



WAGO Electronic Interface

Full Line Catalog, Volume 4 – Edition 2021/2022

4



WAGO Full Line Catalogs



Volume 1, WAGO Rail-Mount Terminal Blocks and Connectors

- Rail-Mount Terminal Blocks
- Rail-Mount Terminal Blocks with Pluggable Connector (X-COM®-SYSTEM)
- Patchboard Systems
- Terminal Strips
- PUSH WIRE® Connectors for Junction Boxes
- Lighting Connectors
- Shield Connecting System



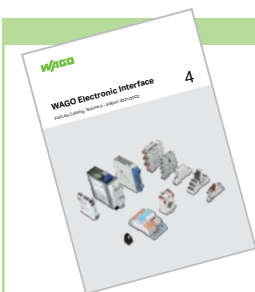
Volume 2, WAGO PCB Terminal Blocks and Connectors

- PCB Terminal Blocks
- THR/SMD PCB Terminal Blocks
- *MULTI CONNECTION SYSTEM (MCS)*
- Pluggable PCB Terminal Blocks
- Feedthrough Terminal Blocks
- Specialty Connectors
- Empty Housings



Volume 3, Automation Technology

- Solutions & Software
- Operating & Monitoring
- Controllers, Edge Devices
- Modular I/O-SYSTEM IP20, I/O-SYSTEM IP67
- Industrial Switches
- Radio Technology
- IP67 Sensor/Actuator Boxes, IP67 Cables and Connectors



Volume 4, WAGO Interface Electronic

- Relay and Optocoupler Modules
- Signal Conditioners and Isolation Amplifiers
- Current and Energy Measurement Technology
- Power Supplies
- Interface Modules and System Wiring
- Overvoltage Protection
- Empty Housings



Volume 5, WAGO Pluggable Connection System WINSTA®

- Pluggable Connectors
- Snap-In Device Connectors
- Pluggable PCB Connectors
- Distribution Connectors
- Cable Assemblies
- Flat Cable Systems
- Distribution Boxes



Volume 6, WAGO Marking

- Printer
- Software
- Terminal Block Marking
- Cable and Conductor Marking
- Device Marking
- Marker Carriers

Volume 4, WAGO Electronic Interface

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Operating WAGO Connection Technologies

Please follow the applicable product-specific termination instructions.

PUSH-IN CAGE CLAMP®



Push-in CAGE CLAMP® terminates the following copper conductors: solid



stranded



fine-stranded, also with tinned single strands



fine-stranded, tip-bonded



fine-stranded, with ferrule (gastight crimped)



fine-stranded, with pin terminal (gastight crimped)

The universal connection with an additional advantage:

Push-in connection

Terminate solid and stranded (Class B 7 strands or less), as well as ferruled conductors, by simply pushing them in – no tools required.

Termination for all conductor types:

- Open clamping unit.
- Insert the conductor.
- Release clamp – done!

CAGE CLAMP®



CAGE CLAMP® terminates the following copper conductors: solid



stranded



fine-stranded, also with tinned single strands



fine-stranded, tip-bonded



fine-stranded, with ferrule (gastight crimped)



fine-stranded, with pin terminal (gastight crimped)

The universal connection for solid, stranded and fine-stranded conductors

Termination:

- Open clamping unit.
- Insert the conductor.
- Release clamp – done!

Operating WAGO Connection Technologies

Please follow the applicable product-specific termination instructions.

POWER CAGE CLAMP®



POWER CAGE CLAMP terminates the following copper conductors:
solid



stranded



fine-stranded,
also with tinned
single strands



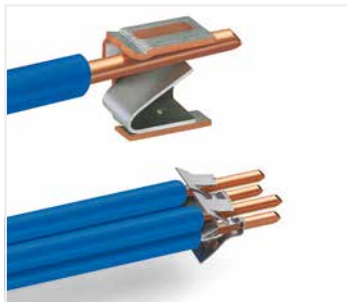
fine-stranded,
with ferrule
(gastight crimped)

The universal connection for conductors larger than 35 mm² (2 AWG)

Termination:

- Open clamp by turning a T-wrench counter-clockwise.
- Press the integrated latch to open clamping unit for hands-free wiring.
- Insert the conductor.
- A small counter-clockwise rotation closes the clamp, securing conductor.

PUSH WIRE®



PUSH WIRE® terminates the following copper conductors:
solid

PUSH WIRE® connection for solid and stranded conductors (depending on the model used)

Termination:

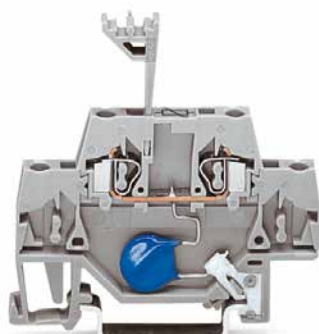
Tool-free, twist-free terminations for solid and rigid stranded conductors – simply push into the unit.

The Right Interface

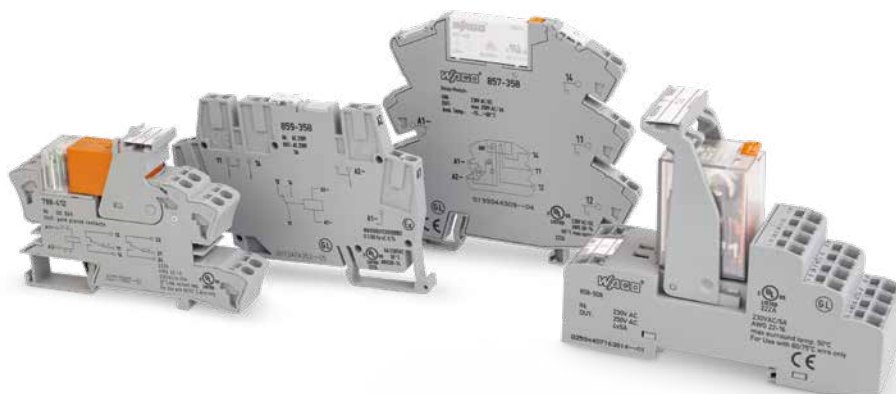
WAGO Power Supplies



WAGO Overvoltage Protection



WAGO Relay Modules and WAGO Optocoupler Modules

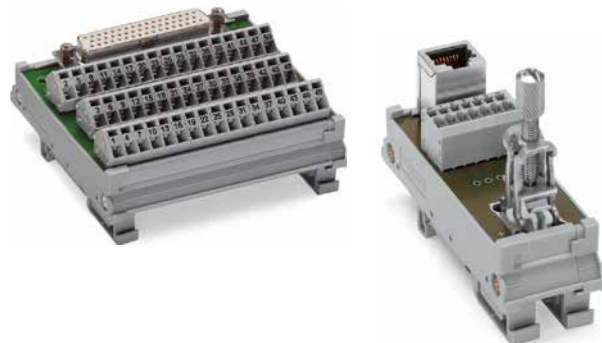


for Every Application

WAGO Signal Conditioners and WAGO Isolation Amplifiers



WAGO Interface Modules











WAGO Current and Energy Measurement Technology





WAGO Relay Modules

WAGO Relay Modules

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	Accessories	50
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	Relay Modules, 859 Series	
	Relay Modules	80
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WAGO Relay Modules Selection Guide

1

Nominal Input Voltage U_{nom}	Limiting Continuous Current	Make Contact	Break Contact	Changeover Contact	Approvals									Contact Material	For Railway Applications	Specialty function	Item Number	Page
					EN 50121-3-2	EN 50155	EN 61373	EN 50205	EN 61810-3	EN 61812-1	GL	UL 508	ATEX					
5 VDC	5 A			1			■					■	■		AgSnO ₂		859-302	80
5 VDC	5 A			1			■					■	■		AgNi + Au		859-312	81
12 VDC	5 A			1			■					■	■		AgSnO ₂		859-303	80
12 VDC	5 A			1			■					■	■		AgSnO ₂		859-353	82
12 VDC	5 A			4			■					■		AgCe	With manual operation	858-303	66	
12 VDC	6 A			1			■					■	■	AgSnO ₂		857-303	12	
12 VDC	8 A			2			■					■		AgNi 90/10		788-311	32	
12 VDC	16 A			1			■					■		AgNi 90/10		788-303	30	
12 VDC	16 A			1			■					■		AgSnO ₂	For lamp loads	788-353	38	
24 VDC	0.3 A			2				■				■		AgNi + Au	Force-guided contacts	788-906	42	
24 VDC	5 A	1												AgSnO ₂		286-364	138	
24 VDC	5 A	1												AgNi 0.15		288-364	130	
24 VDC	5 A	4			■		■							AgNi	■	2042-3024	104	
24 VDC	5 A	2	2			■	■							AgNi	■	2042-3084	106	
24 VDC	5 A	3	1			■	■							AgNi	■	2042-3074	105	
24 VDC	5 A		1											AgNi 0.15		288-368	131	
24 VDC	5 A		1											AgNi		286-368	139	
24 VDC	5 A		1				■			■	■			AgSnO ₂		859-304	80	
24 VDC	5 A		1				■			■	■			AgSnO ₂	■	859-390	84	
24 VDC	5 A		1				■			■				AgSnO ₂	■	859-398	87	
24 VDC	5 A		1				■			■	■			AgNi + Au		859-314	81	
24 VDC	5 A		1				■			■	■			AgNi + Au	■	859-392	85	
24 VDC	5 A		2											AgNi 10 +Au	Force-guided contacts	288-437	135	
24 VDC	5 A		4				■			■	■			AgCe	With manual operation	858-304	66	
24 VDC	5 A		4				■			■	■			AgCe + Au	With manual operation	858-314	67	
24 VDC	5 A		4				■			■	■			AgCe	■ With manual operation	858-354	70	
24 VDC	5 A		4				■			■	■			AgCe + Au	■ With manual operation	858-355	71	
24 VDC	6 A	1			■		■							AgSnO ₂	■	2042-3004	92	
24 VDC	6 A	1	1											AgSnO ₂		286-320	144	
24 VDC	6 A	2												AgSnO ₂		286-328	145	
24 VDC	6 A		1		■		■							AgSnO ₂	■	2042-3054	93	
24 VDC	6 A		1				■			■	■	■		AgSnO ₂		857-304	12	
24 VDC	6 A		1				■			■	■	■		AgNi + Au		857-314	13	
24 VDC	6 A		1		■		■		■	■	■			AgSnO ₂	■ Multifunctional/multi-time	857-640	22	
24 VDC	6 A		1		■		■		■	■	■			AgSnO ₂	■ Multifunctional/multi-time	857-642	23	
24 VDC	6 A		1		■		■		■	■	■			AgSnO ₂	■ Multifunctional/multi-time	857-604	24	
24 VDC	6 A		1											AgNi 0.15	Bistable	286-380	146	
24 VDC	6 A		1											AgNi 0.15	Bistable	286-381	147	
24 VDC	6 A		1											AgNi 90/10		288-304	132	
24 VDC	6 A		1											AgNi 0.15	Bistable	288-380	134	
24 VDC	6 A		2											AgNi 0.15		288-312	133	
24 VDC	6 A		2				■	■				■		AgNi	Force-guided contacts	788-384	41	
24 VDC	6 A		4									■		AgNi 90/10	With manual operation	858-390	72	
24 VDC	7 A		1											AgNi 0.15		286-304	140	
24 VDC	7 A		2											AgNi 0.15		286-312	142	
24 VDC	8 A	2			■		■							AgNi	■	2042-3014	98	
24 VDC	8 A	1	1		■		■							AgNi	■	2042-3064	100	
24 VDC	8 A		2				■					■		AgNi 90/10		788-312	32	
24 VDC	8 A		2				■					■		AgNi + Au		788-412	33	
24 VDC	8 A		2				■					■		AgNi	With manual operation	788-346	45	
24 VDC	8 A		2				■							AgNi	■ With manual operation	788-390	48	
24 VDC	8 A		2											AgNi 90/10		789-312	114	
24 VDC	8 A		2											AgNi	With manual operation	789-1346	120	

WAGO Relay Modules Selection Guide

Nominal Input Voltage $U_{in(nom)}$	Limiting Continuous Current	Make Contact	Break Contact	Changeover Contact	Approvals									Contact Material	For Railway Applications	Specialty function	Item Number	Page	
					EN 50121-3-2	EN 50155	EN 61373	EN 50205	EN 61810-3	EN 61812-1	GL	UL 508	ATEX						IEC Ex
24 VDC	8 A			2		■	■								AgNi	■		2042-3044	99
24 VDC	10 A			1	■		■								AgNi	■		2042-3034	96
24 VDC	12 A			1											AgNi 90/10			789-304	112
24 VDC	12 A			1											AgNi		With manual operation	789-1341	118
24 VDC	12 A			1					■						AgSnO ₂		For lamp loads; Manual/OFF/Auto switch	789-326	125
24 VDC	12 A			1											AgSnO ₂		For lamp loads; Manual/OFF/Auto switch	789-329	126
24 VDC	12 A			2									■		AgNi		With manual operation	858-324	74
24 VDC	16 A	1					■						■		AgSnO ₂		For lamp loads	788-356	39
24 VDC	16 A	1					■								AgSnO ₂		For lamp loads	788-357	40
24 VDC	16 A	1													AgSnO ₂		For lamp loads; Manual/OFF/Auto switch	789-323	122
24 VDC	16 A	1						■							AgSnO ₂		For lamp loads; Manual/OFF/Auto switch	789-324	123
24 VDC	16 A	1													AgSnO ₂		For lamp loads; Manual/OFF/Auto switch	789-325	125
24 VDC	16 A	1													AgSnO ₂			789-571	127
24 VDC	16 A			1			■						■		AgNi 90/10			788-304	30
24 VDC	16 A			1			■						■		AgNi + Au			788-404	31
24 VDC	16 A			1			■						■		AgSnO ₂		For lamp loads	788-354	38
24 VDC	16 A			1			■						■		AgNi		With manual operation	788-341	44
24 VDC	16 A			1			■								AgNi		With manual operation	788-391	49
36 VDC	5 A			1			■								AgNi + Au	■		859-386	85
48 VDC	5 A			1			■					■	■		AgSnO ₂			859-305	80
48 VDC	5 A			1			■					■			AgSnO ₂	■		859-397	87
48 VDC	5 A			4			■						■		AgCe		With manual operation	858-305	66
48 VDC	6 A			1			■						■		AgSnO ₂			857-305	12
48 VDC	8 A			2			■						■		AgNi 90/10			788-313	32
48 VDC	12 A			2									■		AgNi		With manual operation	858-325	74
48 VDC	16 A			1			■						■		AgNi 90/10			788-305	30
60 VDC	8 A			2			■						■		AgNi 90/10			788-314	32
60 VDC	16 A			1			■						■		AgNi 90/10			788-306	30
110 VDC	5 A			1			■					■	■		AgSnO ₂			859-307	80
110 VDC	5 A			1			■					■	■		AgSnO ₂	■		859-391	86
110 VDC	5 A			1			■					■			AgSnO ₂	■		859-399	87
110 VDC	5 A			1			■					■	■		AgNi + Au	■		859-317	85
110 VDC	5 A			4			■						■		AgCe		With manual operation	858-307	66
110 VDC	6 A			4									■		AgNi 90/10		With manual operation	858-392	72
110 VDC	8 A			2			■						■		AgNi 90/10			788-315	32
110 VDC	8 A			2			■						■		AgNi + Au			788-415	33
110 VDC	12 A			2									■		AgNi		With manual operation	858-327	74
110 VDC	16 A			1			■						■		AgNi 90/10			788-307	30
220 VDC	5 A			1			■					■	■		AgSnO ₂			859-308	80
220 VDC	5 A			1			■					■	■		AgNi + Au			859-318	81
220 VDC	5 A			4			■						■		AgCe		With manual operation	858-308	66
220 VDC	6 A			4									■		AgNi 90/10		With manual operation	858-391	72
220 VDC	12 A			2									■		AgNi		With manual operation	858-328	74

WAGO Relay Modules Selection Guide

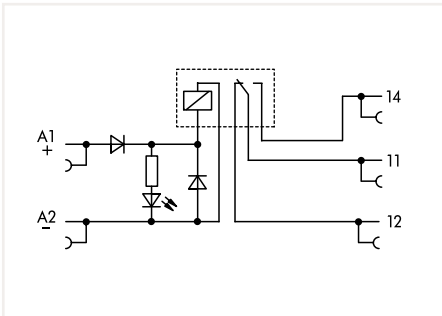
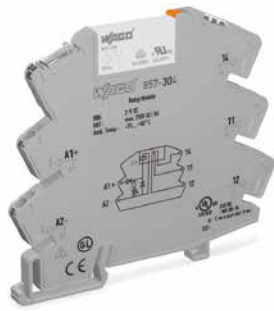
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Nominal Input Voltage U_{nom}	Limiting Continuous Current	Make Contact	Break Contact	Changeover Contact	Approvals									Contact Material	For Railway Applications	Specialty function	Item Number	Page	
					EN 50121-3-2	EN 50155	EN 61373	EN 50205	EN 61810-3	EN 61812-1	GL	UL 508	ATEX						IEC Ex
12 VAC	6 A	4	4					■						■		AgSnO ₂	Force-guided contacts	288-413	136
24 VAC	5 A			4			■							■		AgCe	With manual operation	858-504	68
24 VAC	5 A			4			■							■		AgCe + Au	With manual operation	858-514	69
24 VAC	8 A			2			■							■		AgNi 90/10		788-512	36
24 VAC	8 A			2			■							■		AgNi	With manual operation	788-546	47
24 VAC	16 A			1			■							■		AgNi 90/10		788-506	34
24 VAC	16 A			1			■							■		AgNi	With manual operation	788-541	46
115 VAC	5 A			1			■				■	■				AgSnO ₂	Defined switch-on threshold	859-367	88
115 VAC	5 A			4			■							■		AgCe	With manual operation	858-507	68
115 VAC	5 A			4			■							■		AgCe + Au	With manual operation	858-517	69
115 VAC	7 A			1												AgNi 0.15		286-507	141
115 VAC	8 A			2			■							■		AgNi 90/10		788-515	36
115 VAC	8 A			2			■							■		AgNi + Au		788-615	37
115 VAC	8 A			2			■							■		AgNi	With manual operation	788-548	47
115 VAC	16 A			1			■							■		AgNi 90/10		788-507	34
115 VAC	16 A			1			■							■		AgNi + Au		788-607	35
115 VAC	16 A			1			■							■		AgNi	With manual operation	788-543	46
230 VAC	5 A			4			■				■	■				AgCe	With manual operation	858-508	68
230 VAC	5 A			4			■				■	■				AgCe + Au	With manual operation	858-518	69
230 VAC	5 A			1			■				■	■				AgSnO ₂	Defined switch-on threshold	859-368	89
230 VAC	6 A			1			■									AgSnO ₂	Integrated base load module	857-358/006-000	16
230 VAC	6 A			1			■									AgNi + Au	Integrated base load module	857-368/006-000	17
230 VAC	7 A			1												AgNi 0.15		286-508	141
230 VAC	7 A			2												AgNi 0.15		286-516	143
230 VAC	8 A			2			■							■		AgNi 90/10		788-516	36
230 VAC	8 A			2			■							■		AgNi + Au		788-616	37
230 VAC	8 A			2			■							■		AgNi	With manual operation	788-549	47
230 VAC	8 A			2												AgNi	With manual operation	789-1549	121
230 VAC	12 A			1												AgNi 90/10		789-508	113
230 VAC	12 A			1												AgNi	With manual operation	789-1544	119
230 VAC	12 A			2										■		AgNi	With manual operation	858-528	75
230 VAC	16 A	1														AgSnO ₂		789-570	127
230 VAC	16 A			1			■							■		AgNi	With manual operation	788-544	46
230 VAC	16 A			1			■							■		AgNi 90/10		788-508	34
230 VAC	16 A			1			■							■		AgNi + Au		788-608	35

WAGO Relay Modules Selection Guide

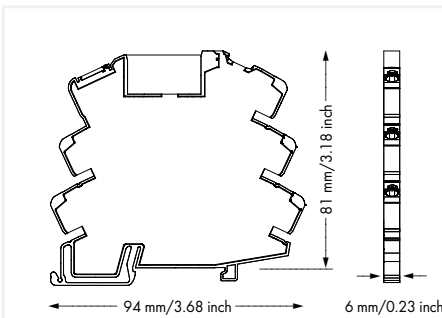
Nominal Input Voltage U_{nom}	Limiting Continuous Current	Make Contact	Break Contact	Changeover Contact	Approvals								Contact Material	For Railway Applications	Specialty function	Item Number	Page		
					EN 50121-3-2	EN 50155	EN 61373	EN 50205	EN 61810-3	EN 61812-1	GL	UL 508						ATEX	IEC Ex
12 VAC/DC	5 A			1			■					■	■		AgSnO ₂		859-353	82	
24 VAC/DC	4 A	1					■						■	■	■	AgSnO ₂		857-1330	20
24 VAC/DC	4 A	4														AgNi + Au		789-552	116
24 VAC/DC	4 A	2	2													AgNi + Au		789-536	117
24 VAC/DC	5 A	1														AgNi 0.15		288-564	130
24 VAC/DC	5 A			1			■					■	■			AgSnO ₂		859-354	82
24 VAC/DC	6 A	4	4				■						■			AgSnO ₂	Force-guided contacts	288-414	136
24 VAC/DC	6 A			1			■						■	■	■	AgSnO ₂		857-354	14
24 VAC/DC	6 A			1												AgNi 90/10		288-504	132
24 VAC/DC	6 A			1			■						■	■	■	AgNi + Au		857-364	15
24 VAC/DC	6 A			2												AgNi 0.15		288-512	133
24 VAC/DC	16 A	1														AgSnO ₂	For lamp loads	789-520	115
48 VAC/DC	5 A			1			■					■	■			AgSnO ₂		859-355	82
115 VAC/DC	5 A			1			■					■	■			AgNi + Au		859-360	83
115 VAC/DC	5 A			1			■					■	■			AgSnO ₂		859-357	82
115 VAC/DC	6 A			1			■						■	■	■	AgSnO ₂		857-357	12
115 VAC/DC	6 A			1			■						■	■	■	AgNi + Au		857-367	15
230 VAC/DC	5 A			1			■					■	■			AgSnO ₂		859-358	82
230 VAC/DC	5 A			1			■					■	■			AgNi + Au		859-359	83
230 VAC/DC	6 A	4	4				■						■			AgSnO ₂	Force-guided contacts	288-418	136
230 VAC/DC	6 A			1			■					■	■	■	■	AgSnO ₂		857-358	12
230 VAC/DC	6 A			1			■					■	■	■	■	AgNi + Au		857-368	15
24 ... 230 VAC/DC	3 A	1			■		■									AgSnO ₂		2042-3809	94
24 ... 230 VAC/DC	3 A	4				■	■									AgNi		2042-3829	107
24 ... 230 VAC/DC	3 A	2	2			■	■									AgNi		2042-3889	109
24 ... 230 VAC/DC	3 A	3	1			■	■									AgNi		2042-3879	108
24 ... 230 VAC/DC	4 A			1		■	■									AgNi		2042-3839	97
24 ... 230 VAC/DC	5 A	2			■		■									AgNi		2042-3819	101
24 ... 230 VAC/DC	5 A	1	1		■		■									AgNi		2042-3869	103
24 ... 230 VAC/DC	5 A			2	■		■									AgNi		2042-3849	102
24 ... 230 VAC/DC	6 A			1		■	■									AgSnO ₂		2042-3859	95
24 ... 230 VAC/DC	6 A			1	■		■					■				AgSnO ₂		857-359	18
24 ... 230 VAC/DC	6 A			1	■		■					■				AgNi + Au		857-369	19

Relay Module 857 Series

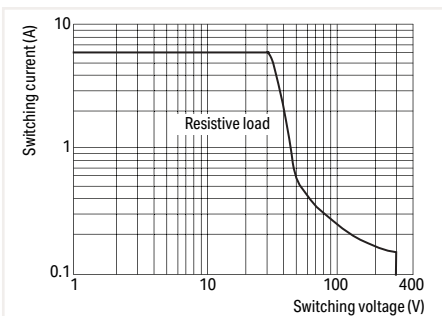


Relay Module; 1 changeover contact; Limiting continuous current: 6 A; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
12 VDC	17 mA	857-303	25
24 VDC	10 mA	857-304	25
48 VDC	6.5 mA	857-305	25
115 VAC/DC	4 mA	857-357	25
230 VAC/DC	3.5 mA	857-358	25



Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit

Input voltage range	-15 ... +20 %
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Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgSnO ₂
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	8 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ⁶ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching frequency with/without load (max.)	6 min ⁻¹ / 180 min ⁻¹

Signaling

Status indicator	Yellow LED
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Safety and Protection

Rated voltage	300 VDC
Rated surge voltage	4 kV
Circuit type	Mains circuits
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the same type)	Reinforced insulation (safe isolation)
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	30.6 g
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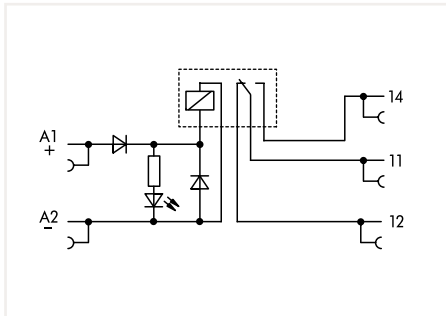
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +60 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 85 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

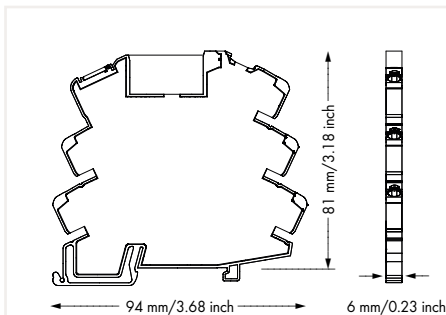
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508; ATEX, IEC Ex
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Relay Module 857 Series



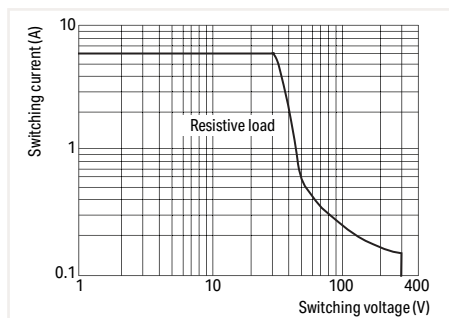
Relay Module; 1 changeover contact; Limiting continuous current: 6 A; Gold contacts; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	10 mA	857-314	25



Note:

To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

Control Circuit

Input voltage range	-15 ... +20 %
---------------------	---------------

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgNi + Au
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	1 V / 1 mA / 1 mW
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	8 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ³ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching frequency with/without load (max.)	6 min ⁻¹ / 180 min ⁻¹

Signaling

Status indicator	Yellow LED
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Safety and Protection

Rated voltage	250 VDC
Rated surge voltage	4 kV
Circuit type	Mains circuits
Overtoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the same type)	Reinforced insulation (safe isolation)
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	31.2 g
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Environmental Requirements

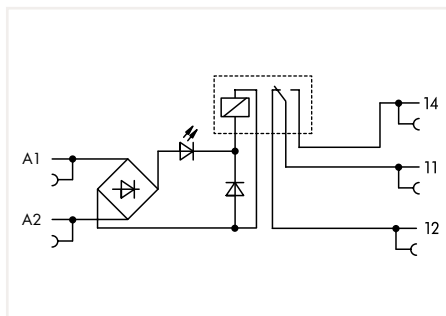
Surrounding air temperature (operation at U_N)	-40 ... +60 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508; GL; ATEX; IEC Ex
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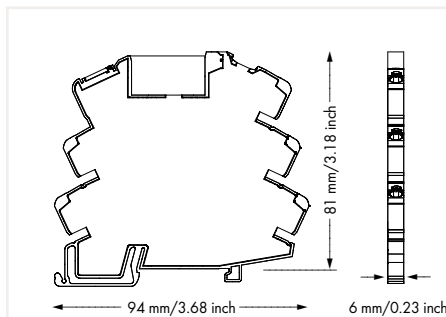
Relay Module

857 Series



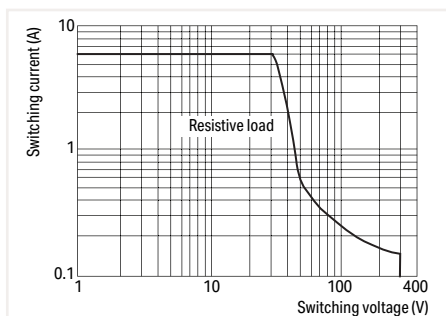
Relay Module; 1 changeover contact; Limiting continuous current: 6 A; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VAC/DC	8.5 mA	857-354	25
115 VAC/DC	4 mA	857-357	25
230 VAC/DC	3.5 mA	857-358	25



Note:

To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit

Input voltage range	-15 ... +20 % (857-354; 857-357); -20 ... +10 % (857-358)
---------------------	--

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgSnO ₂
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ³ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching frequency with/without load (max.)	6 min ⁻¹ / 180 min ⁻¹

Signaling

Status indicator	Yellow LED
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Safety and Protection

Rated voltage	300 VDC
Rated surge voltage	4 kV
Circuit type	Mains circuits
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the the same type)	Reinforced insulation (safe isolation)
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	30.6 g
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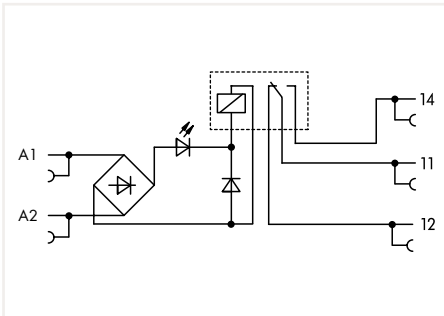
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +60 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 85 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

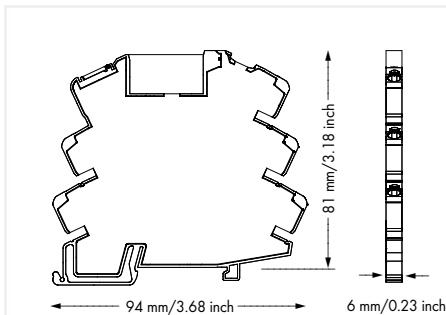
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508; ATEX, IEC Ex
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Relay Module 857 Series



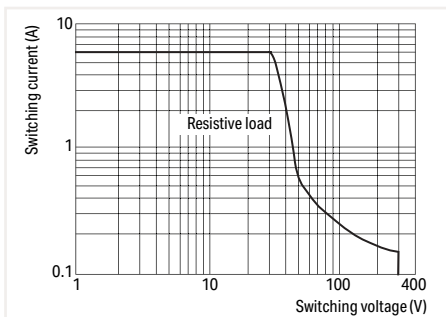
Relay Module; 1 changeover contact; Limiting continuous current: 6 A; Gold contacts; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VAC/DC	8.5 mA	857-364	25
115 VAC/DC	4 mA	857-367	25
230 VAC/DC	3.5 mA	857-368	25



Note:

To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

Control Circuit

Input voltage range	-15 ... +20 % (857-364; 857-367); -20 ... +10 % (857-368)
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Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgNi + Au
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	1 V / 1 mA / 1 mW
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50x 10 ³ switching operations
Mechanical life	5x 10 ⁶ switching operations
Switching frequency with/without load (max.)	6 min ⁻¹ / 180 min ⁻¹

Signaling

Status indicator	Yellow LED
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Safety and Protection

Rated voltage	250 VDC
Rated surge voltage	4 kV
Circuit type	Mains circuits
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the the same type)	Reinforced insulation (safe isolation)
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	30.3 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +60 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 85 % (no condensation permissible)
Operating altitude (max.)	2000 m

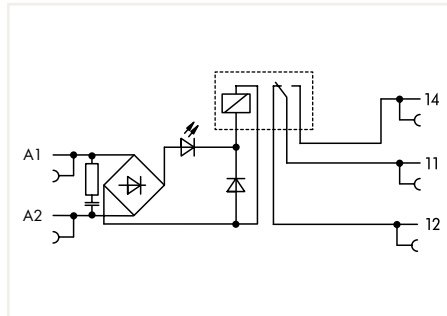
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508; ATEX, IEC Ex
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Relay Module 857 Series

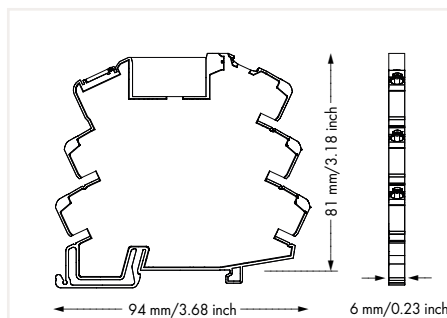


Similar to pictured device

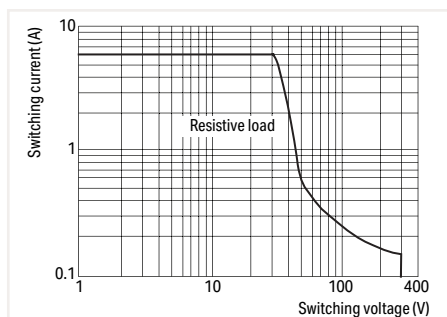


Relay Module; 1 changeover contact; Limiting continuous current: 6 A; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
230 VAC	16 mA	857-358/006-000	25



Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit	
Input voltage range	-15 ... +10 %
Line capacitance (max.)	170 nF
Cable length (control circuit)	≤ 350 m (for a line capacitance of 330 nF/km)

Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgSnO ₂
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ³ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching frequency with/without load (max.)	6 min ⁻¹ / 180 min ⁻¹

Signaling	
Status indicator	Yellow LED

Safety and Protection	
Rated voltage	300 VDC
Rated surge voltage	4 kV
Circuit type	Mains circuits
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the the same type)	Reinforced insulation (safe isolation)
Protection type	IP20

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

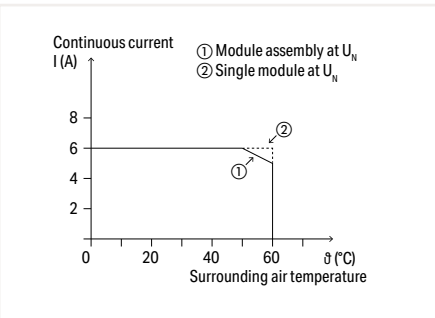
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch

Mechanical Data	
Mounting type	DIN-35 rail

Material Data	
Weight	33.2 g

Environmental Requirements	
Surrounding air temperature (operation at U_N)	-40 ... +60 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 85 % (no condensation permissible)
Operating altitude (max.)	2000 m

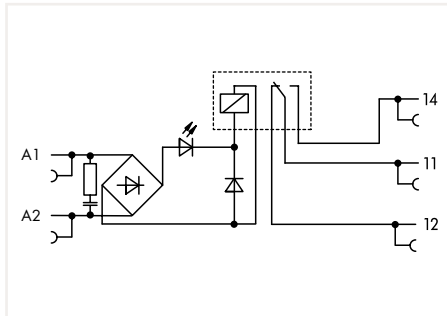
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373



Relay Module 857 Series

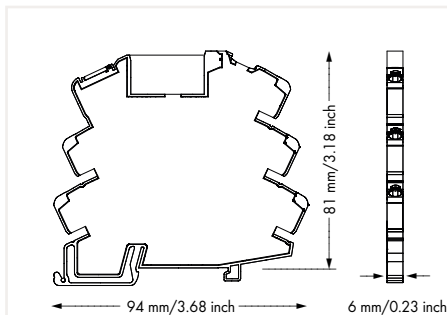


Similar to pictured device

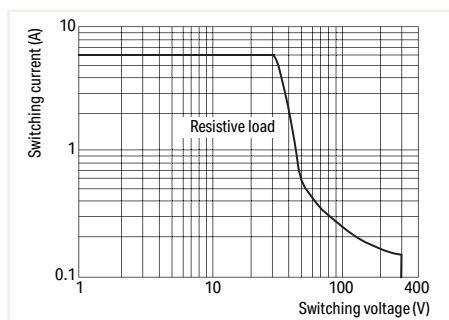


Relay Module; 1 changeover contact; Limiting continuous current: 6 A; Gold contacts; with integrated base load module; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
230 VAC	16 mA	857-368/006-000	25

**Note:**

- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.
- To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

Control Circuit

Input voltage range	-15 ... +10 %
Line capacitance (max.)	170 nF
Cable length (control circuit)	≤ 350 m (for a line capacitance of 330 nF/km)

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgNi + Au
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	1 V / 1 mA / 1 mW
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ³ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching frequency with/without load (max.)	6 min ⁻¹ / 180 min ⁻¹

Signaling

Status indicator	Yellow LED
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Safety and Protection

Rated voltage	300 VDC
Rated surge voltage	4 kV
Circuit type	Mains circuits
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the the same type)	Reinforced insulation (safe isolation)
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

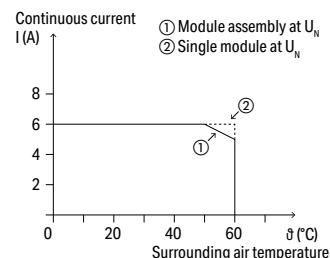
Weight	31.5 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +60 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 85 % (no condensation permissible)
Operating altitude (max.)	2000 m

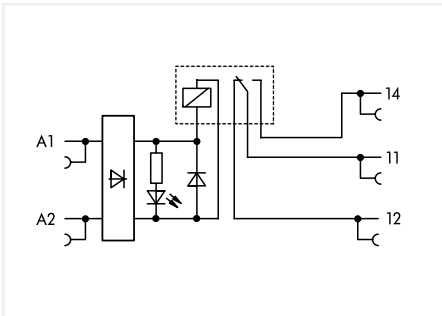
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373
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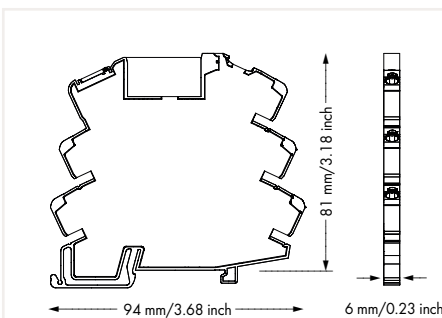
Relay Module 857 Series

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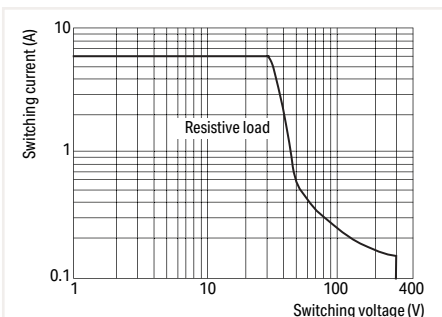


Relay Module; 1 changeover contact; Limiting continuous current: 6 A; Status indicator: yellow; 6 mm wide

U_N	Item No.	Pack. Unit
24 ... 230 VAC/DC	857-359	25



Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit

Input voltage range	-30 ... +10 %
Input current	3.5 mA (230 VAC); 20 mA (24 VDC)

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgSnO ₂
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ⁵ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching frequency with/without load (max.)	6 min ⁻¹ / 60 min ⁻¹

Signaling

Status indicator	Yellow LED
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Safety and Protection

Rated voltage	300 VDC
Rated surge voltage	4 kV
Circuit type	Mains circuits
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the the same type)	Reinforced insulation (safe isolation)
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

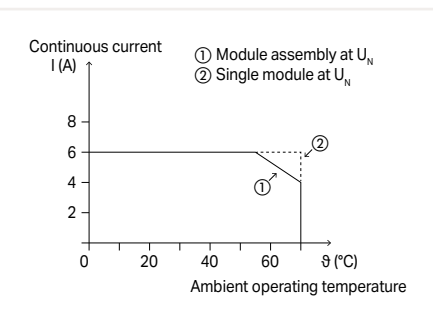
Weight	30.9 g
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Environmental Requirements

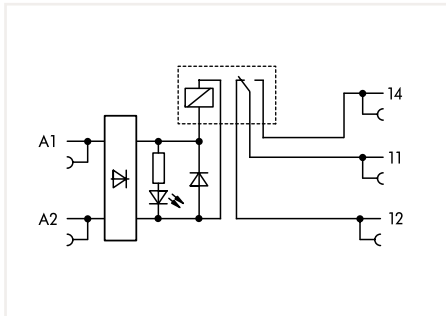
Surrounding air temperature (operation at U_N)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 85 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 50121-3-2; EN 50121-4; EN 61000-6-2; EN 61000-6-3; EN 61010-2-201; EN 61810-1; EN 61373; UL 508
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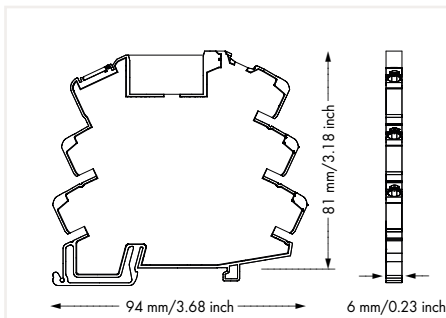


Relay Module 857 Series

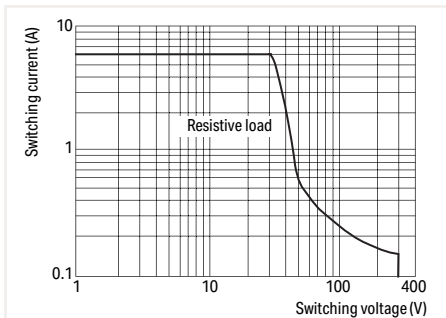


Relay Module; 1 changeover contact; Limiting continuous current: 6 A; Gold contacts; Status indicator: yellow; 6 mm wide

U_N	Item No.	Pack. Unit
24 ... 230 VAC/DC	857-369	25



Note:
To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

Control Circuit	
Input voltage range	-30 ... +10 %
Input current	3.5 mA (230 VAC); 20 mA (24 VDC)

Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi + Au
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	1 V / 1 mA / 1 mW
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ³ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching frequency with/without load (max.)	6 min ⁻¹ / 60 min ⁻¹

Signaling	
Status indicator	Yellow LED

Safety and Protection	
Rated voltage	300 VDC
Rated surge voltage	4 kV
Circuit type	Mains circuits
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the the same type)	Reinforced insulation (safe isolation)
Protection type	IP20

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

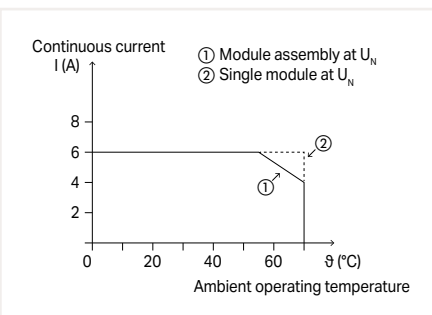
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch

Mechanical Data	
Mounting type	DIN-35 rail

Material Data	
Weight	31.9 g

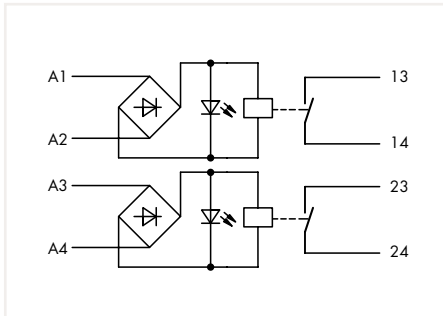
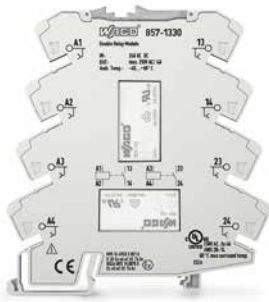
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 85 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications	
Standards/specifications	EN 50121-3-2; EN 50121-4; EN 61000-6-2; EN 61000-6-3; EN 61010-2-201; EN 61810-1; EN 61373; UL 508



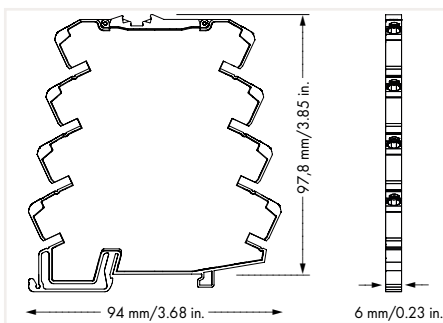
Relay Module

857 Series



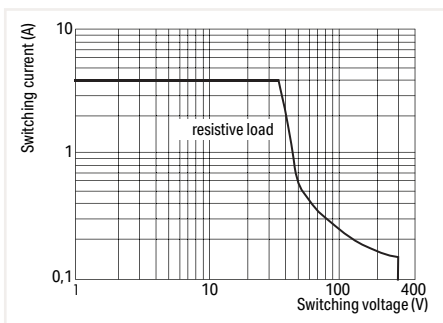
Relay Module; 2-channel; 1 make contact; Limiting continuous current: 4 A; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
AC/DC 24	10 mA	857-1330	25



Note:

To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit

Input voltage range	-15 ... +20 %
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Load Circuit

Number of make contacts/switch-on contacts	1
Contact material	AgSnO ₂
Limiting continuous current	4 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ⁶ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching frequency with/without load (max.)	6 min ⁻¹ / 180 min ⁻¹

Signaling

Status indicator	Yellow LED
------------------	------------

Safety and Protection

Rated voltage	250 VDC
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength channel/channel (AC, 1 min)	4 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	39.2 g
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Environmental Requirements

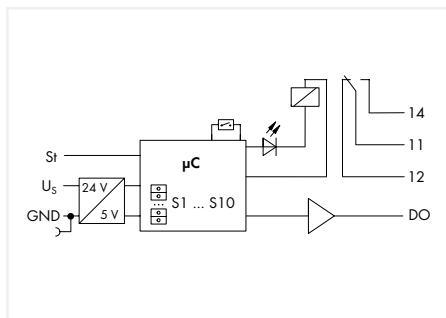
Surrounding air temperature (operation at U_N)	-40 ... +85 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508; ATEX, IEC Ex
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Timer Relay Module

857 Series

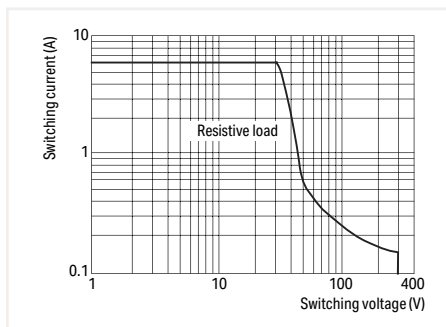


Timer Relay Module; 1 changeover contact; Limiting continuous current: 6 A; for railway applications; Multifunctional/multi-time; Status indicator: yellow; 6 mm wide

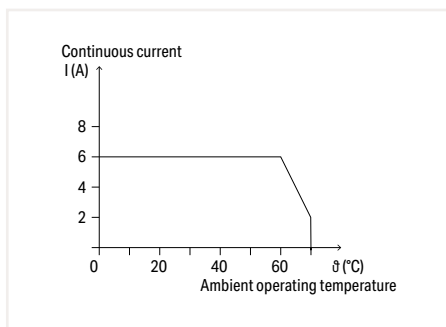
U_N	I_N	Item No.	Pack. Unit
24 VDC	18 mA	857-640	1

Features:

- 14 functions
- Function and time range adjustable via DIP switch



DC Load Limit Curve



Current-Carrying Capacity Curve

Control Circuit

Input voltage range	±30 %
Time range	Adjustable: 0.01 ... 0.1 s; 0.1 ... 1 s; 1 ... 10 s; 10 ... 100 s; 1 ... 10 min; 10 ... 100 min; 1 ... 10 h; 10 ... 100 h
Reset time	50 ms
Minimum pulse length (control input)	10 ms
Functions	On delay; On-delay, with control input; Off-delay, with control input; On- and off-delay, with control input; Single-shot leading edge; Single-shot leading edge, with control input; Off-delay, with control input; Single-shot leading and trailing edge, with control input; On-delay and single-shot leading edge; On-delay and single-shot leading edge, with control input; Step switching; Blinking, pulse start; Blinking, interval start; Relay switching

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgSnO ₂
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ³ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Digital output (DO)	$U_N - 1$ V; 100 mA

Signaling

Status indicator	Yellow LED
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Safety and Protection

Rated voltage	250 VDC
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	33.2 g
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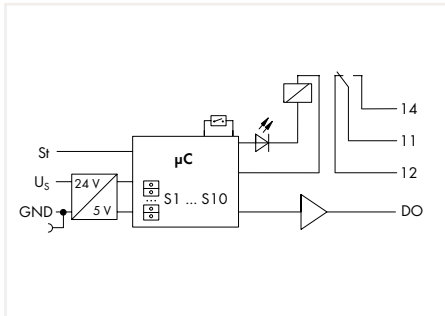
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61812-1; EN 61373; EN 50121-3-2; UL 508
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Timer Relay Module 857 Series

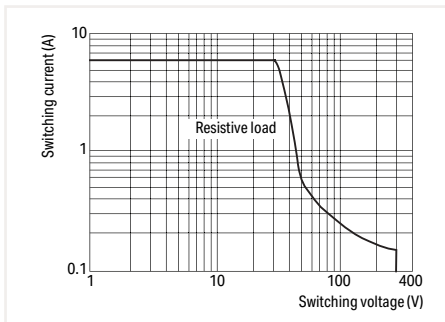


Timer Relay Module; 1 changeover contact; Limiting continuous current: 6 A; for railway applications; Multifunctional/multi-time; Status indicator: yellow; 6 mm wide

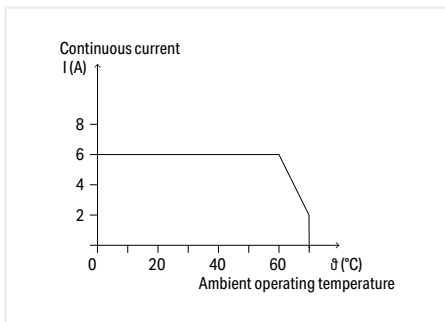
U_N	I_N	Item No.	Pack. Unit
24 VDC	18 mA	857-642	1

Features:

- 7 functions
- 2 separately adjustable time ranges
- Function and time range adjustable via DIP switch



DC Load Limit Curve



Current-Carrying Capacity Curve

Control Circuit

Input voltage range	±30 %
Time range	Adjustable: 0.01 ... 0.1 s; 0.1 ... 1 s; 1 ... 10 s; 10 ... 100 s; 1 ... 10 min; 10 ... 100 min; 1 ... 10 h; 10 ... 100 h
Reset time	50 ms
Minimum pulse length (control input)	10 ms
Functions	On- and off-delay, with control input; On-delay and single-shot leading edge, with control input; Single-shot leading and trailing edge, with control input; Pulse sequence evaluation, with control input; Repeat cycle timer, pulse start; Repeat cycle timer, interval start, control input

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgSnO ₂
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ³ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Digital output (DO)	$U_N - 1$ V; 100 mA

Signaling

Status indicator	Yellow LED
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Safety and Protection

Rated voltage	250 VDC
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	52 g
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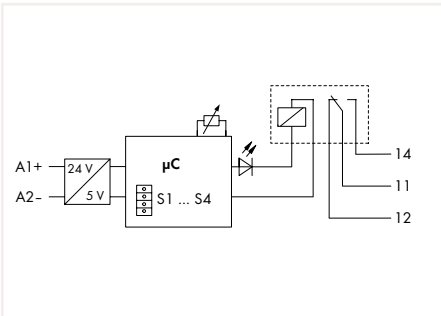
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

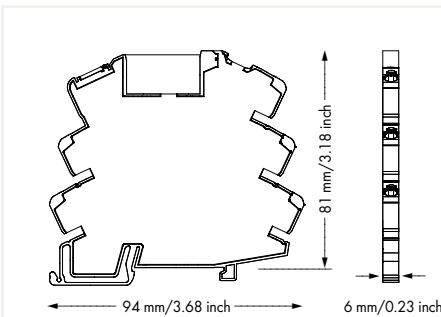
Standards/specifications	EN 61812-1; EN 61373; EN 50121-3-2; UL 508
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Timer Relay Module 857 Series



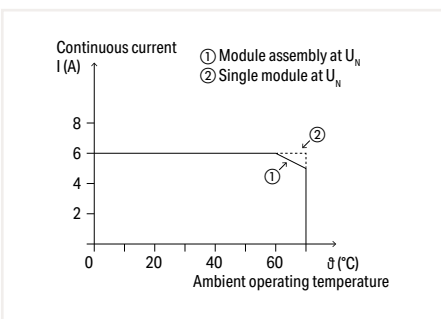
Timer Relay Module; 1 changeover contact; Limiting continuous current: 6 A; for railway applications; Multifunctional/multi-time; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	18 mA	857-604	1



Features:

- 4 functions
- Function and time range adjustable via DIP switch



Current-Carrying Capacity Curve

Control Circuit

Input voltage range	±30 %
Time range	Adjustable: 0.1 ... 10 s; 3 ... 300 s; 0.3 ... 30 min; 3 ... 300 min
Reset time	50 ms
Minimum pulse length (control input)	10 ms
Repeat accuracy	±1 %
Functions	On-delay; Single-shot leading edge; On-delay and single-shot leading edge (1s fixed); blinking

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgSnO ₂
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ⁵ switching operations
Mechanical life	5 x 10 ⁶ switching operations

Signaling

Status indicator	Yellow LED
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Safety and Protection

Rated voltage	250 VDC
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	24.9 g
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Environmental Requirements

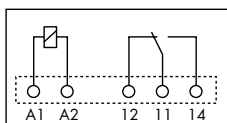
Surrounding air temperature (operation at U_N)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61812-1; EN 61373; EN 50121-3-2; UL 508
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Basic Relay 857 Series

1

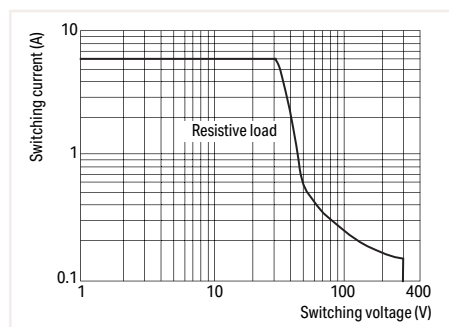


Basic Relay; 1 changeover contact; Limiting continuous current: 6 A; 5 mm wide; 15 mm high

U_N	Item No.	Pack. Unit
12 VDC	857-150	20
24 VDC	857-152	20
48 VDC	857-154	20
60 VDC	857-155	20

Note:

- The 60 VDC spare relay must be used for 60 VDC, 110 VDC, 220 VDC and 115 VAC/DC, 230 VAC/DC relay modules.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgSnO ₂
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	4 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ⁶ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching frequency with/without load (max.)	6 min ⁻¹ / 180 min ⁻¹

Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20

Physical Data

Width	5 mm / 0.197 inch
Height from the surface	15 mm / 0.591 inch
Depth	28 mm / 1.09 inch

Mechanical Data

Mounting type	Pluggable module
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Material Data

Weight	4.7 g
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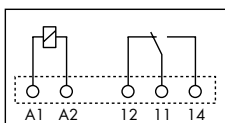
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +85 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 85 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61810-1, EN 61373; VDE, UR
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Basic Relay 857 Series

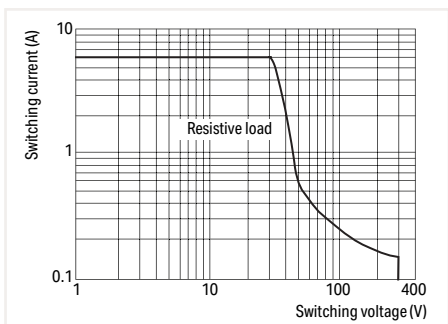


Basic Relay; 1 changeover contact; Limiting continuous current: 6 A; Gold contacts; 5 mm wide; 15 mm high

U_N	Item No.	Pack. Unit
12 VDC	857-151	20
24 VDC	857-153	20
60 VDC	857-157	20

Note:

- The 60 VDC spare relay must be used for 60 VDC, 110 VDC, 220 VDC and 115 VAC/DC, 230 VAC/DC relay modules.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.
- 30 VDC switching voltages and 50 mA currents must not be exceeded for gold-plated basic relays. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgNi + Au
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	1 V / 1 mA / 1 mW
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	4 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ³ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching frequency with/without load (max.)	6 min ⁻¹ / 180 min ⁻¹

Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20

Physical Data

Width	5 mm / 0.197 inch
Height from the surface	15 mm / 0.591 inch
Depth	28 mm / 1.09 inch

Mechanical Data

Mounting type	Pluggable module
---------------	------------------

Material Data

Weight	4.7 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +85 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 85 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61810-1, EN 61373; VDE, UR
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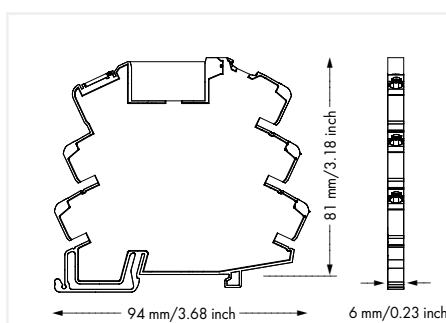
Relay Socket

857 Series



Relay Socket; for 5 mm basic relay; Status indicator: yellow

U_N	Item No.	Pack. Unit
24 VAC/DC	857-104	25



Load Circuit

Limiting continuous current	6 A
Switching voltage (max.)	250 VAC

Signaling

Status indicator	Yellow LED
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Safety and Protection

Rated voltage	300 V
Rated surge voltage	4 kV
Circuit type	Mains circuits
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the the same type)	Reinforced insulation (safe isolation)
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	26.3 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... 70 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201; UR 508
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Accessories



Push-in type jumper bar; light gray; insulated; 18 A

Description	Item No.	Pack. Unit
2-way	859-402	200 (8x25)
3-way	859-403	200 (8x25)
4-way	859-404	200 (8x25)
5-way	859-405	200 (8x25)
6-way	859-406	100 (4x25)
7-way	859-407	100 (4x25)
8-way	859-408	100 (4x25)
9-way	859-409	100 (4x25)
10-way	859-410	100 (4x25)

Item no. suffixes for colored push-in type jumper bars

yellow	... /000-029	
red	... /000-005	
blue	... /000-006	



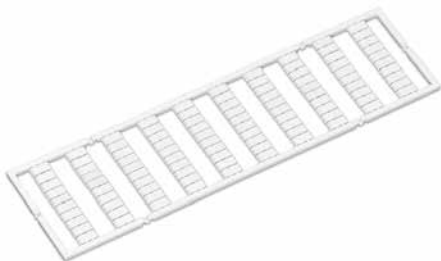
Comb-style jumper bar; insulated; for conductor entry

Description	Item No.	Pack. Unit
2-way	281-482	100



Operating tool with a partially insulated shaft; Type 2; (3.5 x 0.5) mm blade

	Item No.	Pack. Unit
	210-720	50



WMB marker card; 10 strips with 10 markers; white; with black printing

Marking	Item No.	Pack. Unit
plain	793-501	5 cards
1 ... 10 (10 x)	793-502	5 cards
11 ... 20 (10 x)	793-503	5 cards
21 ... 30 (10 x)	793-504	5 cards
31 ... 40 (10 x)	793-505	5 cards
41 ... 50 (10 x)	793-506	5 cards
1 ... 50 (2 x)	793-566	5 cards



WMB Inline; for terminal block width: 5 ... 5.2 mm; plain; 1500 markers/reel; white

Marking	Item No.	Pack. Unit
plain	2009-115	1

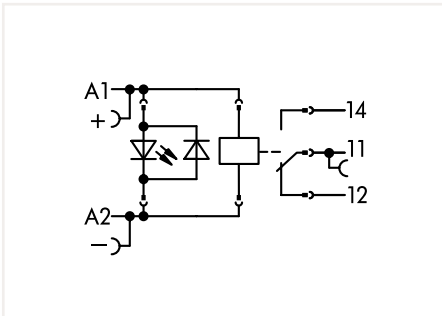
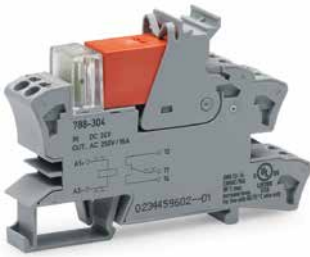


Marking strip; plain; 11 mm wide; 50 m reel; white

Marking	Item No.	Pack. Unit
plain	2009-110	1

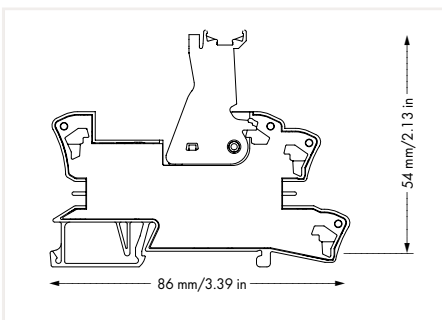
Relay Module 788 Series

1



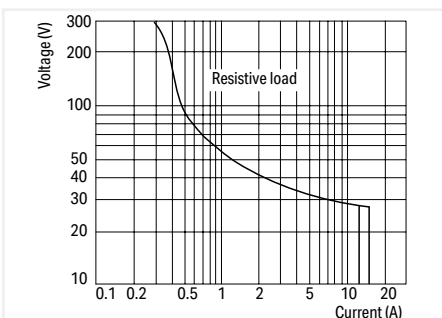
Relay Module; 1 changeover contact; Limiting continuous current: 16 A; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
12 VDC	36 mA	788-303	20
24 VDC	19 mA	788-304	20
48 VDC	11 mA	788-305	20
60 VDC	115 mA	788-306	20
110 VDC	6 mA	788-307	20



Note:

- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit

Input voltage range	±10 %
---------------------	-------

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgNi 90/10
Limiting continuous current	16 A
Inrush current (resistive) max.	30 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 6 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	6 ms
Electrical life (NO; resistive load; 23 °C)	30 x 10 ³ switching operations
Mechanical life	30 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 1200 min ⁻¹

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

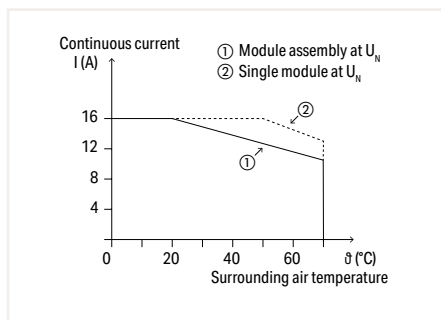
Weight	45.9 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C

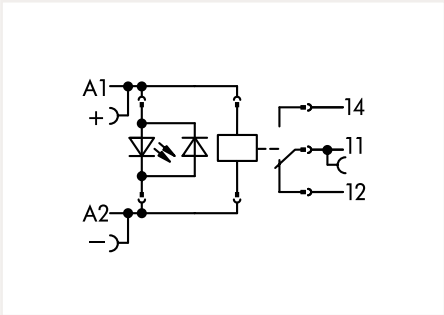
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508 (max. 10 A)
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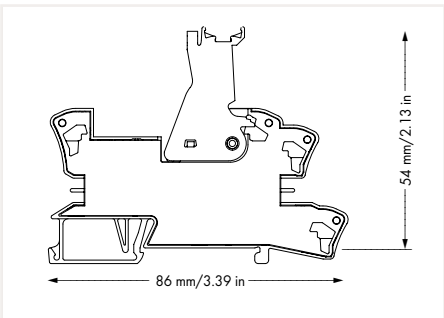
Current-Carrying Capacity Curve

Relay Module 788 Series



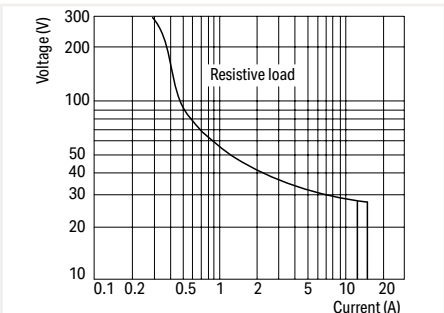
Relay Module; 1 changeover contact; Limiting continuous current: 16 A; Gold contacts; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	19 mA	788-404	20



Note:

- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

Control Circuit

Input voltage range	±10 %
---------------------	-------

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgNi + Au
Limiting continuous current	16 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 6 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	5 V / 2 mA / 50 mW
Pull-in time (typ.)	7 ms
Drop-out time (typ.)	3 ms
Bounce time (typ.)	6 ms
Electrical life (NO; resistive load; 23 °C)	70 x 10 ³ switching operations
Mechanical life	30 x 10 ⁶ switching operations
Switching load with/without load (max.)	10 min ⁻¹ / 1200 min ⁻¹

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

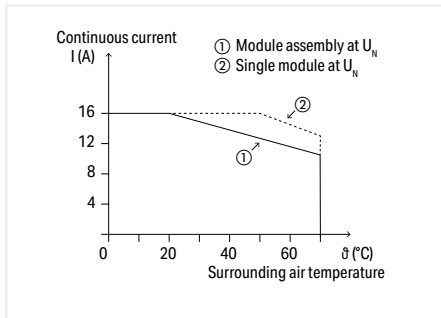
Weight	46.1 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

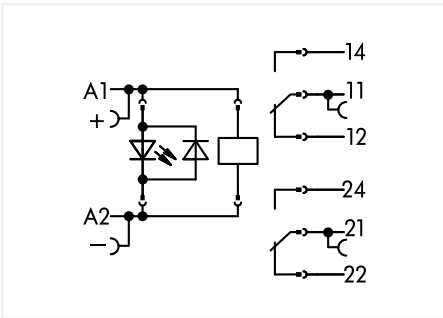
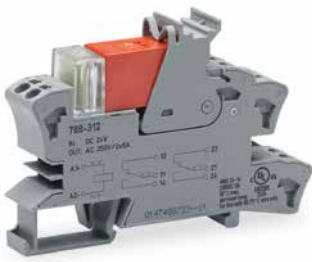
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508
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Current-Carrying Capacity Curve

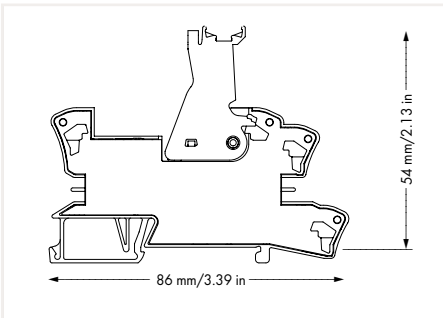
Relay Module 788 Series

1



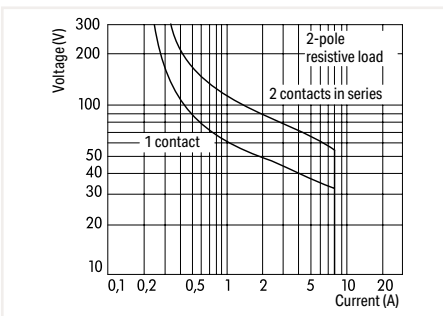
Relay Module; 2 changeover contacts; Limiting continuous current: 8 A; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
12 VDC	36 mA	788-311	20
24 VDC	19 mA	788-312	20
48 VDC	11 mA	788-313	20
60 VDC	11 mA	788-314	20
110 VDC	6 mA	788-315	20



Note:

- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit

Input voltage range	±10 %
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Load Circuit

Number of changeover/switchover contacts	2
Contact material	AgNi 90/10
Limiting continuous current	8 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	13 ms
Bounce time (typ.)	10 ms
Electrical life (NO; resistive load; 23 °C)	10 x 10 ⁵ switching operations
Mechanical life	30 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 1200 min ⁻¹

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

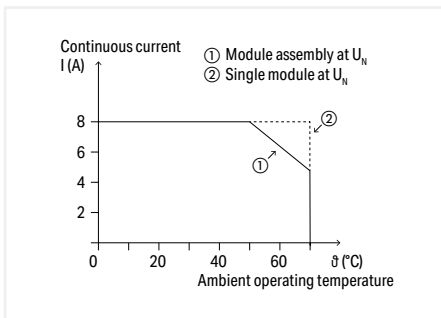
Weight	45.4 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C

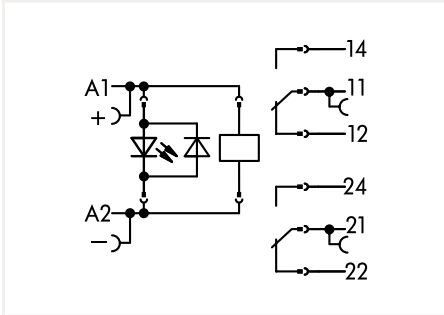
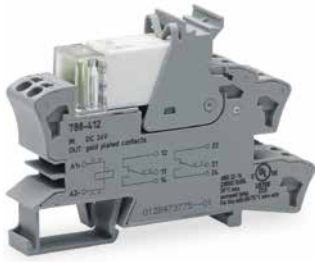
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508
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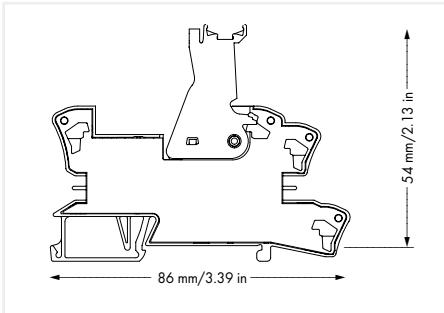
Current-Carrying Capacity Curve

Relay Module 788 Series



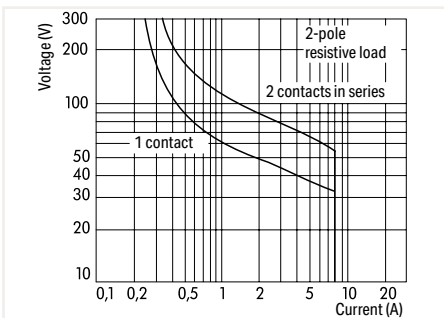
Relay Module; 2 changeover contacts; Limiting continuous current: 8 A; Gold contacts; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	17 mA	788-412	20
110 VDC	5 mA	788-415	20



Note:

- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

Control Circuit

Input voltage range	$\pm 10\%$
---------------------	------------

Load Circuit

Number of changeover/switchover contacts	2
Contact material	AgNi + Au
Limiting continuous current	8 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	5 V / 2 mA / 50 mW
Pull-in time (typ.)	7 ms
Drop-out time (typ.)	3 ms
Bounce time (typ.)	6 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	30 x 10 ⁶ switching operations
Switching load with/without load (max.)	10 min ⁻¹ / 1200 min ⁻¹

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
---------------	-------------

Material Data

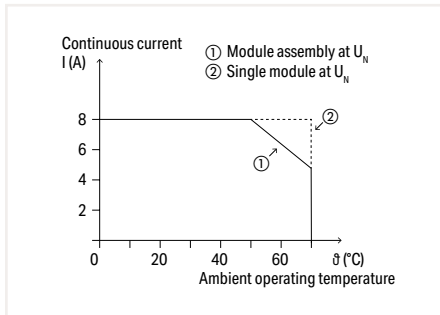
Weight	47.6 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

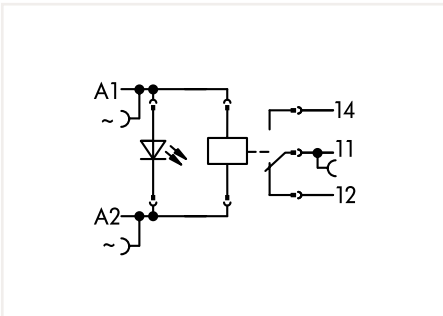
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508
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Current-Carrying Capacity Curve

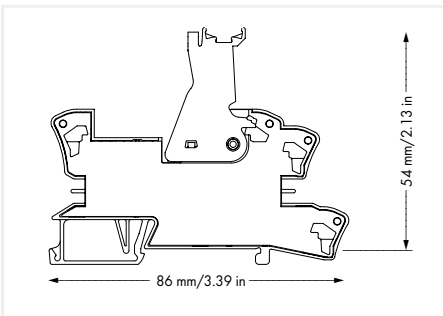
Relay Module 788 Series

1



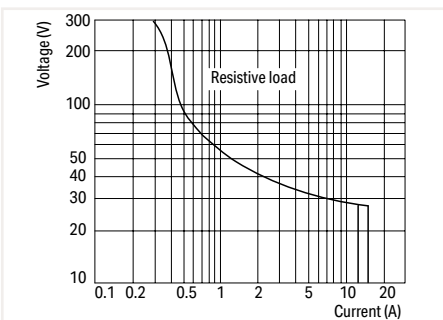
Relay Module; 1 changeover contact; Limiting continuous current: 16 A; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VAC	34 mA	788-506	20
115 VAC	8 mA	788-507	20
230 VAC	3.5 mA	788-508	20



Note:

- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit

Input voltage range	±10 %
---------------------	-------

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgNi 90/10
Limiting continuous current	16 A
Inrush current (resistive) max.	30 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 6 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	10 ms
Drop-out time (typ.)	35 ms
Bounce time (typ.)	6 ms
Electrical life (NO; resistive load; 23 °C)	30 x 10 ⁶ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 600 min ⁻¹

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

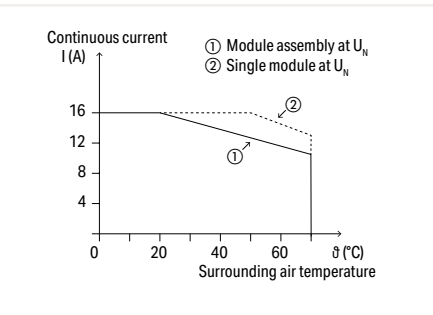
Weight	46.4 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C

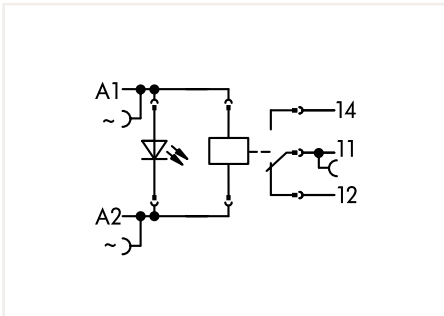
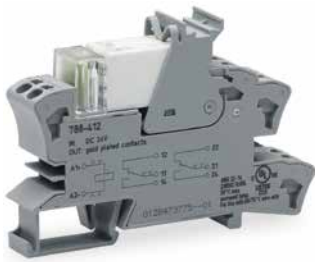
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508
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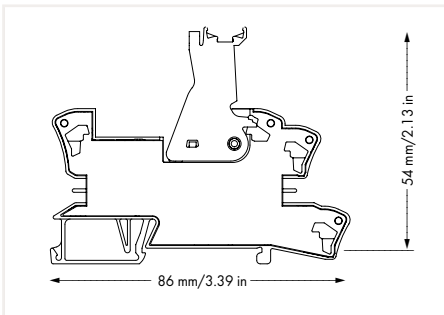
Current-Carrying Capacity Curve

Relay Module 788 Series



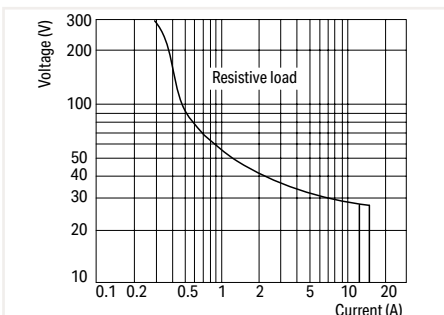
Relay Module; 1 changeover contact; Limiting continuous current: 16 A; Gold contacts; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
115 VAC	8.2 mA	788-607	20
230 VAC	5 mA	788-608	20



Note:

- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

Control Circuit

Input voltage range	±10 %
---------------------	-------

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgNi + Au
Limiting continuous current	16 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 6 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	5 V / 2 mA / 50 mW
Pull-in time (typ.)	7 ms
Drop-out time (typ.)	3 ms
Bounce time (typ.)	6 ms
Electrical life (NO; resistive load; 23 °C)	70 x 10 ³ switching operations
Mechanical life	30 x 10 ⁶ switching operations
Switching load with/without load (max.)	10 min ⁻¹ / 1200 min ⁻¹

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
---------------	-------------

Material Data

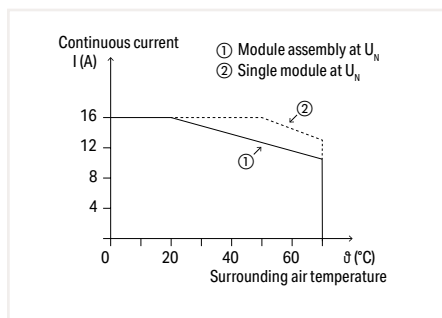
Weight	44.9 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

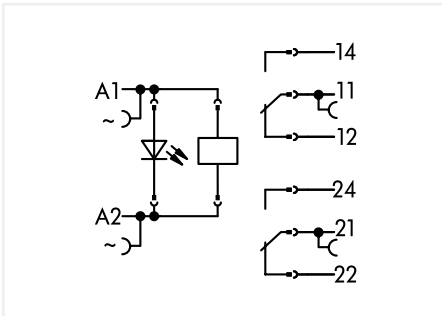
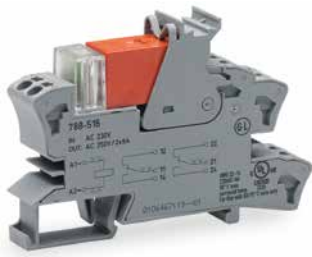
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508
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Current-Carrying Capacity Curve

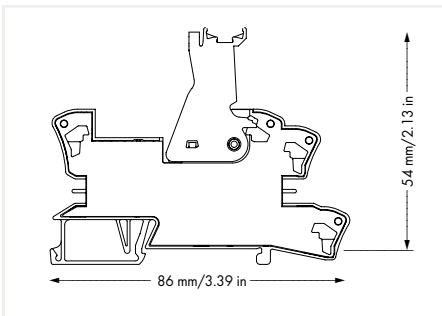
Relay Module 788 Series

1



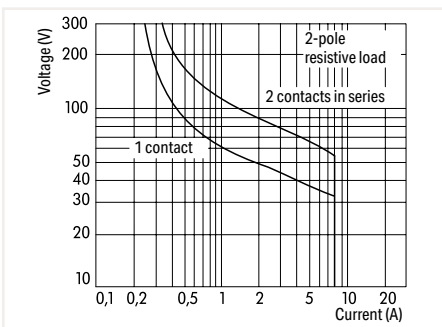
Relay Module; 2 changeover contacts; Limiting continuous current: 8 A; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VAC	34 mA	788-512	20
115 VAC	8 mA	788-515	20
230 VAC	3.5 mA	788-516	20



Note:

- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit

Input voltage range	±10 %
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Load Circuit

Number of changeover/switchover contacts	2
Contact material	AgNi 90/10
Limiting continuous current	8 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	10 ms
Drop-out time (typ.)	35 ms
Bounce time (typ.)	10 ms
Electrical life (NO; resistive load; 23 °C)	10 x 10 ⁵ switching operations
Mechanical life	30 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 1200 min ⁻¹

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

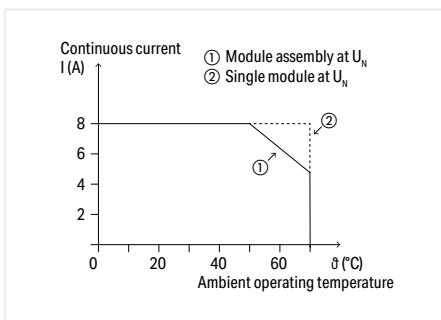
Weight	47.7 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C

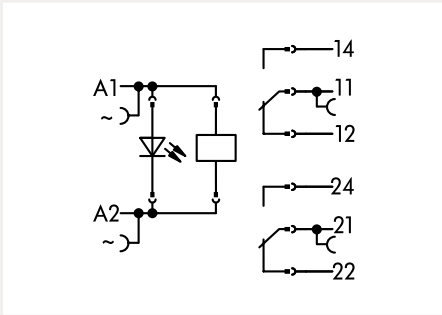
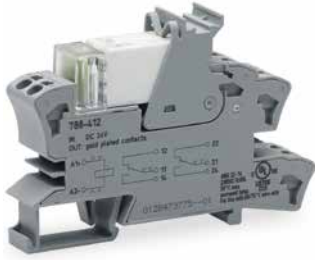
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; GL; UL 508
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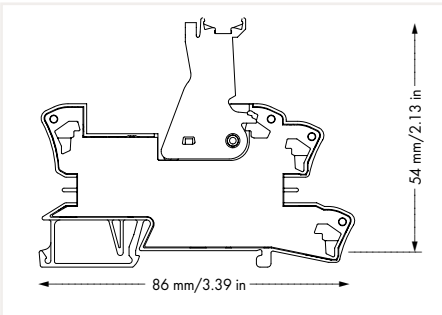
Current-Carrying Capacity Curve

Relay Module 788 Series



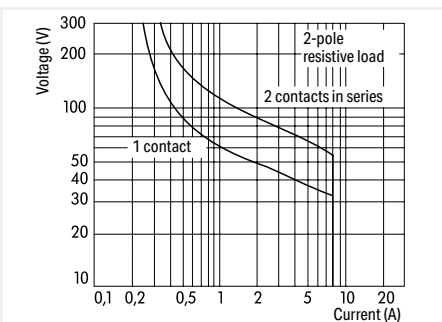
Relay Module; 2 changeover contacts; Limiting continuous current: 8 A; Gold contacts; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
115 VAC	8.2 mA	788-615	20
230 VAC	5 mA	788-616	20



Note:

- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

Control Circuit

Input voltage range	±10 %
---------------------	-------

Load Circuit

Number of changeover/switchover contacts	2
Contact material	AgNi + Au
Limiting continuous current	8 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	5 V / 2 mA / 50 mW
Pull-in time (typ.)	7 ms
Drop-out time (typ.)	3 ms
Bounce time (typ.)	6 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	30 x 10 ⁶ switching operations
Switching load with/without load (max.)	10 min ⁻¹ / 1200 min ⁻¹

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

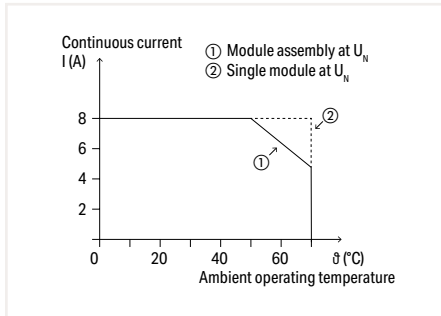
Weight	47.5 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

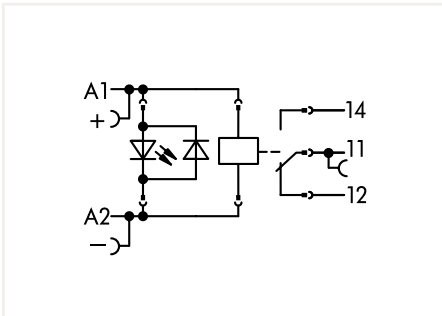
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508
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Current-Carrying Capacity Curve

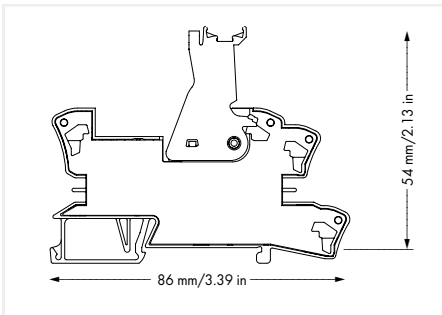
Relay Module 788 Series

1



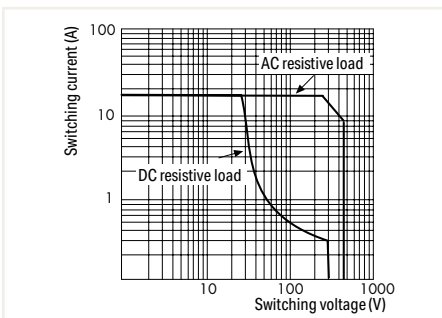
Relay Module; 1 changeover contact; Limiting continuous current: 16 A; for lamp loads; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
12 VDC	35 mA	788-353	20
24 VDC	19 mA	788-354	20



Note:

- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



Load Limit Curve

Control Circuit

Input voltage range	-15 ... +20 %
---------------------	---------------

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgSnO ₂
Limiting continuous current	16 A
Inrush current (resistive) max.	120 A (AC) / 50 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Recommended minimum load	5 V / 100 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	5 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	10 x 10 ⁶ switching operations

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

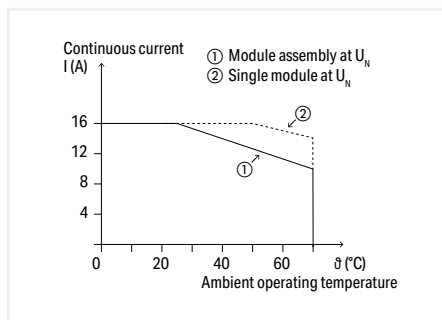
Weight	44.4 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C

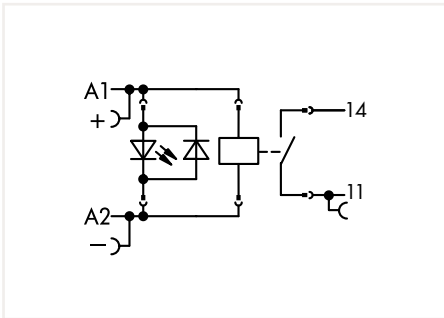
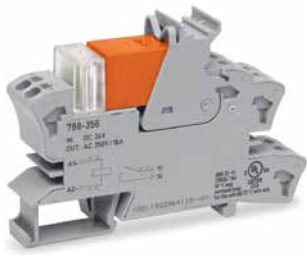
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508 (max. 10 A)
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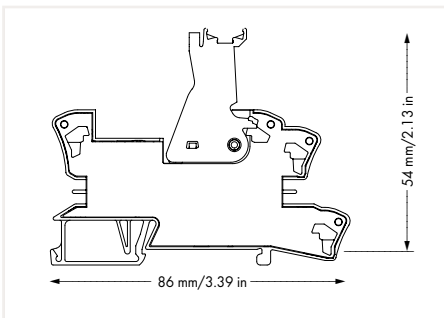
Current-Carrying Capacity Curve

Relay Module 788 Series



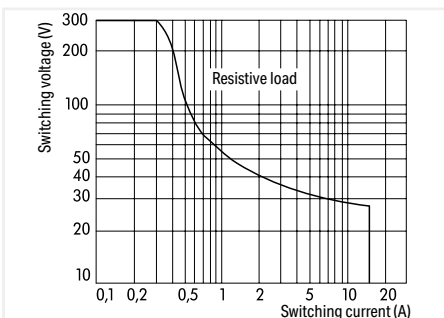
Relay Module; 1 make contact; Limiting continuous current: 16 A; for lamp loads; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	19 mA	788-356	20



Note:

- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit

Input voltage range	-15 ... +20 %
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Load Circuit

Number of make contacts/switch-on contacts	1
Contact material	AgSnO ₂
Limiting continuous current	16 A
Inrush current (resistive) max.	80 A (AC) / 20 ms; 30 A / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 100 mA
Pull-in time (typ.)	9 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	3 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ³ switching operations
Mechanical life	30 x 10 ⁶ switching operations

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

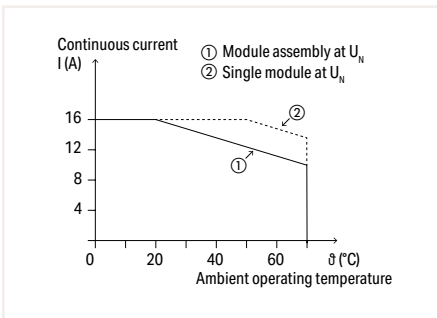
Weight	46.8 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

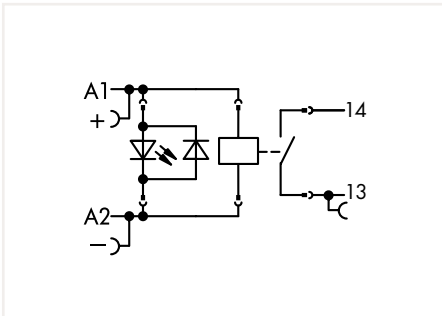
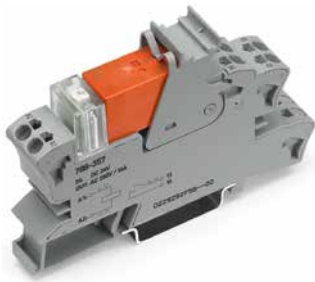
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508 (max. 10 A)
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Current-Carrying Capacity Curve

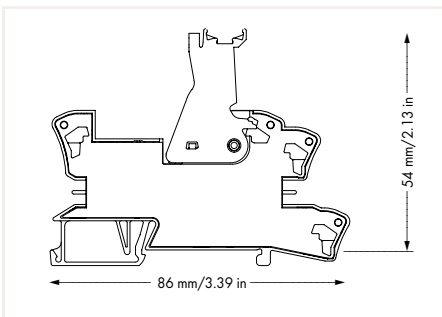
Relay Module 788 Series

1

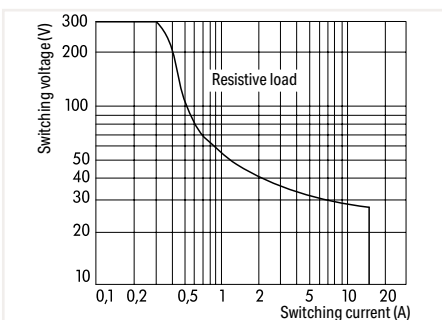


Relay Module; 1 make contact; Limiting continuous current: 16 A; for lamp loads; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	17 mA	788-357	20



- Note:**
- Reinforced insulation between coil and contacts
 - A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
 - To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit

Input voltage range	-10 ... +20 %
---------------------	---------------

Load Circuit

Number of make contacts/switch-on contacts	1
Contact material	AgSnO ₂ , W pre-make contact
Limiting continuous current	16 A
Inrush current (resistive) max.	165 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 100 mA
Pull-in time (typ.)	10 ms
Drop-out time (typ.)	5 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	5 x 10 ³ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 60 min ⁻¹

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1.25 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

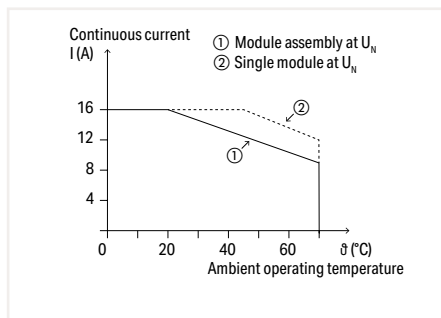
Weight	46.6 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C

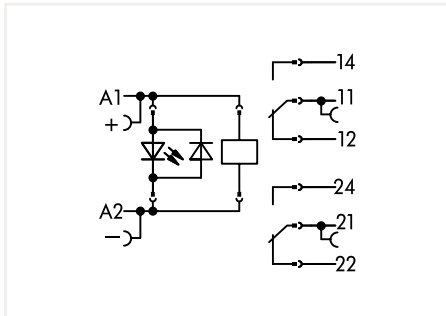
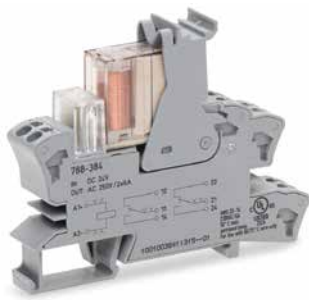
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373
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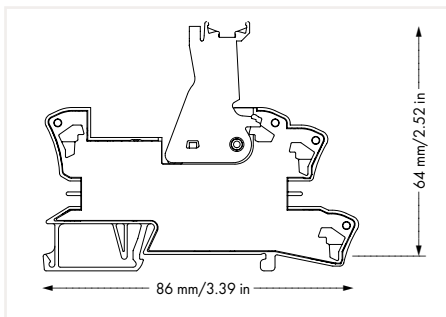
Current-Carrying Capacity Curve

Relay Module 788 Series



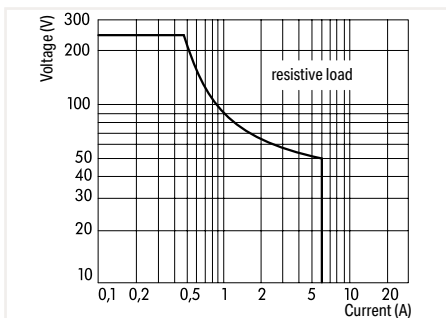
Relay Module; with force-guided contacts; 2 change-over contacts; Limiting continuous current: 6 A; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	31 mA	788-384	10



Note:

- Per EN 50205, it is only permitted to use 1 make contact/1 break contact for safety circuits (11-14 and 22-21 or 12-11 and 21-24).
- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit

Input voltage range	-15 ... +10 %
---------------------	---------------

Load Circuit

Number of changeover/switchover contacts	2
Contact material	AgNi
Limiting continuous current	6 A
Inrush current (resistive) max.	14 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 3 A / 24 VDC
Recommended minimum load	5 V / 10 mA
Pull-in time (typ.)	10 ms
Drop-out time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	10 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 300 min ⁻¹
Mechanical force-guided operation	Type A
Type of basic relay	TE SR2M

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1.5 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	3 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	64 mm / 2.52 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

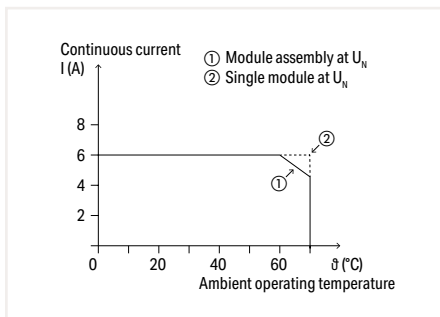
Weight	50.3 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

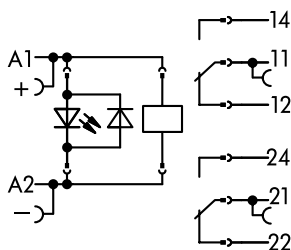
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508
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Current-Carrying Capacity Curve

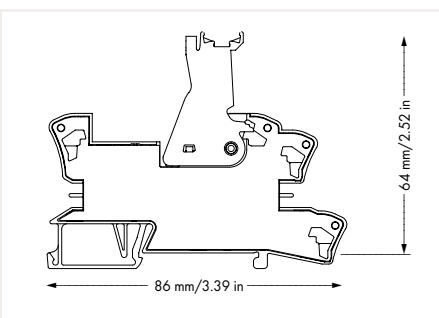
Relay Module

788 Series



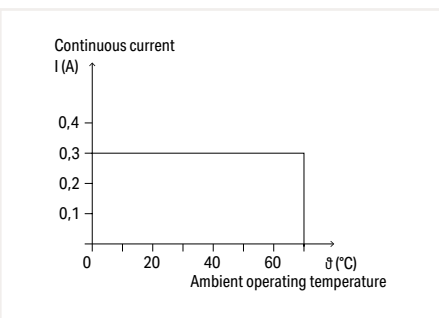
Relay Module; with force-guided contacts; 2 change-over contacts; Limiting continuous current: 0.3 A; Gold contacts; Status indicator: green; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	30 mA	788-906	10



Note:

- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



Current-Carrying Capacity Curve

Control Circuit

Input voltage range	-15 ... +10 %
---------------------	---------------

Load Circuit

Number of changeover/switchover contacts	2
Contact material	AgNi + Au
Limiting continuous current	0.3 A
Switching voltage (max.)	60 VAC
Switching power (resistive) max.	18 VA (AC)
Recommended minimum load	0.1 V / 1 mA / 1 mW
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	12 ms
Electrical life (NO; resistive load; 23 °C)	200 x 10 ⁵ switching operations
Mechanical life	50 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 600 min ⁻¹
Mechanical force-guided operation	Type A
Type of basic relay	Dold OA 5669

Signaling

Status indicator	Green LED
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Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1.5 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	64 mm / 2.52 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	50 g
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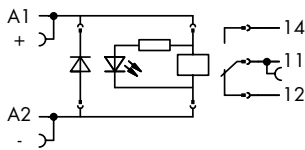
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature UL (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

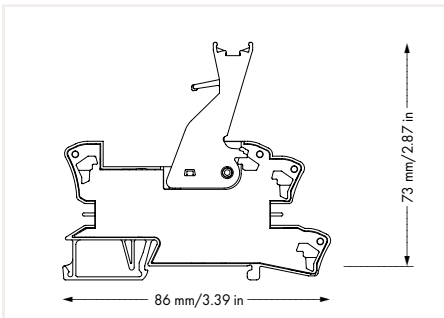
Standards/specifications	EN 61010-2-201, EN 61810-3; UL 508 (max. 40 °C)
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Relay Module 788 Series



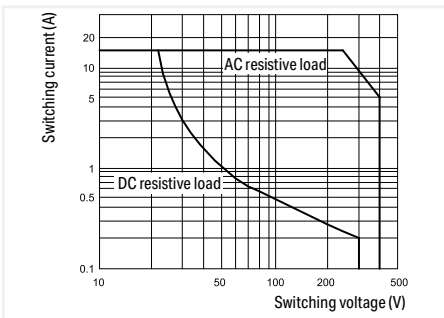
Relay Module; 1 changeover contact; Limiting continuous current: 16 A; Manually operated; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	16.7 mA	788-341	15



Note:

- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit

Input voltage range	±10 %
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Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgNi
Limiting continuous current	16 A
Inrush current (resistive) max.	24 A (AC) / 4 s; 32 A / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 240 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	8 ms
Bounce time (typ.)	6 ms
Electrical life (NO; resistive load; 23 °C)	10 x 10 ⁸ switching operations
Mechanical life	5 x 10 ⁸ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 300 min ⁻¹

Signaling

Status indicator	Red LED; mechanical
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Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

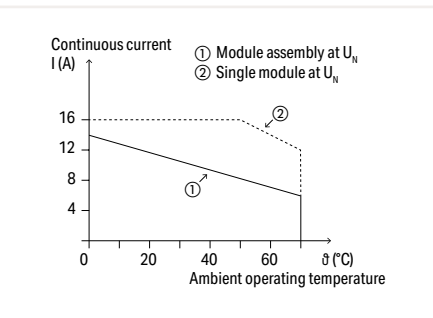
Weight	55.2 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C

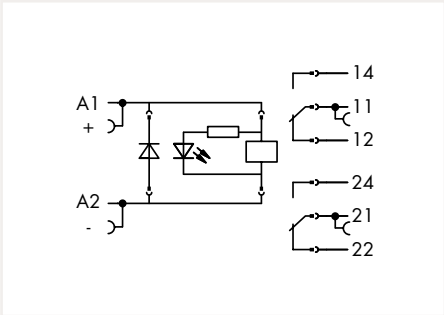
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508 (max. 10 A)
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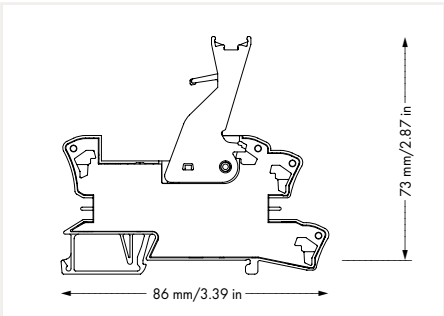
Current-Carrying Capacity Curve

Relay Module 788 Series



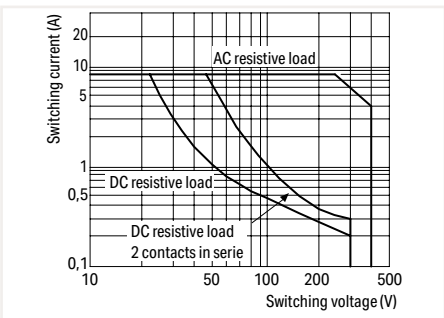
Relay Module; 2 changeover contacts; Limiting continuous current: 8 A; Manually operated; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	16.7 mA	788-346	15



Note:

- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit

Input voltage range	±10 %
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Load Circuit

Number of changeover/switchover contacts	2
Contact material	AgNi
Limiting continuous current	8 A
Inrush current (resistive) max.	12 A (AC) / 4 s; 16 A / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 1.5 A / 240 VAC; DC 13: 1 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	8 ms
Bounce time (typ.)	7 ms
Electrical life (NO; resistive load; 23 °C)	10 x 10 ³ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 300 min ⁻¹

Signaling

Status indicator	Red LED; mechanical
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Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

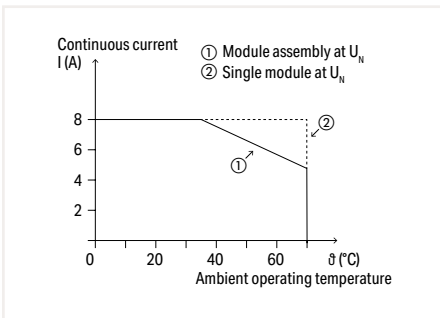
Weight	34.6 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C

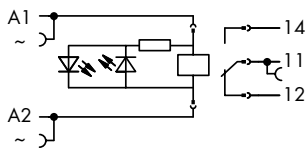
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508
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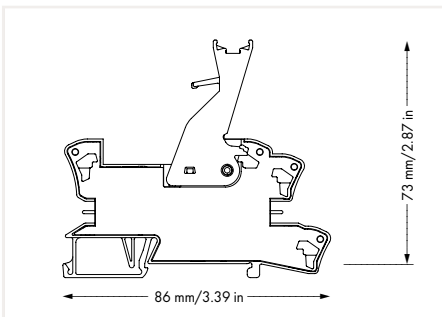
Current-Carrying Capacity Curve

Relay Module 788 Series



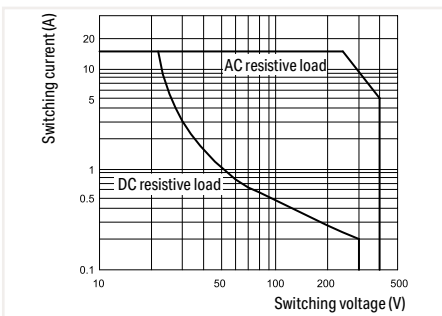
Relay Module; 1 changeover contact; Limiting continuous current: 16 A; Manually operated; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VAC	31.6 mA	788-541	15
115 VAC	6.6 mA	788-543	15
230 VAC	3.2 mA	788-544	15



Note:

- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit

Input voltage range	±10 %
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Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgNi
Limiting continuous current	16 A
Inrush current (resistive) max.	24 A (AC) / 4 s; 32 A / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 240 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	8 ms
Bounce time (typ.)	6 ms
Electrical life (NO; resistive load; 23 °C)	10 x 10 ⁶ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 300 min ⁻¹

Signaling

Status indicator	Red LED; mechanical
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Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

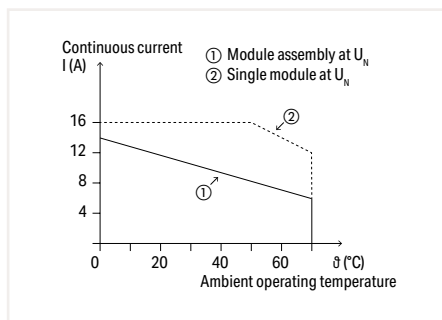
Weight	47 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C

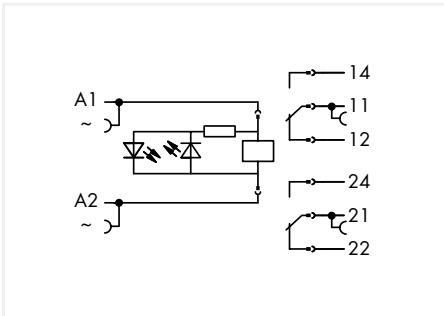
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508 (max. 10 A)
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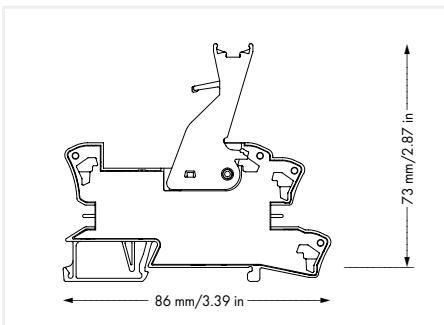
Current-Carrying Capacity Curve

Relay Module 788 Series



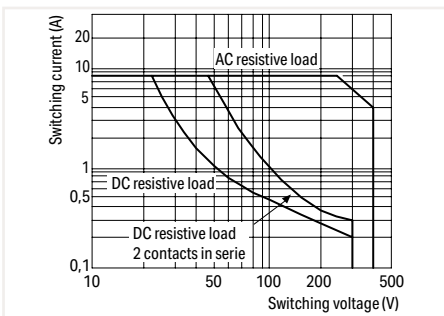
Relay Module; 2 changeover contacts; Limiting continuous current: 8 A; Manually operated; Status indicator: red; 15 mm wide

U _N	I _N	Item No.	Pack. Unit
24 VAC	31.6 mA	788-546	15
115 VAC	6.6 mA	788-548	15
230 VAC	3.2 mA	788-549	15



Note:

- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit

Input voltage range	±10 %
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Load Circuit

Number of changeover/switchover contacts	2
Contact material	AgNi
Limiting continuous current	8 A
Inrush current (resistive) max.	12 A (AC) / 4 s; 16 A / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 1.5 A / 240 VAC; DC 13: 1 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	8 ms
Bounce time (typ.)	7 ms
Electrical life (NO; resistive load; 23 °C)	10 x 10 ³ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 300 min ⁻¹

Signaling

Status indicator	Red LED; mechanical
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Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

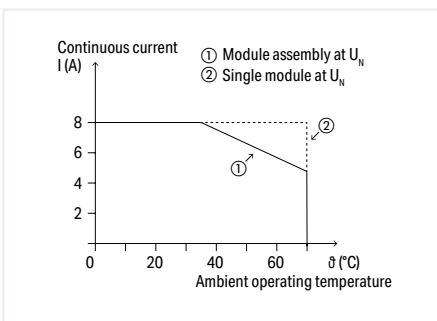
Weight	46.4 g
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Environmental Requirements

Surrounding air temperature (operation at U _N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C

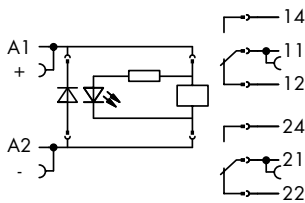
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508
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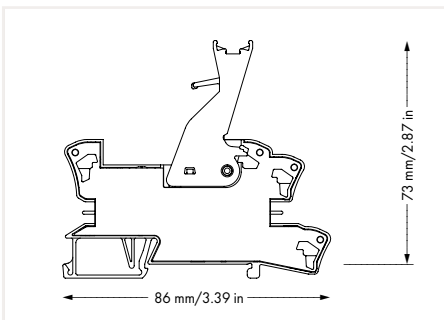
Current-Carrying Capacity Curve

Relay Module 788 Series



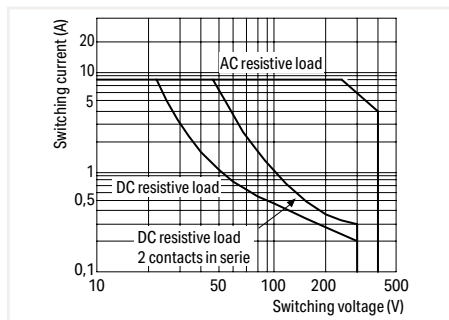
Relay Module; 2 changeover contacts; Limiting continuous current: 8 A; Manually operated; for railway applications; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	19.1 mA	788-390	15



Note:

- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit	
Input voltage range	-30 ... +25 %
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi
Limiting continuous current	8 A
Inrush current (resistive) max.	12 A (AC) / 4 s; 16 A / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 1.5 A / 240 VAC; DC 13: 1 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	8 ms
Bounce time (typ.)	7 ms
Electrical life (NO; resistive load; 23 °C)	10x 10 ³ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 300 min ⁻¹

Signaling	
Status indicator	Red LED; mechanical

Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV _{rms}
Protection type	IP20

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

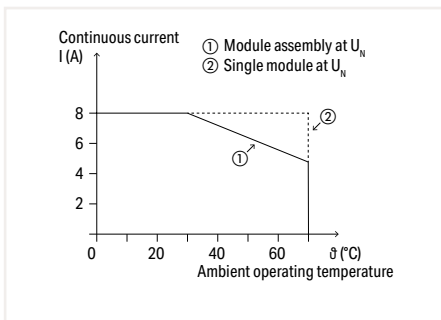
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	86 mm / 3.386 inch

Mechanical Data	
Mounting type	DIN-35 rail

Material Data	
Weight	48 g

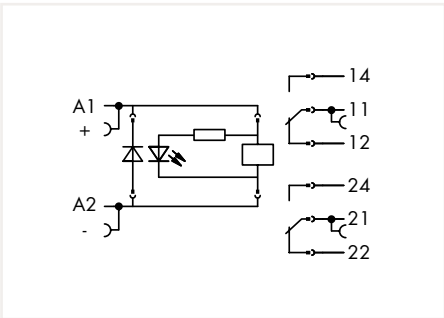
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373



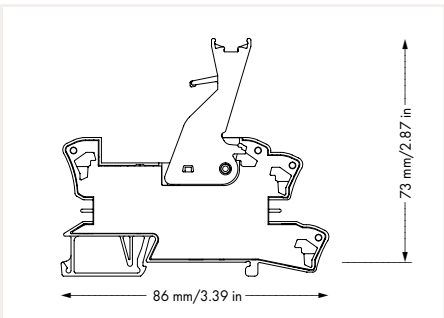
Current-Carrying Capacity Curve

Relay Module 788 Series



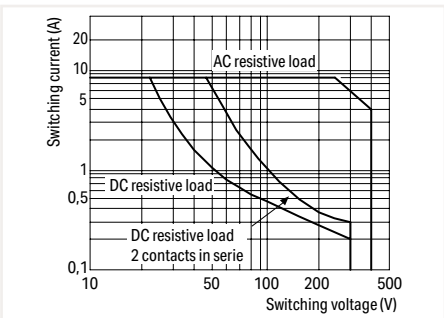
Relay Module; 1 changeover contacts; Limiting continuous current: 16 A; Manually operated; for railway applications; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	19.1 mA	788-391	15



Note:

- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit

Input voltage range	-30 ... +25 %
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Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgNi
Limiting continuous current	16 A
Inrush current (resistive) max.	32 A (AC) / 0.02 s; 24 A / 4 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 240 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	8 ms
Bounce time (typ.)	7 ms
Electrical life (NO; resistive load; 23 °C)	10x 10 ⁹ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 300 min ⁻¹

Signaling

Status indicator	Red LED; mechanical
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Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

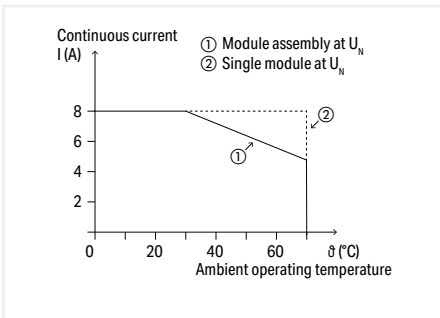
Weight	48 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

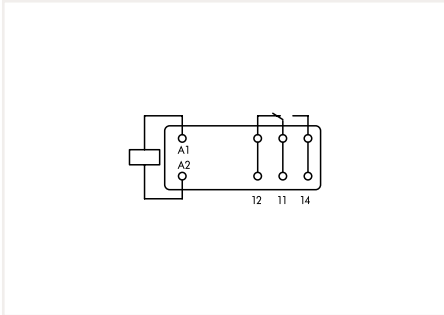
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373
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Current-Carrying Capacity Curve

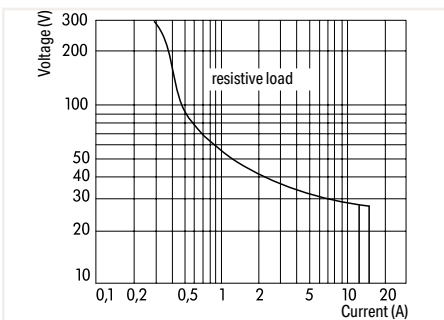
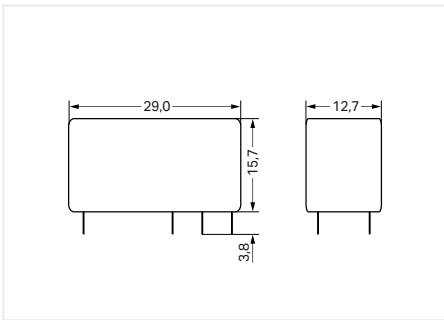
Basic Relay 788 Series

1



Basic Relay; 1 changeover contact; Limiting continuous current: 16 A; 13 mm wide; 15 mm high

U _N	Item No.	Pack. Unit
12 VDC	788-150	20
24 VDC	788-154	20
48 VDC	788-158	20
60 VDC	788-162	20
110 VDC	788-166	20
24 VAC	788-170	20
115 VAC	788-174	20
230 VAC	788-178	20



DC Load Limit Curve

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgNi 90/10
Limiting continuous current	16 A
Inrush current (resistive) max.	30 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 6 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	6 ms
Electrical life (NO; resistive load; 23 °C)	30 x 10 ³ switching operations
Mechanical life	30 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 1200 min ⁻¹

Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP40

Physical Data

Width	12.7 mm / 0.5 inch
Height from the surface	15.7 mm / 0.618 inch
Depth	29 mm / 1.142 inch

Mechanical Data

Mounting type	Pluggable module
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Material Data

Weight	14.7 g
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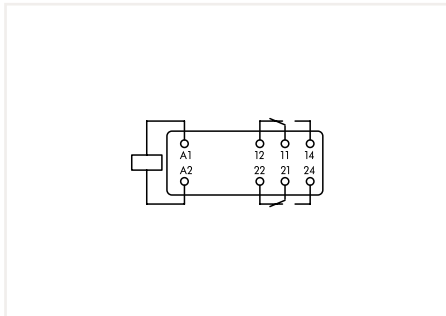
Environmental Requirements

Surrounding air temperature (operation at U _N)	-40 ... +85 °C
Surrounding air temperature (storage)	-40 ... +85 °C

Standards and Specifications

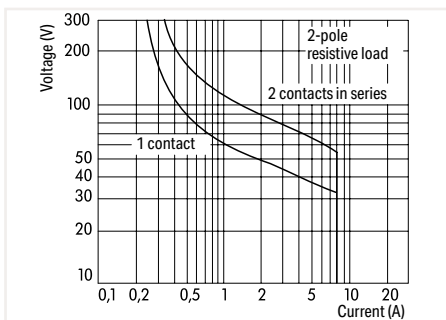
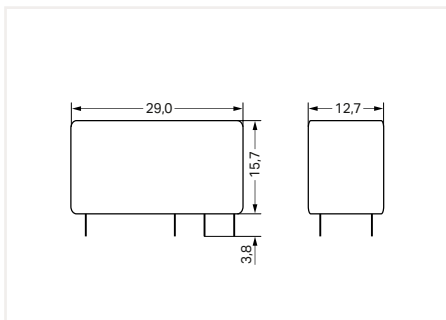
Standards/specifications	EN 61810-1
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Basic Relay 788 Series



Basic Relay; 2 changeover contacts; Limiting continuous current: 8 A; 13 mm wide; 15 mm high

U _N	Item No.	Pack. Unit
12 VDC	788-152	20
24 VDC	788-156	20
48 VDC	788-160	20
60 VDC	788-164	20
110 VDC	788-168	20
24 VAC	788-172	20
115 VAC	788-176	20
230 VAC	788-180	20



DC Load Limit Curve

Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi 90/10
Limiting continuous current	8 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	10 ms
Electrical life (NO; resistive load; 23 °C)	10 x 10 ³ switching operations
Mechanical life	30 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 1200 min ⁻¹

Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV _{rms}
Protection type	IP40

Physical Data	
Width	12.7 mm / 0.5 inch
Height from the surface	15.7 mm / 0.618 inch
Depth	29 mm / 1.142 inch

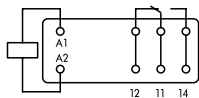
Mechanical Data	
Mounting type	Pluggable module

Material Data	
Weight	13 g

Environmental Requirements	
Surrounding air temperature (operation at U _N)	-40 ... +85 °C
Surrounding air temperature (storage)	-40 ... +85 °C

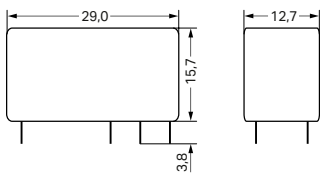
Standards and Specifications	
Standards/specifications	EN 61810-1

Basic Relay 788 Series



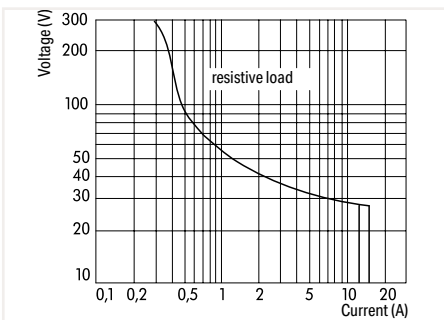
Basic Relay; 1 changeover contact; Limiting continuous current: 16 A; Gold contacts; 13 mm wide; 15 mm high

U_N	Item No.	Pack. Unit
24 VDC	788-155	20
115 VAC	788-175	20
230 VAC	788-179	20



Note:

To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgNi + Au
Limiting continuous current	16 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 6 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	5 V / 2 mA / 50 mW
Pull-in time (typ.)	7 ms
Drop-out time (typ.)	3 ms
Electrical life (NO; resistive load; 23 °C)	30 x 10 ³ switching operations
Mechanical life	30 x 10 ⁶ switching operations

Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}

Physical Data

Width	12.7 mm / 0.5 inch
Height from the surface	15.7 mm / 0.618 inch
Depth	29 mm / 1.142 inch

Mechanical Data

Mounting type	Pluggable module
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Material Data

Weight	11 g
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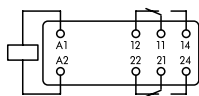
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +85 °C
Surrounding air temperature (storage)	-40 ... +85 °C

Standards and Specifications

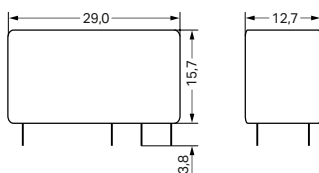
Standards/specifications	EN 61810-1
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Basic Relay 788 Series



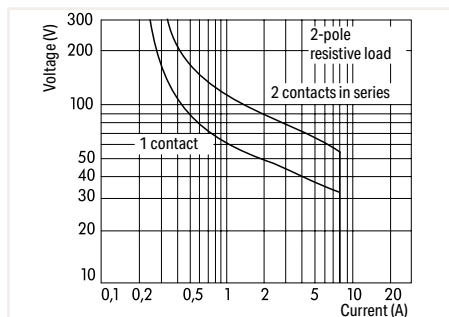
Basic Relay; 2 changeover contacts; Limiting continuous current: 8 A; Gold contacts; 13 mm wide; 15 mm high

U_N	Item No.	Pack. Unit
24 VDC	788-157	20
115 VAC	788-177	20
230 VAC	788-181	20



Note:

To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

Load Circuit

Number of changeover/switchover contacts	2
Contact material	AgNi + Au
Limiting continuous current	8 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	5 V / 2 mA / 50 mW
Pull-in time (typ.)	7 ms
Drop-out time (typ.)	3 ms
Electrical life (NO; resistive load; 23 °C)	10 x 10 ³ switching operations
Mechanical life	30 x 10 ⁶ switching operations

Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV _{rms}

Physical Data

Width	12.7 mm / 0.5 inch
Height from the surface	15.7 mm / 0.618 inch
Depth	29 mm / 1.142 inch

Mechanical Data

Mounting type	Pluggable module
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Material Data

Weight	14.9 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +85 °C
Surrounding air temperature (storage)	-40 ... +85 °C

Standards and Specifications

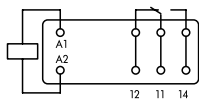
Standards/specifications	EN 61810-1
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Basic Relay 788 Series

1

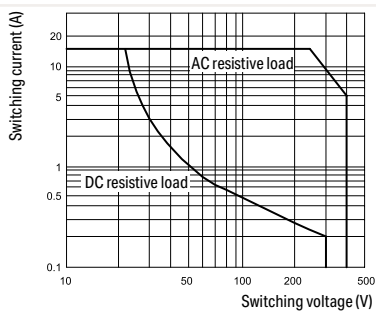
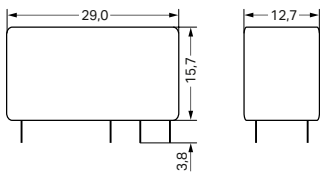


Similar to pictured device



Basic Relay; 1 changeover contact; Limiting continuous current: 16 A; Manually operated; 13 mm wide; 15 mm high

U_N	Item No.	Pack. Unit
24 VDC	788-931	20
230 VAC	788-944	20



DC Load Limit Curve

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgNi
Limiting continuous current	16 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 240 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	8 ms
Electrical life (NO; resistive load; 23 °C)	10 x 10 ³ switching operations
Mechanical life	5 x 10 ⁶ switching operations

Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}

Physical Data

Width	12.7 mm / 0.5 inch
Height from the surface	15.7 mm / 0.618 inch
Depth	29 mm / 1.142 inch

Mechanical Data

Mounting type	Pluggable module
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Material Data

Weight	15.2 g
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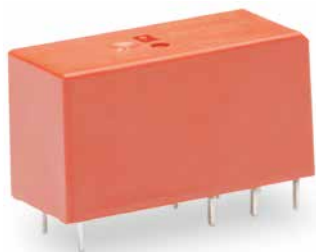
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C

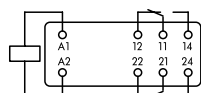
Standards and Specifications

Standards/specifications	EN 61810-1
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Basic Relay 788 Series

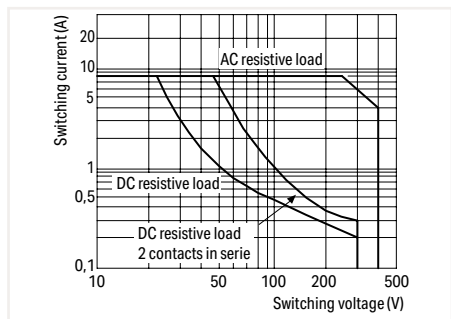
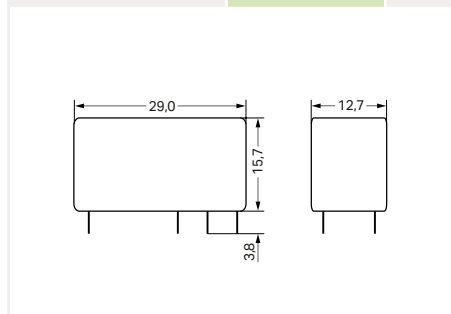


Similar to pictured device



Basic Relay; 2 changeover contact; Limiting continuous current: 8 A; Manually operated; 13 mm wide; 15 mm high

U _N	Item No.	Pack. Unit
24 VDC	788-936	20
24 VAC	788-946	20
230 VAC	788-949	20



DC Load Limit Curve

Load Circuit

Number of changeover/switchover contacts	2
Contact material	AgNi
Limiting continuous current	8 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 1.5 A / 250 VAC; DC 13: 1 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	8 ms
Electrical life (NO; resistive load; 23 °C)	10 x 10 ⁵ switching operations
Mechanical life	5 x 10 ⁶ switching operations

Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}

Physical Data

Width	12.7 mm / 0.5 inch
Height from the surface	15.7 mm / 0.618 inch
Depth	29 mm / 1.142 inch

Mechanical Data

Mounting type	Pluggable module
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Material Data

Weight	15.3 g
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Environmental Requirements

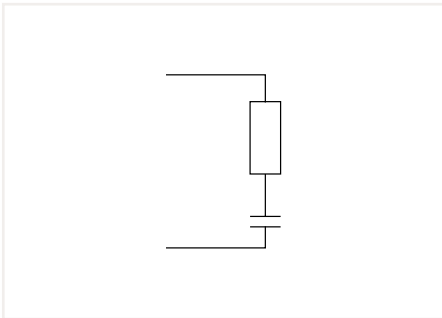
Surrounding air temperature (operation at U _N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C

Standards and Specifications

Standards/specifications	EN 61810-1
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Suppressor Module

788 Series



Filter Module; for miniature switching relays; Pluggable, for relay sockets (788 and 858 Series)

U_N	Item No.	Pack. Unit
110 ... 230 VAC	788-148	50

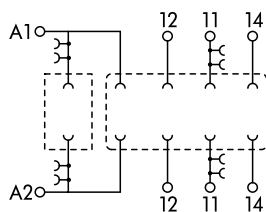
Note:

- To guarantee safe operation, residual voltages (due to the cable capacitance of long connection lines or leakage currents of semi-conductor switches and their protective circuits) must be lower than the release voltage of the relays.
- For DC relays, the release voltage is specified with $\leq 5\%$ of the nominal voltage; for AC relays, it is 15% of the nominal voltage (per VDE 0435).
- The relay may not reset if a high residual voltage exists. Depending on the reason for the residual voltage, changing the cable routing or a parallel connection of an RC element could remedy this situation.

Operating Data	
Nominal operating voltage	110 ... 230 VAC
Operating voltage	0 ... 230 VAC
Power consumption at U_N	7.2 mA (230 VAC; 50 Hz); 3.6 mA (115 VAC; 50 Hz)
Nominal mains frequency range	50 ... 60 Hz
Module Characteristics	
Resistance	470 Ω
Capacitance	100 nF
Safety and protection	
Protection type	IP20
Physical Data	
Width	15 mm / 0.591 inch
Height from the surface	15.7 mm / 0.618 inch
Depth	10 mm / 0.394 inch
Mechanical Data	
Mounting type	Pluggable module
Material Data	
Weight	1.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Standards and Specifications	
Standards/specifications	EN 60664-1

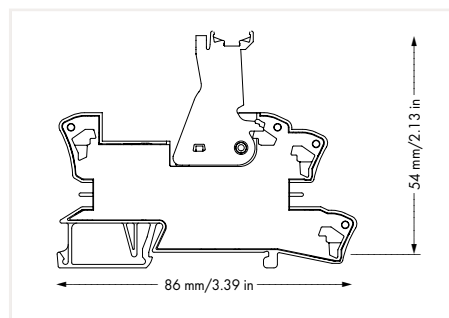
Relay Socket

788 Series



Relay Socket; 1 changeover contact; for 15 mm basic relays

Item No.	Pack. Unit
788-100	20



Control Circuit

Nominal input voltage U_N	250 VAC/DC (depends on relay)
Input voltage range	0 ... 250 V (depends on relay)

Load Circuit

Number of changeover/switchover contacts	1
Limiting continuous current	16 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC)

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	6 kV _{rms} (depends on relay)
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms} (depends on relay)
Dielectric strength, channel/channel (AC, 1 min.)	(depending on relay)
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	31.3 g
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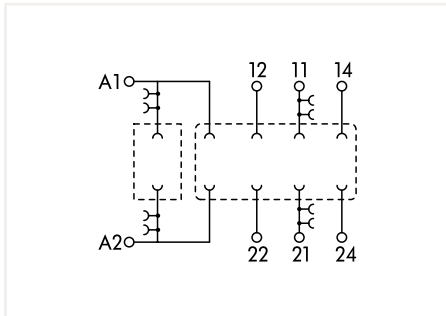
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C (depends on relay)
Surrounding air temperature (storage)	-40 ... +80 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

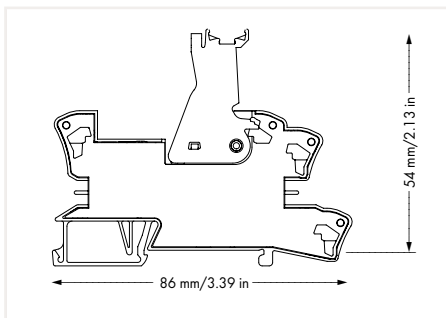
Standards/specifications	EN 60664-1
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Relay Socket 788 Series



Relay Socket; 2 changeover contacts; for 15 mm basic relays

	Item No.	Pack. Unit
	788-102	20



Control Circuit

Nominal input voltage U_N	250 VAC/DC (depends on relay)
Input voltage range	0 ... 250 V (depends on relay)

Load Circuit

Number of changeover/switchover contacts	2
Limiting continuous current	8 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC)

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	6 kV _{rms} (depends on relay)
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms} (depends on relay)
Dielectric strength, load/load circuit (AC, 1 min)	3.5 kV
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	30.7 g
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Environmental Requirements

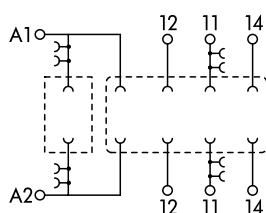
Surrounding air temperature (operation at U_N)	-40 ... +70 °C (depends on relay)
Surrounding air temperature (storage)	-40 ... +80 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

Standards/specifications	EN 60664-1
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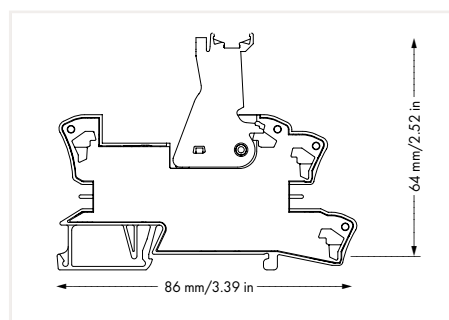
Relay Socket

788 Series



Relay Socket; 1 changeover contact; for 25 mm basic relays

Item No.	Pack. Unit
788-101	15



Control Circuit

Nominal input voltage U_N	250 VAC/DC (depends on relay)
Input voltage range	0 ... 250 V (depends on relay)

Load Circuit

Number of changeover/switchover contacts	1
Limiting continuous current	16 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC)

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	6 kV _{rms} (depends on relay)
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms} (depends on relay)
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	25 mm / 0.984 inch
Height from upper-edge of DIN-rail	64 mm / 2.52 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	31 g
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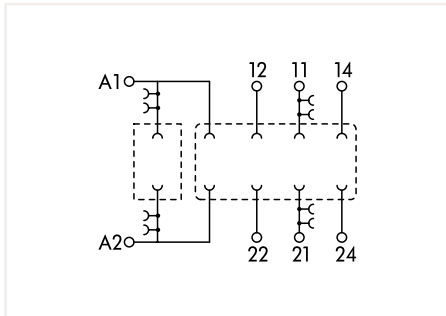
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C (depends on relay)
Surrounding air temperature (storage)	-40 ... +80 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

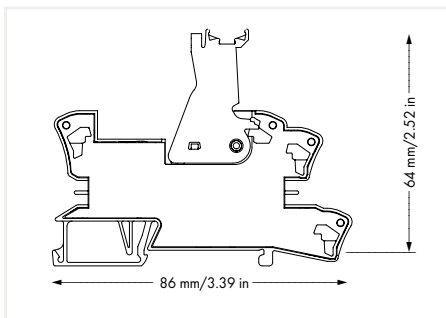
Standards/specifications	EN 60664-1
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Relay Socket 788 Series



Relay Socket; 2 changeover contacts; for 25 mm basic relays

	Item No.	Pack. Unit
	788-103	15



Control Circuit

Nominal input voltage U_N	250 VAC/DC (depends on relay)
Input voltage range	0 ... 250 V (depends on relay)

Load Circuit

Number of changeover/switchover contacts	2
Limiting continuous current	8 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC)

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	6 kV _{rms} (depends on relay)
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms} (depends on relay)
Dielectric strength, channel/channel (AC, 1 min.)	(depending on relay)
Dielectric strength, load/load circuit (AC, 1 min)	3.5 kV _{rms} (depends on relay)
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	25 mm / 0.984 inch
Height from upper-edge of DIN-rail	64 mm / 2.52 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	31 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C (depends on relay)
Surrounding air temperature (storage)	-40 ... +80 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

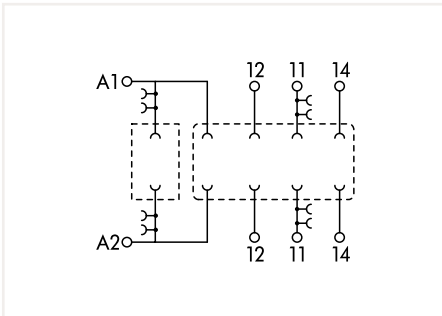
Standards/specifications	EN 60664-1
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Relay Socket

788 Series

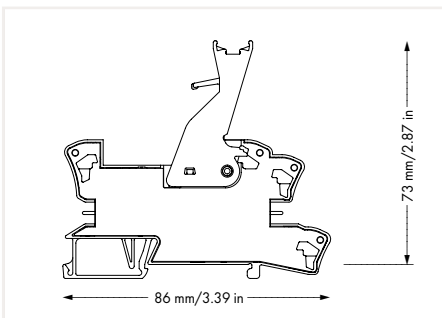


Similar to pictured device



Relay Socket; 1 changeover contact; Manually operated; for 25 mm basic relays

	Item No.	Pack. Unit
	788-108	15

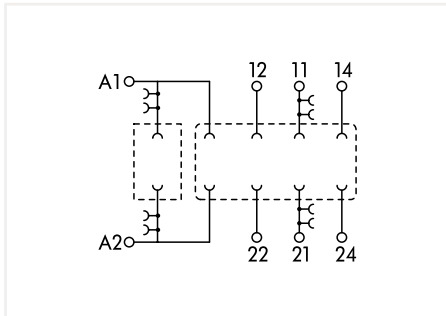


Control Circuit	
Nominal input voltage U_N	250 VAC/DC (depends on relay)
Input voltage range	0 ... 250 V (depends on relay)
Load Circuit	
Number of changeover/switchover contacts	1
Limiting continuous current	16 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC)
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	6 kV _{rms} (depends on relay)
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms} (depends on relay)
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	32 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-40 ... +70 °C (depends on relay)
Surrounding air temperature (storage)	-40 ... +80 °C
Processing temperature	-25 ... +50 °C
Standards and Specifications	
Standards/specifications	EN 60664-1

Relay Socket 788 Series

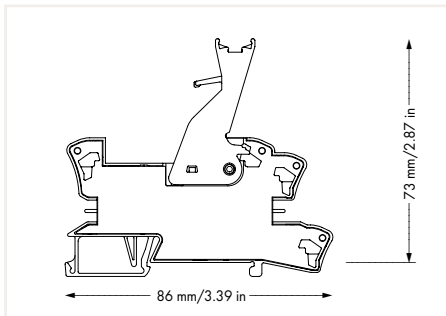


Similar to pictured device



Relay Socket; 2 changeover contacts; Manually operated; for 25 mm basic relays

	Item No.	Pack. Unit
	788-109	15



Control Circuit

Nominal input voltage U_N	250 VAC/DC (depends on relay)
Input voltage range	0 ... 250 V (depends on relay)

Load Circuit

Number of changeover/switchover contacts	2
Limiting continuous current	8 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC)

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	6 kV _{rms} (depends on relay)
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms} (depends on relay)
Dielectric strength, load/load circuit (AC, 1 min)	3.5 kV _{rms} (depends on relay)
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	32.1 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C (depends on relay)
Surrounding air temperature (storage)	-40 ... +80 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

Standards/specifications	EN 60664-1
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Accessories

1



Accessories for relay modules; Operation status indicator: red

U _N	I _N	Item No.	Pack. Unit
24 VDC	2.4 mA	788-120	50(2x25)
48 VDC	1.9 mA	788-121	50(2x25)
110 VDC	1.9 mA	788-122	50(2x25)
24 VAC	2.1 mA	788-123	50(2x25)
115 VAC	1.7 mA	788-124	50(2x25)
230 VAC	1.6 mA	788-125	50(2x25)



Twin ferrule; Sleeve for 2 x 1 mm² / 2 x 18 AWG; red, insulated; 12 mm long

Color	Item No.	Pack. Unit
red	216-542	500



Comb-style jumper bar; insulated; 18 A

Description	Item No.	Pack. Unit
2-way	788-113	200 (8x25)
3-way	788-114	100 (4x25)
4-way	788-115	100 (4x25)
6-way	788-116	100 (4x25)
8-way	788-117	100 (4x25)
1 to 3	788-118	100 (4x25)



Push-in type jumper bar; light gray; insulated; 18 A

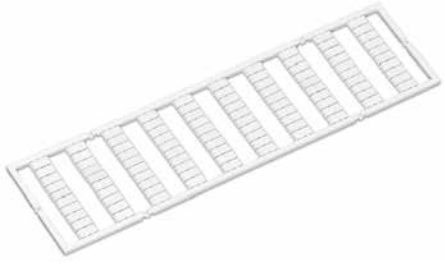
Description	Item No.	Pack. Unit
2-way	859-402	200 (8x25)



Operating tool with a partially insulated shaft; Type 2; (3.5 x 0.5) mm blade

	Item No.	Pack. Unit
	210-720	50

Accessories



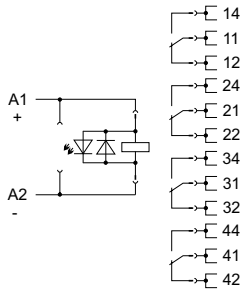
WMB marker card; 10 strips with 10 markers; white; with black printing

Marking	Item No.	Pack. Unit
plain	793-501	5 cards
1 ... 10 (10 x)	793-502	5 cards
11 ... 20 (10 x)	793-503	5 cards
21 ... 30 (10 x)	793-504	5 cards
31 ... 40 (10 x)	793-505	5 cards
41 ... 50 (10 x)	793-506	5 cards
1 ... 50 (2 x)	793-566	5 cards

WMB Inline; for terminal block width: 5 ... 5.2 mm; plain; 1500 markers/reel; white

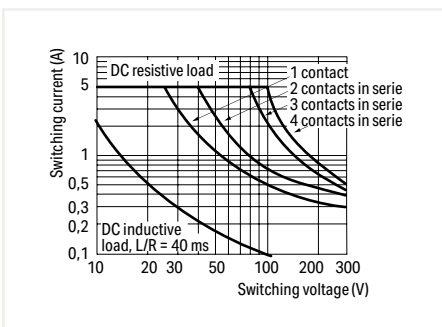
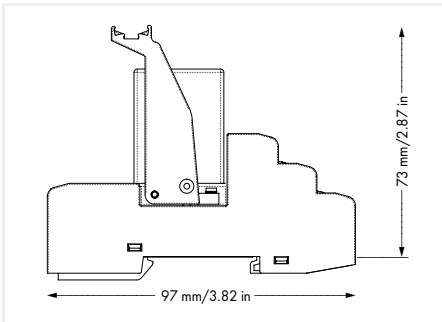
Marking	Item No.	Pack. Unit
plain	2009-115	1

Relay Module 858 Series



Relay Module; 4 changeover contacts; Limiting continuous current: 5 A; manually operated; Status indicator: red; 31 mm wide

U_N	I_N	Item No.	Pack. Unit
12 VDC	75 mA	858-303	5
24 VDC	36.9 mA	858-304	5
48 VDC	18.5 mA	858-305	5
110 VDC	10 mA	858-307	5
220 VDC	4.1 mA	858-308	5



DC Load Limit Curve

Control Circuit

Input voltage range	-20 ... +10 %
---------------------	---------------

Load Circuit

Number of changeover/switchover contacts	4
Contact material	AgCe
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 100 mA
Pull-in time (typ.)	25 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	20 x 10 ⁶ switching operations

Signaling

Status indicator	Red LED; mechanical
------------------	---------------------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	1.5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 1.5 mm ² / 22 ... 16 AWG
Fine-stranded conductor	0.34 ... 1.5 mm ² / 22 ... 16 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch
Note (conductor cross section)	2 x 0.34 ... 2 x 1.5 mm ² / 1 x 2.5 mm ² / 2 x 22 ... 2 x 16 AWG

Physical Data

Width	31 mm / 1.22 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	97 mm / 3.819 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	99.5 g
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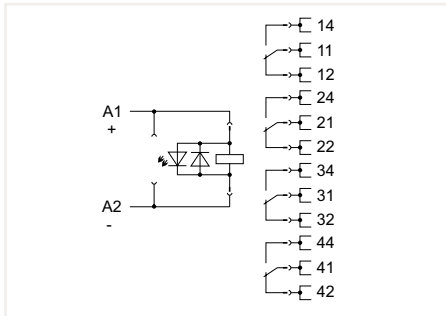
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +70 °C
Surrounding air temperature UL (operation at U_N)	-25 ... +50 °C
Surrounding air temperature (storage)	-40 ... +80 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

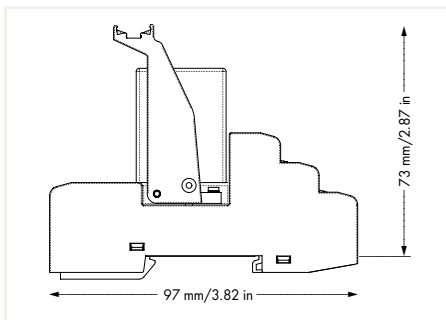
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508 (max. 50 °C); GL (858-304)
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Relay Module 858 Series

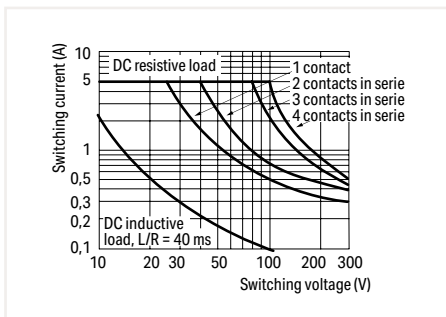


Relay Module; 4 changeover contacts; Limiting continuous current: 5 A; with gold contacts; manually operated; Status indicator: red; 31 mm wide

U _N	I _N	Item No.	Pack. Unit
24 VDC	36.9 mA	858-314	5



Note:
To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

Control Circuit

Input voltage range	-20 ... +10 %
---------------------	---------------

Load Circuit

Number of changeover/switchover contacts	4
Contact material	AgCe + Au
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	5 V / 1 mA / 50 mW
Pull-in time (typ.)	25 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	20 x 10 ⁶ switching operations

Signaling

Status indicator	Red LED; mechanical
------------------	---------------------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	1.5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 1.5 mm ² / 22 ... 16 AWG
Fine-stranded conductor	0.34 ... 1.5 mm ² / 22 ... 16 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch
Note (conductor cross section)	2 x 0.34 ... 2 x 1.5 mm ² / 1 x 2.5 mm ² / 2 x 22 ... 2 x 16 AWG

Physical Data

Width	31 mm / 1.22 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	97 mm / 3.819 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	97.5 g
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Environmental Requirements

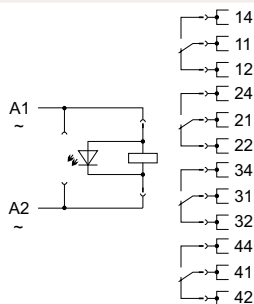
Surrounding air temperature (operation at U _N)	-25 ... +70 °C
Surrounding air temperature UL (operation at U _N)	-25 ... +50 °C
Surrounding air temperature (storage)	-40 ... +80 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; GL; UL 508 (max. 50 °C)
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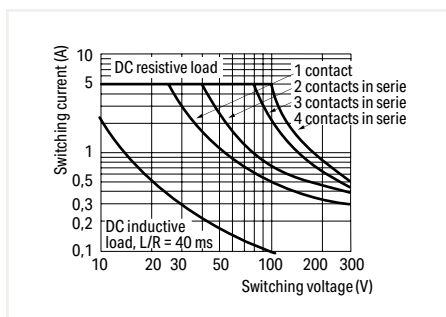
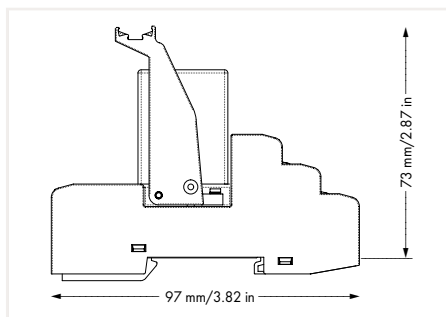
Relay Module

858 Series



Relay Module; 4 changeover contacts; Limiting continuous current: 5 A; manually operated; Status indicator: red; 31 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VAC	50 mA	858-504	5
115 VAC	10 mA	858-507	5
230 VAC	8.3 mA	858-508	5



DC Load Limit Curve

Control Circuit

Input voltage range	-20 ... +10 %
---------------------	---------------

Load Circuit

Number of changeover/switchover contacts	4
Contact material	AgCe
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 100 mA
Pull-in time (typ.)	25 ms
Drop-out time (typ.)	35 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	20 x 10 ⁶ switching operations

Signaling

Status indicator	Red LED; mechanical
------------------	---------------------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	1.5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 1.5 mm ² / 22 ... 16 AWG
Fine-stranded conductor	0.34 ... 1.5 mm ² / 22 ... 16 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch
Note (conductor cross section)	2 x 0.34 ... 2 x 1.5 mm ² / 1 x 2.5 mm ² / 2 x 22 ... 2 x 16 AWG

Physical Data

Width	31 mm / 1.22 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	97 mm / 3.819 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	96.1 g
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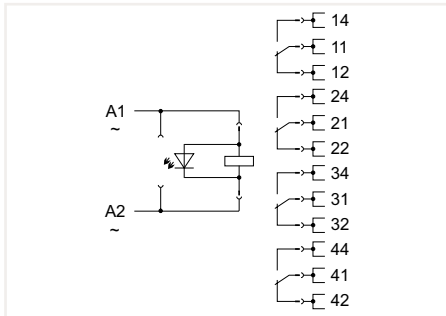
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +70 °C
Surrounding air temperature UL (operation at U_N)	-25 ... +50 °C
Surrounding air temperature (storage)	-40 ... +80 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

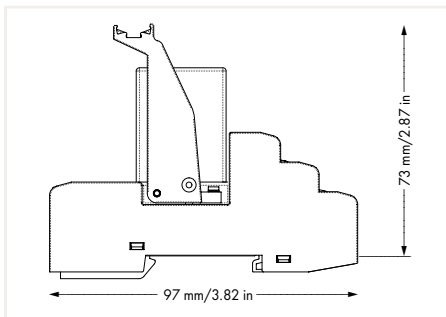
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508 (max. 50 °C)
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Relay Module 858 Series



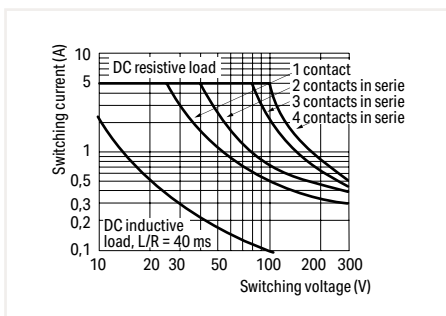
Relay Module; 4 changeover contacts; Limiting continuous current: 5 A; with gold contacts; manually operated; Status indicator: red; 31 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VAC	50 mA	858-514	5
115 VAC	10 mA	858-517	5
230 VAC	8.3 mA	858-518	5



Note:

To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

Control Circuit

Input voltage range	-20 ... +10 %
---------------------	---------------

Load Circuit

Number of changeover/switchover contacts	4
Contact material	AgCe + Au
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	5 V / 1 mA / 50 mW
Pull-in time (typ.)	25 ms
Drop-out time (typ.)	35 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	20 x 10 ⁶ switching operations

Signaling

Status indicator	Red LED; mechanical
------------------	---------------------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	1.5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 1.5 mm ² / 22 ... 16 AWG
Fine-stranded conductor	0.34 ... 1.5 mm ² / 22 ... 16 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch
Note (conductor cross section)	2 x 0.34 ... 2 x 1.5 mm ² / 1 x 2.5 mm ² / 2 x 22 ... 2 x 16 AWG

Physical Data

Width	31 mm / 1.22 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	97 mm / 3.819 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	95.5 g
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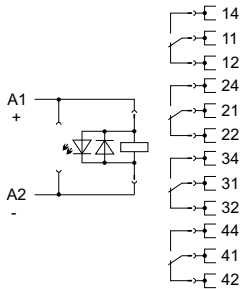
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +70 °C
Surrounding air temperature UL (operation at U_N)	-25 ... +50 °C
Surrounding air temperature (storage)	-40 ... +80 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

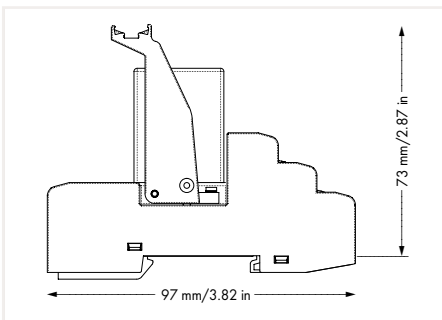
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508 (max. 50 °C)
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Relay Module 858 Series

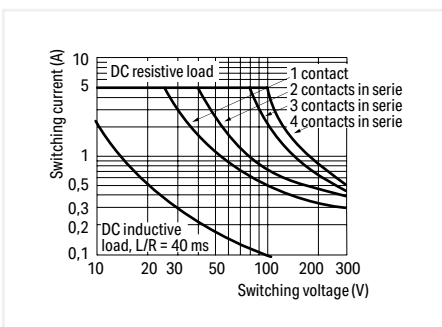


Relay Module; 4 changeover contacts; Limiting continuous current: 5 A; manually operated; for railway applications; Status indicator: red; 31 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	42 mA	858-354	5



Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit

Input voltage range	-30 ... +25 %
---------------------	---------------

Load Circuit

Number of changeover/switchover contacts	4
Contact material	AgCe
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 100 mA
Pull-in time (typ.)	25 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	20 x 10 ⁶ switching operations

Signaling

Status indicator	Red LED; mechanical
------------------	---------------------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	1.5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 1.5 mm ² / 22 ... 16 AWG
Fine-stranded conductor	0.34 ... 1.5 mm ² / 22 ... 16 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch
Note (conductor cross section)	2 x 0.34 ... 2 x 1.5 mm ² / 1 x 2.5 mm ² / 2 x 22 ... 2 x 16 AWG

Physical Data

Width	31 mm / 1.22 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	97 mm / 3.819 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	98.3 g
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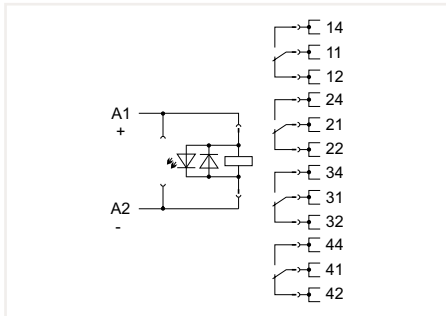
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +80 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

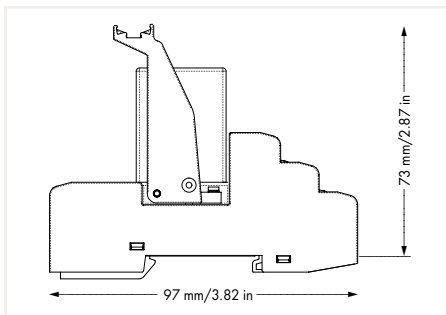
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508
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Relay Module 858 Series



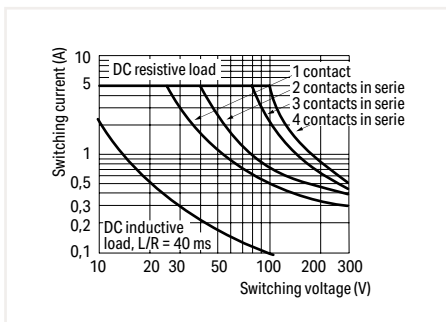
Relay Module; 4 changeover contacts; Limiting continuous current: 5 A; with gold contacts; manually operated; for railway applications; Status indicator: red; 31 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	42 mA	858-355	5



Note:

To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

Control Circuit

Input voltage range	-30 ... +25 %
---------------------	---------------

Load Circuit

Number of changeover/switchover contacts	4
Contact material	AgCe + Au
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1000 VA (AC); DC see load limit curve
Recommended minimum load	5 V / 1 mA / 50 mW
Pull-in time (typ.)	25 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	20 x 10 ⁶ switching operations

Signaling

Status indicator	Red LED; mechanical
------------------	---------------------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	1.5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 1.5 mm ² / 22 ... 16 AWG
Fine-stranded conductor	0.34 ... 1.5 mm ² / 22 ... 16 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch
Note (conductor cross section)	2 x 0.34 ... 2 x 1.5 mm ² / 1 x 2.5 mm ² / 2 x 22 ... 2 x 16 AWG

Physical Data

Width	31 mm / 1.22 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	97 mm / 3.819 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	101 g
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Environmental Requirements

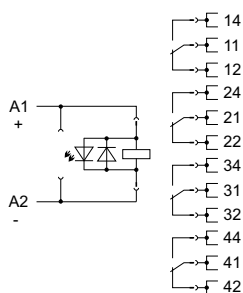
Surrounding air temperature (operation at U_N)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +80 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508
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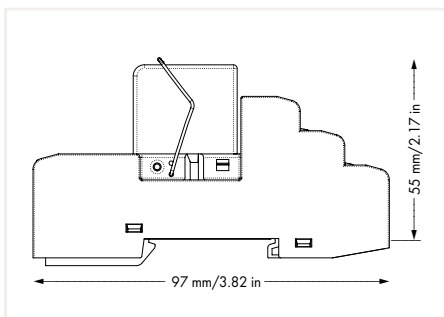
Relay Module

858 Series



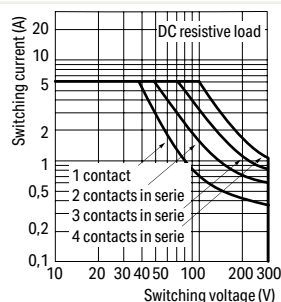
Relay Module; 4 changeover contacts; Limiting continuous current: 6 A; manually operated; Status indicator: red; 31 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	31.5 mA	858-390	5
110 VDC	7.7 mA	858-392	5
220 VDC	4.3 mA	858-391	5



Note:

To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

Control Circuit

Input voltage range	-10 ... +30 %
---------------------	---------------

Load Circuit

Number of changeover/switchover contacts	4
Contact material	AgNi 90/10
Limiting continuous current	6 A
Inrush current (resistive) max.	12 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	18 ms
Bounce time (typ.)	8 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	30 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 60 min ⁻¹

Signaling

Status indicator	Red LED; mechanical
------------------	---------------------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1.2 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 1.5 mm ² / 22 ... 16 AWG
Fine-stranded conductor	0.34 ... 1.5 mm ² / 22 ... 16 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch
Note (conductor cross section)	2 x 0.34 ... 2 x 1.5 mm ² / 1 x 2.5 mm ² / 2 x 22 ... 2 x 16 AWG

Physical Data

Width	31 mm / 1.22 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	97 mm / 3.819 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	87.2 g
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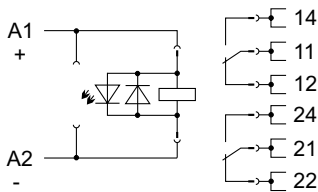
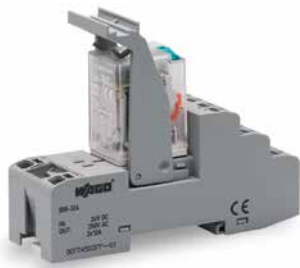
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature UL (operation at U_N)	-25 ... +50 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

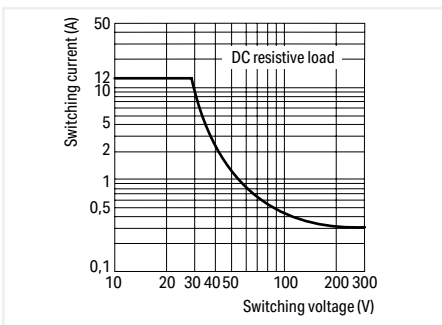
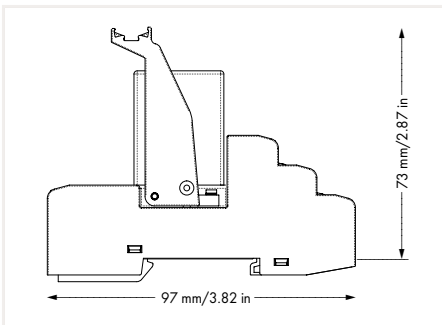
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508 (max. 50 °C)
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Relay Module 858 Series



Relay Module; 2 changeover contacts; Limiting continuous current: 12 A; manually operated; Status indicator: red; 31 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	37.5 mA	858-324	5
48 VDC	18.5 mA	858-325	5
110 VDC	8.1 mA	858-327	5
220 VDC	4.1 mA	858-328	5



DC Load Limit Curve

Control Circuit

Input voltage range	-20 ... +10 %
---------------------	---------------

Load Circuit

Number of changeover/switchover contacts	2
Contact material	AgNi
Limiting continuous current	12 A
Inrush current (resistive) max.	24 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	3000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 1.5 A / 240 VAC; DC 13: 0.1 A / 250 VDC
Recommended minimum load	10 V / 5 mA / 300 mW
Pull-in time (typ.)	13 ms
Drop-out time (typ.)	3 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	20 x 10 ⁶ switching operations
Switching load with/without load (max.)	20 min ⁻¹ / 200 min ⁻¹

Signaling

Status indicator	Red LED; mechanical
------------------	---------------------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1.5 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 1.5 mm ² / 22 ... 16 AWG
Fine-stranded conductor	0.34 ... 1.5 mm ² / 22 ... 16 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch
Note (conductor cross section)	2 x 0.34 ... 2 x 1.5 mm ² / 1 x 2.5 mm ² / 2 x 22 ... 2 x 16 AWG

Physical Data

Width	31 mm / 1.22 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	97 mm / 3.819 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	87.5 g
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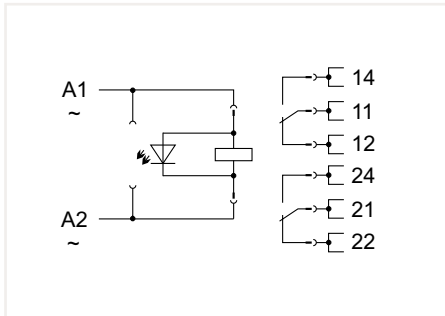
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +55 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

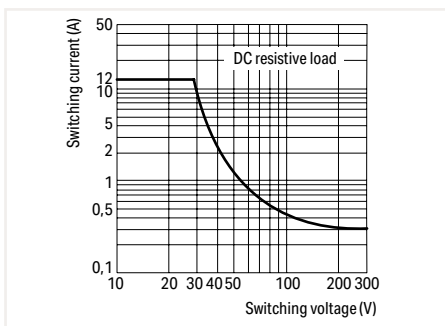
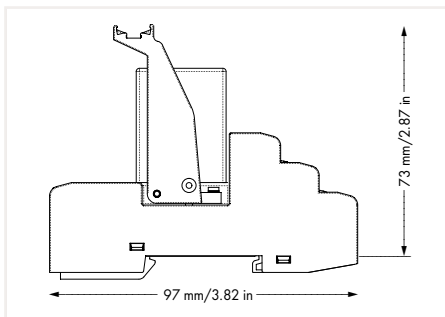
Standards/specifications	EN 61010-2-201; EN 61810-1; UL 508
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Relay Module 858 Series



Relay Module; 2 changeover contacts; Limiting continuous current: 12 A; manually operated; Status indicator: red; 31 mm wide

U_N	I_N	Item No.	Pack. Unit
230 VAC	11 mA	858-528	5



DC Load Limit Curve

Control Circuit

Input voltage range	-20 ... +10 %
---------------------	---------------

Load Circuit

Number of changeover/switchover contacts	2
Contact material	AgNi
Limiting continuous current	12 A
Inrush current (resistive) max.	24 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	3000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 1.5 A / 240 VAC; DC 13: 0.1 A / 250 VDC
Recommended minimum load	10 V / 5 mA / 300 mW
Pull-in time (typ.)	10 ms
Drop-out time (typ.)	8 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	20 x 10 ⁶ switching operations
Switching load with/without load (max.)	20 min ⁻¹ / 200 min ⁻¹

Signaling

Status indicator	Red LED; mechanical
------------------	---------------------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1.5 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 1.5 mm ² / 22 ... 16 AWG
Fine-stranded conductor	0.34 ... 1.5 mm ² / 22 ... 16 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch
Note (conductor cross section)	2 x 0.34 ... 2 x 1.5 mm ² / 1 x 2.5 mm ² / 2 x 22 ... 2 x 16 AWG

Physical Data

Width	31 mm / 1.22 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	97 mm / 3.819 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	85.3 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +55 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C

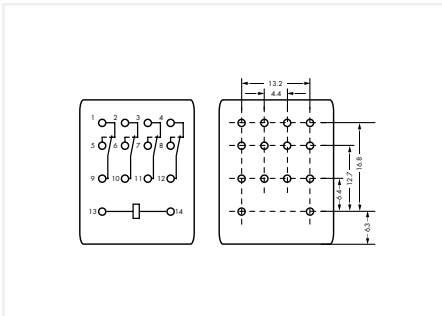
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61810-1; UL 508
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Basic Relay 858 Series

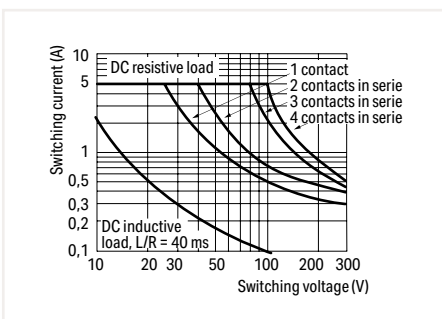
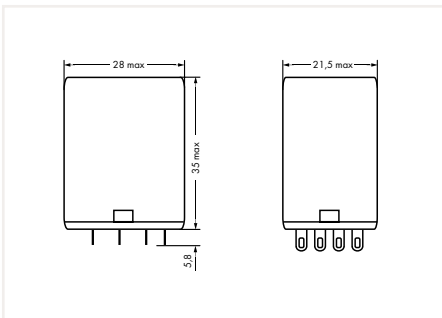


Similar to pictured device



Basic Relay; 4 changeover contacts; Limiting continuous current: 5 A; manually operated; Status indicator: red; 22 mm wide; 25 mm high

U_N	I_N	Item No.	Pack. Unit
12 VDC	75 mA	858-164	3
24 VDC	36.9 mA	858-150	3
24 VAC	50 mA	858-154	3
230 VAC	8.3 mA	858-151	3



DC Load Limit Curve

Load Circuit

Number of changeover/switchover contacts	4
Contact material	AgCe
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 100 mA
Pull-in time (typ.)	25 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	20 x 10 ⁶ switching operations

Signaling

Status indicator	Red LED; mechanical
------------------	---------------------

Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	1.5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV _{rms}
Protection type	IP20

Physical Data

Width	21.5 mm / 0.846 inch
Height from the surface	35 mm / 1.378 inch
Depth	28 mm / 1.102 inch

Mechanical Data

Mounting type	Pluggable module
---------------	------------------

Material Data

Weight	37 g
--------	------

Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +80 °C

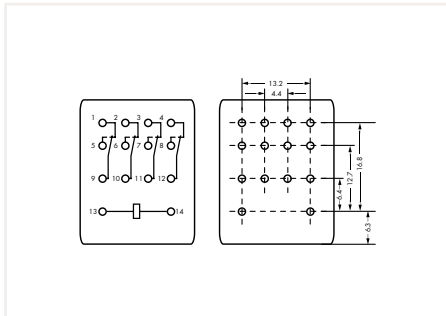
Standards and Specifications

Standards/specifications	EN 61810-1
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Basic Relay 858 Series

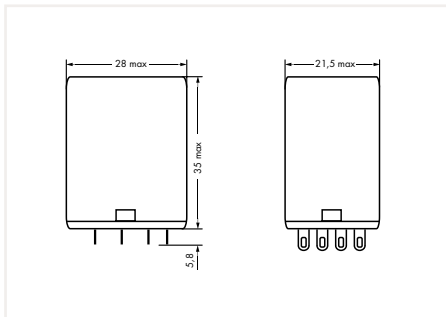


Similar to pictured device



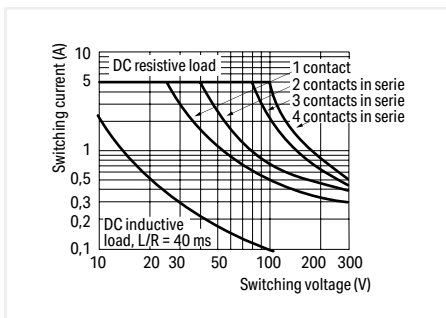
Basic Relay; 4 changeover contacts; Limiting continuous current: 5 A; with gold contacts; manually operated; Status indicator: red; 22 mm wide; 25 mm high

U_N	I_N	Item No.	Pack. Unit
24 VDC	36.9 mA	858-152	3
230 VAC	8.3 mA	858-153	3



Note:

To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

Load Circuit

Number of changeover/switchover contacts	4
Contact material	AgCe + Au
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	5 V / 1 mA / 50 mW
Pull-in time (typ.)	25 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	20 x 10 ⁶ switching operations

Signaling

Status indicator	Red LED; mechanical
------------------	---------------------

Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	1.5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV _{rms}
Protection type	IP20

Physical Data

Width	21.5 mm / 0.846 inch
Height from the surface	35 mm / 1.378 inch
Depth	28 mm / 1.102 inch

Mechanical Data

Mounting type	Pluggable module
---------------	------------------

Material Data

Weight	35 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +80 °C

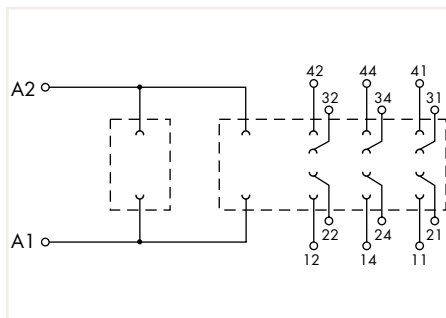
Standards and Specifications

Standards/specifications	EN 61810-1
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Relay Socket

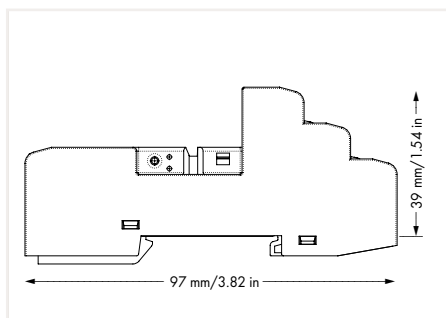
858 Series

1



Relay Socket; 4 changeover contacts; Limiting continuous current: 6 A; manually operated; 31 mm wide

	Item No.	Pack. Unit
	858-100	10



Control Circuit

Nominal input voltage U_N	250 VAC/DC (depends on relay)
Input voltage range	0 ... 250 V (depends on relay)

Load Circuit

Limiting continuous current	12 A
Switching voltage (max.)	250 VAC

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms} (depends on relay)
Dielectric strength, open contact (AC, 1 min)	1.5 kV _{rms} (depends on relay)
Dielectric strength, channel/channel (AC, 1 min.)	(depends on relay)
Dielectric strength, load/load circuit (AC, 1 min)	2 kV _{rms} (depends on relay)
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 1.5 mm ² / 22 ... 16 AWG
Fine-stranded conductor	0.34 ... 1.5 mm ² / 22 ... 16 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch
Note (conductor cross section)	2 x 0.34 ... 2 x 1.5 mm ² / 1 x 2.5 mm ² / 2 x 22 ... 2 x 16 AWG

Physical Data

Width	31 mm / 1.22 inch
Height from upper-edge of DIN-rail	39 mm / 1.535 inch
Depth	97 mm / 3.819 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	56.2 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C (depends on relay)
Surrounding air temperature (storage)	-40 ... +80 °C

Standards and Specifications

Standards/specifications	EN 60664-1; UL 508
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Accessories



Accessories for relay modules; Operation status indicator: red			
U_N	Power consumption at U_N	Item No.	Pack. Unit
24 VDC	2.4 mA	788-120	50(2x25)
48 VDC	1.9 mA	788-121	50(2x25)
110 VDC	1.9 mA	788-122	50(2x25)
24 VAC	2.1 mA	788-123	50(2x25)
115 VAC	1.7 mA	788-124	50(2x25)
230 VAC	1.6 mA	788-125	50(2x25)

Holding bracket		
	Item No.	Pack. Unit
	858-110	10 (1)

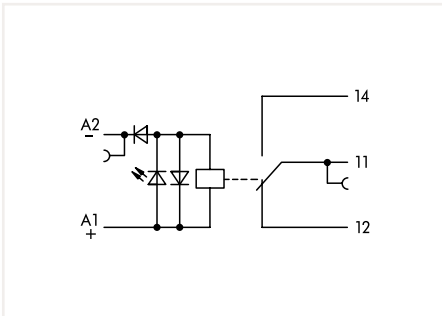


Push-in type jumper bar; for the coil side		
Description	Item No.	Pack. Unit
I_N 12 A	858-402	200 (8x25)

Operating tool with a partially insulated shaft; Type 1; (2.5 x 0.4) mm blade		
	Item No.	Pack. Unit
	210-719	50

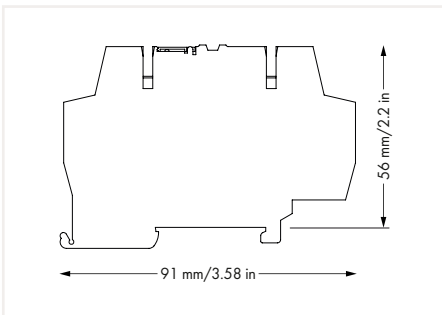
Relay Module

859 Series

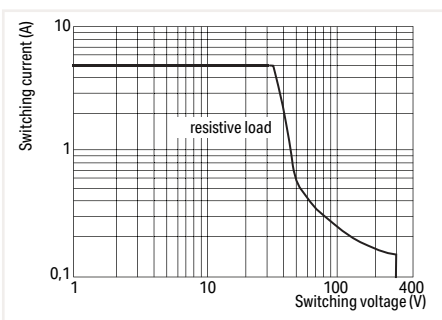


Relay Module; 1 changeover contact; Limiting continuous current: 5 A; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
5 VDC	31 mA	859-302	10
12 VDC	17 mA	859-303	10
24 VDC	10 mA	859-304	10
48 VDC	6.5 mA	859-305	10
110 VDC	3.5 mA	859-307	10
220 VDC	3.2 mA	859-308	10



Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit

Input voltage range	-15 ... +20 %
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Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgSnO ₂
Limiting continuous current	5 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ³ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 180 min ⁻¹

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	22.2 g
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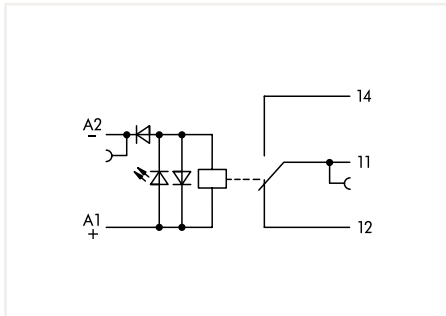
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

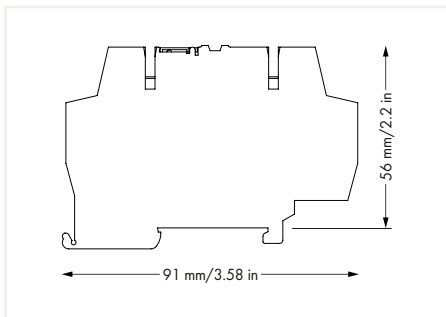
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; GL; UL 508
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Relay Module 859 Series



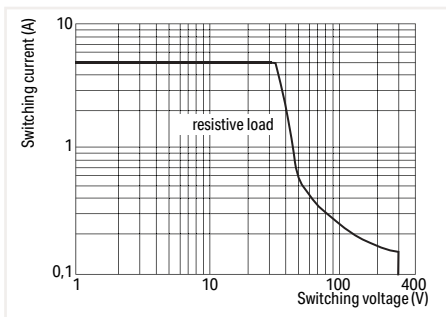
Relay Module; 1 changeover contact; Limiting continuous current: 5 A; with gold contacts; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
5 VDC	31 mA	859-312	10
24 VDC	10 mA	859-314	10
220 VDC	3.2 mA	859-318	10



Note:

To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

Control Circuit

Input voltage range	-15 ... +20 %
---------------------	---------------

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgNi + Au
Limiting continuous current	5 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	1 V / 1 mA / 1 mW
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ⁶ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 180 min ⁻¹

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	22.5 g
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Environmental Requirements

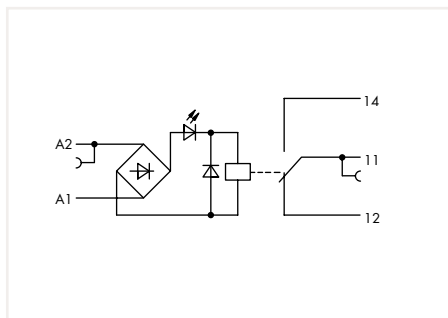
Surrounding air temperature (operation at U_N)	-40 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; GL; UL 508
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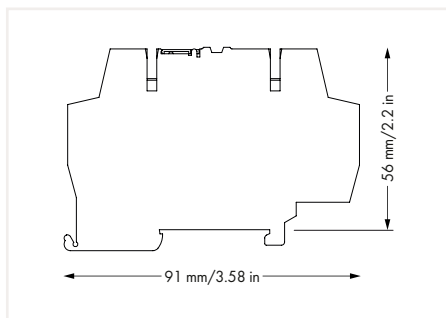
Relay Module

859 Series



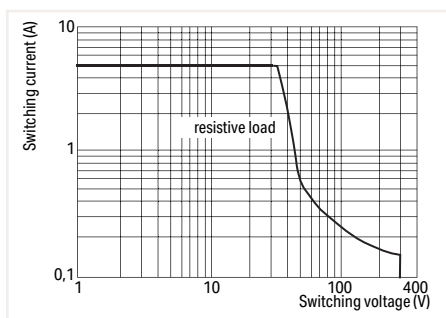
Relay Module; 1 changeover contact; Limiting continuous current: 5 A; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
12 VAC/DC	15 mA	859-353	10
24 VAC/DC	8 mA	859-354	10
48 VAC/DC	5.3 mA	859-355	10
115 VAC/DC	3.5 mA	859-357	10
230 VAC/DC	3.5 mA	859-358	10



Note:

To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit

Input voltage range	-15 ... +10 %
---------------------	---------------

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgSnO ₂
Limiting continuous current	5 A
Inrush current (resistive) max.	20 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ³ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 180 min ⁻¹

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	22.7 g
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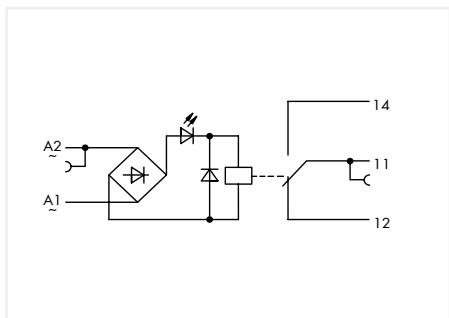
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

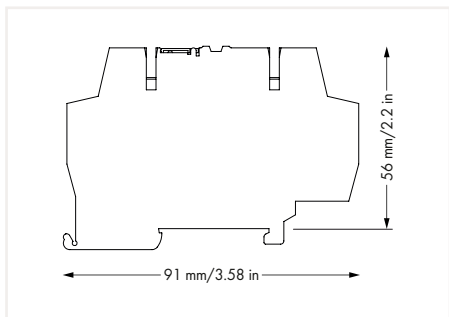
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; GL; UL 508
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Relay Module 859 Series



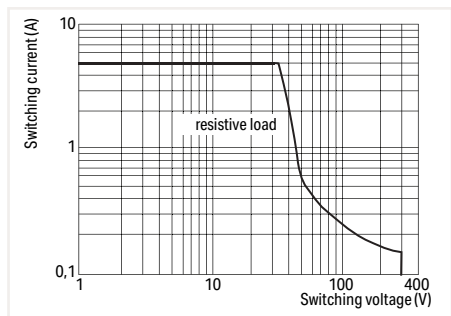
Relay Module; 1 changeover contact; Limiting continuous current: 5 A; with gold contacts; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
115 VAC/DC	3.5 mA	859-360	10
230 VAC/DC	3.5 mA	859-359	10



Note:

To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

Control Circuit

Input voltage range	-15 ... +10 %
---------------------	---------------

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgNi + Au
Limiting continuous current	5 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	1 V / 1 mA / 1 mW
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	30 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ³ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 180 min ⁻¹

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
---------------	-------------

Material Data

Weight	25.3 g
--------	--------

Environmental Requirements

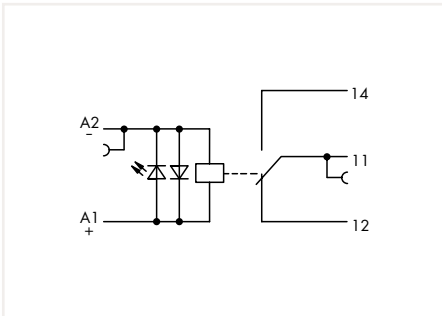
Surrounding air temperature (operation at U_N)	-40 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; GL; UL 508
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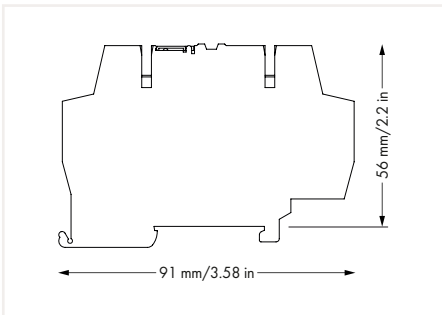
Relay Module 859 Series

1

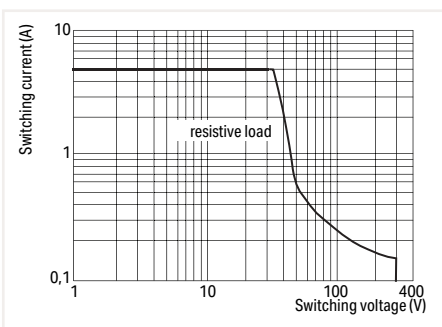


Relay Module; 1 changeover contact; Limiting continuous current: 5 A; for railway applications; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	12 mA	859-390	10



Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit

Input voltage range	-30 ... +25 %
---------------------	---------------

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgSnO ₂
Limiting continuous current	5 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ³ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 180 min ⁻¹

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
---------------	-------------

Material Data

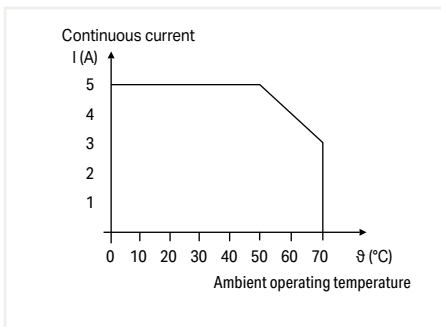
Weight	22.9 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

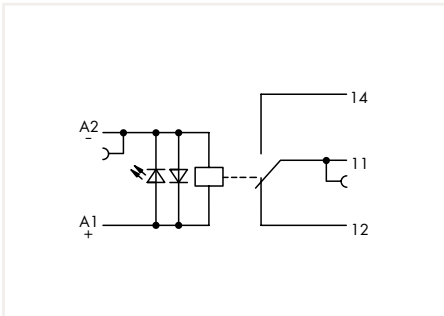
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; GL; UL 508
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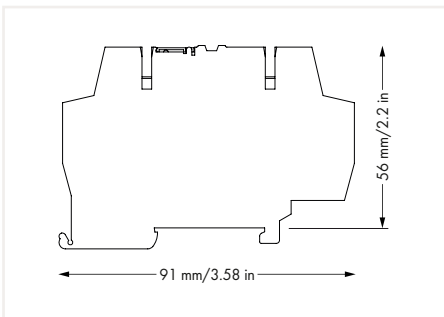
Current-Carrying Capacity Curve

Relay Module 859 Series



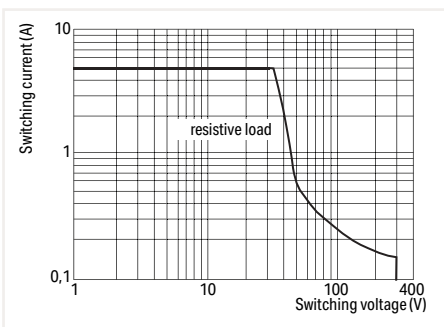
Relay Module; 1 changeover contact; Limiting continuous current: 5 A; with gold contacts; for railway applications; Status indicator: red; 6 mm wide

U _N	I _N	Item No.	Pack. Unit
24 VDC	10 mA	859-392	10
36 VDC	10.1 mA	859-386	10
110 VDC	3.1 mA	859-317	10



Note:

To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

Control Circuit

Input voltage range	-30 ... +25 %
---------------------	---------------

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgNi + Au
Limiting continuous current	5 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	1 V / 1 mA / 1 mW
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ⁶ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 180 min ⁻¹

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
---------------	-------------

Material Data

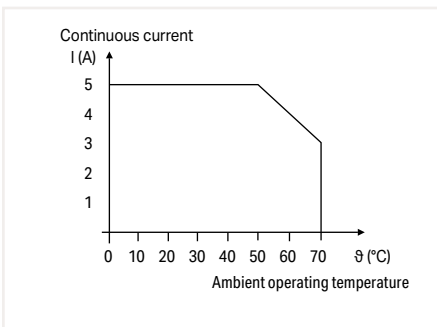
Weight	22.3 g
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Environmental Requirements

Surrounding air temperature (operation at U _N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

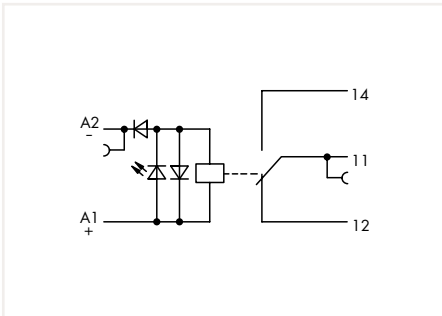
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; GL; UL 508
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Current-Carrying Capacity Curve

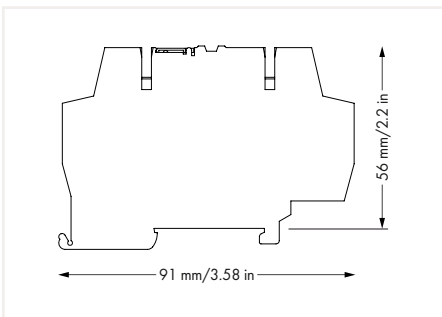
Relay Module 859 Series

1

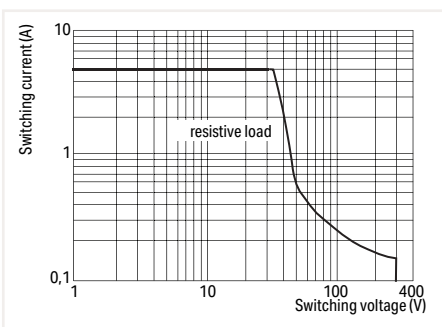


Relay Module; 1 changeover contact; Limiting continuous current: 5 A; for railway applications; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
110 VDC	2.7 mA	859-391	10



Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit

Input voltage range	±30 %
---------------------	-------

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgSnO ₂
Limiting continuous current	5 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ³ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 180 min ⁻¹

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
---------------	-------------

Material Data

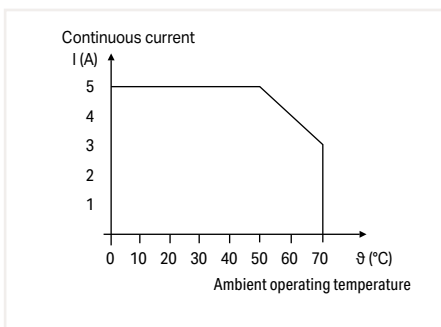
Weight	22.4 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

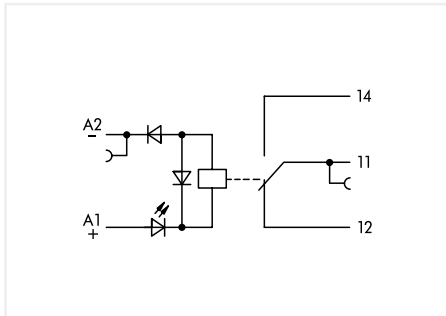
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; GL; UL 508
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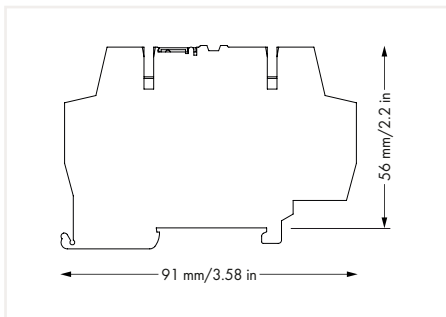
Current-Carrying Capacity Curve

Relay Module 859 Series



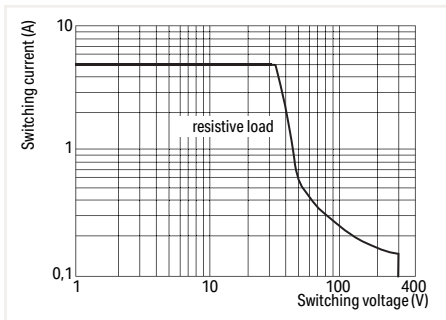
Relay Module; 1 changeover contact; Limiting continuous current: 5 A; for railway applications; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	14.4 mA	859-398	10
48 VDC	7.9 mA	859-397	10
110 VDC	3.1 mA	859-399	10



Note:

To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit

Input voltage range	±40 %
---------------------	-------

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgSnO ₂
Limiting continuous current	5 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ⁶ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 180 min ⁻¹

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
---------------	-------------

Material Data

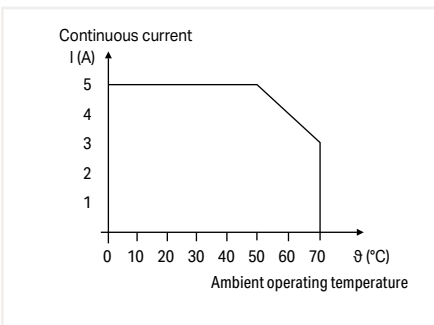
Weight	22.6 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

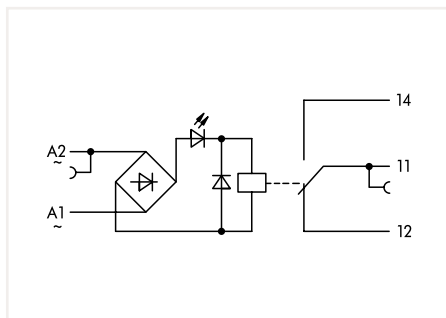
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; GL
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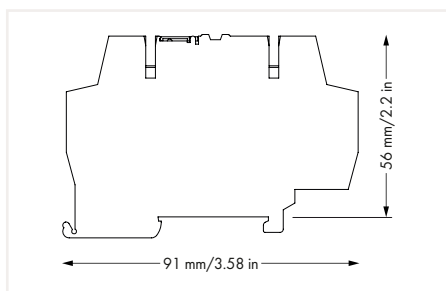
Current-Carrying Capacity Curve

Relay Module 859 Series



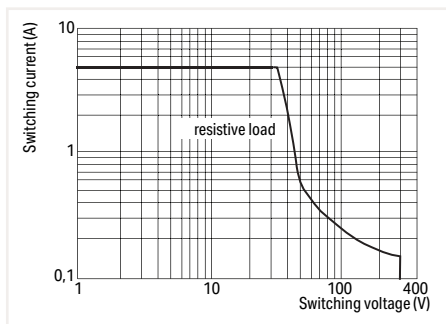
Relay Module; 1 changeover contact; Limiting continuous current: 5 A; with defined switch-on threshold; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
115 VAC	4.2 mA	859-367	10



Note

To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit

Input voltage range	±10 %
Switch-off threshold (relay/LED)	60 VAC / 60 VAC
Switch-on threshold (relay/LED)	95 VAC / 80 VAC

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgSnO ₂
Limiting continuous current	5 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ⁶ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 180 min ⁻¹

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	22.7 g
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Environmental Requirements

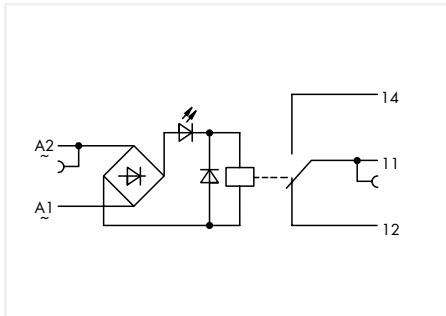
Surrounding air temperature (operation at U_N)	-40 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; GL; UL 508
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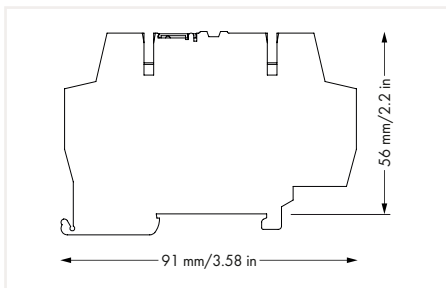
Relay Module

859 Series



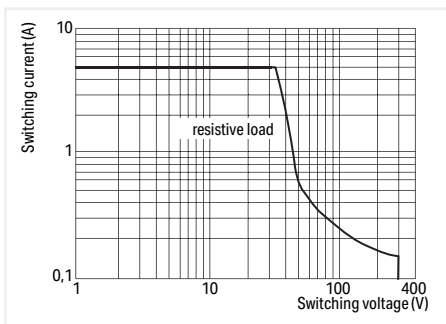
Relay Module; 1 changeover contact; Limiting continuous current: 5 A; with defined switch-on threshold; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
230 VAC	4.2 mA	859-368	10



Note

To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit

Input voltage range	$\pm 10\%$
Switch-off threshold (relay/LED)	140 VAC / 150 VAC
Switch-on threshold (relay/LED)	190 VAC / 165 VAC

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgSnO ₂
Limiting continuous current	5 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ³ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 180 min ⁻¹

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	22.7 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; GL; UL 508
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Accessories

1



Operating tool with a partially insulated shaft; Type 2; (3.5 x 0.5) mm blade

Item No.	Pack. Unit
210-720	50



End and intermediate plate; 1 mm thick

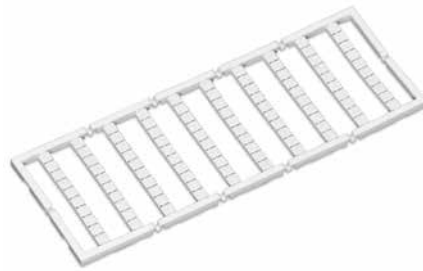
Item No.	Pack. Unit
859-525	100



Test pin; 1 mm Ø; with solder connection for test cable

Item No.	Pack. Unit
859-500	100

Accessories



1

Push-in type jumper bar; light gray; insulated; 18 A

Description	Item No.	Pack. Unit
2-way	859-402	200 (8x25)
3-way	859-403	200 (8x25)
4-way	859-404	200 (8x25)
5-way	859-405	200 (8x25)
6-way	859-406	100 (4x25)
7-way	859-407	100 (4x25)
8-way	859-408	100 (4x25)
9-way	859-409	100 (4x25)
10-way	859-410	100 (4x25)
Item no. suffixes for colored push-in type jumper bars		
yellow	.../000-029	
red	.../000-005	
blue	.../000-006	

Mini-WSB marker card; Marker width: 5 mm; 10 strips with 10 markers/card

Marking	Item No.	Pack. Unit
plain	248-501	50
1 ... 10 (10 x)	248-502	50
11 ... 20 (10 x)	248-503	50
21 ... 30 (10 x)	248-504	50
31 ... 40 (10 x)	248-505	50
41 ... 50 (10 x)	248-506	50
1 ... 50 (2 x)	248-566	50
K1 ... K10	248-450	50
K11 ... K20	248-451	50
K100	248-452	50
U1 ... U10	248-453	50
U11 ... U20	248-454	50
U100	248-455	50

Mini-WSB Inline; for terminal block width: 5 ... 5.2 mm; plain; 1700 markers/reel; white

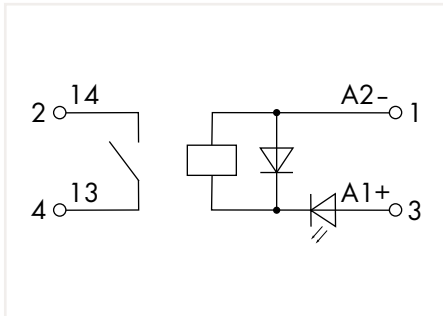
Marking	Item No.	Pack. Unit
plain	2009-145	1

Relay Module

2042 Series

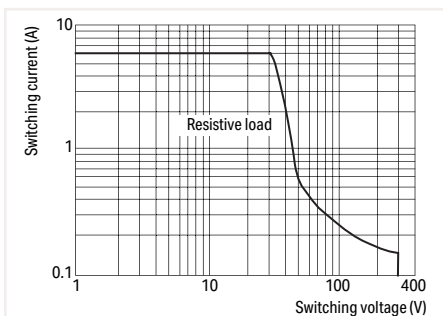
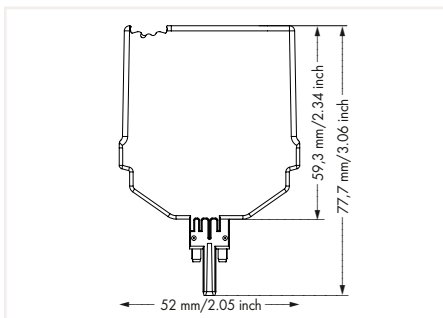


Similar to picture



Relay Module; Relay with 1 make contact; 24 VDC; for railway applications; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 VDC	6.6 mA	2042-3004	6



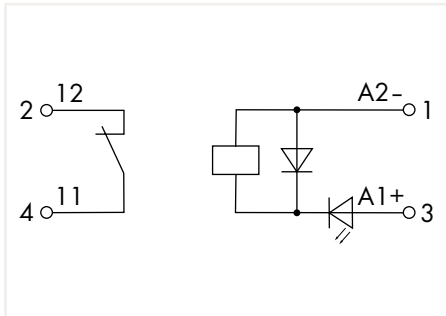
DC Load Limit Curve

Control Circuit	
Input voltage range	-30 ... +25 %
Load Circuit	
Number of make contacts/switch-on contacts	1
Contact material	AgSnO ₂
Limiting continuous current	6 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC-15: 3 A / AC 250 V; DC-13: 2 A / DC 24 V
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ³ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Signaling	
Status indicator	Green LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20
Physical Data	
Width	10.3 mm / 0.406 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch
Mechanical Data	
Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
Material Data	
Weight	20.2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2

Relay Module 2042 Series

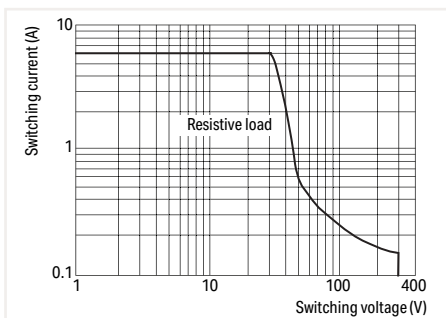
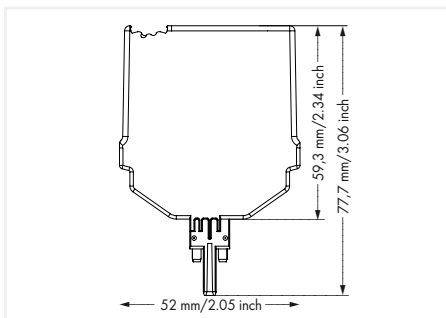


Similar to picture



Relay Module; Relay with 1 break contact; 24 VDC; for railway applications; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 VDC	6.4 mA	2042-3054	6



DC Load Limit Curve

Control Circuit

Input voltage range	-30 ... +25 %
---------------------	---------------

Load Circuit

Number of break contacts/switch-off contacts	1
Contact material	AgSnO ₂
Limiting continuous current	6 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	4 ms
Mechanical life	5 x 10 ⁶ switching operations

Signaling

Status indicator	Green LED
------------------	-----------

Safety and Protection

Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20

Physical Data

Width	10.3 mm / 0.406 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch

Mechanical Data

Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
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Material Data

Weight	67.9 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Operating altitude (max.)	2000 m

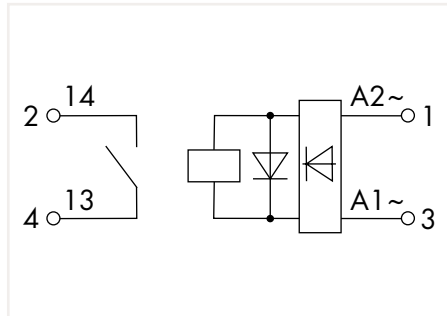
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2
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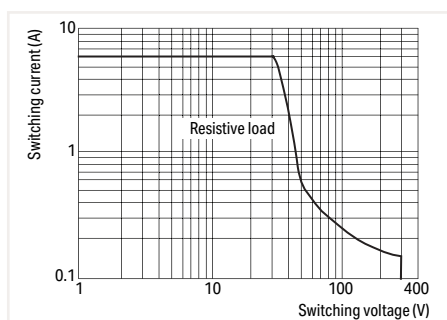
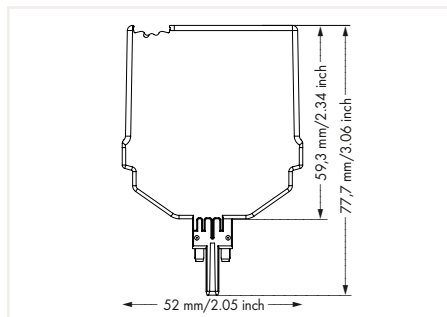
Relay Module 2042 Series



Similar to picture



Relay Module; Relay with 1 make contact; 24 ... 230 VAC/DC; Status indicator: green			
U _N	I _N	Item No.	Pack. Unit
24 ... 230 V AC/DC	26.3 ... 1.7 mA	2042-3809	6



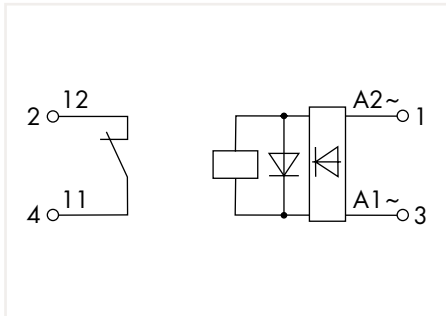
DC Load Limit Curve

Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of make contacts/switch-on contacts	1
Contact material	AgSnO ₂
Limiting continuous current	3 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	750 VA (AC); DC see load limit curve
Switching capacity	AC-15: 3 A / AC 250 V; DC-13: 2 A / DC 24 V
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10 ³ switching operations
Mechanical life	5 x 10 ⁶ switching operations
Signaling	
Status indicator	Green LED
Safety and Protection	
Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20
Physical Data	
Width	10.3 mm / 0.406 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch
Mechanical Data	
Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
Material Data	
Weight	69.1 g
Environmental Requirements	
Surrounding air temperature (operation at U _N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2

Relay Module 2042 Series

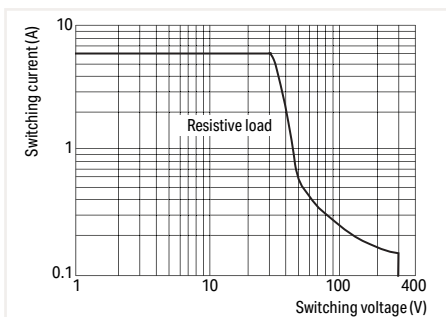
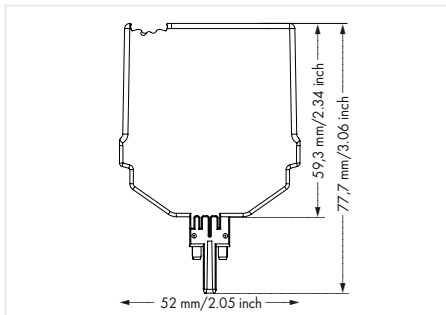


Similar to picture



Relay Module; Relay with 1 break contact;
24 ... 230 VAC/DC; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 ... 230 V AC/DC	26.3 ... 1.7 mA	2042-3859	6



DC Load Limit Curve

Control Circuit

Input voltage range	$\pm 10\%$
---------------------	------------

Load Circuit

Number of break contacts/switch-off contacts	1
Contact material	AgSnO ₂
Limiting continuous current	6 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	4 ms
Mechanical life	5×10^6 switching operations

Signaling

Status indicator	Green LED
------------------	-----------

Safety and Protection

Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20

Physical Data

Width	10.3 mm / 0.406 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch

Mechanical Data

Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
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Material Data

Weight	69.1 g
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Environmental Requirements

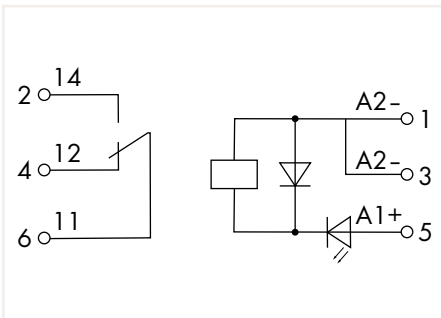
Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2
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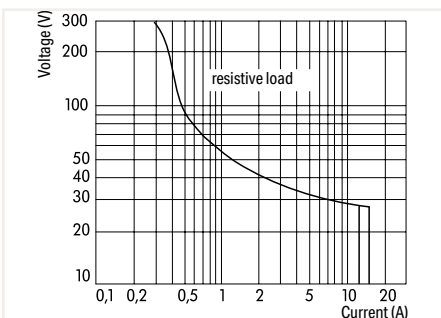
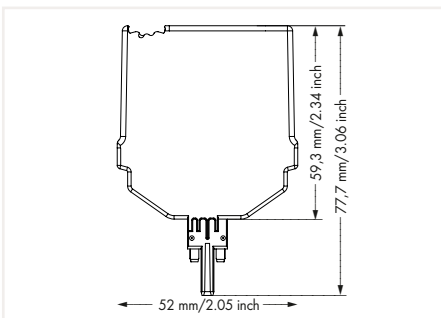
Relay Module

2042 Series



Relay Module; Relay with 1 changeover contact;
24 VDC; for railway applications; Status indicator: green

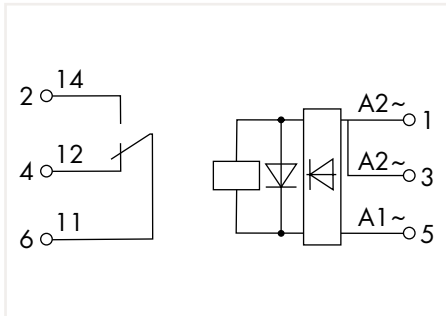
U_N	I_N	Item No.	Pack. Unit
24 VDC	13.7 mA	2042-3034	4



DC Load Limit Curve

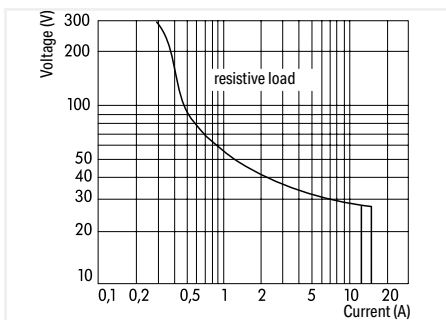
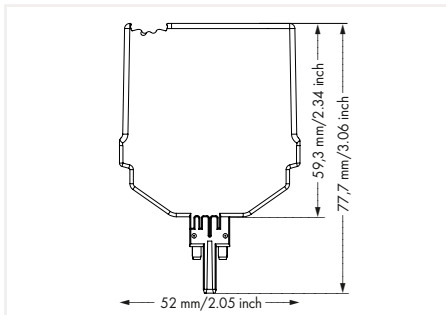
Control Circuit	
Input voltage range	-30 ... +25 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi
Limiting continuous current	10 A
Inrush current (resistive) max.	30 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2500 VA (AC); DC see load limit curve
Switching capacity	AC-15: 6 A / AC 250 V; DC-13: 2 A / DC 24 V
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	10 x 10 ⁶ switching operations
Signaling	
Status indicator	Green LED
Safety and Protection	
Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20
Physical Data	
Width	15.5 mm / 0.61 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch
Mechanical Data	
Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
Material Data	
Weight	33.1 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2

Relay Module 2042 Series



Relay Module; Relay with 1 changeover contact;
24 ... 230 VAC/DC; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 ... 230 V AC/DC	50.2 ... 6 mA	2042-3839	4



DC Load Limit Curve

Control Circuit

Input voltage range	$\pm 10\%$
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Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgNi
Limiting continuous current	4 A
Inrush current (resistive) max.	30 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1000 VA (AC); DC see load limit curve
Switching capacity	AC-15: 6 A / AC 250 V; DC-13: 2 A / DC 24 V
Recommended minimum load	5 V / 100 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	10 x 10 ⁶ switching operations

Signaling

Status indicator	Green LED
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Safety and Protection

Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20

Physical Data

Width	15.5 mm / 0.61 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch

Mechanical Data

Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
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Material Data

Weight	36.3 g
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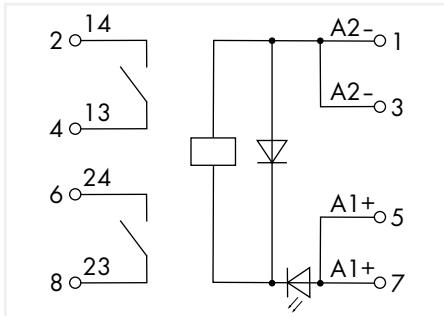
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Operating altitude (max.)	2000 m

Standards and Specifications

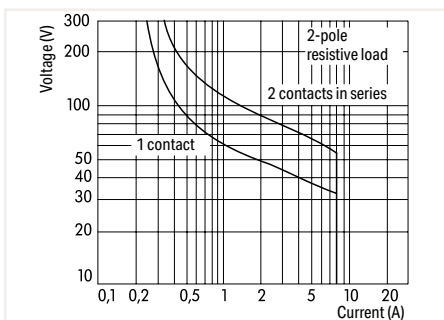
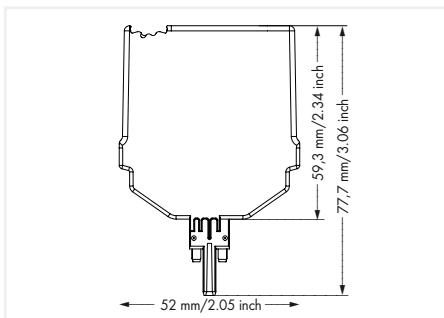
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2
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Relay Module 2042 Series



Relay Module; Relay with 2 make contacts; 24 VDC; for railway applications; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 VDC	13.8 mA	2042-3014	4



DC Load Limit Curve

Control Circuit

Input voltage range	-30 ... +25 %
---------------------	---------------

Load Circuit

Number of make contacts/switch-on contacts	2
Contact material	AgNi
Limiting continuous current	8 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	10 x 10 ⁶ switching operations

Signaling

Status indicator	Green LED
------------------	-----------

Safety and Protection

Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20

Physical Data

Width	20.7 mm / 0.815 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch

Mechanical Data

Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
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Material Data

Weight	36.9 g
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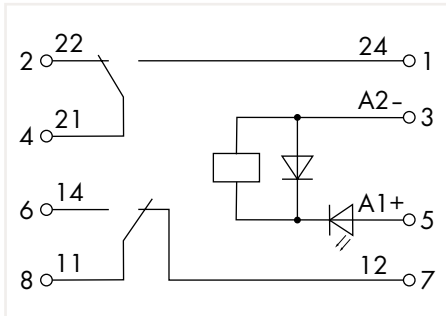
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Operating altitude (max.)	2000 m

Standards and Specifications

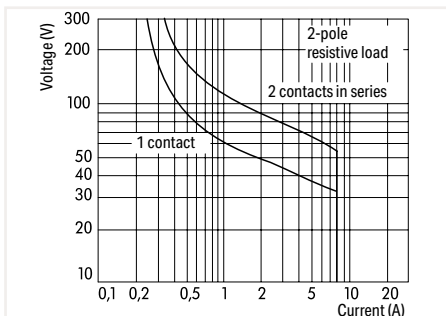
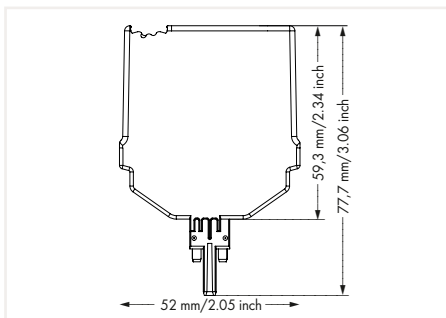
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2
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Relay Module 2042 Series



Relay Module; Relay with 2 changeover contacts;
24 VDC; for railway applications; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 VDC	13.8 mA	2042-3044	4



DC Load Limit Curve

Control Circuit

Input voltage range	-30 ... +25 %
---------------------	---------------

Load Circuit

Number of changeover/switchover contacts	2
Contact material	AgNi
Limiting continuous current	8 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	10 x 10 ⁶ switching operations

Signaling

Status indicator	Green LED
------------------	-----------

Safety and Protection

Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20

Physical Data

Width	20.7 mm / 0.815 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch

Mechanical Data

Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
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Material Data

Weight	37 g
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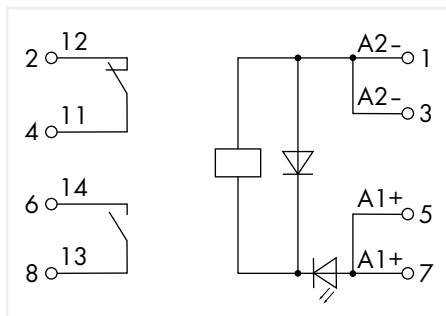
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Operating altitude (max.)	2000 m

Standards and Specifications

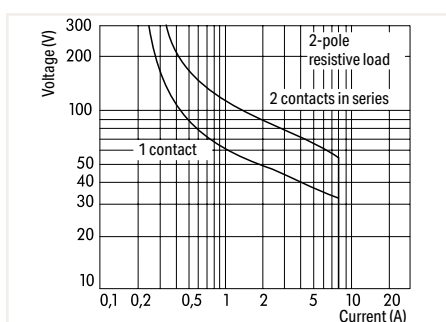
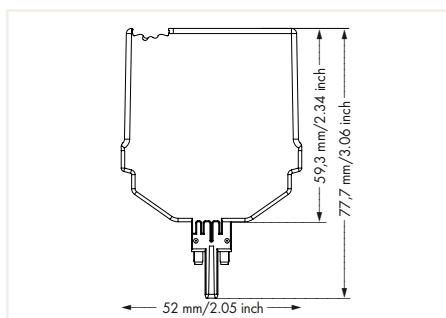
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2
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Relay Module 2042 Series



Relay Module; Relay with 1 break contact and 1 make contact; 24 VDC; for railway applications; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 VDC	13.8 mA	2042-3064	4



DC Load Limit Curve

Control Circuit

Input voltage range	-30 ... +25 %
---------------------	---------------

Load Circuit

Number of break contacts/switch-off contacts	1
Number of make contacts/switch-on contacts	1
Contact material	AgNi
Limiting continuous current	8 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	10 x 10 ⁶ switching operations

Signaling

Status indicator	Green LED
------------------	-----------

Safety and Protection

Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength channel/channel (AC, 1 min)	1.5 kV _{rms}
Protection type	IP20

Physical Data

Width	20.7 mm / 0.815 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch

Mechanical Data

Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
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Material Data

Weight	37.1 g
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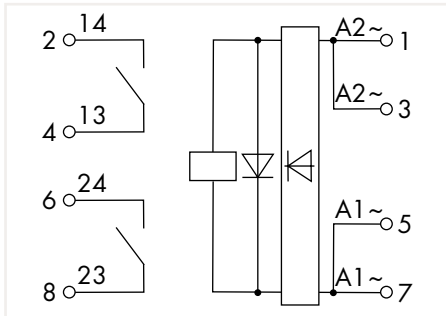
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Operating altitude (max.)	2000 m

Standards and Specifications

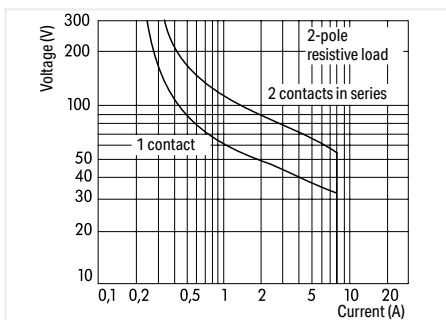
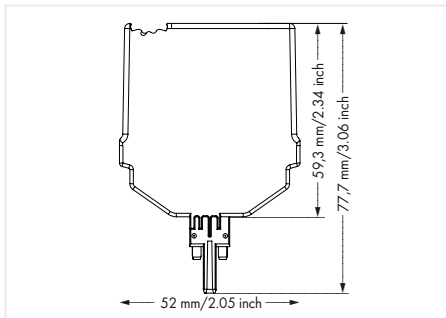
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2
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Relay Module 2042 Series



Relay Module; Relay with 2 make contacts;
24 ... 230 VAC/DC; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 ... 230 V AC/DC	49.1 ... 2.9 mA	2042-3819	4



DC Load Limit Curve

Control Circuit

Input voltage range	±10 %
---------------------	-------

Load Circuit

Number of make contacts/switch-on contacts	2
Contact material	AgNi
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	10 x 10 ⁶ switching operations

Signaling

Status indicator	Green LED
------------------	-----------

Safety and Protection

Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength channel/channel (AC, 1 min)	1.5 kV _{rms}
Protection type	IP20

Physical Data

Width	20.7 mm / 0.815 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch

Mechanical Data

Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
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Material Data

Weight	40.1 g
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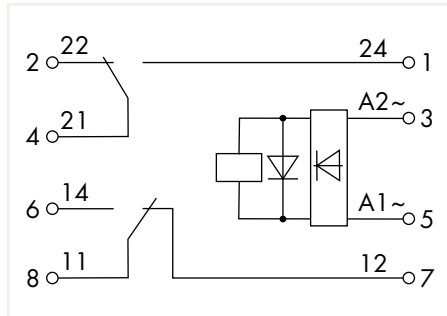
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Operating altitude (max.)	2000 m

Standards and Specifications

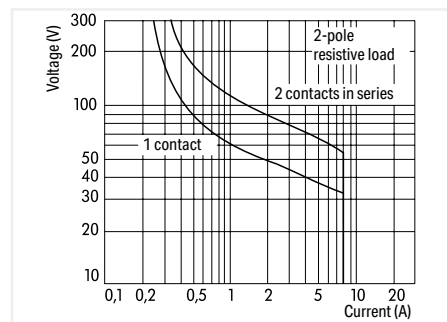
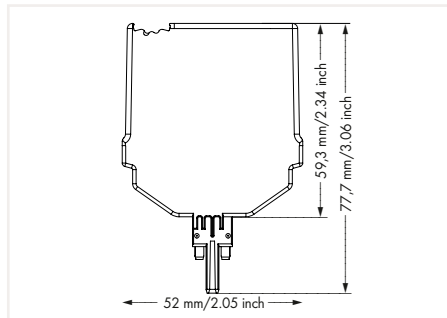
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2
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Relay Module 2042 Series



Relay Module; Relay with 2 changeover contacts;
24 ... 230 VAC/DC; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 ... 230 V AC/DC	49.1 ... 2.8 mA	2042-3849	4



DC Load Limit Curve

Control Circuit

Input voltage range	±10 %
---------------------	-------

Load Circuit

Number of changeover/switchover contacts	2
Contact material	AgNi
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	10 x 10 ⁶ switching operations

Signaling

Status indicator	Green LED
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Safety and Protection

Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength channel/channel (AC, 1 min)	1.5 kV _{rms}
Protection type	IP20

Physical Data

Width	20.7 mm / 0.815 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch

Mechanical Data

Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
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Material Data

Weight	51.1 g
--------	--------

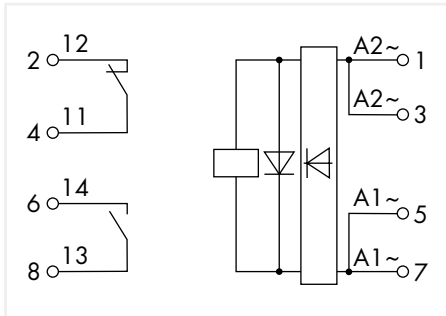
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Operating altitude (max.)	2000 m

Standards and Specifications

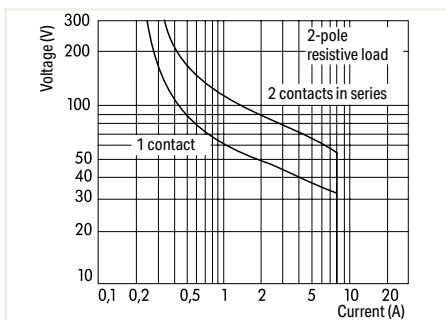
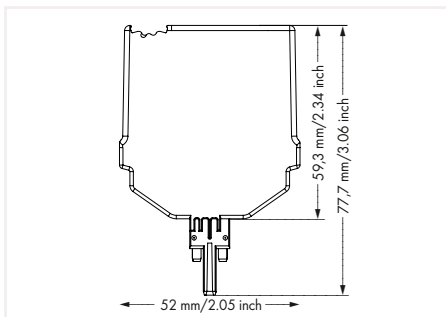
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2
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Relay Module 2042 Series



Relay Module; Relay with 1 break contact and 1 make contact; 24 ... 230 VAC/DC; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 ... 230 V AC/DC	49.1 ... 2.8 mA	2042-3869	4



DC Load Limit Curve

Control Circuit

Input voltage range	$\pm 10\%$
---------------------	------------

Load Circuit

Number of break contacts/switch-off contacts	1
Number of make contacts/switch-on contacts	1
Contact material	AgNi
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	10 x 10 ⁶ switching operations

Signaling

Status indicator	Green LED
------------------	-----------

Safety and Protection

Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength channel/channel (AC, 1 min)	1.5 kV _{rms}
Protection type	IP20

Physical Data

Width	20.7 mm / 0.815 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch

Mechanical Data

Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
---------------	---

Material Data

Weight	39.2 g
--------	--------

Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Operating altitude (max.)	2000 m

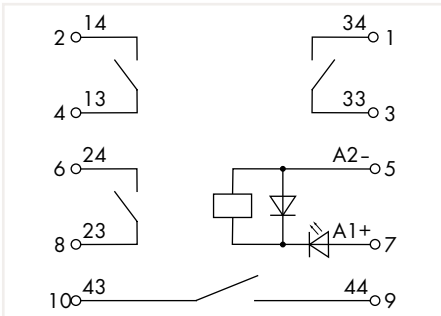
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2
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Relay Module 2042 Series

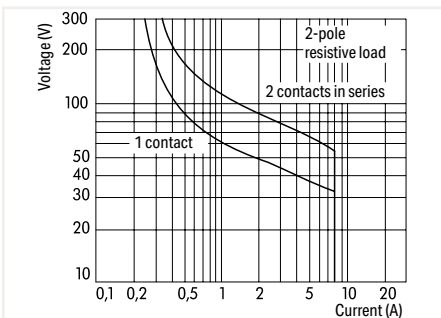
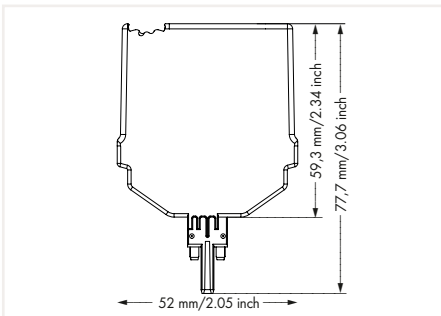


Similar to picture



Relay Module; Relay with 4 make contacts; 24 VDC; for railway applications; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 VDC	28.1 mA	2042-3024	5



DC Load Limit Curve

Control Circuit

Input voltage range	-30 ... +25 %
---------------------	---------------

Load Circuit

Number of make contacts/switch-on contacts	4
Contact material	AgNi
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	10 x 10 ⁶ switching operations

Signaling

Status indicator	Green LED
------------------	-----------

Safety and Protection

Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength channel/channel (AC, 1 min)	1.5 kV _{rms}
Protection type	IP20

Physical Data

Width	25.9 mm / 1.02 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch

Mechanical Data

Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
---------------	---

Material Data

Weight	70.3 g
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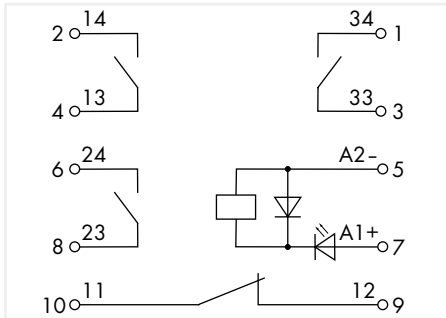
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Operating altitude (max.)	2000 m

Standards and Specifications

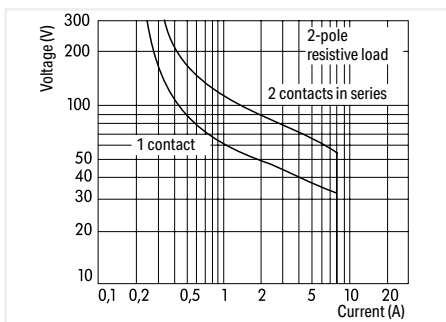
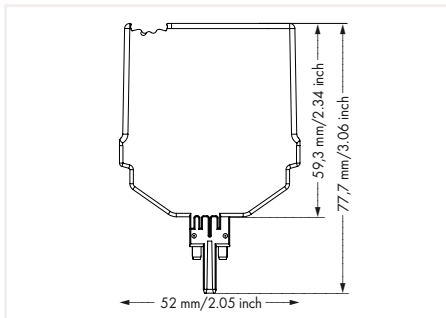
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2
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Relay Module 2042 Series



Relay Module; Relay with 3 make contacts and 1 break contact; 24 VDC; for railway applications; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 VDC	27.4 mA	2042-3074	5



DC Load Limit Curve

Control Circuit

Input voltage range	-30 ... +25 %
---------------------	---------------

Load Circuit

Number of break contacts/switch-off contacts	1
Number of make contacts/switch-on contacts	3
Contact material	AgNi
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	10 x 10 ⁶ switching operations

Signaling

Status indicator	Green LED
------------------	-----------

Safety and Protection

Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength channel/channel (AC, 1 min)	1.5 kV _{rms}
Protection type	IP20

Physical Data

Width	25.9 mm / 1.02 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch

Mechanical Data

Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
---------------	---

Material Data

Weight	58.7 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Operating altitude (max.)	2000 m

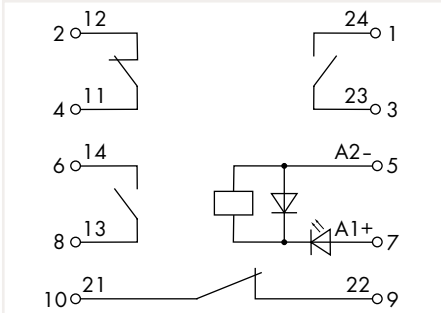
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2
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Relay Module 2042 Series

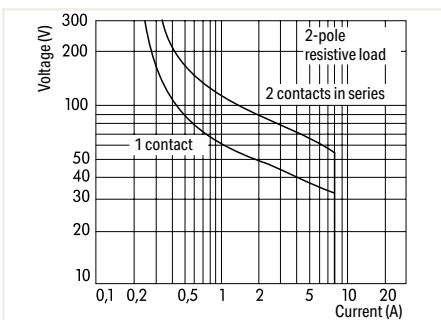
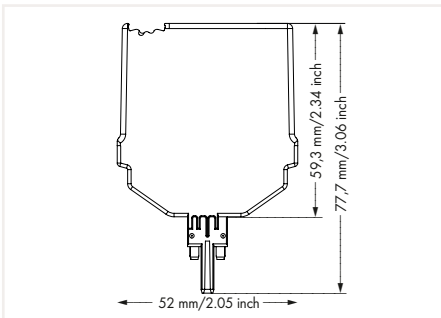


Similar to picture



Relay Module; Relay with 2 break contacts and 2 make contacts; 24 VDC; for railway applications; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 VDC	28.1 mA	2042-3084	5



DC Load Limit Curve

Control Circuit

Input voltage range	-30 ... +25 %
---------------------	---------------

Load Circuit

Number of break contacts/switch-off contacts	2
Number of make contacts/switch-on contacts	2
Contact material	AgNi
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	10 x 10 ⁶ switching operations

Signaling

Status indicator	Green LED
------------------	-----------

Safety and Protection

Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength channel/channel (AC, 1 min)	1.5 kV _{rms}
Protection type	IP20

Physical Data

Width	25.9 mm / 1.02 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch

Mechanical Data

Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
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Material Data

Weight	71.4 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Operating altitude (max.)	2000 m

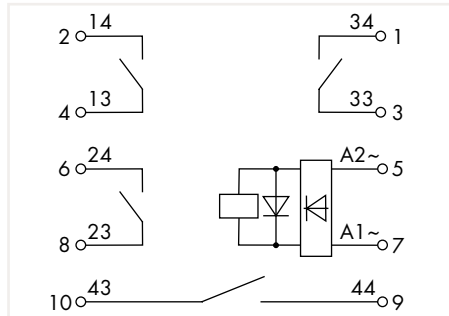
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2
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Relay Module 2042 Series

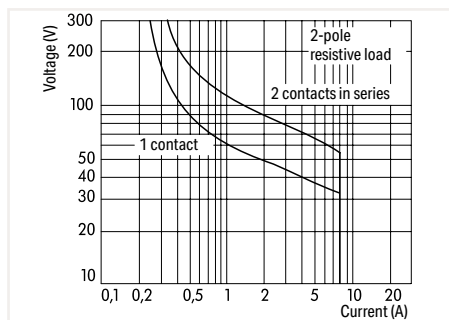
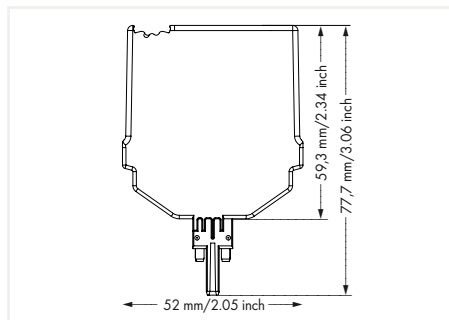


Similar to picture



Relay Module; Relay with 4 make contacts;
24 ... 230 VAC/DC; Status indicator: green

U _N	I _N	Item No.	Pack. Unit
24 ... 230 V AC/DC	58.4 ... 6 mA	2042-3829	5



DC Load Limit Curve

Control Circuit

Input voltage range	±10 %
---------------------	-------

Load Circuit

Number of make contacts/switch-on contacts	4
Contact material	AgNi
Limiting continuous current	3 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	750 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	10 x 10 ⁶ switching operations

Signaling

Status indicator	Green LED
------------------	-----------

Safety and Protection

Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength channel/channel (AC, 1 min)	1.5 kV _{rms}
Protection type	IP20

Physical Data

Width	25.9 mm / 1.02 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch

Mechanical Data

Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
---------------	---

Material Data

Weight	59.5 g
--------	--------

Environmental Requirements

Surrounding air temperature (operation at U _N)	-40 ... +50 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2
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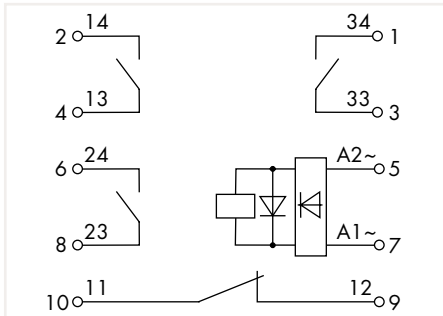
1

Relay Module

2042 Series

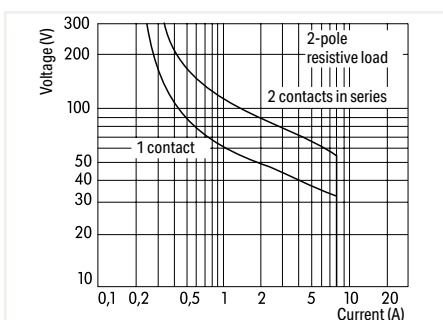
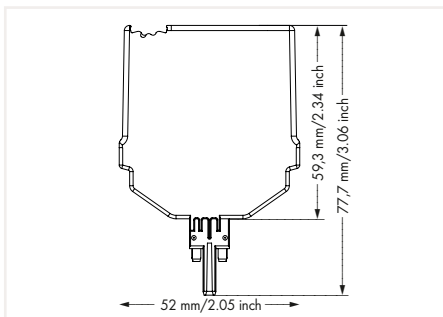


Similar to picture



Relay Module; Relay with 3 make contacts and 1 break contact; 24 ... 230 VAC/DC; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 ... 230 V AC/DC	58.4 ... 6 mA	2042-3879	5



DC Load Limit Curve

Control Circuit

Input voltage range	$\pm 10\%$
---------------------	------------

Load Circuit

Number of break contacts/switch-off contacts	1
Number of make contacts/switch-on contacts	3
Contact material	AgNi
Limiting continuous current	3 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	750 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100×10^3 switching operations
Mechanical life	10×10^6 switching operations

Signaling

Status indicator	Green LED
------------------	-----------

Safety and Protection

Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength channel/channel (AC, 1 min)	1.5 kV _{rms}
Protection type	IP20

Physical Data

Width	25.9 mm / 1.02 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch

Mechanical Data

Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
---------------	---

Material Data

Weight	59.5 g
--------	--------

Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +50 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Operating altitude (max.)	2000 m

Standards and Specifications

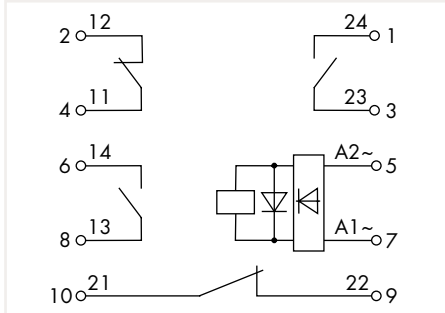
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2
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Relay Module

2042 Series

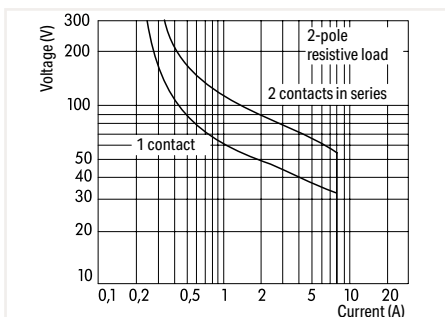
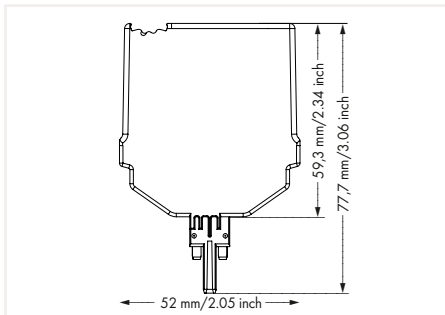


Similar to picture



Relay Module; Relay with 2 break contacts and 2 make contacts; 24 ... 230 VAC/DC; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 ... 230 V AC/DC	58.4 ... 6 mA	2042-3889	5



DC Load Limit Curve

Control Circuit

Input voltage range	±10 %
---------------------	-------

Load Circuit

Number of break contacts/switch-off contacts	2
Number of make contacts/switch-on contacts	2
Contact material	AgNi
Limiting continuous current	3 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	750 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	10 x 10 ⁶ switching operations

Signaling

Status indicator	Green LED
------------------	-----------

Safety and Protection

Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength channel/channel (AC, 1 min)	2.5 kV _{rms}
Protection type	IP20

Physical Data

Width	25.9 mm / 1.02 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch

Mechanical Data

Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
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Material Data

Weight	59,2 g
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Environmental Requirements

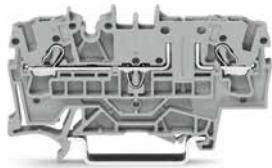
Surrounding air temperature (operation at U_N)	-40 ... +50 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2
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Accessories

1



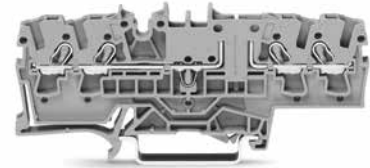
2-conductor carrier terminal block; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²; Push-in CAGE CLAMP®

Color	Item No.	Pack. Unit
gray	2002-1661	50



3-conductor carrier terminal block; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²; Push-in CAGE CLAMP®

Color	Item No.	Pack. Unit
gray	2002-1761	50



4-conductor carrier terminal block; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²; Push-in CAGE CLAMP®

Color	Item No.	Pack. Unit
gray	2002-1861	50



End and intermediate plate; 1 mm thick

Color	Item No.	Pack. Unit
orange	2002-1692	
gray	2002-1691	



End and intermediate plate; 1 mm thick

Color	Item No.	Pack. Unit
orange	2002-1792	
gray	2002-1791	

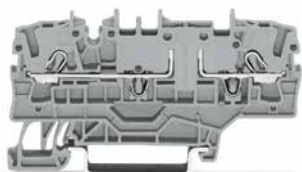


End and intermediate plate; 1 mm thick

Color	Item No.	Pack. Unit
orange	2002-1892	
gray	2002-1891	

Accessories

1



2-conductor carrier terminal block; with additional slot for adjacent jumper, for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²; Push-in CAGE CLAMP®

Color	Item No.	Pack. Unit
gray	2002-1961	50

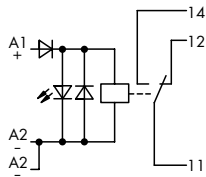
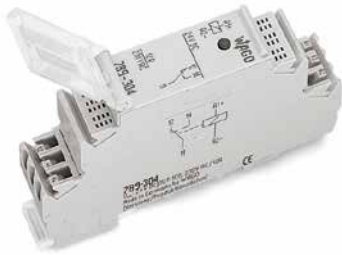


End and intermediate plate; 1 mm thick

Color	Item No.	Pack. Unit
orange	2002-1992	100 (4x25)
gray	2002-1991	100 (4x25)

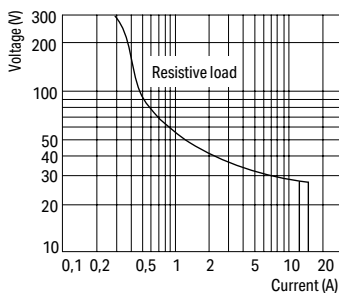
Relay Module

789 Series



Relay Module; 1 changeover contact; Limiting continuous current: 12 A; Status indicator: red; 18 mm wide

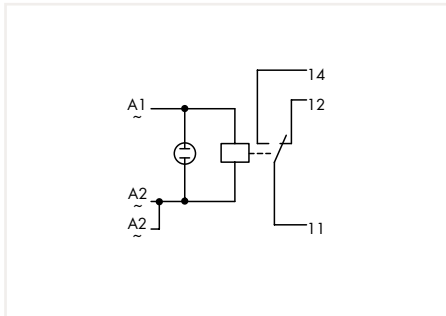
U_N	I_N	Item No.	Pack. Unit
24 VDC	19 mA	789-304	10



DC Load Limit Curve

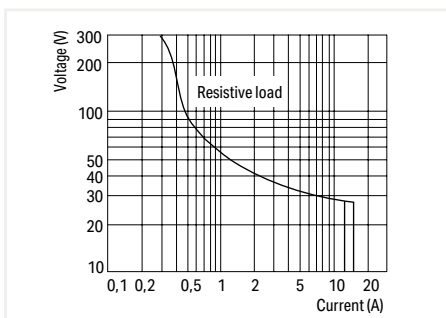
Control Circuit	
Input voltage range	-15 ... +10 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi 90/10
Limiting continuous current	12 A
Inrush current (resistive) max.	30 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	3000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	6 ms
Mechanical life	3 x 10 ⁶ switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch
Physical Data	
Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	50.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Standards and Specifications	
Standards/specifications	EN 60664-1

Relay Module 789 Series



Relay Module; 1 changeover contact; Limiting continuous current: 12 A; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
230 VAC	4.2 mA	789-508	10



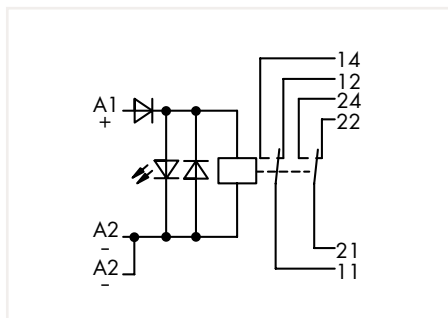
DC Load Limit Curve

Control Circuit	
Input voltage range	-15 ... +10 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi 90/10
Limiting continuous current	12 A
Inrush current (resistive) max.	30 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	3000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	15 ms
Bounce time (typ.)	3 ms
Mechanical life	10 x 10 ⁶ switching operations
Signaling	
Status indicator	red
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch
Physical Data	
Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	49.2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Standards and Specifications	
Standards/specifications	EN 60664-1

1

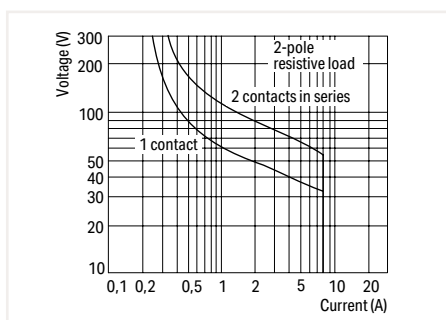
Relay Module

789 Series



Relay Module; 2 changeover contacts; Limiting continuous current: 8 A; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	21 mA	789-312	10



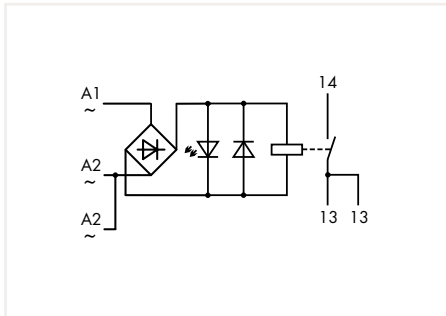
DC Load Limit Curve

Control Circuit	
Input voltage range	-15 ... +10 %
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi 90/10
Limiting continuous current	8 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	6 ms
Mechanical life	30 x 10 ⁶ switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV _{rms}
Protection type	IP20
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch
Physical Data	
Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	55 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201

Relay Module 789 Series



Similar to pictured device

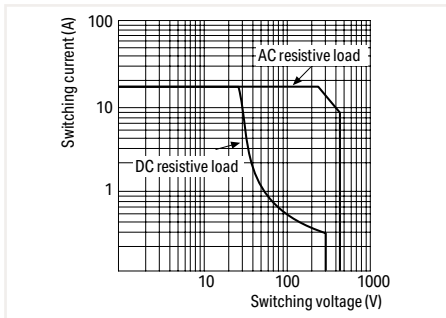


Relay Module; 1 make contact; Limiting continuous current: 16 A; for lamp loads; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VAC/DC	32 mA	789-520	10

Note:

To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



Load Limit Curve

Control Circuit

Input voltage range	-15 ... +20 %
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Load Circuit

Number of make contacts/switch-on contacts	1
Contact material	AgSnO ₂
Limiting continuous current	16 A
Inrush current (resistive) max.	120 A (AC) / 50 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	5 ms
Mechanical life	10 x 10 ⁶ switching operations

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	53.8 g
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Environmental Requirements

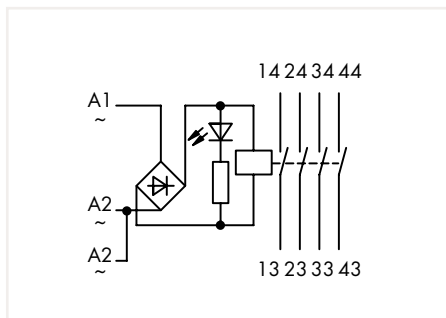
Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

Standards/specifications	EN 60664-1, EN 61810-1
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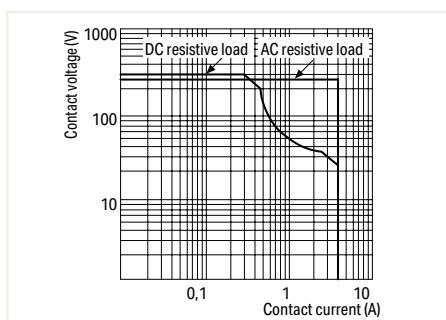
Relay Module

789 Series



Relay Module; 4 make contacts; Limiting continuous current: 4 A; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VAC/DC	12 mA	789-552	10



Load Limit Curve

Control Circuit	
Input voltage range	-15 ... +10 %

Load Circuit	
Number of make contacts/switch-on contacts	4
Contact material	AgNi + Au
Limiting continuous current	4 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1000 VA (AC); DC see load limit curve
Recommended minimum load	0.1 V / 0.1 mA
Pull-in time (typ.)	20 ms
Drop-out time (typ.)	20 ms
Bounce time (typ.)	1 ms
Mechanical life	10 x 10 ⁶ switching operations

Signaling	
Status indicator	Red LED

Safety and Protection	
Rated voltage	230 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	1.5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	0.75 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1 kV _{rms}
Protection type	IP20

Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data	
Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch

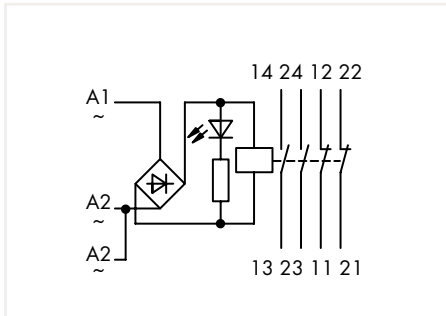
Mechanical Data	
Mounting type	DIN-35 rail

Material Data	
Weight	51.9 g

Environmental Requirements	
Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications	
Standards/specifications	EN 60664-1, EN 61810-1

Relay Module 789 Series

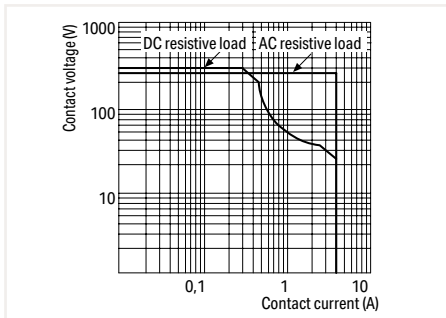


Relay Module; 2 make contacts and 2 break contacts;
Limiting continuous current: 4 A; Status indicator: red;
18 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VAC/DC	12 mA	789-536	10

Note:

To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



Load Limit Curve

Control Circuit

Input voltage range	-15 ... +10 %
---------------------	---------------

Load Circuit

Number of break contacts/switch-off contacts	2
Number of make contacts/switch-on contacts	2
Contact material	AgNi + Au
Limiting continuous current	4 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1000 VA (AC); DC see load limit curve
Recommended minimum load	0.1 V / 0.1 mA
Pull-in time (typ.)	20 ms
Drop-out time (typ.)	20 ms
Bounce time (typ.)	1 ms
Mechanical life	10 x 10 ⁶ switching operations

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	230 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	1.5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	0.75 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	50.7 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

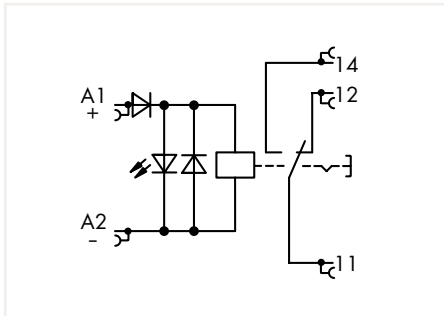
Standards/specifications	EN 60664-1, EN 61810-1
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Relay Module

789 Series



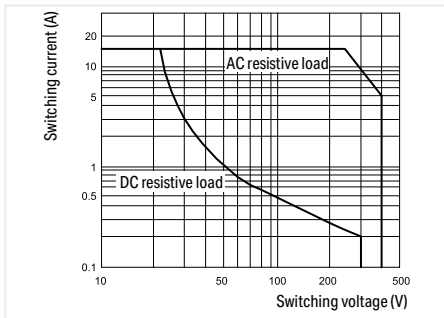
Similar to pictured device



Relay Module; 1 changeover contact; Limiting continuous current: 12 A; manually operated; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	17 mA	789-1341	10

Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



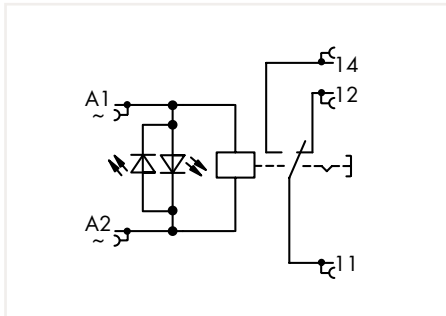
Load Limit Curve

Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi
Limiting continuous current	12 A
Inrush current (resistive) max.	24 A (AC) / 4 s; 30 A / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	3000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	8 ms
Bounce time (typ.)	6 ms
Mechanical life	5 x 10 ⁶ switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch
Physical Data	
Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	50.8 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-25 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Standards and Specifications	
Standards/specifications	EN 60664-1

Relay Module 789 Series



Similar to pictured device

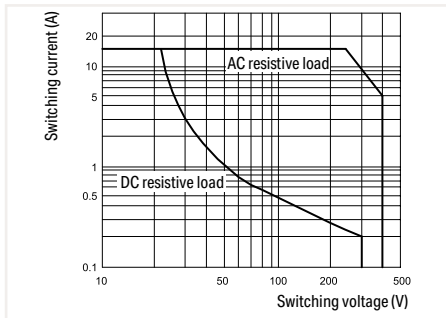


Relay Module; 1 changeover contact; Limiting continuous current: 12 A; manually operated; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
230 VAC	3.5 mA	789-1544	10

Note:

To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



Load Limit Curve

Control Circuit

Input voltage range	±10 %
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Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgNi
Limiting continuous current	12 A
Inrush current (resistive) max.	24 A (AC) / 4 s; 30 A / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	3000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	8 ms
Bounce time (typ.)	6 ms
Mechanical life	5 x 10 ⁶ switching operations

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	50.2 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

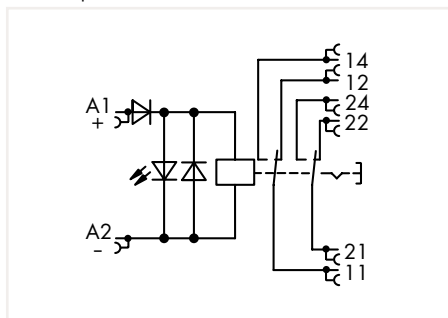
Standards/specifications	EN 60664-1
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Relay Module

789 Series



Similar to pictured device

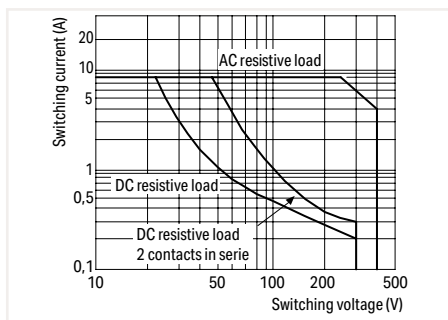


Relay Module; 2 changeover contacts; Limiting continuous current: 8 A; manually operated; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	17 mA	789-1346	10

Note:

To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



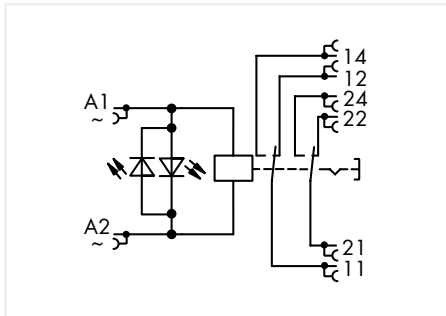
Load Limit Curve

Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi
Limiting continuous current	8 A
Inrush current (resistive) max.	12 A (AC) / 4 s; 16 A / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	8 ms
Bounce time (typ.)	7 ms
Mechanical life	5 x 10 ⁶ switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (open contact)	Functional insulation
Insulation type (load/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Protection type	IP20
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch
Physical Data	
Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	57.6 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-25 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201

Relay Module 789 Series



Similar to pictured device

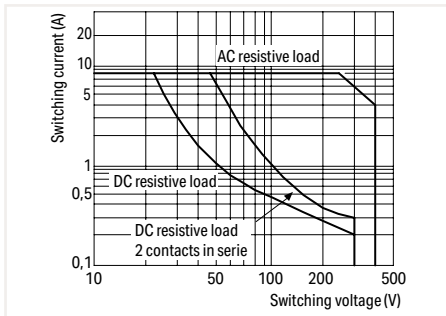


Relay Module; 2 changeover contacts; Limiting continuous current: 8 A; manually operated; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
230 VAC	3.5 mA	789-1549	10

Note:

To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



Load Limit Curve

Control Circuit

Input voltage range	±10 %
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Load Circuit

Number of changeover/switchover contacts	2
Contact material	AgNi
Limiting continuous current	8 A
Inrush current (resistive) max.	12 A (AC) / 4 s; 16 A / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	8 ms
Bounce time (typ.)	7 ms
Mechanical life	5 x 10 ⁶ switching operations

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	59.5 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C

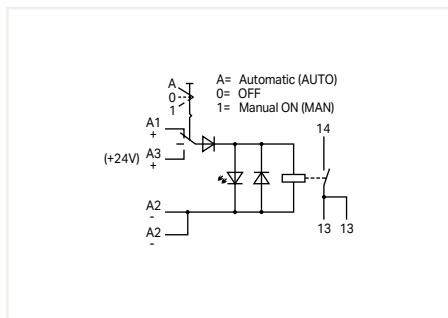
Standards and Specifications

Standards/specifications	EN 60664-1
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Relay Module

789 Series

1

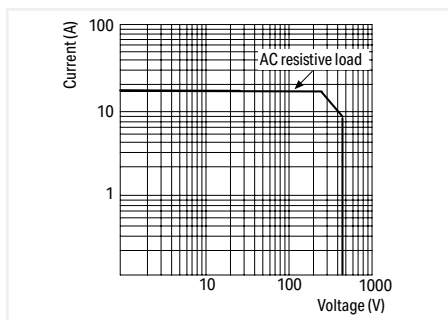


Relay Module; 1 make contact; Limiting continuous current: 16 A; for lamp loads; Manual/OFF/Auto switch; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	19 mA	789-323	10

Note:

To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



Load Limit Curve

Control Circuit

Input voltage range	-15 ... +20 %
Power loss (max.) $P_{I(max)}$	0.7 W

Load Circuit

Number of make contacts/switch-on contacts	1
Contact material	AgSnO ₂
Limiting continuous current	16 A
Inrush current (resistive) max.	120 A (AC) / 50 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC)
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	5 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	10 x 10 ⁶ switching operations

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	300 V
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (open contact)	Functional insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Protection type	IP20

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	54.2 g
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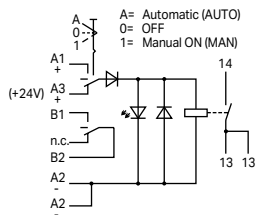
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Temperature range of the connecting cable according to EN 61010-2-201	$\geq (T_{\text{surrounding air}} + 30 \text{ K})$
Relative humidity	75% (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201
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Relay Module 789 Series

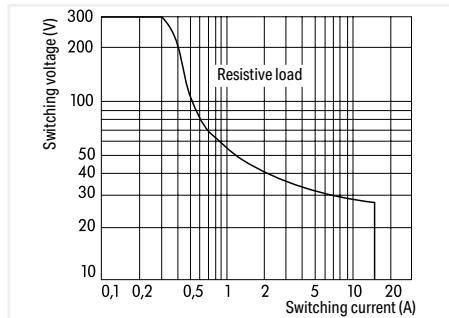


Relay Module; 1 make contact; Limiting continuous current: 16 A; for lamp loads; Manual/OFF/Auto switch; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	19 mA	789-324	10

Note:

To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit

Input voltage range	-10 ... +20 %
Power loss (max.) $P_{I(max)}$	0.7 W

Load Circuit

Number of make contacts/switch-on contacts	1
Contact material	AgSnO ₂ , W pre-make contact
Limiting continuous current	16 A
Inrush current (resistive) max.	165 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Pull-in time (typ.)	10 ms
Drop-out time (typ.)	5 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	5 x 10 ³ switching operations
Mechanical life	5 x 10 ⁶ switching operations

Signal Contact

Switching voltage (signal contact) (max.)	AC 30 V / DC 60 V
Limiting continuous current (signal contact)	4 A

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	300 V
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (open contact)	Functional insulation
Insulation type (load circuit/monitoring contact)	Reinforced insulation (safe isolation)
Insulation type (control circuit / signaling contact)	Basic insulation (Working voltage: 100 V); Overvoltage category II
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Protection type	IP20

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	60.4 g
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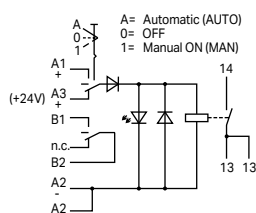
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Temperature range of the connecting cable according to EN 61010-2-201	≥ (T _{surrounding air} + 30 K)
Relative humidity	75% (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201
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Relay Module 789 Series

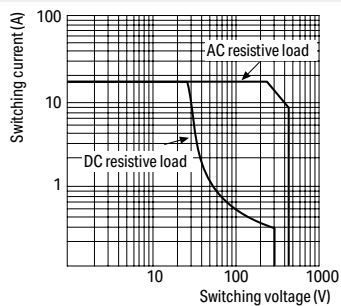


Relay Module; 1 make contact; Limiting continuous current: 16 A; for lamp loads; Manual/OFF/Auto switch; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	19 mA	789-325	10

Note:

To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



Load Limit Curve

Control Circuit

Input voltage range	-15 ... +20 %
Power loss (max.) $P_{I(max)}$	0.7 W

Load Circuit

Number of make contacts/switch-on contacts	1
Contact material	AgSnO ₂
Limiting continuous current	16 A
Inrush current (resistive) max.	120 A (AC) / 50 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	5 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	10 x 10 ⁶ switching operations

Signal Contact

Switching voltage (signal contact) (max.)	AC 30 V / DC 60 V
Limiting continuous current (signal contact)	4 A

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	300 V
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (open contact)	Functional insulation
Insulation type (load circuit/monitoring contact)	Reinforced insulation (safe isolation)
Insulation type (control circuit / signaling contact)	Basic insulation (Working voltage: 100 V); Overvoltage category II
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Protection type	IP20

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	57.8 g
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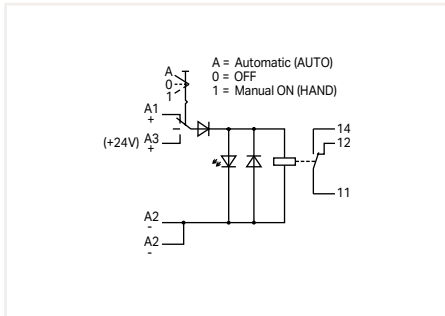
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Temperature range of the connecting cable according to EN 61010-2-201	≥ ($T_{surrounding\ air} + 30\ K$)
Relative humidity	75% (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201
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Relay Module 789 Series

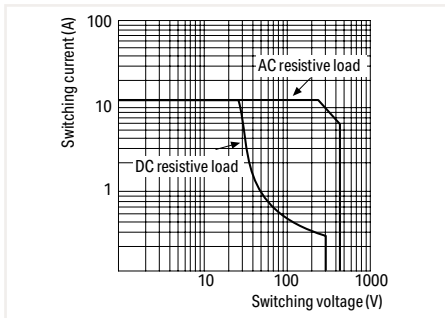


Relay Module; 1 changeover contact; Limiting continuous current: 12 A; for lamp loads; Manual/OFF/Auto switch; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	19 mA	789-326	10

Note:

To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



Load Limit Curve

Control Circuit

Input voltage range	-15 ... +20 %
Power loss (max.) $P_{I(max)}$	0.7 W

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgSnO ₂
Limiting continuous current	12 A
Inrush current (resistive) max.	120 A (AC) / 50 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	3000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	5 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	10 x 10 ⁶ switching operations

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	300 V
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (open contact)	Functional insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Protection type	IP20

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	55 g
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Environmental Requirements

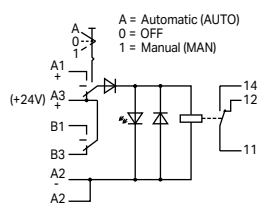
Surrounding air temperature (operation at U_N)	-20 ... +40 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Temperature range of the connecting cable according to EN 61010-2-201	$\geq (T_{\text{surrounding air}} + 30 \text{ K})$
Relative humidity	75% (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201
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Relay Module

789 Series

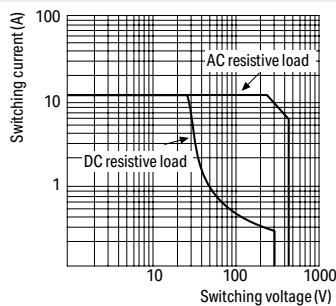


Relay Module; 1 changeover contact; Limiting continuous current: 12 A; for lamp loads; Manual/OFF/Auto switch; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	19 mA	789-329	10

Note:

To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



Load Limit Curve

Control Circuit

Input voltage range	-15 ... +20 %
Power loss (max.) $P_{I(max)}$	0.6 W

Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgSnO ₂
Limiting continuous current	12 A
Inrush current (resistive) max.	120 A (AC) / 50 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	3000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	5 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	10 x 10 ⁶ switching operations

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	300 V
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (open contact)	Functional insulation
Insulation type (load circuit/monitoring contact)	Reinforced insulation (safe isolation)
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Protection type	IP20

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	51 g
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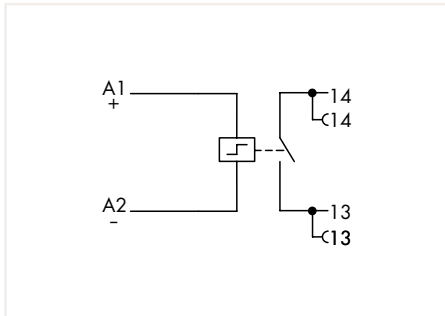
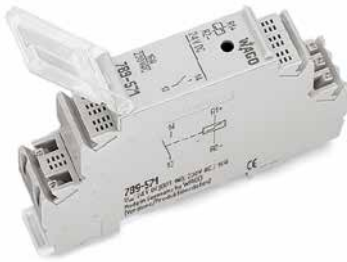
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	75% (no condensation permissible)
Operating altitude (max.)	2000 m

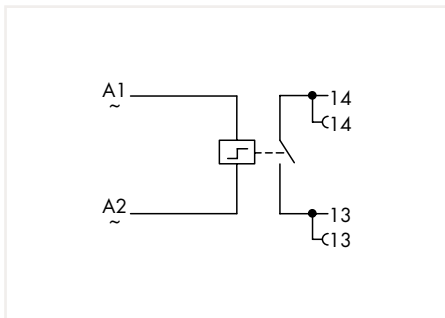
Standards and Specifications

Standards/specifications	EN 61010-2-201
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Latching Relay Module 789 Series



789-571



789-570

Latching Relay Module; 1 make contact; Limiting continuous current: 16 A; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	42 mA	789-571	10
230 VAC	10 mA	789-570	10

Control Circuit

Input voltage range	-15 ... +10 %
Minimum pulse length (control input)	40 ms
Coil control	Pulse mode
Minimum break time	180 ms

Load Circuit

Number of make contacts/switch-on contacts	1
Contact material	AgSnO ₂
Limiting continuous current	16 A
Inrush current (resistive) max.	50 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC)
Recommended minimum load	10 V / 10 mA
Electrical life (NO; resistive load; 23 °C)	50 x 10 ³ switching operations
Mechanical life	1 x 10 ⁶ switching operations
Switching load with/without load (max.)	6 min ⁻¹ / 240 min ⁻¹
Circuit Protection	Circuit breaker max. 16 A, B characteristic

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0.2 ... 2.5 mm ² / 24 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	58.8 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

Standards/specifications	EN 60664-1
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Accessories

1



Operating tool with a partially insulated shaft; Type 2; (3.5 x 0.5) mm blade

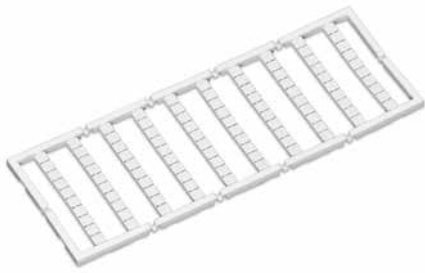
	Item No.	Pack. Unit
	210-720	50



Push-in type jumper bar; 12-way; Nominal current: 16 A; uninsulated

	Item No.	Pack. Unit
	789-112	100 (4x25)

Accessories



Mini-WSB marker card; Marker width: 5 mm; 10 strips with 10 markers/card

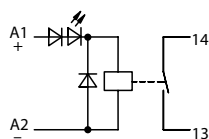
Marking	Item No.	Pack. Unit
plain	248-501	50
1 ... 10 (10 x)	248-502	50
11 ... 20 (10 x)	248-503	50
21 ... 30 (10 x)	248-504	50
31 ... 40 (10 x)	248-505	50
41 ... 50 (10 x)	248-506	50
1 ... 50 (2 x)	248-566	50
K1 ... K10	248-450	50
K11 ... K20	248-451	50
K100	248-452	50
U1 ... U10	248-453	50
U11 ... U20	248-454	50
U100	248-455	50

Felt-tip pen; for permanent marking

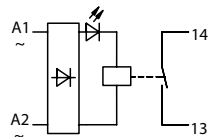
Item No.	Pack. Unit
210-110	200

Relay Module

288 Series



288-364



288-546; 288-567

Relay Module; 1 make contact; Limiting continuous current: 5 A; 13 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	20 mA	288-364	1
24 VAC/DC	20 mA	288-564	1

Control Circuit

Input nominal voltage range	$\pm 10\%$
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Load Circuit

Number of make contacts/switch-on contacts	1
Contact material	AgNi 0.15
Limiting continuous current	5 A
Inrush current (resistive) max.	16 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC)
Pull-in time (typ.)	4 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	2 ms
Electrical life (NO; resistive load; 23 °C)	200 x 10 ³ switching operations
Mechanical life	20 x 10 ⁶ switching operations

Safety and Protection

Overtoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Line-to-neutral conductor voltage	AC / DC 300 V

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	13 mm / 0.512 inch
Height from upper-edge of DIN-rail	47 mm / 1.85 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	30.6 g
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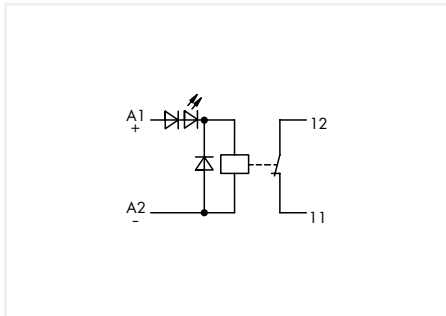
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-25 ... +70 °C
Processing temperature	-25 ... +50 °C
Max. temperature rise of connection cable	30 K
Relative humidity	5 ... 75 % (non-condensing)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201
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Relay Module 288 Series



Relay Module; 1 break contact; Limiting continuous current: 5 A; 13 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	20 mA	288-368	1

Control Circuit

Input nominal voltage range	$\pm 10\%$
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Load Circuit

Number of break contacts/switch-off contacts	1
Contact material	AgNi 0.15
Limiting continuous current	5 A
Inrush current (resistive) max.	16 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC)
Pull-in time (typ.)	4 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	2 ms
Electrical life (NO; resistive load; 23 °C)	200 x 10 ³ switching operations
Mechanical life	30 x 10 ⁶ switching operations

Safety and Protection

Overtoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Line-to-neutral conductor voltage	AC / DC 300 V

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	13 mm / 0.512 inch
Height from upper-edge of DIN-rail	47 mm / 1.85 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	30.9 g
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Environmental Requirements

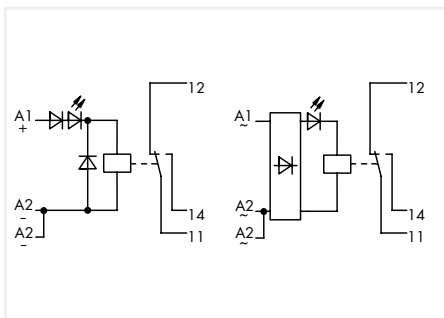
Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-25 ... +70 °C
Processing temperature	-25 ... +50 °C
Max. temperature rise of connection cable	30 K
Relative humidity	5 ... 75 % (non-condensing)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201
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Relay Module

288 Series

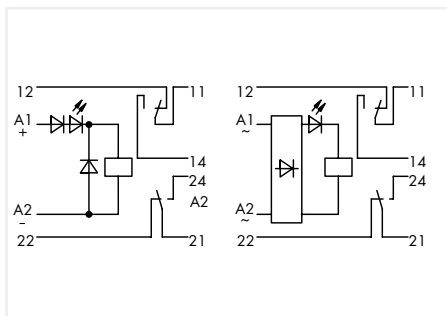


Relay Module; 1 changeover contact; Limiting continuous current: 6 A; 21 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	21.8 mA	288-304	1
24 VAC/DC	21.8 mA	288-504	1

Control Circuit	
Input nominal voltage range	$\pm 10\%$
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi 90/10
Limiting continuous current	6 A
Inrush current (resistive) max.	16 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC)
Pull-in time (typ.)	9 ms
Drop-out time (typ.)	3 ms
Bounce time (typ.)	2 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	30 x 10 ⁶ switching operations
Safety and Protection	
Rated voltage	300 V
Pollution degree	2
Overvoltage category	II
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch
Physical Data	
Width	20.5 mm / 0.807 inch
Height from upper-edge of DIN-rail	48 mm / 1.89 inch
Depth	85 mm / 3.346 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	45 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-40 ... +80 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 75 % (non-condensing)
Standards and Specifications	
Standards/specifications	EN 61010-2-201

Relay Module 288 Series



Relay Module; 2 changeover contacts; Limiting continuous current: 6 A; 23 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	21.8 mA	288-312	1
24 VAC/DC	21.8 mA	288-512	1

Control Circuit

Input nominal voltage range	$\pm 10\%$
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Load Circuit

Number of changeover/switchover contacts	2
Contact material	AgNi 0.15
Limiting continuous current	6 A
Inrush current (resistive) max.	14 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC)
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	3 ms
Bounce time (typ.)	2 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	20 x 10 ⁶ switching operations

Safety and Protection

Rated voltage	250 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV _{rms}

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	22.5 mm / 0.886 inch
Height from upper-edge of DIN-rail	48 mm / 1.89 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	50.2 g
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Environmental Requirements

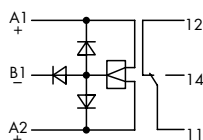
Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-40 ... +80 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

Standards/specifications	EN 60664-1
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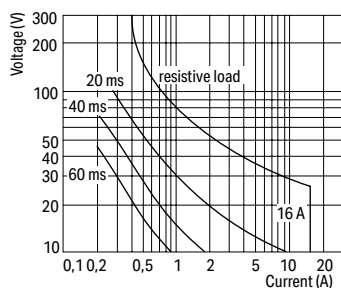
Relay Module

288 Series



Relay Module; Bistable; 1 changeover contact; Limiting continuous current: 6 A; 21 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	41.5 mA	288-380	1



DC Load Limit Curve

Control Circuit

Input voltage range	-15 ... +20 %
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Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgNi 0.15
Limiting continuous current	6 A
Inrush current (resistive) max.	30 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC)
Pull-in time (typ.)	10 ms
Drop-out time (typ.)	10 ms
Bounce time (typ.)	6 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations

Safety and Protection

Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	20.5 mm / 0.807 inch
Height from upper-edge of DIN-rail	48 mm / 1.89 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	43.3 g
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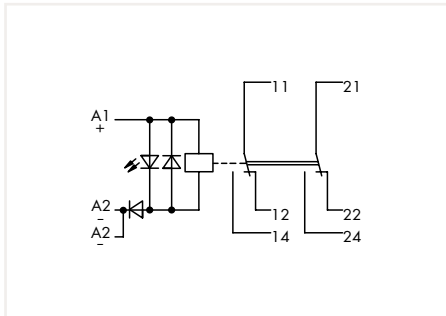
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-25 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 75 % (non-condensing)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201
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Relay Module 288 Series



Relay Module; with force-guided contacts; 2 change-over contacts; Limiting continuous current: 5 A; 19 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	36 mA	288-437	1

Note:

60 VDC switching voltages and 300 mA currents must not be exceeded for gold-plated basic relays. Higher switching power eventually evaporates the gold layer.

Control Circuit

Input voltage range	-15 ... +10 %
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Load Circuit

Number of changeover/switchover contacts	2
Contact material	AgNi 10 + Au
Limiting continuous current	5 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC)
Recommended minimum load	0.1 V / 1 mA / 1 mW
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	12 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	50 x 10 ⁶ switching operations

Safety and Protection

Rated voltage	250 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1.5 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	3 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (load/load circuit)	Functional insulation
Insulation type (adjacent devices)	Basic insulation
Protection type	IP00

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	19 mm / 0.748 inch
Height from upper-edge of DIN-rail	38 mm / 1.496 inch
Depth	75 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	44.2 g
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Environmental Requirements

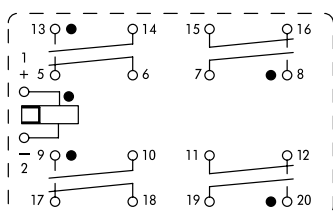
Surrounding air temperature (operation at U_N)	-25 ... +70 °C
Surrounding air temperature (storage)	-25 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 %
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 50205
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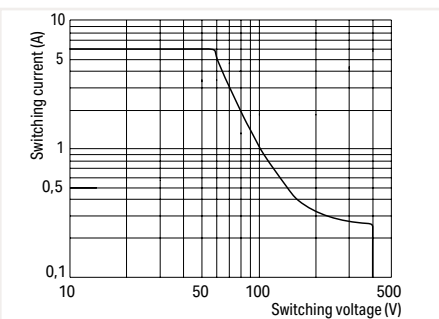
Relay Module

288 Series



Relay Module; with force-guided contacts; 4 make contacts and 4 break contacts; Limiting continuous current: 6 A; 64 mm wide

U_N	I_N	Item No.	Pack. Unit
12 VDC	41.6 mA	288-413	
24 VAC/DC	26 mA	288-414	1
230 VAC/DC	14 mA	288-418	1



DC Load Limit Curve

Note:

If required a ventilation hole can be made in the cover, reducing the degree of protection from IP67 to IP30.

If an outer contact (20) should weld then the forced operated inner contact (12) driven by the actuator remains open. The rotating armature remains free to move. The unaffected contact pairs can operate normally, (i.e., their function to make or break remains unaffected).

If an inner contact should weld (12) then the movement of the rotating armature is blocked via the operator. Open contacts of all four contact pairs remain open. This arrangement corresponds to conventional, force-guided operation.

Control Circuit

Input voltage range	-15 ... +20 %
---------------------	---------------

Load Circuit

Number of break contacts/switch-off contacts	4
Number of make contacts/switch-on contacts	4
Contact material	AgSnO ₂
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC)
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC)
Recommended minimum load	10 V / 10 mA
Pull-in time (typ.)	18 ms
Drop-out time (typ.)	21 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	10 x 10 ⁶ switching operations
Mechanical force-guided operation	Type B

Safety and Protection

Rated voltage	250 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1.3 kV

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	63.5 mm / 2.5 inch
Height from upper-edge of DIN-rail	40 mm / 1.575 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	109.3 g
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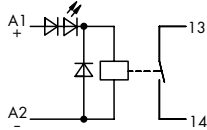
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +80 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

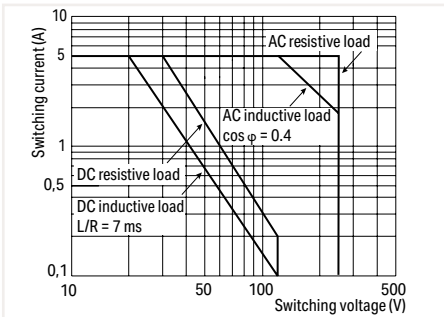
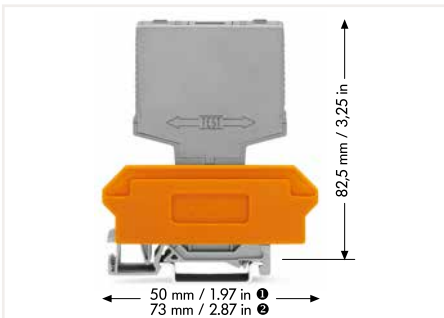
Standards/specifications	EN 60664-1; EN 50205; EN 61810-1; ESTI (SEV): 09.1133; UL 508; E120782; TÜV: 968/EZ 116.02/09
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Relay Module 286 Series



Relay Module; 1 make contact; Limiting continuous current: 5 A; Status indicator: red; 10 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	7.4 mA	286-364	1



DC Load Limit Curve

Control Circuit

Input nominal voltage range	±10 %
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Load Circuit

Number of make contacts/switch-on contacts	1
Contact material	AgSnO ₂
Limiting continuous current	5 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC)
Pull-in time (typ.)	6 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	2 ms
Electrical life (NO; resistive load; 23 °C)	10 x 10 ³ switching operations
Mechanical life	50 x 10 ³ switching operations

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	250 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Protection type	IP20

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.248 inch
Depth	52 mm / 1.654 inch

Mechanical Data

Mounting type	Pluggable relay module for terminal block for pluggable modules
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Material Data

Weight	16.8 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-25 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 85 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 60664-1
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Accessories



Terminal block for pluggable modules; 4-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-618	40



Terminal block for pluggable modules; 8-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

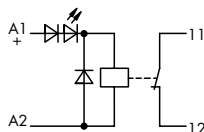
Item No.	Pack. Unit
280-608	40



Terminal block for pluggable modules; 8-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

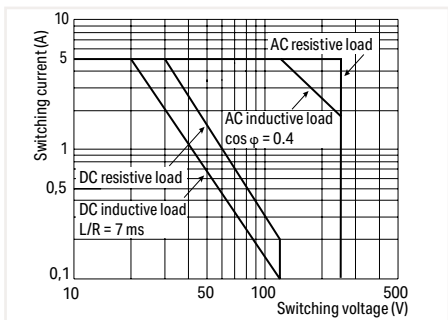
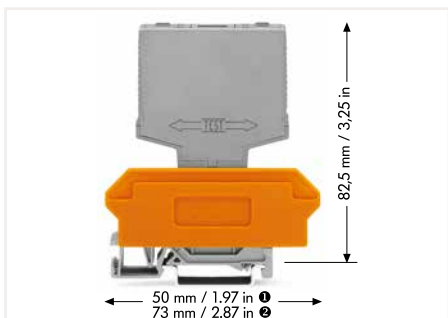
Item No.	Pack. Unit
280-762	30

Relay Module 286 Series



Relay Module; 1 break contact; Limiting continuous current: 5 A; Status indicator: red; 10 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	20.4 mA	286-368	1



DC Load Limit Curve

Control Circuit

Input nominal voltage range	±10 %
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Load Circuit

Number of break contacts/switch-off contacts	1
Contact material	AgNi
Limiting continuous current	5 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC)
Pull-in time (typ.)	10 ms
Drop-out time (typ.)	4 ms
Bounce time (typ.)	3 ms
Mechanical life	5 x 10 ⁶ switching operations

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Protection type	IP20

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.248 inch
Depth	52 mm / 1.654 inch

Mechanical Data

Mounting type	Pluggable relay module for terminal block for pluggable modules
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Material Data

Weight	19.1 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-25 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 85 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 60664-1
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Accessories



Terminal block for pluggable modules; 4-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-618	40



Terminal block for pluggable modules; 8-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-608	40

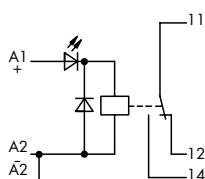


Terminal block for pluggable modules; 8-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-762	30

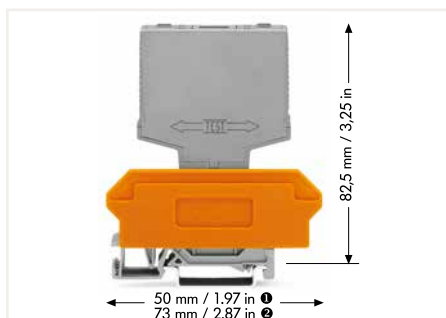
Relay Module

286 Series



Relay Module; 1 changeover contact; Limiting continuous current: 7 A; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	19.4 mA	286-304	1



Control Circuit

Input nominal voltage range	$\pm 10\%$
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Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgNi 0.15
Limiting continuous current	7 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1750 VA (AC)
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	30 x 10 ⁶ switching operations

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.248 inch
Depth	52 mm / 1.654 inch

Mechanical Data

Mounting type	Pluggable relay module for terminal block for pluggable modules
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Material Data

Weight	34.9 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-25 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 85 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 60664-1
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Accessories



Terminal block for pluggable modules; 6-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-619	30



Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

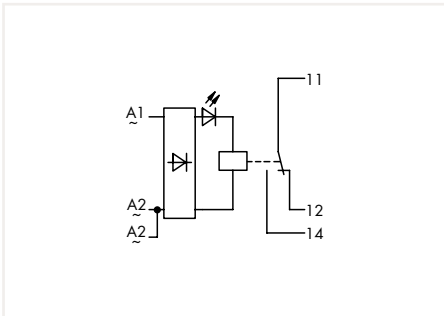
Item No.	Pack. Unit
280-609	30



Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

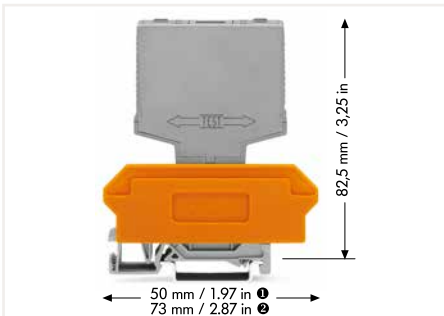
Item No.	Pack. Unit
280-763	25

Relay Module 286 Series



Relay Module; 1 changeover contact; Limiting continuous current: 7 A; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
115 VAC	6.1 mA	286-507	1
230 VAC	4.8 mA	286-508	1



Control Circuit

Input nominal voltage range	±10 %
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Load Circuit

Number of changeover/switchover contacts	1
Contact material	AgNi 0.15
Limiting continuous current	7 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1750 VA (AC)
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	30 x 10 ⁶ switching operations

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Protection type	IP20

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.248 inch
Depth	52 mm / 1.654 inch

Mechanical Data

Mounting type	Pluggable relay module for terminal block for pluggable modules
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Material Data

Weight	31.1 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-25 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 75 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 60664-1
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Accessories



Terminal block for pluggable modules; 6-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-619	30



Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-609	30

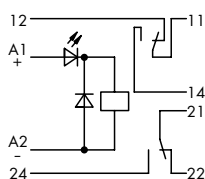


Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-763	25

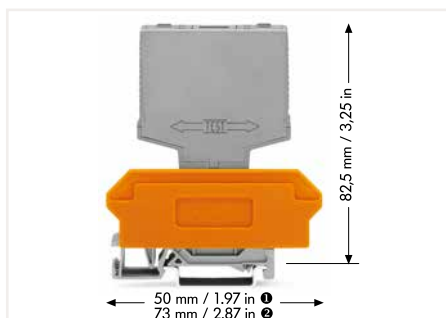
Relay Module

286 Series



Relay Module; 2 changeover contacts; Limiting continuous current: 7 A; Status indicator: red; 20 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	21.8 mA	286-312	1



Control Circuit	
Input nominal voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi 0.15
Limiting continuous current	7 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1750 VA (AC)
Pull-in time (typ.)	18 ms
Drop-out time (typ.)	3 ms
Bounce time (typ.)	2 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ⁵ switching operations
Mechanical life	30 x 10 ⁶ switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV _{rms}
Protection type	IP20
Physical Data	
Width	20 mm / 0.787 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.248 inch
Depth	52 mm / 1.654 inch
Mechanical Data	
Mounting type	Pluggable relay module for terminal block for pluggable modules
Material Data	
Weight	39.6 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-25 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 85 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 60664-1

Accessories



Terminal block for pluggable modules; 8-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-638	20



Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

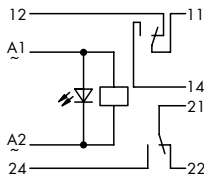
Item No.	Pack. Unit
280-628	20



Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

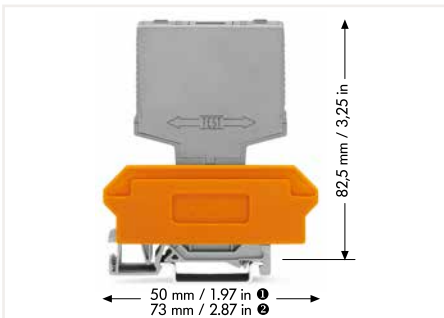
Item No.	Pack. Unit
280-764	20

Relay Module 286 Series



Relay Module; 2 changeover contacts; Limiting continuous current: 7 A; Status indicator: red; 20 mm wide

U_N	I_N	Item No.	Pack. Unit
230 VAC	3.5 mA	286-516	1



Control Circuit

Input nominal voltage range	±10 %
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Load Circuit

Number of changeover/switchover contacts	2
Contact material	AgNi 0.15
Limiting continuous current	7 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1750 VA (AC)
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	3 ms
Bounce time (typ.)	2 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	30 x 10 ⁶ switching operations

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV _{rms}
Protection type	IP20

Physical Data

Width	20 mm / 0.787 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.248 inch
Depth	52 mm / 1.654 inch

Mechanical Data

Mounting type	Pluggable relay module for terminal block for pluggable modules
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Material Data

Weight	35.2 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-25 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 85 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 60664-1
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Accessories



Terminal block for pluggable modules; 8-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-638	20



Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-628	20

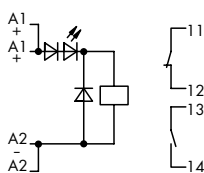


Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-764	20

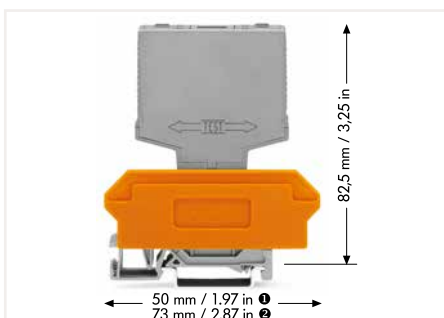
Relay Module

286 Series



Relay Module; 1 make contact and 1 break contact;
Limiting continuous current: 6 A; Status indicator: red;
20 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	7.4 mA	286-320	1



Control Circuit

Input nominal voltage range	$\pm 10\%$
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Load Circuit

Number of break contacts/switch-off contacts	1
Number of make contacts/switch-on contacts	1
Contact material	AgSnO ₂
Limiting continuous current	6 A
Inrush current (resistive) max.	15 A (AC) / 1 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC)
Pull-in time (typ.)	10 ms
Drop-out time (typ.)	4 ms
Bounce time (typ.)	1 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	50 x 10 ⁶ switching operations

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV _{rms}
Protection type	IP20

Physical Data

Width	20 mm / 0.787 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.248 inch
Depth	52 mm / 1.654 inch

Mechanical Data

Mounting type	Pluggable relay module for terminal block for pluggable modules
---------------	---

Material Data

Weight	32.5 g
--------	--------

Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-25 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 85 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 60664-1
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Accessories



Terminal block for pluggable modules; 8-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-638	20



Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

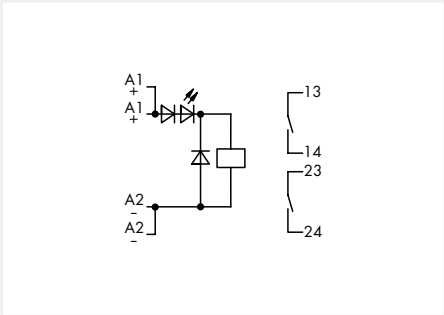
Item No.	Pack. Unit
280-628	20



Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

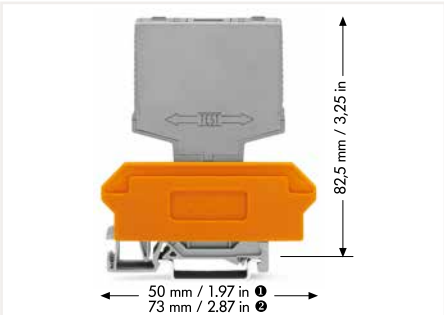
Item No.	Pack. Unit
280-764	20

Relay Module 286 Series



Relay Module; 2 make contacts; Limiting continuous current: 6 A; Status indicator: red; 20 mm wide

U _N	I _N	Item No.	Pack. Unit
24 VDC	7.5 mA	286-328	1



Control Circuit

Input nominal voltage range	±10 %
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Load Circuit

Number of make contacts/switch-on contacts	2
Contact material	AgSnO ₂
Limiting continuous current	6 A
Inrush current (resistive) max.	15 A (AC) / 1 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC)
Pull-in time (typ.)	10 ms
Drop-out time (typ.)	4 ms
Bounce time (typ.)	1 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Mechanical life	50 x 10 ⁶ switching operations

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	300 V
Rated surge voltage	4 kV
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (load/load circuit)	Functional insulation
Insulation type (between adjacent devices of the the same type)	Reinforced insulation (safe isolation)
Protection type	IP20

Physical Data

Width	20 mm / 0.787 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.248 inch
Depth	52 mm / 1.654 inch

Mechanical Data

Mounting type	Pluggable relay module for terminal block for pluggable modules
---------------	---

Material Data

Weight	28.5 g
--------	--------

Environmental Requirements

Surrounding air temperature (operation at U _N)	-25 ... +40 °C
Surrounding air temperature (storage)	-25 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 85 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201
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Accessories



Terminal block for pluggable modules; 8-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-638	20



Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-628	20

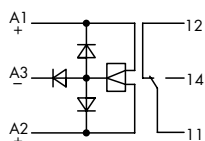


Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-764	20

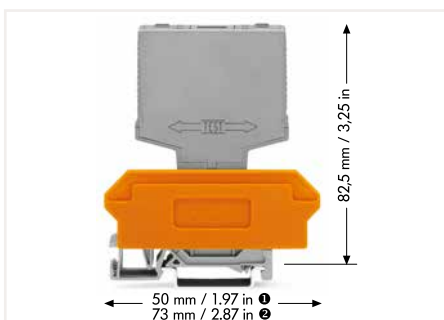
Relay Module

286 Series



Relay Module; Bistable; 1 changeover contact; Limiting continuous current: 6 A; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	51 mA	286-380	1



Control Circuit	
Input nominal voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi 90/10
Limiting continuous current	6 A
Inrush current (resistive) max.	30 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC)
Pull-in time (typ.)	10 ms
Drop-out time (typ.)	10 ms
Bounce time (typ.)	6 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10 ³ switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overtoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Protection type	IP20
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.248 inch
Depth	52 mm / 1.654 inch
Mechanical Data	
Mounting type	Pluggable relay module for terminal block for pluggable modules
Material Data	
Weight	35 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-25 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 75 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201

Accessories



Terminal block for pluggable modules; 6-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-619	30



Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

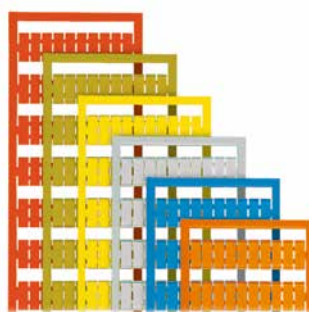
Item No.	Pack. Unit
280-609	30



Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-763	25

Accessories



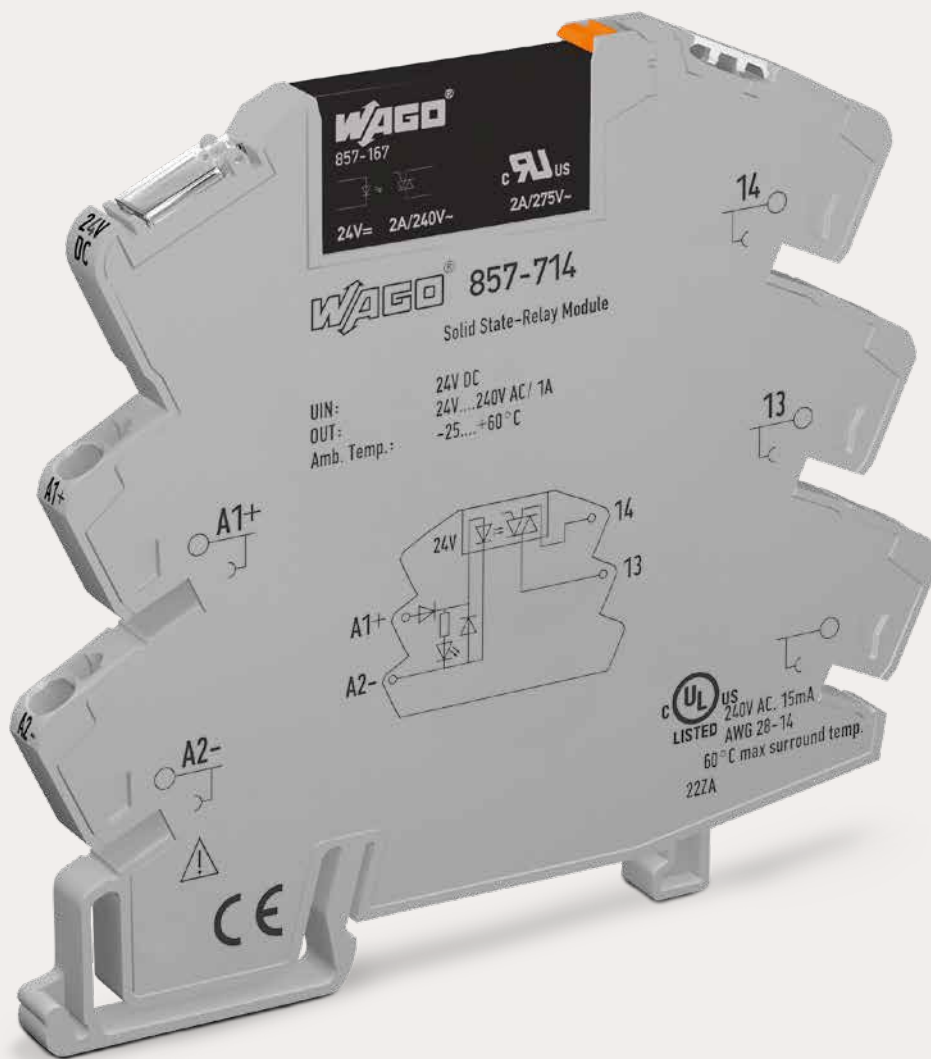
1

WSB marker card; WSB marker width: 4 mm; 10 strips with 10 markers/card

Marking	Item No.	Pack. Unit
K	209-782	50
1 ... 10 (10 x)	209-702	50
A1; A2; 13; 14	209-952	50
A1; A2; 11; 12	209-953	50
11; 12; 14; A1; A2; A2; 11; 12; 14	209-994	50
12; A1; A2; 24; 11; 14; 21; 22	209-995	50
A1; A1; A2; A2; 11; 12; 13; 14; 23; 24	209-693	50
12; A1; A2; 23; 24; 11; 13; 14; 21; 22	209-691	50
12; A1; A2; 23; 24; 11; 13; 14; 33; 34	209-690	50
14; A1; A2; 33; 34; 13; 23; 24; 43; 44	209-692	50
A1; A2; 32; 31; 34; 42; 41; 12; 11; 14; 22; 21; 24; 44	249-656	50
L+; 1; L-; 11; 12; 13; 14	209-954	50
A1; A2; A3; 11; 12; 14	249-607	50
A1; A1; A2; A2; 12; 11; 11; 14	209-996	50
A1; A1; St; A2; A2; 12; 11; 11; 14	209-601	50
U1; U2; U3; U4; OV; 12; 11; 11; 14; 14	209-951	50
U	209-789	50
A1; A2; A2; 1; 3; 2	209-685	50
A1; A2; A2; 1; 2; 2	209-686	50
A1+; A1+; A2-; A2-; 1; RL1; RL2; 2	209-955	50
A1+; A1+; A2-; A2-; 1+; 1+; A; 2-	249-651	50
+/-	209-552	50
1; 2; 3; OV; +UB; OUT; ERR.; OV	249-622	50
1; 2; OV; +UB; OUT; ERR.; OV	249-623	50
Lin; Lin; Lout; Lout; 24V; UA; UA; OV	209-957	50
Lin; Lin; Lout; 11; 14; 14; Lin; Lin; Lout	249-654	50
lin; lin; lout; lout; 24V; 11; 12; 14; OV	209-997	50
S	209-682	50
V	209-784	50
F1 ... F10	209-787	50
D	209-783	50
+; -; 1; 2; 3; 13; 14; 4; 5; 6	249-608	50
L; N; Ackn.; Failure; Test; N; 14; 24	249-606	50
A1; A2; Ackn.; Failure; 12; 11; 11; 14	249-653	50






WSB marker card; plain; WSB marker width: 4 mm; 10 strips with 10 markers/card

Color	Item No.	Pack. Unit
○ white	209-701	100
● yellow	209-701/000-002	100
● red	209-701/000-005	100
● blue	209-701/000-006	100
○ gray	209-701/000-007	100
● orange	209-701/000-012	100
● light green	209-701/000-017	100
● green	209-701/000-023	100
● violet	209-701/000-024	100



WAGO Solid-State Relay and Optocoupler Modules

WAGO Solid-State Relay and Optocoupler Modules

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WAGO Solid-State Relay and Optocoupler Modules Selection Guide

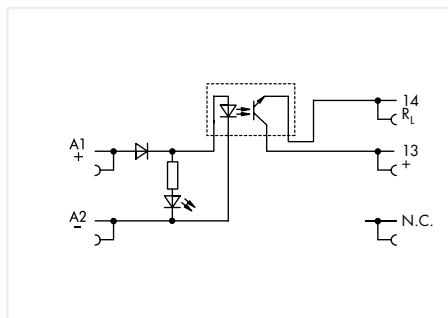
2

Nominal Input Voltage U_N	Limiting Continuous Current	Nominal Input Current at U_N	2-Wire Connection	3-Wire Connection	High-Side Switching	Low-Side Switching	Zero-Voltage Switching	2-Way	Standards/Approvals						For Railway Applications	Specialty Function	Item Number	Page
									EN 50121-3-2	EN 61000-6-2	EN 61000-6-3	EN 61373	EN 61812-1	GL				
5 ADC	0.1 A	7.5 mA	■						■	■	■	■			■	859-793	197	
5 VDC	0.1 A	16.5 mA		■	■					■	■	■			■	859-753	216	
5 VDC	0.1 A	17 mA	■						■	■	■				■	859-795	194	
5 VDC	0.5 A	7.7 mA	■				■			■	■					859-902	220	
5 VDC	0.5 A	9.6 mA		■	■					■	■	■				859-702	209	
5 VDC	0.5 A	10 mA		■	■					■	■	■				859-752	211	
5 VDC	0.5 A	14 mA		■	■											286-752/002-000	228	
5 VDC	5 A	7.2 mA	■							■	■	■				859-738	204	
12 VDC	0.1 A	4 mA	■						■	■	■	■			■	859-798	196	
12 VDC	0.5 A	9.2 mA	■							■	■					859-797	215	
12 VDC	5 A	3.2 mA	■							■	■	■				859-739	205	
24 VDC	0.1 A	4 mA	■													286-794	234	
24 VDC	0.1 A	4 mA	■						■	■	■	■			■	859-791	192	
24 VDC	0.1 A	4.2 mA	■						■	■	■	■			■	859-794	193	
24 VDC	0.1 A	5.6 mA	■					■		■	■	■				857-1494	165	
24 VDC	0.1 A	7 mA	■						■	■	■	■			■	2042-7204	224	
24 VDC	0.1 A	9 mA	■							■	■	■				857-704	152	
24 VDC	0.1 A	9 mA		■	■					■	■	■				859-759	217	
24 VDC	0.1 A	9.2 mA	■						■	■	■	■			■	859-796	195	
24 VDC	0.1 A	14 mA	■													286-791	233	
24 VDC	0.25 A	15 mA	■					■								286-792	235	
24 VDC	0.5 A	5.3 mA		■		■				■	■					859-732	218	
24 VDC	0.5 A	5.9 mA		■	■			■		■	■	■				857-1432	166	
24 VDC	0.5 A	6 mA	■							■	■	■				859-734	219	
24 VDC	0.5 A	7 mA		■	■				■	■	■	■		■		2042-7304	226	
24 VDC	0.5 A	7.7 mA		■	■	■				■	■	■				859-708	210	
24 VDC	0.5 A	8 mA		■	■					■	■	■				859-758	213	
24 VDC	0.5 A	9 mA	■													286-790	232	
24 VDC	0.5 A	11 mA		■	■					■	■	■			2 inverted outputs	859-756	212	
24 VDC	0.5 A	11 mA		■		■				■	■	■				859-706	214	
24 VDC	0.5 A	15 mA		■	■											286-752	231	
24 VDC	1 A	7 mA	■							■	■	■				788-720	184	
24 VDC	1 A	9.15 mA	■						■		■	■			Multifunctional/ multi-time	857-634	169	
24 VDC	2 A	9.15 mA	■							■	■	■			Multifunctional/ multi-time	857-624	168	
24 VDC	2 A	9.2 mA	■							■	■	■				857-714	156	
24 VDC	3 A	4 mA		■		■				■	■	■				859-720	202	
24 VDC	3 A	7 mA	■							■	■	■				859-740	199	
24 VDC	3 A	7 mA	■							■	■	■				859-762	201	
24 VDC	3 A	7.75 mA	■							■	■	■				857-1430	164	
24 VDC	3 A	9.2 mA	■							■	■	■				857-724	160	
24 VDC	3 A	14 mA	■							■	■	■				859-730	198	
24 VDC	3 A	14 mA	■							■	■	■				859-761	200	
24 VDC	3.5 A	7 mA	■							■	■	■				788-700	181	
24 VDC	3.5 A	13 mA	■							■	■	■				788-730	183	
24 VDC	4 A	13.5 mA		■	■											286-723	230	
24 VDC	5 A	3.5 mA	■							■	■	■				859-737	203	
24 VDC	5 A	7 mA		■	■				■	■	■	■		■		2042-7604	227	
24 VDC	5 A	9.3 mA	■							■	■	■		■		788-701	182	
24 VDC	5 A	11 mA			■					■	■	■				788-710	180	
24 VDC	5 A	13.5 mA		■		■										286-721	229	
24 VDC	8 A	8.7 mA							■	■	■	■		■		857-734	163	

WAGO Solid-State Relay and Optocoupler Modules Selection Guide

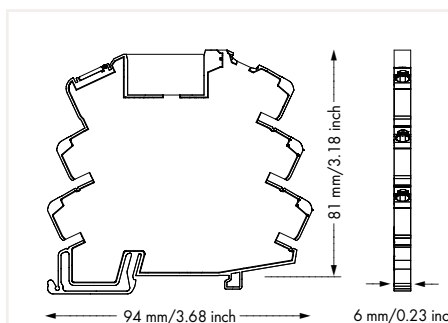
Nominal Input Voltage U_N	Limiting Continuous Current	Nominal Input Current at U_N	2-Wire Connection	3-Wire Connection	High-Side Switching	Low-Side Switching	Zero-Voltage Switching	2-Way	Standards/Approvals						For Railway Applications	Specialty Function	Item Number	Page
									EN 50121-3-2	EN 61000-6-2	EN 61000-6-3	EN 61373	EN 61812-1	GL				
48 VDC	0.1 A	7 mA	■						■	■	■	■			■		2042-7504	225
12 ... 48 VDC	4 A	5 mA	■							■	■	■					859-744	206
24 VAC/DC	4 A	10 mA	■			■				■	■	■					788-721	185
115 VAC/DC	0.1 A	4.2 mA	■							■	■	■					857-707	153
115 VAC/DC	2 A	3.9 mA	■			■				■	■	■					857-717	157
115 VAC/DC	3 A	3.9 mA	■							■	■	■					857-727	161
230 VAC/DC	0.1 A	3.25 mA	■							■	■	■					857-708	154
230 VAC/DC	2 A	3.2 mA	■			■				■	■	■					857-718	158
230 VAC/DC	3 A	3.2 mA	■							■	■	■					857-728	162
230 VAC	0.5 A	0.6 mA		■		■				■	■	■					859-712	207
230 VAC	0.5 A	0.6 mA		■	■					■	■	■					859-772	208

Solid-State Relay Module 857 Series



Solid-State Relay Module; Output voltage range:
0 ... 48 VDC; Limiting continuous current: 0.1 A;
2-wire connection; Status indicator: yellow; 6 mm wide

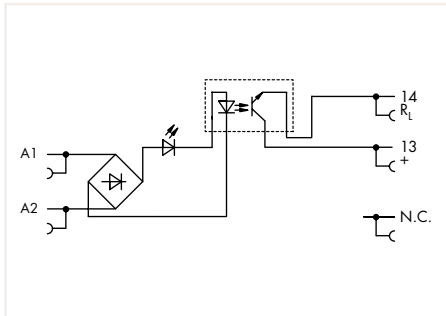
U_N	I_N	Item No.	Pack. Unit
24 VDC	9 mA	857-704	25



Note:
Optocouplers and solid-state relays are designed for use
in signal processing networks that are not supplied by the
low-voltage power grid.

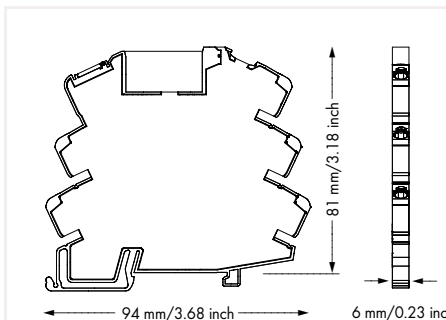
Control Circuit	
Input voltage range (low level)	0 ... 10 VDC
Input voltage range (high level)	16.8 ... 30 VDC
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	0.1 A
Output voltage range	0 ... 48 VDC
Voltage drop (output) max.	≤ 1 VDC
Switching current (min.)	50 μA
Turn-on time	≤ 100 μs
Turn-off time	≤ 600 μs
Switching frequency	≤ 1 kHz
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV _{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	30 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-20 ... +60 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508

Solid-State Relay Module 857 Series



Solid-State Relay Module; Output voltage range:
0 ... 48 VDC; Limiting continuous current: 0.1 A;
2-wire connection; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
115 VAC/DC	4.2 mA	857-707	25



Note:
Optocouplers and solid-state relays are designed for use in signal processing networks that are not supplied by the low-voltage power grid.

Control Circuit

Input voltage range (low level)	0 ... 25 VAC/DC
Input voltage range (high level)	100 ... 138 VAC/DC

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	0.1 A
Nominal output voltage	24 VDC
Output voltage range	0 ... 48 VDC
Voltage drop (output) max.	≤ 1 VDC
Leakage current at rated voltage	≤ 1 μA
Switching current (min.)	50 μA
Turn-on time	4.5 ms
Turn-off time	10 ms
Switching frequency	≤ 20 Hz

Signaling

Status indicator	Yellow LED
------------------	------------

Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
---------------	-------------

Material Data

Weight	30 g
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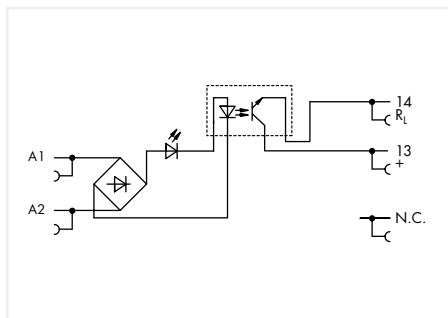
Environmental Requirements

Surrounding air temperature (operation at U_N)	-20 ... +60 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

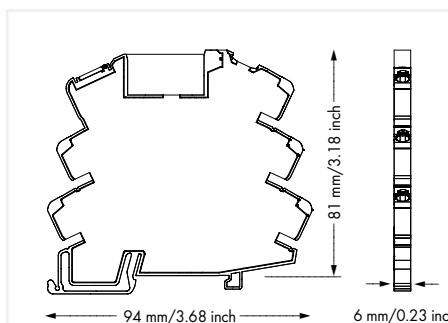
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508
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Solid-State Relay Module 857 Series



Solid-State Relay Module; Output voltage range:
0 ... 48 VDC; Limiting continuous current: 0.1 A;
2-wire connection; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
230 VAC/DC	3.25 mA	857-708	25



Note:
Optocouplers and solid-state relays are designed for use in signal processing networks that are not supplied by the low-voltage power grid.

Control Circuit

Input voltage range (low level)	0 ... 30 VAC/DC
Input voltage range (high level)	200 ... 253 VAC/DC

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	0.1 A
Nominal output voltage	24 VDC
Output voltage range	0 ... 48 VDC
Voltage drop (output) max.	≤ 1 VDC
Leakage current at rated voltage	≤ 1 μA
Switching current (min.)	50 μA
Turn-on time	4.5 ms
Turn-off time	10 ms
Switching frequency	≤ 20 Hz

Signaling

Status indicator	Yellow LED
------------------	------------

Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
---------------	-------------

Material Data

Weight	30.7 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-20 ... +60 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

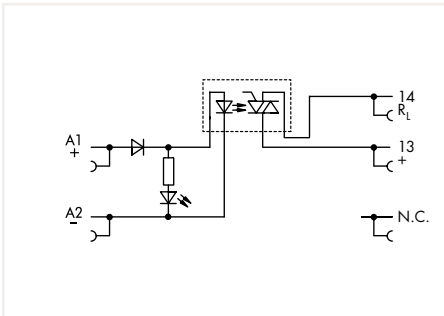
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508
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2

Solid-State Relay Module 857 Series

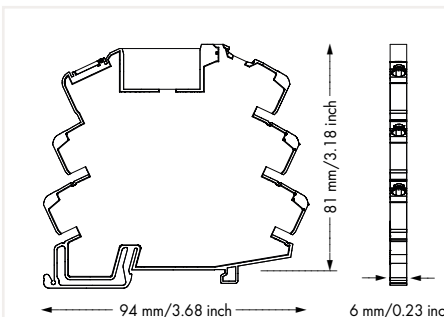


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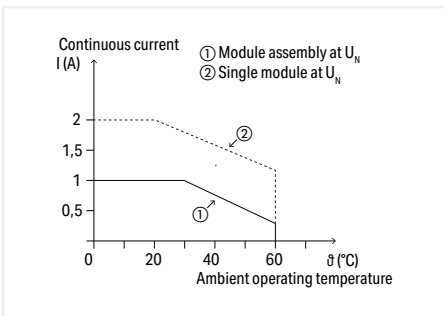


Solid-State Relay Module; Output voltage range: 24 ... 240 VAC; Limiting continuous current: 2 A; 2-wire connection; Zero-voltage switching; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	9.2 mA	857-714	25



Note:
Optocouplers and solid-state relays are designed for use in signal processing networks that are not supplied by the low-voltage power grid.



Current-Carrying Capacity Curve

Control Circuit

Input voltage range (low level)	0 ... 10 VDC
Input voltage range (high level)	20 ... 28.8 VDC

Load Circuit

Circuit type	2-wire connection; zero-voltage switching
Limiting continuous current	2 A
Output voltage range	24 ... 240 VAC
Voltage drop (output) max.	≤ 1.6 VAC
Leakage current at rated voltage	≤ 1.5 mA
Switching current (min.)	22 mA
Turn-on time	≤ 10 ms
Turn-off time	≤ 10 ms
Mains frequency	50 Hz / 60 Hz

Signaling

Status indicator	Yellow LED
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Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	28.4 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-20 ... +60 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

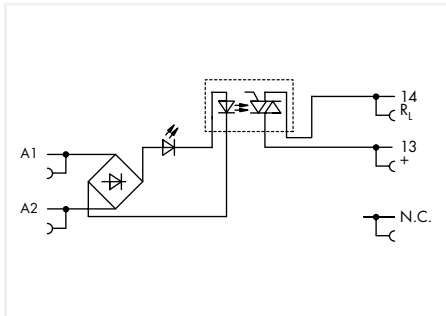
Standards and Specifications

Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508
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Solid-State Relay Module 857 Series

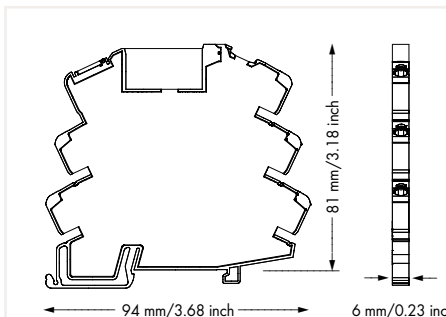


Similar to pictured device



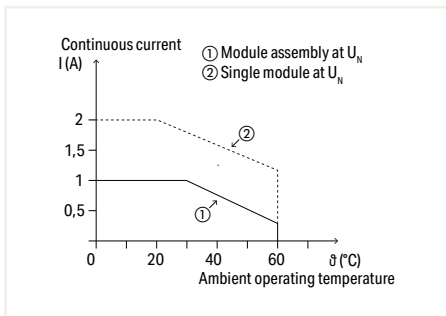
Solid-State Relay Module; Output voltage range: 24 ... 240 VAC; Limiting continuous current: 2 A; 2-wire connection; Zero-voltage switching; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
115 VAC/DC	3.9 mA	857-717	25



Note:

Optocouplers and solid-state relays are designed for use in signal processing networks that are not supplied by the low-voltage power grid.



Current-Carrying Capacity Curve

Control Circuit

Input voltage range (low level)	0 ... 25 VAC/DC
Input voltage range (high level)	100 ... 138 VAC/DC

Load Circuit

Circuit type	2-wire connection; zero-voltage switching
Limiting continuous current	2 A
Nominal output voltage	AC 230 V
Output voltage range	24 ... 240 VAC
Voltage drop (output) max.	≤ 1.6 VAC
Leakage current at rated voltage	≤ 1.5 mA
Switching current (min.)	22 mA
Turn-on time	≤ 10 ms
Turn-off time	≤ 10 ms
Mains frequency	50 Hz / 60 Hz

Signaling

Status indicator	Yellow LED
------------------	------------

Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	28.5 g
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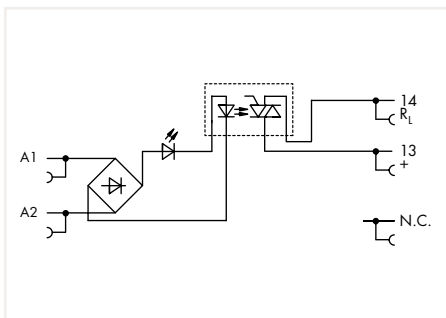
Environmental Requirements

Surrounding air temperature (operation at U_N)	-20 ... +60 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

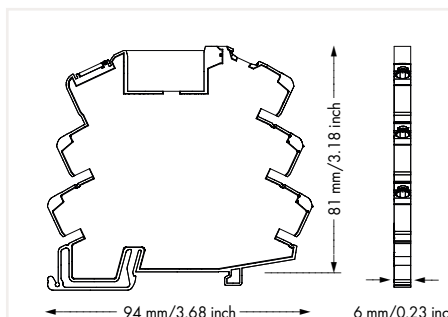
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508
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Solid-State Relay Module 857 Series



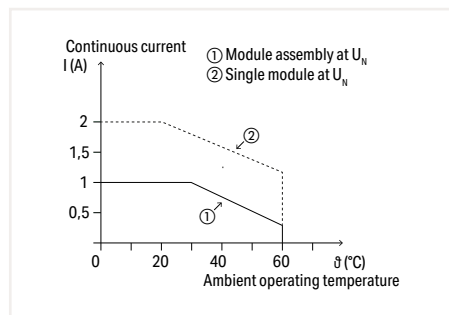
Solid-State Relay Module; Output voltage range: 24 ... 240 VAC; Limiting continuous current: 2 A; 2-wire connection; Zero-voltage switching; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
230 VAC/DC	3.2 mA	857-718	25



Note:

Optocouplers and solid-state relays are designed for use in signal processing networks that are not supplied by the low-voltage power grid.



Current-Carrying Capacity Curve

Control Circuit

Input voltage range (low level)	0 ... 60 VAC/DC
Input voltage range (high level)	200 ... 253 VAC/DC

Load Circuit

Circuit type	2-wire connection; zero-voltage switching
Limiting continuous current	2 A
Nominal output voltage	AC 230 V
Output voltage range	24 ... 240 VAC
Voltage drop (output) max.	≤ 1.6 VAC
Leakage current at rated voltage	≤ 1.5 mA
Switching current (min.)	22 mA
Turn-on time	≤ 10 ms
Turn-off time	≤ 10 ms
Mains frequency	50 Hz / 60 Hz

Signaling

Status indicator	Yellow LED
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Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	29.2 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-20 ... +60 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

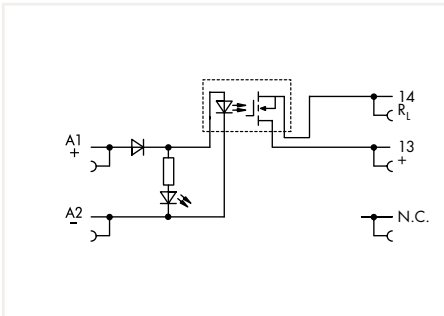
Standards and Specifications

Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508
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Solid-State Relay Module

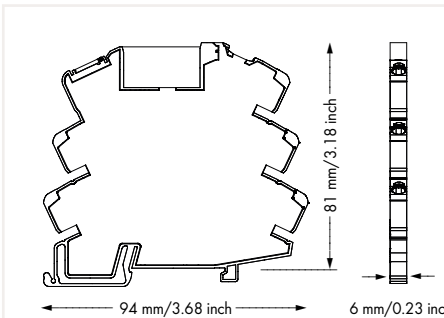
857 Series

2

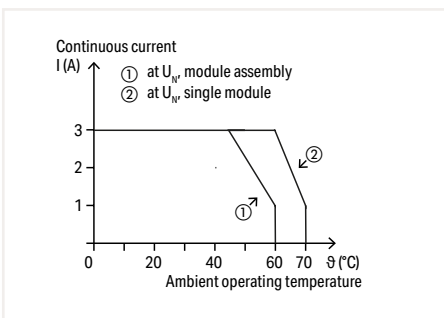


Solid-State Relay Module; Output voltage range: 0 ... 24 VDC; Limiting continuous current: 3 A; 2-wire connection; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	9.2 mA	857-724	25



Note:
Optocouplers and solid-state relays are designed for use in signal processing networks that are not supplied by the low-voltage power grid.



Current-Carrying Capacity Curve

Control Circuit

Input voltage range (low level)	0 ... 10 VDC
Input voltage range (high level)	18.8 ... 31.2 VDC

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	3 A
Nominal output voltage	DC 24 V
Output voltage range	0 ... 24 VDC
Voltage drop (output) max.	≤ 0.12 VDC
Switching current (min.)	50 μA
Inrush current (resistive) (max.)	(AC) 15 A / 10 ms
Turn-on time	≤ 100 μs
Turn-off time	≤ 600 μs
Switching frequency	≤ 350 Hz

Signaling

Status indicator	Yellow LED
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Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	28.4 g
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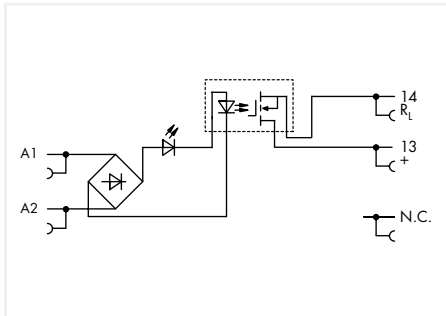
Environmental Requirements

Surrounding air temperature (operation at U_N)	-20 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

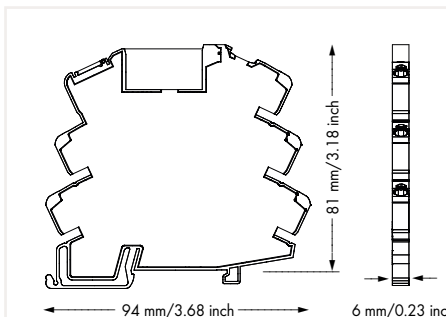
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508; GL
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Solid-State Relay Module 857 Series

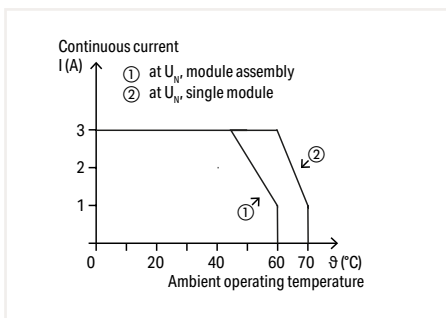


Solid-State Relay Module; Output voltage range:
0 ... 24 VDC; Limiting continuous current: 3 A;
2-wire connection; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
115 VAC/DC	3.9 mA	857-727	25



Note:
Optocouplers and solid-state relays are designed for use in signal processing networks that are not supplied by the low-voltage power grid.



Current-Carrying Capacity Curve

Control Circuit

Input voltage range (low level)	0 ... 25 VAC/DC
Input voltage range (high level)	90 ... 138 VAC/DC

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	3 A
Nominal output voltage	24 VDC
Output voltage range	0 ... 30 VDC
Voltage drop (output) max.	≤ 0.12 VDC
Leakage current at rated voltage	≤ 1 μA
Switching current (min.)	50 μA
Inrush current (resistive) (max.)	(AC) 15 A / 10 ms
Turn-on time	≤ 4.5 ms
Turn-off time	≤ 10 ms
Switching frequency	≤ 20 Hz

Signaling

Status indicator	Yellow LED
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Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	30.1 g
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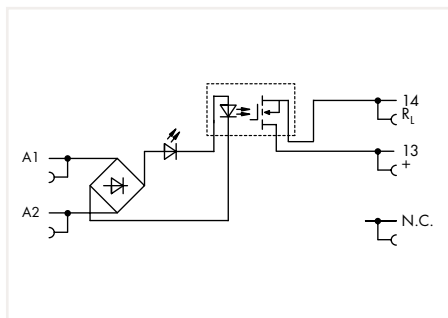
Environmental Requirements

Surrounding air temperature (operation at U_N)	-20 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

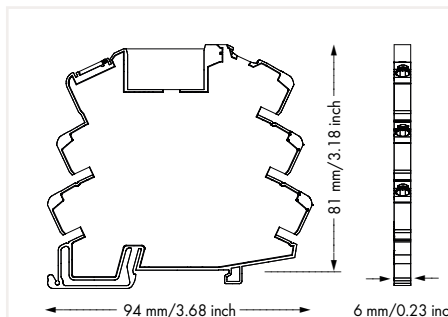
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508
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Solid-State Relay Module 857 Series

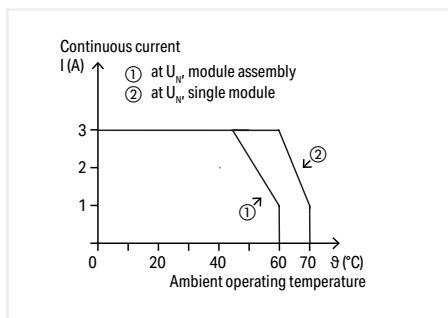


Solid-State Relay Module; Output voltage range:
0 ... 24 VDC; Limiting continuous current: 3 A;
2-wire connection; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
230 VAC/DC	3.2 mA	857-728	25



Note:
Optocouplers and solid-state relays are designed for use in signal processing networks that are not supplied by the low-voltage power grid.



Current-Carrying Capacity Curve

Control Circuit

Input voltage range (low level)	0 ... 60 VAC/DC
Input voltage range (high level)	200 ... 253 VAC/DC

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	3 A
Nominal output voltage	DC 24 V
Output voltage range	0 ... 24 VDC
Voltage drop (output) max.	≤ 0.12 VDC
Leakage current at rated voltage	≤ 1 μA
Switching current (min.)	50 μA
Inrush current (resistive) (max.)	(AC) 15 A / 10 ms
Turn-on time	≤ 4.5 ms
Turn-off time	≤ 10 ms
Switching frequency	≤ 20 Hz

Signaling

Status indicator	Yellow LED
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Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	31 g
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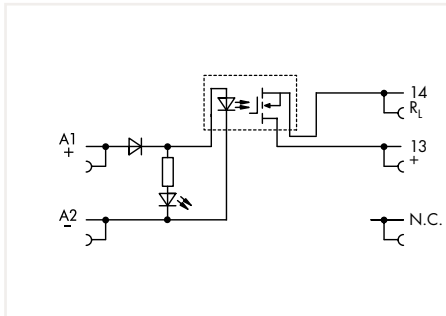
Environmental Requirements

Surrounding air temperature (operation at U_N)	-20 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

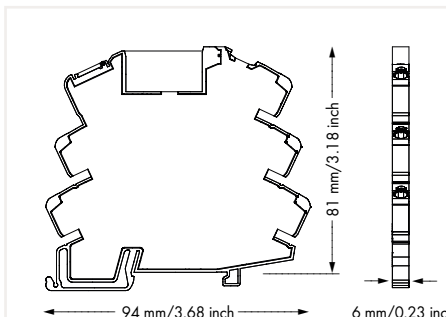
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508
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Solid-State Relay Module 857 Series



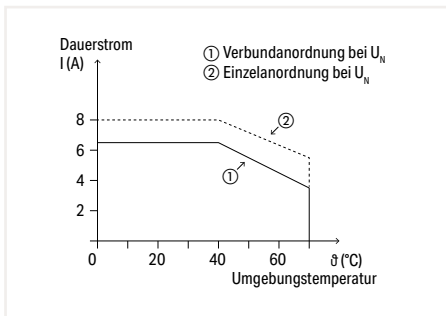
Solid-State Relay Module; Output voltage range: 1 ... 30 VDC; Limiting continuous current: 8 A; 2-wire connection; for railway applications; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC (SELV)	12 mA	857-734	25



Note:

Optocouplers and solid-state relays are designed for use in signal processing networks that are not supplied by the low-voltage power grid.



Current-Carrying Capacity Curve

Control Circuit

Input voltage range (low level)	0 ... 4 VDC
Input voltage range (high level)	16.8 ... 30 VDC
Power loss (max.) $P_{I(max)}$	0.3 W

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	8 A; 6 A (UL)
Nominal output voltage	24 VDC (SELV)
Output voltage range	1 ... 30 VDC
Voltage drop (output) max.	≤ 0.8 V (DC)
Leakage current at rated voltage	≤ 1 μA
Switching current (min.)	10 mA
Turn-on time	≤ 60 μs
Turn-off time	≤ 250 μs
Switching frequency	≤ 500 Hz

Signaling

Status indicator	Yellow LED
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Safety and Protection

Rated voltage	300 V
Overvoltage category	II
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV _{rms}
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	none
Insulation type (control/load circuit)	Double insulation (safe isolation)
Insulation type (between adjacent devices of the same type)	Basic insulation
Insulation type (to any type of adjacent devices)	Adjacent devices are devices of the same design (series) that are arranged next to each other with the same orientation on the mounting rail. An end stop (249-116) must be fitted to devices of other types for compliance with the reinforced insulation requirements.
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	29.5 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

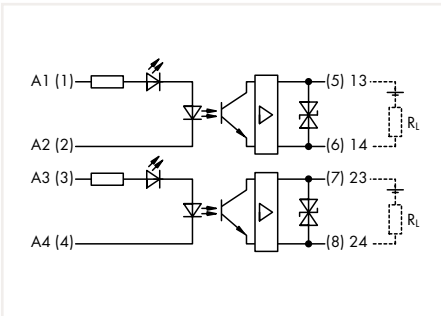
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61373; EN 61000-6-2; EN 61000-6-3; EN 50121-3-2; EN 50121-4; UL 61010-2-201
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Optocoupler Module 857 Series

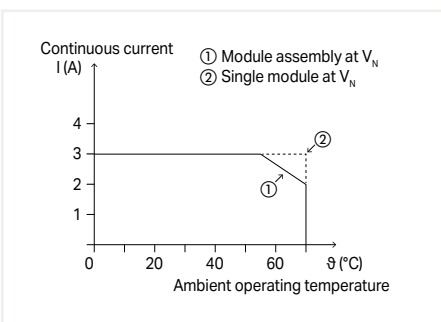
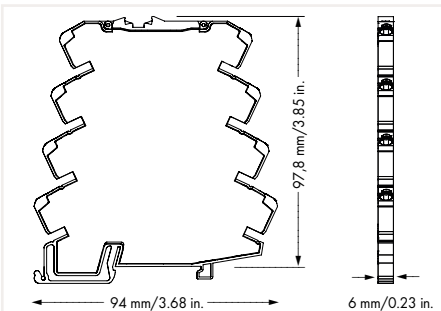


2



Optocoupler Module; 2-channel; Output voltage range: 3 ... 31.2 VDC; Limiting continuous current: 3 A; 2-wire connection; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	7.75 mA	857-1430	25



Current-Carrying Capacity Curve

Control Circuit

Input voltage range (low level)	0 ... 5 VDC
Input voltage range (high level)	16.8 ... 31.2 VDC

Load Circuit

Circuit type	2-channel; 2-wire connection
Limiting continuous current	3 A
Nominal output voltage	24 VDC
Output voltage range	3 ... 31.2 VDC
Voltage drop (output) max.	≤ 0.2 VDC
Leakage current at rated voltage	≤ 250 μA
Turn-on time	≤ 25 μs
Turn-off time	≤ 250 μs
Switching frequency	≤ 300 Hz

Signaling

Status indicator	Yellow LED
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Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Dielectric strength channel/channel (AC, 1 min)	4 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	31.4 g
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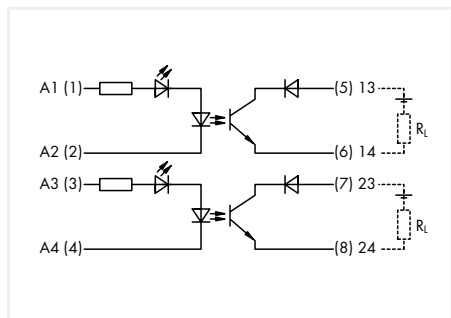
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

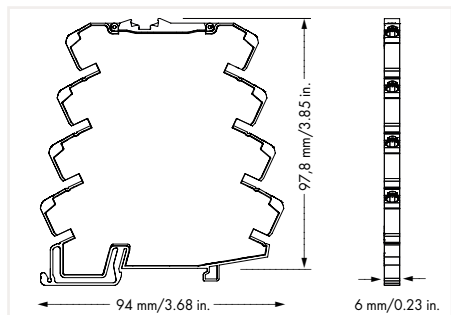
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; GL; UL 508 (max. 70 °C/2 A)
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Optocoupler Module 857 Series



Optocoupler Module; 2-channel; Output voltage range: 9 ... 60 VDC; Limiting continuous current: 0.1 A; 2-wire connection; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	5.6 mA	857-1494	25



Control Circuit

Input voltage range (low level)	0 ... 5 VDC
Input voltage range (high level)	16.8 ... 31.2 VDC

Load Circuit

Circuit type	2-channel; 2-wire connection
Limiting continuous current	0.1 A
Nominal output voltage	24 VDC
Output voltage range	9 ... 60 VDC
Voltage drop (output) max.	≤ 2 VDC
Leakage current at rated voltage	≤ 25 μA
Turn-on time	≤ 20 μs
Turn-off time	≤ 120 μs
Switching frequency	≤ 1.5 kHz

Signaling

Status indicator	Yellow LED
------------------	------------

Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Dielectric strength channel/channel (AC, 1 min)	4 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
---------------	-------------

Material Data

Weight	30.2 g
--------	--------

Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +70 °C
Surrounding air temperature UL (operation at U_N)	-25 ... +50 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

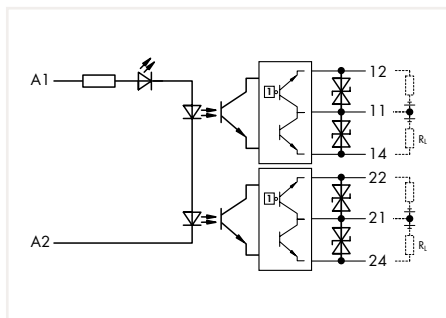
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508 (max. 50 °C/100 mA)
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2

Optocoupler Module 857 Series

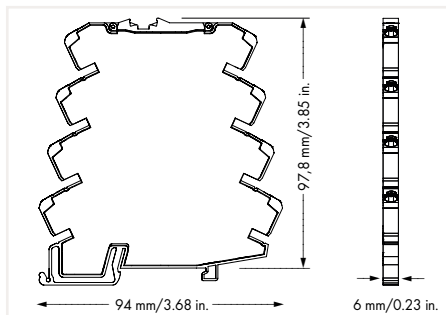


2



Optocoupler Module; 2-channel; Output voltage range: 9 ... 60 VDC; Limiting continuous current: 0.5 A; 2 changeover contacts; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	5.9 mA	857-1432	25



Control Circuit

Input voltage range (low level)	0 ... 5 VDC
Input voltage range (high level)	16.8 ... 30 VDC

Load Circuit

Circuit type	2-channel; 2-wire connection; high-side switching
Limiting continuous current	0.5 A
Nominal output voltage	24 VDC
Output voltage range	9 ... 60 VDC
Voltage drop (output) max.	≤ 1.5 VDC
Leakage current at rated voltage	≤ 1.5 mA
Switching current (min.)	0.5 mA
Turn-on time	≤ 25 μs
Turn-off time	≤ 250 μs
Switching frequency	≤ 1.5 kHz

Signaling

Status indicator	Yellow LED
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Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	33 g
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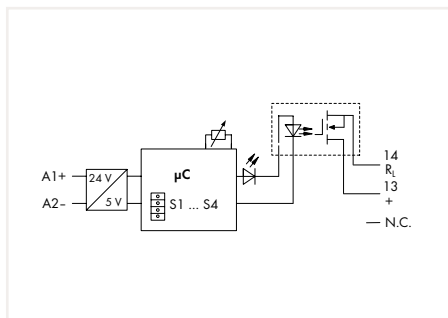
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

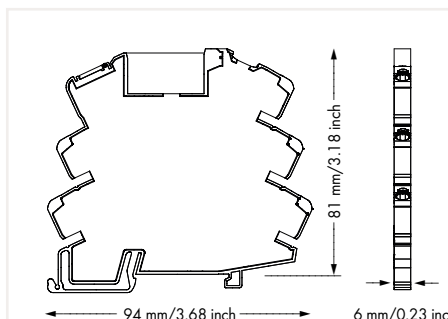
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-2001; UL 508 (max. 70 °C / 0.3 A)
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Solid-State Timer Relay Module 857 Series



Solid-State Relay Module; Output voltage range: 0 ... 24 VDC; Limiting continuous current: 2 A; 2-wire connection; Multifunctional/multi-time; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	9.15 mA	857-624	25



Features:

- 4 functions
- Function and time range adjustable via DIP switch

Control Circuit

Input voltage range	-15 ... +30 %
Time range	Adjustable: 0.1 ... 10 s; 3 ... 300 s; 0.3 ... 30 min; 3 ... 300 min
Reset time	50 ms
Repeat accuracy	±1 %
Functions	On-delay; Single-shot leading edge; On-delay and single-shot leading edge (1s fixed); flashing

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	2 A
Nominal output voltage	24 VDC
Output voltage range	0 ... 30 VDC
Voltage drop (output) max.	≤ 0.12 VDC
Leakage current at rated voltage	≤ 1 µA
Switching current (min.)	50 µA
Turn-on time	≤ 100 µs
Turn-off time	≤ 2 ms

Signaling

Status indicator	Yellow LED
------------------	------------

Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	29.5 g
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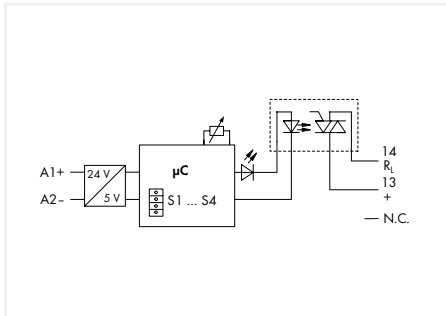
Environmental Requirements

Surrounding air temperature (operation at U_N)	-20 ... +60 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

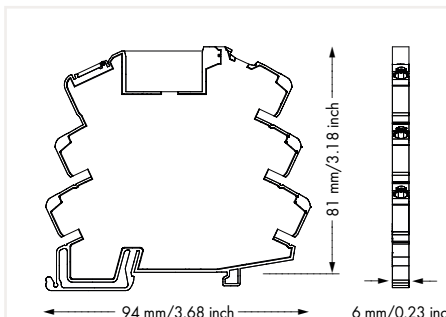
Standards/specifications	EN 61812-1; EN 61373; EN 50121-3-2
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Solid-State Timer Relay Module 857 Series



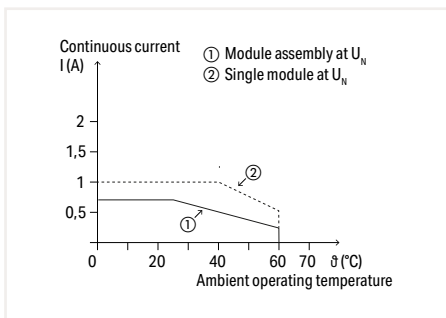
Solid-State Relay Module; Output voltage range: 24 ... 230 VDC; Limiting continuous current: 1 A; 2-wire connection; Multifunctional/multi-time; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	9.15 mA	857-634	25



Features:

- 4 functions
- Function and time range adjustable via DIP switch



Current-Carrying Capacity Curve

Control Circuit

Input voltage range	-15 ... +30 %
Time range	Adjustable: 0.1 ... 10 s; 3 ... 300 s; 0.3 ... 30 min; 3 ... 300 min
Reset time	50 ms
Repeat accuracy	±1 %
Functions	On-delay; Single-shot leading edge; On-delay and single-shot leading edge (1s fixed); blinking

Load Circuit

Circuit type	2-wire connection; zero-voltage switching
Limiting continuous current	1 A
Nominal output voltage	230 VAC
Output voltage range	24 ... 230 VAC
Voltage drop (output) max.	≤ 1 VAC
Leakage current at rated voltage	≤ 1.5 mA
Switching current (min.)	10 mA
Turn-on time	≤ 1 ms
Turn-off time	≤ 10 ms

Signaling

Status indicator	Yellow LED
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Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	29.5 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-20 ... +60 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61812-1; EN 61373; EN 50121-3-2
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Basic Solid-State Relay 857 Series



Basic Solid-State Relay; Output voltage range:
0 ... 30 VDC; Limiting continuous current: 3 A;
5 mm wide; 15 mm high

U_N	I_N	Item No.	Pack. Unit
24 VDC	7 mA	857-161	20

Control Circuit

Input voltage range (low level)	0 ... 10 VDC
Input voltage range (high level)	18.8 ... 31.2 VDC

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	3 A
Nominal output voltage	24 VDC
Output voltage range	0 ... 30 VDC
Voltage drop (output) max.	≤ 0.12 VDC
Leakage current at rated voltage	≤ 1 μA
Switching current (min.)	50 μA
Inrush current (resistive) (max.)	(AC) 15 A / 10 ms
Turn-on time	≤ 100 μs
Turn-off time	≤ 600 μs
Switching frequency	≤ 350 Hz

Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV _{rms}
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Physical Data

Width	5 mm / 0.197 inch
Height from the surface	15 mm / 0.591 inch
Depth	28 mm / 1.102 inch

Mechanical Data

Mounting type	Pluggable relay module
---------------	------------------------

Material Data

Weight	3.6 g
--------	-------

Environmental Requirements

Surrounding air temperature (operation at U_N)	-30 ... +80 °C
Surrounding air temperature (storage)	-40 ... +100 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

2

Basic Solid-State Relay 857 Series



Basic Solid-State Relay; Output voltage range:
24 ... 240 VAC; Limiting continuous current: 2 A;
5 mm wide; 15 mm high

U_N	I_N	Item No.	Pack. Unit
24 VDC	7 mA	857-167	20

Control Circuit	
Input voltage range (low level)	0 ... 10 VDC
Input voltage range (high level)	20 ... 28.8 VDC
Load Circuit	
Circuit type	2-wire connection; zero-voltage switching
Limiting continuous current	2 A
Nominal output voltage	230 VAC
Output voltage range	24 ... 240 VAC
Voltage drop (output) max.	≤ 1.6 VAC
Leakage current at rated voltage	≤ 1.5 mA
Switching current (min.)	22 mA
Turn-on time	≤ 10 ms
Turn-off time	≤ 10 ms
Mains frequency	50 Hz / 60 Hz
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV _{rms}
Physical Data	
Width	5 mm / 0.197 inch
Height from the surface	15 mm / 0.591 inch
Depth	28 mm / 1.102 inch
Mechanical Data	
Mounting type	Pluggable relay module
Material Data	
Weight	3.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-30 ... +80 °C
Surrounding air temperature (storage)	-40 ... +100 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Basic Solid-State Relay 857 Series



Basic Solid-State Relay; Output voltage range:
0 ... 48 VDC; Limiting continuous current: 0.1 A;
5 mm wide; 15 mm high

U_N	I_N	Item No.	Pack. Unit
24 VDC	7 mA	857-164	20

Control Circuit

Input voltage range (low level)	0 ... 10 VDC
Input voltage range (high level)	16.8 ... 30 VDC

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	0.1 A
Nominal output voltage	24 VDC
Output voltage range	0 ... 48 VDC
Voltage drop (output) max.	≤ 1 VDC
Leakage current at rated voltage	≤ 1 μA
Switching current (min.)	50 μA
Turn-on time	≤ 100 μs
Turn-off time	≤ 600 μs
Switching frequency	≤ 1 kHz

Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV _{rms}
---	------------------------

Physical Data

Width	5 mm / 0.197 inch
Height from the surface	15 mm / 0.591 inch
Depth	28 mm / 1.102 inch

Mechanical Data

Mounting type	Pluggable relay module
---------------	------------------------

Material Data

Weight	3.2 g
--------	-------

Environmental Requirements

Surrounding air temperature (operation at U_N)	-30 ... +80 °C
Surrounding air temperature (storage)	-40 ... +100 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

2

Basic Solid-State Relay 857 Series



Basic Solid-State Relay; Output voltage range:
0 ... 30 VDC; Limiting continuous current: 3 A;
5 mm wide; 15 mm high

U_N	I_N	Item No.	Pack. Unit
60 VDC	3 mA	857-162	20

Control Circuit

Input voltage range (low level)	0 ... 10 VDC
Input voltage range (high level)	35 ... 72 VDC

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	3 A
Nominal output voltage	24 VDC
Output voltage range	0 ... 30 VDC
Voltage drop (output) max.	≤ 0.12 VDC
Leakage current at rated voltage	≤ 1 μA
Switching current (min.)	50 μA
Inrush current (max.)	15 A / 10 ms
Turn-on time	≤ 100 μs
Turn-off time	≤ 600 μs
Switching frequency	≤ 350 Hz

Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV _{rms}
---	------------------------

Physical Data

Width	5 mm / 0.197 inch
Height from the surface	15 mm / 0.591 inch
Depth	28 mm / 1.102 inch

Mechanical Data

Mounting type	Pluggable relay module
---------------	------------------------

Material Data

Weight	5 g
--------	-----

Environmental Requirements

Surrounding air temperature (operation at U_N)	-30 ... +80 °C
Surrounding air temperature (storage)	-40 ... +100 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Basic Solid-State Relay 857 Series



Basic Solid-State Relay; Output voltage range:
0 ... 48 VDC; Limiting continuous current: 0.1 A;
5 mm wide; 15 mm high

U_N	I_N	Item No.	Pack. Unit
60 VDC	2.8 mA	857-165	20

Control Circuit

Input voltage range (low level)	0 ... 10 VDC
Input voltage range (high level)	35 ... 72 VDC

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	0.1 A
Nominal output voltage	24 VDC
Output voltage range	0 ... 48 VDC
Voltage drop (output) max.	≤ 1 VDC
Leakage current at rated voltage	≤ 1 μA
Switching current (min.)	50 μA
Turn-on time	≤ 100 μs
Turn-off time	≤ 600 μs
Switching frequency	≤ 1 kHz

Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV _{rms}
---	------------------------

Physical Data

Width	5 mm / 0.197 inch
Height from the surface	15 mm / 0.591 inch
Depth	28 mm / 1.102 inch

Mechanical Data

Mounting type	Pluggable relay module
---------------	------------------------

Material Data

Weight	4.6 g
--------	-------

Environmental Requirements

Surrounding air temperature (operation at U_N)	-30 ... +80 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Basic Solid-State Relay 857 Series



Basic Solid-State Relay; Output voltage range: 24 ... 240 VAC; Limiting continuous current: 2 A; 5 mm wide; 15 mm high

U_N	I_N	Item No.	Pack. Unit
60 VDC	3.1 mA	857-168	20

Control Circuit

Input voltage range (low level)	0 ... 10 VDC
Input voltage range (high level)	35 ... 72 VDC

Load Circuit

Circuit type	2-wire connection; Zero-voltage-switching
Limiting continuous current	2 A
Nominal output voltage	230 VAC
Output voltage range	24 ... 240 VAC
Voltage drop (output) max.	≤ 1.6 VAC
Leakage current at rated voltage	≤ 1.5 mA
Switching current (min.)	22 μA
Turn-on time	≤ 10 ms
Turn-off time	≤ 10 ms
Switching frequency	50 Hz / 60 Hz

Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV _{rms}
---	------------------------

Physical Data

Width	5 mm / 0.197 inch
Height from the surface	15 mm / 0.591 inch
Depth	28 mm / 1.102 inch

Mechanical Data

Mounting type	Pluggable relay module
---------------	------------------------

Material Data

Weight	3.6 g
--------	-------

Environmental Requirements

Surrounding air temperature (operation at U_N)	-30 ... +80 °C
Surrounding air temperature (storage)	-40 ... +100 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Basic Solid-State Relay 857 Series



Basic Solid-State Relay; Output voltage range:
1 ... 30 VDC; Limiting continuous current: 8 A;
5 mm wide; 15 mm high

U_N	I_N	Item No.	Pack. Unit
24 VDC	7 mA	857-181	20

Control Circuit

Input voltage range (low level)	0 ... 4 VDC
Input voltage range (high level)	16.9 ... 30 VDC

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	8 A
Nominal output voltage	24 VDC (SELV)
Output voltage range	1 ... 30 VDC
Voltage drop (output) max.	≤ 0.8 VDC
Leakage current at rated voltage	≤ 1 μA
Switching current (min.)	10 mA
Turn-on time	≤ 60 μs
Turn-off time	≤ 250 μs
Switching frequency	≤ 500 kHz

Safety and Protection

Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV _{rms}
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Physical Data

Width	5 mm / 0.197 inch
Height from the surface	15 mm / 0.591 inch
Depth	28 mm / 1.102 inch

Mechanical Data

Mounting type	Pluggable relay module
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Material Data

Weight	3.6 g
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Environmental Requirements

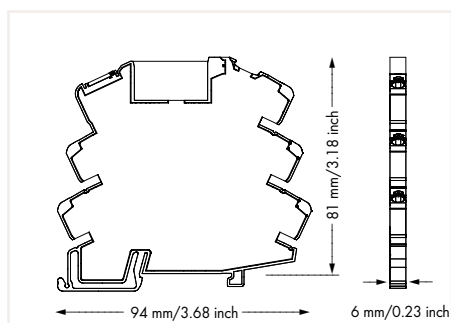
Surrounding air temperature (operation at U_N)	-30 ... +80 °C
Surrounding air temperature (storage)	-40 ... +100 °C
Relative humidity	5 ... 95 % (no condensation permissive)
Operating altitude (max.)	2000 m

Relay Socket 857 Series



Relay Socket; for 5 mm basic relay; Status indicator: yellow

U_N	Item No.	Pack. Unit
24 VAC/DC	857-104	25



Load Circuit

Limiting continuous current	6 A
Switching voltage (max.)	250 VAC

Signaling

Status indicator	Yellow LED
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Safety and Protection

Rated voltage	300 V
Rated surge voltage	4 kV
Circuit type	Mains circuits
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kVrms
Dielectric strength, open contact (AC, 1 min)	1 kVrms
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the the same type)	Reinforced insulation (safe isolation)
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	26.3 g
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Environmental Requirements

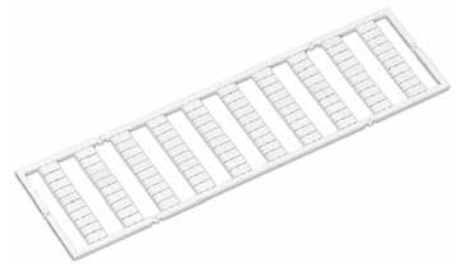
Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	5 ... 95 % (no condensation permissive)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201; UR 508
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Accessories 857 Series

2



Push-in type jumper bar; light gray; insulated; 18 A

Description	Item No.	Pack. Unit
2-way	859-402	200 (8x25)
3-way	859-403	200 (8x25)
4-way	859-404	200 (8x25)
5-way	859-405	200 (8x25)
6-way	859-406	100 (4x25)
7-way	859-407	100 (4x25)
8-way	859-408	100 (4x25)
9-way	859-409	100 (4x25)
10-way	859-410	100 (4x25)

Item no. suffixes for colored push-in type jumper bars

yellow	.../000-029	
red	.../000-005	
blue	.../000-006	

Comb-style jumper bar; insulated; for conductor entry

Description	Item No.	Pack. Unit
2-way	281-482	100

WMB marker card; 10 strips with 10 markers; white; with black printing

Marking	Item No.	Pack. Unit
plain	793-501	5 cards
1 ... 10 (10 x)	793-502	5 cards
11 ... 20 (10 x)	793-503	5 cards
21 ... 30 (10 x)	793-504	5 cards
31 ... 40 (10 x)	793-505	5 cards
41 ... 50 (10 x)	793-506	5 cards
1 ... 50 (2 x)	793-566	5 cards



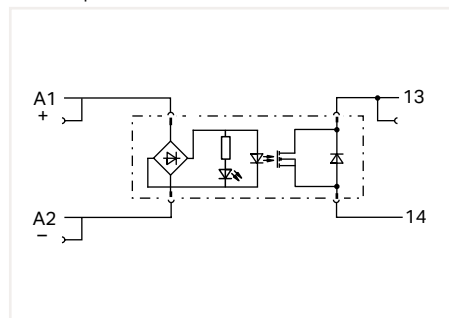
Operating tool with a partially insulated shaft; Type 2; (3.5 x 0.5) mm blade

Item No.	Pack. Unit
210-720	50

Solid-State Relay Module 788 Series

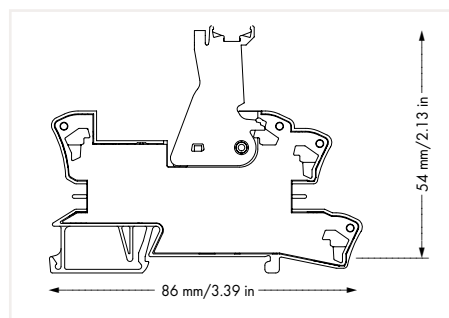


Similar to picture

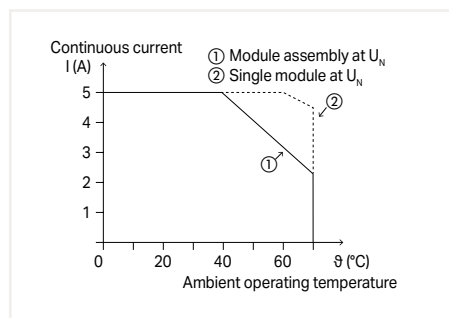


Solid-State Relay Module; Output voltage range:
0 ... 35 VDC; Limiting continuous current: 5 A;
2-wire connection; Status indicator: green; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	20 mA	788-710	20



Note:
Optocouplers and solid-state relays are designed for use in signal processing networks that are not supplied by the low-voltage power grid.



Current-Carrying Capacity Curve

Control Circuit	
Input voltage range (low level)	0 ... 3 VDC
Input voltage range (high level)	10 ... 30 VDC
Power loss (max.) $P_{I(max)}$	0.5 W

Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	5 A; 4.5 A (UL)
Nominal output voltage	24 VDC
Output voltage range	0 ... 35 VDC
Voltage drop (output) max.	≤ 0.3 VDC
Switching current (min.)	1 mA
Turn-on time	≤ 50 μs
Turn-off time	≤ 250 μs
Switching frequency	≤ 3 kHz

Signaling	
Status indicator	Green LED

Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the same type)	Double insulation (safe isolation)
Insulation type (to any type of adjacent devices)	Basic insulation
Protection type	IP20

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.13 inch
Depth	86 mm / 3.386 inch

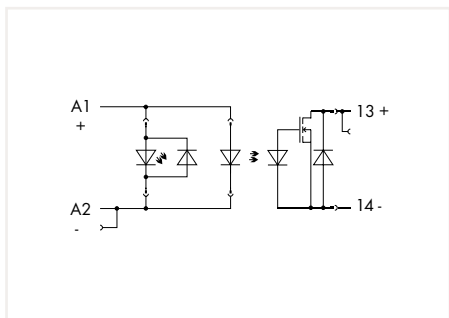
Mechanical Data	
Mounting type	DIN-35 rail

Material Data	
Weight	35.4 g

Environmental Requirements	
Surrounding air temperature (operation at U_N)	-25 ... +70 °C
Surrounding air (operating) temperature for UL	-25 ... +60 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Max. temperature rise of connection cable	35 K
Relative humidity	95% (no condensation permissible)
Operating altitude (max.)	2000 m

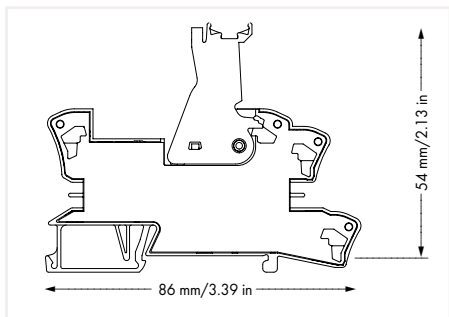
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373; UL 61010-2-201

Solid-State Relay Module 788 Series



Solid-State Relay Module; Output voltage range:
0 ... 24 VDC; Limiting continuous current: 3.5 A;
2-wire connection; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	7 mA	788-700	20



Note:

A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.

Control Circuit

Input voltage range (low level)	0 ... 8 VDC
Input voltage range (high level)	18 ... 30 VDC

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	3.5 A
Nominal output voltage	24 VDC
Output voltage range	0 ... 24 VDC
Voltage drop (output) max.	≤ 0.1 VDC
Turn-on time	≤ 50 μs
Turn-off time	≤ 600 μs
Switching frequency	≤ 100 Hz

Signaling

Status indicator	Red LED
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Safety and Protection

Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	41.7 g
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Environmental Requirements

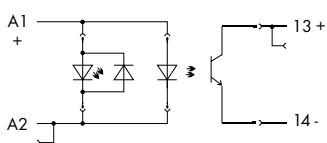
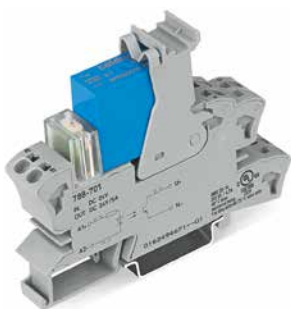
Surrounding air temperature (operation at U_N)	-20 ... +60 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508
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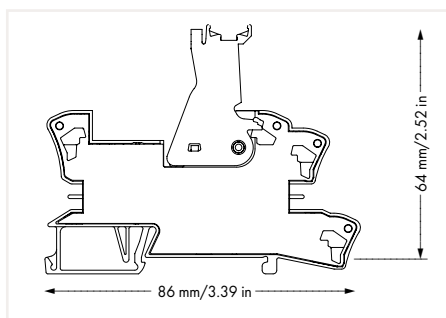
Solid-State Relay Module

788 Series



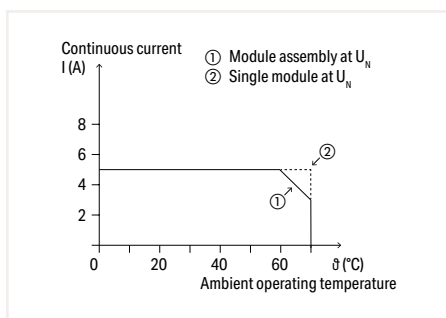
Solid-State Relay Module; Output voltage range: 0 ... 30 VDC; Limiting continuous current: 5 A; 2-wire connection; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	9.3 mA	788-701	10



Note:

A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.



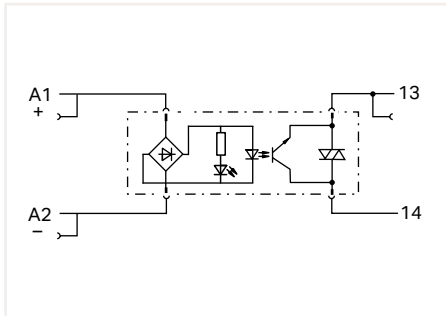
Current-Carrying Capacity Curve

Control Circuit	
Input voltage range (low level)	0 ... 2.5 VDC
Input voltage range (high level)	15 ... 30 VDC
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	5 A
Nominal output voltage	24 VDC
Output voltage range	0 ... 30 VDC
Voltage drop (output) max.	≤ 0.3 VDC
Turn-on time	≤ 50 μs
Turn-off time	≤ 600 μs
Switching frequency	≤ 100 Hz
Signaling	
Status indicator	Red LED
Safety and Protection	
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	64 mm / 2.52 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	47 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature UL (operation at U_N)	-40 ... +40 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Standards and Specifications	
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508 (max. 40 °C/4.7 A)

Solid-State Relay Module 788 Series

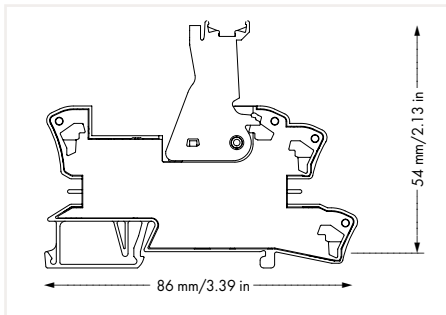


Similar to picture



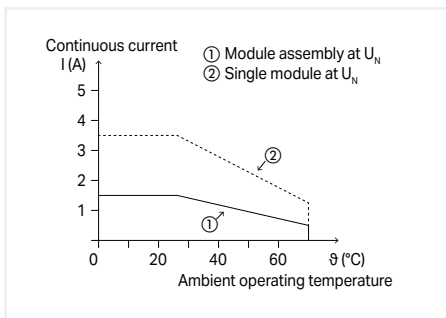
Solid-State Relay Module; Output voltage range:
12 ... 275 VAC; Limiting continuous current: 3.5 A;
2-wire connection; Status indicator: green; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	13 mA	788-730	20



Note:

Optocouplers and solid-state relays are designed for use in signal processing networks that are not supplied by the low-voltage power grid.



Current-Carrying Capacity Curve

Control Circuit

Input voltage range (low level)	0 ... 3 VDC
Input voltage range (high level)	10 ... 30 VDC
Power loss (max.) $P_{I(max)}$	0.5 W

Load Circuit

Circuit type	2-wire connection; zero-voltage switching
Limiting continuous current	3.5 A; 1.3 A (UL)
Nominal output voltage	230 VAC
Output voltage range	12 ... 275 VAC
Voltage drop (output) max.	≤ 1.1 V
Switching current (min.)	1 mA
Turn-on time	≤ 10 μs
Turn-off time	≤ 10 μs
Switching frequency	50 / 60 kHz

Signaling

Status indicator	Green LED
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Safety and Protection

Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the same type)	Double insulation (safe isolation)
Insulation type (to any type of adjacent devices)	Basic insulation
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.13 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	42 g
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Environmental Requirements

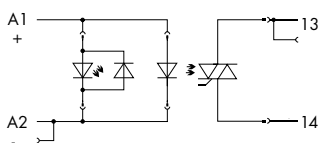
Surrounding air temperature (operation at U_N)	-25 ... +70 °C
Surrounding air temperature UL (operation at U_N)	-25 ... +60 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Max. temperature rise of connection cable	35 K
Relative humidity	95% (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373
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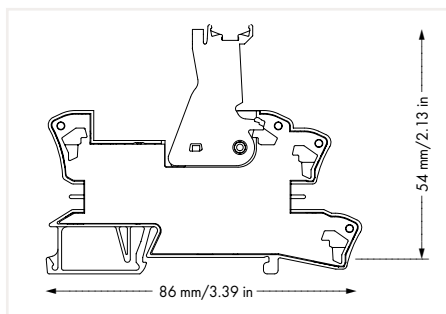
Solid-State Relay Module

788 Series



Solid-State Relay Module; Output voltage range: 24 ... 240 VAC; Limiting continuous current: 1 A; 2-wire connection; Zero-voltage switching; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	7 mA	788-720	20

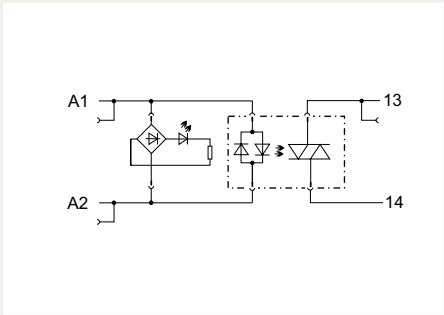
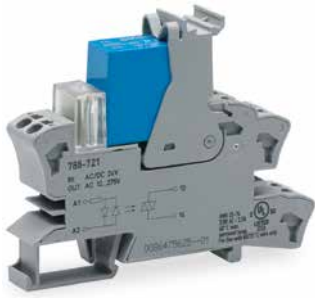


Note:

A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.

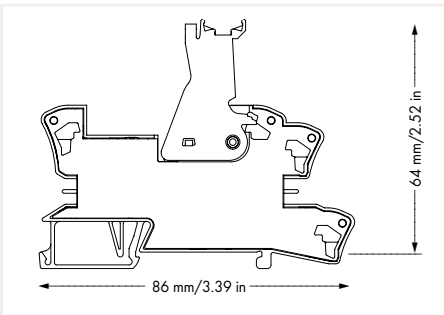
Control Circuit	
Input voltage range (low level)	0 ... 4 VDC
Input voltage range (high level)	18 ... 30 VDC
Load Circuit	
Circuit type	2-wire connection; zero-voltage switching
Limiting continuous current	1 A
Nominal output voltage	230 VAC
Output voltage range	24 ... 240 VAC
Voltage drop (output) max.	≤ 1.1 VAC
Turn-on time	≤ 10 ms
Turn-off time	≤ 10 ms
Switching frequency	50 Hz / 60 Hz
Signaling	
Status indicator	Red LED
Safety and Protection	
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV _{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	41.3 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-20 ... +60 °C
Surrounding air temperature UL (operation at U_N)	-20 ... +40 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Standards and Specifications	
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508 (max. 40 °C/2.5 A)

Solid-State Relay Module 788 Series

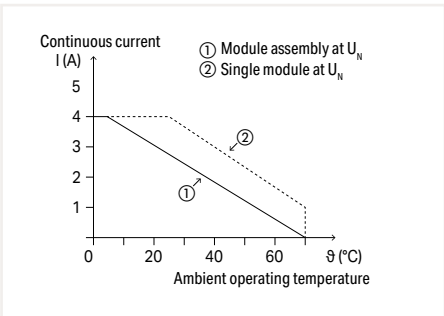


Solid-State Relay Module; Output voltage range: 12 ... 275 VAC; Limiting continuous current: 4 A; 2-wire connection; Zero-voltage switching; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VAC/DC	10 mA	788-721	10



Note:
A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.



Current-Carrying Capacity Curve

Control Circuit

Input voltage range (low level)	0 ... 2.5 VAC/DC
Input voltage range (high level)	15 ... 30 VAC/DC

Load Circuit

Circuit type	2-wire connection; zero-voltage switching
Limiting continuous current	4 A
Nominal output voltage	230 VAC
Output voltage range	12 ... 275 VAC (50/60 Hz)
Voltage drop (output) max.	≤ 1.1 VAC
Turn-on time	≤ 10 ms
Turn-off time	≤ 10 ms
Switching frequency	50 Hz / 60 Hz

Signaling

Status indicator	Red LED
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Safety and Protection

Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV _{rms}
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	64 mm / 2.52 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	49.4 g
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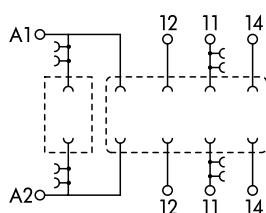
Environmental Requirements

Surrounding air temperature (operation at U_N)	-20 ... +70 °C
Surrounding air temperature UL (operation at U_N)	-20 ... +40 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

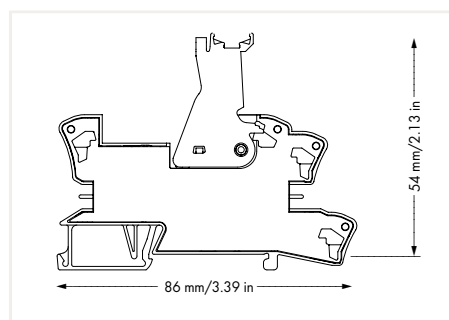
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508 (max. 40 °C/2.5 A)
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Relay Socket 788 Series



Relay Socket; 1 changeover contact;
for 15 mm basic relays

	Item No.	Pack. Unit
	788-100	20



Control Circuit

Nominal input voltage U_N	250 VAC/DC (depends on relay)
Input voltage range	0 ... 250 VAC/DC (depends on relay)

Load Circuit

Number of changeover/switchover contacts	1
Limiting continuous current	16 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC)

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	6 kV _{rms} (depends on relay)
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms} (depends on relay)
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	31.25 g
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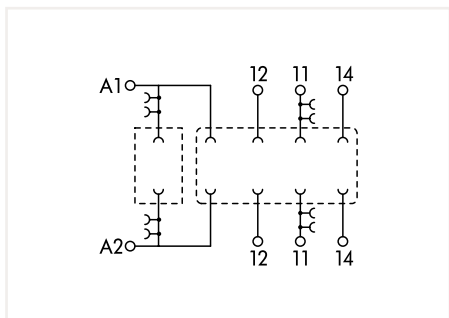
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C (depends on relay)
Surrounding air temperature (storage)	-40 ... +80 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

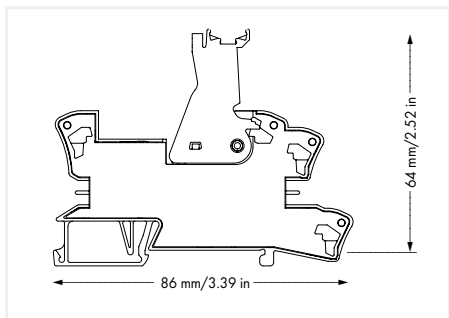
Standards/specifications	EN 60664-1
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Relay Socket 788 Series



Relay Socket; 1 changeover contact;
for 25 mm basic relays

	Item No.	Pack. Unit
	788-101	15



Control Circuit

Nominal input voltage U_N	250 VAC/DC (depends on relay)
Input voltage range	0 ... 250 VAC/DC (depends on relay)

Load Circuit

Number of changeover/switchover contacts	1
Limiting continuous current	16 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC)

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	6 kV _{rms} (depends on relay)
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms} (depends on relay)
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	64 mm / 2.52 inch
Depth	86 mm / 3.386 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	31 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C (depends on relay)
Surrounding air temperature (storage)	-40 ... +80 °C
Processing temperature	-25 ... +50 °C

Standards and Specifications

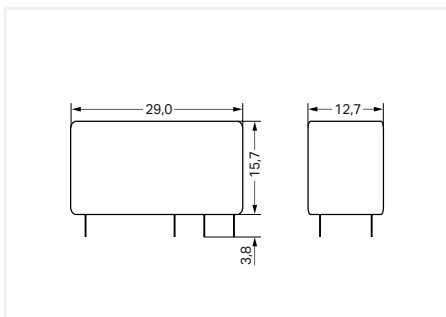
Standards/specifications	EN 60664-1
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Basic solid-state relay 788 Series



Basic solid-state relay; Nominal input voltage 24 VDC; Output voltage range 0 ... 35 VDC; Limiting continuous current 5 A; Module width 12 mm; Module height 15 mm

U_N	I_N	Item No.	Pack. Unit
24 VDC	11 mA	788-754	20



Control circuit

Input voltage range (low level)	DC 0 ... 9 V
Input voltage range (high level)	DC 10 ... 30 V

Load circuit

Circuit type	2-wire connection
Limiting continuous current	5 A
Nominal output voltage	DC 24 V
Output voltage range	DC 0 ... 35 V
Voltage drop at output (max.)	≤ DC 0.3 V
Switching current (min.)	1 mA
Turn-on time	≤ 50 μs
Turn-off time	≤ 250 μs
Switching frequency	≤ 3 kHz

Signaling

Status indicator	Green LED
Safety and protection	
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kVrms

Physical data

Width	12.7 mm / 0.5 inch
Height from the surface	15.7 mm / 0.618 inch
Depth	29 mm / 1.142 inch

Mechanical data

Mounting type	Pluggable module
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Material data

Weight	4 g
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Environmental requirements

Surrounding air temperature (operation at U_N)	-30 ... 80 °C
Surrounding air temperature (storage)	-40 ... 100 °C

Standards and specifications

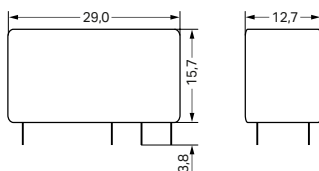
Standards/Specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373
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Basic solid-state relay 788 Series



Basic solid-state relay; Nominal input voltage 24 VDC; Output voltage range 12 ... 275 VAC; Limiting continuous current 3 A; Module width 12 mm; Module height 15 mm

U_N	I_N	Item No.	Pack. Unit
24 VDC	12 mA	788-755	20



Control circuit

Input voltage range (low level)	DC 0 ... 9 V
Input voltage range (high level)	DC 10 ... 30 V

Load circuit

Circuit type	2-wire connection; Zero-voltage switching
Limiting continuous current	3.5 A
Inrush current (resistive) (max.)	(AC) 120 A
Nominal output voltage	AC 230 V
Output voltage range	AC 12 ... 275 V
Voltage drop at output (max.)	≤ AC 1.1 V
Switching current (min.)	50 mA
Turn-on time	≤ 10 ms
Turn-off time	≤ 10 ms
Switching frequency	50 Hz / 60 Hz

Signaling

Status indicator	Green LED
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Safety and protection

Dielectric strength, control/load circuit (AC, 1 min)	3.51 kVrms
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Physical data

Width	12.7 mm / 0.5 inch
Height from the surface	15.7 mm / 0.618 inch
Depth	29 mm / 1.142 inch

Mechanical data

Mounting type	Pluggable module
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Material data

Weight	4 g
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Environmental requirements

Surrounding air temperature (operation at U_N)	-30 ... 80 °C
Surrounding air temperature (storage)	-40 ... 100 °C

Standards and specifications

Standards/Specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373
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Accessories

2



Accessories for relay modules; Operation status indicator: red

U_N	Power consumption at U_N	Item No.	Pack. Unit
24 VDC	2.4 mA	788-120	50(2x25)
48 VDC	1.9 mA	788-121	50(2x25)
110 VDC	1.9 mA	788-122	50(2x25)
24 VAC	2.1 mA	788-123	50(2x25)
115 VAC	1.7 mA	788-124	50(2x25)
230 VAC	1.6 mA	788-125	50(2x25)

Twin ferrule; Sleeve for 2 x 1 mm² / 2 x 18 AWG; red, insulated; 12 mm long

Color	Item No.	Pack. Unit
red	216-542	500



Comb-style jumper bar; insulated; 18 A

Description	Item No.	Pack. Unit
2-way	788-113	200 (8x25)
3-way	788-114	100 (4x25)
4-way	788-115	100 (4x25)
6-way	788-116	100 (4x25)
7-way	788-117	100 (4x25)
2-way (1 to 3)	788-118	100 (4x25)

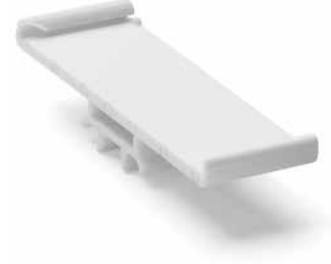
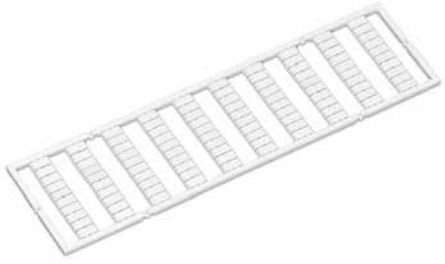
Push-in type jumper bar; light gray; insulated; 18 A

Description	Item No.	Pack. Unit
2-way	859-402	200 (8x25)

Operating tool with a partially insulated shaft; Type 2; (3.5 x 0.5) mm blade

	Item No.	Pack. Unit
	210-720	50

Accessories



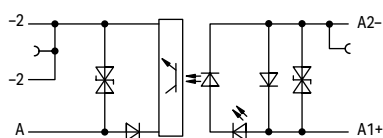
WMB marker card; 10 strips with 10 markers; white; with black printing

Marking	Item No.	Pack. Unit
plain	793-501	5 cards
1 ... 10 (10 x)	793-502	5 cards
11 ... 20 (10 x)	793-503	5 cards
21 ... 30 (10 x)	793-504	5 cards
31 ... 40 (10 x)	793-505	5 cards
41 ... 50 (10 x)	793-506	5 cards
1 ... 50 (2 x)	793-566	5 cards

Group marker carrier; for WMB and Mini-WSB marker slots; 10 mm wide

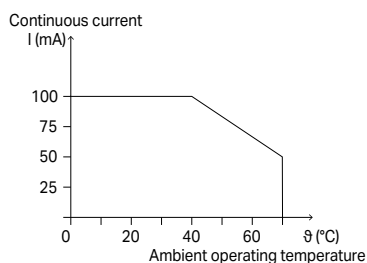
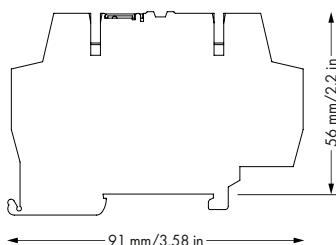
	Item No.	Pack. Unit
	209-145	100

Optocoupler Module 859 Series



Optocoupler Module; Output voltage range:
7 ... 60 VDC; Limiting continuous current: 0.1 A;
2-wire connection; for railway applications;
Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	4 mA	859-791	10



Current-Carrying Capacity Curve

Control Circuit

Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 ... 5 VDC
Input voltage range (high level)	16 ... 30 VDC
Nominal input current at U_N	4 mA

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	0.1 A
Output voltage range	7 ... 60 VDC
Voltage drop (output) max.	≤ 1.5 VDC
Leakage current at rated voltage	≤ 30 μ A
Turn-on time	≤ 20 μ s
Turn-off time	≤ 120 μ s
Switching frequency	≤ 3 kHz

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV _{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	18.7 g
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Environmental Requirements

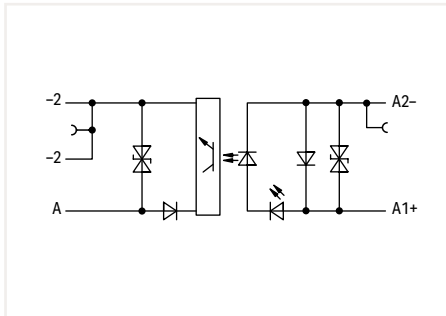
Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 50121-3-2; EN 61373; UL 508
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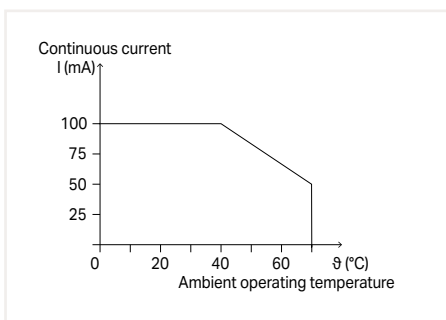
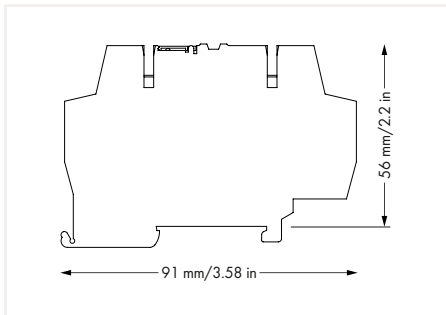
Optocoupler Module

859 Series



Optocoupler Module; Output voltage range: 9 ... 60 VDC; Limiting continuous current: 0.1 A; 2-wire connection; for railway applications; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	4.2 mA	859-794	10



Current-Carrying Capacity Curve

Control Circuit

Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 ... 5 VDC
Input voltage range (high level)	16 ... 30 VDC
Nominal input current at U_N	4.2 mA

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	0.1 A
Output voltage range	9 ... 60 VDC
Voltage drop (output) max.	≤ 2 VDC
Leakage current at rated voltage	≤ 25 μ A
Turn-on time	≤ 20 μ s
Turn-off time	≤ 120 μ s
Switching frequency	≤ 1.5 kHz

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	17.7 g
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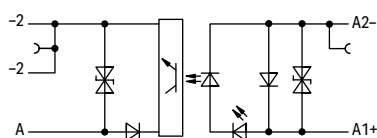
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

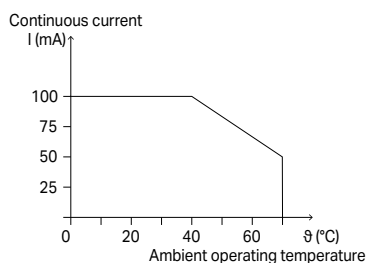
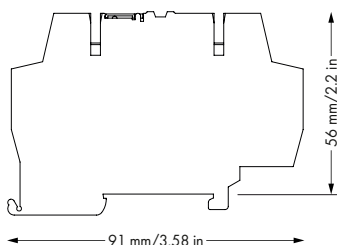
Standards/specifications	EN 60664-1; EN 61000-6-2; EN 61000-6-3; EN 50121-3-2; EN 61373; UL 508
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Optocoupler Module 859 Series



Optocoupler Module; Output voltage range: 3 ... 30 VDC; Limiting continuous current: 0.1 A; 2-wire connection; for railway applications; Frequency: 10 kHz; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
5 VDC	17 mA	859-795	10



Current-Carrying Capacity Curve

Control Circuit

Nominal input voltage U_N	5 VDC
Input voltage range (low level)	0 ... 0.8 VDC
Input voltage range (high level)	2 ... 6.25 VDC
Nominal input current at U_N	17 mA

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	0.1 A
Output voltage range	3 ... 30 VDC
Voltage drop (output) max.	≤ 1 VDC
Leakage current at rated voltage	≤ 25 μ A
Turn-on time	≤ 10 μ s
Turn-off time	≤ 50 μ s
Switching frequency	≤ 10 kHz

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	18.1 g
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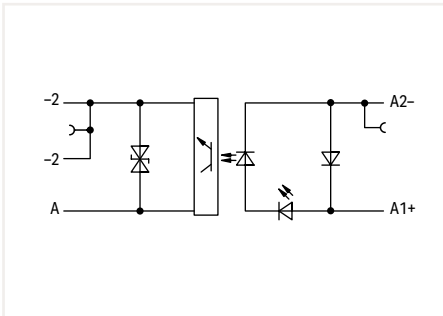
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

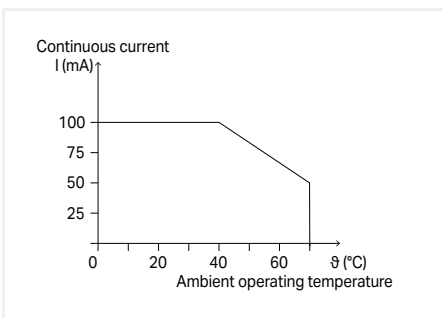
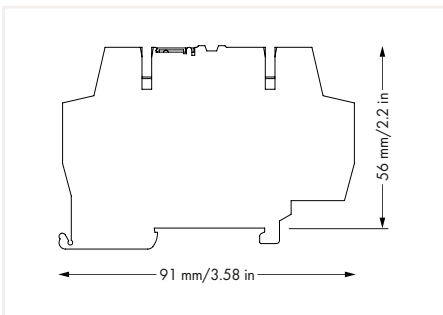
Standards/specifications	EN 61010-2-201; EN 61000-6-3; EN 61000-6-4; EN 50121-3-2; EN 61373; UL 508
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Optocoupler Module 859 Series



Optocoupler Module; Output voltage range: 3 ... 30 VDC; Limiting continuous current: 0.1 A; 2-wire connection; for railway applications; Frequency: 10 kHz; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	9.2 mA	859-796	10



Current-Carrying Capacity Curve

Control Circuit

Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 ... 5 VDC
Input voltage range (high level)	16.8 ... 30 VDC
Nominal input current at U_N	9.2 mA

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	0.1 A
Output voltage range	3 ... 30 VDC
Voltage drop (output) max.	≤ 1 VDC
Leakage current at rated voltage	≤ 25 μ A
Turn-on time	≤ 10 μ s
Turn-off time	≤ 50 μ s
Switching frequency	≤ 10 kHz

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	18.13 g
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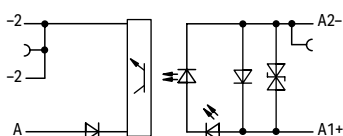
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

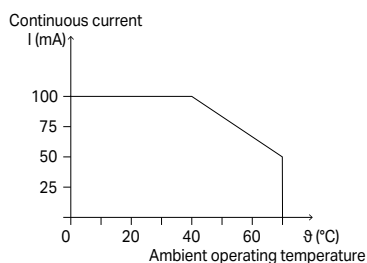
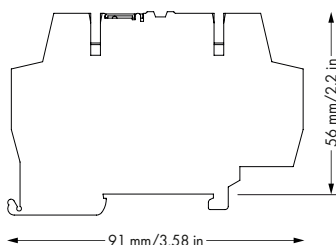
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 50121-3-2; EN 61373; UL 508
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Optocoupler Module 859 Series



Optocoupler Module; Output voltage range: 9 ... 60 VDC; Limiting continuous current: 0.1 A; 2-wire connection; for railway applications; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
12 VDC	4 mA	859-798	10



Current-Carrying Capacity Curve

Control Circuit

Nominal input voltage U_N	12 VDC
Input voltage range (low level)	0 ... 4.8 VDC
Input voltage range (high level)	8.4 ... 15 VDC
Nominal input current at U_N	4 mA

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	0.1 A
Output voltage range	9 ... 60 VDC
Voltage drop (output) max.	≤ 2 VDC
Turn-on time	≤ 20 μs
Turn-off time	≤ 120 μs
Switching frequency	≤ 1.5 kHz

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	17.5 g
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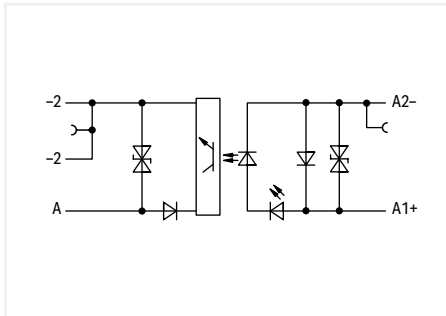
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

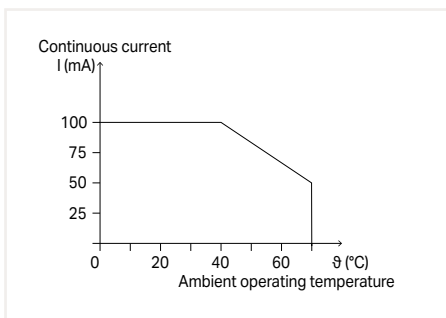
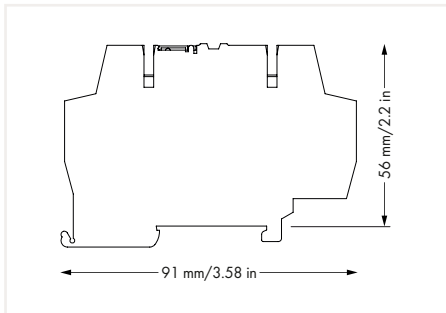
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 50121-3-2; EN 61373
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Optocoupler Module 859 Series



Optocoupler Module; Output voltage range:
3 ... 60 VDC; Limiting continuous current: 0.1 A;
2-wire connection; for railway applications;
Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
5 VDC	7.5 mA	859-793	10



Current-Carrying Capacity Curve

Control Circuit

Nominal input voltage U_N	5 VDC
Input voltage range (low level)	0 ... 0.8 VDC
Input voltage range (high level)	2 ... 6.25 VDC
Nominal input current at U_N	7.5 mA

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	0.1 A
Output voltage range	3 ... 60 VDC
Voltage drop (output) max.	≤ 2.5 VDC
Leakage current at rated voltage	≤ 25 μ A
Turn-on time	≤ 20 μ s
Turn-off time	≤ 120 μ s
Switching frequency	≤ 1.5 kHz

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	17.7 g
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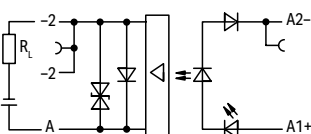
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

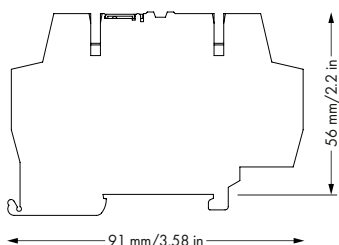
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 50121-3-2; EN 61373; UL 508
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Optocoupler Module 859 Series



Optocoupler Module; Output voltage range:
3 ... 30 VDC; Limiting continuous current: 3 A;
2-wire connection; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	14 mA	859-730	10



Control Circuit

Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 ... 5 VDC
Input voltage range (high level)	15 ... 27 VDC
Nominal input current at U_N	14 mA

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	3 A
Peak output current	25 A
Output voltage range	3 ... 30 VDC
Voltage drop (output) max.	≤ 0.2 VDC
Turn-on time	≤ 25 μ s
Turn-off time	≤ 450 μ s
Switching frequency	≤ 350 Hz

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	18.5 g
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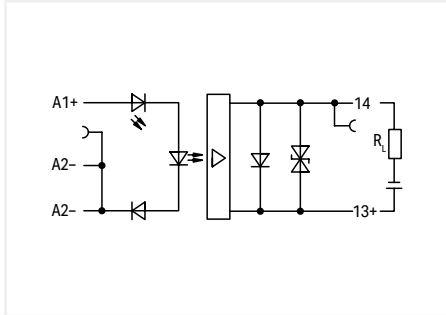
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +55 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

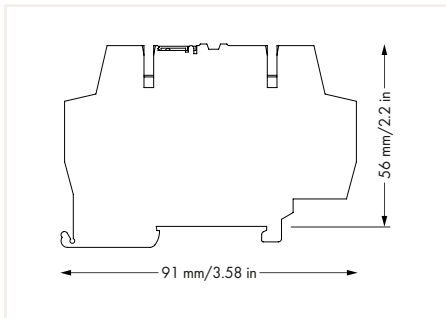
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373; UL 508
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Optocoupler Module 859 Series



Optocoupler Module; Output voltage range:
3 ... 30 VDC; Limiting continuous current: 3 A;
2-wire connection; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	7 mA	859-740	10



Control Circuit	
Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 ... 9 VDC
Input voltage range (high level)	19 ... 27 VDC
Nominal input current at U_N	7 mA

Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	3 A
Peak output current	25 A
Output voltage range	3 ... 30 VDC
Voltage drop (output) max.	≤ 0.2 VDC
Turn-on time	≤ 25 μ s
Turn-off time	≤ 450 μ s
Switching frequency	≤ 350 Hz

Signaling	
Status indicator	Yellow LED

Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

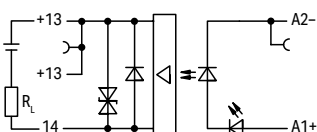
Mechanical Data	
Mounting type	DIN-35 rail

Material Data	
Weight	18.5 g

Environmental Requirements	
Surrounding air temperature (operation at U_N)	-25 ... +55 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

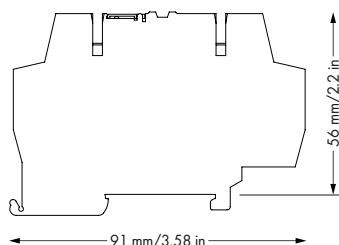
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373

Optocoupler Module 859 Series



Optocoupler Module; Output voltage range:
3 ... 30 VDC; Limiting continuous current: 3 A;
2-wire connection; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	14 mA	859-761	10



Control Circuit

Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 ... 5 VDC
Input voltage range (high level)	15 ... 27 VDC
Nominal input current at U_N	14 mA

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	3 A
Peak output current	25 A
Output voltage range	3 ... 30 VDC
Voltage drop (output) max.	≤ 0.2 VDC
Turn-on time	≤ 25 μ s
Turn-off time	≤ 450 μ s
Switching frequency	≤ 350 Hz

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	18.6 g
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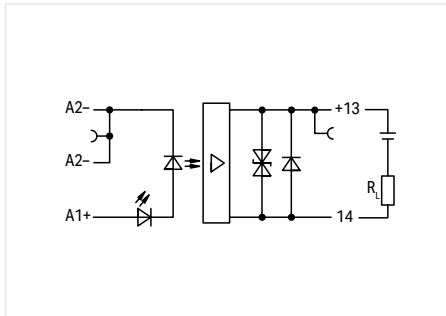
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +55 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

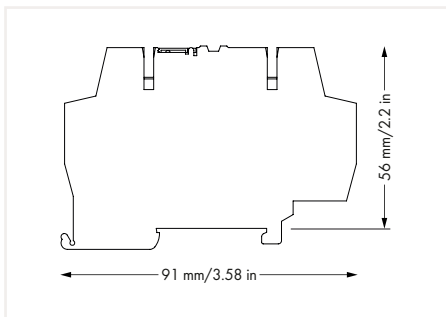
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373
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Optocoupler Module 859 Series



Optocoupler Module; Output voltage range:
3 ... 30 VDC; Limiting continuous current: 3 A;
2-wire connection; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	7 mA	859-762	10



Control Circuit

Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 ... 9 VDC
Input voltage range (high level)	19 ... 27 VDC
Nominal input current at U_N	7 mA

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	3 A
Peak output current	25 A
Output voltage range	3 ... 30 VDC
Voltage drop (output) max.	≤ 0.2 VDC
Turn-on time	≤ 25 μs
Turn-off time	≤ 450 μs
Switching frequency	≤ 350 Hz

Signaling

Status indicator	Yellow LED
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Safety and Protection

Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	18.6 g
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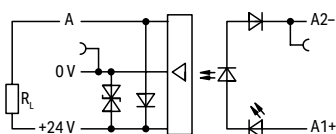
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +55 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

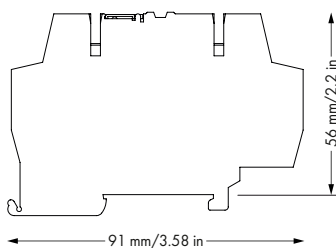
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373
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Optocoupler Module 859 Series



Optocoupler Module; Output voltage range: 10 ... 30 VDC; Limiting continuous current: 3 A; 3-wire connection; Low-side switching; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	4 mA	859-720	10



Control Circuit

Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 ... 3 VDC
Input voltage range (high level)	16 ... 30 VDC
Nominal input current at U_N	4 mA

Load Circuit

Circuit type	3-wire connection; low-side switching
Limiting continuous current	3 A
Peak output current	20 A
Output voltage range	10 ... 30 VDC
Voltage drop (output) max.	≤ 0.5 VDC
Leakage current at rated voltage	≤ 25 μ A
Turn-on time	≤ 30 μ s
Turn-off time	≤ 75 μ s
Rise time (t_{10-90})	16 μ s
Drop-out time (t_{10-90})	20 μ s
Switching frequency	≤ 1 kHz (< 0.5 A; ≤ 2 kHz / < 1 A; ≤ 1 kHz / < 2 A)

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	300 V
Overtoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	18.3 g
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Environmental Requirements

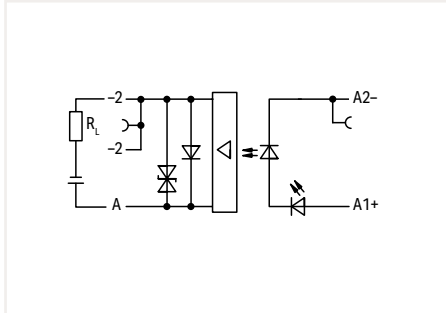
Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373; UL 508
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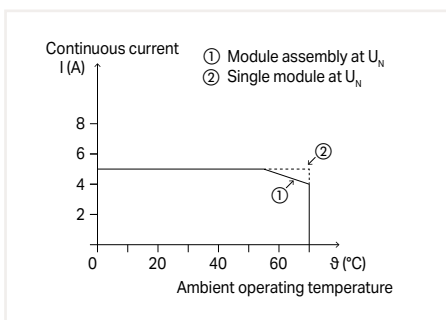
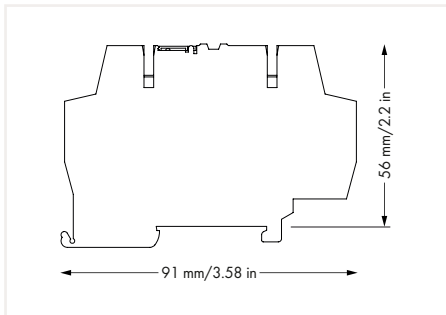
Optocoupler Module

859 Series



Optocoupler Module; Output voltage range:
3 ... 30 VDC; Limiting continuous current: 5 A;
2-wire connection; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	3.5 mA	859-737	10



Current-Carrying Capacity Curve

Control Circuit

Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 ... 5 VDC
Input voltage range (high level)	15 ... 30 VDC
Nominal input current at U_N	3.5 mA

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	5 A
Peak output current	25 A
Output voltage range	3 ... 30 VDC
Voltage drop (output) max.	≤ 0.2 VDC
Turn-on time	≤ 200 μs
Turn-off time	≤ 450 μs
Switching frequency	≤ 100 Hz

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	19.7 g
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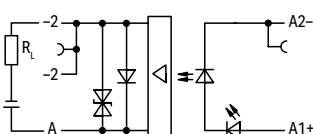
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

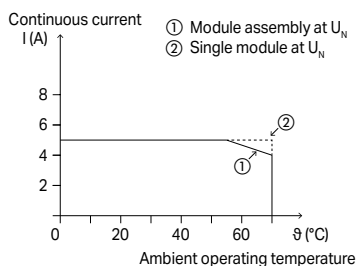
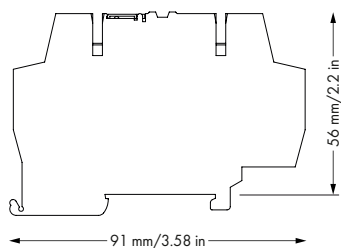
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373
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Optocoupler Module 859 Series



Optocoupler Module; Output voltage range:
3 ... 30 VDC; Limiting continuous current: 5 A;
2-wire connection; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
5 VDC	7.2 mA	859-738	10



Current-Carrying Capacity Curve

Control Circuit

Nominal input voltage U_N	5 VDC
Input voltage range (low level)	0 ... 2 VDC
Input voltage range (high level)	4 ... 6 VDC
Nominal input current at U_N	7.2 mA

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	5 A
Peak output current	25 A
Output voltage range	3 ... 30 VDC
Voltage drop (output) max.	≤ 0.2 VDC
Turn-on time	≤ 200 μs
Turn-off time	≤ 450 μs
Switching frequency	≤ 100 Hz

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	18.7 g
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Environmental Requirements

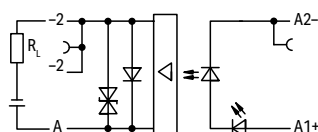
Surrounding air temperature (operation at U_N)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373
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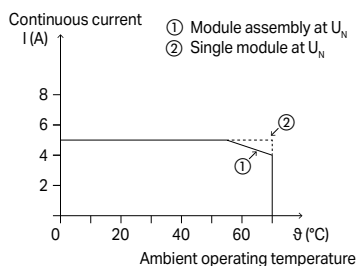
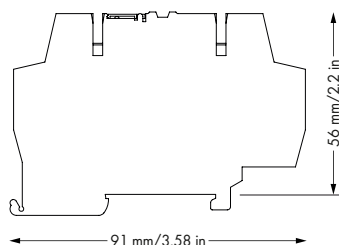
Optocoupler Module

859 Series



Optocoupler Module; Output voltage range:
3 ... 30 VDC; Limiting continuous current: 5 A;
2-wire connection; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
12 VDC	3.2 mA	859-739	10



Current-Carrying Capacity Curve

Control Circuit

Nominal input voltage U_N	12 VDC
Input voltage range (low level)	0 ... 5 VDC
Input voltage range (high level)	9.6 ... 14.4 VDC
Nominal input current at U_N	3.2 mA

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	5 A
Peak output current	25 A
Output voltage range	3 ... 30 VDC
Voltage drop (output) max.	≤ 0.2 VDC
Turn-on time	≤ 200 μs
Turn-off time	≤ 450 μs
Switching frequency	≤ 100 Hz

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	19.1 g
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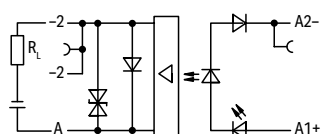
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

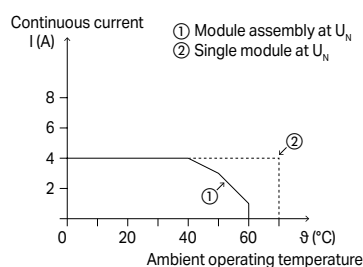
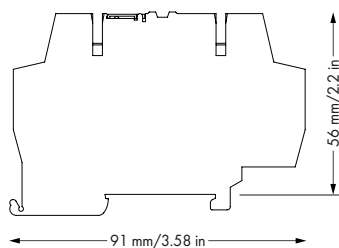
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373
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Optocoupler Module 859 Series



Optocoupler Module; Output voltage range:
10 ... 53 VDC; Limiting continuous current: 4 A;
2-wire connection; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
12 ... 48 VDC	5 mA	859-744	10



Current-Carrying Capacity Curve

Control Circuit

Nominal input voltage U_N	12 ... 48 VDC
Input voltage range (low level)	0 ... 4 VDC
Input voltage range (high level)	10 ... 53 VDC
Nominal input current at U_N	5 mA

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	4 A
Peak output current	30 A
Output voltage range	3 ... 53 VDC
Voltage drop (output) max.	≤ 0.2 VDC
Turn-on time	≤ 200 μs
Turn-off time	≤ 420 μs
Switching frequency	≤ 100 Hz

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	19.3 g
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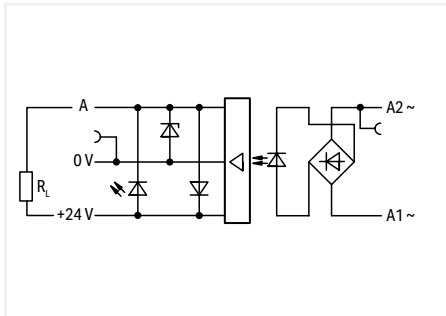
Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

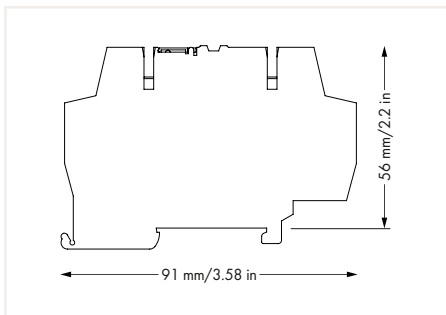
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373
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Optocoupler Module 859 Series



Optocoupler Module; Output voltage range: 20 ... 30 VDC; Limiting continuous current: 0.5 A; 3-wire connection; Low-side switching; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
230 VAC	0.6 mA	859-712	10



Control Circuit

Nominal input voltage U_N	230 VAC
Input voltage range (low level)	0 ... 90 VAC
Input voltage range (high level)	175 ... 270 VAC
Nominal input current at U_N	0.6 mA

Load Circuit

Circuit type	3-wire connection; low-side switching
Limiting continuous current	0.5 A
Output voltage range	20 ... 30 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 10 μ A
Output closed-circuit current (without load) max.	11 mA
Turn-on time	≤ 30 ms
Turn-off time	≤ 30 ms

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	300 V
Circuit type	Mains circuits
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the same type)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	20.4 g
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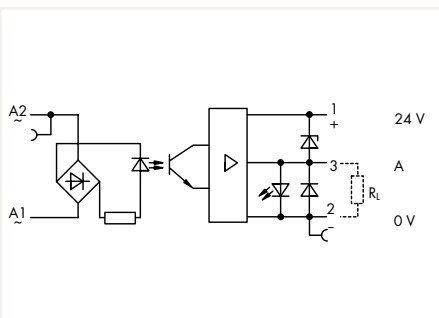
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +55 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

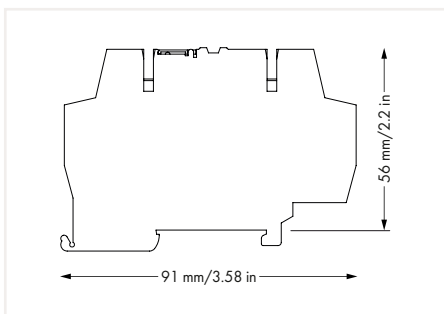
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373; UL 508
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Optocoupler Module 859 Series



Optocoupler Module; Output voltage range:
20 ... 30 VDC; Limiting continuous current: 0.5 A;
3-wire connection; High-side switching;
Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
230 VAC	0.6 mA	859-772	10



Control Circuit

Nominal input voltage U_N	230 VAC
Input voltage range (low level)	0 ... 90 VAC
Input voltage range (high level)	175 ... 270 VAC
Nominal input current at U_N	0.6 mA

Load Circuit

Circuit type	3-wire connection; high-side switching
Limiting continuous current	0.5 A
Output voltage range	20 ... 30 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 10 μ A
Output closed-circuit current (without load) max.	12 mA
Turn-on time	≤ 30 ms
Turn-off time	≤ 30 ms

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	300 V
Circuit type	Mains circuits
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the same type)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	20.4 g
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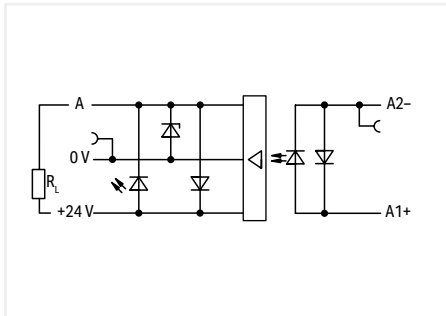
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +55 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

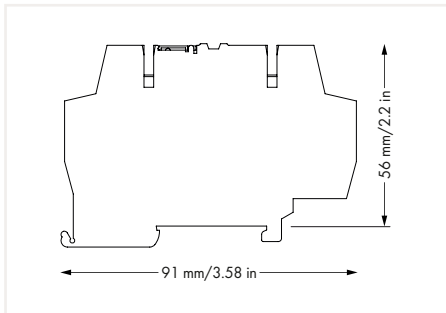
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373; UL 508
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Optocoupler Module 859 Series



Optocoupler Module; Output voltage range: 20 ... 30 VDC; Limiting continuous current: 0.5 A; 3-wire connection; Low-side switching; Frequency: 10 kHz; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
5 VDC	9.6 mA	859-702	1



Control Circuit

Nominal input voltage U_N	5 VDC
Input voltage range (low level)	0 ... 1 VDC
Input voltage range (high level)	4 ... 6.25 VDC
Nominal input current at U_N	9.6 mA

Load Circuit

Circuit type	3-wire connection; low-side switching
Limiting continuous current	0.5 A
Output voltage range	20 ... 30 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 10 μ A
Output closed-circuit current (without load) max.	11 mA
Turn-on time	≤ 7 μ s
Turn-off time	≤ 15 μ s
Switching frequency	≤ 10 kHz

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	18.3 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +55 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

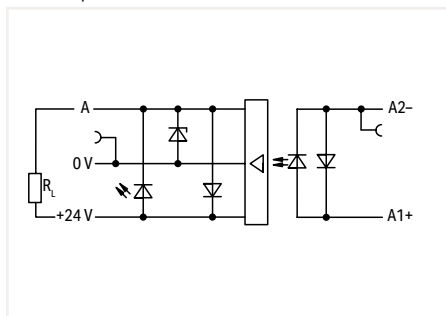
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373; UL 508
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Optocoupler Module 859 Series

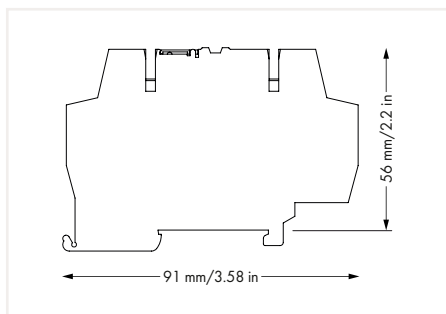


Similar to pictured device



Optocoupler Module; Output voltage range: 20 ... 30 VDC; Limiting continuous current: 0.5 A; 3-wire connection; Low-side switching; Frequency: 10 kHz; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	7.7 mA	859-708	1



Control Circuit

Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 ... 5 VDC
Input voltage range (high level)	19 ... 30 VDC
Nominal input current at U_N	7.7 mA

Load Circuit

Circuit type	3-wire connection; low-side switching
Limiting continuous current	0.5 A
Output voltage range	20 ... 30 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 10 μ A
Output closed-circuit current (without load) max.	11 mA
Turn-on time	≤ 10 μ s
Turn-off time	≤ 10 μ s
Switching frequency	≤ 10 kHz

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	18.4 g
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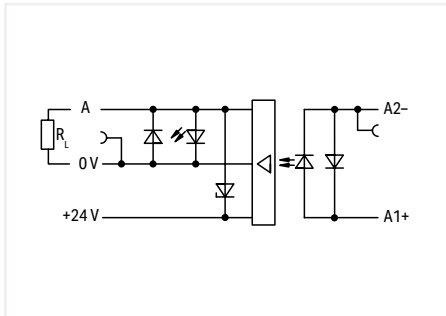
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +55 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

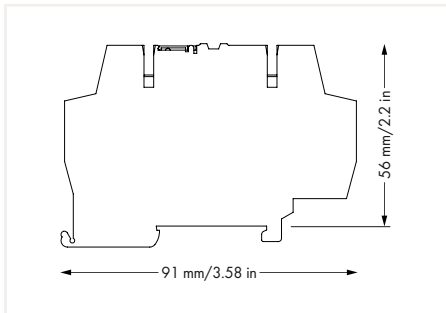
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373; UL 508
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Optocoupler Module 859 Series



Optocoupler Module; Output voltage range: 20 ... 30 VDC; Limiting continuous current: 0.5 A; 3-wire connection; High-side switching; Frequency: 10 kHz; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
5 VDC	10 mA	859-752	1



Control Circuit

Nominal input voltage U_N	5 VDC
Input voltage range (low level)	0 ... 1 VDC
Input voltage range (high level)	4 ... 6 VDC
Nominal input current at U_N	10 mA

Load Circuit

Circuit type	3-wire connection; high-side switching
Limiting continuous current	0.5 A
Output voltage range	20 ... 30 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 10 μ A
Output closed-circuit current (without load) max.	12.5 mA
Turn-on time	≤ 15 μ s
Turn-off time	≤ 30 μ s
Switching frequency	≤ 10 kHz

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	17,8 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

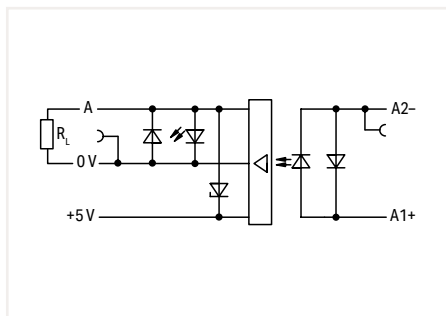
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373; UL 508
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Optocoupler Module 859 Series

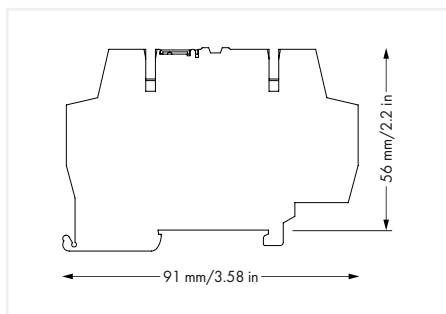


2



Optocoupler Module; Output voltage range: 4 ... 6.25 VDC; Limiting continuous current: 0.5 A; 3-wire connection; High-side switching; Frequency: 10 kHz; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	11 mA	859-756	1



Control Circuit

Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 ... 5 VDC
Input voltage range (high level)	18 ... 30 VDC
Nominal input current at U_N	11 mA

Load Circuit

Circuit type	3-wire connection; high-side switching
Limiting continuous current	0.5 A
Output voltage range	4 ... 6.25 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 10 μA
Output closed-circuit current (without load) max.	4.5 mA
Turn-on time	≤ 15 μs
Turn-off time	≤ 30 μs
Switching frequency	≤ 10 kHz

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	18.7 g
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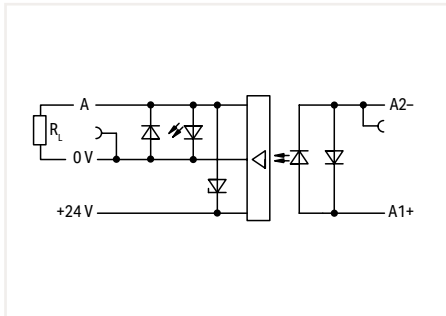
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

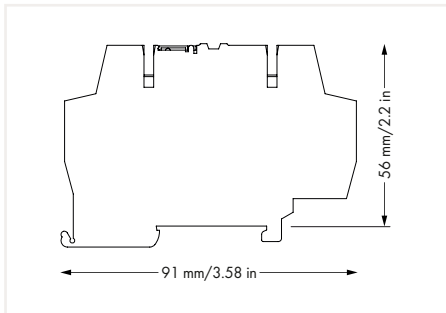
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373; UL 508
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Optocoupler Module 859 Series



Optocoupler Module; Output voltage range: 20 ... 30 VDC; Limiting continuous current: 0.5 A; 3-wire connection; High-side switching; Frequency: 10 kHz; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	8 mA	859-758	10



Control Circuit

Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 ... 5 VDC
Input voltage range (high level)	18 ... 30 VDC
Nominal input current at U_N	8 mA

Load Circuit

Circuit type	3-wire connection; high-side switching
Limiting continuous current	0.5 A
Output voltage range	20 ... 30 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 10 μ A
Output closed-circuit current (without load) max.	11 mA
Turn-on time	≤ 15 μ s
Turn-off time	≤ 30 μ s
Switching frequency	≤ 10 kHz

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	18.3 g
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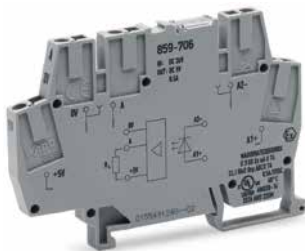
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

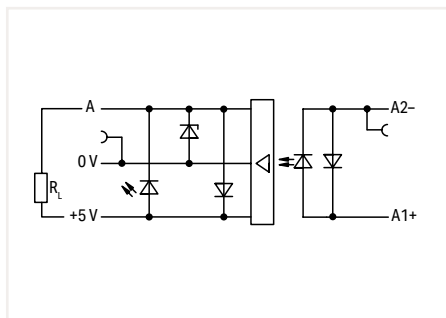
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373; UL 508
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Optocoupler Module 859 Series

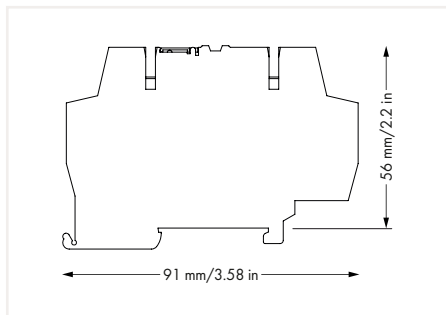


2



Optocoupler Module; Output voltage range: 4 ... 6.25 VDC; Limiting continuous current: 0.5 A; 3-wire connection; Low-side switching; Frequency: 10 kHz; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	11 mA	859-706	1



Control Circuit

Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 ... 5 VDC
Input voltage range (high level)	18 ... 30 VDC
Nominal input current at U_N	11 mA

Load Circuit

Circuit type	3-wire connection; low-side switching
Limiting continuous current	0.5 A
Output voltage range	4 ... 6.25 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 10 μ A
Output closed-circuit current (without load) max.	7 mA
Turn-on time	≤ 7 μ s
Turn-off time	≤ 15 μ s
Switching frequency	≤ 10 kHz

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	18.5 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +55 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

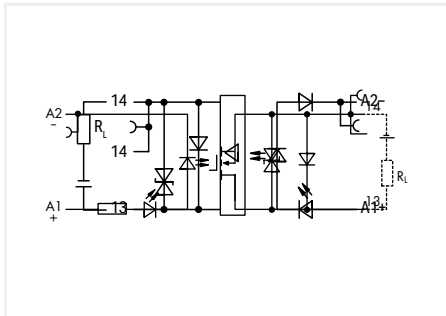
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373; UL 508
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Optocoupler Module 859 Series

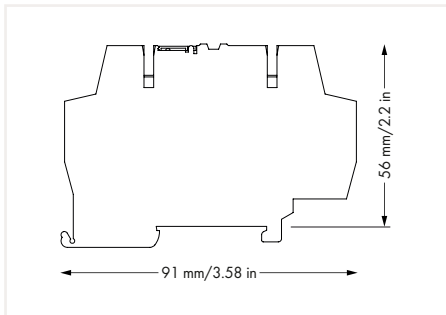


Similar to pictured device



Optocoupler Module; Output voltage range:
3 ... 30 VDC; Limiting continuous current: 0.5 A;
2-wire connection; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
12 VDC	9.2 mA	859-797	10



Control Circuit

Nominal input voltage U_N	12 VDC
Input voltage range (low level)	0 ... 5 VDC
Input voltage range (high level)	9 ... 16 VDC
Nominal input current at U_N	9.2 mA

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	0.5 A
Peak output current	2.7 A
Output voltage range	3 ... 30 VDC
Voltage drop (output) max.	≤ 0.2 VDC
Turn-on time	≤ 15 μs
Turn-off time	≤ 100 μs
Switching frequency	≤ 2.5 kHz

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	18.6 g
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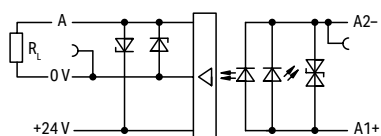
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +55 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

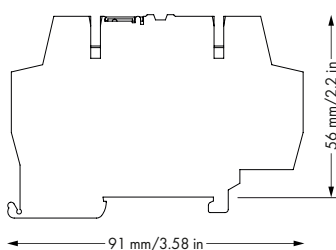
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; UL 508
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Optocoupler Module 859 Series



Optocoupler Module; Output voltage range: 20 ... 28.8 VDC; Limiting continuous current: 0.1 A; 3-wire connection; High-side switching; Frequency: 100 kHz; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
5 VDC	16.5 mA	859-753	1



Control Circuit

Nominal input voltage U_N	5 VDC
Input voltage range (low level)	0 ... 1 VDC
Input voltage range (high level)	4 ... 6.25 VDC
Nominal input current at U_N	16.5 mA

Load Circuit

Circuit type	3-wire connection; high-side switching
Limiting continuous current	0.1 A
Peak output current	0.8 A
Output voltage range	20 ... 28.8 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 10 μ A
Output closed-circuit current (without load) max.	7 mA
Turn-on time	≤ 0.5 μ s
Turn-off time	≤ 5 μ s
Switching frequency	≤ 100 kHz

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	15.4 g
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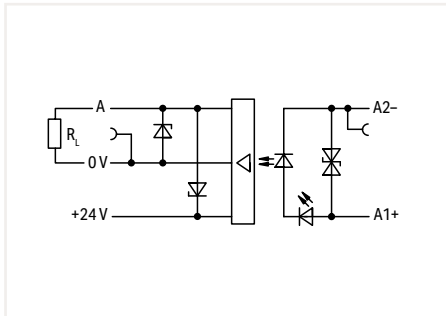
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +55 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

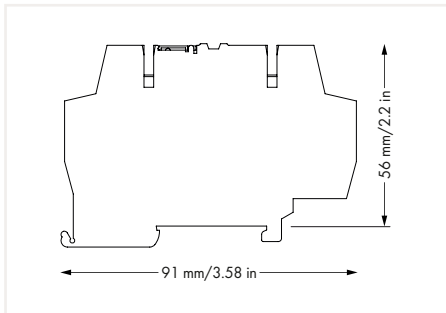
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373; UL 508
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Optocoupler Module 859 Series



Optocoupler Module; Output voltage range: 20 ... 28.8 VDC; Limiting continuous current: 0.1 A; 3-wire connection; High-side switching; Frequency: 100 kHz; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	9 mA	859-759	1



Control Circuit

Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 ... 5 VDC
Input voltage range (high level)	20 ... 30 VDC
Nominal input current at U_N	9 mA

Load Circuit

Circuit type	3-wire connection; high-side switching
Limiting continuous current	0.1 A
Peak output current	0.8 A
Output voltage range	20 ... 28.8 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 10 μ A
Output closed-circuit current (without load) max.	7 mA
Turn-on time	≤ 0.5 μ s
Turn-off time	≤ 2 μ s
Switching frequency	≤ 100 kHz

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	300 V
Oversoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	19.1 g
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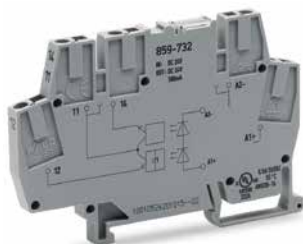
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +55 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

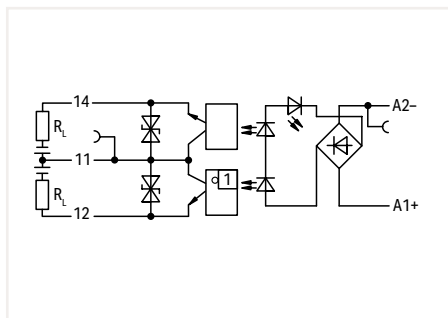
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373
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Optocoupler Module 859 Series

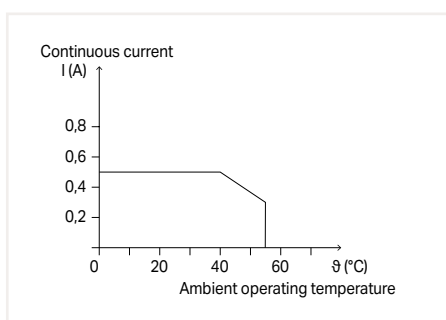
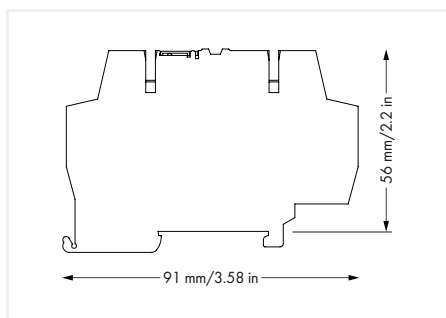


2



Optocoupler Module; Output voltage range:
3 ... 30 VDC; Limiting continuous current: 0.5 A; 1
changeover contact; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	5.3 mA	859-732	1



Current-Carrying Capacity Curve

Control Circuit

Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 ... 5 VDC
Input voltage range (high level)	15 ... 42 VDC
Nominal input current at U_N	5.3 mA

Load Circuit

Circuit type	3-wire connection; changeover contact output
Limiting continuous current	0.5 A
Peak output current	4 A
Output voltage range	3 ... 30 VDC
Voltage drop (output) max.	≤ 1.5 VDC
Leakage current at rated voltage	≤ 1.5 mA
Switching current (min.)	0.5 mA
Turn-on time	≤ 25 μ s
Turn-off time	≤ 150 μ s
Switching frequency	≤ 1.5 kHz

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV _{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	19.6 g
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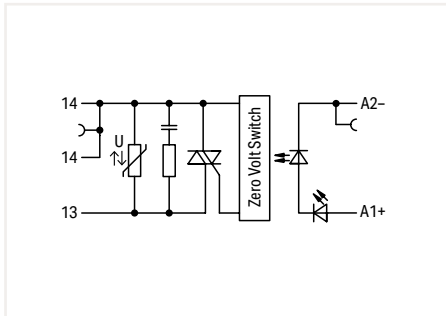
Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +55 °C
Surrounding air temperature (storage)	-25 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

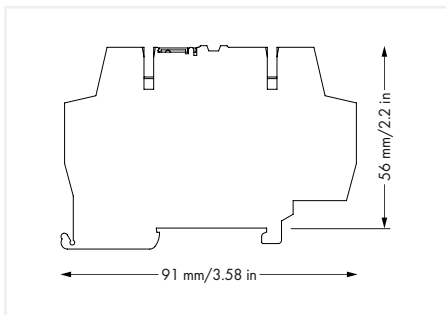
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; UL 508
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Optocoupler Module 859 Series



Optocoupler Module; Output voltage range: 24 ... 260 VAC; Limiting continuous current: 0.5 A; 2-wire connection; Zero-cross switching; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	6 mA	859-734	1



Control Circuit

Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 ... 5 VDC
Input voltage range (high level)	19 ... 28.8 VDC
Nominal input current at U_N	6 mA

Load Circuit

Circuit type	2-wire connection; zero-voltage switching
Limiting continuous current	0.5 A
Peak output current	30 A
Output voltage range	24 ... 260 VAC (50 ... 60 Hz)
Voltage drop (output) max.	≤ 1.2 VAC
Leakage current at rated voltage	≤ 1 mA
Switching current (min.)	10 mA
Turn-on time	≤ 10 ms
Turn-off time	≤ 10 ms
Mains frequency	50 Hz / 60 Hz

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Rated voltage	300 V
Circuit type	Mains circuits
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the same type)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	20.2 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +55 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

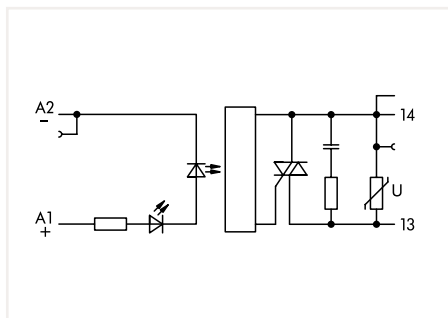
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; UL 508
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Optocoupler Module 859 Series

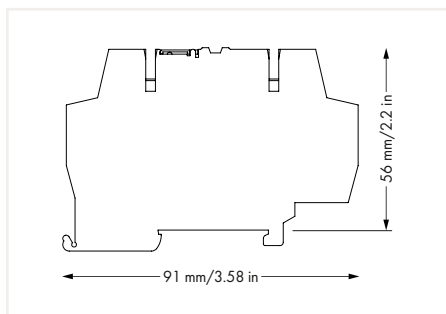


2



Optocoupler Module; Output voltage range: 24 ... 260 VAC; Limiting continuous current: 0.5 A; 2-wire connection; Zero-cross switching; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
5 VDC	7.7 mA	859-902	1



Control Circuit

Nominal input voltage U_N	5 VDC
Input voltage range (low level)	0 ... 1 VDC
Input voltage range (high level)	4 ... 6.25 VDC
Nominal input current at U_N	7.7 mA

Load Circuit

Circuit type	2-wire connection; zero-voltage switching
Limiting continuous current	0.5 A
Peak output current	30 A
Output voltage range	24 ... 260 VAC (50 ... 60 Hz)
Voltage drop (output) max.	≤ 1.2 VAC
Leakage current at rated voltage	≤ 1 mA
Switching current (min.)	50 mA
Turn-on time	≤ 10 ms
Turn-off time	≤ 10 ms
Mains frequency	50 Hz / 60 Hz

Signaling

Status indicator	Red LED
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Safety and Protection

Rated voltage	300 V
Circuit type	Mains circuits
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the same type)	Reinforced insulation (safe isolation)

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
---------------	-------------

Material Data

Weight	20.4 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +55 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; UL 508
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Accessories



Operating tool with a partially insulated shaft; Type 2; (3.5 x 0.5) mm blade		
	Item No.	Pack. Unit
	210-720	50



Felt-tip pen; for permanent marking		
	Item No.	Pack. Unit
	210-110	200

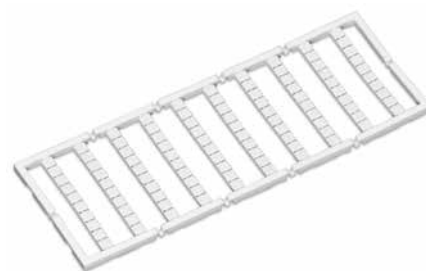


Test pin; 1 mm Ø; with solder connection for test cable		
	Item No.	Pack. Unit
	859-500	100

2

Accessories

2



End and intermediate plate; 1 mm thick		
	Item No.	Pack. Unit
	859-525	100

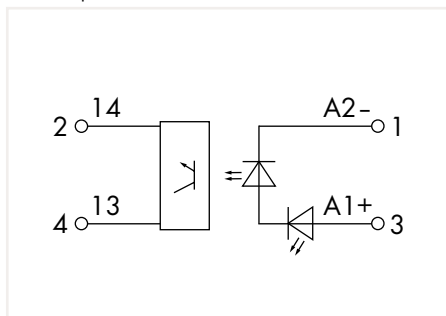
Push-in type jumper bar; light gray; insulated; 18 A		
Description	Item No.	Pack. Unit
2-way	859-402	200 (8x25)
3-way	859-403	200 (8x25)
4-way	859-404	200 (8x25)
5-way	859-405	200 (8x25)
6-way	859-406	100 (4x25)
7-way	859-407	100 (4x25)
8-way	859-408	100 (4x25)
9-way	859-409	100 (4x25)
10-way	859-410	100 (4x25)
Item no. suffixes for colored push-in type jumper bars		
yellow	.../000-029	
red	.../000-005	
blue	.../000-006	

Mini-WSB marker card; Marker width: 5 mm; 10 strips with 10 markers/card		
Marking	Item No.	Pack. Unit
plain	248-501	50
1 ... 10 (10 x)	248-502	50
11 ... 20 (10 x)	248-503	50
21 ... 30 (10 x)	248-504	50
31 ... 40 (10 x)	248-505	50
41 ... 50 (10 x)	248-506	50
1 ... 50 (2 x)	248-566	50
K1 ... K10	248-450	50
K11 ... K20	248-451	50
K100	248-452	50
U1 ... U10	248-453	50
U11 ... U20	248-454	50
U100	248-455	50

Solid-State Relay 2042 Series

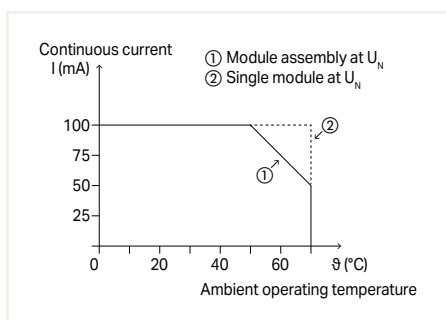
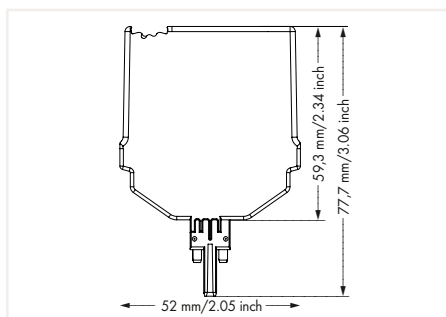


Similar to pictured device



Solid-state relay module; Nominal input voltage: 24 VDC; Output voltage range: 3 ... 60 VDC; Limiting continuous current: 0.1 A; 2-wire connection; Path; Frequency: 10 kHz; Green status indicator; Module width: 10 mm

U_N	I_N	Item No.	Pack. Unit
24 VDC (SELV)	7 mA	2042-7204	1



Current-Carrying Capacity Curve

Control Circuit

Input voltage range (low level)	0 ... 10 VDC
Input voltage range (high level)	16.8 ... 30 VDC
Input current range	6 ... 8 mA

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	0.1 A
Nominal output voltage	24 VDC (SELV)
Output Voltage Range	3 ... 60 VDC
Voltage drop (output) max.	≤ 1 VDC
Switching current (min.)	20 μA
Turn-on time	≤ 8 μs
Turn-off time	≤ 14 μs
Switching frequency	≤ 10 kHz

Signaling

Status indicator	Green LED
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Safety and Protection

Pollution Degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Protection type	IP20
Overvoltage category	II

Physical Data

Width	10.3 mm / 0.406 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch

Mechanical Data

Mounting type	Pluggable relay module for TOPJOB® S Carrier Terminal Block
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Material Data

Weight	14.6 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Operating altitude (max.)	2000 m

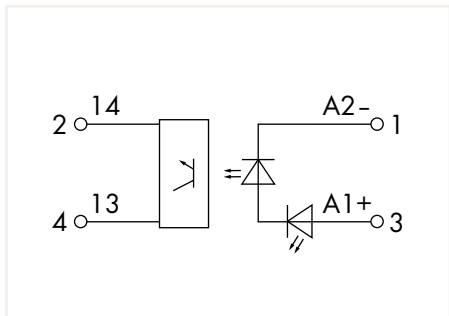
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2; EN 50121-4; EN 61000-6-2; EN 61000-6-3
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Solid-State Relay 2042 Series

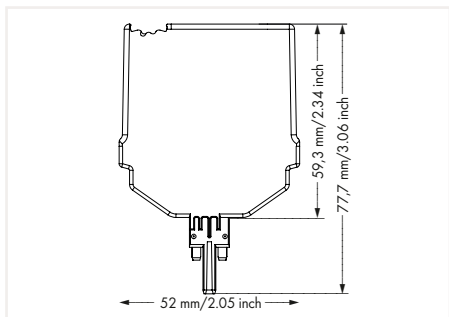


Similar to pictured device



Solid-state relay module; Nominal input voltage:
24 VDC; Limiting continuous current: 4 A;
Module width: 10 mm

U_N	I_N	Item No.	Pack. Unit
24 VDC (SELV)	3 mA	2042-7504	1



Control Circuit

Input voltage range (low level)	0 ... 6 VDC
Input voltage range (high level)	10 ... 53 VDC
Input current range	3 ... 5 mA

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	4 A
Nominal output voltage	48 VDC (SELV)
Output Voltage Range	0 ... 53 VDC
Voltage drop (output) max.	≤ 1 VDC
Switching current (min.)	20 μA
Turn-on time	≤ 12 μs
Turn-off time	≤ 32 μs
Switching frequency	≤ 300 Hz

Signaling

Status indicator	Green LED
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Safety and Protection

Pollution Degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Protection type	IP20
Overvoltage category	II

Physical Data

Width	10.3 mm / 0.406 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch

Mechanical Data

Mounting type	Pluggable relay module for TOPJOB® S Carrier Terminal Block
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Material Data

Weight	17.3 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Operating altitude (max.)	2000 m

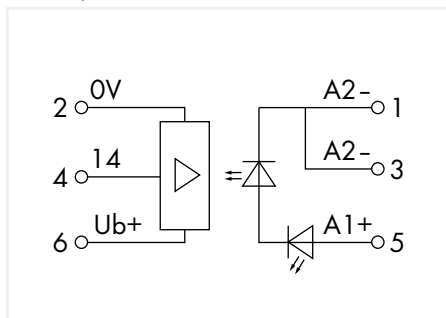
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2; EN 50121-4; EN 61000-6-2; EN 61000-6-3
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Solid-State Relay 2042 Series

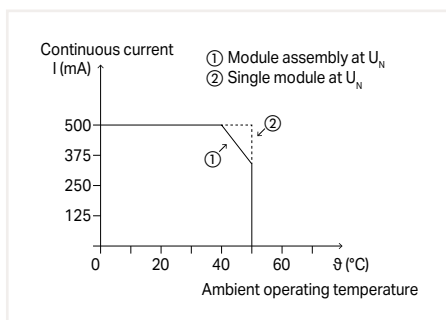
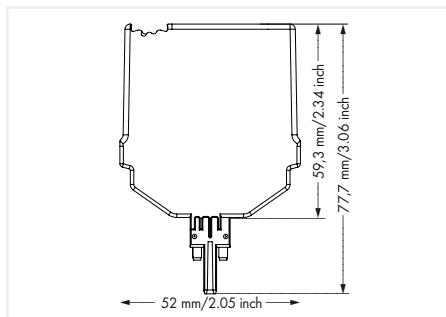


Similar to pictured device



Solid-state relay module; Nominal input voltage: 24 VDC;
Limiting continuous current: 0.5 A; Path; Frequency:
100 kHz; Module width: 15 mm

U_N	I_N	Item No.	Pack. Unit
24 VDC (SELV)	7 mA	2042-7304	1



Current-Carrying Capacity Curve

Control Circuit

Input voltage range (low level)	0 ... 6 VDC
Input voltage range (high level)	16.8 ... 30 VDC
Input current range	6 ... 8 mA

Load Circuit

Circuit type	3-wire connection; high-side switching
Limiting continuous current	0.5 A
Nominal output voltage	24 VDC (SELV)
Output Voltage Range	16.8 ... 30 VDC
Voltage drop (output) max.	≤ 1 VDC
Switching current (min.)	20 μA
Turn-on time	≤ 2 μs
Turn-off time	≤ 4 μs
Switching frequency	≤ 100 kHz

Signaling

Status indicator	Green LED
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Safety and Protection

Pollution Degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV _{rms}
Protection type	IP20
Overvoltage category	II

Physical Data

Width	15.5 mm / 0.61 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch

Mechanical Data

Mounting type	Pluggable relay module for TOPJOB® S Carrier Terminal Block
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Material Data

Weight	70.4 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +50 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Operating altitude (max.)	2000 m

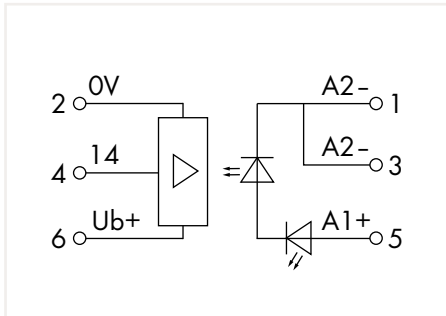
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61373, EN 50121-3-2; EN 50121-4; EN 61000-6-2; EN 61000-6-3
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Solid-State Relay 2042 Series

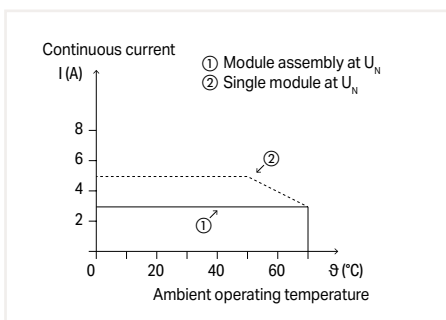
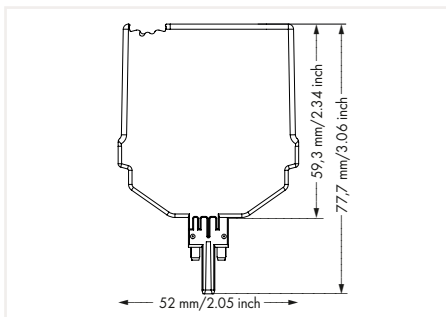


Similar to pictured device



Solid-state relay module; Nominal input voltage: 24 VDC;
Output voltage range: 0 ... 24 VDC; Limiting continuous
current: 5 A; Module width: 15 mm

U_N	I_N	Item No.	Pack. Unit
24 VDC (SELV)	7 mA	2042-7604	1



Current-Carrying Capacity Curve

Control Circuit

Input voltage range (low level)	0 ... 10 VDC
Input voltage range (high level)	16.8 ... 30 VDC
Input current range	6 ... 8 mA

Load Circuit

Circuit type	3-wire connection; high-side switching
Limiting continuous current	5 A
Nominal output voltage	24 VDC (SELV)
Output Voltage Range	0 ... 24 VDC
Voltage drop (output) max.	≤ 1 VDC
Switching current (min.)	3 mA
Turn-on time	≤ 10 μs
Turn-off time	≤ 20 μs
Switching frequency	≤ 5 kHz

Signaling

Status indicator	Green LED
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Safety and Protection

Pollution Degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Protection type	IP20
Overvoltage category	II

Physical Data

Width	15.5 mm / 0.61 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch

Mechanical Data

Mounting type	Pluggable relay module for TOPJOB® S Carrier Terminal Block
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Material Data

Weight	69.5 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Operating altitude (max.)	2000 m

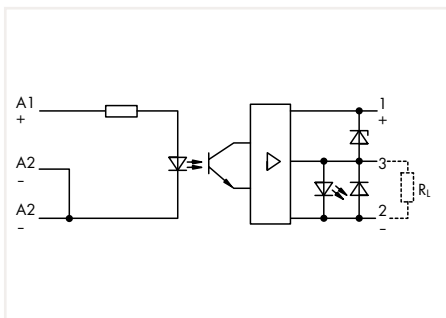
Standards and Specifications

Standards/specifications	EN 61010-2-201; EN 61373, EN 50121-3-2; EN 50121-4; EN 61000-6-2; EN 61000-6-3
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Optocoupler Module 286 Series

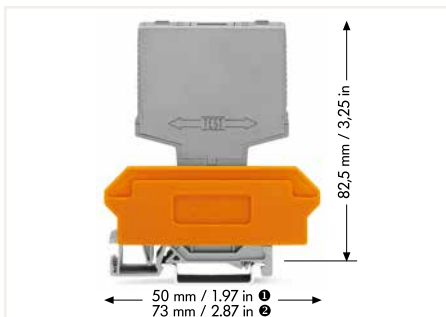


2



Optocoupler Module; Output voltage range: 20 ... 30 VDC; Limiting continuous current: 0.5 A; 3-wire connection; High-side switching; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
5 VDC	14 mA	286-752/002-000	1



Control Circuit

Input voltage range (high level)	2 ... 6.25 VDC
Input current range	3.3 ... 18.5 mA

Load Circuit

Circuit type	3-wire connection; high-side switching
Limiting continuous current	0.5 A
Output Voltage Range	20 ... 30 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 2 μA
Output closed-circuit current (without load) max.	12 mA
Turn-on time	≤ 5 μs
Turn-off time	≤ 10 μs
Switching frequency	≤ 25 kHz

Signaling

Status indicator	Red LED
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Safety and Protection

Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Protection type	IP20

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.25 inch
Depth	52 mm / 1.654 inch

Mechanical Data

Mounting type	Pluggable relay module for terminal block for pluggable modules
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Material Data

Weight	18.5 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +70 °C
Surrounding air temperature (storage)	-25 ... +70 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 60664-1
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Accessories



Terminal block for pluggable modules; 6-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-619	30



Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

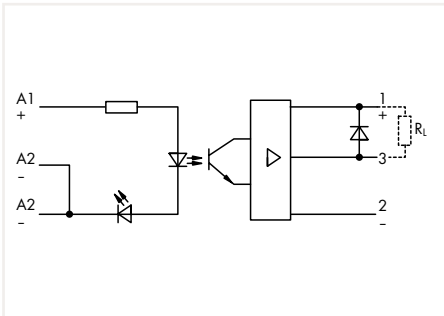
Item No.	Pack. Unit
280-609	30



Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

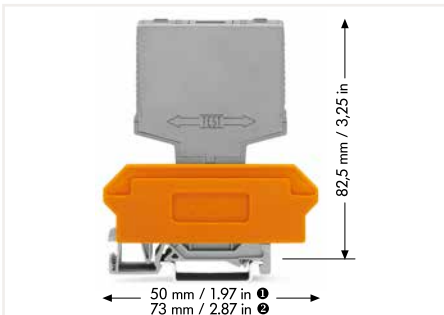
Item No.	Pack. Unit
280-763	25

Optocoupler Module 286 Series



Optocoupler Module; Output voltage range: 15 ... 40 VDC; Limiting continuous current: 5 A; 3-wire connection; Low-side switching; Frequency: 1 kHz; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	13.5 mA	286-721	1



Control Circuit	
Input voltage range (high level)	15 ... 30 VDC
Input current range	7.5 ... 18 mA
Load Circuit	
Circuit type	3-wire connection; low-side switching
Limiting continuous current	5 A
Output Voltage Range	15 ... 40 VDC
Voltage drop (output) max.	≤ 0.5 VDC
Leakage current at rated voltage	≤ 2 μA
Turn-on time	≤ 20 μs
Turn-off time	≤ 80 μs
Switching frequency	≤ 1 kHz
Signaling	
Status indicator	Red LED
Safety and Protection	
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Protection type	IP20
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.25 inch
Depth	52 mm / 1.654 inch
Mechanical Data	
Mounting type	Pluggable relay module for terminal block for pluggable modules
Material Data	
Weight	29.2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-25 ... +40 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 60664-1

Accessories



Terminal block for pluggable modules; 6-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-619	30



Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

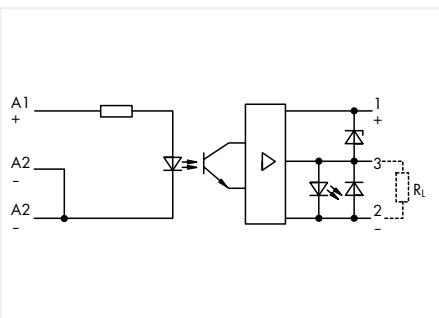
Item No.	Pack. Unit
280-609	30



Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

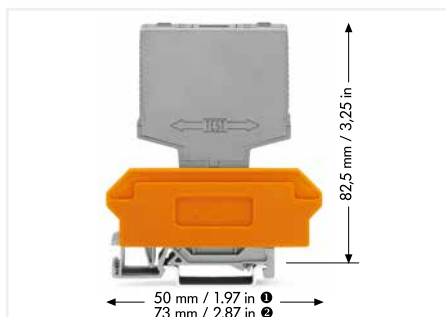
Item No.	Pack. Unit
280-763	25

Optocoupler Module 286 Series



Optocoupler module; Nominal input voltage: 24 VDC; Output voltage range: 15 ... 30 VDC; Limiting continuous current: 4 A; 3-wire connection/high-side switching; Red status indicator; Module width: 15 mm; gray

U_N	I_N	Item No.	Pack. Unit
24 VDC	14 mA	286-723	1



Control Circuit

Input voltage range (high level)	15 ... 30 VDC
Input current range	7.6 ... 15 mA

Load Circuit

Circuit type	3-wire connection; high-side switching
Limiting continuous current	4 A
Output Voltage Range	15 ... 30 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 2 μA
Output closed-circuit current (without load) max.	12 mA
Turn-on time	≤ 15 μs
Turn-off time	≤ 25 μs
Switching frequency	≤ 2.5 kHz

Signaling

Status indicator	Red LED
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Safety and Protection

Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Protection type	IP20

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.25 inch
Depth	52 mm / 1.654 inch

Mechanical Data

Mounting type	Pluggable relay module for terminal block for pluggable modules
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Material Data

Weight	26.8 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-25 ... +40 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 60664-1
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Accessories



Terminal block for pluggable modules; 6-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-619	30



Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

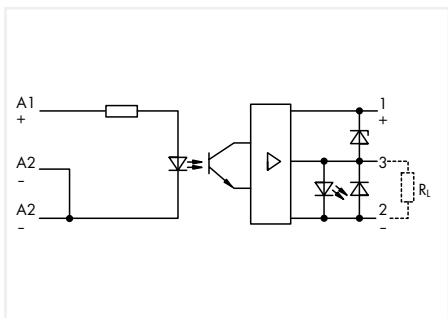
Item No.	Pack. Unit
280-609	30



Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

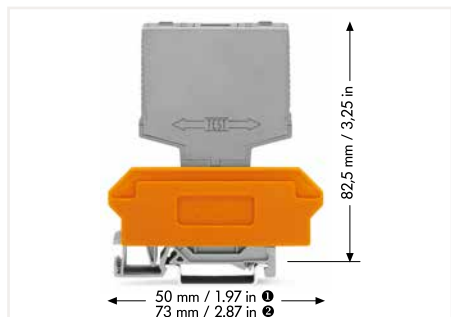
Item No.	Pack. Unit
280-763	25

Optocoupler Module 286 Series



Optocoupler module; Nominal input voltage: 24 VDC; Output voltage range: 20 ... 30 VDC; Limiting continuous current: 0.5 A; 3-wire connection/high-side switching; Frequency: 25 kHz; Red status indicator; Module width: 15 mm; gray

U_N	I_N	Item No.	Pack. Unit
24 VDC	15 mA	286-752	1



Control Circuit

Input voltage range (high level)	12 ... 30 VDC
Input current range	5 ... 20 mA

Load Circuit

Circuit type	3-wire connection; high-side switching
Limiting continuous current	0.5 A
Output Voltage Range	20 ... 30 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 2 μA
Output closed-circuit current (without load) max.	12 mA
Turn-on time	≤ 7 μs
Turn-off time	≤ 15 μs
Switching frequency	≤ 25 kHz

Signaling

Status indicator	Red LED
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Safety and Protection

Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Protection type	IP20

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.25 inch
Depth	52 mm / 1.654 inch

Mechanical Data

Mounting type	Pluggable relay module for terminal block for pluggable modules
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Material Data

Weight	17.9 g
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Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-25 ... +40 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 60664-1
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Accessories



Terminal block for pluggable modules; 6-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-619	30



Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-609	30



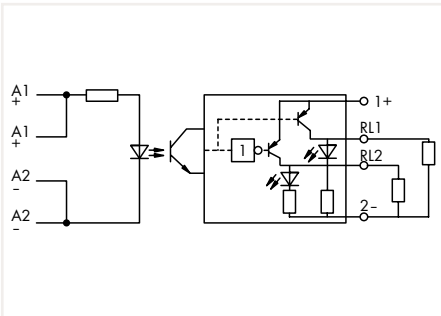
Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-763	25

Optocoupler Module 286 Series

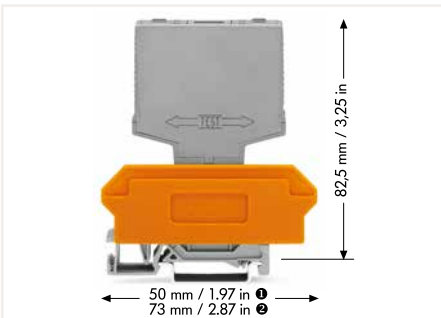


2



Optocoupler Module; with 2 inverted outputs; Output voltage range: 20 ... 30 VDC; Limiting continuous current: 0.5 A; Frequency: 2.5 kHz; 20 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	9 mA	286-790	1



Control Circuit

Input voltage range (high level)	20 ... 30 VDC
----------------------------------	---------------

Load Circuit

Circuit type	2-wire connection; 2 inverted outputs
Limiting continuous current	0.5 A
Output Voltage Range	20 ... 30 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 2 μA
Turn-on time	≤ 4 μs
Turn-off time	≤ 15 μs
Switching frequency	≤ 2.5 kHz

Signaling

Status indicator	Red LED
------------------	---------

Safety and Protection

Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Protection type	IP20

Physical Data

Width	20 mm / 0.787 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.25 inch
Depth	52 mm / 1.654 inch

Mechanical Data

Mounting type	Pluggable relay module for terminal block for pluggable modules
---------------	---

Material Data

Weight	32 g
--------	------

Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-25 ... +40 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 60664-1
--------------------------	------------

Accessories



Terminal block for pluggable modules; 8-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-638	20



Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-628	20

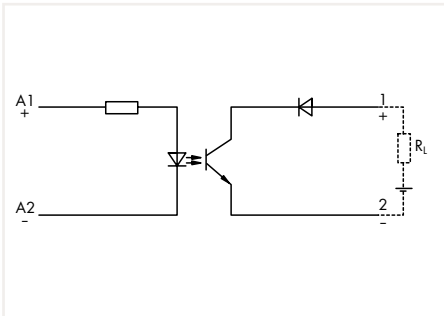


Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-764	20

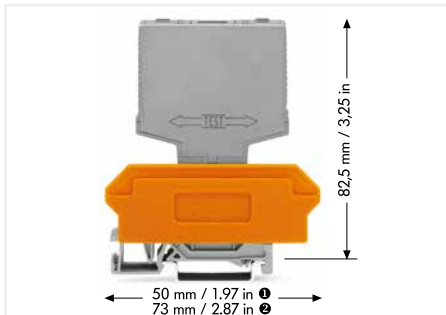
Optocoupler Module

286 Series



Optocoupler module; Nominal input voltage: 24 VDC; Output voltage range: 20 ... 60 VDC; Limiting continuous current: 0.1 A; 2-wire connection; Frequency: 3 kHz; Red status indicator; Module width: 10 mm; gray

U_N	I_N	Item No.	Pack. Unit
24 VDC	14 mA	286-791	1



Control Circuit	
Input voltage range (high level)	15 ... 30 VDC
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	0.1 A
Output Voltage Range	20 ... 60 VDC
Voltage drop (output) max.	≤ 2 VDC
Leakage current at rated voltage	≤ 2 μA
Turn-on time	≤ 10 μs
Turn-off time	≤ 50 μs
Switching frequency	≤ 3 kHz
Safety and Protection	
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Protection type	IP20
Physical Data	
Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.25 inch
Depth	52 mm / 1.654 inch
Mechanical Data	
Mounting type	Pluggable relay module for terminal block for pluggable modules
Material Data	
Weight	15.3 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-25 ... +40 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 60664-1

Accessories



Terminal block for pluggable modules; 4-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-618	40



Terminal block for pluggable modules; 8-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-608	40



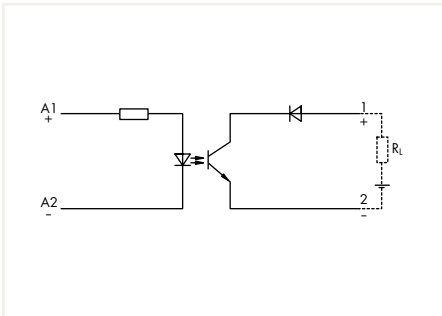
Terminal block for pluggable modules; 8-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-762	30

Optocoupler Module 286 Series

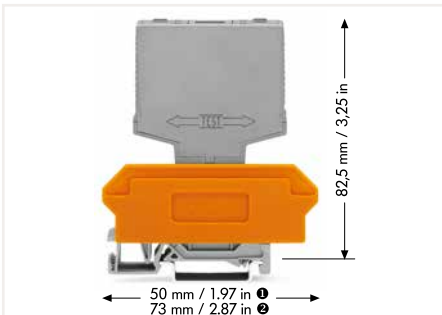


2



Optocoupler module; Nominal input voltage: 24 VDC; Output voltage range: 20 ... 60 VDC; Limiting continuous current: 0.1 A; 2-wire connection; Red status indicator; Module width: 10 mm; gray

U_N	I_N	Item No.	Pack. Unit
24 VDC	4 mA	286-794	1



Control Circuit

Input voltage range (high level)	18 ... 30 VDC
----------------------------------	---------------

Load Circuit

Circuit type	2-wire connection
Limiting continuous current	0.1 A
Output Voltage Range	20 ... 60 VDC
Voltage drop (output) max.	≤ 2 VDC
Leakage current at rated voltage	≤ 2 μA
Turn-on time	≤ 80 μs
Turn-off time	≤ 100 μs
Switching frequency	≤ 1.5 kHz

Safety and Protection

Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Protection type	IP20

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.25 inch
Depth	52 mm / 1.654 inch

Mechanical Data

Mounting type	Pluggable relay module for terminal block for pluggable modules
---------------	---

Material Data

Weight	16.3 g
--------	--------

Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +60 °C
Surrounding air temperature (storage)	-25 ... +40 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 60664-1
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Accessories



Terminal block for pluggable modules; 4-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-618	40



Terminal block for pluggable modules; 8-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

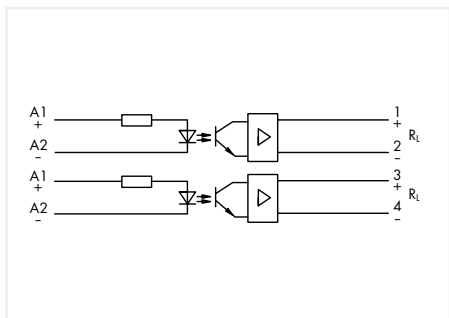
Item No.	Pack. Unit
280-608	40



Terminal block for pluggable modules; 8-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

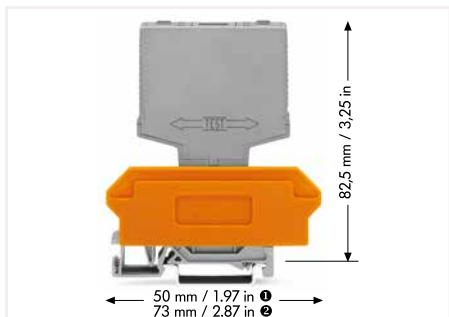
Item No.	Pack. Unit
280-762	30

Dual-Channel Optocoupler Module 286 Series



Dual-Channel Optocoupler Module; Output voltage range: 20 ... 30 VDC; Limiting continuous current: 0.25 A; Frequency: 1.5 kHz; 20 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	15 mA	286-792	1



Control Circuit

Input voltage range (high level)	7.5 ... 30 VDC
----------------------------------	----------------

Load Circuit

Circuit type	2-channel; 2-wire connection
Limiting continuous current	0.25 A
Output Voltage Range	20 ... 30 VDC
Voltage drop (output) max.	≤ 2.5 VDC
Leakage current at rated voltage	≤ 3 μA
Turn-on time	≤ 60 μs
Turn-off time	≤ 120 μs
Switching frequency	≤ 1.5 kHz

Safety and Protection

Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV _{rms}
Protection type	IP20

Physical Data

Width	20 mm / 0.787 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.25 inch
Depth	52 mm / 1.654 inch

Mechanical Data

Mounting type	Pluggable relay module for terminal block for pluggable modules
---------------	---

Material Data

Weight	23.4 g
--------	--------

Environmental Requirements

Surrounding air temperature (operation at U_N)	-25 ... +40 °C
Surrounding air temperature (storage)	-25 ... +40 °C
Processing temperature	-25 ... +50 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 60664-1
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Accessories



Terminal block for pluggable modules; 8-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-638	20



Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-628	20

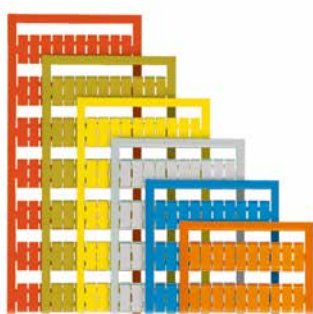


Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-764	20

Accessories

2



WSB marker card; WSB marker width: 4 mm; 10 strips with 10 markers/card

Marking	Item No.	Pack. Unit
K	209-782	50
1 ... 10 (10 x)	209-702	50
A1; A2; 13; 14	209-952	50
A1; A2; 11; 12	209-953	50
11; 12; 14; A1; A2; A2; 11; 12; 14	209-994	50
12; A1; A2; 24; 11; 14; 21; 22	209-995	50
A1; A1; A2; A2; 11; 12; 13; 14; 23; 24	209-693	50
12; A1; A2; 23; 24; 11; 13; 14; 21; 22	209-691	50
12; A1; A2; 23; 24; 11; 13; 14; 33; 34	209-690	50
14; A1; A2; 33; 34; 13; 23; 24; 43; 44	209-692	50
A1; A2; 32; 31; 34; 42; 41; 12; 11; 14; 22; 21; 24; 44	249-656	50
L+; 1; L-; L-; 11; 12; 13; 14	209-954	50
A1; A2; A3; 11; 12; 14	249-607	50
A1; A1; A2; A2; 12; 11; 11; 14	209-996	50
A1; A1; St; A2; A2; 12; 11; 11; 14	209-601	50
U1; U2; U3; U4; 0V; 12; 11; 11; 14; 14	209-951	50
U	209-789	50
A1; A2; A2; 1; 3; 2	209-685	50
A1; A2; A2; 1; 2; 2	209-686	50
A1+; A1+; A2-; A2-; 1; RL1; RL2; 2	209-955	50
A1+; A1+; A2-; A2-; 1+; 1+; A; 2-	249-651	50
+/-	209-552	50
1; 2; 3; 0V; +UB; OUT; ERR.; 0V	249-622	50
1; 2; 0V; +UB; OUT; ERR.; 0V	249-623	50
Lin; Lin; Lout; Lout; 24V; UA; UA; 0V	209-957	50
Lin; Lin; Lout; 11; 14; 14; Lin; Lin; Lout	249-654	50
lin; lin; lout; lout; 24V; 11; 12; 14; 0V	209-997	50
S	209-682	50
V	209-784	50
F1 ... F10	209-787	50
D	209-783	50
+; -; 1; 2; 3; 13; 14; 4; 5; 6	249-608	50
L; N; Ackn.; Failure; Test; N; 14; 24	249-606	50
A1; A2; Ackn.; Failure; 12; 11; 11; 14	249-653	50










WSB marker card; plain; WSB marker width: 4 mm; 10 strips with 10 markers/card

Color	Item No.	Pack. Unit
○ white	209-701	100
● yellow	209-701/000-002	100
● red	209-701/000-005	100
● blue	209-701/000-006	100
○ gray	209-701/000-007	100
● orange	209-701/000-012	100
● light green	209-701/000-017	100
● green	209-701/000-023	100
● violet	209-701/000-024	100



WAGO Isolation Amplifiers and Signal Conditioners

WAGO Isolation Amplifiers and Signal Conditioners

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WAGO Isolation Amplifiers Selection Guide

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	Image	Description	Circuit Diagram	Input Signal			Power Supply U_s
				Current	Voltage	Bipolar Signals (I/U)	
Isolation Amplifiers							
Isolation Amplifiers		Isolation Amplifier; Configurable; with Digital Output		0 ... 1 mA 0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA 0 ... 100 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V 0 ... 220 V	± 1 mA; ± 10 mA; ± 20 mA; ± 100 mA ± 1 V; ± 10 V; ± 30 V; ± 100 V; ± 200 V	24 VDC
		Isolation Amplifier; Configurable; with Zero/Span Adjustment		0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V		24 VDC
		Isolation Amplifier; Configurable; with Digital Output		0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V	± 20 mA ± 10 V	24 VDC
		Isolation Amplifier; Configurable		$\pm 0,3 ... \pm 100$ mA	± 60 mV ... ± 200 V	$\pm 0,3 ... \pm 100$ mA ± 60 mV ... ± 200 V	24 VDC
		Bipolar Isolation Amplifier		0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V	± 10 mA ± 20 mA ± 5 V ± 10 V	24 VDC
		Isolation Amplifier; Pre-Configured		0 (4) ... 20 mA 0 ... 20 mA 4 ... 20 mA	0 (2) ... 10 V 0 ... 10 V 0 ... 10 V		24 VDC
Repeater Power Supply		Repeater Power Supply		0 ... 20 mA 4 ... 20 mA			24 VDC
Signal Splitters		Signal Splitter; with Current Output		0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V		24 VDC
		Signal Splitter; with Voltage/Current Output		0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V		24 VDC
Passive Isolators		Loop-Powered Isolation Amplifier		0 ... 5 mA 0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 1 V 0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V	± 5 mA ± 10 mA ± 20 mA ± 1 V; ± 5 V ± 10 V ± 20 V	via output circuit
		Passive Isolator; 1-Channel		0 (4) ... 20 mA			via input circuit
		Passive Isolator; 2-Channel		2 x 0 (4) ... 20 mA			via input circuit

Output Signal			Configuration	Specialty Functions	Item No.	Page
Current	Voltage	Bipolar Signals (I/U)				
0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V	±10 mA ±20 mA ±5 V ±10 V	DIP switch; Interface configuration software/app/display	Digital output (DO); Clipping; Simulation	2857-401	250
0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V		DIP switch	Zero/span adjustment	857-400	252
0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V		DIP switch; Interface configuration software/app	Digital output (DO); Clipping	857-401	254
0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V	±10 mA ±20 mA ±5 V ±10 V	DIP switch	Clipping	857-403	256
0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V	±10 mA ±20 mA ±5 V ±10 V	DIP switch	Zero/span adjustment	857-409	258
0 (4) ... 20 mA	0 (2) ... 10 V				857-411	260
0 ... 20 mA					857-412	261
4 ... 20 mA					857-413	262
					857-414	262
		0 ... 10 V			857-415	263
		0 ... 10 V			857-416	263
0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V		DIP switch		857-420	264
2 x 0 (4) ... 20 mA			DIP switch		857-423	266
2 x 0 ... 20 mA 4 ... 20 mA	2 x 0 ... 10 V 2 ... 10 V		DIP switch		857-424	268
4 ... 20 mA			DIP switch	Zero/span adjustment	857-450	270
0 (4) ... 20 mA					857-451	272
2 x 0 (4) ... 20 mA					857-452	273

WAGO Current and Voltage Signal Conditioners Selection Guide

3

Image	Description	Circuit Diagram	Input Signal			Power Supply U _s
			Current	Voltage	Bipolar Signals (I/U)	
Current and Voltage Signal Conditioners						
	Through-Hole Current Signal Conditioner		100 A AC/DC			24 VDC
	Current Signal Conditioner		1 A AC/DC 5 A AC/DC			24 VDC
	Current Signal Conditioner; for Rogowski Coils		Rogowski coils 500 AAC 2000 AAC			24 VDC
	Voltage Signal Conditioner		300 V AC/DC			24 VDC
	1-Phasen- Leistungsmessumformer		1 A AC/DC (IN 3.1); 5 A AC/DC (IN 3.2); 8 A AC/DC (IN 3.3)	500 VAC/VDC (IN 2.1); 300 VAC/VDC (IN 2.1); 250 VAC/VDC (IN 2.2); 50 VAC/VDC (IN 2.3)		24 VDC
	Power Signal Conditioner		300 V AC/DC (5 A)			24 VDC
	Milivolt Signal Conditioner			0 ... 200 mV 0 ... 1000 mV	±100 mV	24 VDC
	Current Signal Conditioner		0 ... 5 A AC/DC (IN 1; block arrangement); 0 ... 6 A AC/DC (IN 1; individual arrangement); 0 ... 1 A AC/DC (IN 2)			24 VDC
	3-Phase Power Measurement Module		4 x 1 AAC	3 x 300 VAC		24 VDC
	3-Phase Power Measurement Module		4 x 5 AAC	3 x 300 VAC		24 VDC
	3-Phase Power Measurement Module		Rogowski coils 4x 4000 AAC	3 x 300 VAC		24 VDC

Output Signal			Configuration	Specialty Functions	Item No.	Page
Current	Voltage	Bipolar Signals (I/U)				
0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V	±10 mA ± 20 mA ±5 V ±10 V	DIP switch; Interface configuration software/app/display	Digital output (DO); Clipping; Zero/span adjustment; Simulation	2857-550	274
0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V		DIP switch; Interface configuration software/app	Digital output (DO); Clipping	857-550	276
0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V		DIP switch; Interface configuration software/app	Digital output (DO); Clipping	857-552	280
0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V		DIP switch; Interface configuration software/app	Digital output (DO); Clipping	857-560	282
		±24 mA ±12 V	Interface configuration software/display	Digital output (DO)	2857-569	286
0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V		DIP switch; Interface configuration software/app	Digital output (DO); Clipping	857-569	288
0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V		DIP switch; Interface configuration software/app	Clipping	857-819	284
0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA (can be inverted, also bipolar)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V (can be inverted, also bipolar)		DIP switch; Interface configuration software		857-551	278
			Interface configuration software		2857-570/024-001	290
			Interface configuration software		2857-570/024-005	292
			Interface configuration software		2857-570/024-000	294

3

WAGO Temperature Signal Conditioners Selection Guide

3

Image	Description	Circuit Diagram	Input Signal	Sensor Connection	Power Supply U_s
Temperature Signal Conditioners					
	Temperature Signal Conditioner; for Pt and Resistance Sensors		Pt sensors: Pt100, Pt200, Pt500, Pt1000; Resistance sensors: 0 ... 1 kΩ; 0 ... 4.5 kΩ	2-, 3-, 4-wire connection	24 VDC
	Temperature Signal Conditioner; for Pt and Resistance Sensors		Pt sensors: Pt100, Pt200, Pt500, Pt1000; Resistance sensors: 0 ... 1 kΩ; 0 ... 4.5 kΩ	2-, 3-, 4-wire connection	24 VDC
	Temperature Signal Conditioner; for Pt46 and Cu53 Sensors		Pt46; Cu53	2-, 3-, 4-wire connection	24 VDC
	Temperature Signal Conditioner; for Thermocouples		Thermocouples: Type J, K		24 VDC
	Temperature Signal Conditioner; for Thermocouples		Thermocouples: Type J, K, E, R, N, S, T, B, S		24 VDC
	Temperature Signal Conditioner; for Thermocouples		Thermocouples: Type K, S, B, R		24 VDC
	Loop-Powered RTD Temperature Signal Conditioner		Pt sensors: Pt100, Pt200, Pt500, Pt1000; Resistance sensors: 0 ... 1 kΩ; 0 ... 4.5 kΩ	2-, 3-, 4-wire connection	via output circuit
	Temperature Signal Conditioner; for Ni Sensors		Ni sensors: Ni100, Ni120, Ni200, Ni500, Ni1000	2-, 3-, 4-wire connection	24 VDC
	Temperature Signal Conditioner; for KTY Sensors		KTY sensors	2-wire connection	24 VDC
	RTD/TC Temperature Signal Conditioner; Analog		RTD sensors; Potentiometers; Resistors; Thermocouples	2-, 3-, 4-wire connection; Differential measurement; Potentiometer	9.6 ... 31.2 VDC
	RTD/TC Temperature Signal Conditioner; Serial		RTD sensors; Potentiometers; Resistors; Thermocouples	2-, 3-, 4-wire connection; Differential measurement; Potentiometer	9.6 ... 31.2 VDC


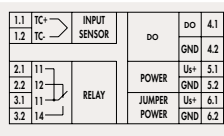

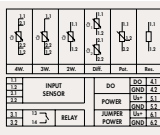

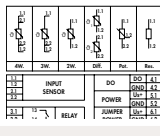

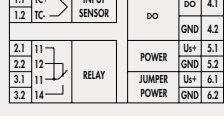

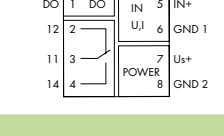

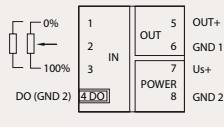
Sensor Temperature Range	Output Signal			Configuration	Specialty Functions	Item No.	Page
	Current	Voltage	RS-485				
-200 ... +850 °C	0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V		DIP switch	Clipping	857-800	304
-200 ... +850 °C	0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V		DIP switch; Configuration software/app	Clipping	857-801	306
-200 ... +300 °C (Pt46) 0 ... +180 °C (Cu53)	0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V		DIP switch		857-808	308
Type J: -150 ... +1200 °C; Type K: -150 ... +1350 °C	0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V		DIP switch	Clipping	857-810	310
Type J: -150 ... +1200 °C; Type K: -150 ... +1350 °C	0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V		DIP switch; Configuration software/app	Clipping	857-811	312
Type K: -150 ... +1200 °C; Type S: 0 ... +1600 °C; Type B: 600 ... +1800 °C; Type R: 0 ... +1600 °C	0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V		DIP switch		857-812	314
-200 ... +850 °C	4 ... 20 mA 20 ... 4 mA			DIP switch		857-815	416
	0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V		DIP switch	Clipping	857-818	322
	0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V		DIP switch	Digital output (DO); Clipping	857-820	324
-200 ... +850 °C; 0 ... 10 kΩ; Type J: -210 ... +1200 °C; Type K: -200 ... +1372 °C	-24 ... +24 mA (load impedance ≤ 600 Ω)	-12 ... +12 V (load impedance ≥ 2 kΩ)		Configuration software/ display	Digital output DO; Relay with 1 changeover contact (250 VAC / 6 A); Simulation	2857-535	318
-200 ... +850 °C; 0 ... 10 kΩ; Type J: -210 ... +1200 °C; Type K: -200 ... +1372 °C			Modbus RTU	Configuration software/ display; Rotary encoder switch	Relay with 1 changeover con- tact (250 VAC / 6 A); Simulation	2857-535/000-001	320

WAGO Signal Conditioners with Specialty Functions

WAGO Threshold Value Switches

Selection Guide

3

Image	Description	Circuit Diagrams	Input Signal			
			Frequencies			
Frequency Signal Conditioner						
	Frequency Signal Conditioner		Frequency signals; NAMUR/NPN or PNP sensors 0.1 ... 120 kHz			
Threshold Value Switches						
Image	Description	Circuit Diagrams	Input Signal			
			Current	Voltage	Bipolar Signals (I/U)	Sensors
	RTD Threshold Value Switch					0 ... 100 kΩ; Pt100; Pt200; Pt500; Pt1000; Pt5000; Pt10,000; Pt10 ... 20,000
	RTD Threshold Value Switch					0 ... 100 kΩ; Pt100; Pt200; Pt500; Pt1000; Pt5000; Pt10,000; Pt10 ... 20,000
	Thermocouple Threshold Value Switch					Type J, K, E, N, R, S, T, B, C
	Analog Threshold Value Switch		0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V; 0 ... 15 V; 0 ... 30 V	±10 mA ±20 mA ±5 V ±10 V	
Signal Conditioners with Specialty Functions						
Image	Description	Circuit Diagrams	Input Signal			
			Potentiometers	Resistors		
	Potentiometer Signal Conditioner		0 ... 100 kΩ	10 ... 100 kΩ		

Power Supply U_s	Output Signal		Configuration	Specialty Functions	Item No.	Page
	Current	Voltage				
24 VDC	0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V	DIP switch; Interface configuration software/app	Clipping	857-500	328
Power Supply U_s	Output Signal		Configuration	Specialty Functions	Item No.	Page
	Relay (1 changeover contact)	Relay (1 make contact)				
24 VDC		250 VAC 6 A	DIP switch; Interface configuration software/app/display	Digital output DO; Relay with 1 make contact (250 VAC / 6 A); Simulation	2857-533	296
24 VDC		250 VAC 6 A	Interface configuration software/display	Digital output DO; Relay with 1 make contact (250 VAC / 6 A); Simulation	2857-533/000-001	298
24 VDC	250 VAC 6 A		DIP switch; Interface configuration software/app/display	Digital output DO; Relay with 1 changeover contact (250 VAC / 6 A); Simulation	2857-534	300
24 VDC	250 VAC 6 A		DIP switch; Push/slide switch; Interface configuration software/app	Digital output DO; Relay with 1 changeover contact (250 VAC/6 A)	857-531	302
Power Supply U_s	Output Signal		Configuration	Specialty Functions	Item No.	Page
	Current	Voltage				
24 VDC	0 ... 10 mA 2 ... 10 mA 0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V	DIP switch; Push/slide switch; Interface configuration software/app	Clipping	857-809	326

3

Approvals Overview

3

Approvals										Item Description	Item Number	Page
IECEX	ATEX	Marine Approvals					ANSI/ISA 12.12.01	UL 508	UL 61010-2-201			
		PRS (Polski Rejestr Statkow)	NKK (Nippon Kaiji Kyokai)	GL (Germ Lloyd)	DNV (Det Norske Veritas)	BV (Bureau Veritas)						
Isolation Amplifiers										Isolation Amplifier; Configurable; with Digital Output	2857-401	250
										Isolation Amplifier; Configurable; with Zero/Span Adjustment	857-400	252
										Isolation Amplifier; Configurable; with Digital Output	857-401	254
										Isolation Amplifier; Configurable	857-403	256
										Bipolar Isolation Amplifier	857-409	258
										Isolation Amplifier; Pre-Configured	857-411	260
										Isolation Amplifier; Pre-Configured	857-412	261
										Isolation Amplifier; Pre-Configured	857-413	262
										Isolation Amplifier; Pre-Configured	857-414	262
										Isolation Amplifier; Pre-Configured	857-415	263
										Isolation Amplifier; Pre-Configured	857-416	263
										Repeater Power Supply	857-420	264
										Signal Splitter	857-423	266
										Signal Splitter (I/U)	857-424	268
										Loop-Powered Isolation Amplifier	857-450	270
										Passive Isolator; 1-Channel	857-451	272
										Passive Isolator; 2-Channel	857-452	273
Current and Voltage Signal Conditioners										Through-Hole Current Signal Conditioner	2857-550	274
										Current Signal Conditioner	857-550	276
										Current Signal Conditioner; for Rogowski Coils	857-552	280
										Voltage Signal Conditioner	857-560	282
											2857-569	286
										Power Signal Conditioner	857-569	288
										Milivolt Signal Conditioner	857-819	284
										Current Signal Conditioner	857-551	278
										3-Phase Power Signal Conditioner; 1 A	2857-570/024-001	290
										3-Phase Power Signal Conditioner; 5 A	2857-570/024-005	292
										3-Phase Power Signal Conditioner; RC	2857-570/024-000	294
Temperature Signal Conditioners										Temperature Signal Conditioner; for Pt and Resistance Sensors	857-800	304
										Temperature Signal Conditioner; for Pt and Resistance Sensors	857-801	306
										Temperature Signal Conditioner; for Thermocouples	857-810	310
										Temperature Signal Conditioner; for Thermocouples	857-811	312
										Temperature Signal Conditioner; for Thermocouples	857-812	314
										Temperature Signal Conditioner; for Pt46 and Cu53 Sensors	857-808	308
										Loop-Powered RTD Temperature Signal Conditioner	857-815	316
										Temperature Signal Conditioner; for Ni Sensors	857-818	322
										Temperature Signal Conditioner; for KTY Sensors	857-820	324
										RTD/TC Temperature Signal Conditioner; Analog	2857-535	318
										RTD/TC Temperature Signal Conditioner; Serial	2857-535/000-001	320
Threshold Value Switches										RTD Threshold Value Switch	2857-533	296
											2857-533/000-001	298
										Thermocouple Threshold Value Switch	2857-534	300
										Analog Threshold Value Switch	857-531	302
Specialty Functions										Frequency Signal Conditioner	857-500	328
										Potentiometer Signal Conditioner	857-809	326
Accessories										Supply and Through Module	857-979	338
										Interface Adapter for System Wiring	857-980	337

Signs and Symbols

Specialty Functions:



Zero/span adjustment



Clipping capability



Digital output (DO)



Relay, 1 changeover contact



Relay, 1 make contact



Simulation

Configuration:



DIP switch



Rotary coding switch



Interface configuration software



Interface configuration app



Interface configuration display



Push/slide switch

Isolation Amplifier; Configurable; with Digital Output

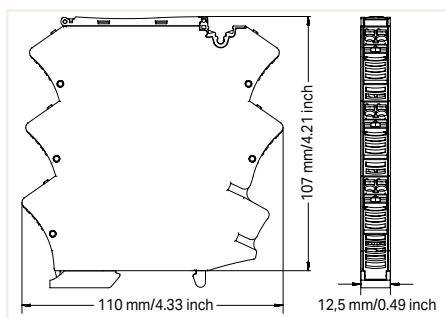
2857 Series



1.1	U+	INPUT VOLTAGE	OUTPUT	OUT+	4.1
1.2	U-			OUT-	4.2
2.1	I+	INPUT CURRENT	POWER	Us+	5.1
2.2	I-			GND	5.2
3.1	DO (GND)	DO	JUMPER	Us+	6.1
3.2	DI (GND)			DI (HOLD)	GND

Isolation Amplifier; Bipolar current and voltage input signal; Bipolar current and voltage output signal; Digital output; Supply voltage: 24 VDC; Module width: 12.5 mm

Item No.	Pack. Unit
2857-401	1



Short description:

WAGO's isolation amplifier converts, amplifies, filters, and electrically isolates analog signals.

Features:

- Analog unipolar/bipolar signals at both input and output
- Digital signal output reacts to configured measurement range limits (configurable on/off switching delay and threshold value switch function with up to two threshold values)
- Digital HOLD input freezes the output signal
- Clipping capability provides analog signal limitation to output end values
- Adjustable software/hardware filter
- Input/output response simulation via configuration display
- Safe 3-way isolation with 4 kV test voltage per EN 61140

Note:

Additional setting options via interface configuration software/app

Configuration	
Configuration options	DIP switch; Interface configuration software; Interface configuration app; Configuration display
Input	
Input signal type	Voltage; Current
Input signal (voltage)	± 1 V; 0 ... 1 V; ± 5 V; 0 ... 5 V; 1 ... 5 V; ± 10 V; 0 ... 10 V; 2 ... 10 V; ± 30 V; 0 ... 30 V; ± 100 V; 0 ... 100 V; ± 200 V; 0 ... 220 V
Input signal (current)	± 1 mA; 0 ... 1 mA; ± 10 mA; 0 ... 10 mA; 2 ... 10 mA; ± 20 mA; 0 ... 20 mA; 4 ... 20 mA; ± 100 mA; 0 ... 100 mA
Input resistance (current input)	$\leq 50 \Omega$
Input resistance (voltage input)	$\geq 1 \text{ M}\Omega$
Input current (max.)	± 120 mA
Input voltage (max.)	± 250 V
Input – Digital	
Hold signal	11.8 V ... U_S
Output	
Output signal type	Current; Voltage
Output signal (voltage)	± 5 V; 0 ... 5 V; 1 ... 5 V; ± 10 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	± 10 mA; 0 ... 10 mA; 2 ... 10 mA; ± 20 mA; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	$\geq 1 \text{ k}\Omega$
Load impedance (current output)	$\leq 600 \Omega$
Output – Digital	
Max. switching voltage (DO)	Supply voltage applied: -0.3 V
Max. continuous current (DO)	100 mA (no internal restriction)
Number of switching thresholds (DO)	1 or 2 (adjustable)
Configurable rise/fall delay time (DO)	0 ... 60 s (via software)
Signal Processing	
Limit frequency	10 kHz / 5 kHz / 100 Hz / 30 Hz (configurable via DIP switch or software)
Software filter; adjustable	Moving average value (filter level: 30)
Step response (typ.)	1 ms
Measurement Error	
Transmission error (typ.)	≤ 0.1 % of upper-range value
Temperature coefficient	$\leq 0.01\%/K$
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U_S	24 VDC
Supply voltage range	± 30 %
Power consumption at nominal supply voltage	≤ 70 mA (+ IDO)
Safety and Protection	
Test voltage (input/output/supply)	4 kV AC; 50 Hz; 1 min
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
WAGO Connector	picoMAX® 5.0
Solid conductor	0.2 ... 2.5 mm ² / 24 ... 12 AWG
Fine-stranded conductor	0.2 ... 2.5 mm ² / 24 ... 12 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Geometric Data	
Width	12.5 mm / 0.492 inch
Height from upper-edge of DIN-rail	107 mm / 4.213 inch
Depth	110 mm / 4.331 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	85.9 g

» Configuration software	Page 332
» Configuration app	Page 333
» Configuration display	Page 334
» Accessories	Page 344

Specialty Functions:



Configuration via:



Environmental Requirements

Surrounding air temperature (operation)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C

Standards and Specifications

Conformity marking	CE
EMC immunity to interference	EN 61000-6-2; EN 61326-2-3; EN 50121-3-2
EMC emission of interference	EN 61000-6-4; EN 61326-2-3; EN 50121-3-2
Standards/specifications	EN 60664-1; EN 61373

2857-401

DIP Switch Adjustability

● = ON Default

DIP Switch S1

Input													
1	Signal	2	Polarity	3	4	5	Range / mA	Range / V	6	Inverted Characteristic	7	8	Limit Frequency
	Current		Unipolar				0 ... 20	0 ... 10		Not inverted			10 kHz
●	Voltage	●	Bipolar *	●			0 ... 1	0 ... 1	●	Inverted	●		5 kHz
					●		0 ... 5	0 ... 5				●	100 Hz
				●	●		0 ... 10	1 ... 5				●	30 Hz
						●	2 ... 10	2 ... 10					
				●		●	4 ... 20	0 ... 30					
					●	●	0 ... 50	0 ... 100					
				●	●	●	0 ... 100	0 ... 220					

DIP Switch S1

Output				Output			
9	Signal	10	Polarity	1	2	Range / mA	Range / V
	Current		Unipolar			0 ... 20	0 ... 10
●	Voltage	●	Bipolar *	●		4 ... 20	2 ... 10
					●	0 ... 10	0 ... 5
				●	●	2 ... 10	1 ... 5

DIP Switch S2

DIP Switch S2

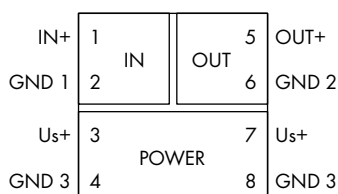
Output						Digital Output (DO)	
3	4	Measuring Range Underflow		Measuring Range Overflow		5	6
		Lower limit of output range -5% **		Upper limit of output range +2.5% **			
●		Lower limit of output range		Upper limit of output range +2.5%		●	
	●	Lower limit of output range		Upper limit of output range			●
	●	Lower limit of output range -5%		Upper limit of output range +5%		●	●

* Bipolar only applies to ranges starting with 0.

** acc. to NAMUR NE 43

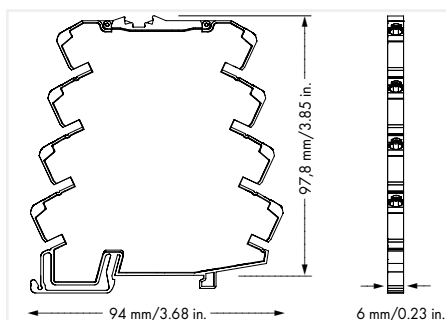
Isolation Amplifier; Configurable; with Zero/Span Adjustment

857 Series



Isolation Amplifier; Current and voltage input signal; Current and voltage output signal; Zero/span adjustment; Supply voltage: 24 VDC; Module width: 6 mm

Item No.	Pack. Unit
857-400	1



Short description:

WAGO's configurable isolation amplifier converts, amplifies, filters, and electrically isolates standard analog signals.

Features:

- Zero/span adjustment across the entire measurement range
- Calibrated measurement range switching
- Switchable limit frequency
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

Specialty Functions:



Configuration via:



Configuration	
Configuration options	DIP switch
Input	
Input signal type	Voltage; Current
Input signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V (calibrated switching)
Input signal (current)	0 ... 20 mA; 4 ... 20 mA (calibrated switching)
Input resistance (current input)	≤ 50 Ω
Input resistance (voltage input)	≥ 1MΩ
Input current (max.)	50 mA
Input voltage (max.)	30 V
Zero/span adjustment	±3 % of upper range value
Output	
Output signal type	Current; Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V (calibrated switching)
Output signal (current)	0 ... 20 mA; 4 ... 20 mA; 0 ... 10 mA; 2 ... 10 mA (calibrated switching)
Load impedance (voltage output)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω
Signal Processing	
Limit frequency	100 Hz / 5 kHz (configurable via DIP switch)
Step response (typ.)	3.5 ms (100 Hz); 100 μs (5 kHz)
Measurement Error	
Transmission error (typ.)	≤ 0.1 % of upper-range value
Transmission error (max.)	≤ 0.2 % of upper-range value
Temperature coefficient	≤ 0.01%/K
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U_s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 25 mA
Safety and Protection	
Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Geometric Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	36.8 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4

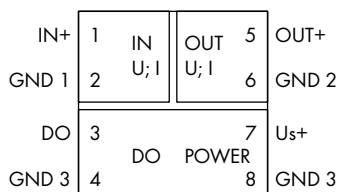
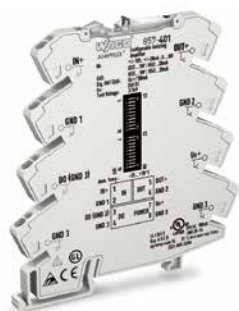
857-400

DIP Switch Adjustability

● = ON Default

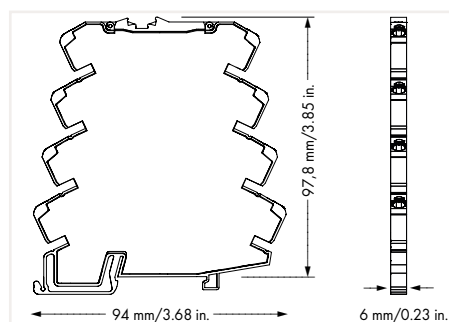
DIP Switch S1 (2-fold)		DIP Switch S2 (6-fold)					Max. Operating Frequency		
Input Signal		Output Signal							
1	2	1	2	3	4	5	6		
●	0 ... 20 mA					●	0 ... 20 mA	●	5 kHz
							4 ... 20 mA		100 Hz
		●	●				0 ... 10 V		
		●	●		●		2 ... 10 V		
		●	●	●			0 ... 5 V		
		●	●	●	●		1 ... 5 V		
●	4 ... 20 mA					●	0 ... 20 mA		
							4 ... 20 mA		
		●	●				0 ... 10 V		
		●	●		●		2 ... 10 V		
		●	●	●		●	0 ... 5 V		
		●	●	●			1 ... 5 V		
●	0 ... 10 V					●	0 ... 20 mA		
							4 ... 20 mA		
		●	●				0 ... 10 V		
		●	●		●		2 ... 10 V		
		●	●	●			0 ... 5 V		
		●	●	●	●		1 ... 5 V		
●	2 ... 10 V					●	0 ... 20 mA		
							4 ... 20 mA		
		●	●				0 ... 10 V		
		●	●		●		2 ... 10 V		
		●	●	●		●	0 ... 5 V		
		●	●	●			1 ... 5 V		
	0 ... 5 V					●	0 ... 20 mA		
							4 ... 20 mA		
		●	●				0 ... 10 V		
		●	●		●		2 ... 10 V		
		●	●	●			0 ... 5 V		
		●	●	●	●		1 ... 5 V		
	1 ... 5 V					●	0 ... 20 mA		
							4 ... 20 mA		
		●	●				0 ... 10 V		
		●	●		●		2 ... 10 V		
		●	●	●		●	0 ... 5 V		
		●	●	●	●		1 ... 5 V		

Isolation Amplifier; Configurable; with Digital Output 857 Series



Isolation Amplifier; Current and voltage input signal; Current and voltage output signal; Digital output; Supply voltage: 24 VDC; Module width: 6 mm

Item No.	Pack. Unit
857-401	1



Short description:

WAGO's configurable isolation amplifier converts, amplifies, filters, and electrically isolates standard analog signals.

Features:

- PC configuration interface
- Digital switching output
- Calibrated measurement range switching
- Unipolar/bipolar standard analog signals at input
- Switchable clipping
- Limitation of standard analog signals to upper range values
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

Specialty Functions:



Configuration via:



» Configuration software	Page 332
» Configuration app	Page 333
» Accessories	Page 344

Configuration

Configuration options	DIP switch; Interface configuration software; Interface configuration app
-----------------------	---

Input

Input signal type	Voltage; Current
Input signal (voltage)	± 10 V; 0 ... 30 V
Input signal (current)	± 20 mA
Input resistance (current input)	≤ 200 Ω
Input resistance (voltage input)	≥ 100 k Ω
Input current (max.)	22 mA
Input voltage (max.)	31 V
Measurement span (voltage)	1 V
Measurement span (current)	2 mA

Output

Output signal type	Current; Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 2 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	≥ 2 k Ω
Load impedance (current output)	≤ 600 Ω

Output – Digital

Max. switching voltage (DO)	Supply voltage applied
Max. continuous current (DO)	100 mA (no internal restriction)
Number of switching thresholds (DO)	1 (adjustable)

Signal Processing

Step response (typ.)	8 ms
----------------------	------

Measurement Error

Transmission error (typ.)	≤ 0.1 % of upper-range value
Temperature coefficient	$\leq 0.01\%/K$

Power Supply

Power supply type	24 VDC
Nominal supply voltage U _S	24 VDC
Supply voltage range	± 30 %
Power consumption at nominal supply voltage	≤ 40 mA (+ IDO)

Safety and Protection

Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Geometric Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	37 g
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Environmental Requirements

Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Conformity marking	CE
EMC immunity to interference	EN 61000-6-2; EN 61326-1; EN 50121-3-2
EMC emission of interference	EN 61000-6-3; EN 61326-1
Standards/specifications	EN 61373

857-401

DIP Switch Adjustability

● = ON Default

Input Signal Start Value														Input Signal End Value																				
DIP S1														DIP S2																				
1	2	3	4	5	6	7	V	mA	2	3	4	5	6	7	V	mA	8	9	10	1	2	3	V	mA	8	9	10	1	2	3	V	mA		
							0	0							●	5.5	11															●	5.5	11
							0	0							●	6	12															●	6	12
●							-10	-20	●						●	6.5	13	●													●	6.5	13	
	●						-9.5	-19		●					●	7	14	●	●												●	7	14	
		●					-8.5	-17			●				●	7.5	15	●		●											●	7.5	15	
			●				-8	-16	●		●				●	8	16	●			●										●	8	16	
				●			-7.5	-15		●	●				●	8.5	17	●	●												●	8.5	17	
					●		-7	-14	●		●				●	9	18	●	●												●	9	18	
						●	-6.5	-13				●			●	9.5	19	●													●	9.5	19	
							-6	-12	●			●			●	10	20	●												●	10	20		
							-5.5	-11		●					●	10.5		●	●											●	10.5			
							-5	-10		●					●	11		●	●											●	11			
							-4.5	-9							●	11.5		●												●	11.5			
							-4	-8	●		●				●	12		●												●	12			
							-3.5	-7		●	●				●	13		●	●											●	13			
							-3	-6	●	●	●				●	14		●	●											●	14			
							-2.5	-5							●	15		●												●	15			
							-2	-4	●						●	16		●												●	16			
							-1.5	-3		●					●	17		●	●											●	17			
							-1	-2	●	●					●	18		●	●											●	18			
							-0.5	-1			●				●	19		●												●	19			
							0	0	●		●				●	20		●												●	20			
							0.5	1		●	●				●	21		●												●	21			
							1	2	●	●					●	22		●	●											●	22			
							1.5	3							●	23		●												●	23			
							2	4	●						●	24		●												●	24			
							2.5	5		●					●	25		●	●											●	25			
							3	6	●	●					●	26		●	●											●	26			
							3.5	7			●				●	27		●												●	27			
							4	8	●		●				●	28		●	●											●	28			
							4.5	9		●	●				●	29		●	●											●	29			
							5	10	●	●	●				●	30		●	●											●	30			

DIP Switch S2

Output Signal			7	8	Measuring Range Underflow	Measuring Range Overflow	9	10	Digital Output DO Signaling	
4	5	6								
					Lower limit of output range	Upper limit of output range				DO not active
●					-5 % *	+2.5 % *				
					Lower limit of output range	Upper limit of output range	●			GND → U _N (switching)
					Lower limit of output range	Upper limit of output range		●		U _N → GND (switching)
					Lower limit of output range	Upper limit of output range				

*acc. to NAMUR NE 43

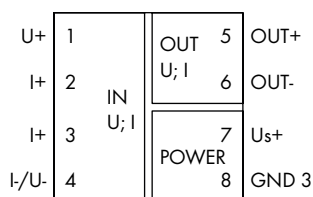
Digital Output DO/Signaling

The digital output (DO) signals error messages and can be configured as follows: 24 V → 0 V / 0 V → 24 V.

In order to increase the switching current of the DO, the latter may be expanded by a relay. Thanks to the common housing shape for the 857 Series, for example, a 857-304 Relay can be snapped in next to it. This output can be quickly and easily expanded to a switching current of 6A by simply using an adjacent jumper (859-402).

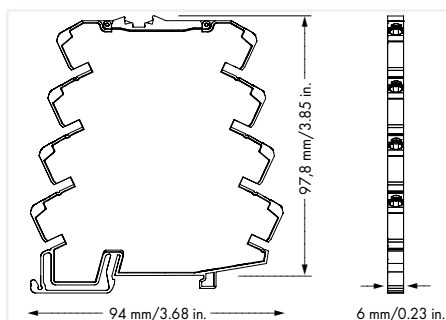
Isolation Amplifier; Configurable; with Zero/Span Adjustment

857 Series



Isolation Amplifier; Current and voltage input signal; Bipolar current and voltage output signal; Zero/span adjustment; Supply voltage: 24 VDC; Module width: 6 mm

Item No.	Pack. Unit
857-403	1



Short description:

This isolation amplifier converts standard unipolar/bipolar signals, as well as amplifies, filters and electrically isolates standard analog signals.

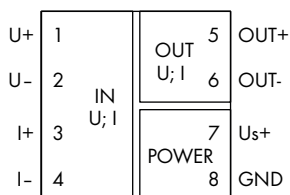
Features:

- Overload protection of current input via resettable fuse
- Calibrated measurement range switching for all 456 signals
- Unipolar/bipolar standard analog signals at both input/output
- Switchable limit frequency
- Clipping capability for analog signal limitation to output end values
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

Configuration	
Configuration options	DIP switch
Input	
Input signal type	Voltage; Current
Input signal (voltage)	±60 mV; 0 ... 60 mV; ±100 mV; 0 ... 100 mV; ±150 mV; 0 ... 150 mV; ±300 mV; 0 ... 300 mV; ±500 mV; 0 ... 500 mV; ±1 V; 0 ... 1 V; ±5 V; 0 ... 5 V; 1 ... 5 V; ±10 V; 0 ... 10 V; 2 ... 10 V; ±100 V; 0 ... 100 V; ±200 V; 0 ... 200 V
Input signal (current)	±0.3 mA; 0 ... 0.3 mA; ±1 mA; 0 ... 1 mA; ±5 mA; 0 ... 5 mA; ±10 mA; 0 ... 10 mA; ±20 mA; 0 ... 20 mA; 4 ... 20 mA; ±50 mA; 0 ... 50 mA; ±100 mA; 0 ... 100 mA
Input resistance (current input)	10 Ω (≥ 5 mA); 100 Ω (≤ 5 mA)
Input resistance (voltage input)	1 MΩ
Output	
Output signal type	Current; Voltage
Output signal (voltage)	±5 V; 0 ... 5 V; 1 ... 5 V; ±10 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	±10 mA; 0 ... 10 mA; 2 ... 10 mA; ±20 mA; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω
Signal Processing	
Limit frequency	100 Hz / 5 kHz (configurable via DIP switch)
Step response (typ.)	3.5 ms (100 Hz); 100 μs (5 kHz)
Measurement Error	
Transmission error (typ.)	≤ 0.08 % of upper-range value
Temperature coefficient	≤ 0.01%/K
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U_s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 40 mA
Safety and Protection	
Test voltage (input/output/supply)	3 kVAC; 50 Hz; 1 min
Line-to-neutral conductor voltage	200 VAC
Overvoltage category	II
Pollution degree	2
Insulation type (input/supply, analog output/relay output)	Reinforced insulation
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Geometric Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	39.9 g

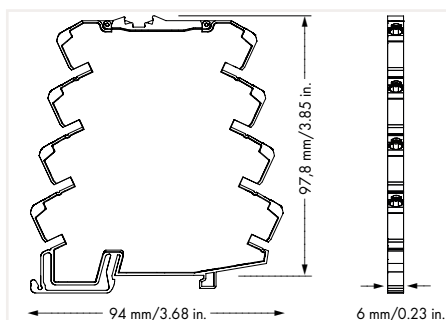
Isolation Amplifier; Configurable; with Zero/Span Adjustment

857 Series



Isolation Amplifier; Bipolar current and voltage input signal; Bipolar current and voltage output signal; Zero/span adjustment; Supply voltage: 24 VDC; Module width: 6 mm

Item No.	Pack. Unit
857-409	1



Short description:
WAGO's bipolar isolation amplifier converts, amplifies, filters, and electrically isolates standard unipolar/bipolar analog signals.

Features:

- Overload protection of current input via resettable fuse
- Zero/span adjustment across the entire measurement range
- Calibrated measurement range switching
- Unipolar/bipolar standard analog signals at both input/output
- Switchable limit frequency
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

Specialty Functions:



Configuration via:



Configuration	
Configuration options	DIP switch
Input	
Input signal type	Voltage; Current
Input signal (voltage)	±5 V; 0 ... 5 V; 1 ... 5 V; ±10 V; 0 ... 10 V; 2 ... 10 V
Input signal (current)	±10 mA; 0 ... 10 mA; 2 ... 10 mA; ±20 mA; 0 ... 20 mA; 4 ... 20 mA
Input resistance (current input)	≤ 50 Ω (approx.)
Input resistance (voltage input)	1 MΩ (approx.)
Input current (max.)	50 mA
Input voltage (max.)	32 V
Zero/span adjustment	±5 % of upper range value
Output	
Output signal type	Current; Voltage
Output signal (voltage)	±5 V; 0 ... 5 V; 1 ... 5 V; ±10 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	±10 mA; 0 ... 10 mA; 2 ... 10 mA; ±20 mA; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω
Residual ripple	≤ 10 mV (rms)
Signal Processing	
Limit frequency	100 Hz / 5 kHz (configurable via DIP switch)
Step response (typ.)	3.5 ms (100 Hz); 60 μs (5 kHz)
Measurement Error	
Transmission error (typ.)	≤ 0.1 % of upper-range value
Temperature coefficient	≤ 0.01%/K
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U _s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 25 mA
Safety and Protection	
Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Geometric Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	38.4 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-3

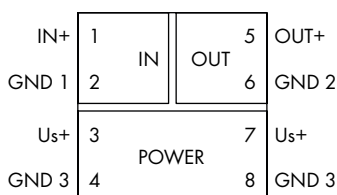
857-409

DIP Switch Adjustability

● = ON Default

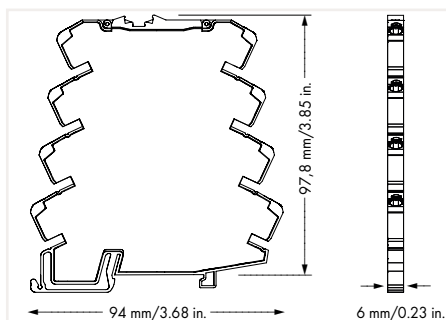
DIP Switch S1 (4-fold)				DIP Switch S2 (6-fold)							
Input Signal				Output Signal					Max. Operating Frequency		
1	2	3	4	1	2	3	4	5	6		
●								●		±20 mA	5 kHz
●	●						●	●		±10 mA	100 Hz
●				●	●	●	●			±10 V	
●	●			●	●	●	●			±5 V	
										0 ... 20 mA	
		●						●		4 ... 20 mA	
	●					●				0 ... 10 mA	
	●	●				●	●			2 ... 10 mA	
				●	●					0 ... 10 V	
		●		●	●			●		2 ... 10 V	
	●			●	●	●				0 ... 5 V	
	●	●		●	●	●		●		1 ... 5 V	

Isolation Amplifier; Pre-Configured; Current Input; Current Output 857 Series



Isolation Amplifier; Current input signal: 0 (4) ... 20 mA;
Current output signal: 0 (4) ... 20 mA; Supply voltage: 24 VDC;
Module width: 6 mm wide

Item No.	Pack. Unit
857-411	1



Short description:

WAGO's pre-configured isolation amplifier converts, amplifies, filters, and electrically isolates standard analog signals.

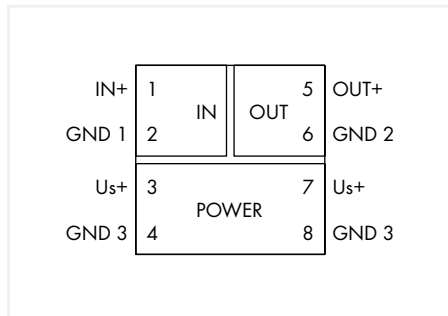
Features:

- Input/output: current or voltage signal
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

Configuration	
Configuration options	Pre-configured
Input	
Input signal type	Current
Input signal (current)	0 ... 20 mA; 4 ... 20 mA
Input resistance (current input)	≤ 50 Ω
Input current (max.)	50 mA
Output	
Output signal type	Current
Output signal (current)	0 ... 20 mA; 4 ... 20 mA
Load impedance (current output)	≤ 600 Ω
Signal Processing	
Limit frequency	100 Hz
Step response (typ.)	3.5 ms
Measurement Error	
Transmission error (typ.)	≤ 0.1 % of upper-range value
Temperature coefficient	≤ 0.01%/K
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U_s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 25 mA
Safety and Protection	
Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Geometric Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	36.1 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4

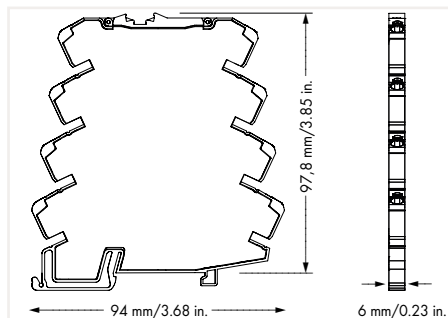
Isolation Amplifier; Pre-Configured; Voltage Input; Voltage Output

857 Series



Isolation Amplifier; Voltage input signal: 0 (2) ... 10 V;
Voltage output signal: 0 (2) ... 10 V; Supply voltage: 24 VDC;
Module width: 6 mm

Item No.	Pack. Unit
857-412	1



Short description:

WAGO's pre-configured isolation amplifier converts, amplifies, filters, and electrically isolates standard analog signals.

Features:

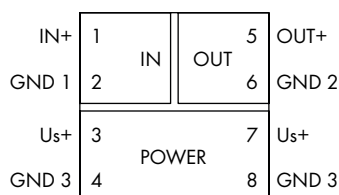
- Input/output: current or voltage signal
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

Configuration	
Configuration options	Pre-configured
Input	
Input signal type	Voltage
Input signal (voltage)	0 ... 10 V; 2 ... 10 V
Input resistance (voltage input)	≥ 100 kΩ
Input voltage (max.)	30 V
Output	
Output signal type	Voltage
Output signal (voltage)	0 ... 10 V; 2 ... 10 V
Load impedance (voltage output)	≥ 2 kΩ
Signal Processing	
Limit frequency	100 Hz
Step response (typ.)	3.5 ms
Measurement Error	
Transmission error (typ.)	≤ 0.1 % of upper-range value
Temperature coefficient	≤ 0.01%/K
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U_s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 25 mA
Safety and Protection	
Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Geometric Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	35.6 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4

Isolation Amplifier; Pre-Configured; Voltage Input; Current Output 857 Series

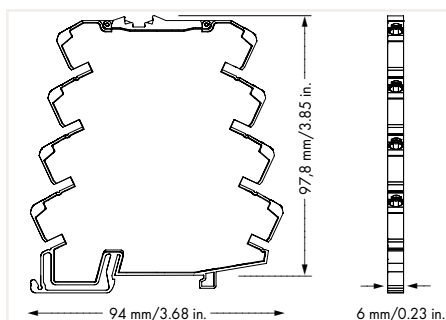


3



Isolation Amplifier; Voltage input signal: 0 ... 10 V; Supply voltage: 24 VDC; Module width: 6 mm

Output Signal	Item No.	Pack. Unit
0 ... 20 mA	857-413	1
4 ... 20 mA	857-414	1



Short description:

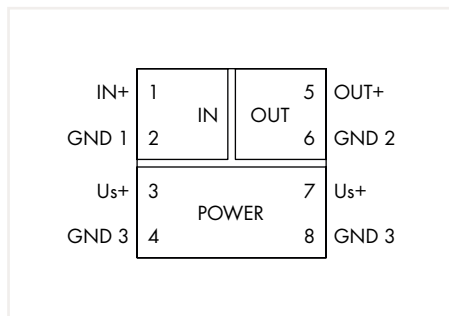
WAGO's pre-configured isolation amplifier converts, amplifies, filters, and electrically isolates standard analog signals.

Features:

- Input/output: current or voltage signal
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

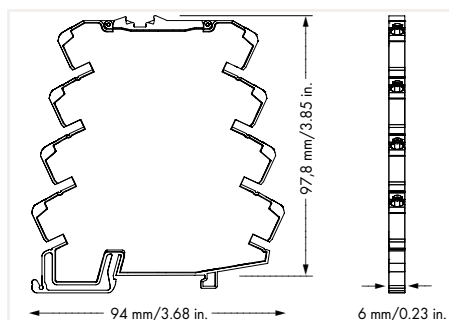
Configuration	
Configuration options	Pre-configured
Input	
Input signal type	Voltage
Input signal (voltage)	0 ... 10 V
Input resistance (voltage input)	≥ 100 kΩ
Input voltage (max.)	30 V
Output	
Output signal type	Current
Load impedance (current output)	≤ 600 Ω
Signal Processing	
Limit frequency	100 Hz
Step response (typ.)	3.5 ms
Measurement Error	
Transmission error (typ.)	≤ 0.1 % of upper-range value
Temperature coefficient	≤ 0.01%/K
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U_s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 25 mA
Safety and Protection	
Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Geometric Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	36.01 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4

Isolation Amplifier; Pre-Configured; Current Input; Voltage Output 857 Series



Isolation Amplifier; Voltage output signal: 0 ... 10 V;
Supply voltage: 24 VDC; Module width: 6 mm

Input Signal	Item No.	Pack. Unit
0 ... 20 mA	857-415	1
4 ... 20 mA	857-416	1



Short description:

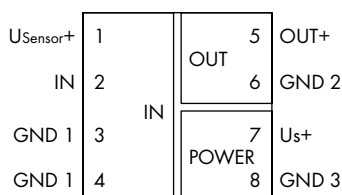
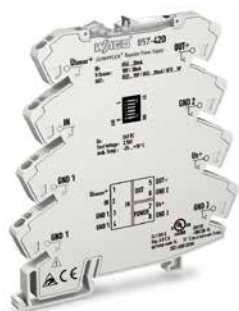
WAGO's pre-configured isolation amplifier converts, amplifies, filters, and electrically isolates standard analog signals.

Features:

- Input/output: current or voltage signal
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

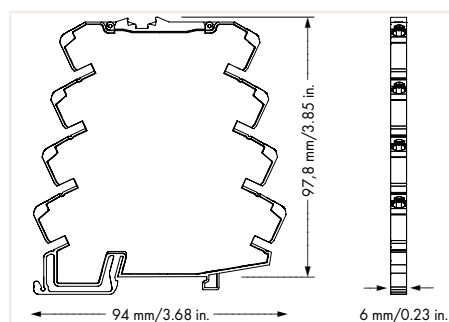
Configuration	
Configuration options	Pre-configured
Input	
Input signal type	Current
Input resistance (current input)	≤ 50 Ω
Input current (max.)	50 mA
Output	
Output signal type	Voltage
Output signal (voltage)	0 ... 10 V
Load impedance (voltage output)	≥ 2 kΩ
Signal Processing	
Limit frequency	100 Hz
Step response (typ.)	3.5 ms
Measurement Error	
Transmission error (typ.)	≤ 0.1 % of upper-range value
Temperature coefficient	≤ 0.01%/K
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U_s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 25 mA
Safety and Protection	
Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Geometric Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	35.31 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4

Isolation Amplifier; Configurable; with Current and Voltage Output 857 Series



Isolation Amplifier; Current input signal; Current and voltage output signal; Supply voltage: 24 VDC; Module width: 6 mm

Item No.	Pack. Unit
857-420	1



Short description:

WAGO's repeater power supply provides the power required for 2- or 3-wire field transmitters, and electrically isolates analog signals.

Features:

- Power supply to SMART transmitters
- Calibrated measurement range switching
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

Configuration via:



Configuration

Configuration options	DIP switch
-----------------------	------------

Input

Input signal type	Current
Input signal (current)	0 ... 20 mA; 4 ... 20 mA
Input resistance (current input)	≤ 50 Ω
Input current (max.)	50 mA
Sensor supply	U _v = 18 V; 30 mA

Output

Output signal type	Current; Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V (calibrated switching)
Output signal (current)	0 ... 20 mA; 4 ... 20 mA (calibrated switching)
Load impedance (voltage output)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω
Offset	≤ 20 μA
Residual ripple	≤ 10 mV (rms)

Signal Processing

Limit frequency	100 Hz
Step response (typ.)	3.5 ms

Measurement Error

Transmission error (typ.)	≤ 0.1 % of upper-range value
Temperature coefficient	≤ 0.01%/K

Power Supply

Power supply type	24 VDC
Nominal supply voltage U _s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 45 mA

Safety and Protection

Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Geometric Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	37 g
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Environmental Requirements

Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Conformity marking	CE
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857-420

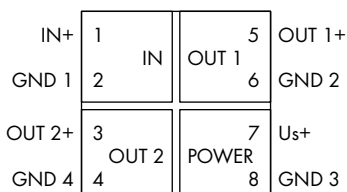
DIP Switch Adjustability

● = ON Default

DIP Switch S1 (6-fold)

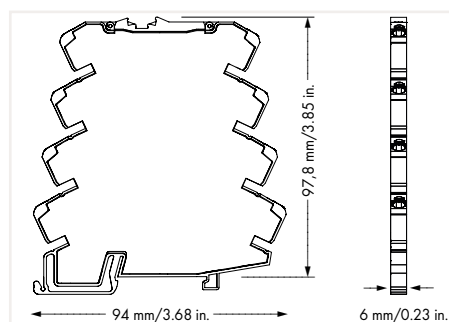
1	2	3	4	5	6	Input Signal	Output Signal
					n.c.	0 ... 20 mA	0 ... 20 mA
			●		n.c.	0 ... 20 mA	4 ... 20 mA
●	●				n.c.	0 ... 20 mA	0 ... 10 V
●	●		●		n.c.	0 ... 20 mA	2 ... 10 V
●	●	●			n.c.	0 ... 20 mA	0 ... 5 V
●	●	●	●		n.c.	0 ... 20 mA	1 ... 5 V
				●	n.c.	4 ... 20 mA	0 ... 20 mA
					n.c.	4 ... 20 mA	4 ... 20 mA
●	●			●	n.c.	4 ... 20 mA	0 ... 10 V
●	●				n.c.	4 ... 20 mA	2 ... 10 V
●	●	●		●	n.c.	4 ... 20 mA	0 ... 5 V
●	●	●			n.c.	4 ... 20 mA	1 ... 5 V

Isolation Amplifier; Configurable; with 2 Current Outputs 857 Series



Isolation Amplifier; Current and voltage input signal;
2x current output signal; Supply voltage: 24 VDC;
Module width: 6 mm

Item No.	Pack. Unit
857-423	1



Short description:

WAGO's signal splitter converts, amplifies, filters, and electrically isolates standard analog signals.

Features:

- Two configurable current outputs
- Calibrated measurement range switching
- Switchable limit frequency
- Safe 4-way isolation with 2.5 kV test voltage per EN 61140

Configuration via:



Configuration	
Configuration options	DIP switch
Input	
Input signal type	Voltage; Current
Input signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V (calibrated switching)
Input signal (current)	0 ... 20 mA; 4 ... 20 mA (calibrated switching)
Input resistance (current input)	≤ 50 Ω
Input resistance (voltage input)	≥ 100 kΩ
Output	
Output signal type	Current
Output signal (current)	0 ... 20 mA; 4 ... 20 mA (calibrated switching)
Load impedance (current output)	≤ 300 Ω
Signal Processing	
Limit frequency	100 Hz / 1 kHz (configurable via DIP switch)
Step response (typ.)	3.5 ms (100 Hz); 300 μs (1 kHz)
Measurement Error	
Transmission error (typ.)	≤ 0.1 % of upper-range value
Transmission error (max.)	≤ 0.2 % of upper-range value
Temperature coefficient	≤ 0.01%/K
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U _s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 35 mA
Safety and Protection	
Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Geometric Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	40.6 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4

857-423

DIP Switch Adjustability

● = ON Default

DIP Switch S1 (6-fold)

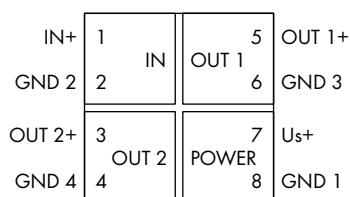
Input Signal			Max. Operating Frequency	Output Signal 1		Output Signal 2	
1	2	3	4	5	6		
●							
	●		0 ... 20 mA	1 kHz	0 ... 20 mA		0 ... 20 mA
		●	4 ... 20 mA	100 Hz	4 ... 20 mA	●	4 ... 20 mA
	●		0 ... 10 V				
		●	2 ... 10 V				
			0 ... 5 V				
		●	1 ... 5 V				

Isolation Amplifier; Configurable; with Current and Voltage Output

857 Series

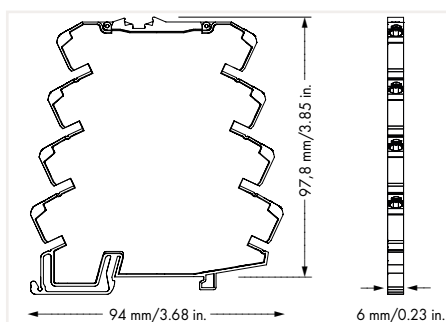


3



Isolation Amplifier; Current and voltage input signal; Current and voltage output signal; Supply voltage: 24 VDC; Module width: 6 mm

Item No.	Pack. Unit
857-424	1



Short description:

WAGO's signal splitter converts, amplifies, filters, and electrically isolates standard analog signals. In addition, the input signal is split into two separate outputs.

Features:

- Two configurable voltage/current outputs
- Switchable limit frequency
- Safe 4-way isolation with 3 kV test voltage per EN 61010-1

Configuration via:



Configuration	
Configuration options	DIP switch
Input	
Input signal type	Voltage; Current
Input signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 1 V; 0 ... 10 V; 2 ... 10 V
Input signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA
Input resistance (current input)	≤ 50 Ω
Input resistance (voltage input)	≥ 100 kΩ
Input current (max.)	50 mA
Input voltage (max.)	30 V
Output	
Output signal type	Voltage; Current
Output signal (voltage)	0 ... 10 V; 2 ... 10 V (calibrated switching)
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA (calibrated switching)
Load impedance (voltage output)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω
Signal Processing	
Limit frequency	100 Hz / 1 kHz (configurable via DIP switch)
Step response (typ.)	3.5 ms (100 Hz); 300 μs (1 kHz)
Measurement Error	
Transmission error (typ.)	≤ 0.1 % of upper-range value
Temperature coefficient	≤ 0.01%/K
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U _S	24 VDC
Supply voltage range	-60 ... +30 %
Power consumption at nominal supply voltage	≤ 35 mA (typ.); ≤ 250 mA max.)
Safety and Protection	
Measurement category per EN/UL 61010-2-030	CAT II (input)
Protection type	IP20
Test voltage (input/analog output 1/analog output 2/supply)	3 kVAC; 50 ... 60 Hz; 1 min
Insulation parameters per EN/UL 61010-1	
Line-to-neutral conductor voltage (AC) max.	300 V
Overvoltage category	II
Pollution degree	2
Insulation type (input/analog output 1/analog output 2/supply)	Reinforced insulation
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Cable type	Shielded cable
Geometric Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	41.5 g

Environmental Requirements	
Surrounding air temperature (operation)	-40 ... 70 °C (for single module; -40 ... +60 °C for module assembly)
Surrounding air temperature (storage)	-40 ... 85 °C
Temperature range of the connecting cable according to EN 61010-2-201	$\geq (T_{\text{surrounding air}} + 10 \text{ K})$
Temperature range of connecting cable per UL 61010-2-201 (min.)	90 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2; EN 61326-1; EN 50121-3-2
EMC emission of interference	EN 61000-6-3; EN 61326-1; EN 50121-3-2
Standards/specifications	EN 61010-1; EN 61373

3

857-424

DIP Switch Adjustability

= ON Default

DIP Switch S1 (4 positions)

Input Signal			Max. Operating Frequency	
1	2	3	4	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	> 1 kHz
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 Hz
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

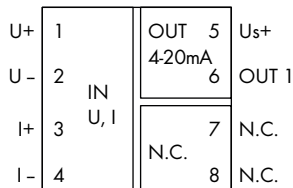
DIP Switch S2 (2 positions)

Output Signal 1	
1	2
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

DIP Switch S3 (2 positions)

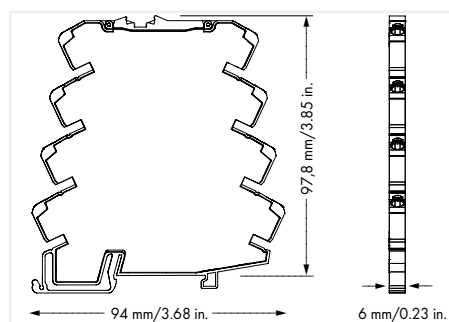
Output Signal 2	
1	2
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Loop-Powered Isolation Amplifier 857 Series



Loop-Powered Isolation Amplifier; Bipolar current and voltage input signal; Current output signal; Power via input; Module width: 6 mm

Item No.	Pack. Unit
857-450	1



Short description:

WAGO's loop-powered isolation amplifier converts, amplifies, filters, and electrically isolates standard unipolar/bipolar analog signals.

Features:

- No additional supply voltage required
- Zero/span adjustment
- Standard unipolar/bipolar analog signals at input
- Calibrated measurement range switching
- Switchable limit frequency
- Safe 2-way isolation with 2.5 kV test voltage per EN 61140

Specialty Functions:



Configuration via:



Configuration

Configuration options	DIP switch
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Input

Input signal type	Voltage; Current
Input signal (voltage)	± 1 V; 0 ... 1 V; ± 2 V; 0 ... 2 V; ± 5 V; 0 ... 5 V; 1 ... 5 V; ± 10 V; 0 ... 10 V; 2 ... 10 V; ± 20 V
Input signal (current)	± 5 mA; 0 ... 5 mA; ± 10 mA; 0 ... 10 mA; 2 ... 10 mA; ± 20 mA; 0 ... 20 mA; 4 ... 20 mA
Input resistance (current input)	$\leq 50 \Omega$
Input resistance (voltage input)	≥ 1 M Ω
Input current (max.)	50 mA
Input voltage (max.)	30 V
Zero/span adjustment	± 5 % of upper range value

Output

Output signal type	Current
Output signal (current)	4 ... 20 mA
Load impedance (current output)	$\leq 600 \Omega$

Signal Processing

Limit frequency	100 Hz / 30 Hz (configurable via DIP switch)
Step response (typ.)	3.5 ms

Measurement Error

Transmission error (typ.)	≤ 0.1 % of upper-range value
Temperature coefficient	≤ 0.01 %/K

Power Supply

Power supply type	loop-powered (via output)
Supply voltage	8 ... 30 VDC (power derived from the output circuit)

Safety and Protection

Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Geometric Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	37.9 g
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Environmental Requirements

Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-3

857-450

DIP Switch Adjustability

● = ON Default

DIP switch (6 positions)

Input Signal					Output Signal	Max. Operating Frequency		
1	2	3	4	5		6		
					4 ... 20 mA	4 ... 20 mA		
●		●	●		0 ... 20 mA		●	100 Hz
●		●	●	●	±20 mA			30 Hz
●		●			2 ... 10 mA			
●			●		0 ... 10 mA			
●			●	●	±10 mA			
●					0 ... 5 mA			
●				●	±5 mA			
	●	●	●		0 ... 20 V			
	●	●	●	●	±20 V			
	●	●			2 ... 10 V			
	●		●		0 ... 10 V			
	●		●	●	±10 V			
	●				1 ... 5 V			
		●	●		0 ... 5 V			
		●	●	●	±5 V			
		●			0 ... 2 V			
		●		●	±2 V			
			●		0 ... 1 V			
			●	●	±1 V			

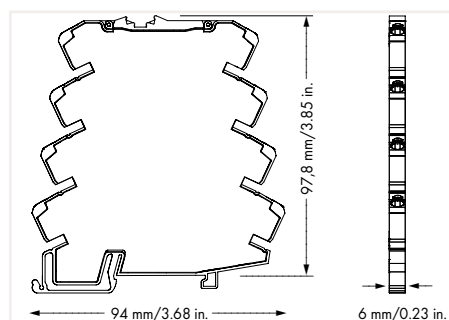
Passive Isolator; 1-Channel 857 Series



IN+	1	IN	OUT	5	OUT+
GND 1	2			6	GND 2
N.C.	3			7	N.C.
N.C.	4			8	N.C.

Passive Isolator; 1-channel; Current input signal; Current output signal; Power via input; Module width: 6 mm wide

Item No.	Pack. Unit
857-451	1



Short description:

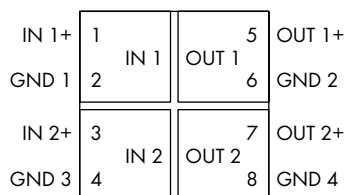
WAGO's passive isolator (1-channel) electrically isolates and filters 0(4)–20 mA standard analog signals, while drawing power for signal transmission from the input circuit. The connected sensor supplies the passive isolator with the required power to energize the connected load.

Features:

- No additional supply voltage required
- Safe 2-way isolation with 2.5 kV test voltage per EN 61140

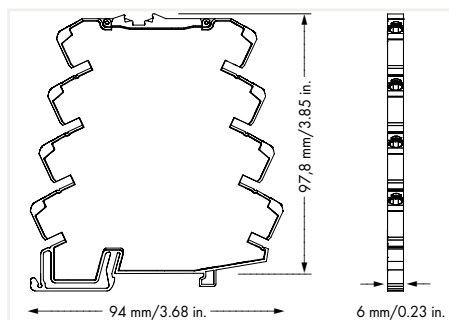
Configuration	
Configuration options	Pre-configured
Input	
Input signal type	Current
Input signal (current)	0 ... 20 mA; 4 ... 20 mA
Voltage drop at input	≤ 2.5 V at 20 mA (output)
Input current (max.)	40 mA
Input voltage (max.)	20 V
Response threshold	200 µA
Output	
Output signal type	Current
Output signal (current)	0 ... 20 mA; 4 ... 20 mA
Load impedance (current output)	≤ 600 Ω (temperature range restrictions may occur)
Signal Processing	
Limit frequency	100 Hz
Step response (typ.)	3.5 ms
Measurement Error	
Transmission error (typ.)	≤ 0.1 % of upper-range value
Load error	≤ 0.05 % (of upper-range value; per 100 Ω load)
Temperature coefficient	≤ 0.01 %/K
Supply	
Power supply type	passive (via input)
Safety and Protection	
Measurement category per EN/UL 61010-2-030	CAT II (input)
Line-to-neutral conductor voltage	AC 300 V
Overvoltage category	II
Pollution degree	2
Protection type	IP20
Test voltage	
Test voltage (input/output)	AC 3 kV; 50 Hz; 1 min
Test voltage (input/output) AC	3000 V
Test voltage (input/output) duration	1 min
Test voltage (input/output) frequency	50 Hz
Insulation parameters per EN/UL 61010-1	
Insulation type (input/analog output)	Reinforced insulation
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Cable type	Shielded cable
Geometric Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	34.2 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Temperature range of the connecting cable according to EN 61010-2-201	≥ (T _{surrounding air} + 15 K)
Temperature range of connecting cable per UL 61010-2-201 (min.)	85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4

Passive Isolator; 2-Channel 857 Series



Passive Isolator; 2-channel; Current input signal;
2 x Current output signal; Power via input; Module width:
6 mm wide

Item No.	Pack. Unit
857-452	1



Short description:

WAGO's passive isolator (2-channel) electrically isolates and filters 0(4)–20 mA standard analog signals, while drawing power for signal transmission from the input circuit. The connected sensor supplies the passive isolator with the required power to energize the connected load.

Features:

- No additional supply voltage required
- Safe 2-way isolation with 2.5 kV test voltage per EN 61140

Configuration

Configuration options	Pre-configured
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Input

Input signal type	Current
Input signal (current)	0 ... 20 mA; 4 ... 20 mA
Voltage drop at input	≤ 2.5 V at 20 mA (output)
Input current (max.)	40 mA
Input voltage (max.)	20 V
Response threshold	200 µA

Output

Output signal type	Current
Output signal (current)	0 ... 20 mA; 4 ... 20 mA
Load impedance (current output)	≤ 600 Ω (temperature range restrictions may occur)

Signal Processing

Limit frequency	100 Hz
Step response (typ.)	3.5 ms

Measurement Error

Transmission error (typ.)	≤ 0.1 % of upper-range value
Load error	≤ 0.05 % (of upper-range value; per 100 Ω load)
Temperature coefficient	≤ 0.01 %/K

Supply

Power supply type	passive (via input)
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Safety and Protection

Measurement category per EN/UL 61010-2-030	CAT II (input)
Line-to-neutral conductor voltage	AC 300 V
Overvoltage category	II
Pollution degree	2
Protection type	IP20

Test voltage

Test voltage (input/output)	AC 3 kV; 50 Hz; 1 min
Test voltage (input/output) AC	3000 V
Test voltage (input/output) duration	1 min
Test voltage (input/output) frequency	50 Hz

Insulation parameters per EN/UL 61010-1

Insulation type (input/analog output)	Reinforced insulation
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Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Cable type	Shielded cable

Geometric Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	62 g
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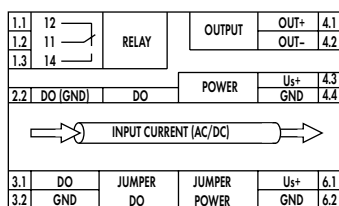
Environmental Requirements

Surrounding air temperature (operation)	–25 ... +70 °C
Surrounding air temperature (storage)	–40 ... +85 °C
Temperature range of the connecting cable according to EN 61010-2-201	≥ (T _{surrounding air} + 15 K)
Temperature range of connecting cable per UL 61010-2-201 (min.)	85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

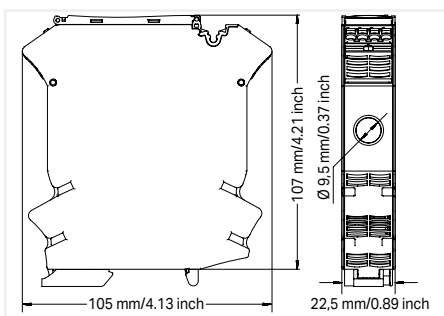
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4

Current Signal Conditioner; Configurable; with Digital and Relay Output 2857 Series



Current Signal Conditioner; Current input signal: 100 A AC/DC; Current and voltage output signal; Digital and relay output; Supply voltage: 24 VDC; Module width: 6 mm

	Item No.	Pack. Unit
	2857-550	1



Short description:

WAGO's current signal conditioner measures AC/DC currents up to 100 A and converts the measured current into a standard analog signal at the output.

Features:

- Both digital signal output and relay with changeover contact react to configured measurement range limits (on/off switching delay and threshold value switch function can be configured with up to two threshold values)
- Clipping capability provides analog signal limitation to output end values
- Adjustable software filter
- Input/output response simulation via configuration display
- Safe 3-way isolation with 3 kV test voltage per EN 61010-1

Note:

Additional setting options via interface configuration software/app

Configuration

Configuration options	DIP switch; Interface configuration software; Interface configuration app; Configuration display
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Input

Input signal type	Current
Input signal (current)	0.5 ... 100 AAC; -100 ... +100 ADC
Frequency range	15 ... 1000 Hz
Input current (max.)	100 A AC/DC
Response threshold	500 mA (AC); 250 mA (DC)
Resolution	10 mA

Output

Output signal type	Current; Voltage
Output signal (voltage)	±5 V; 0 ... 5 V; 1 ... 5 V; ±10 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	±10 mA; 0 ... 10 mA; 2 ... 10 mA; ±20 mA; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	≥ 1 kΩ
Load impedance (current output)	≤ 600 Ω

Output – Digital

Max. switching voltage (DO)	Supply voltage applied: -0.3 V
Max. continuous current (DO)	100 mA (no internal restriction)
Number of switching thresholds (DO)	1 or 2 (adjustable)
Configurable rise/fall delay time (DO)	0 ... 60 s (via software)

Output – Relay

Number of changeover/switchover contacts	1
Contact material (relay)	AgNi + Au
Switching voltage (max.)	250 VAC
Limiting continuous current (relay; module assembly)	6 A (≤ 60 °C); 3 A (60 ... +70 °C)
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	4 ms
Bounce time (typ.)	8 ms
Number of switching thresholds (relay)	1 or 2 (adjustable)
Configurable rise/fall delay time (relay)	0 ... 60 s (via software)

Signal Processing

Measurement method	True RMS measurement; Arithmetic mean value
Limit frequency	3.3 kHz
Software filter (adjustable)	Moving average value (filter level: 30)
Step response (typ.)	60 ms (DC; for software filter 3/default setting); 250 ms (AC)

Measurement Error

Transmission error (max.)	≤ 1 % (of the full scale value)
Temperature coefficient	≤ 0.01 %/K

Power Supply

Power supply type	24 VDC
Nominal supply voltage U _s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 50 mA (+ IDO)

Safety and Protection

Rated voltage of the measurement circuit connections per EN 61010-2-030	AC 300 V
Measurement category per EN/UL 61010-2-030	CAT II (input)
Protection type	IP20

Test voltage

Test voltage (input/output/supply)	AC 3 kV; 50 Hz; 1 min
Test voltage (measurement circuit/relay output/supply/ analog output)	3 kVAC; 50 ... 60 Hz; 1 min
Test voltage (measurement circuit/relay output/supply/ service interface)	3 kVAC; 50 ... 60 Hz; 1 min
Test voltage (analog output/service interface)	2 kVAC; 50 ... 60 Hz; 1 min

» Dip Switch configuration, see www.wago.com	
» Configuration software	Page 332
» Configuration app	Page 333
» Configuration display	Page 334
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Specialty Functions:



Configuration via:

**Insulation parameters per EN/UL 61010-1**

Line-to-neutral conductor voltage (AC) max.	300 V
Overvoltage category	II
Pollution degree	2
Insulation type (measurement circuit/relay output, supply, analog output and service interface)	Double insulation
Insulation type (analog output/service interface)	Basic insulation

Connection Data

Connection technology	Push-in CAGE CLAMP®
WAGO Connector	picoMAX® 5.0
Solid conductor	0.2 ... 2.5 mm ² / 24 ... 12 AWG
Fine-stranded conductor	0.2 ... 2.5 mm ² / 24 ... 12 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Feedthrough for measurement conductor	9.5 mm Ø

Geometric Data

Width	22.5 mm / 0.886 inch
Height from upper-edge of DIN-rail	107 mm / 4.213 inch
Depth	105 mm / 4.134 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	102.94 g
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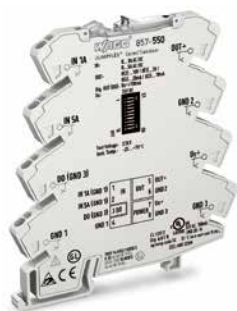
Environmental Requirements

Surrounding air temperature (operation)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Temperature range of the connecting cable according to EN 61010-2-201	≥ (T _{surrounding air} + 10 K)
Temperature range of connecting cable per UL 61010-2-201 (min.)	90 °C

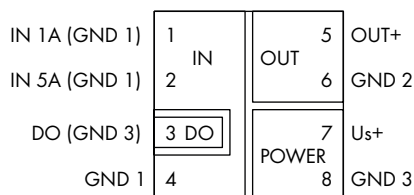
Standards and Specifications

Conformity marking	CE
EMC immunity to interference	EN 61000-6-2; EN 61326-2-3; EN 50121-3-2
EMC emission of interference	EN 61000-6-4; EN 61326-2-3; EN 50121-3-2
Standards/specifications	EN 61010-1; EN 61373

Current Signal Conditioner; Configurable; with Digital Output 857 Series

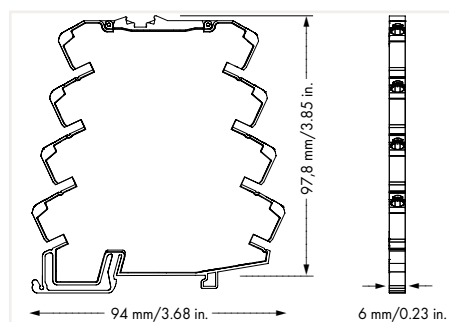


3



Current Signal Conditioner; Current input signal:
5 A AC/DC; Current and voltage output signal; Digital
output; Supply voltage: 24 VDC; Module width: 6 mm

Item No.	Pack. Unit
857-550	1



Short description:

WAGO's current signal conditioner measures both 0–1 A and 0–5 A AC/DC currents, converting the input signal to an standard analog signal at the output.

Features:

- PC configuration interface
- True RMS measurement or arithmetic mean value
- Digital switching output (configurable switching thresholds)
- Switchable filter function
- Calibrated measurement range switching
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140
- Extremely fast response times
- Measurement range overflow indication

Note:

Additional setting options via interface configuration software/app

Configuration	
Configuration options	DIP switch; Interface configuration software; Interface configuration app

Input	
Input signal type	Current
Input signal (current)	0 ... 1 A AC/DC (IN 1); 0 ... 5 A AC/DC (IN 2)
Frequency range	16 ... 400 Hz
Input resistance (current input)	47 mΩ (IN 1); 10 mΩ (IN 2)
Input current (max.)	10 A (IN 1; 5 s); 15 A (IN 2; 5 s)
Response threshold	2 mA (IN 1); 4 mA (IN 2)

Output	
Output signal type	Current; Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	≥ 2 kΩ (temperature range restrictions may occur)
Load impedance (current output)	≤ 600 Ω (temperature range restrictions may occur)

Output – Digital	
Max. switching voltage (DO)	Supply voltage applied
Max. continuous current (DO)	100 mA (no internal restriction)
Number of switching thresholds (DO)	1 (adjustable)

Signal Processing	
Measurement method	True RMS measurement; Arithmetic mean value
Software filter (adjustable)	Moving average value (filter level: 30)
Step response (typ.)	60 ms

Measurement Error	
Transmission error (typ.)	≤ 0.1 % of upper-range value
Transmission error (max.)	≤ 0.4 % of upper-range value
Temperature coefficient	≤ 0.01 %/K

Power Supply	
Power supply type	24 VDC
Nominal supply voltage U_s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 40 mA (+ IDO)

Safety and Protection	
Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Protection type	IP20

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Geometric Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch

Mechanical Data	
Mounting type	DIN-35 rail

Material Data	
Weight	64 g

Environmental Requirements	
Surrounding air temperature (operation)	–25 °C ... +70 °C (at nominal current)
Surrounding air temperature (storage)	–40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4

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» Configuration app	Page 333
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Specialty Functions:



Configuration via:



857-550

DIP Switch Adjustability

= ON Default

DIP Switch S1

Input Signal		Measurement Method	Filter	Output Signal		
1	2	3	4	5	6	
5 A	Mean square value	off				0 ... 20 mA
• 1 A	• Arithmetic mean value	• active		•		4 ... 20 mA
				•		0 ... 10 V
				•	•	2 ... 10 V
						• 0 ... 10 mA
					•	• 2 ... 10 mA
				•		• 0 ... 5 V
				•	•	• 1 ... 5 V

Filter:

The filter function allows a low-pass filter to be switched on in order to mask or "smooth out" oscillating measured values (e.g., during trailing edge flows).

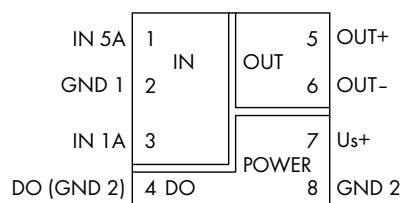
DIP Switch S1

7	8	Measurement Range Underflow	Measurement Range Overflow	Overcurrent (Input Signal - End Value + 20%)	9	10	Digit Output DO Signaling
		Lower limit of measurement range -5 %*	Upper limit of measurement range +2.5 %*	Upper limit of measurement range +5 %*			DO not active
•		Lower limit of measurement range	Upper limit of measurement range +2.5 %	Upper limit of measurement range +5 %		•	DO U _s + switching
	•	Lower limit of measurement range	Upper limit of measurement range	Lower limit of measurement range	•	•	DO GND switching
	•	Lower limit of measurement range	Upper limit of measurement range	Upper limit of measurement range			*acc. to NAMUR NE 43

Current Signal Conditioner; Configurable; with Digital Output Serie 857

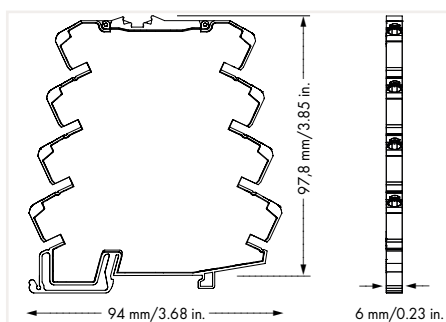


3



Current Signal Conditioner; Current input signal: 5 A AC/DC; Current and voltage output signal; Digital output; Supply voltage: 24 VDC; Module width: 6 mm

Item No.	Pack. Unit
857-551	1



Short description:

WAGO's current signal conditioner measures AC/DC currents up to 5 A, converting the input signal to a standard analog signal at the output.

Features:

- Two isolated measurement inputs for 1 and 5 A AC/DC
- RMS measurement or arithmetic mean value
- A digital signal output reacts to configured measurement range limits (on/off switching delay and threshold value switch function can be configured with up to two threshold values)
- Switchable filter function
- Safe 3-way isolation with 3 kV test voltage per DIN EN 61010-1

Notes:

- Additional setting options via interface configuration software
- In the present network, ensure that the neutral conductor is not dangerously active!

Configuration	
Configuration options	DIP switch; Interface configuration software

Input	
Input signal type	Current
Input signal (current)	0 ... 5 A AC/DC (IN 1; Individual arrangement); 0 ... 6 A AC/DC (IN 1; Block arrangement)
Frequency range	16 ... 200 Hz
Input resistance (current input)	47 mΩ (IN 1); 10 mΩ (IN 2)
Input current (max.)	15 A (IN 1; 5 s); 10 A (IN 3; 5 s)
Response threshold	10 mA (IN 1); 2 mA (IN 2)
Resolution	1 mA (IN 1); 0.5 mA (IN 2)

Output	
Output signal type	Current; Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V (can be inverted, also bipolar)
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA (can be inverted, also bipolar)
Load impedance (voltage output)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω

Output – Digital	
Max. switching voltage (DO)	Supply voltage applied
Max. continuous current (DO)	100 mA (no internal restriction)
Number of switching thresholds (DO)	1 or 2 (adjustable)
Configurable rise/fall delay time (DO)	0 ... 60 s (via software)

Signal Processing	
Measurement method	True RMS measurement; Arithmetic mean value
Software filter (adjustable)	Moving average value (filter level: 30)
Step response (typ.)	60 ms (with software filter 3)
Step response (max.)	250 ms

Measurement Error	
Transmission error (max.)	≤ 0.5 % (of the full scale value)
Temperature coefficient	1-A-input: ≤ 0,01 %/K (typ.); ≤ 0,02 %/K (max.); 5-A-input: ≤ 0,02 %/K (typ.); ≤ 0,04 %/K (max.)

Power Supply	
Nominal supply voltage U_s	24 VDC (SELV)
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 50 mA (+ IDO)

Safety and Protection	
Measurement category per EN 61010-2-030	CAT II (input 300 VAC)
Note on insulation parameters	Danger: Configuration via the service interface must only be performed with a voltage-free measurement input! The digital output (DO) is at the potential of the supply
Protection type	IP20

Test voltage	
Test voltage (input/analog output/supply/service interface)	3 kVAC; 50 Hz; 1 min

Insulation parameters per EN 61010-1	
Line-to-neutral conductor voltage (AC) max.	300 V
Line-to-neutral conductor voltage (DC) max.	300 V
Overvoltage category	II
Pollution degree	2
Insulation type (input/analog output/supply/service interface)	Double insulation (impedance and basic insulation) Requirement: The GND 1 input is dangerous when active and the measurement is conducted as a low-side measurement!

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Geometric Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch

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Specialty Functions:



Configuration via:



Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	38.2 g
Environmental Requirements	
Surrounding air temperature (operation)	-40 °C ... +70 °C (at nominal current)
Surrounding air temperature (storage)	-40 ... +85 °C
Temperature range of the connecting cable according to EN 61010-2-201	≥ (T _{surrounding air} + 34 K)
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2; EN 61326-1
EMC emission of interference	EN 61000-6-3; EN 61326-1
Standards/specifications	EN 61010-1

857-551

DIP Switch Adjustability

● = ON Default

DIP Switch S1

1	2	Input	3	Measurement Method	4	Filter
		5 A		Effective value (RMS)		off
	●	2.5 A	●	Arithmetic mean value (bipolar output)	●	active
	●	1 A				
	● ●	0.5 A				

DIP Switch S1

5	6	7	Output Signal Range (Bipolar for Arithmetic Mean Value)
			(+/-) 0 ... 20 mA
	●		4 ... 20 mA
●			(+/-) 0 ... 10 V
● ●			2 ... 10 V
	●		(+/-) 0 ... 10 mA
● ●			2 ... 10 mA
●	●		(+/-) 0 ... 5 V
● ● ●			1 ... 5 V

DIP Switch S1

8	9	Measurement Range Underflow	Measurement Range Overflow	10	Digital Output DO Signaling
		Lower limit of measurement range +2.5 %*	Upper limit of measurement range -5 %*		DO U _s switching
●		Lower limit of measurement range +2.5 %	Upper limit of measurement range	●	DO GND switching
	●	Lower limit of measurement range	Upper limit of measurement range		
● ●		Lower limit of measuring range	Upper limit of measuring range -5 %		

*acc. to NAMUR NE 43

Filter

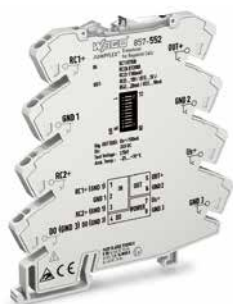
The filter function allows a low-pass filter to be switched on in order to mask or "smooth out" oscillating measured values (e.g., during trailing edge flows).

Digital Output DO/Signaling

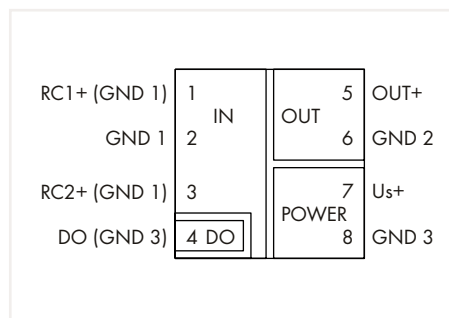
The digital output (DO) signals error messages and can be configured as follows: 24 V → 0 V/0 V → 24 V.

Current Signal Conditioner; Configurable; Input for Rogowski Coils

857 Series

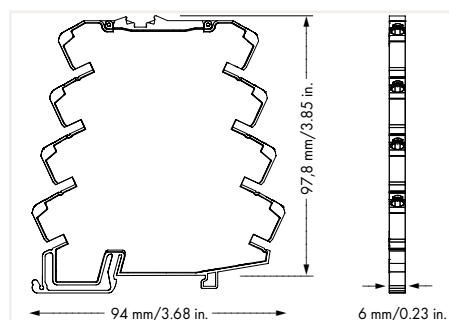


3



Current Signal Conditioner; Input for Rogowski coils; Current and voltage output signal; Digital output; Supply voltage: 24 VDC; Module width: 6 mm

Item No.	Pack. Unit
857-552	1



Short description:

WAGO's rogowski signal conditioner records RMS values from alternating currents via Rogowski coil, converting the input signal into a standard analog signal on the output side.

Features:

- PC configuration interface
- Supports different Rogowski coil types
- Digital switching output (configurable switching thresholds)
- True RMS measurement (TRMS)
- Configurable output signal
- Configuration via DIP switch
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140
- No current bar interruption during installation
- Measurement range overflow indication

Note:

Additional setting options via interface configuration software/app

Configuration	
Configuration options	DIP switch; Interface configuration software; Interface configuration app
Input	
Input signal type	Voltage
Input signal (voltage)	50 Hz sinusoidal signals: 10.05 mVAC (RC1); 40.2 mVAC (RC2A); 90 mVAC (RC2B)
Sensitivity	RC2B: 22.5 mV/kA
Measurement range (current)	500 AAC (RC1); 2000 AAC (RC2A); 4000 AAC (RC2B)
Frequency range	50 Hz (sinusoidal signals)
Response threshold	≤ 1 % (of measurement range nominal value)
Resolution	250 mA (RC1); 1 A (RC2A); 1.5 A (RC2B)
Output	
Output signal type	Current; Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	≥ 1 kΩ
Load impedance (current output)	≤ 600 Ω
Output – Digital	
Max. switching voltage (DO)	Supply voltage applied
Max. continuous current (DO)	100 mA (no internal restriction)
Number of switching thresholds (DO)	1 (adjustable)
Signal Processing	
Measurement method	True RMS measurement (TRMS)
Limit frequency	2 kHz
Software filter (adjustable)	Moving average value (filter level: 30)
Step response (typ.)	60 ms
Measurement Error	
Transmission error (max.)	≤ 1 % (of the full scale value)
Temperature coefficient	≤ 0.01 %/K
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U_s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 40 mA (+ IDO)
Safety and Protection	
Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Geometric Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	35.1 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Conformity marking	CE

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» Configuration app	Page 333
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Specialty Functions:



Configuration via:



857-552

DIP Switch Adjustability

● = ON Default

DIP Switch S1

Input Signal		RC Configuration Input		Filter	Output Signal		
1	2	3	4	5	6		
RC1 = RT500 from LEM	RC2A = RT2000 from LEM	off				0 ... 20 mA	
● RC2	● RC2B = 22.5 mV/kA	● active		●		4 ... 20 mA	
				●		0 ... 10 V	
				●	●	2 ... 10 V	
					●	0 ... 10 mA	
					●	2 ... 10 mA	
				●	●	0 ... 5 V	
				●	●	1 ... 5 V	

Filter:

The filter function allows a low-pass filter to be switched on in order to mask or "smooth out" oscillating measured values (e.g., during trailing edge flows).

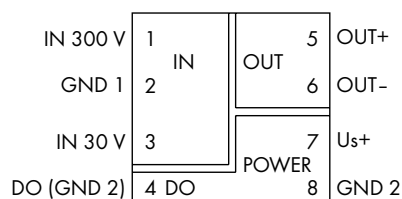
DIP Switch S1

7	8	Measurement Range Underflow	Measurement Range Overflow	Overcurrent (Input Signal – End Value + 20%)	9	10	Digital Output DO Signaling
		Lower limit of measurement range +5 %*	Upper limit of measurement range +2.5 %*	Upper limit of measurement range +5 %*			DO not active
●		Lower limit of measurement range	Upper limit of measurement range +2.5 %	Upper limit of measurement range +5 %		●	DO U _s + switching
	●	Lower limit of measurement range	Upper limit of measurement range	Lower limit of measurement range	●	●	DO GND switching
●	●	Lower limit of measurement range	Upper limit of measurement range	Upper limit of measurement range			*acc. to NAMUR NE 43

Voltage Signal Conditioner; Configurable; with Digital Output 857 Series

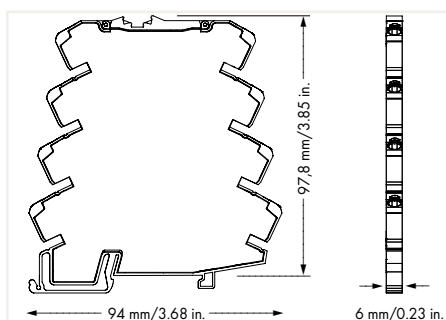


3



Voltage Signal Conditioner; Voltage input signal; Current and voltage output signal; Digital output; Supply voltage: 24 VDC; Module width: 6 mm

Item No.	Pack. Unit
857-560	1



Short description:

WAGO's voltage signal conditioner measures AC/DC voltages up to 300 V, converting the input signal into a standard analog signal at the output.

Features:

- Two isolated measurement inputs for 30 and 300 V AC/DC
- RMS measurement or arithmetic mean value
- A digital signal output reacts to configured measurement range limits (on/off switching delay and threshold value switch function can be configured with up to two threshold values)
- Switchable filter function
- Safe 3-way isolation with 3 kV test voltage per DIN EN 61010-1

Configuration

Configuration options	DIP switch; Interface configuration software; Interface configuration app
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Input

Input signal type	Voltage
Input signal (voltage)	300 V AC/DC (IN 1); 30 V AC/DC (IN 2)
Frequency range	10 ... 100 Hz (AC)
Input resistance (voltage input)	≥ 300 kΩ
Response threshold	300 mV (IN 1); 30 mV (IN 2)
Resolution	30 mV (IN 1); 3 mV (IN 2)

Output

Output signal type	Current; Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V (can be inverted, also bipolar)
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA (can be inverted, also bipolar)
Load impedance (voltage output)	≥ 1 kΩ
Load impedance (current output)	≤ 600 Ω

Output – Digital

Max. switching voltage (DO)	Supply voltage applied
Max. continuous current (DO)	100 mA (no internal restriction)
Number of switching thresholds (DO)	1 or 2 (adjustable)
Configurable rise/fall delay time (DO)	0 ... 60 s (via software)

Signal Processing

Measurement method	RMS measurement; Arithmetic mean value
Limit frequency	2 kHz
Software filter (adjustable)	Moving average value (filter level: 30)
Step response (typ.)	30 ms

Measurement Error

Transmission error (max.)	≤ 0.5 % (of the full scale value)
Temperature coefficient	≤ 0.01 %/K

Power Supply

Power supply type	24 VDC
Nominal supply voltage U_s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 46 mA (+ IDO)

Safety and Protection

Measurement category per EN/UL 61010-2-030	CAT II (input)
Note on insulation parameters	Danger: Configuration via the service interface must only be performed with a voltage-free measurement input! The digital output (DO) is at the potential of the supply
Protection type	IP20

Test voltage

Test voltage (input/analog output/supply/service interface)	2.5 kVAC; 50 ... 60 Hz; 1 min
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Insulation parameters per EN/UL 61010-1

Line-to-neutral conductor voltage (AC) max.	150 V
Overvoltage category	II
Pollution degree	2
Insulation type (input/analog output/supply/service interface)	Reinforced insulation

Insulation parameters per EN 61010-1

Line-to-neutral conductor voltage (AC) max.	300 V
Overvoltage category	II
Pollution degree	2
Insulation type (input/analog output/supply/service interface)	Double insulation (impedance and basic insulation) Requirement: The GND 1 input is dangerous when active and the measurement is conducted as a low-side measurement!

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

» Configuration software	Page 332
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Specialty Functions:



Configuration via:



Geometric Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	40 g
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Environmental Requirements

Surrounding air temperature (operation)	-25 °C ... +70 °C (at nominal current)
Surrounding air temperature (storage)	-40 ... +85 °C
Temperature range of the connecting cable according to EN 61010-2-201	≥ (Tsurrounding air + 10 K)
Temperature range of connecting cable per UL 61010-2-201 (min.)	90 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Conformity marking	CE
EMC immunity to interference	EN 61000-6-2; EN 61326-2-3; EN 50121-3-2
EMC emission of interference	EN 61000-6-3; EN 61326-2-3; EN 50121-3-2
Standards/specifications	EN 61010-1; EN 61373

857-560

DIP Switch Adjustability

● = ON Default

DIP Switch S1

1	2	Input	3	Measurement Method	4	Filter
		300 V		Effective value (RMS)		off
	●	150 V	●	Arithmetic mean value (bipolar output)	●	active
	●	30 V				
	● ●	15 V				

DIP Switch S1

5	6	7	Output Signal Range (Bipolar for Arithmetic Mean Value)
			(+/-) 0 ... 20 mA
	●		4 ... 20 mA
	●		(+/-) 0 ... 10 V
	● ●		2 ... 10 V
		●	(+/-) 0 ... 10 mA
	● ●		2 ... 10 mA
	● ●		(+/-) 0 ... 5 V
	● ● ●		1 ... 5 V

DIP Switch S1

8	9	Measurement Range Underflow	Measurement Range Overflow	10	Digital Output DO/ Signaling
		Lower limit of measurement range -5 %*	Upper limit of measurement range +2.5 %*		DO V _s + switching
	●	Lower limit of measurement range	Upper limit of measurement range +2.5 %	●	DO GND switching
	●	Lower limit of measurement range	Upper limit of measurement range		
	● ●	Lower limit of measurement range	Upper limit of measurement range		

*acc. to NAMUR NE 43

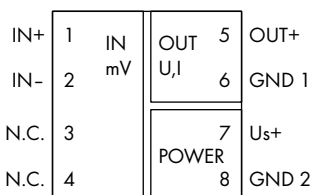
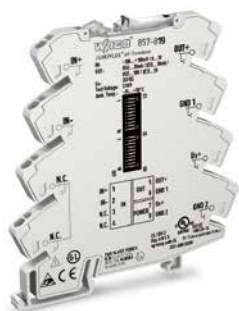
Filter

The filter function allows a low-pass filter to be switched on in order to mask or "smooth out" oscillating measured values (e.g., during trailing edge flows).

Digital Output DO/Signaling

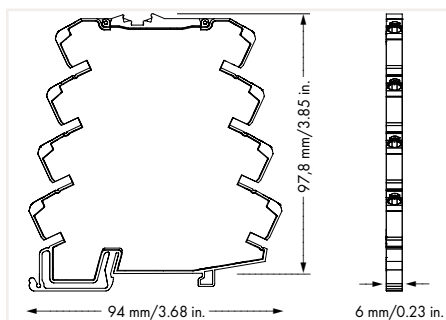
The digital output (DO) signals error messages and can be configured as follows: 24 V → 0 V/0 V → 24 V.

Voltage Signal Conditioner; Configurable 857 Series



Voltage Signal Conditioner; Bipolar voltage input signal;
Current and voltage output signal; Supply voltage:
24 VDC; Module width: 6 mm

Item No.	Pack. Unit
857-819	1



Short description:

WAGO's voltage signal conditioner converts millivolt signals (at the input) into a standard analog signal at the output.

Features:

- PC configuration interface
- Calibrated measurement range switching
- Switchable clipping
- Limitation of standard analog signal to upper range values
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

Note:

Additional setting options via interface configuration software/app

Configuration

Configuration options	DIP switch; Interface configuration software; Interface configuration app
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Input

Input signal type	Voltage
Input signal (voltage)	±100 mV; 0 ... 200 mV; 0 ... 300 mV; 0 ... 400 mV; 0 ... 500 mV; 0 ... 600 mV; 0 ... 700 mV; 0 ... 800 mV; 0 ... 900 mV; 0 ... 1 V
Input resistance (voltage input)	≥ 1 MΩ
Input voltage (max.)	±31.2 VDC
Measurement span (voltage)	10 mV

Output

Output signal type	Current; Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω

Signal Processing

Step response (typ.)	50 ms
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Measurement Error

Transmission error (typ.)	≤ 0.1 % at full measurement span
Temperature coefficient	≤ 0.01 %/K

Power Supply

Power supply type	24 VDC
Nominal supply voltage U _s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 40 mA

Safety and Protection

Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Geometric Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	36.3 g
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Environmental Requirements

Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4

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1-Phase Power Signal Conditioner; with Digital Output; Configuration via Software

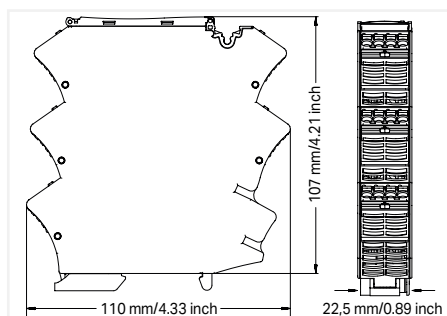
2857 Series



1.1	N.C.	Relay Output	Analog Output (AO)	OUT+	4.1
1.2	12			OUT-	4.2
1.3	11			OUT+	4.3
1.4	14			OUT-	4.4
2.1	500 V	Voltage IN	Supply Voltage	U _s +	5.1
2.2	250 V			GND 2	5.2
2.3	30 V			DO (GND 2)	5.3
3.1	1 A	Current IN	Digital Output (DO)	GND 2	5.4
3.2	5 A			U _s +	6.1
3.3	8 A			GND 2	6.2
3.4	N (GND 1)				

1-Phase Power Measurement Module; Current and voltage input signal; Current and voltage output signal; Digital output; Configuration via software; Supply voltage: 24 VDC

Item No.	Pack. Unit
2857-569	1



Short description:

Short description:

The WAGO 1-Phase Power Measurement Module monitors and reports signal states with up to two switching thresholds. The sensor and status information that is collected is also converted to a standard analog signal. Current, voltage, effective power, apparent power or reactive power can be selected as the measured variable. Additionally, both frequency and phase angle are displayed.

Additionally, both frequency and phase angle are displayed.

Features:

- A relay with changeover contact reacts to configured measurement range limits (on/off switching delay and threshold value switch function can be configured with up to two threshold values).
- Adjustable software filter
- Input/output response simulation via WAGO Configuration Display
- Analog unipolar/bipolar signals (current/voltage) at output
- Additional digital signal output for configured measurement range limits
- The digital output can be configured as a frequency generator or pulse output (S0 interface).

Note:

Additional setting options via WAGO Interface Configuration Software or WAGO Configuration Display

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Configuration

Configuration options WAGO Interface Configuration Software; WAGO Configuration Display

Input

Input signal type	Voltage; Current
Input signal (voltage)	500 V AC/DC (IN 2.1; per EN 61010-1); 300 V AC/DC (IN 2.1; per UL 61010-1); 250 V AC/DC (IN 2.2); 30 V AC/DC (IN 2.3)
Input signal (current)	1 A AC/DC (IN 3.1); 5 A AC/DC (IN 3.2); 8 A AC/DC (IN 3.3)
Frequency range	15 ... 400 Hz (AC)
Input voltage (max.)	$1.2 \times U_N$
Input current (max.)	$1.2 \times I_N (\leq 60^\circ\text{C}); 1 \times I_N (60 \dots 70^\circ\text{C})$
Response threshold (voltage)	500 mV AC / 600 mV DC (IN 2.1); 50 mV AC / 500 mV DC (IN 2.2); 20 mV AC / 100 mV DC (IN 2.3)
Response threshold (current)	1.5 mA AC / 7.5 mA DC (IN 3.1); 3 mA AC / 10 mA DC (IN 3.2); 7.5 mA AC / 12 mA DC (IN 3.3)
Resolution (voltage)	50 mV (IN 2.1); 30 mV (IN 2.2); 5 mV (IN 2.3)
Resolution (current)	1 mA (for all measurement ranges)

Output – Analog

Output signal type	Current; Voltage
Output signal (voltage)	± 12 V (SELV)
Output signal (current)	± 24 mA (SELV)
Load impedance (voltage output)	≥ 2 k Ω
Load impedance (current output)	≤ 600 Ω

Output – Digital

Switching voltage (DO) (max.)	Supply voltage (applied): -0.3 V
Continuous current (DO) (max.)	100 mA (no internal restriction)
Number of switching thresholds (DO)	2 (max.)
Configurable rise/fall delay time (DO)	0 ... 60 s (via software)
Configurable functions (DO)	Disabled; U _s /GND switching; Threshold value switch; Frequency generator; Pulse output (S0 interface)

Output – Relays

Number of changeover/switchover contacts	1
Switching voltage (max.)	250 VAC
Limiting continuous current (relay; module assembly)	6 A ($\leq 60^\circ\text{C}$); 3 A (60 ... 70 °C)
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Number of switching thresholds (relay)	1 or 2 (adjustable)
Configurable rise/fall delay time (relay)	0 ... 60 s (via software)

Signal Processing

Measurement method	True RMS measurement (TRMS)
Measured variables (calculated)	Active power; Apparent power; Reactive power; Phase angle; Mains frequency
Limit frequency	2 kHz
Software filter (adjustable)	Filter level: 1 ... 30
Step response (max.)	≤ 350 ms (default settings)

Measurement Error

Transmission error (max.)	≤ 0.5 % for current and voltage (of the full scale value)
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Power Supply

Power supply type	24 VDC
Nominal supply voltage U _s	24 VDC (SELV)
Supply voltage range	± 30 %
Power consumption at nominal supply voltage	≤ 70 mA (+ I ₀₀)

Safety and Protection

Measurement category per EN/UL 61010-2-030	CAT III (input)
Overvoltage category	III
Note on insulation parameters	The digital output (DO) is at the potential of the supply. The service interface is at the potential of the analog output.
Protection type	IP20

Specialty Functions:

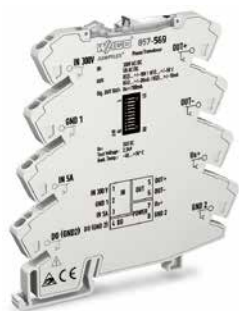


Configuration via:

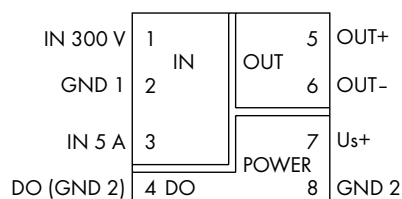


Test voltage	
Test voltage (input IN 2.1/relay output; per EN 61010-1)	5.4 kVAC ; 50 Hz; 5 s; 3.6 kVAC; 50 Hz; 1 min
Test voltage (input IN 2.1/relay output; per UL 61010-1)	3.51 kVAC; 60 Hz; 1 min
Test voltage (input/supply, analog output/relay output)	3.51 kVAC; 50 ... 60 Hz; 1 min
Test voltage (supply/analog output)	3.6 kVAC; 50 ... 60 Hz; 1 min
Insulation parameters per EN/UL 61010-1	
Line-to-neutral conductor voltage (AC) max.	300 V
Overvoltage category	III
Pollution degree	2
Insulation type (input/supply, analog output/relay output)	Reinforced insulation
Insulation parameters per EN 61010-1	
Line-to-neutral conductor voltage (AC) max.	600 V
Overvoltage category	III
Pollution degree	2
Insulation type (input IN 2.1/relay output)	Reinforced insulation
Insulation type (input/supply, analog output/relay output)	Double insulation (impedance and basic insulation) Requirement: The N (GND 1) input is dangerous when active!
Connection Data	
Connection technology	Push-in CAGE CLAMP®
WAGO Connector	picoMAX® 5.0
Solid conductor	0.2 ... 2.5 mm² / 24 ... 12 AWG
Fine-stranded conductor	0.2 ... 2.5 mm² / 24 ... 12 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Physical Data	
Width	22.5 mm / 0.886 inch
Height from upper-edge of DIN-rail	107 mm / 4.213 inch
Depth	110 mm / 4.331 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	149 g
Environmental Requirements	
Surrounding air temperature (operation)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Temperature range of connecting cable per EN 61010-2-201	≥ (T _{surrounding air} + 10 K)
Temperature range of connecting cable per UL 61010-2-201	≥ 90 °C
Relative humidity	5 ... 85 % (non-condensing)
Operating altitude (max.)	2000 m
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2; EN 61326-2-3
EMC emission of interference	EN 61000-6-3; EN 61326-2-3
Standards/Specifications	EN 61010-1; UL 61010-1; UL 61010-2-201

Power Signal Conditioner; Configurable; with Digital Output 857 Series

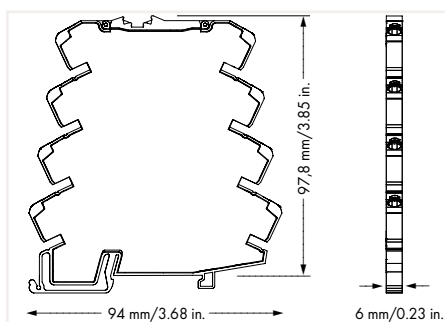


3



Power Signal Conditioner; 300 VAC / 5 A; Current and voltage output signal; Digital output; Supply voltage: 24 VDC; Module width: 6 mm

Item No.	Pack. Unit
857-569	1



Short description:

WAGO's power signal conditioner measures both AC/DC voltages and currents, converting the input signal into a standard analog signal at the output. Measured value processing can be switched between RMS value or arithmetic mean value and between effective, apparent or reactive power, and phase angle.

Features:

- Two isolated measurement inputs for both AC/DC voltages and currents
- RMS measurement or arithmetic mean value
- A digital signal output reacts to configured measurement range limits (on/off switching delay and threshold value switch function can be configured with up to two threshold values)
- Switchable filter function
- Safe 3-way isolation with 3 kV test voltage per DIN EN 61010-1

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Configuration	
Configuration options	DIP switch; Interface configuration software; Interface configuration app
Input	
Input signal type	Voltage; Current
Input signal (voltage)	300 V AC/DC (IN 1)
Input signal (current)	0 ... 5 A AC/DC (IN 2)
Frequency range	15 ... 70 Hz (AC)
Input resistance (current input)	≤ 10 mΩ
Input resistance (voltage input)	≥ 300 kΩ
Input current (max.)	10 A AC/DC (IN 2; permanent)
Input voltage (max.)	600 V (IN 1; permanent)
Response threshold	300 mV (IN 1); 10 mA (IN 2)
Resolution	30 mV (IN 1); 1 mA (IN 2)
Output	
Output signal type	Current; Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V (can be inverted, also bipolar)
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA (can be inverted, also bipolar)
Load impedance (voltage output)	≥ 1 kΩ
Load impedance (current output)	≤ 600 Ω
Output – Digital	
Max. switching voltage (DO)	Supply voltage applied
Max. continuous current (DO)	100 mA (no internal restriction)
Number of switching thresholds (DO)	1 or 2 (adjustable)
Configurable rise/fall delay time (DO)	0 ... 60 s (via software)
Signal Processing	
Measurement method	RMS measurement; Arithmetic mean value
Limit frequency	2 kHz
Software filter (adjustable)	Moving average value (filter level: 30)
Step response (typ.)	100 ms
Measurement Error	
Transmission error (max.)	≤ 0.5 % (of the full scale value)
Temperature coefficient	≤ 0.01 %/K
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U_s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 46 mA (+ IDO)
Safety and Protection	
Measurement category per EN/UL 61010-2-030	CAT II (input)
Note on insulation parameters	Danger: Configuration via the service interface must only be performed with a voltage-free measurement input! The digital output (DO) is at the potential of the supply
Protection type	IP20
Test voltage	
Test voltage (input/analog output/supply/service interface)	2.5 kVAC; 50 ... 60 Hz; 1 min
Insulation parameters per EN/UL 61010-1	
Line-to-neutral conductor voltage (AC) max.	150 V
Overvoltage category	II
Pollution degree	2
Insulation type (input/analog output/supply/service interface)	Reinforced insulation
Insulation parameters per EN 61010-1	
Line-to-neutral conductor voltage (AC) max.	300 V
Overvoltage category	II
Pollution degree	2
Insulation type (input/analog output/supply/service interface)	Double insulation (impedance and basic insulation) Requirement: The GND 1 input is dangerous when active and the measurement is conducted as a low-side measurement!

Specialty Functions:



Configuration via:



Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Geometric Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	34 g
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Environmental Requirements

Surrounding air temperature (operation)	-25 °C ... +70 °C (at nominal current)
Surrounding air temperature (storage)	-40 ... +85 °C
Temperature range of the connecting cable according to EN 61010-2-201	≥ (T _{surrounding air} + 10 K)
Temperature range of connecting cable per UL 61010-2-201 (min.)	90 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

Conformity marking	CE
EMC immunity to interference	EN 61000-6-2; EN 61326-2-3; EN 50121-3-2
EMC emission of interference	EN 61000-6-3; EN 61326-2-3; EN 50121-3-2
Standards/specifications	EN 61010-1; EN 61373

857-569

DIP Switch Adjustability

● = ON Default

DIP Switch S1

1	2	Measured Variable	3	4	Filter
		Effective power	Not assigned		Off
●		Apparent power		●	Active
●		Reactive power			
●	●	Power factor			

DIP Switch S1

5	6	7	Output Signal Range
			0 ... 20 mA
●			4 ... 20 mA
●			0 ... 10 V
●	●		2 ... 10 V
		●	0 ... 10 mA
	●		2 ... 10 mA
●	●		0 ... 5 V
●	●	●	1 ... 5 V

DIP Switch S1

8	9	Measurement Range Underflow	Measurement Range Overflow	10	Digit Output DO/Signaling
		Lower limit of measurement range -5 %*	Upper limit of measurement range +2.5 %*		DO V _s + switching
●		Lower limit of measurement range	Upper limit of measurement range +2.5 %	●	DO GND switching
	●	Lower limit of measurement range	Upper limit of measurement range		
●	●	Lower limit of measurement range	Upper limit of measurement range		

*acc. to NAMUR NE 43

Filter:

The filter function allows a low-pass filter to be switched on in order to mask or "smooth out" oscillating measured values (e.g., during trailing edge flows).

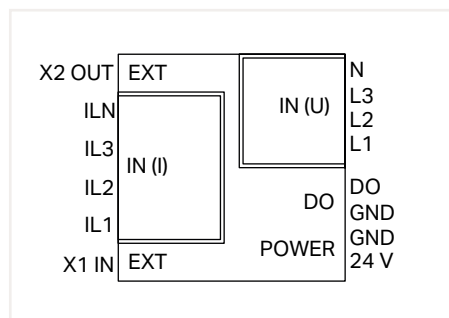
Digital Output DO/Signaling:

The digital output (DO) signals error messages and can be configured as follows: 24 V → 0 V/0 V → 24 V.

3-Phase Power Measurement Module; 3 x 400 / 690 V; 1 A; Modbus RTU Serie 2857



3



3-Phase Power Measurement Module;
3 x 400 / 690 V; 1 A; Modbus RTU

Item No.	Pack. Unit
2857-570/024-001	1

Short description:

WAGO's 3-phase power measurement module in a DIN-rail-mount enclosure measures electrical data in three-phase supply networks – remotely from the control level.

Measured variables such as active/apparent/reactive power, energy consumption, power factor, phase angle and frequency can be accessed via Modbus® Interface. In addition, the measured variables can be stored on a microSD card.

Features:

- Current measurement via 1A current transformer
- Mobile measurement and storage of measured values on microSD card
- Configuration and display of measured values during operation via configuration interface
- Compact device in DIN-rail-mount enclosure saves space used for building technology
- Communication of measured values via Modbus® Interface
- Configurable digital signal output as pulse output

Note:

- Additional setting options via interface configuration software

Specialty Functions:



Configuration via:



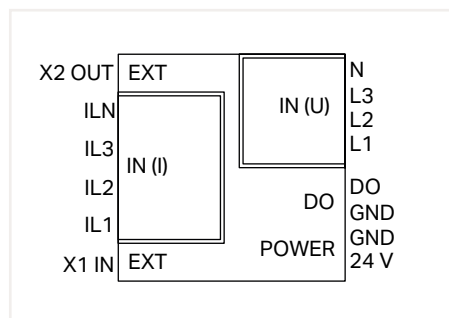
Configuration	
Configuration options	Interface configuration software
Input	
Input signal type	Voltage; Current
Network configuration	3-phase power measurement with N-conductor (4 conductors); 3-phase power measurement with N-conductor (3 conductors)
Input signal (voltage)	400 VAC (U_{LN}); 690 VAC (U_{LL})
Input signal (current)	1 AAC (current transformer)
Frequency range	45 ... 65 Hz (Harmonics analysis: 0 ... 3.3 kHz)
Input resistance (voltage input)	1.5 MΩ
Input resistance (current input)	22 mΩ
Input voltage (max.)	400 VAC (U_{LN}); 690 VAC (U_{LL})
Input current (max.)	1 AAC
Response threshold	10 mA
Resolution (current)	10 mA
Output – Digital	
Max. switching voltage (DO)	Supply voltage applied
Max. continuous current (DO)	100 mA (no internal restriction)
Configurable functions (DO)	Threshold value switch; S0 interface (pulse output)
Communication	
Communication	Modbus RTU
Interface	RS-485 (2-wire) via RJ-45
Number of participants (max.)	32
Addressing	Via interface configuration software
Signal Processing	
Measurement method	True RMS measurement (measured value acquisition with 8 kHz)
Measured variables (calculated)	Line-to-line voltage; Power output; Energy; Power factors; Mains frequency; Harmonic analysis (up to the 41st harmonic); Total harmonic distortion (THD)
Signal form	Any periodic signals (considering the threshold frequencies)
Limit frequency	15.9 kHz
Type of memory card	WAGO 758-879/000-3102 (microSD; 2 GB)
Measurement Error	
Transmission error (max.)	≤ 0.5 % for current and voltage (of the full scale value)
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U_s	24 VDC (SELV)
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 50 mA (+ I_{DO})
Safety and Protection	
Test voltage (input/output/supply)	3.51 kV AC; 50 Hz; 1 min
Safe isolation (input/supply and communication)	Per EN 61010-1
Requirement (N input)	Shall not be dangerously active
Requirement (I_{Lx} input)	Coils/converters with basic insulation
External/Neutral conductor voltage	600 V AC/DC
Overvoltage category	III
Pollution degree	2
Protection type	IP20

Connection Data	
Connection type	Voltage
Connection technology	Push-in CAGE CLAMP®
WAGO Connector	WAGO 804 Series
Solid conductor	0.25 ... 2.5 mm ² / 20 ... 12 AWG
Fine-stranded conductor	0.25 ... 2.5 mm ² / 22 ... 12 AWG
Strip length	10 ... 11 mm / 0.39 ... 0.43 inch
Connection type 2	Current/Power supply/DO
Connection technology 2	Push-in CAGE CLAMP®
WAGO Connector 2	WAGO 805 Series
Solid conductor 2	0.2 ... 1.5 mm ² / 24 ... 16 AWG
Fine-stranded conductor 2	0.2 ... 1.5 mm ² / 24 ... 16 AWG
Strip length 2	9 ... 10 mm / 0.35 ... 0.39 inch
Connection type 3	Modbus® communication
Connector	2 x RJ-45 (daisy chain configuration)
Geometric Data	
Width	72 mm / 2.835 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	115.6 g
Environmental Requirements	
Surrounding air temperature (operation)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (non-condensing)
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-3
Standards/specifications	EN 61010-1

3-Phase Power Measurement Module; 3 x 400 / 690 V; 5 A; Modbus RTU Serie 2857



3



3-Phase Power Measurement Module;
3 x 400 / 690 V; 5 A; Modbus RTU

Item No.	Pack. Unit
2857-570/024-005	1

Short description:

WAGO's 3-phase power measurement module in a DIN-rail-mount enclosure measures electrical data in three-phase supply networks – remotely from the control level. Measured variables such as active/apparent/reactive power, energy consumption, power factor, phase angle and frequency can be accessed via Modbus® Interface. In addition, the measured variables can be stored on a microSD card.

Features:

- Current measurement via 5A current transformer
- Mobile measurement and storage of measured values on microSD card
- Configuration and display of measured values during operation via configuration interface
- Compact device in DIN-rail-mount enclosure saves space used for building technology
- Communication of measured values via Modbus® Interface
- Configurable digital signal output as pulse output

Note:

- Additional setting options via interface configuration software

Specialty Functions:



Configuration via:



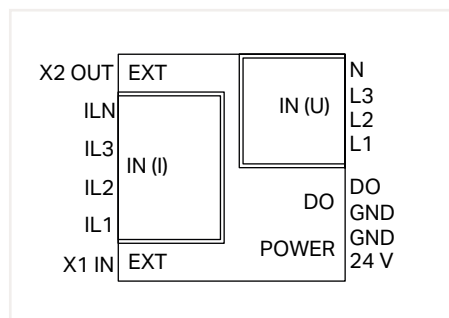
Configuration	
Configuration options	Interface configuration software
Input	
Input signal type	Voltage; Current
Network configuration	3-phase power measurement with N-conductor (4 conductors); 3-phase power measurement with N-conductor (3 conductors)
Input signal (voltage)	400 VAC (U_{LN}); 690 VAC (U_{LL})
Input signal (current)	5 AAC (current transformer)
Frequency range	45 ... 65 Hz (Harmonics analysis: 0 ... 3.3 kHz)
Input resistance (voltage input)	1.5 MΩ
Input resistance (current input)	22 mΩ
Input voltage (max.)	400 VAC (U_{LN}); 690 VAC (U_{LL})
Input current (max.)	5 AAC
Response threshold	5 mA
Resolution (current)	0.15 mA
Output – Digital	
Max. switching voltage (DO)	Supply voltage applied
Max. continuous current (DO)	100 mA (no internal restriction)
Configurable functions (DO)	Threshold value switch; S0 interface (pulse output)
Communication	
Communication	Modbus RTU
Interface	RS-485 (2-wire) via RJ-45
Number of participants (max.)	32
Addressing	Via interface configuration software
Signal Processing	
Measurement method	True RMS measurement (measured value acquisition with 8 kHz)
Measured variables (calculated)	Line-to-line voltage; Power output; Energy; Power factors; Mains frequency; Harmonic analysis (up to the 41st harmonic); Total harmonic distortion (THD)
Signal form	Any periodic signals (considering the threshold frequencies)
Limit frequency	15.9 kHz
Type of memory card	WAGO 758-879/000-3102 (microSD; 2 GB)
Measurement Error	
Transmission error (max.)	≤ 0.5 % for current and voltage (of the full scale value)
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U_s	24 VDC (SELV)
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 50 mA (+ I_{D0})
Safety and Protection	
Test voltage (input/output/supply)	3.51 kV AC; 50 Hz; 1 min
Safe isolation (input/supply and communication)	Per EN 61010-1
Requirement (N input)	Shall not be dangerously active
Requirement (I_{Lx} input)	Coils/converters with basic insulation
External/Neutral conductor voltage	600 V AC/DC
Overtoltage category	III
Pollution degree	2
Protection type	IP20

Connection Data	
Connection type	Voltage
Connection technology	Push-in CAGE CLAMP®
WAGO Connector	WAGO 804 Series
Solid conductor	0.25 ... 2.5 mm ² / 20 ... 12 AWG
Fine-stranded conductor	0.25 ... 2.5 mm ² / 22 ... 12 AWG
Strip length	10 ... 11 mm / 0.39 ... 0.43 inch
Connection type 2	Current/Power supply/DO
Connection technology 2	Push-in CAGE CLAMP®
WAGO Connector 2	WAGO 805 Series
Solid conductor 2	0.2 ... 1.5 mm ² / 24 ... 16 AWG
Fine-stranded conductor 2	0.2 ... 1.5 mm ² / 24 ... 16 AWG
Strip length 2	9 ... 10 mm / 0.35 ... 0.39 inch
Connection type 3	Modbus® communication
Connector	2 x RJ-45 (daisy chain configuration)
Geometric Data	
Width	72 mm / 2.835 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	115.6 g
Environmental Requirements	
Surrounding air temperature (operation)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (non-condensing)
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-3
Standards/specifications	EN 61010-1

3-Phase Power Measurement Module; 3 x 400 / 690 V; RC; Modbus RTU Serie 2857



3



3-Phase Power Measurement Module;
3 x 400 / 690 V; RC; Modbus RTU

Item No.	Pack. Unit
2857-570/024-000	1

Short description:

WAGO's 3-phase power measurement module in a DIN-rail-mount enclosure measures electrical data in three-phase supply networks – remotely from the control level. Measured variables such as active/apparent/reactive power, energy consumption, power factor, phase angle and frequency can be accessed via Modbus® Interface. In addition, the measured variables can be stored on a microSD card.

Features:

- Current measurement via Rogowski Coils RC xxx
- Mobile measurement and storage of measured values on microSD card
- Configuration and display of measured values during operation via configuration interface
- Compact device in DIN-rail-mount enclosure saves space used for building technology
- Communication of measured values via Modbus® Interface
- Configurable digital signal output as pulse output

Note:

- Additional setting options via interface configuration software

Specialty Functions:



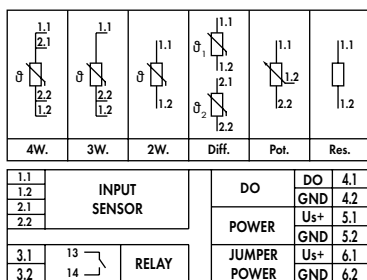
Configuration via:



Configuration	
Configuration options	Interface configuration software
Input	
Input signal type	Voltage; Current
Network configuration	3-phase power measurement with N-conductor (4 conductors); 3-phase power measurement with N-conductor (3 conductors)
Input signal (voltage)	400 VAC (U_{LN}); 690 VAC (U_{LL}); 90 mVAC (WAGO Rogowski Coils RC xxx)
Sensitivity	22.5 mV/kA (WAGO Rogowski Coils RC xxx)
Measurement range (current)	4000 AAC (WAGO Rogowski Coils RC xxx)
Frequency range	45 ... 65 Hz (Harmonics analysis: 0 ... 3.3 kHz)
Output – Digital	
Max. switching voltage (DO)	Supply voltage applied
Max. continuous current (DO)	100 mA (no internal restriction)
Configurable functions (DO)	Threshold value switch; S0 interface (pulse output)
Communication	
Communication	Modbus RTU
Interface	RS-485 (2-wire) via RJ-45
Number of participants (max.)	32
Addressing	Via interface configuration software
Signal Processing	
Measurement method	True RMS measurement (measured value acquisition with 8 kHz)
Measured variables (calculated)	Line-to-line voltage; Power output; Energy; Power factors; Mains frequency; Harmonic analysis (up to the 41st harmonic); Total harmonic distortion (THD)
Signal form	Any periodic signals (considering the threshold frequencies)
Limit frequency	15.9 kHz
Type of memory card	WAGO 758-879/000-3102 (microSD; 2 GB)
Measurement Error	
Transmission error (max.)	≤ 0.5 % for current and voltage (of the full scale value)
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U_s	24 VDC (SELV)
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 50 mA (+ I_{D0})
Safety and Protection	
Test voltage (input/output/supply)	3.51 kV AC; 50 Hz; 1 min
Safe isolation (input/supply and communication)	Per EN 61010-1
Requirement (N input)	Shall not be dangerously active
Requirement (I_L , input)	Coils/converters with basic insulation
External/Neutral conductor voltage	600 V AC/DC
Overtoltage category	III
Pollution degree	2
Protection type	IP20

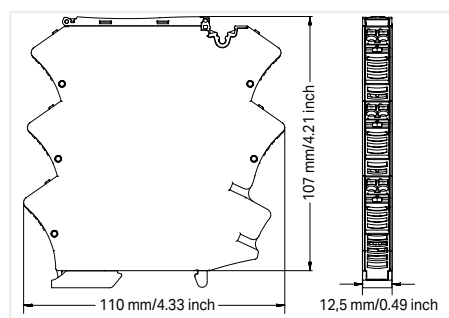
Connection Data	
Connection type	Voltage
Connection technology	Push-in CAGE CLAMP®
WAGO Connector	WAGO 804 Series
Solid conductor	0.25 ... 2.5 mm ² / 20 ... 12 AWG
Fine-stranded conductor	0.25 ... 2.5 mm ² / 22 ... 12 AWG
Strip length	10 ... 11 mm / 0.39 ... 0.43 inch
Connection type 2	Current/Power supply/DO
Connection technology 2	Push-in CAGE CLAMP®
WAGO Connector 2	WAGO 805 Series
Solid conductor 2	0.2 ... 1.5 mm ² / 24 ... 16 AWG
Fine-stranded conductor 2	0.2 ... 1.5 mm ² / 24 ... 16 AWG
Strip length 2	9 ... 10 mm / 0.35 ... 0.39 inch
Connection type 3	Modbus® communication
Connector	2 x RJ-45 (daisy chain configuration)
Geometric Data	
Width	72 mm / 2.835 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	117.6 g
Environmental Requirements	
Surrounding air temperature (operation)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (non-condensing)
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-3
Standards/specifications	EN 61010-1

RTD Threshold Value Switch; Configurable 2857 Series



Threshold Value Switch; RTD sensors; Relay/1 make contact; Digital output; Supply voltage: 24 VDC; Module width: 12.5 mm

Item No.	Pack. Unit
2857-533	1



Short description:

WAGO's RTD threshold value switch for RTD sensors, potentiometers and resistors monitors and reports signals of up to two switching thresholds.

Features:

- Both digital signal output and relay with make contact react to configured measurement range limits (on/off switching delay and threshold value switch function can be configured with up to two threshold values)
- Configurable RTD factor
- Adjustable software filter
- Input/output response simulation via configuration display
- Safe 3-way isolation with 4 kV test voltage per EN 61140

Note:

Additional setting options via interface configuration software/app

Configuration

Configuration options: DIP switch; Interface configuration software; Interface configuration app; Configuration display

Input

Input signal type: Resistor; RTD sensors; Potentiometers

Input – RTD Sensors

Sensor types (RTD): Pt100; Pt200; Pt500; Pt1000; Pt5000; Pt10000; Pt10 ... Pt20000
 Sensor connection: 2-wire; 3-wire; 4-wire; differential
 Sensor power supply (RTD) max.: ≤ 0.5 mA
 Temperature measurement range (RTD): -200 ... +850 °C

Input – Resistors

Input range (resistor): 0 ... 100 kΩ
 Input range (potentiometer): 0 ... 100 kΩ

Output – Digital

Max. switching voltage (DO): Supply voltage applied: -0.3 V
 Max. continuous current (DO): 100 mA (no internal restriction)
 Number of switching thresholds (DO): 1 or 2 (adjustable)
 Configurable rise/fall delay time (DO): 0 ... 60 s (via software)

Output – Relay

Number of make contacts/switch-on contacts: 1
 Contact material (relay): AgNi + Au
 Switching voltage (max.): 250 VAC
 Limiting continuous current (relay; module assembly): 6 A (≤ 60 °C); 3 A (60 ... +70 °C)
 Dielectric strength, open contact (AC, 1 min): 1 kV_{rms}
 Pull-in time (typ.): 8 ms
 Drop-out time (typ.): 4 ms
 Bounce time (typ.): 8 ms
 Number of switching thresholds (relay): 1 or 2 (adjustable)
 Configurable rise/fall delay time (relay): 0 ... 60 s (via software)

Signal Processing

Software filter (adjustable): Moving average value (filter level: 30)
 Step response (typ.): 60 ms (2-wire); 360 ms (3-wire); 540 ms (4-wire); 360 ms (potentiometer)
 Hysteresis: adjustable via DIP switch or software

Measurement Error

Transmission error (max.): ±1 K
 Temperature coefficient: ≤ 0.01 %/K

Power Supply

Power supply type: 24 VDC
 Nominal supply voltage U_s: 24 VDC
 Supply voltage range: ±30 %
 Power consumption at nominal supply voltage: ≤ 40 mA (+ I_{bo})

Safety and Protection

Rated voltage of the measurement circuit connections per EN 61010-2-030: AC 300 V
 Measurement category per EN/UL 61010-2-030: CAT II (input)
 Note on insulation parameters: Temperature sensors are not intended for use in dangerous circuits, provided the external temperature sensors used do not have basic insulation in accordance with EN/UL 61010-1 (300 VAC; overvoltage category II; pollution degree 2). The digital output (DO) is at the potential of the supply
 Protection type: IP20

Test voltage

Test voltage (input/relay output/supply): 4 kVAC; 60 Hz; 1 min
 Test voltage (input/service interface): 3 kVAC; 60 Hz; 1 min
 Test voltage (relay output/service interface): 4 kVAC; 60 Hz; 1 min
 Test voltage (supply/service interface): 2.5 kVAC; 60 Hz; 1 min

» DIP switch configuration, see www.wago.com

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» Configuration app	Page 333
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Specialty Functions:



Configuration via:



Insulation parameters per EN/UL 61010-1

Line-to-neutral conductor voltage (AC) max.	300 V
Overvoltage category	II
Pollution degree	2
Insulation type (input, supply and service interface/ relay output)	Reinforced insulation
Insulation type (input/supply/service interface)	Basic insulation

Connection Data

Connection technology	Push-in CAGE CLAMP®
WAGO Connector	picoMAX® 5.0
Solid conductor	0.2 ... 2.5 mm ² / 24 ... 12 AWG
Fine-stranded conductor	0.2 ... 2.5 mm ² / 24 ... 12 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Geometric Data

Width	12.5 mm / 0.492 inch
Height from upper-edge of DIN-rail	107 mm / 4.213 inch
Depth	110 mm / 4.331 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	86.5 g
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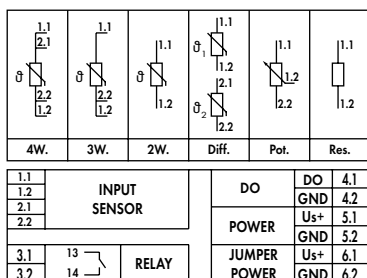
Environmental Requirements

Surrounding air temperature (operation)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Temperature range of the connecting cable according to EN 61010-2-201	≥ (T _{surrounding air} + 10 K)
Temperature range of connecting cable per UL 61010-2-201 (min.)	90 °C

Standards and Specifications

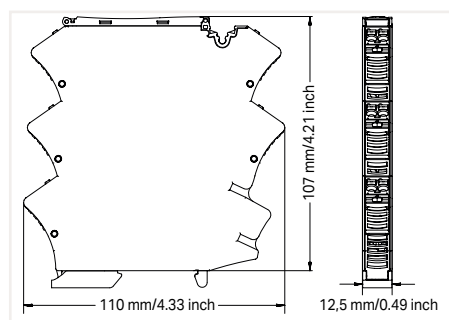
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2; EN 61326-2-3; EN 50121-3-2
EMC emission of interference	EN 61000-6-4; EN 61326-2-3; EN 50121-3-2
Standards/specifications	EN 61010-1; EN 61373

RTD Threshold Value Switch; Configurable; for Railway Applications 2857 Series



Threshold value switch; RTD sensors; Relay/1 make contact; Digital output; Supply voltage: 24 VDC; Module width: 12.5 mm

Item No.	Pack. Unit
2857-533/000-001	1



Short description:

The WAGO RTD Threshold Value Switch for RTD sensors, potentiometers and resistors monitors and reports signals for up to two switching thresholds.

Features:

- Both digital signal output and relay with make contact react to configured measurement range limits (on/off switching delay and threshold value switch function can be configured with up to two threshold values).
- Configurable RTD factor
- Adjustable software filter
- Simulation of input/output response via WAGO Configuration Display or WAGO Interface Configuration Software
- Safe 3-way isolation with 4 kV test voltage per EN 61010-1
- For railway applications

Note:

This product is supplied with 24 VDC, which can be commoed using lateral push-in type jumper bars: (6.1) US+ (BR) and (6.2) GND 2 (BR). With this variant, it is necessary to ensure that the maximum permissible total current of 2 A is not exceeded.

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» Configuration display	Page 334
» Accessories	Page 344

Configuration

Configuration options	WAGO Interface Configuration Software; WAGO Configuration Display
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Input

Input signal type	Resistor; RTD sensors; Potentiometers
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Input – RTD Sensors

Sensor types (RTD)	Pt100; Pt200; Pt500; Pt1000; Pt5000; Pt10000; Pt10 ... Pt20000
Sensor connection	2-wire; 3-wire; 4-wire; differential
Sensor power supply (RTD) (max.)	≤ 0.5 mA
Temperature measurement range (RTD)	-200 ... +850 °C

Input – Resistors

Input range (resistor)	0 ... 100 kΩ
Input range (potentiometer)	0 ... 100 kΩ

Output – Digital

Switching voltage (DO) (max.)	Supply voltage (applied): -0.3 V
Continuous current (DO) (max.)	100 mA (no internal restriction)
Number of switching thresholds (DO)	1 or 2 (adjustable)
Configurable rise/fall delay time (DO)	0 ... 60 s (via software)

Output – Relay

Number of make/switch-on contacts	1
Contact material (relay)	AgNi + Au
Switching voltage (max.)	250 VAC
Limiting continuous current (relay; module assembly)	6 A (≤ 60 °C); 3 A (60 ... +70 °C)
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	4 ms
Bounce time (typ.)	8 ms
Number of switching thresholds (relay)	1 or 2 (adjustable)
Configurable rise/fall delay time (relay)	0 ... 60 s (via software)

Signal Processing

Software filter (adjustable)	Moving average value (filter level: 30)
Step response (typ.)	60 ms (2-wire); 360 ms (3-wire); 540 ms (4-wire); 360 ms (potentiometer)

Measurement Error

Transmission error (max.)	± 1 K
Temperature coefficient	≤ 0.01 %/K

Power Supply

Power supply type	24 VDC
Nominal supply voltage U _s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 40 mA (+ I _{DO})

Safety and Protection

Rated voltage of the measurement circuit connections per EN 61010-2-030	AC 300 V
Measurement category per EN/UL 61010-2-030	CAT II (input)
Note on insulation parameters	Temperature sensors are not intended for use in dangerous circuits, provided the external temperature sensors used do not have basic insulation in accordance with EN/UL 61010-1 (300 VAC; overvoltage category II; pollution degree 2). The digital output (DO) is at the potential of the supply
Protection type	IP20

Test voltage

Test voltage (input/relay output/supply)	4 kVAC; 60 Hz; 1 min
Test voltage (input/service interface)	3 kVAC; 60 Hz; 1 min
Test voltage (relay output/service interface)	4 kVAC; 60 Hz; 1 min
Test voltage (supply/service interface)	2.5 kVAC; 60 Hz; 1 min

Specialty Functions:



Configuration via:

**Insulation parameters per EN/UL 61010-1**

Line-to-neutral conductor voltage (AC) max.	300 V
Overvoltage category	II
Pollution degree	2
Insulation type (input, supply and service interface/ relay output)	Reinforced insulation
Insulation type (input/supply/service interface)	Basic insulation

Connection Data

Connection technology	Push-in CAGE CLAMP®
WAGO Connector	picoMAX® 5.0
Solid conductor	0.2 ... 2.5 mm ² / 24 ... 12 AWG
Fine-stranded conductor	0.2 ... 2.5 mm ² / 24 ... 12 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	12.5 mm / 0.492 inch
Height from upper-edge of DIN-rail	107 mm / 4.213 inch
Depth	110 mm / 4.331 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	86 g
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Environmental Requirements

Surrounding air temperature (operation)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Temperature range of connecting cable per EN 61010-2-201	≥ (T _{surrounding air} + 30 K)
Relative humidity	5 ... 95 %
Operating altitude (max.)	2000 m
Environmental conditions per DIN EN 50155:2018-05	
Altitude	A1
Operating temperature class	OT3
Extended operating temperature at switch-on	ST1
Quick temperature changes	H1
Power supply interruptions	S1
Power supply switching classes	C2
Service life	L4 at 40 °C (max.)
Protective coatings for populated PCBs	PC2
Temporary supply voltage dips	Criterion B

Standards and Specifications

Conformity marking	CE
EMC immunity to interference	EN 61000-6-2; EN 61326-2-3; EN 50121-3-2
EMC emission of interference	EN 61000-6-4; EN 61326-2-3; EN 50121-3-2
Standards/Specifications	EN 61010-1; EN 61373

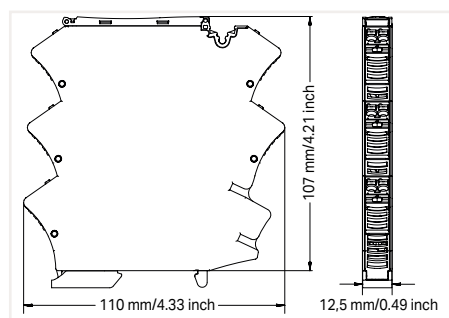
Threshold Value Switch; Thermocouples; Configurable 2857 Series



1.1	TC+	INPUT SENSOR	DO	DO	4.1
1.2	TC-			GND	4.2
2.1	11	RELAY	POWER	Us+	5.1
2.2	12			GND	5.2
3.1	11			Us+	6.1
3.2	14			GND	6.2

Threshold Value Switch; Thermocouple; Relay/1 change-over contact; Digital output; Supply voltage: 24 VDC; Module width: 12.5 mm

Item No.	Pack. Unit
2857-534	1



Short description:

WAGO's thermocouple threshold value switch for TC sensors monitors and reports signals of up to two switching thresholds.

Features:

- Both digital signal output and relay with changeover contact react to configured measurement range limits (on/off switching delay and threshold value switch function can be configured with up to two threshold values)
- Adjustable software filter
- Input/output response simulation via configuration display
- Safe 3-way isolation with 4 kV test voltage per EN 61140

Note:

Additional setting options via interface configuration software/app

» DIP switch configuration, see www.wago.com	
» Configuration software	Page 332
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Configuration	
Configuration options	DIP switch; Interface configuration software; Interface configuration app; Configuration display
Input	
Input signal type	TC sensors
Input – TC Sensors	
Sensor types (TC)	Type J, K, E, N, R, S, T, B, C
Temperature measurement range (TC)	-210 ... +1200 °C (Type J); -200 ... +1372 °C (Type K)
Cold junction compensation	ON/OFF (default: ON)
Cold junction error	3 K (2 K typ.)
Output – Digital	
Max. switching voltage (DO)	Supply voltage applied: -0.3 V
Max. continuous current (DO)	100 mA (no internal restriction)
Number of switching thresholds (DO)	1 or 2 (adjustable)
Configurable rise/fall delay time (DO)	0 ... 60 s (via software)
Output – Relay	
Number of changeover/switchover contacts	1
Contact material (relay)	AgNi + Au
Switching voltage (max.)	250 VAC
Limiting continuous current (relay; module assembly)	6 A (≤ 60 °C); 3 A (60 ... $+70$ °C)
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	4 ms
Bounce time (typ.)	8 ms
Number of switching thresholds (relay)	1 or 2 (adjustable)
Configurable rise/fall delay time (relay)	0 ... 60 s (via software)
Signal Processing	
Software filter (adjustable)	Moving average value (filter level: 30)
Step response (typ.)	60 ms (cold junction compensation OFF); 360 ms (cold junction compensation ON)
Hysteresis	adjustable via DIP switch or software
Measurement Error	
Transmission error (max.)	± 1 K
Temperature coefficient	≤ 0.01 %/K
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U_s	24 VDC
Supply voltage range	± 30 %
Power consumption at nominal supply voltage	≤ 40 mA (+ I_{DD})
Safety and Protection	
Rated voltage of the measurement circuit connections per EN 61010-2-030	AC 300 V
Measurement category per EN/UL 61010-2-030	CAT II (input)
Note on insulation parameters	Temperature sensors are not intended for use in dangerous circuits, provided the external temperature sensors used do not have basic insulation in accordance with EN/UL 61010-1 (300 VAC; overvoltage category II; pollution degree 2). The digital output (DO) is at the potential of the supply
Protection type	IP20
Test voltage	
Test voltage (input/relay output/supply)	4 kVAC; 60 Hz; 1 min
Test voltage (input/service interface)	3 kVAC; 60 Hz; 1 min
Test voltage (relay output/service interface)	4 kVAC; 60 Hz; 1 min
Test voltage (supply/service interface)	2.5 kVAC; 60 Hz; 1 min
Insulation parameters per EN/UL 61010-1	
Line-to-neutral conductor voltage (AC) max.	300 V
Overvoltage category	II
Pollution degree	2
Insulation type (input, supply and service interface/relay output)	Reinforced insulation
Insulation type (input/supply/service interface)	Basic insulation

Specialty Functions:

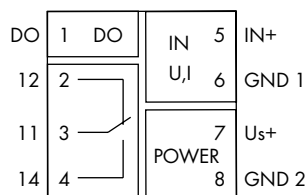


Configuration via:



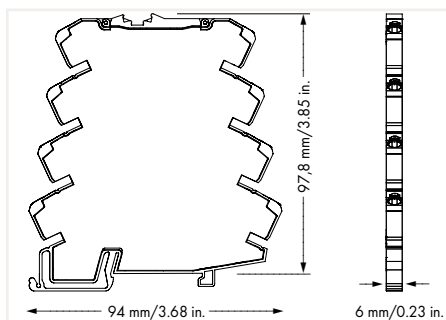
Connection Data	
Connection technology	Push-in CAGE CLAMP®
WAGO Connector	<i>picoMAX</i> ® 5.0
Solid conductor	0.2 ... 2.5 mm ² / 24 ... 12 AWG
Fine-stranded conductor	0.2 ... 2.5 mm ² / 24 ... 12 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Geometric Data	
Width	12.5 mm / 0.492 inch
Height from upper-edge of DIN-rail	107 mm / 4.213 inch
Depth	110 mm / 4.331 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	63.9 g
Environmental Requirements	
Surrounding air temperature (operation)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Temperature range of the connecting cable according to EN 61010-2-201	≥ (T _{surrounding air} + 10 K)
Temperature range of connecting cable per UL 61010-2-201 (min.)	90 °C
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2; EN 61326-2-3; EN 50121-3-2
EMC emission of interference	EN 61000-6-4; EN 61326-2-3; EN 50121-3-2
Standards/specifications	EN 61010-1; EN 61373

Threshold Value Switch; Configurable; with Analog Input and Changeover Relay Output 857 Series



Threshold Value Switch; Analog values; Relay/1 changeover contact; Digital output; Supply voltage: 24 VDC; Module width: 6 mm

Item No.	Pack. Unit
857-531	1



Short description:

WAGO's threshold value switch for analog signals monitors standard analog signals and reports signals exceeding a preset threshold.

Features:

- PC configuration interface
- Digital switching output
- Changeover contact relay output
- Calibrated measurement range switching
- Threshold value configuration via DIP switch and teach-in function via push/slide switch
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

Note:

Additional setting options via interface configuration software/app

Configuration	
Configuration options	DIP switch; Interface configuration software; Interface configuration app; Push/slide switch
Input	
Input signal type	Voltage; Current
Input signal (voltage)	± 10 V; 0 ... 30 V
Input signal (current)	± 20 mA
Input resistance (current input)	≤ 200 Ω
Input resistance (voltage input)	≥ 100 k Ω
Input current (max.)	22 mA
Input voltage (max.)	31 V
Output – Digital	
Max. switching voltage (DO)	Supply voltage applied
Max. continuous current (DO)	100 mA (no internal restriction)
Number of switching thresholds (DO)	1 (adjustable)
Configurable rise/fall delay time (DO)	10 s
Output – Relay	
Number of changeover/switchover contacts	1
Switching voltage (max.)	250 VAC
Limiting continuous current (relay; module assembly)	6 A (≤ 60 °C); 2 A (60 ... +70 °C)
Switching power (resistive) max.	1250 VA AC
Drop-out time (typ.)	4 ms
Number of switching thresholds (relay)	1 or 2 (adjustable)
Configurable rise/fall delay time (relay)	0 ... 30 s (via software)
Signal Processing	
Step response (typ.)	16 ms
Hysteresis	adjustable via DIP switch or software
Measurement Error	
Transmission error (typ.)	≤ 0.1 % of upper-range value
Temperature coefficient	≤ 0.01 %/K
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U_s	24 VDC
Supply voltage range	± 30 %
Power consumption at nominal supply voltage	≤ 25 mA (+ IDO)
Safety and Protection	
Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Geometric Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	38.6 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 85 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2; EN 61131-2; EN 61326-1
EMC emission of interference	EN 61000-6-4; EN 61131-2; EN 61326-1
Standards/specifications	EN 61373

» Configuration software	Page 332
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Specialty Functions:



Configuration via:



857-531

DIP Switch Adjustability

● = ON Default

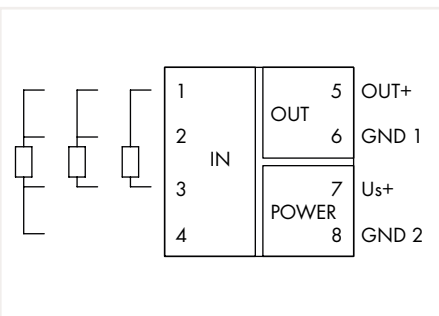
DIP-Switch S1

Input Signal Limits ±0.25 V; ±0.5 mA				Hysteresis	
1	2	3	4	5	
					±10 V
●				●	5 mV; 10 µA
					10 mV, 20 µA
	●				0 ... 10 V
		●			2 ... 10 V
	●	●			0 ... 5 V
			●		1 ... 5 V
	●		●		±5 V
		●	●		0 ... 15 V
	●	●	●		0 ... 30 V
●					±20 mA
●	●				0 ... 20 mA
●		●			4 ... 20 mA
●	●	●			0 ... 10 mA
●			●		2 ... 10 mA
●	●		●		±10 mA

DIP Switch S1

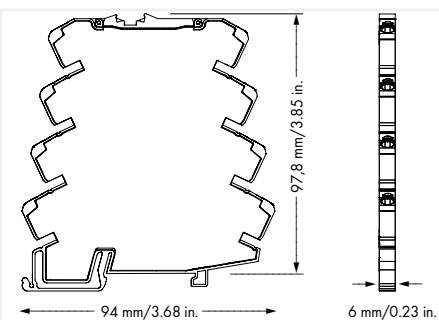
Configurable Rise/Fall Delay Time in sec.			Digital Output DO Signaling	
6	7	8	9	10
				DO not active
●				● GND → U _N (switching)
	●			● U _N → GND (switching)
●	●			
		●		
●		●		
	●	●		
●	●	●		

Temperature Signal Conditioner; Configurable; for RTD Sensors 857 Series



Temperature Signal Conditioner for Pt Sensors; Current and voltage output signal; Supply voltage: 24 VDC; Module width: 6 mm

Item No.	Pack. Unit
857-800	1



Short description:

WAGO's temperature signal conditioner records Pt100, Pt200, Pt500, and Pt1000 sensors, as well as resistors up to 4.5 kOhm, converting the temperature signal into a standard analog signal at the output.

Features:

- For Pt100, Pt200, Pt500 and Pt1000 sensors, as well as resistors up to 4.5 kOhm
- 2-, 3- and 4-wire connection technology
- Calibrated measurement range switching
- Detects sensor wire break/short circuit
- Detects measurement range underflow/overflow
- Switchable clipping
- Limitation of standard analog signal to upper range values
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

Configuration	
Configuration options	DIP switch
Input	
Input signal type	Pt sensors; Resistor
Input – RTD Sensors	
Sensor types (RTD)	Pt100; Pt200; Pt500; Pt1000
Sensor connection	2-wire; 3-wire; 4-wire (switchable)
Sensor power supply (RTD) max.	≤ 0.5 mA
Temperature measurement range (RTD)	-200 ... +850 °C
Input – Resistors	
Input range (resistor)	0 ... 1 kΩ; 0 ... 4.5 kΩ
Output	
Output signal type	Current; Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω
Signal Processing	
Step response (typ.)	180 ms (2-wire); 360 ms (3-wire)
Measurement Error	
Transmission error (typ.)	≤ 0.1 % at full measurement span
Transmission error for the set measurement range	≤ ((10 K/set measurement range [K]) + 0.1) %
Temperature coefficient	≤ 0.02 %/K
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U_s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 40 mA
Safety and Protection	
Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Geometric Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	35.3 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4

Specialty Functions:



Configuration via:



857-800

DIP Switch Adjustability

● = ON Default

DIP Switch S1

Wire Connection		Sensor Type			Output Signal					Measurement Range Underflow	Measurement Range Overflow	Wire Break	Short Circuit
1	2	3	4	5	6	7	8	9	10				
●	2 Leiter				Pt100					Lower limit of output range - 5 % *	Upper limit of output range + 2.5 % *	Upper limit of output range + 5 % *	Lower limit of output range - 12.5 % *
●	3 Leiter	●			Pt200	●				Lower limit of output range - 5 % *	Upper limit of output range + 2.5 % *	Upper limit of output range + 5 % *	Lower limit of output range - 12.5 % *
●	4 Leiter		●		Pt500		●		●	Lower limit of output range	Upper limit of output range + 2.5 %	Upper limit of output range + 5 %	Lower limit of output range
			●	●	Pt1000	●	●			Lower limit of output range	Upper limit of output range + 2.5 %	Upper limit of output range + 5 %	Lower limit of output range
				●	1 kΩ		●		●	Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %	Upper limit of output range + 5 %
			●	●	4,5 kΩ	●	●			Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %	Upper limit of output range + 5 %
							●	●		Lower limit of output range	Upper limit of output range	Lower limit of output range	Lower limit of output range
							●	●	●	Lower limit of output range	Upper limit of output range	Lower limit of output range	Lower limit of output range
							●	●	●	Lower limit of output range	Upper limit of output range	Lower limit of output range	Lower limit of output range

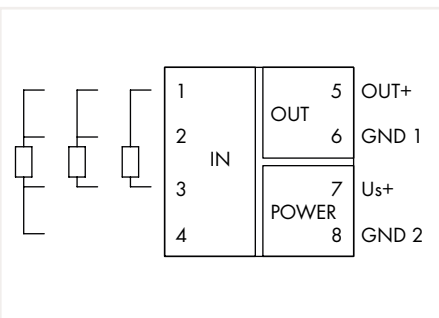
* acc. to NAMUR NE 43

DIP Switch S2

Start Temperature				End Temperature																																	
1	2	3	4	°C	°F	5	6	7	8	9	10	°C	°F	5	6	7	8	9	10	°C	°F	5	6	7	8	9	10	°C	°F								
				0	32							100	212							●	75	167						●	210	410				●	●	475	887
●				-200	-328	●						0	32	●						●	80	176	●					●	220	428	●			●	●	500	932
●	●			-175	-283		●					5	41		●					●	85	185		●				●	230	446		●		●	●	525	997
●	●	●		-150	-238	●	●					10	50	●	●					●	90	194	●	●				●	240	464	●	●		●	●	550	1022
	●			-125	-193			●				15	59			●				●	95	203			●			●	250	482			●	●	●	575	1067
●	●			-100	-148	●		●				20	68	●		●				●	100	212	●		●			●	260	500	●		●	●	●	600	1112
	●	●		-90	-130		●	●				25	77		●	●				●	110	230		●	●			●	270	518		●	●	●	●	625	1157
●	●	●		-80	-112	●	●	●				30	86	●	●	●				●	120	248	●	●	●			●	280	536	●	●	●	●	●	650	1202
		●		-70	-94			●				35	95			●	●			●	130	266			●			●	290	554			●	●	●	675	1247
●		●		-60	-76	●		●				40	104	●		●	●			●	140	284	●		●			●	300	572	●		●	●	●	700	1292
	●	●		-50	-58		●	●				45	113		●	●	●			●	150	302		●	●			●	325	617		●	●	●	●	725	1337
●	●		●	-40	-40	●	●	●				50	122	●	●	●	●			●	160	320	●	●	●			●	350	662	●	●	●	●	●	750	1382
		●	●	-30	-22			●	●			55	131			●	●	●		●	170	338			●	●		●	375	707			●	●	●	775	1427
●		●	●	-20	-4	●		●	●			60	140	●		●	●			●	180	356	●	●	●			●	400	752	●		●	●	●	800	1472
	●	●	●	-10	14			●	●	●		65	149		●	●	●	●		●	190	374		●	●	●		●	425	797			●	●	●	825	1517
●	●	●	●	0	32	●	●	●	●			70	158	●	●	●	●	●		●	200	392	●	●	●	●		●	450	842	●	●	●	●	●	850	1562

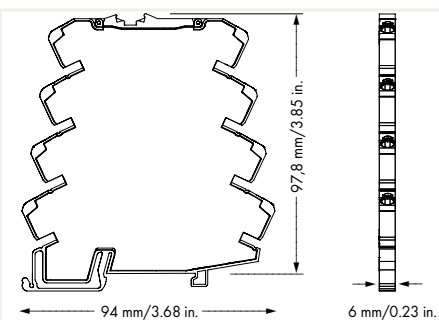
The minimum distance from the start temperature to the end temperature may not fall short of 50K degrees on the Celsius (C) scale or 122K degrees on the Fahrenheit (F) scale.

Temperature Signal Conditioner; Configurable; for RTD Sensors 857 Series



Temperature Signal Conditioner for Pt Sensors; Current and voltage output signal; Supply voltage: 24 VDC; Module width: 6 mm

Item No.	Pack. Unit
857-801	1



Short description:

WAGO's temperature signal conditioner records Pt100, Pt200, Pt500, and Pt1000 sensors, as well as resistors up to 4.5 kOhm, converting the temperature signal into a standard analog signal at the output.

Features:

- PC configuration interface
- For Pt100, Pt200, Pt500 and Pt1000 sensors, as well as resistors up to 4.5 kOhm
- 2-, 3- and 4-wire connection technology
- Detects calibrated measurement range switching
- Detects sensor wire break/short circuit
- Measurement range underflow/overflow
- Switchable clipping
- Limitation of standard analog signal to upper range values
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

Note:

Additional setting options as well as output signal inversion via interface configuration software or interface configuration app

Configuration	
Configuration options	DIP switch; Interface configuration software; Interface configuration app
Input	
Input signal type	Pt sensors; Resistor
Input – RTD Sensors	
Sensor types (RTD)	Pt100; Pt200; Pt500; Pt1000
Sensor connection	2-wire, 3-wire, 4-wire (switchable)
Sensor power supply (RTD) max.	≤ 0.5 mA
Temperature measurement range (RTD)	–200 ... +850 °C
Measurement span (RTD) min.	50 K
Input – Resistors	
Input range (resistor)	0 ... 1 kΩ; 0 ... 4.5 kΩ
Measurement span (min.)	50 Ω
Output	
Output signal type	Current; Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω
Signal Processing	
Step response (typ.)	180 ms (2-wire); 360 ms (3-wire)
Measurement Error	
Transmission error (typ.)	≤ 0.1 % at full measurement span
Transmission error for the set measurement range	≤ ((10 K/set measurement range [K]) + 0.1) %
Temperature coefficient	≤ 0.02 %/K
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U_s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 40 mA
Safety and Protection	
Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Geometric Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	35.1 g
Environmental Requirements	
Surrounding air temperature (operation)	–25 ... +70 °C
Surrounding air temperature (storage)	–40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4

» Configuration software	Page 332
» Configuration App	Page 333
» Accessories	Page 344

Specialty Functions:



Configuration via:



857-801

DIP Switch Adjustability

● = ON Default

DIP Switch S1

Wire Connection		Sensor Type			Output Signal					Measurement Range Underflow	Measurement Range Overflow	Wire Break	Short Circuit
1	2	3	4	5	6	7	8	9	10				
●	2-wire	●			Pt100					Lower limit of output range - 5 % *	Upper limit of output range + 2.5 % *	Upper limit of output range + 5 % *	Lower limit of output range - 12.5 % *
●	3-wire	●			Pt200	●				Lower limit of output range	Upper limit of output range + 2.5 %	Upper limit of output range + 5 %	Lower limit of output range
●	4-wire		●		Pt500		●		●	Lower limit of output range	Upper limit of output range + 2.5 %	Upper limit of output range + 5 %	Lower limit of output range
			●	●	Pt1000	●	●			Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %	Upper limit of output range + 5 %
				●	1 kΩ			●	●	Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %	Upper limit of output range + 5 %
			●	●	4.5 kΩ	●		●	●	Lower limit of output range	Upper limit of output range	Lower limit of output range	Lower limit of output range
								●	●	Lower limit of output range	Upper limit of output range	Lower limit of output range	Lower limit of output range
								●	●	Lower limit of output range	Upper limit of output range	Lower limit of output range	Lower limit of output range
								●	●	Lower limit of output range	Upper limit of output range	Lower limit of output range	Lower limit of output range

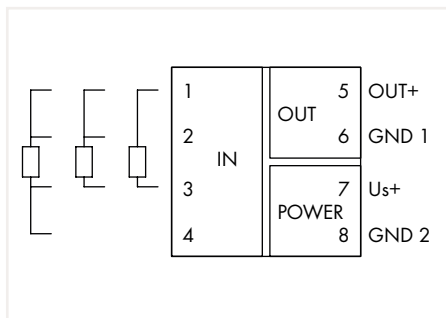
* acc. to NAMUR NE 43

DIP Switch S2

Start Temperature				End Temperature																																		
1	2	3	4	°C	°F	5	6	7	8	9	10	°C	°F	5	6	7	8	9	10	°C	°F	5	6	7	8	9	10	°C	°F									
				0	32							100	212							●	75	167						●	210	410					●	●	475	887
●				-200	-328	●						0	32	●						●	80	176	●					●	220	428	●				●	●	500	932
●	●			-175	-283		●					5	41		●					●	85	185		●				●	230	446		●			●	●	525	997
●	●	●		-150	-238	●	●					10	50	●	●					●	90	194	●	●				●	240	464	●	●			●	●	550	1022
	●			-125	-193			●				15	59			●				●	95	203			●			●	250	482			●		●	●	575	1067
●	●			-100	-148	●		●				20	68	●		●				●	100	212	●		●			●	260	500	●		●		●	●	600	1112
	●	●		-90	-130		●	●				25	77		●	●				●	110	230		●	●			●	270	518		●	●		●	●	625	1157
●	●	●		-80	-112	●	●	●				30	86	●	●	●				●	120	248	●	●	●			●	280	536	●	●	●		●	●	650	1202
		●		-70	-94			●				35	95				●	●		●	130	266			●			●	290	554			●	●	●	675	1247	
●		●		-60	-76	●		●				40	104	●			●	●		●	140	284	●		●			●	300	572	●			●	●	●	700	1292
	●	●		-50	-58		●	●				45	113		●		●	●		●	150	302		●	●			●	325	617		●		●	●	●	725	1337
●	●			-40	-40	●	●	●				50	122	●	●		●	●		●	160	320	●	●		●		●	350	662	●	●		●	●	●	750	1382
		●	●	-30	-22			●	●			55	131			●	●	●		●	170	338			●	●		●	375	707			●	●	●	●	775	1427
●		●	●	-20	-4	●		●	●			60	140	●			●	●		●	180	356	●	●	●			●	400	752	●		●	●	●	●	800	1472
	●	●	●	-10	14			●	●	●		65	149		●	●	●	●		●	190	374		●	●	●		●	425	797			●	●	●	●	825	1517
●	●	●	●	0	32	●	●	●	●			70	158	●	●	●	●	●		●	200	392	●	●	●	●		●	450	842	●	●	●	●	●	●	850	1562

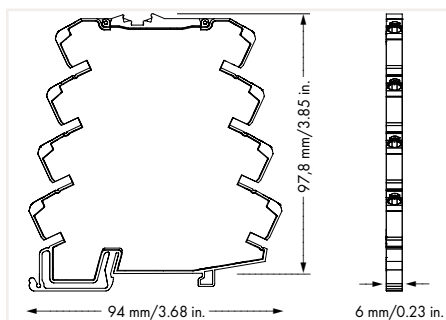
The minimum distance from the start temperature to the end temperature may not fall short of 50K degrees on the Celsius (C) scale or 122K degrees on the Fahrenheit (F) scale.

Temperature Signal Conditioner; Configurable; for RTD Sensors 857 Series



Temperature Signal Conditioner for RTD Sensors; Current and voltage output signal; Supply voltage: 24 VDC; Module width: 6 mm

Item No.	Pack. Unit
857-808	1



Short description:

WAGO's temperature signal conditioner records signals from Pt46 and Cu53 sensors and converts the temperature signal into a standard analog signal at the output.

Features:

- 2-, 3- and 4-wire connection technology
- Calibrated measurement range switching
- Detects sensor wire break/short circuit
- Detects measurement range underflow/overflow
- Clipping function limits the standard analog signal to the upper range values
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

Configuration via:



Configuration	
Configuration options	DIP switch
Input	
Input signal type	Pt sensors; Cu sensors
Input – RTD Sensors	
Sensor types (RTD)	Pt46; Cu53
Sensor connection	2-wire, 3-wire, 4-wire (switchable)
Sensor power supply (RTD) max.	≤ 0.5 mA
Temperature measurement range (RTD)	-200 ... +300 °C (Pt46); 0 ... +180 °C (Cu53)
Measurement span (RTD) min.	50 K
Output	
Output signal type	Current; Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω
Signal Processing	
Step response (typ.)	180 ms (2-wire); 360 ms (3-wire)
Measurement Error	
Transmission error (typ.)	≤ 0.1 % at full measurement span
Transmission error for the set measurement range	≤ ((10 K/set measurement range [K]) + 0.1) %
Temperature coefficient	≤ 0.02 %/K
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U_s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 40 mA
Safety and Protection	
Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Geometric Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	35.4 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4

857-808

DIP Switch Adjustability

● = ON Default

DIP Switch S1

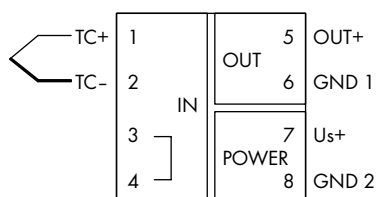
Wire Connection		Sensor Type			Output Signal							Measurement Range Underflow	Measurement Range Overflow	Wire Break	Short Circuit
1	2	3	4	5	6	7	8		9	10					
	2-wire			Pt46								Lower limit of output range - 5 % *	Upper limit of output range + 2.5 % *	Upper limit of output range + 5 % *	Lower limit of output range - 12.5 % *
●	3-wire	●		Cu53	●							Lower limit of output range	Upper limit of output range + 2.5 %	Upper limit of output range + 5 %	Lower limit of output range
	4-wire					●			●			Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %	Upper limit of output range
						●	●			●		Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %	Upper limit of output range
						●	●			●		Lower limit of output range	Upper limit of output range	Lower limit of output range	Lower limit of output range
						●	●			●		Lower limit of output range	Upper limit of output range	Lower limit of output range	Lower limit of output range

* acc. to NAMUR NE 43

DIP Switch S2

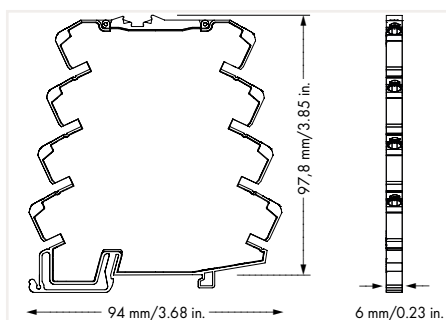
Start Temperature										End Temperature																				
1	2	3	4	°C	°F	5	6	7	8	9	10	°C	°F	5	6	7	8	9	10	°C	°F	5	6	7	8	9	10	°C	°F	
				0	32							100	212							●	75	167						●	210	410
●				-200	-328	●						0	32	●						●	80	176	●					●	220	428
	●			-175	-283		●					5	41		●					●	85	185		●				●	230	446
●	●			-150	-238	●	●					10	50	●	●					●	90	194	●	●				●	240	464
		●		-125	-193			●				15	59			●				●	95	203			●			●	250	482
●	●			-100	-148	●	●					20	68	●	●	●				●	100	212	●	●				●	260	500
	●	●		-90	-130		●	●				25	77		●	●	●			●	110	230		●	●			●	270	518
●	●	●		-80	-112	●	●	●				30	86	●	●	●				●	120	248	●	●	●			●	280	536
			●	-70	-94				●			35	95							●	130	266				●		●	290	554
●			●	-60	-76	●			●			40	104	●						●	140	284	●			●		●	300	572
	●	●		-50	-58		●	●				45	113		●					●	150	302								
●	●		●	-40	-40	●	●		●			50	122	●	●					●	160	320								
		●	●	-30	-22			●	●			55	131			●	●	●		●	170	338								
●	●	●		-20	-4	●		●	●			60	140	●		●	●	●		●	180	356								
	●	●	●	-10	14		●	●	●			65	149		●	●	●	●		●	190	374								
●	●	●	●	0	32	●	●	●	●			70	158	●	●	●	●	●		●	200	392								

Temperature Signal Conditioner; Configurable; for Thermocouples 857 Series



Temperature Signal Conditioner for Thermocouples;
Current and voltage output signal; Supply voltage:
24 VDC; Module width: 6 mm

Item No.	Pack. Unit
857-810	1



Short description:

WAGO's temperature signal conditioner records signals from thermocouples (type J, K) and converts the temperature signal into a standard analog signal at the output.

Features:

- For type J and K thermocouples
- Cold junction compensation (ON/OFF)
- Calibrated measurement range switching
- Detects a sensor wire break
- Detects measurement range underflow/overflow
- Switchable clipping
- Limitation of standard analog signal to upper range values
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

Specialty Functions:



Configuration via:



Configuration	
Configuration options	DIP switch
Input	
Input signal type	TC sensors
Input – TC Sensors	
Sensor types (TC)	Type J; Type K
Temperature measurement range (TC)	-150 ... +1200 °C (Type J); -150 ... +1350 °C (Type K)
Measurement min. (TC)	100 K
Cold junction compensation	ON/OFF (default: ON)
Cold junction error	3 K (2 K typ.)
Output	
Output signal type	Current; Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω
Signal Processing	
Step response (typ.)	60 ms (cold junction compensation OFF); 120 ms (cold junction compensation ON)
Measurement Error	
Transmission error (typ.)	≤ 0.1% at max. measurement span (type J, K)
Transmission error for the set measurement range	≤ (150 K/set measurement range [K]) %
Temperature coefficient	≤ 0.04 %/K
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U_s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 40 mA
Safety and Protection	
Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Geometric Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	35.5 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4

857-810

DIP Switch Adjustability

● = ON Default

DIP Switch S1

Cold Junction Compensation		Sensor type			Output signal					Measurement Range Underflow	Measurement Range Overflow	Wire Break
1	2	3	4	5	6	7	8					
●	on		J						Lower limit of output range - 5 % *	Upper limit of output range + 2.5 % *	Upper limit of output range + 5 % *	
●	off	●	K	●				●	Lower limit of output range	Upper limit of output range + 2.5 %	Upper limit of output range + 5 %	
					●				Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %	
					●	●			Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %	
						●		●	Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %	
						●	●	●	Lower limit of output range	Upper limit of output range	Lower limit of output range	

DIP 9 and 10 n.c.

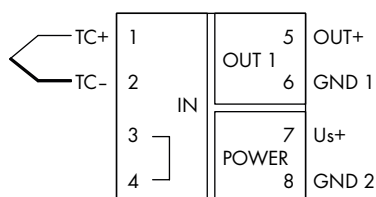
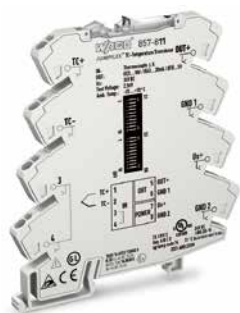
* acc. to NAMUR NE 43

DIP Switch S2

Start Temperature										End Temperature																																													
1	2	3	4	°C	°F	5	6	7	8	9	10	°C	°F	5	6	7	8	9	10	°C	°F	5	6	7	8	9	10	°C	°F	5	6	7	8	9	10	°C	°F																		
				0	32							1000	1832							●						225	437							●						625	1157							●	●	●	●	●	●	1025	1877
●				-200	-328	●						0	32	●						●						250	482	●						●						650	1202	●						●	●	●	●	●	●	1050	1922
	●			-175	-283		●					10	50		●						●					275	527		●						●					675	1247		●						●	●	●	●	●	1075	1967
●	●			-150	-283	●	●					20	68	●	●					●	●					300	572	●	●					●	●					700	1292	●	●					●	●	●	●	●	●	1100	2012
		●		-125	-193			●				30	86			●						●				325	617			●						●				725	1337			●						●	●	●	●	1125	2057
●	●			-100	-148	●		●				40	104	●		●				●		●				350	662	●		●				●		●				750	1382	●		●				●	●	●	●	●	●	1150	2102
	●	●		-90	-130		●	●				50	122		●	●					●	●				375	707		●	●					●	●				775	1427		●	●					●	●	●	●	●	1175	2147
●	●	●		-80	-112	●	●	●				60	140	●	●	●				●	●	●				400	752	●	●	●				●	●	●				800	1472	●	●	●				●	●	●	●	●	●	1200	2192
			●	-70	-94				●			70	158				●						●			425	797				●						●			825	1517				●					●	●	●	●	1225	2237
●		●		-60	-76		●		●			80	176	●		●				●		●				450	842	●		●				●		●				850	1562	●		●				●	●	●	●	●	●	1250	2282
	●	●		-50	-58		●		●			90	194		●	●					●	●				475	887		●	●					●	●				875	1607		●	●					●	●	●	●	●	1275	2327
●	●	●		-40	-40	●	●		●			100	212	●	●					●	●					500	932	●	●					●	●					900	1652	●	●					●	●	●	●	●	●	1300	2372
		●	●	-30	-22			●	●			125	257				●						●			525	977				●						●			925	1697				●					●	●	●	●	1325	2417
●	●	●		-20	-4	●		●	●			150	302	●		●				●		●				550	1022	●		●				●		●				950	1742	●		●				●	●	●	●	●	●	1350	2462
	●	●	●	-10	14		●	●	●			175	347		●	●					●	●				575	1067		●	●					●	●				975	1787		●	●					●	●	●	●	●	1375	2507
●	●	●	●	0	32	●	●	●	●			200	392	●	●	●				●	●	●				600	1112	●	●	●				●	●	●				1000	1832	●	●	●				●	●	●	●	●	●	1400	2552

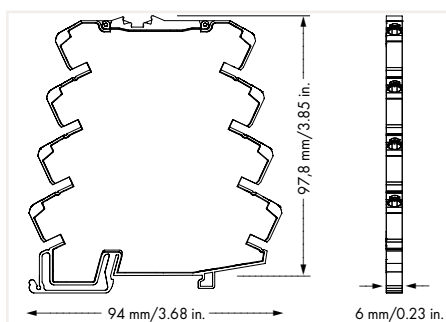
The minimum distance from the start temperature to the end temperature may not fall short of 100K degrees on the Celsius (C) scale or 212K degrees on the Fahrenheit (F) scale.

Temperature Signal Conditioner; Configurable; for Thermocouples 857 Series



Temperature Signal Conditioner for Thermocouples;
Current and voltage output signal; Supply voltage:
24 VDC; Module width: 6 mm

Item No.	Pack. Unit
857-811	1



Short description:

WAGO's temperature signal conditioner records signals from thermocouples of type J and K (E, R, N, S, T, B, C) and converts the temperature signal into a standard analog signal.

Features:

- PC configuration interface
- For thermocouples of type J and K (E, R, N, S, T, B, C)
- Cold junction compensation (ON/OFF)
- Calibrated measurement range switching
- Detects a sensor wire break
- Detects measurement range underflow/overflow
- Switchable clipping
- Limitation of standard analog signal to upper range values
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

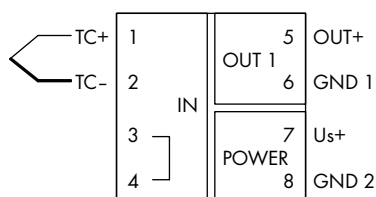
Note:

Additional setting options as well as output signal inversion via interface configuration software or interface configuration app

Configuration	
Configuration options	DIP switch; Interface configuration software; Interface configuration app
Input	
Input signal type	TC sensors
Input – TC Sensors	
Sensor types (TC)	Type J; Type K
Temperature measurement range (TC)	-150 ... +1200 °C (Type J); -150 ... +1350 °C (Type K)
Measurement min. (TC)	100 K
Cold junction compensation	ON/OFF (default: ON)
Cold junction error	3 K (2 K typ.)
Output	
Output signal type	Current; Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω
Signal Processing	
Step response (typ.)	60 ms (cold junction compensation OFF); 120 ms (cold junction compensation ON)
Measurement Error	
Transmission error (typ.)	≤ 0.1% at max. measurement span (type J, K)
Transmission error for the set measurement range	≤ (150 K/set measurement range [K]) %
Temperature coefficient	≤ 0.04 %/K
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U_s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 40 mA
Safety and Protection	
Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Geometric Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	36 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4

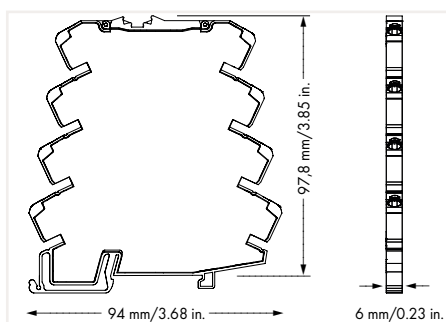
» Configuration software	Page 332
» Configuration App	Page 333
» Accessories	Page 344

Temperature Signal Conditioner; Configurable; for Thermocouples 857 Series



Temperature Signal Conditioner for Thermocouples;
Current and voltage output signal; Supply voltage:
24 VDC; Module width: 6 mm

Item No.	Pack. Unit
857-812	1



Short description:

WAGO's temperature signal conditioner records signals from thermocouples (type K, S, B, R) and converts the temperature signal into a standard analog signal at the output.

Features:

- For thermocouples of type K, S, B and R
- Cold junction compensation (ON/OFF)
- Calibrated measurement range switching
- Detects a sensor wire break
- Detects measurement range underflow/overflow
- Clipping function limits the standard analog signal to the upper range values
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

Configuration via:



Configuration	
Configuration options	DIP switch
Input	
Input signal type	TC sensors
Input – TC Sensors	
Sensor types (TC)	Type K, S, B, R
Temperature measurement range (TC)	0 ... +1200 °C (Type K); 0 ... +1600 °C (Type S); 600 ... +1800 °C (Type B); 0 ... +1600 °C (Type R)
Cold junction compensation	ON/OFF (default: ON)
Cold junction error	3 K (2 K typ.)
Output	
Output signal type	Current; Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω
Signal Processing	
Step response (typ.)	60 ms (cold junction compensation OFF); 120 ms (cold junction compensation ON)
Measurement Error	
Transmission error (typ.)	≤ 0.1 % at full measurement span
Transmission error for the set measurement range	≤ (150 K/set measurement range [K]) %
Temperature coefficient	≤ 0.04 %/K
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U_s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 40 mA
Safety and Protection	
Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Geometric Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	35.7 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4

857-812

DIP Switch Adjustability

● = ON Default

DIP Switch S1

Cold Junction Compensation		Sensor Type		Output Signal						Measurement Range Underflow	Measurement Range Overflow	Wire Break
1		2	3	4	5	6	7	8				
●	Ein			K						Lower limit of output range - 5 % *	Upper limit of output range + 2.5 % *	Upper limit of output range + 5 % *
	Aus	●		S	●					Lower limit of output range	Upper limit of output range + 2.5 %	Upper limit of output range + 5 %
			●	B		●			●	Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %
			● ●	R	● ●					Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %
						●			●	Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %
						● ●			● ●	Lower limit of output range	Upper limit of output range	Lower limit of output range
						● ● ●			● ● ●	Lower limit of output range	Upper limit of output range	Lower limit of output range

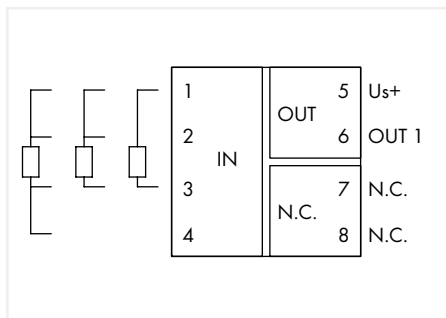
DIP Switch S1 (9) n.c.

* acc. to NAMUR NE 43

DIP Switch S1+S2

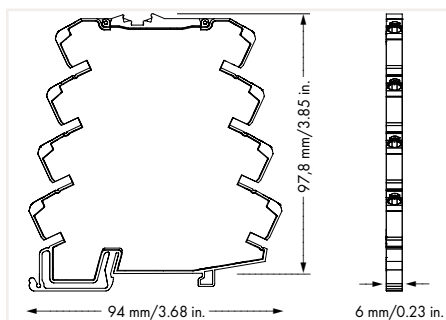
Start Temperature					End Temperature																		
S1	S2				°C	°F	S2				°C	°F	S2				°C	°F					
10	1	2	3	4			5	6	7	8	9	10			5	6	7	8	9	10			
					0	32							1000	1832	●		●		●			1000	1832
●					50	122	●						0	32		●	●		●			1050	1922
	●				100	212		●					50	122	●	●	●		●			1100	2012
●	●				150	302	●	●					100	212				●	●			1150	2102
		●			200	392			●				150	302	●			●	●			1200	2192
●		●			250	482	●		●				200	392		●		●	●			1250	2282
	●	●			300	572		●	●				250	482	●	●		●	●			1300	2372
●	●	●			350	662	●	●	●				300	572			●	●	●			1350	2462
			●		400	752				●			350	662	●		●	●	●			1400	2552
●			●		450	842	●			●			400	752		●	●	●	●			1450	2642
	●		●		500	932		●		●			450	842	●	●	●	●	●			1500	2732
●	●		●		550	1022	●	●		●			500	932						●		1550	2822
		●	●		600	1112			●	●			550	1022	●						●	1600	2912
●		●	●		650	1202	●		●	●			600	1112		●					●	1650	3002
	●	●	●		700	1292		●	●	●			650	1202	●	●					●	1700	3092
●	●	●	●		750	1382	●	●	●	●			700	1292			●				●	1750	3182
			●		800	1472					●		750	1382	●		●				●	1800	3272
●			●		850	1562	●				●		800	1472									
	●		●		900	1652		●			●		850	1562									
●	●		●		950	1742	●	●			●		900	1652									
		●	●		1000	1832			●	●			950	1742									

Temperature Signal Conditioner; Configurable; for RTD Sensors 857 Series



Temperature Signal Conditioner for RTD Sensors;
Current and voltage output signal; Loop-powered RTD;
Module width: 6 mm

Item No.	Pack. Unit
857-815	1



Short description:

WAGO's loop-powered RTD temperature signal conditioner records sensors (Pt100, Pt200, Pt500, Pt1000) and resistors up to 4.5 k Ω , converting the temperature signal into a standard analog signal at the output. The loop-powered RTD temperature signal conditioner provides safe isolation between input and output with 3 kV test voltage per EN 61010-1.

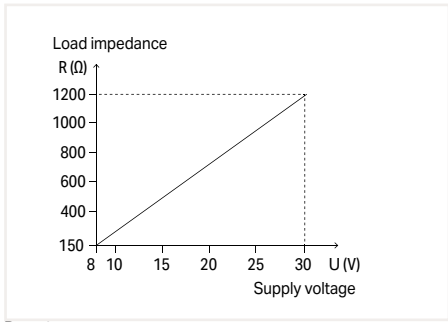
Features:

- No additional supply voltage required
- For Pt100, Pt200, Pt500 and Pt1000 sensors, as well as resistors up to 4.5 k Ω
- 2-, 3- and 4-wire connection technology
- Calibrated measurement range switching
- Detects sensor wire break/short circuit
- Safe 2-way isolation with 2.5 kV test voltage per EN 61010-1

Configuration via:



Configuration	
Configuration options	DIP switches
Input	
Input signal type	Pt sensors; resistor
Input current (max.)	50 mA
Input voltage (max.)	30 VDC
Input – RTD Sensors	
Sensor types (RTD)	Pt100; Pt200; Pt500; Pt1000
Sensor connection	2-wire, 3-wire, 4-wire (switchable)
Sensor power supply (RTD) max.	≤ 0.5 mA
Temperature measurement range (RTD)	-200 ... +850 °C
Measurement span (RTD) min.	50 K
Input – Resistors	
Input range (resistor)	0 ... 1 k Ω ; 0 ... 4.5 k Ω
Output	
Output signal type	Current
Output signal (current)	4 ... 20 mA; 20 ... 4 mA
Load impedance (current output)	See derating graph
Signal Processing	
Step response (typ.)	1000 ms
Measurement Error	
Transmission error (typ.)	≤ 0.1 % at full measurement span
Transmission error for the set measurement range	$\leq ((40 \text{ K}/\text{set measurement range [K]}) + 0.1)$ %
Temperature coefficient	≤ 0.02 %/K
Power Supply	
Power supply type	loop-powered (via output)
Supply voltage	8 ... 30 VDC (power derived from the output circuit)
Safety and Protection	
Measurement category per EN/UL 61010-2-030	CAT II (input)
Protection type	IP20
Test voltage	
Test voltage (input/analog output)	3 kVAC; 50 ... 60 Hz; 1 min
Insulation parameters per EN/UL 61010-1	
Line-to-neutral conductor voltage (AC) max.	150 V
Overvoltage category	II
Pollution degree	2
Insulation type (input/analog output)	Reinforced insulation
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Geometric Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	38.9 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C (at nominal current)
Surrounding air temperature (storage)	-40 ... +85 °C
Temperature range of the connecting cable according to EN 61010-2-201	$\geq (T_{\text{surrounding air}} + 10 \text{ K})$
Temperature range of connecting cable per UL 61010-2-201 (min.)	90 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m



Derating

Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2; EN 61326-1; EN 50121-3-2
EMC emission of interference	EN 61000-6-3; EN 61326-1; EN 50121-3-2
Standards/specifications	EN 61010-1; EN 61373

857-815

DIP Switch Adjustability

● = ON Default

DIP Switch S1

Sensor Connection		Sensor Type			Output Signal		N.C.		Measurement Range Underflow	Measurement Range Overflow	Wire Break	Short Circuit	
1	2	3	4	5	6	7	8	9	10				
●	2-wire			Pt100	4 ... 20 mA					Lower limit of output range - 5 % *	Upper limit of output range + 2.5 % *	Upper limit of output range + 5 % *	Lower limit of output range - 12.5 % *
●	3-wire	●		Pt200	20 ... 4 mA					Lower limit of output range	Upper limit of output range + 2.5 %	Upper limit of output range + 5 %	Lower limit of output range
●	4-wire		●	Pt500				●		Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %	Lower limit of output range
●	2-wire	●	●	Pt1000						Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %	Upper limit of output range + 5 %
				1 kΩ						Lower limit of output range	Upper limit of output range	Upper limit of output range + 5 %	Upper limit of output range + 5 %
			●	4,5 kΩ						Lower limit of output range	Upper limit of output range	Lower limit of output range	Lower limit of output range

* acc. to NAMUR NE 43

DIP Switch S2

Output Signal Start Temperature				Output Signal End Temperature																																
1	2	3	4	°C	°F	5	6	7	8	9	10	°C	°F	5	6	7	8	9	10	°C	°F	5	6	7	8	9	10	°C	°F							
				0	32							100	212								75	167							210	410					475	887
●				-200	-328	●						0	32	●							80	176	●					220	428	●				500	932	
	●			-175	-283		●					5	41		●						85	185		●				230	446		●			525	997	
●	●			-150	-238	●	●					10	50	●	●						90	194	●	●				240	464	●	●			550	1022	
		●		-125	-193			●				15	59			●					95	203			●			250	482			●		575	1067	
●	●			-100	-148	●		●				20	68	●		●					100	212	●		●			260	500	●		●		600	1112	
		●	●	-90	-130		●	●				25	77		●	●					110	230		●	●			270	518		●	●		625	1157	
●	●	●		-80	-112	●	●	●				30	86	●	●	●					120	248	●	●	●			280	536	●	●	●		650	1202	
			●	-70	-94				●			35	95			●	●				130	266				●		290	554			●	●	675	1247	
●			●	-60	-76	●			●			40	104	●		●					140	284	●			●		300	572	●			●	700	1292	
		●	●	-50	-58		●		●			45	113		●	●	●				150	302		●		●		325	617		●		●	725	1337	
●	●		●	-40	-40	●	●		●			50	122	●	●		●	●			160	320	●	●		●		350	662	●	●		●	750	1382	
		●	●	-30	-22			●	●			55	131			●	●	●			170	338			●	●		375	707			●	●	775	1427	
●	●	●		-20	-4	●		●	●			60	140	●		●	●	●			180	356	●		●	●		400	752	●		●	●	800	1472	
		●	●	-10	14		●	●	●			65	149		●	●	●	●			190	374		●	●	●		425	797		●	●	●	825	1517	
●	●	●	●	0	32	●	●	●	●			70	158	●	●	●	●	●			200	392	●	●	●	●		450	842	●	●	●	●	850	1562	

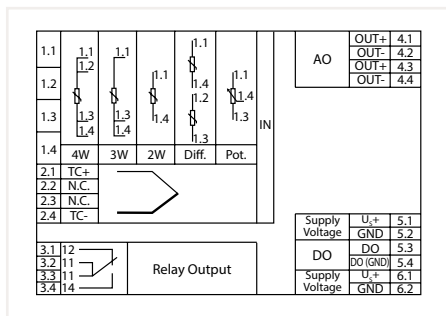
The measurement span must have the following min. magnitude:

- in the Celsius scale (°C): 50 K
- in the Fahrenheit scale (°F): 90 K

Temperature Signal Conditioner; Configurable; for RTD and TC Sensors; Analog 2857 Series

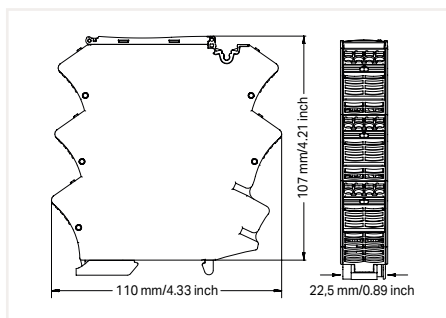


3



RTD/TC Temperature Signal Conditioner; analog

Item No.	Pack. Unit
2857-535	1



Short description:

WAGO's RTD TC temperature signal conditioner for RTD sensors, potentiometers, resistors and thermocouples monitors and reports signals of up to two switching thresholds. The sensor and status information that is collected is also converted to a standard analog signal.

Features:

- A relay with changeover contact reacts to configured measurement range limits (on/off switching delay and threshold value switch function can be configured with up to two threshold values)
- Configurable Pt factor
- Adjustable software filter
- Simulation of input/output response via interface configuration display
- Input of customer-specific sensors via interface configuration software
- Safe 3-way isolation with 3 kV test voltage per EN 61010-1
- Analog unipolar/bipolar signals (current/voltage) at output
- Additional digital signal output for configured measurement range limits
- Adjustable transfer characteristic

Configuration	
Configuration options	Interface configuration software; configuration display
Input	
Input signal type	RTD sensors; Potentiometers; Resistors; TC sensors
Input – RTD Sensors	
Sensor types (RTD)	Pt10 ... Pt2000 (expandable)
Sensor connection	2-wire; 3-wire; 4-wire; differential; potentiometer
Sensor power supply (RTD) max.	≤ 0.5 mA
Temperature measurement range (RTD)	-200 ... +850 °C
Measurement span (RTD) min.	50 K
Input – TC Sensors	
Sensor types (TC)	Type J, K, E, R, N, S, T, B, C
Temperature measurement range (TC)	-210 ... +1200 °C (Type J); -200 ... +1372 °C (Type K); -200 ... +1000 °C (Type E); 250 ... 1768 °C (Type R); -200 ... +1300 °C (Type N); -50 ... +1664 °C (Type S); -200 ... +400 °C (Type T); 250 ... 1820 °C (Type B); 0 ... 2320 °C (Type C)
Measurement min. (TC)	100 K
Cold junction compensation	ON/OFF (default: ON)
Cold junction error	3 K (2 K typ.)
Input – Resistors	
Input range (resistor)	0 ... 10 kΩ
Input range (potentiometer)	0 ... 10 kΩ
Measurement span (min.)	50 Ω
Output	
Output signal type	Current; Voltage
Output signal (voltage)	±12 V
Output signal (current)	±24 mA
Load impedance (voltage output)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω
Output – Digital	
Max. switching voltage (DO)	Supply voltage applied: -0.3 V
Max. continuous current (DO)	100 mA (no internal restriction)
Number of switching thresholds (DO)	1 or 2 (adjustable)
Configurable rise/fall delay time (DO)	0 ... 60 s (via software)
Output – Relay	
Number of changeover/switchover contacts	1
Switching voltage (max.)	250 VAC
Limiting continuous current (relay; module assembly)	6 A (≤ 60 °C); 3 A (60 ... +70 °C)
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Number of switching thresholds (relay)	1 or 2 (adjustable)
Configurable rise/fall delay time (relay)	0 ... 60 s (via software)
Signal Processing	
Software filter (adjustable)	Moving average value (filter level: 30)
Step response (typ.)	130 ms (2-wire); 700 ms (3-wire); 700 ms (4-wire); 600 ms (differential); 500 ms (potentiometer); 150 ms (cold junction compensation OFF); 400 ms (cold junction compensation ON)
Measurement Error	
Transmission error (typ.)	≤ 0.1 % at full measurement span
Transmission error for the set measurement range	≤ (100 K/set measurement range [K]) %
Temperature coefficient	≤ 0.01 %/K
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U _s	24 VDC
Supply voltage range	-60 ... +30 %
Power consumption at nominal supply voltage	≤ 70 mA (+ IDO)

» Configuration software	Page 332
» Configuration display	Page 333
» Accessories	Page 344

Specialty Functions:



Configuration via:

**Safety and Protection**

Rated voltage of the measurement circuit connections per EN 61010-2-030	AC 300 V
Measurement category per EN/UL 61010-2-030	CAT II (input)
Overvoltage category	II
Note on insulation parameters	The digital output (DO) is at the potential of the supply The service interface is at the potential of the analog output The DIN-rail contact (functional ground) is capacitively coupled to the analog output.
Protection type	IP20

Test voltage

Test voltage (input/output/supply)	AC 3 kV; 50 Hz; 1 min
Test voltage (input/analog output/relay output/supply)	3 kVAC; 50 ... 60 Hz; 1 min
Test voltage (input/DIN-rail contact/relay output/supply)	3 kVAC; 50 ... 60 Hz; 1 min

Insulation parameters per EN/UL 61010-1

Line-to-neutral conductor voltage (AC) max.	300 V
Overvoltage category	II
Pollution degree	2
Insulation type (input/analog output/relay output/supply)	Reinforced insulation
Insulation type (input/DIN-rail contact/relay output/supply)	Reinforced insulation

Connection Data

Connection technology	Push-in CAGE CLAMP®
WAGO Connector	<i>picoMAX</i> ® 5.0
Solid conductor	0.2 ... 2.5 mm ² / 24 ... 12 AWG
Fine-stranded conductor	0.2 ... 2.5 mm ² / 24 ... 12 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Geometric Data

Width	22.5 mm / 0.886 inch
Height from upper-edge of DIN-rail	107 mm / 4.213 inch
Depth	110 mm / 4.331 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	126.9 g
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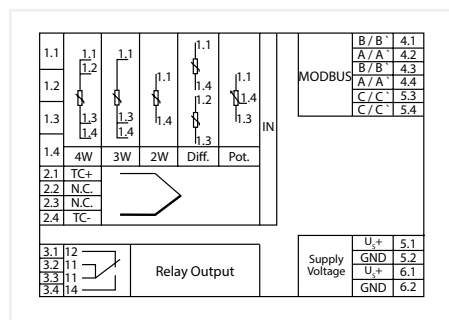
Environmental Requirements

Surrounding air temperature (operation)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Temperature range of the connecting cable according to EN 61010-2-201	≥ (T _{surrounding air} + 10 K)
Temperature range of connecting cable per UL 61010-2-201 (min.)	90 °C
Relative humidity	5 ... 95 % (non-condensing)
Operating altitude (max.)	2000 m

Standards and Specifications

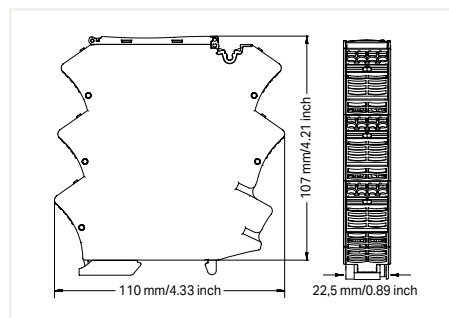
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2; EN 61326-2-3
EMC emission of interference	EN 61000-6-3; EN 61326-2-3
Standards/specifications	EN 61010-1; EN 61373

Temperature Signal Conditioner; Configurable; for RTD and TC Sensors; Serial 2857 Series



RTD/TC Temperature Signal Conditioner; serial

Item No.	Pack. Unit
2857-535/000-001	1



Short description:

WAGO's RTD TC temperature signal conditioner for RTD sensors, potentiometers, resistors and thermocouples monitors and reports signals of up to two switching thresholds. The sensor and status information that is collected is also made available to a higher-order device (e.g., a PLC) via a bus connection.

Features:

- A relay with changeover contact reacts to configured measurement range limits (on/off switching delay and threshold value switch function can be configured with up to two threshold values)
- Configurable Pt factor
- Adjustable software filter
- Simulation of input/output response via interface configuration display
- Input of customer-specific sensors via the interface configuration software
- Safe 3-way isolation with 3 kV test voltage per EN 61010-1
- RS-485 interface with Modbus protocol at the output
- Terminating resistor can be adjusted at the output
- Adjustable transfer characteristic

Configuration

Configuration options	Interface configuration software; Configuration display; Rotary encoder switch
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Input

Input signal type	RTD sensors; Potentiometers; Resistors; TC sensors
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Input – RTD Sensors

Sensor types (RTD)	Pt10 ... Pt2000 (expandable)
Sensor connection	2-wire; 3-wire; 4-wire; differential; potentiometer
Sensor power supply (RTD) max.	≤ 0.5 mA
Temperature measurement range (RTD)	-200 ... +850 °C
Measurement span (RTD) min.	50 K

Input – TC Sensors

Sensor types (TC)	Type J, K, E, R, N, S, T, B, C
Temperature measurement range (TC)	-210 ... +1200 °C (Type J); -200 ... +1372 °C (Type K); -200 ... +1000 °C (Type E); 250 ... 1768 °C (Type R); -200 ... +1300 °C (Type N); -50 ... +1664 °C (Type S); -200 ... +400 °C (Type T); 250 ... 1820 °C (Type B); 0 ... 3230 °C (Type C)
Measurement min. (TC)	100 K
Cold junction compensation	ON/OFF (default: ON)
Cold junction error	3 K (2 K typ.)

Input – Resistors

Input range (resistor)	0 ... 10 kΩ
Input range (potentiometer)	0 ... 10 kΩ
Measurement span (min.)	50 Ω

Output – Relay

Number of changeover/switchover contacts	1
Switching voltage (max.)	250 VAC
Limiting continuous current (relay; module assembly)	6 A (≤ 60 °C); 3 A (60 ... +70 °C)
Dielectric strength, open contact (AC, 1 min)	1 kV _{rms}
Number of switching thresholds (relay)	1 or 2 (adjustable)
Configurable rise/fall delay time (relay)	0 ... 60 s (via software)

Communication

Communication	Modbus RTU
Interface	RS-485 (2-wire)
Number of participants (max.)	64

Signal Processing

Software filter (adjustable)	Moving average value (filter level: 30)
Step response (typ.)	130 ms (2-wire); 700 ms (3-wire); 700 ms (4-wire); 600 ms (differential); 500 ms (potentiometer); 150 ms (cold junction compensation OFF); 400 ms (cold junction compensation ON)

Measurement Error

Transmission error (typ.)	≤ 0.1 % at full measurement span
Transmission error for the set measurement range	≤ (100 K/set measurement range [K]) %
Temperature coefficient	≤ 0.01 %/K

Power Supply

Power supply type	24 VDC
Nominal supply voltage U _s	24 VDC
Supply voltage range	-60 ... +30 %
Power consumption at nominal supply voltage	≤ 50 mA

» Configuration software	Page 332
» Configuration display	Page 333
» Accessories	Page 344

Specialty Functions:

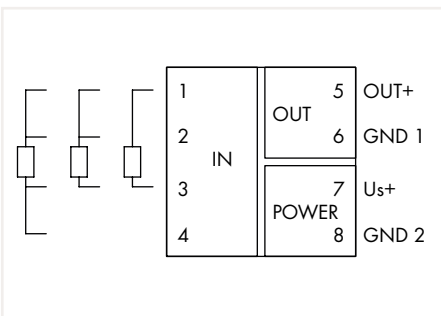
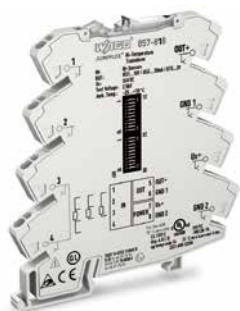


Configuration via:



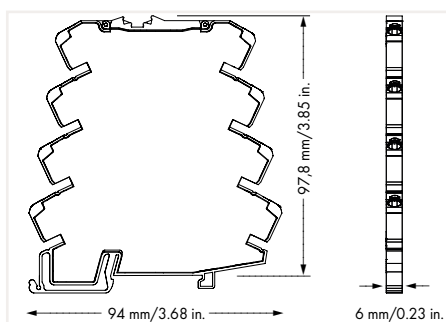
Safety and Protection	
Rated voltage of the measurement circuit connections per EN 61010-2-030	AC 300 V
Measurement category per EN/UL 61010-2-030	CAT II (input)
Overvoltage category	II
Note on insulation parameters	The service interface is at the potential of the analog output The DIN-rail contact (functional ground) is capacitively coupled to the analog output.
Protection type	IP20
Test voltage	
Test voltage (input/output/supply)	AC 3 kV; 50 Hz; 1 min
Test voltage (input/analog output/relay output/supply)	3 kVAC; 50 ... 60 Hz; 1 min
Test voltage (input/DIN-rail contact/relay output/supply)	3 kVAC; 50 ... 60 Hz; 1 min
Insulation parameters per EN/UL 61010-1	
Line-to-neutral conductor voltage (AC) max.	300 V
Overvoltage category	II
Pollution degree	2
Insulation type (input/analog output/relay output/supply)	Reinforced insulation
Insulation type (input/DIN-rail contact/relay output/supply)	Reinforced insulation
Connection Data	
Connection technology	Push-in CAGE CLAMP®
WAGO Connector	picoMAX® 5.0
Solid conductor	0.2 ... 2.5 mm² / 24 ... 12 AWG
Fine-stranded conductor	0.2 ... 2.5 mm² / 24 ... 12 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Geometric Data	
Width	22.5 mm / 0.886 inch
Height from upper-edge of DIN-rail	107 mm / 4.213 inch
Depth	110 mm / 4.331 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	127.83 g
Environmental Requirements	
Surrounding air temperature (operation)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Temperature range of the connecting cable according to EN 61010-2-201	≥ (T _{surrounding air} + 10 K)
Temperature range of connecting cable per UL 61010-2-201 (min.)	90 °C
Relative humidity	5 ... 95 % (non-condensing)
Operating altitude (max.)	2000 m
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2; EN 61326-2-3
EMC emission of interference	EN 61000-6-3; EN 61326-2-3
Standards/specifications	EN 61010-1; EN 61373

Temperature Signal Conditioner; Configurable; for Ni Sensors 857 Series



Temperature Signal Conditioner for Ni Sensors; Current and voltage output signal; Supply voltage: 24 VDC; Module width: 6 mm

Item No.	Pack. Unit
857-818	1



Short description:

WAGO's Ni temperature signal conditioner (Ni = nickel) records signals from Ni sensors featuring all standard characteristics and converts the temperature signal into a standard analog signal at the output.

Features:

- For Ni100, Ni120, Ni200; Ni500 und Ni1000 sensors
- Calibrated measurement range switching
- Switchable clipping
- Limitation of standard analog signal to upper range values
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

Specialty Functions:



Configuration via:



Configuration	
Configuration options	DIP switch
Input	
Input signal type	Ni sensors
Input voltage (max.)	±31.2 VDC
Input – RTD Sensors	
Sensor types (RTD)	Ni100; Ni120; Ni200; Ni500; Ni1000
Sensor connection	2-wire, 3-wire, 4-wire (switchable)
Output	
Output signal type	Current; Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω
Signal Processing	
Step response (typ.)	60 ms (2-wire); 120 ms (3-wire); 30 ms (4-wire)
Measurement Error	
Transmission error (typ.)	≤ 0.1 % of upper-range value
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U_s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 40 mA
Safety and Protection	
Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Geometric Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	34.9 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (non-condensing)
Operating altitude (max.)	2000 m
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4

857-818

DIP Switch Adjustability

● = ON Default

DIP Switch S1

Connection Technology		Temperature Coefficient		Sensor Type		
1	2	3	4	5	6	7
	2-wire			6178 ppm/K *1		Ni100
●	3-wire	●		5000 ppm/K	●	Ni120
	4-wire		●	6720 ppm/K		● Ni200
		●	●	6370 ppm/K	●	● Ni500
					●	Ni1000

*1 6178 ppm/K acc. to DIN 4376

DIP Switch S1 DIP Switch S2

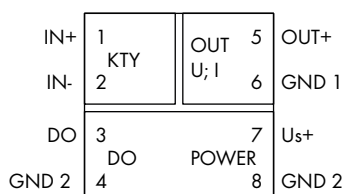
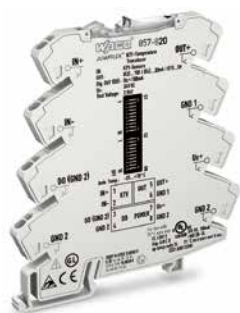
Start Temperature			End Temperature																			
8	9	10	°C	1	2	3	4	5	T / °C	1	2	3	4	5	T / °C	1	2	3	4	5	T / °C	
			0						100	●	●		●		100		●	●		●		210
●			-60	●					0			●	●		110	●	●	●		●		220
	●		-50		●				10	●		●	●		120				●	●		230
●	●		-40	●	●				20		●	●	●		130	●			●	●		240
		●	-30			●			30	●	●	●	●		140				●	●		250
●	●		-20	●	●				40					●	150	●	●		●	●		260
	●	●	-10		●	●			50	●				●	160				●	●		270
●	●	●	0	●	●	●			60		●			●	170	●			●	●		280
							●		70	●	●			●	180		●	●	●	●		290
				●			●		80			●		●	190	●	●	●	●	●		300
					●	●			90	●	●			●	200							

DIP Switch S2

Output Signal					Measurement Range Underflow	Measurement Range Overflow	Wire Break	Short Circuit
6	7	8	9	10				
			0 ... 20 mA		Lower limit of output range -5 % **2	Upper limit of output range +2.5 %*2	Upper limit of output range +5 %*2	Lower limit of output range -12.5 % **2
●			4 ... 20 mA					
	●		0 ... 10 mA		Lower limit of output range	Upper limit of output range +2.5 %	Upper limit of output range +5 %	Lower limit of output range
●	●		2 ... 10 mA	●				
		●	0 ... 10 V		Lower limit of output range	Upper limit of output range	Upper limit of output range +5 %	Upper limit of output range +5 %
●	●		2 ... 10 V	●				
	●	●	0 ... 5 V		Lower limit of output range	Upper limit of output range	Lower limit of output range	Lower limit of output range
●	●	●	1 ... 5 V	●				

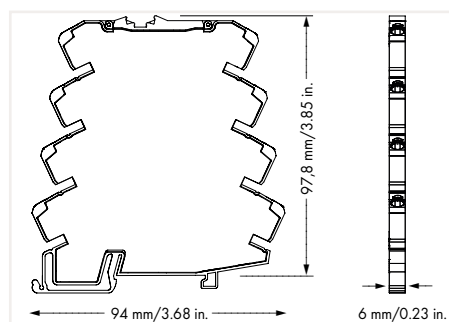
* but not when lower limit of output range = 0 V or 0 mA
**2 acc. to NAMUR NE 43

KTY Signal Conditioner; Configurable 857 Series



Temperature Signal Conditioner for KTY Sensors; Current and voltage output signal; Supply voltage: 24 VDC; Module width: 6 mm

Item No.	Pack. Unit
857-820	1



Short description:

WAGO's KTY temperature signal conditioner records signals from KTY sensors featuring all standard characteristics and converts the temperature signal into a standard analog signal at the output.

Features:

- Supports all standard KTY sensors
- Calibrated measurement range switching
- Switchable clipping
- Limitation of standard analog signal to upper range values
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

Specialty Functions:



Configuration via:



Configuration	
Configuration options	DIP switch
Input	
Input signal type	KTY sensors
Input voltage (max.)	±30 VDC
Input – KTY Sensors	
Sensor types (KTY)	KTY81-110; KTY81-120; KTY81-121; KTY81-122; KTY81-150; KTY81-210; KTY81-220; KTY81-221; KTY81-222; KTY81-250; KTY82-110; KTY82-120; KTY82-121; KTY82-122; KTY82-150; KTY82-220; KTY82-221; KTY82-222; KTY82-250; KTY83-110; KTY83-120; KTY83-121; KTY83-122; KTY83-150; KTY83-151; KTY84-130; KTY84-150; KTY84-151; KTY16; KTY19; ST13; ST20
Sensor connection	2-wire
Output	
Output signal type	Current; Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω
Output – Digital	
Max. switching voltage (DO)	Supply voltage applied
Max. continuous current (DO)	100 mA (no internal restriction)
Signal Processing	
Step response (typ.)	50 ms
Measurement Error	
Transmission error (typ.)	≤ 0.1 % of upper-range value
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U _s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 40 mA
Safety and Protection	
Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Geometric Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	35.5 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (non-condensing)
Operating altitude (max.)	2000 m
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4

857-820

DIP Switch Adjustability

● = ON

Default

DIP Switch S1

Sensor Type			
1	2	3	4
●	●	●	●
KTY81-110, KTY81-120, KTY82-110, KTY82-120			
●	●	●	●
KTY81-121, KTY82-121			
●	●	●	●
KTY81-122, KTY82-122			
●	●	●	●
KTY81-150, KTY82-150			
●	●	●	●
KTY81-210, KTY81-220, KTY82-210, KTY82-220			
●	●	●	●
KTY81-221, KTY82-221			
●	●	●	●
KTY81-222, KTY82-222			
●	●	●	●
KTY81-250, KTY82-250			
●	●	●	●
KTY83-110, KTY83-120,			
●	●	●	●
KTY83-121			
●	●	●	●
KTY83-122			
●	●	●	●
KTY83-150			
●	●	●	●
KTY83-151			
●	●	●	●
KTY84-130, KTY84-150			
●	●	●	●
KTY84-151			
●	●	●	●
KTY16, KTY19, ST13, ST20			

DIP Switch S2

Start Temperature				End Temperature																		
1	2	3	°C	4	5	6	7	8	°C	4	5	6	7	8	°C	4	5	6	7	8	°C	
●	●	●	0	●	●	●	●	●	100	●	●	●	●	●	100	●	●	●	●	●	●	210
●	●	●	-55	●	●	●	●	●	0	●	●	●	●	●	110	●	●	●	●	●	●	220
●	●	●	-50	●	●	●	●	●	10	●	●	●	●	●	120	●	●	●	●	●	●	230
●	●	●	-40	●	●	●	●	●	20	●	●	●	●	●	130	●	●	●	●	●	●	240
●	●	●	-30	●	●	●	●	●	30	●	●	●	●	●	140	●	●	●	●	●	●	250
●	●	●	-20	●	●	●	●	●	40	●	●	●	●	●	150	●	●	●	●	●	●	260
●	●	●	-10	●	●	●	●	●	50	●	●	●	●	●	160	●	●	●	●	●	●	270
●	●	●	0	●	●	●	●	●	60	●	●	●	●	●	170	●	●	●	●	●	●	280
●	●	●		●	●	●	●	●	70	●	●	●	●	●	180	●	●	●	●	●	●	290
●	●	●		●	●	●	●	●	80	●	●	●	●	●	190	●	●	●	●	●	●	300
●	●	●		●	●	●	●	●	90	●	●	●	●	●	200	●	●	●	●	●	●	

DIP Switch S1

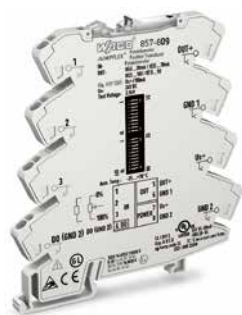
Output Signal			9	10	Measurement Range Underflow	Measurement Range Overflow	Wire Break	Short Circuit
6	7	8						
●	●	●	●	●	Lower limit of output range -5 % **2	Upper limit of output range +2.5 %*2	Upper limit of output range 5 %*2	Lower limit of output range -12.5 % **2
●	●	●	●	●	Lower limit of output range	Upper limit of output range +2.5 %	Upper limit of output range +5 %	Lower limit of output range
●	●	●	●	●	Lower limit of output range	Upper limit of output range	Upper limit of output range +5 %	Upper limit of output range +5 %
●	●	●	●	●	Lower limit of output range	Upper limit of output range	Lower limit of output range	Lower limit of output range

* but not when lower limit of output range = 0V or 0mA
**2 acc. to NAMUR NE 43

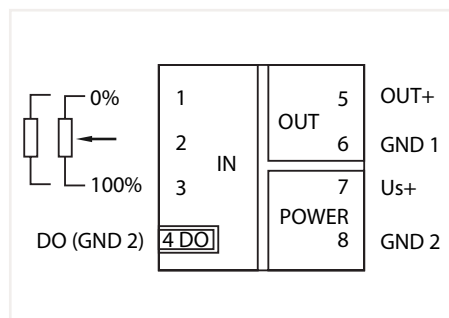
DIP Switch S2

Digital Output DO	
9	10
Measurement Range Overflow Indication	
DO not active	
●	●
GND → U _N (rising)	
●	●
U _N → GND (falling)	

Potentiometer Signal Conditioner; Configurable 857 Series

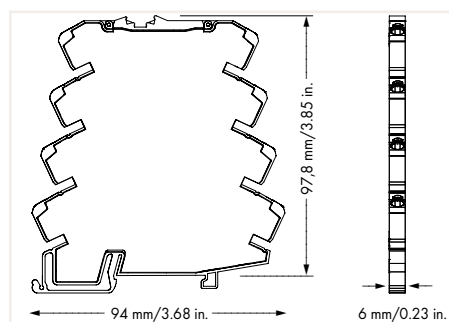


3



Potentiometer Position Signal Conditioner; Current and voltage output signal; Digital output; Supply voltage: 24 VDC; Module width: 6 mm

Item No.	Pack. Unit
857-809	1



Short description:

WAGO's potentiometer signal conditioner records resistance signals (e.g., from potentiometers) and converts them into a standard analog signal. The device is supplied with 24 VDC (nominal voltage). It is set via DIP switch or push/slide switch.

Features:

- PC configuration interface
- Calibrated measurement range switching
- Automatic potentiometer identification
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

Note:

Additional setting options via interface configuration software/app

Configuration	
Configuration options	DIP switch; Interface configuration software; Interface configuration app; Push/slide switch
Input	
Input signal type	Potentiometer; Resistor
Input – Resistors	
Input range (resistor)	10 Ω ... 100 kΩ
Input range (potentiometer)	100 Ω ... 100 kΩ
Potentiometer supply voltage (max.)	2.5 V
Measurement range (min.)	100 Ω
Output	
Output signal type	Current; Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω
Output – Digital	
Max. switching voltage (DO)	Supply voltage applied
Max. continuous current (DO)	100 mA (no internal restriction)
Number of switching thresholds (DO)	1 (adjustable)
Signal Processing	
Step response (typ.)	32 ms
Measurement Error	
Transmission error (typ.)	≤ 0.1 % of upper-range value
Temperature coefficient	≤ 0.01 %/K
Power Supply	
Power supply type	24 VDC
Nominal supply voltage U_s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 40 mA (+ IDO)
Safety and Protection	
Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Geometric Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	36.6 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (non-condensing)
Operating altitude (max.)	2000 m
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4

» Configuration software	Page 332
» Configuration App	Page 333
» Accessories	Page 344

Specialty Functions:



Configuration via:



857-809

DIP Switch Adjustability

• = ON Default

DIP Switch S1 und S2

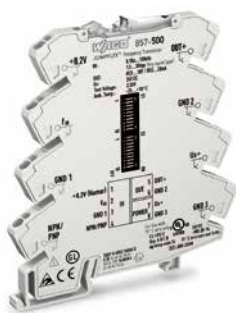
Input		Start Value					End Value						
DIP S1		DIP S1					Resistor Ω	DIP S1			DIP S2	Resistor Ω	
1		2	3	4	5	6		7	8	9	10	1	
•	Potentiometer						0						100000
	Resistor	•					0	•					0
			•				10		•				10
		•	•				11	•	•				11
				•			12			•			12
		•		•			13	•		•			13
			•	•			15		•	•			15
		•	•	•			16	•	•	•			16
					•		18				•		18
		•			•		20	•			•		20
			•		•		22		•		•		22
		•	•		•		24	•	•		•		24
				•	•		27			•	•		27
		•		•	•		30	•		•	•		30
			•	•	•		33		•	•	•		33
		•	•	•	•		36	•	•	•	•		36
						•	39					•	39
		•			•	•	43	•				•	43
			•		•	•	47		•			•	47
		•	•		•	•	51	•	•			•	51
				•	•	•	56			•		•	56
		•		•	•	•	62	•		•		•	62
			•	•	•	•	68		•	•		•	68
		•	•	•	•	•	75	•	•	•		•	75
					•	•	82				•	•	82
		•			•	•	91	•			•	•	91
			•		•	•	40		•		•	•	40
		•	•		•	•	50	•	•		•	•	50
				•	•	•	60			•	•	•	60
		•		•	•	•	70	•		•	•	•	70
			•	•	•	•	80		•	•	•	•	80
		•	•	•	•	•	90	•	•	•	•	•	90

DIP Switch S2

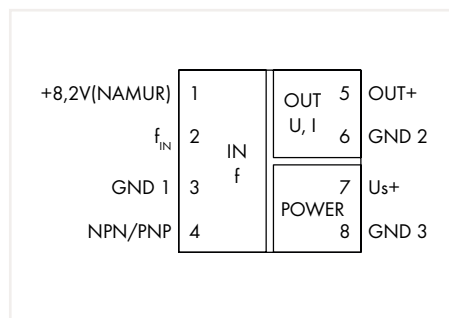
Factor of Initial Value		Factor of End Value		Output		Output Signal Range	
2	3	4	5	6	7	8	
	x1			x1			0 ... 10 V/0 ... 20 mA
•	x10	•		x10	•		2 ... 10 V/4 ... 20 mA
	x100		•	x100		•	0 ... 5 V/0 ... 10 mA
•	x1000	•	•	x1000		•	1 ... 5 V/2 ... 10 mA
Measurement Range Underflow		Measurement Range Overflow		Wire Break			
	Upper limit of output range* +2.5 %		Lower limit of output range* -5 %		Upper limit of output range* +5 %		
•	Upper limit of output range +2.5 %		Lower limit of output range		Upper limit of output range +5 %		
	Upper limit of output range		Lower limit of output range		Upper limit of output range +5 %		
•	Upper limit of output range		Lower limit of output range		Lower limit of output range		

* acc. to NAMUR NE 45

Frequency Signal Conditioner; Configurable 857 Series

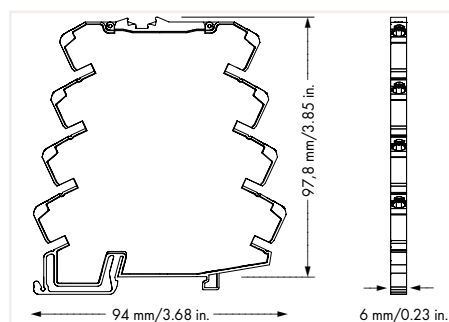


3



Frequency Signal Conditioner; Current and voltage output signals; Supply voltage: 24 VDC; Module width: 6 mm

Item No.	Pack. Unit
857-500	1



Short description:

WAGO's frequency signal conditioner collects 0.1–120 kHz signals from NAMUR, NPN or PNP sensors and converts them into a standard analog signal.

Features:

- PC configuration interface
- Signal acquisition from NAMUR, NPN or PNP sensors
- Calibrated measurement range switching
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

Specialty Functions:



Configuration via:



» Configuration software	Page 332
» Configuration App	Page 333
» Accessories	Page 344

Configuration

Configuration options	DIP switch; Interface configuration software; Interface configuration app
-----------------------	---

Input

Input signal type	Frequency generators; NAMUR sensors; NPN/PNP transistor outputs; Mechanical contact (dry contact)
-------------------	---

Input – Sensor Type 1

Sensor type 1	Frequency generator; NPN/PNP transistor output with pull-up or pull-down resistor
Measurement range (frequency) 1	0.1 Hz ... 120 kHz
Pulse length 1	≥ 1 μs
Measurement span 1 (min.)	10 Hz
Signal level	1.5 V; 10 V; 20 V (switchable)
Input voltage (max.)	±31.2 VDC
Signal form	Any
Coupling	AC/DC (adjustable; AC above 10 Hz)
Input resistance 1	10 kΩ

Input – Sensor Type 2

Sensor type 2	NAMUR sensor per DIN EN 50227
Measurement range (frequency) 2	0.1 Hz ... 1 kHz
Pulse length 2	≥ 500 μs
Measurement span 2 (min.)	10 Hz
Sensor supply	8.2 VDC
Signal current (0)	≤ 1.2 mA
Signal current (1)	≥ 2.1 mA
Hysteresis	0.45 mA
Short circuit monitoring	≥ 4.7 mA
Wire break monitoring	≤ 0.2 mA
Input resistance 2	≤ 600 Ω

Input – Sensor Type 3

Sensor type 3	NPN/PNP transistor output without pull-up or pull-down resistor; Mechanical contact (dry contact)
Measurement range (frequency) 3	0.1 Hz ... 20 kHz
Pulse length 3	≥ 25 μs
Measurement span 3 (min.)	100 Hz
Open-circuit voltage	5 VDC
NPN residual voltage	≤ 1.5 V
PNP switching voltage	≥ 7.5 V (+ residual voltage U _{CE sat})

Output

Output signal type	Current; Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω

Signal Processing

Conversion time	Peak-time measurement method (> 400 Hz): < 20 ms; Pulse time measurement method (< 400 Hz): < 200 μs + T _{Cycle duration}
-----------------	--

Measurement Error

Transmission error (typ.)	≤ 0.1 % of upper-range value
Temperature coefficient	≤ 0.01 %/K

Power Supply

Art der Versorgung	24 VDC
Nominal supply voltage U _s	24 VDC
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 40 mA

Safety and Protection

Test voltage (input/output/supply)	2.5 kVAC; 50 Hz; 1 min
Protection type	IP20

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Geometric Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	36.2 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (non-condensing)
Operating altitude (max.)	2000 m
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4
Standards/Specifications	EN 61373

Frequency Signal Conditioner; Configurable 857 Series

857-500

DIP Switch Adjustability

● = ON Default

DIP Switch S1

Source Input		Coupling	Operation with Disturbed Frequency Signals for Acceptable Signal Level (applies only to f_{in} input)	
1	2	3	4	5
			High	Low
Frequency generator or NPN/PNP transistor outputs with pull-up or pull-down resistor		AC/DC	> 1.5 V	< 0.4 V
●	NAMUR	● AC (without DC), see Figure 1	> 10 V	< 8 V
●	NPN/PNP transistor outputs without pull-up or pull-down resistor input		> 20 V	< 16 V
●	Dry Contact		> 1.5 V	< 0.4 V

DIP Switch S1

DIP Switch S2

Input Start Value					Frequency/Hz	Input End Value					Frequency/Hz
6	7	8	9	10		1	2	3	4	5	
					100						1000
●					0.1	●					0.1
	●				1		●				1
●	●				100	●	●				100
		●			200			●			200
●		●			300	●	●				300
	●	●			400		●	●			400
●	●	●			500	●	●	●			500
			●		600				●		600
●		●	●		700	●			●		700
	●	●			800		●	●			800
●	●	●			900	●	●	●			900
			●		1000			●	●		1000
●	●	●	●		2000	●	●	●			2000
	●	●	●		3000		●	●	●		3000
●	●	●	●		4000	●	●	●	●		4000
			●		5000					●	5000
●		●	●		6000	●			●		6000
	●		●		7000		●		●		7000
●	●		●		8000	●	●		●		8000
		●	●		9000			●	●		9000
●	●	●	●		10000	●	●	●	●		10000
	●	●	●		20000		●	●	●		20000
●	●	●	●		30000	●	●	●	●		30000
			●	●	40000				●	●	40000
●		●	●	●	50000	●		●	●		50000
	●	●	●	●	60000		●	●	●		60000
●	●	●	●	●	70000	●	●	●	●		70000
		●	●	●	80000			●	●	●	80000
●	●	●	●	●	90000	●		●	●	●	90000
	●	●	●	●	100000		●	●	●	●	100000
●	●	●	●	●	120000	●	●	●	●	●	120000

DIP Switch S2

Output Signal			9	10	Measurement Range Underflow	Measurement Range Overflow	Only for NAMUR Sensors	
6	7	8					Wire Break	Short Circuit
		0 ... 20 mA	●	●	Lower limit of output range* -5 %	Upper limit of output range* +2.5 %	Upper limit of output range* 5 %	Lower limit of output range* -12.5 %
●		4 ... 20 mA					Upper limit of output range 5 %	Lower limit of output range
		0 ... 10 mA	●	●	Lower limit of output range	Upper limit of output range +2.5 %	Upper limit of output range 5 %	Lower limit of output range
●	●	2 ... 10 mA					Upper limit of output range 5 %	Lower limit of output range
		0 ... 10 V	●	●	Lower limit of output range	Upper limit of output range	Upper limit of output range 5 %	Upper limit of output range 5 %
●	●	2 ... 10 V					Upper limit of output range 5 %	Lower limit of output range
		0 ... 5 V	●	●	Lower limit of output range	Upper limit of output range	Ausgangsbereichsanfang	Lower limit of output range
●	●	1 ... 5 V					Ausgangsbereichsanfang	Lower limit of output range

*acc. to NAMUR NE 43

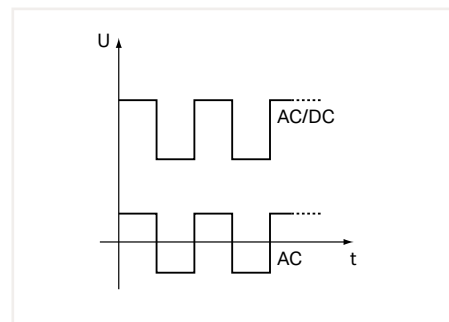


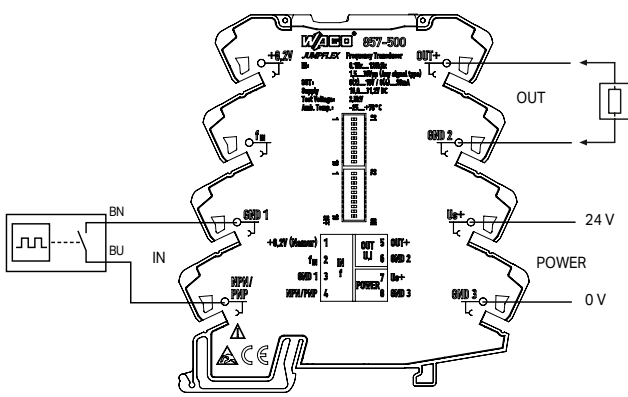
Figure 1: Coupling

3

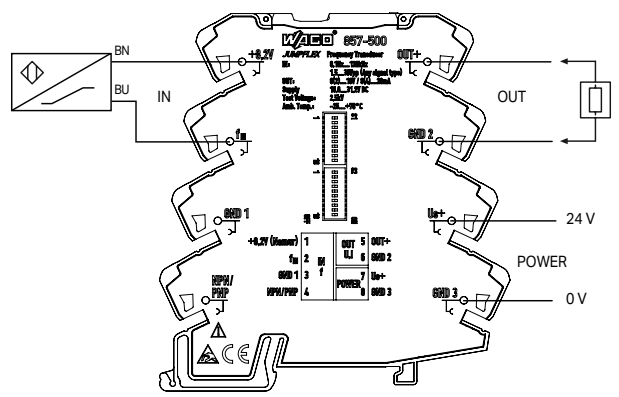
857-500

Wiring Material

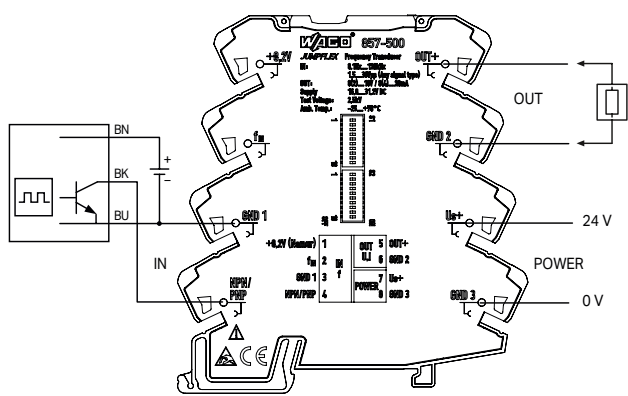
2-Wire DC (Mechanical Contact)



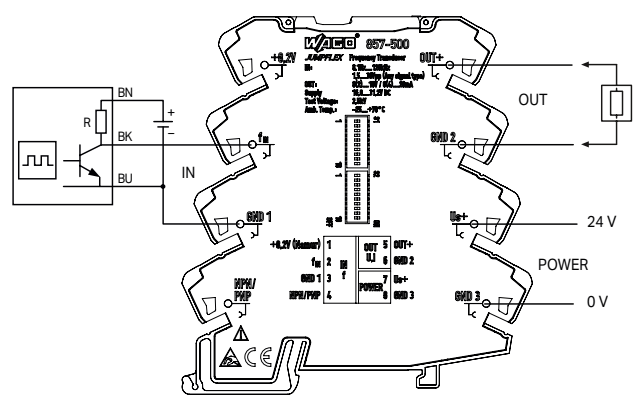
2-Wire DC NAMUR Sensor



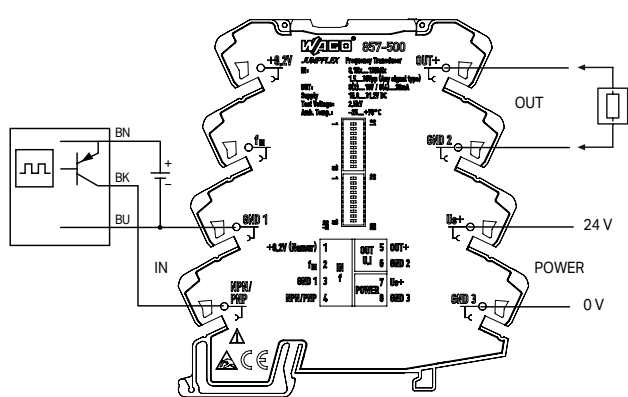
NPN Transistor Output



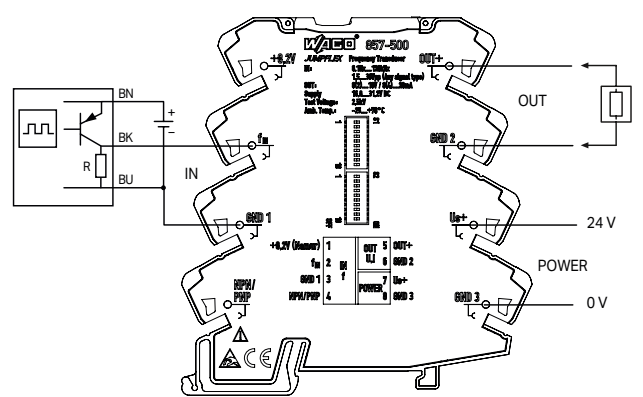
NPN Transistor Output with Pull-Up Resistor



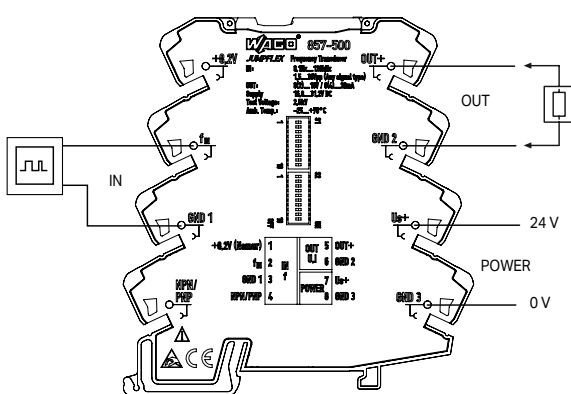
PNP Transistor Output



PNP Transistor Output with Pull-Down Resistor



Frequency Generator



Interface Configuration Software

All signal conditioners offer user-friendly configuration at a glance using the interface configuration software.

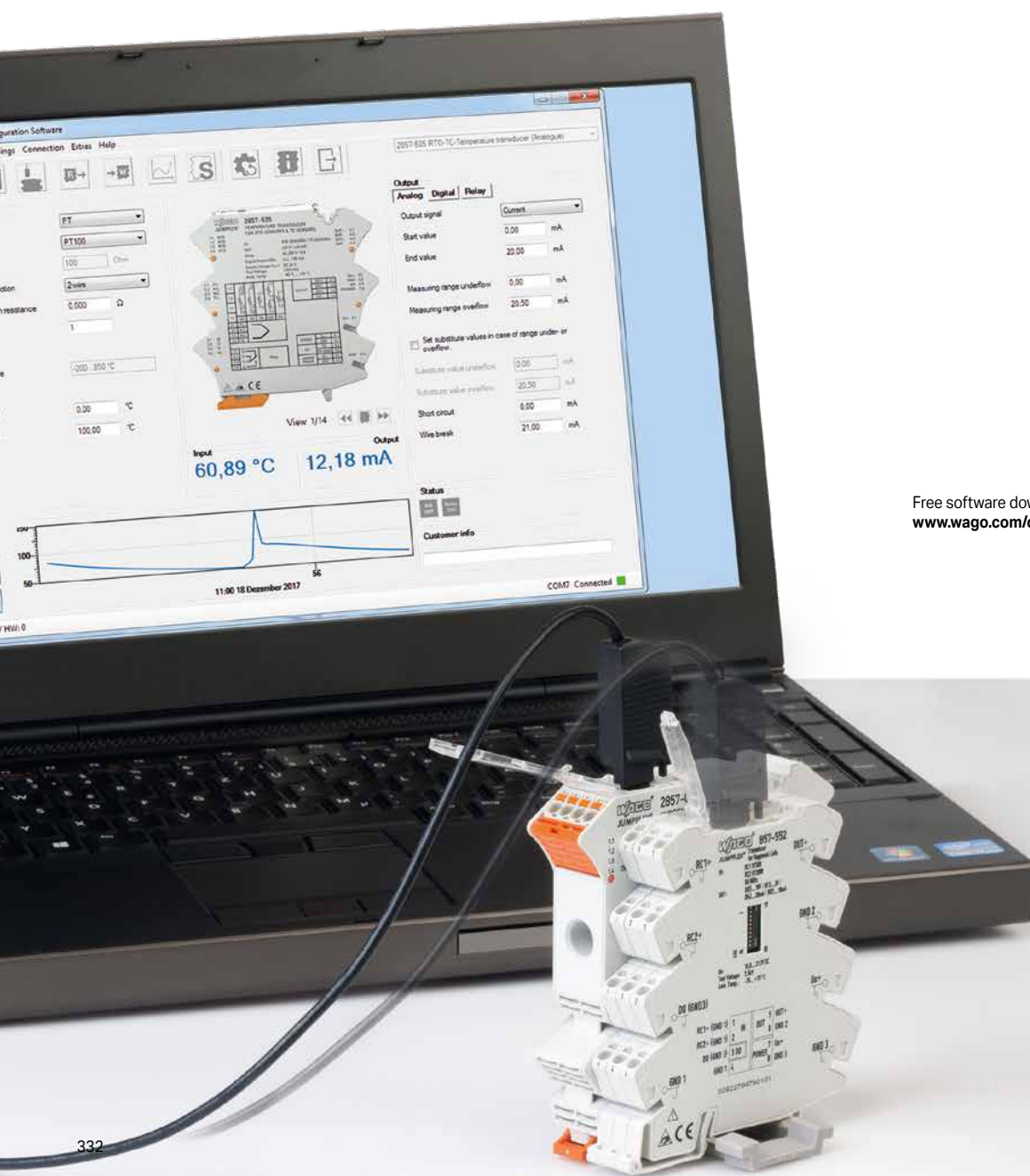
All devices marked with the software symbol can be configured accordingly via the software.



Software features:

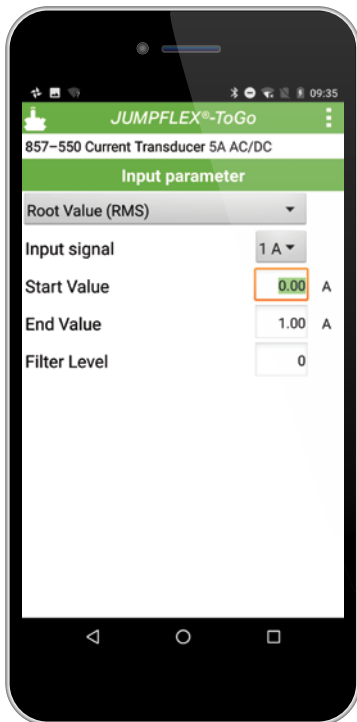
- Simulation of input and output parameters (2857 Series)
- Automatic module recognition
- Configuration and visualization of process values
- Parameterization of the digital switch output (threshold functionality)
- Communication via WAGO USB Service Cable (750-923) or WAGO Bluetooth® Adapter (750-921), pluggable on both series
- Creation of configuration reports
- Backup of configuration settings

3



Free software download at:
www.wago.com/configuration-software

JUMPFLEX®-ToGo Configuration App



(Android smartphone)

The JUMPFLEX®-ToGo App brings the power of PC-based configuration software to your Android mobile device.

All devices marked with the app symbol can be configured accordingly via the app.



App features:

- Configuration of input and output parameters with a stroke of the finger
- Simple display of configuration data and current value
- Communication via WAGO Bluetooth® Adapter (750-921)

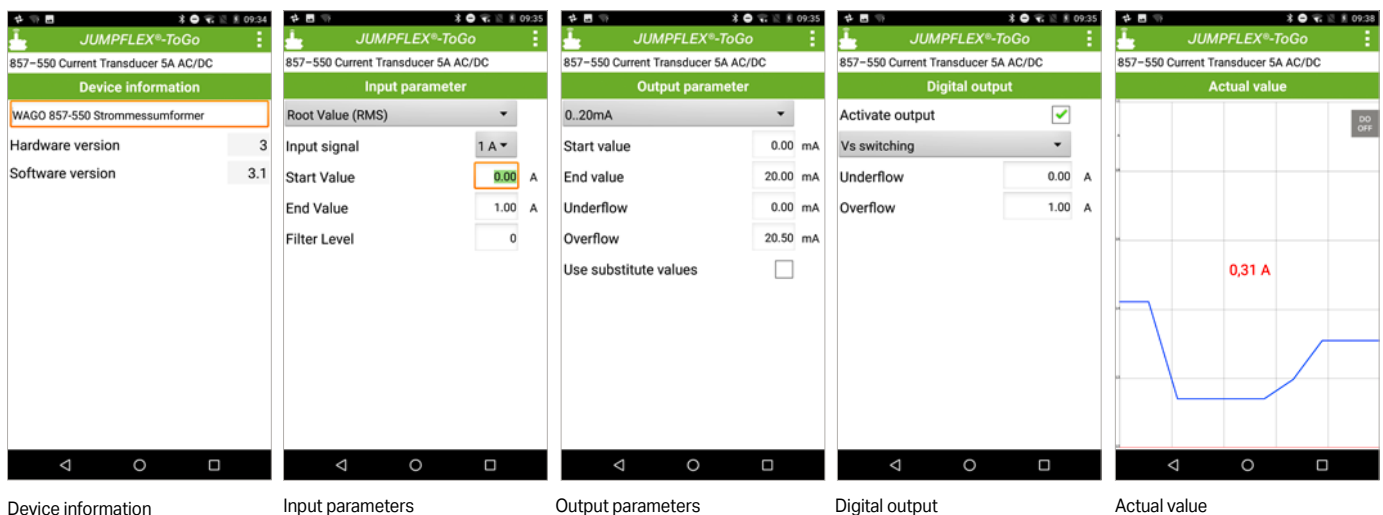
3



Free download from Google Play Store



Bluetooth® Adapter, 750-921



Device information

Input parameters

Output parameters

Digital output

Actual value

Configuration Display 2857 Series




Configuration Display

Item No.	Pack. Unit
2857-900	1

Features:

- Easy mounting on 2857 Series devices
- Automatic module recognition
- Capacitive user interface with slider function
- Intuitive menu navigation
- Multicolor backlight for status indication
- Device configuration and process value visualization
- Easy copying of device configuration

All devices marked with the display symbol  can be configured accordingly via the display.

Operating Data

Operating voltage	3.3 VDC
Power consumption	≤ 60 mA

Geometric Data

Width	22 mm / 0.866 inch
Height	13 mm / 0.512 inch
Depth	59 mm / 2.323 inch

Mechanical Data

Mounting type	Pluggable module
---------------	------------------

Material Data

Weight	24.3 g
--------	--------

Environmental Requirements

Surrounding air temperature (operation)	-20 ... +70 °C
Surrounding air temperature (storage)	-30 ... +80 °C
Relative humidity	10 ... 90 % (non-condensing)
Operating altitude (max.)	2000 m

Standards and Specifications

Conformity marking	CE
EMC immunity to interference	EN 61000-6-2; EN 61326-2-3; EN 50121-3-2
EMC emission of interference	EN 61000-6-4; EN 61326-2-3; EN 50121-3-2
Standards/specifications	EN 61373



Housing width: 22.5 mm

Housing width: 12.5 mm

Bluetooth® Adapter 750 Series



Bluetooth® Adapter		
	Item No.	Pack. Unit
	750-921	1

Bluetooth® Adapter in Connection with 750 Series

The *Bluetooth®* Adapter wirelessly connects a notebook computer with *Bluetooth®* functionality to the service interface of the coupler/controller. It also provides an active connection to a programmable fieldbus controller.

As a cable substitute, the *Bluetooth®* Adapter allows communication between two fieldbus controllers, as well as between fieldbus couplers/controllers via WAGO software tools (e.g., WAGO-I/O-CHECK, WAGO-I/O-PRO).

Configurable coexistence properties ensure trouble-free operation in the presence of other radio systems.

Bluetooth® Adapter in Connection with 857 Series

The *Bluetooth®* Adapter wirelessly connects a notebook computer with *Bluetooth®* functionality to the service interface of a configurable 857 Series Module.

As a cable substitute, the *Bluetooth®* adapter allows communication between modules and the WAGO software tool (WAGOframe) or configuration app for Android-based end-devices.

If required, adapter configuration may be performed via AT commands.

The adapter is supplied via both service interface and power supply of coupler/controller or module.

Technical Data	
Security encryption	128-bit encryption
Radio technology	Bluetooth® 2.1
Frequency band	ISM band, 2402 ... 2483 MHz
Security authentication	Pin code or configurable access list
Supported profiles	Serial Port Profile (SPP)
Type of communication	Peer-to-peer connection
Coexistence	Frequency hopping spread spectrum (FHSS); Adaptive frequency hopping (AFH); Adaptive transmission power with configurable upper limit; Configurable channel blacklist; Supports coexistence optimized inquiry (transmission time ≤ 0.1 s; transmission cycle ≥ 2.9 s)
Transmission range	20 m in open air (Class 2)
Antenna	Integrated
Receiver sensitivity	-82 dBm
Configuration options	AT commands (e.g., via HyperTerminal)
Current consumption (system supply)	60 mA
Indicators	Operating mode

Connection Data	
Contact type	4-pole male connector
Connection type	4-pole male connector

Geometric Data	
Width	15 mm / 0.591 inch
Height	50 mm / 1.969 inch
Depth	19 mm / 0.748 inch

Material Data	
Color	light gray
Weight	16.6 g
Conformity marking	CE

Environmental Requirements	
Surrounding air temperature (operation)	-20 ... +60 °C
Protection type	IP20



Application example: 750 Series



Application example: 857 Series

WAGO USB Communication Cable 750 Series



Configuration Cable; USB connection

Length	Item No.	Pack. Unit
2.5 m	750-923	1
5.0 m	750-923/000-001	1

The WAGO USB Communication Cable connects a PC (notebook) to both the service interface of the 857/2857 Series Signal Conditioners and the configuration interface of WAGO's I/O fieldbus couplers/controllers.

Notice:

Using the WAGO 759-923 USB Communication Cable in combination with select programmable fieldbus controllers requires the specific firmware versions listed below (or higher):

750-841: version 12 and higher

750-872/0020-0000: version 2 and higher

Technical Data

Connection type	4-pole male connector; USB plug (type A)
Number of poles	4
Supported operating systems	Windows XP (SP3 or higher); Windows 7 ; Windows 10

Geometric Data

Width	15 mm / 0.591 inch
Height	50 mm / 1.97 inch
Depth	19 mm / 0.748 inch

Mechanical Data

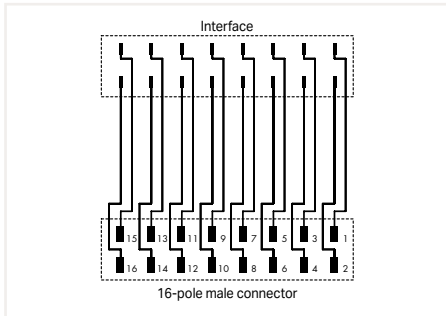
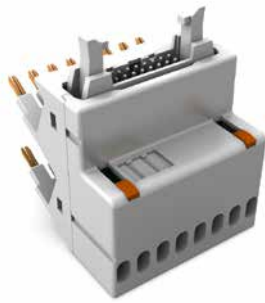
Weight	64.8 g
Color	black

Environmental Requirements

Surrounding air temperature (operation)	-25 ... +70 °C
Protection type	IP20
EMC immunity to interference	Per EN 61000-4-3, EN 61000-4-6
EMC emission of interference	Per EN 55022

3

Interface Adapter 857 Series

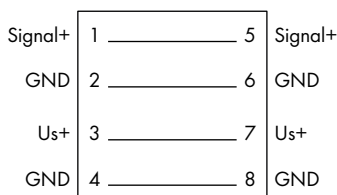


Interface Adapter; with 16-pole ribbon cable connector (DIN 41651); analog

	Item No.	Pack. Unit
	857-980	1

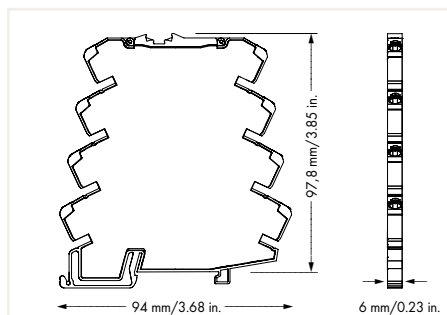
Electrical Data	
Inputs/Outputs	8-channel analog input or output
Circuit type	Analog
Limiting continuous current	1 A
Contact resistance	≤ 20 mΩ
Safety and Protection	
Pollution degree	2
Overvoltage category	III
Test voltage	500 VAC; 50 Hz; 1 min
Connection Data	
Connection type 1	System
Pole number 1	16
Connector 1	DIN 41651 male connector
Performance level 1	3
Connection type 2	Field
Pole number 2	16
Design 2	Plug for jumper slot
Mechanical Data	
Mounting type	Pluggable module
Material Data	
Weight	41.4 g
Environmental Requirements	
Surrounding air temperature (operation)	-20 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Supply and Through Module 857 Series



Supply and Through Module

Item No.	Pack. Unit
857-979	25



Short description:

WAGO's supply and through module transmits electrically isolated signals, e.g., in conjunction with the 857-980 Interface Adapter for analog signals (Item No. 857-980). When used as a supply module, it transmits the power from the connected clamping points to the adjacent modules via push-in type jumper bars.

Electrical Data

Operating voltage	≤ 33 V AC/DC
Continuous current (max.)	8 A
Contact resistance	≤ 10 Ω

Safety and Protection

Protection type	IP20
-----------------	------

Connection Data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Geometric Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch

Mechanical Data

Mounting type	DIN-35 rail
Protection type	IP20

Material Data

Weight	28.8 g
--------	--------

Environmental Requirements

Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and Specifications

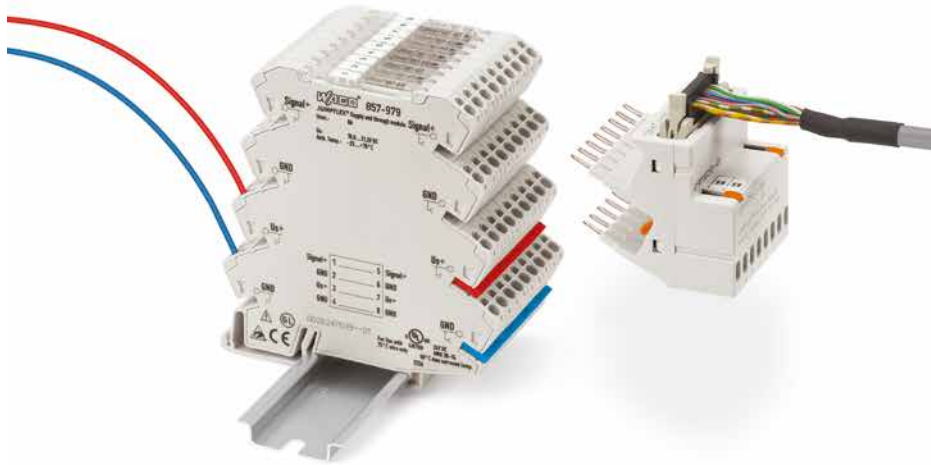
Conformity marking	CE
--------------------	----

857-979**Application example:**

Power supply for 8 modules with plugged interface adapter

- WAGO interface adapter, 857-980
- WAGO ribbon cable, 706-100/1602-200, 16-pole socket/open-ended
- Push-in type jumper bar, 9-way, 859-409

1



2

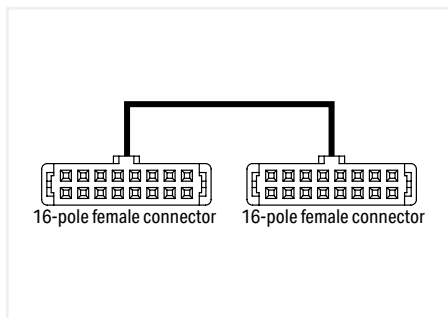


Connection Cable; Paired with an Interface Adapter

706 Series



3



Connection Cable; 16-pole;
DIN 41651 connector; 16-pole; DIN 41651 connector;
Conductor cross section: 0.14 mm²/24 AWG

Length	Item No.	Pack. Unit
1 m	706-753/301-100	1
2 m	706-753/301-200	1
3 m	706-753/301-300	1

WAGO's 16-pole connection cables transmit the signal one-to-one from the 16-pole connector and are available in 1-, 2- and 3-meter lengths. Signal transmission from the 857-980 Interface Adapter is also possible.

They are suitable for system wiring when paired with WAGO's Interface Adapter (Item No. 857-980).

Note:

When using more than 10 wires, the maximum current per wire must be reduced to 0.7 A.

Electrical Data

Operating voltage	≤ 35 VDC
Current per wire (max.)	1 A

Safety and Protection

Degree of protection	IP20
----------------------	------

Connection Data

Connection type 1	System
Pole number 1	16
Pluggable connectors	Pluggable connector per DIN 41651; Female connector
Connection type 2	System
Pole number 2	16
Connector 2	Pluggable connector per DIN 41651; Female connector
Cable type	LiYY
Wire cross-section	0.14 mm ²
Color code	per DIN VDE 47100

Environmental Requirements







Surrounding air temperature (operation)	-25 ... +70 °C
---	----------------

Connection Cable; Paired with an Interface Adapter 706 Series



Connection Cable; 16-pole;
DIN 41651 connector; open-ended; Conductor cross
section: 0.14 mm²/24 AWG; UR components

Length	Item No.	Pack. Unit
2 m	706-100/1602-200	1

Color Coding		HE 10 16-pole
acc. to DIN VDE 47100		Contact Number
white		1
brown		2
green		3
yellow		4
gray		5
pink		6
blue		7
red		8
black		9
violet		10
gray/pink		11
red/blue		12
white/green		13
brown/green		14
white/yellow		15
yellow/brown		16

Note:

When using more than 10 wires, the maximum current per wire must be reduced to 0.7 A.

Electrical Data

Operating voltage	≤ 35 VDC
Current per wire (max.)	1 A

Safety and Protection

Degree of protection	IP20
----------------------	------

Connection Data

Connectors	1 x 16-pole connector per DIN 41651; open-ended
Color code	DIN VDE 47100
Wire cross section	0.14 mm ² /24 AWG LiYY

Physical Data

Cable length	2 m
--------------	-----

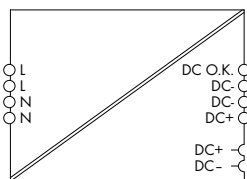
Material Data

Weight	202 g
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Environmental Requirements

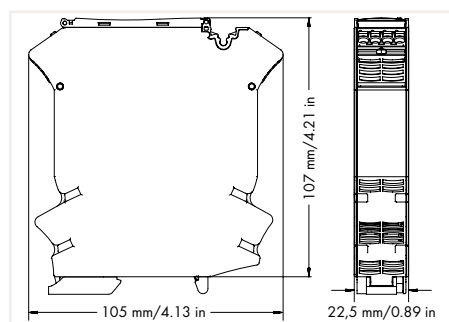
Surrounding air temperature (operation)	-25 ... +70 °C
---	----------------

Switched-Mode Power Supply in 2857 Series Housing 787 Series



Switched-Mode Power Supply; for signal conditioners;
1-phase; Output voltage: 24 VDC; Output current: 1 A

Item No.	Pack. Unit
787-2852	1



- Switched-mode power supply in 22.5 mm wide 2857 Series housing, same profile as 2857 and 857 Series Signal Conditioners
- Both 24 VDC and 0 V output voltage can be easily supplied to adjacent modules via 859-4xx Jumpers
- Pluggable *picoMAX*® connection technology
- Natural convection cooling
- DC OK message as active signal output (24 VDC; 20 mA)
- Integrated redundancy diode enables easy fail-safe power supply via parallel connection of two power supplies
- Approvals for worldwide applications with modules (pending)

Input	
Phases	1
Nominal input voltage $U_{i, \text{nom}}$	100 ... 240 VAC
Input voltage range	85 ... 264 VAC; 120 ... 372 VDC
Nominal mains frequency range	47 ... 63 Hz; 0 Hz
Input current I_i	≤ 0.28 A (240 VAC; nominal load); ≤ 0.49 A (100 VAC; nominal load)
Discharge current	≤ 1 mA
Inrush current	≤ 30 A
Power factor	≥ 0.6 (230 VAC, nominal load; per EN 61000-3-2)
Power factor correction (PFC)	None
Mains failure hold-up time	≥ 20 ms (100 VAC)

Output	
Nominal output voltage $U_{o, \text{nom}}$	24 VDC (SELV)
Default setting	24 VDC
Nominal output current $I_{o, \text{nom}}$	1 A
Nominal output power	24 W
Adjustment accuracy	≤ 2 %
Deviation; Dynamic load change: 10 ... 90 %	≤ 1 %
Residual ripple	≤ 100 mV (peak-to-peak)
Current limitation	$1.1 \times I_{o, \text{nom}}$ typ.
Overload behavior	Constant current

Signaling and Communication	
Signaling	1 x DC OK LED (green); 1 x Overload LED (red); 1 x active DC OK signal output (24 VDC; 20 mA)
Status indication	Green LED ($U_o > 21.5$ V); Red LED (overload)

Efficiency/Power Losses	
Power loss P_i	≤ 1 W (230 VAC; no load); ≤ 4.3 W (230 VAC; nominal load)
Power loss (max.) $P_{i, \text{max}}$	≤ 5 W (100 VAC / 24 VDC; 1 A)
Efficiency (typ.)	86 % (230 VAC; nominal load); 84 % (110 VAC, nominal load);

Fuse Protection	
Internal fuse	T 2 A / 250 VAC
Recommended backup fusing	Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C

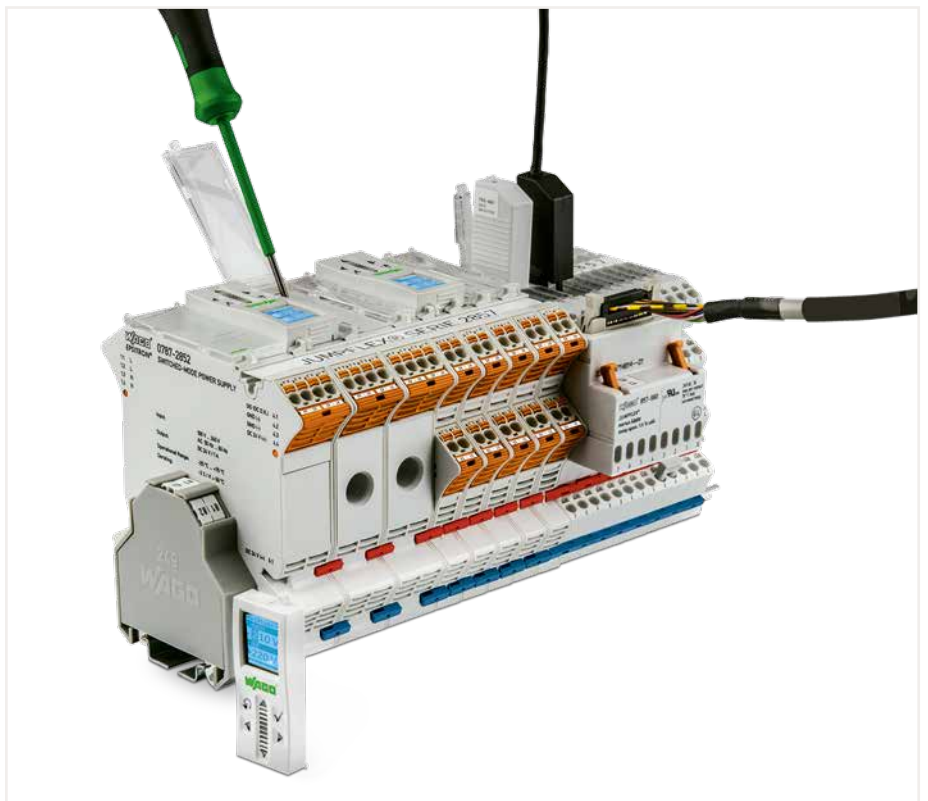
Safety and Protection	
Isolation voltage (pri.-sec.)	4.242 kVDC
Pollution degree	2
Protection class	II
Protection type	IP20 (per EN 60529)
Feedback voltage	≤ 60 VDC
Transient suppression (primary)	Varistor
Overvoltage protection (secondary)	Internal protective circuit; ≤ 29 ... 31 VDC (in the event of a fault)
Short-circuit-protected	Yes
Open-circuit-proof	Yes
Parallel operation	Yes, for two devices of the same type
Series operation	Yes, for two devices of the same type
MTBF	$> 500,000$ h (at $+25$ °C per IEC 61709)

Connection Data	
Number of jumper slots	4
Connection type 1	Input/output/signaling
Connection technology	Push-in CAGE CLAMP®
WAGO Connector	<i>picoMAX</i> ® 5.0
Solid conductor	0.2 ... 2.5 mm ² / 24 ... 10 AWG
Fine-stranded conductor	0.2 ... 2.5 mm ² / 24 ... 10 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Geometric Data	
Width	22.5 mm / 0.89 inch
Height from upper-edge of DIN-rail	107 mm / 4.21 inch
Depth	105 mm / 4.13 inch

Mechanical Data	
Mounting type	DIN-35 rail (EN 60715)
Material Data	
Weight	200 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-2 %/K (> +60 °C)
Climatic category	3K3 (per EN 60721)
Standards and Specifications	
Conformity marking	CE
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 60950-1; UL 60950*; cULus 508*; ANSI-ISA 12.12.01 (Class I Div 2)*; ATEX/IEC Ex*; DNV GL (*pending)

3



Application example

Accessories

3



Push-in type jumper bar; light gray; insulated; 18 A		
Description	Item No.	Pack. Unit
2-way	859-402	200 (8x25)
3-way	859-403	200 (8x25)
4-way	859-404	200 (8x25)
5-way	859-405	200 (8x25)
6-way	859-406	100 (4x25)
7-way	859-407	100 (4x25)
8-way	859-408	100 (4x25)
9-way	859-409	100 (4x25)
10-way	859-410	100 (4x25)

Item no. suffixes for colored push-in type jumper bars	
	Item No.
yellow	.../000-029
red	.../000-005
blue	.../000-006



Comb-style jumper bar; insulated		
	Item No.	Pack. Unit
2-way	281-482	100



Operating tool with a partially insulated shaft; Type 2; Blade: 3.5 x 0.5 mm		
	Item No.	Pack. Unit
	210-720	1

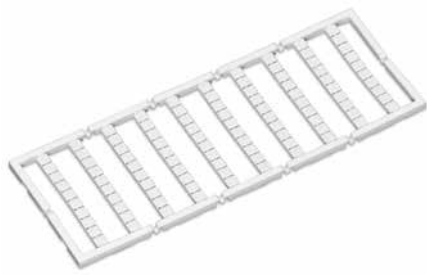


End stop		
Width	Item No.	Pack. Unit
6 mm	249-116	1
10 mm	249-117	1
14 mm	249-197	1



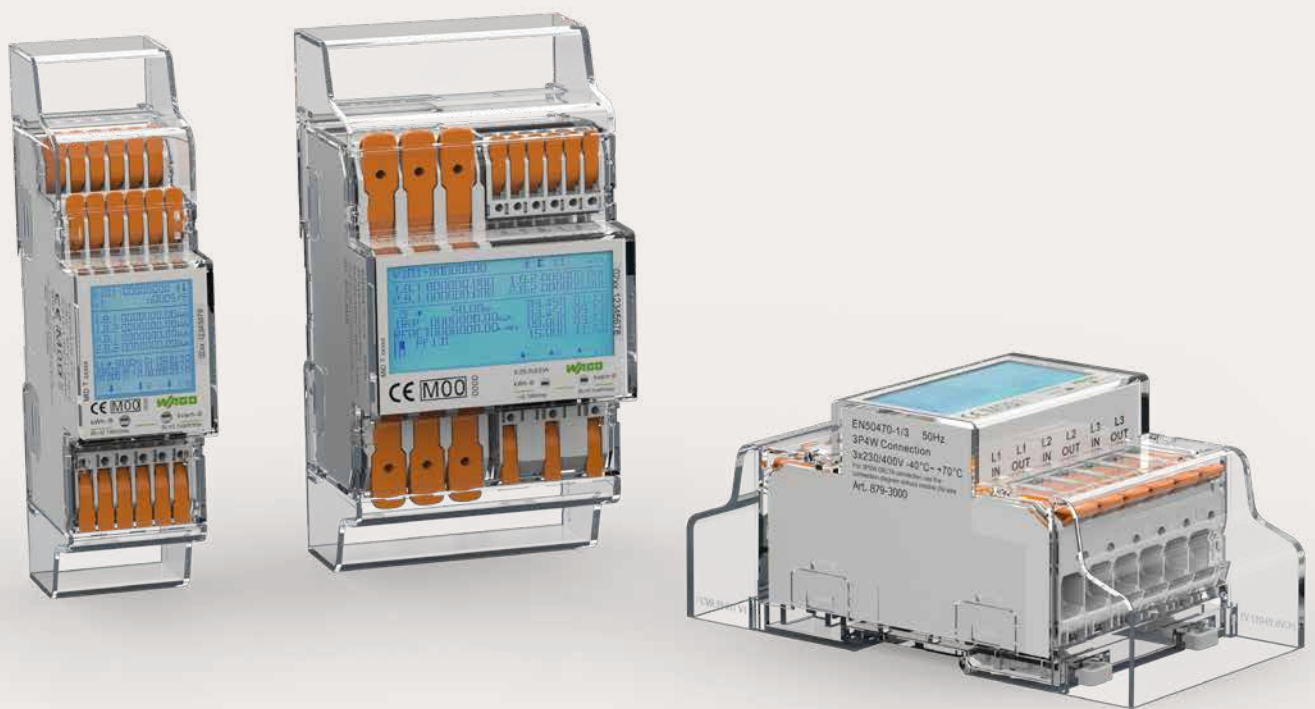
Test pin		
	Item No.	Pack. Unit
	735-500	1

Marking










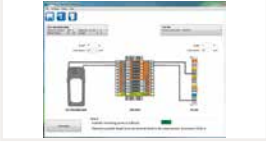
WMB Multi Marking System		
Marking	Item No.	Pack. Unit
plain	793-501	5 cards
1 ... 10 (10 x)	793-502	5 cards
11 ... 20 (10 x)	793-503	5 cards
21 ... 30 (10 x)	793-504	5 cards
31 ... 40 (10 x)	793-505	5 cards
41 ... 50 (10 x)	793-506	5 cards
1 ... 50 (2 x)	793-566	5 cards

Marking Strip for TOPJOB® S; white; plain; 11 mm wide		
	Item No.	Pack. Unit
50 m reel	2009-110	1







WAGO Current and Energy Measurement Technology

WAGO Current and Energy Measurement Technology

	Page
	Energy consumption meter; with Push-in CAGE CLAMP® Connection Technology 352
	Current Transformers Plug-In Current Transformers; with CAGE CLAMP® Connection Technology; 855 Series 358 Plug-In Current Transformers; for Billing Measurement; 855 Series 362 Plug-In Current Transformers; with <i>picoMAX</i> ® Connection Technology; 855 Series 364 Split-Core Current Transformers; 855 Series 366
	Rogowski Coils 855 Series 370
	Terminal Block Assemblies for Current and Voltage Transformers 2007 Series 372
	Current Sensors with Bus Connection 789 Series 374 Accessories 380
	Power Taps 855 Series 390
	Current and Voltage Taps 855 Series 397
	Line Length Calculation for Current Transformers 400

Selection Guide: Current Transformers

The Right Solution for Every Application

Current Transformers 855 Series	Split-Core Current Transformers	Plug-In Current Transformers with CAGE CLAMP® Connection Technology
		
Application	Retrofit	New systems
Coil bobbin	Separable	Closed
Connection technology	Connection cable (color coded)	CAGE CLAMP®
Mounting	Round cable (insulated), copper current bar (insulated)	Round cable, copper current bar, DIN-rail, mounting plate
Compatibility with other WAGO components	750-493, (750-493/000-001) 750-494, (750-494/000-001) 750-495, (750-495/000-001) 857-550, 2857-570/024-001 2857-570/024-005	
Primary rated current	60 ... 1000 A	50 ... 2500 A
Secondary rated current	1 A / 5 A	1 A / 5 A
Accuracy class	0.5; 1 or 3	1 or 3
Surrounding air temperature	-10 ... +55 °C	-5 ... +50 °C
Standards	EN 61869-2	EN 61869-2
Approvals	-	
Connection examples		

* In the measurement range between 0.8 and 32 A and in combination with WAGO's 3-Phase Power Measurement Modules, accuracy class 0.5 per EN 61869-2 is achieved.

Plug-In Current Transformers with <i>picoMAX</i> ® Pluggable Connectors		Rogowski Coils RC 70 / RC 125 / RC 175	Current and Voltage Taps
			
New systems		Retrofit	New systems
Closed		Bayonet connector, separable	Closed
<i>picoMAX</i> ®		Connection cable	Push-in CAGE CLAMP®
Round cable, copper current bar, mounting plate		Round cable, copper current bar	Jumper slot of the 285 series 2-Conductor Through Teremin Blocks 285-150, 285-195, 285-1185, 285-141, 285-181, 285-1161
750-493, 750-494 750-495, 857-550, 2857-570/024-001		750-495/000-002 857-552 2857-570/024-000	750-493 750-494 750-495 857-550 2857-570/024-001
32 A	35 / 64 A	Up to 4000 A	150 ... 350 A
320 mA	1 A	22.5 mV/kA	1 A
0.5*	1	0.5	0.5
-10 ... +55 °C		-40 ... +80 °C	-25 ... +70 °C
EN 61869-2		IEC 61010-1 / EN 61869-2	EN 61869-2, EN 60947-7-3, IEC 60068-2-6
–		UL listed	–
			








Selection Guide: WAGO Measurement Technology

The Right Solution for Every Application

Measurement Devices 879, 750, 857 and 2857 Series	Energy Meters			Through-Hole Current Signal Conditioner	Current Signal Conditioner	Voltage Signal Conditioner
Illustration						
Application	Measurement, indication, billing (MID approval)			Measurement, isolation, amplification, filtering, conversion		
Input voltage	3 x 230 / 400 VAC	3 x 230 / 400 VAC	3 x 230 / 400 VAC			300 VAC/VDC
Input Current	Direct: 65 A	Direct: 65 A	1 A / 5 A*	Via hall sensor: max. 100 AAC/ADC	Direct: max. 6 AAC/ADC	
Output	Modbus®, M-Bus and 2 x S0 interfaces			Analog output module (±10 V / ±20 mA) Digital output Relay output (max. 6 A)	Analog output (±10 V / ±20 mA) Digital output	
Energy consumption	x	x	x			
Active, apparent and reactive energy/power	x	x	x			
Phase position	x	x	x			
Rotary field detection	x	x	x			
Power factor	x	x	x			
Four-quadrant operation (inductive, capacitive, consumer, generator)	x	x	x			
Neutral conductor measurement						
Specialty functions	Display and Bluetooth®					
Other product variants						
Housing width	72 mm (4TE)	72 mm (4TE)	35 mm (2TE)	22,5 mm	6 mm	6 mm
Item number	879-3000	879-3020	879-3040	2857-550	857-551	857-560
Note	Plug-in current transformers, split-core current transformers, Rogowski coils, voltage taps – see "Selection Guide: WAGO Current Transformers"					

* Only with a current transformer

** Only with a Rogowski coil

3-Phase Power Measurement Modules					3-Phase Power Measurement Module	1-Phase Power Measurement Module
						
Measurement and evaluation with the WAGO I/O System			AC/DC current measurement via external shunt	Measurement in the medium-voltage range	Measurement, evaluation and recording at a distance from the control level	Measurement, isolation, amplification, filtering, conversion
3~ 277 / 480 VAC 2 x 277 VDC	3~ 277 / 480 VAC 2 x 277 VDC	3~ 400 / 690 VAC	3~ 277 / 480 VAC 2 x 277 VDC	3~ 20 kV exclusively via sensors per IEC 61869-7	3~ 400 / 690 VAC	500 VAC/VDC
1 A (750-493)* 5 A (750-493/000-001)*	1 A (750-494)* 5 A (750-494/000-001)*	1 A (750-495)* 5 A (750-495/000-001)* to 4000 A (750-495/000-002)**	Depending on external shunt (50 ... 300 mV)	300 A exclusively via sensors per IEC 61869-8	1 A (2857-570/024-001)* 5 A (2857-570/024-005)* to 4000 A (2857-570/024-000)**	Direct: max. 8 AAC/ADC
Prozess data in the WAGO I/O System					RS-485 Serial interface (Modbus-RTU) Digital output	Analog output (±10 V / ±20 mA) Digital output Relay output (max. 6 A)
x	x	x	x	x	x	x
x	x	x	x	x	x	x
x	x	x	x	x	x	x
	x	x	x	x	x	
(x)	x	x	x	x	x	
	x	x	x	x	x	
		x			x	
					microSD slot	Digital output as S0 interface
	Extended temperatur range: -20 ... +60 °C: 750-494/025-000 (1 A), 750-494/025-001 (5 A)	750 XTR: 750-495/040-000 (1 A), 750-495/040-001 (5 A), 750-495/040-002 (Rogowski coil)				
12 mm	12 mm	24 mm	12 mm	24 mm	72 mm (4TE)	22,5 mm
See information on current	See information on current	See information on current	750-494/000-005	750-495/040-010	See information on current	2857-569
Plug-in current transformers, split-core current transformers, Rogowski coils, voltage taps – see "Selection Guide: WAGO Current Transformers"						

Energy Meter (MID); with Push-in CAGE CLAMP® and Lever; Direct Connection (4PU) 879 Series



9	+	(M-bus)			
8	B/-	(RS485)	L3	OUT	
7	A	(RS485)			
6	S02		L3	IN	
5	GND				
4	S01		L2	OUT	
11	Tariff	230 V~	L2	IN	
10	Tariff	230 V~	L1	OUT	
N			L1	IN	

Energy consumption meter; for direct connection; 65A; 3x230/400V; 50Hz; MID; Modbus® & M-Bus; 2 x S0 interface; 4DU; 4PU

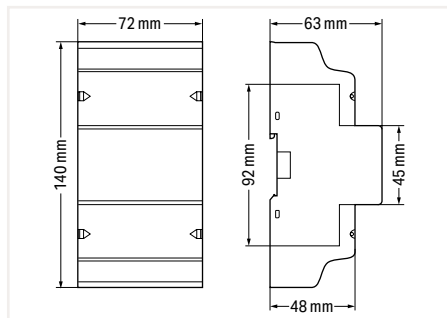
	Item No.	Pack. Unit
	879-3000	1

Short description:

Comprehensive energy measurement is necessary for optimizing energy consumption. WAGO now has new energy meters in its portfolio that simplify this task while providing several key advantages. They use the push-in connection technology with a lever, making them connect quickly and easily. The devices have a width of just 72 mm for direct measurement. These widths save a tremendous amount of control cabinet space. In addition to the values for active and reactive energy, the energy meters also record the mains frequency as well as current, voltage and power for all phases. And the user can conveniently see all of these energy characteristics at a glance on a large, illuminated display.

Features:

- Saving time at every level thanks to the Push-in CAGE CLAMP® and lever
- Real space savings: 72 mm wide (4PU)
- The communications pro: M-Bus and Modbus® interface and 2 S0 pulse outputs
- Full transparency at a glance: Display energy quality characteristics on an illuminated full-format display
- Intuitive configuration: Touch-sensitive controls and configuration app via Bluetooth®



Configuration

Configuration options	Touch-sensitive controls; Configuration app via Bluetooth®
-----------------------	---

Input

Input voltage range	3 x 230 ... 400 VAC; ±20 %
Reference current I_{ref}	5 A
Input current	65 A
Frequency range	45 ... 65 Hz
Network configuration	Two-wire, three-wire and four-wire networks
Power consumption P_{max}	≤ 2 W/phase; ≤ 10 VA/phase
Measured variable	Active and reactive energy in supply and reference direction

Communication

Communication	Modbus®, M-Bus; Bluetooth®
Interface	RS-485 (2-wire); 2x S0 interfaces (configurable)
Rate control input	230 VAC/VDC
Indicators	LCD with backlight

Measurement Error

Accuracy class	Class B (= 1 % error); Active energy per EN 50470-3
Calibration validity period	8 years

Power Supply

Power supply type	Via measurement circuit
Power consumption P_{max} (phase; effective power)	2 W
Power consumption P_{max} (phase; apparent power)	10 VA

Safety and Protection

Dielectric strength	4 kV, 1 min; 1.2/50 μs at 6 kV
Protection class	IP51 (front side); IP20 (connection)
Protection class	II
Pollution degree	2

Connection Data

Connection type (1)	Voltage/Current
Connection technology	Push-in CAGE CLAMP®
Actuation type	Lever
WAGO Connector	2616 Series
Solid conductor	0.75 ... 16 mm ² / 18 ... 4 AWG
Fine-stranded conductor	0.75 ... 25 mm ² / 18 ... 4 AWG
Fine-stranded conductor; with insulated ferrule	0.75 ... 16 mm ²
Fine-stranded conductor; with uninsulated ferrule	0.75 ... 16 mm ²
Fine-stranded conductor; with twin ferrule	0.75 ... 6 mm ²
Strip length	18 ... 20 mm / 0.71 ... 0.79 inch
Connection type 2	Communication and rate control input
Connection technology 2	Push-in CAGE CLAMP®
Actuation type 2	Lever
WAGO Connector 2	2604 Series
Solid conductor 2	0.2 ... 4 mm ² / 24 ... 12 AWG
Fine-stranded conductor 2	0.2 ... 4 mm ² / 24 ... 12 AWG
Fine-stranded conductor; with insulated ferrule 2	0.25 ... 2.5 mm ²
Fine-stranded conductor; with uninsulated ferrule 2	0.25 ... 2.5 mm ²
Fine-stranded conductor; with twin ferrule 2	0.25 ... 1.5 mm ²
Strip length 2	9 ... 11 mm / 0.35 ... 0.43 inch

Physical Data

Width	72 mm
Height	140 mm
Depth	63 mm
Note (dimensions)	Height without cover: 92 mm

Mechanical Data

Mounting type	DIN-35 rail (EN 60715)
---------------	------------------------

Material Data

Housing material	PC 940A
------------------	---------

Environmental Requirements	
Surrounding air temperature (operation)	-40 ... +70 °C
Relative humidity	≤ 75 % (during storage ≤ 95 %)
Standards and Specifications	
Conformity marking	CE
Standards/Specifications	EN 50470-1/3; MID-compliant

Energy Meter (MID); with Push-in CAGE CLAMP® and Lever; Direct Connection (4PS) 879 Series



9	(M-bus)	L3	OUT
8	B/- (RS485)	L3	IN
7	A (RS485)		
6	S02	L2	OUT
5	GND		
4	S01	L2	IN
11	Tariff 230 V~		
10	Tariff 230 V~	L1	OUT
N			
		L1	IN

Energy consumption meter; for direct connection; 65A; 3x230/400V; 50Hz; MID; Modbus® & M-Bus; 2 x S0 interface; 4DU; 4PS

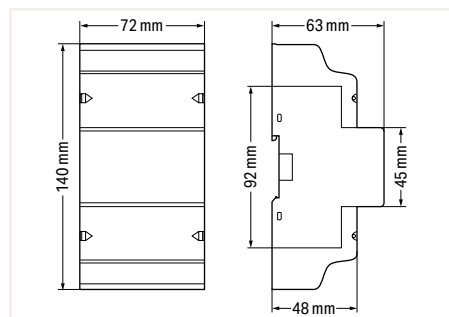
	Item No.	Pack. Unit
	879-3020	1

Short description:

Comprehensive energy measurement is necessary for optimizing energy consumption. WAGO now has new energy meters in its portfolio that simplify this task while providing several key advantages. They use the push-in connection technology with a lever, making them connect quickly and easily. The devices have a width of just 72 mm for direct measurement. These widths save a tremendous amount of control cabinet space. In addition to the values for active and reactive energy, the energy meters also record the mains frequency as well as current, voltage and power for all phases. And the user can conveniently see all of these energy characteristics at a glance on a large, illuminated display.

Features:

- Saving time at every level thanks to the Push-in CAGE CLAMP® and lever
- Real space savings: 72 mm wide (4PS)
- The communications pro: M-Bus and Modbus® interface and 2 S0 pulse outputs
- Full transparency at a glance: Display energy quality characteristics on an illuminated full-format display
- Intuitive configuration: Touch-sensitive controls and configuration app via Bluetooth®



Configuration	
Configuration options	Touch-sensitive controls; Configuration app via Bluetooth®

Input	
Input voltage range	3 x 230 ... 400 VAC; ±20 %
Reference current I_{ref}	5 A
Input current	65 A
Frequency range	45 ... 65 Hz
Network configuration	Two-wire, three-wire and four-wire networks
Measured variable	Active and reactive energy in supply and reference direction

Communication	
Communication	Modbus®, M-Bus; Bluetooth®
Interface	RS-485 (2-wire); 2x S0 interfaces (configurable)
Rate control input	230 VAC/VDC
Indicators	LCD with backlight

Measurement Error	
Accuracy class	Class B (= 1 % error); Active energy per EN 50470-3
Calibration validity period	8 years

Power Supply	
Power supply type	Via measurement circuit
Power consumption P_{max} (phase; effective power)	2 W
Power consumption P_{max} (phase; apparent power)	10 VA

Safety and Protection	
Dielectric strength	4 kV, 1 min; 1.2/50 µs at 6 kV
Protection class	IP51 (front side); IP20 (connection)
Protection class	II
Pollution degree	2

Connection Data	
Connection type (1)	Voltage/Current
Connection technology	Push-in CAGE CLAMP®
Actuation type	Lever
WAGO Connector	2616 Series
Solid conductor	0.75 ... 16 mm² / 18 ... 4 AWG
Fine-stranded conductor	0.75 ... 25 mm² / 18 ... 4 AWG
Fine-stranded conductor; with insulated ferrule	0.75 ... 16 mm²
Fine-stranded conductor; with uninsulated ferrule	0.75 ... 16 mm²
Fine-stranded conductor; with twin ferrule	0.75 ... 6 mm²
Strip length	18 ... 20 mm / 0.71 ... 0.79 inch
Connection type 2	Communication and rate control input
Connection technology 2	Push-in CAGE CLAMP®
Actuation type 2	Lever
WAGO Connector 2	2604 Series
Solid conductor 2	0.2 ... 4 mm² / 24 ... 12 AWG
Fine-stranded conductor 2	0.2 ... 4 mm² / 24 ... 12 AWG
Fine-stranded conductor; with insulated ferrule 2	0.25 ... 2.5 mm²
Fine-stranded conductor; with uninsulated ferrule 2	0.25 ... 2.5 mm²
Fine-stranded conductor; with twin ferrule 2	0.25 ... 1.5 mm²
Strip length 2	9 ... 11 mm / 0.35 ... 0.43 inch

Physical Data	
Width	72 mm
Height	140 mm
Depth	63 mm
Note (dimensions)	Height without cover: 92 mm

Mechanical Data	
Mounting type	DIN-35 rail (EN 60715)

Material Data	
Housing material	PC 940A

Environmental Requirements	
Surrounding air temperature (operation)	-40 ... +70 °C
Relative humidity	≤ 75 % (during storage ≤ 95 %)
Standards and Specifications	
Conformity marking	CE
Standards/Specifications	EN 50470-1/3; MID-compliant

Energy Meter (MID); with Push-in CAGE CLAMP® and Lever; Transformer Connection (2PCT) 879 Series



11	Tariff 230 V~	9	+ (M-bus)	CT3	OUT
10	Tariff 230 V~	8	B/- (RS485)	CT3	IN
	N	7	A (RS485)	CT2	OUT
	U3	6	S02	CT2	IN
	U2	5	GND	CT1	OUT
	U1	4	S01	CT1	IN

Energy Meter; Transformer Connection (6 A); 3 x 230/400 V; 50 Hz; MID; Modbus - M-Bus; 2 x interface; 2 DU; 2PCT

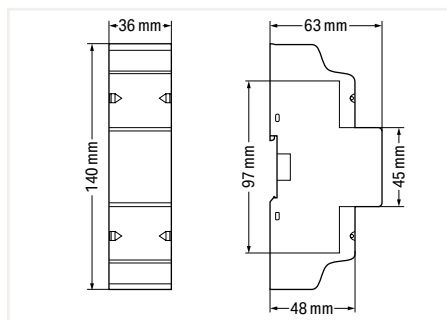
	Item No.	Pack. Unit
	879-3040	1

Short description:

Comprehensive energy measurement is necessary for optimizing energy consumption. WAGO now has new energy meters in its portfolio that simplify this task while providing several key advantages. They use the push-in connection technology with a lever, making them connect quickly and easily. Versions for current transformers are even slimmer at only 35 mm. These widths save a tremendous amount of control cabinet space. In addition to the values for active and reactive energy, the energy meters also record the mains frequency as well as current, voltage and power for all phases. And the user can conveniently see all of these energy characteristics at a glance on a large, illuminated display.

Features:

- Saving time at every level thanks to the Push-in CAGE CLAMP® and lever
- Real space savings: 35 mm wide (2PCT)
- The communications pro: M-Bus and Modbus® interface and 2 S0 pulse outputs
- Full transparency at a glance: Display energy quality characteristics on an illuminated full-format display
- Intuitive configuration: Touch-sensitive controls and configuration app via Bluetooth®



Configuration

Configuration options Touch-sensitive controls; Configuration app via Bluetooth®

Input

Input voltage range	3 x 230 ... 400 VAC; ±20 %
Reference current I_{ref}	1 A
Input current	6 A
Current transformer (secondary)	1 A / 5 A
Current transformer ratio	1 ... 10,000
Frequency range	45 ... 65 Hz
Network configuration	Two-wire, three-wire and four-wire networks
Measured variable	Active and reactive energy in supply and reference direction

Communication

Communication	Modbus®, M-Bus; Bluetooth®
Interface	RS-485 (2-wire); 2x S0 interfaces (configurable)
Rate control input	230 VAC/VDC
Indicators	LCD with backlight

Measurement Error

Accuracy class	Class B (= 1 % error); Active energy per EN 50470-3
Calibration validity period	8 years

Power Supply

Power supply type	Via measurement circuit
Power consumption P_{max} (phase; effective power)	2 W
Power consumption P_{max} (phase; apparent power)	10 VA

Safety and Protection

Dielectric strength	4 kV, 1 min; 1.2/50 µs at 6 kV
Protection class	IP51 (front side); IP20 (connection)
Protection class	II
Pollution degree	2

Connection Data

Connection type (1)	Voltage/Current
Connection technology	Push-in CAGE CLAMP®
Actuation type	Lever
WAGO Connector	2604 Series
Solid conductor	0.2 ... 4 mm² / 24 ... 12 AWG
Fine-stranded conductor	0.2 ... 4 mm² / 24 ... 12 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 2.5 mm²
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 2.5 mm²
Fine-stranded conductor; with twin ferrule	0.25 ... 1.5 mm²
Strip length	9 ... 11 mm / 0.35 ... 0.43 inch
Connection type 2	Communication and rate control input
Connection technology 2	Push-in CAGE CLAMP®
Actuation type 2	Lever
WAGO Connector 2	2604 Series
Solid conductor 2	0.2 ... 4 mm² / 24 ... 12 AWG
Fine-stranded conductor 2	0.2 ... 4 mm² / 24 ... 12 AWG
Fine-stranded conductor; with insulated ferrule 2	0.25 ... 2.5 mm²
Fine-stranded conductor; with uninsulated ferrule 2	0.25 ... 2.5 mm²
Fine-stranded conductor; with twin ferrule 2	0.25 ... 1.5 mm²
Strip length 2	9 ... 11 mm / 0.35 ... 0.43 inch

Physical Data

Width	36 mm
Height	140 mm
Depth	63 mm
Note (dimensions)	Height without cover: 98.2 mm

Mechanical Data

Mounting type	DIN-35 rail (EN 60715)
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Material Data

Housing material	PC 940A
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Environmental Requirements	
Surrounding air temperature (operation)	-40 ... +70 °C
Relative humidity	≤ 75 % (during storage ≤ 95 %)
Standards and Specifications	
Conformity marking	CE
Standards/Specifications	EN 50470-1/3; MID-compliant

Plug-In Current Transformer; with CAGE CLAMP® Connection 855 Series



Short description:

WAGO's plug-in units (855 Series) are inductive, single-conductor current transformers. Due to the measurement principle used, these current transformers are exclusively designed for AC network applications.

Features:

- Screwless CAGE CLAMP® connection technology
- Several mounting options available
- Vibration- and shock-resistant
- High mechanical retention forces
- High current-carrying capacity
- Continuous overload of 120% the nominal primary current
- Low-voltage current transformer for operating voltages up to max. 1.2 kV
- For 690 V power networks
- UL recognized components

Input – Current Transformer	
Rated continuous thermal current I_{cth}	1.2 x I_N
Rated short-time thermal current I_{th}	60 x $I_N/1$ s (max. 100 kA/1 s)
Overcurrent limiting factor	FS5 / FS10 (type dependent; see type plate inscription)
Rated frequency	50 ... 60 Hz
Safety and Protection	
Test voltage	6 kVAC; 50 Hz; 1 min
Highest voltage for equipment U_m	3.75 kVAC _{rms}
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 4 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 4 mm ² / 28 ... 12 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Mechanical Data	
Mounting type	Current transformer (closed); Installation on mounting plate; Mounting on DIN-rail via carrier rail adapter; Mounting on round cable
Material Data	
Insulation class	E
Environmental Requirements	
Surrounding air temperature (operation)	-5 ... +50 °C
Surrounding air temperature (storage)	-25 ... +70 °C
Operating altitude (max.)	1000 m
Standards and Specifications	
Conformity marking	CE
Standards/specifications	EN 61869-1; EN 61869-2; UL: E356480

Accessories



Carrier rail adapter for plug-in current transformers (855-3xx/xxxx-xxxx and 855-4xx/xxxx-xxxx)

Item No.	Pack. Unit
855-9900	1



Quick-mount kit for plug-in current transformers with CAGE CLAMP® connections

Item No.	Pack. Unit
855-9910	1



3-phase power measurement module

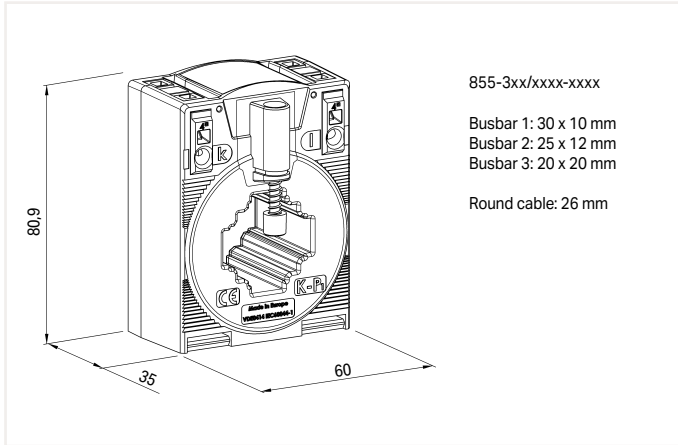
Rated Voltage	Item No.	Pack. Unit
480 VAC	750-493	1
480 VAC	750-494	1
690 VAC	750-495	1



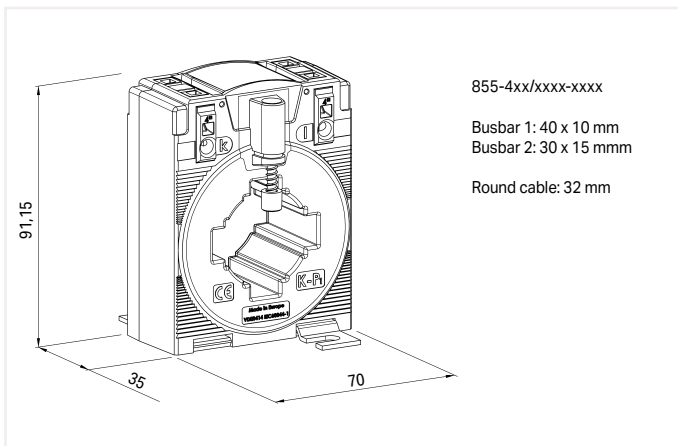
Operating tool with a partially insulated shaft; Type 1; Blade: (3.5 x 0.4) mm

Item No.	Pack. Unit
210-720	1

Plug-In Current Transformer; with CAGE CLAMP® Connection 855 Series



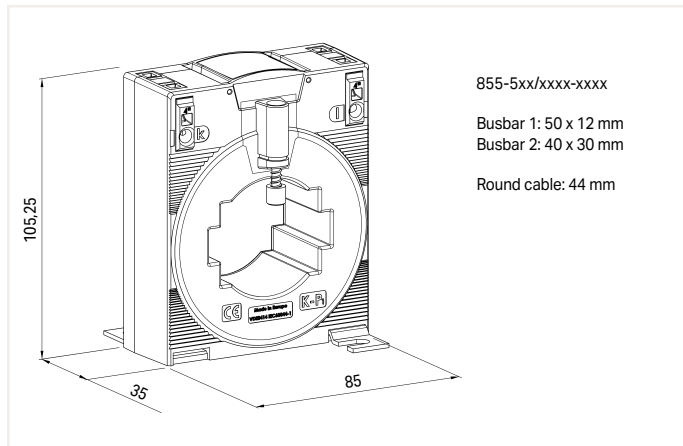
Plug-In Current Transformer; with CAGE CLAMP® Connection					
Primary Rated Current	Secondary Rated Current	Rated Power	Accuracy Class	Item No.	Pack. Unit
50 A	1 A	1.25 VA	3	855-301/050-103	1
50 A	5 A	1.25 VA	3	855-305/050-103	1
60 A	1 A	1.25 VA	1	855-301/060-101	1
60 A	5 A	1.25 VA	1	855-305/060-101	1
75 A	1 A	2.5 VA	1	855-301/075-201	1
75 A	5 A	2.5 VA	1	855-305/075-201	1
100 A	1 A	2.5 VA	1	855-301/100-201	1
100 A	5 A	2.5 VA	1	855-305/100-201	1
150 A	1 A	5 VA	1	855-301/150-501	1
150 A	5 A	5 VA	1	855-305/150-501	1
200 A	1 A	5 VA	1	855-301/200-501	1
200 A	5 A	5 VA	1	855-305/200-501	1
250 A	1 A	5 VA	1	855-301/250-501	1
250 A	5 A	5 VA	1	855-305/250-501	1
300 A	5 A	5 VA	1	855-305/300-501	1
400 A	1 A	10 VA	1	855-301/400-1001	1
400 A	5 A	10 VA	1	855-305/400-1001	1
600 A	1 A	10 VA	1	855-301/600-1001	1
600 A	5 A	10 VA	1	855-305/600-1001	1



Plug-In Current Transformer; with CAGE CLAMP® Connection					
Primary Rated Current	Secondary Rated Current	Rated Power	Accuracy Class	Item No.	Pack. Unit
250 A	1 A	5 VA	1	855-401/250-501	1
250 A	5 A	5 VA	1	855-405/250-501	1
400 A	1 A	5 VA	1	855-401/400-501	1
400 A	5 A	5 VA	1	855-405/400-501	1
600 A	1 A	5 VA	1	855-401/600-501	1
750 A	5 A	5 VA	1	855-405/750-501	1

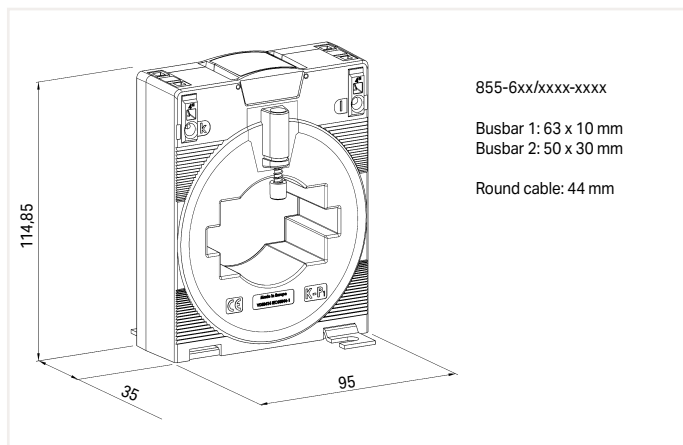
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Plug-In Current Transformer; with CAGE CLAMP® Connection 855 Series



Plug-In Current Transformer; with CAGE CLAMP® Connection					
Primary Rated Current	Secondary Rated Current	Rated Power	Accuracy Class	Item No.	Pack. Unit
400 A	1 A	10 VA	1	855-501/400-1001	1
400 A	5 A	10 VA	1	855-505/400-1001	1
600 A	1 A	10 VA	1	855-501/600-1001	1
600 A	5 A	10 VA	1	855-505/600-1001	1
800 A	1 A	10 VA	1	855-501/800-1001	1
800 A	5 A	10 VA	1	855-505/800-1001	1
1000 A	1 A	10 VA	1	855-501/1000-1001	1
1000 A	5 A	10 VA	1	855-505/1000-1001	1

4

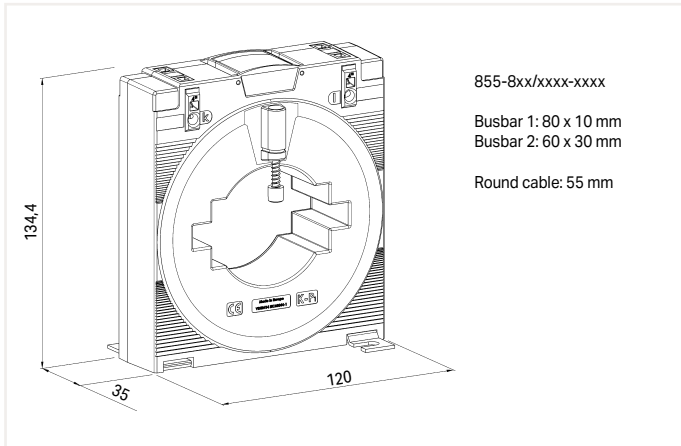


Plug-In Current Transformer; with CAGE CLAMP® Connection					
Primary Rated Current	Secondary Rated Current	Rated Power	Accuracy Class	Item No.	Pack. Unit
1500 A	5 A	5 VA	1	855-605/1500-501	1
1500 A	1 A	5 VA	1	855-601/1500-501	1

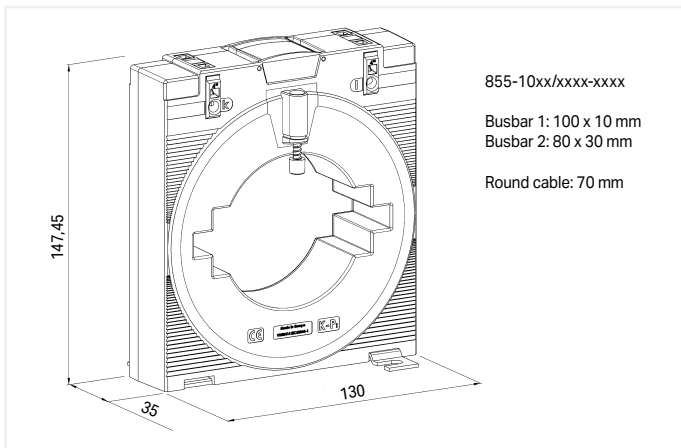
Plug-In Current Transformer; with CAGE CLAMP® Connection 855 Series



Plug-In Current Transformer; with CAGE CLAMP® Connection					
Primary Rated Current	Secondary Rated Current	Rated Power	Accuracy Class	Item No.	Pack. Unit
1000 A	1 A	10 VA	1	855-801/1000-1001	1
2000 A	5 A	10 VA	1	855-805/2000-1001	1
2000 A	1 A	10 VA	1	855-801/2000-1001	1



Plug-In Current Transformer; with CAGE CLAMP® Connection					
Primary Rated Current	Secondary Rated Current	Rated Power	Accuracy Class	Item No.	Pack. Unit
2500 A	5 A	10 VA	1	855-1005/2500-1001	1
2500 A	1 A	10 VA	1	855-1001/2500-1001	1



4

Plug-In Current Transformer for Billing Measurement 855 Series



Short description:

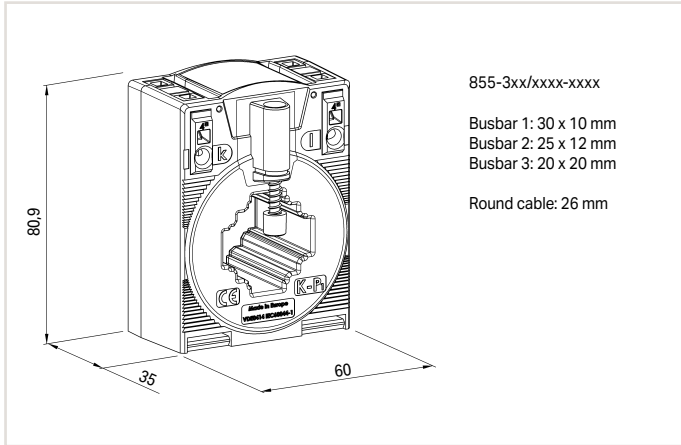
The 855 Series Plug-In Current Transformers for Billing Measurement are inductive, single-conductor current transformers. Due to the measurement principle used, these current transformers are exclusively designed for AC network applications. These plug-in current transformers comply with the conformity assessment procedure (module D) and can be used for billing.

Features:

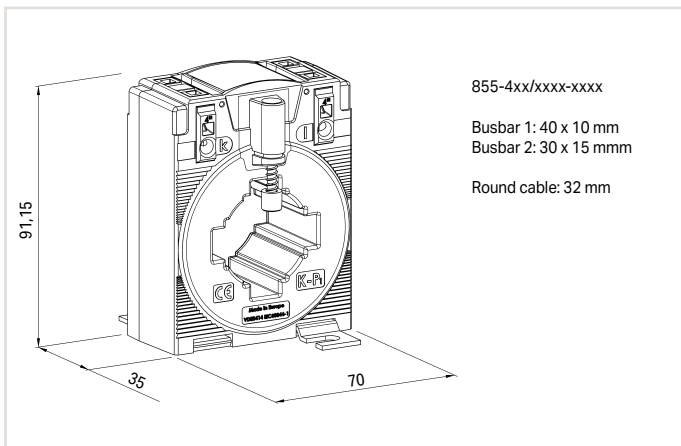
- Screwless CAGE CLAMP® connection technology
- Several mounting options available
- Vibration- and shock-resistant
- High mechanical retention forces
- High current-carrying capacity
- Continuous overload of 120% the nominal primary current
- Low-voltage current transformer for operating voltages up to max. 1.2 kV
- For 690 V power networks
- Accessories: 879-3040; Energy Meter; with Push-in CAGE CLAMP® and Lever; Transformer Connection (2PCT);

Input – Current Transformers	
Rated continuous thermal current I_{cth}	1.2 AC x I_n
Rated short-time thermal current I_{th}	60 x I_n /1 s (max. 100 kA/1 s)
Overcurrent limiting factor	FS5 / FS10 (type dependent; see type plate inscription)
Rated frequency	50 ... 60 Hz
Safety and Protection	
Test voltage	6 kVAC; 50 Hz; 1 min
Highest voltage for equipment U_m	1.2 kVAC _{rms}
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 4 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 4 mm ² / 28 ... 12 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Mechanical Data	
Mounting type	Current transformer (closed); Installation on mounting plate; Mounting on DIN-rail via DIN-rail adapter; Mounting on round cable
Material Data	
Insulation class	E
Environmental Conditions	
Surrounding air temperature (operation)	-5 ... +50 °C
Surrounding air temperature (storage)	-25 ... +70 °C
Operating altitude, max.	1000 m
Standards and Specifications	
Conformity marking	CE
Standards/specifications	EN 61869-1; EN 61869-2

Plug-In Current Transformer for Billing Measurement 855 Series



Plug-In Current Transformer for Billing Purposes					
Primary Rated Current	Secondary Rated Current	Rated Power	Accuracy Class	Item No.	Pack. Unit
100 A	5 A	2.5 VA	0,5	855-305/100-209	1
150 A	5 A	2.5 VA	0,5	855-305/150-209	1
200 A	5 A	5 VA	0,5	855-305/200-509	1
250 A	5 A	5 VA	0,5	855-305/250-509	1
300 A	5 A	5 VA	0,5	855-305/300-509	1
400 A	5 A	5 VA	0,5	855-305/400-509	1
500 A	5 A	5 VA	0,5	855-305/500-509	1
600 A	5 A	5 VA	0,5	855-305/600-509	1
750 A	5 A	5 VA	0,5	855-305/750-509	1



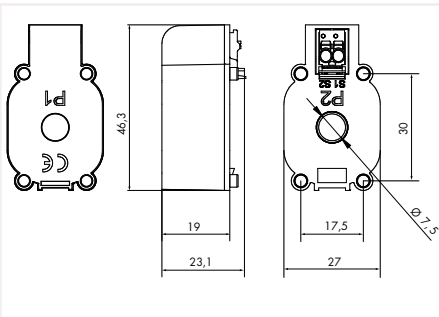
Plug-In Current Transformer for Billing Purposes					
Primary Rated Current	Secondary Rated Current	Rated Power	Accuracy Class	Item No.	Pack. Unit
200 A	5 A	2.5 VA	0,5	855-405/200-209	1
250 A	5 A	2.5 VA	0,5	855-405/250-209	1
300 A	5 A	5 VA	0,5	855-405/300-509	1
400 A	5 A	5 VA	0,5	855-405/400-509	1
500 A	5 A	5 VA	0,5	855-405/500-509	1
600 A	5 A	5 VA	0,5	855-405/600-509	1
750 A	5 A	5 VA	0,5	855-405/750-509	1

Plug-In Current Transformer; with a *picoMAX*® Pluggable Connector 855 Series



Plug-In Current Transformer with *picoMAX*® Connection Technology; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 1

Prim. Rated Current	Item No.	Pack. Unit
35 A	855-2701/035-001	15 (1)
64 A	855-2701/064-001	15 (1)



Short description:

WAGO's plug-in units (855 Series) are inductive, single-conductor current transformers. Due to the measurement principle used, these current transformers are exclusively designed for AC network applications.

Features:

- First current transformer with *picoMAX*® connection technology
- Also suitable for space-restricted applications
- Simple assembly permits 17.5 mm phase spacing, allowing perfect adjustment to any circuit breaker
- Easy mount on DIN-rail or panels via carrier rail adapter
- Converts current from 64 A or 35 A to 1 A
- Accuracy class: 1

Input – Current Transformer	
Rated continuous thermal current I_{cth}	100 %
Rated short-time thermal current I_{th}	60 x I_{cth} /1 s
Rated surge current I_{dyn}	2.5 x I_{cth}
Rated frequency	50 ... 60 Hz

Output – Current Transformer	
Secondary rated current	1 A
Rated Power	0.2 VA

Measurement error	
Accuracy class	1

Safety and Protection	
Test voltage	3 kVAC; 50 Hz; 1 min
Protection type	IP20
Highest voltage for equipment U_m	720 VAC

Connection Data	
Connection technology	Push-in CAGE CLAMP®
WAGO Connector	<i>picoMAX</i> ® 3.5, 2091-1122
Solid conductor	0.2 ... 1.5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0.2 ... 1.5 mm ² / 24 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch
Feedthrough for measurement conductor	7.5 mm Ø

Geometric Data	
Width	27 mm / 1.063 inch
Height	46 mm / 1.811 inch
Depth	23 mm / 0.906 inch

Mechanical Data	
Mounting type	Current transformer (closed); Mounting on DIN-rail via carrier rail adapter; Mounting on round cable

Material Data	
Insulation class	E
Housing material	PA 66

Environmental Requirements	
Surrounding air temperature (operation)	-10 ... +55 °C
Surrounding air temperature (storage)	-20 ... +70 °C
Relative humidity	5 ... 85 % (non-condensing)
Operating altitude (max.)	2000 m

Standards and Specifications	
Conformity marking	CE
Standards/specifications	EN 61869-1; EN 61869-2; UL

Accessories



Carrier rail adapter; for plug-in current transformer

Item No.	Pack. Unit
855-9927	1



Operating tool with a partially insulated shaft; Type 1; Blade: (2.5 x 0.4) mm

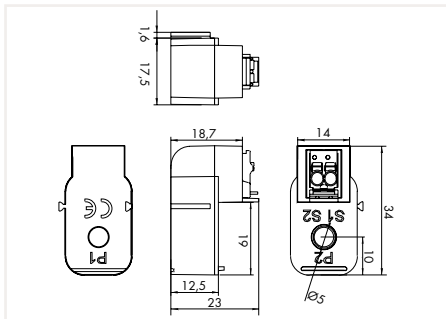
Item No.	Pack. Unit
210-719	1

Plug-In Current Transformer; with a *picoMAX*® Pluggable Connector 855 Series



Plug-In Current Transformer; Primary rated current: 32 A; Secondary rated current: 320 mA

	Item No.	Pack. Unit
	855-1700/032-000	15 (1)



Short description:

The *picoMAX*® Plug-In Current Transformer with low-power output is specifically tailored to WAGO's 750 Series 3-Phase Power Measurement Modules.

Features:

- First *picoMAX*® Plug-In Current Transformer with low power output
- Assembly via side latches
- Can be mounted directly on an ECB

Notes:

- The 855-1700/032-000 Plug-In Current Transformer is exclusive to the WAGO-I/O-SYSTEM and shall only be used with WAGO's 750 Series 3-Phase Power Measurement Modules.
- WAGO recommends the following conductor cross section and length: 1.5 mm² (14 AWG) and maximum 3.0 m at the output

*Measurement range: 0.8 to 32 A in combination with the three-phase power measurement modules (750-493/494/495)

**Testing adheres to EN 61869-2 with a conversion ratio of 16 A/0.16 A (accuracy class: 0.5) and an extended primary current of 200%.

Input – Current Transformer

Primary rated current	32 A
Rated short-time thermal current I_{th}	2 kA/0.1 s
Rated surge current I_{dyn}	2.5 x I_{th}
Rated frequency	50 ... 60 Hz

Output – Current Transformer

Secondary rated current	0.32 A
Rated Power	0.01 VA

Measurement error

Accuracy class	0,5
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Safety and Protection

Test voltage	3 kVAC; 50 Hz; 1 min
Protection type	IP20
Highest voltage for equipment U_m	720 VAC

Connection Data

Connection technology	Push-in CAGE CLAMP®
WAGO Connector	<i>picoMAX</i> ® 3.5, 2091-1122
Solid conductor	0.2 ... 1.5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0.2 ... 1.5 mm ² / 24 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch
Feedthrough for measurement conductor	5.0 mm Ø

Geometric Data

Width	17 mm / 0.669 inch
Height	34 mm / 1.339 inch
Depth	23 mm / 0.906 inch

Mechanical Data

Mounting type	Current transformer (closed); Mounting on round cable
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Material Data

Insulation class	E
Housing material	PA 66
Weight	11 g

Environmental Requirements

Surrounding air temperature (operation)	-10 ... +55 °C
Surrounding air temperature (storage)	-20 ... +70 °C
Relative humidity	5 ... 85 % (non-condensing)
Operating altitude (max.)	2000 m

Standards and Specifications

Standards/specifications	EN 61869-2; EN 61010-1
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Accessories



3-phase power measurement module

Rated Voltage	Item No.	Pack. Unit
480 VAC	750-493	1
480 VAC	750-494	1
690 VAC	750-495	1



Operating tool with a partially insulated shaft; Type 1; Blade: (2.5 x 0.4) mm

Item No.	Pack. Unit
210-719	1

Split-Core Current Transformers

855 Series



Short description:

WAGO's compact split-core current transformers are ideal for retrofitting existing systems. They are perfect for applications in which the current path must not be disrupted. The transformer's accuracy permits extremely precise current measurements. The split-core current transformers are capable of supplying the specified rated power at the end of the secondary cable. All transformers are supplied with color-coded cables. Two UV-resistant cable ties are also included for secure and easy mounting.

Features:

- Current ratios from 60 A up to 1000 A (primary side) and 1 A or 5 A (secondary side)
- No measuring cable interruption
- Ideal for use in very confined spaces
- Rapid mounting
- For use around insulated cables up to 42 mm diameter
- Compact and hinged
- Color-coded connecting cables up to 5 m

Input – Current Transformer

Rated continuous thermal current I_{cth}	100 %
Rated short-time thermal current I_{th}	$60 \times I_{cth} / 1 \text{ s}$
Rated surge current I_{dyn}	$2.5 \times I_{th}$
Rated frequency	50 ... 60 Hz

Safety and Protection

Test voltage	3 kVAC; 50 Hz; 1 min
Protection type	IP20
Highest voltage for equipment U_m	720 VAC

Mechanical Data

Mounting type	Split-core current transformer
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Material Data

Insulation class	E
Flammability class per UL94	V2
Housing material	PA 66

Environmental Requirements

Surrounding air temperature (operation)	-10 ... +55 °C
Surrounding air temperature (storage)	-20 ... +70 °C
Relative humidity	5 ... 85 % (non-condensing)
Operating altitude (max.)	2000 m

Standards and Specifications

Conformity marking	CE
Standards/specifications	EN 61869-1; EN 61869-2

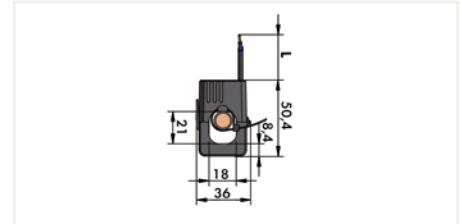
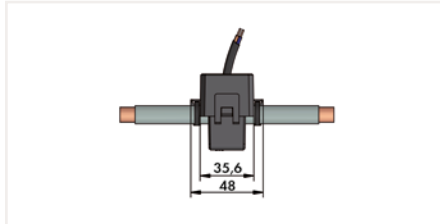


Split-Core Current Transformers 855 Series



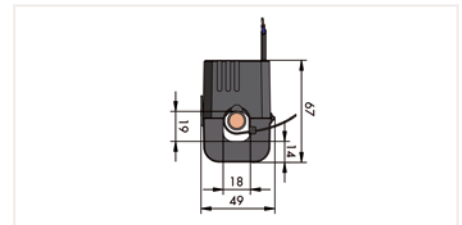
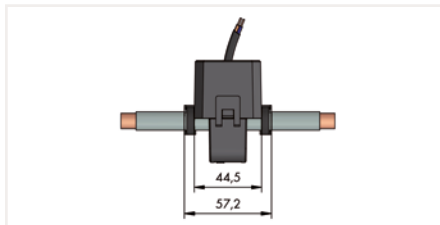
Split-Core Current Transformer; Feedthrough for measurement conductor: 18 mm Ø

Prim. Rated Current	Sec. Rated Current	Rated Power	Accuracy class	Cable Length	Conductor Cross Section	Item No.	Pack. Unit
60 A	1 A	0.2 VA	3	3 m	0.5 mm ²	855-3001/060-003	1
75 A	1 A	0.2 VA	3	3 m	0.5 mm ²	855-3001/075-003	1
100 A	1 A	0.2 VA	3	3 m	0.5 mm ²	855-3001/100-003	1
125 A	1 A	0.2 VA	3	3 m	0.5 mm ²	855-3001/125-003	1
150 A	1 A	0.2 VA	3	3 m	0.5 mm ²	855-3001/150-003	1
200 A	1 A	0.2 VA	1	3 m	0.5 mm ²	855-3001/200-001	1
250 A	1 A	0.2 VA	1	3 m	0.5 mm ²	855-3001/250-001	1



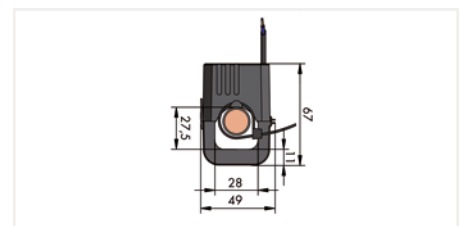
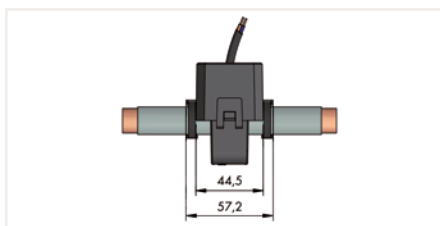
Split-Core Current Transformer; Feedthrough for measurement conductor: 18 mm Ø

Prim. Rated Current	Sec. Rated Current	Rated Power	Accuracy class	Cable Length	Conductor Cross Section	Item No.	Pack. Unit
100 A	1 A	0.2 VA	1	3 m	0.5 mm ²	855-4001/100-001	1
125 A	1 A	0.2 VA	1	3 m	0.5 mm ²	855-4001/125-001	1
150 A	1 A	0.2 VA	1	3 m	0.5 mm ²	855-4001/150-001	1
150 A	5 A	1 VA	1	0.5 m	1.5 mm ²	855-4005/150-101	1
200 A	1 A	0.2 VA	0.5	3 m	0.5 mm ²	855-4001/200-001	1
200 A	5 A	1 VA	1	0.5 m	1.5 mm ²	855-4005/200-101	1
250 A	1 A	0.2 VA	0.5	3 m	0.5 mm ²	855-4001/250-000	1
250 A	5 A	1 VA	0.5	0.5 m	1.5 mm ²	855-4005/250-100	1



Split-Core Current Transformer; Feedthrough for measurement conductor: 28 mm Ø

Prim. Rated Current	Sec. Rated Current	Rated Power	Accuracy class	Cable Length	Conductor Cross Section	Item No.	Pack. Unit
200 A	1 A	0.2 VA	1	3 m	0.5 mm ²	855-4101/200-001	1
250 A	1 A	0.2 VA	1	3 m	0.5 mm ²	855-4101/250-001	1
250 A	5 A	1 VA	1	0.5 m	1.5 mm ²	855-4105/250-101	1
300 A	1 A	0.2 VA	1	3 m	0.5 mm ²	855-4101/300-001	1
300 A	5 A	1 VA	1	0.5 m	1.5 mm ²	855-4105/300-101	1
400 A	1 A	0.2 VA	1	3 m	0.5 mm ²	855-4101/400-001	1
400 A	5 A	1 VA	1	0.5 m	1.5 mm ²	855-4105/400-101	1
500 A	1 A	0.2 VA	0.5	3 m	0.5 mm ²	855-4101/500-000	1
500 A	5 A	1 VA	1	0.5 m	1.5 mm ²	855-4105/500-101	1

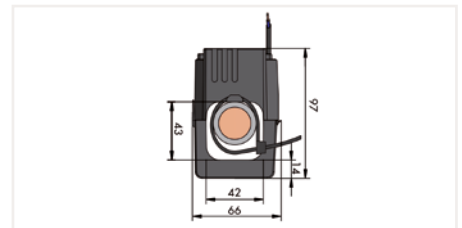
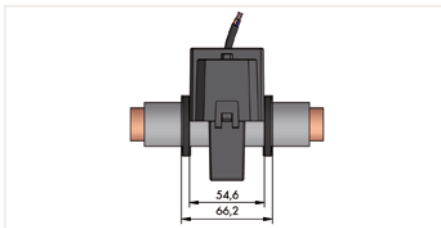


Split-Core Current Transformers 855 Series



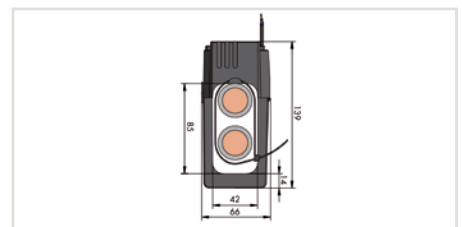
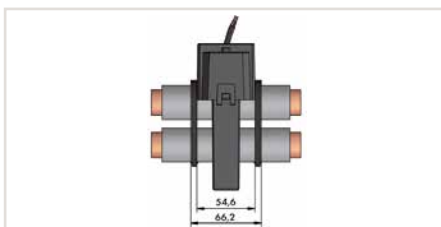
Split-Core Current Transformer; Feedthrough for measurement conductor: 42 mm Ø

Prim. Rated Current	Sec. Rated Current	Rated Power	Accuracy class	Cable Length	Conductor Cross Section	Item No.	Pack. Unit
250 A	1 A	0.5 VA	1	5 m	0.5 mm ²	855-5001/250-001	1
300 A	1 A	0.5 VA	1	5 m	0.5 mm ²	855-5001/300-001	1
300 A	5 A	0.5 VA	1	3 m	1.5 mm ²	855-5005/300-001	1
400 A	1 A	0.5 VA	0.5	5 m	0.5 mm ²	855-5001/400-000	1
400 A	5 A	0.5 VA	1	3 m	1.5 mm ²	855-5005/400-001	1
500 A	1 A	0.5 VA	0.5	5 m	0.5 mm ²	855-5001/500-000	1
500 A	5 A	0.5 VA	1	3 m	1.5 mm ²	855-5005/500-001	1
600 A	1 A	0.5 VA	0.5	5 m	0.5 mm ²	855-5001/600-000	1
600 A	5 A	0.5 VA	0.5	3 m	1.5 mm ²	855-5005/600-000	1
750 A	1 A	0.5 VA	0.5	5 m	0.5 mm ²	855-5001/750-000	1
750 A	5 A	0.5 VA	0.5	3 m	1.5 mm ²	855-5005/750-000	1
800 A	1 A	0.5 VA	0.5	5 m	0.5 mm ²	855-5001/800-000	1
800 A	5 A	0.5 VA	0.5	3 m	1.5 mm ²	855-5005/800-000	1
1000 A	1 A	0.5 VA	0.5	5 m	0.5 mm ²	855-5001/1000-000	1
1000 A	5 A	0.5 VA	0.5	3 m	1.5 mm ²	855-5005/1000-000	1



Split-Core Current Transformer; Feedthrough for measurement conductor: 42 mm Ø

Prim. Rated Current	Sec. Rated Current	Rated Power	Accuracy class	Cable Length	Conductor Cross Section	Item No.	Pack. Unit
250 A	1 A	0.5 VA	1	5 m	0.5 mm ²	855-5101/250-001	1
300 A	1 A	0.5 VA	1	5 m	0.5 mm ²	855-5101/300-001	1
300 A	5 A	0.5 VA	1	3 m	1.5 mm ²	855-5105/300-001	1
400 A	1 A	0.5 VA	0.5	5 m	0.5 mm ²	855-5101/400-000	1
400 A	5 A	0.5 VA	1	3 m	1.5 mm ²	855-5105/400-001	1
500 A	1 A	0.5 VA	0.5	5 m	0.5 mm ²	855-5101/500-000	1
500 A	5 A	0.5 VA	1	3 m	1.5 mm ²	855-5105/500-001	1
600 A	1 A	0.5 VA	0.5	5 m	0.5 mm ²	855-5101/600-000	1
600 A	5 A	0.5 VA	0.5	3 m	1.5 mm ²	855-5105/600-000	1
750 A	1 A	0.5 VA	0.5	5 m	0.5 mm ²	855-5101/750-000	1
750 A	5 A	0.5 VA	0.5	3 m	1.5 mm ²	855-5105/750-000	1
800 A	1 A	0.5 VA	0.5	5 m	0.5 mm ²	855-5101/800-000	1
800 A	5 A	0.5 VA	0.5	3 m	1.5 mm ²	855-5105/800-000	1
1000 A	1 A	0.5 VA	0.5	5 m	0.5 mm ²	855-5101/1000-000	1
1000 A	5 A	0.5 VA	0.5	3 m	1.5 mm ²	855-5105/1000-000	1



4

Rogowski Coil; RC 70, RC 125 and RC 175 855 Series



Short description:

WAGO's Rogowski coils are closed-air coils featuring a non-magnetic split core that can be connected to WAGO products (857-552; 750-495/000-002; 2857-570/024-000).

Easy mounting of the Rogowski coils allows existing systems to be retrofitted without time-consuming installation or process interruption.

Features:

- Rated insulation voltage: 1000 V Cat. III/600 V Cat. IV
- Accuracy class: 0.5 (per EN 61869-2)
- Degree of protection: IP67
- Measurement coil diameter: 70, 125 or 175 mm
- Length of signal lines: 1.5 m or 4.5 m
- Surrounding air temperature: -40 ... +80°C
- Sealable bayonet connector
- Anchor points for cable ties

Note:

The specifications for the primary rated current refer to a combination with the WAGO Modules (857-552 and 750-495/000-002). Rogowski technology allows the coils to measure a wide primary current range of up to 10,000 A without loss of accuracy, because there are no saturation effects.

The requirements for standards EN 61869-1, EN 61869-2, EN 61869-6 and EN 61869-10 are only partially met, as there are fundamental differences with current transformers for a Rogowski coil.

Input – Current Transformer

Primary rated current	4000 A (in combination with WAGO products)
Rated short-time thermal current I_{th}	300 kA at 50 Hz
Rated frequency	50 ... 60 Hz

Output

Sensitivity	22.5 mV/kA at 50 Hz
Output signal (max.)	30 VDC

Measurement error

Accuracy class	0.5
Positioning error	±0.75 %

Safety and Protection

Rated insulation voltage	1000 V _{rms} AC (Cat. III); 600 V _{rms} AC (Cat. IV)
Test voltage for isolation	7.4 kVAC; 50 Hz; 1 min
Impulse withstand voltage (1.2/50 μs)	12.8 kV
Protection type	IP67

Mechanical Data

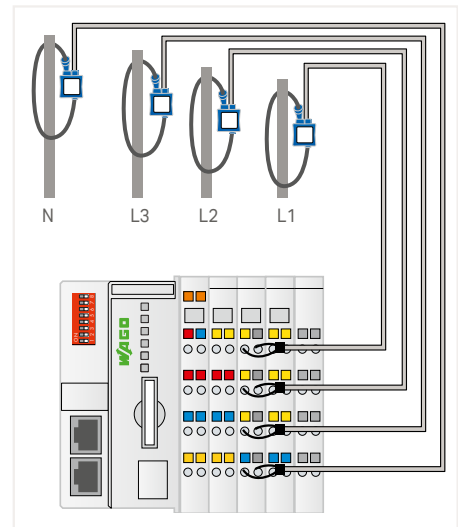
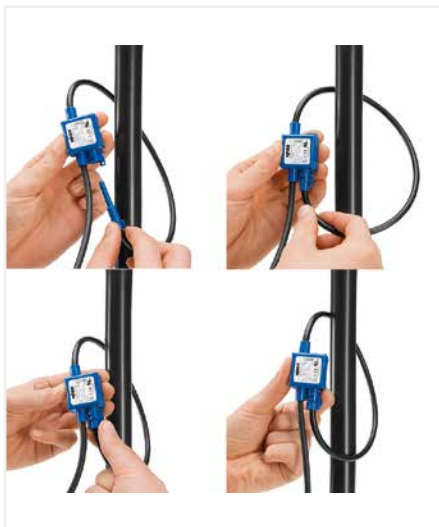
Mounting type	Split-core current transformer (suspended)
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Environmental Requirements

Surrounding air temperature (operation)	-40 ... +80 °C
Surrounding air temperature (storage)	-40 ... +80 °C
Relative humidity	≤ 90 % (no condensation permissible)
Operating altitude (max.)	2000 m

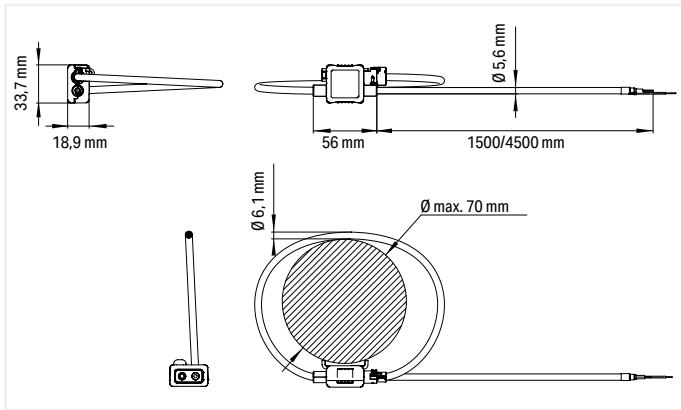
Standards and Specifications

Conformity marking	CE
Standards/specifications	EN 61010-1; EN 61010-2-32; EN 61869-1; EN 61869-2; EN 61869-6; EN 61869-10; UL 61010-1



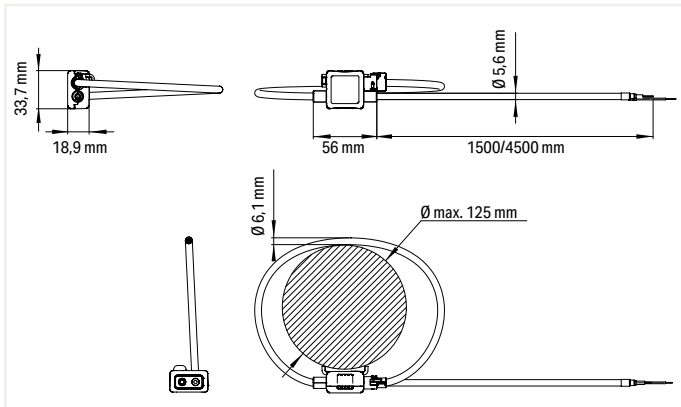
Direct connection of Rogowski coils to the three-phase power measurement module (750-495/000-002)

Rogowski Coil; RC 70, RC 125 and RC 175 855 Series



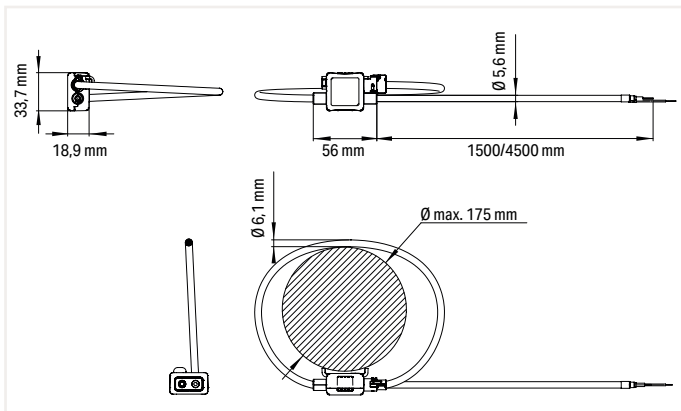
Rogowski Coil; Primary rated current: 4000 A; Output signal: 22.5 mV per kA; Accuracy class: 1; Feedthrough for measurement conductor: 70 mm Ø

Mutual Inductance M	Cable Length	Item No.	Pack. Unit
71.98 mH	1.5 m	855-9150/2000-701	1
71.98 mH	4.5 m	855-9450/2000-701	1



Rogowski Coil; Primary rated current: 4000 A; Output signal: 22.5 mV per kA; Accuracy class: 1; Feedthrough for measurement conductor: 125 mm Ø

Mutual Inductance M	Cable Length	Item No.	Pack. Unit
72.14 mH	1.5 m	855-9150/2000-1251	1
72.14 mH	4.5 m	855-9450/2000-1251	1



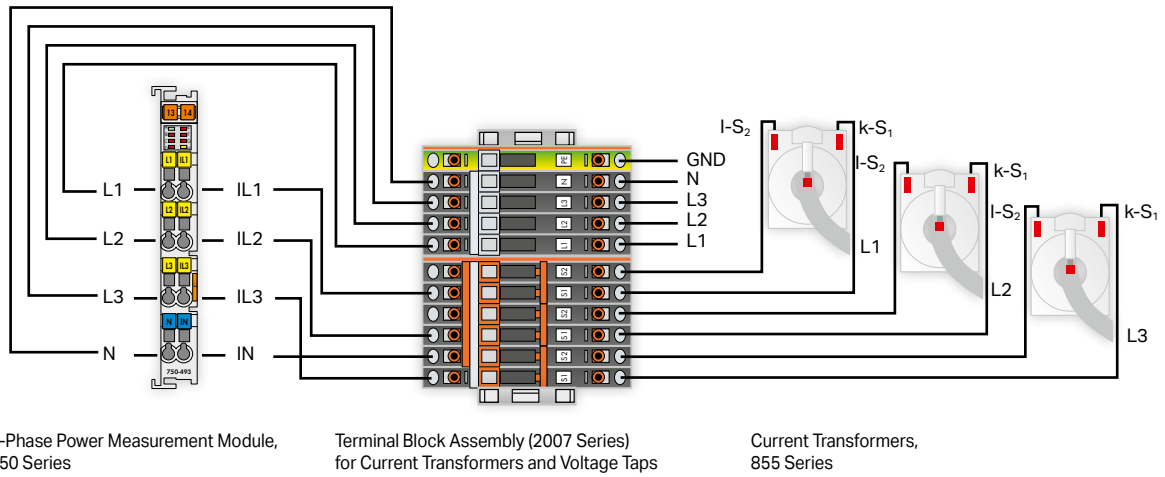
Rogowski Coil; Primary rated current: 4000 A; Output signal: 22.5 mV per kA; Accuracy class: 1; Feedthrough for measurement conductor: 175 mm Ø

Mutual Inductance M	Cable Length	Item No.	Pack. Unit
72.31 mH	1.5 m	855-9150/2000-1751	1
72.31 mH	4.5 m	855-9450/2000-1751	1

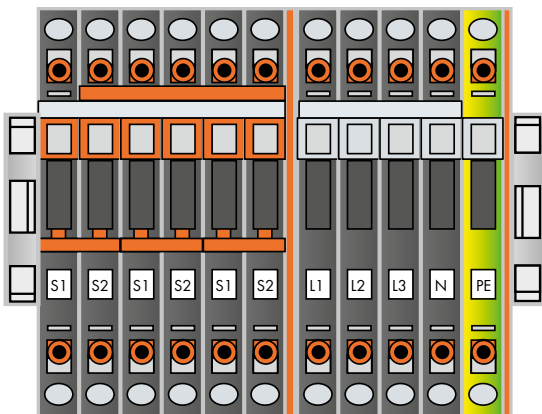
4

Terminal Block Assemblies for Current and Voltage Transformers For Fast and Easy Connections

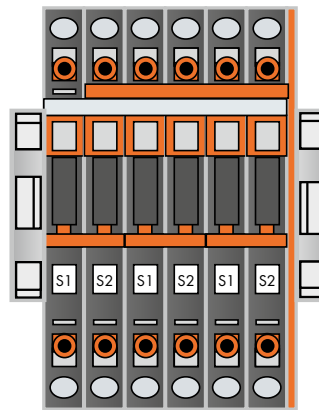
4



Pre-assembled terminal block assembly for easily connecting and short-circuiting current transformers, suitable for three-phase power measurement modules (750-493 and 750-494)



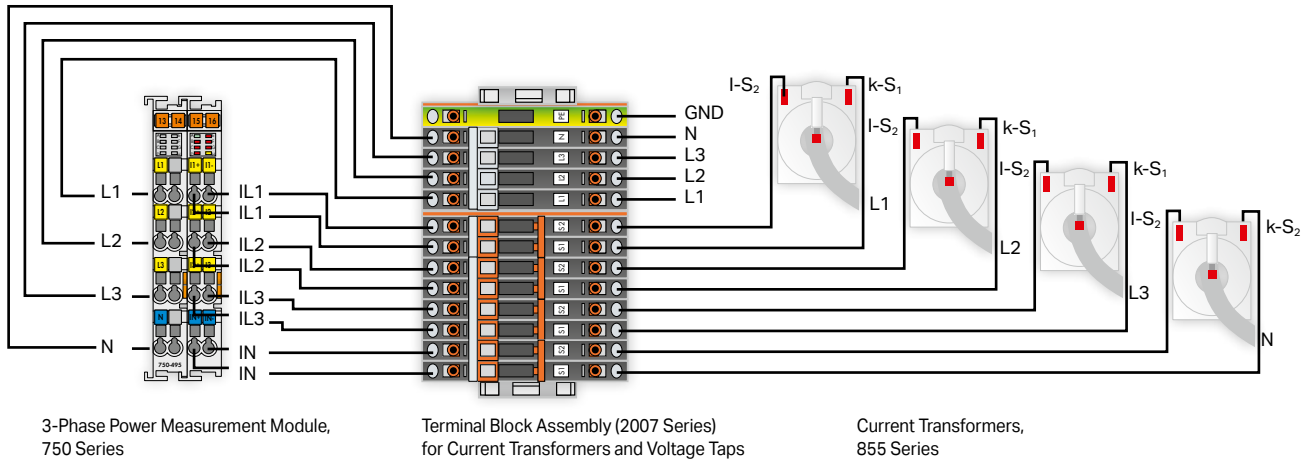
Compact terminal block for current transformer circuit, 2007-8873
Connection option for current and voltage, including 'Y' point jumper



Compact terminal block for current transformer circuit, 2007-8875
Connection option for current and voltage, including 'Y' point jumper

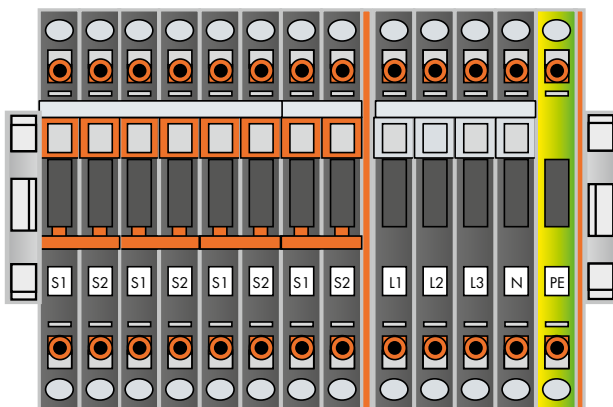
ADVANTAGES:

- 'Y' point jumper
- Easy and clear wiring
- Short-circuiting of current transformers
- Test sockets for control measurements
- Visible current and voltage path separation

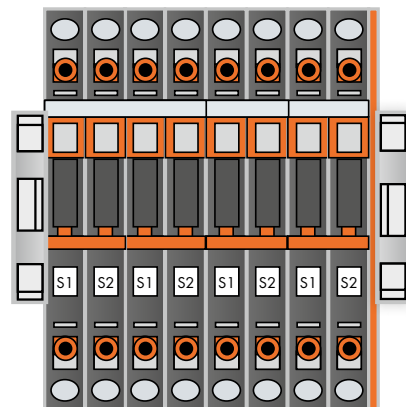


4

Pre-assembled terminal block assembly for easily connecting and short circuiting current transformers, suitable for three-phase power measurement modules (750-495)



Compact terminal block for current transformer circuit, 2007-8874
Connection option for current and voltage



Compact terminal block for current transformer circuit, 2007-8877
Connection option for current

Current Sensor with Bus Connection; in DIN-Rail-Mount Enclosure 789 Series



Current Sensor with Bus Connection; in DIN-rail-mount enclosure; Measurement range: 0 ... 80 A

Item No.	Pack. Unit
789-620	1

Short description:
WAGO's intelligent current sensor monitors solar plants or inverters for DC measurements within a large current measurement range.

Input	
Input signal type	Current
Input signal, current	0 ... 80 ADC
Resolution [bit]	15 bits
Communication	
Communication	Modbus RTU
Interface	RS-485
Transmission channels	Half duplex; 8-bit data; 1 stop bit
Number of participants (max.)	32
Bus length (max.)	≤ 1200 m
Parity	Even
Baud rate	19.2 kB
Terminating resistor	150 Ω (can be activated via DIP switch 1)
Measurement Error	
Transmission error (typ.)	≤ 0.5 % of upper-range value (at room temperature)
Temperature coefficient	≤ 0.01 %/K
Power Supply	
Nominal supply voltage U_s	DC 24 V
Supply voltage range	12 ... 34 VDC
Power consumption at nominal supply voltage	≤ 8 mA
Safety and Protection	
Protection type	IP20
Connection Data	
Feedthrough for measurement conductor	15 mm
Connector	RJ-45
Geometric Data	
Width	35 mm / 1.378 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	80.2 g
Environmental Requirements	
Surrounding air temperature (operation)	-20 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4
Standards/specifications	DIN EN 50178

Accessories



Interface Module with RJ-45 Connector

Item No.	Pack. Unit
289-965	1



Interface Module with RJ-45 Connector and Shield Clamping Saddle

Color	Item No.	Pack. Unit
white	289-966	1



ETHERNET RJ-45 Connector

Item No.	Pack. Unit
750-975	1

789-620

RJ-45-Connector Pin Assignment:

Pin	Function
1	Ub
2	
3	n. c.
4	A (Data+)
5	B (Data-)
6	n. c.
7	GND
8	

Communication Description:

Modbus®-Function	Read Holding Registers (0x03)
Address of Measured Value	0x0004
Data Type Measurement	Integer

Error Numbers

id	Description
01	Illegal Function
03	Illegal Data
101	Overflow (Current > +83 A)
102	Underflow (Current < -3 A)

DIP Switch Adjustability

● = ON

Adress	DIP Switch						Terminating Resistor	DIP Switch 1
	2	3	4	5	6			
1						150 Ohm	●	
2					●			
3				●				
4				●	●			
5			●					
6			●		●			
7			●	●				
8			●	●	●			
9		●						
10		●			●			
11		●		●				
12		●		●	●			
13		●	●					
14		●	●		●			
15		●	●	●				
16		●	●	●	●			
17	●							
18	●						●	
19	●			●				
20	●			●	●			
21	●		●					
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24	●		●	●	●			
25	●	●						
26	●	●			●			
27	●	●		●				
28	●	●		●	●			
29	●	●	●					
30	●	●	●		●			
31	●	●	●	●				
32	●	●	●	●	●			

NOTICE:
Only set the Modbus® address in the OFF state.

Current Sensor with Bus Connection; in DIN-Rail-Mount Enclosure 789 Series



Current Signal Conditioner; Current input signal:
140 ADC; Modbus® RTU; Supply voltage: 24 VDC;
Module width: 35 mm

Item No.	Pack. Unit
789-621	1

Short description:

WAGO's intelligent current sensor monitors solar plants or inverters for DC measurements within a large current measurement range. The sensor is mounted on DIN-35 rail.

Input	
Input signal type	Current
Input signal, current	0 ... 140 ADC
Resolution [bit]	15 bits
Communication	
Communication	Modbus® RTU
Interface	RS-485
Transmission channels	Half duplex; 8-bit data; 1 stop bit
Number of participants (max.)	32
Bus length (max.)	≤ 1200 m
Parity	Even
Baud rate	19.2 kB
Terminating resistor	150 Ω (can be activated via DIP switch 1)
Measurement Error	
Transmission error (typ.)	≤ 0.5 % of upper-range value (0 ... 80 A; at room temperature); ≤ 1 % of upper-range value (80 ... 140 A; at room temperature)
Temperature coefficient	≤ 0.05 %/K (-20 ... +60 °C); ≤ 0.1 %/K (-60 ... +70 °C)
Power Supply	
Nominal supply voltage U _S	DC 24 V
Supply voltage range	12 ... 34 VDC
Power consumption at nominal supply voltage	≤ 8 mA
Safety and Protection	
Protection type	IP20
Connection Data	
Feedthrough for measurement conductor	15 mm Ø
Connector	RJ-45
Geometric Data	
Width	35 mm / 1.378 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	77.22 g
Environmental Requirements	
Surrounding air temperature (operation)	-20 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4
Standards/specifications	DIN EN 50178

Accessories



Interface Module with RJ-45 Connector

Item No.	Pack. Unit
289-965	1



Interface Module with RJ-45 Connector and Shield Clamping Saddle

Color	Item No.	Pack. Unit
white	289-966	1



ETHERNET RJ-45 Connector

Item No.	Pack. Unit
750-975	1

789-621

RJ-45-Connector Pin Assignment:

Pin	Function
1	Ub
2	
3	n.c.
4	A (Data+)
5	B (Data-)
6	n.c.
7	GND
8	

Communication Description:

Modbus® Function	Read Holding Registers (0x03)
Address of Measured Value	0x0004
Data Type Measurement	Integer

Error Numbers

id	Description
01	Illegal Function
03	Illegal Data
101	Overflow (Current > +83 A)
102	Underflow (Current < -3 A)

DIP Switch Adjustability

● = ON

Adress	DIP Switch						Terminating Resistor	DIP Switch 1
	2	3	4	5	6			
1						150 Ohm	●	
2					●			
3				●				
4				●	●			
5			●					
6			●		●			
7			●	●				
8			●	●	●			
9		●						
10		●			●			
11		●		●				
12		●		●	●			
13		●	●					
14		●	●		●			
15		●	●	●				
16		●	●	●	●			
17	●							
18	●						●	
19	●			●				
20	●			●	●			
21	●		●					
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23	●		●	●				
24	●		●	●	●			
25	●	●						
26	●	●			●			
27	●	●		●				
28	●	●		●	●			
29	●	●	●					
30	●	●	●		●			
31	●	●	●	●				
32	●	●	●	●	●			

NOTICE:
Only set the Modbus® Adress in the OFF state.

Current Sensor with Bus Connection; in DIN-Rail-Mount Enclosure 789 Series



Current Signal Conditioner; Current input signal:
50 ADC; Modbus® RTU; Supply voltage: 24 VDC;
Module width: 35 mm

Item No.	Pack. Unit
789-622	1

Short description:
WAGO's intelligent current sensor monitors AC currents and is mounted on DIN-35 rail.

Input	
Input signal type	Current
Input signal, current	0 ... 50 AAC
Resolution [bit]	14 bits
Communication	
Communication	Modbus® RTU
Interface	RS-485
Transmission channels	Half duplex; 8-bit data; 1 stop bit
Number of participants (max.)	32
Bus length (max.)	≤ 1200 m
Parity	Even
Baud rate	19.2 kB
Terminating resistor	150 Ω (can be activated via DIP switch 1)
Measurement Error	
Transmission error (typ.)	1 % (typ.); Max. 3 % of upper-range value (at room temperature)
Temperature coefficient	≤ 0.01 %/K
Power Supply	
Nominal supply voltage U_s	DC 24 V
Supply voltage range	12 ... 34 VDC
Power consumption at nominal supply voltage	≤ 8 mA
Safety and Protection	
Protection type	IP20
Connection Data	
Feedthrough for measurement conductor	15 mm Ø
Connector	RJ-45
Geometric Data	
Width	35 mm / 1.378 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	77.22 g
Environmental Requirements	
Surrounding air temperature (operation)	-20 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Standards and Specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4
Standards/specifications	DIN EN 50178

Accessories



Interface Module with RJ-45 Connector

Item No.	Pack. Unit
289-965	1



Interface Module with RJ-45 Connector and Shield Clamping Saddle

Color	Item No.	Pack. Unit
white	289-966	1



ETHERNET RJ-45 Connector

Item No.	Pack. Unit
750-975	1

789-622

RJ-45-Connector Pin Assignment:

Pin	Function
1	Ub
2	
3	n.c.
4	A (Data+)
5	B (Data-)
6	n.c.
7	GND
8	

Communication Description:

Modbus® Function	Read Holding Registers (0x03)
Address of Measured Value	0x0004
Data Type Measurement	Integer

Error Numbers:

id	Description
01	Illegal Function
03	Illegal Data
101	Overflow (Current > +83 A)
102	Underflow (Current < -3 A)

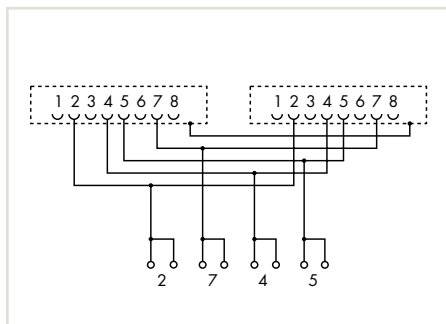
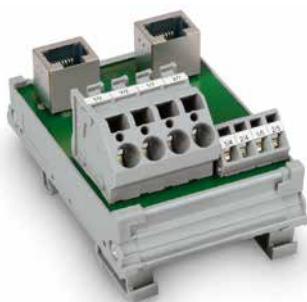
DIP Switch Adjustability

● = ON

Address	DIP Switch						Terminating Resistor	DIP Switch 1
	2	3	4	5	6			
1						150 Ohm	●	
2					●			
3				●				
4				●	●			
5			●					
6			●		●			
7			●	●				
8			●	●	●			
9		●						
10		●			●			
11		●		●				
12		●		●	●			
13		●	●					
14		●	●		●			
15		●	●	●				
16		●	●	●	●			
17	●							
18	●						●	
19	●			●				
20	●			●	●			
21	●		●					
22	●		●		●			
23	●		●	●				
24	●		●	●	●			
25	●	●						
26	●	●			●			
27	●	●		●				
28	●	●		●	●			
29	●	●	●					
30	●	●	●		●			
31	●	●	●	●				
32	●	●	●	●	●			

NOTICE:
Only set the Modbus® address in the OFF state.

Interface Module for Current Sensors 289 Series



Interface Module; with RJ-45 connector

Item No.	Pack. Unit
289-965	1

Short description:

Compatible on the field side with the 789-620, 789-621 and 789-622 Current Sensors.

Required terminal assignment:

- 2: + Supply
- 7: - Supply
- 4: D+
- 5: D-

General Specifications

Nominal current	1.5 A
Insulation resistance	> 500 MΩ

Safety and Protection

Dielectric strength, contact/contact	0.5 kVrms
--------------------------------------	-----------

Connection Data

Connection type (1)	System
Pluggable connectors	2 x RJ-45 (shielded)
Connection type 2	Clamping units 2, 7
Pole number 2	8
Design 2	PCB terminal blocks
Connection technology 2	CAGE CLAMP®
WAGO Connector 2	WAGO 236 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch
Connection type (3)	Clamping units 4, 5
Pole number 3	4
Design 3	PCB terminal blocks
Connection technology 3	CAGE CLAMP®
WAGO Connector 3	WAGO 745 Series
Solid conductor 3	0.2 ... 6 mm ² / 24 ... 10 AWG
Fine-stranded conductor (3)	0.2 ... 6 mm ² / 24 ... 10 AWG
Strip length 3	11 ... 12 mm / 0.43 ... 0.47 inch
Note (conductor cross-section)	12 AWG: THHN, THWN
Mating cycles	500
Connection cable	RJ-45 cable assembly (recommended: UTP)

Geometric Data

Width	58 mm / 2.283 in
Height from upper-edge of DIN-rail	40 mm / 1.575 in
Depth	85 mm / 3.346 in

Mechanical Data

Mounting type	DIN-35 rail
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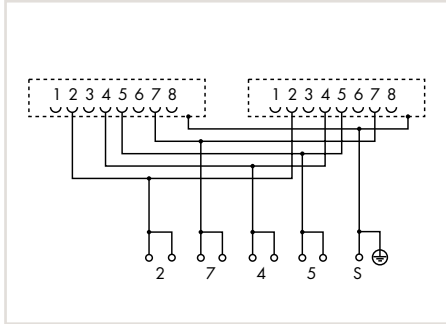
Material Data

Weight	70 g
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Environmental Requirements

Surrounding air temperature (operation)	-20 ... +85 °C
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Interface Module for Current Sensors 289 Series



Interface Module; with RJ-45 connector and shield clamping saddle

	Item No.	Pack. Unit
	289-966	1

Short description:

Compatible on the field side with the 789-620, 789-621 and 789-622 Current Sensors.

Required terminal assignment:

- 2: + Supply
- 7: - Supply
- 4: D+
- 5: D-

Direct shield connection to the DIN-rail via shield grounding foot

General Specifications

Nominal current	1.5 A
Insulation resistance	≥ 500 MΩ
Specialty functions	with shield connection; with shield clamping saddle

Safety and Protection

Dielectric strength, contact/contact	0.5 kVrms
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Connection Data

Connection type (1)	System
Pluggable connectors	2 x RJ-45 (shielded)
Connection type 2	Clamping units 2, 7
Pole number 2	8
Design 2	PCB terminal blocks
Connection technology 2	CAGE CLAMP®
WAGO Connector 2	WAGO 236 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch
Connection type (3)	Clamping units 4, 5
Pole number 3	4
Design 3	PCB terminal blocks
Connection technology 3	CAGE CLAMP®
WAGO Connector 3	WAGO 745 Series
Solid conductor 3	0.2 ... 6 mm ² / 24 ... 10 AWG
Fine-stranded conductor (3)	0.2 ... 6 mm ² / 24 ... 10 AWG
Strip length 3	11 ... 12 mm / 0.43 ... 0.47 inch
Note (conductor cross-section)	12 AWG: THHN, THWN
Mating cycles	500
Connection cable	Shielded RJ-45 cable assembly (recommended: UTP, STP)
WAGO Shield Clamping Saddle	27 mm wide; cable diameter up to 24 mm

Geometric Data

Width	69 mm / 2.717 in
Height from upper-edge of DIN-rail	40 mm / 1.575 in
Depth	85 mm / 3.346 in

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	106.9 g
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Environmental Requirements

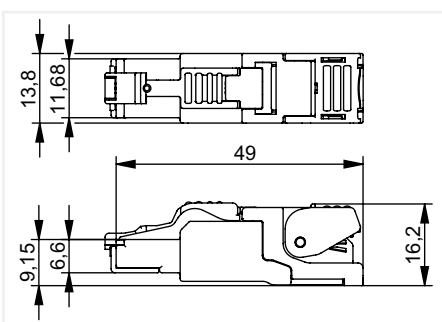
Surrounding air temperature (operation)	-20 ... +85 °C
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ETHERNET RJ-45 Connector 750 Series



ETHERNET Plug; RJ-45; Cat. 6A; straight; 22 AWG

Code	Item No.	Pack. Unit
TIA-568A	750-977/000-011	1
TIA-568B	750-977/000-012	1



Technical Data

Connection type	RJ-45 connector
Number of poles	8
Cable connection direction to mating direction	0°
Communication/fieldbus	ETHERNET
Baud rate	10,000 Mbit/s

Connection Data

Connection type 1	IDC (Insulation Displacement Contact)
Solid conductor	0.21 ... 0.32 mm ² / 24/1 ... 22/1 AWG
Stranded conductor (2)	0.11 ... 0.36 mm ² / 27/7 ... 22/7 AWG

Geometric Data

Width	13.8 mm
Height	16.2 mm
Depth	49 mm

Mechanical Data

Connection requirement (permissible cable type)	Cat. 6A
Connectable sheathed cable diameter	5.5 ... 9 mm
Housing material	Zinc die-cast
Weight	18 g

Environmental Requirements

Surrounding air temperature (operation)	-40 ... +85 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Protection type	IP20
Relative humidity (without condensation)	95 %

Standards and Specifications

Standards/specifications	IEC 60603-7-51, ISO/IEC 11801, IEEE 802.3an; EIA/TIA 568-C.2; DIN EN 50173-1; UL 1863; UL 2043
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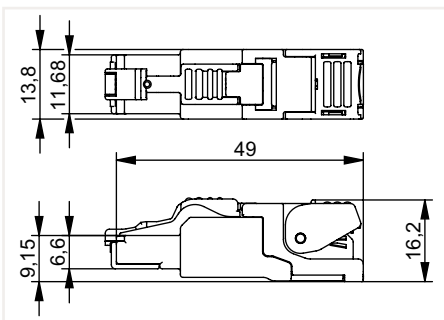
4

ETHERNET RJ-45 Connector 750 Series



ETHERNET Plug; RJ-45; Cat. 6A; straight; 24 AWG

Code	Item No.	Pack. Unit
TIA-568A	750-977/000-021	1
TIA-568B	750-977/000-022	1



Technical Data

Connection type	RJ-45 connector
Number of poles	8
Cable connection direction to mating direction	0°
Communication/fieldbus	ETHERNET
Baud rate	10,000 Mbit/s

Connection Data

Connection type 1	IDC (Insulation Displacement Contact)
Solid conductor	0.13 ... 0.21 mm ² / 26/1 ... 24/1 AWG
Stranded conductor (2)	0.11 ... 0.23 mm ² / 27/7 ... 24/7 AWG

Geometric Data

Width	13.8 mm
Height	16.2 mm
Depth	49 mm

Mechanical Data

Connection requirement (permissible cable type)	Cat. 6A
Connectable sheathed cable diameter	5.5 ... 9 mm
Housing material	Zinc die-cast
Weight	18 g

Environmental Requirements

Surrounding air temperature (operation)	-40 ... +85 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Protection type	IP20
Relative humidity (without condensation)	95 %

Standards and Specifications

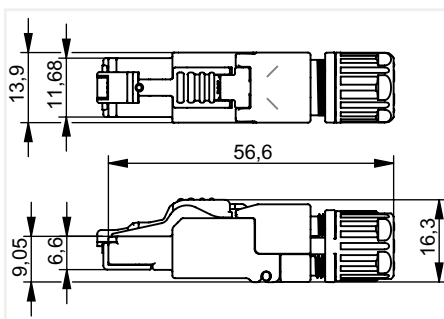
Standards/specifications	IEC 60603-7-51, ISO/IEC 11801, IEEE 802.3an; EIA/TIA 568-C.2; DIN EN 50173-1; UL 1863; UL 2043
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ETHERNET RJ-45 Connector 750 Series



ETHERNET Plug; RJ-45; Cat. 6A; straight; 22 AWG;
Strain relief

Code	Item No.	Pack. Unit
TIA-568A	750-978/000-011	1
TIA-568B	750-978/000-012	1



Technical Data

Connection type	RJ-45 connector
Number of poles	8
Cable connection direction to mating direction	0°
Communication/fieldbus	ETHERNET
Baud rate	10,000 Mbit/s

Connection Data

Connection type 1	IDC (Insulation Displacement Contact)
Solid conductor	0.21 ... 0.32 mm ² / 24/1 ... 22/1 AWG
Stranded conductor (2)	0.11 ... 0.36 mm ² / 27/7 ... 22/7 AWG

Geometric Data

Width	13.9 mm
Height	16.3 mm
Depth	56.6 mm

Mechanical Data

Connection requirement (permissible cable type)	Cat. 6A
Connectable sheathed cable diameter	5.5 ... 10 mm
Housing material	Zinc die-cast
Weight	22 g

Environmental Requirements

Surrounding air temperature (operation)	-40 ... +85 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Protection type	IP20
Relative humidity (without condensation)	95 %

Standards and Specifications

Standards/specifications	IEC 60603-7-51, ISO/IEC 11801, IEEE 802.3an; EIA/TIA 568-C.2; DIN EN 50173-1; UL 1863; UL 2043
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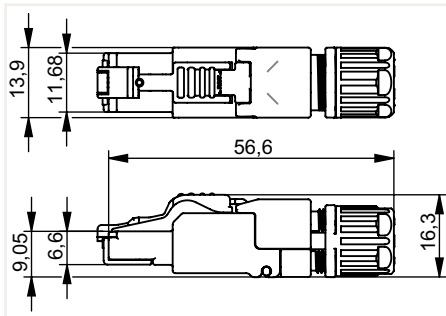
4

ETHERNET RJ-45 Connector 750 Series



ETHERNET Plug; RJ-45; Cat. 6A; straight; 24 AWG;
Strain relief

Code	Item No.	Pack. Unit
TIA-568A	750-978/000-021	1
TIA-568B	750-978/000-022	1



Technical Data

Connection type	RJ-45 connector
Number of poles	8
Cable connection direction to mating direction	0°
Communication/fieldbus	ETHERNET
Baud rate	10,000 Mbit/s

Connection Data

Connection type 1	IDC (Insulation Displacement Contact)
Solid conductor	0.13 ... 0.21 mm ² / 26/1 ... 24/1 AWG
Stranded conductor (2)	0.11 ... 0.23 mm ² / 27/7 ... 24/7 AWG

Geometric Data

Width	13.9 mm
Height	16.3 mm
Depth	56.6 mm

Mechanical Data

Connection requirement (permissible cable type)	Cat. 6A
Connectable sheathed cable diameter	5.5 ... 10 mm
Housing material	Zinc die-cast
Weight	22 g

Environmental Requirements

Surrounding air temperature (operation)	-40 ... +85 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Protection type	IP20
Relative humidity (without condensation)	95 %

Standards and Specifications

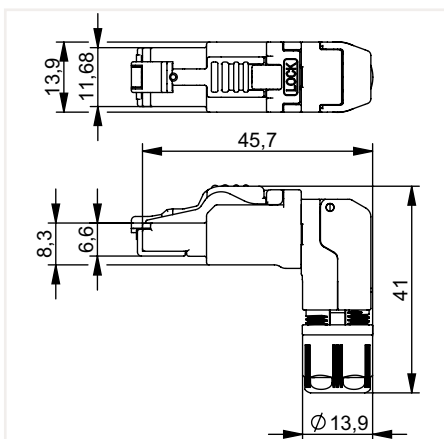
Standards/specifications	IEC 60603-7-51, ISO/IEC 11801, IEEE 802.3an; EIA/TIA 568-C.2; DIN EN 50173-1; UL 1863; UL 2043
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ETHERNET RJ-45 Connector 750 Series



ETHERNET Plug; RJ-45; Cat. 6A; angled; 22 AWG; Strain relief

Code	Item No.	Pack. Unit
TIA-568A	750-979/000-011	1
TIA-568B	750-979/000-012	



Technical Data

Connection type	RJ-45 connector
Number of poles	8
Cable connection direction to mating direction	90 °
Communication/fieldbus	ETHERNET
Baud rate	10,000 Mbit/s

Connection Data

Connection type 1	IDC (Insulation Displacement Contact)
Solid conductor	0.21 ... 0.32 mm ² / 24/1 ... 22/1 AWG
Stranded conductor (2)	0.11 ... 0.36 mm ² / 27/7 ... 22/7 AWG

Geometric Data

Width	13.9 mm
Height	41 mm
Depth	45.7 mm

Mechanical Data

Connection requirement (permissible cable type)	Cat. 6A
Connectable sheathed cable diameter	5.5 ... 10 mm
Housing material	Zinc die-cast
Weight	26 g

Environmental Requirements

Surrounding air temperature (operation)	-40 ... +85 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Protection type	IP20
Relative humidity (without condensation)	95 %

Standards and Specifications

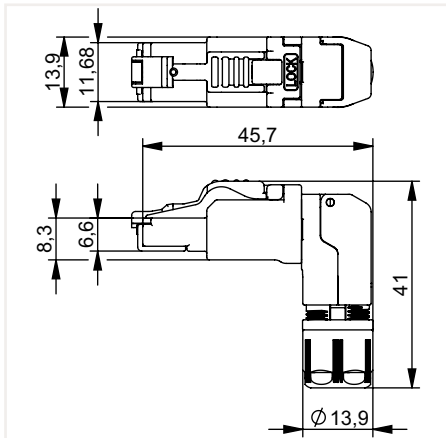
Standards/specifications	IEC 60603-7-51, ISO/IEC 11801, IEEE 802.3an; EIA/TIA 568-C.2; DIN EN 50173-1; UL 1863; UL 2043
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ETHERNET RJ-45 Connector 750 Series



ETHERNET Plug; RJ-45; Cat. 6A; angled; 24 AWG; Strain relief

Code	Item No.	Pack. Unit
TIA-568A	750-979/000-011	1
TIA-568B	750-979/000-012	



Technical Data

Connection type	RJ-45 connector
Number of poles	8
Cable connection direction to mating direction	90°
Communication/fieldbus	ETHERNET
Baud rate	10,000 Mbit/s

Connection Data

Connection type 1	IDC (Insulation Displacement Contact)
Solid conductor	0.13 ... 0.21 mm ² / 26/1 ... 24/1 AWG
Stranded conductor (2)	0.11 ... 0.23 mm ² / 27/7 ... 24/7 AWG

Geometric Data

Width	13.9 mm
Height	41 mm
Depth	45.7 mm

Mechanical Data

Connection requirement (permissible cable type)	Cat. 6A
Connectable sheathed cable diameter	5.5 ... 10 mm
Housing material	Zinc die-cast
Weight	26 g

Environmental Requirements

Surrounding air temperature (operation)	-40 ... +85 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Protection type	IP20
Relative humidity (without condensation)	95 %

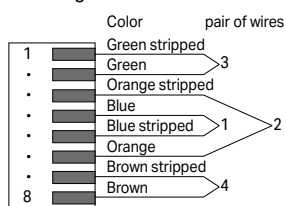
Standards and Specifications

Standards/specifications	IEC 60603-7-51, ISO/IEC 11801, IEEE 802.3an; EIA/TIA 568-C.2; DIN EN 50173-1; UL 1863; UL 2043
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ETHERNET RJ-45 Connector 750 Series

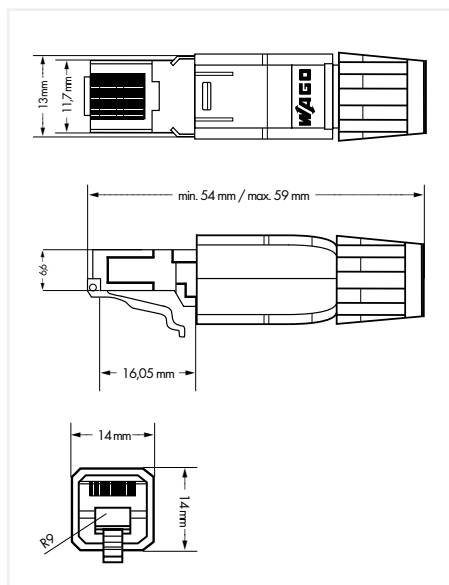


Pin assignment TIA-568A



ETHERNET Plug RJ-45, IP20; ETHERNET
10/100 Mbit/s; for field assembly

Item No.	Pack. Unit
750-975	1



Short description:

Versatile RJ-45 connector for industrial, office and building wiring applications.

WAGO's compact RJ-45 ETHERNET connector uses IDC technology for easy field assembly – connection is made without tools. The connector is compliant with all required standards. Large conductor cross sections can also be connected and the connector satisfies Category 5e.

Technical Data

Connection type	RJ-45 connector
Number of poles	8
Cable connection direction to mating direction	0°
Communication/fieldbus	ETHERNET
Code	TIA-568A
Insulation resistance	(100 V) > 1 GΩ

Connection Data

Connection type 1	IDC (Insulation Displacement Contact)
Solid conductor	0.13 ... 0.24 mm ² / 26/1 ... 23/1 AWG
Stranded conductor (2)	0.14 ... 0.36 mm ² / 26/7 ... 22/7 AWG

Geometric Data

Width	14 mm
Height	14 mm
Depth	59 mm

Mechanical Data

Shield	Brass (CuZn); hot-dip tinned 3 μm; Shield contacting: large surface >180°
Connection requirement (permissible cable type)	Cat. 5e
Connectable sheathed cable diameter	4.5 ... 8 mm
Housing material	Plastic
Contact material	Bronze (CuSn ₃)
Contact plating	> 1.2 μm gold over 1.2 μm nickel
Mating cycles (max.)	1000
Weight	12 g
Color	light gray

Environmental Requirements

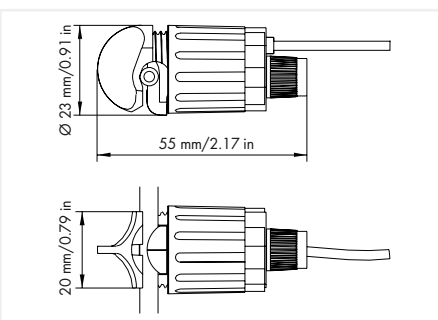
Surrounding air temperature (operation)	-20 ... +70 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Protection type	IP20
Relative humidity (without condensation)	95 %
Vibration resistance	4g per IEC 60068-2-6 - Basic standard: IEC 60603-7 RJ-45 Category 5; - CD ISO/IEC 11801: 2002; - EN 50173: 2002; - EIA/TIA 568A: 2002
Standards/specifications	

Voltage Tap 855 Series



Voltage Tap; with fuse; 2.5 ... 6 mm²; Phase

Color	Item No.	Pack. Unit
black	855-8001	1



Short description:

WAGO's 855 Series Voltage Taps easily and safely tap the measurement voltage. This allows a fuse-protected measurement voltage to be tapped from an insulated conductor with just one turn – no tools required.

Features:

- Safely tap the measurement voltage with just one turn
- Tool-free assembly
- Secure mounting
- For insulated conductors up to 16 mm² (6 AWG)
- Cable length: 3 m

Note:

Spare fuse: SIBA Fuse, Item No. 7008913.2

Output – Voltage Tap

Rated voltage	400 VAC
Continuous current (max.)	2 A
Max. voltage drop (output)	≤ 0.5 VAC
Fuse (voltage path)	2 A; 450 V; F, 70 kA, 5 x 25 mm

Safety and Protection

Test voltage	3 kVAC; 50 Hz; 1 min
Rated surge voltage	6 kV
Overvoltage category	III
Pollution degree	2
Protection type	IP20

Connection Data

Connection technology	IDC
Solid conductor	2.5 ... 6 mm ² / 14 ... 10 AWG
Fine-stranded conductor	2.5 ... 6 mm ² / 14 ... 10 AWG
Feedthrough for measurement conductor	3 ... 5 mm Ø
Cable type	Secondary side: 1 x 1.0 mm ² ; flexible; with ferrule

Geometric Data

Width	23 mm / 0.906 inch
Height	59 mm / 2.323 inch
Depth	23 mm / 0.906 inch
Cable length	3 m

Mechanical Data

Mounting type	Insulation displacement connection (IDC)
Mounting type	Mounting on insulated round cable
Torque	1.5 ... 2 Nm
Usability	Can be reused several times (max. 24 times)

Material Data

Weight	25.9 g
Housing material	PA 6.6; UL94 V2

Environmental Requirements

Surrounding air temperature (operation)	-5 ... +55 °C
Surrounding air temperature (storage)	-20 ... +70 °C
Relative humidity	5 ... 85 % (non-condensing)
Operating altitude (max.)	2000 m

Standards and Specifications

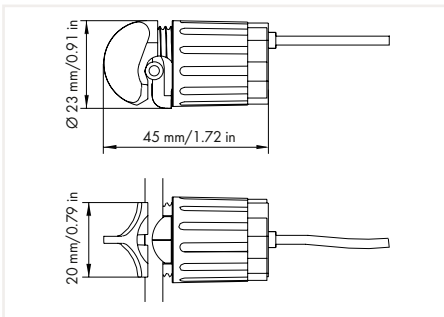
Conformity marking	CE
Standards/specifications	EN 60947-7-1

Voltage Tap 855 Series



Voltage Tap; without fuse; 2.5 ... 6 mm²; Neutral conductor

Color	Item No.	Pack. Unit
blue	855-8002	1



Short description:

WAGO's 855 Series Voltage Taps easily and safely tap the measurement voltage. This allows a fuse-protected measurement voltage to be tapped from an insulated conductor with just one turn – no tools required.

Features:

- Safely tap the measurement voltage with just one turn
- Tool-free assembly
- Secure mounting
- For insulated conductors up to 16 mm² (6 AWG)
- Cable length: 3 m

Output – Voltage Tap

Rated voltage	400 VAC
Continuous current (max.)	2 A
Max. voltage drop (output)	≤ 0.5 VAC
Fuse (voltage path)	-

Safety and Protection

Test voltage	3 kVAC; 50 Hz; 1 min
Rated surge voltage	6 kV
Overvoltage category	III
Pollution degree	2
Protection type	IP20

Connection Data

Connection technology	IDC
Solid conductor	2.5 ... 6 mm ² / 14 ... 10 AWG
Fine-stranded conductor	2.5 ... 6 mm ² / 14 ... 10 AWG
Feedthrough for measurement conductor	3 ... 5 mm Ø
Cable type	Secondary side: 1 x 1.0 mm ² ; flexible; with ferrule

Geometric Data

Width	23 mm / 0.906 inch
Height	50 mm / 1.969 inch
Depth	23 mm / 0.906 inch
Cable length	3 m

Mechanical Data

Mounting type	Insulation displacement connection (IDC)
Mounting type	Mounting on insulated round cable
Torque	1.5 ... 2 Nm
Usability	Can be reused several times (max. 24 times)

Material Data

Weight	20 g
Housing material	PA 6.6; UL94 V2

Environmental Requirements

Surrounding air temperature (operation)	-5 ... +55 °C
Surrounding air temperature (storage)	-20 ... +70 °C
Relative humidity	5 ... 85 % (non-condensing)
Operating altitude (max.)	2000 m

Standards and Specifications

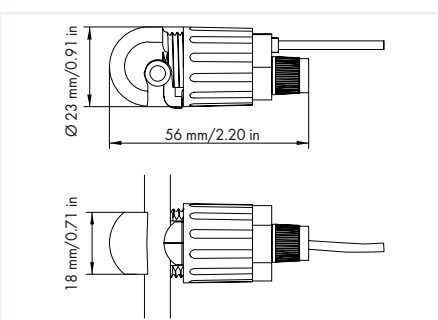
Conformity marking	CE
Standards/specifications	EN 60947-7-1

Voltage Tap 855 Series



Voltage Tap; with fuse; 10 ... 16 mm²; Phase

Color	Item No.	Pack. Unit
black	855-8003	1



Short description:

WAGO's 855 Series Voltage Taps easily and safely tap the measurement voltage. This allows a fuse-protected measurement voltage to be tapped from an insulated conductor with just one turn – no tools required.

Features:

- Safely tap the measurement voltage with just one turn
- Tool-free assembly
- Secure mounting
- For insulated conductors up to 16 mm² (6 AWG)
- Cable length: 3 m

Note:

Spare fuse: SIBA Fuse, Item No. 7008913.2

Output – Voltage Tap

Rated voltage	400 VAC
Continuous current (max.)	2 A
Max. voltage drop (output)	≤ 0.5 VAC
Fuse	2 A; 450 V; F; 70 kA, 5 x 25 mm

Safety and Protection

Test voltage	3 kVAC; 50 Hz; 1 min
Rated surge voltage	6 kV
Overvoltage category	III
Pollution degree	2
Protection type	IP20

Connection Data

Connection technology	IDC
Solid conductor	10 ... 16 mm ² / 8 ... 6 AWG
Fine-stranded conductor	10 ... 16 mm ² / 8 ... 6 AWG
Feedthrough for measurement conductor	5 ... 7 mm Ø
Cable type	Secondary side: 1 x 1.0 mm ² ; flexible; with ferrule

Geometric Data

Width	23 mm / 0.906 inch
Height	59 mm / 2.323 inch
Depth	23 mm / 0.906 inch
Cable length	3 m

Mechanical Data

Mounting type	Insulation displacement connection (IDC)
Mounting type	Mounting on insulated round cable
Torque	1.5 ... 2 Nm
Usability	Can be reused several times (max. 24 times)

Material Data

Weight	29 g
Housing material	PA 6.6; UL94 V2

Environmental Requirements

Surrounding air temperature (operation)	-5 ... +55 °C
Surrounding air temperature (storage)	-20 ... +70 °C
Relative humidity	5 ... 85 % (non-condensing)
Operating altitude (max.)	2000 m

Standards and Specifications

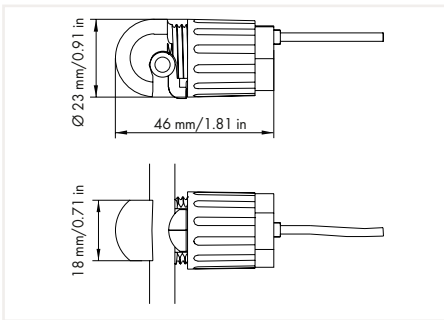
Conformity marking	CE
Standards/specifications	EN 60947-7-1

Voltage Tap 855 Series



Voltage Tap; without fuse; 10 ... 16 mm²; Neutral conductor

Color	Item No.	Pack. Unit
blue	855-8004	1



Short description:

WAGO's 855 Series Voltage Taps easily and safely tap the measurement voltage. This allows a fuse-protected measurement voltage to be tapped from an insulated conductor with just one turn – no tools required.

Features:

- Safely tap the measurement voltage with just one turn
- Tool-free assembly
- Secure mounting
- For insulated conductors up to 16 mm² (6 AWG)
- Cable length: 3 m

Output – Voltage Tap

Rated voltage	400 VAC
Continuous current (max.)	2 A
Max. voltage drop (output)	≤ 0.5 VAC
Fuse	-

Safety and Protection

Test voltage	3 kVAC; 50 Hz; 1 min
Rated surge voltage	6 kV
Overvoltage category	III
Pollution degree	2
Protection type	IP20

Connection Data

Connection technology	IDC
Solid conductor	10 ... 16 mm ² / 8 ... 6 AWG
Fine-stranded conductor	10 ... 16 mm ² / 8 ... 6 AWG
Feedthrough for measurement conductor	5 ... 7 mm Ø
Cable type	Secondary side: 1 x 1.0 mm ² ; flexible; with ferrule

Geometric Data

Width	23 mm / 0.906 inch
Height	50 mm / 1.969 inch
Depth	23 mm / 0.906 inch
Cable length	3 m

Mechanical Data

Mounting type	Insulation displacement connection (IDC)
Mounting type	Mounting on insulated round cable
Torque	1.5 ... 2 Nm
Usability	Can be reused several times (max. 24 times)

Material Data

Weight	21 g
Housing material	PA 6.6; UL94 V2

Environmental Requirements

Surrounding air temperature (operation)	-5 ... +55 °C
Surrounding air temperature (storage)	-20 ... +70 °C
Relative humidity	5 ... 85 % (non-condensing)
Operating altitude (max.)	2000 m

Standards and Specifications

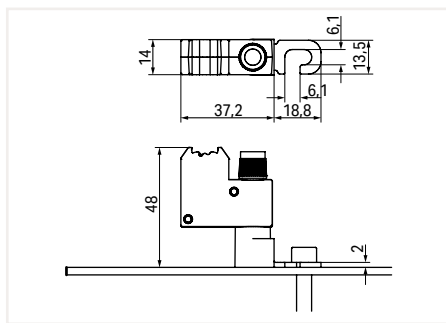
Conformity marking	CE
Standards/specifications	EN 60947-7-1

Voltage Tap 855 Series



Voltage Tap; for busbar; with fuse; M6 mount

Item No.	Pack. Unit
855-8006	1



Short description:

WAGO's voltage taps serve as busbar taps for measuring L- or N-conductors and are equipped with an integrated SIBA fuse with indicator. The built-in fuse is located directly above the voltage-carrying busbar. In the event of an overload and short circuit, the downstream measurement unit is safely disconnected before major damage occurs.

The voltage taps can be mounted directly on the busbar. Mounting is performed via M6 screw.

The measurement line is connected via Push-in CAGE CLAMP®, the universal connection technology for all conductor types that provides the simplicity of push-in terminations. Rigid conductors, such as solid and stranded conductors, as well as fine-stranded conductors with ferrules, can be terminated by simply pushing them in – no operating tool needed. The connection unit with a fuse and Push-in CAGE CLAMP® rotates. This creates additional added value by directly guiding subsequent wiring into the cable channel.

In addition, the voltage taps can be labeled with two different marking options.

Features:

- Fuse-protected voltage tap for measurement purposes
- Safe protection through integrated fuse with indicator (measurement line/device)
- WAGO Push-in CAGE CLAMP® connection technology
- WAGO labelling options (WMB markers or marking strips)

Note:

Spare fuse: SIBA Fuse, Item No. 7008913.2

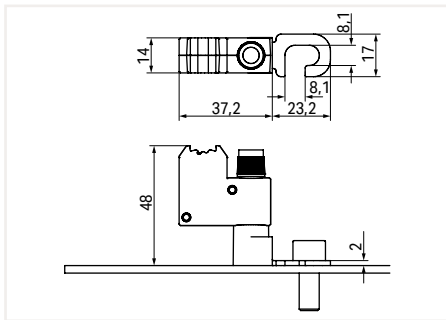
Output – Voltage Tap	
Rated voltage	400 VAC
Fuse (voltage path)	2 A; 450 V; F; 70 kA; 5 x 25 mm (WAGO 855-8020)
Connection Data	
Connection technology	Push-in CAGE CLAMP®
WAGO Connector	WAGO 2624 Series
Solid conductor	0.2 ... 6 mm ² / 24 ... 10 AWG
Fine-stranded conductor	0.2 ... 6 mm ² / 24 ... 10 AWG
Strip length	10 ... 12 mm / 0.39 ... 0.47 inch
Connection Data	
Width	57 mm / 2.244 inch
Height	14 mm / 0.551 inch
Depth	48 mm / 1.89 inch
Mechanical Data	
Mounting type	M6 mount
Mounting type	Installation on busbar
Material Data	
Weight	30 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 85 % (non-condensing)
Operating altitude (max.)	2000 m
Vibration resistance	10g (Industry; 5 ... 2000 Hz; per IEC 60068-2-6); 4g (Ship; 5 ... 150 Hz; per IEC 60068-2-6)
Standards and Specifications	
Standards/specifications	IEC 60947-7-3

Voltage Tap 855 Series



Voltage Tap; for busbar; with fuse; M8 mount

Item No.	Pack. Unit
855-8008	1



Short description:

WAGO's voltage taps serve as busbar taps for measuring L- or N-conductors and are equipped with an integrated SIBA fuse with indicator. The built-in fuse is located directly above the voltage-carrying busbar. In the event of an overload and short circuit, the downstream measurement unit is safely disconnected before major damage occurs.

The voltage taps can be mounted directly on the busbar. Mounting is performed via M8 screw.

The measurement line is connected via Push-in CAGE CLAMP®, the universal connection technology for all conductor types that provides the simplicity of push-in terminations. Rigid conductors, such as solid and stranded conductors, as well as fine-stranded conductors with ferrules, can be terminated by simply pushing them in – no operating tool needed. The connection unit with a fuse and Push-in CAGE CLAMP® rotates. This creates additional added value by directly guiding subsequent wiring into the cable channel.

In addition, the voltage taps can be labeled with two different marking options.

Features:

- Fuse-protected voltage tap for measurement purposes
- Safe protection through integrated fuse with indicator (measurement line/device)
- WAGO Push-in CAGE CLAMP® connection technology
- WAGO labelling options (WMB markers or marking strips)

Note:

Spare fuse: SIBA Fuse, Item No. 7008913.2

Output – Voltage Tap

Rated voltage	400 VAC
Fuse (voltage path)	2 A; 450 V; F; 70 kA; 5 x 25 mm (WAGO 855-8020)

Connection Data

Connection technology	Push-in CAGE CLAMP®
WAGO Connector	WAGO 2624 Series
Solid conductor	0.2 ... 6 mm ² / 24 ... 10 AWG
Fine-stranded conductor	0.2 ... 6 mm ² / 24 ... 10 AWG
Strip length	10 ... 12 mm / 0.39 ... 0.47 inch

Connection Data

Width	61 mm / 2.402 inch
Height	14 mm / 0.551 inch
Depth	48 mm / 1.89 inch

Mechanical Data

Mounting type	M8 mount
Mounting type	Installation on busbar

Material Data

Weight	31 g
--------	------

Environmental Requirements

Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 85 % (non-condensing)
Operating altitude (max.)	2000 m
Vibration resistance	10g (Industry; 5 ... 2000 Hz; per IEC 60068-2-6); 4g (Ship; 5 ... 150 Hz; per IEC 60068-2-6)

Standards and Specifications

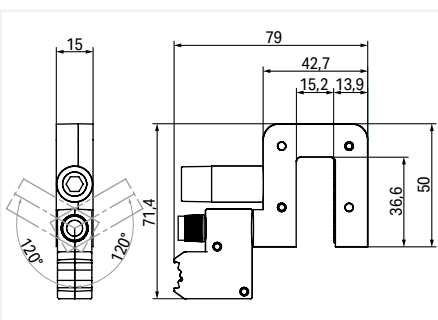
Standards/specifications	IEC 60947-7-3
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Voltage Tap 855 Series



Voltage Tap; for busbar; with fuse; Clamp mount

Item No.	Pack. Unit
855-8015	1



Short description:

WAGO's voltage taps serve as busbar taps for measuring L- or N-conductors and are equipped with an integrated SIBA fuse with indicator. The built-in fuse is located directly above the voltage-carrying busbar. In the event of an overload and short circuit, the downstream measurement unit is safely disconnected before major damage occurs.

The voltage taps can be mounted directly on the busbar. Clamp mount via Allen screw is performed using an insulated Allen wrench and provides an excellent contact between the busbar and the fuse. This ensures high operational safety and short-circuit protection.

The measurement line is connected via Push-in CAGE CLAMP®, the universal connection technology for all conductor types that provides the simplicity of push-in terminations. Rigid conductors, such as solid and stranded conductors, as well as fine-stranded conductors with ferrules, can be terminated by simply pushing them in – no operating tool needed. The connection unit with a fuse and Push-in CAGE CLAMP® rotates ($\pm 120^\circ$). This creates additional added value by directly guiding subsequent wiring into the cable channel.

In addition, the voltage taps can be labeled with two different marking options.

Features:

- Fuse-protected voltage tap for measurement purposes
- Safe protection through integrated fuse with indicator (measurement line/device)
- WAGO push-in termination technology
- WAGO labelling options (WMB markers or marking strips)

Note:

Spare fuse: SIBA Fuse, Item No. 7008913.2

Output – Voltage Tap

Rated voltage	400 VAC
Fuse (voltage path)	2 A; 450 V; F; 70 kA; 5 x 25 mm (WAGO 855-8020)

Connection Data

Connection technology	Push-in CAGE CLAMP®
WAGO Connector	WAGO 2624 Series
Solid conductor	0.2 ... 6 mm ² / 24 ... 10 AWG
Fine-stranded conductor	0.2 ... 6 mm ² / 24 ... 10 AWG
Strip length	10 ... 12 mm / 0.39 ... 0.47 inch
Busbar thickness (min.)	4 mm
Busbar thickness (max.)	15 mm

Connection Data

Width	79 mm / 3.11 inch
Height	15 mm / 0.591 inch
Depth	72 mm / 2.835 inch

Mechanical Data

Mounting type	Clamp mount
Mounting type	Installation on busbar

Material Data

Weight	160 g
--------	-------

Environmental Requirements

Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 85 % (non-condensing)
Operating altitude (max.)	2000 m
Vibration resistance	10g (Industry; 5 ... 2000 Hz; per IEC 60068-2-6); 4g (Ship; 5 ... 150 Hz; per IEC 60068-2-6)

Standards and Specifications

Standards/specifications	IEC 60947-7-3
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Accessories



T-wrench; with a partially insulated shaft; SW 6.0 x 100

Item No.	Pack. Unit
855-8000	1

Current and Voltage Tap 855 Series



Current and Voltage Tap for the 50 mm² (0/1 AWG)
High-Current Through Terminal Block

	Item No.	Pack. Unit
	855-501/150-000	1

Short description:

WAGO's current and voltage tap for 50 mm² (0/1 AWG) high-current through terminal blocks provides the ideal basis for successful energy management, because current and voltage are required wherever electrical power is measured. A combination of current transformer and voltage tap, this solution can be quickly and easily mounted into the jumper slot of WAGO's 50 mm² (1/0 AWG) high-current through terminal block.

An integrated fuse reliably protects downstream energy meters. An integrated current transformer (conversion ratio: 150 A/1 A) allows precise current measurement per EN 61869-2 (accuracy class: 0.5).

The current output connectors are marked with S1 (black) and S2 (red). Both termination and removal of fine-stranded conductors is performed via push-buttons. The 4-pole configuration (2 x S1 and 2 x S2) provides the following advantages:

- Current transformer (S1 and S2) can be short circuited via jumper (2000-402)
- Direct 'Y' point jumper on current transformer

The voltage is connected using a redundant terminal block.

Additionally, the current and voltage tap can be marked either using continuous marking strips or via WMB Multi Marking System.

Features:

- Power data can be directly tapped into the power supply
- Easy installation – simply insert the tap into the jumper slot of the 50 mm² (1/0 AWG) high-current through terminal block
- Integrated current transformer (150 A/1 A)
- Accuracy class: 0.5
- Fuse-protected voltage path

Note:

- Suitable for 2-conductor through terminal blocks for DIN-rail mounting (285-150; 285-154)
- Suitable for 2-conductor through terminal blocks with mounting flanges (285-141; 285-144)
- Spare fuse: SIBA Fuse, Item No. 7008913.2

Input – Current Transformer	
Primary rated current	150 A
Rated continuous thermal current I_{cth}	150 A
Rated short-time thermal current I_{th}	9 kA/1 s
Rated surge current I_{dyn}	22.5 kA
Rated frequency	50 ... 60 Hz
Output – Current Transformer	
Secondary rated current	1 A
Rated power S_r	0.2 VA
Output – Voltage Tap	
Rated voltage	400 VAC
Fuse (voltage path)	2 A; 450 V; F; 70 kA; 5 x 25 mm (WAGO 855-8020)
Measurement Error	
Accuracy class	0.5
Safety and Protection	
Test voltage	3 kVAC; 50 Hz; 1 min
Protection type	IP20
Highest voltage for equipment U_m	720 VAC
Connection Data	
Connection type 1	Current output
Connection technology	Push-in CAGE CLAMP®
WAGO Connector	WAGO 250 Series
Solid conductor	0.2 ... 1.5 mm ² / 24 ... 16 AWG
Fine-stranded conductor	0.2 ... 1.5 mm ² / 24 ... 16 AWG
Strip length	8.5 ... 9.5 mm / 0.33 ... 0.37 inch
Connection type 2	Voltage output
Connection technology 2	Push-in CAGE CLAMP®
WAGO Connector 2	WAGO 2624 Series
Solid conductor 2	0.2 ... 6 mm ² / 24 ... 10 AWG
Fine-stranded conductor 2	0.2 ... 6 mm ² / 24 ... 10 AWG
Strip length 2	10 ... 12 mm / 0.39 ... 0.47 inch
Feedthrough for measurement conductor	$\varnothing \leq 12$ mm
Geometric Data	
Width	20 mm / 0.787 inch
Height	68 mm / 2.677 inch
Depth	57 mm / 2.244 inch
Mechanical Data	
Mounting type	Via jumper slot of the 2-conductor high-current through terminal block (see note)
Material Data	
Weight	66 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-25 ... +70 °C
Relative humidity	5 ... 85 % (non-condensing)
Operating altitude (max.)	2000 m
Vibration resistance	10g (Industry; 5 ... 2000 Hz; per IEC 60068-2-6); 4g (Ship; 5 ... 150 Hz; per IEC 60068-2-6)
Standards and Specifications	
Conformity marking	CE
Standards/specifications	EN 61869-2; EN 60947-7-3

Current and Voltage Tap 855 Series



Current and Voltage Tap for the 95 mm² (4/0 AWG)
High-Current Through Terminal Block

Item No.	Pack. Unit
855-951/250-000	1

Short description:

WAGO's current and voltage tap for 95 mm² (4/0 AWG) high-current through terminal blocks provides the ideal basis for successful energy management, because current and voltage are required wherever electrical power is measured. A combination of current transformer and voltage tap, this solution can be quickly and easily mounted into the jumper slot of WAGO's 95 mm² (4/0 AWG) high-current through terminal block.

An integrated fuse reliably protects downstream energy meters. An integrated current transformer (conversion ratio: 250 A/1 A) allows precise current measurement per EN 61869-2 (accuracy class: 0.5).

The current output connectors are marked with S1 (black) and S2 (red). Both termination and removal of fine-stranded conductors is performed via push-buttons. The 5-pole configuration (2 x S1 and 3 x S2) provides the following advantages:

- Current transformer (S1 and S2) can be short circuited via jumper (2000-402)
- Direct 'Y' point jumper on current transformer

The voltage is connected using a redundant terminal block.

Additionally, the current and voltage tap can be marked either using continuous marking strips or via WMB Multi Marking System.

Features:

- Power data can be directly tapped into the power supply
- Easy installation – simply insert the tap into the jumper slot of the 95 mm² (4/0 AWG) high-current through terminal block
- Integrated current transformer (250 A/1 A)
- Accuracy class: 0.5
- Fuse-protected voltage path

Note:

- Suitable for 2-conductor through terminal blocks for DIN-rail mounting (285-195; 285-194)
- Suitable for 2-conductor through terminal blocks with mounting flanges (285-181; 285-184)
- Spare fuse: SIBA Fuse, Item No. 7008913.2

Input – Current Transformer	
Primary rated current	250 A
Rated continuous thermal current I_{ctn}	250 A
Rated short-time thermal current I_{th}	15 kA/1 s
Rated surge current I_{dyn}	37.5 kA
Rated frequency	50 ... 60 Hz
Output – Current Transformer	
Secondary rated current	1 A
Rated power S_2	0.2 VA
Output – Voltage Tap	
Rated voltage	400 VAC
Fuse (voltage path)	2 A; 450 V; F; 70 kA; 5 x 25 mm (WAGO 855-8020)
Measurement Error	
Accuracy class	0.5
Safety and Protection	
Test voltage	3 kVAC; 50 Hz; 1 min
Protection type	IP20
Highest voltage for equipment U_m	720 VAC
Connection Data	
Connection type 1	Current output
Connection technology	Push-in CAGE CLAMP®
WAGO Connector	WAGO 250 Series
Solid conductor	0.2 ... 1.5 mm ² / 24 ... 16 AWG
Fine-stranded conductor	0.2 ... 1.5 mm ² / 24 ... 16 AWG
Strip length	8.5 ... 9.5 mm / 0.33 ... 0.37 inch
Connection type 2	Voltage output
Connection technology 2	Push-in CAGE CLAMP®
WAGO Connector 2	WAGO 2624 Series
Solid conductor 2	0.2 ... 6 mm ² / 24 ... 10 AWG
Fine-stranded conductor 2	0.2 ... 6 mm ² / 24 ... 10 AWG
Strip length 2	10 ... 12 mm / 0.39 ... 0.47 inch
Feedthrough for measurement conductor	$\varnothing \leq 16$ mm
Geometric Data	
Width	25 mm / 0.984 inch
Height	73 mm / 2.874 inch
Depth	58 mm / 2.283 inch
Mechanical Data	
Mounting type	Via jumper slot of the 2-conductor high-current through terminal block (see note)
Material Data	
Weight	98 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-25 ... +70 °C
Relative humidity	5 ... 85 % (non-condensing)
Operating altitude (max.)	2000 m
Vibration resistance	10g (Industry; 5 ... 2000 Hz; per IEC 60068-2-6); 4g (Ship; 5 ... 150 Hz; per IEC 60068-2-6)
Standards and Specifications	
Conformity marking	CE
Standards/specifications	EN 61869-2; EN 60947-7-3

Current and Voltage Tap 855 Series



Current and Voltage Tap for the 185 mm² (350 kcmil) High-Current Through Terminal Block

	Item No.	Pack. Unit
	855-1851/350-000	1

Short description:

WAGO's current and voltage tap for 185 mm² (350 kcmil) high-current through terminal blocks provides the ideal basis for successful energy management, because current and voltage are required wherever electrical power is measured. A combination of current transformer and voltage tap, this solution can be quickly and easily mounted into the jumper slot of WAGO's 95 mm² (4/0 AWG) high-current through terminal block.

An integrated fuse reliably protects downstream energy meters. An integrated current transformer (conversion ratio: 350 A/1 A) allows precise current measurement per EN 61869-2 (accuracy class: 0.5).

The current output connectors are marked with S1 (black) and S2 (red). Both termination and removal of fine-stranded conductors is performed via push-buttons. The 5-pole configuration (2 x S1 and 3 x S2) provides the following advantages:

- Current transformer (S1 and S2) can be short circuited via jumper (2000-402)
- Direct 'Y' point jumper on current transformer

The voltage is connected using a redundant terminal block.

Additionally, the current and voltage tap can be marked either using continuous marking strips or via WMB Multi Marking System.

Features:

- Power data can be directly tapped into the power supply
- Easy installation – simply insert the tap into the jumper slot of the 185 mm² (350 kcmil) high-current through terminal block
- Integrated current transformer (350 A/1 A)
- Accuracy class: 0.5
- Fuse-protected voltage path

Note:

- Suitable for 2-conductor through terminal blocks for DIN-rail mounting (285-1185; 285-1184)
- Suitable for 2-conductor through terminal blocks with mounting flanges (285-1161; 285-1164)
- Spare fuse: SIBA Fuse, Item No. 7008913.2

Input – Current Transformer	
Primary rated current	350 A
Rated continuous thermal current I_{cth}	350 A
Rated short-time thermal current I_{th}	21 kA/1 s
Rated surge current I_{dyn}	52.5 kA
Rated frequency	50 ... 60 Hz
Output – Current Transformer	
Secondary rated current	1 A
Rated power S_r	0.2 VA
Output – Voltage Tap	
Rated voltage	400 VAC
Fuse (voltage path)	2 A; 450 V; F; 70 kA; 5 x 25 mm (WAGO 855-8020)
Measurement Error	
Accuracy class	0.5
Safety and Protection	
Test voltage	3 kVAC; 50 Hz; 1 min
Protection type	IP20
Highest voltage for equipment U_m	720 VAC
Connection Data	
Connection type 1	Current output
Connection technology	Push-in CAGE CLAMP®
WAGO Connector	WAGO 250 Series
Solid conductor	0.2 ... 1.5 mm ² / 24 ... 16 AWG
Fine-stranded conductor	0.2 ... 1.5 mm ² / 24 ... 16 AWG
Strip length	8.5 ... 9.5 mm / 0.33 ... 0.37 inch
Connection type 2	Voltage output
Connection technology 2	Push-in CAGE CLAMP®
WAGO Connector 2	WAGO 2624 Series
Solid conductor 2	0.2 ... 6 mm ² / 24 ... 10 AWG
Fine-stranded conductor 2	0.2 ... 6 mm ² / 24 ... 10 AWG
Strip length 2	10 ... 12 mm / 0.39 ... 0.47 inch
Feedthrough for measurement conductor	$\varnothing \leq 21.5$ mm
Geometric Data	
Width	32 mm / 1.256 inch
Height	84 mm / 3.307 inch
Depth	60 mm / 2.362 inch
Mechanical Data	
Mounting type	Via jumper slot of the 2-conductor high-current through terminal block (see note)
Material Data	
Weight	144 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-25 ... +70 °C
Relative humidity	5 ... 85 % (non-condensing)
Operating altitude (max.)	2000 m
Vibration resistance	10g (Industry; 5 ... 2000 Hz; per IEC 60068-2-6); 4g (Ship; 5 ... 150 Hz; per IEC 60068-2-6)
Standards and Specifications	
Conformity marking	CE
Standards/specifications	EN 61869-2; EN 60947-7-3



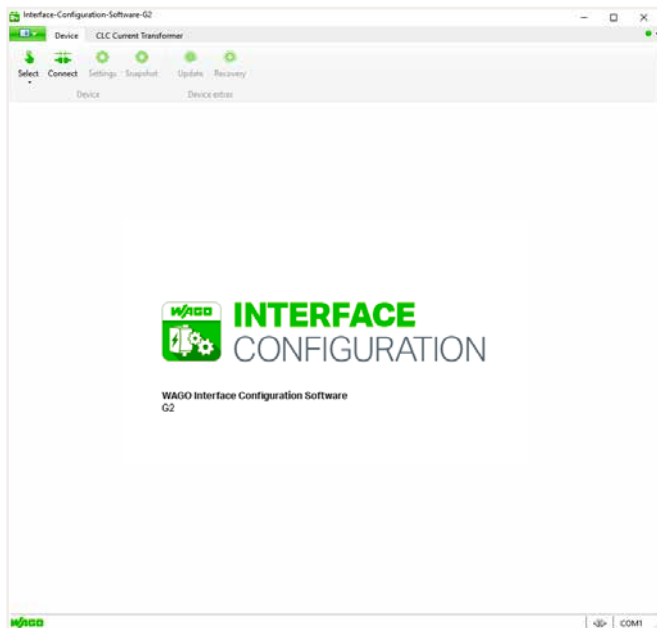
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Line Length Calculation for Current Transformers

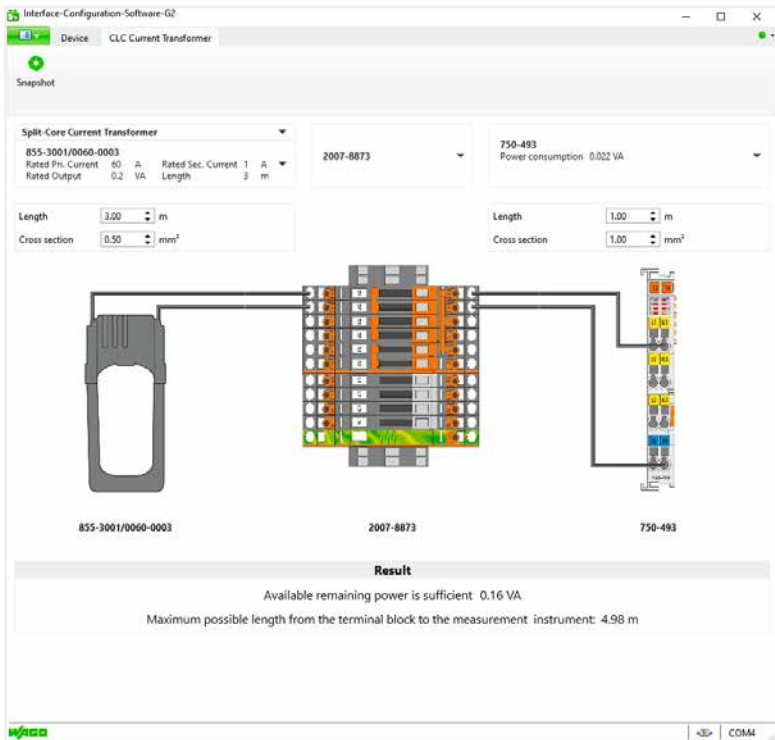
Refined Solution for Your System Planning

To determine actual power requirements, both the power requirements of the connected measurement devices and the power losses from the measurement lines connected to a transformer's secondary circuit must be taken into account.

The interface configuration software's new feature quickly and easily calculates cable length and provides the results for your system documentation.



WAGO Interface Configuration Software Start Screen



Cable length calculation using the interface configuration software

11.05.2020 07:32 WAGO Kontakttechnik GmbH & Co. KG	
Interface Configuration Software (1.0.4.1)	
Current Transformer	
Order number	855-3001/0060-0003
Rated Pri. Current	60 A
Rated Sec. Current	1 A
Rated Output	0.414 VA
Measurement instrument	
Order number	750-493
Power consumption	0.022 VA
Cabel from transducer to terminal block	
Length	3 m
Cross section	0.5 mm²
Power loss	0.214 VA
Cabel from transducer to measurement instrument	
length	1 m
Cross section	1 mm²
Power loss	0.036 VA
Result	
Available power	0.414 VA
Total power loss	0.250 VA
Remaining power	0.164 VA
Required power	0.022 VA
Result	Available remaining power is sufficient

Simply documented!

4

Power calculation of copper cables between measurement device and current transformer:

$$P_v = \frac{I_s^2 \times 2 \times l}{A_{CU} \times 56} \text{ VA}$$

I_s = Secondary rated measuring current strength [A]
 l = Simple cable length in m
 A_{CU} = Cable cross section in mm²
 P_v = Power loss of connection cables

Note: When using a common three-phase return line, the values for P_v are halved.

Current transformer 5 A

$$P_v = \frac{5^2 \times 2 \times 10}{1.5 \times 56} \text{ VA} = 5.96 \text{ VA}$$

Current transformer 1 A

$$P_v = \frac{1^2 \times 2 \times 10}{1.5 \times 56} \text{ VA} = 0.24 \text{ VA}$$









Example:
 A 1 amp or 5 amp current transformer is used, with an ammeter on the secondary circuit, at a distance of 10 m between the transformer and the measurement device.

Free software download at:
www.wago.com/configuration-software



WAGO Power Supplies

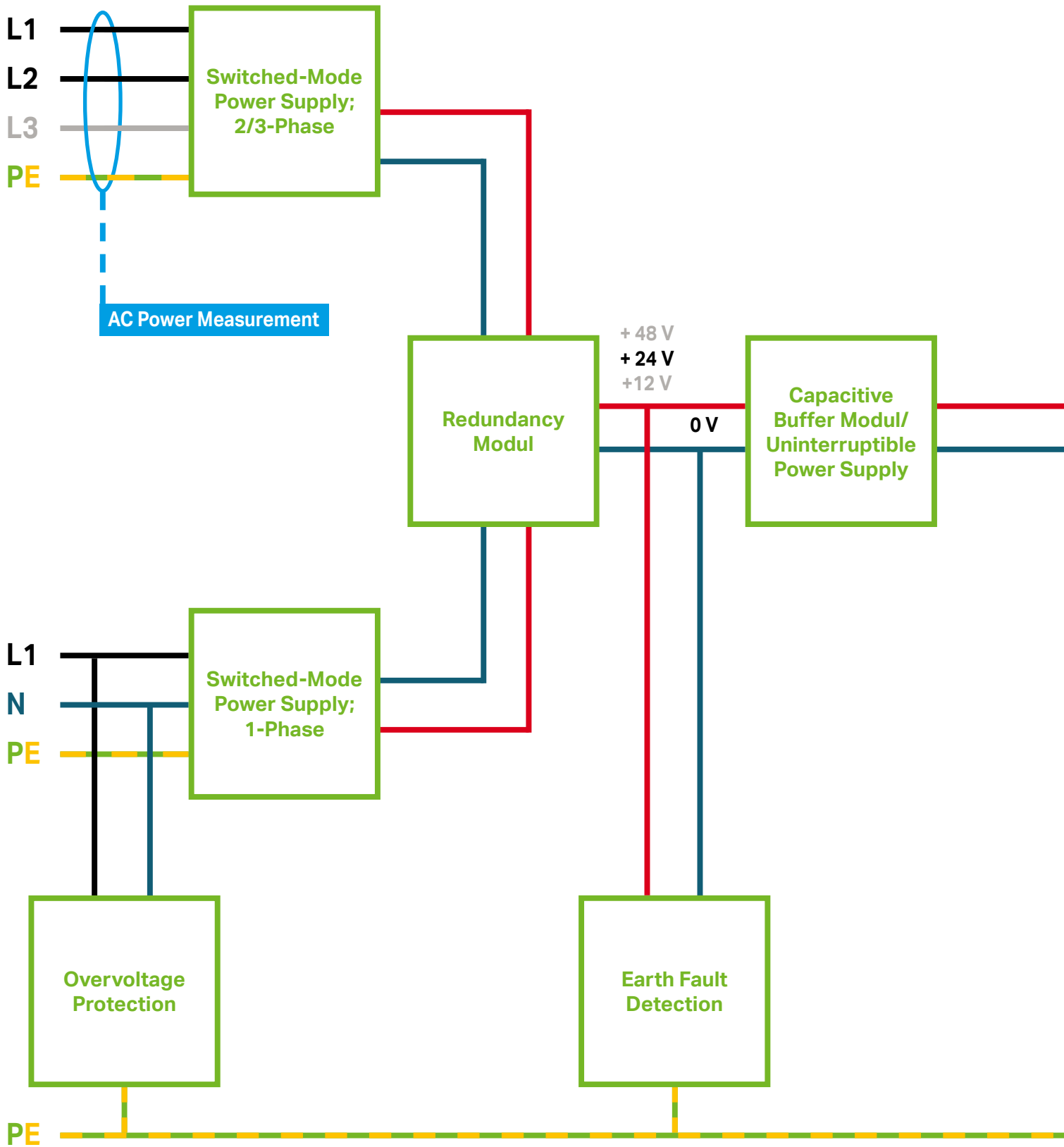
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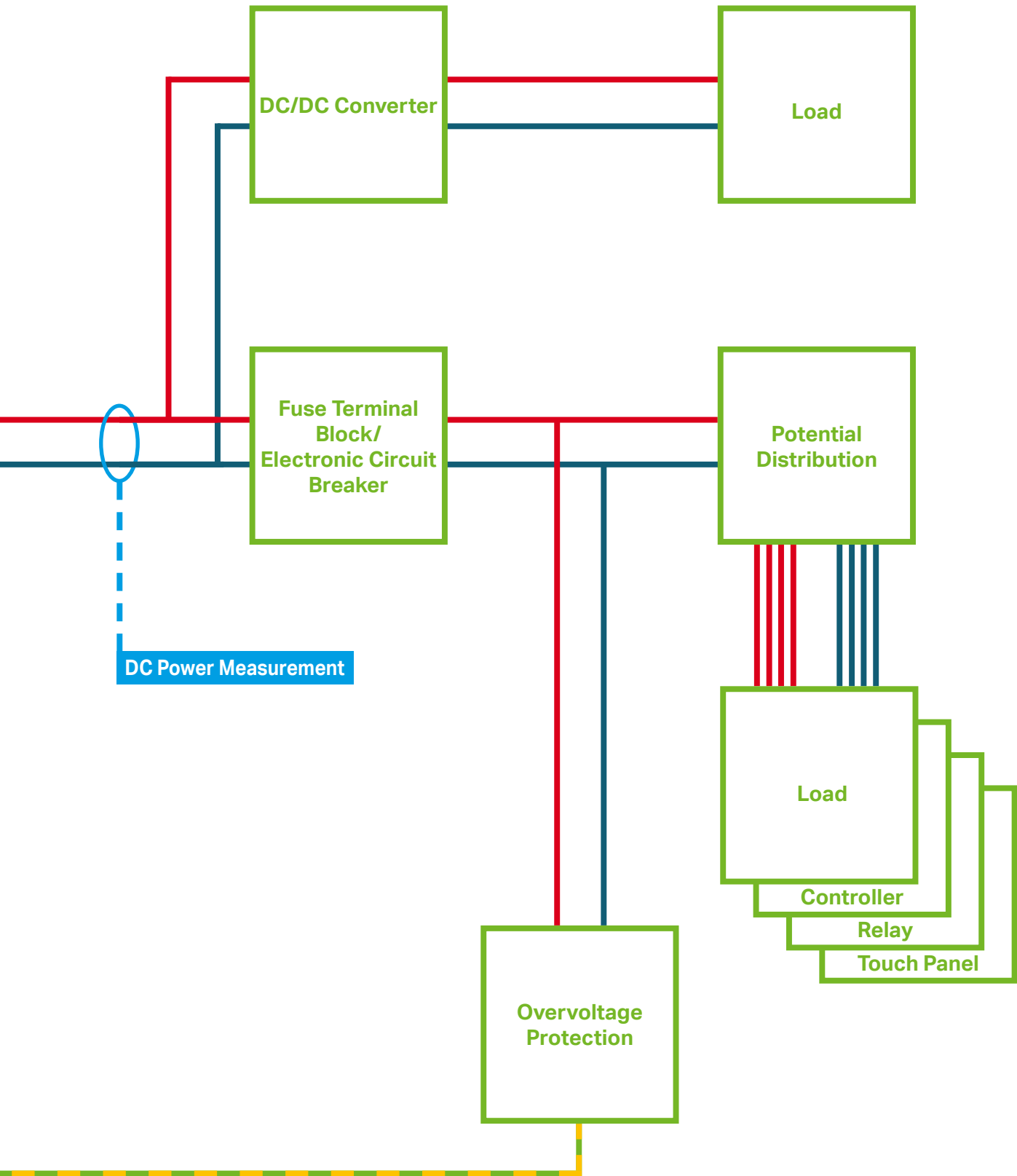
For more Informationen about WAGO Power Supplies please consult the catalog WAGO Power supplies 2021/2022 or via www.wago.com!

WAGO Power Supplies System Overview



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WAGO Power Supplies System Overview



WAGO Power Supplies



WAGO Power Supplies Pro 2

New Generation of Professional Power Supplies for Applications Requiring High Performance, Efficiency and Reliability

WAGO's Pro 2 Power Supplies offer tremendous added value thanks to flexible configuration and comprehensive monitoring via optional communication interface (WAGO USB Communication Cable and IO-Link Communication Module).

Advantages:

- TopBoost function: Up to 600% output current for 15 ms
- PowerBoost function: 150% output power for 5 s
- High efficiency thanks to a CCFL inverter topology
- Single- and three-phase power supplies with output voltages of 24 VDC and nominal output currents from 5 to 40 A
- Communication interface for configuring threshold values, overload and DI/DO behavior, as well as monitoring output variables, warning and error messages
- Permanent communication via IO-Link through an optional pluggable communication module



WAGO Power Supplies Pro

Applications with high output requirements call for professional power supplies capable of reliably handling power peaks. WAGO's Pro Power Supplies are ideally suited for such applications.

- TopBoost function: Multiplies the nominal current for up to 50 ms
- PowerBoost function: Provides 200% of output power for four seconds
- Single- and three-phase power supplies with output voltages of 12/24/48 VDC and nominal output currents from 5 to 40 A for nearly every application
- LineMonitor (option): Easy parameter setting and input/output monitoring
- Potential-free contact/stand-by input: Switch off output with no wear and minimize power consumption
- Serial RS-232 interface (option): Communicate with PC or PLC



WAGO Power Supplies Classic

Classic is the robust power supply with optional TopBoost integration. A wide input range and extensive list of international approvals open up WAGO's Classic Power Supplies to a wide variety of applications.

- TopBoost: cost-effective, secondary-side fusing via standard circuit breakers (≥ 120 W)
- Nominal output voltage: 12, 24, 30.5 and 48 VDC
- DC OK signal/contact for easy remote monitoring
- Wide input voltage range and UL/GL approvals for worldwide applications
- CAGE CLAMP® Connection Technology: maintenance-free and time-saving
- Slim, compact design saves valuable cabinet space

WAGO Power Supplies



WAGO Power Supplies Eco 2

The Eco line of power supplies now includes WAGO Eco 2 Power Supplies with push-in technology and integrated WAGO levers. The new devices' compelling features include fast, reliable and tool-free lever connections, as well as an excellent price/performance ratio. At 25 mm and 38 mm wide, the power supplies are slim and compact. The devices are also extremely durable and reliable with their high efficiency of $\geq 88\%$ (2687-2142) and lower thermal generation.

- Power supplies with a wide input voltage range of 90 ... 264 VAC (100 ... 373 VDC) Output voltage: 24 VDC, adjustable; Output power: 30 W (2687-2142) and 120 W (2687-2144)
- Integrated, tool-free lever-actuated push-in connection technology
- Slim design, high efficiency, good price/performance ratio
- Reliability, long service life (high MTBF)
- Quick, easy, maintenance- and tool-free connection technology



WAGO Power Supplies Eco

Many applications only require 24 VDC. Here, WAGO's ECO Power Supplies are the economical solution.

- Output current: 1.25 ... 40 A
- Wide input voltage range for use internationally: 90 ... 264 VAC
- Economically supports basic applications
- CAGE CLAMP® Connection Technology: maintenance-free and time-saving
- LED status indication: output voltage availability (green), overcurrent/short circuit (red)
- Flexible mounting on DIN-rail and variable installation via screw-mount clips – perfect for every application
- Flat, rugged metal housing: compact and stable design



WAGO Power Supplies Compact

WAGO's compact, high-performance Compact Power Supplies in DIN-rail-mount housings are available with output voltages of 5, 12, 18 and 24 VDC, as well as nominal output currents up to 6.5 A.

- Wide input voltage range for use internationally: 85 ... 264 VAC
- Flexible mounting on DIN-rail and variable installation via screw-mount clips
- Push-in CAGE CLAMP® Connection Technology (option): maintenance-free and time-saving
- Improved cooling due to a removable front plate: ideal for alternative mounting positions
- Dimensions per DIN 43880: suitable for installation in distribution and meter boards

WAGO Power Supplies



Uninterruptible Power Supply (UPS)

Consisting of a 24 V UPS charger and controller with one or more connected batteries, WAGO's Uninterruptible Power Supply reliably powers an application for several hours. Trouble-free machine or system operation is guaranteed – even in the event of brief power supply failures.

- Slim charging and control units save control cabinet space
- Integrated display and RS-232 interface (option) simplify visualization and configuration
- Pluggable CAGE CLAMP® Connection Technology: maintenance-free and time-saving
- Battery control technology for predictive maintenance that extends battery life

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Capacitive Buffer Modules

In addition to reliably ensuring trouble-free machine and system operation – even through brief power failures – WAGO's Capacitive Buffer Modules offer power reserves that may be required when starting heavy motors or triggering a fuse.

Decoupled output: integrated diodes for decoupling buffered loads from unbuffered loads

- Maintenance-free and time-saving connections via pluggable connectors equipped with CAGE CLAMP® Connection Technology
- Unlimited parallel connections possible
- Adjustable switching threshold
- Maintenance-free, high-energy gold caps



Redundancy Modules

WAGO's redundancy modules are ideal for reliably increasing power supply availability. These modules decouple two parallel-connected power supplies and are ideal for applications where an electrical load must be reliably supplied – even in the event of a power supply failure.

- Integrated power diodes with overload capability: suitable for Top-Boost or PowerBoost
- Potential-free contact (option) for input voltage monitoring
- Reliable connection via pluggable connectors equipped with CAGE CLAMP® or terminal strips with integrated operating levers: maintenance-free and time-saving
- Solutions for 12, 24 and 48 VDC supply, up to 76 A supply: suitable for nearly every application

WAGO Power Supplies



Electronic Circuit Breakers (ECBs)

WAGO's ECBs are the space-saving and precision solution for fusing DC voltage circuits.

- 1-, 2-, 4- and 8-channel ECBs with fixed or adjustable currents ranging from 0.5 to 12 A
- High switch-on capacity: >50,000 μF
- Communication capability: remote monitoring and reset
- Pluggable CAGE CLAMP® Connection Technology (option): maintenance-free and time-saving
- Comprehensive range of approvals: many applications



DC/DC Converters

Instead of using an additional power supply, WAGO's DC/DC Converters are ideal for specialty voltages, allowing sensors and actuators to be reliably supplied.

DC/DC converters can be used instead of an additional power supply for applications with specialty voltages.

- Slim design: "True" 6.0 mm (0.23 inch) width maximizes panel space
- Wide operating temperature range
- Ready for worldwide use in many industries, thanks to UL listing
- Common profile with 857 and 2857 Series Signal Conditioners and Relays: Enables full commoning of the supply voltage

WAGO Power Supplies Selection Guide

Switched-Mode Power Supplies 1-Phase

Nominal voltage (output)	Nominal current (output) [ADC]	Input, 1-phase	Input, 2-phase	Approvals							DC OK signal/contact	RS-232 interface	TopBoost ¹⁾	PowerBoost	Efficiency typ. [%]	Surrounding air temperature [°C] ⁴⁾	Item Number
				EN 60335	cURus 60950	cULus 508	cULus 61010	DNVGL	ANSI/ISA 12.12.1	ATEX/IEC Ex							
5 VDC	5.5	■			■	■			□						75.0	-25 ... +60	787-1020
12 VDC	2.0	■		■	■	■			■						82.0	-25 ... +70	787-1601 ²⁾
	2.0	■		■											80.0	-25 ... +60	787-1701
	2.0	■		■	■	■			■						80.0	-25 ... +60	787-1001
	2.5	■		■											88.0	-25 ... +70	787-1201
	4.0	■		■	■	■			■						86.0	-25 ... +70	787-1611 ²⁾
	4.0	■		■											81.0	-25 ... +60	787-1711
	4.0	■		■	■	■			■						85.0	-25 ... +60	787-1011
	5.0	■		■	■	■									89.5	-25 ... +70	787-1211
	6.0	■		■	■	■			■						87.0	-25 ... +60	787-1021
	7.0	■		■	■	■			■						86.0	-25 ... +70	787-1621
	8.0	■		■											84.0	-25 ... +60	787-1721
	8.0	■		■	■										88.0	-25 ... +70	787-1201
8.0	■		■	■										91.5	-25 ... +70	787-1221	
10.0	■						■				■	■		93.8	-25 ... +70	2787-2134	
15.0	■						■				■	■		95.3	-25 ... +70	2787-2135	
15.0	■			■	■		■				■	■		90.0	-25 ... +70	787-1631	
18 VDC	2.4	■			■	■			□					83.0	-25 ... +60	787-1017	
22 VDC	1.0	■			■									84.0	-25 ... +60	787-914	
24 VDC	0.5	■		■		■									83.0	-25 ... +70	787-1200
	1.0	■		■	■	■			■						86.0	-25 ... +70	787-1602 ²⁾
	1.25	■		■	■	■									80.0	-20 ... +60	787-1702
	1.25	■					■								88.0	-25 ... +70	2687-2142
	1.25	■			■										88.0	-20 ... +70	787-2850
	1.3	■			■	■			■						82.0	-25 ... +60	787-1002
	1.3	■			■	■			■						82.0	-25 ... +60	787-1102
	1.3	■			■	■			■						87.0	-25 ... +70	787-1202
	2.0	■			■	■			■						89.0	-25 ... +70	787-1606 ²⁾
	2.5	■			■	■				■					86.0	-10 ... +70	787-712
	2.5	■			■	■									81.0	-20 ... +60	787-1712
	2.5	■			■	■			■						88.0	-25 ... +60	787-1012
	2.5	■			■	■			■						88.0	-25 ... +60	787-1112
	2.5	■			■	■									89.0	-25 ... +70	787-1212
	3.0	■				■					■	■	■		87.8	-25 ... +70	787-818
	3.8	■			■	■			■						87.0	-25 ... +70	787-1616/000-1000 ²⁾
	4.0	■			■	■			■						89.0	-25 ... +70	787-1616
	4.0	■			■	■			■						88.0	-25 ... +60	787-1022
	4.0	■			■	■			■						88.0	-25 ... +60	787-1122
	4.0	■			■	■									92.3	-40 ... +85	787-6716
	4.2	■			■	■									90.0	-25 ... +70	787-1216
	5.0	■						■			■	■	■		91.5	-25 ... +70	2787-2144
	5.0	■				■					■	■	■		87.8	-25 ... +70	787-822
	5.0	■			■	■			■		■	■	■		89.0	-25 ... +70	787-1622
	5.0	■	■			■			■		■	■	■		89.0	-25 ... +70	787-1628
	5.0	■			■	■									86.0	-10 ... +60	787-722
	5.0	■			■	■									84.0	-20 ... +60	787-1722
	5.0	■						■							90.0	-25 ... +70	2687-2144
	6.0	■			■	■									90.0	-25 ... +70	787-1226
	10.0	■						■				■	■		92.8	-25 ... +70	2787-2146
10.0	■				■						■	■		90.0	-25 ... +70	787-832	
10.0	■				■			■		■	■	■		91.0	-25 ... +70	787-1632 ⁵⁾	
10.0	■	■			■			■		■	■	■		90.0	-25 ... +70	787-1638	
10.0	■				■									86.0	-10 ... +70	787-732	
10.0	■			■	■									84.0	-20 ... +60	787-1732	
20.0	■						■				■	■		94.0	-25 ... +70	2787-2147	
20.0	■				■						■	■		91.0	-25 ... +70	787-834	
20.0	■				■			■		■	■	■		92.0	-25 ... +70	787-1634	
20.0	■				■									90.0	-25 ... +70	787-734	
40.0	■						■				■	■		95.0	-25 ... +70	2787-2448	
40.0	■				■						■	■		90.0	-25 ... +70	787-736	

Switched-Mode Power Supplies 1-Phase

Nominal voltage (output)	Nominal current (output) [ADC]	Input, 1-phase	Input, 2-phase	Approvals								DC OK signal/contact	RS-232 interface	TopBoost ¹⁾	PowerBoost	Efficiency typ. [%]	Surrounding air temperature [°C] ⁴⁾	Item Number
				EN 60335	cURus 60950	cULus 508	cULus 61010	DNVGL	ANSI/ISA 12.12.1	ATEX/IEC Ex								
48 VDC	2.0	■		■	■	■		■							86.0	-25 ... +70	787-1623	
	5.0	■		■	■		■									-25 ... +70	2787-2154	
	5.0	■			■	■									91.0	-25 ... +70	787-833	
	5.0	■			■	■		■							92.0	-25 ... +70	787-1633	
	10.0	■						■							95.3	-25 ... +70	2787-2157	
	10.0	■			■	■									91.0	-25 ... +70	787-835	
	10.0	■			■	■		■							93.0	-25 ... +70	787-1635 ⁵⁾	

Switched-Mode Power Supplies 3-Phase

Nominal voltage (output)	Nominal current (output) [ADC]	Approvals								DC OK signal/contact	RS-232 interface	TopBoost ¹⁾	PowerBoost	Efficiency typ. [%]	Surrounding air temperature [°C] ⁴⁾	Item Number
		EN 60335	cURus 60950	cULus 508	cULus 61010	DNVGL	ANSI/ISA 12.12.1	ATEX/IEC Ex								
24 VDC	6.25		■	■										87.0	-25 ... +70	787-738
	10.0				■						■	■		93.0	-25 ... +70	2787-2346
	10.0				■						■	■		95.0	-25 ... +70	2787-2357
	10.0		■	■							■	■		91.7	-25 ... +70	787-840
	10.0		■	■							■	■		91.7	-25 ... +70	787-850
	10.0		■	■		■					■	■		90.0	-25 ... +70	787-1640
	10.0		■	■							■	■		89.0	-25 ... +70	787-740
	20.0				■						■	■		94.8	-25 ... +70	2787-2347
	20.0				■						■	■		96.0	-25 ... +70	2787-2358
	20.0		■	■							■	■		92.9	-25 ... +70	787-842
	20.0		■	■							■	■		92.9	-25 ... +70	787-852
	20.0		■	■		■					■	■		92.0	-25 ... +70	787-1642
	20.0		■	■							■	■		90.0	-25 ... +70	787-742
	20.0		■	■							■	■		90.5	-20 ... +70	787-2742
	40.0				■						■	■		95.0	-25 ... +70	2787-2348
	40.0		■	■							■	■		93.6	-25 ... +55	787-844
	40.0		■	■							■	■		93.6	-25 ... +55	787-854
	40.0		■	■		■					■	■		92.0	-25 ... +70	787-1644
	40.0		■	■							■	■		91.5	-20 ... +70	787-2744
	48 VDC	10.0		■	■							■	■		93.0	-25 ... +70
20.0			■	■							■	■		94.4	-25 ... +70	787-847

Other

Description	Approvals					Surrounding air temperature [°C]	Item Number
	EN 60950	UL 60950	EN 61204-3	EN 61000-6-3	DIN EN 60939-2		
Power supply for fan control	■	■	■	■			787-914
Radio interference suppression filter; 1-phase					■		787-980

■ Yes □ Pending

¹⁾ TopBoost enables magnetic tripping of circuit breakers in the output circuit.

²⁾ NEC Class 2 Power Unit per cURus 1310 or cURus 60950

³⁾ With uninterruptible power supply (UPS)

⁴⁾ Device starts at -40°C, type-tested for 787-8xx, -10xx, -16xx, 2787-2xxx

⁵⁾ .../000-070 is optionally available with protective coating

WAGO System Devices Selection Guide

Uninterruptible Power Supplies (UPS)

Input		Output		Approvals						Dimensions and Environmental Conditions				Item Number
Nominal voltage [VAC]	Nominal voltage [VDC]	Nominal voltage [VDC]	Nominal current [ADC]	EN 60335	UL 60950	UL 508	DNV GL	ANSI/ISA 12.12.1	ATEX/IEC Ex	Width [mm]	Height [mm]	Length [mm]	Surrounding air temperature [°C]	
-	24	24	10.0		■	■				40.0	163.0	163.0	-10 ... +60	787-870
-	24	24	20.0		■	■				57.0	163.0	171.0	-10 ... +60	787-875
	24	24	40.0							68.0	181.0	162.0	0 ... +55	787-915
100 ... 240	110 ... 370	24	5.0		■	■	■			60.0	135.5	127.0	-25 ... +70	787-1675

Battery Modules

Input		Output		Approvals						Dimensions and Environmental Conditions				Item Number	
Nominal voltage [VDC]	Nominal voltage [VDC]	Nominal capacity [Ah]	Nominal current [ADC]	EN 60335	UL 60950	UL 508	DNV GL	ANSI/ISA 12.12.1	ATEX/IEC Ex	VdS-tested battery	Width [mm]	Height [mm]	Length [mm]		Surrounding air temperature [°C]
24	24	0.8				□				■	72.0	124.5	97.0	-15 ... +40	787-1671
24	24	1.2				■				■	55.0	136.5	153.0	-15 ... +40	787-876
24	24	3.2				■				■	76.2	175.5	168.0	-15 ... +40	787-871
24	24	7.0				■				■	86.0	217.5	236.0	-15 ... +40	787-872
24	24	12.0				■				■	120.5	217.5	236.0	-15 ... +40	787-873

Capacitive Buffer Modules

Input/Output, Buffer			Approvals						Dimensions and Environmental Conditions				Item Number
Nominal input/output voltage [VDC]	Nominal current (output) [ADC]	Buffer time [s]	EN 60335	UL 60950	UL 508	DNV GL	ANSI/ISA 12.12.1	ATEX/IEC Ex	Width [mm]	Height [mm]	Length [mm]	Surrounding air temperature [°C]	
24	10.0	0.06 ... 7.2			■	■			57.0	179.0	163.0	-10 ... +50	787-880
24	20.0	0.17 ... 16.5			■	■			57.0	179.0	181.0	-10 ... +50	787-881
24	40.0	0.35 ... 6.6							68.0	181.0	162.0	-10 ... +50	787-916

Redundancy Modules

Input		Output		Approvals						Dimensions and Environmental Conditions				Item Number
Nominal voltage [VDC]	Nominal voltage [VDC]	Nominal current [ADC]	Nominal current [ADC]	EN 60335	UL 60950	UL 508	DNV GL	ANSI/ISA 12.12.1	ATEX/IEC Ex	Width [mm]	Height [mm]	Length [mm]	Surrounding air temperature [°C]	
12 ... 48	12 ... 48	12.5				■				50.0	92.0	130.0	-25 ... +70	787-783
24	24	20.0			■	■				40.0	163.0	181.0	-10 ... +60	787-885
24	24	40.0			■	■	■			42.0	139.5	127.0	-40 ... +70	787-1685 ²⁾
12 ... 48	12 ... 48	40.0				■				83.0	153.0	130.0	-25 ... +70	787-785
48	48	20.0								40.0	163.0	181.0	-10 ... +60	787-886

- Yes □ Pending
- ¹⁾ NEC Class 2
- ²⁾ .../000-070 is optionally available with protective coating
- ³⁾ Available upon request

DC/DC Converters

Nominal voltage (input) [VDC]	Nominal voltage (output) [VDC]	Nominal current (output) [A]	Approvals					DC OK signal/contact	Efficiency typ. [%]	Surrounding air temperature [°C]	Item Number
			EN 50155	EN 60335	UL 61010-2-201	DNVGL	ANSI/ISA 12.12.1				
24.0	5.0	0.5			■			■	82.5	-25 ... +70	787-2801
24.0	10.0	0.5			■			■	89.0	-25 ... +70	787-2802
48.0	24.0	0.5			■			■	91.0	-25 ... +70	787-2803
24.0	12.0	0.5			■			■	90.0	-25 ... +70	787-2805
24.0	5/10/12	0.5			■			■	82.5	-25 ... +70	787-2810
24.0	12.0	0.4			■			■	84.0	-25 ... +70	787-1650
110.0	24.0	2.0	■		■			■	85.0	-40 ... +70	787-1014
72.0	24.0	2.0	■		■			■	86.0	-40 ... +70	787-1014/072-000
72.0	12.0	4.0	■		■	■		■	86.0	-40 ... +70	787-1015/072-000

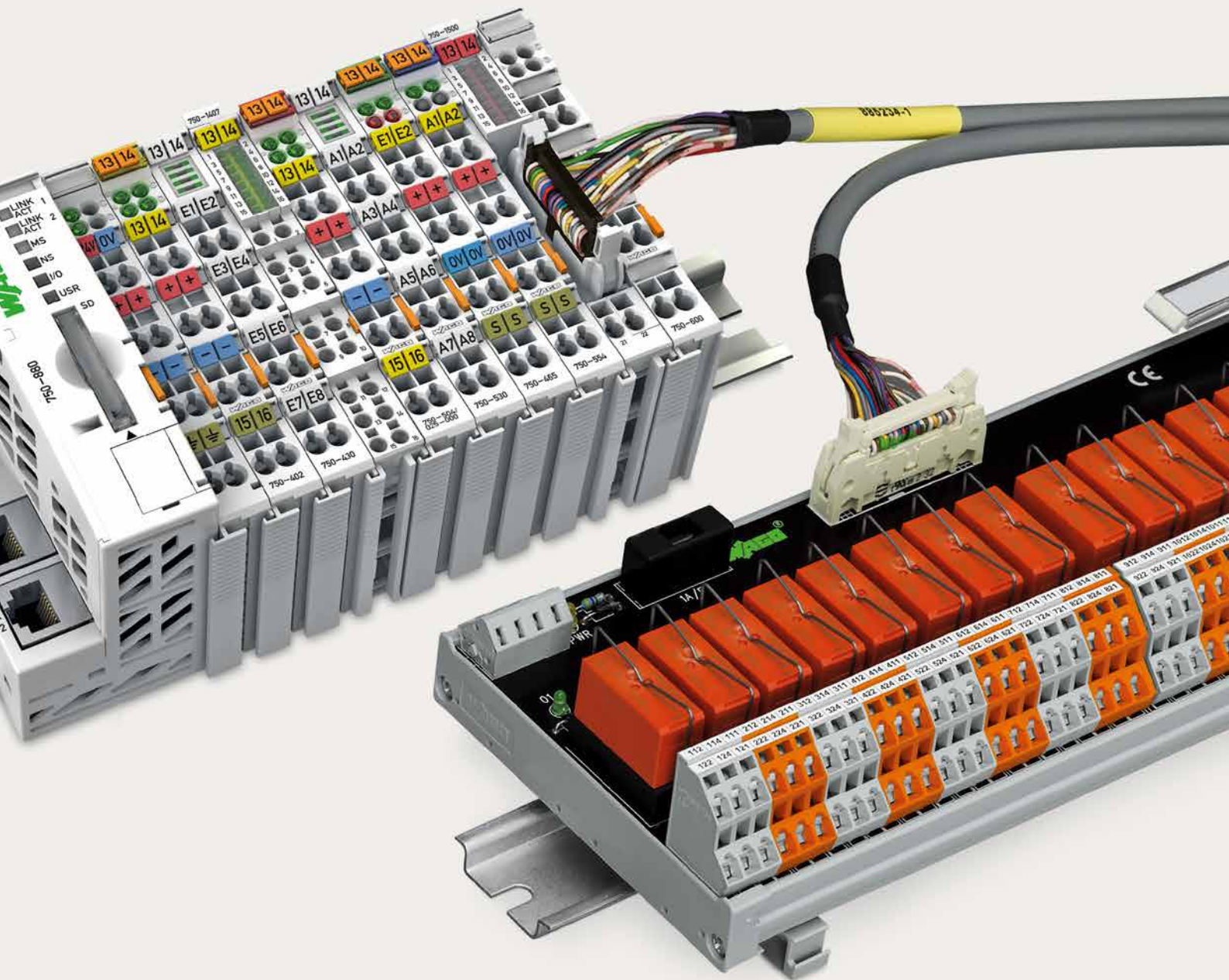
Electronic Circuit Breakers

Nominal input/ output voltage	Input/Output				Approvals				Dimensions and Environmental Conditions				Item Number
	Channels (output)	Nominal current (output) [ADC]	Communication	Active current limitation	UL 61010-2-201	UR 2367	cULus 508	GL	Width [mm]	Height [mm]	Length [mm]	Surrounding air temperature [°C]	
12 VDC	4	2 ... 10	M			■	■	■	45	115,5	90	-25 ... +70	787-1664/000-100
24 VDC	1	0,5	S		■			■	6	97,8	94	-25 ... +70	787-2861/050-000
	1	1	S		■			■	6	97,8	94	-25 ... +70	787-2861/100-000
	1	2	S		■			■	6	97,8	94	-25 ... +70	787-2861/200-000
	1	4	S		■			■	6	97,8	94	-25 ... +70	787-2861/400-000
	1	6	S		■			■	6	97,8	94	-25 ... +70	787-2861/600-000
	1	8	S		■			■	6	97,8	94	-25 ... +70	787-2861/800-000
24 VDC	1	1 ... 8	S		■			■	6	97,8	94	-25 ... +70	787-2861/108-020
	2	2 ... 10	M			■	■	■	45	115,5	90	-25 ... +70	787-1662
	2	2 ... 10	P			■	■	■	45	115,5	90	-25 ... +70	787-1662/000-054
	2	3,8 LPS	M	■		■	■		45	115,5	90	-25 ... +70	787-1662/004-1000 ¹⁾
24 VDC	2	0,5 ... 6	M	■		■	■	■	45	115,5	90	-25 ... +70	787-1662/006-1000
	2	1 ... 6	M			■	■	■	45	115,5	90	-25 ... +70	787-1662/106-000
	4	2 ... 10	M			■	■	■	45	115,5	90	-25 ... +70	787-1664
	4	2 ... 10	M			■	■	■	45	115,5	90	-25 ... +70	787-1664/000-004
	4	2 ... 10	P			■	■	■	45	115,5	90	-25 ... +70	787-1664/000-054
	4	2 ... 10	N			■	■	■	45	115,5	90	-25 ... +70	787-1664/000-011
	4	1 ... 10	I			■	■	■	45	115,5	90	-25 ... +70	787-1664/000-080
	4	3,8 LPS	M	■		■	■		45	115,5	90	-25 ... +70	787-1664/004-1000 ¹⁾
48 VDC	4	0,5 ... 6	M	■		■	■	■	45	115,5	90	-25 ... +70	787-1664/006-1000
	4	1 ... 6	M			■	■	■	45	115,5	90	-25 ... +70	787-1664/106-000
	4	1 ... 6	N			■	■	■	45	115,5	90	-25 ... +70	787-1664/106-011
	4	2 ... 12	M	■		■	■	■	45	115,5	90	-25 ... +70	787-1664/212-1000
	4	0,5 ... 6	P	■	□	■	■	■	45	115,5	90	-25 ... +70	787-1664/006-1054
	8	2 ... 10	M			■	■	■	42	142,5	127	-25 ... +70	787-1668
	8	2 ... 10	M			■	■	■	42	142,5	127	-25 ... +70	787-1668/000-004
	8	2 ... 10	P			■	■	■	42	142,5	127	-25 ... +70	787-1668/000-054
48 VDC	8	1 ... 10	I			■	■	■	42	142,5	127	-25 ... +70	787-1668/000-080
	8	0,5 ... 6	M	■		■	■	■	42	142,5	127	-25 ... +70	787-1668/006-1000
	8	1 ... 6	M			■	■	■	42	142,5	127	-25 ... +70	787-1668/106-000
	8	1 ... 6	M		□	■	■	■	42	142,5	127	-25 ... +70	787-1668/106-054
	8	1 ... 6	P	■		■	■	■	42	142,5	127	-25 ... +70	787-1668/006-1054
	2	2 ... 10	P			■	■	■	45	115,5	90	-25 ... +70	787-1662/000-250
	48 VDC	4	2 ... 10	M			■	■	■	45	115,5	90	-25 ... +70
4		2 ... 10	P			■	■	■	45	115,5	90	-25 ... +70	787-1664/000-250
48 VDC	8	2 ... 10	M			■	■	■	42	142,5	127	-25 ... +70	787-1668/000-200
	8	2 ... 10	P			■	■	■	42	142,5	127	-25 ... +70	787-1668/000-250

- Yes □ Pending
- ¹⁾ NEC Class 2
- S = Signal
- N = Signal, low-side switching
- P = Potential-free signal
- I = IO-Link protocol
- M = Manchester protocol




Safety Transformers

Nominal voltage (output) [VAC]	Nominal power (output) [VA]	Nominal voltage (input) [VAC]	Approvals							Surrounding air temperature [°C]	Item Number
			EN 5085	EN 61558-2-6	UL 60601	UL 508	DNV GL	ANSI/ISA 12.12.1	ATEX/IEC Ex		
12/24	40	110/230	□	□	□					-25 ... +55	787-974
12/24	63	110/230	□	□	□					-25 ... +55	787-976



WAGO System Wiring

WAGO System Wiring

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WAGO System Wiring Overview and Application Examples

16-Channel I/O Module with Interface Module

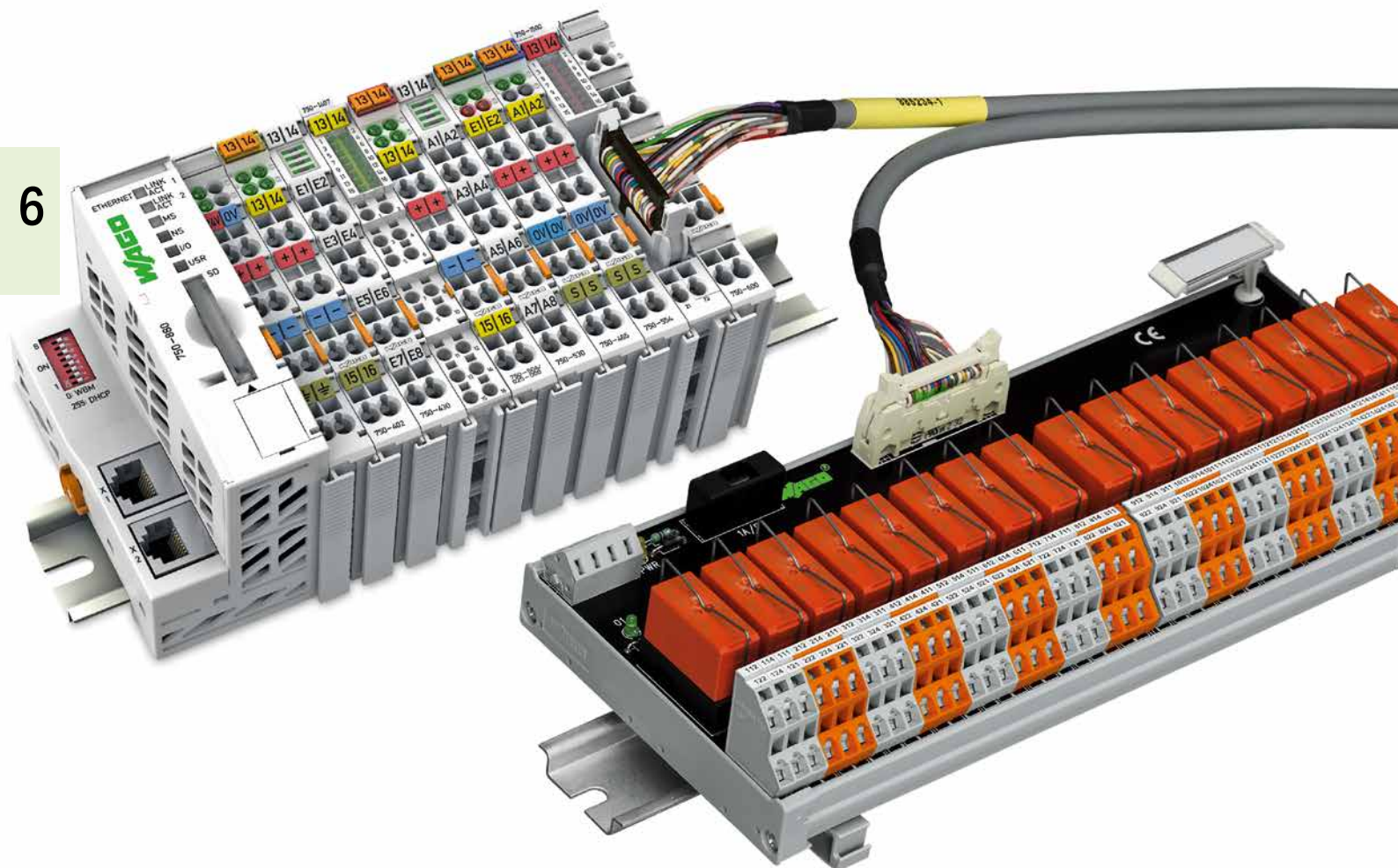
The 750-14xx and 750-15xx I/O Modules with a pluggable connector per DIN 41651 offer 16 digital channels in a module less than 1/2 inch (12 mm) wide. Offering quick connections and a space-efficient design, the DIN-rail-mount interface modules simplify installation in confined areas and conveniently relocate the termination point. When combined with WAGO's interface modules (e.g., Item No. 289-614, 289-611), a control cabinet can be pre-wired before installation to minimize wiring time and errors. This is beneficial as wiring can be performed independently of construction.

The programmed controller can be installed right before start-up, saving valuable time during final stages of project completion. The I/O modules are also ideal for connecting series machines or relay modules tasked with the higher loads common to buildings and industrial applications. The interface modules also combine the advantages of relays (e.g., manual operation or rapid replacement with socket-mounted versions) with the benefits of a modern I/O system. Another ideal application would be the integration of pneumatic controllers into a fieldbus network.

Most pneumatic modules have an appropriate connector and can be controlled by the WAGO-I/O-SYSTEM.

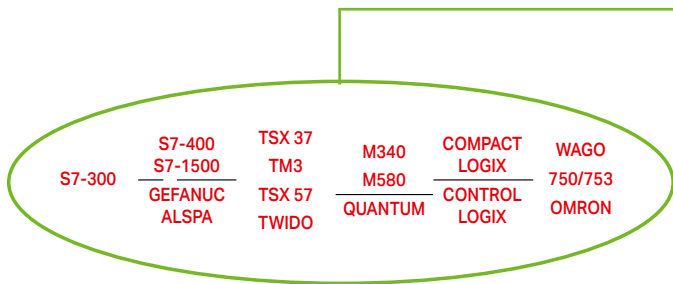
Six variants are available: two 16-channel input or output modules (one high-side and one low-side switching variant), as well as two versions combining 8 inputs and 8 outputs.

6



6

HOW TO USE THE PRODUCT SELECTOR



STEP 1
 Use the tabs to select your PLC.
 Ex.:
 • PLC Siemens S7 - 300

6

CPU	PLC		FRONT CABLES		
	PLC I/O Card		Part N°	Qty	
6ES7 313-5BE01-0AB0	16	DI	706-2300/301-XXXX	1	
		DO			
	8	DI	706-2300/701-XXXX	1	
		AI/2 AO			
		DO			
	6ES7 313-5BG04-0AB0	16	DI	706-2300/301-XXXX	1
		16	DO	706-2300/301-XXXX	1
		8	DI	706-2300/701-XXXX	1
	6ES7 313-6BE01-0AB0	5	AI/2 AO	706-2300/701-XXXX	1
		16	DI	706-2300/301-XXXX	1
16		DO	706-2300/301-XXXX	1	
6ES7 313-6BF03-0AB0	16	DI	706-2300/301-XXXX	1	
	16	DO	706-2300/301-XXXX	1	
6ES7 313-6CE01-0AB0	16	DI	706-2300/301-XXXX	1	
	16	DO	706-2300/301-XXXX	1	
6ES7 313-6CF03-0AB0	16	DI	706-2300/301-XXXX	1	
	16	DO	706-2300/301-XXXX	1	
6ES7 314-6BF01-0AB0	16	DI	706-2300/301-XXXX	1	
	16	DO	706-2300/301-XXXX	1	

STEP 2
 Select a PLC I/O card.
 Ex.:
 • 6ES7 313-6CF03-0AB0

STEP 3
 Read the part no. and quantity of the front cable to be used.
 Ex.:
 • 706 - 2300/301 - XXXX* Qty: 1

6ES7 313-5BG04-0AB0	16	DI	706-2300/301-XXXX	1
	16	DO	706-2300/301-XXXX	1
	8	DI	706-2300/701-XXXX	1
	5	AI/2 AO	706-2300/701-XXXX	1

In some cases, TWO different cables are necessary.
 Ex.:
 • **Card:** 6ES7 313 - 5BG04- 0AB0
 • **Cables:**
 706 - 2300/301- XXXX* Qty: 1
AND
 706 - 2300/701- XXXX* Qty: 1

*The part number suffix «xxx» indicates the length of cable in cm.

Guide de choix câbles pour automates | S7-300 | www.wago.com

XXX	CORD S7-300 2xT8ESHT	1	T16ESHT	2				
XXX	CORD S7-300 T8S	1	T8ES	1			T8S	1
XXX	CORD S7-300 T16S	1	T16ES	1			T16S	1
XXX	CORD S7-300 T8ET8S	1	T8ES	1			T8S	1
XXX	CORD S7-300 2xT16ES	1	T16ES	1	T16EO			
XXX	CORD S7-300 T8ET8S	1	T8ES	1			T16S	1
XXX	CORD S7-300 T8ET8S	1	T8ES	1			T8S	1
XXX	CORD S7-300 A8EI	1	A8ES	1				
XXX	CORD S7-300 A8EU	1	A8ES	1				
XXX	CORD S7-300 A8E	1	A8ES	1				
XXX	CORD S7-300 A2E	1	A4ES	1				
XXX	CORD S7-300 A2E	1	A4ES	1				
XXX	CORD S7-300 A8E	1	A8ES	1				
XXX	CORD S7-300 A8E1	1	A8ES	1				

6ES7 321-1BH01-0AA0	32	DI	706-2300/100-XXXX	CORD S7-300 2xT16ES	2	T16ES	2	T16EO	4				
6ES7 321-1BH00-0AA0	64	DI	706-2300/100-XXXX	CORD S7-300 2xT16E	2	T16ES	4	T16EO	4				
6ES7 321-1CH00-0AA0	16	DI	706-2300/306-XXXX	CORD S7-300 2xT8ESHT	1	T8ESHT	2					U ₀ = 24Vdc VAC/DC	
6ES7 321-1CH00-0AA0	16	DI	706-2300/306-XXXX	CORD S7-300 T8ESHT1	1	T8ESHT	1					U ₀ = 48-125 Vdc	
6ES7 321-1CH00-0AA0	16	DI	706-2300/306-XXXX	CORD S7-300 2xT8ESHT	1	T8ESHT	2						
6ES7 321-1EL00-0AA0	32	DI	706-2300/306-XXXX	CORD S7-300 2xT8ESHT	1	T8ESHT	2					U ₀ = 120 Vdc	
6ES7 321-1FH00-0AA0	16	DI	706-2300/100-XXXX	CORD S7-300 T8ESHT1	1	T8ESHT	1					U ₀ = 120/230 Vdc	
6ES7 321-1BH01-0AB0	16	DI	706-2300/101-XXXX	CORD S7-300 T16E	1	T16ES	1						
6ES7 321-1BH00-0AB0	16	DI	706-2300/101-XXXX	CORD S7-300 T16E	1	T16ES	1						

Attention: pour le choix des interfaces toujours tenir compte des caractéristiques des modules, tension max., courant max., tension de commande relié ou open.

Le suffixe xxxx de la référence indique la longueur du cordon en cm.

Exemples de longueurs standards: L: 0xxxx

- * 1,00m (100) / 1,50m (150) / 2,00m (200)

Exemple de Ref. cordon 12m: 706-2300/300-1200

STEP 4

Select the compatible range of interfaces.

Ex.:

- Card: 6ES7 323-1BH01-0AA0
- Range of interfaces:
T8ES Qty: 1 AND T8S Qty: 1

In some cases we can have the choice between TWO differents interfaces range.

Ex.:

- Card: 6ES7 323 - 1BL00 - 0AA0
- Range of interfaces:
T16ES Qty: 1 OR T16EO Qty: 1
AND T16S Qty: 1

WAGO Interface Modules			
Type	Description	Item No.	
T8ES	10-pole; without supply	289-611	
	10-pole; with LED; 3-wire	704-2003	
T8ESHT	12-pole (MCS); without LED; 2 conductors; up to 250 V	704-3003	
T8S	10-pole; with LED; electrical isolation: 5 A relay	704-5003	
	10-pole; with LED; electrical isolation: 5 A relay; manual operation	704-5013	
T16ES	20-pole; without supply	289-614	
	20-pole; with LED; 1-wire	704-2004	
	20-pole; with LED; 1-wire; channel isolation	704-2014	
	20-pole; with LED; 2-wire	704-2024	

STEP 5

Select the compatible interfaces.

Ex.:

- 704-2003
- 704-5013

In most cases we can have the choice between different products.

Ex.:

- Range of interfaces: T8S
- Products 704-5003 or 704-5013

On the basis of the short description in the table or the more extensive technical data in the eShop the required interface module can be selected

PLC SIEMENS S7-300

PLC				FRONT CABLES			COMPATIBLE INTERFACES						
PLC I/O Card				Part N°	Type	Qty	Directes	Qty	Opto	Qty	Relays	Qty	Remarks
CPU	6ES7 313-5BE01-0AB0	16	DI	706-2300/301-XXXX	CORD S7-300 2xT16ES	1	T16ES	1	T16EO	1			
		16	DO							T16S	1		
	6ES7 313-5BG04-0AB0	8	DI	706-2300/701-XXXX	CORD S7-300 T8EA7	1	T8ES	1					
		5	AI/2 AO				A8TSX	1					
		16	DO							T16EO	1		T16S
	6ES7 313-6BE01-0AB0	16	DI	706-2300/301-XXXX	CORD S7-300 2xT16ES	1	T16ES	1	T16EO	1			
		16	DO							T16S	1		
	6ES7 313-6BF03-0AB0	16	DI	706-2300/301-XXXX	CORD S7-300 2xT16ES	1	T16ES	1	T16EO	1			
		16	DO							T16S	1		
	6ES7 313-6CE01-0AB0	16	DI	706-2300/301-XXXX	CORD S7-300 2xT16ES	1	T16ES	1	T16EO	1			
		16	DO							T16S	1		
	6ES7 313-6CF03-0AB0	16	DI	706-2300/301-XXXX	CORD S7-300 2xT16ES	1	T16ES	1	T16EO	1			
		16	DO							T16S	1		
	6ES7 314-6BF01-0AB0	16	DI	706-2300/301-XXXX	CORD S7-300 2xT16ES	1	T16ES	1	T16EO	1			
		16	DO							T16S	1		
		8	DI				706-2300/701-XXXX	CORD S7-300 T8EA7ES	1	T8ES	1		
5	AI/2 AO	A8TSX	1										
6ES7 314-6BG03-0AB0	16	DI	706-2300/301-XXXX	CORD S7-300 2xT16ES	1	T16ES	1	T16EO	1				
	16	DO							T16S	1			
	8	DI				706-2300/701-XXXX	CORD S7-300 T8EA7	1	T8ES	1			
5	AI/2 AO	A8TSX	1										
6ES7 314-6CF01-0AB0	16	DI	706-2300/301-XXXX	CORD S7-300 2xT16ES	1	T16ES	1	T16EO	1				
	16	DO							T16S	1			
	8	DI				706-2300/701-XXXX	CORD S7-300 T8EA7	1	T8ES	1			
5	AI/2AO	A8TSX	1										
6ES7 314-6CG03-0AB0	16	DI	706-2300/301-XXXX	CORD S7-300 2xT16ES	1	T16ES	1	T16EO	1				
	16	DO							T16S	1			
	8	DI				706-2300/701-XXXX	CORD S7-300 T8EA7	1	T8ES	1			
5	AI/2 AO	A8TSX	1										
DI	6ES7 321-1BH02-0AA0	16	DI	706-2300/300-XXXX	CORD S7-300 T16ES	1	T16ES	1	T16EO	1			
	6ES7 321-1BH10-0AA0	16	DI	706-2300/300-XXXX	CORD S7-300 T16ES	1	T16ES	1	T16EO	1			
	6ES7 321-1BH80-0AA0	16	DI	706-2300/300-XXXX	CORD S7-300 T16ES	1	T16ES	1	T16EO	1			
	6ES7 321-1BL00-0AA0	32	DI	706-2300/301-XXXX	CORD S7-300 2xT16ES	1	T16ES	2	T16EO	2			
	6ES7 321-1BL80-0AA0	32	DI	706-2300/301-XXXX	CORD S7-300 2xT16ES	1	T16ES	2	T16EO	2			
	6ES7 321-1BP00-0AA0	64	DI	706-2300/100-XXXX	CORD S7-300 2xT16E	2	T16ES	4	T16EO	4			
	6ES7 321-1CH00-0AA0	16	DI	706-2300/306-XXXX	CORD S7-300 2xT8ESHT	1	T16ESHT	2					$U_{in} = 24/48 \text{ VAC/DC}$
	6ES7 321-1CH20-0AA0	16	DI	706-2300/304-XXXX	CORD S7-300 T16ESHT1	1	T16ESHT	1					$U_{in} = 48-125 \text{ VDC}$
	6ES7 321-1CH80-0AA0	16	DI	706-2300/304-XXXX	CORD S7-300 T16ESHT1	1	T16ESHT	1					$U_{in} = 48-125 \text{ VDC}$
	6ES7 321-1EL00-0AA0	32	DI	706-2300/306-XXXX	CORD S7-300 2xT8ESHT	1	T16ESHT	2					$U_{in} = 120 \text{ VAC}$
	6ES7 321-1FH00-0AA0	16	DI	706-2300/102-XXXX	CORD S7-300 T16EHT	1	T16ESHT	1					$U_{in} = 120/230 \text{ VAC}$
	6ES7 321-7BH01-0AB0	16	DI	706-2300/101-XXXX	CORD S7-300 T16E	1	T16ES	1					
	6ES7 321-7BH80-0AA0	16	DI	706-2300/101-XXXX	CORD S7-300 T16E	1	T16ES	1					

Please always consider the modules features (max voltage, max current, relay and optocoupler control voltage) when selecting interfaces.



The part number suffix «xxxx» indicates the length of cable in cm.

Standard length examples: L (xxxx)

• 1,00 m (100) / 2,00 m (200) / 3,00 m (300)

Part no. example for 2m cable: 706-2300/300-200

PLC SIEMENS S7-300

PLC				FRONT CABLES			COMPATIBLE INTERFACES						
	PLC I/O Card			Part N°	Type	Qty	Directes	Qty	Opto	Qty	Relays	Qty	Remarks
	DO	6ES7 322-1BF01-0AA0	8	DO	706-2300/201-XXXX	CORD S7-300 T8S	1	T8ES	1			T8S	1
6ES7 322-1BH01-0AA0		16	DO	706-2300/300-XXXX	CORD S7-300 T16ES	1	T16ES	1			T16S	1	
6ES7 322-1BH10-0AA0		16	DO	706-2300/300-XXXX	CORD S7-300 T16ES	1	T16ES	1			T16S	1	
6ES7 322-1BH80-0AA0		16	DO	706-2300/300-XXXX	CORD S7-300 T16ES	1	T16ES	1			T16S	1	
6ES7 322-1BL00-0AA0		32	DO	706-2300/301-XXXX	CORD S7-300 2xT16ES	1	T16ES	2			T16S	2	
6ES7 322-1BP00-0AA0		64	DO	706-2300/200-XXXX	CORD S7-300 2xT16S	2	T16ES	4			T16S	4	
6ES7 322-1EH01-0AA0		16	DO	706-2300/300-XXXX	CORD S7-300 T16ES	1	T16ES	1			T16S	1	
6ES7 322-1FL00-0AA0		32	DO	706-2300/304-XXXX	CORD S7-300 T16ESHT1	2	T16ESHT	2					Uout = 120/230 VAC
6ES7 322-1FH00-0AA0		16	DO	706-2300/304-XXXX	CORD S7-300 T16ESHT1	1	T16ESHT	1					Uout = 120/230 VAC
6ES7 322-1HF10-0AA0		8	DO	706-2300/205-XXXX	CORD S7-300 T8SHT2	1	T16ESHT	1					Uout = 230 VAC
6ES7 322-1HH01-0AA0		16	DO	706-2300/202-XXXX	CORD S7-300 T16SHT	1	T16ESHT	1					Uout = 120/230 VAC
6ES7 322-5GH00-0AB0		16	DO	706-2300/306-XXXX	CORD S7-300 2xT8ESHT	1	T16ESHT	2					Uout = 24/48 VAC/DC
6ES7 322-8BF00-0AB0		8	DO	706-2300/201-XXXX	CORD S7-300 T8S	1	T8ES	1			T8S	1	
6ES7 322-8BH01/8BH10-0AB0	16	DO	706-2300/209-XXXX	CORD S7-300 T16S	1	T16ES	1			T16S	1		
D/DO	6ES7 323-1BH01-0AA0	8 8	DI DO	706-2300/302-XXXX	CORD S7-300 T8ET8S	1	T8ES	1			T8S	1	
	6ES7 323-1BL00-0AA0	16 16	DI DO	706-2300/301-XXXX	CORD S7-300 2xT16ES	1	T16ES	1	T16EO	1	T16S	1	
	6ES7 327-1BH00-0AB0	8 8	DI DO	706-2300/302-XXXX	CORD S7-300 T8ET8S	1	T8ES	1			T8S	1	
	6ES7 331-1KF02-0AB0	8	AI	706-2300/402-XXXX	CORD S7-300 A8EI	1	A8ES	1					Current
6ES7 331-1KF02-0AB0	8	AI	706-2300/403-XXXX	CORD S7-300 A8EU	1	A8ES	1					Voltage	
6ES7 331-1KF02-0AB0	8	AI	706-2300/400-XXXX	CORD S7-300 A8E	1	A8ES	1						
6ES7 331-7KB02-0AB0	2	AI	706-2300/401-XXXX	CORD S7-300 A2E	1	A4ES	1						
6ES7 331-7KB81-0AB0	2	AI	706-2300/401-XXXX	CORD S7-300 A2E	1	A4ES	1						
6ES7 331-7KF02-0AB0	8	AI	706-2300/400-XXXX	CORD S7-300 A8E	1	A8ES	1						
6ES7 331-7NF00-0AB0	8	AI	706-2300/404-XXXX	CORD S7-300 A8E1	1	A8ES	1					Current	
6ES7 331-7NF00-0AB0	8	AI	706-2300/405-XXXX	CORD S7-300 A8EU1	1	A8ES	1					Voltage	
6ES7 331-7NF10-0AB0	8	AI	706-2300/406-XXXX	CORD S7-300 A8E12	1	A8ES	1					Current	
6ES7 331-7NF10-0AB0	8	AI	706-2300/407-XXXX	CORD S7-300 A8EU2	1	A8ES	1					Voltage	
6ES7 331-7PF01-0AB0	8	AI	706-2300/408-XXXX	CORD S7-300 2xA4E	1	A8ES	2						
6ES7 331-7RD00-0AB0	4	AI	706-2300/409-XXXX	CORD S7-300 A4EP	1	A4ES	1					Passive sensor	
6ES7 331-7RD00-0AB0	4	AI	706-2300/410-XXXX	CORD S7-300 A4EA	1	A4ES	1					Active sensor	
6ES7 331-7SF00-0AB0	8	AI	706-2300/400-XXXX	CORD S7-300 A8E	1	A8ES	1					No Thermocouple	
6ES7 331-7TF00-0AB0	8	AI	706-2300/400-XXXX	CORD S7-300 A8E	1	A8ES	1						
AO	6ES7 332-5HB01-0AB0	2	AO	706-2300/500-XXXX	CORD S7-300 A4SI	1	A4ES	1					Current
	6ES7 332-5HB01-0AB0	2	AO	706-2300/501-XXXX	CORD S7-300 A4SU	1	A4ES	1					Voltage
	6ES7 332-5HB81-0AB0	2	AO	706-2300/500-XXXX	CORD S7-300 A4SI	1	A4ES	1					Current
	6ES7 332-5HB81-0AB0	2	AO	706-2300/501-XXXX	CORD S7-300 A4SU	1	A4ES	1					Voltage
	6ES7 332-5HD01-0AB0	4	AO	706-2300/500-XXXX	CORD S7-300 A4SI	1	A4ES	1					Current
	6ES7 332-5HD01-0AB0	4	AO	706-2300/501-XXXX	CORD S7-300 A4SU	1	A4ES	1					Voltage
	6ES7 332-5HF00-0AB0	8	AO	706-2300/502-XXXX	CORD S7-300 A8SI	1	A8ES	1					Current
	6ES7 332-5HF00-0AB0	8	AO	706-2300/503-XXXX	CORD S7-300 A8SU	1	A8ES	1					Voltage
	6ES7 332-7ND02-0AB0	4	AO	706-2300/500-XXXX	CORD S7-300 A4SI	1	A4ES	1					Current
	6ES7 332-7ND02-0AB0	4	AO	706-2300/501-XXXX	CORD S7-300 A4SU	1	A4ES	1					Voltage
6ES7 332-8TF01-0AB0	8	AO	706-2300/400-XXXX	CORD S7-300 A8E	1	A8ES	1						
AI/AO	6ES7 334-0CE01-0AA0	4	AI+ 2AO	706-2300/601-XXXX	CORD S7-300 A6ESI	1	A8ES	1					Current
	6ES7 334-0CE01-0AA0	4	AI+ 2AO	706-2300/602-XXXX	CORD S7-300 A6ESU	1	A8ES	1					Voltage
SAFETY	6ES7 326-2BF01-0AB0	10	DO	706-2300/207-XXXX	CORD S7-300 2xT5S	1	T8ES	2			T8S	2	
	6ES7 326-2BF10-0AB0	10	DO	706-2300/207-XXXX	CORD S7-300 2xT5S	1	T8ES	2			T8S	2	
	6ES7 326-1BK01-0AB0	24	DI	706-2300/104-XXXX	CORD S7-300 2xT12E	1	T16ES	2					
	6ES7 326-1RF00-0AB0	8	DI	706-2300/105-XXXX	CORD S7-300 T8E	1	T16ES	1					
	6ES7 336-4GE01-0AB0	6	AI	706-2300/411-XXXX	CORD S7-300 A6E	1	A8ES	1					Active sensor
6ES7 336-4GE01-0AB0	6	AI	706-2300/413-XXXX	CORD S7-300 A6EP	1	A8ES	1					Passive sensor	

Please always consider the modules features (max voltage, max current, relay and optocoupler control voltage) when selecting interfaces.

S7-400
S7-1500
GEFANUC
ALSPA

PLC SIEMENS S7-400

PLC				FRONT CABLES			COMPATIBLE INTERFACES						
DI	PLC I/O Card			Part N°	Type	Qty	Directes	Qty	Opto	Qty	Relays	Qty	Remarks
	DI	DO	AI				AO	Relays	Qty	Remarks			
DI	6ES7 421-1BL01-0AA0	32	DI	706-2400/300-XXXX	CORD S7-400 2xT16ES	1	T16ES	2	T16EO	2			
	6ES7 421-7BH01-0AB0	16	DI	706-2400/100-XXXX	CORD S7-400 2xT8E	1	T16ES	2					
DO	6ES7 422-1BL00-0AA0	32	DO	706-2400/300-XXXX	CORD S7-400 2xT16ES	1	T16ES	2			T16S	2	
	6ES7 422-1FF00-0AA0	8	DO	706-2400/201-XXXX	CORD S7-400 T8SHT	1	T8ESHT	1					Uout = 120/230 VAC
	6ES7 422-1HH00-0AA0	16	DO	706-2400/202-XXXX	CORD S7-400 2xT8SHT	1	T16ESHT	2					Uout = 30/230 VAC/DC
	6ES7 422-7BL00-0AB0	32	DO	706-2400/300-XXXX	CORD S7-400 2xT16ES	1	T16ES	2					
AI	6ES7 431-1KF00-0AB0	8	AI	706-2400/404-XXXX	CORD S7-400 A8EI	1	A8ES	1					Current
	6ES7 431-1KF00-0AB0	8	AI	706-2400/405-XXXX	CORD S7-400 A8EU	1	A8ES	1					Voltage
	6ES7 431-1KF10-0AB0	8	AI	706-2400/401-XXXX	CORD S7-400 A8E	1	A8ES	1					
	6ES7 431-1KF20-0AB0	8	AI	706-2400/401-XXXX	CORD S7-400 A8E	1	A8ES	1					
	6ES7 431-7KF00-0AB0	8	AI	706-2400/402-XXXX	CORD S7-400 A8EI1	1	A8ES	1					Current
	6ES7 431-7KF00-0AB0	8	AI	706-2400/403-XXXX	CORD S7-400 A8EU1	1	A8ES	1					Voltage
AO	6ES7 432-1HF00-0AB0	8	AO	706-2400/500-XXXX	CORD S7-400 A8SI	1	A8ES	1					Current
	6ES7 432-1HF00-0AB0	8	AO	706-2400/501-XXXX	CORD S7-400 A8SU	1	A8ES	1					Voltage

Please always consider the modules features (max voltage, max current, relay and optocoupler control voltage) when selecting interfaces.

PLC SIEMENS S7-1500

PLC				FRONT CABLES			COMPATIBLE INTERFACES							
CPU	PLC I/O Card			Part N°	Type	Qty	Directes	Qty	Opto	Qty	Relays	Qty	Remarks	
	DI	DO	AI				AO	Relays	Qty	Remarks				
CPU	6ES7 511-1CK00-0AB0	16	DI	706-2500/305-XXXX	CORD S7-1500 2xT16ES	1	T16ES	1	T16EO	1	T16S	1		
		16	DO	706-2500/600-XXXX	CORD S7-1500 A7UI	1	A8TSX	1						
DI	6ES7 512-1CK00-0AB0	32	DI	706-2500/305-XXXX	CORD S7-1500 2xT16ES	1	T16ES	2	T16EO	2	T16S	2		
		32	DO	706-2500/305-XXXX	CORD S7-1500 2xT16ES	1	T16ES	2	T16EO	2	T16S	2		
	5	AI/2 AO	706-2500/600-XXXX	CORD S7-1500 A7UI	1	A8TSX	1							
	6ES7 521-1BH00-0AA0	16	DI	706-2500/300-XXXX	CORD S7-1500 T16ES	1	T16ES	1	T16EO	1				
	6ES7 521-1BH10-0AA0	16	DI	706-2500/304-XXXX	CORD S7-1500 T16ES	1	T16ES	1	T16EO	1				
	6ES7 521-1BH50-0AA0	16	DI	706-2500/300-XXXX	CORD S7-1500 T16ES	1	704-2224	1					Log negative	
	6ES7 521-1BL00-0AB0	32	DI	706-2500/301-XXXX	CORD S7-1500 2xT16ES	1	T16ES	2	T16EO	2				
	6ES7 521-1BL10-0AA0	32	DI	706-2500/303-XXXX	CORD S7-1500 2xT16ES	1	T16ES	2	T16EO	2				
	6ES7 521-1FH00-0AA0	16	DI	706-2500/102-XXXX	CORD S7-1500 T16ESHT	1	T16ESHT	1					Uin = 120/230 VAC	
	6ES7 521-7EH00-0AB0	16	DI	706-2500/302-XXXX	CORD S7-1500 T16ESHT	1	T16ESHT	1					Uin = 24/125 VAC	
	DO	6ES7 522-1BF00-0AB0	8	DO	706-2500/201-XXXX	CORD S7-1500 T8S	1	T8ES	1			T8S	1	
		6ES7 522-1BH00-0AB0	16	DO	706-2500/300-XXXX	CORD S7-1500 T16ES	1	T16ES	1			T16S	1	
		6ES7 522-1BH01-0AB0	16	DO	706-2500/300-XXXX	CORD S7-1500 T16ES	1	T16ES	1			T16S	1	
		6ES7 522-1BH10-0AA0	16	DO	706-2500/304-XXXX	CORD S7-1500 T16ES	1	T16ES	1			T16S	1	
6ES7 522-1BL00-0AB0		32	DO	706-2500/301-XXXX	CORD S7-1500 2xT16ES	1	T16ES	2			T16S	2		
6ES7 522-1BL01-0AB0		32	DO	706-2500/301-XXXX	CORD S7 1500 2xT16ES	1	T16ES	2			T16S	2		
6ES7 522-1BL10-0AA0		32	DO	706-2500/303-XXXX	CORD S7-1500 2xT16ES	1	T16ES	2			T16S	2		
6ES7 522-5EH00-0AB0		16	DO	706-2500/302-XXXX	CORD S7-1500 T16ESHT	1	T16ESHT	1					Uout = 24/125 VDC or 24/48 VAC	
6ES7 522-5FF00-0AB0		8	DO	706-2500/204-XXXX	CORD S7-1500 T8SHT	1	T16ESHT	1					Uout = 120/230 VAC	
6ES7 522-5FH00-0AB0		16	DO	706-2500/202-XXXX	CORD S7-1500 T16SHT	1	T16ESHT	1					Uout = 230 VAC	
DI/DO	6ES7 522-5HF00-0AB0	8	DO	706-2500/204-XXXX	CORD S7-1500 T8SHT	1	T16ESHT	1					I _{max} /ch. = 3A and I _{max} api = 8A	
		16	DO	706-2500/202-XXXX	CORD S7-1500 2xT16SHT	1	T16ESHT	1					Uout = 230 VAC	
AI	6ES7 522-5HH00-0AB0	16	DI	706-2500/303-XXXX	CORD S7-1500 2xT16ES	1	T16ES	1	T16EO	1	T16S	1		
		16	DO	706-2500/303-XXXX	CORD S7-1500 2xT16ES	1	T16ES	1	T16EO	1	T16S	1		
AO	6ES7 531-7NF00-0AB0	8	AI	706-2500/400-XXXX	CORD S7-1500 A8EI	1	A8ES	1					Current	
		8	AI	706-2500/401-XXXX	CORD S7-1500 A8EI	1	A8ES	1					Voltage	
		8	AI	706-2500/400-XXXX	CORD S7-1500 A8EI	1	A8ES	1					Current	
	6ES7 531-7NF00-0AB0	8	AI	706-2500/401-XXXX	CORD S7-1500 A8EU	1	A8ES	1					Voltage	
		8	AI	706-2500/400-XXXX	CORD S7-1500 A8EI	1	A8ES	1					Current	
		8	AI	706-2500/401-XXXX	CORD S7-1500 A8E	1	A8ES	1					Voltage	
	6ES7 531-7KF00-0AB0	8	AI	706-2500/405-XXXX	CORD S7-1500 A8EIMC	1	A8ES	1					Current Common Mode	
		8	AI	706-2500/402-XXXX	CORD S7-1500 A4EI	1	A4ES	1					Current	
		8	AI	706-2500/403-XXXX	CORD S7-1500 A4EU	1	A4ES	1					Voltage	
6ES7 532-5HD00-0AB0	4	AO	706-2500/500-XXXX	CORD S7-1500 A4SI	1	A4ES	1					Current		
	4	AO	706-2500/501-XXXX	CORD S7-1500 A4SU	1	A4ES	1					Voltage		
	8	AO	706-2500/502-XXXX	CORD S7-1500 A8SI	1	A8ES	1					Current		
	8	AO	706-2500/503-XXXX	CORD S7-1500 A8SU	1	A8ES	1					Voltage		
	4	AO	706-2500/500-XXXX	CORD S7-1500 A4SI	1	A4ES	1					Current		
	4	AO	706-2500/501-XXXX	CORD S7-1500 A4SU	1	A4ES	1					Voltage		
AI/AO	6ES7 534-7QE00-0AB0	4 AI + 2 AO	706-2500/601-XXXX	CORD S7-1500 A6UI1	1	A8ES	1					Current 2 wires		
		4 AI + 2 AO	706-2500/602-XXXX	CORD S7-1500 A6UI2	1	A8ES	1					Current 4 wires		
		4 AI + 2 AO	706-2500/603-XXXX	CORD S7-1500 A6U	1	A8ES	1					Voltage		
SAFETY	6ES7 526-1BH00-0AB0	16	DI	706-2500/103-XXXX	CORD S7-1500 T16E	1	T16ES	1					24V extern common (L+)	
		8	DO	706-2500/205-XXXX	CORD S7-1500 T8S	1	T16ES	1					OV extern common (M-)	

Please always consider the modules features (max voltage, max current, relay and optocoupler control voltage) when selecting interfaces.

PLC GE FANUC 90-30 / ALSPA 80-35

PLC				FRONT CABLES			COMPATIBLE INTERFACES						
DI	PLC I/O Card			Part N°	Type	Qty	Directes	Qty	Opto	Qty	Relays	Qty	Remarks
	DI	IC693 MDL230	8	DI	706-5030/301-XXXX	CORD GEF-9030 2xT8ESHT	1	T8ESHT	2				
IC693 MDL231		8	DI	706-5030/301-XXXX	CORD GEF-9030 2xT8ESHT	1	T8ESHT	2					Uin = 240 VAC
IC693 MDL240		16	DI	706-5030/100-XXXX	CORD GEF-9030 T16EHT	1	T16ESHT	1					
IC693 MDL241		16	DI	706-5030/101-XXXX	CORD GEF-9030 T16E	1	T16ES	1	T16EO	1			24 VDC (com -)
IC693 MDL632		8	DI	706-5030/302-XXXX	CORD GEF-9030 T8ESHT	1	T8ESHT	1					Uin = 125 VDC
IC693 MDL634		8	DI	706-5030/303-XXXX	CORD GEF-9030 T8ES	1	T8ES	1					
IC693 MDL640		16	DI	706-5030/101-XXXX	CORD GEF-9030 T16E	1	T16ES	1	T16EO	1			24 VDC (com -)
IC693 MDL643		16	DI	706-5030/101-XXXX	CORD GEF-9030 T16E	1	T16ES	1	T16EO	1			24 VDC (com -)
IC693 MDL645		16	DI	706-5030/101-XXXX	CORD GEF-9030 T16E	1	T16ES	1	T16EO	1			24 VDC (com -)
IC693 MDL646		16	DI	706-5030/101-XXXX	CORD GEF-9030 T16E	1	T16ES	1	T16EO	1			24 VDC (com -)
DO	IC693 MDL655	32	DI	706-5030/300-XXXX	CORD GEF-9030 T16ES	2	T16ES	2	T16EO	2			
	IC693 MDL310	12	DO	706-5030/200-XXXX	CORD GEF-9030 T16SHT	1	T16ESHT	1					
	IC693 MDL330	8	DO	706-5030/302-XXXX	CORD GEF-9030 T8ESHT	1	T8ESHT	1					Uout = 240 VAC
	IC693 MDL340	16	DO	706-5030/200-XXXX	CORD GEF-9030 T16SHT	1	T16ESHT	1					
	IC693 MDL390	5	DO	706-5030/203-XXXX	CORD GEF-9030 T5SHT	1	T16ESHT	1					
	IC693 MDL730	8	DO	706-5030/201-XXXX	CORD GEF-9030 T8S	1	T8ES	1			T8S	1	Uout = 24 VDC
	IC693 MDL732	8	DO	706-5030/303-XXXX	CORD GEF-9030 T8ES	1	T8ES	1			T8S	1	
	IC693 MDL734	6	DO	706-5030/204-XXXX	CORD GEF-9030 T6SHT	1	T16ESHT	1					Uout = 125 VDC
	IC693 MDL740	16	DO	706-5030/202-XXXX	CORD GEF-9030 T16S	1	T16ES	1			T16S	1	Uout = 24 VDC
	IC693 MDL742	16	DO	706-5030/202-XXXX	CORD GEF-9030 T16S	1	T16ES	1			T16S	1	Uout = 24 VDC
DI/DO	IC693 MDL753	32	DO	706-5030/300-XXXX	CORD GEF-9030 T16ES	2	T16ES	2			T16S	2	
	IC693 MDL930	8	DO	706-5030/301-XXXX	CORD GEF-9030 2xT8ESHT	1	T8ESHT	2					
AI	IC693 MAR590	8 DI 8 DO		706-5030/301-XXXX	CORD GEF-9030 2xT8ESHT	1	T8ESHT T8ESHT	1 1					Uout = 120 VAC
	IC693 MDR390	8 DI 8 DO		706-5030/301-XXXX	CORD GEF-9030 2xT8ESHT	1	T8ESHT T8ESHT	1 1					
AO	IC693 ALG220	4	AI	706-5030/400-XXXX	CORD GEF-9030 A4E	1	A4ES	1					
	IC693 ALG221	4	AI	706-5030/400-XXXX	CORD GEF-9030 A4E	1	A4ES	1					
	IC693 ALG222	16	AI	706-5030/402-XXXX	CORD GEF-9030 2xA8E	1	A8ES	2					
	IC693 ALG223	16	AI	706-5030/402-XXXX	CORD GEF-9030 2xA8E	1	A8ES	2					
AO	IC693 ALG392	8	AO	706-5030/500-XXXX	CORD GEF-9030 A8SI	1	A8ES	1					Current
	IC693 ALG392	8	AO	706-5030/501-XXXX	CORD GEF-9030 A8SU	1	A8ES	1					Voltage

Please always consider the modules features (max voltage, max current, relay and optocoupler control voltage) when selecting interfaces.

PLC GE FANUC RX3i

PLC				FRONT CABLES			COMPATIBLE INTERFACES						
DI	PLC I/O Card			Part N°	Type	Qty	Directes	Qty	Opto	Qty	Relays	Qty	Remarks
	DI	IC694 MDL655	32	DI	706-5030/300-XXXX	CORD GEF-9030 T16ES	2	T16ES	2				
IC694 MDL753		32	DO	706-5030/300-XXXX	CORD GEF-9030 T16ES	2	T16ES	2			T16S	2	
AI	IC694 ALG223	8	AI	706-5030/402-XXXX	CORD GEF-9030 A4E	1	A8ES	2					
AO	IC694 ALG392	8	AO	706-5030/500-XXXX	CORD GEF-9030 A8SI	1	A8ES	1					Current
	IC694 ALG392	8	AO	706-5030/501-XXXX	CORD GEF-9030 A8SU	1	A8ES	1					Voltage

Please always consider the modules features (max voltage, max current, relay and optocoupler control voltage) when selecting interfaces.



The part number suffix «xxxx» indicates the length of cable in cm.

Standard length examples: L (xxxx)

• 1,00 m (100) / 2,00 m (200) / 3,00 m (300)

Part no. example for 2m cable: 706-5030/402-200

M2xx (TM3)
TSX 37
TSX 57
TWIDO

PLC SCHNEIDER MODICON M221, M241, M251 (TM3)

PLC				FRONT CABLES			COMPATIBLE INTERFACES						
	PLC I/O Card			Part N°	Type	Qty	Directes	Qty	Opto	Qty	Relays	Qty	Remarks
	DI	TM3 DI8A	8	DI	706-3033/102-XXXX	CORD MODICON TM3 T8EHT	1	T8ESHT	1				
TM3 DI8(G)		8	DI	706-3033/103-XXXX	CORD MODICON TM3 T8E COM-	1	T8ES	1					Log. positive (com -)
TM3 DI16(G)		16	DI	706-3033/104-XXXX	CORD MODICON TM3 T16E COM-	1	T16ES	1	T16EO	1			Log. positive (com -)
TM3 DI16K		16	DI	706-3033/100-XXXX	CORD TWIDO T16E COM-	1	T16ES	1	T16EO	1			Log. positive (com -)
TM3 DI32K		32	DI	706-3033/100-XXXX	CORD TWIDO T16E COM-	2	T16ES	2	T16EO	2			Log. positive (com -)
DO	TM3 DQ8T(G)	8	DO	706-3033/202-XXXX	CORD MODICON TM3 T8S	1	T8ES	1			T8S	1	
	TM3 DQ16T(G)	16	DO	706-3033/203-XXXX	CORD MODICON TM3 T16S	1	T16ES	1			T16S	1	
	TM3 DQ16TK	16	DO	706-3033/200-XXXX	CORD TWIDO T16S	1	T16ES	1			T16S	1	
	TM3 DQ32TK	32	DO	706-3033/200-XXXX	CORD TWIDO T16S	2	T16ES	2			T16S	2	
AI	TM3 AI2H(G)	2	AI	706-3033/400-XXXX	CORD MODICON TM3 A2E	1	A4ES	1					
	TM3 AI4(G)	4	AI	706-3033/401-XXXX	CORD MODICON TM3 A4E	1	A4ES	1					
	TM3 TI4(G)	4	AI	706-3033/401-XXXX	CORD MODICON TM3 A4E	1	A4ES	1					Voltage-Current
	TM3 AI8(G)	8	AI	706-3033/402-XXXX	CORD MODICON TM3 A8E	1	A8ES	1					
AO	TM3 AI8T(G)	8	AI	706-3033/402-XXXX	CORD MODICON TM3 A8E	1	A8ES	1					Thermocouples and PTC/NTC
	TM3 AQ2(G)	2	AO	706-3033/500-XXXX	CORD MODICON TM3 A2S	1	A4ES	1					
AI/AO	TM3 AQ4(G)	4	AO	706-3033/501-XXXX	CORD MODICON TM3 A4S	1	A4ES	1					
	TM3 AM6(G)	4 AI/2 AO	AO	706-3033/600-XXXX	CORD MODICON TM3 A6ES	1	A8ES	1					
	TM3 TM3(G)	2 AI/1 AO	AO	706-3033/601-XXXX	CORD MODICON TM3 A3ES	1	A4ES	1					Voltage-Current

Please always consider the modules features (max voltage, max current, relay and optocoupler control voltage) when selecting interfaces.

PLC SCHNEIDER TSX 37 (Micro)

PLC				FRONT CABLES			COMPATIBLE INTERFACES						
	PLC I/O Card			Part N°	Type	Qty	Directes	Qty	Opto	Qty	Relays	Qty	Remarks
	DI	TSX DEZ 12D2K	12	DI	706-3057/300-XXXX	CORD TSX T16ES	1	T16ES	1				
TSX DEZ 32D2		32	DI	706-3037/301-XXXX	CORD TSX37 2xT16ES	1	T16ES	2	T16EO	2			
DO	TSX DSZ 04T22	4	DO	706-3037/200-XXXX	CORD TSX37 T8S	1	T8ES	1			T8S	1	Uout = 24 VDC
	TSX DSZ 08T2	8	DO	706-3037/200-XXXX	CORD TSX37 T8S	1	T8ES	1			T8S	1	
	TSX DSZ 08T2K	8	DO	706-3037/202-XXXX	CORD TSX37 T8S1	1	T8ES	1			T8S	1	
	TSX DSZ 32T2	32	DO	706-3037/301-XXXX	CORD TSX37 2xT16ES	1	T16ES	2			T16S	2	
	DI/DO	TSX DMZ 16DTK	8	DI	706-3037/305-XXXX	CORD TSX37 T8E8S	1	T8ES	1			T8S	1
8			DO	T8ES				1			T8S	1	
TSX DMZ 28DT		16	DI	706-3037/304-XXXX	CORD TSX37 T16E12S	1	T16ES	1	T16EO	1			
		12	DO				T16ES	1			T16S	1	
TSX DMZ 28DTK		16	DI	706-3057/300-XXXX	CORD TSX T16ES	1	T16ES	1	T16EO	1			
		12	DO	706-3057/200-XXX	CORD TSX T12S	1	T16ES	1			T16S	1	
TSX DMZ 64DTK	32	DI	706-3057/300-XXXX	CORD TSX T16ES	4	T16ES	2	T16EO	2				
	32	DO				T16ES	2			T16S	2		
AI	TSX AEZ 801	8	AI	706-3037/401-XXXX	CORD TSX37 A8E	1	A8ES	1					
	TSX AEZ 802	8	AI	706-3037/401-XXXX	CORD TSX37 A8E	1	A8ES	1					
AO	TSX ASZ 200	4	AO	706-3037/500-XXXX	CORD TSX37 A4S	1	A4ES	1					
	TSX ASZ 401	4	AO	706-3037/500-XXXX	CORD TSX37 A4S	1	A4ES	1					

Please always consider the modules features (max voltage, max current, relay and optocoupler control voltage) when selecting interfaces.

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PLC SCHNEIDER TSX 57 (Premium)

PLC				FRONT CABLES			COMPATIBLE INTERFACES						
DI	PLC I/O Card			Part N°	Type	Qty	Directes	Qty	Opto	Qty	Relays	Qty	Remarks
		TSX DEY 08D2	8	DI	706-3057/301-XXXX	CORD TSX57 T8ES	1	T8ES	1				
	TSX DEY 16A2	16	DI	706-3057/100-XXXX	CORD TSX57 T16EHT	1	T16ESHT	1					Uin = 24VAC/DC
	TSX DEY 16A3	16	DI	706-3057/100-XXXX	CORD TSX57 T16EHT	1	T16ESHT	1					Uin = 48VAC
	TSX DEY 16A4	16	DI	706-3057/100-XXXX	CORD TSX57 T16EHT	1	T16ESHT	1					Uin = 110VAC
	TSX DEY 16A5	16	DI	706-3057/100-XXXX	CORD TSX57 T16E	1	T16ESHT	1					Uin = 220VAC
	TSX DEY 16D2	16	DI	706-3057/302-XXXX	CORD TSX57 T16ES	1	T16ES	1					
	TSX DEY 16D3	16	DI	706-3057/100-XXXX	CORD TSX57 T16EHT	1	T16ESHT	1					Uin = 48VDC
	TSX DEY 16FK	16	DI	706-3057/300-XXXX	CORD TSX T16ES	1	T16ES	1	T16EO	1			
	TSX DEY 32D2K	32	DI	706-3057/300-XXXX	CORD TSX T16ES	2	T16ES	2	T16EO	2			
	TSX DEY 64D2K	64	DI	706-3057/300-XXXX	CORD TSX T16ES	4	T16ES	4	T16EO	4			
DO	TSX DSY 08R4	8	DO	706-3057/204-XXXX	CORD TSX57 T8SHT2	1	T16ESHT	1					Uout = 48...120VAC/DC
	TSX DSY 08R5	8	DO	706-3057/201-XXXX	CORD TSX57 T16SHT	1	T16ESHT	1					Uout = 48...240VAC/DC
	TSX DSY 08R5A	8	DO	706-3057/204-XXXX	CORD TSX57 T8SHT2	1	T16ESHT	1					Uout = 48...240VAC/DC
	TSX DSY 08S5	8	DO	706-3057/202-XXXX	CORD TSX57 T8SHT	1	T8ESHT	1					Uout = 48...240VAC
	TSX DSY 08T2	8	DO	706-3057/301-XXXX	CORD TSX57 T8ES	1	T8ES	1			T8S	1	
	TSX DSY 08T22	8	DO	706-3057/203-XXXX	CORD TSX57 T8SHT1	1	T8ESHT	1					Uout = 24VDC
	TSX DSY 08T31	8	DO	706-3057/203-XXXX	CORD TSX57 T8SHT1	1	T8ESHT	1					Uout = 48VDC
	TSX DSY 16R5	16	DO	706-3057/201-XXXX	CORD TSX57 T16SHT	1	T16ESHT	1					Uout = 48...240VAC/DC
	TSX DSY 16S4	16	DO	706-3057/201-XXXX	CORD TSX57 T16SHT	1	T16ESHT	1					Uout = 48...120VAC
	TSX DSY 16S5	16	DO	706-3057/201-XXXX	CORD TSX57 T16SHT	1	T16ESHT	1					Uout = 48...240VAC
	TSX DSY 16T2	16	DO	706-3057/302-XXXX	CORD TSX57 T16ES	1	T16ES	1			T16S	1	
	TSX DSY 32T2K	32	DO	706-3057/300-XXXX	CORD TSX T16ES	2	T16ES	2			T16S	2	
TSX DSY 64T2K	64	DO	706-3057/300-XXXX	CORD TSX T16ES	4	T16ES	4			T16S	4		
DI/DO	TSX DMY 28FK	16	DI	706-3057/300-XXXX	CORD TSX T16ES	1	T16ES	1					
	TSX DMY 28RFK	12	DO	706-3057/200-XXXX	CORD TSX T12S	1	T16ES	1			T16S	1	
AI	TSX AEY 414	4	AI	706-3057/601-XXXX	CORD TSX57 A4ES	1	A4ES	1					Analog
	TSX AEY 414	4	AI	706-3057/400-XXXX	CORD TSX57 A4ERTD	1	A8ES	1					RTD
	TSX AEY 420	4	AI	706-3057/600-XXXX	CORD TSX A8ES	1	A8TSX	1					
	TSX AEY 800	8	AI	706-3057/600-XXXX	CORD TSX A8ES	1	A8TSX	1					
	TSX AEY 810	8	AI	706-3057/600-XXXX	CORD TSX A8ES	1	A8TSX	1					
AO	TSX ASY 1600	16	AI	706-3057/600-XXXX	CORD TSX A8ES	2	A8TSX	2					
	TSX ASY 410	4	AO	706-3057/601-XXXX	CORD TSX57 A4ES	1	A4ES	1					Current
	TSX ASY 410	4	AO	706-3057/500-XXXX	CORD TSX57 A4SU	1	A4ES	1					Voltage
TSX ASY 800	8	AO	706-3057/600-XXXX	CORD TSX A8ES	1	A8TSX	1						

Please always consider the modules features (max voltage, max current, relay and optocoupler control voltage) when selecting interfaces.

PLC SCHNEIDER TWIDO

PLC				FRONT CABLES			COMPATIBLE INTERFACES						
DI	PLC I/O Card			Part N°	Type	Qty	Directes	Qty	Opto	Qty	Relays	Qty	Remarks
		TM2 DDI 16DK	16	DI	706-3033/100-XXXX	CORD TWIDO T16E COM-	1	T16ES	1	T16EO	1		
	TM2 DDI 32DK	32	DI	706-3033/100-XXXX	CORD TWIDO T16E COM-	2	T16ES	2	T16EO	2			Log. positive (com -)
DO	TM2 DDO 16TK	16	DO	706-3033/200-XXXX	CORD TWIDO T16ES	1	T16ES	1			T16S	1	
	TM2 DDO 32TK	32	DO	706-3033/200-XXXX	CORD TWIDO T16ES	2	T16ES	2			T16S	2	

Note, the TM2 cards replace TWD ones. Le front cables are still the same.

Please always consider the modules features (max voltage, max current, relay and optocoupler control voltage) when selecting interfaces.



The part number suffix «xxxx» indicates the length of cable in cm.

Standard length examples: L (xxxx)

• 1,00 m (100) / 2,00 m (200) / 3,00 m (300)

Part no. example for 2m cable: 706-3057/300-200

M340
M580
QUANTUM

PLC SCHNEIDER M340 ET M580

PLC				FRONT CABLES			COMPATIBLE INTERFACES						
	PLC I/O Card			Part N°	Type	Qty	Directes	Qty	Opto	Qty	Relays	Qty	Remarks
	DI	BMX DAI 1602	16	DI	706-3340/300-XXXX	CORD M340 T16ESHT	1	T16ESHT	1				
BMX DAI 1603		16	DI	706-3340/300-XXXX	CORD M340 T16ESHT	1	T16ESHT	1					Uin = 48 VAC
BMX DAI 1604		16	DI	706-3340/300-XXXX	CORD M340 T16ESHT	1	T16ESHT	1					Uin = 100/120 VAC
BMX DDI 1602		16	DI	706-3340/301-XXXX	CORD M340 T16ES	1	T16ES	1	T16EO	1			
BMX DDI 1603		16	DI	706-3340/300-XXXX	CORD M340 T16ESHT	1	T16ESHT	1					Uin = 48 VDC
BMX DDI 3202K		32	DI	706-3340/302-XXXX	CORD M340 2xT16ES	1	T16ES	2	T16EO	2			
DO	BMX DAO 1605	16	DO	706-3340/200-XXXX	CORD M340 T16SHT	1	T16ESHT	1					Uout = 120/240 VAC
	BMX DDO 1602	16	DO	706-3340/301-XXXX	CORD M340 T16ES	1	T16ES	1			T16S	1	
	BMX DDO 3202K	32	DO	706-3340/302-XXXX	CORD M340 2xT16ES	1	T16ES	2			T16S	2	
	BMX DDO 6402K	64	DO	706-3340/302-XXXX	CORD M340 2xT16ES	2	T16ES	4			T16S	4	
	BMX DRA 0805	8	DO	706-3340/300-XXXX	CORD M340 T16ESHT	1	T16ESHT	1					Uout = 48...240 VAC/ DC
	BMX DRA 1605	16	DO	706-3340/201-XXXX	CORD M340 T16SHT1	1	T16ESHT	1					Uout = 12...24 VAC
DI/DO	BMX DDM 16022	8	DI	706-3340/303-XXXX	CORD M340 2xT8ES	1	T8ES	1			T8S	1	
		8	DO										
	BMX DDM 16025	8	DO	706-3340/304-XXXX	CORD M340T8E/T8SHT	1	T8ES	1					Uout = 48...240 VAC/ DC
BMX DDM 3202K	16	DI	706-3340/302-XXXX	CORD M340 2xT16ES	1	T16ES	1	T16EO	1				
	16	DO								T16S	1		
AI	BMX AMI 0410	4	AI	706-3340/400-XXXX	CORD M340 A4EI	1	A4ES	1					Current
	BMX AMI 0410	4	AI	706-3340/401-XXXX	CORD M340 A4EU	1	A4ES	1					Voltage
	BMX ART 0414	4	AI	706-3340/402-XXXX	CORD M340 A4ERTD	1	A8ES	1					RTD
	BMX ART 0814	8	AI	706-3340/402-XXXX	CORD M340 A4ERTD	2	A8ES	2					RTD
	BMX AMI 0800	8	AI	706-3340/403-XXXX	CORD M340 A8EU	1	A8ES	1					Voltage
	BMX AMI 0800	8	AI	706-3340/404-XXXX	CORD M340 A8EI	1	A8ES	1					Current
AO	BMX AMI 0810	8	AI	706-3340/403-XXXX	CORD M340 A8EU	1	A8ES	1					Voltage
	BMX AMI 0810	8	AI	706-3340/404-XXXX	CORD M340 A8EI	1	A8ES	1					Current
	BMX AMM 0600	4	AI+2 AO	706-3340/500-XXXX	CORD M340 A6ESI	1	A8ES	1					Current
	BMX AMM 0600	4	AI+2 AO	706-3340/501-XXXX	CORD M340 A6ESU	1	A8ES	1					Voltage
	BMX AMO 0210	2	AO	706-3340/502-XXXX	CORD M340 A2S	1	A4ES	1					
	BMX AMO 0410	4	AO	706-3340/401-XXXX	CORD M340 A4EU	1	A4ES	1					
BMX AMO 0802	8	AO	706-3340/504-XXXX	CORD M340 A8S	1	A8ES	1						

Please always consider the modules features (max voltage, max current, relay and optocoupler control voltage) when selecting interfaces.



The part number suffix «xxxx» indicates the length of cable in cm.

Standard length examples: L (xxxx)
• 1,00 m (100) / 2,00 m (200) / 3,00 m (300)

Part no. example for 2m cable: 706-3340/301-200

PLC SCHNEIDER QUANTUM

PLC				FRONT CABLES			COMPATIBLE INTERFACES							
	PLC I/O Card			Part N°	Type	Qty	Directes	Qty	Opto	Qty	Relays	Qty	Remarks	
	DI	140 DAI 340 00	16	DI	706-3140/300-XXXX	CORD QUANTUM 2xT16ESHT	1	T16ESHT	2					Uin = 24 VAC
140 DAI 353 00		32	DI	706-3140/300-XXXX	CORD QUANTUM 2xT16ESHT	1	T16ESHT	2					Uin = 24 VAC	
140 DAI 440 00		16	DI	706-3140/300-XXXX	CORD QUANTUM 2xT16ESHT	1	T16ESHT	2					Uin = 48 VAC	
140 DAI 453 00		32	DI	706-3140/300-XXXX	CORD QUANTUM 2xT16ESHT	1	T16ESHT	2					Uin = 48 VAC	
140 DAI 540 00		16	DI	706-3140/300-XXXX	CORD QUANTUM 2xT16ESHT	1	T16ESHT	2					Uin = 115 VAC	
140 DAI 543 00		16	DI	706-3140/300-XXXX	CORD QUANTUM 2xT16ESHT	1	T16ESHT	2					Uin = 115 VAC	
140 DAI 553 00		32	DI	706-3140/300-XXXX	CORD QUANTUM 2xT16ESHT	1	T16ESHT	2					Uin = 115 VAC	
140 DAI 740 00		16	DI	706-3140/300-XXXX	CORD QUANTUM 2xT16ESHT	1	T16ESHT	2					Uin = 230 VAC	
140 DAI 753 00		32	DI	706-3140/300-XXXX	CORD QUANTUM 2xT16ESHT	1	T16ESHT	2					Uin = 230 VAC	
140 DDI 353 00		32	DI	706-3140/301-XXXX	CORD QUANTUM 2xT16ES	1	T16ES	2	T16EO	2				
140 DDI 364 00		96	DI	706-3057/300-XXXX	CORD TSX T16ES	6	T16ES	6	T16EO	6				
140 DSI 353 00		32	DI	706-3140/301-XXXX	CORD QUANTUM 2xT16ES	1	T16ES	2	T16EO	2			Uin = 20...30 VDC	
DO		140 DAO 840 00	16	DO	706-3140/300-XXXX	CORD QUANTUM 2xT16ESHT	1	T16ESHT	2					Uout = 48...230 VAC
		140 DAO 840 10	16	DO	706-3140/300-XXXX	CORD QUANTUM 2xT16ESHT	1	T16ESHT	2					Uout = 48...115 VAC
	140 DDO 353 00	32	DO	706-3140/301-XXXX	CORD QUANTUM 2xT16ES	1	T16ES	2			T16S	2		
	140 DDO 353 01	32	DO	706-3140/301-XXXX	CORD QUANTUM 2xT16ES	1	T16ES	2			T16S	2		
	140 DDO 364 00	96	DO	706-3057/300-XXXX	CORD TSX T16ES	6	T16ES	6			T16S	6		
	140 DRA 840 00	16	DO	706-3140/300-XXXX	CORD QUANTUM 2xT16ESHT	1	T16ESHT	2					Uout = 20...250 VAC/ DC	
	140 DVO 853 00	32	DO	706-3140/301-XXXX	CORD QUANTUM 2xT16ES	1	T16ES	2			T16S	2	Uout = 10...30 VDC	
DI/ DO	140 DDM 390 00	16	DI	706-3140/302-XXXX	CORD QUANTUM T16E8S	1	T16ES	1	T16EO	1			Uin = 30 VDC	
		8	DO				T8ES	1			T8S	1	Uout = 19...30 VDC	
AI	140 ACI 030 00	8	AI	706-3140/400-XXXX	CORD QUANTUM A8EI	1	A8ES	1					Current	
	140 ACI 030 00	8	AI	706-3140/401-XXXX	CORD QUANTUM A8EU	1	A8ES	1					Voltage	
	140 ACI 040 00	16	AI	706-3140/402-XXXX	CORD QUANTUM 2xA8E	1	A8ES	2						
	140 ARI 030 10	8	AI	706-3140/402-XXXX	CORD QUANTUM 2xA8E	1	A8ES	2					4 wires	
	140 AVI 030 00	8	AI	706-3140/400-XXXX	CORD QUANTUM A8EI	1	A8ES	1					Current	
	140 AVI 030 00	8	AI	706-3140/401-XXXX	CORD QUANTUM A8EU	1	A8ES	1					Voltage	
AO	140 ACO 020 00	4	AO	706-3140/500-XXXX	CORD QUANTUM A4S	1	A4ES	1					Current	
	140 ACO 130 00	8	AO	706-3140/501-XXXX	CORD QUANTUM A8S	1	A8ES	1						

Please always consider the modules features (max voltage, max current, relay and optocoupler control voltage) when selecting interfaces.



The part number suffix «xxxx» indicates the length of cable in cm.

Standard length examples: L (xxxx)

• 1,00 m (100) / 2,00 m (200) / 3,00 m (300)

Part no. example for 2m cable: 706-3140/301-200

**COMPACT LOGIX
CONTROL LOGIX**

PLC ROCKWELL COMPACT LOGIX (1769)

PLC				FRONT CABLES			COMPATIBLE INTERFACES						
DI	PLC I/O Card			Part N°	Type	Qty	Directes	Qty	Opto	Qty	Relays	Qty	Remarks
	DI	1769 - IA16	16	DI	706-4769/300-XXXX	CORD Compact Lx T16ESHT	1	T16ESHT	1				
1769 - IM12		12	DI	706-4769/300-XXXX	CORD Compact Lx T16ESHT	1	T16ESHT	1					Uin = 100...120 VAC
1769 - IQ16		16	DI	706-4769/100-XXXX	CORD Compact Lx T16E	1	T16ES	1	T16EO	1			
1769 - IQ16F		16	DI	706-4769/100-XXXX	CORD Compact Lx T16E	1	T16ES	1	T16EO	1			
1769 - IQ32		32	DI	706-4769/102-XXXX	CORD Compact Lx 2xT16E	1	T16ES	2	T16EO	2			
1769 - IQ32T		32	DI	706-4769/101-XXXX	CORD Compact Lx 2xT16ES	1	T16ES	2	T16EO	2			Log positive (com-)
DO	1769 - OA8	8	DO	706-4769/201-XXXX	CORD Compact Lx T8SHT	1	T8ESHT	1					Uout = 100...240 VAC
	1769 - OA16	16	DO	706-4769/200-XXXX	CORD Compact Lx T16SHT	1	T16ESHT	1					Uout = 100...240 VAC
	1769 - OB8	8	DO	706-4769/202-XXXX	CORD Compact Lx T8S	1	T8ES	1			T8S	1	
	1769 - OB16	16	DO	706-4769/203-XXXX	CORD Compact Lx T16S	1	T16ES	1			T16S	1	
	1769 - OB16P	16	DO	706-4769/203-XXXX	CORD Compact Lx T16S	1	T16ES	1			T16S	1	
	1769 - OB32	32	DO	706-4769/204-XXXX	CORD Compact Lx 2xT16S	1	T16ES	2			T16S	2	
	1769 - OB32T	32	DO	706-4769/301-XXXX	CORD Compact Lx 2xT16ES	1	T16ES	2			T16S	2	
	1769 - OW8	8	DO	706-4769/201-XXXX	CORD Compact Lx T8SHT	1	T8ESHT	1					Uout = 5...265 VAC/DC
	1769 - OW8I	8	DO	706-4769/300-XXXX	CORD Compact Lx T16ESHT	1	T16ESHT	1					Uout = 5...265 VAC/DC
	1769 - OW16	16	DO	706-4769/200-XXXX	CORD Compact Lx T16SHT	1	T16ESHT	1					Uout = 5...265 VAC/DC
DI/ DO	1769 - IQ6XOW4	6	DI	706-4769/0302-XXXX	CORD Compact Lx T6E4SHT	1	T16ESHT	1					Uout = 5...265 VAC/DC
		4	DO										
AI	1769 - IF4	4	AI	706-4769/400-XXXX	CORD Compact Lx A4EI	1	A4ES	1					Current
	1769 - IF4	4	AI	706-4769/401-XXXX	CORD Compact Lx A4EU	1	A4ES	1					Voltage
	1769 - IF4I	4	AI	706-4769/402-XXXX	CORD Compact Lx A4EI1	1	A4ES	1					Current
	1769 - IF4I	4	AI	706-4769/403-XXXX	CORD Compact Lx A4EU1	1	A4ES	1					Voltage
	1769 - IF8	8	AI	706-4769/405-XXXX	CORD Compact Lx A4EI	1	A4ES	2					Current
	1769 - IF8	8	AI	706-4769/406-XXXX	CORD Compact Lx A4EU	1	A4ES	2					Voltage
	1769 - IR6	6	AI	706-4769/404-XXXX	CORD Compact Lx A6E RTD	1	A8ES	2					
	1769 - IF4XOF2 (F)	4	AI+ 2 AO	706-4769/600-XXXX	CORD Compact Lx A6ESI	1	A8ES	1					Current
1769 - IF4XOF2 (F)	4	AI+ 2 AO	706-4769/601-XXXX	CORD Compact Lx A6ESU	1	A8ES	1					Voltage	
1769 - IF16C	16	AI	706-4769/408-XXXX	CORD Compact Lx A16E	1	A8ES	2						
AO	1769 - OF2	2	AO	706-4769/500-XXXX	CORD Compact Lx A2S	1	A4ES	1					
	1769 - OF4	4	AO	706-4769/503-XXXX	CORD Compact Lx A4SI	1	A4ES	1					Current
	1769 - OF4	4	AO	706-4769/504-XXXX	CORD Compact Lx A4SU	1	A4ES	1					Voltage
	1769 - OF4CI	4	AO	706-4769/501-XXXX	CORD Compact Lx A4S	1	A4ES	1					
	1769 - OF4VI	4	AO	706-4769/501-XXXX	CORD Compact Lx A4S	1	A4ES	1					
	1769 - OF8V	8	AO	706-4769/502-XXXX	CORD Compact Lx A8S	1	A8ES	1					
	1769 - OF8C	8	AO	706-4769/502-XXXX	CORD Compact Lx A8S	1	A8ES	1					

Please always consider the modules features (max voltage, max current, relay and optocoupler control voltage) when selecting interfaces.



The part number suffix «xxxx» indicates the length of cable in cm.

- Standard length examples: L (xxxx)
 • 1,00 m (100) / 2,00 m (200) / 3,00 m (300)
 Part no. example for 2m cable: 706-4769/302-200

PLC ROCKWELL CONTROL LOGIX (1756)

PLC				FRONT CABLES			COMPATIBLE INTERFACES							
	PLC I/O Card			Part N°	Type	Qty	Directes	Qty	Opto	Qty	Relays	Qty	Remarks	
	DI	1756 - IA16I	16	DI	706-4756/302-XXXX	CORD Control Lx 2xT16ESHT1	1	T16ESHT	2					Uin = 120 VAC
1756 - IB16I		16	DI	706-4756/301-XXXX	CORD Control Lx 2xT16ES	1	T16ES	2						
1756 - IB16ISOE		16	DI	706-4756/301-XXXX	CORD Control Lx 2xT16ES	1	T16ES	2					Uin = 24/48 VDC	
1756 - IB32		32	DI	706-4756/102-XXXX	CORD Control Lx 2xT16E	1	T16ES	2	T16EO	2				
1756 - IH16I		16	DI	706-4756/302-XXXX	CORD Control Lx 2xT16ESHT1	1	T16ESHT	2					Uin = 125 VDC	
1756 - IH16ISOE		16	DI	706-4756/302-XXXX	CORD Control Lx 2xT16ESHT1	1	T16ESHT	2					Uin = 125 VDC	
DO	1756 - IM16I	16	DI	706-4756/302-XXXX	CORD Control Lx 2xT16ESHT1	1	T16ESHT	2					Uin = 240 VAC	
	1756 - OA16I	16	DO	706-4756/302-XXXX	CORD Control Lx 2xT16ESHT1	1	T16ESHT	2					Uout = 120/240 VAC	
	1756 - OB16E	16	DO	706-4756/203-XXXX	CORD Control Lx T16S	1	T16ES	1			T16S	1		
	1756 - OB16I	16	DO	706-4756/301-XXXX	CORD Control Lx 2xT16ES	1	T16ES	2						
	1756 - OB16IS	16	DO	706-4756/301-XXXX	CORD Control Lx 2xT16ES	1	T16ES	2						
	1756 - OB32	32	DO	706-4756/207-XXXX	CORD Control Lx 2xT16S	1	T16ES	2			T16S	2		
	1756 - OC8	8	DO	706-4756/202-XXXX	CORD Control Lx T8SHT1	1	T8ESHT	1					Uout = 48 VDC	
	1756 - OH8I	8	DO	706-4756/302-XXXX	CORD Control Lx 2xT16ESHT1	1	T16ESHT	2					Uout = 120 VDC	
	1756 - OW16I	16	DO	706-4756/302-XXXX	CORD Control Lx 2xT16ESHT1	1	T16ESHT	2					Uout = 10..265 VAC/DC	
	1756 - OX8I	8	DO	706-4756/302-XXXX	CORD Control Lx 2xT16ESHT1	1	T16ESHT	2					Uout = 10..265 VAC/DC	
	AI	1756 - IF6CIS	6	AI	706-4756/411-XXXX	CORD Control Lx A6EP	1	A8ES	1					Passive sensor
		1756 - IF6CIS	6	AI	706-4756/412-XXXX	CORD Control Lx A6EA	1	A8ES	1					Active sensor
		1756 - IF6I	6	AI	706-4756/408-XXXX	CORD Control Lx A6EI	1	A8ES	1					Current
		1756 - IF6I	6	AI	706-4756/409-XXXX	CORD Control Lx A6EU	1	A8ES	1					Voltage
1756 - IF8		8	AI	706-4756/402-XXXX	CORD Control Lx A8EI	1	A8ES	1					Current	
1756 - IF8		8	AI	706-4756/403-XXXX	CORD Control Lx A8EU	1	A8ES	1					Voltage	
1756 - IF8H		8	AI	706-4756/404-XXXX	CORD Control Lx A8EI1	1	A8ES	1					Current	
1756 - IF8H		8	AI	706-4756/405-XXXX	CORD Control Lx A8EU1	1	A8ES	1					Voltage	
1756 - IF16		16	AI	706-4756/406-XXXX	CORD Control Lx 2xA8EI	1	A8ES	2					Current	
1756 - IF16		16	AI	706-4756/407-XXXX	CORD Control Lx 2xA8EU	1	A8ES	2					Voltage	
AO	1756 - IR6I	16	AI	706-4756/410-XXXX	CORD Control Lx A6E RTD	1	A8ES	2						
	1756 - OF4	4	AO	706-4756/500-XXXX	CORD Control Lx A4SI	1	A4ES	1					Current	
	1756 - OF4	4	AO	706-4756/501-XXXX	CORD Control Lx A4SU	1	A4ES	1					Voltage	
	1756 - OF6CI	6	AO	706-4756/502-XXXX	CORD Control Lx A6S	1	A8ES	1					Z < 550Ω	
	1756 - OF6VI	6	AO	706-4756/502-XXXX	CORD Control Lx A6S	1	A8ES	1						
	1756 - OF8	8	AO	706-4756/503-XXXX	CORD Control Lx A8SI	1	A8ES	1					Current	
	1756 - OF8	8	AO	706-4756/504-XXXX	CORD Control Lx A8SU	1	A8ES	1					Voltage	
	1756 - OF8H	8	AO	706-4756/503-XXXX	CORD Control Lx A8SI	1	A8ES	1					Current	
1756 - OF8H	8	AO	706-4756/504-XXXX	CORD Control Lx A8SU	1	A8ES	1					Voltage		

Please always consider the modules features (max voltage, max current, relay and optocoupler control voltage) when selecting interfaces.



The part number suffix «xxxx» indicates the length of cable in cm.

Standard length examples: L (xxxx)

• 1,00 m (100) / 2,00 m (200) / 3,00 m (300)

Part no. example for 12m cable: 706-4756/411-200

WAGO 750/753
OMRON

PLC WAGO-I/O-SYSTEM 753

PLC				FRONT CABLES			COMPATIBLE INTERFACES						
DI	PLC I/O Card			Part N°	Type	Qty	Directes	Qty	Opto	Qty	Relays	Qty	Remarks
	DI	753-430 (x1)	8	DI	706-7753/300-XXXX	CORD Wago-753 T8ES	1	T8ES	1				
753-430 (x2)		16	DI	706-7753/301-XXXX	CORD Wago-753 T16ES	1	T16ES	1	T16EO	1			
753-431 (x1)		8	DI	706-7753/300-XXXX	CORD Wago-753 T8ES	1	T8ES	1					
DO	753-431 (x2)	16	DI	706-7753/301-XXXX	CORD Wago-753 T16ES	1	T16ES	1	T16EO	1			
	753-530 (x1)	8	DO	706-7753/300-XXXX	CORD Wago-753 T8ES	1	T8ES	1			T8S	1	
DO	753-530 (x2)	16	DO	706-7753/301-XXXX	CORD Wago-753 T16ES	1	T16ES	1			T16S	1	
	753-453 (x1)	4	AI	706-7753/602-XXXX	CORD Wago-753 A4ES	1	A4ES	1					
AI	753-453 (x2)	8	AI	706-7753/601-XXXX	CORD Wago-753 A8ES	1	A8ES	1					
	753-455 (x1)	4	AI	706-7753/602-XXXX	CORD Wago-753 A4ES	1	A4ES	1					
	753-455 (x2)	8	AI	706-7753/601-XXXX	CORD Wago-753 A8ES	1	A8ES	1					
	753-457 (x1)	4	AI	706-7753/602-XXXX	CORD Wago-753 A4ES	1	A4ES	1					
	753-457 (x2)	8	AI	706-7753/601-XXXX	CORD Wago-753 A8ES	1	A8ES	1					
	753-459 (x1)	4	AI	706-7753/602-XXXX	CORD Wago-753 A4ES	1	A4ES	1					
	753-459 (x2)	8	AI	706-7753/601-XXXX	CORD Wago-753 A8ES	1	A8ES	1					
AO	753-553 (x1)	4	AO	706-7753/602-XXXX	CORD Wago-753 A4ES	1	A4ES	1					
	753-553 (x2)	8	AO	706-7753/601-XXXX	CORD Wago-753 A8ES	1	A8ES	1					
	753-555 (x1)	4	AO	706-7753/602-XXXX	CORD Wago-753 A4ES	1	A4ES	1					
	753-555 (x2)	8	AO	706-7753/601-XXXX	CORD Wago-753 A8ES	1	A8ES	1					
	753-557 (x1)	4	AO	706-7753/602-XXXX	CORD Wago-753 A4ES	1	A4ES	1					
	753-557 (x2)	8	AO	706-7753/601-XXXX	CORD Wago-753 A8ES	1	A8ES	1					
	753-559 (x1)	4	AO	706-7753/602-XXXX	CORD Wago-753 A4ES	1	A4ES	1					
753-559 (x2)	8	AO	706-7753/601-XXXX	CORD Wago-753 A8ES	1	A8ES	1						

Please always consider the modules features (max voltage, max current, relay and optocoupler control voltage) when selecting interfaces.

PLC WAGO-I/O-SYSTEM 750

PLC				FRONT CABLES			COMPATIBLE INTERFACES							
DI	PLC I/O Card			Part N°	Type	Qty	Directes	Qty	Opto	Qty	Relays	Qty	Remarks	
	DO	750-1400	16	DI	706-3057/300-XXXX	CORD TSX T16ES	1	T16ES	1	T16EO	1			
750-1500		16	DO	706-3057/300-XXXX	CORD TSX T16ES	1	T16ES	1			T16S	1		
DI/DO	750-1502	8	DI	706-7753/302-XXXX	CORD Wago-750 HE T8ES	1	T8ES	1			T8S	1		
		8	DO											
	750-1502	8	DI	706-3057/300-XXXX	CORD TSX T16ES	1	T16ES	1						Interface only 3 wires
		8	DO											

Please always consider the modules features (max voltage, max current, relay and optocoupler control voltage) when selecting interfaces.

PLC OMRON CJ1

PLC				FRONT CABLES			COMPATIBLE INTERFACES						
DI	PLC I/O Card			Part N°	Type	Qty	Directes	Qty	Opto	Qty	Relays	Qty	Remarks
	DI	CJ1W-ID201	8	DI	706-100/310-XXXX	CORD UNIVERSEL T8ES	1	T8ES	1				
CJ1W-ID211		16	DI	706-100/320-XXXX	CORD UNIVERSEL T16ES	1	T16ES	1					Log. positive (com-)
CJ1W-ID231		32	DI	706-6001/100-XXXX	CORD CJ1W 2xT16E	1	T16ES	2	T16EO	2			Log. positive (com-)
CJ1W-ID232		32	DI	706-6001/300-XXXX	CORD CJ1W 2xT16ES	1	T16ES	2	T16EO	2			Log. positive (com-)
CJ1W-ID261		64	DI	706-6001/100-XXXX	CORD CJ1W 2xT16E	2	T16ES	4	T16EO	4			Log. positive (com-)
CJ1W-ID262		64	DI	706-6001/300-XXXX	CORD CJ1W 2xT16ES	2	T16ES	4	T16EO	4			Log. positive (com-)
CJ1W-IDP01		16	DI	706-100/320-XXXX	CORD UNIVERSEL T16ES	1	T16ES	1					Log. positive (com-)
DO	CJ1W-INT01	16	DI	706-100/320-XXXX	CORD UNIVERSEL T16ES	1	T16ES	1					Log. positive (com-)
	CJ1W-OD204	8	DO	706-100/310-XXXX	CORD UNIVERSEL T8ES	1	T8ES	1			T8S	1	
	CJ1W-OD212	16	DO	706-100/320-XXXX	CORD UNIVERSEL T16ES	1	T16ES	1			T16S	1	
	CJ1W-OD232	32	DO	706-6001/300-XXXX	CORD CJ1W 2xT16ES	1	T16ES	2			T16S	2	
DI/DO	CJ1W-OD262	64	DO	706-6001/300-XXXX	CORD CJ1W 2xT16ES	2	T16ES	4			T16S	4	
		16	DI										
		16	DO	706-6001/301-XXXX	CORD CJ1W T16E+T16S	1	T16ES	1			T16S	1	Log. positive (com-)

Please always consider the modules features (max voltage, max current, relay and optocoupler control voltage) when selecting interfaces.



The part number suffix «xxxx» indicates the length of cable in cm.

Standard length examples: L (xxxx)
• 1,00 m (100) / 2,00 m (200) / 3,00 m (300)

Part no. example for 2m cable: 706-7753/300-200

WAGO INTERFACE MODULES

Type	Description	Dimensions in mm (W x H x D)	Item No.
DI/DO	T8ES	10-pole; without supply	289-611
		10-pole; with LED; 3-wire	704-2003
	T8ESHT	12-pole (MCS); without LED; 2 conductors; up to 250 V	704-3003
	T8S	10-pole; with LED; electrical isolation: 5 A relay	704-5003
		10-pole; with LED; electrical isolation: 5 A relay; manual operation	704-5013
	T16ES	20-pole; without supply	289-614
		20-pole; with LED; 1-wire	704-2004
		20-pole; with LED; 1-wire; channel isolation	704-2014
		20-pole; with LED; 2-wire	704-2024
		20-pole; with LED; 2-wire; channel fuse	704-2034
		20-pole; with LED; 2-wire; channel isolation	704-2044
		20-pole; with LED; 3-wire	704-2054
		20-pole; with LED; 3-wire; channel isolation	704-2064
		20-pole; with LED; 2-wire; 0 V/channel isolation	704-2074
		20-pole; without LED; 2-wire	704-2224
	T16ESHT	2 x 10-pole (MCS); without LED; 2-wire; up to 250 V	704-3004
	T16S	20-pole; with LED; electrical isolation: 5 A relay	704-5004
		20-pole; with LED; electrical isolation: 5 A relay	704-5024
		20-pole; with LED; electrical isolation: 5 A relay; channel fuse	704-5034
		20-pole; with LED; electrical isolation: 5 A relay; manual operation	704-5044
20-pole; with LED; electrical isolation: 5 A relay; 0 V isolation; channel fuse		704-5054	
20-pole; with LED; electrical isolation: 5 A relay (2 u)		704-5064	
20-pole; with LED; electrical isolation: 5 A relay (1 a); 0 V/channel isolation; channel fuse		704-5074	
T16EO	20-pole; with LED; electrical isolation: 2 A optocoupler	704-4004	
AI/AO	A4ES	15-pole sub-D; 2- and 4-wire	704-8002
		15-pole sub-D; 2- and 4-wire; isolation	704-8012
	A8ES	25-pole sub-D; 2- and 4-wire	704-8003
	A8TSX	25-pole sub-D; 2- and 4-wire; isolation	704-8013
	25-pole sub-D; current and voltage signal	704-8023	

6

WAGO Interface Cable (Examples)



For Siemens

For Rockwell

For WAGO

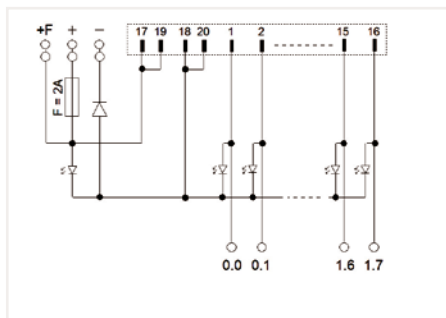
For Schneider

Cable Length Overview

Item No.	-XXXX	Length	Example
706-2300/201-XXXX	-100	1 m	706-2300/201-100
	-200	2 m	706-2300/201-200
	-300	3 m	706-2300/201-300

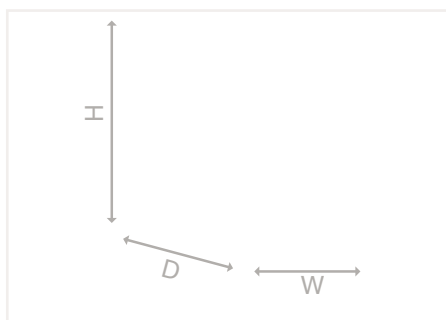
Additional cable lengths upon request

Interface Module for System Wiring 704 Series



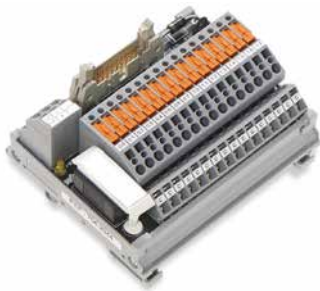
Interface module for system wiring; Pluggable connector per DIN 41651; Male connector; 20-pole; 16-channel digital input or output; 1-wire connection; in mounting carrier

Item No.	Pack. Unit
704-2004	1

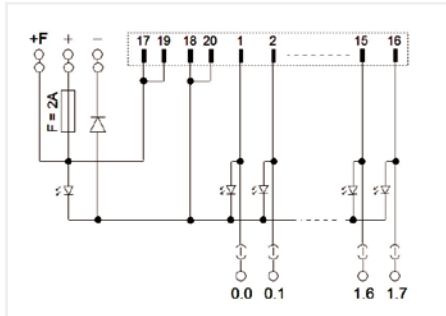


Electrical Data	
Inputs/outputs	16-channel digital input or output
Circuit type	1-cond. connection
Nominal operating voltage	DC 24 V
Operating voltage range	±10 %
Power consumption (status indication)	5 mA
Total current	2 A
Limiting continuous current	1 A
Status indicator	Green LED (channel); Yellow LED (power supply)
Internal fuse	2 A
Safety and protection	
Rated voltage	50 V
Rated surge voltage	0.8 kV
Pollution degree	2
Connection data	
Compatible PLC Modules	WAGO I/O System 750; WAGO I/O System 753; Omron CJ1W; Rockwell Compact Logix; Rockwell Control Logix; Schneider Modicon Quantum; Schneider Modicon M340; Schneider Twido; Schneider TSX; Schneider Modicon TM3; GE Fanuc RX3i; GE Fanuc 9030; Siemens S7-1500; Siemens S7-400; Siemens S7-300
Connection type 1	System
Pole number 1	20
Pluggable connectors	DIN 41651 male connector
Mating direction	vertical
Connection type 2	Field
Pole number 2	16
Design 2	PCB terminal blocks (double-deck)
WAGO Connector 2	WAGO 736 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch
Connection type 3	Supply
Pole number 3	6
Design 3	PCB terminal blocks (double-deck)
WAGO Connector 3	WAGO 736 Series
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 3	5 ... 6 mm / 0.2 ... 0.24 inch
Note (conductor cross-section)	12 AWG: THHN, THWN
Physical data	
Width	55 mm / 2.165 inch
Height from upper-edge of DIN-rail	50 mm / 1.969 inch
Depth	85 mm / 3.346 inch
Mechanical data	
Mounting type	DIN-35 rail
Material data	
Weight	80 g
Environmental requirements	
Surrounding air temperature (operation)	-20 ... 50 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Relative humidity	85% (non-condensing)

Interface Module for System Wiring 704 Series

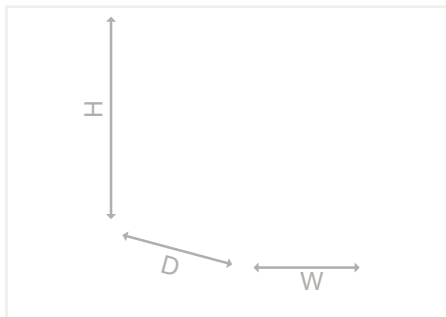


Similar to pictured device



Interface module for system wiring; Pluggable connector per DIN 41651; Male connector; 20-pole; 16-channel digital input or output; 1-wire connection; with disconnect terminal block; in mounting carrier

	Item No.	Pack. Unit
	704-2014	1



Electrical Data	
Inputs/outputs	16-channel digital input or output
Circuit type	1-cond. connection
Nominal operating voltage	DC 24 V
Operating voltage range	±10 %
Power consumption (status indication)	5 mA
Total current	2 A
Limiting continuous current	1 A
Status indicator	Green LED (channel); Yellow LED (power supply)
Internal fuse	Supply: 2 A
Specialty functions	with disconnect/test terminal blocks

Safety and protection	
Rated voltage	50 V
Rated surge voltage	0.8 kV
Pollution degree	2

Connection data	
Compatible PLC Modules	WAGO I/O System 750; WAGO I/O System 753; Omron CJ1W; Rockwell Compact Logix; Rockwell Control Logix; Schneider Modicon Quantum; Schneider Modicon M340; Schneider Twido; Schneider TSX; Schneider Modicon TM3; GE Fanuc RX3i; GE Fanuc 9030; Siemens S7-1500; Siemens S7-400; Siemens S7-300

Pole No.	20
Connection type 1	System
Pluggable connectors	DIN 41651 male connector
Mating direction	vertical
Connection type 2	Field
Pole number 2	16
Design 2	PCB terminal blocks
WAGO Connector 2	WAGO 742 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	8 ... 9 mm / 0.31 ... 0.35 inch
Connection type 3	Supply
Pole number 3	6
Design 3	PCB terminal blocks (double-deck)
WAGO Connector 3	WAGO 736 Series
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 3	5 ... 6 mm / 0.2 ... 0.24 inch
Note (conductor cross-section)	12 AWG: THHN, THWN

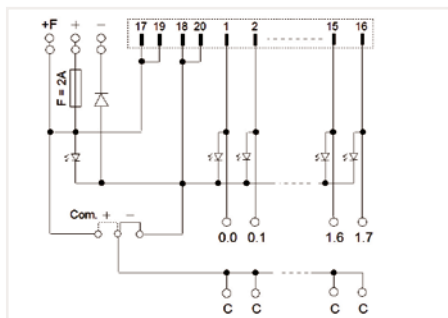
Physical data	
Width	85 mm / 3.346 inch
Height from upper-edge of DIN-rail	50 mm / 1.969 inch
Depth	85 mm / 3.346 inch

Mechanical data	
Mounting type	DIN-35 rail

Material data	
Weight	150 g

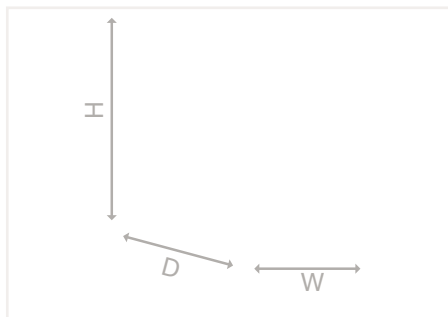
Environmental requirements	
Surrounding air temperature (operation)	-20 ... 50 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Relative humidity	≤85% (non-condensing)

Interface Module for System Wiring 704 Series



Interface module for system wiring; Pluggable connector per DIN 41651; Male connector; 20-pole; 16-channel digital input or output; 2-wire connection; in mounting carrier

	Item No.	Pack. Unit
	704-2024	1
without LED	704-2224	1



Electrical Data

Inputs/outputs	16-channel digital input or output
Circuit type	2-wire connection
Nominal operating voltage	DC 24 V
Operating voltage range	±10 %
Power consumption (status indication)	5 mA
Total current	2 A
Limiting continuous current	1 A
Status indicator	Green LED (channel); Yellow LED (power supply)
Internal fuse	2 A

Safety and protection

Rated voltage	50 V
Rated surge voltage	0.8 kV
Pollution degree	2

Connection data

Compatible PLC Modules	WAGO I/O System 750; WAGO I/O System 753; Omron CJ1W; Rockwell Compact Logix; Rockwell Control Logix; Schneider Modicon Quantum; Schneider Modicon M340; Schneider Twido; Schneider TSX; Schneider Modicon TM3; GE Fanuc RX3i; GE Fanuc 9030; Siemens S7-1500; Siemens S7-400; Siemens S7-300
Connection type 1	System
Pole number 1	20
Pluggable connectors	DIN 41651 male connector
Mating direction	vertical
Connection type 2	Field
Pole number 2	32
Design 2	PCB terminal blocks (double-deck)
WAGO Connector 2	WAGO 736 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch
Connection type 3	Supply
Pole number 3	6
Design 3	PCB terminal blocks (double-deck)
WAGO Connector 3	WAGO 736 Series
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 3	5 ... 6 mm / 0.2 ... 0.24 inch
Note (conductor cross-section)	12 AWG: THHN, THWN

Physical data

Width	85 mm / 3.346 inch
Height from upper-edge of DIN-rail	50 mm / 1.969 inch
Depth	85 mm / 3.346 inch

Mechanical data

Mounting type	DIN-35 rail
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Material data

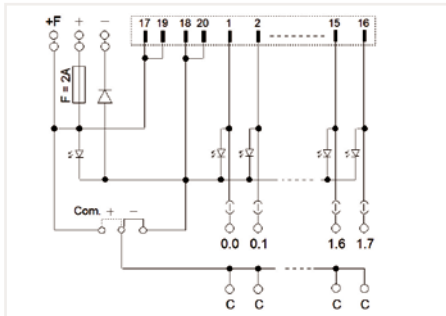
Weight	112.3 g
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Environmental requirements

Surrounding air temperature (operation)	-20 ... 50 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Relative humidity	85% (non-condensing)

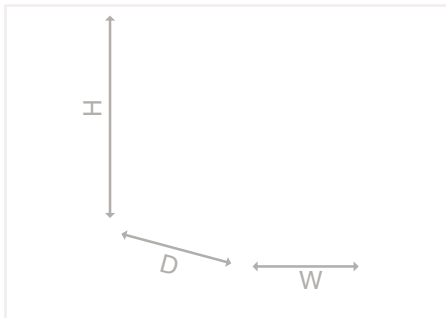
Interface Module for System Wiring

704 Series



Interface module for system wiring; Pluggable connector per DIN 41651; Male connector; 20-pole; 16-channel digital input or output; 2-wire connection; in mounting carrier

	Item No.	Pack. Unit
	704-2044	1



Electrical Data	
Inputs/outputs	16-channel digital input or output
Circuit type	2-wire connection
Nominal operating voltage	DC 24 V
Operating voltage range	±10 %
Power consumption (status indication)	5 mA
Total current	2 A
Limiting continuous current	1 A
Status indicator	Green LED (channel); Yellow LED (power supply)
Internal fuse	2 A
Specialty functions	with disconnect/test terminal blocks

Safety and protection	
Rated voltage	50 V
Rated surge voltage	0.8 kV
Pollution degree	2

Connection data	
Compatible PLC Modules	WAGO I/O System 750; WAGO I/O System 753; Omron CJ1W; Rockwell Compact Logix; Rockwell Control Logix; Schneider Modicon Quantum; Schneider Modicon M340; Schneider Twido; Schneider TSX; Schneider Modicon TM3; GE Fanuc RX3i; GE Fanuc 9030; Siemens S7-1500; Siemens S7-400; Siemens S7-300

Connection type 1	System
Pole number 1	20
Pluggable connectors	DIN 41651 male connector
Mating direction	vertical
Connection type 2	Field
Pole number 2	16
Design 2	PCB terminal blocks
WAGO Connector 2	WAGO 742 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	8 ... 9 mm / 0.31 ... 0.35 inch
Connection type 3	Field
Pole number 3	16
Design 3	PCB terminal blocks
WAGO Connector 3	WAGO 236 Series
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 3	5 ... 6 mm / 0.2 ... 0.24 inch
Connection type 4	Power supply
Pole number 4	6
Design 4	PCB terminal blocks (double-deck)
WAGO Connector 4	WAGO 736 Series
Solid conductor 4	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 4	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 4	5 ... 6 mm / 0.2 ... 0.24 inch
Note (conductor cross-section)	12 AWG: THHN, THWN

Physical data	
Width	99 mm / 3.898 inch
Height from upper-edge of DIN-rail	50 mm / 1.969 inch
Depth	85 mm / 3.346 inch

Mechanical data	
Mounting type	DIN-35 rail

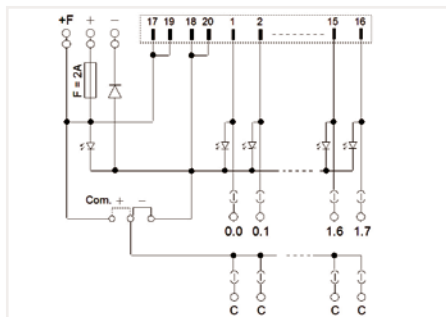
Material data	
Weight	184.1 g

Environmental requirements	
Surrounding air temperature (operation)	-20 ... 50 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Relative humidity	85% (non-condensing)

Interface Module for System Wiring 704 Series

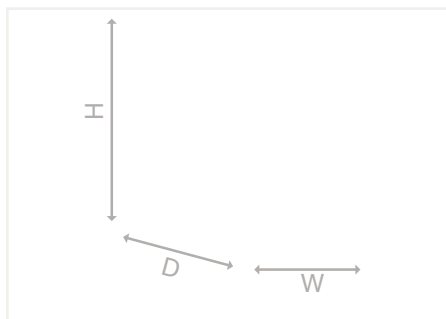


Similar to pictured device



Interface module for system wiring; Pluggable connector per DIN 41651; Male connector; 20-pole; 16-channel digital input or output; 2-wire connection; with disconnect terminal block; in mounting carrier

	Item No.	Pack. Unit
	704-2074	1



Electrical Data

Inputs/outputs	16-channel digital input or output
Circuit type	2-wire connection
Nominal operating voltage	DC 24 V
Operating voltage range	±10 %
Power consumption (status indication)	5 mA
Total current	2 A
Limiting continuous current	1 A
Status indicator	Green LED (channel); Yellow LED (power supply)
Internal fuse	2 A
Specialty functions	with disconnect/test terminal blocks

Safety and protection

Rated voltage	50 V
Rated surge voltage	0.8 kV
Pollution degree	2

Connection data

Compatible PLC Modules	WAGO I/O System 750; WAGO I/O System 753; Omron CJ1W; Rockwell Compact Logix; Rockwell Control Logix; Schneider Modicon Quantum; Schneider Modicon M340; Schneider Twido; Schneider TSX; Schneider Modicon TM3; GE Fanuc RX3i; GE Fanuc 9030; Siemens S7-1500; Siemens S7-400; Siemens S7-300
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Pole No.	20
Connection type 1	System
Pluggable connectors	DIN 41651 male connector
Mating direction	vertical
Connection type 2	Field
Pole number 2	32
Design 2	PCB terminal blocks
WAGO Connector 2	WAGO 742 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	8 ... 9 mm / 0.31 ... 0.35 inch
Connection type 3	Supply
Pole number 3	6
Design 3	PCB terminal blocks (double-deck)
WAGO Connector 3	WAGO 736 Series
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 3	5 ... 6 mm / 0.2 ... 0.24 inch
Note (conductor cross-section)	12 AWG: THHN, THWN

Physical data

Width	165 mm / 6.496 inch
Height from upper-edge of DIN-rail	50 mm / 1.969 inch
Depth	85 mm / 3.346 inch

Mechanical data

Mounting type	DIN-35 rail
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Material data

Weight	170 g
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Environmental requirements

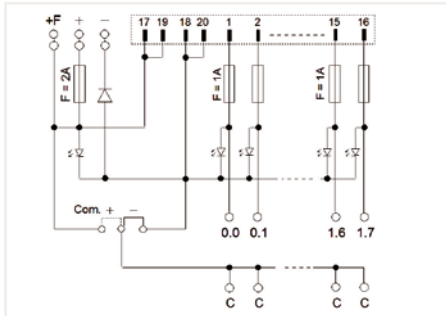
Surrounding air temperature (operation)	-20 ... 50 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Relative humidity	85% (non-condensing)

Interface Module for System Wiring

704 Series

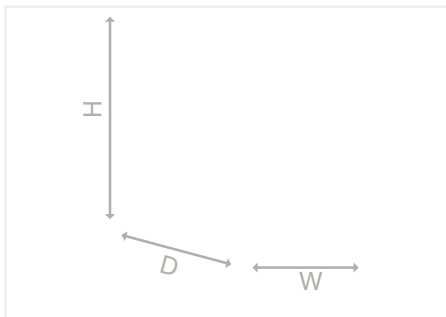


Similar to pictured device



Interface module for system wiring; Pluggable connector per DIN 41651; Male connector; 20-pole; 16-channel digital input or output; 2-wire connection; Miniature fuse; in mounting carrier

	Item No.	Pack. Unit
	704-2034	1



Electrical Data

Inputs/outputs	16-channel digital input or output
Circuit type	2-wire connection
Nominal operating voltage	DC 24 V
Operating voltage range	±10 %
Power consumption (status indication)	5 mA
Total current	2 A
Status indicator	Green LED (channel); Yellow LED (power supply)
Internal fuse	Channel: 1 A

Safety and protection

Rated voltage	50 V
Rated surge voltage	0.8 kV
Pollution degree	2

Connection data

Compatible PLC Modules	WAGO I/O System 750; WAGO I/O System 753; Omron CJ1W; Rockwell Compact Logix; Rockwell Control Logix; Schneider Modicon Quantum; Schneider Modicon M340; Schneider Twido; Schneider TSX; Schneider Modicon TM3; GE Fanuc RX3i; GE Fanuc 9030; Siemens S7-1500; Siemens S7-400; Siemens S7-300
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Pole No.	20
Connection type 1	System
Pluggable connectors	DIN 41651 male connector
Mating direction	vertical
Connection type 2	Field
Pole number 2	32
Design 2	PCB terminal blocks (double-deck)
WAGO Connector 2	WAGO 736 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch
Connection type 3	Supply
Pole number 3	6
Design 3	PCB terminal blocks (double-deck)
WAGO Connector 3	WAGO 736 Series
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 3	5 ... 6 mm / 0.2 ... 0.24 inch
Note (conductor cross-section)	12 AWG: THHN, THWN

Physical data

Width	120 mm / 4.724 inch
Height from upper-edge of DIN-rail	50 mm / 1.969 inch
Depth	85 mm / 3.346 inch

Mechanical data

Mounting type	DIN-35 rail
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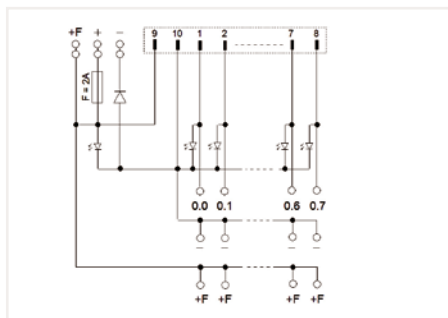
Material data

Weight	170 g
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Environmental requirements

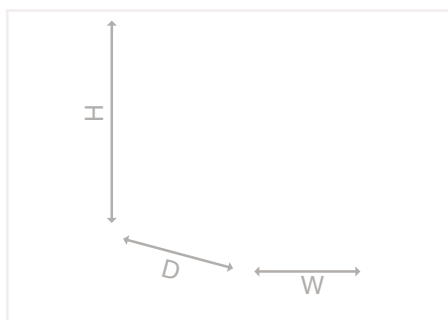
Surrounding air temperature (operation)	-20 ... 50 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Relative humidity	85% (non-condensing)

Interface Module for System Wiring 704 Series



Interface module for system wiring; Pluggable connector per DIN 41651; Male connector; 10-pole; 8-channel digital input or output; 3-wire connection; in mounting carrier

Item No.	Pack. Unit
704-2003	1



Electrical Data

Inputs/outputs	8-channel digital input or output
Circuit type	3-wire connection
Nominal operating voltage	DC 24 V
Operating voltage range	±10 %
Power consumption (status indication)	5 mA
Total current	2 A
Limiting continuous current	1 A
Status indicator	Green LED (channel); Yellow LED (power supply)
Internal fuse	2 A

Safety and protection

Rated voltage	50 V
Rated surge voltage	0.8 kV
Pollution degree	2

Connection data

Compatible PLC Modules	Siemens S7-300; Siemens S7-400; Siemens S7-1500; GE Fanuc 9030; Schneider Modicon TM3; Schneider TSX; Schneider Modicon M340; Schneider Modicon Quantum; Rockwell Compact Logix; WAGO I/O System 753; WAGO I/O System 750; Omron CJ1W
Connection type 1	System
Pole number 1	10
Pluggable connectors	DIN 41651 male connector
Mating direction	vertical
Connection type 2	Field
Pole number 2	24
Design 2	PCB terminal blocks (triple-deck)
WAGO Connector 2	WAGO 737 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch
Connection type 3	Supply
Pole number 3	6
Design 3	PCB terminal blocks (double-deck)
WAGO Connector 3	WAGO 736 Series
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 3	5 ... 6 mm / 0.2 ... 0.24 inch
Note (conductor cross-section)	12 AWG: THHN, THWN

Physical data

Width	56 mm / 2.205 inch
Height from upper-edge of DIN-rail	63 mm / 2.48 inch
Depth	85 mm / 3.346 inch

Mechanical data

Mounting type	DIN-35 rail
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Material data

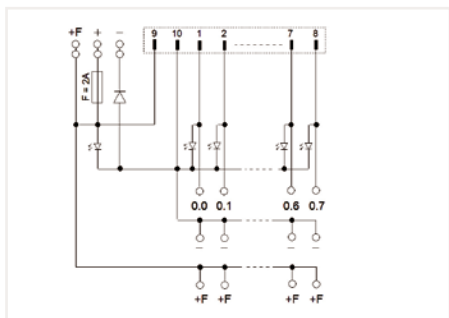
Weight	92 g
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Environmental requirements

Surrounding air temperature (operation)	-20 ... 50 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Relative humidity	85% (non-condensing)

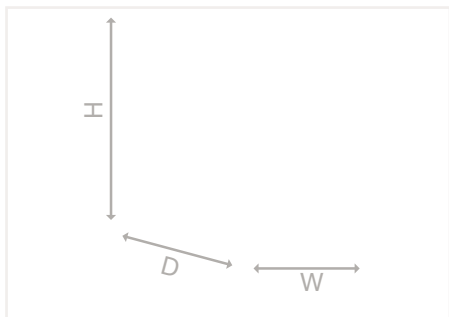
Interface Module for System Wiring

704 Series



Interface module for system wiring; Pluggable connector per DIN 41651; Male connector; 10-pole; 8-channel digital input or output; 3-wire connection; with disconnect terminal block; in mounting carrier

Item No.	Pack. Unit
704-2063	1



Electrical Data

Inputs/outputs	8-channel digital input or output
Circuit type	3-wire connection
Nominal operating voltage	DC 24 V
Operating voltage range	±10 %
Power consumption (status indication)	5 mA
Total current	2 A
Limiting continuous current	1 A
Status indicator	Green LED (channel); Yellow LED (power supply)
Internal fuse	2 A
Specialty functions	with disconnect/test terminal blocks

Safety and protection

Rated voltage	50 V
Rated surge voltage	0.8 kV
Pollution degree	2

Connection data

Compatible PLC Modules	Siemens S7-300; Siemens S7-400; Siemens S7-1500; GE Fanuc 9030; Schneider Modicon TM3; Schneider TSX; Schneider Modicon M340; Schneider Modicon Quantum; Rockwell Compact Logix; WAGO I/O System 753; WAGO I/O System 750; Omron CJ1W
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Pole No.	10
Connection type 1	System
Pole number 1	10
Pluggable connectors	DIN 41651 male connector
Mating direction	vertical
Connection type 2	Field
Pole number 2	8
Design 2	PCB terminal blocks
WAGO Connector 2	WAGO 742 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	8 ... 9 mm / 0.31 ... 0.35 inch
Connection type 3	Field
Pole number 3	16
Design 3	PCB terminal blocks
WAGO Connector 3	WAGO 236 Series
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 3	5 ... 6 mm / 0.2 ... 0.24 inch
Connection type 4	Power supply
Pole number 4	24
Design 4	PCB terminal blocks (double-deck)
WAGO Connector 4	WAGO 736 Series
Solid conductor 4	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 4	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 4	5 ... 6 mm / 0.2 ... 0.24 inch

Physical data

Width	56 mm / 2.205 inch
Height from upper-edge of DIN-rail	63 mm / 2.48 inch
Depth	105 mm / 4.133 inch

Mechanical data

Mounting type	DIN-35 rail
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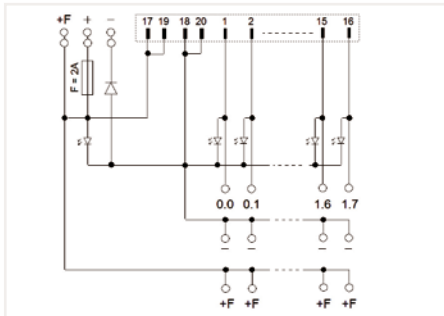
Material data

Weight	114.4 g
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Environmental requirements

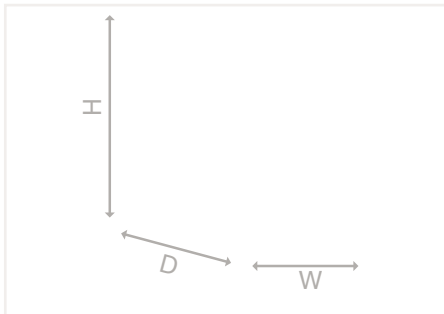
Surrounding air temperature (operation)	-20 ... 50 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Relative humidity	85% (non-condensing)

Interface Module for System Wiring 704 Series



Interface module for system wiring; Pluggable connector per DIN 41651; Male connector; 20-pole; 16-channel digital input or output; 3-wire connection; in mounting carrier

Item No.	Pack. Unit
704-2054	1



Electrical Data	
Inputs/outputs	16-channel digital input or output
Circuit type	3-wire connection
Nominal operating voltage	DC 24 V
Operating voltage range	±10 %
Power consumption (status indication)	5 mA
Total current	2 A
Limiting continuous current	1 A
Status indicator	Green LED (channel); Yellow LED (power supply)
Internal fuse	2 A

Safety and protection	
Rated voltage	50 V
Rated surge voltage	0.8 kV
Pollution degree	2

Connection data	
Compatible PLC Modules	WAGO I/O System 750; WAGO I/O System 753; Omron CJ1W; Rockwell Compact Logix; Rockwell Control Logix; Schneider Modicon Quantum; Schneider Modicon M340; Schneider Twido; Schneider TSX; Schneider Modicon TM3; GE Fanuc RX3i; GE Fanuc 9030; Siemens S7-1500; Siemens S7-400; Siemens S7-300

Connection type 1	System
Pole number 1	20
Pluggable connectors	DIN 41651 male connector
Mating direction	vertical
Connection type 2	Field
Pole number 2	48
Design 2	PCB terminal blocks (triple-deck)
WAGO Connector 2	WAGO 737 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch
Connection type 3	Supply
Pole number 3	6
Design 3	PCB terminal blocks (double-deck)
WAGO Connector 3	WAGO 736 Series
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 3	5 ... 6 mm / 0.2 ... 0.24 inch
Note (conductor cross-section)	12 AWG: THHN, THWN

Physical data	
Width	85 mm / 3.346 inch
Height from upper-edge of DIN-rail	63 mm / 2.48 inch
Depth	85 mm / 3.346 inch

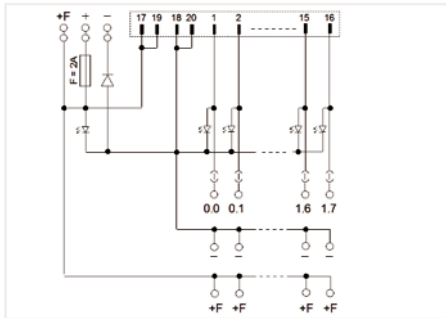
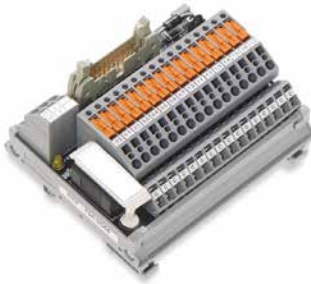
Mechanical data	
Mounting type	DIN-35 rail

Material data	
Weight	143 g

Environmental requirements	
Surrounding air temperature (operation)	-20 ... 50 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Relative humidity	85% (non-condensing)

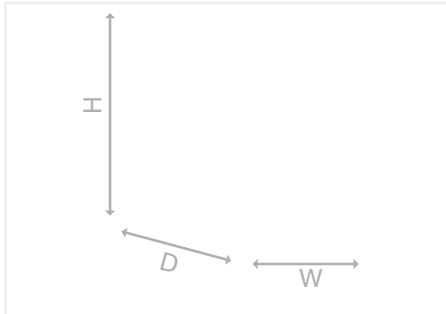
Interface Module for System Wiring

704 Series



Interface module for system wiring; Pluggable connector per DIN 41651; Male connector; 20-pole; 16 channels analog input/ analog output; 3-wire connection; with disconnect terminal block; in mounting carrier

Item No.	Pack. Unit
704-2064	1



Electrical Data	
Inputs/outputs	16-channel digital input or output
Circuit type	3-wire connection
Nominal operating voltage	DC 24 V
Operating voltage range	±10 %
Power consumption (status indication)	5 mA
Total current	2 A
Limiting continuous current	1 A
Status indicator	Green LED (channel); Yellow LED (power supply)
Internal fuse	2 A
Specialty functions	with disconnect/test terminal blocks

Safety and protection	
Rated voltage	50 V
Rated surge voltage	0.8 kV
Pollution degree	2

Connection data	
Compatible PLC Modules	WAGO I/O System 750; WAGO I/O System 753; Omron CJ1W; Rockwell Compact Logix; Rockwell Control Logix; Rockwell Control Logix; Schneider Modicon Quantum; Schneider Twido; Schneider Modicon M340; Schneider TSX; Schneider Modicon TM3; GE Fanuc RX3i; GE Fanuc 9030; Siemens S7-1500; Siemens S7-400; Siemens S7-300

Pole No.	20
Connection type 1	System
Pluggable connectors	DIN 41651 male connector
Mating direction	vertical
Connection type 2	Field
Pole number 2	16
Design 2	PCB terminal blocks
WAGO Connector 2	WAGO 742 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	8 ... 9 mm / 0.31 ... 0.35 inch
Connection type 3	Field
Pole number 3	32
Design 3	PCB terminal blocks (double-row)
WAGO Connector 3	WAGO 236 Series
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 3	5 ... 6 mm / 0.2 ... 0.24 inch
Connection type 4	Power supply
Pole number 4	6
Design 4	PCB terminal blocks (double-deck)
WAGO Connector 4	WAGO 736 Series
Solid conductor 4	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 4	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 4	5 ... 6 mm / 0.2 ... 0.24 inch
Note (conductor cross-section)	12 AWG: THHN, THWN

Physical data	
Width	85 mm / 3.346 inch
Height from upper-edge of DIN-rail	50 mm / 1.969 inch
Depth	105 mm / 4.134 inch

Mechanical data	
Mounting type	DIN-35 rail

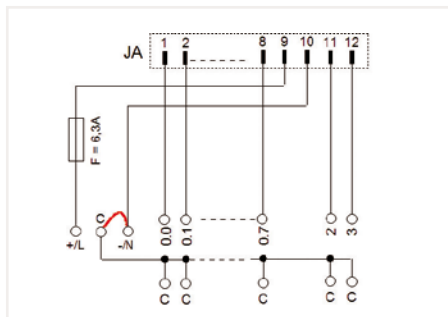
Material data	
Weight	170 g

Environmental requirements	
Surrounding air temperature (operation)	-20 ... 50 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Relative humidity	85% (non-condensing)

Interface Module for System Wiring 704 Series

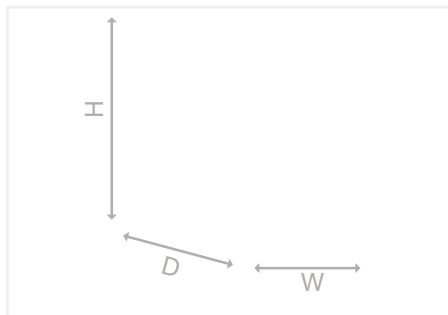


Similar to pictured device



Interface module for system wiring; for 232 Series Pluggable Connectors; 12-pole; 8-channel digital input or output; 2-wire connection; Double-deck PCB terminal blocks; for higher voltages; in mounting carrier

	Item No.	Pack. Unit
	704-3003	1



Electrical Data

Inputs/outputs	8-channel relay output
Circuit type	2-wire connection
Nominal operating voltage	AC 230 V
Operating voltage range	±10 %
Total current	8 A
Limiting continuous current	3 A
Internal fuse	6.3 A

Safety and protection

Rated voltage	250 V
Rated surge voltage	2 kV

Connection data

Compatible PLC Modules	GE Fanuc 9030; Schneider Modicon TM3; Schneider TSX; Schneider Modicon M340; Rockwell Compact Logix; Rockwell Control Logix; Siemens S7-400
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Pole No.	12
Connection type 1	System
Design	PCB terminal blocks
Pluggable connectors	WAGO 231 Series
Mating direction	vertical
WAGO Connector	WAGO 232 Series
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch
Connection type 2	Field
Pole number 2	20
Design 2	PCB terminal blocks (double-deck)
WAGO Connector 2	WAGO 736 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch
Connection type 3	Supply
Pole number 3	3
Design 3	PCB terminal blocks
WAGO Connector 3	WAGO 742 Series
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 3	8 ... 9 mm / 0.31 ... 0.35 inch
Note (conductor cross-section)	12 AWG: THHN, THWN

Physical data

Width	71 mm / 2.795 inch
Height from upper-edge of DIN-rail	56 mm / 2.204 inch
Depth	85 mm / 3.346 inch

Mechanical data

Mounting type	DIN-35 rail
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Material data

Weight	170 g
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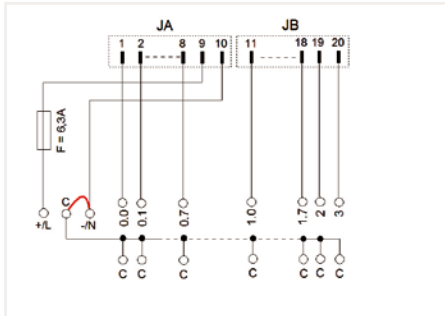
Environmental requirements

Surrounding air temperature (operation)	-20 ... 50 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Relative humidity	85% (non-condensing)

Interface Module for System Wiring 704 Series

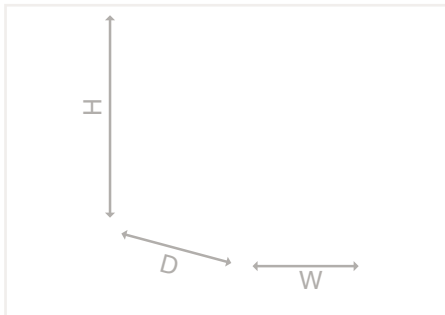


Similar to pictured device



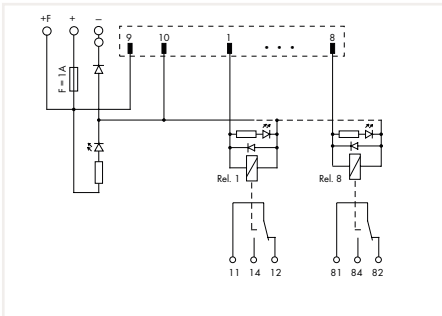
Interface module for system wiring; for 232 Series Pluggable Connectors; 2 x 10-pole; 16-channel digital input or output; 2-wire connection; Double-deck PCB terminal blocks; for higher voltages; in mounting carrier

	Item No.	Pack. Unit
	704-3004	1



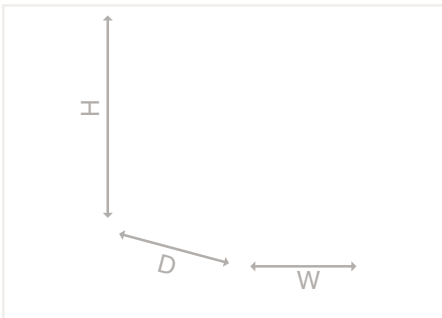
Electrical Data	
Inputs/outputs	16-channel relay output
Circuit type	2-wire connection
Nominal operating voltage	AC 230 V
Operating voltage range	±10 %
Total current	8 A
Limiting continuous current	3 A
Internal fuse	6.3 A
Safety and protection	
Rated voltage	250 V
Rated surge voltage	2 kV
Connection data	
Compatible PLC Modules	Siemens S7-300; Siemens S7-400; Siemens S7-1500; GE Fanuc 9030; Schneider Modicon M340; Schneider Modicon Quantum; Rockwell Compact Logix; Rockwell Control Logix
Pole No.	20
Connection type 1	System
Design	PCB terminal blocks
Pluggable connectors	WAGO 231 Series
Mating direction	vertical
WAGO Connector	WAGO 232 Series
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch
Connection type 2	Field
Pole number 2	32
Design 2	PCB terminal blocks (double-deck)
WAGO Connector 2	WAGO 736 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch
Connection type 3	Supply
Pole number 3	3
Design 3	PCB terminal blocks
WAGO Connector 3	WAGO 742 Series
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 3	8 ... 9 mm / 0.31 ... 0.35 inch
Note (conductor cross-section)	12 AWG: THHN, THWN
Physical data	
Width	111 mm / 4.37 inch
Height from upper-edge of DIN-rail	56 mm / 2.204 inch
Depth	85 mm / 3.346 inch
Mechanical data	
Mounting type	DIN-35 rail
Material data	
Weight	170 g
Environmental requirements	
Surrounding air temperature (operation)	-20 ... 50 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Relative humidity	85% (non-condensing)

Interface Module for System Wiring 704 Series



Interface module for system wiring; Pluggable connector per DIN 41651; Male connector; 10-pole; 8-channel relay output; 1 changeover contact; Triple-deck PCB terminal blocks; in mounting carrier

	Item No.	Pack. Unit
	704-5003	1
without relay	704-5023	1
common changeover contacts of 4 Relays	704-5303	1



Accessories



Basic Relay; 1 changeover contact; 24 VDC; Limiting continuous current: 6 A; 5 mm wide; 15 mm high

Item No.	Pack. Unit
857-152	20

Electrical Data

Inputs/outputs	8-channel relay output
Nominal operating voltage	DC 24 V
Operating voltage range	±10 %
Number of changeover/switchover contacts	1
Limiting continuous current	5 A
Switching voltage (max.)	AC 250 V; DC 48 V
Switching power (resistive) (max.)	AC 1250 VA; DC 50 W
Mechanical life	10 x 10 ⁶ switching operations
Status indicator	Green LED (channel); Yellow LED (power supply)
Internal fuse	Supply: 1 A; Relay output: -
WAGO Basic Relay	857-152

Safety and protection

Rated voltage	50 V
Rated surge voltage	0.8 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kVrms
Dielectric strength, load/load circuit (AC, 1 min)	1 kVrms

Connection data

Compatible PLC Modules
Siemens S7-300; Siemens S7-1500; GE Fanuc 9030; Schneider TSX; Schneider Modicon M340; Schneider Modicon Quantum; Schneider Modicon TM3; Rockwell Compact Logix; WAGO I/O System 753; WAGO I/O System 750

Pole No.	10
Connection type 1	System
Pole number 1	10
Pluggable connectors	DIN 41651 male connector
Mating direction	vertical
Connection type 2	Field
Pole number 2	24
Design 2	PCB terminal blocks (triple-deck)
WAGO Connector 2	WAGO 737 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch
Connection type 3	Supply
Pole number 3	4
Design 3	PCB terminal blocks
WAGO Connector 3	WAGO 236 Series
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 3	5 ... 6 mm / 0.2 ... 0.24 inch
Note (conductor cross-section)	12 AWG: THHN, THWN

Physical data

Width	70 mm / 2.756 inch
Height from upper-edge of DIN-rail	65 mm / 2.559 inch
Depth	105 mm / 4.134 inch

Mechanical data

Mounting type	DIN-35 rail
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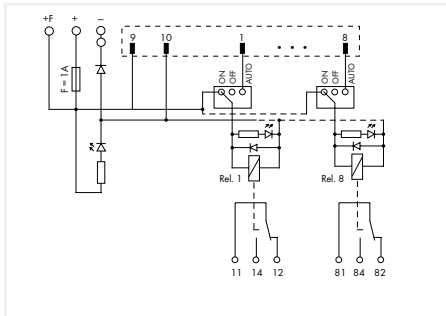
Material data

Contact material (relay)	AgSnO ₂
Weight	230 g

Environmental requirements

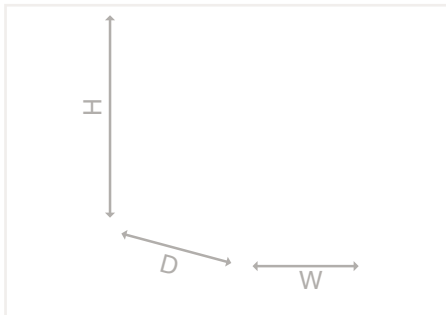
Surrounding air temperature (operation)	-25 ... 40 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Relative humidity	85% (non-condensing)

Interface Module for System Wiring 704 Series



Interface module for system wiring; Pluggable connector per DIN 41651; Male connector; 10-pole; 8-channel relay output; 1 changeover contact; Triple-deck PCB terminal blocks; with manual operation; in mounting carrier

Item No.	Pack. Unit
704-5013	1



Accessories



Basic Relay; 1 changeover contact; 24 VDC; Limiting continuous current: 6 A; 5 mm wide; 15 mm high

Item No.	Pack. Unit
857-152	20

Electrical Data

Inputs/outputs	8-channel relay output
Nominal operating voltage	DC 24 V
Operating voltage range	±10 %
Number of changeover/switchover contacts	1
Limiting continuous current	5 A
Switching voltage (max.)	AC 250 V; DC 48 V
Switching power (resistive) (max.)	AC 1250 VA; DC 50 W
Mechanical life	10 x 10 ⁶ switching operations
Status indicator	Green LED (channel); Yellow LED (power supply)
Internal fuse	Supply: 1 A; Relay output: -
WAGO Basic Relay	857-152
Specialty functions	with manual operation

Safety and protection

Rated voltage	50 V
Rated surge voltage	0.8 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kVrms
Dielectric strength, load/load circuit (AC, 1 min)	1 kVrms

Connection data

Compatible PLC Modules	Siemens S7-300; Siemens S7-1500; GE Fanuc 9030; Schneider TSX; Schneider Modicon M340; Schneider Modicon Quantum; Schneider Modicon TM3; Rockwell Compact Logix; WAGO I/O System 753; WAGO I/O System 750; Omron CJ1W
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Pole No.	10
Connection type 1	System
Pole number 1	10
Pluggable connectors	DIN 41651 male connector
Mating direction	vertical
Connection type 2	Field
Pole number 2	24
Design 2	PCB terminal blocks (triple-deck)
WAGO Connector 2	WAGO 737 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch
Connection type 3	Supply
Pole number 3	4
Design 3	PCB terminal blocks
WAGO Connector 3	WAGO 236 Series
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 3	5 ... 6 mm / 0.2 ... 0.24 inch
Note (conductor cross-section)	12 AWG: THHN, THWN

Physical data

Width	70 mm / 2.756 inch
Height from upper-edge of DIN-rail	65 mm / 2.559 inch
Depth	105 mm / 4.134 inch

Mechanical data

Mounting type	DIN-35 rail
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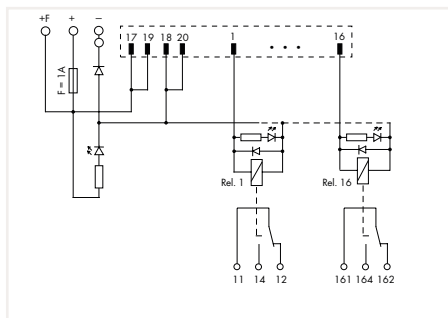
Material data

Contact material (relay)	AgSnO ₂
Weight	240 g

Environmental requirements

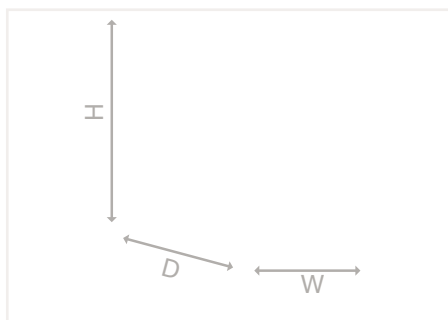
Surrounding air temperature (operation)	-25 ... 40 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Relative humidity	85% (non-condensing)

Interface Module for System Wiring 704 Series



Interface module for system wiring; Pluggable connector per DIN 41651; Male connector; 20-pole; 16-channel relay output; 1 changeover contact; Double-deck PCB terminal blocks; in mounting carrier

	Item No.	Pack. Unit
	704-5024	1
without relay	704-5084	1
common changeover contacts of 4 Relais	704-5324	1



Accessories



Basic Relay; 1 changeover contact; 24 VDC;
Limiting continuous current: 6 A; 5 mm wide;
15 mm high

Item No.	Pack. Unit
857-152	20

Electrical Data

Inputs/outputs	16-channel relay output
Nominal operating voltage	DC 24 V
Operating voltage range	±10 %
Number of changeover/switchover contacts	1
Limiting continuous current	5 A
Switching voltage (max.)	AC 250 V; DC 48 V
Switching power (resistive) (max.)	AC 1250 VA; DC 50 W
Mechanical life	10 x 10 ⁶ switching operations
Status indicator	Green LED (channel); Yellow LED (power supply)
Internal fuse	Supply: 1 A; Relay output: -
WAGO Basic Relay	857-152

Safety and protection

Rated voltage	50 V
Rated surge voltage	0.8 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kVrms
Dielectric strength, load/load circuit (AC, 1 min)	1 kVrms

Connection data

Compatible PLC Modules	Siemens S7-300; Siemens S7-400; Siemens S7-1500; GE Fanuc 9030; GE Fanuc RX3i; Schneider TSX; Schneider Modicon TM3; Schneider Twido; Schneider Modicon M340; Schneider Modicon Quantum; Rockwell Compact Logix; Rockwell Control Logix; WAGO I/O System 753; WAGO I/O System 750; Omron CJ1W
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Pole No.	20
Connection type 1	System
Pole number 1	20
Pluggable connectors	DIN 41651 male connector
Mating direction	vertical
Connection type 2	Field
Pole number 2	48
Design 2	PCB terminal blocks (triple-deck)
WAGO Connector 2	WAGO 737 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch
Connection type 3	Supply
Pole number 3	4
Design 3	PCB terminal blocks
WAGO Connector 3	WAGO 236 Series
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 3	5 ... 6 mm / 0.2 ... 0.24 inch
Note (conductor cross-section)	12 AWG: THHN, THWN

Physical data

Width	111 mm / 4.37 inch
Height from upper-edge of DIN-rail	65 mm / 2.559 inch
Depth	105 mm / 4.134 inch

Mechanical data

Mounting type	DIN-35 rail
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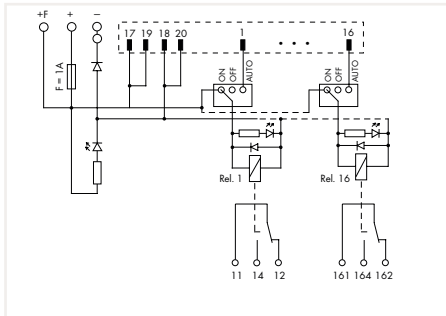
Material data

Contact material (relay)	AgSnO ₂
Weight	300 g

Environmental requirements

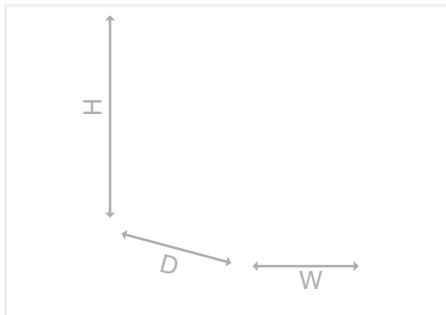
Surrounding air temperature (operation)	-25 ... 40 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Relative humidity	85% (non-condensing)

Interface Module for System Wiring 704 Series



Interface module for system wiring; Pluggable connector per DIN 41651; Male connector; 20-pole; 16-channel relay output; 1 changeover contact; Triple-deck PCB terminal blocks; with manual operation; in mounting carrier

	Item No.	Pack. Unit
	704-5044	1



Accessories



Basic Relay; 1 changeover contact; 24 VDC;
Limiting continuous current: 6 A; 5 mm wide;
15 mm high

	Item No.	Pack. Unit
	857-152	20

Electrical Data

Inputs/outputs	16-channel relay output
Nominal operating voltage	DC 24 V
Operating voltage range	±10 %
Number of changeover/switchover contacts	1
Limiting continuous current	5 A
Switching voltage (max.)	AC 250 V; DC 48 V
Switching power (resistive) (max.)	AC 1250 VA; DC 50 W
Mechanical life	10 x 10 ⁶ switching operations
Status indicator	Green LED (channel); Yellow LED (power supply)
Internal fuse	Supply: 1 A; Relay output: -
WAGO Basic Relay	857-152
Specialty functions	with manual operation

Safety and protection

Rated voltage	50 V
Rated surge voltage	0.8 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kVrms
Dielectric strength, load/load circuit (AC, 1 min)	1 kVrms

Connection data

Compatible PLC Modules	Siemens S7-300; Siemens S7-400; Siemens S7-1500; GE Fanuc 9030; GE Fanuc RX3i; Schneider Twido; Schneider Modicon TM3; Schneider Modicon M340; Schneider TSX; Schneider Modicon Quantum; Rockwell Compact Logix; Rockwell Control Logix; WAGO I/O System 753; WAGO I/O System 750; Omron CJ1W
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Connection type 1	System
Pole number 1	20
Pluggable connectors	DIN 41651 male connector
Mating direction	vertical
Connection type 2	Field
Pole number 2	48
Design 2	PCB terminal blocks (triple-deck)
WAGO Connector 2	WAGO 737 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch
Connection type 3	Supply
Pole number 3	4
Design 3	PCB terminal blocks
WAGO Connector 3	WAGO 236 Series
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 3	5 ... 6 mm / 0.2 ... 0.24 inch
Note (conductor cross-section)	12 AWG: THHN, THWN

Physical data

Width	111 mm / 4.37 inch
Height from upper-edge of DIN-rail	65 mm / 2.559 inch
Depth	105 mm / 4.134 inch

Mechanical data

Mounting type	DIN-35 rail
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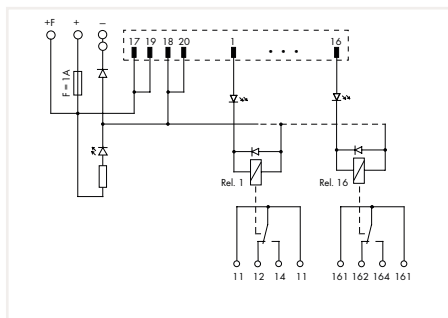
Material data

Contact material (relay)	AgSnO ₂
Weight	319 g

Environmental requirements

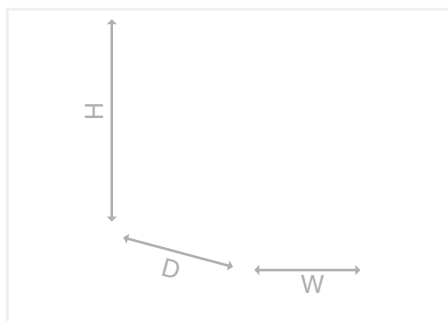
Surrounding air temperature (operation)	-25 ... 40 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Relative humidity	85% (non-condensing)

Interface Module for System Wiring 704 Series



Interface module for system wiring; Pluggable connector per DIN 41651; Male connector; 20-pole; 16-channel relay output; 1 changeover contact; Double-deck PCB terminal blocks; in mounting carrier

	Item No.	Pack. Unit
	704-5004	1
without relay	704-5014	
for DC load	704-5204	



Accessories



Basic Relay; 1 changeover contact; Limiting continuous current: 16 A; 13 mm wide; 15 mm high

Item No.	Pack. Unit
788-154	20

Electrical Data

Inputs/outputs	16-channel relay output
Nominal operating voltage	DC 24 V
Operating voltage range	±10 %
Number of changeover/switchover contacts	1
Limiting continuous current	5 A
Making capacity	2 ms 16 A
Switching voltage (max.)	AC 250 V; DC 48 V
Switching power (resistive) (max.)	AC 1250 VA; DC 50 W
Mechanical life	30 x 10 ⁶ switching operations
Status indicator	Green LED (channel); Yellow LED (power supply)
Internal fuse	Supply: 1 A; Relay output: -
WAGO Basic Relay	788-154

Safety and protection

Rated voltage	50 V
Rated surge voltage	0.8 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kVrms
Dielectric strength, load/load circuit (AC, 1 min)	1 kVrms

Connection data

Compatible PLC Modules	Siemens S7-300; Siemens S7-400; Siemens S7-1500; GE Fanuc 9030; GE Fanuc RX3i; Schneider TSX; Schneider Twido; Schneider Modicon Quantum; Schneider Modicon TM3; Schneider Modicon M340; Rockwell Compact Logix; Rockwell Control Logix; WAGO I/O System 753; WAGO I/O System 750; Omron CJ1W
Connection type 1	System
Pole number 1	20
Pluggable connectors	DIN 41651 male connector
Mating direction	vertical
Connection type 2	Field
Pole number 2	64
Design 2	PCB terminal blocks (double-deck)
WAGO Connector 2	WAGO 736 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch
Connection type 3	Supply
Pole number 3	6
Design 3	PCB terminal blocks (double-deck)
WAGO Connector 3	WAGO 736 Series
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 3	5 ... 6 mm / 0.2 ... 0.24 inch
Note (conductor cross-section)	12 AWG: THHN, THWN

Physical data

Width	180 mm / 7.087 inch
Height from upper-edge of DIN-rail	50 mm / 1.969 inch
Depth	105 mm / 4.134 inch

Mechanical data

Mounting type	DIN-35 rail
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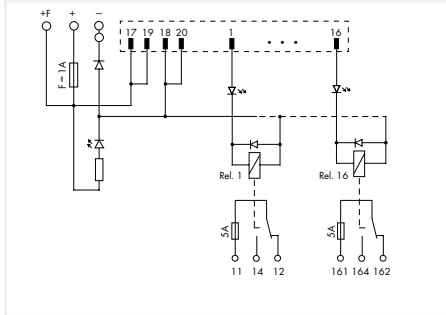
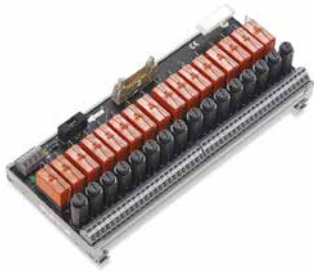
Material data

Contact material (relay)	AgNi 90/10
Weight	550 g

Environmental requirements

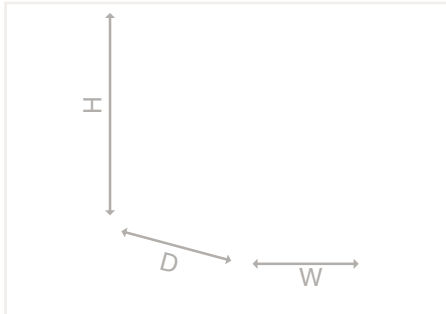
Surrounding air temperature (operation)	-25 ... 50 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Relative humidity	85% (non-condensing)

Interface Module for System Wiring 704 Series



Interface module for system wiring; Pluggable connector per DIN 41651; Male connector; 20-pole; 16-channel relay output; 1 changeover contact; PCB terminal blocks; with output fuse; in mounting carrier

	Item No.	Pack. Unit
	704-5034	1
without relay	704-5114	



Accessories



Basic Relay; 1 changeover contact; Limiting continuous current: 16 A; 13 mm wide; 15 mm high

	Item No.	Pack. Unit
	788-154	20

Electrical Data	
Inputs/outputs	16-channel relay output
Nominal operating voltage	DC 24 V
Operating voltage range	±10 %
Number of changeover/switchover contacts	1
Limiting continuous current	5 A
Making capacity	2 ms 16 A
Switching voltage (max.)	AC 250 V; DC 48 V
Switching power (resistive) (max.)	AC 1250 VA; DC 50 W
Mechanical life	30 x 10 ⁶ switching operations
Status indicator	Green LED (channel); Yellow LED (power supply)
Internal fuse	Supply: 1 A; Relay output: 5 A
WAGO Basic Relay	788-154
Specialty functions	with output fuse

Safety and protection	
Rated voltage	50 V
Rated surge voltage	0.8 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kVrms
Dielectric strength, load/load circuit (AC, 1 min)	1 kVrms

Connection data	
Compatible PLC Modules	Siemens S7-300; Siemens S7-400; Siemens S7-1500; GE Fanuc 9030; GE Fanuc RX3i; Schneider TSX; Schneider Modicon TM3; Schneider Modicon Quantum; Schneider Twido; Schneider Modicon M340; Rockwell Compact Logix; Rockwell Control Logix; WAGO I/O System 753; WAGO I/O System 750; Omron CJ1W

Connection type 1	System
Pole number 1	20
Pluggable connectors	DIN 41651 male connector
Mating direction	vertical
Connection type 2	Field
Pole number 2	48
Design 2	PCB terminal blocks
WAGO Connector 2	WAGO 236 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch
Connection type 3	Supply
Pole number 3	4
Design 3	PCB terminal blocks
WAGO Connector 3	WAGO 236 Series
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 3	5 ... 6 mm / 0.2 ... 0.24 inch
Note (conductor cross-section)	12 AWG: THHN, THWN

Physical data	
Width	247 mm / 9.724 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	105 mm / 4.134 inch

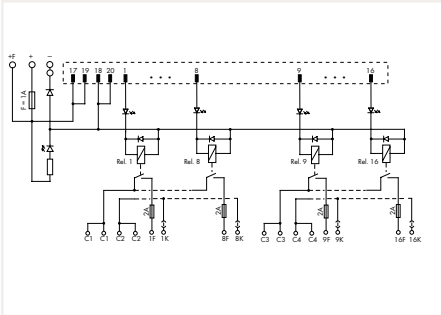
Mechanical data	
Mounting type	DIN-35 rail

Material data	
Contact material (relay)	AgNi 90/10
Weight	685 g

Environmental requirements	
Surrounding air temperature (operation)	-25 ... 50 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Relative humidity	85% (non-condensing)

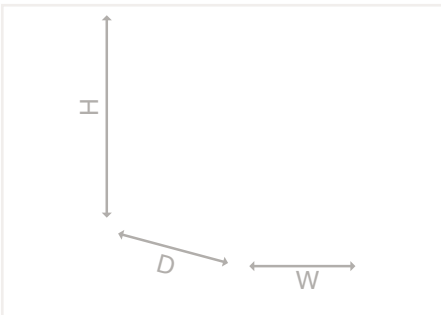
Interface Module for System Wiring

704 Series



Interface module for system wiring; Pluggable connector per DIN 41651; Male connector; 20-pole; 16-channel relay output; 1 make contact; with disconnect terminal block and fuse; in mounting carrier

	Item No.	Pack. Unit
	704-5054	1
ohne Relais	704-5094	1



Accessories



Basic Relay; 1 changeover contact; Limiting continuous current: 16 A; 13 mm wide; 15 mm high

Item No.	Pack. Unit
788-154	20

Electrical Data

Inputs/outputs	16-channel relay output
Nominal operating voltage	DC 24 V
Operating voltage range	±10 %
Number of make/switch-on contacts	1
Limiting continuous current	2 A
Switching voltage (max.)	AC 250 V; DC 48 V
Switching power (resistive) (max.)	AC 500 VA; DC 50 W
Mechanical life	30 x 10 ⁶ switching operations
Status indicator	Green LED (channel); Yellow LED (power supply)
Internal fuse	Supply: 1 A; Relay output: 2 A
WAGO Basic Relay	788-154
Specialty functions	with disconnect/test terminal blocks; with output fuse

Safety and protection

Rated voltage	50 V
Rated surge voltage	0.8 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kVrms
Dielectric strength, load/load circuit (AC, 1 min)	1 kVrms

Connection data

Compatible PLC Modules	Siemens S7-300; Siemens S7-400; Siemens S7-1500; GE Fanuc 9030; GE Fanuc RX3i; Schneider Twido; Schneider Modicon TM3; Schneider Modicon Quantum; Schneider TSX; Schneider Modicon M340; Rockwell Compact Logix; Rockwell Control Logix; WAGO I/O System 753; WAGO I/O System 750; Omron CJ1W
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Connection type 1	System
Pole number 1	20
Pluggable connectors	DIN 41651 male connector
Mating direction	vertical
Connection type 2	Field
Pole number 2	32
Design 2	PCB terminal blocks
WAGO Connector 2	WAGO 742 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	8 ... 9 mm / 0.31 ... 0.35 inch
Connection type 3	Field
Pole number 3	8
Design 3	PCB terminal blocks (double-deck)
WAGO Connector 3	WAGO 736 Series
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 3	5 ... 6 mm / 0.2 ... 0.24 inch
Connection type 4	Power supply
Pole number 4	4
Design 4	PCB terminal blocks
Connection technology 4	CAGE CLAMP®
WAGO Connector 4	WAGO 236 Series
Solid conductor 4	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 4	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 4	5 ... 6 mm / 0.2 ... 0.24 inch
Note (conductor cross-section)	12 AWG: THHN, THWN

Physical data

Width	240 mm / 9.449 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	105 mm / 4.134 inch

Mechanical data

Mounting type	DIN-35 rail
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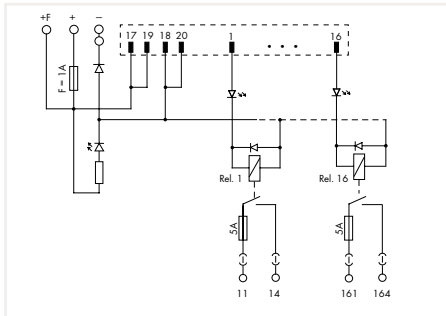
Material data

Contact material (relay)	AgNi 90/10
Weight	770 g

Environmental requirements

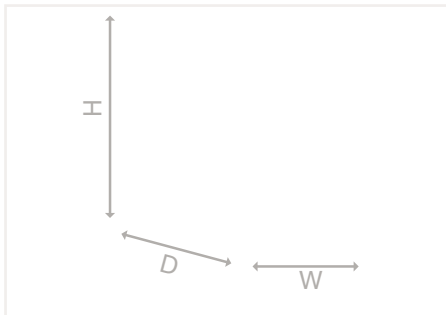
Surrounding air temperature (operation)	-25 ... 50 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Relative humidity	85% (non-condensing)

Interface Module for System Wiring 704 Series



Interface module for system wiring; Pluggable connector per DIN 41651; Male connector; 20-pole; 16-channel relay output; 1 make contact; with disconnect terminal block and fuse; in mounting carrier

	Item No.	Pack. Unit
	704-5074	1



Accessories



Basic Relay; 1 changeover contact; Limiting continuous current: 16 A; 13 mm wide; 15 mm high

	Item No.	Pack. Unit
	788-154	20

Electrical Data	
Inputs/outputs	16-channel relay output
Nominal operating voltage	DC 24 V
Operating voltage range	±10 %
Number of make/switch-on contacts	1
Limiting continuous current	5 A
Switching voltage (max.)	AC 250 V; DC 48 V
Switching power (resistive) (max.)	AC 1250 VA; DC 50 W
Mechanical life	30 x 10 ⁶ switching operations
Status indicator	Green LED (channel); Yellow LED (power supply)
Internal fuse	Supply: 1 A; Relay output: 5 A
WAGO Basic Relay	788-154
Specialty functions	with disconnect/test terminal blocks; with output fuse

Safety and protection	
Rated voltage	50 V
Rated surge voltage	0.8 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kVrms
Dielectric strength, load/load circuit (AC, 1 min)	1 kVrms

Connection data	
Compatible PLC Modules	Siemens S7-300; Siemens S7-400; Siemens S7-1500; GE Fanuc 9030; GE Fanuc RX3i; Schneider Twido; Schneider Modicon TM3; Schneider Modicon Quantum; Schneider TSX; Schneider Modicon M340; Rockwell Compact Logix; Rockwell Control Logix; WAGO I/O System 753; WAGO I/O System 750; Omron CJ1W

Connection type 1	System
Pole number 1	20
Pluggable connectors	DIN 41651 male connector
Mating direction	vertical
Connection type 2	Field
Pole number 2	32
Design 2	PCB terminal blocks
WAGO Connector 2	WAGO 742 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	8 ... 9 mm / 0.31 ... 0.35 inch
Connection type 3	Supply
Pole number 3	4
Design 3	PCB terminal blocks
WAGO Connector 3	WAGO 236 Series
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 3	5 ... 6 mm / 0.2 ... 0.24 inch
Note (conductor cross-section)	12 AWG: THHN, THWN

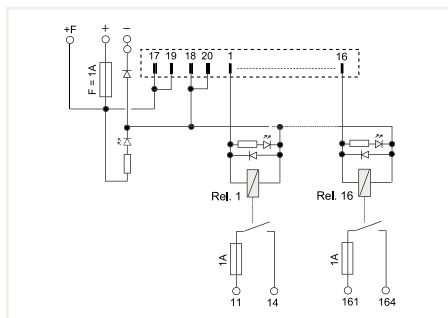
Physical data	
Width	240 mm / 9.449 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	105 mm / 4.134 inch

Mechanical data	
Mounting type	DIN-35 rail

Material data	
Contact material (relay)	AgNi 90/10
Weight	785 g

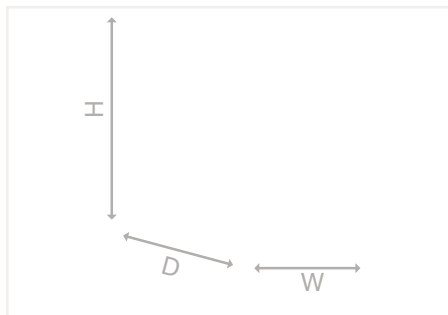
Environmental requirements	
Surrounding air temperature (operation)	-25 ... 50 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Relative humidity	85% (non-condensing)

Interface Module for System Wiring 704 Series



Interface module for system wiring; Pluggable connector per DIN 41651; Male connector; 20-pole; 16-channel relay output; 1 make contact; Double-deck PCB terminal blocks; with output fuse; in mounting carrier

Item No.	Pack. Unit
704-5234	1



Accessories



Basic Relay; 1 changeover contact; 24 VDC;
Limiting continuous current: 6 A; 5 mm wide;
15 mm high

Item No.	Pack. Unit
857-152	20

Electrical Data

Inputs/outputs	16-channel relay output
Nominal operating voltage	DC 24 V
Operating voltage range	±10 %
Number of make/switch-on contacts	1
Limiting continuous current	1 A
Switching voltage (max.)	AC 250 V; DC 48 V
Switching power (resistive) (max.)	AC 1250 VA; DC 50 W
Mechanical life	10 x 10 ⁶ switching operations
Status indicator	Green LED (channel); Yellow LED (power supply)
WAGO Basic Relay	857-152
Specialty functions	with output fuse

Safety and protection

Rated voltage	50 V
Rated surge voltage	0.8 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kVrms
Dielectric strength, load/load circuit (AC, 1 min)	1 kVrms

Connection data

Compatible PLC Modules	Siemens S7-300; Siemens S7-400; Siemens S7-1500; GE Fanuc 9030; GE Fanuc RX3i; Schneider Twido; Schneider Modicon TM3; Schneider Modicon Quantum; Schneider TSX; Schneider Modicon M340; Rockwell Compact Logix; Rockwell Control Logix; WAGO I/O System 753; WAGO I/O System 750; Omron CJ1W
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Connection type 1	System
Pole number 1	20
Pluggable connectors	DIN 41651 male connector
Mating direction	vertical
Connection type 2	Field
Pole number 2	32
Design 2	PCB terminal blocks (double-deck)
WAGO Connector 2	WAGO 736 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch
Connection type 3	Supply
Pole number 3	4
Design 3	PCB terminal blocks
WAGO Connector 3	WAGO 236 Series
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 3	5 ... 6 mm / 0.2 ... 0.24 inch
Note (conductor cross-section)	12 AWG: THHN, THWN

Physical data

Width	115 mm / 5.133 inch
Height from upper-edge of DIN-rail	50 mm / 1.969 inch
Depth	125 mm / 4.921 inch

Mechanical data

Mounting type	DIN-35 rail
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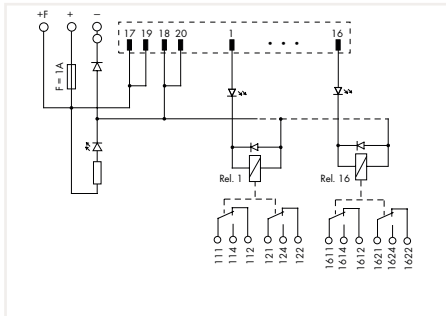
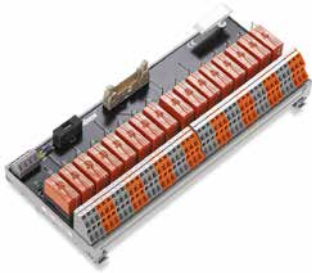
Material data

Contact material (relay)	AgSnO ₂
Weight	393.4 g

Environmental requirements

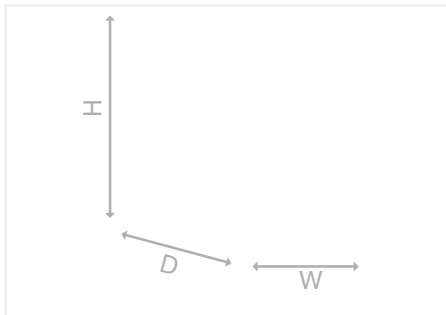
Surrounding air temperature (operation)	-25 ... 40 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Relative humidity	85% (non-condensing)

Interface Module for System Wiring 704 Series



Interface module for system wiring; Pluggable connector per DIN 41651; Male connector; 20-pole; 16-channel relay output; 2 changeover contacts; Double-deck PCB terminal blocks; in mounting carrier

Item No.	Pack. Unit
704-5064	1



Accessories



Basic Relay; 2 changeover contacts; Limiting continuous current: 8 A; 13 mm wide; 15 mm high

Item No.	Pack. Unit
788-156	20

Electrical Data	
Inputs/outputs	16-channel relay output
Nominal operating voltage	DC 24 V
Operating voltage range	±10 %
Number of changeover/switchover contacts	2
Limiting continuous current	5 A
Making capacity	2 ms 8 A
Switching voltage (max.)	AC 250 V; DC 48 V
Switching power (resistive) (max.)	AC 1000 VA; DC 50 W
Mechanical life	30 x 10 ⁶ switching operations
Status indicator	Green LED (channel); Yellow LED (power supply)
Internal fuse	Supply: 1 A; Relay output: -
WAGO Basic Relay	788-156

Safety and protection	
Rated voltage	50 V
Rated surge voltage	0.8 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kVrms
Dielectric strength, load/load circuit (AC, 1 min)	1 kVrms

Connection data	
Compatible PLC Modules	Siemens S7-300; Siemens S7-400; Siemens S7-1500; GE Fanuc 9030; GE Fanuc RX3; Schneider Twido; Schneider Modicon TM3; Schneider Modicon Quantum; Schneider TSX; Schneider Modicon M340; Rockwell Compact Logix; Rockwell Control Logix; WAGO I/O System 753; WAGO I/O System 750; Omron CJ1W

Pole number 1	20
Pluggable connectors	DIN 41651 male connector
Mating direction	vertical
Connection type 2	Field
Pole number 2	96
Design 2	PCB terminal blocks (double-deck)
WAGO Connector 2	WAGO 736 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch
Connection type 3	Supply
Pole number 3	4
Design 3	PCB terminal blocks
WAGO Connector 3	WAGO 236 Series
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 3	5 ... 6 mm / 0.2 ... 0.24 inch
Note (conductor cross-section)	12 AWG: THHN, THWN

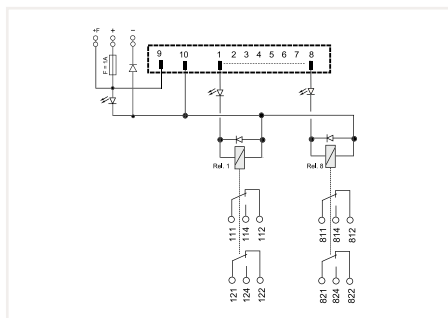
Physical data	
Width	247 mm / 9.724 inch
Height from upper-edge of DIN-rail	50 mm / 1.969 inch
Depth	105 mm / 4.134 inch

Mechanical data	
Mounting type	DIN-35 rail

Material data	
Contact material (relay)	AgNi 90/10
Weight	645 g

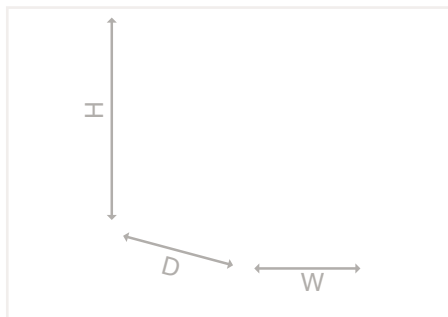
Environmental requirements	
Surrounding air temperature (operation)	-25 ... 40 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Relative humidity	85% (non-condensing)

Interface Module for System Wiring 704 Series



Interface module for system wiring; Pluggable connector per DIN 41651; Male connector; 10-pole; 8-channel relay output; 2 changeover contacts; Double-deck PCB terminal blocks; in mounting carrier

Item No.	Pack. Unit
704-5063	1



Electrical Data

Inputs/outputs	8-channel relay output
Nominal operating voltage	DC 24 V
Operating voltage range	±10 %
Number of changeover/switchover contacts	2
Limiting continuous current	5 A
Making capacity	2 ms 8 A
Switching voltage (max.)	AC 250 V; DC 48 V
Switching power (resistive) (max.)	AC 1000 VA; DC 50 W
Mechanical life	30 x 10 ⁶ switching operations
Status indicator	Green LED (channel); Yellow LED (power supply)
Internal fuse	Supply: 1 A; Relay output: -
WAGO Basic Relay	788-156

Safety and protection

Rated voltage	50 V
Rated surge voltage	0.8 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kVrms
Dielectric strength, load/load circuit (AC, 1 min)	1 kVrms

Connection data

Compatible PLC Modules	Siemens S7-300; Siemens S7-1500; GE Fanuc 9030; Schneider TSX; Schneider Modicon M340; Schneider Modicon Quantum; Schneider Modicon TM3; Rockwell Compact Logix; WAGO I/O System 753; WAGO I/O System 750; Omron CJ1W
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Connection type 1	System
Pole number 1	10
Pluggable connectors	DIN 41651 male connector
Mating direction	vertical
Connection type 2	Field
Pole number 2	48
Design 2	PCB terminal blocks (double-deck)
WAGO Connector 2	WAGO 736 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch
Connection type 3	Supply
Pole number 3	4
Design 3	PCB terminal blocks
WAGO Connector 3	WAGO 236 Series
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 3	5 ... 6 mm / 0.2 ... 0.24 inch

Physical data

Width	124 mm / 4.882 inch
Height from upper-edge of DIN-rail	50 mm / 1.969 inch
Depth	105 mm / 4.134 inch

Mechanical data

Mounting type	DIN-35 rail
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Material data

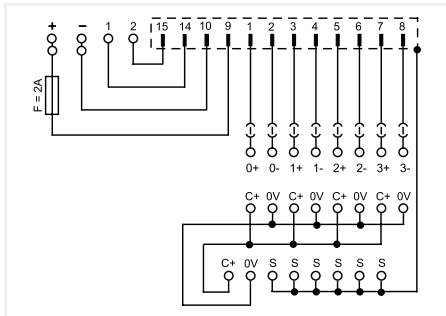
Contact material (relay)	AgNi 90/10
Weight	177.1 g

Environmental requirements

Surrounding air temperature (operation)	-20 ... 40 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Relative humidity	85% (non-condensing)

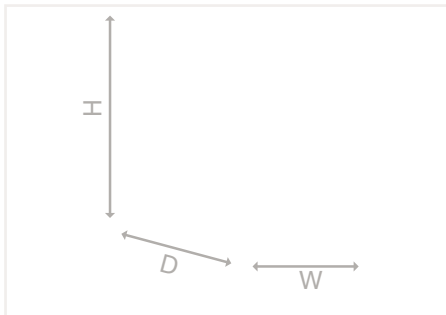
Interface Module for System Wiring

704 Series



Interface module for system wiring; with solder pin; Male connector; 15-pole; 4-channel analog input or output; 4-wire; Double-deck PCB terminal blocks; in mounting carrier

	Item No.	Pack. Unit
	704-8012	1



Electrical Data

Inputs/outputs	4-channel analog input or output
Circuit type	2-wire connection; 4-wire connection
Operating voltage	≤ DC 48 V
Limiting continuous current	1 A
Internal fuse	Supply: 2 A
Specialty functions	with disconnect/test terminal blocks

Safety and protection

Rated voltage	50 V
Rated surge voltage	0.8 kV
Pollution degree	2

Connection data

Compatible PLC Modules	Siemens S7-300; Siemens S7-1500; GE Fanuc 9030; Schneider Modicon TM3; Schneider Modicon M340; Schneider TSX; Schneider Modicon Quantum; Rockwell Compact Logix; Rockwell Control Logix; WAGO I/O System 753
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Connection type 1

System	15
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Pole number 1

Pluggable connectors	D-sub male connector
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Mating direction

Field	vertical
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Connection type 2

Field	8
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Pole number 2

Design 2	PCB terminal blocks
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WAGO Connector 2

WAGO 742 Series	WAGO 742 Series
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Solid conductor 2

Field	0.08 ... 2.5 mm ² / 28 ... 12 AWG
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Fine-stranded conductor 2

Field	0.08 ... 2.5 mm ² / 28 ... 12 AWG
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Strip length 2

Field	8 ... 9 mm / 0.31 ... 0.35 inch
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Connection type 3

Field	16
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Pole number 3

Design 3	PCB terminal blocks (double-row)
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WAGO Connector 3

WAGO 236 Series	WAGO 236 Series
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Solid conductor 3

Field	0.08 ... 2.5 mm ² / 28 ... 12 AWG
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Fine-stranded conductor 3

Field	0.08 ... 2.5 mm ² / 28 ... 12 AWG
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Strip length 3

Field	5 ... 6 mm / 0.2 ... 0.24 inch
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Connection type 4

Power supply	6
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Pole number 4

Design 4	PCB terminal blocks (double-deck)
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WAGO Connector 4

WAGO 736 Series	WAGO 736 Series
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Solid conductor 4

Field	0.08 ... 2.5 mm ² / 28 ... 12 AWG
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Fine-stranded conductor 4

Field	0.08 ... 2.5 mm ² / 28 ... 12 AWG
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Strip length 4

Field	5 ... 6 mm / 0.2 ... 0.24 inch
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Note (conductor cross-section)

Field	12 AWG: THHN, THWN
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Physical data

Width	66 mm / 2.598 inch
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Height from upper-edge of DIN-rail	50 mm / 1.969 inch
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Depth	105 mm / 4.134 inch
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Mechanical data

Mounting type	DIN-35 rail
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Material data

Weight	131 g
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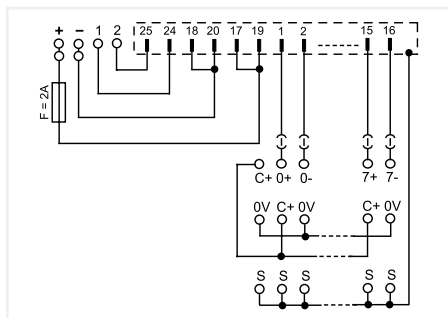
Environmental requirements

Surrounding air temperature (operation)	-20 ... 50 °C
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Surrounding air temperature (storage)	-40 ... 70 °C
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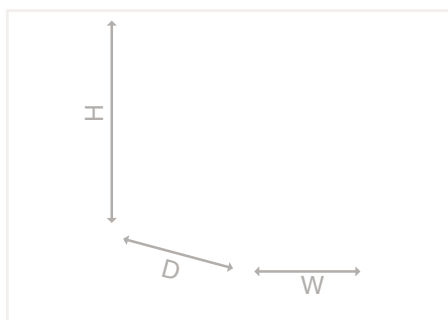
Relative humidity	85% (non-condensing)
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Interface Module for System Wiring 704 Series



Interface module for system wiring; with solder pin; Male connector; 25-pole; 8-channel analog input or output; 4-wire; Double-deck PCB terminal blocks; in mounting carrier

	Item No.	Pack. Unit
	704-8013	1



Electrical Data

Inputs/outputs	8-channel analog input or output
Circuit type	2-wire connection; 4-wire connection
Operating voltage	≤ DC 48 V
Limiting continuous current	1 A
Internal fuse	Supply: 2 A
Specialty functions	with disconnect/test terminal blocks

Safety and protection

Rated voltage	50 V
Rated surge voltage	0.8 kV
Pollution degree	2

Connection data

Compatible PLC Modules	Siemens S7-300; Siemens S7-400; Siemens S7-1500; GE Fanuc 9030; GE Fanuc RX3i; Schneider TSX; Schneider Modicon TM3; Schneider Modicon M340; Schneider Modicon Quantum; Rockwell Compact Logix; Rockwell Control Logix; WAGO I/O System 753
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Connection type 1	System
Pole number 1	25
Pluggable connectors	D-sub male connector
Mating direction	vertical
Connection type 2	Field
Pole number 2	16
Design 2	PCB terminal blocks
WAGO Connector 2	WAGO 742 Series
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	8 ... 9 mm / 0.31 ... 0.35 inch
Connection type 3	Field
Pole number 3	32
Design 3	PCB terminal blocks (double-row)
WAGO Connector 3	WAGO 236 Series
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 3	5 ... 6 mm / 0.2 ... 0.24 inch
Connection type 4	Power supply
Pole number 4	6
Design 4	PCB terminal blocks (double-deck)
Connection technology 4	CAGE CLAMP®
WAGO Connector 4	WAGO 736 Series
Solid conductor 4	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 4	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 4	5 ... 6 mm / 0.2 ... 0.24 inch
Note (conductor cross-section)	12 AWG: THHN, THWN

Physical data

Width	92 mm / 3.62 inch
Height from upper-edge of DIN-rail	50 mm / 1.969 inch
Depth	105 mm / 4.134 inch

Mechanical data

Mounting type	DIN-35 rail
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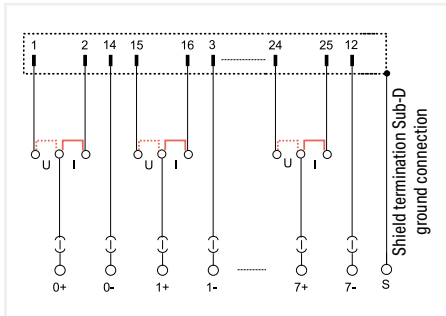
Material data

Weight	190 g
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Environmental requirements

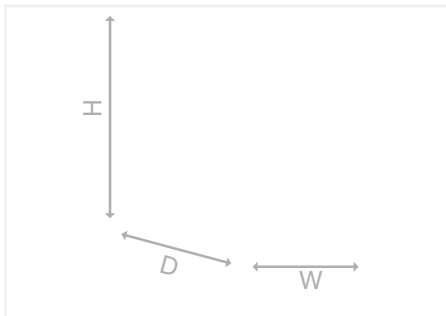
Surrounding air temperature (operation)	-20 ... 50 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Relative humidity	85% (non-condensing)

Interface Module for System Wiring 704 Series



Interface module for system wiring; with solder pin;
Male connector; 25-pole; 8-channel analog input or
output; in mounting carrier

	Item No.	Pack. Unit
	704-8033	1



Electrical Data

Inputs/outputs	8-channel analog input or output
Circuit type	2-wire connection
Operating voltage	≤ DC 48 V
Limiting continuous current	1 A
Internal fuse	No
Specialty functions	with disconnect/test terminal blocks

Safety and protection

Rated voltage	50 V
Rated surge voltage	0.8 kV
Pollution degree	2

Connection data

Compatible PLC Modules	Siemens S7-300; Siemens S7-1500; Schneider TSX
Connection type 1	System
Pole number 1	25
Pluggable connectors	D-sub male connector
Mating direction	vertical
Connection type 2	Field
Pole number 2	17
Design 2	PCB terminal blocks
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	8 ... 9 mm / 0.31 ... 0.35 inch
WAGO Connector 3	WAGO 236 Series
Note (conductor cross-section)	12 AWG: THHN, THWN

Physical data

Width	90 mm / 3.543 inch
Height from upper-edge of DIN-rail	46 mm / 1.811 inch
Depth	85 mm / 3.346 inch

Mechanical data

Mounting type	DIN-35 rail
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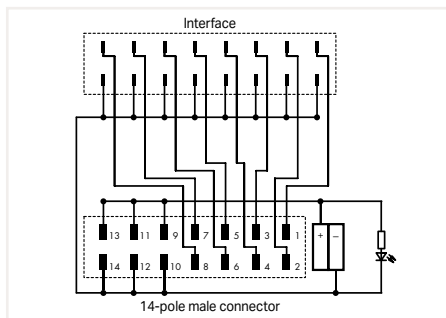
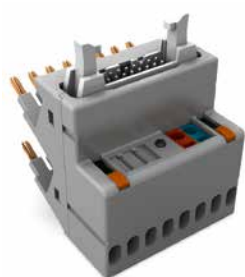
Material data

Weight	140.9 g
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Environmental requirements

Surrounding air temperature (operation)	-20 ... 50 °C
Surrounding air temperature (storage)	-40 ... 70 °C
Relative humidity	85% (non-condensing)

Interface Adapter 857 Series



Interface Adapter, 14-pole; High-side switching input

Item No.	Pack. Unit
857-981	1

Electrical Data	
Inputs/Outputs	8-Channel Digital Input
Circuit type	High-side switching input
Nominal operating voltage	24 VDC
Operating voltage range	±30 %
Total current	3 A
Limiting continuous current	1 A
Contact resistance	≤ 20 mΩ
Status indicator	Green LED

Safety and Protection	
Test voltage	500 VAC; 50 Hz; 1 min

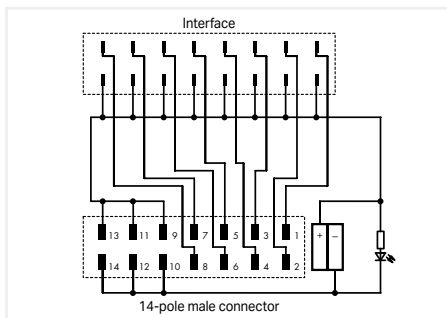
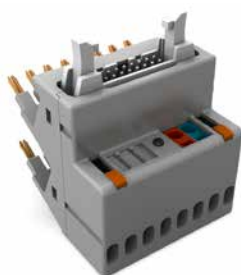
Connection Data	
Connection type 1	System
Pole number 1	14
Connector 1	DIN 41651 male connector
Performance level 1	3
Connection type 2	Field
Pole number 2	16
Design 2	Plug for jumper slot
Connection type 3	Power supply
Pole number 3	2
Connection technology 3	CAGE CLAMP®
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length 3	5 ... 6 mm / 0.2 ... 0.24 inch

Mechanical Data	
Mounting type	Pluggable module

Material Data	
Weight	45 g

Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C

Interface Adapter 857 Series



Interface Adapter; 14-pole; High-side switching output

Item No.	Pack. Unit
857-982	1

Electrical Data

Inputs/Outputs	8-channel digital output
Circuit type	High-side switching output
Nominal operating voltage	24 VDC
Operating voltage range	±30 %
Total current	3 A
Limiting continuous current	1 A
Contact resistance	≤ 20 mΩ
Status indicator	Green LED

Safety and Protection

Test voltage	500 VAC; 50 Hz; 1 min
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Connection Data

Connection type 1	System
Pole number 1	14
Connector 1	DIN 41651 male connector
Performance level 1	3
Connection type 2	Field
Pole number 2	16
Design 2	Plug for jumper slot
Connection type 3	Power supply
Pole number 3	2
Connection technology 3	CAGE CLAMP®
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length 3	5 ... 6 mm / 0.2 ... 0.24 inch

Mechanical Data

Mounting type	Pluggable module
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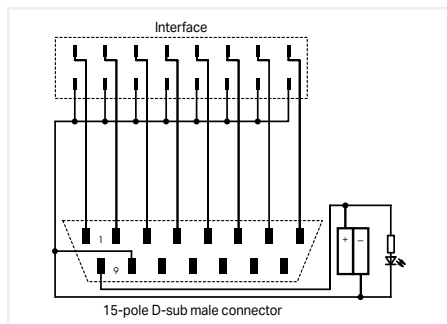
Material Data

Weight	44.5 g
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Environmental Requirements

Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C

Interface Adapter 857 Series



Interface Adapter, 15-pole; High-side switching input

Item No.	Pack. Unit
857-986	1

Electrical Data

Inputs/Outputs	8-Channel Digital Input
Circuit type	High-side switching input
Nominal operating voltage	24 VDC
Operating voltage range	±30 %
Total current	3 A
Limiting continuous current	1 A
Contact resistance	≤ 10 mΩ
Status indicator	Green LED

Safety and Protection

Test voltage	500 VAC; 50 Hz; 1 min
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Connection Data

Connection type 1	System
Pole number 1	15
Connector 1	D-sub male connector
Performance level 1	2
Connection type 2	Field
Pole number 2	16
Design 2	Plug for jumper slot
Connection type 3	Power supply
Pole number 3	2
Connection technology 3	CAGE CLAMP®
Solid conductor 3	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor 3	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length 3	5 ... 6 mm / 0.2 ... 0.24 inch

Mechanical Data

Mounting type	Pluggable module
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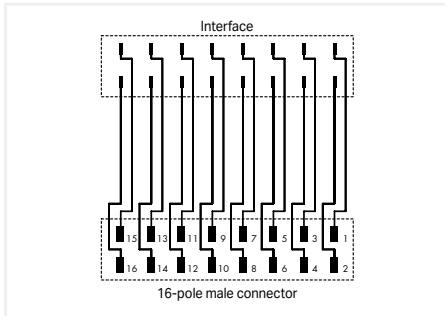
Material Data

Weight	48.2 g
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Environmental Requirements

Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C

Interface Adapter 857 Series

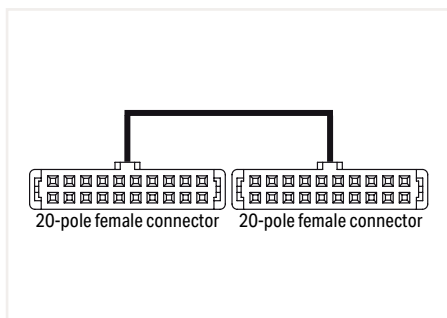


Interface Adapter; with 16-pole ribbon cable connector (DIN 41651); analog

	Item No.	Pack. Unit
	857-980	1

Electrical Data	
Inputs/Outputs	8-channel analog input or output
Circuit type	Analog
Limiting continuous current	1 A
Contact resistance	≤ 20 mΩ
Safety and Protection	
Pollution degree	2
Overvoltage category	III
Test voltage	500 VAC; 50 Hz; 1 min
Connection Data	
Connection type 1	System
Pole number 1	16
Connector 1	DIN 41651 male connector
Performance level 1	3
Connection type 2	Field
Pole number 2	16
Design 2	Plug for jumper slot
Mechanical Data	
Mounting type	Pluggable module
Material Data	
Weight	41.4 g
Environmental Requirements	
Surrounding air temperature (operation)	-20 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C

System Cable; for 289/704 Series; Paired with WAGO-I/O-SYSTEM 750 706 Series



System Cable; for Schneider TSX; 16 digital inputs or outputs; Conductor cross section: 0.14 mm²/24 AWG

Length	Item No.	Pack. Unit
1 m	706-3057/300-100	1
2 m	706-3057/300-200	1
3 m	706-3057/300-300	1

WAGO's System Cables provide fast and easy connection of WAGO I/O Modules equipped with a pluggable connector (750-1400, -1402, -1500, -1501, -1502) to appropriate interface or relay modules (16-channel) featuring a 20-pole pluggable connector.

The cables are available in 1-, 2- and 3-meter lengths; each has one 20-pole pluggable connector at both ends.

Note:

When using more than 10 wires, the maximum current per wire must be reduced to 0.7 A.

Electrical Data

Operating voltage	≤ 35 VDC
Current per wire (max.)	1 A

Safety and Protection

Degree of protection	IP20
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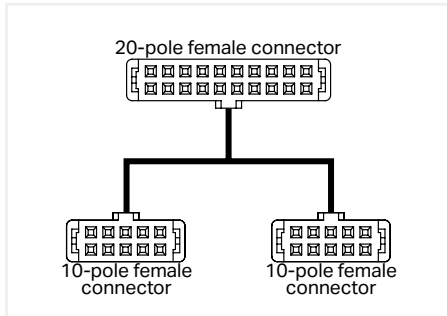
Connection Data

Connectors	2 x 20-pole DIN 41651 connector
Color code	DIN VDE 47100
Wire cross section	0.14 mm ² /24 AWG LiYY

Environmental Requirements

Surrounding air temperature (operation)	-25 ... +70 °C
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System Cable; for 289/704 Series; Paired with WAGO-I/O-SYSTEM 750 706 Series



System Cable; for 750 Series WAGO-I/O-SYSTEM;
8 digital inputs and 8 digital outputs;
Conductor cross section: 0.14 mm²/24 AWG

Length	Item No.	Pack. Unit
1 m	706-7753/302-100	1
2 m	706-7753/302-200	1

WAGO's System Cables provide fast and easy connection of WAGO I/O Modules equipped with a pluggable connector (750-1400, -1402, -1500, -1501, -1502) to appropriate interface or relay modules featuring a 10-pole pluggable connector. For example, this cable connects two relay modules (8-channel) to a WAGO I/O Module.

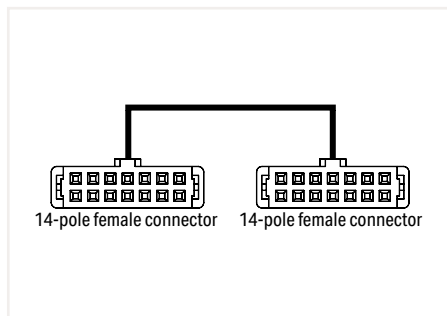
The cables are available in 1- and 2-meter lengths; each has one 20-pole and two 10-pole pluggable connectors at both ends.

Note:

When using more than 10 wires, the maximum current per wire must be reduced to 0.7 A.

Electrical Data	
Operating voltage	≤ 35 VDC
Current per wire (max.)	1 A
Safety and Protection	
Degree of protection	IP20
Connection Data	
Connectors	1 x 20-pole DIN 41651 connector; 2 x 10-pole DIN 41651 connector
Color code	DIN VDE 47100
Wire cross section	0.14 mm ² /24 AWG LiYY
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C

Connection Cable; Paired with an Interface Adapter 706 Series



Connection Cable; 14-pole;
DIN 41651 connector; 14-pole; DIN 41651 connector;
Conductor cross section: 0.14 mm²/24 AWG

Length	Item No.	Pack. Unit
1 m	706-753/300-100	1
2 m	706-753/300-200	1
3 m	706-753/300-300	1

WAGO's 14-pole connection cables transmit the signal one-to-one from the 14-pole connector and are available in 1-, 2- and 3-meter lengths.

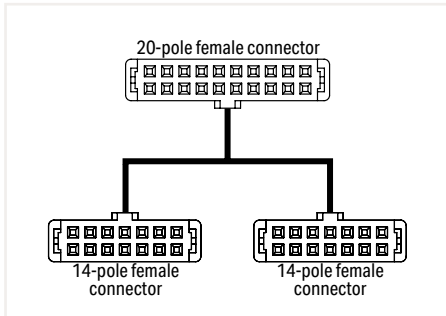
They are suitable for system wiring when paired with WAGO's Interface Adapters (Item No. 857-981 and 857-982).

Note:

When using more than 10 wires, the maximum current per wire must be reduced to 0.7 A.

Electrical Data	
Operating voltage	≤ 35 VDC
Current per wire (max.)	1 A
Safety and Protection	
Degree of protection	IP20
Connection Data	
Connectors	2 x 14-pole DIN 41651 connector
Color code	DIN VDE 47100
Wire cross section	0.14 mm ² /24 AWG LiYY
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C

System Cable; Paired with an Interface Adapter 706 Series



System Cable; for 750 Series WAGO I/O-SYSTEM;
2 x 8 analog inputs or outputs; Conductor cross
section: 0.14 mm²/24 AWG

Length	Item No.	Pack. Unit
1 m	706-7753/304-100	1
2 m	706-7753/304-200	1
3 m	706-7753/304-300	1

WAGO's System Cables provide fast and easy connection of WAGO I/O Modules equipped with pluggable connectors. The following WAGO I/O Modules and WAGO Adapters are compatible:

750-1500 (16 DO) --> 857-981 (DO)

750-1502 (8 DO / 8 DI) --> 857-981 (DO) and 857-982 (DI)

The cables are available in 1-, 2- and 3-meter lengths; each has one 20-pole or two 14-pole pluggable connectors at both ends.

They are suitable for system wiring when paired with WAGO's Interface Adapters (Item No. 857-981 and 857-982).

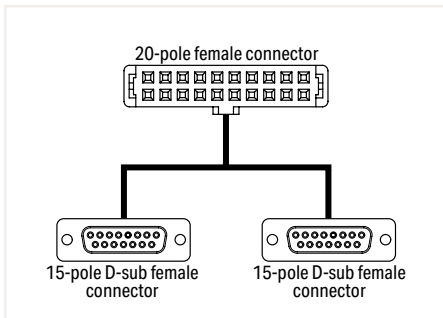
Note:

When using more than 10 wires, the maximum current per wire must be reduced to 0.7 A.

Electrical Data	
Operating voltage	≤ 35 VDC
Current per wire (max.)	1 A
Safety and Protection	
Degree of protection	IP20
Connection Data	
Connectors	1 x 20-pole DIN 41651 connector; 2 x 14-pole DIN 41651 connector
Color code	DIN VDE 47100
Wire cross section	0.14 mm ² /24 AWG LiYY
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C

System Cable; Paired with an Interface Adapter

706 Series



System Cable; for 750 Series WAGO-I/O-SYSTEM;
2 x 8 digital inputs or outputs; D-sub; Conductor cross
section: 0.14 mm²/24 AWG; for 857 Series Relay
Modules

Length	Item No.	Pack. Unit
1 m	706-7753/306-100	1
2 m	706-7753/306-200	1
3 m	706-7753/306-300	1

WAGO's System Cables provide fast and easy connection of WAGO I/O Modules equipped with pluggable connectors. The following WAGO I/O Modules and D-sub Adapters are compatible:

750-1500 (16 DO) --> 857-986 (DO)

The cables are available in 1-, 2- and 3-meter lengths; each has one 20-pole or two 15-pole pluggable connectors at both ends.

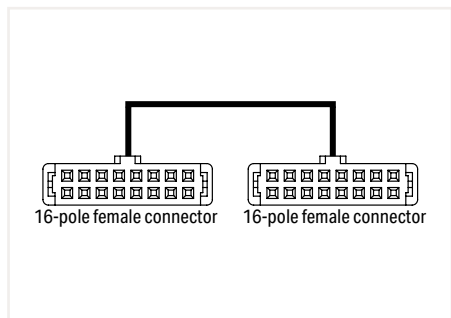
They are suitable for system wiring when paired with WAGO's Interface Adapter (Item No. 857-986).

Note:

When using more than 10 wires, the maximum current per wire must be reduced to 0.7 A.

Electrical Data	
Operating voltage	≤ 35 VDC
Current per wire (max.)	1 A
Safety and Protection	
Degree of protection	IP20
Connection Data	
Connectors	1 x 20-pole DIN 41651 connector; 2 x 15-pole DIN 41652 D-sub socket
Color code	DIN VDE 47100
Wire cross section	0.14 mm ² /24 AWG LiYY
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C

Connection Cable; Paired with an Interface Adapter 706 Series



Connection Cable; 16-pole;
DIN 41651 connector; 16-pole; DIN 41651 connector;
Conductor cross section: 0.14 mm²/24 AWG

Length	Item No.	Pack. Unit
1 m	706-753/301-100	1
2 m	706-753/301-200	1
3 m	706-753/301-300	1

WAGO's 16-pole connection cables transmit the signal one-to-one from the 16-pole connector and are available in 1-, 2- and 3-meter lengths. Signal transmission from the 857-980 Interface Adapter is also possible.

They are suitable for system wiring when paired with WAGO's Interface Adapter (Item No. 857-980).

Note:

When using more than 10 wires, the maximum current per wire must be reduced to 0.7 A.

Electrical Data

Operating voltage	≤ 35 VDC
Current per wire (max.)	1 A

Safety and Protection

Degree of protection	IP20
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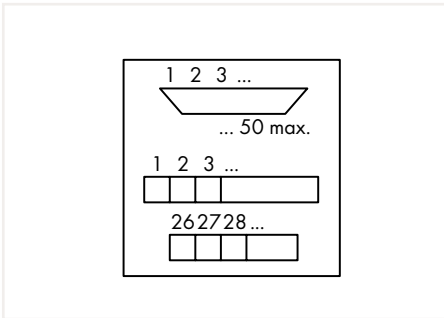
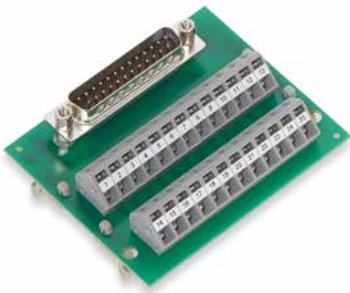
Connection Data

Connectors	2 x 16-pole DIN 41651 connector
Color code	DIN VDE 47100
Wire cross section	0.14 mm ² /24 AWG LiYY

Environmental Requirements

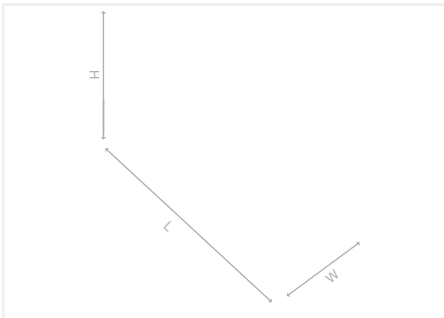
Surrounding air temperature (operation)	-25 ... +70 °C
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Interface Module for D-Sub Male Connector and Solder Mating Connector 289 Series



Interface Module; D-sub male connector; Solder mating connector; Vertical mating; Double-row PCB terminal blocks; with mounting feet

Pole No.	Width	Item No.	Pack. Unit
9	38 mm	289-445	1
15	53.5 mm	289-446	1
25	79 mm	289-447	1
37	120 mm	289-448	1
50	157 mm	289-449	1



Notice:
Live parts are likely to be touched! Protection against direct contact must be provided by the equipment manufacturer, e.g., using a WAGO 709 Series Cover (see "Accessories") or a similar cover.
The installation regulations must be observed for each individual application.

Electrical Data

Operating voltage	≤ 30 VAC; ≤ 50 VDC
Nominal current	1 A
Contact resistance (max.)	30 mΩ
Performance level	2 / 200 mating cycles

Safety and Protection

Pollution degree	2
Rated voltage	50 V
Rated surge voltage	0.8 kV
Degree of protection	IP00

Connection Data

Connection type 1	System
Connector 1	D-sub male connector
Strain relief (stud bolt) 1	UNC 4-40
Connection type 2	Field
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Height from upper-edge of DIN-rail	19 mm / 0.748 inch
Depth	63.5 mm / 2.5 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Contact material (connector)	Au over Ni
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Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

Accessories

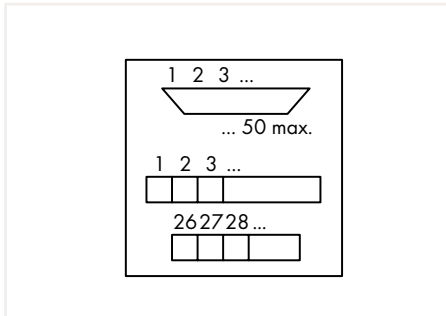


Cover carrier; Type 1; incl. mounting/securing screws and knurled nuts			
Item No.	Pack. Unit		
709-167	10		



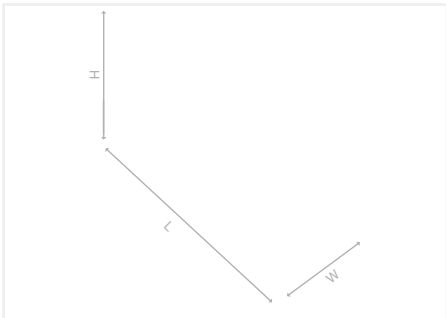
Cover; Type 1; for cover carrier (type 1); 1 m long			
Item No.	Pack. Unit		
709-153	10		

Interface Module for D-Sub Male Connector and Solder Mating Connector 289 Series



Interface Module; D-sub male connector; Solder mating connector; Vertical mating; Double-row PCB terminal blocks; with mounting carrier

Pole No.	Width	Item No.	Pack. Unit
9	38 mm	289-545	1
15	46 mm	289-546	1
25	72 mm	289-547	1
37	102 mm	289-548	1
50	94 mm	289-549	1



Electrical Data

Operating voltage	≤ 100 VAC; ≤ 125 VDC
Nominal current	2 A
Contact resistance (max.)	30 mΩ
Performance level	2 / 200 mating cycles

Safety and Protection

Pollution degree	2
Rated voltage	100 V
Rated surge voltage	0.8 kV
Degree of protection	IP20

Connection Data

Connection type 1	System
Connector 1	D-sub male connector
Strain relief (stud bolt) 1	UNC 4-40
Connection type 2	Field
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Height from upper-edge of DIN-rail	34 mm / 1.339 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Contact material (connector)	Au over Ni
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Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

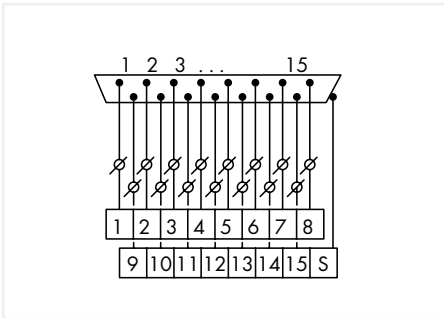
Accessories



Marking strip; for mounting carrier; 7.5 mm wide;
50 m reel

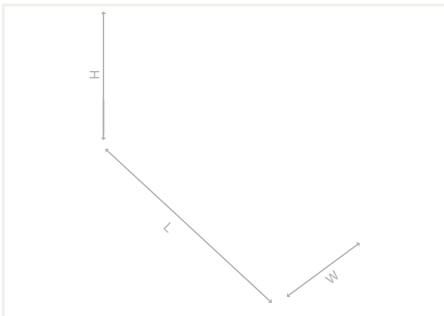
Item No.	Pack. Unit
709-178	1

Interface Module for D-Sub Male Connector and Solder Mating Connector 289 Series



Interface Module; D-sub male connector; Double-deck PCB terminal blocks; with mounting carrier

Pole No.	Width	Item No.	Pack. Unit
9	33.5 mm	289-720	1
15	43.5 mm	289-721	1



Note:
One solder terminal per pole is available for testing and patching (except for shield contact).

Notice:
Live parts are likely to be touched! Protection against direct contact must be provided by the equipment manufacturer, e.g., using a WAGO 709 Series Cover (see "Accessories") or a similar cover.
The installation regulations must be observed for each individual application.

Electrical Data	
Operating voltage	≤ 30 VAC; ≤ 50 VDC
Nominal current	2 A
Contact resistance (max.)	30 mΩ
Performance level	2 / 200 mating cycles

Safety and Protection	
Pollution degree	2
Rated voltage	50 V
Rated surge voltage	0.8 kV
Degree of protection	IP00

Connection Data	
Connection type 1	System
Connector 1	D-sub male connector
Strain relief (stud bolt) 1	UNC 4-40
Mating direction 1	Vertical
Connection type 2	Field
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data	
Height from upper-edge of DIN-rail	48 mm / 1.89 inch
Depth	85 mm / 3.346 inch

Mechanical Data	
Mounting type	DIN-35 rail

Material Data	
Contact material (connector)	Au over Ni

Environmental Requirements	
Surrounding air temperature (operation)	-20 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

Accessories



Cover carrier; Type 1; incl. mounting/securing screws and knurled nuts	
Item No.	Pack. Unit
709-167	10

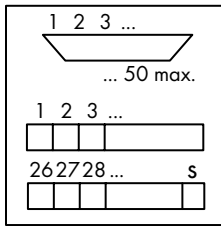


Cover; Type 1; for cover carrier (type 1); 1 m long	
Item No.	Pack. Unit
709-153	10



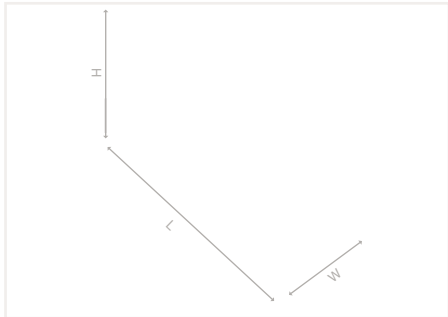
Marking strip; for mounting carrier; 7.5 mm wide; 50 m reel	
Item No.	Pack. Unit
709-178	1

Interface Module for D-Sub Male Connector and Solder Mating Connector 289 Series



Interface Module; D-sub male connector; Solder mating connector; Vertical mating; Double-row PCB terminal blocks; with mounting carrier; with shield connection

Pole No.	Width	Item No.	Pack. Unit
9	38.5 mm	289-585	1
15	46 mm	289-586	1
25	71.5 mm	289-587	1
37	102 mm	289-588	1



Electrical Data	
Operating voltage	≤ 100 VAC; ≤ 125 VDC
Nominal current	2 A
Contact resistance (max.)	30 mΩ
Performance level	2 / 200 mating cycles

Safety and Protection	
Pollution degree	2
Rated voltage	100 V
Rated surge voltage	0.8 kV
Degree of protection	IP20

Connection Data	
Connection type 1	System
Connector 1	D-sub male connector
Strain relief (stud bolt) 1	UNC 4-40
Connection type 2	Field
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data	
Height from upper-edge of DIN-rail	34 mm / 1.339 inch
Depth	85 mm / 3.346 inch

Mechanical Data	
Mounting type	DIN-35 rail

Material Data	
Contact material (connector)	Au over Ni

Environmental Requirements	
Surrounding air temperature (operation)	-20 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

Standards and Specifications	
Standards/specifications	UL 840

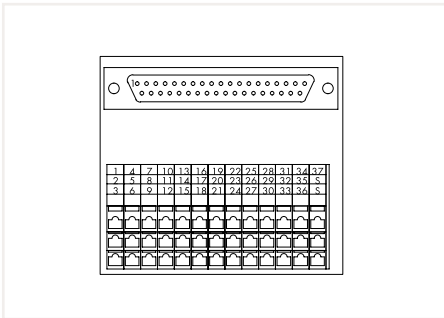
Accessories



Marking strip; for mounting carrier; 7.5 mm wide; 50 m reel

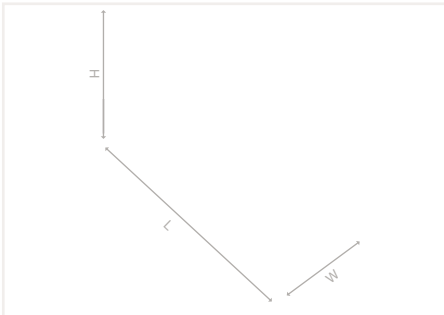
Item No.	Pack. Unit
709-178	1

Interface Module for D-Sub Male Connector and Solder Mating Connector 289 Series



Interface Module; D-sub male connector; Solder mating connector; Vertical mating; Triple-deck PCB terminal blocks; with mounting carrier; with shield connection

Pole No.	Width	Item No.	Pack. Unit
25	56 mm	289-620	1
37	74 mm	289-621	1



Electrical Data

Operating voltage	≤ 100 VAC; ≤ 125 VDC
Nominal current	2 A
Contact resistance (max.)	30 mΩ
Performance level	2 / 200 mating cycles

Safety and Protection

Pollution degree	2
Rated voltage	100 V
Rated surge voltage	0.8 kV
Degree of protection	IP20

Connection Data

Connection type 1	System
Connector 1	D-sub male connector
Strain relief (stud bolt) 1	UNC 4-40
Connection type 2	Field
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Height from upper-edge of DIN-rail	62 mm / 2.441 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Contact material (connector)	Au over Ni
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Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

Standards and Specifications

Standards/specifications	UL 840
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Accessories

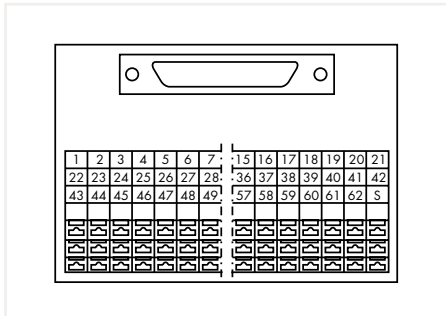


Marking strip; for mounting carrier; 7.5 mm wide; 50 m reel

Item No.	Pack. Unit
709-178	1

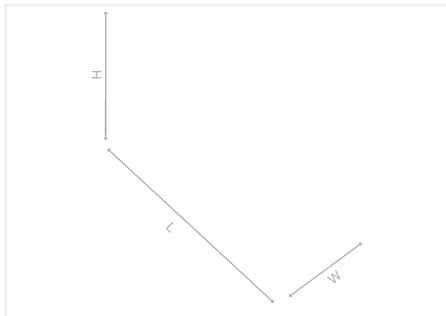
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Interface Module for HD D-Sub Male Connector 289 Series



Interface Module; HD D-sub male connector; Triple-deck PCB terminal blocks; with mounting carrier

Pole No.	Width	Item No.	Pack. Unit
15	35 mm	289-714	1
62	108 mm	289-710	1



Electrical Data

Operating voltage	≤ 100 VAC; ≤ 125 VDC
Nominal current	1 A
Contact resistance (max.)	15 mΩ
Performance level	3 / 50 mating cycles

Safety and Protection

Pollution degree	2
Rated voltage	100 V
Rated surge voltage	0.8 kV
Degree of protection	IP20

Connection Data

Connection type 1	System
Connector 1	HD D-sub male connector
Strain relief (stud bolt) 1	UNC 4-40
Mating direction 1	Vertical
Connection type 2	Field
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Height from upper-edge of DIN-rail	62 mm / 2.441 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Contact material (connector)	Au over Ni
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Environmental Requirements

Surrounding air temperature (operation)	-20 ... +55 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

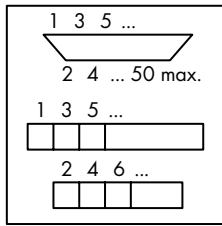
Accessories



Marking strip; for mounting carrier; 7.5 mm wide; 50 m reel

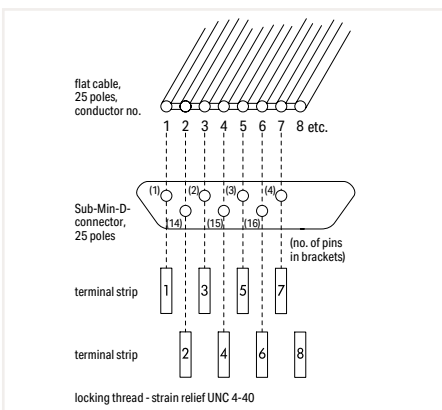
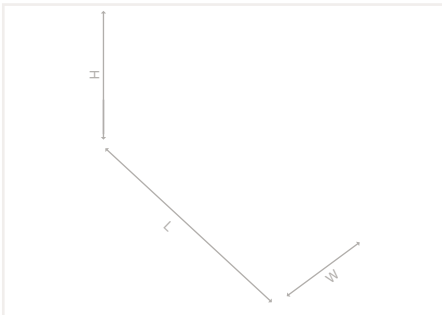
Item No.	Pack. Unit
709-178	1

Interface Module for D-Sub Male Connector and IDC Mating Connector 289 Series



Interface Module; D-sub male connector; IDC mating connector; Vertical mating; Double-row PCB terminal blocks; with mounting feet

Pole No.	Width	Item No.	Pack. Unit
9	38 mm	289-440	1
15	53.5 mm	289-441	1
25	79 mm	289-442	1
37	120 mm	289-443	1
50	157 mm	289-444	1



Notice:
Live parts are likely to be touched! Protection against direct contact must be provided by the equipment manufacturer, e.g., using a WAGO 709 Series Cover (see "Accessories") or a similar cover.
The installation regulations must be observed for each individual application.

Electrical Data	
Operating voltage	≤ 30 VAC; ≤ 50 VDC
Nominal current	1 A
Contact resistance (max.)	30 mΩ
Performance level	2 / 200 mating cycles

Safety and Protection	
Pollution degree	2
Rated voltage	50 V
Rated surge voltage	0.8 kV
Degree of protection	IP00

Connection Data	
Connection type 1	System
Connector 1	D-sub male connector
Strain relief (stud bolt) 1	UNC 4-40
Connection type 2	Field
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data	
Height from upper-edge of DIN-rail	19 mm / 0.748 inch
Depth	63.5 mm / 2.5 inch

Mechanical Data	
Mounting type	DIN-35 rail

Material Data	
Contact material (connector)	Au over Ni

Environmental Requirements	
Surrounding air temperature (operation)	-20 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

Accessories



Cover carrier; Type 1; incl. mounting/securing screws and knurled nuts

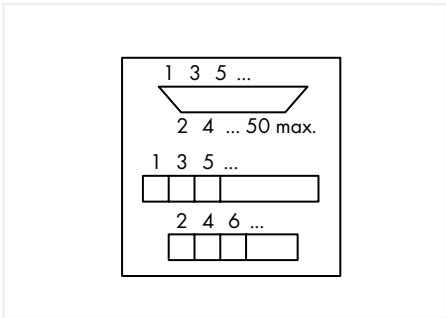
Item No.	Pack. Unit
709-167	10



Cover; Type 1; for cover carrier (type 1); 1 m long

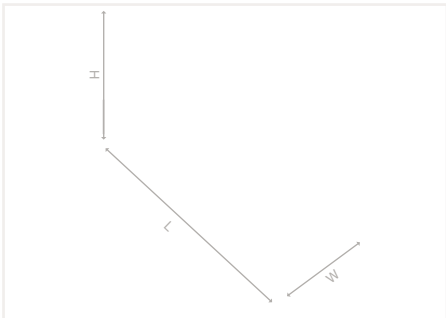
Item No.	Pack. Unit
709-153	10

Interface Module for D-Sub Male Connector and IDC Mating Connector 289 Series



Interface Module; D-sub male connector; IDC mating connector; Vertical mating; Triple-row PCB terminal blocks; with mounting carrier

Pole No.	Width	Item No.	Pack. Unit
9	38 mm	289-540	1
15	46 mm	289-541	1
25	72 mm	289-542	1
37	102 mm	289-543	1
50	94 mm	289-544	1



Electrical Data

Operating voltage	≤ 100 VAC; ≤ 125 VDC
Nominal current	2 A
Contact resistance (max.)	30 mΩ
Performance level	2 / 200 mating cycles

Safety and Protection

Pollution degree	2
Rated voltage	100 V
Rated surge voltage	0.8 kV
Degree of protection	IP20

Connection Data

Connection type 1	System
Connector 1	D-sub male connector
Strain relief (stud bolt) 1	UNC 4-40
Connection type 2	Field
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Height from upper-edge of DIN-rail	34 mm / 1.339 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Contact material (connector)	Au over Ni
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Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

Standards and Specifications

Standards/specifications	UL 840
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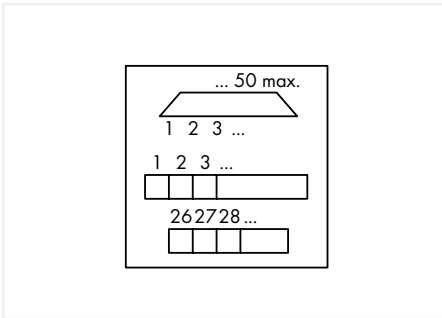
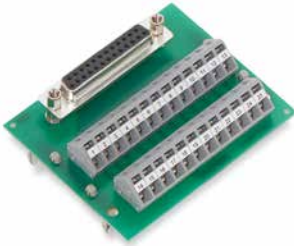
Accessories



Marking strip; for mounting carrier; 7.5 mm wide; 50 m reel

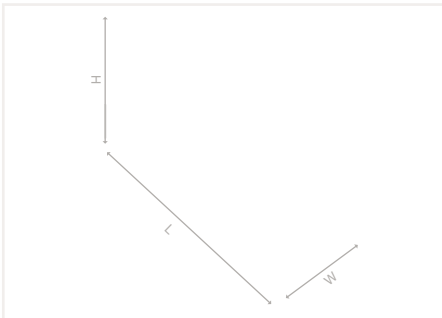
Item No.	Pack. Unit
709-178	1

Interface Module for D-Sub Female Connector and Solder Mating Connector 289 Series



Interface Module; D-sub female connector; Solder mating connector; Vertical mating; Double-row PCB terminal blocks; with mounting feet

Pole No.	Width	Item No.	Pack. Unit
9	38 mm	289-455	1
15	53,5	289-456	1
25	79 mm	289-457	1
37	120 mm	289-458	1
50	157 mm	289-459	1



Notice:
Live parts are likely to be touched! Protection against direct contact must be provided by the equipment manufacturer, e.g., using a WAGO 709 Series Cover (see "Accessories") or a similar cover.
The installation regulations must be observed for each individual application.

Electrical Data	
Operating voltage	≤ 30 VAC; ≤ 50 VDC
Nominal current	1 A
Contact resistance (max.)	30 mΩ
Performance level	2 / 200 mating cycles

Safety and Protection	
Pollution degree	2
Rated voltage	50 V
Rated surge voltage	0.8 kV
Degree of protection	IP00

Connection Data	
Connection type 1	System
Connector 1	D-Sub female connector
Strain relief (stud bolt) 1	UNC 4-40
Connection type 2	Field
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data	
Height from upper-edge of DIN-rail	19 mm / 0.748 inch
Depth	63.5 mm / 2.5 inch

Mechanical Data	
Mounting type	DIN-35 rail

Material Data	
Contact material (connector)	Au over Ni

Environmental Requirements	
Surrounding air temperature (operation)	-20 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

Accessories

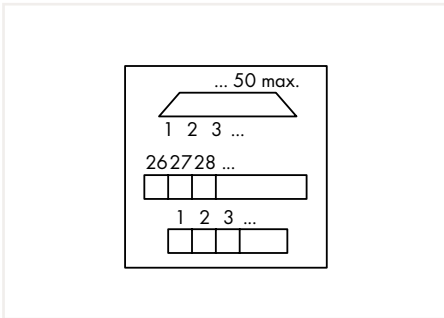


Cover carrier; Type 1; incl. mounting/securing screws and knurled nuts	
Item No.	Pack. Unit
709-167	10



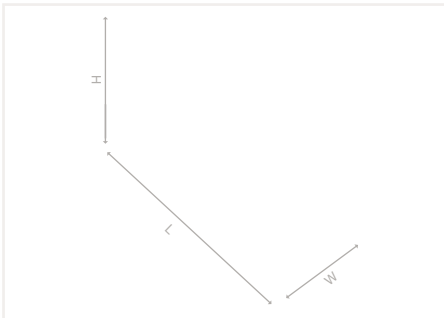
Cover; Type 1; for cover carrier (type 1); 1 m long	
Item No.	Pack. Unit
709-153	10

Interface Module for D-Sub Female Connector and Solder Mating Connector 289 Series



Interface Module; D-sub female connector; Solder mating connector; Vertical mating; Double-row PCB terminal blocks; with mounting carrier

Pole No.	Width	Item No.	Pack. Unit
9	38 mm	289-555	1
15	46 mm	289-556	1
25	72 mm	289-557	1
37	102 mm	289-558	1
50	94 mm	289-559	1



Electrical Data	
Operating voltage	≤ 100 VAC; ≤ 125 VDC
Nominal current	2 A
Contact resistance (max.)	30 mΩ
Performance level	2 / 200 mating cycles

Safety and Protection	
Pollution degree	2
Rated voltage	100 V
Rated surge voltage	0.8 kV
Degree of protection	IP20

Connection Data	
Connection type 1	System
Connector 1	D-Sub female connector
Strain relief (stud bolt) 1	UNC 4-40
Connection type 2	Field
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data	
Height from upper-edge of DIN-rail	34 mm / 1.339 inch
Depth	85 mm / 3.346 inch

Mechanical Data	
Mounting type	DIN-35 rail

Material Data	
Contact material (connector)	Au over Ni

Environmental Requirements	
Surrounding air temperature (operation)	-20 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

Standards and Specifications	
Standards/specifications	UL 840

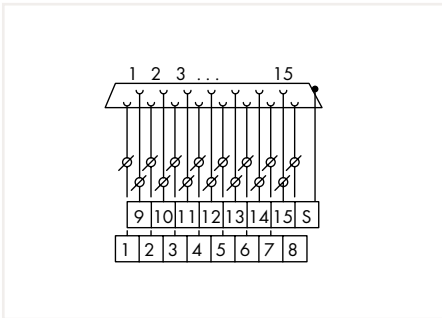
Accessories



Marking strip; for mounting carrier; 7.5 mm wide; 50 m reel

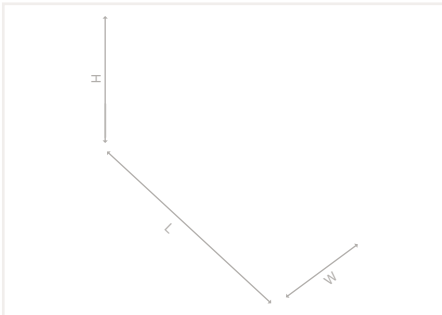
Item No.	Pack. Unit
709-178	1

Interface Module for D-Sub Female Connector 289 Series



Interface Module; D-sub female connector; Double-deck PCB terminal blocks; with mounting carrier; with solder terminal

Pole No.	Width	Item No.	Pack. Unit
9	33.5 mm	289-725	1
15	43.5 mm	289-726	1



Note:
One solder terminal per pole is available for testing and patching (except for shield contact).

Notice:
Live parts are likely to be touched! Protection against direct contact must be provided by the equipment manufacturer, e.g., using a WAGO 709 Series Cover (see "Accessories") or a similar cover. The installation regulations must be observed for each individual application.

Electrical Data	
Operating voltage	≤ 30 VAC; ≤ 50 VDC
Nominal current	2 A
Contact resistance (max.)	30 mΩ
Performance level	2 / 200 mating cycles

Safety and Protection	
Pollution degree	2
Rated voltage	50 V
Rated surge voltage	0.8 kV
Degree of protection	IP00

Connection Data	
Connection type 1	System
Connector 1	D-Sub female connector
Strain relief (stud bolt) 1	UNC 4-40
Mating direction 1	Vertical
Connection type 2	Field
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data	
Height from upper-edge of DIN-rail	48 mm / 1.89 inch
Depth	85 mm / 3.346 inch

Mechanical Data	
Mounting type	DIN-35 rail

Material Data	
Contact material (connector)	Au over Ni

Environmental Requirements	
Surrounding air temperature (operation)	-20 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

Accessories



Cover carrier; Type 1; incl. mounting/securing screws and knurled nuts	
Item No.	Pack. Unit
709-167	10

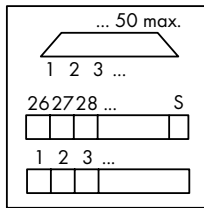


Cover; Type 1; for cover carrier (type 1); 1 m long	
Item No.	Pack. Unit
709-153	10



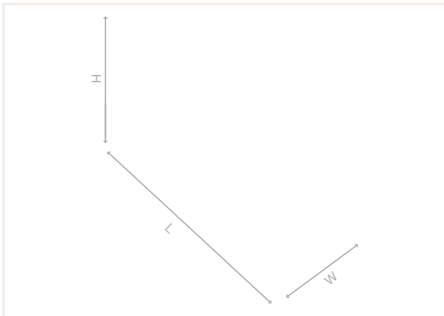
Marking strip; for mounting carrier; 7.5 mm wide; 50 m reel	
Item No.	Pack. Unit
709-178	1

Interface Module for D-Sub Female Connector and Solder Mating Connector 289 Series



Interface Module; D-sub female connector; Solder mating connector; Vertical mating; Double-row PCB terminal blocks; with mounting carrier; with shield connection

Pole No.	Width	Item No.	Pack. Unit
9	33 mm	289-575	1
15	43 mm	289-576	1
25	68.5 mm	289-577	1
37	99 mm	289-578	1



Electrical Data

Operating voltage	≤ 100 VAC; ≤ 125 VDC
Nominal current	2 A
Contact resistance (max.)	30 mΩ
Performance level	2 / 200 mating cycles

Safety and Protection

Pollution degree	2
Rated voltage	100 V
Rated surge voltage	0.8 kV
Degree of protection	IP20

Connection Data

Connection type 1	System
Connector 1	D-Sub female connector
Strain relief (stud bolt) 1	UNC 4-40
Connection type 2	Field
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Height from upper-edge of DIN-rail	34 mm / 1.339 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Contact material (connector)	Au over Ni
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Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

Standards and Specifications

Standards/specifications	UL 840
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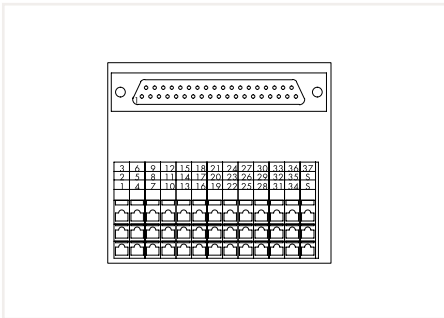
Accessories



Marking strip; for mounting carrier; 7.5 mm wide; 50 m reel

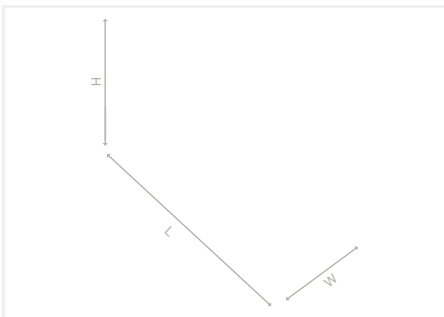
Item No.	Pack. Unit
709-178	1

Interface Module for D-Sub Female Connector and Solder Mating Connector 289 Series



Interface Module; D-sub female connector; Solder mating connector; Vertical mating; Triple-deck PCB terminal blocks; with mounting carrier; with shield connection

Pole No.	Width	Item No.	Pack. Unit
25	56 mm	289-623	1
37	74 mm	289-624	1



Electrical Data

Operating voltage	≤ 100 VAC; ≤ 125 VDC
Nominal current	2 A
Contact resistance (max.)	30 mΩ
Performance level	2 / 200 mating cycles

Safety and Protection

Pollution degree	2
Rated voltage	100 V
Rated surge voltage	0.8 kV
Degree of protection	IP20

Connection Data

Connection type 1	System
Connector 1	D-Sub female connector
Strain relief (stud bolt) 1	UNC 4-40
Mating direction 1	Vertical
Connection type 2	Field
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Height from upper-edge of DIN-rail	62 mm / 2.441 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Contact material (connector)	Au over Ni
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Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

Standards and Specifications

Standards/specifications	UL 840
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Accessories

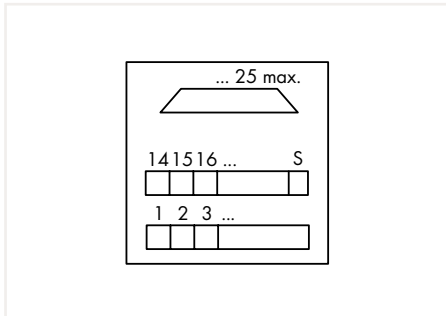


Marking strip; for mounting carrier; 7.5 mm wide; 50 m reel

Item No.	Pack. Unit
709-178	1

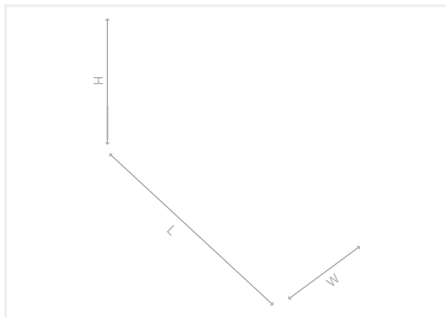
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Interface Module for D-Sub Female Connector 289 Series



Interface Module; D-sub female connector;
Double-deck PCB terminal blocks; with mounting
carrier; with shield connection

Pole No.	Width	Item No.	Pack. Unit
9	33 mm	289-650	1
25	68.5 mm	289-652	1



Electrical Data	
Operating voltage	≤ 100 VAC; ≤ 125 VDC
Nominal current	2 A
Contact resistance (max.)	30 mΩ
Performance level	2 / 200 mating cycles

Safety and Protection	
Pollution degree	2
Rated voltage	100 V
Rated surge voltage	0.8 kV
Degree of protection	IP20

Connection Data	
Connection type 1	System
Connector 1	D-Sub female connector
Strain relief (stud bolt) 1	UNC 4-40
Mating direction 1	Vertical
Connection type 2	Field
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data	
Height from upper-edge of DIN-rail	48 mm / 1.89 inch
Depth	85 mm / 3.346 inch

Mechanical Data	
Mounting type	DIN-35 rail

Material Data	
Contact material (connector)	Au over Ni

Environmental Requirements	
Surrounding air temperature (operation)	-20 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

Standards and Specifications	
Standards/specifications	UL 840

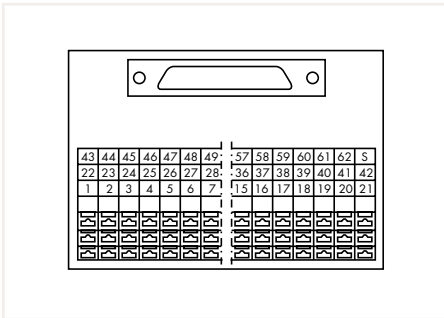
Accessories



Marking strip; for mounting carrier; 7.5 mm wide;
50 m reel

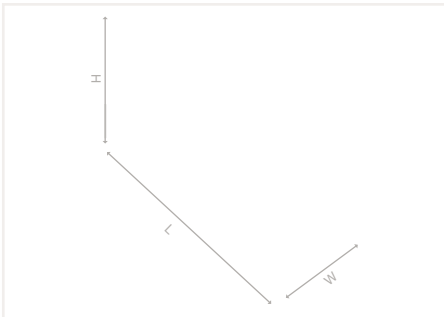
Item No.	Pack. Unit
709-178	1

Interface Module for HD D-Sub Female Connector 289 Series



Interface Module; HD D-sub female connector;
Triple-deck PCB terminal blocks; with mounting carrier

Pole No.	Width	Item No.	Pack. Unit
15	35 mm	289-713	1
44	79 mm	289-707	1
62	108 mm	289-708	1



Electrical Data

Operating voltage	≤ 100 VAC; ≤ 125 VDC
Nominal current	1 A
Contact resistance (max.)	15 mΩ
Performance level	3 / 50 mating cycles

Safety and Protection

Pollution degree	2
Rated voltage	100 V
Rated surge voltage	0.8 kV
Degree of protection	IP20

Connection Data

Connection type 1	System
Connector 1	HD D-sub female connector
Strain relief (stud bolt) 1	UNC 4-40
Mating direction 1	Vertical
Connection type 2	Field
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Height from upper-edge of DIN-rail	62 mm / 2.441 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Contact material (connector)	Au over Ni
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Environmental Requirements

Surrounding air temperature (operation)	-20 ... +55 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

Accessories



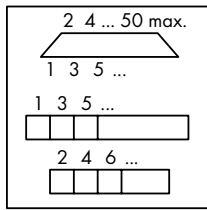
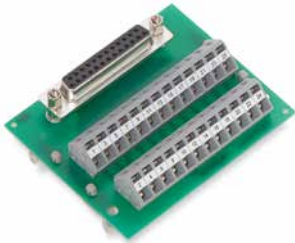
Marking strip; for mounting carrier; 7.5 mm wide;
50 m reel

Item No.	Pack. Unit
709-178	1

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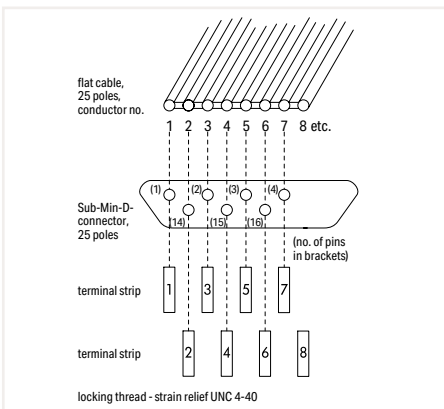
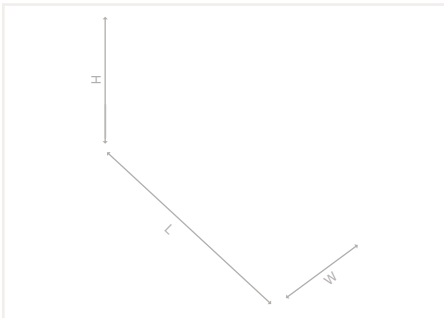
6

Interface Module for D-Sub Female Connector and IDC Mating Connector 289 Series



Interface Module; D-sub female connector; IDC mating connector; Vertical mating; Double-row PCB terminal blocks; with mounting feet

Pole No.	Width	Item No.	Pack. Unit
9	38 mm	289-450	1
15	53.5 mm	289-451	1
25	79 mm	289-452	1
37	120 mm	289-453	1
50	157 mm	289-454	1



Notice:
Live parts are likely to be touched! Protection against direct contact must be provided by the equipment manufacturer, e.g., using a WAGO 709 Series Cover (see "Accessories") or a similar cover.
The installation regulations must be observed for each individual application.

Electrical Data	
Operating voltage	≤ 30 VAC; ≤ 50 VDC
Nominal current	1 A
Contact resistance (max.)	30 mΩ
Performance level	2 / 200 mating cycles

Safety and Protection	
Pollution degree	2
Rated voltage	50 V
Rated surge voltage	0.8 kV
Degree of protection	IP00

Connection Data	
Connection type 1	System
Connector 1	D-Sub female connector
Strain relief (stud bolt) 1	UNC 4-40
Connection type 2	Field
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data	
Height from upper-edge of DIN-rail	19 mm / 0.748 inch
Depth	63.5 mm / 2.5 inch

Mechanical Data	
Mounting type	DIN-35 rail

Material Data	
Contact material (connector)	Au over Ni

Environmental Requirements	
Surrounding air temperature (operation)	-20 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

Accessories



Cover carrier; Type 1; incl. mounting/securing screws and knurled nuts

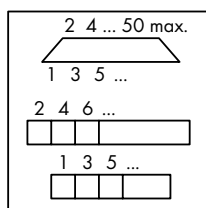
Item No.	Pack. Unit
709-167	10



Cover; Type 1; for cover carrier (type 1); 1 m long

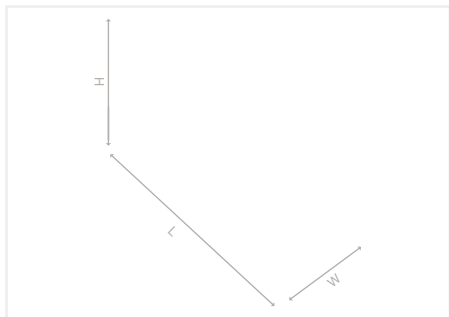
Item No.	Pack. Unit
709-153	10

Interface Module for D-Sub Female Connector and IDC Mating Connector 289 Series



Interface Module; D-sub female connector; IDC mating connector; Vertical mating; Double-row PCB terminal blocks; with mounting carrier

Pole No.	Width	Item No.	Pack. Unit
9	38 mm	289-550	1
15	46 mm	289-551	1
25	72 mm	289-552	1
37	102 mm	289-553	1
50	94 mm	289-554	1



Electrical Data

Operating voltage	≤ 100 VAC; ≤ 125 VDC
Nominal current	2 A
Contact resistance (max.)	30 mΩ
Performance level	2 / 200 mating cycles

Safety and Protection

Pollution degree	2
Rated voltage	100 V
Rated surge voltage	0.8 kV
Degree of protection	IP20

Connection Data

Connection type 1	System
Connector 1	D-Sub female connector
Strain relief (stud bolt) 1	UNC 4-40
Connection type 2	Field
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Height from upper-edge of DIN-rail	34 mm / 1.339 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Contact material (connector)	Au over Ni
------------------------------	------------

Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

Standards and Specifications

Standards/specifications	UL 840
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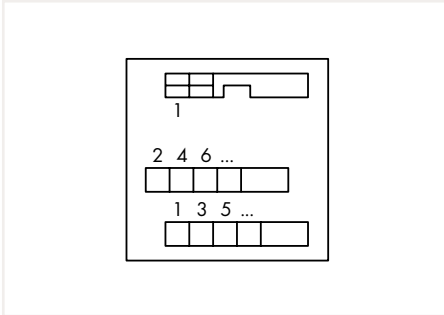
Accessories



Marking strip; for mounting carrier; 7.5 mm wide; 50 m reel

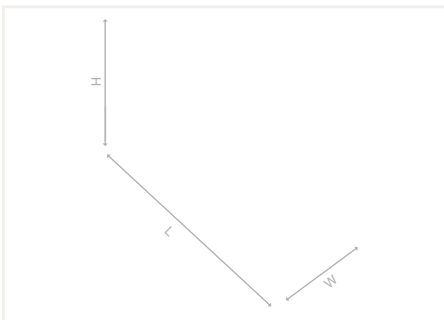
Item No.	Pack. Unit
709-178	1

Interface Module for DIN 41651 Connector 289 Series



Interface Module; DIN 41651 connector; Double-row PCB terminal blocks; with mounting feet

Pole No.	Width	Item No.	Pack. Unit
10	41 mm	289-401	1
14	51.5 mm	289-402	1
16	56.5 mm	289-403	1
20	66.5 mm	289-404	1
26	81 mm	289-405	1
34	102 mm	289-406	1
40	126 mm	289-407	1
50	151 mm	289-408	1
64	187 mm	289-409	1



Notice:
Live parts are likely to be touched! Protection against direct contact must be provided by the equipment manufacturer, e.g., using a WAGO 709 Series Cover (see "Accessories") or a similar cover.
The installation regulations must be observed for each individual application.

Electrical Data

Operating voltage	≤ 30 VAC; ≤ 50 VDC
Nominal current	1 A
Performance level	3 / 50 mating cycles

Safety and Protection

Pollution degree	2
Rated voltage	50 V
Rated surge voltage	0.8 kV
Degree of protection	IP00

Connection Data

Connection type 1	System
Connector 1	DIN 41651 male connector
Connection type 2	Field
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Height from upper-edge of DIN-rail	28 mm / 1.102 inch
Depth	63.5 mm / 2.5 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Contact material (connector)	Au over Ni
------------------------------	------------

Environmental Requirements

Surrounding air temperature (operation)	-20 ... +55 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

Accessories

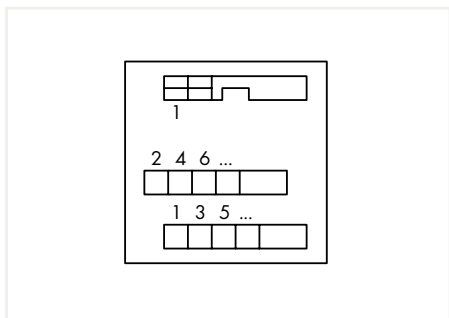
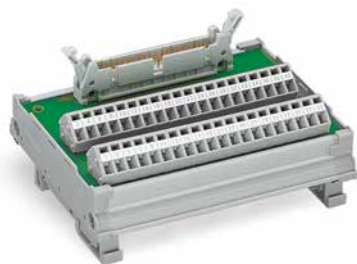


Cover carrier; Type 1; incl. mounting/securing screws and knurled nuts	
Item No.	Pack. Unit
709-167	10



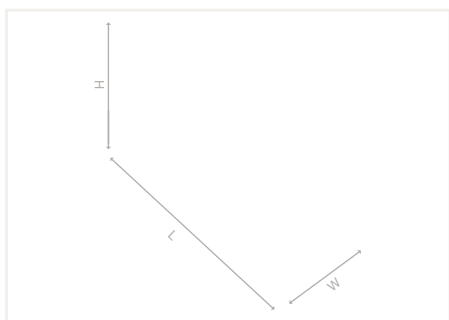
Cover; Type 1; for cover carrier (type 1); 1 m long	
Item No.	Pack. Unit
709-153	10

Interface Module for DIN 41651 Connector 289 Series



Interface Module; DIN 41651 connector; Double-row PCB terminal blocks; with mounting carrier

Pole No.	Width	Item No.	Pack. Unit
10	38 mm	289-501	1
14	43 mm	289-502	1
16	46 mm	289-503	1
20	53.5 mm	289-504	1
26	71 mm	289-505	1
34	94 mm	289-506	1
40	114 mm	289-507	1
50	132 mm	289-508	1
64	170 mm	289-509	1
64	120 mm	289-510	1



Electrical Data

Operating voltage	≤ 100 VAC; ≤ 125 VDC
Nominal current	1 A
Performance level	3 / 50 mating cycles

Safety and Protection

Pollution degree	2
Rated voltage	100 V
Rated surge voltage	0.8 kV
Degree of protection	IP20

Connection Data

Connection type 1	System
Connector 1	DIN 41651 male connector
Connection type 2	Field
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Height from upper-edge of DIN-rail	36 mm / 1.417 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Contact material (connector)	Au over Ni
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Environmental Requirements

Surrounding air temperature (operation)	-20 ... +55 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

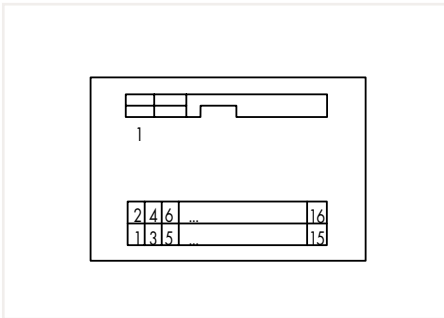
Accessories

Marking strip; for mounting carrier; 7.5 mm wide; 50 m reel

Item No.	Pack. Unit
709-178	1

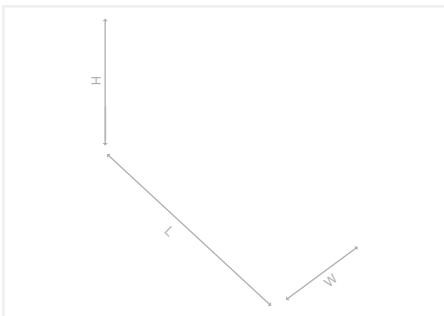
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Interface Module for DIN 41651 Connector 289 Series



Interface Module; DIN 41651 connector; Double-deck PCB terminal blocks; with mounting carrier

Pole No.	Width	Item No.	Pack. Unit
10	35 mm	289-611	1
14	40 mm	289-612	1
16	45 mm	289-613	1



Electrical Data

Operating voltage	≤ 100 VAC; ≤ 125 VDC
Nominal current	1 A
Performance level	3 / 50 mating cycles

Safety and Protection

Pollution degree	2
Rated voltage	100 V
Rated surge voltage	0.8 kV
Degree of protection	IP20

Connection Data

Connection type 1	System
Connector 1	DIN 41651 male connector
Mating direction 1	Vertical
Connection type 2	Field
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Height from upper-edge of DIN-rail	48 mm / 1.89 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Contact material (connector)	Au over Ni
------------------------------	------------

Environmental Requirements

Surrounding air temperature (operation)	-20 ... +55 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

Accessories

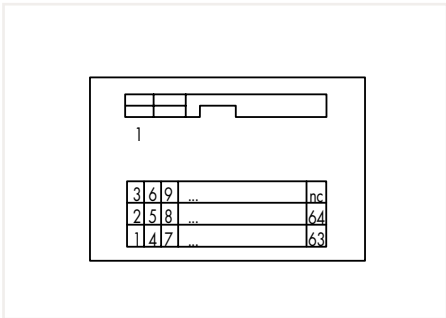


Marking strip; for mounting carrier; 7.5 mm wide; 50 m reel

Item No.	Pack. Unit
709-178	1

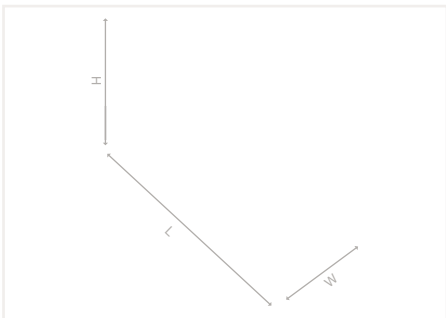
6

Interface Module for DIN 41651 Connector 289 Series



Interface Module; DIN 41651 connector; Triple-deck PCB terminal blocks; with mounting carrier

Pole No.	Width	Item No.	Pack. Unit
20	47 mm	289-614	1
26	55 mm	289-615	1
34	65 mm	289-616	1
40	74 mm	289-617	1
50	88 mm	289-618	1
64	114 mm	289-619	1



Electrical Data

Operating voltage	≤ 100 VAC; ≤ 125 VDC
Nominal current	1 A
Performance level	3 / 50 mating cycles

Safety and Protection

Pollution degree	2
Rated voltage	100 V
Rated surge voltage	0.8 kV
Degree of protection	IP20

Connection Data

Connection type 1	System
Connector 1	DIN 41651 male connector
Mating direction 1	Vertical
Connection type 2	Field
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Height from upper-edge of DIN-rail	62 mm / 2.441 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
---------------	-------------

Material Data

Contact material (connector)	Au over Ni
------------------------------	------------

Environmental Requirements

Surrounding air temperature (operation)	-20 ... +55 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

Accessories

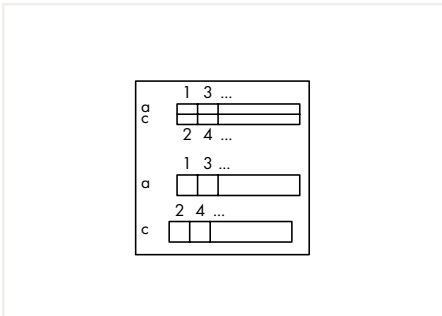
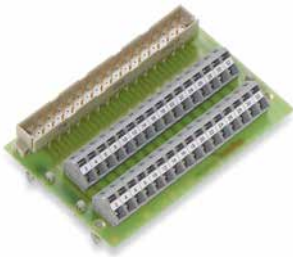


Marking strip; for mounting carrier; 7.5 mm wide; 50 m reel

Item No.	Pack. Unit
709-178	1

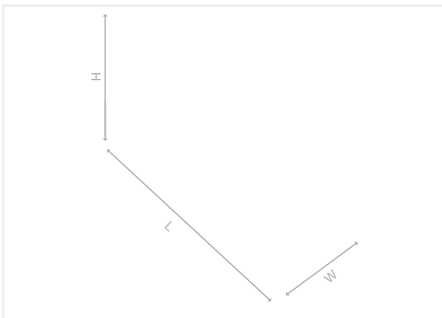
6

Interface Module for DIN 41612 Connector; Type C; IDC Mating Connector 289 Series



Interface Module; DIN 41612 connector; IDC mating connector; Vertical mating; Double-row PCB terminal blocks; with mounting feet; Type C

Pole No.	Width	Item No.	Pack. Unit
32	79 mm	289-422	1



Notice!
Live parts are likely to be touched! Protection against direct contact must be provided by the equipment manufacturer, e.g., using a WAGO 709 Series Cover (see "Accessories") or a similar cover.
The installation regulations must be observed for each individual application.

Electrical Data

Operating voltage	≤ 30 VAC; ≤ 50 VDC
Nominal current	1 A
Contact resistance (max.)	30 mΩ
Performance level	2 / 200 mating cycles

Safety and Protection

Pollution degree	2
Rated voltage	50 V
Rated surge voltage	0.8 kV
Degree of protection	IP00

Connection Data

Pole No.	32
Connection type 1	System
Connector 1	D-sub male connector
Strain relief (stud bolt) 1	UNC 4-40
Connection type 2	Field
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	79 mm / 3.11 inch
Height from upper-edge of DIN-rail	19 mm / 0.748 inch
Depth	63.5 mm / 2.5 inch

Mechanical Data

Mounting type	DIN-35 rail
---------------	-------------

Material Data

Contact material (connector)	Au over Ni
Weight	52 g

Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

Accessories

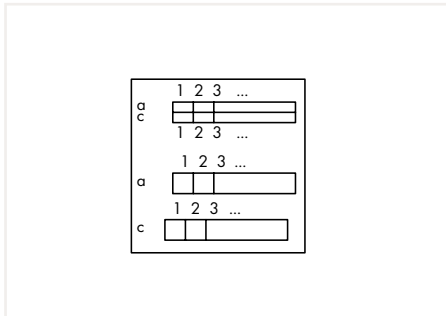


Cover carrier; Type 1; incl. mounting/securing screws and knurled nuts			
Item No.	Pack. Unit		
709-167	10		



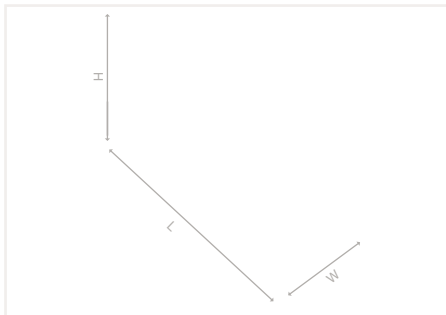
Cover; Type 1; for cover carrier (type 1); 1 m long			
Item No.	Pack. Unit		
709-153	10		

Interface Module for DIN 41612 Connector; Type C; Solder Mating Connector 289 Series



Interface Module; DIN 41612 connector; Solder mating connector; Horizontal mating; Double-row PCB terminal blocks; with mounting feet; Type C

Pole No.	Width	Item No.	Pack. Unit
64	187 mm	289-427	1



Notice!

Live parts are likely to be touched! Protection against direct contact must be provided by the equipment manufacturer, e.g., using a WAGO 709 Series Cover (see "Accessories") or a similar cover.

The installation regulations must be observed for each individual application.

Electrical Data

Operating voltage	≤ 30 VAC; ≤ 50 VDC
Nominal current	1 A
Contact resistance (max.)	20 mΩ
Performance level	2 / 400 mating cycles

Safety and Protection

Pollution degree	2
Rated voltage	50 V
Rated surge voltage	0.8 kV
Degree of protection	IP00

Connection Data

Pole No.	64
Connection type 1	System
Connector 1	DIN 41612 male connector
Connection type 2	Field
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	187 mm / 7.362 inch
Height from upper-edge of DIN-rail	21 mm / 0.827 inch
Depth	63.5 mm / 2.5 inch

Mechanical Data

Mounting type	DIN-35 rail
---------------	-------------

Material Data

Contact material (connector)	Copper alloy; gold plated
Weight	107.6 g

Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

Accessories



Cover carrier; Type 1; incl. mounting/securing screws and knurled nuts

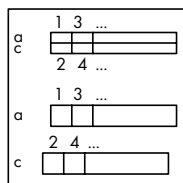
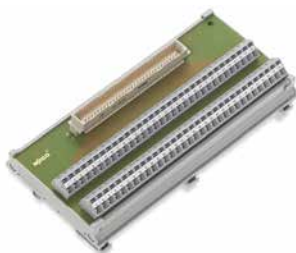
Item No.	Pack. Unit
709-167	10



Cover; Type 1; for cover carrier (type 1); 1 m long

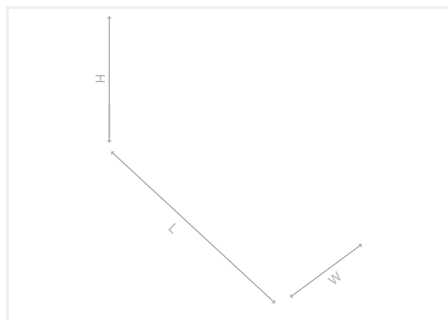
Item No.	Pack. Unit
709-153	10

Interface Module for DIN 41612 Connector; Type C; IDC Mating Connector 289 Series



Interface Module; DIN 41612 connector; IDC mating connector; Vertical mating; Double-row PCB terminal blocks; with mounting carrier; Type C

Pole No.	Width	Item No.	Pack. Unit
64	171 mm	289-522	1



Electrical Data

Operating voltage	≤ 100 VAC; ≤ 125 VDC
Nominal current	1 A
Contact resistance (max.)	20 mΩ
Performance level	2 / 400 mating cycles

Safety and Protection

Pollution degree	2
Rated voltage	100 V
Rated surge voltage	0.8 kV
Degree of protection	IP20

Connection Data

Pole No.	64
Connection type 1	System
Connector 1	DIN 41612 male connector
Connection type 2	Field
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	171 mm / 6.732 inch
Height from upper-edge of DIN-rail	34 mm / 1.339 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
---------------	-------------

Material Data

Contact material (connector)	Copper alloy; gold plated
Weight	165.4 g

Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

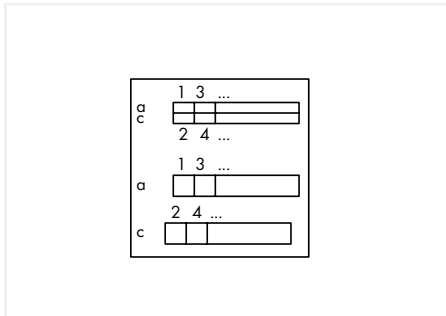
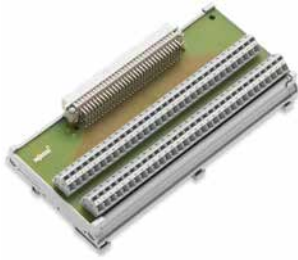
Accessories



Marking strip; for mounting carrier; 7.5 mm wide;
50 m reel

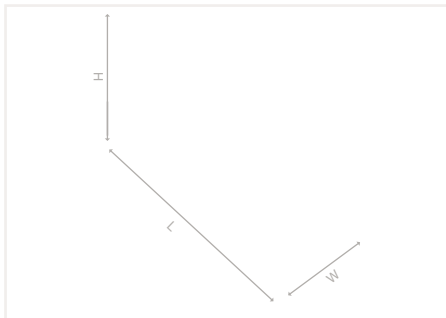
Item No.	Pack. Unit
709-178	1

Interface Module for DIN 41612 Connector; Type C; IDC Mating Connector 289 Series



Interface Module; DIN 41612 connector; IDC mating connector; Horizontal mating; Double-row PCB terminal blocks; with mounting carrier; Type C

Pole No.	Width	Item No.	Pack. Unit
64	171 mm	289-523	1



Notice!

Live parts are likely to be touched! Protection against direct contact must be provided by the equipment manufacturer, e.g., using a WAGO 709 Series Cover (see "Accessories") or a similar cover.

The installation regulations must be observed for each individual application.

Electrical Data

Operating voltage	≤ 30 VAC; ≤ 50 VDC
Nominal current	1 A
Contact resistance (max.)	20 mΩ
Performance level	2 / 400 mating cycles

Safety and Protection

Pollution degree	2
Rated voltage	50 V
Rated surge voltage	0.8 kV
Degree of protection	IP00

Connection Data

Pole No.	64
Connection type 1	System
Connector 1	DIN 41612 male connector
Connection type 2	Field
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	171 mm / 6.732 inch
Height from upper-edge of DIN-rail	34 mm / 1.339 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Contact material (connector)	Copper alloy; gold plated
Weight	159.3 g

Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

Accessories



Cover carrier; Type 1; incl. mounting/securing screws and knurled nuts

Item No.	Pack. Unit
709-167	10



Cover; Type 1; for cover carrier (type 1); 1 m long

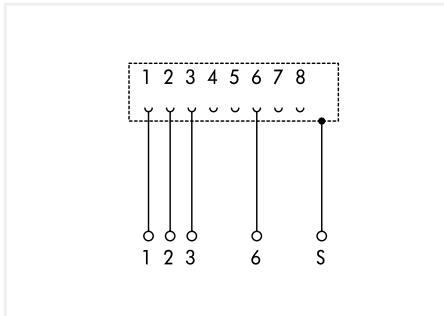
Item No.	Pack. Unit
709-153	10



Marking strip; for mounting carrier; 7.5 mm wide; 50 m reel

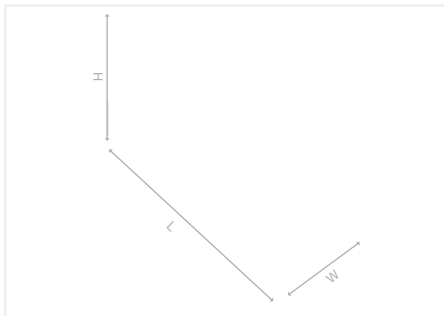
Item No.	Pack. Unit
709-178	1

Interface Module for RJ-45 Connector 289 Series



Interface Module; RJ-45; PCB terminal blocks; Cat. 5; with mounting carrier; with shield connection

	Item No.	Pack. Unit
	289-174	1
with shield clamping saddle	289-174/790-108	1



Electrical Data

Nominal current	1.5 A
Contact resistance (typ.)	20 mΩ
Insulation resistance	> 500 MΩ
Transmission length (max.)	100 m
Connection cable	Min. Cat. 5

Safety and Protection

Dielectric strength (contact/contact)	1 kV _{rms}
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Connection Data

Connection type 1	System
Connector 1	RJ-45; shielded
Connection type 2	System
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 1.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor 2	0.08 ... 1.5 mm ² / 28 ... 14 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch
Mating cycles	500

Physical Data

Width	24 mm / 0.945 inch
Height from upper-edge of DIN-rail	40 mm / 1.575 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	32.6 g
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Environmental Requirements


Surrounding air temperature (operation)	-40 ... +85 °C (Actuation: -35 ... +85 °C)
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	≤ 85 % (non-condensing)

Accessories



Marking strip; for mounting carrier; 7.5 mm wide; 50 m reel

Item No.	Pack. Unit
709-178	1

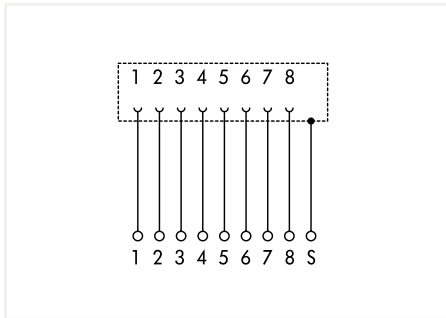


Shield clamping saddle; 11 mm wide; Connectable shield diameter: up to 8 mm

Item No.	Pack. Unit
790-108	50 (10)

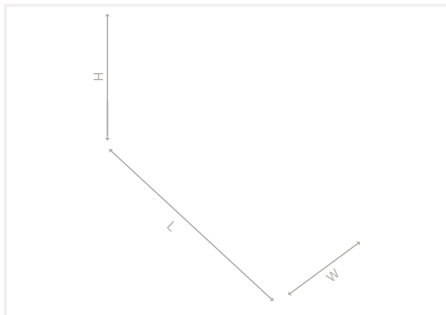
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Interface Module for RJ-45 Connector 289 Series



Interface Module; RJ-45; Double-row PCB terminal blocks; Cat. 5; with mounting carrier; with shield connection

	Item No.	Pack. Unit
	289-175	1
with shield clamping saddle	289-175/790-108	1



Electrical Data

Nominal current	1.5 A
Contact resistance (typ.)	20 mΩ
Insulation resistance	> 500 MΩ
Transmission length (max.)	100 m
Connection cable	Min. Cat. 5
WAGO Shield Clamping Saddle	11 mm wide; cable diameter up to 8 mm

Safety and Protection

Dielectric strength (contact/contact)	1 kV _{rms}
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Connection Data

Connection type 1	System
Connector 1	RJ-45 (shielded)
Connection type 2	System
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 1.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor 2	0.08 ... 1.5 mm ² / 28 ... 14 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch
Mating cycles	500

Physical Data

Width	24 mm / 0.945 inch
Height from upper-edge of DIN-rail	40 mm / 1.575 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
---------------	-------------

Material Data

Weight	49 g
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Environmental Requirements

Surrounding air temperature (operation)	-40 ... +85 °C (Actuation: -35 ... +85 °C)
Surrounding air temperature (storage)	-40 ... +85 °C
Surrounding air (operating) temperature for UL	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

Standards and Specifications

Standards/specifications	UL 840
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6

Accessories

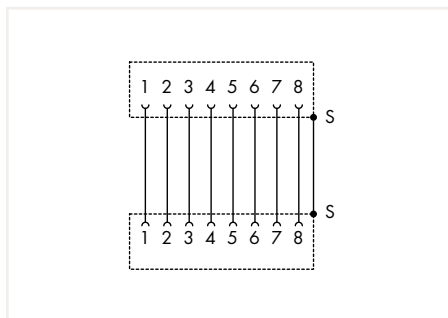
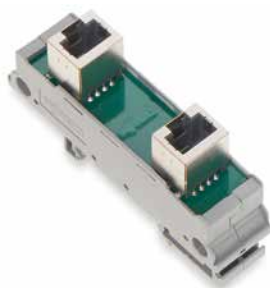


Marking strip; for mounting carrier; 7.5 mm wide; 50 m reel		
Item No.	Pack. Unit	
709-178	1	



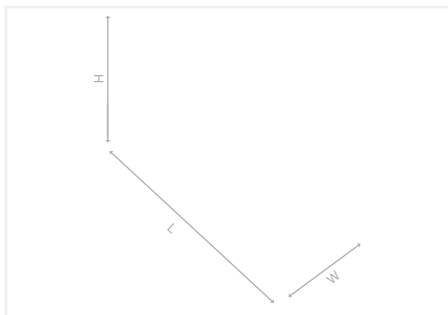
Shield clamping saddle; 11 mm wide; Connectable shield diameter: up to 8 mm		
Item No.	Pack. Unit	
790-108	50 (10)	

Interface Module for RJ-45 Connector 289 Series



Interface Module; RJ-45; RJ-45; Cat. 5;
with mounting carrier

Item No.	Pack. Unit
289-172	1



Electrical Data

Operating voltage	≤ 30 VAC; ≤ 42 VDC
Nominal current	1.5 A
Contact resistance (typ.)	20 mΩ
Insulation resistance	> 500 MΩ
Transmission length (max.)	100 m
Connection cable	Min. Cat. 5

Safety and Protection

Dielectric strength (contact/contact)	1 kV _{rms}
---------------------------------------	---------------------

Connection Data

Connection type 1	System
Connector 1	RJ-45 (shielded)
Connection type 2	System
Connector 2	RJ-45 (shielded)
Mating cycles	500

Physical Data

Width	20.5 mm / 0.807 inch
Height from upper-edge of DIN-rail	51 mm / 2.008 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	28.3 g
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Environmental Requirements

Surrounding air temperature (operation)	-40 ... +85 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Surrounding air (operating) temperature for UL	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

Standards and Specifications

Standards/specifications	UL 840
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Accessories



Marking strip; for mounting carrier; 7.5 mm wide;
50 m reel

Item No.	Pack. Unit
709-178	1

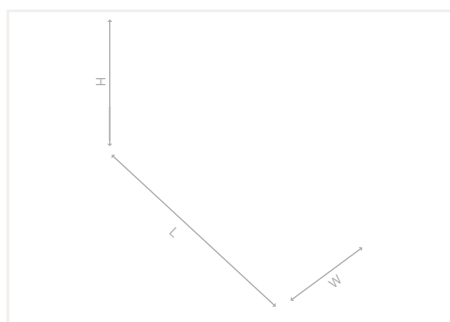
6

Interface Module for RJ-45 Connector 289 Series



Interface Module; RJ-45; IDC; Cat. 6; with mounting carrier; with shield connection

	Item No.	Pack. Unit
	289-195	1



Electrical Data

Contact resistance (typ.)	50 mΩ (20 °C)
Connection cable	Min. Cat. 6

Safety and Protection

Degree of protection	IP20
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Connection Data

Pole No.	8
Connection type 1	System
Connector 1	RJ-45 (shielded)
Connection type 2	System
Connection technology 2	IDC
Solid conductor 2	0.2 ... 0.32 mm ² / 24 ... 22 AWG
Stranded conductor (2)	0.2 ... 0.32 mm ² / 26/7 ... 22/7 AWG
Strip length 2	0.8 ... 1.6 mm / 0.03 ... 0.06 inch
Mating cycles	750

Physical Data

Width	26.8 mm / 1.056 inch
Height from upper-edge of DIN-rail	64.4 mm / 2.535 inch
Depth	81.4 mm / 3.205 inch

Mechanical Data

Mounting type	DIN-35 rail
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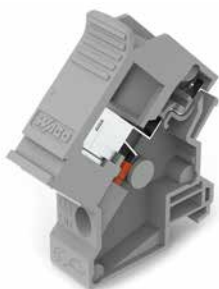
Material Data

Contact material (connector)	Au over Ni
Weight	51 g

Environmental Requirements

Surrounding air temperature (operation)	-10 ... +60 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 95 % (non-condensing)

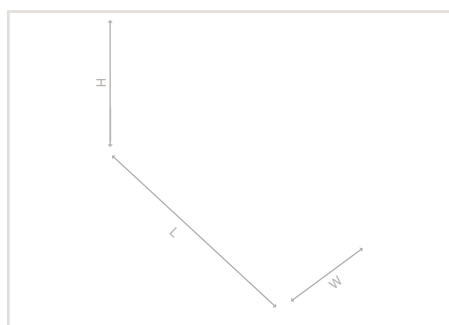
Interface Module for RJ-45 Connectors 289 Series



Similar to illustration

Interface Module; RJ-45; IDC; Cat. 6a;
with mounting carrier; with shield connection

	Item No.	Pack. Unit
	289-197	1



Electrical Data

Contact resistance (max.)	5 mΩ
Connection cable	Min. cat. 6a

Safety and Protection

Protection type	IP20
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Connection Data

Pole number 1	8
Connection type 1	System
Connector 1	RJ-45; shielded
Pole number (2)	8
Connection type 2	System
Connection technology 2	IDC
Solid conductor 2	0.4 ... 0.65 mm ² / 26 ... 22 AWG
Stranded conductor (2)	0.4 ... 0.65 mm ² / 26/7 ... 22/7 AWG
Sheathed cable diameter	4.5 ... 9.6 mm
Mating cycles	750

Physical Data

Width	18 mm
Height from upper-edge of DIN-rail	59 mm
Depth	90 mm

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Contact plating (connector)	Au over Ni
Contact material (connector)	CuSn
Material (plug-in module)	Zinc die-cast
Material (DIN-rail adapter)	PC-GF10
Weight	39 g

Environmental Conditions

Surrounding air temperature (operation)	-10 ... +60 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 95 % (non-condensing)

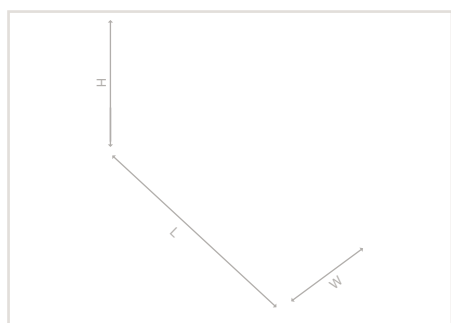
Coupler Module for RJ-45 Connectors 289 Series



Similar to illustration

Coupler Module; 2 x RJ-45; Cat. 6a;
with mounting carrier; with shield connection

	Item No.	Pack. Unit
	289-198	1



Electrical Data

Contact resistance	200 mΩ
Connection cable	Min. cat. 6a

Safety and Protection

Protection type	IP20
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Connection Data

Pole number 1	8
Connection type 1	System
Connector 1	RJ-45; shielded
Pole number (2)	8
Connection type 2	System
Connector 2	RJ-45; shielded
Mating cycles	750

Physical Data

Width	18 mm
Height from upper-edge of DIN-rail	59 mm
Depth	90 mm

Mechanical Data

Mounting type	DIN-35 rail
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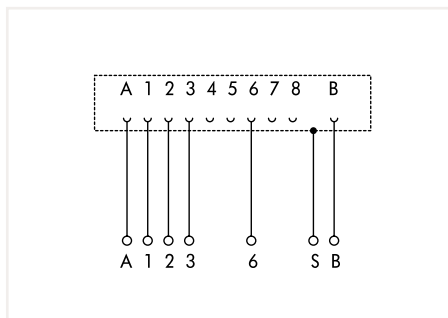
Material Data

Contact plating (connector)	Au over Ni
Contact material (connector)	Spring steel
Material (plug-in module)	Zinc die-cast
Material (DIN-rail adapter)	PC-GF10
Weight	34 g

Environmental Conditions

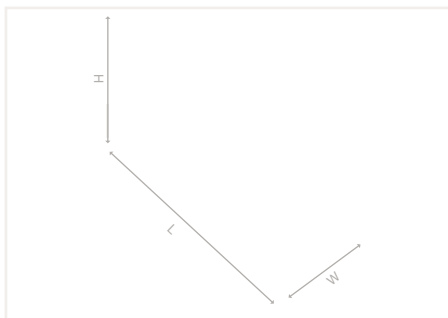
Surrounding air temperature (operation)	-10 ... +60 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 95 % (non-condensing)

Interface Module for RJ-45 Connector; with Power Contacts 289 Series



Interface Module; RJ-45; with power contacts; PCB terminal blocks; Cat. 5; with mounting carrier; with shield connection; with shield clamping saddle

Item No.	Pack. Unit
289-178	1



Electrical Data

Operating voltage	≤ 35 VAC; ≤ 50 VDC
Nominal current	2.1 A
Contact resistance (typ.)	40 mΩ
Insulation resistance	> 500 MΩ
Transmission length (max.)	100 m
Connection cable	Min. Cat. 5
WAGO Shield Clamping Saddle	11 mm wide; cable diameter up to 8 mm

Safety and Protection

Dielectric strength (contact/contact)	1 kV _{rms}
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Connection Data

Connection type 1	System
Connector 1	RJ-45 (shielded); with two additional power contacts
Connection type 2	System
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 1.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor 2	0.08 ... 1.5 mm ² / 28 ... 14 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch
Mating cycles	1000

Physical Data

Width	30 mm / 1.181 inch
Height from upper-edge of DIN-rail	67 mm / 2.638 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	51.7 g
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Environmental Requirements

Surrounding air temperature (operation)	-40 ... +85 °C (Actuation: -35 ... +85 °C)
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	≤ 85 % (non-condensing)

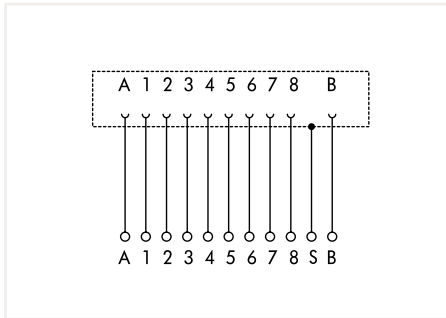
Accessories



Marking strip; for mounting carrier; 7.5 mm wide; 50 m reel

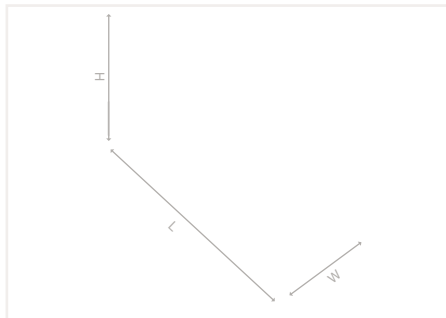
Item No.	Pack. Unit
709-178	1

Interface Module for RJ-45 Connector; with Power Contacts 289 Series



Interface Module; RJ-45; with power contacts; Double-row PCB terminal blocks; Cat. 5; with mounting carrier; with shield connection; with shield clamping saddle

Item No.	Pack. Unit
289-179	1



Electrical Data

Operating voltage	≤ 35 VAC; ≤ 50 VDC
Nominal current	2.1 A
Contact resistance (typ.)	40 mΩ
Insulation resistance	> 500 MΩ
Transmission length (max.)	100 m
Connection cable	Min. Cat. 5
WAGO Shield Clamping Saddle	11 mm wide; cable diameter up to 8 mm

Safety and Protection

Dielectric strength (contact/contact)	1 kV _{rms}
---------------------------------------	---------------------

Connection Data

Connection type 1	System
Connector 1	RJ-45 (shielded); with two additional power contacts
Connection type 2	System
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 1.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor 2	0.08 ... 1.5 mm ² / 28 ... 14 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch
Mating cycles	1000

Physical Data

Width	30 mm / 1.181 inch
Height from upper-edge of DIN-rail	67 mm / 2.638 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
---------------	-------------

Material Data

Weight	52.5 g
--------	--------

Environmental Requirements

Surrounding air temperature (operation)	-40 ... +85 °C (Actuation: -35 ... +85 °C)
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	≤ 85 % (non-condensing)

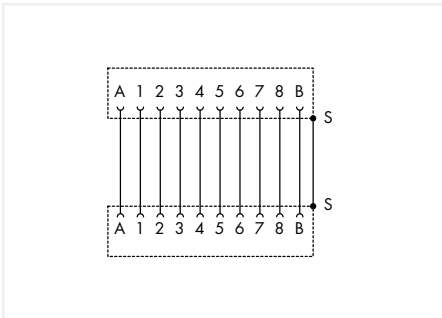
Accessories



Marking strip; for mounting carrier; 7.5 mm wide; 50 m reel

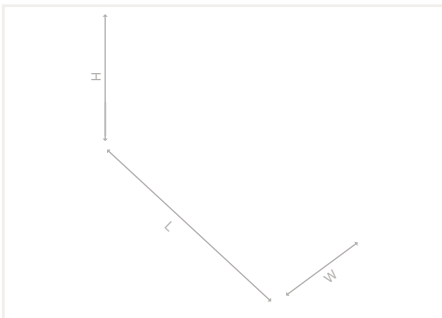
Item No.	Pack. Unit
709-178	1

Interface Module for RJ-45 Connector; with Power Contacts 289 Series



Interface Module; RJ-45; with power contacts; RJ-45; Cat. 5; with mounting carrier

Item No.	Pack. Unit
289-176	1



Electrical Data

Operating voltage	≤ 35 VAC; ≤ 50 VDC
Nominal current	2.1 A
Contact resistance (typ.)	40 mΩ
Insulation resistance	> 500 MΩ
Transmission length (max.)	100 m
Connection cable	Min. Cat. 5

Safety and Protection

Dielectric strength (contact/contact)	1 kV _{rms}
---------------------------------------	---------------------

Connection Data

Connection type 1	System
Connector 1	RJ-45 (shielded); with two additional power contacts
Connection type 2	System
Connector 2	RJ-45 (shielded); with two additional power contacts
Mating cycles	1000

Physical Data

Width	30 mm / 1.181 inch
Height from upper-edge of DIN-rail	51 mm / 2.008 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
---------------	-------------

Material Data

Weight	29.4 g
--------	--------

Environmental Requirements

Surrounding air temperature (operation)	-40 ... +85 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	≤ 85 % (non-condensing)

Accessories

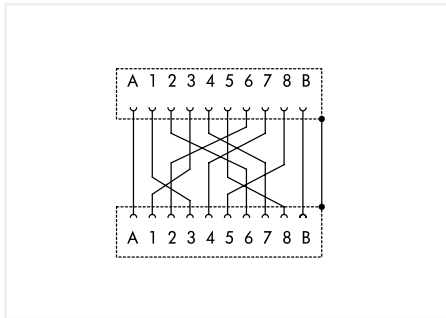
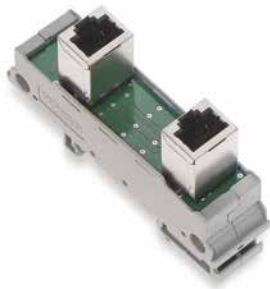


Marking strip; for mounting carrier; 7.5 mm wide; 50 m reel

Item No.	Pack. Unit
709-178	1

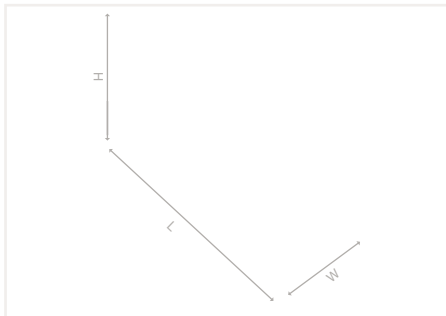
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Interface Module for RJ-45 Connector; with Power Contacts 289 Series



Interface Module; RJ-45; with cross-over power contacts; RJ-45; Cat. 5; with mounting carrier

Item No.	Pack. Unit
289-177	1



Electrical Data

Operating voltage	≤ 35 VAC; ≤ 50 VDC
Nominal current	2.1 A
Contact resistance (typ.)	40 mΩ
Insulation resistance	> 500 MΩ
Transmission length (max.)	100 m
Connection cable	Min. Cat. 5

Safety and Protection

Dielectric strength (contact/contact)	1 kV _{rms}
---------------------------------------	---------------------

Connection Data

Connection type 1	System
Connector	RJ-45 (shielded); with two additional power contacts
Connection type 2	System
Connector	RJ-45 (shielded); with two additional power contacts
Mating cycles	1000

Physical Data

Width	30 mm / 1.181 inch
Height from upper-edge of DIN-rail	51 mm / 2.008 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
---------------	-------------

Material Data

Weight	34.3 g
--------	--------

Environmental Requirements

Surrounding air temperature (operation)	-40 ... +85 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Relative humidity	≤ 85 % (non-condensing)

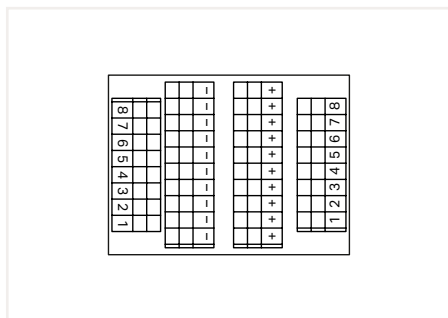
Accessories



Marking strip; for mounting carrier; 7.5 mm wide; 50 m reel

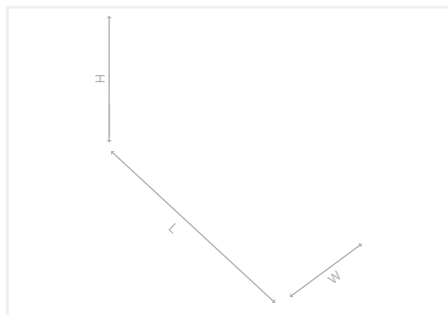
Item No.	Pack. Unit
709-178	1

Sensor/Actuator Module 289 Series



Sensor/Actuator Module; 8-channel digital input;
3 conductors; with mounting carrier

Item No.	Pack. Unit
289-664	1



Electrical Data

Operating voltage	≤ 100 VAC; ≤ 125 VDC
Total current	8 A
Current per connection (max.)	1 A

Safety and Protection

Pollution degree	2
Rated voltage	100 V
Rated surge voltage	0.8 kV

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	56 mm / 2.205 inch
Height from upper-edge of DIN-rail	34 mm / 1.339 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
---------------	-------------

Material Data

Weight	73 g
--------	------

Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)

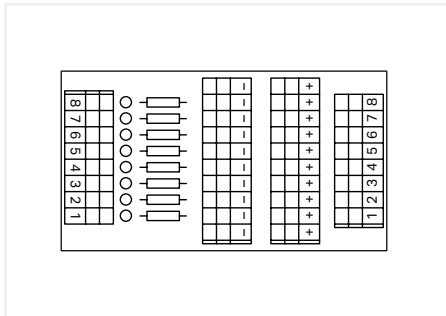
Accessories



Marking strip; for mounting carrier; 7.5 mm wide;
50 m reel

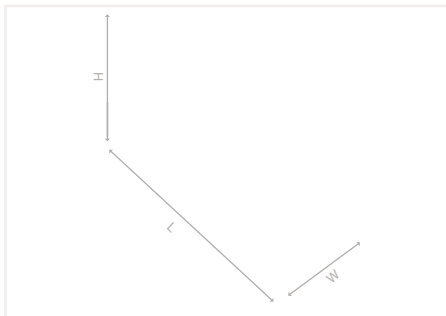
Item No.	Pack. Unit
709-178	1

Sensor/Actuator Module 289 Series



Sensor/Actuator Module; 8-channel digital input;
3 conductors; High-side switching;
Status indicator: red; with mounting carrier

Item No.	Pack. Unit
289-665	1



Electrical Data

Nominal operating voltage	24 VDC
Operating voltage range	±10 %
Total current	8 A
Current per connection (max.)	1 A
Power consumption (status indication)	5.2 mA

Safety and Protection

Pollution degree	2
Rated voltage	100 V
Rated surge voltage	0.8 kV

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	56 mm / 2.205 inch
Height from upper-edge of DIN-rail	34 mm / 1.339 inch
Depth	105 mm / 4.134 inch

Mechanical Data

Mounting type	DIN-35 rail
---------------	-------------

Material Data

Weight	83.6 g
--------	--------

Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	≤ 85 % (non-condensing)




Accessories



Marking strip; for mounting carrier; 7.5 mm wide;
50 m reel



Item No.	Pack. Unit
709-178	1

Universal Connection Cable; with pluggable connector per DIN 41651 Serie 706

Image	Connection Type 1	Pole No. 1	Connection Type 2	Pole No. 2	Cable type	Operating voltage	Current per wire (max.)	Wire cross-section	Length	Item No.
Connection cable; Pluggable connector per DIN 41651/open-ended; Female connector										
	Pluggable connector per DIN 41651; Female connector	10	open-ended	-	LiYY	≤ 35 VAC/VDC	1 A	0.14 mm ²	1 m	706-100/310-100
									2 m	706-100/310-200
									3 m	706-100/310-300
	Pluggable connector per DIN 41651; Female connector	14	open-ended	-	LiYY	≤ 35 VAC/VDC	1 A	0.14 mm ²	1 m	706-100/314-100
									2 m	706-100/314-200
									3 m	706-100/314-300
	Pluggable connector per DIN 41651; Female connector	16	open-ended	-	LiYY	≤ 35 VAC/VDC	1 A	0.14 mm ²	1 m	706-100/316-100
									2 m	706-100/316-200
									3 m	706-100/316-300
	Pluggable connector per DIN 41651; Female connector	20	open-ended	-	LiYY	≤ 35 VAC/VDC	1 A	0.14 mm ²	1 m	706-100/320-100
									2 m	706-100/320-200
									3 m	706-100/320-300
	Pluggable connector per DIN 41651; Female connector	26	open-ended	-	LiYY	≤ 35 VAC/VDC	1 A	0.14 mm ²	1 m	706-100/326-100
									2 m	706-100/326-200
									3 m	706-100/326-300
	Pluggable connector per DIN 41651; Female connector	34	open-ended	-	LiYY	≤ 35 VAC/VDC	1 A	0.14 mm ²	1 m	706-100/334-100
									2 m	706-100/334-200
									3 m	706-100/334-300
	Pluggable connector per DIN 41651; Female connector	40	open-ended	-	LiYY	≤ 35 VAC/VDC	1 A	0.14 mm ²	1 m	706-100/340-100
									2 m	706-100/340-200
									3 m	706-100/340-300
	Pluggable connector per DIN 41651; Female connector	50	open-ended	-	LiYY	≤ 35 VAC/VDC	1 A	0.14 mm ²	1 m	706-100/350-100
									2 m	706-100/350-200
									3 m	706-100/350-300
Connection cable; Pluggable connector per DIN 41651/Pluggable connector per DIN 41651; Female connector										
	Pluggable connector per DIN 41651; Female connector	10	Pluggable connector per DIN 41651; Female connector	10	LiYY	≤ 35 VAC/VDC	1 A	0.14 mm ²	1 m	706-150/310-100
									2 m	706-150/310-200
									3 m	706-150/310-300
	Pluggable connector per DIN 41651; Female connector	14	Pluggable connector per DIN 41651; Female connector	14	LiYY	≤ 35 VAC/VDC	1 A	0.14 mm ²	1 m	706-150/314-100
									2 m	706-150/314-200
									3 m	706-150/314-300
	Pluggable connector per DIN 41651; Female connector	16	Pluggable connector per DIN 41651; Female connector	16	LiYY	≤ 35 VAC/VDC	1 A	0.14 mm ²	1 m	706-150/316-100
									2 m	706-150/316-200
									3 m	706-150/316-300
	Pluggable connector per DIN 41651; Female connector	20	Pluggable connector per DIN 41651; Female connector	20	LiYY	≤ 35 VAC/VDC	1 A	0.14 mm ²	1 m	706-150/320-100
									2 m	706-150/320-200
									3 m	706-150/320-300
	Pluggable connector per DIN 41651; Female connector	26	Pluggable connector per DIN 41651; Female connector	26	LiYY	≤ 35 VAC/VDC	1 A	0.14 mm ²	1 m	706-150/326-100
									2 m	706-150/326-200
									3 m	706-150/326-300
	Pluggable connector per DIN 41651; Female connector	34	Pluggable connector per DIN 41651; Female connector	34	LiYY	≤ 35 VAC/VDC	1 A	0.14 mm ²	1 m	706-150/334-100
									2 m	706-150/334-200
									3 m	706-150/334-300
	Pluggable connector per DIN 41651; Female connector	40	Pluggable connector per DIN 41651; Female connector	40	LiYY	≤ 35 VAC/VDC	1 A	0.14 mm ²	1 m	706-150/340-100
									2 m	706-150/340-200
									3 m	706-150/340-300
	Pluggable connector per DIN 41651; Female connector	50	Pluggable connector per DIN 41651; Female connector	50	LiYY	≤ 35 VAC/VDC	1 A	0.14 mm ²	1 m	706-150/350-100
									2 m	706-150/350-200
									3 m	706-150/350-300
Note: When using more than 10 wires, the maximum current per wire must be reduced to 0.7 A.										
Connection cable; Pluggable connector per DIN 41651/Pluggable connector per DIN 41651; Female connector; compatible with 857-981 and 857-982 Interface Adapters										
	Pluggable connector per DIN 41651; Female connector	14	Pluggable connector per DIN 41651; Female connector	14	LiYY	≤ 35 VAC/VDC	2 A	0.14 mm ²	1 m	706-753/300-100
									2 m	706-753/300-200
									3 m	706-753/300-300
	Pluggable connector per DIN 41651; Female connector	16	Pluggable connector per DIN 41651; Female connector	16	LiYY	≤ 35 VAC/VDC	2 A	0.14 mm ²	1 m	706-753/301-100
									2 m	706-753/301-200
									3 m	706-753/301-300
Note: When using more than 10 wires, the maximum current per wire must be reduced to 0.7 A.										

6

Universal Connection Cable; with D-sub pluggable connector Serie 706

Image	Connection Type 1	Pole No. 1	Connection Type 2	Pole No. 2	Cable type	Operating voltage	Current per wire (max.)	Wire cross-section	Length	Item No.
Connection cable; D-sub/open-ended; Male connector										
	D-sub; Male connector	9	open-ended	-	LiYCY	≤ 35 VAC/VDC	2 A	0.25 mm ²	1 m	706-100/509-100
									2 m	706-100/509-200
									3 m	706-100/509-300
	D-sub; Male connector	15	open-ended	-	LiYCY	≤ 35 VAC/VDC	2 A	0.25 mm ²	1 m	706-100/515-100
									2 m	706-100/515-200
									3 m	706-100/515-300
	D-sub; Male connector	25	open-ended	-	LiYCY	≤ 35 VAC/VDC	2 A	0.25 mm ²	1 m	706-100/525-100
									2 m	706-100/525-200
									3 m	706-100/525-300
	D-sub; Male connector	37	open-ended	-	LiYCY	≤ 35 VAC/VDC	2 A	0.25 mm ²	1 m	706-100/537-100
									2 m	706-100/537-200
									3 m	706-100/537-300
	D-sub; Male connector	50	open-ended	-	LiYCY	≤ 35 VAC/VDC	2 A	0.25 mm ²	1 m	706-100/550-100
									2 m	706-100/550-200
									3 m	706-100/550-300
Connection cable; D-sub/open-ended; Female connector										
	D-sub; Female connector	9	open-ended	-	LiYCY	≤ 35 VAC/VDC	2 A	0.25 mm ²	1 m	706-100/609-100
									2 m	706-100/609-200
									3 m	706-100/609-300
	D-sub; Female connector	15	open-ended	-	LiYCY	≤ 35 VAC/VDC	2 A	0.25 mm ²	1 m	706-100/615-100
									2 m	706-100/615-200
									3 m	706-100/615-300
	D-sub; Female connector	25	open-ended	-	LiYCY	≤ 35 VAC/VDC	2 A	0.25 mm ²	1 m	706-100/625-100
									2 m	706-100/625-200
									3 m	706-100/625-300
	D-sub; Female connector	37	open-ended	-	LiYCY	≤ 35 VAC/VDC	2 A	0.25 mm ²	1 m	706-100/637-100
									2 m	706-100/637-200
									3 m	706-100/637-300
	D-sub; Female connector	50	open-ended	-	LiYCY	≤ 35 VAC/VDC	2 A	0.25 mm ²	1 m	706-100/650-100
									2 m	706-100/650-200
									3 m	706-100/650-300
Connection cable; D-sub/D-sub; Male connector/Female connector										
	D-sub; Male connector	9	D-sub; Female connector	9	LiYCY	≤ 35 VAC/VDC	2 A	0.25 mm ²	1 m	706-160/509-100
									2 m	706-160/509-200
									3 m	706-160/509-300
	D-sub; Male connector	15	D-sub; Female connector	15	LiYCY	≤ 35 VAC/VDC	2 A	0.25 mm ²	1 m	706-160/515-100
									2 m	706-160/515-200
									3 m	706-160/515-300
	D-sub; Male connector	25	D-sub; Female connector	25	LiYCY	≤ 35 VAC/VDC	2 A	0.25 mm ²	1 m	706-160/525-100
									2 m	706-160/525-200
									3 m	706-160/525-300
	D-sub; Male connector	37	D-sub; Female connector	37	LiYCY	≤ 35 VAC/VDC	2 A	0.25 mm ²	1 m	706-160/537-100
									2 m	706-160/537-200
									3 m	706-160/537-300
	D-sub; Male connector	50	D-sub; Female connector	50	LiYCY	≤ 35 VAC/VDC	2 A	0.25 mm ²	1 m	706-160/550-100
									2 m	706-160/550-200
									3 m	706-160/550-300

Note: When using more than 10 wires, the maximum current per wire must be reduced to 1 A.

Connection Cable; Paired with an Interface Adapter 706 Series



Connection Cable; 10-pole;
DIN 41651 connector; open-ended; Conductor cross
section: 0.14 mm²/24 AWG; UR components

Length	Item No.	Pack. Unit
2 m	706-100/1301-200	1

Color coding acc. to DIN VDE 47100		HE 10 10-pol. Contact number
white		1
brown		2
green		3
yellow		4
grey		5
pink		6
blue		7
red		8
black		9
violet		10

Note:

When using more than 10 wires, the maximum current per wire must be reduced to 0.7 A.

Electrical Data

Operating voltage	≤ 35 VDC
Current per wire (max.)	1 A

Safety and Protection

Degree of protection	IP20
----------------------	------

Connection Data

Connectors	1 x 10-pole DIN 41651 connector; open-ended
Color code	DIN VDE 47100
Wire cross section	0.14 mm ² /24 AWG LiYY

Physical Data

Cable length	2 m
--------------	-----

Material Data

Weight	162 g
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Environmental Requirements















Surrounding air temperature (operation)	-25 ... +70 °C
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Connection Cable; Paired with an Interface Adapter 706 Series



Connection Cable; 14-pole;
DIN 41651 connector; open-ended; Conductor cross
section: 0.14 mm²/24 AWG; UR components

Length	Item No.	Pack. Unit
2 m	706-100/1303-200	1

Color coding		HE 10 14-pole
acc. to DIN VDE 47100		Contact number
white		1
brown		2
green		3
yellow		4
grey		5
pink		6
blue		7
red		8
black		9
violet		10
grey/pink		11
red/blue		12
white/green		13
brown/green		14

Note:

When using more than 10 wires, the maximum current per wire must be reduced to 0.7 A.

Electrical Data

Operating voltage	≤ 35 VDC
Current per wire (max.)	1 A

Safety and Protection

Degree of protection	IP20
----------------------	------

Connection Data

Connectors	1 x 14-pole connector per DIN 41651; open-ended
Color code	DIN VDE 47100
Wire cross section	0.14 mm ² /24 AWG LiYY

Physical Data

Cable length	2 m
--------------	-----

Material Data

Weight	199 g
--------	-------

Environmental Requirements

Surrounding air temperature (operation)	-25 ... +70 °C
---	----------------

Connection Cable; Paired with an Interface Adapter 706 Series



Connection Cable; 16-pole;
DIN 41651 connector; open-ended; Conductor cross
section: 0.14 mm²/24 AWG; UR components

Length	Item No.	Pack. Unit
2 m	706-100/1602-200	1

Color Coding		HE 10 16-pole
acc. to DIN VDE 47100		Contact Number
white		1
brown		2
green		3
yellow		4
gray		5
pink		6
blue		7
red		8
black		9
violet		10
gray/pink		11
red/blue		12
white/green		13
brown/green		14
white/yellow		15
yellow/brown		16

Note:

When using more than 10 wires, the maximum current per wire must be reduced to 0.7 A.

Electrical Data	
Operating voltage	≤ 35 VDC
Current per wire (max.)	1 A
Safety and Protection	
Degree of protection	IP20
Connection Data	
Connectors	1 x 16-pole connector per DIN 41651; open-ended
Color code	DIN VDE 47100
Wire cross section	0.14 mm ² /24 AWG LiYY
Physical Data	
Cable length	2 m
Material Data	
Weight	202 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C

Connection Cable; Paired with an Interface Adapter 706 Series



Connection Cable; 20-pole;
DIN 41651 connector; open-ended; Conductor cross
section: 0.14 mm²/24 AWG; UR components

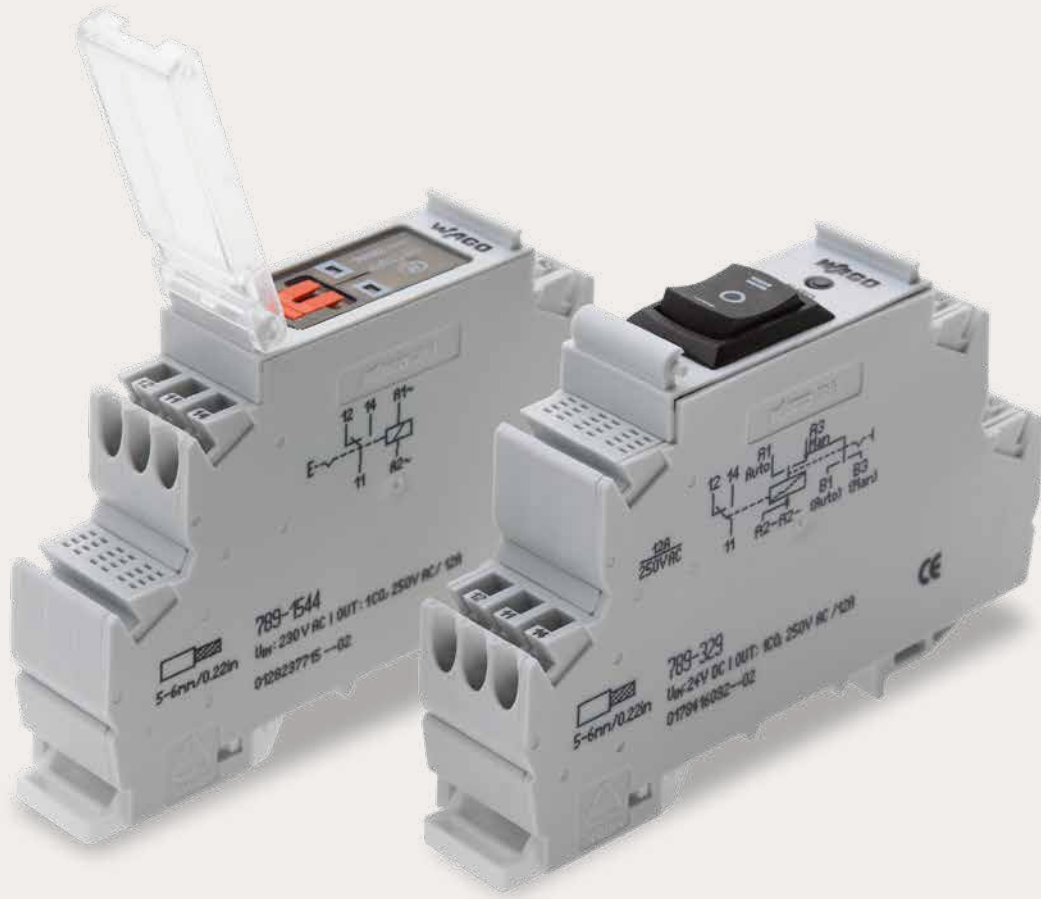
Length	Item No.	Pack. Unit
2 m	706-100/1300-200	1

Color coding acc. to DIN VDE 47100		HE 10 20-pole Contact number
white		1
brown		2
green		3
yellow		4
gray		5
pink		6
blue		7
red		8
black		9
violet		10
grey/pink		11
red/blue		12
white/green		13
brown/green		14
white/yellow		15
yellow/brown		16
white/grey		17
grey/brown		18
white/pink		19
pink/brown		20

Note:






When using more than 10 wires, the maximum current per wire must be reduced to 0.7 A.

Electrical Data	
Operating voltage	≤ 35 VDC
Current per wire (max.)	1 A
Safety and Protection	
Degree of protection	IP20
Connection Data	
Connectors	1 x 20-pole connector per DIN 41651; open-ended
Color code	DIN VDE 47100
Wire cross section	0.14 mm ² /24 AWG LiYY
Physical Data	
Cable length	2 m
Material Data	
Weight	176.6 g
Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +70 °C



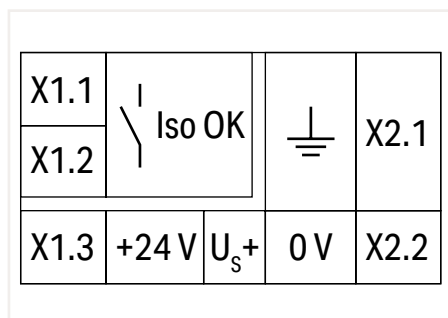
WAGO Interface Modules with Specialty Functions

WAGO Interface Modules with Specialty Functions

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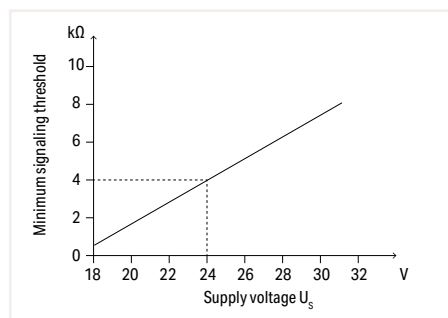
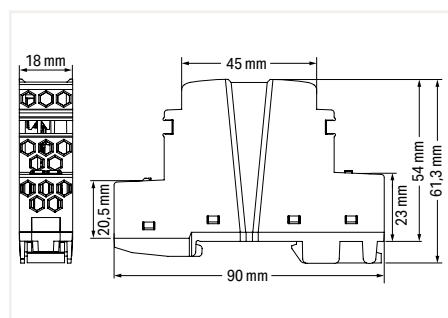
Ground Resistance Signaling Module

789 Series

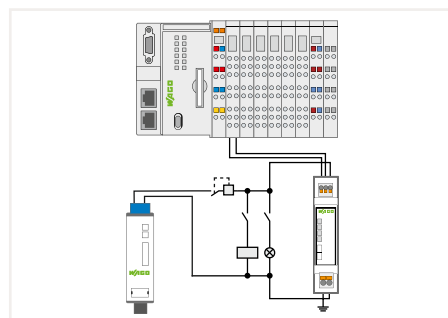


Ground resistance signaling module; Ground fault alarm via digital output; Supply voltage: 24 VDC; Module width: 18 mm

Item No.	Pack. Unit
789-665	1



Signaling threshold characteristic



Supply	
Nominal supply voltage U_S	24 VDC (SELV)
Supply voltage range	DC 18 ... 31.2 V
Current consumption at nominal supply voltage	≤ 40 mA
Power Consumption P_C	≤ 1.7 W
Current at ground fault (24 VDC) (max.)	56 mA

Signaling	
Operation status indicator	1 x LED "Status OK" (green);
Signaling	1 x LED "Iso Alarm" (red); 1 x LED "Iso Alarm" 24 V – Ground (yellow); 1 x LED "Iso Alarm" 0 V – Ground (yellow); 1 x Signal output "Iso OK"

Iso OK Contact	
Switching voltage (max.)	48 VDC (SELV)
Continuous current (max.)	500 mA (for general use)
Number of Iso OK contacts connected in series (max.)	25 (Limit value type: 1); 32 (Limit value type: 2 and 3) (per IEC 61131)
Function	1 make contact (NO); closed with applied power supply and insulation resistance > limit value

Fuse Protection	
External fuse (required)	The fuse must be placed in the output circuit of the power supply. The fuse must be adapted to the power supply used and must trip safely in case of a short circuit. The module is designed for use with a 10 A (max.) fuse or with a 10 ADC (max.) circuit breaker (characteristic B or C).

Safety and Protection	
Pollution degree	2
Overtoltage category	II
Protection class	IP20
Test voltage (supply/"Iso OK" contact)	1.5 kVAC; 50 ... 60 Hz; 1 min

Mode: grounded control circuit	
Response value for alarm at nominal supply voltage	4 kΩ (at $U_S = 24$ V, for other values of U_S see signaling threshold characteristic)
Hysteresis (typ.)	1 kΩ
Response time	10 s

Mode: ungrounded control circuit	
Response value for alarm at nominal supply voltage	4 kΩ (at $U_S = 24$ V, for other values of U_S see signaling threshold characteristic)
Hysteresis (typ.)	1 kΩ
Response time	1 s

Environmental Requirements	
Surrounding air temperature (operation)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Temperature range of the connecting cable according to EN 61010-2-201	$\geq (T_{\text{surrounding air}} + 10$ K)
Relative humidity	5 ... 95 % (non-condensing)
Operating altitude (max.)	3000 m

Connection Data	
Connection type 1	X1.x
Connection technology 1	Push-in CAGE CLAMP®
WAGO Connector 1	picoMAX® eCOM
Solid conductor 1	0.25 ... 1.5 mm ² / 24 ... 14 AWG
Fine-stranded conductor 1	0.25 ... 1.5 mm ² / 24 ... 14 AWG
Fine-stranded conductor; with insulated ferrule 1	0.25 ... 0.75 mm ²
Fine-stranded conductor; with uninsulated ferrule 1	0.25 ... 1.5 mm ²
Strip length 1	8 ... 9 mm / 0.31 ... 0.35 inch
Connection type 2	X2.x
Connection technology 2	Push-in CAGE CLAMP®
WAGO Connector 2	picoMAX® eCOM
Solid conductor 2	0.2 ... 2.5 mm ² / 24 ... 12 AWG
Fine-stranded conductor 2	0.2 ... 2.5 mm ² / 24 ... 12 AWG
Fine-stranded conductor; with insulated ferrule 2	0.25 ... 1.5 mm ²
Fine-stranded conductor; with uninsulated ferrule 2	0.25 ... 2.5 mm ²
Strip length 2	9 ... 10 mm / 0.35 ... 0.39 inch

Short Description

The product signals a value falling below a non-adjustable, asymmetric isolation resistance between +24 V or 0 V of the supply voltage and ground by means of a potential-free contact ("Iso OK") and status LED. The "Iso OK" contact can be evaluated via a PLC.

This status is maintained until the next measurement interval.

Operation with Grounded Control Circuit (Functional Potential Equalization)

- The module establishes an internal connection between the 0 V (X2.2) and ground (X2.1) connections via a semiconductor switch.
- At 10 s intervals, the connection between 0 V and ground is interrupted for 0.5 s, and the isolation resistance between +24 V (X1.3) or 0 V (X2.2) of the supply voltage and earth (X2.1) is determined.
- The grounding connection on the module does not meet the requirements of a protective earth terminal (PE). It serves as a functional ground. The measurement method does not involve the module establishing any permanent connection between 0 V and ground.

Operation with Ungrounded Control Circuit

- In this operating mode, the semiconductor switch to establish a connection between 0 V (X2.2) and ground (X2.1) is deactivated. At 1 s intervals, the isolation resistance offset is determined for 0.5 s.
- The module does not meet the requirements of an isolation monitoring device per EN 61557-8.

"Iso OK" Contact

- The potential-free contact serves the purpose of supporting evaluation (e.g., via a PLC) of looming isolation faults.
- This contact must not be used to switch safety-related products that could cause the circuit to switch off.

Physical Data

Width	18 mm
Depth from upper edge of DIN-rail	51 mm
Height	90 mm

Mechanical Data

Mounting type	DIN-35 rail
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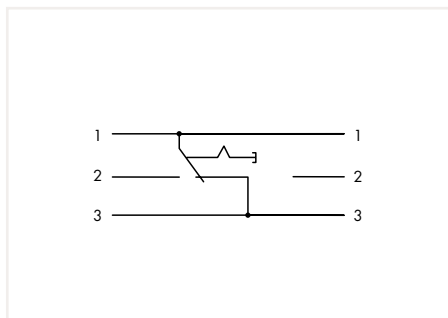
Material Data

Weight	47 g
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Standards and Specifications

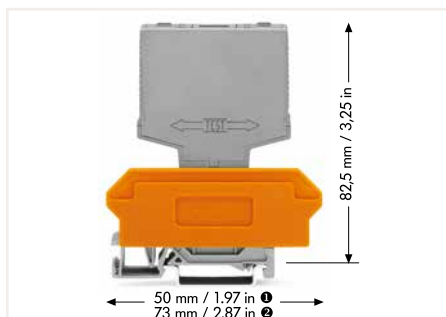
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-3; EN 61000-6-4
Standards/Specifications	UL 61010-2-201

Switching Module 286 Series



Switching Module; with changeover rocker switch;
Switching voltage: 250 VAC; Switching current: 6 A

Item No.	Pack. Unit
286-895	1



Electrical Data

Switching voltage (max.) AC	250 V
Switching voltage (max.) DC	24 V
Switching current (resistive) max.	6 A
Electrical life (NO; resistive load; 23 °C)	50 x 10 ³ switching operations
Contact gap	≥ 3 mm

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	85 mm / 3.346 inch
Depth	52 mm / 2.047 inch

Mechanical Data

Mounting type	Pluggable module for receptacle terminal blocks
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Material Data

Weight	20.5 g
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Environmental Requirements

Surrounding air temperature (operation)	-20 ... +40 °C
Relative humidity	5 ... 85 % (no condensation permissible)
Operating altitude (max.)	2000 m

Accessories



Terminal block for pluggable modules; 6-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-619	30



Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-609	30



Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

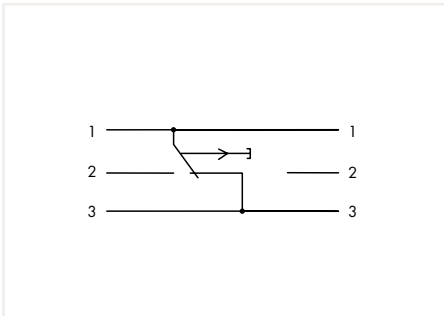
Item No.	Pack. Unit
280-763	25



WSB marker card; white; for 5 ... 17.5 mm terminal block width; 10 strips with 10 markers/card

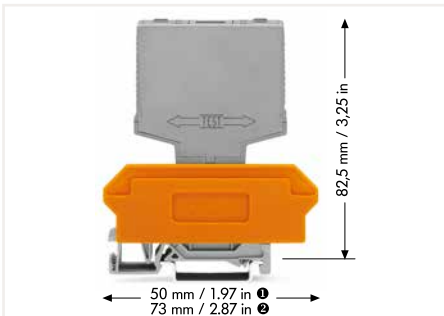
Marking	Item No.	Pack. Unit
1 ... 10	209-702	5
S	209-682	5

Switching Module 286 Series



Switching Module; with momentary switch;
Switching voltage: 250 VAC; Switching current: 6 A

	Item No.	Pack. Unit
	286-896	1



Electrical Data

Switching voltage (max.) AC	250 V
Switching voltage (max.) DC	24 V
Switching current (resistive) max.	6 A
Electrical life (NO; resistive load; 23 °C)	50 x 10 ³ switching operations
Contact gap	≥ 3 mm

Physical Data

Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	85 mm / 3.346 inch
Depth	52 mm / 2.047 inch

Mechanical Data

Mounting type	Pluggable module for receptacle terminal blocks
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Material Data

Weight	19.5 g
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Environmental Requirements

Surrounding air temperature (operation)	-20 ... +40 °C
Relative humidity	5 ... 85 % (no condensation permissible)
Operating altitude (max.)	2000 m

Accessories



Terminal block for pluggable modules; 6-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

	Item No.	Pack. Unit
	280-619	30



Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

	Item No.	Pack. Unit
	280-609	30



Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

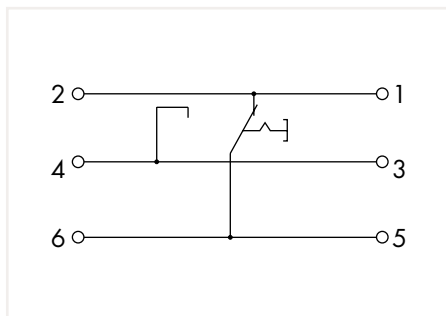
	Item No.	Pack. Unit
	280-763	25



WSB marker card; white; for 5 ... 17.5 mm terminal block width; 10 strips with 10 markers/card

Marking	Item No.	Pack. Unit
1 ... 10	209-702	5
S	209-682	5

Switching Module 2042 Series



Switching Module; with changeover rocker switch;
Switching voltage: 250 VAC

	Item No.	Pack. Unit
	2042-1008	10

Technical Data

Switching voltage (max.)	250 VAC
Switching current (max.)	10 A
Inrush current (max.)	128 A
Contact resistance	≤ 20 mΩ
Electrical life (NO; resistive load; 23 °C)	10 x 10 ³ switching operations (UL: 6 x 10 ³ switching operations)

Safety and Protection

Dielectric strength, open contact (AC, 1 min)	1.5 kV _{rms}
Rated voltage	250 V
Insulation resistance	≥ 100 MΩ (500 VDC; new condition)
Overtoltage category	II
Pollution degree	2
Protection class	IP20

Physical Data

Width	15.5 mm / 0.61 inch
Height	87 mm / 3.425 inch
Height from the surface	68 mm / 2.677 inch
Depth	52 mm / 2.047 inch

Mechanical Data

Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
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Material Data

Flammability class per UL94	V0
Weight	78.4 g

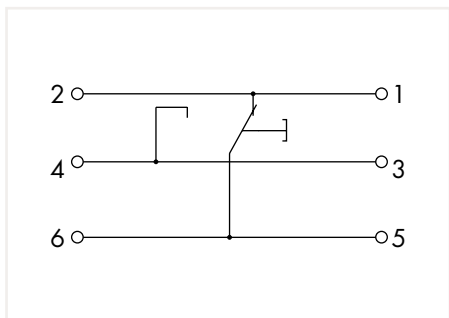
Environmental Requirements

Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Operating altitude (max.)	2000 m

Standards and Specifications

Conformity marking	CE
Standards/specifications	EN 61010-2-201; EN 50155; EN 61373

Switching Module 2042 Series



Switching Module; with momentary switch;
Switching voltage: 250 VAC

	Item No.	Pack. Unit
	2042-1108	10

Technical Data

Switching voltage (max.)	250 VAC
Switching current (max.)	10 A
Inrush current (max.)	128 A
Contact resistance	≤ 20 mΩ
Electrical life (NO; resistive load; 23 °C)	10 x 10 ³ switching operations (UL: 6 x 10 ³ switching operations)

Safety and Protection

Dielectric strength, open contact (AC, 1 min)	1.5 kV _{rms}
Rated voltage	250 V
Insulation resistance	≥ 100 MΩ (500 VDC; new condition)
Overtoltage category	II
Pollution degree	2
Protection class	IP20

Physical Data

Width	15.5 mm / 0.61 inch
Height	87 mm / 3.425 inch
Height from the surface	68 mm / 2.677 inch
Depth	52 mm / 2.047 inch

Mechanical Data

Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
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Material Data

Flammability class per UL94	V0
Weight	78.4 g

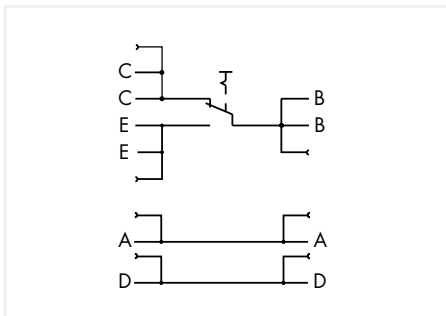
Environmental Requirements

Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Operating altitude (max.)	2000 m

Standards and Specifications

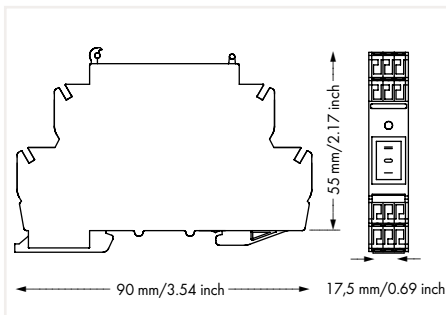
Conformity marking	CE
Standards/specifications	EN 61010-2-201; EN 50155; EN 61373

Switching Module 789 Series



Switching Module; with changeover rocker switch;
Switching voltage: 250 VAC; Switching current: 10 A

Item No.	Pack. Unit
789-800	1



Electrical Data

Switching voltage (max.)	≤ 250 VAC
Switching current (resistive) max.	10 A
Inrush current (max.)	100 A (capacitive)
Contact gap	≥ 3 mm
Contact resistance	≤ 100 mΩ (12 V / 1 ADC, new condition)
Insulation resistance	> 100 MΩ (500 VDC, new condition)
Electrical life (NO; resistive load; 23 °C)	10 x 10 ³ switching operations
Mechanical life	100 x 10 ³ switching operations

Safety and Protection

Pollution degree	2
Rated voltage	250 V
Rated surge voltage	4 kV
Dielectric strength, open contact (AC, 1 min)	1.25 kV _{rms}

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0,2 ... 2,5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0,2 ... 2,5 mm ² / 24 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

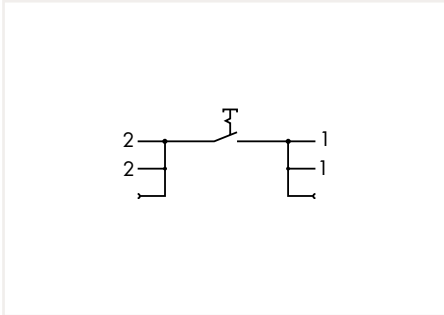
Weight	41.7 g
Contact material	Ag alloy

Environmental Requirements

Surrounding air temperature (operation)	-20 ... +55 °C
Surrounding air temperature (storage)	-40 ... +80 °C

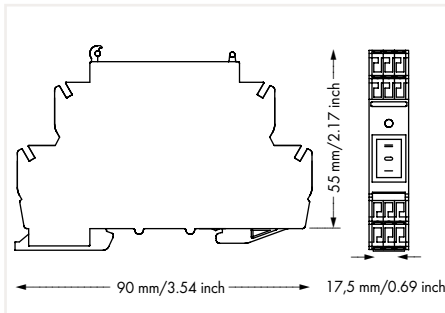
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Switching Module 789 Series



Switching Module; with off switch;
Switching voltage: 250 VAC; Switching current: 16 A

	Item No.	Pack. Unit
	789-801	1



Electrical Data	
Switching voltage (max.)	≤ 250 VAC
Switching current (resistive) max.	16 A
Inrush current (max.)	100 A (capacitive)
Contact gap	≥ 3 mm
Contact resistance	≤ 100 mΩ (12 V / 1 ADC, new condition)
Insulation resistance	> 100 MΩ (500 VDC, new condition)
Electrical life (NO; resistive load; 23 °C)	10 x 10 ³ switching operations
Mechanical life	50 x 10 ³ switching operations

Safety and Protection	
Pollution degree	2
Rated voltage	250 V
Rated surge voltage	4 kV
Dielectric strength, open contact (AC, 1 min)	1.25 kV _{rms}

Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0,2 ... 2,5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0,2 ... 2,5 mm ² / 24 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

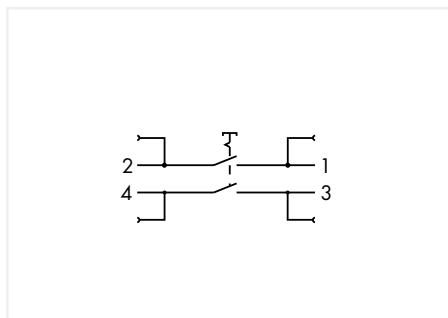
Physical Data	
Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch

Mechanical Data	
Mounting type	DIN-35 rail

Material Data	
Weight	41.7 g
Contact material	Ag alloy

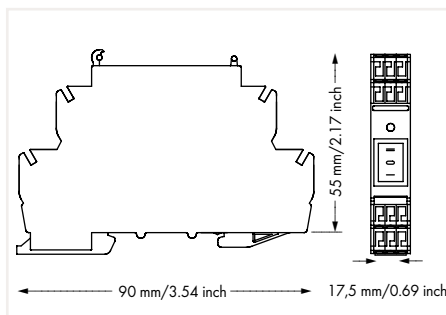
Environmental Requirements	
Surrounding air temperature (operation)	-20 ... +55 °C
Surrounding air temperature (storage)	-40 ... +80 °C

Switching Module 789 Series



Switching Module; with 2-pole off switch;
Switching voltage: 250 VAC; Switching current: 16 A

Item No.	Pack. Unit
789-802	1



Electrical Data

Switching voltage (max.)	≤ 250 VAC
Switching current (resistive) max.	16 A
Inrush current (max.)	100 A (capacitive)
Contact gap	≥ 3 mm
Contact resistance	≤ 100 mΩ (12 V / 1 ADC, new condition)
Insulation resistance	> 100 MΩ (500 VDC, new condition)
Electrical life (NO; resistive load; 23 °C)	10 x 10 ³ switching operations
Mechanical life	50 x 10 ³ switching operations

Safety and Protection

Pollution degree	2
Rated voltage	250 V
Rated surge voltage	4 kV
Dielectric strength, open contact (AC, 1 min)	1.25 kV _{rms}

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0,2 ... 2,5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0,2 ... 2,5 mm ² / 24 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch

Mechanical Data

Mounting type	DIN-35 rail
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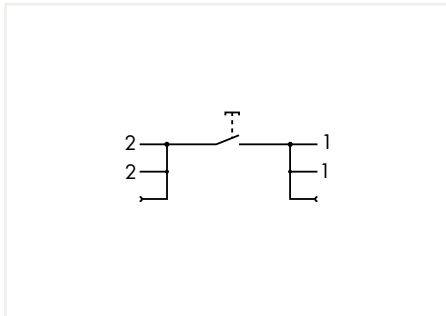
Material Data

Weight	45.9 g
Contact material	Ag alloy

Environmental Requirements

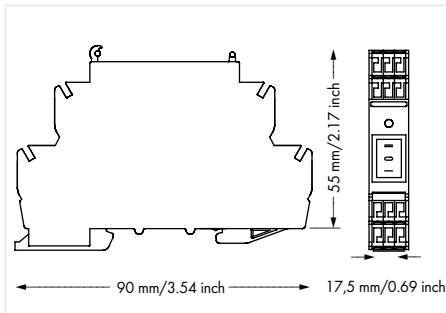
Surrounding air temperature (operation)	-20 ... +55 °C
Surrounding air temperature (storage)	-40 ... +80 °C

Switching Module 789 Series



Switching Module; with off button;
Switching voltage: 250 VAC; Switching current: 16 A

Item No.	Pack. Unit
789-803	1



Electrical Data

Switching voltage (max.)	≤ 250 VAC
Switching current (resistive) max.	16 A
Inrush current (max.)	100 A (capacitive)
Contact gap	≥ 3 mm
Contact resistance	≤ 100 mΩ (12 V / 1 ADC, new condition)
Insulation resistance	> 100 MΩ (500 VDC, new condition)
Electrical life (NO; resistive load; 23 °C)	10 x 10 ³ switching operations
Mechanical life	50 x 10 ³ switching operations

Safety and Protection

Pollution degree	2
Rated voltage	250 V
Rated surge voltage	4 kV
Dielectric strength, open contact (AC, 1 min)	1.25 kV _{rms}

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0,2 ... 2,5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0,2 ... 2,5 mm ² / 24 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch

Mechanical Data

Mounting type	DIN-35 rail
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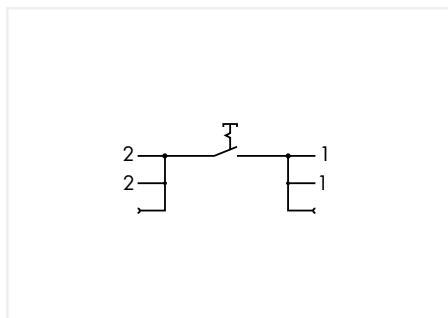
Material Data

Weight	42.4 g
Contact material	Ag alloy

Environmental Requirements

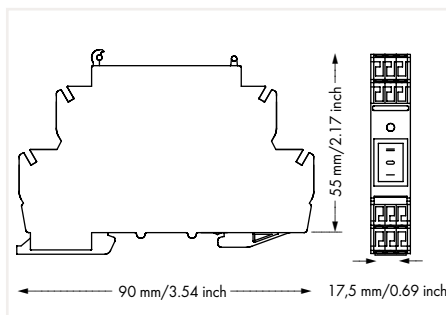
Surrounding air temperature (operation)	-20 ... +55 °C
Surrounding air temperature (storage)	-40 ... +80 °C

Switching Module 789 Series



Switching Module; with off button;
Switching voltage: 250 VAC; Switching current: 16 A

Item No.	Pack. Unit
789-804	1



Electrical Data

Switching voltage (max.)	≤ 250 VAC
Switching current (resistive) max.	16 A
Inrush current (max.)	100 A (capacitive)
Contact gap	≥ 3 mm
Contact resistance	≤ 100 mΩ (12 V / 1 ADC, new condition)
Insulation resistance	> 100 MΩ (500 VDC, new condition)
Electrical life (NO; resistive load; 23 °C)	10 x 10 ³ switching operations
Mechanical life	50 x 10 ³ switching operations

Safety and Protection

Pollution degree	2
Rated voltage	250 V
Rated surge voltage	4 kV
Dielectric strength, open contact (AC, 1 min)	1.25 kV _{rms}

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0,2 ... 2,5 mm ² / 24 ... 14 AWG
Fine-stranded conductor	0,2 ... 2,5 mm ² / 24 ... 14 AWG
Strip Length	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

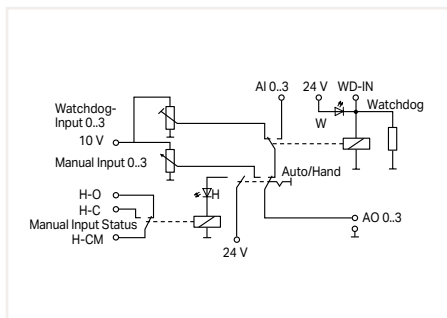
Weight	40.8 g
Contact material	Ag alloy

Environmental Requirements

Surrounding air temperature (operation)	-20 ... +55 °C
Surrounding air temperature (storage)	-40 ... +80 °C

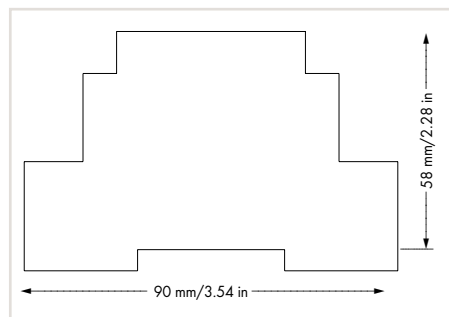
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Manual Operation Module 789 Series



Manual Operation Module; 4 analog outputs

	Item No.	Pack. Unit
	789-811	1



Short description:

The 789-811 Analog Manual Operation Module monitors 0 ... 3 analog inputs. Depending on both manual/automatic switch and watchdog input, 0 to 10 V set voltage is transmitted to the output.

Electrical Data

Nominal operating voltage	24 VDC
Operating voltage range	±20 %
Inputs	No. 1 / 10: 24 V; Power supply; No. 2: GND; No. 3 / 4 / 5 / 6: AI-0 ... 3; Input 0 ... 3; 0 ... 10 V / max. 20 mA; No. 11: WD-IN; Watchdog input; 24 V / max. 20 mA
Outputs	No. 7: H-C; Manual operation; "closed"; No. 8: H-CM; Manual operation; "common"; No. 9: H-O; Manual operation; "open"; No. 12 / 15 / 18 / 21: DO-0 ... 3-NC; Channel 0 ... 3; Break contact; 250 VAC / 30 VDC; 8 A; No. 13 / 16 / 19 / 22: DO-0 ... 3-CM; Channel 0 ... 3; Common; No. 14 / 17 / 20 / 23: DO-0 ... 3-NO; Channel 0 ... 3; Make contact; 250 VAC / 30 VDC; 8 A

Connection Data

Connection technology 1	CAGE CLAMP®
Solid conductor 1	0.08 ... 1.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor 1	0.08 ... 1.5 mm ² / 28 ... 14 AWG
Strip length 1	7 mm / 0.28 inch
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	106 mm / 4.173 inch
Height from upper-edge of DIN-rail	58 mm / 2.283 inch
Depth	90 mm / 3.543 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

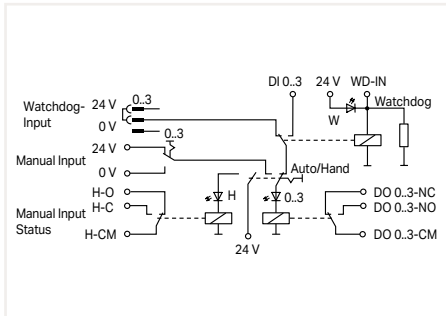
Weight	199.5 g
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Environmental Requirements

Surrounding air temperature (operation)	0 ... 50 °C
Surrounding air temperature (storage)	-25 ... +70 °C

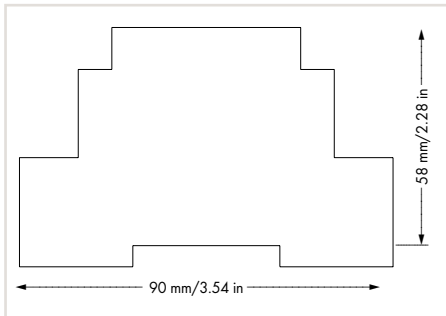
Manual Operation Module

789 Series



Manual Operation Module; 4 digital outputs

Item No.	Pack. Unit
789-810	1



Short description:

The 789-810 Digital Manual Operation Module monitors 0 ... 3 inputs and indicates their status via green LED and power relay's changeover contact. Depending on both the manual/automatic switch and watchdog input, the states 0 or 1 are transmitted (electrically isolated) via relay to the output.

Electrical Data	
Nominal operating voltage	24 VDC
Operating voltage range	±20 %
Inputs	No. 1 / 10: 24 V; Power supply; No. 2: GND; No. 3 / 4 / 5 / 6: DI-0 ... 3; Input 0 ... 3; 24 V / max. 20 mA; No. 11: WD-IN; Watchdog input; 24 V / max. 20 mA
Outputs	No. 7: H-C; Manual operation; "closed"; No. 8: H-CM; Manual operation; "common"; No. 9: H-O; Manual operation; "open"; No. 12 / 15 / 18 / 21: GND; No. 13 / 16 / 19 / 22: AO-0 ... 3; Output 0 ... 3; 0 ... 10 V / max. 20 mA; No. 14 / 17 / 20 / 23: GND

Safety and Protection	
Dielectric strength (input/output)	4 kV _{rms}
Connection Data	
Connection technology 1	CAGE CLAMP®
Solid conductor 1	0.08 ... 1.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor 1	0.08 ... 1.5 mm ² / 28 ... 14 AWG
Strip length 1	7 mm / 0.28 inch
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	8 ... 9 mm / 0.31 ... 0.35 inch

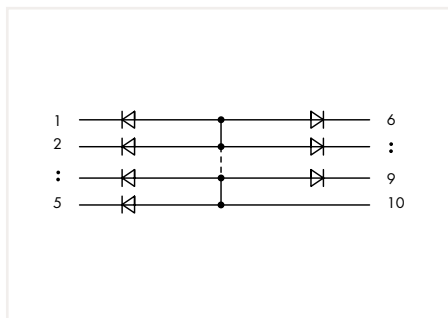
Physical Data	
Width	106 mm / 4.173 inch
Height from upper-edge of DIN-rail	58 mm / 2.283 inch
Depth	90 mm / 3.543 inch

Mechanical Data	
Mounting type	DIN-35 rail

Material Data	
Weight	251.6 g

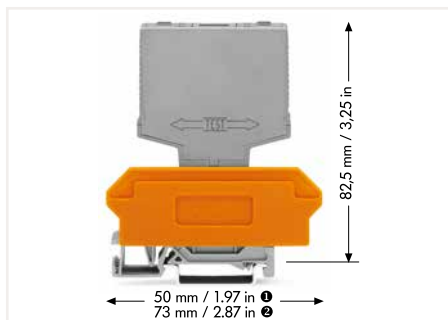
Environmental Requirements	
Surrounding air temperature (operation)	0 ... 50 °C
Surrounding air temperature (storage)	-25 ... +70 °C

Component Module with Diodes 286 Series



Component Module with a Diode; 1N4007 diode;
with common anode; plugs into rail-mount terminal
block; 10 mm wide

Module Width	Diodes	Item No.	Pack. Unit
10 mm/0.394 inch	3	286-803	1
15 mm/0.591 inch	5	286-805	1
20 mm/0.787 inch	7	286-807	1
25 mm/0.984 inch	9	286-809	1



Note:

Max. admissible current per the manufacturer's data sheet
– with all diodes loaded, the continuous current must be
reduced.

Electrical Data

Operating voltage	≤ 250 VAC/DC
Rectified current for each diode (resistive)	1 A
Peak reverse voltage	1000 V

Safety and Protection

Pollution degree	2
Rated voltage	250 V
Rated surge voltage	4 kV

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.25 inch
Depth	52 mm / 2.047 inch

Mechanical Data

Mounting type	Pluggable module for receptacle terminal blocks
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Material Data

Weight	14.4 g
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Environmental Requirements

Surrounding air temperature (operation)	-25 ... +40 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Component Module with Diodes 286 Series

Accessories



Terminal block for pluggable modules; 4-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Width	Item No.	Pack. Unit
12 mm	280-618	40



Terminal block for pluggable modules; 8-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Width	Item No.	Pack. Unit
12 mm	280-608	40



Terminal block for pluggable modules; 8-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Width	Item No.	Pack. Unit
15 mm	280-762	30



Terminal block for pluggable modules; 6-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Width	Item No.	Pack. Unit
17 mm	280-619	30



Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Width	Item No.	Pack. Unit
17 mm	280-609	30



Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Width	Item No.	Pack. Unit
20 mm	280-763	25



Terminal block for pluggable modules; 8-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Width	Item No.	Pack. Unit
22 mm	280-638	20



Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Width	Item No.	Pack. Unit
22 mm	280-628	20



Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Width	Item No.	Pack. Unit
25 mm	280-764	20



Terminal block for pluggable modules; 10-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Width	Item No.	Pack. Unit
27 mm	280-639	15



Terminal block for pluggable modules; 20-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

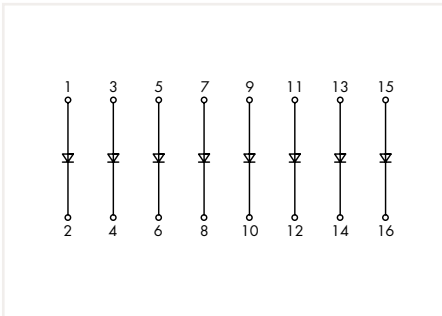
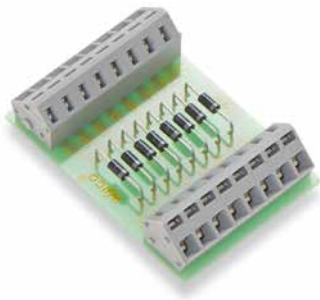
Width	Item No.	Pack. Unit
27 mm	280-629	15



Terminal block for pluggable modules; 20-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

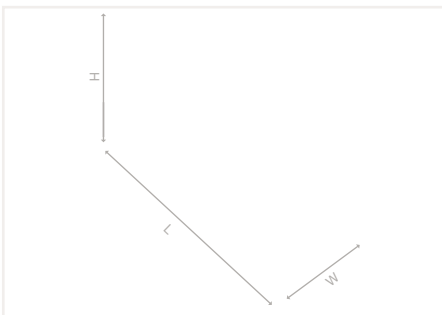
Width	Item No.	Pack. Unit
30 mm	280-765	15

Component Module with Diodes 289 Series



Component Module with Diodes; with 8 diodes;
1N4007 diode

Item No.	Pack. Unit
289-101	1



Notice!

Live parts are likely to be touched! Protection against direct contact must be provided by the equipment manufacturer, e.g., using a WAGO 709 Series Cover (see "Accessories") or a similar cover.

The installation regulations must be observed for each individual application.

Note:

Max. admissible current per the manufacturer's data sheet – with all diodes loaded, the continuous current must be reduced.

Electrical Data

Operating voltage	≤ 250 VAC/DC
Rectified current for each diode	1 A
Forward voltage per diode	1.1 V
Forward current per diode (resistive)	1 A
Peak reverse voltage	1000 V
Leakage current	50 µA

Safety and Protection

Pollution degree	2
Rated voltage	250 V
Rated surge voltage	4 kV
Protection class	IP00

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm² / 28 ... 12 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	47 mm / 1.85 inch
Height from upper-edge of DIN-rail	31.5 mm / 1.24 inch
Depth	65.5 mm / 2.579 inch

Mechanical Data

Mounting type	Mounting on DIN-rail via DIN-rail adapter
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Material Data

Weight	24.9 g
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Environmental Requirements

Surrounding air temperature (operation)	-25 ... +40 °C
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Accessories



Mounting carrier; for screw or DIN-rail mounting		
Item No.	Pack. Unit	
288-001	50	



Universal mounting foot; for DIN-15/35/32 rails		
Item No.	Pack. Unit	
288-002	100	



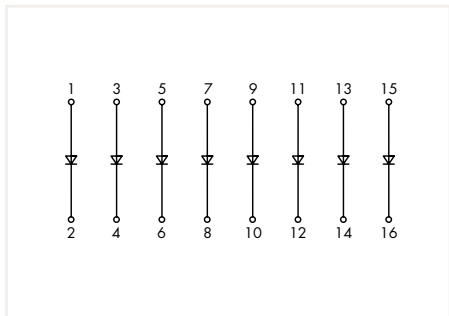
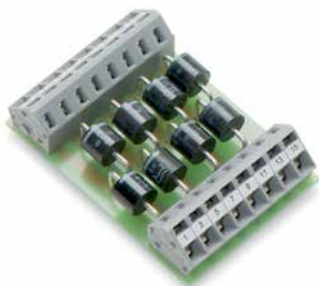
Cover carrier; Type 1; incl. mounting/securing screws and knurled nuts		
Item No.	Pack. Unit	
709-167	10	



Cover; Type 1; for cover carrier (type 1); 1 m long		
Item No.	Pack. Unit	
709-153	10	

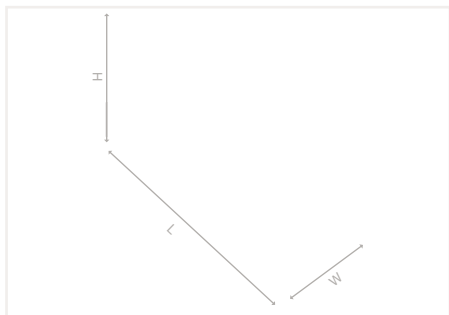
7

Component Module with Diodes 289 Series



Component Module with Diodes; with 8 diodes;
P600B diode

Item No.	Pack. Unit
289-103	1



Notice!

Live parts are likely to be touched! Protection against direct contact must be provided by the equipment manufacturer, e.g., using a WAGO 709 Series Cover (see "Accessories") or a similar cover.

The installation regulations must be observed for each individual application.

Note:

Max. admissible current per the manufacturer's data sheet – with all diodes loaded, the continuous current must be reduced.

Electrical Data

Operating voltage	≤ 100 VAC/DC
Rectified current for each diode	6 A
Forward voltage per diode	1 V
Forward current per diode (resistive)	6 A
Peak reverse voltage	100 V
Leakage current	5 μA

Safety and Protection

Pollution degree	2
Rated voltage	250 V
Rated surge voltage	4 kV
Protection class	IP00

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	47 mm / 1.85 inch
Height from upper-edge of DIN-rail	31.5 mm / 1.24 inch
Depth	65.5 mm / 2.579 inch

Mechanical Data

Mounting type	Mounting on DIN-rail via DIN-rail adapter
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Material Data

Weight	19 g
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Environmental Requirements

Surrounding air temperature (operation)	-25 ... +40 °C
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Accessories



Mounting carrier; for screw or DIN-rail mounting

Item No.	Pack. Unit
288-001	50



Universal mounting foot; for DIN-15/35/32 rails

Item No.	Pack. Unit
288-002	100



Cover carrier; Type 1; incl. mounting/securing screws and knurled nuts

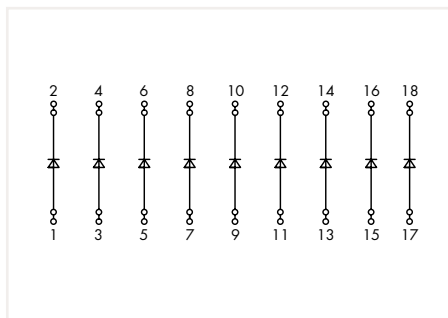
Item No.	Pack. Unit
709-167	10



Cover; Type 1; for cover carrier (type 1); 1 m long

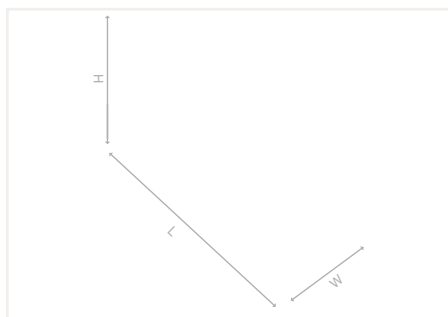
Item No.	Pack. Unit
709-153	10

Component Module with Diodes 289 Series



Component Module with Diodes; with 9 diodes;
1N5408 diode

Item No.	Pack. Unit
289-105	1



Notice!

Live parts are likely to be touched! Protection against direct contact must be provided by the equipment manufacturer, e.g., using a WAGO 709 Series Cover (see "Accessories") or a similar cover.

The installation regulations must be observed for each individual application.

Note:

Max. admissible current per the manufacturer's data sheet – with all diodes loaded, the continuous current must be reduced.

Electrical Data

Operating voltage	≤ 250 VAC/DC
Rectified current for each diode	3 A
Forward voltage per diode	1.3 V
Forward current per diode (resistive)	3 A
Peak reverse voltage	1000 V
Leakage current	10 μA

Safety and Protection

Pollution degree	2
Rated voltage	250 V
Rated surge voltage	4 kV
Protection class	IP00

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	51 mm / 2.008 inch
Height from upper-edge of DIN-rail	48 mm / 1.89 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	80.6 g
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Environmental Requirements

Surrounding air temperature (operation)	-25 ... +40 °C
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Accessories



Cover carrier; Type 1; incl. mounting/securing screws and knurled nuts

Item No.	Pack. Unit
709-167	10



Cover; Type 1; for cover carrier (type 1); 1 m long

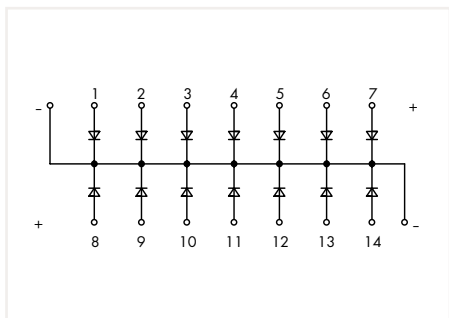
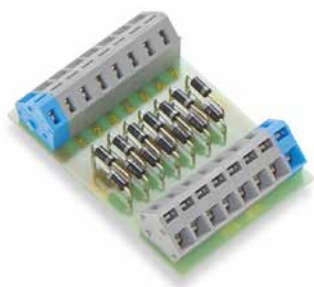
Item No.	Pack. Unit
709-153	10



Marking strip; for mounting carrier; 7.5 mm wide; 50 m reel

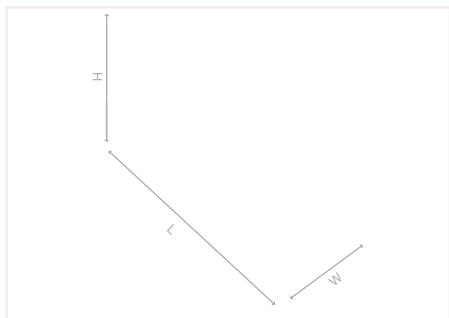
Item No.	Pack. Unit
709-178	1

Component Module with Diodes 289 Series



Component Module with Diodes; with 14 diodes;
1N4007 diode; with common cathode

Item No.	Pack. Unit
289-111	1



Notice!

Live parts are likely to be touched! Protection against direct contact must be provided by the equipment manufacturer, e.g., using a WAGO 709 Series Cover (see "Accessories") or a similar cover.

The installation regulations must be observed for each individual application.

Note:

Max. admissible current per the manufacturer's data sheet – with all diodes loaded, the continuous current must be reduced.

Electrical Data

Operating voltage	≤ 250 VAC/DC
Rectified current for each diode	1 A
Forward voltage per diode	1.1 V
Forward current per diode (resistive)	1 A
Peak reverse voltage	1000 V
Leakage current	50 μA

Safety and Protection

Pollution degree	2
Rated voltage	250 V
Rated surge voltage	4 kV
Protection class	IP00

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	47 mm / 1.85 inch
Height from upper-edge of DIN-rail	31.5 mm / 1.24 inch
Depth	65.5 mm / 2.579 inch

Mechanical Data

Mounting type	Mounting on DIN-rail via DIN-rail adapter
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Material Data

Weight	25.6 g
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Environmental Requirements

Surrounding air temperature (operation)	-25 ... +40 °C
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Accessories



Mounting carrier; for screw or DIN-rail mounting

Item No.	Pack. Unit
288-001	50



Universal mounting foot; for DIN-15/35/32 rails

Item No.	Pack. Unit
288-002	100



Cover carrier; Type 1; incl. mounting/securing screws and knurled nuts

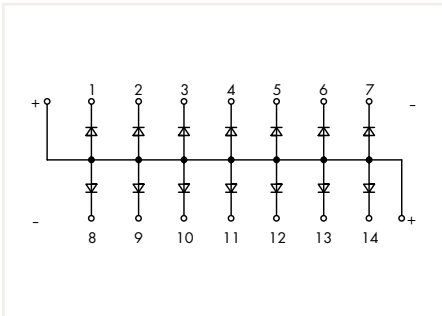
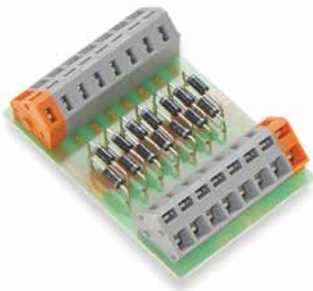
Item No.	Pack. Unit
709-167	10



Cover; Type 1; for cover carrier (type 1); 1 m long

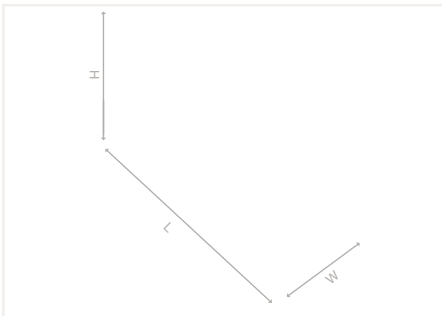
Item No.	Pack. Unit
709-153	10

Component Module with Diodes 289 Series



Component Module with Diodes; with 14 diodes;
1N4007 diode; with common anode

Item No.	Pack. Unit
289-121	1



Notice!

Live parts are likely to be touched! Protection against direct contact must be provided by the equipment manufacturer, e.g., using a WAGO 709 Series Cover (see "Accessories") or a similar cover.

The installation regulations must be observed for each individual application.

Note:

Max. admissible current per the manufacturer's data sheet – with all diodes loaded, the continuous current must be reduced.

Electrical Data

Operating voltage	≤ 250 VAC/DC
Rectified current for each diode	1 A
Forward voltage per diode	1.1 V
Forward current per diode (resistive)	1 A
Peak reverse voltage	1000 V
Reverse current per diode	50 µA

Safety and Protection

Pollution degree	2
Rated voltage	250 V
Rated surge voltage	4 kV
Protection class	IP00

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm² / 28 ... 12 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	47 mm / 1.85 inch
Height from upper-edge of DIN-rail	31.5 mm / 1.24 inch
Depth	65.5 mm / 2.579 inch

Mechanical Data

Mounting type	Mounting on DIN-rail via DIN-rail adapter
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Material Data

Weight	25.3 g
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Environmental Requirements

Surrounding air temperature (operation)	-25 ... +40 °C
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Accessories



Mounting carrier; for screw or DIN-rail mounting	
Item No.	Pack. Unit
288-001	50



Universal mounting foot; for DIN-15/35/32 rails	
Item No.	Pack. Unit
288-002	100



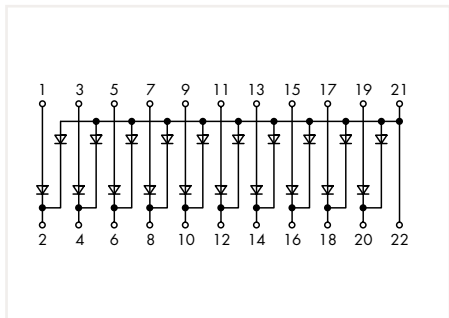
Cover carrier; Type 1; incl. mounting/securing screws and knurled nuts	
Item No.	Pack. Unit
709-167	10



Cover; Type 1; for cover carrier (type 1); 1 m long	
Item No.	Pack. Unit
709-153	10

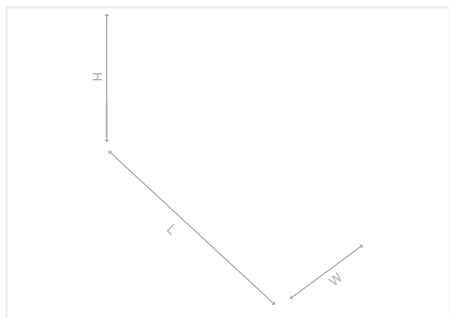
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Component Module with Diodes 289 Series



Component Module with Diodes; with 20 diodes;
EM513 diode

	Item No.	Pack. Unit
	289-151	1



Notice!

Live parts are likely to be touched! Protection against direct contact must be provided by the equipment manufacturer, e.g., using a WAGO 709 Series Cover (see "Accessories") or a similar cover.

The installation regulations must be observed for each individual application.

Note:

Max. admissible current per the manufacturer's data sheet – with all diodes loaded, the continuous current must be reduced.

Electrical Data

Operating voltage	≤ 250 VAC/DC
Rectified current for each diode	1 A
Forward voltage per diode	1.1 V
Forward current per diode (resistive)	1 A
Peak reverse voltage	1600 V
Leakage current	50 μA

Safety and Protection

Pollution degree	2
Rated voltage	250 V
Rated surge voltage	4 kV
Protection class	IP00

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	69 mm / 2.717 inch
Height from upper-edge of DIN-rail	21 mm / 0.827 inch
Depth	50 mm / 1.969 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	35.5 g
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Environmental Requirements

Surrounding air temperature (operation)	-25 ... +40 °C
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Accessories



Cover carrier; Type 1; incl. mounting/securing screws and knurled nuts

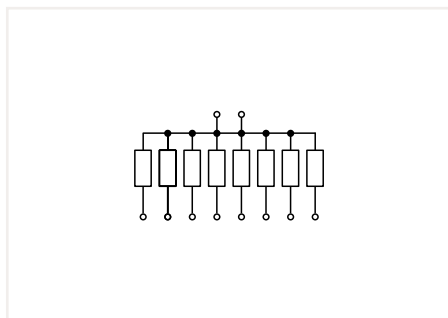
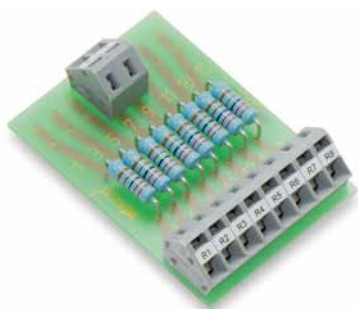
	Item No.	Pack. Unit
	709-167	10



Cover; Type 1; for cover carrier (type 1); 1 m long

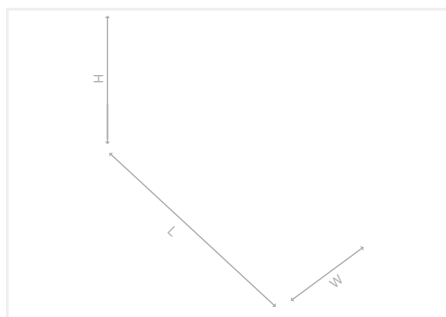
	Item No.	Pack. Unit
	709-153	10

Component Module with Resistors 289 Series



Component Module with Resistors; with 8 resistors;
2K2 resistor; 1 Watt

Item No.	Pack. Unit
289-113	1



Note:

- Max. admissible capacity of a single resistor – with all resistors loaded, the max. admissible power dissipation must be reduced.
- Other resistors are available upon request!

General Specifications

Operating voltage	≤ 40 VAC/DC
Power dissipation, component (P70)	1 W
Resistance	2K2
Resistor type	DIN 0414
Temperature coefficient	50 ppm
Tolerance	± 1 %

Safety and Protection

Rated voltage	250 V
Rated surge voltage	4 kV

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	47 mm / 1.85 inch
Height from upper-edge of DIN-rail	31.5 mm / 1.24 inch
Depth	65.5 mm / 2.579 inch

Mechanical Data

Mounting type	Mounting on DIN-rail via DIN-rail adapter
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Material Data

Weight	18.9 g
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Environmental Requirements

Surrounding air temperature (operation)	-25 ... +40 °C
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Accessories



Mounting carrier; for screw or DIN-rail mounting

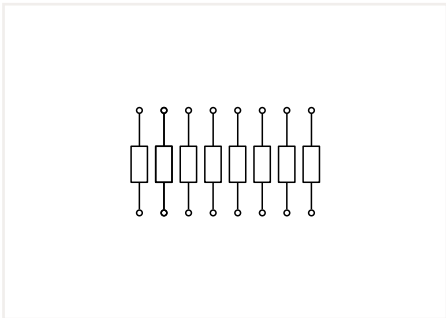
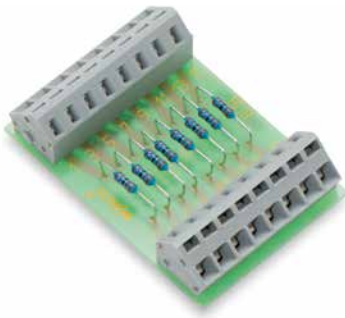
Item No.	Pack. Unit
288-001	50



Universal mounting foot; for DIN-15/35/32 rails

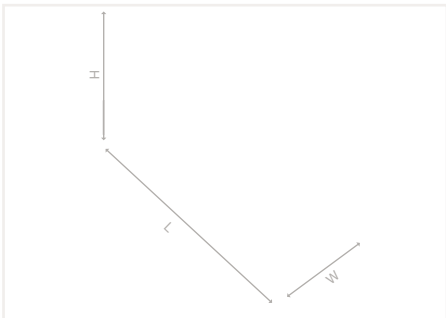
Item No.	Pack. Unit
288-002	100

Component Module with Resistors 289 Series



Component Module with Resistors; with 8 resistors; 2K7 resistor; 0.6 Watt

Item No.	Pack. Unit
289-114	1



Note:

- Max. admissible capacity of a single resistor – with all resistors loaded, the max. admissible power dissipation must be reduced.
- Other resistors are available upon request!

General Specifications

Operating voltage	≤ 40 VAC/DC
Power dissipation, component (P70)	0.6 W
Resistance	2K7
Resistor type	DIN 0207
Temperature coefficient	50 ppm
Tolerance	±1 %

Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	47 mm / 1.85 inch
Height from upper-edge of DIN-rail	31.5 mm / 1.24 inch
Depth	65.5 mm / 2.579 inch

Mechanical Data

Mounting type	Mounting on DIN-rail via DIN-rail adapter
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Material Data

Weight	23.4 g
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Environmental Requirements

Surrounding air temperature (operation)	-25 ... +40 °C
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Accessories



Item No.	Pack. Unit
288-001	50



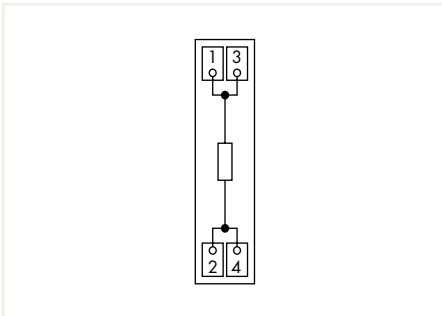
Item No.	Pack. Unit
288-002	100

Component Module with Resistors

289 Series

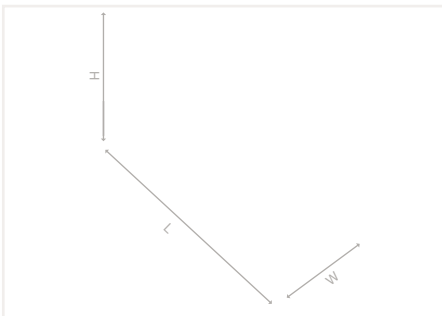


Picture of 289-128/003-000



Component Module with a Resistor; with 1 resistor; 5 Watt

Resistance	Item No.	Pack. Unit
100R	289-128/005-000	1
270R	289-128/006-000	1
2K4	289-128/001-000	1
4K7	289-128/002-000	1
6K8	289-128/003-000	1
9K1	289-128	1



Notice!

Live parts are likely to be touched! Protection against direct contact must be provided by the equipment manufacturer, e.g., using a WAGO 709 Series Cover (see "Accessories") or a similar cover.

The installation regulations must be observed for each individual application.

Note:

- Depending on operating conditions, the components' temperature may exceed the limit temperature for accessible parts.
- Other resistors are available upon request!

General Specifications

Power dissipation, component (P70)	5 W
Temperature coefficient	50 ppm
Tolerance	±10 %

Safety and Protection

Protection class	IP00*
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Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	13 mm / 0.512 inch
Height from upper-edge of DIN-rail	34 mm / 1.339 inch
Depth	85 mm / 3.346 inch

Mechanical Data

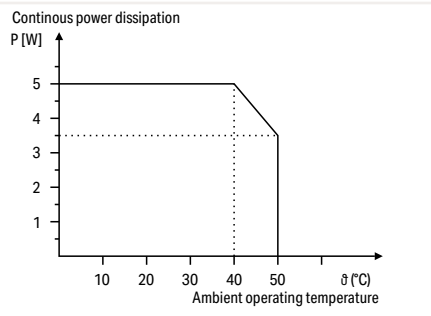
Mounting type	DIN-35 rail
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Material Data

Weight	19.1 g
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Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C (derating must be observed)
Surrounding air temperature (storage)	-40 ... +70 °C



Derating

Accessories



Cover carrier; Type 1; incl. mounting/securing screws and knurled nuts

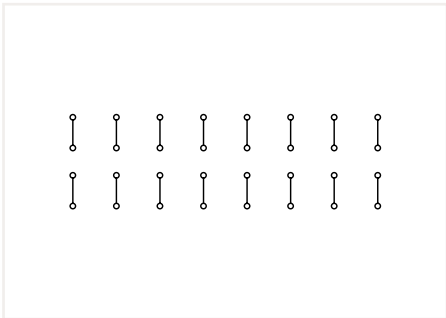
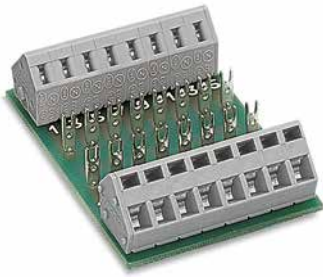
Item No.	Pack. Unit
709-167	10



Cover; Type 1; for cover carrier (type 1); 1 m long

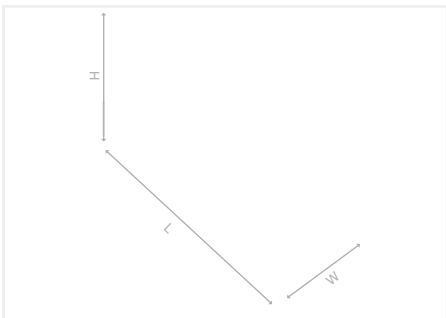
Item No.	Pack. Unit
709-153	10

PCB for Self-Assembly 289 Series



PCB for Self-Assembly; with 8 mounting positions

	Item No.	Pack. Unit
	289-102	1
with solder terminals	289-131	1



Notice!

Live parts are likely to be touched! Protection against direct contact must be provided by the equipment manufacturer, e.g., using a WAGO 709 Series Cover (see "Accessories") or a similar cover. The installation regulations must be observed for each individual application.

General Specifications

Operating voltage	≤ 250 VAC/DC
Nominal current	3 A

Safety and Protection

Protection class	IP00
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Connection Data

Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip Length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	47 mm / 1.85 inch
Height from upper-edge of DIN-rail	31.5 mm / 1.24 inch
Depth	65.5 mm / 2.579 inch

Mechanical Data

Mounting type	Mounting on DIN-rail via DIN-rail adapter
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Material Data

Weight	22.2 g
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Environmental Requirements

Surrounding air temperature (operation)	-25 ... +40 °C
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Accessories



Mounting carrier; for screw or DIN-rail mounting		
Item No.	Pack. Unit	
288-001	50	



Universal mounting foot; for DIN-15/35/32 rails		
Item No.	Pack. Unit	
288-002	100	

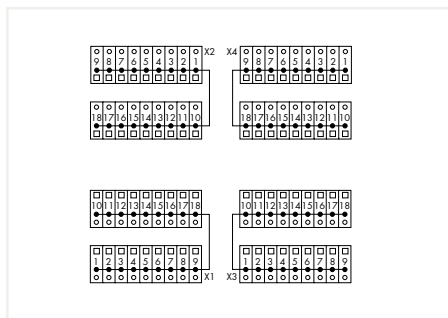
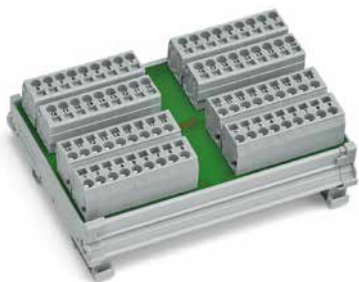


Cover carrier; Type 1; incl. mounting/securing screws and knurled nuts		
Item No.	Pack. Unit	
709-167	10	



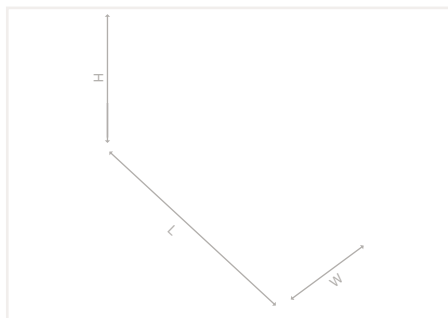
Cover; Type 1; for cover carrier (type 1); 1 m long		
Item No.	Pack. Unit	
709-153	10	

Potential Distribution Module 288 Series



Potential Distribution Module; 4 potentials;
each with 18 connection points

Item No.	Pack. Unit
288-825	1



General Specifications

Operating voltage	≤ 250 VAC/DC
Total current per potential (max.)	12 A
Current per connection (max.)	12 A

Safety and Protection

Pollution degree	2
Rated voltage	250 V
Rated surge voltage	4 kV

Connection Data

Total number of potentials	4
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip Length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	115 mm / 4.528 inch
Height from upper-edge of DIN-rail	45 mm / 1.772 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

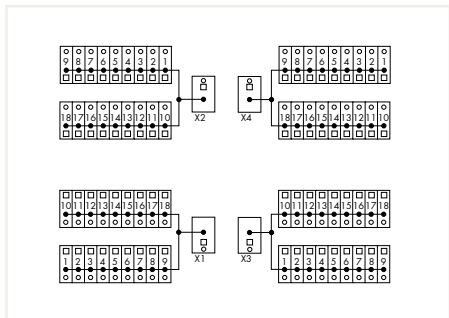
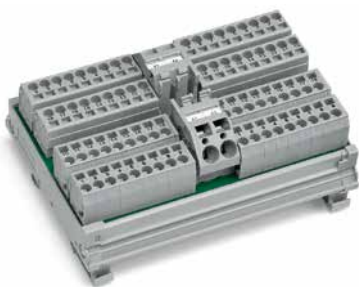
Weight	156.6 g
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Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Surrounding air temperature (storage)	-40 ... +80 °C

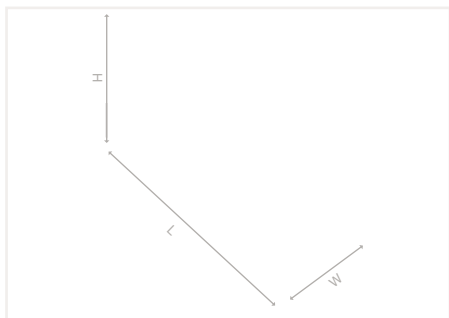
7

Potential Distribution Module 288 Series



Potential Distribution Module; 4 potentials;
each with 19 connection points

Item No.	Pack. Unit
288-837	1



General Specifications

Operating voltage	≤ 250 VAC/DC
Total current per potential (max.)	32 A
Current per connection (max.)	12 A

Safety and Protection

Pollution degree	2
Rated voltage	250 V
Rated surge voltage	4 kV

Connection Data

Total number of potentials	4
Connection type 1	Power supply
Connection technology 1	CAGE CLAMP®
Solid conductor 1	0.2 ... 6 mm ² / 24 ... 10 AWG
Fine-stranded conductor 1	0.2 ... 6 mm ² / 24 ... 10 AWG
Strip length 1	11 ... 12 mm / 0.43 ... 0.47 inch
Connection type 2	Connection points
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	115 mm / 4.528 inch
Height from upper-edge of DIN-rail	45 mm / 1.772 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	178.2 g
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Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Surrounding air temperature (storage)	-40 ... +80 °C

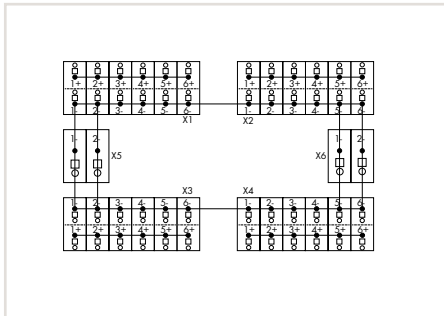
Accessories



Comb-style jumper bar; 2-way

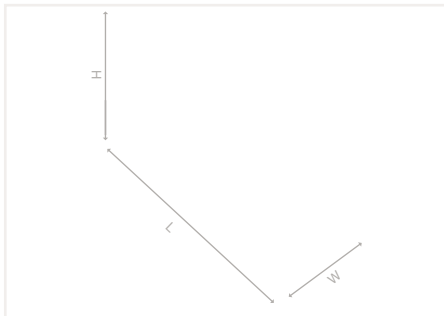
Item No.	Pack. Unit
745-382	250 (50)

Potential Distribution Module 288 Series



Potential Distribution Module; 4 potentials;
each with 6 connection points

Item No.	Pack. Unit
288-867	1



Features:

- May be used with electronic circuit breakers for 24 and 0 VDC power distribution, as a substitute for rail-mount terminal blocks
- Four potential groups for four output circuits
- Six connection points per potential group for positive and negative potentials
- On-unit commoned negative potential with optional commoning to adjacent modules via comb-style jumper bar (745-682)
- Marker carrier is available

General Specifications

Nominal operating voltage	24 VDC
Total current 0 V (max.)	40 A
Total current per potential (max.)	10 A
Current per connection (max.)	10 A

Safety and Protection

Pollution degree	2
Rated voltage	50 V
Rated surge voltage	0.8 kV

Connection Data

Total number of potentials	4
Connection type 1	Connection points
Connection technology 1	CAGE CLAMP®
Solid conductor 1	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 1	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 1	5 ... 6 mm / 0.2 ... 0.24 inch
Connection type 2	Power supply
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.2 ... 16 mm ² / 24 ... 6 AWG
Fine-stranded conductor 2	0.2 ... 16 mm ² / 24 ... 6 AWG
Strip length 2	12 ... 13 mm / 0.47 ... 0.51 inch

Physical Data

Depth	105 mm / 4.134 inch
Height from upper-edge of DIN-rail	50 mm / 1.969 inch
Width	70 mm / 2.756 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	136.2 g
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Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Surrounding air temperature (storage)	-40 ... +70 °C

Accessories

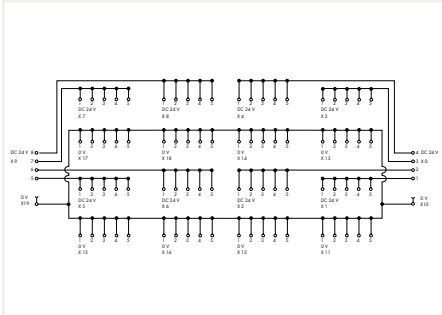


Comb-style jumper bar; 2-way

Item No.	Pack. Unit
745-682	400 (50)

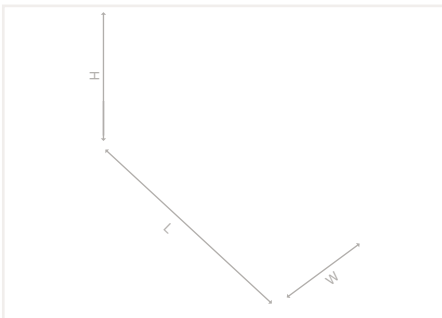
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Potential Distribution Module 288 Series



Potential Distribution Module; 8 potentials; each with 6 connection points; with 42 ground connection points

Item No.	Pack. Unit
288-870/000-040	1



Features:

- May be used with electronic circuit breakers for 24 and 0 VDC power distribution, as a substitute for rail-mount terminal blocks
- Pre-wiring and electrical isolation of current paths via pluggable *picoMAX*® Female Headers
- Optional coding pins (2092-1610) protect against any inadvertent mixing of female headers
- Optional gripping plates with sliding connector release (2092-1601/002-000 or 2092-1602/002-000) provide conductor strain relief
- 0 V may be supplied to the adjacent modules via comb-style jumper bar (745-682) (Derating with jumper bar: -1 A/K > 60 °C surrounding air temperature)

General Specifications

Nominal operating voltage	24 VDC
Total current 0 V (max.)	76 A
Total current per potential (max.)	10 A
Current per connection (max.)	10 A

Connection Data

Total number of potentials	8
Connection type 1	Power supply 0 V
Mating direction 1	45°
Connection technology 1	CAGE CLAMP®
Solid conductor 1	0.2 ... 16 mm ² / 24 ... 6 AWG
Fine-stranded conductor 1	0.2 ... 16 mm ² / 24 ... 6 AWG
Strip length 1	12 ... 13 mm / 0.47 ... 0.51 inch
Connection type 2	Power supply 24 V; connection points
Mating direction 2	Vertical
Connection technology 2	Push-in CAGE CLAMP®
Solid conductor 2	0.2 ... 2.5 mm ² / 24 ... 12 AWG
Fine-stranded conductor 2	0.2 ... 2.5 mm ² / 24 ... 12 AWG
Strip length 2	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	154 mm / 6.063 inch
Height from upper-edge of DIN-rail	49 mm / 1.929 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	226.9 g
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Environmental Requirements

Surrounding air temperature (operation)	-25 ... +70 °C (no condensation)
Surrounding air temperature (storage)	-40 ... +85 °C

Accessories



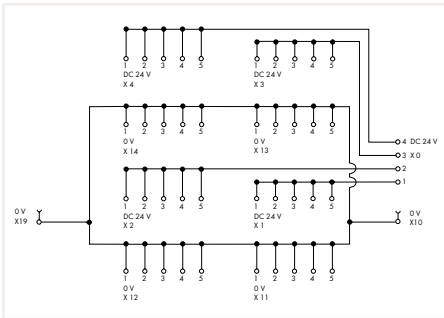
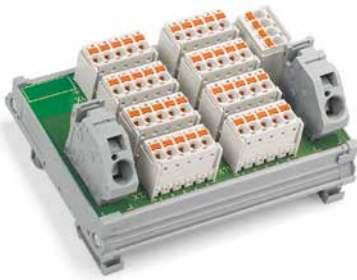
Comb-style jumper bar; 2-way

Coding pin carrier

Gripping plate with sliding connector release

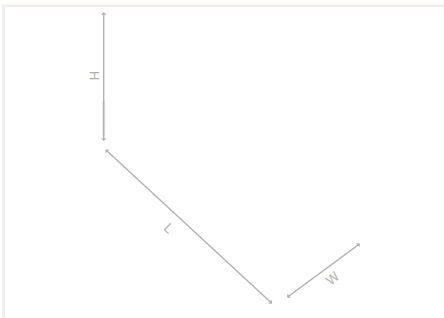
Item No.	Pack. Unit	Item No.	Pack. Unit	Description	Item No.	Pack. Unit
745-682	400 (50)	2092-1610	100 (25)	3- to 4-pole	2092-1601/002-000	100 (25)
				5- to 8-pole	2092-1602/002-000	100 (25)

Potential Distribution Module 288 Series



Potential Distribution Module; 4 potentials; each with 6 connection points; with 22 ground connection points

Item No.	Pack. Unit
288-870/000-030	1



Features:

- May be used with electronic circuit breakers for 24 and 0 VDC power distribution, as a substitute for rail-mount terminal blocks
- Pre-wiring and electrical isolation of current paths via pluggable *picoMAX*® Female Headers
- Optional coding pins (2092-1610) protect against any inadvertent mixing of female headers
- Optional gripping plates with sliding connector release (2092-1601/002-000 or 2092-1602/002-000) provide conductor strain relief
- 0 V may be supplied to the adjacent modules via comb-style jumper bar (745-682)

General Specifications

Nominal operating voltage	24 VDC
Total current 0 V (max.)	40 A
Total current per potential (max.)	10 A
Current per connection (max.)	10 A

Connection Data

Total number of potentials	4
Connection type 1	Power supply 0 V
Mating direction 1	45°
Connection technology 1	CAGE CLAMP®
Solid conductor 1	0.2 ... 16 mm ² / 24 ... 6 AWG
Fine-stranded conductor 1	0.2 ... 16 mm ² / 24 ... 6 AWG
Strip length 1	12 ... 13 mm / 0.47 ... 0.51 inch
Connection type 2	Power supply 24 V; connection points
Mating direction 2	Vertical
Connection technology 2	Push-in CAGE CLAMP®
Solid conductor 2	0.2 ... 2.5 mm ² / 24 ... 12 AWG
Fine-stranded conductor 2	0.2 ... 2.5 mm ² / 24 ... 12 AWG
Strip length 2	9 ... 10 mm / 0.35 ... 0.39 inch

Physical Data

Width	100 mm / 3.937 inch
Height from upper-edge of DIN-rail	49 mm / 1.929 inch
Depth	85 mm / 3.346 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	140.4 g
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Environmental Requirements

Surrounding air temperature (operation)	-25 ... +70 °C (no condensation)
Surrounding air temperature (storage)	-40 ... +85 °C

Accessories



Item No.	Pack. Unit
745-682	400 (50)

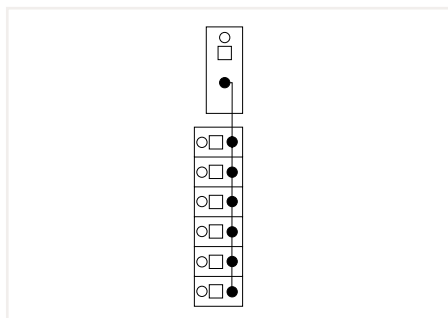
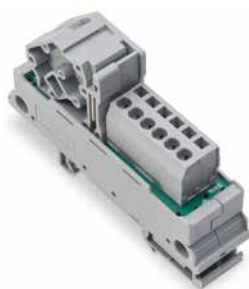


Item No.	Pack. Unit
2092-1610	100 (25)



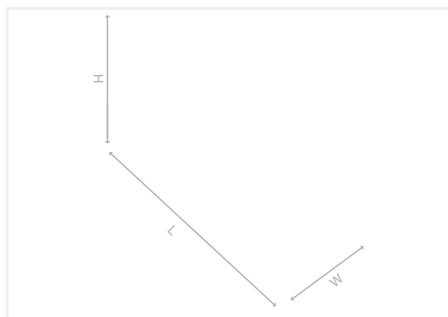
Description	Item No.	Pack. Unit
3- to 4-pole	2092-1601/002-000	100 (25)
5- to 8-pole	2092-1602/002-000	100 (25)

Potential Distribution Module 830 Series



Potential Distribution Module; 1 potential;
with 1 input clamping point; Conductor cross section
up to 16 mm²/6 AWG; with 6 output clamping points;
Conductor cross section up to 2.5 mm²/12 AWG

Color	Item No.	Pack. Unit
gray	830-800/000-302	10
blue	830-800/000-302/000-006	10



General Specifications

Operating voltage	≤ 250 VAC/DC
Total current per potential (max.)	65 A
Current per connection (max.)	12 A

Connection Data

Total number of potentials	1
Connection type 1	Input
Connection technology 1	CAGE CLAMP®
Solid conductor 1	0.2 ... 16 mm ² / 24 ... 6 AWG
Fine-stranded conductor 1	0.2 ... 16 mm ² / 24 ... 6 AWG
Strip length 1	11 ... 12 mm / 0.43 ... 0.47 inch
Connection type 2	Output
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	21 mm / 0.81 inch
Height from upper-edge of DIN-rail	49 mm / 1.98 inch
Depth	85 mm / 3.35 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	51 g
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Environmental Requirements

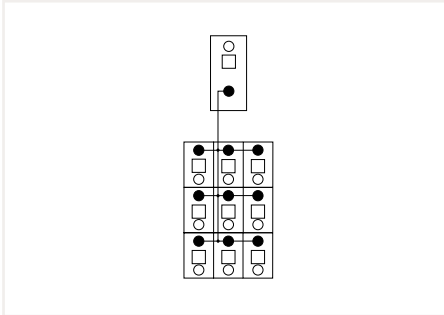
Surrounding air temperature (operation)	-20 ... +50 °C
Relative humidity	≤ 95 % (no condensation permissible)

Standards and Specifications

Standards/specifications	cULus 61010-2-201
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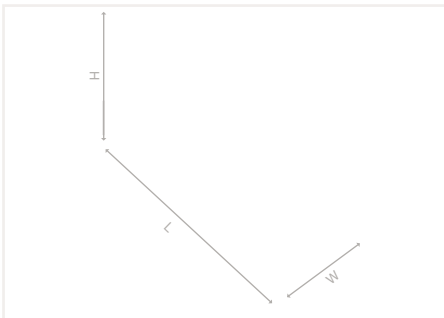
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Potential Distribution Module 830 Series



Potential Distribution Module; 1 potential;
with 1 input clamping point; Conductor cross section
up to 16 mm²/6 AWG; with 9 output clamping points;
Conductor cross section up to 2.5 mm²/12 AWG

Color	Item No.	Pack. Unit
gray	830-800/000-303	10



General Specifications

Operating voltage	≤ 250 VAC/DC
Total current per potential (max.)	65 A
Current per connection (max.)	10 A

Connection Data

Total number of potentials	1
Connection type 1	Input
Connection technology 1	CAGE CLAMP®
Solid conductor 1	0.2 ... 16 mm ² / 24 ... 6 AWG
Fine-stranded conductor 1	0.2 ... 16 mm ² / 24 ... 6 AWG
Strip length 1	11 ... 12 mm / 0.43 ... 0.47 inch
Connection type 2	Output
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	21 mm / 0.81 inch
Height from upper-edge of DIN-rail	62 mm / 2.44 inch
Depth	85 mm / 3.35 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	63 g
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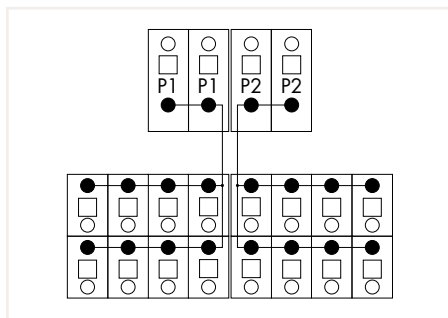
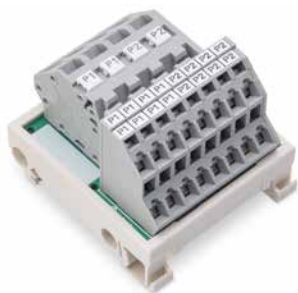
Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Relative humidity	≤ 95 % (no condensation permissible)

Standards and Specifications

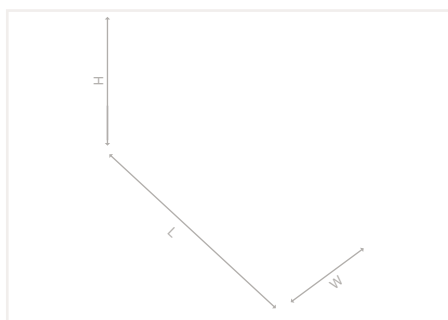
Standards/specifications	cULus 61010-2-201
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Potential Distribution Module 830 Series



Potential Distribution Module; 2 potentials;
with 2 input clamping points; Conductor cross section
up to 6 mm²/10 AWG; each with 8 output clamping
points; Conductor cross section up to 2.5 mm²/12 AWG

Color	Item No.	Pack. Unit
gray	830-800/000-305	6



General Specifications

Operating voltage	≤ 250 VAC/DC
Total current per potential (max.)	30 A
Current per connection (max.)	10 A

Connection Data

Total number of potentials	2
Connection type 1	Input
Connection technology 1	CAGE CLAMP®
Solid conductor 1	0.2 ... 6 mm ² / 24 ... 10 AWG
Fine-stranded conductor 1	0.2 ... 6 mm ² / 24 ... 10 AWG
Strip length 1	11 ... 12 mm / 0.43 ... 0.47 inch
Connection type 2	Output
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	49 mm / 1.92 inch
Height from upper-edge of DIN-rail	38 mm / 1.47 inch
Depth	55 mm / 2.17 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	70 g
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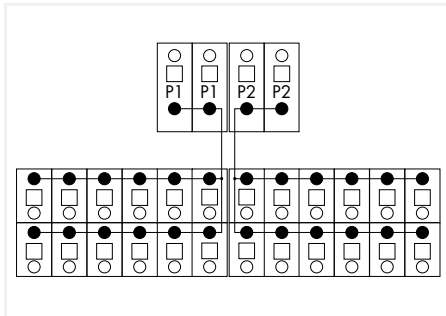
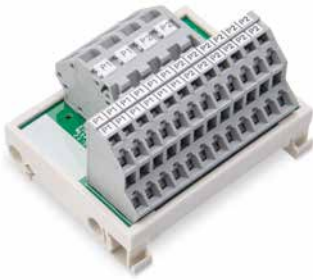
Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Relative humidity	≤ 95 % (no condensation permissible)

Standards and Specifications

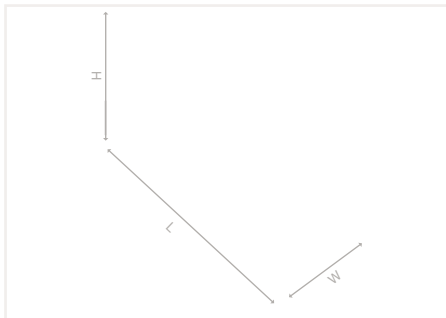
Standards/specifications	cULus 61010-2-201
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Potential Distribution Module 830 Series



Potential Distribution Module; 2 potentials;
with 2 input clamping points; Conductor cross section
up to 6 mm²/10 AWG; each with 12 output clamping
points; Conductor cross section up to 2.5 mm²/12 AWG

Color	Item No.	Pack. Unit
gray	830-800/000-306	6



General Specifications

Operating voltage	≤ 250 VAC/DC
Total current per potential (max.)	30 A
Current per connection (max.)	10 A

Connection Data

Total number of potentials	2
Connection type 1	Input
Connection technology 1	CAGE CLAMP®
Solid conductor 1	0.2 ... 6 mm ² / 24 ... 10 AWG
Fine-stranded conductor 1	0.2 ... 6 mm ² / 24 ... 10 AWG
Strip length 1	11 ... 12 mm / 0.43 ... 0.47 inch
Connection type 2	Output
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	69 mm / 2.72 inch
Height from upper-edge of DIN-rail	38 mm / 1.47 inch
Depth	55 mm / 2.17 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	96.5 g
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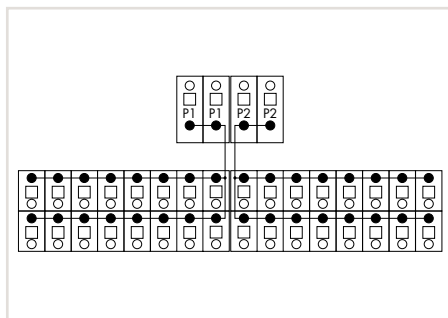
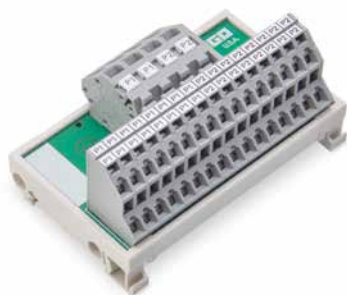
Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Relative humidity	≤ 95 % (no condensation permissible)

Standards and Specifications

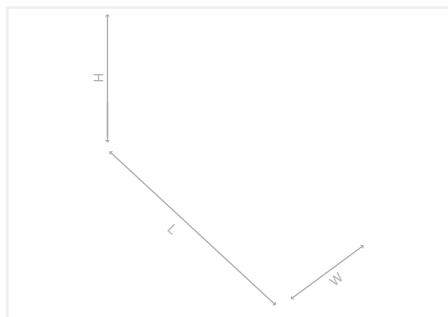
Standards/specifications	cULus 61010-2-201
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Potential Distribution Module 830 Series



Potential Distribution Module; 2 potentials;
with 2 input clamping points; Conductor cross section
up to 6 mm²/10 AWG; each with 16 output clamping
points; Conductor cross section up to 2.5 mm²/12 AWG

Color	Item No.	Pack. Unit
gray	830-800/000-307	6



General Specifications

Operating voltage	≤ 250 VAC/DC
Total current per potential (max.)	30 A
Current per connection (max.)	10 A

Connection Data

Total number of potentials	2
Connection type 1	Input
Connection technology 1	CAGE CLAMP®
Solid conductor 1	0.2 ... 6 mm ² / 24 ... 10 AWG
Fine-stranded conductor 1	0.2 ... 6 mm ² / 24 ... 10 AWG
Strip length 1	11 ... 12 mm / 0.43 ... 0.47 inch
Connection type 2	Output
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	89 mm / 3.51 inch
Height from upper-edge of DIN-rail	38 mm / 1.47 inch
Depth	55 mm / 2.17 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	118.9 g
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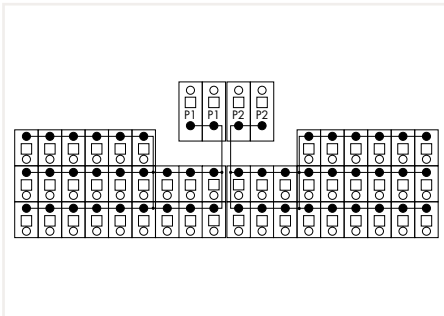
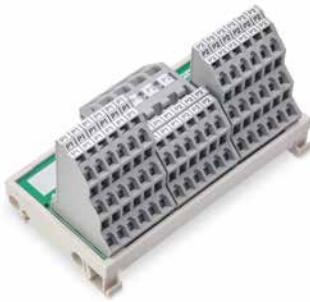
Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Relative humidity	≤ 95 % (no condensation permissible)

Standards and Specifications

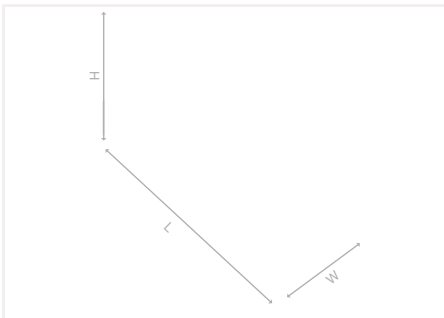
Standards/specifications	cULus 61010-2-201
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Potential Distribution Module 830 Series



Potential Distribution Module; 2 potentials;
with 2 input clamping points; Conductor cross section
up to 16 mm²/6 AWG; each with 24 output clamping
points; Conductor cross section up to 2.5 mm²/12 AWG

Color	Item No.	Pack. Unit
gray	830-800/000-308	6



General Specifications

Operating voltage	≤ 250 VAC/DC
Total current per potential (max.)	30 A
Current per connection (max.)	10 A

Connection Data

Total number of potentials	2
Connection type 1	Input
Connection technology 1	CAGE CLAMP®
Solid conductor 1	0.2 ... 6 mm ² / 24 ... 10 AWG
Fine-stranded conductor 1	0.2 ... 6 mm ² / 24 ... 10 AWG
Strip length 1	11 ... 12 mm / 0.43 ... 0.47 inch
Connection type 2	Output
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	102 mm / 4.02 inch
Height from upper-edge of DIN-rail	38 mm / 1.47 inch
Depth	55 mm / 2.17 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	158.9 g
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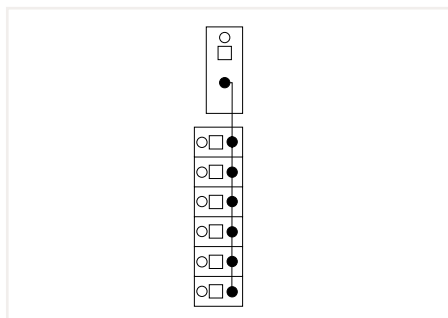
Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Relative humidity	≤ 95 % (no condensation permissible)

Standards and Specifications

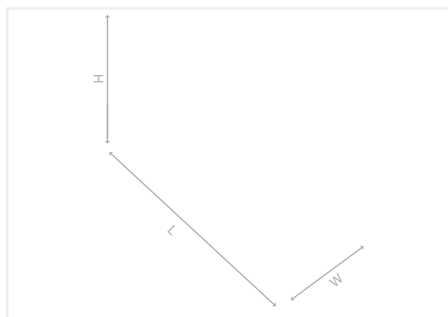
Standards/specifications	cULus 61010-2-201
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Potential Distribution Module 830 Series



Potential Distribution Module; 1 potential;
with 1 input clamping point; Conductor cross section
up to 16 mm²/6 AWG; Lever; with 6 output clamping
points; Conductor cross section up to 2.5 mm²/12 AWG

Color	Item No.	Pack. Unit
gray	830-800/000-312	10
blue	830-800/000-312/000-006	10



General Specifications

Operating voltage	≤ 250 VAC/DC
Total current per potential (max.)	65 A
Current per connection (max.)	12 A

Connection Data

Total number of potentials	1
Connection type 1	Input
Connection technology 1	CAGE CLAMP®
Solid conductor 1	1.5 ... 16 mm ² / 16 ... 6 AWG
Fine-stranded conductor 1	1.5 ... 16 mm ² / 16 ... 6 AWG
Strip length 1	12 ... 13 mm / 0.47 ... 0.51 inch
Connection type 2	Output
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	21 mm / 0.81 inch
Height from upper-edge of DIN-rail	49 mm / 1.98 inch
Depth	85 mm / 3.35 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	57.8 g
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Environmental Requirements

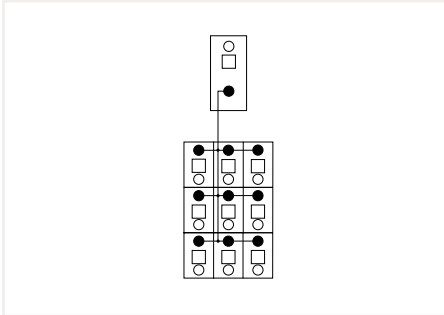
Surrounding air temperature (operation)	-20 ... +50 °C
Relative humidity	≤ 95 % (no condensation permissible)

Standards and Specifications

Standards/specifications	cULus 61010-2-201
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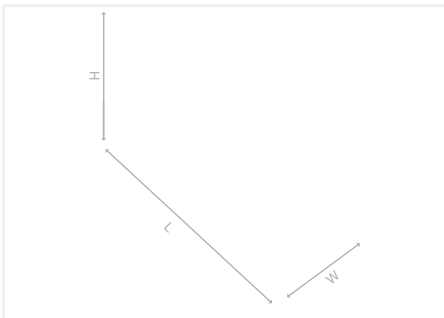
7

Potential Distribution Module 830 Series



Potential Distribution Module; 1 potential;
with 1 input clamping point; Conductor cross section
up to 16 mm²/6 AWG; Lever; with 9 output clamping
points; Conductor cross section up to 2.5 mm²/12 AWG

Color	Item No.	Pack. Unit
gray	830-800/000-313	10



General Specifications

Operating voltage	≤ 250 VAC/DC
Total current per potential (max.)	65 A
Current per connection (max.)	10 A

Connection Data

Total number of potentials	1
Connection type 1	Input
Connection technology 1	CAGE CLAMP®
Solid conductor 1	1.5 ... 16 mm ² / 16 ... 6 AWG
Fine-stranded conductor 1	1.5 ... 16 mm ² / 16 ... 6 AWG
Strip length 1	12 ... 13 mm / 0.47 ... 0.51 inch
Connection type 2	Output
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	21 mm / 0.81 inch
Height from upper-edge of DIN-rail	62 mm / 2.44 inch
Depth	85 mm / 3.35 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	61.9 g
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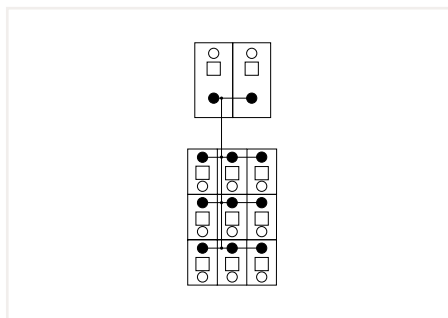
Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Relative humidity	≤ 95 % (no condensation permissible)

Standards and Specifications

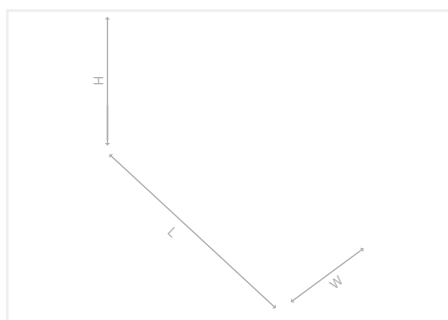
Standards/specifications	cULus 61010-2-201
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Potential Distribution Module 830 Series



Potential Distribution Module; 1 potential;
with 2 input clamping points; Conductor cross section
up to 6 mm²/10 AWG; Lever; with 9 output clamping
points; Conductor cross section up to 2.5 mm²/12 AWG

Color	Item No.	Pack. Unit
gray	830-800/000-314	10



General Specifications

Operating voltage	≤ 250 VAC/DC
Total current per potential (max.)	30 A
Current per connection (max.)	10 A

Connection Data

Total number of potentials	1
Connection type 1	Input
Connection technology 1	CAGE CLAMP®
Solid conductor 1	0.5 ... 6 mm ² / 20 ... 10 AWG
Fine-stranded conductor 1	0.5 ... 6 mm ² / 20 ... 10 AWG
Strip length 1	11 mm / 0.43 inch
Connection type 2	Output
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	21 mm / 0.81 inch
Height from upper-edge of DIN-rail	62 mm / 2.44 inch
Depth	85 mm / 3.35 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	62.6 g
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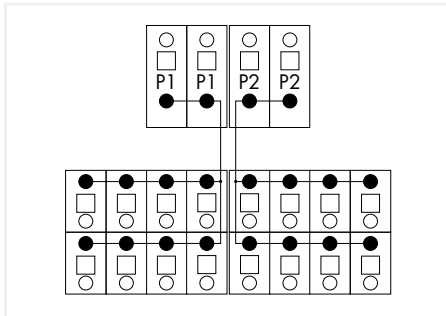
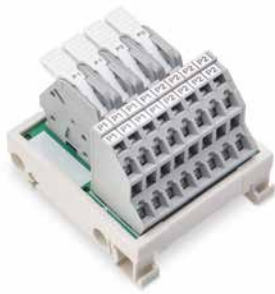
Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Relative humidity	≤ 95 % (no condensation permissible)

Standards and Specifications

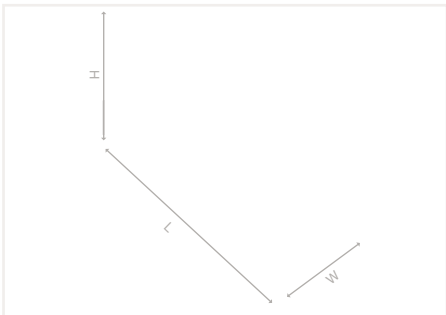
Standards/specifications	cULus 61010-2-201
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Potential Distribution Module 830 Series



Potential Distribution Module; 2 potentials;
with 2 input clamping points; Conductor cross section
up to 6 mm²/10 AWG; Lever; each with 8 output
clamping points; Conductor cross section up to
2.5 mm²/12 AWG

Color	Item No.	Pack. Unit
gray	830-800/000-315	10



General Specifications

Operating voltage	≤ 250 VAC/DC
Total current per potential (max.)	30 A
Current per connection (max.)	10 A

Connection Data

Total number of potentials	2
Connection type 1	Input
Connection technology 1	CAGE CLAMP®
Solid conductor 1	0.5 ... 6 mm ² / 20 ... 10 AWG
Fine-stranded conductor 1	0.5 ... 6 mm ² / 20 ... 10 AWG
Strip length 1	11 ... 12 mm / 0.43 ... 0.47 inch
Connection type 2	Output
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	49 mm / 1.92 inch
Height from upper-edge of DIN-rail	38 mm / 1.47 inch
Depth	55 mm / 2.17 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	87.5 g
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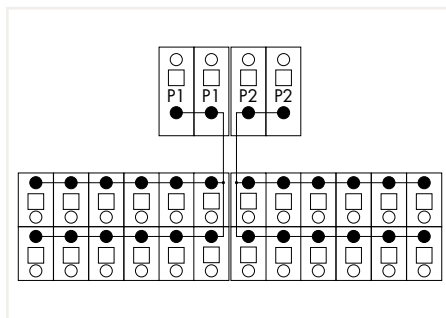
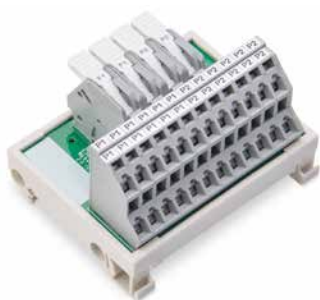
Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Relative humidity	≤ 95 % (no condensation permissible)

Standards and Specifications

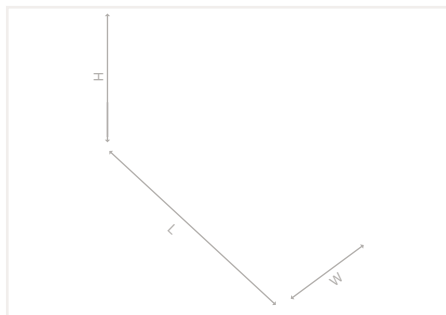
Standards/specifications	cULus 61010-2-201
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Potential Distribution Module 830 Series



Potential Distribution Module; 2 potentials; with 2 input clamping points; Conductor cross section up to 6 mm²/10 AWG; Lever; each with 12 output clamping points; Conductor cross section up to 2.5 mm²/12 AWG

Color	Item No.	Pack. Unit
gray	830-800/000-316	6



General Specifications

Operating voltage	≤ 250 VAC/DC
Total current per potential (max.)	30 A
Current per connection (max.)	10 A

Connection Data

Total number of potentials	2
Connection type 1	Input
Connection technology 1	CAGE CLAMP®
Solid conductor 1	0.5 ... 6 mm ² / 20 ... 10 AWG
Fine-stranded conductor 1	0.5 ... 6 mm ² / 20 ... 10 AWG
Strip length 1	11 ... 12 mm / 0.43 ... 0.47 inch
Connection type 2	Output
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	69 mm / 2.72 inch
Height from upper-edge of DIN-rail	38 mm / 1.47 inch
Depth	55 mm / 2.17 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	101.6 g
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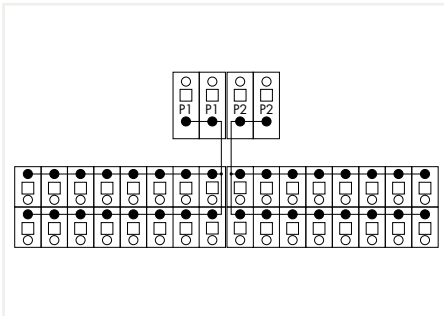
Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Relative humidity	≤ 95 % (no condensation permissible)

Standards and Specifications

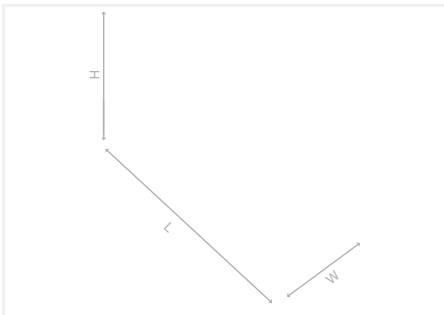
Standards/specifications	cULus 61010-2-201
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Potential Distribution Module 830 Series



Potential Distribution Module; 2 potentials;
with 2 input clamping points; Conductor cross section
up to 6 mm²/10 AWG; Lever; each with 16 output
clamping points; Conductor cross section up to
2.5 mm²/12 AWG

Color	Item No.	Pack. Unit
gray	830-800/000-317	6



General Specifications

Operating voltage	≤ 250 VAC/DC
Total current per potential (max.)	30 A
Current per connection (max.)	10 A

Connection Data

Total number of potentials	2
Connection type 1	Input
Connection technology 1	CAGE CLAMP®
Solid conductor 1	0.5 ... 6 mm ² / 20 ... 10 AWG
Fine-stranded conductor 1	0.5 ... 6 mm ² / 20 ... 10 AWG
Strip length 1	11 ... 12 mm / 0.43 ... 0.47 inch
Connection type 2	Output
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	89 mm / 3.51 inch
Height from upper-edge of DIN-rail	38 mm / 1.47 inch
Depth	55 mm / 2.17 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	119.7 g
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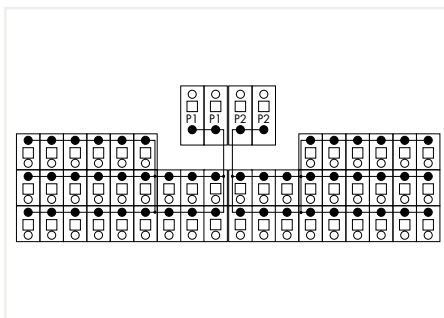
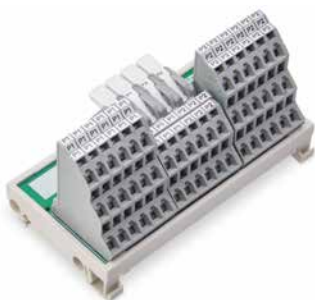
Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Relative humidity	≤ 95 % (no condensation permissible)

Standards and Specifications

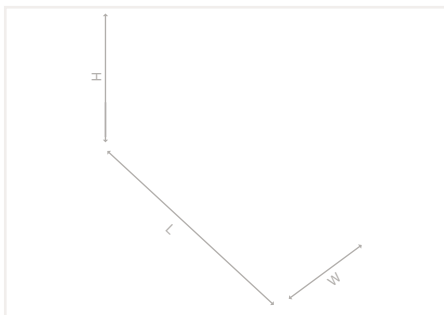
Standards/specifications	cULus 61010-2-201
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Potential Distribution Module 830 Series



Potential Distribution Module; 2 potentials;
with 2 input clamping points; Conductor cross section
up to 16 mm²/6 AWG; Lever; each with 24 output
clamping points; Conductor cross section up to
2.5 mm²/12 AWG

Color	Item No.	Pack. Unit
gray	830-800/000-318	3



General Specifications

Operating voltage	≤ 250 VAC/DC
Total current per potential (max.)	30 A
Current per connection (max.)	10 A

Connection Data

Total number of potentials	2
Connection type 1	Input
Connection technology 1	CAGE CLAMP®
Solid conductor 1	0.5 ... 6 mm ² / 20 ... 10 AWG
Fine-stranded conductor 1	0.5 ... 6 mm ² / 20 ... 10 AWG
Strip length 1	11 ... 12 mm / 0.43 ... 0.47 inch
Connection type 2	Output
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	102 mm / 4.02 inch
Height from upper-edge of DIN-rail	53 mm / 2.02 inch
Depth	55 mm / 2.17 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	127.4 g
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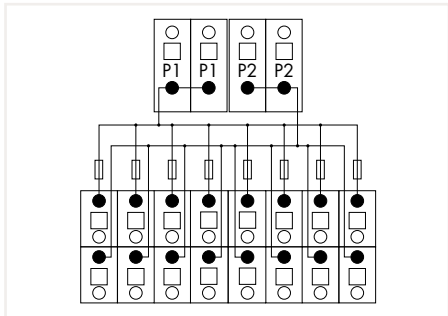
Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Relative humidity	≤ 95 % (no condensation permissible)

Standards and Specifications

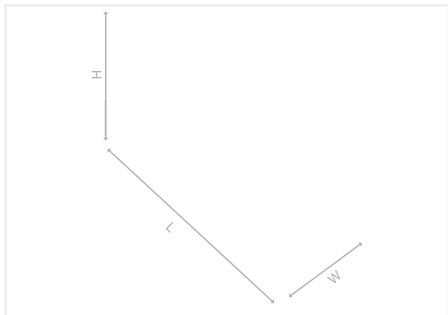
Standards/specifications	cULus 61010-2-201
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Potential Distribution Module 830 Series



Potential Distribution Module; 2 potentials;
with 2 input clamping points; Conductor cross section
up to 6 mm²/10 AWG; Lever; each with 8 output
clamping points; Conductor cross section up to
2.5 mm²/12 AWG; with fuse

Color	Item No.	Pack. Unit
gray	830-800/000-319	3



General Specifications

Operating voltage	≤ 250 VAC/DC
Total current per potential (max.)	30 A
Fuse capacity (max.)	6.3 A

Connection Data

Total number of potentials	2
Connection type 1	Input
Connection technology 1	CAGE CLAMP®
Solid conductor 1	0.5 ... 6 mm ² / 20 ... 10 AWG
Fine-stranded conductor 1	0.5 ... 6 mm ² / 20 ... 10 AWG
Strip length 1	11 ... 12 mm / 0.43 ... 0.47 inch
Connection type 2	Output
Connection technology 2	CAGE CLAMP®
Solid conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor 2	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length 2	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	98 mm / 3.85 inch
Height from upper-edge of DIN-rail	48 mm / 1.89 inch
Depth	106 mm / 4.18 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	181.5 g
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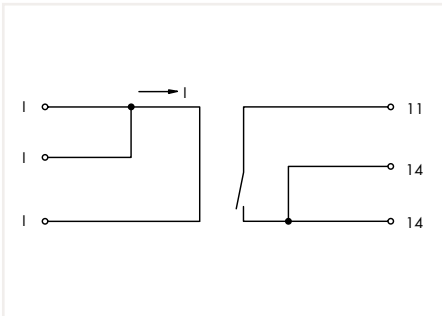
Environmental Requirements

Surrounding air temperature (operation)	-20 ... +50 °C
Relative humidity	≤ 95 % (no condensation permissible)

Standards and Specifications

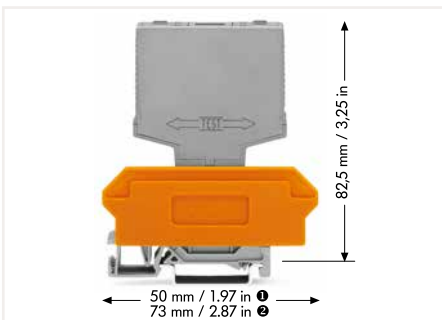
Standards/specifications	cULus 61010-2-201
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Current Flow Monitoring Module 286 Series



Current Flow Monitoring Module;
DC current flow monitoring module; 0.4 ... 3.5 A;
Relay with 1 make contact (1a)

Item No.	Pack. Unit
286-662	1



General Specifications

Operating voltage	12 ... 28 VDC
Measurement span (max.)	0.4 ... 3.5 ADC (-20 ... +40 °C)
	0.4 ... 3 ADC (-20 ... +60 °C)
	0.4 ... 2 ADC (-20 ... +70 °C)
Turn on/off point	0.35 A / 0.07 A
Voltage drop at input	24 ... 210 mV
Response time	0.5 ms
Number of make contacts/switch-on contacts	1
Switching voltage (max.)	200 VDC
Limiting continuous current	0.5 A
Switching power (resistive) max.	10 W (DC)

Safety and Protection

Dielectric strength input/output (AC, 1 min)	1.5 kV _{rms}
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Mechanical Data

Mounting type	Pluggable module for receptacle terminal blocks
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Material Data

Weight	22.7 g
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Environmental Requirements

Surrounding air temperature (operation)	-25 ... +40 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Accessories



Terminal block for pluggable modules; 6-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Width	Item No.	Pack. Unit
17 mm	280-619	30



Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

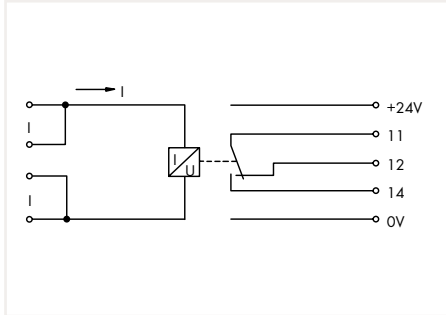
Width	Item No.	Pack. Unit
17 mm	280-609	30



Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

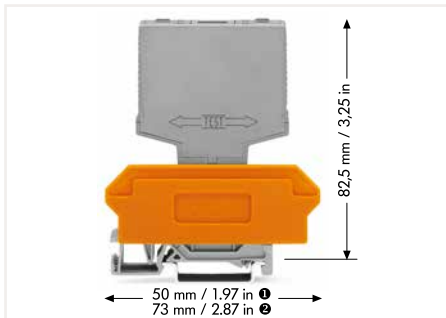
Width	Item No.	Pack. Unit
20 mm	280-763	25

Current Flow Monitoring Module 286 Series



Current Flow Monitoring Module;
AC current flow monitoring module; 1 ... 10 AAC;
Relay with 1 changeover contact (1u); adjustable

	Item No.	Pack. Unit
	286-665	1



General Specifications

Nominal operating voltage	24 VDC
Power consumption at nominal supply voltage	28 mA
Voltage drop at input	23 ... 850 mV
Measurement span (max.)	1 ... 10 A (AC)
Switching threshold (adjustable) min.	1 A
Response time	200 ms
Number of changeover/switchover contacts	1
Number of break contacts/switch-off contacts	1
Limiting continuous current	5 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC)
Status indicator	Red LED; Energized relay (current < switching threshold)

Safety and Protection

Pollution degree	2
Rated voltage	250 V
Rated surge voltage	4 kV
Dielectric strength input/output (AC, 1 min)	1.5 kV

Mechanical Data

Mounting type	Pluggable module for receptacle terminal blocks
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Material Data

Weight	58 g
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Environmental Requirements

Surrounding air temperature (operation)	-25 ... +40 °C
Surrounding air temperature (storage)	-40 ... +70 °C
Relative humidity	5 ... 85 % (no condensation permissible)
Operating altitude (max.)	2000 m

Accessories



Terminal block for pluggable modules; 10-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Width	Item No.	Pack. Unit
27 mm	280-639	15



Terminal block for pluggable modules; 20-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

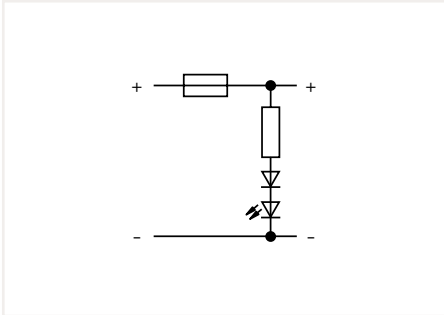
Width	Item No.	Pack. Unit
27 mm	280-629	15



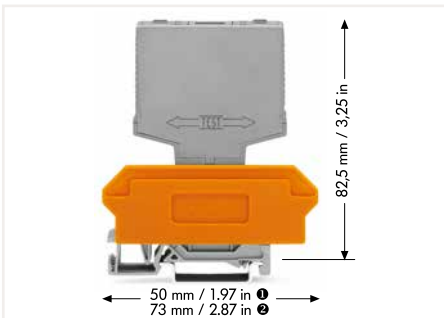
Terminal block for pluggable modules; 20-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Width	Item No.	Pack. Unit
30 mm	280-765	15

Component Module with a Fuse 286 Series



Component Module with a Fuse; for 5 x 20 mm microfuse; Nominal voltage: 24 VAC/DC		
	Item No.	Pack. Unit
	286-890	1



General Specifications	
Nominal operating voltage	24 VAC/DC
Leakage current in case of a blown fuse	5 mA
Fuse capacity (max.)	6.3 A

Safety and Protection	
Pollution degree	3
Rated voltage	250 V
Rated surge voltage	4 kV

Physical Data	
Width	10 mm / 0.394 inch

Mechanical Data	
Mounting type	Pluggable module for receptacle terminal blocks

Material Data	
Weight	14.6 g

Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +40 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Accessories



Terminal block for pluggable modules; 4-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm ²		
Width	Item No.	Pack. Unit
12 mm	280-618	40

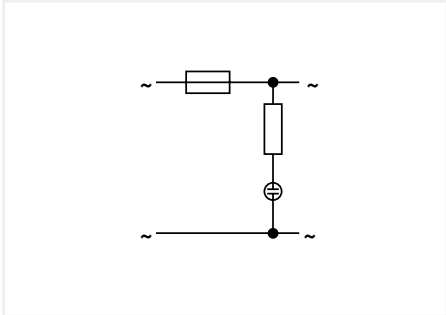


Terminal block for pluggable modules; 8-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm ²		
Width	Item No.	Pack. Unit
12 mm	280-608	40

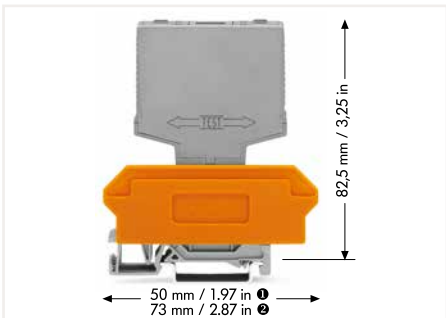


Terminal block for pluggable modules; 8-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm ²		
Width	Item No.	Pack. Unit
15 mm	280-762	30

Component Module with a Fuse 286 Series



Component Module with a Fuse; for 5 x 20 mm microfuse; Nominal voltage: 230 VAC/DC		
	Item No.	Pack. Unit
	286-891	1



General Specifications	
Nominal operating voltage	230 VAC/DC
Leakage current in case of a blown fuse	0.5 mA
Fuse capacity (max.)	6.3 A

Safety and Protection	
Pollution degree	3
Rated voltage	250 V
Rated surge voltage	4 kV

Physical Data	
Width	10 mm / 0.394 inch

Mechanical Data	
Mounting type	Pluggable module for receptacle terminal blocks

Material Data	
Weight	14.1 g

Environmental Requirements	
Surrounding air temperature (operation)	-25 ... +40 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Accessories



Terminal block for pluggable modules; 4-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm ²		
Width	Item No.	Pack. Unit
12 mm	280-618	40

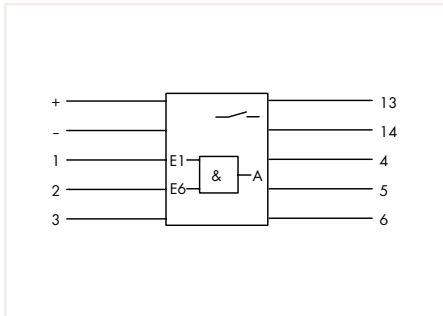


Terminal block for pluggable modules; 8-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm ²		
Width	Item No.	Pack. Unit
12 mm	280-608	40



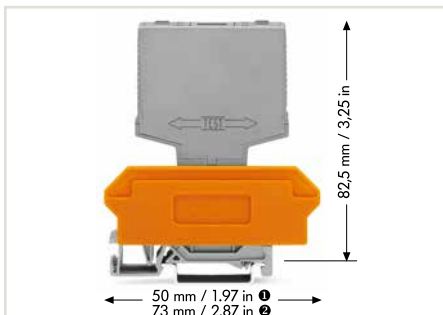
Terminal block for pluggable modules; 8-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm ²		
Width	Item No.	Pack. Unit
15 mm	280-762	30

AND Gate Module 286 Series



AND Gate Module; with 6 inputs

Item No.	Pack. Unit
286-826	1



General Specifications

Nominal operating voltage	24 VDC
Operating voltage	24 ... 27.5 VDC
Limiting continuous current	3 A
Power consumption at nominal supply voltage	34.6 mA
Number of make contacts/switch-on contacts	1
Switching voltage (max.)	250 VAC; 120 VDC
Switching power (resistive) max.	750 VA AC / 120 W

Safety and Protection

Pollution degree	2
Rated voltage	250 V
Rated surge voltage	4 kV
Dielectric strength input/output (AC, 1 min)	2.5 kV

Physical Data

Width	25 mm / 0.984 inch
-------	--------------------

Mechanical Data

Mounting type	Pluggable module for receptacle terminal blocks
---------------	---

Material Data

Weight	34 g
--------	------

Environmental Requirements

Surrounding air temperature (operation)	-25 ... +40 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Accessories



Terminal block for pluggable modules; 10-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Width	Item No.	Pack. Unit
27 mm	280-639	15



Terminal block for pluggable modules; 20-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

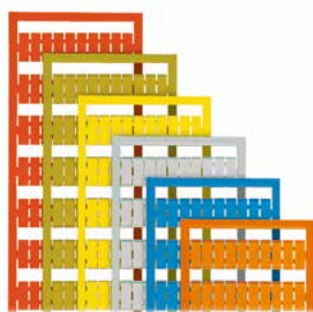
Width	Item No.	Pack. Unit
27 mm	280-629	15



Terminal block for pluggable modules; 20-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

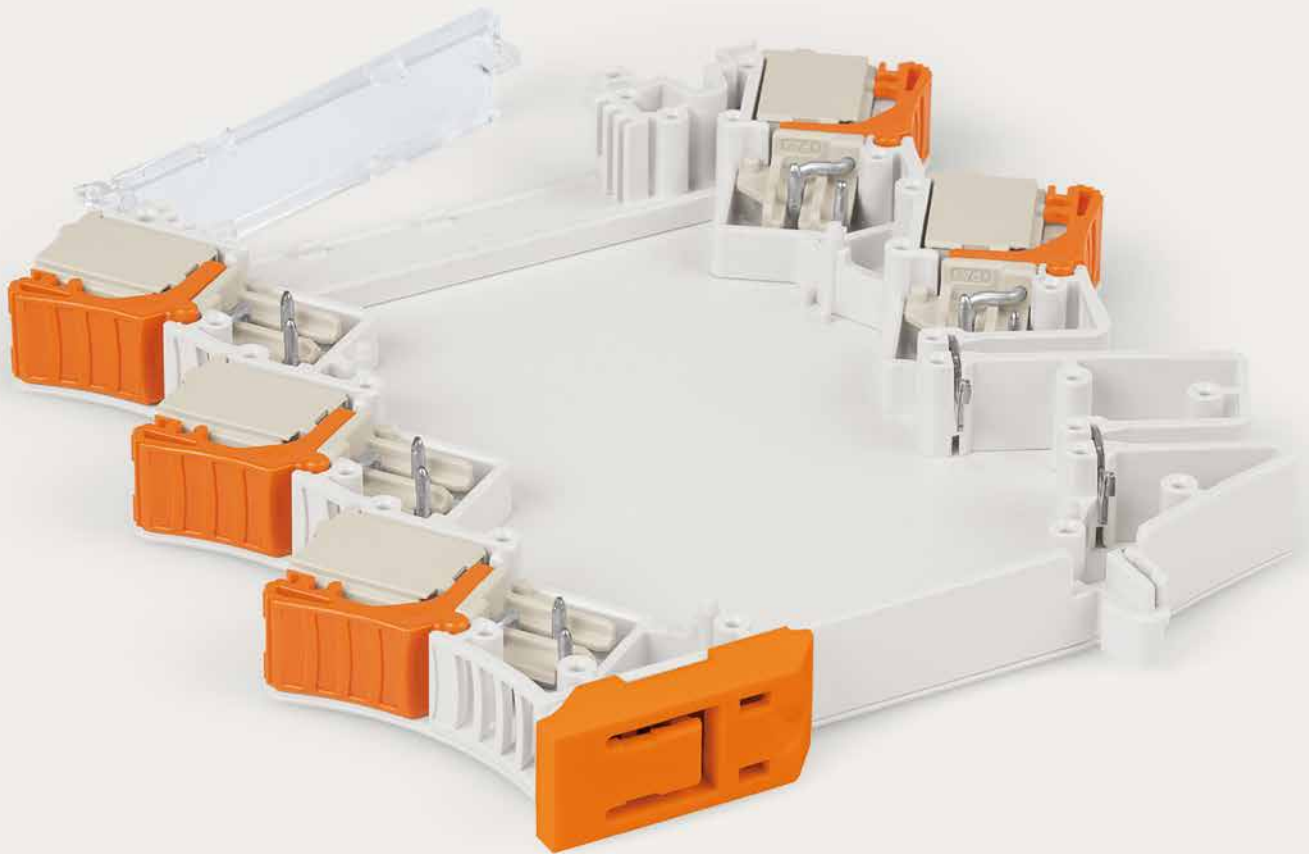
Width	Item No.	Pack. Unit
30 mm	280-765	15

Accessories





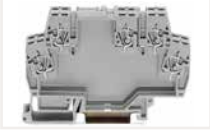


WSB marker card; WSB marker width: 4 mm; 10 strips with 10 markers/card		
Marking	Item No.	Pack. Unit
K	209-782	50
1 ... 10 (10 x)	209-702	5
A1; A2; 13; 14	209-952	50
A1; A2; 11; 12	209-953	50
11; 12; 14; A1; A2; A2; 11; 12; 14	209-994	50
12; A1; A2; 24; 11; 14; 21; 22	209-995	50
A1; A1; A2; A2; 11; 12; 13; 14; 23; 24	209-693	50
12; A1; A2; 23; 24; 11; 13; 14; 21; 22	209-691	50
12; A1; A2; 23; 24; 11; 13; 14; 33; 34	209-690	50
14; A1; A2; 33; 34; 13; 23; 24; 43; 44	209-692	50
A1; A2; 32; 31; 34; 42; 41; 12; 11; 14; 22; 21; 24; 44	249-656	50
L+; 1; L-; L-; 11; 12; 13; 14	209-954	50
A1; A2; A3; 11; 12; 14	249-607	50
A1; A1; A2; A2; 12; 11; 11; 14	209-996	50
A1; A1; St; A2; A2; 12; 11; 11; 14	209-601	50
U1; U2; U3; U4; OV; 12; 11; 11; 14; 14	209-951	50
U	209-789	50
A1; A2; A2; 1; 3; 2	209-685	50
A1; A2; A2; 1; 2; 2	209-686	50
A1+; A1+; A2-; A2-; 1; RL1; RL2; 2	209-955	50
A1+; A1+; A2-; A2-; 1+; 1+; A; 2-	249-651	50
+/-	209-552	50
1; 2; 3; OV; +UB; OUT; ERR.; OV	249-622	50
1; 2; OV; +UB; OUT; ERR.; OV	249-623	50
Lin; Lin; Lout; Lout; 24V; UA; UA; OV	209-957	50
Lin; Lin; Lout; 11; 14; 14; Lin; Lin; Lout	249-654	50
lin; lin; lout; lout; 24V; 11; 12; 14; OV	209-997	50
S	209-682	50
V	209-784	50
F1 ... F10	209-787	50
D	209-783	50
+; -; 1; 2; 3; 13; 14; 4; 5; 6	249-608	50
L; N; Ackn.; Failure; Test; N; 14; 24	249-606	50
A1; A2; Ackn.; Failure; 12; 11; 11; 14	249-653	50

WSB marker card; plain; WSB marker width: 4 mm; 10 strips with 10 markers/card		
Color	Item No.	Pack. Unit
○ white	209-701	100
● yellow	209-701/000-002	100
● red	209-701/000-005	100
● blue	209-701/000-006	100
○ gray	209-701/000-007	100
● orange	209-701/000-012	100
● light green	209-701/000-017	100
● green	209-701/000-023	100
● violet	209-701/000-024	100

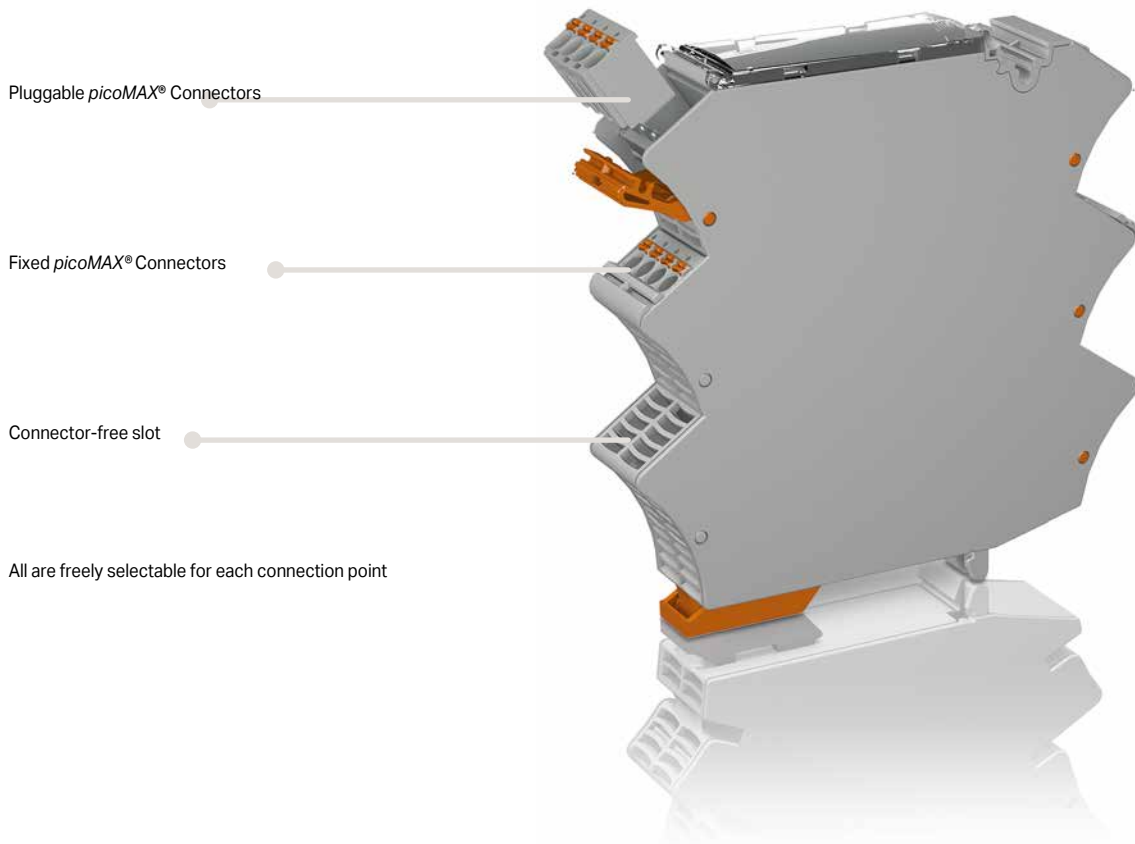


WAGO Empty Housings

WAGO Empty Housings

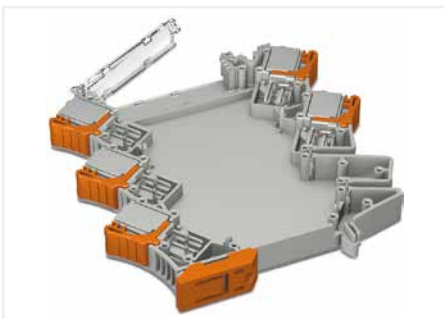
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	Empty Housings; 2857 Series	
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Modular Empty Housings Overview and Configuration 2857 Series

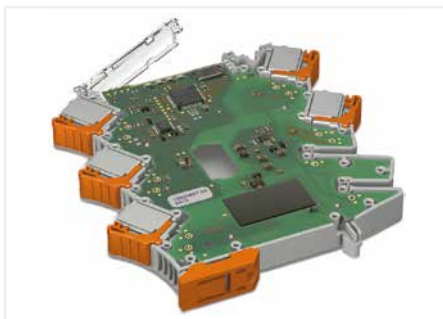


8

Supplied as a pre-assembled unit:



1. Pre-assembled unit










2. Insert and solder the PCB.



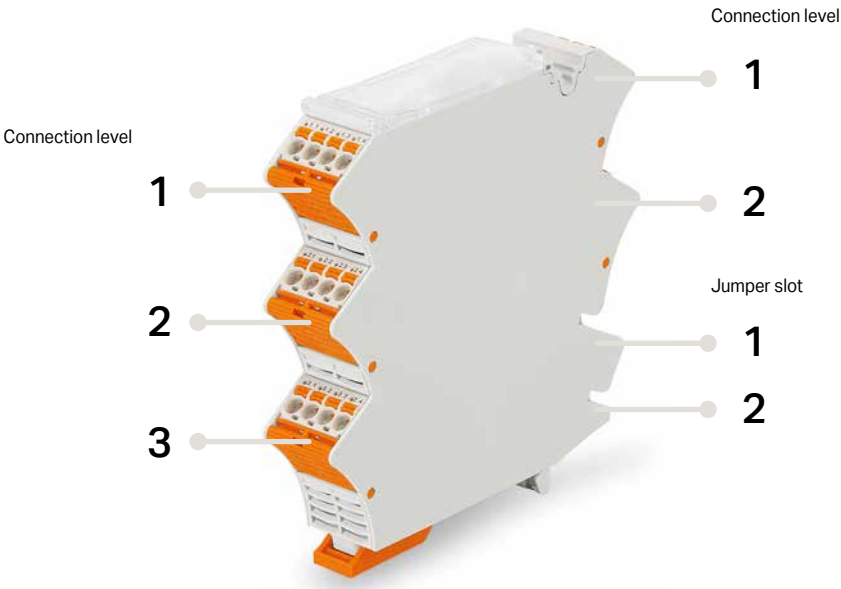
3. Snap on the side wall.

Housing configuration:

Housing width: 12.5 mm	 2857-101	 2857-102	 2857-103	-
Housing width: 22.5 mm	 2857-121	 2857-122	 2857-123	 2857-124
Connection levels	2-2	3-2	3-3	1-1
Jumper slots	2-2	0-2	0-0	2-2

Mixed configuration (fixed/removable/empty slot) upon request!

Example of connection level and jumper slot assignment:



Connection levels	3-2
Jumper slots	0-2

Modular Empty Housings 2857 Series



- *picoMAX*® female connectors, with coding keys, 4-pole
- Pre-assembled unit
- Flexible conductor termination
- Customizable connection levels
- Various marking options available
- Sealable, transparent cover
- Commoning via jumpers (859-402)

Electrical Data (*picoMAX*® 5.0 Female Connector)

Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Rated voltage	250 V	320 V	630 V
Rated surge voltage	4 kV	4 kV	4 kV
Rated current	16 A	16 A	16 A
Approvals per	UL 1059		
Use Group	B	C	D
Rated voltage UL	300 V	-	300 V
Rated current UL	15 A	-	10 A

Connection Data

Connection technology	Push-in CAGE CLAMP®
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Conductor connection direction to PCB	45 °
Solid conductor	0.2 ... 2.5 mm ² / 24 ... 12 AWG
Fine-stranded conductor	0.2 ... 2.5 mm ² / 24 ... 12 AWG
Fine-stranded conductor; with insulated ferrule	0.2 ... 1.5 mm ²
Fine-stranded conductor; with uninsulated ferrule	0.2 ... 2.5 mm ²

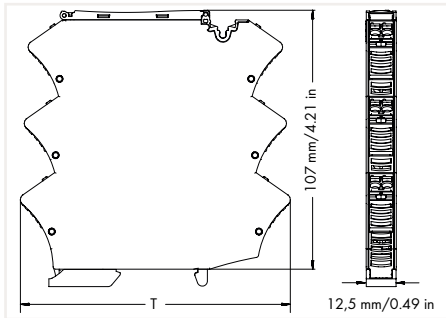
Material Data (*picoMAX*® 5.0 Female Connector)

Material group	I
Insulation material	Polyphthalamide (PPA GF)
Flammability class per UL94	V0
Limit temperature range	-60 ... +100 °C
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact material	Electrolytic copper (Ecu)
Contact plating	Tin-plated

Material Data (Empty Housing)

Housing material	PC
Flammability class	V0
Surrounding air temperature	-40 ... +70 °C
Storage temperature	-40 ... +85 °C

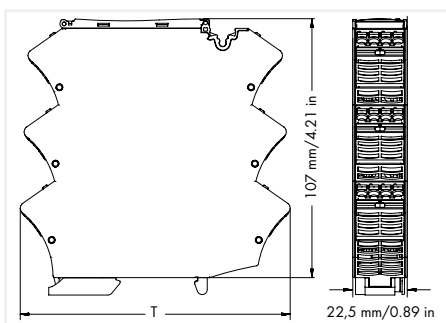
Modular Empty Housing; for DIN-35 Rail 2857 Series



Housing width: 12.5 mm		
Description	Item No.	Pack. Unit
2-2 connection levels, 2-2 jumper slots	2857-101	10
3-2 connection levels, 0-2 jumper slots	2857-102	10
3-3 connection levels, 0-0 jumper slots	2857-103	10

Technical Data: Empty Housing	
Dimensions (mm) W x H x D	12.5 x 107 x 108 (2857-101) 12.5 x 107 x 110 (2857-102) 12.5 x 107 x 112 (2857-103) Height from upper-edge of DIN-rail
Power loss	2 W

Accessories		
Description	Item No.	Pack. Unit
Coding pin carrier	2092-1610	1
Jumper	859-402	1



Housing width: 22.5 mm		
Description	Item No.	Pack. Unit
2-2 connection levels, 2-2 jumper slots	2857-121	5
3-2 connection levels, 0-2 jumper slots	2857-122	5
3-3 connection levels, 0-0 jumper slots	2857-123	5
1-1 connection levels, 2-2 jumper slots	2857-124	5

Technical Data: Empty Housing	
Dimensions (mm) W x H x D	22.5 x 107 x 108 (2857-121) 22.5 x 107 x 110 (2857-122) 22.5 x 107 x 112 (2857-123) 22.5 x 107 x 105 (2857-124) Height from upper-edge of DIN-rail
Power loss	3 W (max.)

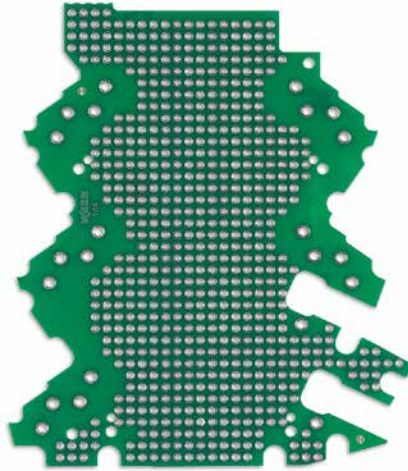
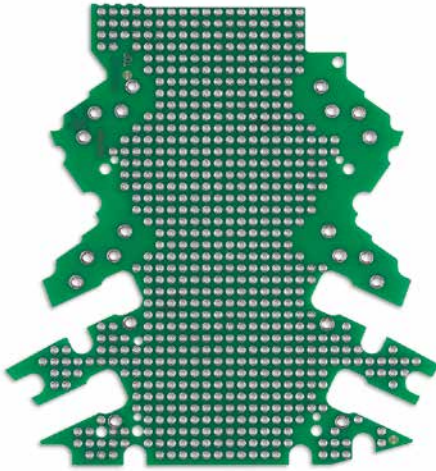
Accessories		
Description	Item No.	Pack. Unit
Coding pin carrier	2092-1610	1
Jumper	859-402	1

PU = Packaging Unit; SPU = Subpackaging Unit

Stripboard; for installation in 12.5 mm and 22.5 mm empty housings 2857 Series

Connection levels: 2-2; Jumper slots: 2-2

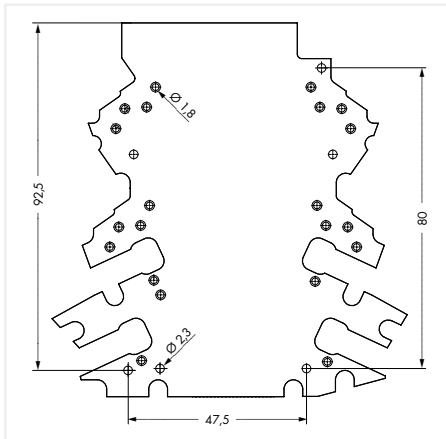
Connection levels: 3-2; Jumper slots: 0-2



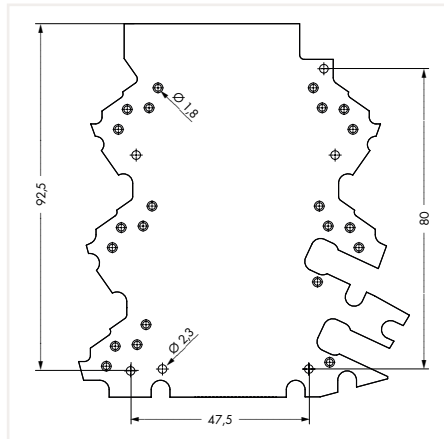
Item No.	PU (SPU)
2857-191/3140-000	5 (1)

Item No.	PU (SPU)
2857-192/3140-000	5 (1)

Dimensions in mm



Dimensions in mm



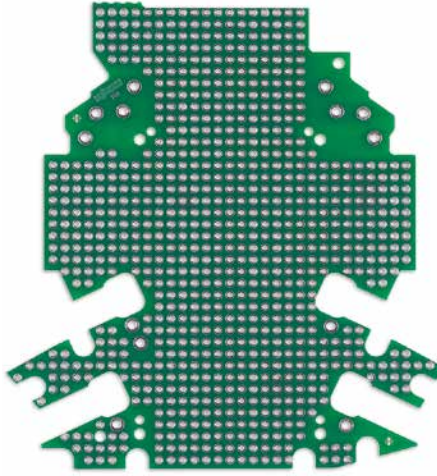
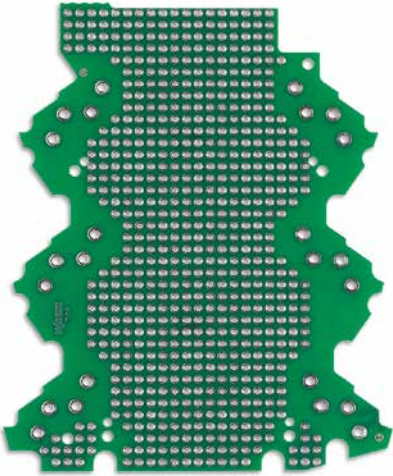
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PU = Packaging Unit; SPU = Subpackaging Unit

Stripboard; for installation in 12.5 mm and 22.5 mm empty housings 2857 Series

Connection levels: 3-3; Jumper slots: 0-0

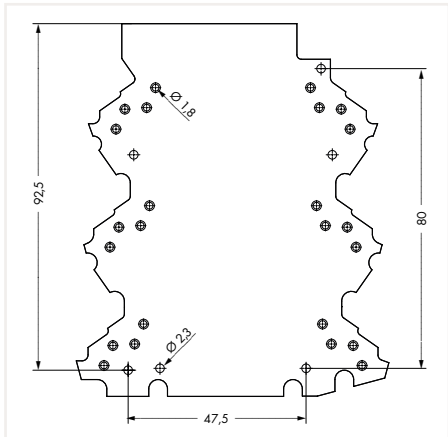
Connection levels: 1-1; Jumper slots: 2-2



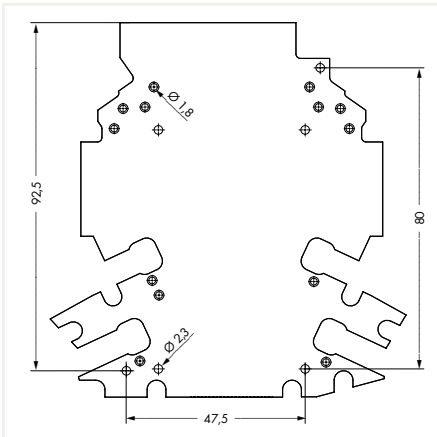
Item No.	PU (SPU)
2857-193/3140-000	5 (1)

Item No.	PU (SPU)
2857-194/3140-000	5 (1)

Dimensions in mm

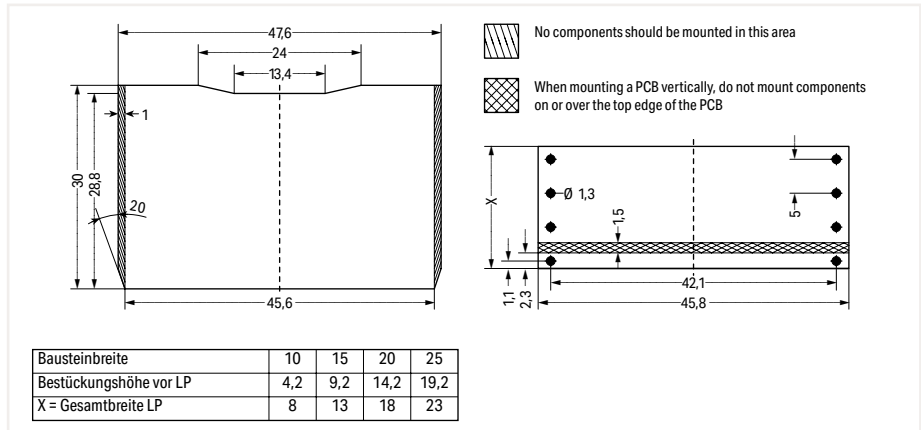


Dimensions in mm



PU = Packaging Unit; SPU = Subpackaging Unit

Empty Component Plug Housing for Receptacle Terminal Blocks; for Self-Assembly 286/786 Series



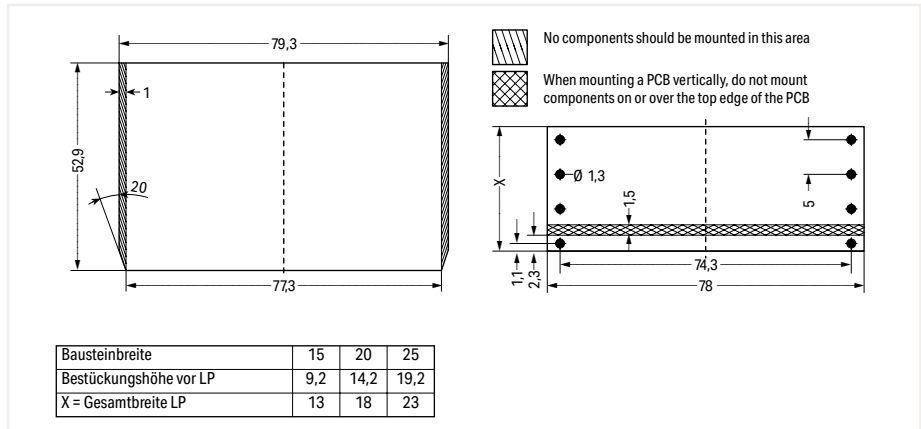
Empty Component Plug Housing; 286 Series

Type	Pole	Width	Item No.	Pack. Unit
9	4	10 mm / 0.394 inch	286-110	1
10	6	15 mm / 0.591 inch	286-111	1
11	8	20 mm / 0.787 inch	286-112	1
12	10	25 mm / 0.984 inch	286-113	1

Technical Data

Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Per contact	6 A
Module height	82.5 mm (from upper-edge of DIN-35 rail)

8



Empty Component Plug Housing; 786 Series

Type	Pole	Width	Item No.	Pack. Unit
14	6	15 mm / 0.591 inch	786-101	1
15	8	20 mm / 0.787 inch	786-102	1
16	10	25 mm / 0.984 inch	786-103	1

Technical Data

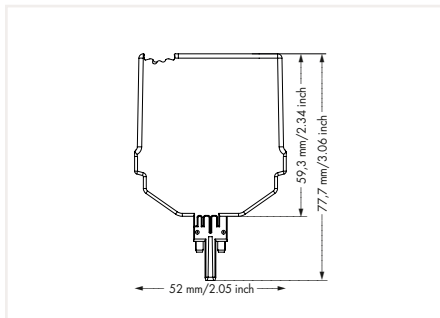
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Per contact	6 A
Module height	82.5 mm (from upper-edge of DIN-35 rail)

Empty Component Plug Housing for Receptacle Terminal Blocks; for Self-Assembly 2002/2042 Series



Empty Component Plug Housing; TOPJOB® S; 2002 Series; grey

Type	Pole	Width	Item No.	Pack. Unit
1	2	5.2 mm / 0.205 inch	2002-800	100
2	2	10.4 mm / 0.409 inch	2002-810	50
3	4	10.4 mm / 0.409 inch	2002-820	50
4	2	10.4 mm / 0.409 inch	2002-880	50



Empty Component Plug Housing; TOPJOB® S; 286 Series; transparent housing; with fiber optics

Pole	Width	Item No.	Pack. Unit
4	10.3 mm breit / 0.406 inch	2042-321	5
6	15.5 mm / 0.61 inch	2042-331	5
8	20.7 mm / 0.815 inch	2042-341	5
10	25.9 mm / 1.02 inch	2042-351	5

Empty Component Plug Housing for Receptacle Terminal Blocks; for Self-Assembly 286/786 Series

Accessories



Terminal block for pluggable modules; 4-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Width	Item No.	Pack. Unit
12 mm	280-618	40



Terminal block for pluggable modules; 8-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Width	Item No.	Pack. Unit
12 mm	280-608	40



Terminal block for pluggable modules; 6-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Width	Item No.	Pack. Unit
17 mm	280-619	30



Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Width	Item No.	Pack. Unit
17 mm	280-609	30



Terminal block for pluggable modules; 8-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Width	Item No.	Pack. Unit
22 mm	280-638	20



Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Width	Item No.	Pack. Unit
22 mm	280-628	20

8



Terminal block for pluggable modules; 10-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Width	Item No.	Pack. Unit
27 mm	280-639	15



Terminal block for pluggable modules; 20-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Width	Item No.	Pack. Unit
27 mm	280-629	15



Unlocking pliers for component plug housings

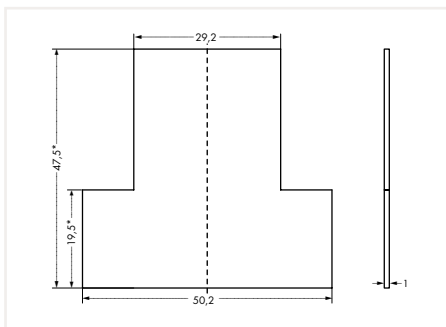
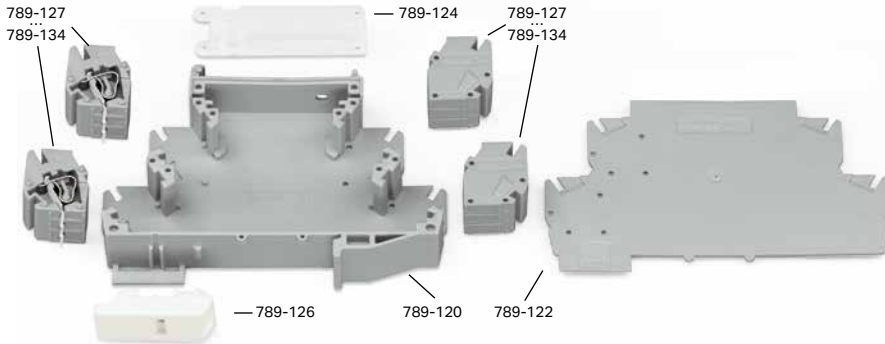
Item No.	Pack. Unit
210-492	1



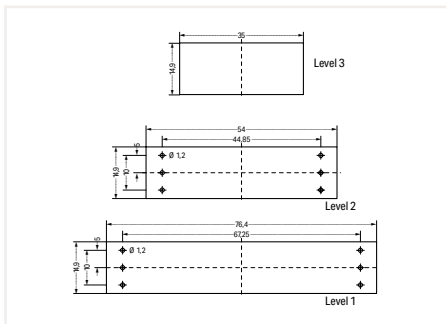
WSB marker card; white; for 5 ... 17.5 mm terminal block width; 10 strips with 10 markers/card

Marking	Item No.	Pack. Unit
plain	209-501	5
1 ... 10	209-702	5

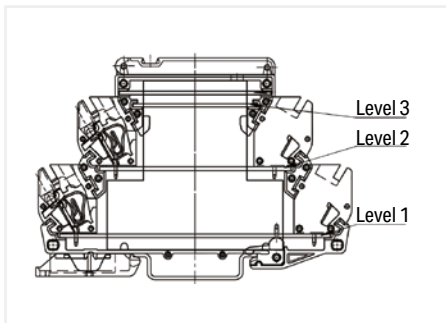
DIN-Rail-Mount Enclosures 789 Series



PCB dimensions, horizontal mounting
*less 4.5 mm when mounting a vertical PCB on level 1



PCB dimensions, vertical mounting:
(PCB thickness max. 1.5 mm) in level 1;
(PCB thickness max. 1 mm) in level 2 and 3



Universal Modular Component Plug Housing; as rail-mount terminal block

Description	Item No.	Pack. Unit
Housing: 55 mm	789-120	1
Top cover: 55 mm	789-122	1
Cover; transparent	789-124	1
Release mechanism	789-126	1
Compact terminal block; 3-pole: CCC*	789-127	1
Compact terminal block; 3-pole: COC*	789-128	1
Compact terminal block; 3-pole: CCO*	789-129	1
Compact terminal block; 3-pole: OCC*	789-130	1
Compact terminal block; 3-pole: OCO*	789-131	1
Compact terminal block; 3-pole: OOO*	789-132	1
Compact terminal block; 3-pole: OOC*	789-133	1
Compact terminal block; 3-pole: COO*	789-134	1

*C = with clamping spring; O = without clamping spring, enclosure open on the right side

Electrical Data

Rated nominal voltage	250 V
Rated surge voltage	4 kV

Safety and Protection

Pollution degree	3
Protection class	IP20

Connection Data

Width	17.5 mm
Height	55 mm
Depth	90 mm
Dimensions (note)	Height from upper-edge of DIN-rail

Physical Data

Connection technology	CAGE CLAMP®
Cross sections	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Mechanical Data

Mounting position	Any
-------------------	-----

Material Data

Housing material	PA 66
Flammability class	V0
Color	Gray (similar to RAL 7038)

Environmental Requirements

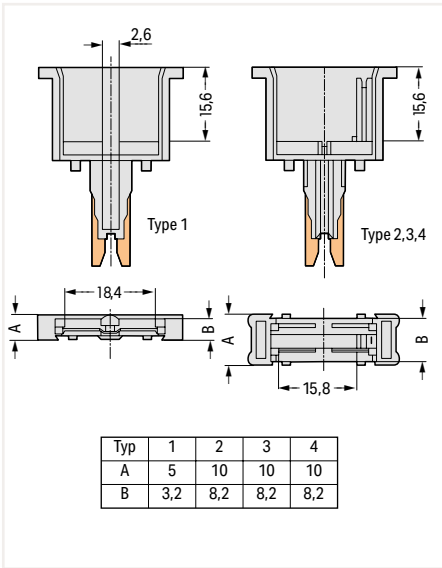
Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C

Empty Component Plug Housing for Carrier Terminal Blocks; for Self-Assembly 280 Series



Empty Component Plug Housing			
	Description	Item No.	Pack. Unit
Type 1	2-pole; 5 mm/0.197 inch wide; Plug inside dimensions (W/H/D): 3.2/15/15 mm	280-801	100
Type 2	2-pole; 10 mm/0.394 inch wide; Plug inside dimensions (W/H/D): 8.2/15/15 mm	280-802	50
Type 3	4-pole; 10 mm/0.394 inch wide; Plug inside dimensions (W/H/D): 8.2/15/15 mm	280-804	50

Technical Data	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Per contact	6 A (max.)



8

Accessories



2-conductor carrier terminal block; Marking on both sides; gray; Terminal block width: 5 mm / 0.197 inch; Cross sections: 0.08 ... 2.5 mm² / 28 ... 14 AWG; Strip length: 8 ... 9 mm / 0.31 ... 0.35 inch

Item No.	Pack. Unit
280-616	100



2-conductor carrier terminal block; Marking in center position; gray; Terminal block width: 5 mm / 0.197 inch; Cross sections: 0.08 ... 2.5 mm² / 28 ... 14 AWG; Strip length: 8 ... 9 mm / 0.31 ... 0.35 inch

Item No.	Pack. Unit
280-916	100



3-conductor carrier terminal block; gray; Terminal block width: 5 mm / 0.197 inch; Cross sections: 0.08 ... 2.5 mm² / 28 ... 14 AWG; Strip length: 8 ... 9 mm / 0.31 ... 0.35 inch

Item No.	Pack. Unit
280-610	100



4-conductor carrier terminal block; Marking on both sides; gray; Terminal block width: 5 mm / 0.197 inch; Cross sections: 0.08 ... 2.5 mm² / 28 ... 14 AWG; Strip length: 8 ... 9 mm / 0.31 ... 0.35 inch

Item No.	Pack. Unit
280-606	100



4-conductor carrier terminal block; Marking in center position; gray; Terminal block width: 5 mm / 0.197 inch; Cross sections: 0.08 ... 2.5 mm² / 28 ... 14 AWG; Strip length: 8 ... 9 mm / 0.31 ... 0.35 inch

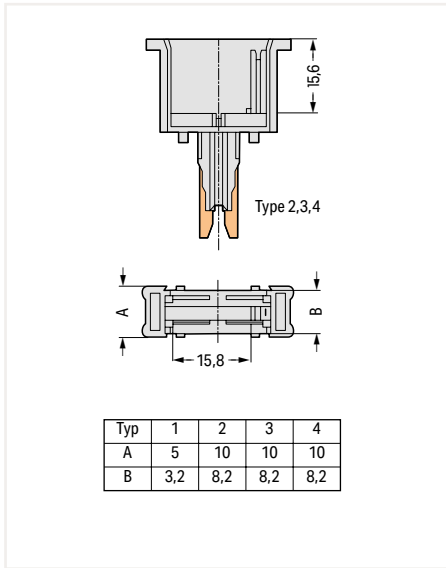
Item No.	Pack. Unit
280-686	100

Empty Component Plug Housing for Through Terminal Blocks; for Self-Assembly 280 Series



Empty Component Plug Housing			
	Description	Item No.	Pack. Unit
Type 4	2-pole; 10 mm/0.394 inch wide; Plug inside dimensions (W/H/D): 8.2/15/15 mm	280-803	50

Technical Data	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Per contact	6 A (max.)



Accessories



2-conductor through terminal block; Marking on both sides; gray; Terminal block width: 5 mm / 0.197 inch; Cross sections: 0.08 ... 2.5 mm² / 28 ... 14 AWG; Strip length: 8 ... 9 mm / 0.31 ... 0.35 inch

Item No.	Pack. Unit
280-601	100



2-conductor through terminal block; Marking in center position; gray; Terminal block width: 5 mm / 0.197 inch; Cross sections: 0.08 ... 2.5 mm² / 28 ... 14 AWG; Strip length: 8 ... 9 mm / 0.31 ... 0.35 inch

Item No.	Pack. Unit
280-901	100



3-conductor through terminal block; gray; Terminal block width: 5 mm / 0.197 inch; Cross sections: 0.08 ... 2.5 mm² / 28 ... 14 AWG; Strip length: 8 ... 9 mm / 0.31 ... 0.35 inch

Item No.	Pack. Unit
280-681	100



4-conductor through terminal block; Marking on both sides; gray; Terminal block width: 5 mm / 0.197 inch; Cross sections: 0.08 ... 2.5 mm² / 28 ... 14 AWG; Strip length: 8 ... 9 mm / 0.31 ... 0.35 inch

Item No.	Pack. Unit
280-621	100



4-conductor through terminal block; Marking in center position; gray; Terminal block width: 5 mm / 0.197 inch; Cross sections: 0.08 ... 2.5 mm² / 28 ... 14 AWG; Strip length: 8 ... 9 mm / 0.31 ... 0.35 inch

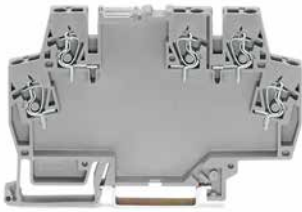
Item No.	Pack. Unit
280-833	100



2-conductor through terminal block; gray; Terminal block width: 5 mm / 0.197 inch; Cross sections: 0.08 ... 2.5 mm² / 28 ... 14 AWG; Strip length: 8 ... 9 mm / 0.31 ... 0.35 inch

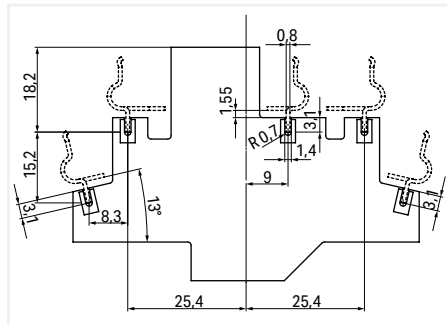
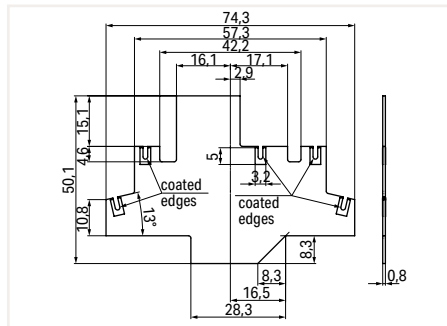
Item No.	Pack. Unit
280-101	100

Empty Rail-Mount Terminal Block Housing 859 Series



Universal Modular Component Plug Housing as Rail-Mount Terminal Block

Item No.	Pack. Unit
859-110	1



PCB dimensions

Safety and Protection

Protection class	IP00
Protection class with end and intermediate plate	IP20

Connection Data

Connection points (number)	5
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm² / 28 ... 14 AWG
Strip length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 in
Height from upper-edge of DIN-rail	56 mm / 2.205 in
Depth	91 mm / 3.583 in

Mechanical Data

Mounting type	DIN-35 rail
Mounting position	Any

Material Data

Color	Gray
Flammability class per UL94	V0
Housing material	PA 6.6
Weight	14.4 g

Environmental Requirements

Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C

8

Accessories



End and intermediate plate; 1 mm thick; gray

Item No.	Pack. Unit
859-525	100 (25)

Push-in type jumper bar; light gray; insulated; 18 A

Description	Item No.	Pack. Unit
2-way	859-402	200 (8x25)
3-way	859-403	200 (8x25)
4-way	859-404	200 (8x25)
5-way	859-405	200 (8x25)
6-way	859-406	100 (4x25)
7-way	859-407	100 (4x25)
8-way	859-408	100 (4x25)
9-way	859-409	100 (4x25)
10-way	859-410	100 (4x25)

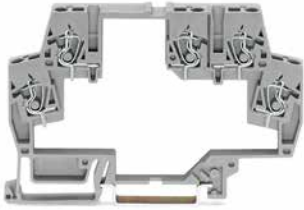
Test pin; 1 mm Ø; with solder connection for test cable

Item No.	Pack. Unit
735-500	100 (1)

Item no. suffix for colored push-in type jumper bars

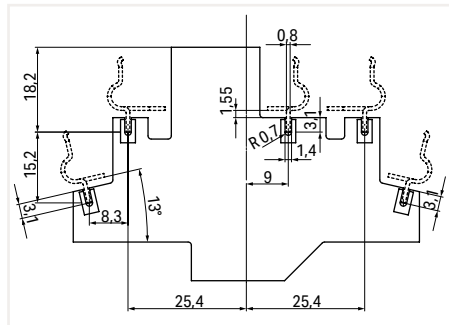
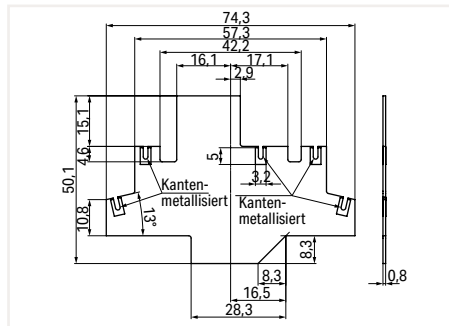
yellow	... /000-029
red	... /000-005
blue	... /000-006

Empty Rail-Mount Terminal Block Housing 859 Series



Frame to Enlarge Terminal block Width

Item No.	Pack. Unit
859-501	1



PCB dimensions

Safety and Protection

Protection class	IP00
Protection class with end and intermediate plate	IP20

Connection Data

Connection points (number)	5
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	8 mm / 0.315 in
Height from upper-edge of DIN-rail	56 mm / 2.205 in
Depth	91 mm / 3.583 in

Mechanical Data

Mounting type	DIN-35 rail
Mounting position	Any

Material Data

Color	Gray
Flammability class per UL94	V0
Housing material	PA 6.6
Weight	14.4 g

Environmental Requirements

Surrounding air temperature (operation)	-25 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C

Accessories



End and intermediate plate; 1 mm thick; gray

Item No.	Pack. Unit
859-525	100 (25)

Push-in type jumper bar; light gray; insulated; 18 A

Description	Item No.	Pack. Unit
2-way	859-402	200 (8x25)
3-way	859-403	200 (8x25)
4-way	859-404	200 (8x25)
5-way	859-405	200 (8x25)
6-way	859-406	100 (4x25)
7-way	859-407	100 (4x25)
8-way	859-408	100 (4x25)
9-way	859-409	100 (4x25)
10-way	859-410	100 (4x25)

Test pin; 1 mm Ø; with solder connection for test cable

Item No.	Pack. Unit
735-500	100 (1)

Item no. suffix for colored push-in type jumper bars

yellow	... /000-029
red	... /000-005
blue	... /000-006

Accessories



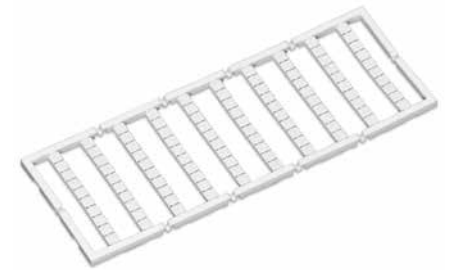
Operating tool with a partially insulated shaft; Type 2; (3.5 x 0.5) mm blade		
	Item No.	Pack. Unit
	210-720	50



Felt-tip pen; for permanent marking		
	Item No.	Pack. Unit
	210-110	200



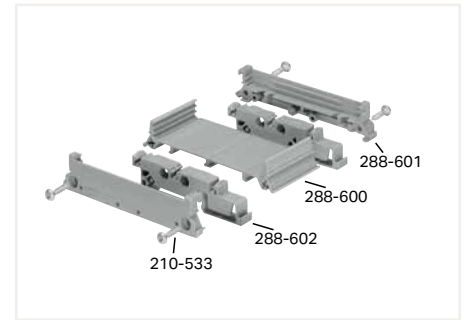
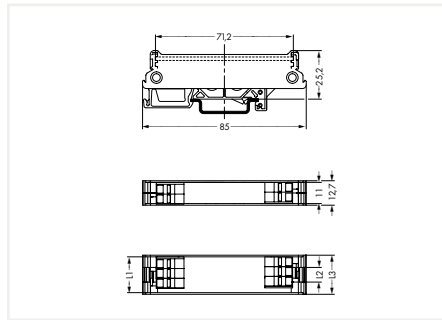
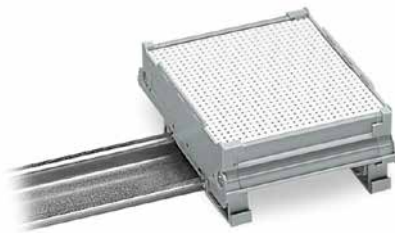
Push-in type jumper bar; 12-way; Nominal current: 16 A; uninsulated		
	Item No.	Pack. Unit
	789-112	100



Mini-WSB marker card; Marker width: 5 mm; 10 strips with 10 markers/card		
Marking	Item No.	Pack. Unit
plain	248-501	50
1 ... 10 (10 x)	248-502	5
11 ... 20 (10 x)	248-503	5
21 ... 30 (10 x)	248-504	5
31 ... 40 (10 x)	248-505	5
41 ... 50 (10 x)	248-506	5
1 ... 50 (2 x)	248-566	5
K1 ... K10	248-450	50
K11 ... K20	248-451	50
K100	248-452	50
U1 ... U10	248-453	50
U11 ... U20	248-454	50
U100	248-455	50

8

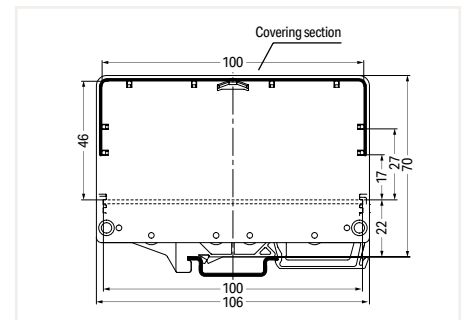
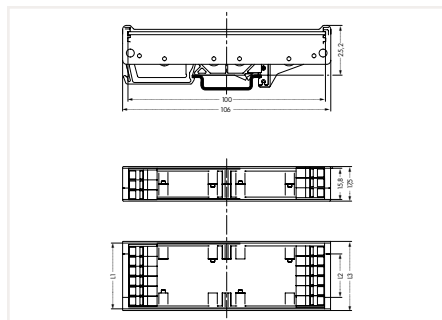
DIN-Rail Mount PCB Carriers 288 Series



Mounting Carrier, Size 1

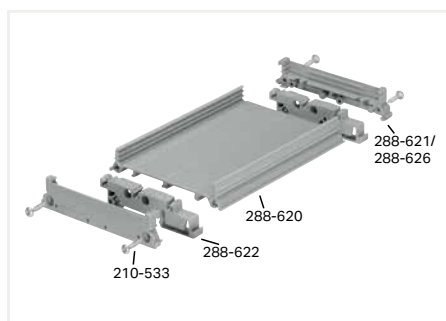
Length calculation for a complete mounting carrier:
 PCB length: L1
 Base length: L2 = L1 - 11 mm
 Mounting carrier length: L3 = L1 + 2 mm
 Lateral cover, size 1, 6.35 mm thick
 Free space between base and PCB (when using upper PCB groove): 5 mm
 PCB tolerances: 1.5 mm ± 0.2 mm (thickness), ± 0.2 mm (length/width), -0.1/+0.3 for milling contours

Mounting Carrier; Size 1		
Description	Item No.	Pack. Unit
Lateral cover; Type 1; small; 6.35 mm thick	288-601	1
Foot for DIN-35 rail	288-602	1
Carrier base; Size 1; 1 m long	288-600	1



Mounting Carrier, Size 2

Length calculation for a complete mounting carrier:
 PCB length: L1
 Base length: L2 = L1 - 15.8 mm
 Mounting carrier length: L3 = L1 + 2 mm
 Cover length: L4 = L1
 Lateral cover, size 2, 8.75 mm thick
 Free space between base and PCB (when using upper PCB groove): 5 mm
 PCB tolerances: 1.5 mm ± 0.2 mm (thickness), ± 0.2 mm (length/width), -0.1/+0.3 for milling contours



Mounting Carrier, Size 2

Mounting Carrier; Size 2		
Description	Item No.	Pack. Unit
Lateral cover; Type 2; small; 8.75 mm thick	288-621	1
Lateral cover; Type 2; large; 8.75 mm thick	288-626	1
Foot for DIN-35 rail	288-622	1
Carrier base; Size 2; 1 m long	288-620	1
Cover; Size 2; 1 m long	288-627	1

Accessories; for all mounting carriers

Marking strip

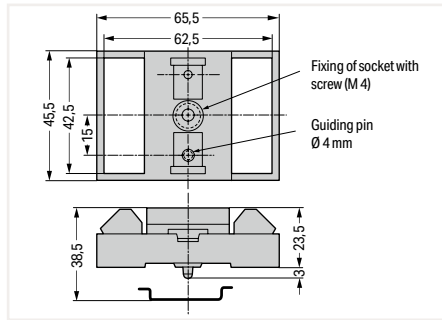
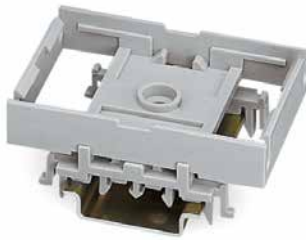


Description	Item No.	Pack. Unit
Phillips screw 2.9 x 13*	210-533	25
Marking strip 7.5 x 0.5 mm; 1 m long; translucent	709-196	1

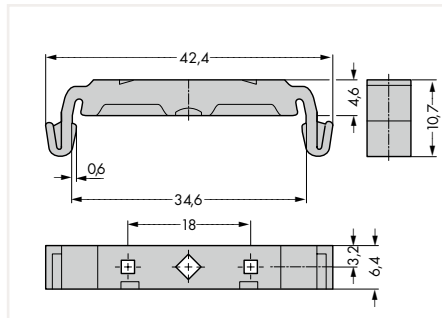
* Two screws per lateral cover; for a module length of 35 mm or higher; lateral covers must be riveted for smaller modules. Rivet length depends on module length (rivets are not offered by WAGO).

PU = Packaging Unit; SPU = Subpackaging Unit

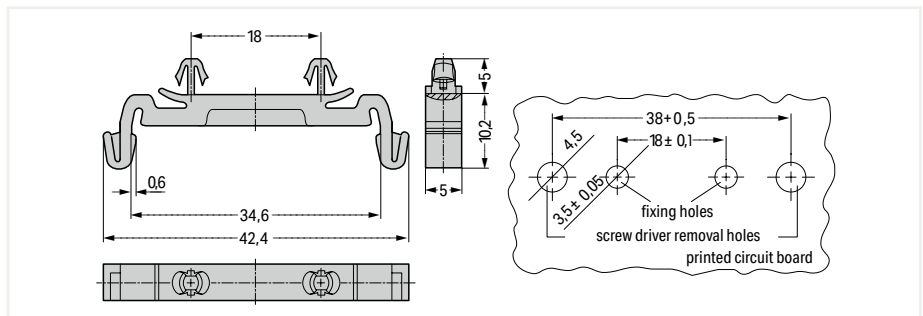
DIN-Rail-Mount PCB Carriers and Feet 288/209 Series



Mounting carrier			
Description		Item No.	Pack. Unit
Mounting carrier	For screw or DIN-rail mounting via universal snap-on type mounting feet (to be ordered separately)	288-001	1
Universal mounting foot	Snap-fit type; for DIN-15, DIN-32 and DIN-35 rails	288-002	10
Mounting carrier for PCBs	Suitable for a "Eurocard" PCB (100 x 160 mm)	288-003	1

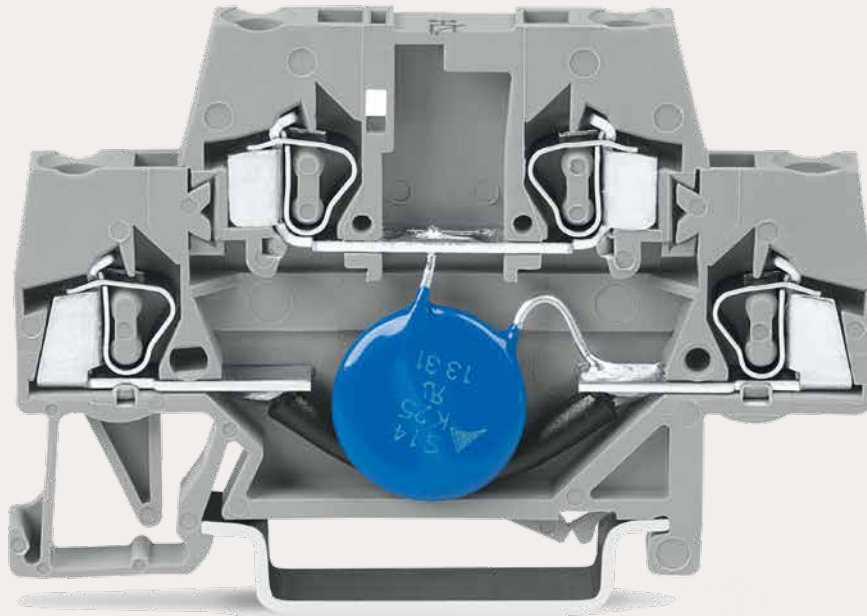


Mounting foot			
Description		Item No.	Pack. Unit
Mounting foot		209-120	25
Mounting screw	for mounting foot (209-120)	209-119	50






Mounting foot			
Description		Item No.	Pack. Unit
Mounting foot		209-188	25

8



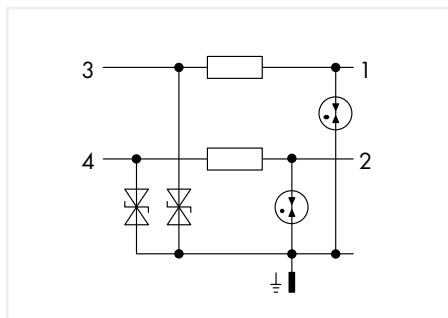
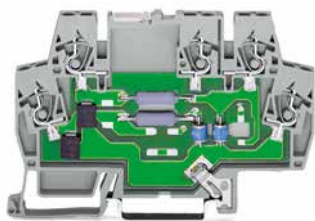
WAGO Overvoltage Protection

WAGO Overvoltage Protection

		Page
	Rail-Mount Terminal Blocks with Overvoltage Protection	
	792 Series	590
	Accessories	594
	Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail	
	280 Series	596
	Accessories	642
	Component Terminal Block; with Surge Arrester	
	280 Series	628
	Accessories	642

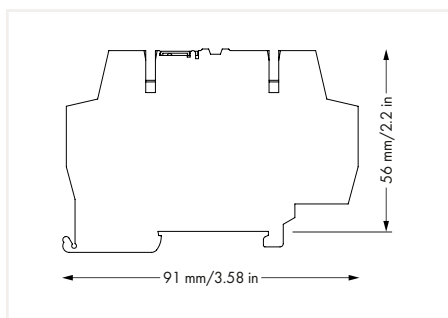
Rail-Mount Terminal Block; with Overvoltage Protection; for DIN-35 Rail

792 Series



Surge Protection Module for Signal Technology;
Nominal voltage: 24 VDC; for 2 signal paths with common surge arrester; for asymmetric interfaces; 2-stage;
6 mm wide

Nominal Voltage	Item No.	Pack. Unit
24 VDC	792-800	1



Electrical Data

Nominal operating voltage	24 VDC
Maximum continuous operating voltage	23 VAC / 33 VDC
Nominal current	0.5 A
Nominal discharge current I_{SN} (8/20 μ s), line	5 kA
Nominal discharge current I_{SN} (8/20 μ s), total	10 kA
Voltage protection level, line/line (cat. C2 at I_{N})	≤ 110 V
Voltage protection level, line/PG (cat. C2 at I_{N})	≤ 65 V
Voltage protection level, line/line (cat. C3 at I_{N})	≤ 90 V
Voltage protection level, line/PG (cat. C3 at I_{N})	≤ 45 V
Response time	≤ 1 ns
Limit frequency (line/line)	6 MHz
Limit frequency (line/protected ground)	6 MHz
Impedance	1.8 Ω
Capacitance (line/line)	≤ 0.5 nF
Capacitance (line/PG)	≤ 1 nF

Safety and Protection

Protection class	IP00
Protection class with end and intermediate plate	IP20

Connection Data

Connection points (number)	5
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	38.8 g
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Environmental Requirements

Surrounding air temperature (operation)	-40 ... +80 °C
Surrounding air temperature (storage)	-40 ... +80 °C

Standards and Specifications

Standards/specifications	IEC 61643-21
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9

Short description:

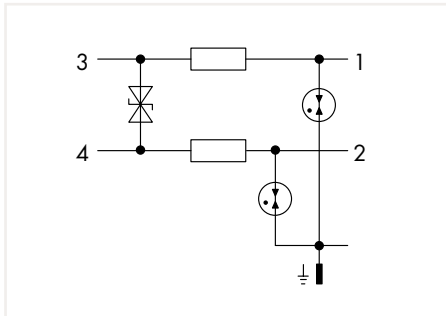
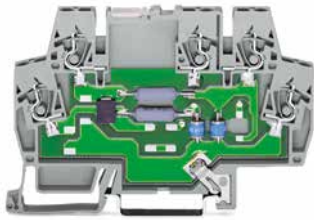
Surge protection devices for IT systems and devices in the voltage range up to 60 V (except custom solutions, e.g., telephone systems with ringing voltage)

Overvoltage protection is also possible for DIN-35 rail-mount terminal blocks. Multi-stage surge arresters in rail-mount terminal blocks (792-80x Series) of just 6 mm width ensure cost-effective protection for control and bus technology (e.g., LON® network, PROFIBUS network, binary signals).

Features:

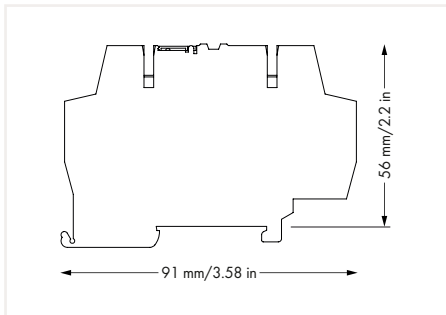
- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Rail-Mount Terminal Block; with Overvoltage Protection; for DIN-35 Rail 792 Series



Surge Protection Module for Signal Technology;
Nominal voltage: 24 VDC; for 2 signal paths with common surge arrester; for symmetric interfaces; 2-stage; 6 mm wide

Nominal Voltage	Item No.	Pack. Unit
24 VDC	792-801	1



Short description:

Surge protection devices for IT systems and devices in the voltage range up to 60 V (except custom solutions, e.g., telephone systems with ringing voltage)

Overvoltage protection is also possible for DIN-35 rail-mount terminal blocks. Multi-stage surge arresters in rail-mount terminal blocks (792-80x Series) of just 6 mm width ensure cost-effective protection for control and bus technology (e.g., LON® network, PROFIBUS network, binary signals).

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	24 VDC
Maximum continuous operating voltage	23 VAC / 33 VDC
Nominal current	0.5 A
Nominal discharge current I_{SN} (8/20 μ s), line	5 kA
Nominal discharge current I_{SN} (8/20 μ s), total	10 kA
Voltage protection level, line/line (cat. C2 at I_N)	≤ 50 V
Voltage protection level, line/PG (cat. C2 at I_N)	≤ 750 V
Voltage protection level, line/line (cat. C3 at I_N)	≤ 45 V
Voltage protection level, line/PG (cat. C3 at I_N)	≤ 650 V
Response time	≤ 100 ns
Limit frequency	6 MHz
Limit frequency (line/protected ground)	6 MHz
Impedance	1.8 Ω
Capacitance (line/line)	≤ 10 nF
Capacitance (line/PG)	≤ 5 nF

Safety and Protection

Protection class	IP00
Protection class with end and intermediate plate	IP20

Connection Data

Connection points (number)	5
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	38.7 g
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Environmental Requirements

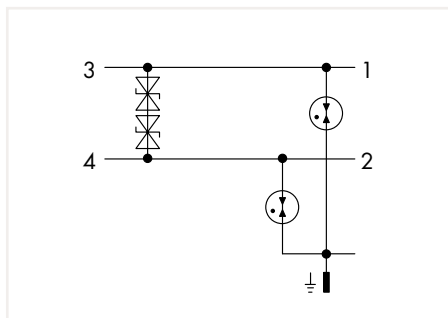
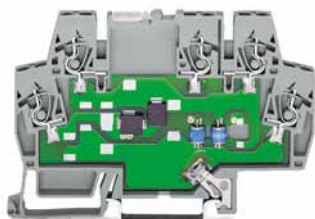
Surrounding air temperature (operation)	-40 ... +80 °C
Surrounding air temperature (storage)	-40 ... +80 °C

Standards and Specifications

Standards/specifications	IEC 61643-21
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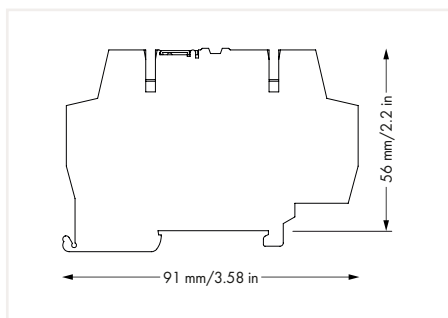
Rail-Mount Terminal Block; with Overvoltage Protection; for DIN-35 Rail

792 Series



Surge Protection Module for Signal Technology;
Nominal voltage: 24 VDC; for 2 signal paths with common surge arrester; for supply lines; 1-stage; 6 mm wide

Nominal Voltage	Item No.	Pack. Unit
24 VDC	792-802	1



Short description:

Surge protection devices for IT systems and devices in the voltage range up to 60 V (except custom solutions, e.g., telephone systems with ringing voltage)

Overvoltage protection is also possible for DIN-35 rail-mount terminal blocks. Multi-stage surge arresters in rail-mount terminal blocks (792-80x Series) of just 6 mm width ensure cost-effective protection for control and bus technology (e.g., LON® network, PROFIBUS network, binary signals).

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	24 VDC
Maximum continuous operating voltage	23 VAC / 33 VDC
Nominal current	10 A
Nominal discharge current I_{SN} (8/20 μ s), line	300 A
Nominal discharge current I_{SN} (8/20 μ s), total	5 kA
Voltage protection level, line/line (cat. C2 at I_N)	≤ 50 V
Voltage protection level, line/PG (cat. C2 at I_N)	≤ 750 V
Voltage protection level, line/line (cat. C3 at I_N)	≤ 45 V
Voltage protection level, line/PG (cat. C3 at I_N)	≤ 650 V
Response time (line/line)	≤ 1 ns
Response time (line/PG)	≤ 100 ns
Limit frequency	7 MHz
Capacitance (line/line)	≤ 10 nF
Capacitance (line/PG)	≤ 12 pF

Safety and Protection

Protection class	IP00
Protection class with end and intermediate plate	IP20

Connection Data

Connection points (number)	5
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	38 g
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Environmental Requirements

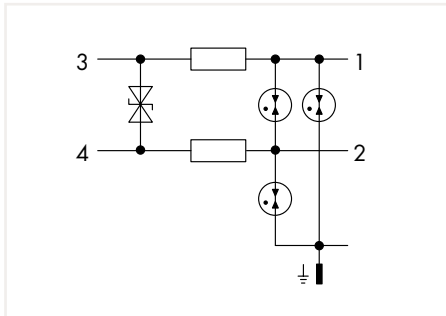
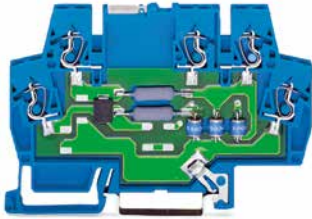
Surrounding air temperature (operation)	-40 ... +80 °C
Surrounding air temperature (storage)	-40 ... +80 °C

Standards and Specifications

Standards/specifications	IEC 61643-21
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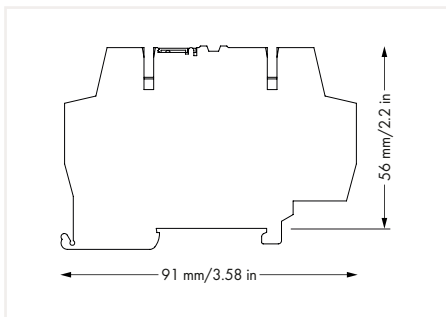
Rail-Mount Terminal Block; with Overvoltage Protection; for DIN-35 Rail

792 Series



Surge Protection Module for Signal Technology; Nominal voltage: 24 VDC; for 2 signal paths with common surge arrester; for symmetric interfaces; 2-stage; protects intrinsically safe circuits; 6 mm wide

Nominal Voltage	Item No.	Pack. Unit
24 VDC	792-803	1



Short description:

Surge protection devices for IT systems and devices in the voltage range up to 60 V (except custom solutions, e.g., telephone systems with ringing voltage)

Overvoltage protection is also possible for DIN-35 rail-mount terminal blocks. Multi-stage surge arresters in rail-mount terminal blocks (792-80x Series) of just 6 mm width ensure cost-effective protection for control and bus technology (e.g., LON® network, PROFIBUS network, binary signals).

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	24 VDC
Maximum continuous operating voltage	23 VAC / 33 VDC
Input voltage (max.) per EN 50020 U _i	30 V
Nominal current	0.5 A
Input current (max.) per EN 50020 I _i	0.5 A
Nominal discharge current I _{SN} (8/20 μs), line	5 kA
Nominal discharge current I _{SN} (8/20 μs), total	10 kA
Voltage protection level, line/line (cat. C2 at I _N)	≤ 50 V
Voltage protection level, line/PG (cat. C2 at I _N)	≤ 1.5 kV
Voltage protection level, line/line (cat. C3 at I _N)	≤ 45 V
Voltage protection level, line/PG (cat. C3 at I _N)	≤ 1.4 kV
Response time (line/line)	≤ 1 ns
Response time (line/PG)	≤ 100 ns
Limit frequency	6 MHz
Impedance	1.8 Ω
Capacitance (line/line)	≤ 10 nF
Capacitance (line/PG)	≤ 6 pF

Safety and Protection

Protection class	IP00
Protection class with end and intermediate plate	IP20

Connection Data

Connection points (number)	5
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Color	Blue
Weight	38.3 g

Environmental Requirements

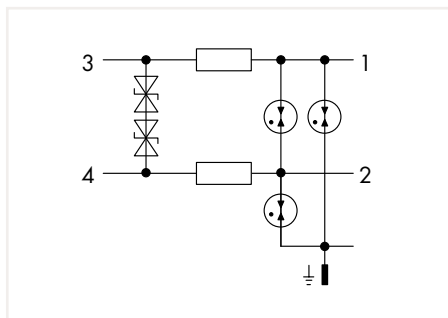
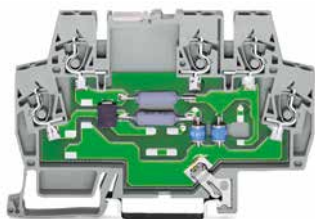
Surrounding air temperature (operation)	-40 ... +80 °C
Surrounding air temperature (storage)	-40 ... +80 °C

Standards and Specifications

Standards/specifications	IEC 61643-21
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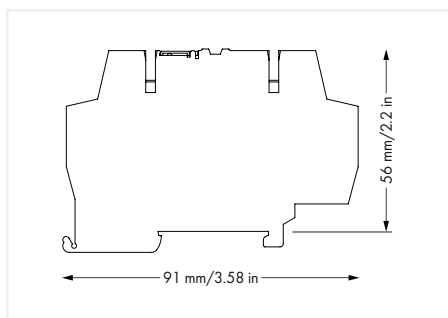
Rail-Mount Terminal Block; with Overvoltage Protection; for DIN-35 Rail

792 Series



Surge Protection Module for Signal Technology;
Nominal voltage: 48 VDC; for 2 signal paths with common
surge arrester; for symmetric interfaces; 2-stage;
6 mm wide

Nominal Voltage	Item No.	Pack. Unit
48 VDC	792-804	1



Electrical Data

Nominal operating voltage	48 VDC
Maximum continuous operating voltage	38.5 VAC / 55 VDC
Nominal current	1.7 A
Nominal discharge current I_{SN} (8/20 μ s), line	5 kA
Nominal discharge current I_{SN} (8/20 μ s), total	10 kA
Voltage protection level, line/line (cat. C2 at I_N)	≤ 100 V
Voltage protection level, line/PG (cat. C2 at I_N)	≤ 750 V
Voltage protection level, line/line (cat. C3 at I_N)	≤ 70 V
Voltage protection level, line/PG (cat. C3 at I_N)	≤ 650 V
Response time (line/line)	≤ 1 ns
Response time (line/PG)	≤ 100 ns
Limit frequency	10 MHz
Impedance	0.4 Ω
Capacitance (line/line)	≤ 10 pF
Capacitance (line/PG)	≤ 1 pF

Safety and Protection

Protection class	IP00
Protection class with end and intermediate plate	IP20

Connection Data

Connection points (number)	5
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	39.4 g
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Environmental Requirements

Surrounding air temperature (operation)	-40 ... +80 °C
Surrounding air temperature (storage)	-40 ... +80 °C

Standards and Specifications

Standards/specifications	IEC 61643-21
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9

Short description:

Surge protection devices for IT systems and devices in the voltage range up to 60 V (except custom solutions, e.g., telephone systems with ringing voltage)

Overvoltage protection is also possible for DIN-35 rail-mount terminal blocks. Multi-stage surge arresters in rail-mount terminal blocks (792-80x Series) of just 6 mm width ensure cost-effective protection for control and bus technology (e.g., LON® network, PROFIBUS network, binary signals).

Features:

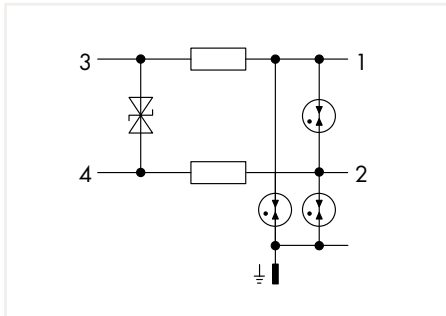
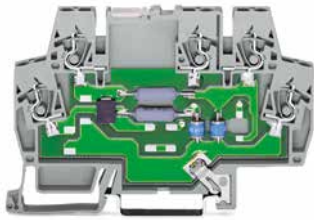
- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Note:

The coordination characteristics of the surge arrester provide information about its discharge capacity and protection capability.

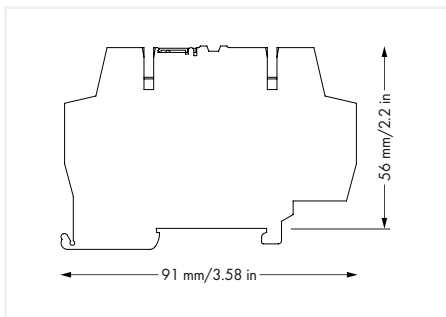
Rail-Mount Terminal Block; with Overvoltage Protection; for DIN-35 Rail

792 Series



Surge Protection Module for Signal Technology; Nominal voltage: 5 VDC; for 2 signal paths with common surge arrester; for symmetric interfaces; 2-stage; for interfaces with high data rates; 6 mm wide

Nominal Voltage	Item No.	Pack. Unit
5 VDC	792-805	1



Short description:

Surge protection devices for IT systems and devices in the voltage range up to 60 V (except custom solutions, e.g., telephone systems with ringing voltage)

Overvoltage protection is also possible for DIN-35 rail-mount terminal blocks. Multi-stage surge arresters in rail-mount terminal blocks (792-80x Series) of just 6 mm width ensure cost-effective protection for control and bus technology (e.g., LON® network, PROFIBUS network, binary signals).

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	5 VDC
Maximum continuous operating voltage	4.2 VAC / 6 VDC
Nominal current	0.1 A
Nominal discharge current I_{SN} (8/20 μ s), line	5 kA
Nominal discharge current I_{SN} (8/20 μ s), total	10 kA
Voltage protection level, line/line (cat. C2 at I_N)	≤ 27 V
Voltage protection level, line/PG (cat. C2 at I_N)	≤ 50 V
Voltage protection level, line/line (cat. C3 at I_N)	≤ 14 V
Voltage protection level, line/PG (cat. C3 at I_N)	≤ 14 V
Response time (line/line)	≤ 1 ns
Limit frequency (line/line)	250 MHz
Limit frequency (line/PG)	180 MHz
Impedance	1 Ω
Capacitance (line/line)	≤ 19 pF
Capacitance (line/PG)	≤ 16 pF

Safety and Protection

Protection class	IP00
Protection class with end and intermediate plate	IP20

Connection Data

Connection points (number)	5
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	5 ... 6 mm / 0.2 ... 0.24 inch

Physical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	38 g
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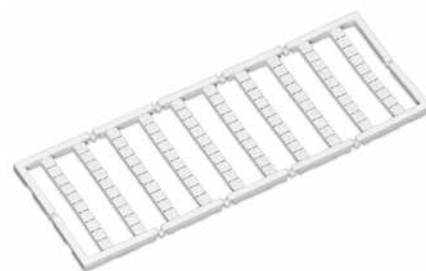
Environmental Requirements

Surrounding air temperature (operation)	-40 ... +80 °C
Surrounding air temperature (storage)	-40 ... +80 °C

Standards and Specifications

Standards/specifications	IEC 61643-21
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Accessories

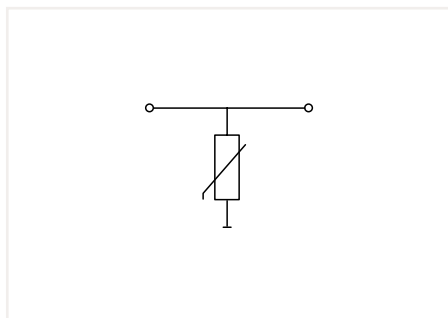
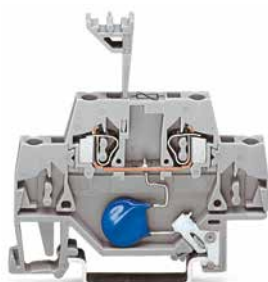


End and intermediate plate; 1 mm thick		
	Item No.	Pack. Unit
	859-525	100

Push-in type jumper bar; light gray; insulated; 18 A		
Description	Item No.	Pack. Unit
2-way	859-402	200
3-way	859-403	200
4-way	859-404	200
5-way	859-405	200
6-way	859-406	100
7-way	859-407	100
8-way	859-408	100
9-way	859-409	100
10-way	859-410	100
Item no. suffixes for colored push-in type jumper bars		
yellow	.../000-029	
red	.../000-005	
Blue	.../000-006	

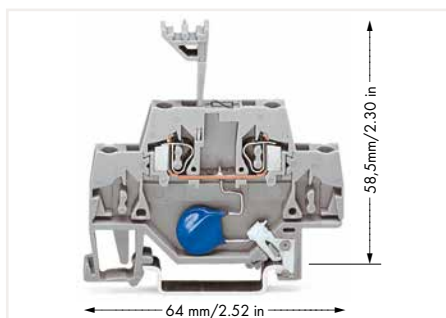
Mini-WSB marker card; Marker width: 5 mm; 10 strips with 10 markers/card		
Marking	Item No.	Pack. Unit
plain	248-501	50
1 ... 10 (10 x)	248-502	5
11 ... 20 (10 x)	248-503	5
21 ... 30 (10 x)	248-504	5
31 ... 40 (10 x)	248-505	5
41 ... 50 (10 x)	248-506	5
1 ... 50 (2 x)	248-566	5
K1 ... K10	248-450	50
K11 ... K20	248-451	50
K100	248-452	50
U1 ... U10	248-453	50
U11 ... U20	248-454	50
U100	248-455	50

Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with varistor;
for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²;
CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
24 VDC	280-502/281-609	50



Short description:

This component terminal block with surge suppression device and direct connection to the DIN-35 rail is equipped with a varistor.

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	24 VDC
Maximum continuous operating voltage	31 VDC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	60 A
Discharge current (max.)	0.25 kA
Voltage protection level (8/20 μs)	≤ 77 VDC
Capacitance	≤ 1.25 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	5 mm / 0.197 inch
Height from upper-edge of DIN-rail	58,5 mm / 2.303 inch
Depth	64 mm / 2.52 inch

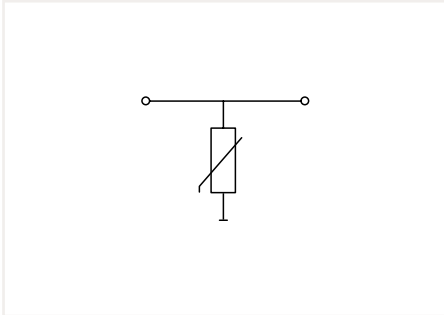
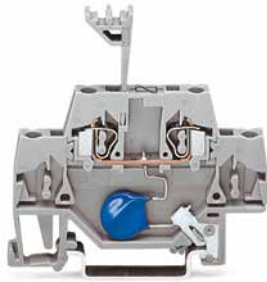
Mechanical Data

Mounting type	DIN-35 rail
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Material Data

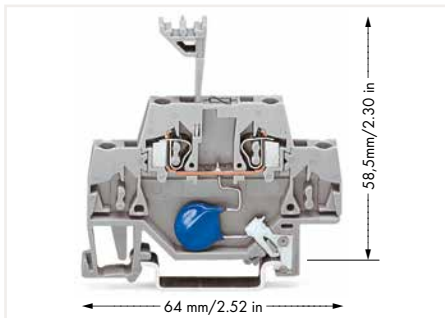
Weight	8.4 g
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Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with varistor;
for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²;
CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
48 VDC	280-502/281-610	50



Short description:

This component terminal block with surge suppression device and direct connection to the DIN-35 rail is equipped with a varistor.

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	48 VDC
Maximum continuous operating voltage	65 VDC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	300 A
Discharge current (max.)	1.2 kA
Voltage protection level (8/20 μs)	≤ 135 VDC
Capacitance	≤ 0.5 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	5 mm / 0.197 inch
Height from upper-edge of DIN-rail	58,5 mm / 2.303 inch
Depth	64 mm / 2.52 inch

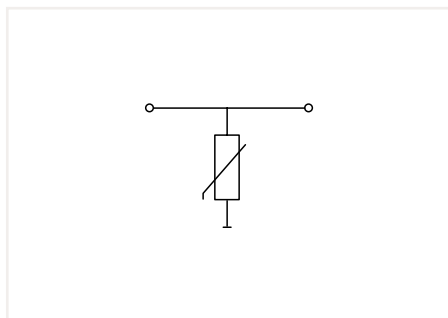
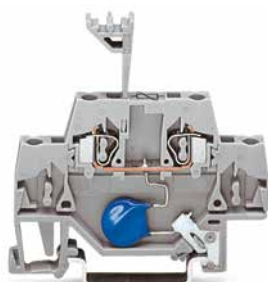
Mechanical Data

Mounting type	DIN-35 rail
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Material Data

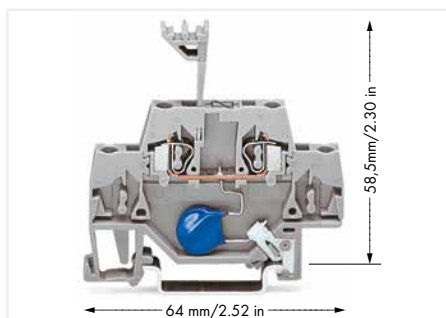
Weight	8.5 g
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Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with varistor;
for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²;
CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
60 VDC	280-502/281-611	50



Short description:

This component terminal block with surge suppression device and direct connection to the DIN-35 rail is equipped with a varistor.

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	60 VDC
Maximum continuous operating voltage	85 VDC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	300 A
Discharge current (max.)	1.2 kA
Voltage protection level (8/20 μs)	≤ 165 VDC
Capacitance	≤ 0.48 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	5 mm / 0.197 inch
Height from upper-edge of DIN-rail	58,5 mm / 2.303 inch
Depth	64 mm / 2.52 inch

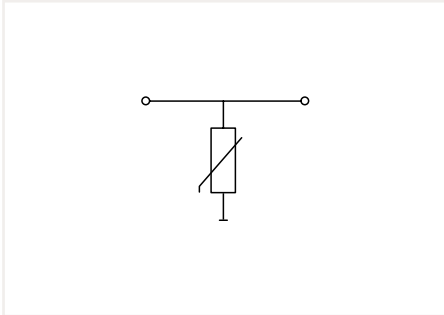
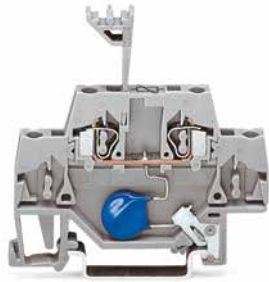
Mechanical Data

Mounting type	DIN-35 rail
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Material Data

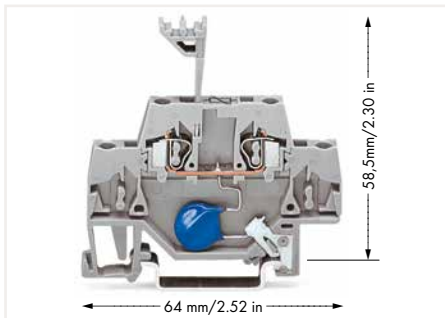
Weight	8.5 g
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Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with varistor;
for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²;
CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
110 VDC	280-502/281-612	50



Short description:

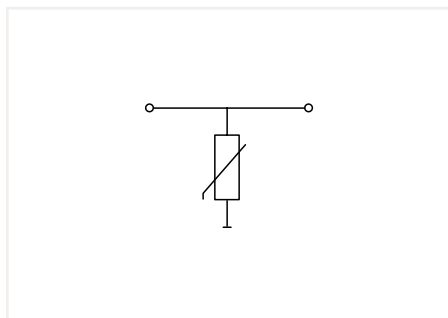
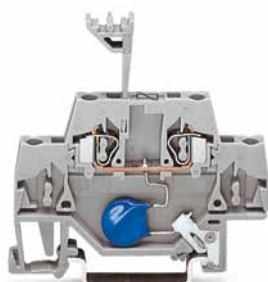
This component terminal block with surge suppression device and direct connection to the DIN-35 rail is equipped with a varistor.

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

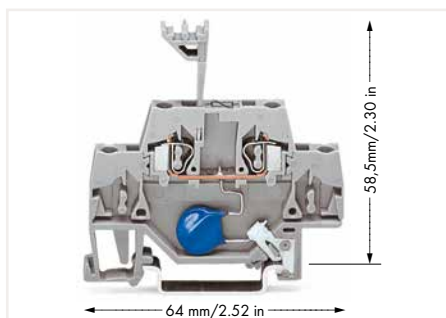
Electrical Data	
Nominal operating voltage	110 VDC
Maximum continuous operating voltage	150 VDC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	300 A
Discharge current (max.)	1.2 kA
Voltage protection level (8/20 μs)	≤ 300 VDC
Capacitance	≤ 0.22 nF
Connection Data	
Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch
Physical Data	
Width	5 mm / 0.197 inch
Height from upper-edge of DIN-rail	58,5 mm / 2.303 inch
Depth	64 mm / 2.52 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	8.7 g

Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with varistor;
for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²;
CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
24 VAC	280-502/281-613	50



Short description:

This component terminal block with surge suppression device and direct connection to the DIN-35 rail is equipped with a varistor.

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	24 VAC
Maximum continuous operating voltage	30 VAC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	60 A
Discharge current (max.)	0.25 kA
Voltage protection level (8/20 μs)	≤ 93 VAC
Capacitance	≤ 1.05 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	5 mm / 0.197 inch
Height from upper-edge of DIN-rail	58,5 mm / 2.303 inch
Depth	64 mm / 2.52 inch

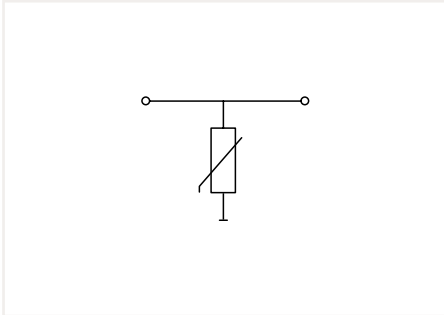
Mechanical Data

Mounting type	DIN-35 rail
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Material Data

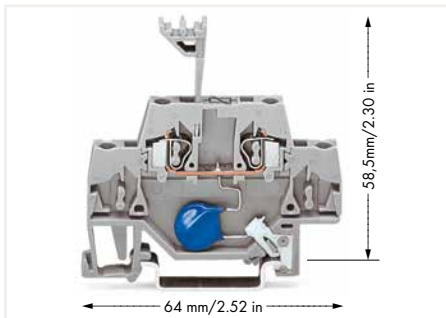
Weight	8.4 g
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Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with varistor;
for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²;
CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
115 VAC	280-502/281-614	50



Short description:

This component terminal block with surge suppression device and direct connection to the DIN-35 rail is equipped with a varistor.

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	115 VAC
Maximum continuous operating voltage	140 VAC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	300 A
Discharge current (max.)	1.2 kA
Voltage protection level (8/20 μs)	≤ 360 VAC
Capacitance	≤ 0.18 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	5 mm / 0.197 inch
Height from upper-edge of DIN-rail	58,5 mm / 2.303 inch
Depth	64 mm / 2.52 inch

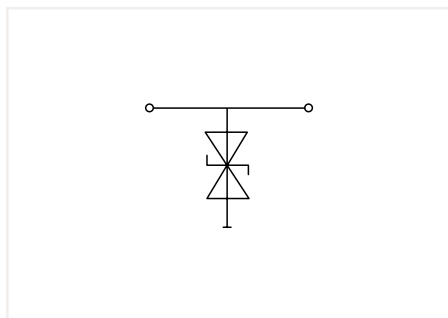
Mechanical Data

Mounting type	DIN-35 rail
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Material Data

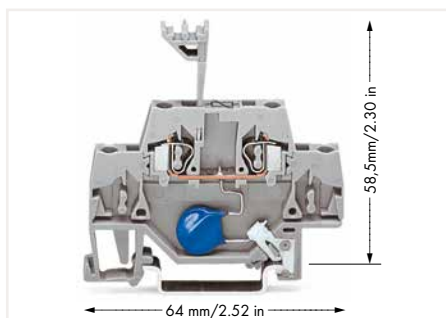
Weight	8.6 g
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Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with P6KE36C TVS diode; 24 VDC; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
24 VDC	280-502/281-602	50



Electrical Data

Nominal operating voltage	24 VDC
Maximum continuous operating voltage	30.8 VDC
Rated continuous current	20 A
Nominal discharge current (10/1000 µs), line	12 A
Voltage protection level (10/1000 µs)	≤ 50 VDC
Capacitance	≤ 1 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	5 mm / 0.197 inch
Height from upper-edge of DIN-rail	58,5 mm / 2.303 inch
Depth	64 mm / 2.52 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	8.3 g
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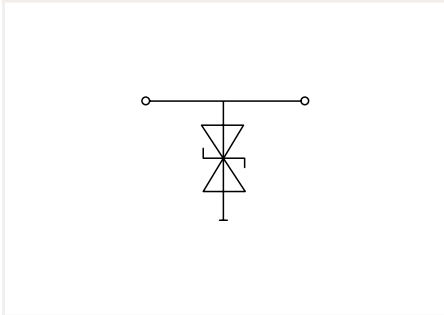
Short description:

This component terminal block with surge suppression device and direct connection to the DIN-35 rail is equipped with a TVS diode.

Features:

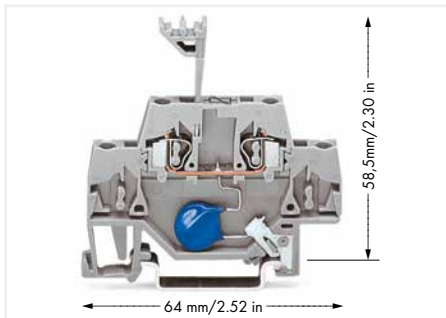
- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with P6KE68C TVS diode; 48 VDC; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
48 VDC	280-502/281-603	50



Short description:

This component terminal block with surge suppression device and direct connection to the DIN-35 rail is equipped with a TVS diode.

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	48 VDC
Maximum continuous operating voltage	58 VDC
Rated continuous current	20 A
Nominal discharge current (10/1000 µs), line	6.5 A
Voltage protection level (10/1000 µs)	≤ 92 VDC
Capacitance	≤ 0.63 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	5 mm / 0.197 inch
Height from upper-edge of DIN-rail	58,5 mm / 2.303 inch
Depth	64 mm / 2.52 inch

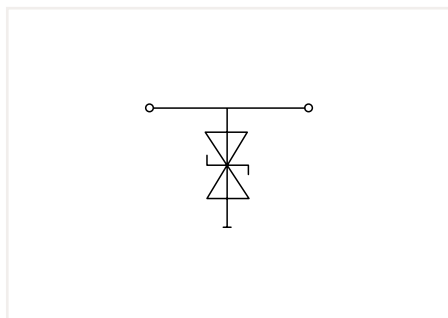
Mechanical Data

Mounting type	DIN-35 rail
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Material Data

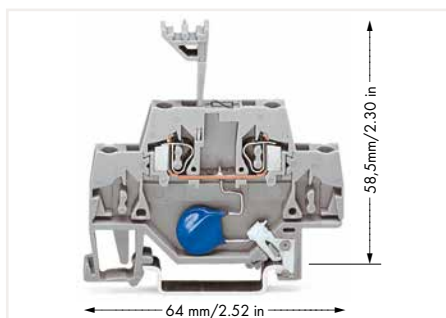
Weight	8.2 g
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Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with P6KE91C TVS diode; 60 VDC; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
60 VDC	280-502/281-604	50



Electrical Data

Nominal operating voltage	60 VDC
Maximum continuous operating voltage	77 VDC
Rated continuous current	20 A
Nominal discharge current (10/1000 µs), line	4.8 A
Voltage protection level (10/1000 µs)	≤ 125 VDC
Capacitance	≤ 0.55 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	5 mm / 0.197 inch
Height from upper-edge of DIN-rail	58,5 mm / 2.303 inch
Depth	64 mm / 2.52 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	8.5 g
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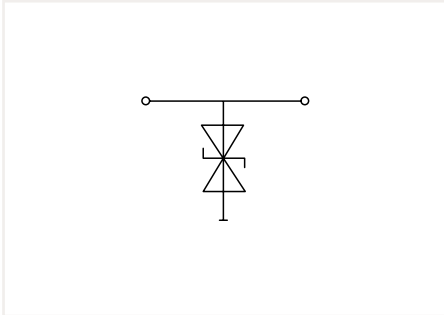
Short description:

This component terminal block with surge suppression device and direct connection to the DIN-35 rail is equipped with a TVS diode.

Features:

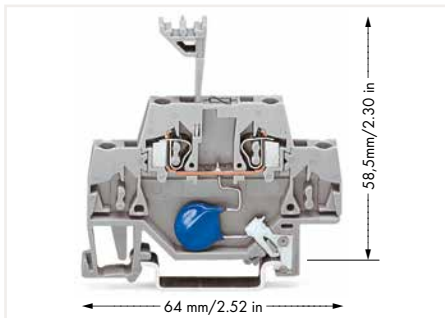
- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with BZW06-B TVS diode; 110 VDC; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
110 VDC	280-502/281-605	50



Short description:

This component terminal block with surge suppression device and direct connection to the DIN-35 rail is equipped with a TVS diode.

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	110 VDC
Maximum continuous operating voltage	136 VDC
Rated continuous current	20 A
Nominal discharge current (10/1000 µs), line	2.7 A
Voltage protection level (10/1000 µs)	≤ 219 VDC
Capacitance	≤ 0.4 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	5 mm / 0.197 inch
Height from upper-edge of DIN-rail	58,5 mm / 2.303 inch
Depth	64 mm / 2.52 inch

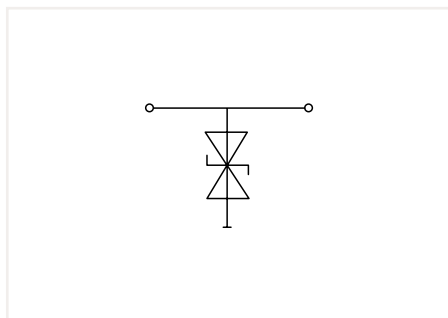
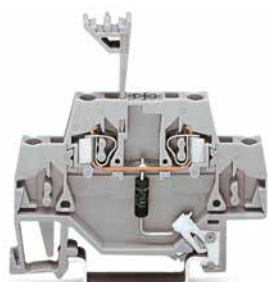
Mechanical Data

Mounting type	DIN-35 rail
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Material Data

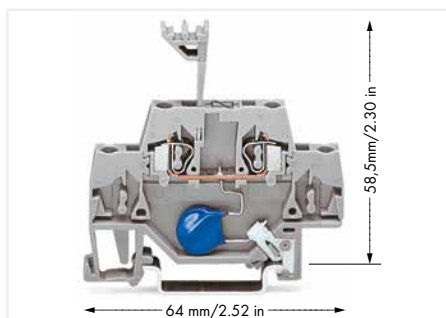
Weight	8.1 g
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Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with BZW06-40B TVS diode; 24 VAC; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
24 VAC	280-502/281-606	50



Electrical Data

Nominal operating voltage	24 VAC
Maximum continuous operating voltage	28 VAC
Rated continuous current	20 A
Nominal discharge current (10/1000 µs), line	9.3 A
Voltage protection level (10/1000 µs)	≤ 65 VAC
Capacitance	≤ 0.8 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	5 mm / 0.197 inch
Height from upper-edge of DIN-rail	58,5 mm / 2.303 inch
Depth	64 mm / 2.52 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	8.2 g
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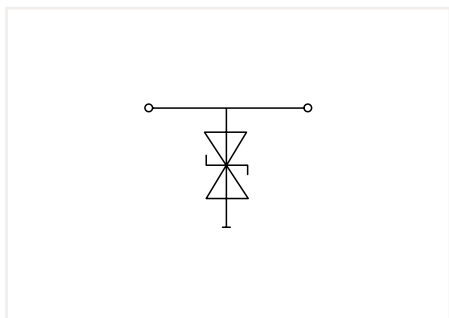
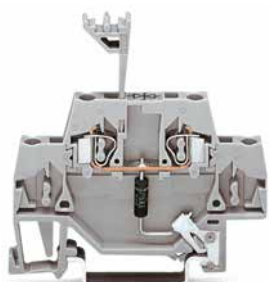
Short description:

This component terminal block with surge suppression device and direct connection to the DIN-35 rail is equipped with a TVS diode.

Features:

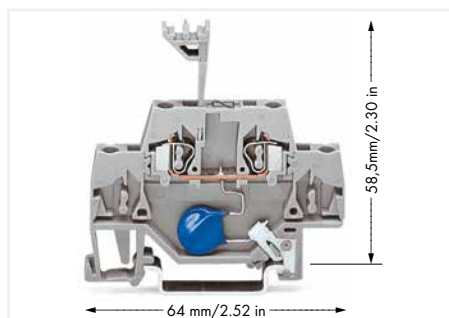
- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with BZW06-B TVS diode; AC 115 V; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
115 VAC	280-502/281-607	50



Short description:

This component terminal block with surge suppression device and direct connection to the DIN-35 rail is equipped with a TVS diode.

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	115 VAC
Maximum continuous operating voltage	133 VAC
Rated continuous current	20 A
Nominal discharge current (10/1000 μs), line	1.7 A
Voltage protection level (10/1000 μs)	≤ 384 VAC
Capacitance	≤ 0.36 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	5 mm / 0.197 inch
Height from upper-edge of DIN-rail	58,5 mm / 2.303 inch
Depth	64 mm / 2.52 inch

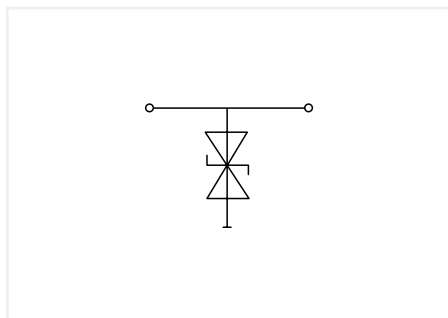
Mechanical Data

Mounting type	DIN-35 rail
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Material Data

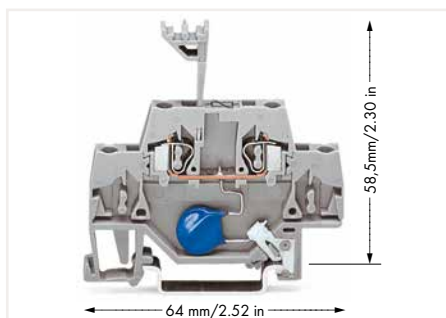
Weight	8.1 g
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Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with BZW06-B TVS diode; 110 VDC; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
230 VAC	280-502/281-608	50



Electrical Data

Nominal operating voltage	230 VAC
Maximum continuous operating voltage	253 VAC
Rated continuous current	20 A
Nominal discharge current (10/1000 µs), line	1.1 A
Voltage protection level (10/1000 µs)	≤ 548 VAC
Capacitance	≤ 0.36 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	5 mm / 0.197 inch
Height from upper-edge of DIN-rail	58,5 mm / 2.303 inch
Depth	64 mm / 2.52 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	8.3 g
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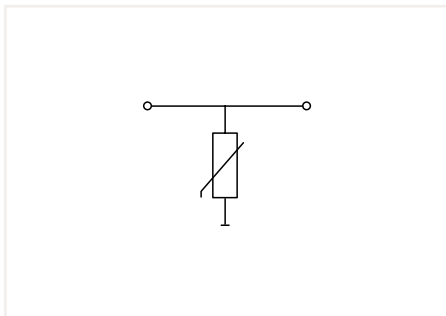
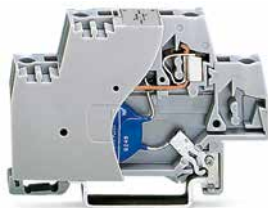
Short description:

This component terminal block with surge suppression device and direct connection to the DIN-35 rail is equipped with a TVS diode.

Features:

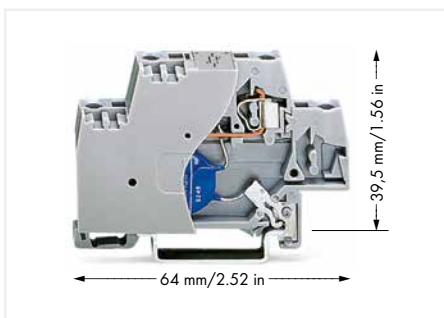
- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with end plate; with varistor; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
24 VDC	280-502/281-582	25



Electrical Data

Nominal operating voltage	24 VDC
Maximum continuous operating voltage	31 VDC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	300 A
Discharge current (max.)	1 kA
Voltage protection level (8/20 μs)	≤ 77 VDC
Capacitance	≤ 4.6 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39.5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	12.8 g
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9

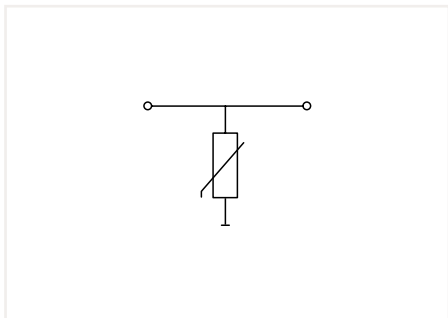
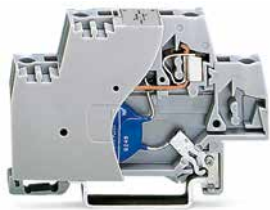
Short description:

This component terminal block with surge suppression device, end plate and direct connection to the DIN-35 rail is equipped with a varistor.

Features:

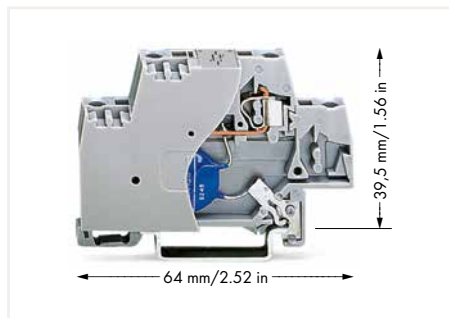
- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with end plate; with varistor; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
48 VDC	280-502/281-583	25



Short description:

This component terminal block with surge suppression device, end plate and direct connection to the DIN-35 rail is equipped with a varistor.

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	48 VDC
Maximum continuous operating voltage	56 VDC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	300 A
Discharge current (max.)	1 kA
Voltage protection level (8/20 μs)	≤ 135 VDC
Capacitance	≤ 2.8 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39,5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

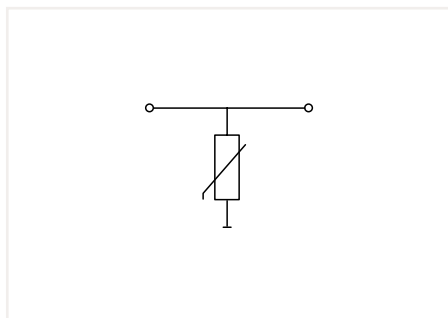
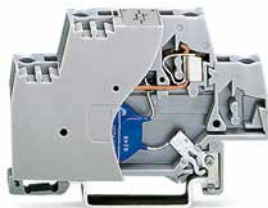
Mechanical Data

Mounting type	DIN-35 rail
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Material Data

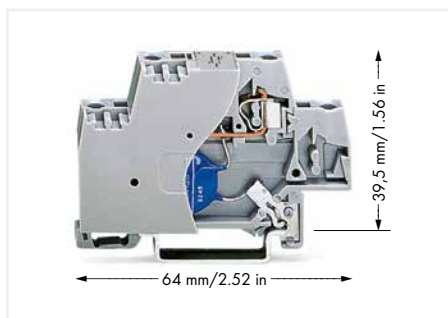
Weight	13.4 g
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Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with end plate; with varistor; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U_{BN}	Item No.	Pack. Unit
60 VDC	280-502/281-584	25



Electrical Data

Nominal operating voltage	60 VDC
Maximum continuous operating voltage	85 VDC
Rated continuous current	20 A
Nominal discharge current (8/20 μ s), line	1 kA
Discharge current (max.)	4.5 kA
Voltage protection level (8/20 μ s)	\leq 165 VDC
Capacitance	\leq 1.7 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39.5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	12.7 g
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9

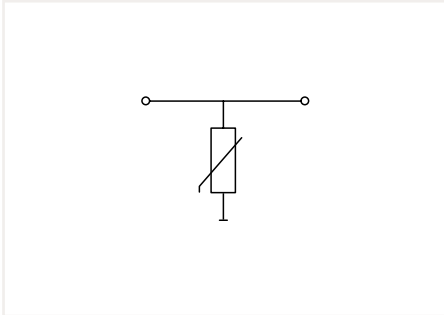
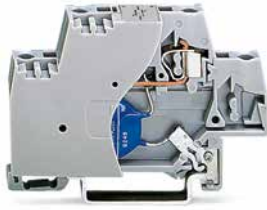
Short description:

This component terminal block with surge suppression device, end plate and direct connection to the DIN-35 rail is equipped with a varistor.

Features:

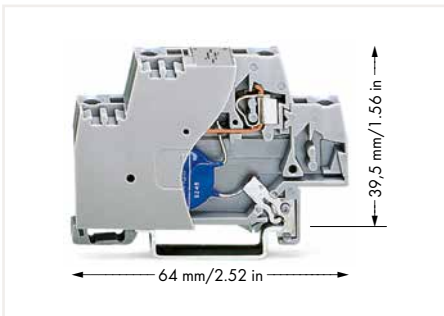
- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with end plate; with varistor; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
110 VDC	280-502/281-585	25



Short description:

This component terminal block with surge suppression device, end plate and direct connection to the DIN-35 rail is equipped with a varistor.

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	110 VDC
Maximum continuous operating voltage	150 VDC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	1 kA
Discharge current (max.)	4.5 kA
Voltage protection level (8/20 μs)	≤ 300 VDC
Capacitance	≤ 0.8 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39,5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

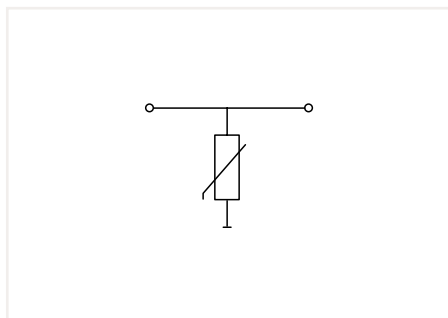
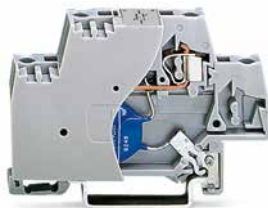
Mechanical Data

Mounting type	DIN-35 rail
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Material Data

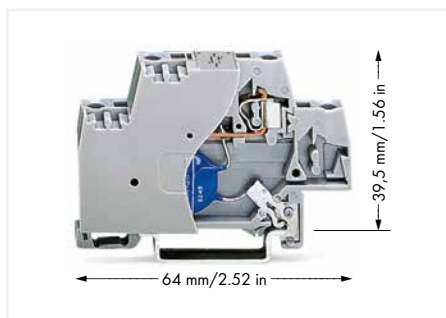
Weight	12.5 g
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Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with end plate; with varistor; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
24 VAC	280-502/281-586	25



Electrical Data

Nominal operating voltage	24 VAC
Maximum continuous operating voltage	30 VAC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	300 A
Discharge current (max.)	1 kA
Voltage protection level (8/20 μs)	≤ 93 VAC
Capacitance	≤ 3.5 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39.5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	13.1 g
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9

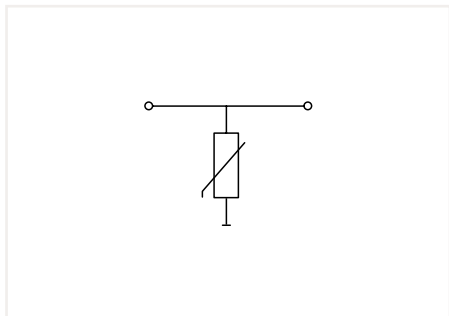
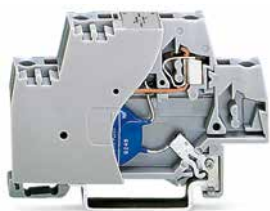
Short description:

This component terminal block with surge suppression device, end plate and direct connection to the DIN-35 rail is equipped with a varistor.

Features:

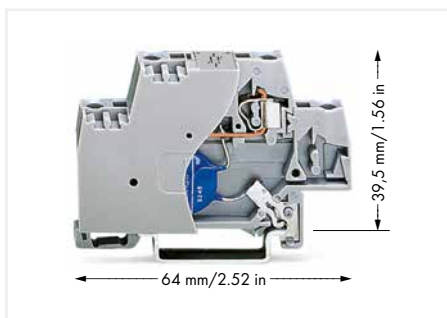
- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with end plate; with varistor; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
115 VAC	280-502/281-587	25



Short description:

This component terminal block with surge suppression device, end plate and direct connection to the DIN-35 rail is equipped with a varistor.

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	115 VAC
Maximum continuous operating voltage	150 VAC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	1 kA
Discharge current (max.)	4.5 kA
Voltage protection level (8/20 μs)	≤ 395 VAC
Capacitance	≤ 0.57 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39,5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

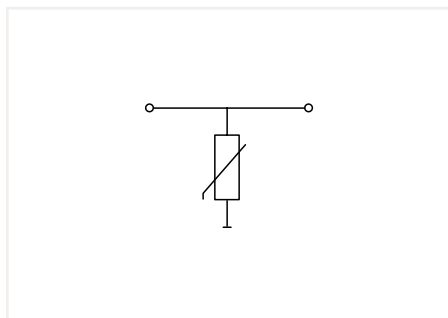
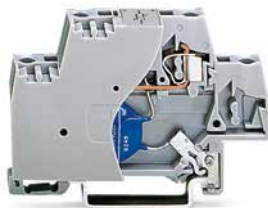
Mechanical Data

Mounting type	DIN-35 rail
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Material Data

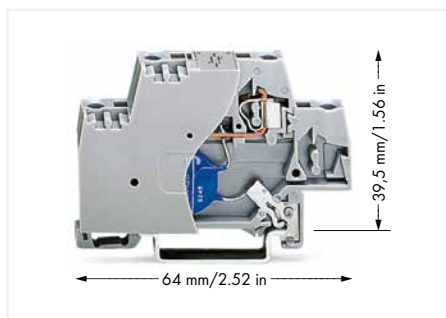
Weight	12.6 g
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Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with end plate; with varistor; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
230 VAC	280-502/281-588	25



Electrical Data

Nominal operating voltage	230 VAC
Maximum continuous operating voltage	275 VAC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	1 kA
Discharge current (max.)	4.5 kA
Voltage protection level (8/20 μs)	≤ 710 VAC
Capacitance	≤ 0.32 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39.5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	13.1 g
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9

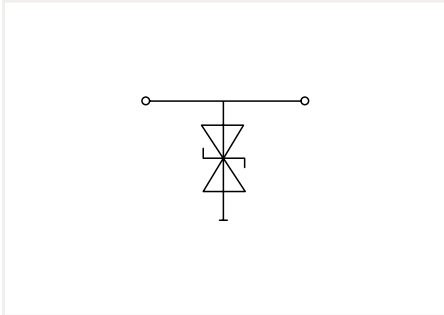
Short description:

This component terminal block with surge suppression device, end plate and direct connection to the DIN-35 rail is equipped with a varistor.

Features:

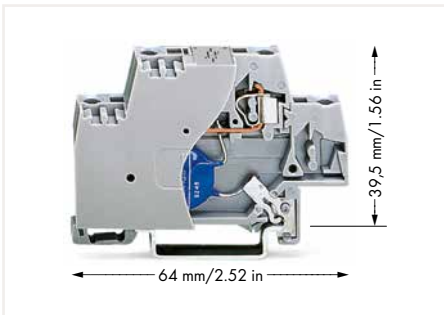
- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with end plate and direct connection to DIN-rail; with 1.5KE33C TVS diode; 24 VDC; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
24 VDC	280-502/281-589	25



Short description:

This component terminal block with surge suppression device, end plate and direct connection to the DIN-35 rail is equipped with a TVS diode.

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	24 VDC
Maximum continuous operating voltage	28 VDC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	169 A
Voltage protection level (8/20 μs)	≤ 59 VDC
Capacitance	≤ 2.7 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39,5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

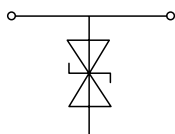
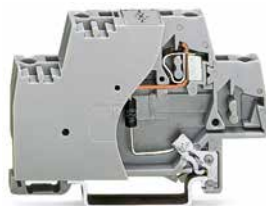
Mechanical Data

Mounting type	DIN-35 rail
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Material Data

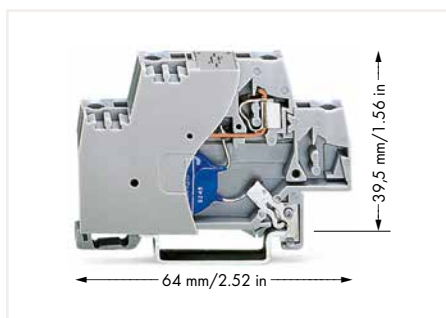
Weight	11.9 g
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Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with end plate and direct connection to DIN-rail; with 1.5KE62C TVS diode; 48 VDC; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
48 VDC	280-502/281-590	25



Electrical Data

Nominal operating voltage	48 VDC
Maximum continuous operating voltage	53 VDC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	90 A
Voltage protection level (8/20 μs)	≤ 111 VDC
Capacitance	≤ 1.7 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39,5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	12 g
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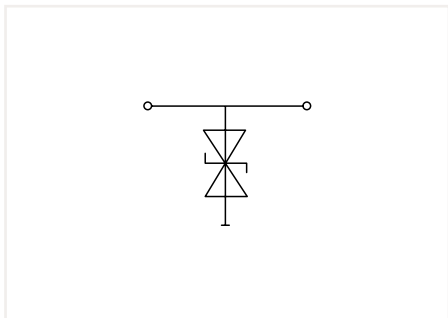
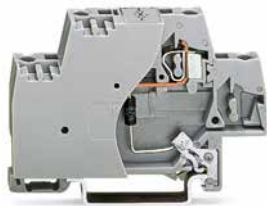
Short description:

This component terminal block with surge suppression device, end plate and direct connection to the DIN-35 rail is equipped with a TVS diode.

Features:

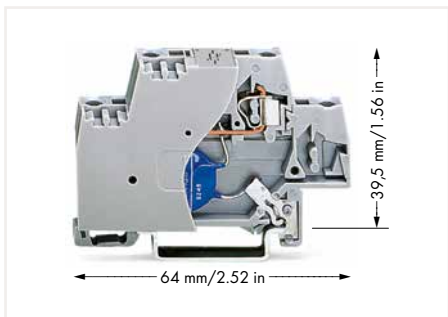
- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with end plate and direct connection to DIN-rail; with 1.5KE82C TVS diode; 60 VDC; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
60 VDC	280-502/281-591	25



Short description:

This component terminal block with surge suppression device, end plate and direct connection to the DIN-35 rail is equipped with a TVS diode.

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	60 VDC
Maximum continuous operating voltage	70 VDC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	69 A
Voltage protection level (8/20 μs)	≤ 146 VDC
Capacitance	≤ 1.35 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39,5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

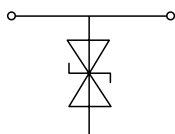
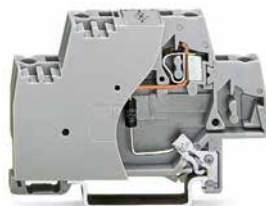
Mechanical Data

Mounting type	DIN-35 rail
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Material Data

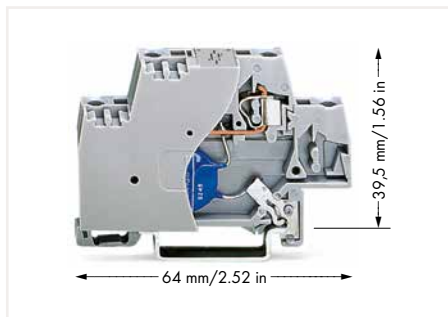
Weight	12.1 g
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Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with end plate and direct connection to DIN-rail; with 1.5KE150C TVS diode; 110 VDC; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
110 VDC	280-502/281-592	25



Electrical Data

Nominal operating voltage	110 VDC
Maximum continuous operating voltage	128 VDC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	38 A
Voltage protection level (8/20 μs)	≤ 265 VDC
Capacitance	≤ 0.85 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39,5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	12.2 g
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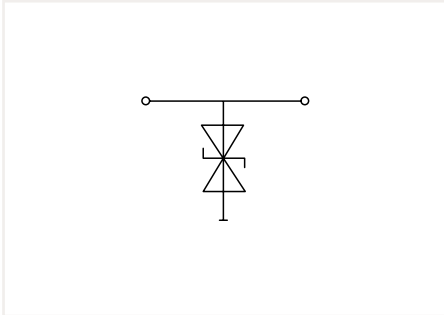
Short description:

This component terminal block with surge suppression device, end plate and direct connection to the DIN-35 rail is equipped with a TVS diode.

Features:

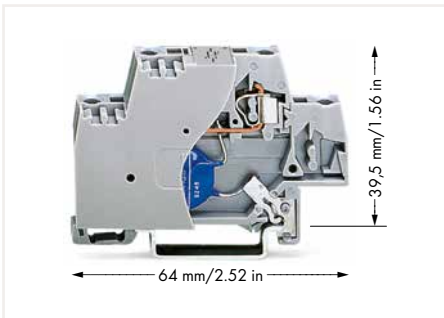
- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with end plate and direct connection to DIN-rail; with 1.5KE39CA TVS diode; 24 VAC; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
24 VAC	280-502/281-593	25



Short description:

This component terminal block with surge suppression device, end plate and direct connection to the DIN-35 rail is equipped with a TVS diode.

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	24 VAC
Maximum continuous operating voltage	26 VAC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	143 A
Voltage protection level (8/20 μs)	≤ 70 VAC
Capacitance	≤ 2.4 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39,5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

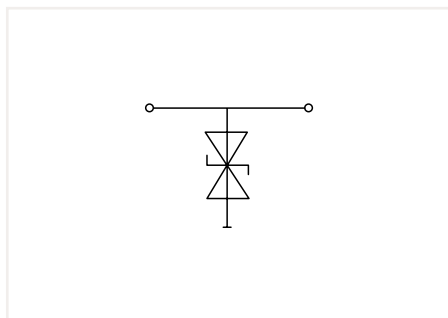
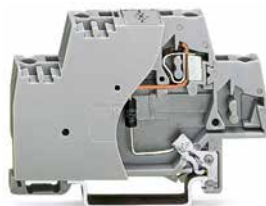
Mechanical Data

Mounting type	DIN-35 rail
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Material Data

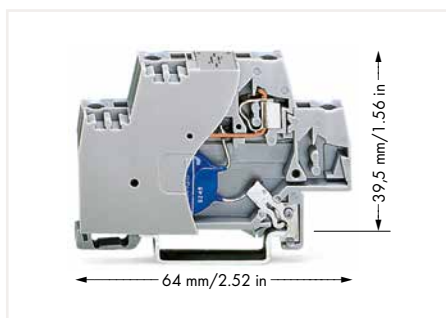
Weight	12.1 g
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Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with end plate and direct connection to DIN-rail; with 1.5KE-C TVS diode; AC 115 V; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
115 VAC	280-502/281-594	25



Electrical Data

Nominal operating voltage	115 VAC
Maximum continuous operating voltage	133 VAC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	26 A
Voltage protection level (8/20 μs)	≤ 388 VAC
Capacitance	≤ 0.63 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39.5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	12 g
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9

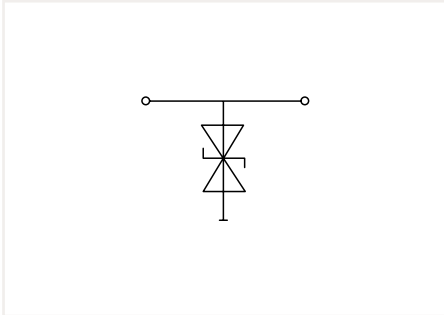
Short description:

This component terminal block with surge suppression device, end plate and direct connection to the DIN-35 rail is equipped with a TVS diode.

Features:

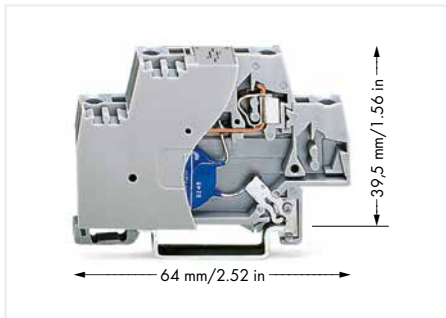
- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with end plate and direct connection to DIN-rail; with 1.5KE-C TVS diode; 230 VAC; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
230 VAC	280-502/281-595	25



Short description:

This component terminal block with surge suppression device, end plate and direct connection to the DIN-35 rail is equipped with a TVS diode.

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	230 VAC
Maximum continuous operating voltage	253 VAC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	14 A
Voltage protection level (8/20 μs)	≤ 706 VAC
Capacitance	≤ 0.4 nF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39,5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

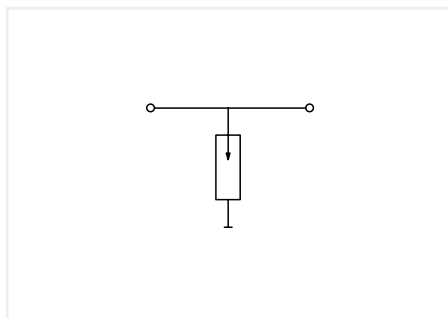
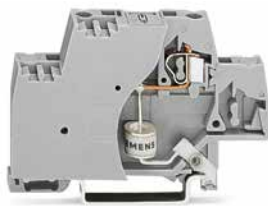
Mechanical Data

Mounting type	DIN-35 rail
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Material Data

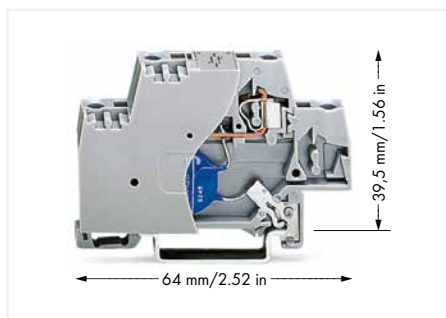
Weight	12.1 g
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Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with end plate; with gas-filled surge arrester; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
24 VAC/DC	280-503/281-579	25



Electrical Data

Nominal operating voltage	24 VAC/DC
Maximum continuous operating voltage	70 VAC / 90 VDC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	5 kA
Voltage protection level (8/20 μs)	≤ 600 VAC
Capacitance	≤ 2 pF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39,5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	13 g
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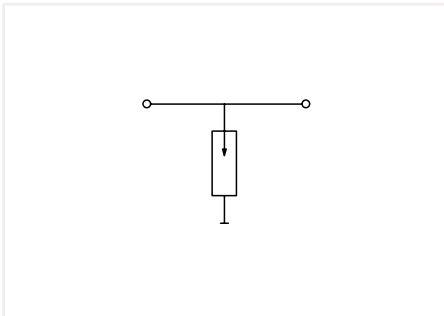
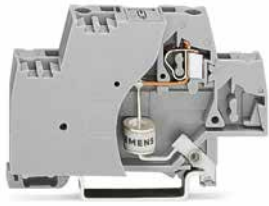
Short description:

This component terminal block with surge suppression device, end plate and direct connection to the DIN-35 rail is equipped with a gas-filled surge.

Features:

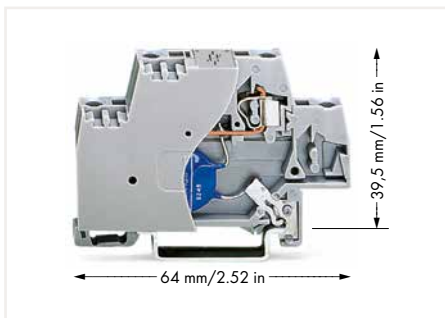
- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with end plate; with gas-filled surge arrester; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
115 VAC/DC	280-503/281-580	25



Short description:

This component terminal block with surge suppression device, end plate and direct connection to the DIN-35 rail is equipped with a gas-filled surge.

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	115 VAC/DC
Maximum continuous operating voltage	180 VAC / 230 VDC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	5 kA
Voltage protection level (8/20 μs)	≤ 650 VAC
Capacitance	≤ 2 pF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39,5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

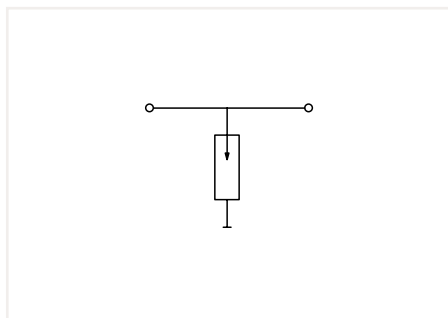
Mechanical Data

Mounting type	DIN-35 rail
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Material Data

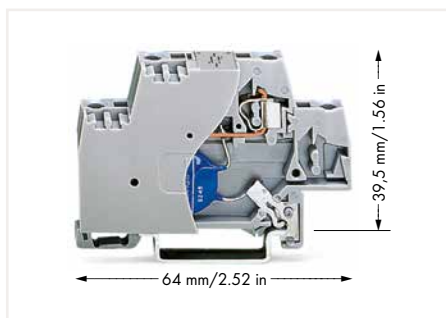
Weight	12.3 g
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Component Terminal Block; with Surge Arrester; with Direct Connection to the DIN-35 Rail 280 Series



Component terminal block; double-deck; with end plate; with gas-filled surge arrester; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U_{BN}	Item No.	Pack. Unit
230 VAC/DC	280-503/281-581	25



Electrical Data

Nominal operating voltage	230 VAC/DC
Maximum continuous operating voltage	450 VAC / 600 VDC
Rated continuous current	20 A
Nominal discharge current (8/20 μ s), line	5 kA
Voltage protection level (8/20 μ s)	\leq 1100 VAC
Capacitance	\leq 2 pF

Connection Data

Connection points (number)	2
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39.5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	12.7 g
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9

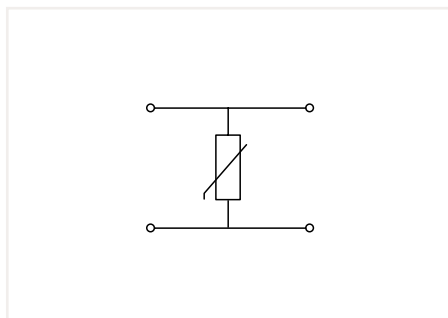
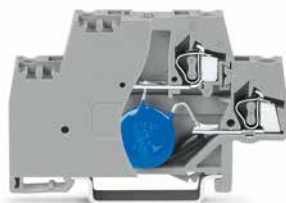
Short description:

This component terminal block with surge suppression device, end plate and direct connection to the DIN-35 rail is equipped with a gas-filled surge.

Features:

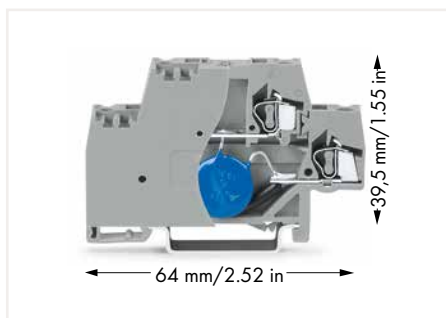
- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Component Terminal Block; with Surge Arrester 280 Series



Component terminal block; double-deck; with end plate; with varistor; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
24 VDC	280-504/281-582	25



Electrical Data

Nominal operating voltage	24 VDC
Maximum continuous operating voltage	31 VDC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	300 A
Discharge current (max.)	1 kA
Voltage protection level (8/20 μs)	≤ 77 VDC
Capacitance	≤ 4.6 nF

Connection Data

Connection points (number)	4
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39.5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	15.5 g
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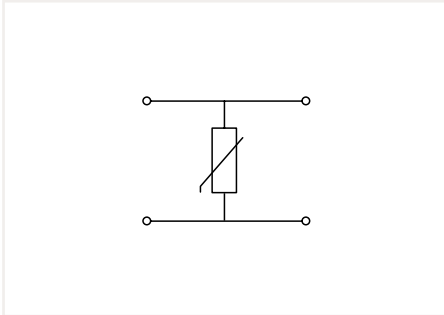
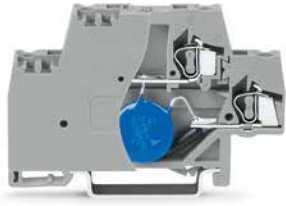
Short description:

This component terminal block with surge suppression device and end plate is equipped with a varistor.

Features:

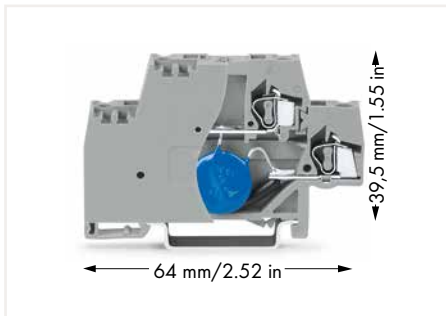
- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Component Terminal Block; with Surge Arrester 280 Series



Component terminal block; double-deck; with end plate; with varistor; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
48 VDC	280-504/281-583	25



Short description:

This component terminal block with surge suppression device and end plate is equipped with a varistor.

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	48 VDC
Maximum continuous operating voltage	56 VDC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	300 A
Discharge current (max.)	1 kA
Voltage protection level (8/20 μs)	≤ 135 VDC
Capacitance	≤ 2.8 nF

Connection Data

Connection points (number)	4
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39,5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

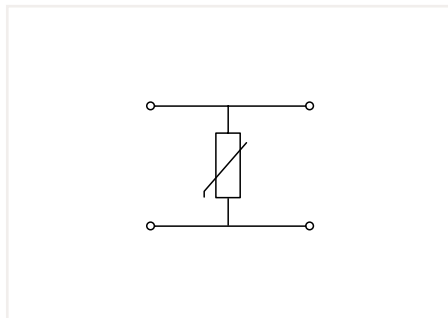
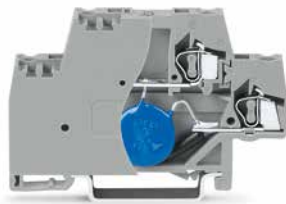
Mechanical Data

Mounting type	DIN-35 rail
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Material Data

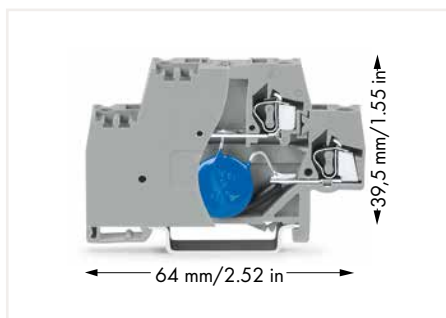
Weight	16 g
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Component Terminal Block; with Surge Arrester 280 Series



Component terminal block; double-deck; with end plate; with varistor; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
60 VDC	280-504/281-584	25



Electrical Data

Nominal operating voltage	60 VDC
Maximum continuous operating voltage	85 VDC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	1 kA
Discharge current (max.)	4.5 kA
Voltage protection level (8/20 μs)	≤ 165 VDC
Capacitance	≤ 1.7 nF

Connection Data

Connection points (number)	4
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39.5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	15.2 g
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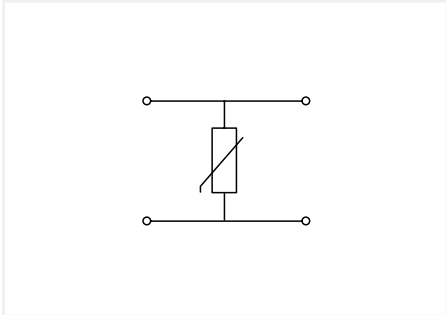
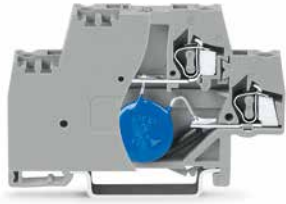
Short description:

This component terminal block with surge suppression device and end plate is equipped with a varistor.

Features:

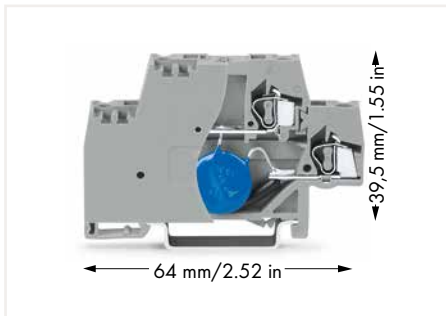
- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Component Terminal Block; with Surge Arrester 280 Series



Component terminal block; double-deck; with end plate; with varistor; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
110 VDC	280-504/281-585	25



Short description:

This component terminal block with surge suppression device and end plate is equipped with a varistor.

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	110 VDC
Maximum continuous operating voltage	150 VDC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	1 kA
Discharge current (max.)	4.5 kA
Voltage protection level (8/20 μs)	≤ 300 VDC
Capacitance	≤ 0.8 nF

Connection Data

Connection points (number)	4
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39,5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

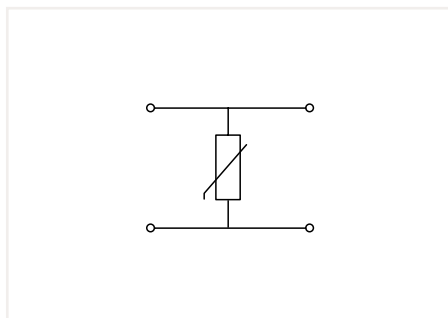
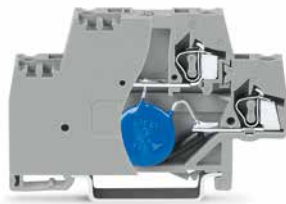
Mechanical Data

Mounting type	DIN-35 rail
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Material Data

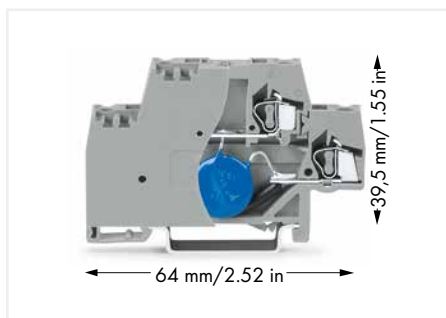
Weight	15.2 g
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Component Terminal Block; with Surge Arrester 280 Series



Component terminal block; double-deck; with end plate; with varistor; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
24 VAC	280-504/281-586	25



Electrical Data

Nominal operating voltage	24 VAC
Maximum continuous operating voltage	30 VAC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	300 A
Discharge current (max.)	1 kA
Voltage protection level (8/20 μs)	≤ 93 VAC
Capacitance	≤ 3.5 nF

Connection Data

Connection points (number)	4
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39,5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	15.5 g
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9

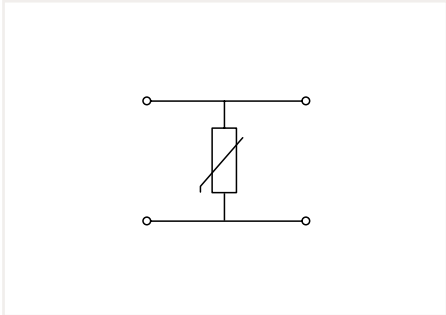
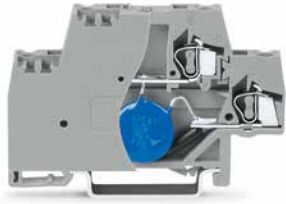
Short description:

This component terminal block with surge suppression device and end plate is equipped with a varistor.

Features:

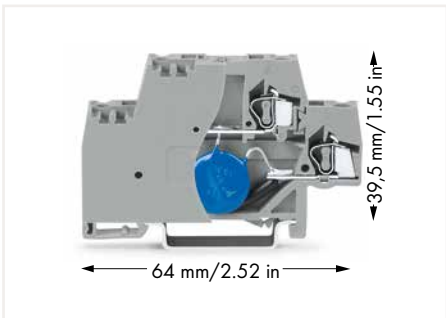
- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Component Terminal Block; with Surge Arrester 280 Series



Component terminal block; double-deck; with end plate; with varistor; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
115 VAC	280-504/281-587	25



Short description:

This component terminal block with surge suppression device and end plate is equipped with a varistor.

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	115 VAC
Maximum continuous operating voltage	150 VAC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	1 kA
Discharge current (max.)	4.5 kA
Voltage protection level (8/20 μs)	≤ 395 VAC
Capacitance	≤ 0.57 nF

Connection Data

Connection points (number)	4
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39,5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

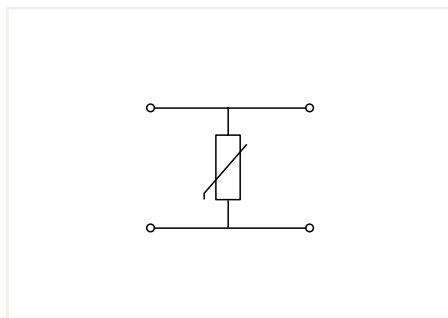
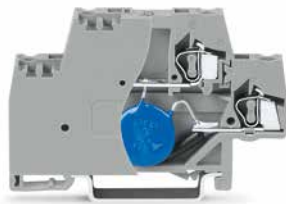
Mechanical Data

Mounting type	DIN-35 rail
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Material Data

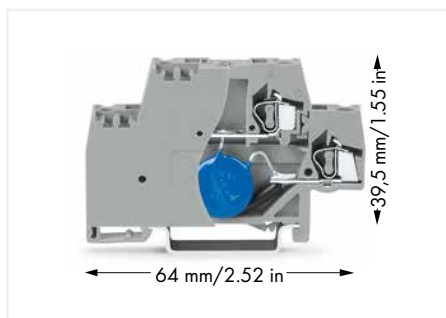
Weight	15.9 g
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Component Terminal Block; with Surge Arrester 280 Series



Component terminal block; double-deck; with end plate; with varistor; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
230 VAC	280-504/281-588	25



Electrical Data

Nominal operating voltage	230 VAC
Maximum continuous operating voltage	275 VAC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	1 kA
Discharge current (max.)	4.5 kA
Voltage protection level (8/20 μs)	≤ 710 VAC
Capacitance	≤ 0.32 nF

Connection Data

Connection points (number)	4
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39.5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	15.8 g
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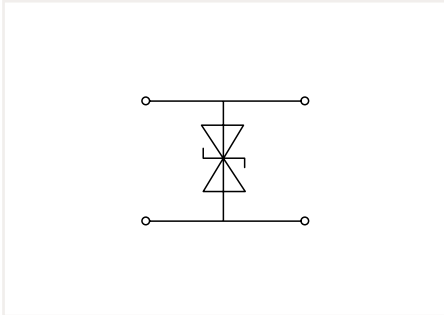
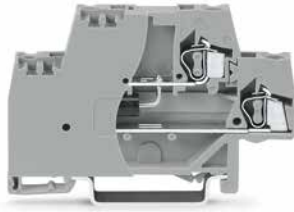
Short description:

This component terminal block with surge suppression device and end plate is equipped with a TVS diode.

Features:

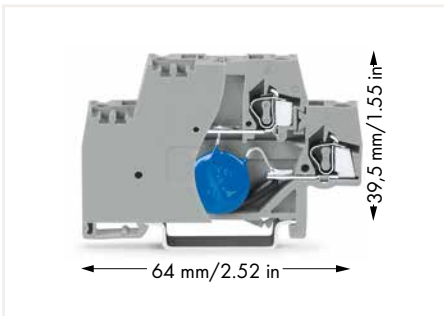
- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Component Terminal Block; with Surge Arrester 280 Series



Component terminal block; double-deck; with end plate; with 1.5KE33C TVS diode; 24 VDC; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
24 VDC	280-944/281-589	25



Short description:

This component terminal block with surge suppression device and end plate is equipped with a TVS diode.

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	24 VDC
Maximum continuous operating voltage	28 VDC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	169 A
Voltage protection level (8/20 μs)	≤ 59 VDC
Capacitance	≤ 2.7 nF

Connection Data

Connection points (number)	4
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39,5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

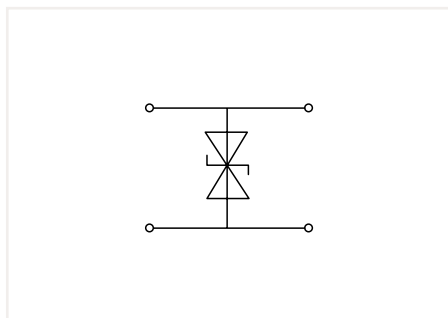
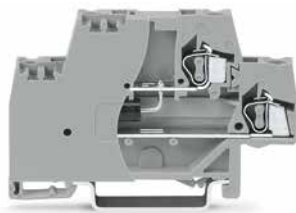
Mechanical Data

Mounting type	DIN-35 rail
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Material Data

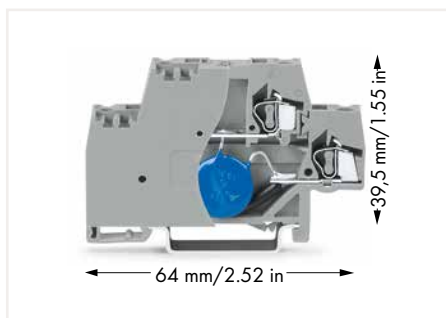
Weight	13.6 g
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Component Terminal Block; with Surge Arrester 280 Series



Component terminal block; double-deck; with end plate; with 1.5KE62C TVS diode; 48 VDC; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
48 VDC	280-944/281-590	25



Electrical Data

Nominal operating voltage	48 VDC
Maximum continuous operating voltage	53 VDC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	90 A
Voltage protection level (8/20 μs)	≤ 111 VDC
Capacitance	≤ 1.7 nF

Connection Data

Connection points (number)	4
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39,5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	14 g
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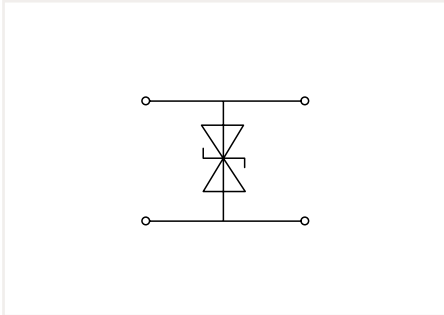
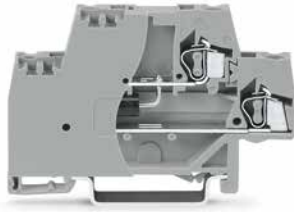
Short description:

This component terminal block with surge suppression device and end plate is equipped with a TVS diode.

Features:

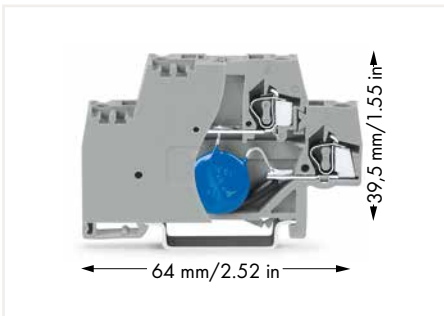
- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Component Terminal Block; with Surge Arrester 280 Series



Component terminal block; double-deck; with end plate; with 1.5KE82C TVS diode; 60 VDC; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
60 VDC	280-944/281-591	25



Short description:

This component terminal block with surge suppression device and end plate is equipped with a TVS diode.

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	60 VDC
Maximum continuous operating voltage	70 VDC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	69 A
Voltage protection level (8/20 μs)	≤ 146 VDC
Capacitance	≤ 1.35 nF

Connection Data

Connection points (number)	4
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39,5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

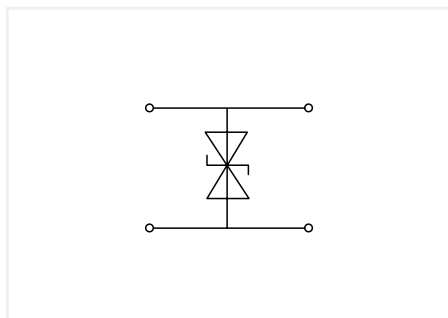
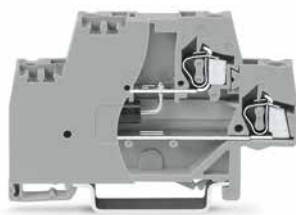
Mechanical Data

Mounting type	DIN-35 rail
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Material Data

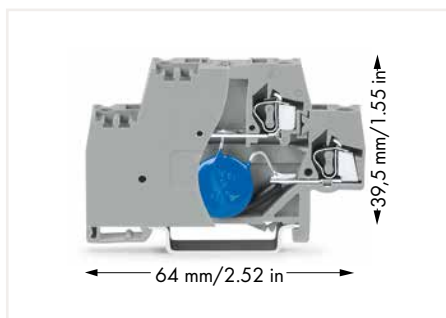
Weight	14.2 g
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Component Terminal Block; with Surge Arrester 280 Series



Component terminal block; double-deck; with end plate; with 1.5KE150C TVS diode; 110 VDC; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
110 VDC	280-944/281-592	25



Electrical Data

Nominal operating voltage	110 VDC
Maximum continuous operating voltage	128 VDC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	38 A
Voltage protection level (8/20 μs)	≤ 265 VDC
Capacitance	≤ 0.85 nF

Connection Data

Connection points (number)	4
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39,5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	14.2 g
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9

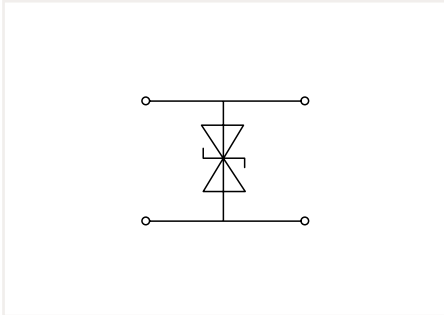
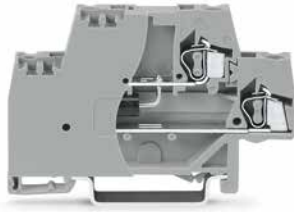
Short description:

This component terminal block with surge suppression device and end plate is equipped with a TVS diode.

Features:

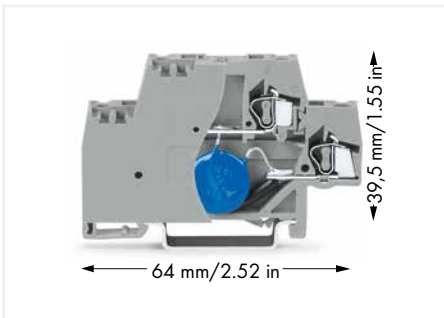
- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Component Terminal Block; with Surge Arrester 280 Series



Component terminal block; double-deck; with end plate; with 1.5KE39CA TVS diode; 24 VAC; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
24 VAC	280-944/281-593	25



Short description:

This component terminal block with surge suppression device and end plate is equipped with a TVS diode.

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	24 VAC
Maximum continuous operating voltage	26 VAC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	143 A
Voltage protection level (8/20 μs)	≤ 70 VAC
Capacitance	≤ 2.4 nF

Connection Data

Connection points (number)	4
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39,5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

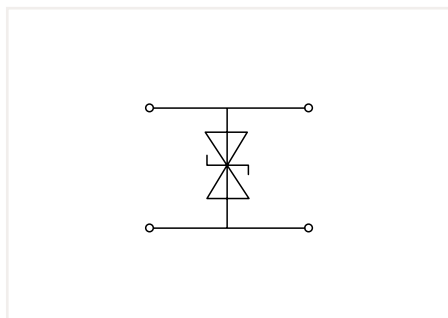
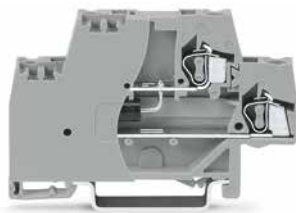
Mechanical Data

Mounting type	DIN-35 rail
---------------	-------------

Material Data

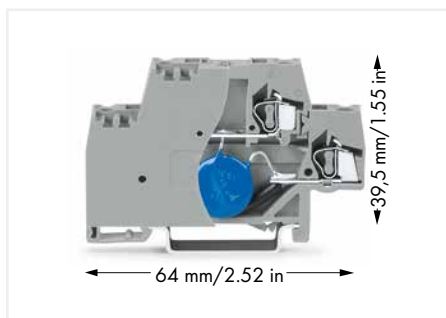
Weight	14.2 g
--------	--------

Component Terminal Block; with Surge Arrester 280 Series



Component terminal block; double-deck; with end plate; with 1.5KE-C TVS diode; AC 115 V; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
115 VAC	280-944/281-594	25



Electrical Data

Nominal operating voltage	115 VAC
Maximum continuous operating voltage	133 VAC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	26 A
Voltage protection level (8/20 μs)	≤ 388 VAC
Capacitance	≤ 0.63 nF

Connection Data

Connection points (number)	4
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39.5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

Mechanical Data

Mounting type	DIN-35 rail
---------------	-------------

Material Data

Weight	14 g
--------	------

9

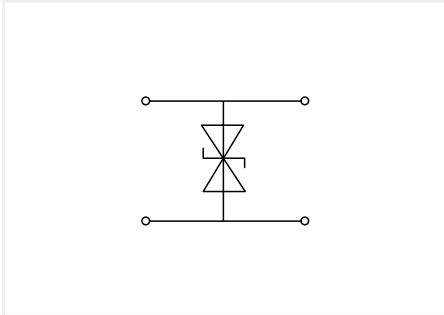
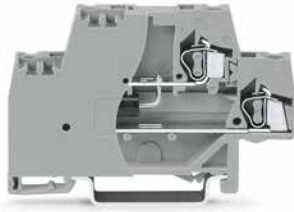
Short description:

This component terminal block with surge suppression device and end plate is equipped with a TVS diode.

Features:

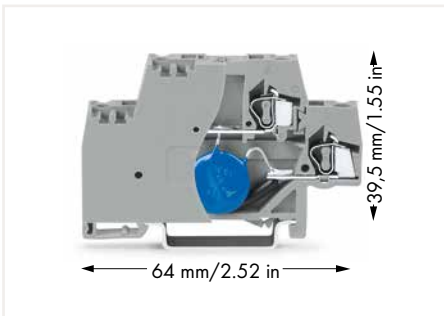
- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Component Terminal Block; with Surge Arrester 280 Series



Component terminal block; double-deck; with end plate; with 1.5KE-C TVS diode; 230 VAC; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; CAGE CLAMP®

U _{BN}	Item No.	Pack. Unit
230 VAC	280-944/281-595	25



Short description:

This component terminal block with surge suppression device and end plate is equipped with a TVS diode.

Features:

- Protect your system against overvoltage
- Slim, space-saving design
- Control operational costs by preventing expensive, unplanned downtime
- High operational reliability and system uptime

Electrical Data

Nominal operating voltage	230 VAC
Maximum continuous operating voltage	253 VAC
Rated continuous current	20 A
Nominal discharge current (8/20 μs), line	14 A
Voltage protection level (8/20 μs)	≤ 706 VAC
Capacitance	≤ 0.4 nF

Connection Data

Connection points (number)	4
Connection technology	CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Physical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	39,5 mm / 1.555 inch
Depth	64 mm / 2.52 inch

Mechanical Data

Mounting type	DIN-35 rail
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Material Data

Weight	14.1 g
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Accessories



End and intermediate plate; 2.5 mm thick

Color	Item No.	Pack. Unit
orange	280-341	100
gray	280-340	100

Insulation stop; 5 pcs/strip

Color	Diameter	Item No.	Pack. Unit
white	0.08 ... 0.2 mm ²	280-470	200
light gray	0.25 ... 0.5 mm ²	280-471	200
black	0.75 ... 1 mm ²	280-472	200

Comb-style jumper bar; insulated; $I_N = I_N$ of terminal block

	Item No.	Pack. Unit
2-way	280-482	200
3-way	280-483	200
10-way	280-490	50

Accessories














Alternate comb-style jumper bar; insulated; $I_N = I_N$ of terminal block		
	Item No.	Pack. Unit
2-way	280-492	200



WAGO Accessories and WAGO Tools

WAGO Accessories and WAGO Tools

			Page
	Shield Clamping Saddles	790 Series	648
	Spring-Equipped Shield Clamping Saddles	790 Series	651
	Busbar Carriers	790 Series	654
	Marking Systems		653
	Control Cabinet Outlet and Switch Cabinet Drawer	709 Series	668
	DIN-Rails, Collective Jumper Carriers and Rail-Mount Terminal Block Covers		670
	End Stops for DIN-35 and DIN-15 Rails		672
	Operating tools		678
	Cable Strippers		680
	Crimping Tools for Ferrules		684
	Test and Measurement Devices		690

Shield Connection System

790 Series

Installation



Carrier with grounding foot* (790-113), 45 mm long, busbar 90° to the rail

*for all shield clamping saddle sizes



Carrier with grounding foot* (790-114), 45 mm long, busbar parallel to the rail

*for all shield clamping saddle sizes



Carrier with grounding foot* (790-115), 125 mm long, busbar parallel to the rail

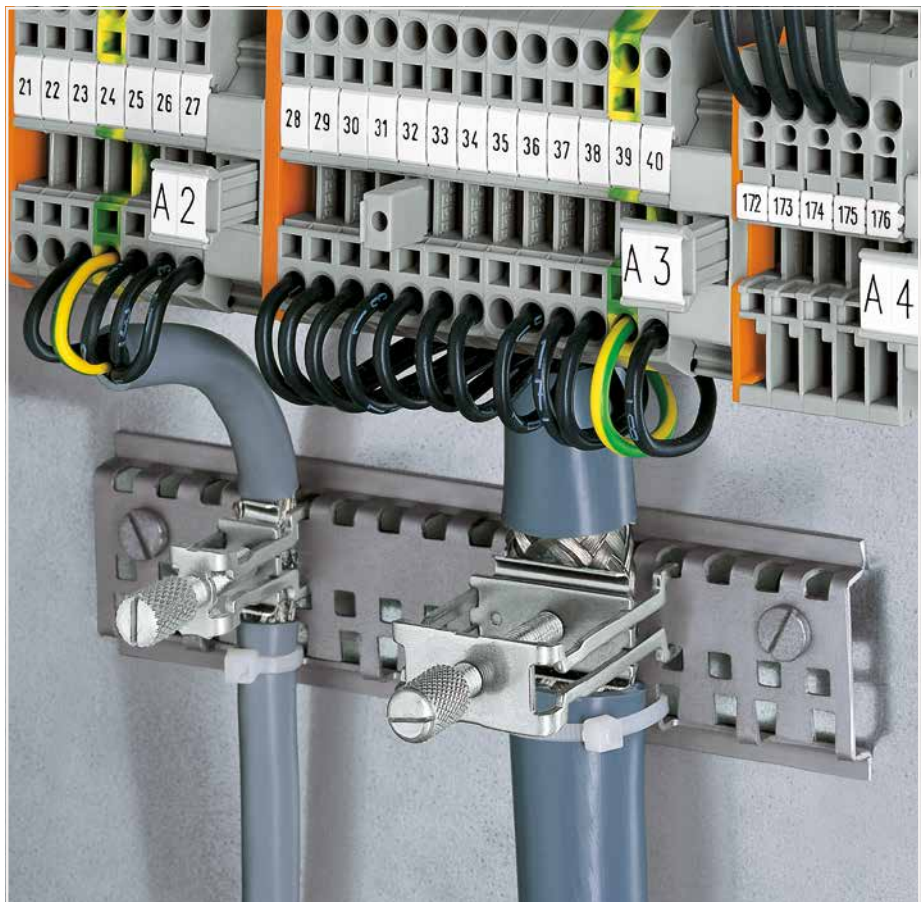
*for all shield clamping saddle sizes



Securing a spacer sleeve to a specialty slotted DIN-rail.



Securing an additional shield clamping saddle.



10



Tightening/removing a shield clamping saddle.



After connection, tighten the knurled screw to complete the installation.
Recommended tightening torque: 0.5 Nm

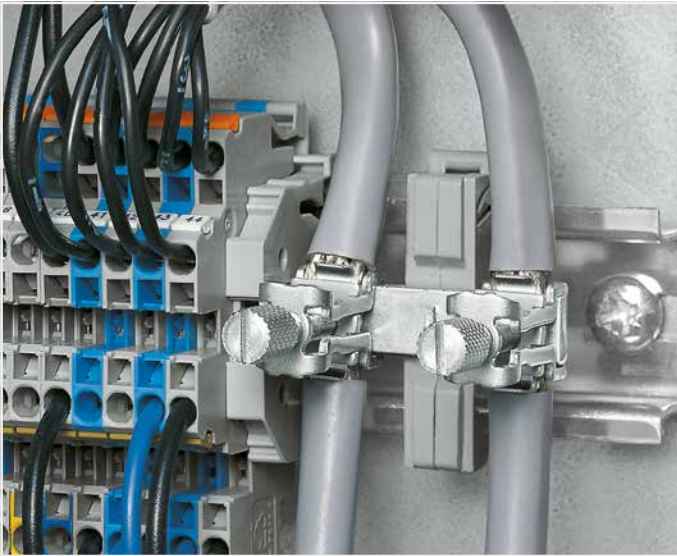


To remove the clamping saddle, unscrew until ratcheted mechanism is released, then slightly tip saddle and remove the clamping saddle.

Shield Connection System

790 Series

Installation



Carrier with grounding foot – busbar parallel to the rail



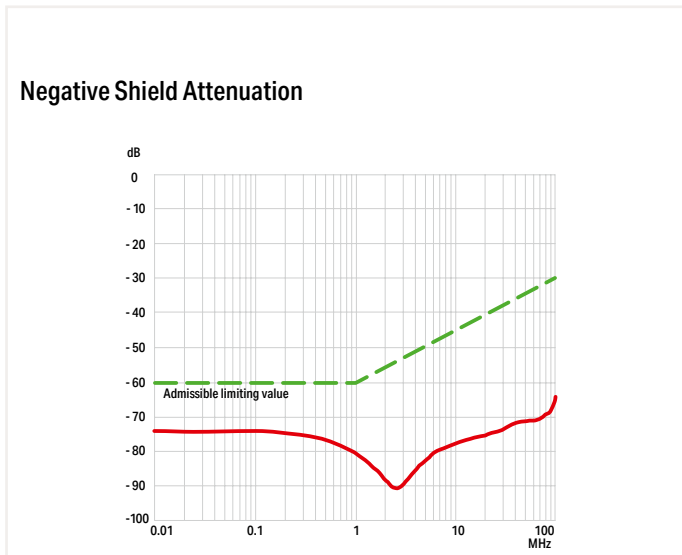
Insulated mounting carriers for a common shield reference potential, independent of housing potential



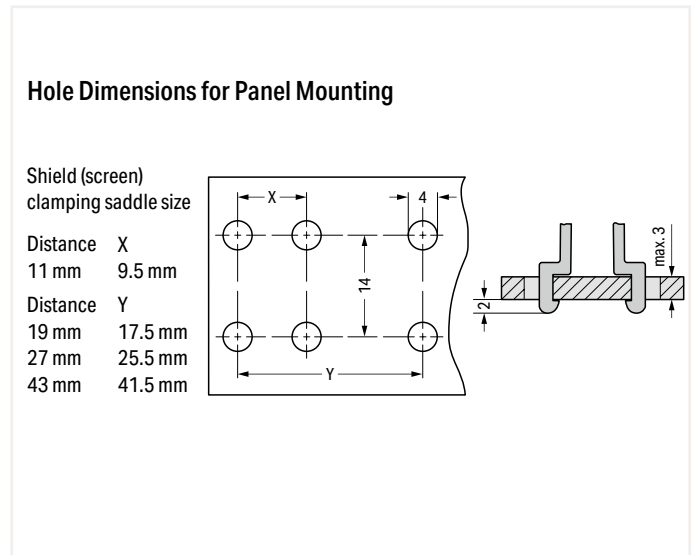
U-shaped (10 x 3) mm copper busbar



Snap shield clamping saddles into any metal plate (max. thickness: 3 mm).

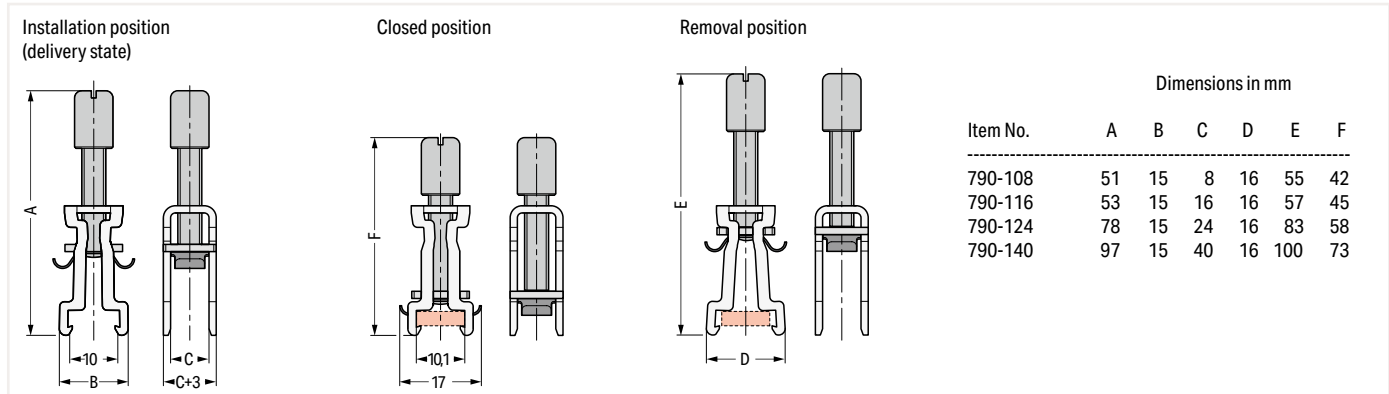


The shield connection system is highly effective because the clamping unit can be brought very close to the unshielded part of the cable.



Additionally, the spring material is part of the clamping saddle, providing a good electrical connection (the system also acts as a partial strain relief). The spring element integrated in the shield clamping saddle compensates for deformation and settling that results from a connected shield.

Shield Clamping Saddles 790 Series



Item No.	Dimensions in mm					
	A	B	C	D	E	F
790-108	51	15	8	16	55	42
790-116	53	15	16	16	57	45
790-124	78	15	24	16	83	58
790-140	97	15	40	16	100	73

Shield clamping saddle; 11 mm wide; Connectable shield diameter: 3 ... 8 mm
 Note: Cannot be used for connecting ground conductors!

Item No.	Pack. Unit
790-108	50 (10)

Shield clamping saddle; 19 mm wide; Connectable shield diameter: 7 ... 16 mm
 Note: Cannot be used for connecting ground conductors!

Item No.	Pack. Unit
790-116	50 (10)

Shield clamping saddle; 27 mm wide; Connectable shield diameter: 6 ... 24 mm
 Note: Cannot be used for connecting ground conductors!

Item No.	Pack. Unit
790-124	50 (10)

Accessories; for Shield Clamping Saddles

Carrier with grounding foot; Busbar parallel to the rail; 15 mm long; Copper (10 x 3) mm; for shield clamping saddles (790-108)



790-110 25

Carrier with grounding foot; Busbar parallel to the rail; 25 mm long; Copper (10 x 3) mm; for shield clamping saddles (790-108; 790-116) and shield clamps (791-111; 791-117)



790-112 25

Carrier with grounding foot; Busbar 90° to the DIN-rail; 45 mm long; Copper (10 x 3) mm; for shield clamping saddles (790 Series)



790-113 25

Carrier with grounding foot; Busbar parallel to the DIN-rail; 45 mm long; Copper (10 x 3) mm; for shield clamping saddles (790 Series) and shield clamps (791 Series)



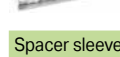
790-114 25

Carrier with two grounding feet; Busbar parallel to the DIN-rail; 125 mm long; Copper (10 x 3) mm



790-115 25

DIN-rail; specialty slotted; 1000 mm long; tin-plated



790-145

Spacer sleeve; steel; for DIN-rail; specialty slotted; for M5-size screw;



790-144 200 (100)

Insulated mounting foot; for busbar with M4 x 8 mm screw



790-100 50 (25)

Insulated mounting foot; for busbar with (3.5 x 9) mm sheet metal screw



790-101 50 (25)

Busbar; tin-plated; 1000 mm long; copper (10 x 3) mm



210-133 1

Busbar; tin-plated; 30 mm long; copper (10 x 3) mm



790-133 20

Busbar; tin-plated; 50 mm long; copper (10 x 3) mm



790-134 20

U-shaped busbar; Copper (10 x 3) mm; for 5 I/O; for 750 Series I/O Modules



790-190 25 (5)

U-shaped busbar; Copper (10 x 3) mm; for 8 I/O; for 750 Series I/O Modules



790-191 25

U-shaped busbar; Copper (10 x 3) mm; for 5 I/O; for 750 Series I/O Modules



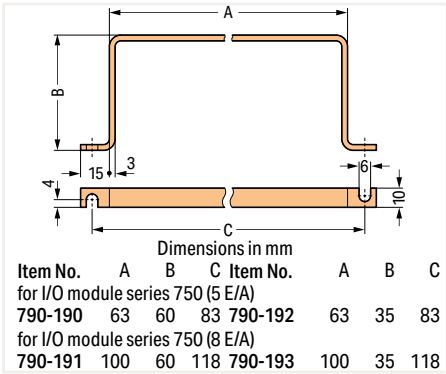
790-192 25

U-shaped busbar; Copper (10 x 3) mm; for 8 I/O; for 750 Series I/O Modules



790-193 25

10



Shield clamping saddle; 43 mm wide; Connectable shield diameter: 22 ... 40 mm
 Note: Cannot be used for connecting ground conductors!

Item No.	Pack. Unit
790-140	50 (10)



Carrier with grounding foot* (790-114), 45 mm long, busbar parallel to the rail

*for all shield clamping saddle sizes



Carrier with grounding foot* (790-115), 125 mm long, busbar parallel to the rail

*for all shield clamping saddle sizes

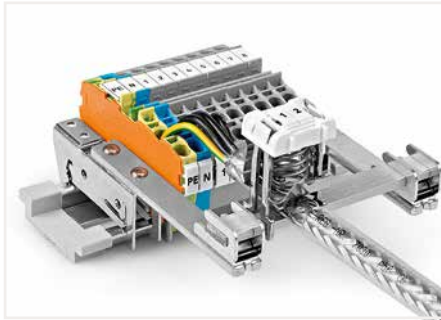
Spring-Equipped Shield Clamping Saddles

790 Series

Installation



Shield clamping saddles are available in three different sizes for shield diameters ranging from 3 to 20 mm.



Application example



Compress the clamping saddle until fully engaged.



Mounting a clamping saddle on a specialty slotted DIN-rail (790-145).
When releasing the saddle, do not place your finger under the clamping spring!



Removing the shield clamping saddle.



Shield clamping saddle contacts shield conductor and specialty slotted DIN-rail (790-145).



Labeling using a marking strip.



Labelling using WMB markers.

Spring-Equipped Shield Clamping Saddles 790 Series



Delivery position		Mounting position		Dimensions in mm					
Item No.	A	B	C	D	E*				
790-208	30	29.9	8	12.4	25.8				
790-216	34.6	28.3	16	21.8	30.2				
790-220	45.6	28.3	24	30	41.2				
					*Height with WMB marker				

Shield clamping saddle; 12.4 mm wide; Connectable shield diameter: 3 ... 8 mm
Note: Cannot be used for connecting ground conductors and strain relief!

Item No.	Pack. Unit
790-208	50

Shield clamping saddle; 21.8 mm wide; Connectable shield diameter: 6 ... 16 mm
Note: Cannot be used for connecting ground conductors and strain relief!


Item No.	Pack. Unit
790-216	25

Shield clamping saddle; 30 mm wide; Connectable shield diameter: 6 ... 20 mm
Note: Cannot be used for connecting ground conductors and strain relief!


Item No.	Pack. Unit
790-220	25

Accessories; for Shield Clamping Saddles

Carrier with grounding foot; Busbar parallel to the rail; 15 mm long; Copper (10 x 3) mm; for shield clamping saddles (790-108)

	790-110	25
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Carrier with grounding foot; Busbar parallel to the rail; 25 mm long; Copper (10 x 3) mm; for shield clamping saddles (790-108; 790-116) and shield clamps (791-111; 791-117)

	790-112	25
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Carrier with grounding foot; Busbar 90° to the DIN-rail; 45 mm long; Copper (10 x 3) mm; for shield clamping saddles (790 Series)

	790-113	25
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Carrier with grounding foot; Busbar parallel to the DIN-rail; 45 mm long; Copper (10 x 3) mm; for shield clamping saddles (790 Series) and shield clamps (791 Series)

	790-114	25
---	---------	----


Carrier with two grounding feet; Busbar parallel to the DIN-rail; 125 mm long; Copper (10 x 3) mm

	790-115	25
---	---------	----

DIN-rail; specialty slotted; 1000 mm long; tin-plated

	790-145	
---	---------	--

Spacer sleeve; steel; for DIN-rail; specialty slotted; for M5-size screw;

	790-144	200 (100)
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Busbar; tin-plated; 1000 mm long; copper (10 x 3) mm

	210-133	1
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Busbar; tin-plated; 30 mm long; copper (10 x 3) mm

	790-133	20
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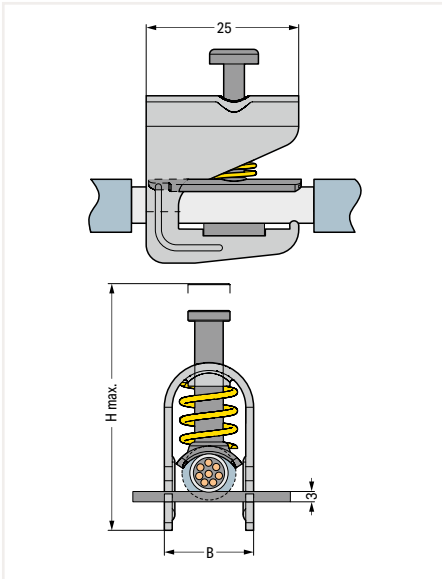
Busbar; tin-plated; 50 mm long; copper (10 x 3) mm

	790-134	20
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Shield Clamp and Shield Termination 791 and 709 Series



Dimensions in mm



Shield clamp; Connectable shield diameter: 1.5 ... 6.5 mm; Height (max.): 40 mm; 10 mm wide
Note: Cannot be used for connecting ground conductors!

Item No.	Pack. Unit
791-107	50

Shield termination; includes cable ties for 5 ... 10 mm shield diameter; 60 mm long

Item No.	Pack. Unit
709-350	100 (25)

Shield clamp; Connectable shield diameter: 5 ... 11 mm; Height (max.): 47 mm; 17 mm wide
Note: Cannot be used for connecting ground conductors!

791-111	50
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Shield termination; includes cable ties for 5 ... 10 mm shield diameter; 150 mm long

709-352	100 (25)
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Shield clamp; Connectable shield diameter: 10 ... 17 mm; Height (max.): 63 mm; 23 mm wide
Note: Cannot be used for connecting ground conductors!

791-117	50
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Fit the shield termination to the shield cable.



Secure both shield cable and shield termination to the strain relief plate using cable ties.

Shield clamp; Connectable shield diameter: 16 ... 24 mm; Height (max.): 78 mm; 30 mm wide
Note: Cannot be used for connecting ground conductors!

791-124	50
---------	----

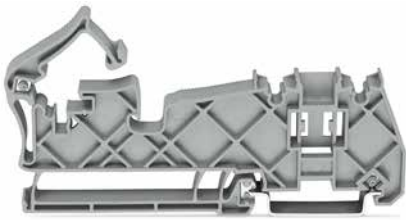


Shield termination connected to an X-COM® female plug

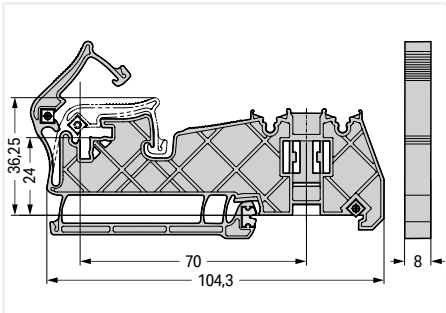
10

Busbar Carriers

790 Series



Dimensions in mm



Busbar carrier; for (10 x 3) mm copper busbars; no contact to DIN-rail; insulated

Item No.	Pack. Unit
790-400	20



Snapping the busbar carrier onto DIN-35 rail.



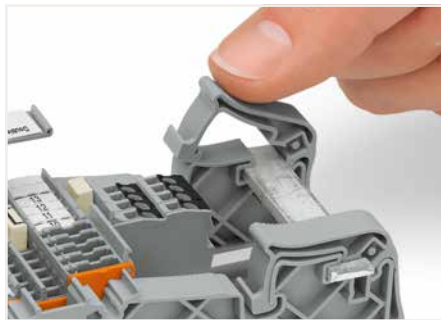
Vertical mounting position of the busbar



Place the busbar in the carrier holder.



Horizontal mounting position of the busbar



Snap the mounting bracket into position.



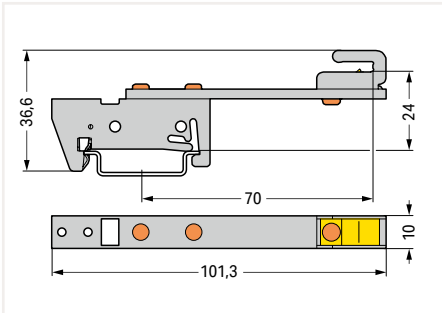
Release the mounting bracket by pushing the operating tool down ① and then forward ②.

Busbar Carriers

790 Series



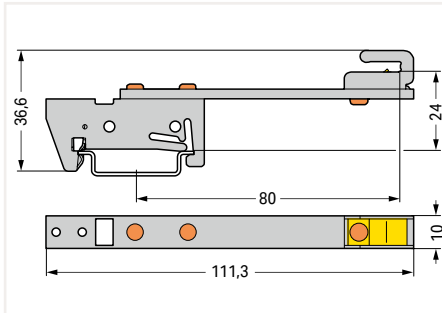
Dimensions in mm



Busbar carrier; for (10 x 3) mm copper busbars; single side; straight; 70 mm between center of DIN-rail and busbar carrier

Item No.	Pack. Unit
790-300	10

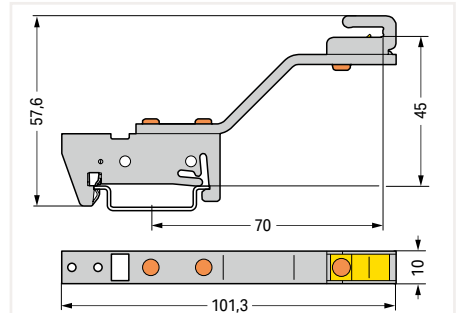
Dimensions in mm



Busbar carrier; for (10 x 3) mm copper busbars; single side; straight; 80 mm between center of DIN-rail and busbar carrier

Item No.	Pack. Unit
790-302	10

Dimensions in mm

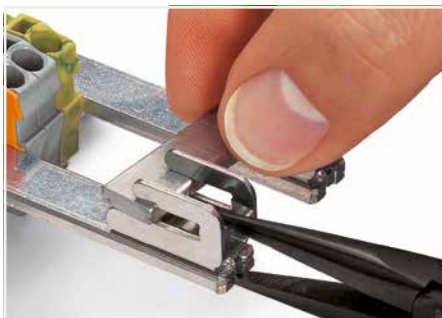


Busbar carrier; for (10 x 3) mm copper busbars; single side; angled; 70 mm between center of DIN-rail and busbar carrier

Item No.	Pack. Unit
790-301	10



Remove the busbar carrier using an operating tool (type 3, 5.5 x 0.8 mm blade).



To remove the busbar, compress the spring using pliers.

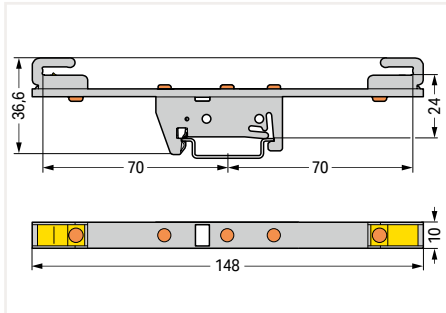


Place the busbar in the busbar carrier.

Busbar Carriers 790 Series



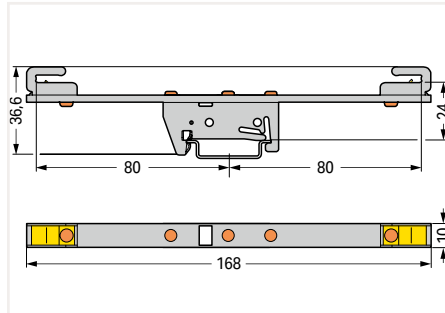
Dimensions in mm



Busbar carrier; for (10 x 3) mm copper busbars; both sides; straight; 70 mm between center of DIN-rail and busbar carrier

Item No.	Pack. Unit
790-310	10

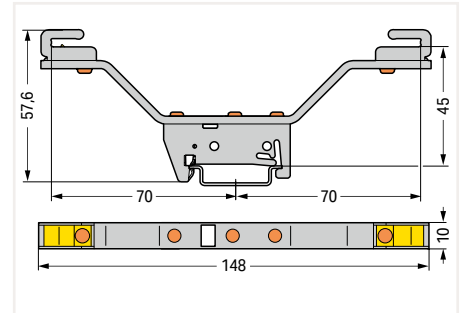
Dimensions in mm



Busbar carrier; for (10 x 3) mm copper busbars; both sides; straight; 80 mm between center of DIN-rail and busbar carrier

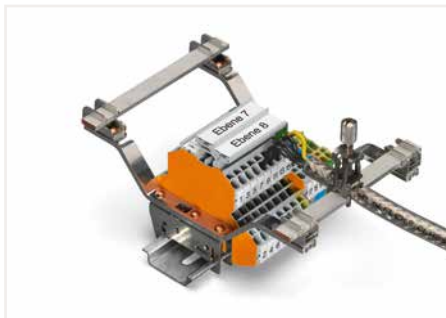
Item No.	Pack. Unit
790-312	10

Dimensions in mm



Busbar carrier; for (10 x 3) mm copper busbars; both sides; angled; 70 mm between center of DIN-rail and busbar carrier

Item No.	Pack. Unit
790-311	10

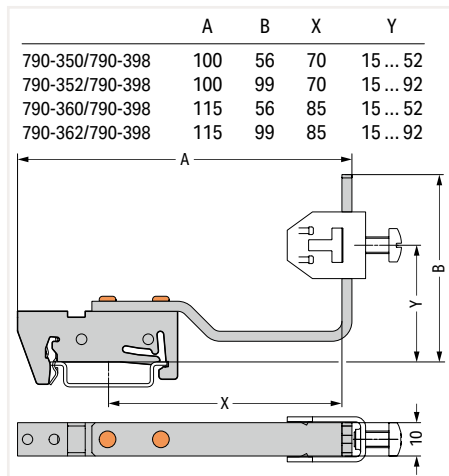


Application example

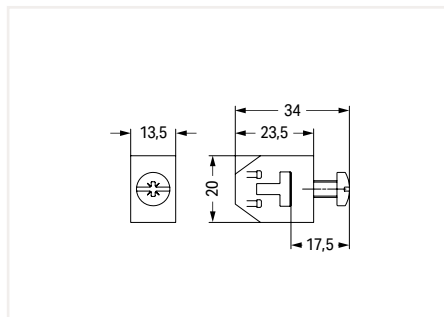
Busbar Carrier with a T-Connector (Flexible) and T-Connector 790 Series



Dimensions in mm



Dimensions in mm



Horizontal mounting position of the busbar



Vertical mounting position of the busbar

Busbar carrier with a T-connector; flexible; for (10 x 3) mm copper busbars; 70 mm between center of DIN-rail and busbar carrier; 56 mm high

	Item No.	Pack. Unit
	790-350/790-398	12

T-connector; connects two (10 x 3) mm copper busbars

	Item No.	Pack. Unit
	790-398	

Busbar carrier with a T-connector; flexible; for (10 x 3) mm copper busbars; 70 mm between center of DIN-rail and busbar carrier; 99 mm high

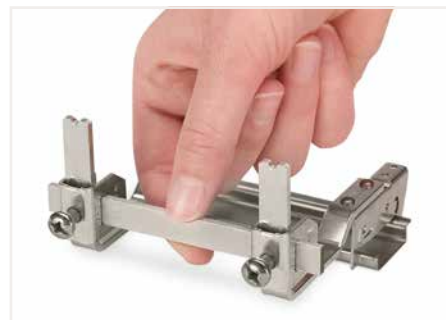
	790-352/790-398	12
--	-----------------	----

Busbar carrier with a T-connector; flexible; for (10 x 3) mm copper busbars; 85 mm between center of DIN-rail and busbar carrier; 56 mm high

	790-360/790-398	12
--	-----------------	----

Busbar carrier with a T-connector; flexible; for (10 x 3) mm copper busbars; 85 mm between center of DIN-rail and busbar carrier; 99 mm high

	790-362/790-398	12
--	-----------------	----



The height of the busbar can be adjusted.



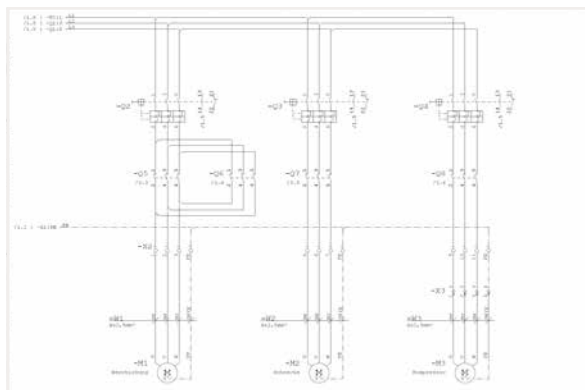
Secure the busbar by tightening the screws at the required position.

Smart Data

Supports Workflow from Control Cabinet Planning to Installation

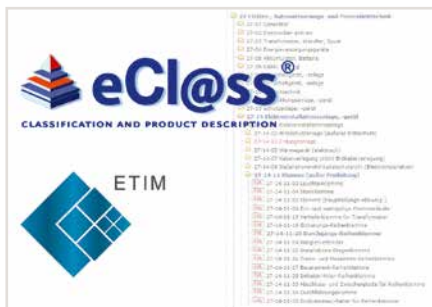
Electrical Planning

Directly import data from a CAE circuit diagram into the Smart Designer engineering software or output marking data on Smart Printer



Technical and Commercial Item Data

Classified by ETIM and eCl@ss – also in Advanced Format



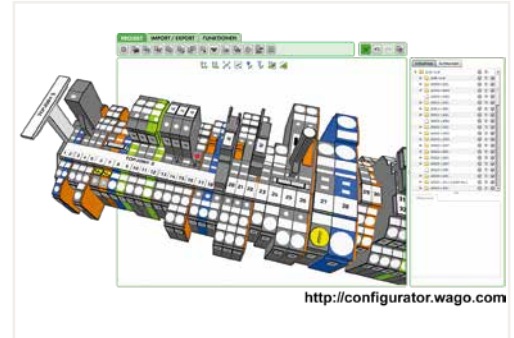
Mechanical Planning

CAD export into all standard CAD formats and in different granularities



Smart Designer

- Free online configuration and ordering software for all electrical interconnect and automation components
- No installation required
- Available worldwide – 24 hours a day
- Item data is always updated
- Auto-audit feature checks product compatibility via programmed database
- Design in full 3-D



Smart Script

- XML-based software for all WAGO labeling materials
- Data import from CAE systems
- Font size check
- Material selection wizard



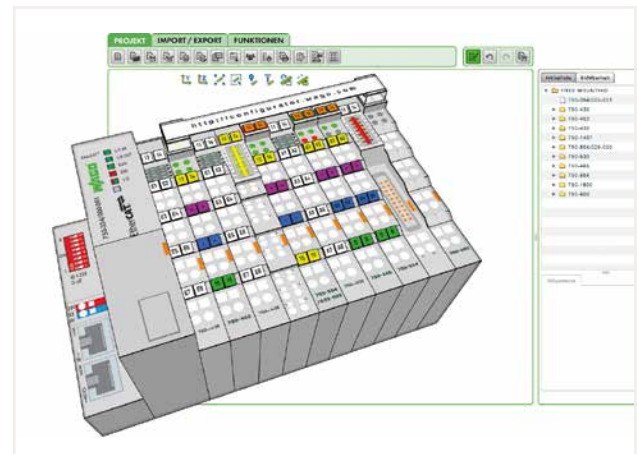
Smart Printer

The Fastest Marking System



Smart Script

Smart Designer



Smart Script
Import from CAE systems or create customized marking.

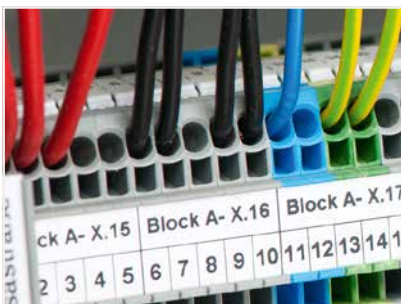
Smart Designer
After designing, print labeling materials directly from the project via Smart Printer

10



- Smart Printer**
- Compact and easy-to-use
 - Quickly print and install marking strips
 - Cost-effective marking from beginning to end

Terminal Block Marking



Multi-line marking strips for clear, detailed control cabinet labels

- WMB Inline markers on a reel are suitable for various terminal block sizes – just one marker size for all standard applications
- Same profile across all WAGO Rail-Mount Terminal Blocks TOPJOB® S ensures quick labeling

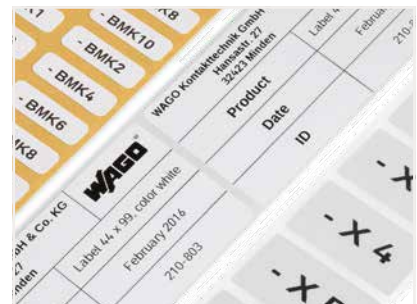
Cable and Conductor Marking



Different versions available:

- Marking sleeves, self-laminating labels, conductor markers for thread-on mounting or shrink tubes
- Large variety of marking surface sizes

Device Marking



Broad selection of label types (e.g., printable fabric), push-button markers and type plates optimizes marking for devices and control cabinets

- Labels and markers are available in a variety of colors and sizes

Thermal Transfer Printer Smart Printer



Open the printer.



Printer – open



Accessories for unwinding material



Insert the ink ribbon.



Prepare the marking material.



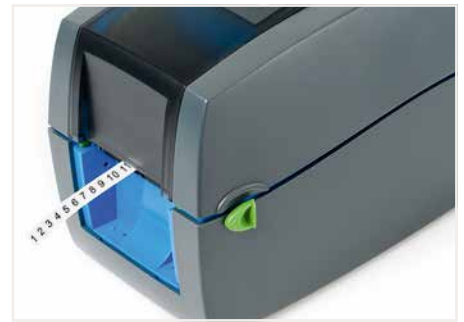
10



Insert and secure the appropriate roller into the printer.



Printer has several interfaces:
USB, ETHERNET, serial COM port



Fast, cost-effective and easy to use –
printing WMB Inline markers via Smart Printer

Thermal Transfer Printer and Cutter Smart Printer



Smart Printer; WMB Inline markers; Marking strips; Conductor markers and labels; Resolution: 300 dpi

Item No.	Pack. Unit
258-5000	1

Smart Printer

includes:

- Power supply and cable
- USB cable
- 1 x marking strip reel (2009-110)
- 1 x WMB Inline marker reel (2009-115)
- 2 x roller (258-5006 + 258-5007)
- 1 x reel holder
- 1 x ink ribbon (258-5005)

Technical Data

Printing method	Thermal transfer
Print head	Glass layer, spring-mounted
Print speed (max.)	127 mm/s (WAGO recommends 50.8 mm/s)
Print width (max.)	47 mm
Print length (max.)	762 mm
Print resolution	300 dpi (12 pixels/mm)
See-through/reflective sensor	Yes, centrally mounted
Operating display	Color TFT LCD with navigation button
Memory	8 MB Flash, 16 MB SDRAM
Interfaces	USB, RS-232, ETHERNET 10/100 Mbps, USB Host
Operating voltage	100 ... 240 VAC, 50 ... 60 Hz (automatic adjustment)
Dimensions (mm) W x H x D	135 x 175 x 245
Weight	2000 g (without printing material)
Operating temperature	5 ... 40 °C (41 ... 104 °F)
Storage temperature	-20 ... 50 °C (-4 ... 122 °F)
Safety approvals	CE (EMC)
Ink ribbon (see also Full Line Catalog, Volume 6, Marking)	External roll diameter: 40 mm; Internal core diameter: 12.7 mm (0.5 inch); Max. length: 110 m; Max. width: 58 mm



Cutter for Smart Printer; for marking strips only; not suitable for WMB Inline markers

Item No.	Pack. Unit
258-5030	1

Hardware requirements:

- Printer model: Smart Printer
- From manufacturing month/year: 0814 – August 2014
- Firmware version: 1.UW7i
- Printer driver: Version 7.4.2

Software requirements:

- Smart Script: Version 3.88.9.0 or higher
- WAGO printer settings: Version 2.4.0.0 or higher

Approved print material to be cut:

- Marking strips: 2009-110, 709-177, 709-178, 757-901/000-005
- Self-adhesive marking strips: 210-702, 210-870 ... -877
- Cable tie markers: 211-835 ... -836, 211-836/000-002
- Self-laminating labels: 211-855 ... -857
- Conductor markers for thread-on mounting: 211-861 ... -863
- Type labels: 210-801 ... -804, 210-812
- Continuous labels: 210-831 ... -834
- Label for circuit identification: 210-813

Dimensions of printing materials:

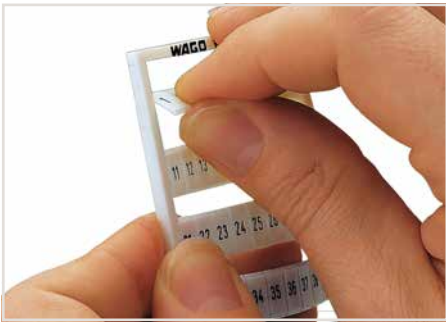
- Width (max.): 46 mm
- Thickness (max.): 250 µm

Technical Data

Width	60 mm
Height	107 mm
Depth	131 mm
Weight	1050 g

Marking Systems

Description and Installation



Separating a strip from the WMB or WMB marker card.



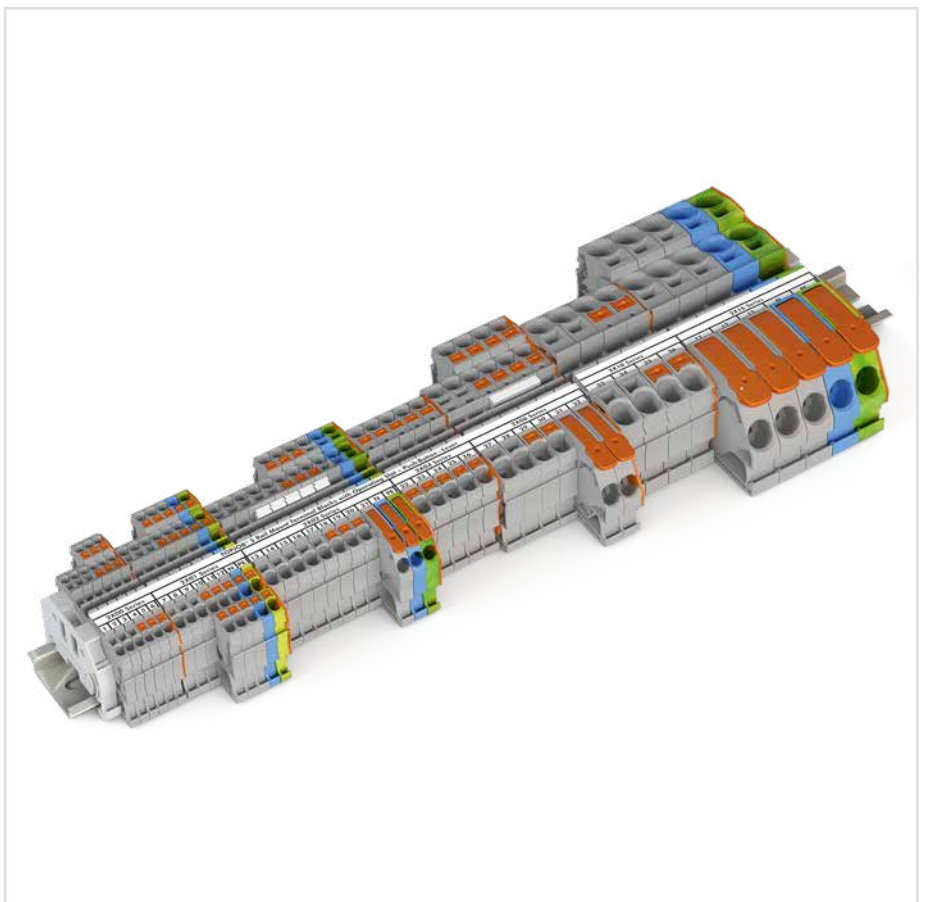
Stretching a WMB marker strip.



Separating an individual marker from the strip – for larger terminal blocks.



Marking via Mini-WSB Quick Marking System.

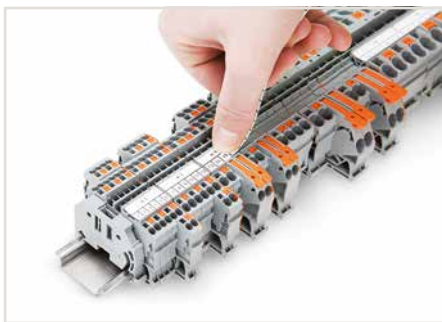


WMB markers in Mini-WSB marker slots
Translucent marking strip
Mini-WSB markers

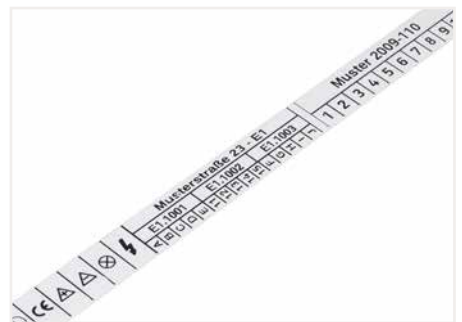
10



Printing a marking strip (2009-110) via Smart Printer.



Snapping a marking strip into the marker slot.



Marking strip – multi-line printing



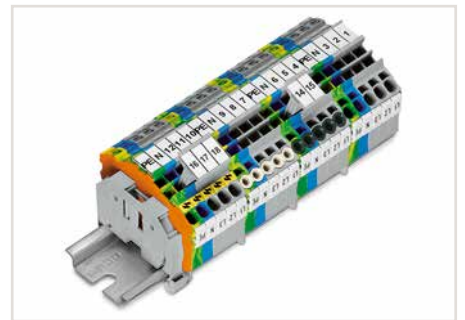
Snapping a marking strip into the marker slot.



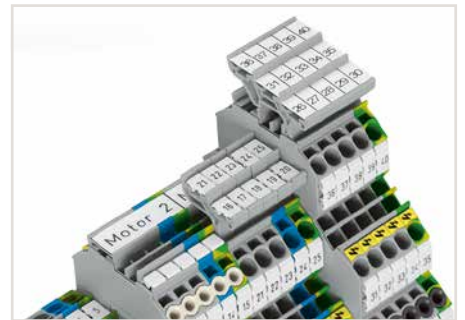
Snapping a WMB strip into the marker slot of the double marker carrier.



WMB "decade" marking



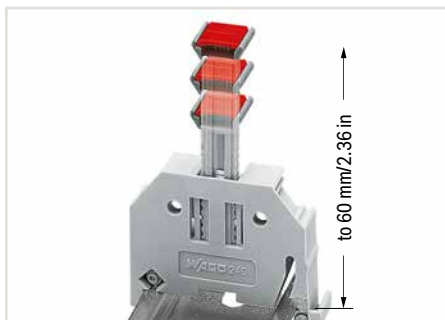
Group marker carriers for WAGO Rail-Mount Terminal Blocks TOPJOB® S- can be snapped into jumper slots.



Double- and triple-deck marker carriers can be retrofitted into the jumper contact slot of double- and triple-deck terminal blocks.



Height adjustable group marker carrier (2009-163) for marking strips (2009-110)



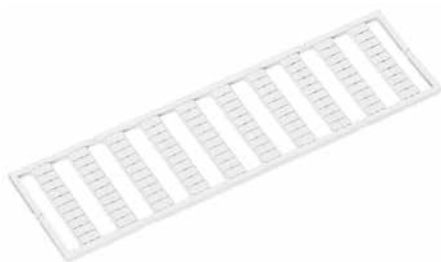
Height-adjustable group marker carrier



Additional group marking

Marking System

Terminal Block Width: 3.5 mm, 4 ... 4.2 mm and from 5 mm



Use		
Marker width	Can be snapped onto the following terminal block series	
	for continuous marking	that will be separated
3.5 mm	2000, 2020	-
4 ... 4.2 mm	279, 2001	-
5 ... 5.2 mm	270, 280, 780, 869, 870, 880, 2002, 2003, 2022	Terminal blocks with spacing > 5 ... 5.2 mm
5 ... 17.5 mm	270, 280, 780, 869, 870, 880	281 ... 285, 781 ... 785, 2002, 2004, 2005, 2006, 2007, 2010, 2016, 2022

WMB marker card; plain; 10 strips with 10 markers/card					
Color	5 mm Item No.	5 ... 5.2 mm Item No.	4 ... 4.2 mm Item No.	3.5 mm Item No.	Pack. Unit
○ white	793-501	793-5501	793-4501	793-3501	5
● yellow	793-501/000-002	793-5501/000-002	793-4501/000-002		5
● red	793-501/000-005	793-5501/000-005	793-4501/000-005		5
● blue	793-501/000-006	793-5501/000-006	793-4501/000-006		5
○ gray	793-501/000-007	793-5501/000-007	793-4501/000-007		5
● orange	793-501/000-012	793-5501/000-012	793-4501/000-012		5
● light green	793-501/000-017	793-5501/000-017	793-4501/000-017		5
● green	793-501/000-023	793-5501/000-023	793-4501/000-023		5
● violet	793-501/000-024	793-5501/000-024	793-4501/000-024		5



Use		
Marker width	Can be snapped onto the following terminal block series	
	for continuous marking	that will be separated
3.5 mm	2000, 2020	-
4 ... 4.2 mm	279, 2001	-
5 ... 5.2 mm	270, 280, 780, 869, 870, 880, 2002, 2003, 2022	Terminal blocks with spacing > 5 ... 5.2 mm

WMB Inline; plain; 2,300 WMB markers (3.5 mm)/reel		
Color	3.5 mm Item No.	Pack. Unit
○ white	2009-113	1

WMB Inline; plain; 2,000 WMB markers (4 mm)/reel; stretchable 4 ... 4.2 mm		
Color	4 ... 4.2 mm Item No.	Pack. Unit
○ white	2009-114	1

WMB Inline; plain; 1,500 WMB markers (5 mm)/reel; stretchable 5 ... 5.2 mm		
Color	5 ... 5.2 mm Item No.	Pack. Unit
○ white	2009-115	1



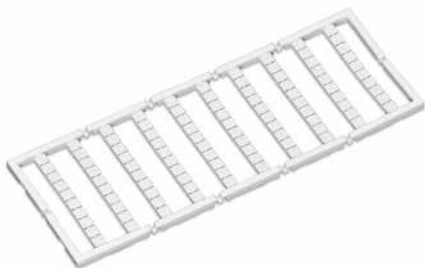
Use		
	Can be snapped onto the following terminal block series	
	2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2010, 2016, 2020, 2022	

Marking strip; plain; 11 mm wide; 50 m reel		
Color	Item No.	Pack. Unit
○ white	2009-110	1

10

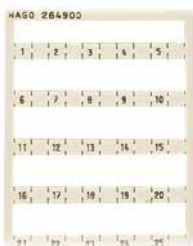
Mini-WSB Quick Marking System

Terminal Block Width: 5 mm



Use		
Marker width	Can be snapped onto the following terminal block series	
	for continuous marking	that will be separated
5 mm	264, 270, 869, 880, 769, 870, 218, 233 ... 236, 243, 250, 252 ... 257, 735 ... 742, 745, 746, 804, 805, 806, 816, 831, 750, 753, 2002, 2003, 2022	745, 746, 2004, 2006, 2007, 2010, 2016

Mini-WSB marker card; plain; 10 strips with 10 markers/card		
Color	Item No.	Pack. Unit
<input type="radio"/> white	248-501	5
<input type="radio"/> yellow	248-501/000-002	5
<input type="radio"/> red	248-501/000-005	5
<input type="radio"/> blue	248-501/000-006	5
<input type="radio"/> gray	248-501/000-007	5
<input type="radio"/> orange	248-501/000-012	5
<input type="radio"/> light green	248-501/000-017	5
<input type="radio"/> green	248-501/000-023	5
<input type="radio"/> violet	248-501/000-024	5



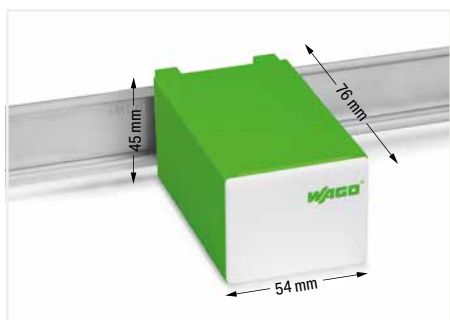
Mini-WSB marker card; with marking; not stretchable; horizontal marking; snap-on type		
Marking	Item No.	Pack. Unit
<input type="radio"/> 1, 2, 3, 4, 5; to 46, 47, 48, 49, 50; (each 1x)	264-900	5
<input type="radio"/> U, V, W, N, GND; (10x)	264-901	5
<input type="radio"/> L1, L2, L3, N, GND; (10x)	264-902	5
<input type="radio"/> 1, 1, 1, 1, 1; (10x)	264-903	5
<input type="radio"/> 2, 2, 2, 2, 2; (10x)	264-904	5
<input type="radio"/> 3, 3, 3, 3, 3; (10x)	264-905	5



Use		
Marker width	Can be snapped onto the following terminal block series	
	for continuous marking	that will be separated
5 mm	264, 270, 869, 880, 769, 870, 218, 233 ... 236, 243, 250, 252 ... 257, 735 ... 742, 745, 746, 804, 805, 806, 816, 831, 750, 753, 2002, 2003, 2022	745, 746, 2004, 2005, 2006, 2007, 2010, 2016

Mini-WSB Inline; plain; 1,700 markers (5 mm)/reel; stretchable 5 ... 5.2 mm		
Color	Item No.	Pack. Unit
<input type="radio"/> white	2009-145	1

Control Cabinet Outlet and Switch Cabinet Drawer 709 Series



Technical Data	
Ratings per	DIN VDE 0620-1
Voltage type	AC
Rated voltage	250 V
Rated surge voltage	2 kV
Rated current	16 A

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Actuation type	Type 2 (3.5 x 0.5) mm blade
Actuation direction	Operation parallel to conductor entry
Connectable conductor materials	Copper
Solid conductor	0.2 ... 2.5 mm / 24 ... 14 AWG
Stranded conductor	0.2 ... 2.5 mm / 24 ... 14 AWG
Fine-stranded conductor	0.2 ... 2.5 mm / 24 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Number of poles	3

Mechanical Data	
Mounting type	DIN-35 rail
Protection type	IP20
Potential marking	L GND N

Material Data	
Material group	I
Insulation material	Polyamide 66 (PA 66)
Flammability class per UL94	V0
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact material	Copper alloy
Contact plating	Sn

Environmental Requirements	
Continuous operating temperature from	-35 °C
Continuous operating temperature up to	85 °C

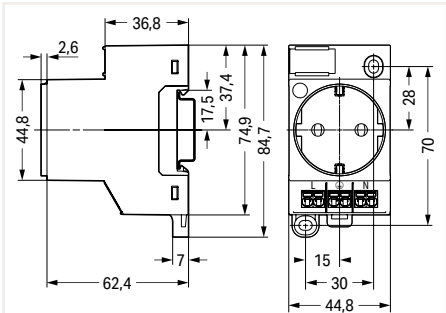
- 1 The outlets are available in three colors to identify different circuits:
- 709-581 gray (standard)
 - 709-582 yellow (permanently energized)
 - 709-583 red (UPS)

Approvals and corresponding ratings, visit www.wago.com

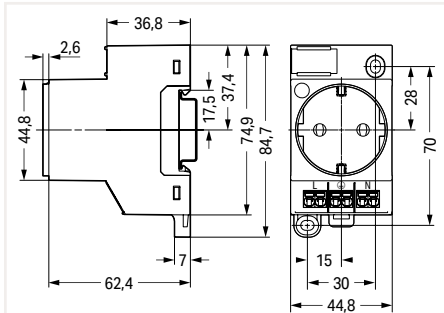
Control Cabinet Outlet and Switch Cabinet Drawer 709 Series



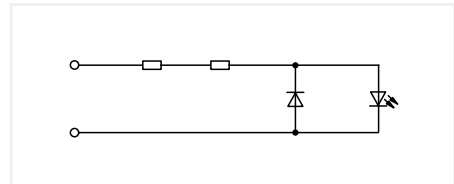
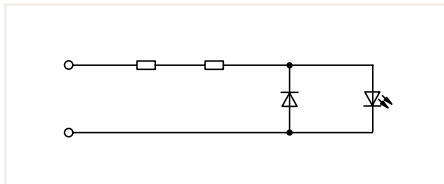
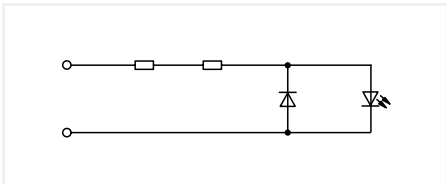
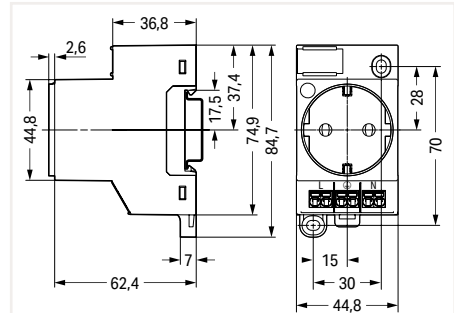
Dimensions in mm



Dimensions in mm



Dimensions in mm



Control cabinet outlet; for DIN-35 rail and screw mounting; for plug Type F, CEE 7/4 (SCHUKO®); used in Germany, the Netherlands, Austria; with status LED; with Push-in CAGE CLAMP® double connection

Color	Item No.	Pack. Unit
○ light gray	709-581 1	1

Control cabinet outlet; for DIN-35 rail and screw mounting; for plug Type F, CEE 7/4 (SCHUKO®); used in Germany, the Netherlands, Austria; with status LED; with Push-in CAGE CLAMP® double connection

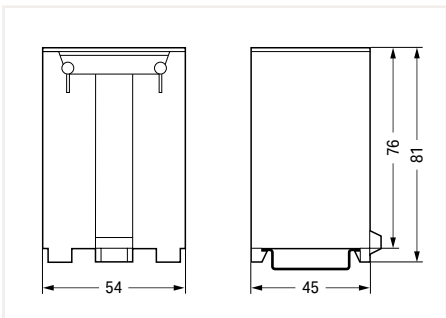
Color	Item No.	Pack. Unit
● yellow	709-582 1	1

Control cabinet outlet; for DIN-35 rail and screw mounting; for plug Type F, CEE 7/4 (SCHUKO®); used in Germany, the Netherlands, Austria; with status LED; with Push-in CAGE CLAMP® double connection

Color	Item No.	Pack. Unit
● red	709-583 1	1



Dimensions in mm



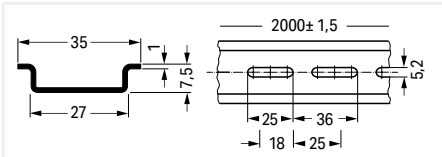
Switchgear cabinet drawer; DIN-35 rail-mount drawer

Item No.	Pack. Unit
709-591	1

DIN-Rail; Rail End Cap; Angled Support Bracket and Collective Jumper Carrier



Dimensions in mm



Steel DIN-rail; I_N 76 A (based on 1 m length); 35 x 7.5 mm; 1 mm thick; 2 m long; per EN 60715

	Item No.	Pack. Unit
unslotted	210-113	10 (1)

Hole width: 25 mm; Hole spacing: 36 mm

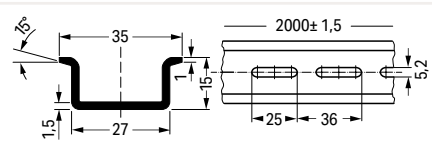
slotted	210-112	10 (1)
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Hole width: 18 mm; Hole spacing: 25 mm

slotted	210-115	1
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Dimensions in mm

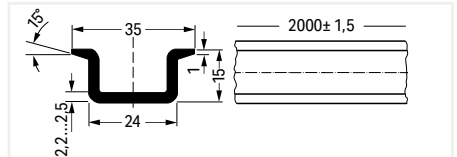


Steel DIN-rail; I_N 125 A (based on 1 m length); 35 x 15 mm; 1.5 mm thick; 2 m long; similar to EN 60715

	Item No.	Pack. Unit
unslotted	210-114	10 (1)
slotted	210-197	10 (1)



Dimensions in mm

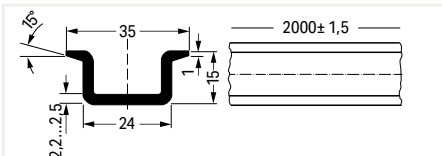


Steel DIN-rail; I_N 125 A (based on 1 m length); 35 x 15 mm; 2.3 mm thick; 2 m long; per EN 60715

	Item No.	Pack. Unit
unslotted	210-118	10 (1)



Dimensions in mm

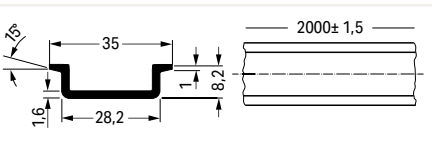


Copper DIN-rail; I_N 309 A (based on 1 m length); 35 x 15 mm; 2.3 mm thick; 2 m long; per EN 60715

	Item No.	Pack. Unit
unslotted	210-198	10 (1)



Dimensions in mm



Aluminum DIN-rail; I_N 76 A (based on 1 m length); 35 x 8.2 mm; 1.6 mm thick; 2 m long; similar to EN 60715

	Item No.	Pack. Unit
unslotted	210-196	20 (1)



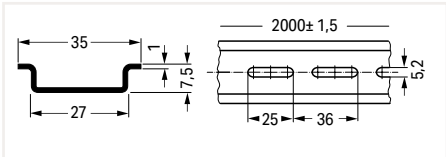
Rail end cap; for DIN-35 rail (7.5 mm high)

Color	Item No.	Pack. Unit
○ gray	209-109	50 (25)

10



Dimensions in mm

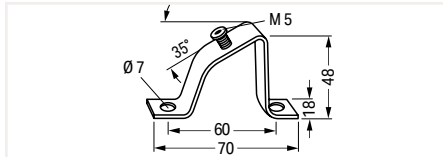


Steel DIN-rail; I_n 76 A (based on 1 m length); 35 x 7.5 mm; 1 mm thick; 2 m long; per EN 60715

	Item No.	Pack. Unit
unslotted	210-505	1
slotted	210-504	1



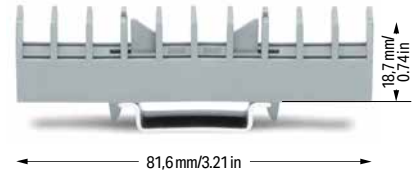
Dimensions in mm



Angled support bracket; without screw

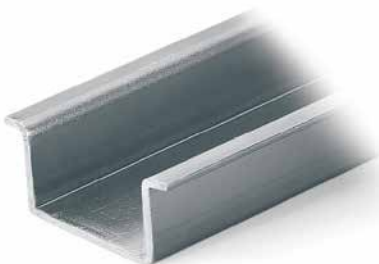
	Item No.	Pack. Unit
	210-148	10

Screw M5 x 8		
	210-149	100 (20)

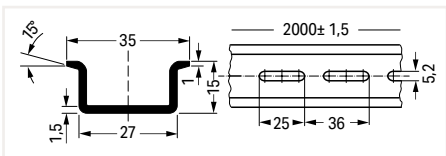


Collective jumper carrier; for DIN-35 rail; compatible with jumpers for transverse switching terminal block (282-811) and longitudinal switching disconnect terminal block (282-821)
The collective carrier can be snapped onto DIN-35 rails. It stores jumpers during maintenance.

Color	Item No.	Pack. Unit
○ gray	282-369	25



Dimensions in mm

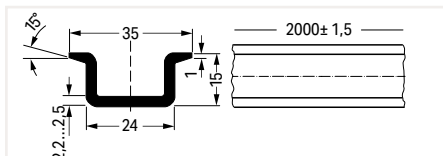


Steel DIN-rail; I_n 125 A (based on 1 m length); 35 x 15 mm; 1.5 mm thick; 2 m long; per EN 60715

	Item No.	Pack. Unit
unslotted	210-506	1
slotted	210-508	1



Dimensions in mm



Carrier rail; plastic
Not suited for use with ground terminal blocks!

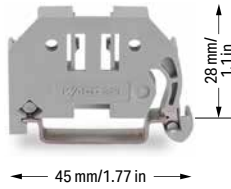
	Item No.	Pack. Unit
	210-509	10 (1)



Collective carrier for adjacent jumpers; for DIN-35 rail; for adjacent jumpers (279 to 284 Series); for banana plugs (215 Series)
The collective carrier can be snapped onto DIN-35 rails. It stores adjacent jumpers and banana plugs during maintenance.

Color	Item No.	Pack. Unit
○ gray	209-100	50 (25)

Screwless End Stop; for DIN-35 Rail 249 Series



Screwless end stop; for DIN-35 rail; 6 mm wide

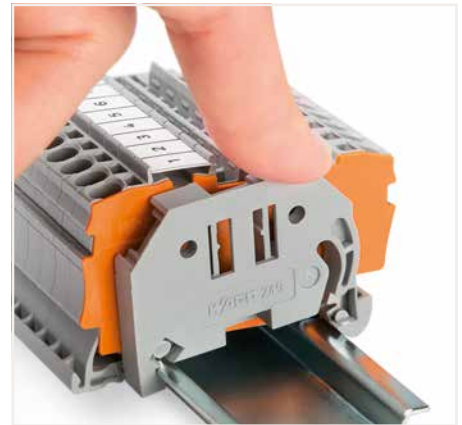
Color	Item No.	Pack. Unit
○ gray	249-116	100 (25)

Screwless end stop; for DIN-35 rail; 10 mm wide

○ gray	249-117	50 (25)
--------	---------	---------



Simply snap on – that's it!



Simply snap on – that's it!



Screwless end stop; for DIN-35 rail; 14 mm wide

Color	Item No.	Pack. Unit
○ gray	249-197	10



Simply snap on – that's it!



Removing an end stop from the DIN-rail.

Snap on – that's it! Assembling the WAGO Screwless End Stop is as simple and quick as snapping a rail-mount terminal block onto the rail.

Tool free!

A tool-free design allows rail-mount terminal blocks to be safely and economically secured against any movement on all DIN-35 rails per DIN EN 60715 (35 x 7.5 mm; 35 x 15 mm).

Screwless!

The "secret" to a perfect fit lies in the two small clamping plates which keep the end stop in position, even if the rails are mounted vertically.

Simply snap on – that's it!

In addition, costs are significantly reduced when using large numbers of end stops.

Additional benefit: Three marker slots for all WAGO Rail-Mount Terminal Block Marking Systems and one snap-in hole for WAGO's adjustable height group marker carriers offer individual marking options.

Mounting Foot



Mounting foot; for isolated DIN-35 rail mounting		
Color	Item No.	Pack. Unit
○ gray	209-106	25



Isolated mounting of a carrier rail in a distribution box for protection class II

Sealable, Transparent Covers for Rail-Mount Terminal Blocks

709 Series

Description and Installation



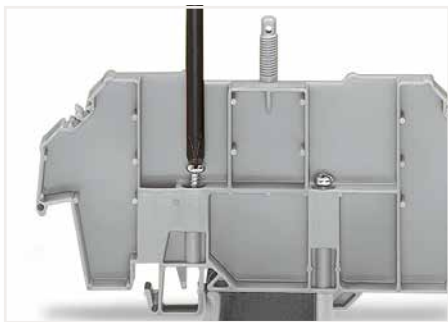
Snapping a cover carrier onto the DIN-rail.



Application example:
Cover (type 1) without safety warning



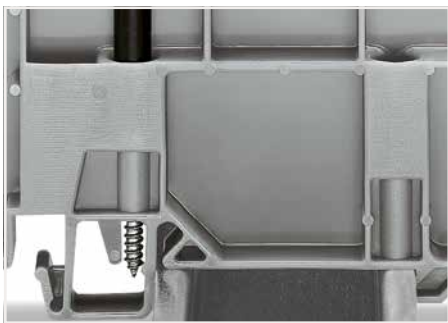
Application example:
Cover (type 1) with safety warning



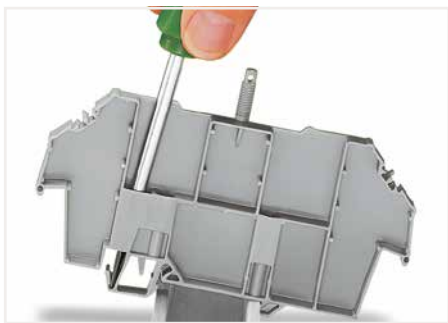
Tightening both securing screw (left) and mounting screw (right).



Application example:
Cover (type 2) with safety warning



Securing screw – prevents lifting off from the rail.
Mounting screw – prevents the cover carrier from being moved on the rail.



Removing a cover carrier from the DIN-rail.



Inserting a marking strip into the cover.



Cover with lead seals:
Using covers without lead seals,
the thread dome-head can be broken off.


10


Sealable, Transparent Cover; for Rail-Mount Terminal Blocks 709 Series




Cover; Type 1; for cover carrier (type 1); 1 m long		
Color	Item No.	Pack. Unit
transparent	709-153	10

Cover; Type 2; for cover carrier (type 2); 1 m long		
Color	Item No.	Pack. Unit
transparent	709-154	10

Accessories			
Marking card; with 6 marking strips; for group marking or safety instructions			
	plain	709-183	1

Spare mounting/securing screw; for cover			
		209-196	200 (25)

Spare knurled nut; for cover			
		210-549	100 (25)



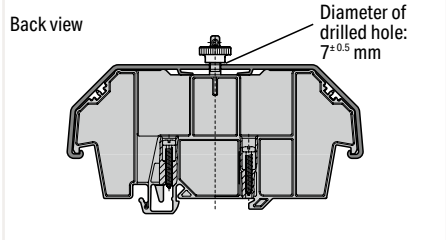
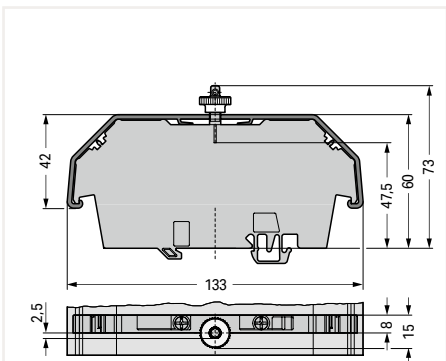
Cover carrier; Type 1; incl. mounting/securing screws and knurled nut; for rail-mount terminal blocks (279 to 282, 880 Series); for "Mini" rail-mount terminal blocks (264 Series); for sensor/actuator terminal blocks (270 Series)

Cover carrier; Type 2; incl. mounting/securing screws and knurled nut; for rail-mount terminal blocks (283 to 285 Series); for double- and triple-deck terminal blocks (279 to 281 Series); for TOPJOB® rail-mount terminal blocks (780 to 785 and 775 Series); for sensor/actuator terminal blocks (280 Series); for disconnect/test terminal blocks for transformer circuits (282 Series)

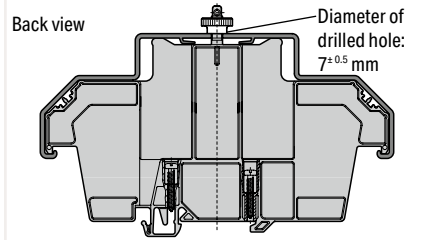
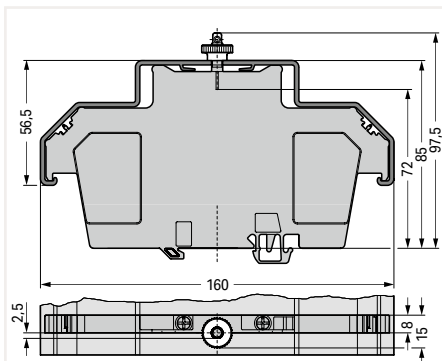
Color	Item No.	Pack. Unit
○ gray	709-167	10

Color	Item No.	Pack. Unit
○ gray	709-168	10

Dimensions in mm




Dimensions in mm





Sealable, Transparent Cover; for Rail-Mount Terminal Blocks 709 Series



Cover; Type 3; for cover carrier (type 3); 1 m long		
Color	Item No.	Pack. Unit
transparent	709-156	10

Accessories			
Marking card; with 6 marking strips; for group marking or safety instructions			
	plain	709-183	1

Marking strip; plain; 11 mm wide; 50 m reel			
	white	2009-110	1

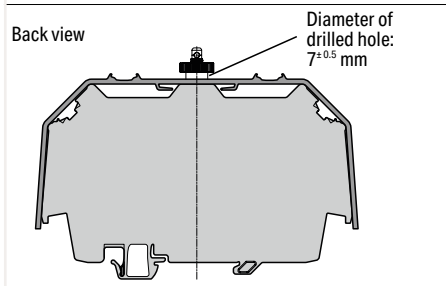
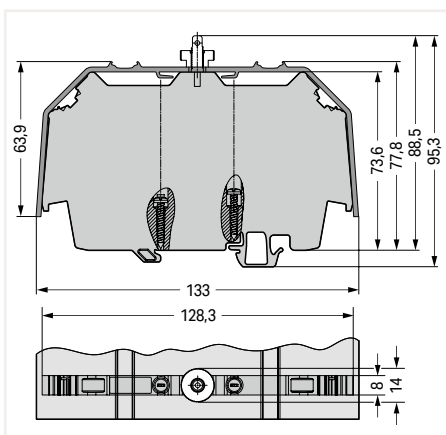
Spare mounting/securing screw; for cover			
		209-196	200 (25)

Spare knurled nut; for cover			
		210-549	100 (25)



Cover carrier; Type 3; for rail-mount terminal blocks (2000 to 2016 Series, 2102 to 2116 Series, 2200 to 2216 Series); for transformer terminal blocks (2007 Series)		
Color	Item No.	Pack. Unit
○ gray	709-169	10

Dimensions in mm

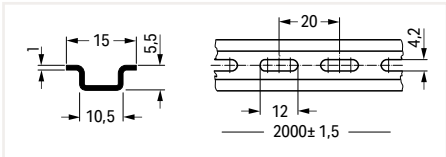


10

DIN-Rail and End Stop; for DIN-15 Rail



Dimensions in mm

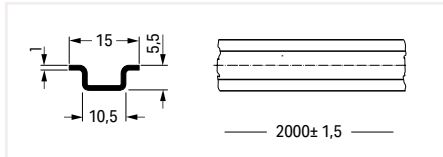


Steel DIN-rail; I_n 57 A (based on 1 m length); 15 x 5.5 mm; 1 mm thick; 2 m long; per EN 60715

	Item No.	Pack. Unit
slotted	210-111	10 (1)



Dimensions in mm



Aluminum DIN-rail; I_n 57 A (based on 1 m length); 15 x 5.5 mm; 1 mm thick; 2 m long; similar to EN 60715

	Item No.	Pack. Unit
unslotted	210-296	10 (1)

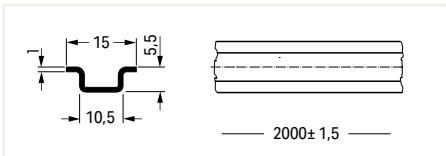


Screwless end stop; for DIN-15 rail; 6 mm wide; for WMB markers

Color	Item No.	Pack. Unit
○ gray	249-101	25



Dimensions in mm



Steel DIN-rail; I_n 57 A (based on 1 m length); 15 x 5.5 mm; 1 mm thick; 2 m long; per EN 60715

	Item No.	Pack. Unit
unslotted	210-295	1

Operating Tool



Operating tool with a partially insulated shaft; Type 1, (2.5 x 0.4) mm blade

Item No.	Pack. Unit
210-719	50 (1)



Operating tool; Blades: 3.5 mm and 2.5 mm; for installation terminal blocks (TOPJOB® S)

Item No.	Pack. Unit
2009-309	50 (1)



Operating tool with a partially insulated shaft; Type 1; (2.5 x 0.4) mm blade; short

Item No.	Pack. Unit
210-647	50 (1)

Operating tool with a partially insulated shaft; Type 2, (3.5 x 0.5) mm blade

210-720	50 (1)
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Operating tool; Blades: 3.5 mm and 5.5 mm; for installation terminal blocks (TOPJOB® S)

2009-310	50 (1)
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Operating tool with a partially insulated shaft; (2.5 x 0.4) mm blade; short; angled

210-648	50 (1)
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Operating tool with a partially insulated shaft; Type 3, (5.5 x 0.8) mm blade

210-721	25 (1)
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Operating tool with a partially insulated shaft; (3.5 x 0.5) mm blade; short

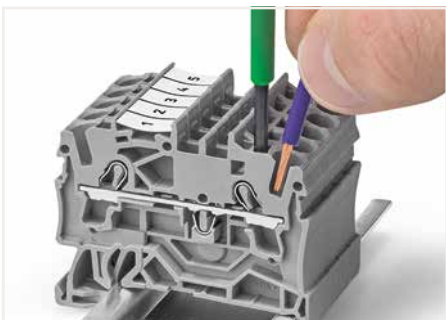
210-657	50 (1)
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Set of operating tools with a partially insulated shaft; Type 1, (2.5 x 0.4) mm blade; Type 2, (3.5 x 0.5) mm blade; Type 3, (5.5 x 0.8) mm blade

210-722	1
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Operating tool with a partially insulated shaft; (3.5 x 0.5) mm blade; short; angled

210-658	50 (1)
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The blade of this operating tool with a partially insulated shaft is ideal for operating front-entry terminal blocks.



Open the clamping unit using an operating tool.



This operating tool with blade dimensions per DIN 5264 is ideal for front-entry sensor/actuator terminal blocks (280 Series).

10



Set of operating tools in a box (210-722)

Operating Tool



Operating tool; insulated; for 279 Series

	Item No.	Pack. Unit
1-way	209-129	100 (1)
2-way	279-432	100 (1)
3-way	279-433	100 (1)
10-way	279-440	30 (1)



Operating pliers; for side-entry rail-mount terminal blocks (281, 282, 283 and 284 Series)

	Item No.	Pack. Unit
	210-141	1



T-wrench with a partially insulated shaft

	Item No.	Pack. Unit
	285-172	1

Operating tool; insulated; for 264 Series (1- and 2-way only), 280, 281 Series (up to 3-way only)

	Item No.	Pack. Unit
1-way	209-130	100 (1)
2-way	280-432	100 (1)
3-way	280-433	100 (1)
4-way	280-434	40 (1)
5-way	280-435	40 (1)
6-way	280-436	30 (1)
7-way	280-437	30 (1)
8-way	280-438	30 (1)
9-way	280-439	30 (1)
10-way	280-440	30 (1)

Operating pliers; for side-entry rail-mount terminal blocks (279 and 280 Series)

	Item No.	Pack. Unit
	210-143	1

T-wrench with a partially insulated shaft and anti-rotation protection

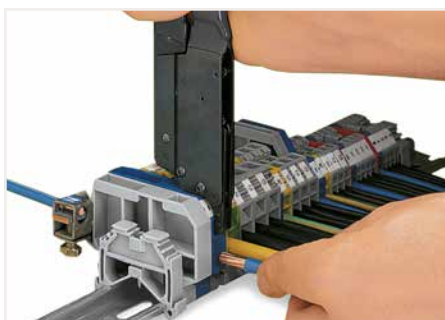
	Item No.	Pack. Unit
	285-173	1

Operating tool; insulated; for 281 Series

	Item No.	Pack. Unit
5-way	281-440	40 (1)



Commoning front-entry disconnect terminal blocks via comb-style jumper bar using a 10-pole operating tool.



When operating the handles beyond the locked position, the ratchet allows the tool to open and be removed from the terminal block.
The operating pliers are placed into the upper operating slot of the rail-mount terminal block and the clamp is hooked into the lateral operating slot. The contact is fully opened by pressing the handles together until they engage. This will allow both hands to be used for wiring the terminal blocks.



T-wrench with a partially insulated shaft and anti-rotation protection (285-173)

Cable Stripper



Never use this tool on or near live electrical circuits!



To replace the cable bracket, use the new bracket as an operating tool and pull it upwards.

Cable knife; for Ø 8 ... 28 mm / 0.31 ... 1.10 inch; with a unique, changeable cable bracket system; including cable bracket


Item No.	Pack. Unit
206-1403	1

Cable knife set; for Ø 4 ... 70 mm / 0.16 ... 2.75 inch; including all cable brackets in a Sortimo® Box


Item No.	Pack. Unit
206-1400	1

Item-Specific Accessories

Cable bracket; for Ø 4 ... 16 mm / 0.16 ... 0.63 inch

	206-1411	1
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Cable bracket; for Ø 8 ... 28 mm / 0.31 ... 1.10 inch

	206-1412	1
--	----------	---


Cable bracket; for Ø 27 ... 35 mm / 1.06 ... 1.38 inch

	206-1413	1
--	----------	---

Cable bracket; for Ø 35 ... 50 mm / 1.38 ... 1.97 inch


	206-1414	1
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Cable bracket; for Ø 50 ... 70 mm / 1.97 ... 2.75 inch


	206-1415	1
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Accessories

Spare inside blade

	206-1418	1
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Spare hook blade

	206-1419	1
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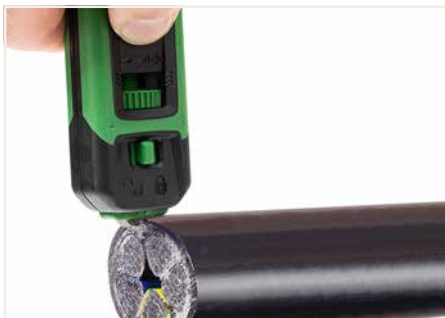


The cutting depth of the hook blade can be adjusted with the slider.



The cutting depth of the inner knife can be adjusted with the screw.

10



Strip large cross sections with the hook blade.



Release the fuse before using the hook blade.

Cable Stripper



In-socket cable stripper; for Ø 8 ... 13 mm / 5/16 ... 1/2 inch

Item No.	Pack. Unit
206-1441	1

Universal cable stripper; for Ø 8 ... 13 mm / 5/16 ... 1/2 inch

Item No.	Pack. Unit
206-1442	1

Data cable stripper; for Ø 4.5 ... 10 mm / 3/16 ... 3/8 inch

Item No.	Pack. Unit
206-1451	1



Product features:

- Extra long design and improved force transmission simplifies stripping in deep device connection sockets
- Special four-blade design for an even more precise round cut
- No cutting depth adjustment required
- TiN-coated blades, TÜV/GS tested
- Ø 8... 13 mm / 5/16 ... 1/2 inch
- Strips all standard round cables, including NYM 3 x 1.5 mm²/16 AWG ... 5 x 2.5 mm²/14 AWG



Sheath stripping: longitudinal cut

Product features:

- Secure grip achieved with soft padding for non-slip grips
- Technically improved functionality
- New locking mechanism prevents the unwanted opening of the tool
- Absolutely straightforward, quick and easy longitudinal cuts – with innovative internal cable duct
- Redesigned blade layout and intake to stop cable waste from jamming the tool
- Durable and ergonomically designed pocket clip
- Ø 8 ... 13 mm / 5/16 ... 1/2 inch



Product features:

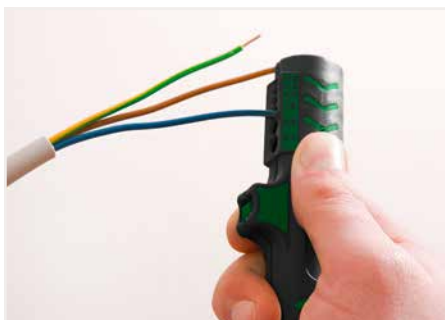
- Strip outer insulation and foil sheathing with one tool
- Ideal for stripping PVC-insulated data cables with thin insulation (e.g., Cat. 5, Cat. 6, Cat. 7, twisted pair cable)
- TiN-coated blades
- Ø 4.5 ... 10 mm / 3/16 ... 3/8 inch



Stripping a cable sheath.



Built-in handy knife



Stripping a conductor insulation.

Cable Stripper

Never use this tool on or near live electrical circuits!



Stripping pliers; for sensor cables; for Ø 3.2 ... 4.4 mm / 0.13 ... 0.17 inch

Item No.	Pack. Unit
206-1481	1

Item-Specific Accessories

Replacement blade set; for Ø 3.2 ... 4.4 mm / 0.13 ... 0.17 inch

206-1491	1
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Stripping pliers; for control cables; for Ø 4.4 ... 7 mm / 0.17 ... 0.27 inch

Item No.	Pack. Unit
206-1482	1

Item-Specific Accessories

Replacement blade set; for Ø 4.4 ... 7 mm / 0.17 ... 0.27 inch

206-1492	1
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The stripping pliers for sensor cables have a blade geometry specially designed for sensor cables with a smaller cross section and a working range from Ø 3.2 mm / 0.13 inch (for stranded cables and round cables with Ø 3.2 mm ... 4.4 mm / 0.13 ... 0.17 inch).

The stripping pliers for control cables are designed for stronger cables from Ø 4.4 mm / 0.17 inch (for stranded cables and round cables with Ø 4.4 mm ... 7 mm / 0.17 ... 0.27 inch).

These stripping pliers quickly and safely strip cables for connecting, e.g., sensor/actuator distribution boxes, bus couplers and pluggable connectors.

Suitable for:

- Halogen-free PUR sensor/actuator cables
- Highly flexible TPE-U cables
- Control cables
- PUR cables
- PUR/PVC cables
- PVC cables
- Multi-core cables
- Shielded and unshielded cables



Wire Stripper



Wire stripper "Quickstrip Vario"; 0.03 ... 16 mm² / 34 ... 6 AWG; with wire cutter

Item No.	Pack. Unit
206-1125	1

Accessories

Blade set; Standard; 0.03 ... 16 mm² / 34 ... 6 AWG

206-1126 1



Blade set; V-blade; 0.14 ... 4 mm² / 24 ... 12 AWG

206-1127 1



Blade set; Oval blade; 10 ... 16 mm² / 8 ... 6 AWG

206-1128 1



Spare stripping stop

206-1129 1



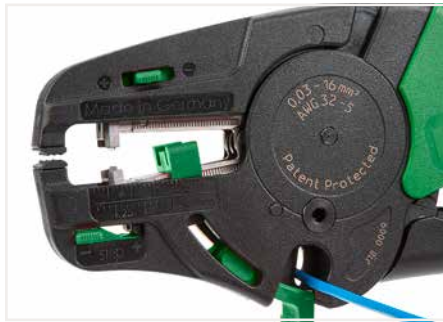
Spare cut protector

206-1131 1



Spare clamping jaws

206-1132 1



Cutting a conductor.



Partially stripping a conductor.

Wire Stripper:

- Automatically adjust to conductor size
- Stripping blades cause no damage to conductor strands
- Gripping pressure of jaws adjusts automatically to conductor insulation diameter
- Clamping jaws and stripping blades automatically open once the stripping process is completed – no splaying of the conductor strands
- Exact strip length may be set by sliding black setting stop
- Stripping blades can be replaced
- Self-sharpening, fully protected cutter (replaceable)
- Entire body made of glass-fiber-reinforced polyamide
- Cutting capacity of the wire cutter of fine-stranded conductors up to 16 mm² (6 AWG)

Crimping Tool



Crimping tool "Variocrimp 4"; for insulated and uninsulated ferrules; Crimping range: 0.25 ... 4 mm² (24 ... 12 AWG)

Item No.	Pack. Unit
206-1204	1

Crimping tool "Variocrimp 16"; for insulated and uninsulated ferrules; Crimping range: 6 mm² (10 AWG), 10 mm² (8 AWG) and 16 mm² (6 AWG)

Item No.	Pack. Unit
206-1216	1

Item-Specific Accessories

Spring clamp; large

	206-1205	1
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Spring clamp; small

	206-1206	1
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Item-Specific Accessories

Spring clamp; small

	206-1206	1
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Application notes:

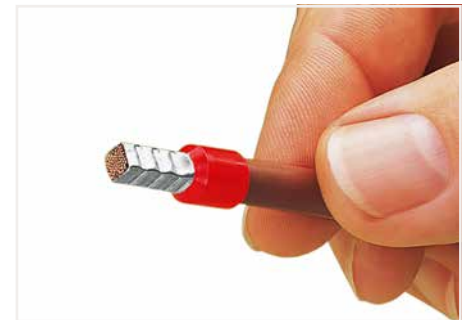
- The built-in crimping pressure control of "Variocrimp 4" automatically adjusts the crimping force to the conductor cross section. Select the wire gauge on "Variocrimp 16" before crimping.
- Only one crimping station is needed to handle the specified conductor range.
- Uniform, compact crimping on all four sides for high conductor retention.
- No need to center the ferrules into the terminal blocks.
- Crimping can be performed from either side (for left- or right-handed users).
- Built-in ratchet mechanism ensures gas-tight crimp connection.
- Crimping tools open automatically after crimping operation is complete.
- Ergonomically designed handles.



Insert the ferruled conductor into the crimping station.



Squeeze handles until ratchet mechanism is released.

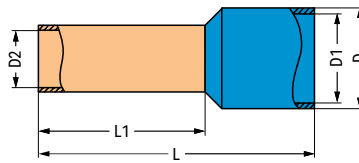


A perfect gas-tight crimp – both electrically and mechanically reliable



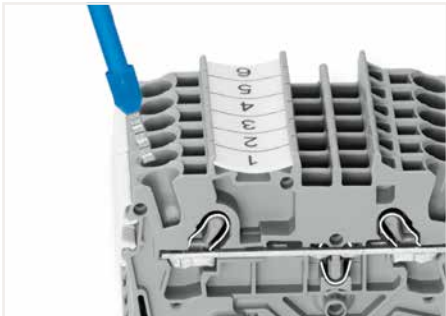
Only for "Variocrimp 16":
Adjust conductor cross section with crimping tool in open position.

Insulated ferrule; for Rail-Mount Terminal Block TOPJOB® S



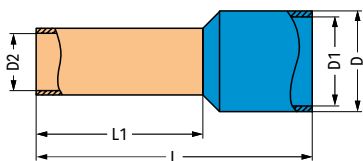
Ferrule; insulated; electro-tin-plated; electrolytic copper; gastight crimped; per DIN 46288 (Part 4/09.09)

Conductor Cross Section	Color	Strip Length	L	L 1	D	D 1	D 2	Item No.	Pack. Unit
0.5 mm ² / 20 AWG	○ white	12 mm / 0.47 inch	16	10	3,1	2,6	1	216-241	1000
0.75 mm ² / 18 AWG	○ gray	12 mm / 0.47 inch	16	10	3,3	2,8	1,2	216-242	1000
0.75 mm ² / 18 AWG	○ gray	14 mm / 0.55 inch	18	12	3,3	2,8	1,2	216-262	1000
1 mm ² / 18 AWG	● red	12 mm / 0.47 inch	16	10	3,5	3	1,4	216-243	1000
1 mm ² / 18 AWG	● red	14 mm / 0.55 inch	18	12	3,5	3	1,4	216-263	1000
1.5 mm ² / 16 AWG	● black	12 mm / 0.47 inch	16	10	4	3,5	1,7	216-244	1000
1.5 mm ² / 16 AWG	● black	14 mm / 0.55 inch	18	12	4	3,5	1,7	216-264	1000
1.5 mm ² / 16 AWG	● black	20 mm / 0.79 inch	24	18	4	3,5	1,7	216-284	500
2.5 mm ² / 14 AWG	● blue	12 mm / 0.47 inch	17	10	4,7	4,2	2,2	216-246	1000
2.5 mm ² / 14 AWG	● blue	14 mm / 0.55 inch	19	12	4,7	4,2	2,2	216-266	1000
2.5 mm ² / 14 AWG	● blue	20 mm / 0.79 inch	25	18	4,7	4,2	2,2	216-286	500
4 mm ² / 12 AWG	○ gray	14 mm / 0.55 inch	20	12	5,4	4,8	2,8	216-267	500
4 mm ² / 12 AWG	○ gray	20 mm / 0.79 inch	26	18	5,4	4,8	2,8	216-287	100
6 mm ² / 10 AWG	● yellow	14 mm / 0.55 inch	20	12	6,9	6,3	3,5	216-208	100
6 mm ² / 10 AWG	● yellow	20 mm / 0.79 inch	26	18	6,9	6,3	3,5	216-288	100
10 mm ² / 8 AWG	● red	20 mm / 0.79 inch	28	18	8,4	7,6	4,5	216-289	100
16 mm ² / 6 AWG	● blue	23 mm / 0.91 inch	28	18	9,6	8,8	5,8	216-210	100



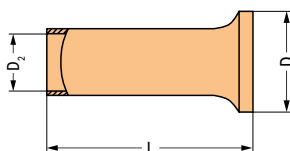
Fine-stranded conductors with ferrules from at least two sizes below the rated cross section up to the rated cross section can also be simply pushed in – without tools.

Insulated and Uninsulated Ferrules; for Chassis-Mount Terminal Strip



Ferrule; insulated; electro-tin-plated; electrolytic copper; gastight crimped; per DIN 46288 (Part 4/09.09)

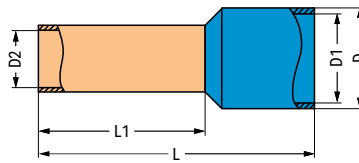
Conductor Cross Section	Color	Strip Length	L	L 1	D	D 1	D 2	Item No.	Pack. Unit
0.5 mm ² / 20 AWG	○ white	12 mm / 0.47 inch	16	10	3,1	2,6	1	216-241	1000
0.75 mm ² / 18 AWG	○ gray	12 mm / 0.47 inch	16	10	3,3	2,8	1,2	216-242	1000
1 mm ² / 18 AWG	● red	12 mm / 0.47 inch	16	10	3,5	3	1,4	216-243	1000
1.5 mm ² / 16 AWG	● black	12 mm / 0.47 inch	16	10	4	3,5	1,7	216-244	1000



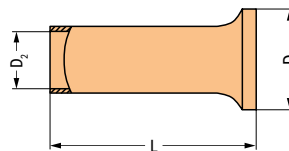
Ferrule; uninsulated; electro-tin-plated; electrolytic copper; gastight crimped; per DIN 46288 (Part 4/09.09)

Conductor Cross Section	Strip Length	L	D	D 2	Item No.	Pack. Unit
0.5 mm ² / 20 AWG	10 mm / 0.39 inch	10	2,1	1	216-141	5000 (1000)
0.75 mm ² / 18 AWG	10 mm / 0.39 inch	10	2,3	1,2	216-142	5000 (1000)
1 mm ² / 18 AWG	10 mm / 0.39 inch	10	2,5	1,4	216-143	5000 (1000)
1.5 mm ² / 16 AWG	10 mm / 0.39 inch	10	2,8	1,7	216-144	5000 (1000)

Insulated and Uninsulated Ferrules



Ferrule; insulated; electro-tin-plated; electrolytic copper; gastight crimped; per DIN 46288 (Part 4/09.09)									
Conductor Cross Section	Color	Strip Length	L	L 1	D	D 1	D 2	Item No.	Pack. Unit
0.25 mm ² / 24 AWG	● yellow	7 mm / 0.28 inch	10	6	2,3	1,8	0,85	216-321	1000
0.25 mm ² / 24 AWG	● yellow	9 mm / 0.35 inch	12	8	2,3	1,8	0,85	216-301	1000
0.34 mm ² / 22 AWG	● green	7 mm / 0.28 inch	10	6	2,5	2	0,85	216-322	1000
0.34 mm ² / 22 AWG	● green	9 mm / 0.35 inch	12	8	2,5	2	0,85	216-302	1000
0.5 mm ² / 20 AWG	○ white	7 mm / 0.28 inch	12	6	3,1	2,6	1	216-221	1000
0.5 mm ² / 20 AWG	○ white	9 mm / 0.35 inch	14	8	3,1	2,6	1	216-201	1000
0.75 mm ² / 18 AWG	○ gray	8 mm / 0.31 inch	12	6	3,3	2,8	1,2	216-222	1000
0.75 mm ² / 18 AWG	○ gray	10 mm / 0.39 inch	14	8	3,3	2,8	1,2	216-202	1000
1 mm ² / 18 AWG	● red	8 mm / 0.31 inch	12	6	3,5	3	1,4	216-223	1000
1 mm ² / 18 AWG	● red	10 mm / 0.39 inch	14	8	3,5	3	1,4	216-203	1000
1.5 mm ² / 16 AWG	● black	8 mm / 0.31 inch	12	6	4	3,5	1,7	216-224	1000
1.5 mm ² / 16 AWG	● black	10 mm / 0.39 inch	14	8	4	3,5	1,7	216-204	1000
2.08 mm ² / 14 AWG	● yellow	10 mm / 0.39 inch	15	8	4,8	4,2	2,05	216-205	1000
2.5 mm ² / 14 AWG	● blue	10 mm / 0.39 inch	15	8	4,7	4,2	2,2	216-206	1000
4 mm ² / 12 AWG	○ gray	12 mm / 0.47 inch	18	10	5,4	4,8	2,8	216-207	500
6 mm ² / 10 AWG	● yellow	14 mm / 0.55 inch	20	12	6,9	6,3	3,5	216-208	100
10 mm ² / 8 AWG	● red	16 mm / 0.63 inch	22	12	8,4	7,6	4,6	216-209	100
16 mm ² / 6 AWG	● blue	23 mm / 0.91 inch	28	18	9,6	8,8	5,8	216-210	100



Ferrule; un-insulated; electro-tin-plated; electrolytic copper; gastight crimped; per DIN 46288 (Part 4/09.09)						
Conductor Cross Section	Strip Length	L	D	D 2	Item No.	Pack. Unit
0.25 mm ² / 24 AWG	5 mm / 0.2 inch	5	1,7	0,75	216-151	1000
0.25 mm ² / 24 AWG	7 mm / 0.28 inch	7	1,7	0,75	216-131	1000
0.34 mm ² / 22 AWG	5 mm / 0.2 inch	5	1,8	0,85	216-152	1000
0.34 mm ² / 22 AWG	7 mm / 0.28 inch	7	1,8	0,85	216-132	1000
0.5 mm ² / 20 AWG	6 mm / 0.24 inch	6	2,1	1	216-121	1000
0.5 mm ² / 20 AWG	8 mm / 0.31 inch	8	2,1	1	216-101	1000
0.75 mm ² / 18 AWG	6 mm / 0.24 inch	6	2,3	1,2	216-122	1000
0.75 mm ² / 18 AWG	8 mm / 0.31 inch	8	2,3	1,2	216-102	1000
1 mm ² / 18 AWG	6 mm / 0.24 inch	6	2,5	1,4	216-123	1000
1 mm ² / 18 AWG	8 mm / 0.31 inch	8	2,5	1,4	216-103	1000
1.5 mm ² / 16 AWG	6 mm / 0.24 inch	6	2,8	1,7	216-124	1000
1.5 mm ² / 16 AWG	8 mm / 0.31 inch	8	2,8	1,7	216-104	1000
2.5 mm ² / 14 AWG	10 mm / 0.39 inch	10	3,4	2,2	216-106	1000
4 mm ² / 12 AWG	10 mm / 0.39 inch	10	4	2,8	216-107	1000
6 mm ² / 10 AWG	12 mm / 0.47 inch	12	4,7	3,5	216-108	500
10 mm ² / 8 AWG	12 mm / 0.47 inch	12	5,8	4,5	216-109	500
16 mm ² / 6 AWG	15 mm / 0.59 inch	15	7,5	5,8	216-110	500

Crimping Tool



Crimping tool 25; for insulated and uninsulated ferrules; crimping range: 10 mm² (8 AWG), 16 mm² (6 AWG) and 25 mm² (4 AWG)

Item No.	Pack. Unit
206-1225	1

Crimping tool 50; for insulated and uninsulated ferrules; crimping range: 35 mm² (2 AWG) and 50 mm² (1/0 AWG)

Item No.	Pack. Unit
206-1250	1



Insert the ferruled conductor into the crimping station.



Squeeze handles until ratchet mechanism is released.

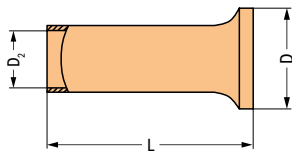
Application notes:

- Improved crimping for higher conductor retention
- Crimping can be performed from either side (for left- or right-handed users).
- Built-in ratchet mechanism ensures gas-tight crimp connection.
- Crimping tools open automatically after crimping operation is complete.
- Ergonomically designed handles.

What is a "gas-tight" connection?

In a gas-tight connection, the conductor and the ferrule are compressed, eliminating all spaces. Under normal atmospheric conditions, neither a liquid nor gaseous medium can penetrate the crimped connection. Oxidation between crimped single conductors is prevented, virtually eliminating the possibility of any increase in the crimped connection's resistance. In some exceptional cases, minute, isolated spaces may be present. However, these instances can be considered as closed off due to the twisted conductor. Inadequate crimping can allow the conductor to be pulled out of the connection. Hollow spaces also remain, permitting oxidation formation and an increase in contact resistance. Elevated resistance is detrimental for both signal transmission (signal flow is damped) and power transmission, resulting in power loss and contact heating (risk of fire). Crimping tools with built-in ratchets are recommended (e.g., WAGO Crimping Tools). These tools open automatically after the crimping operation is complete. Space-saving crimping from all four sides is ideal for spring clamp termination. Ferruled conductor cross sections specified for WAGO products are based on this crimping method.

Uninsulated Ferrule



Ferrule; uninsulated; electro-tin-plated; electrolytic copper; gastight crimped; per DIN 46288 (Part 4/09.09)						
Conductor Cross Section	Strip Length	L	D	D 2	Item No.	Pack. Unit
25 mm ² / 4 AWG	25 mm / 0.98 inch	25	9,5	7,3	216-413	50
35 mm ² / 2 AWG	25 mm / 0.98 inch	25	11	8,3	216-414	50
35 mm ² / 2 AWG	30 mm / 1.18 inch	30	11	8,3	216-424	50
50 mm ² / 1/0 AWG	30 mm / 1.18 inch	30	13	10,3	216-425	50
50 mm ² / 1/0 AWG	35 mm / 1.38 inch	35	13	10,3	216-435	50

Test and Measurement Devices

206 Series



Testboy; with integrated flashlight, non-contact voltage tester

	Item No.	Pack. Unit
	206-804	6 (1)



A device that will reliably detect AC voltage in cables, sockets, fuses, switches, outlets and other installations. Testboy can detect the following:

- Live conductors
- Cable breaks
- Blown fuses (in cartridges or holders)
- Defective switches
- Defective lamps in strings of lights

Test and Measurement Devices

206 Series



Profi-LCD+; 2-pole voltage tester with LCD display; removable 4 mm Ø test probes

Item No.	Pack. Unit
206-707	1



Profi-LED+; 2-pole voltage tester with LED display; removable 4 mm Ø test probes

Item No.	Pack. Unit
206-706	1



Spare test probes; 4 mm Ø (2 pieces)

Item No.	Pack. Unit
206-808	1



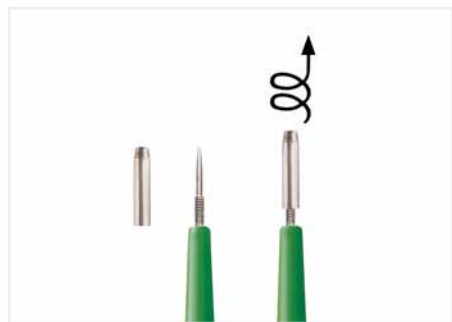
Additional Profi-LCD+ features:

- Automatic measurement range selection
- Single-pole phase testing AC > 100 V
- Two-pole sequence testing (R and L)
- Continuity testing
- RDC/RCD testing (30 mA) via buttons
- One-hand operation for SCHUKO® and CEE sockets
- LED torch lamp function
- Automatic backlight
- Auto power-off function
- CAT IV 1000 V
- TÜV/GS tested and approved
- IEC/EN 61243-3 (DIN VDE 0682-401)



Additional Profi-LED+ features:

- Automatic measurement range selection
- Single-pole phase testing AC > 100 V
- Two-pole sequence testing (R and L)
- Continuity testing
- RDC/RCD testing (30 mA) via buttons
- One-hand operation for SCHUKO® and CEE sockets
- LED torch lamp function
- CAT IV 1000 V
- TÜV/GS tested and approved
- IEC/EN 61243-3 (DIN VDE 0682-401)



Profi-LED+:

- Improved socket contact via 4 mm Ø test probes
- Removable test probes for small test ports (suitable for all WAGO Terminal Blocks)



Banana Plug (Only for Safety Extra-Low Voltage) 215 Series

Technical Data

0.08 ... 2.5 mm² 28 ... 14 AWG

max. 42 V

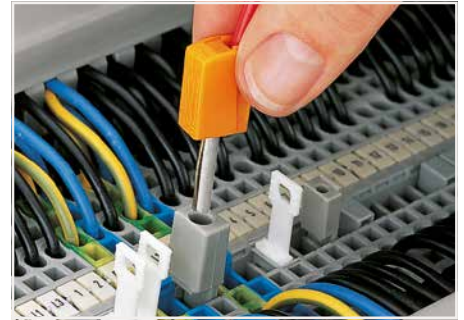
Test current: 20 A

Measuring range category: CAT I

9 ... 11 mm / 0.35 ... 0.43 inch



Conductor termination: Press button fully, insert stripped conductor into square entry and release.



Testing via banana plug. Picture shows a test plug adapter (209-170).

Banana plug; for 4 mm socket diameter; color mixed; 10 x orange, white, black, blue, yellow

	Item No.	Pack. Unit
	215-111	50

Banana plug; single

Banana plug; for 4 mm socket diameter



orange 215-211 50

Banana plug; for 4 mm socket diameter



red 215-212 50

Banana plug; for 4 mm socket diameter



black 215-311 50

Banana plug; for 4 mm socket diameter



green 215-411 50

Banana plug; for 4 mm socket diameter



yellow 215-511 50

Banana plug; for 4 mm socket diameter



white 215-611 50

Banana plug; for 4 mm socket diameter



blue 215-711 50

Banana plug; for 4 mm socket diameter

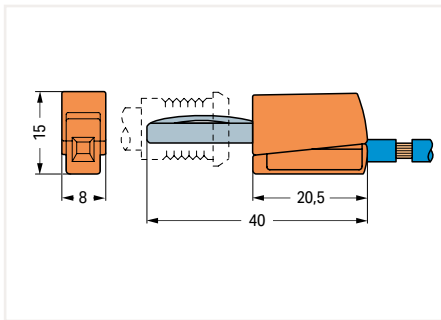


gray 215-811 50

Banana plug; for 4 mm socket diameter



green-yellow 215-911 50



Dimensions in mm

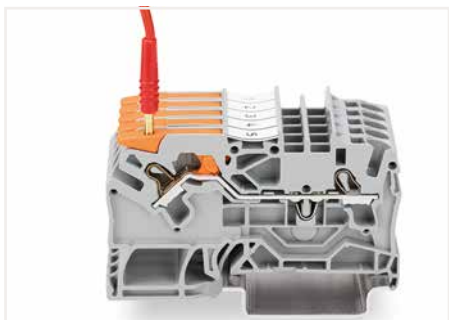
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Test Plug 210 Series



Test plug; with 500 mm cable; 2 mm Ø; max. 42 V

Color	Item No.	Pack. Unit
● red	210-136	50 (1)

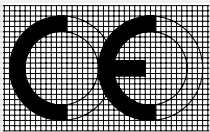


Testing with a 2 mm Ø test plug (max. 42 V).



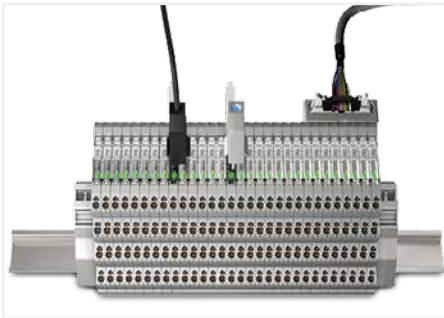
Technical Section

Technical Section

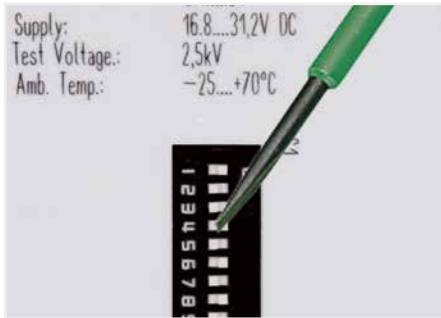
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Signal Conditioners

857 Series



Configuration Options



Configuration via DIP switch



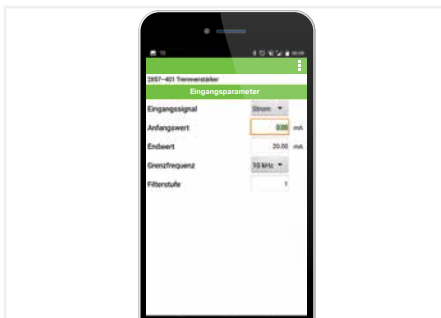
Industry's most compact – "True" 6.0 mm (0.23 inch) width maximizes panel space.

Housed in a 6 mm-wide package, the Signal Conditioners feature eight Push-in CAGE CLAMP® connections and a common profile. These features play a key role in forming the basis for a successful overall solution. Additional benefits include: "safe isolation," extended operating temperature range and calibrated, configurable signals. Combined with excellent technical specifications, these features lead to a line of advanced signal conditioning solutions that maximize panel space while reducing signal wiring and downtime.

Directly Connect:
Simple, push-in termination of solid and ferruled conductors – no operating tool needed.

PUSH-IN CAGE CLAMP®

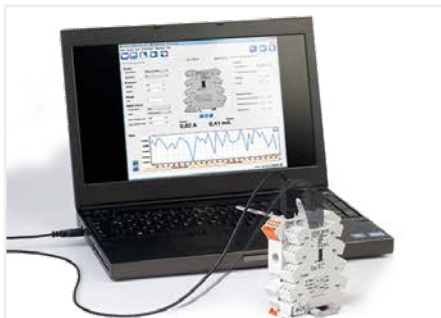
Highest Safety:
All devices provide "safe isolation" with 2.5 kV test voltage according to DIN EN 61010-1.



Configuration via JUMPFLEX®-ToGo Smartphone App



For extreme applications – Extended temperature range of -25 °C to +70 °C to support more applications.



Configuration via PC software



Commoning, not discrete wiring – Same outline allows use of a single in-line, push-in jumper.

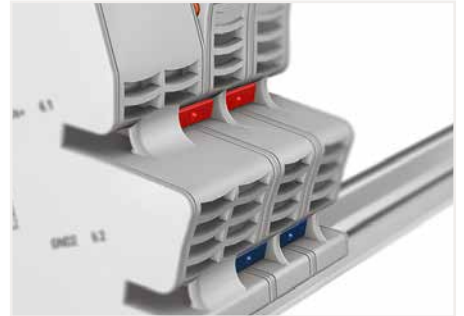
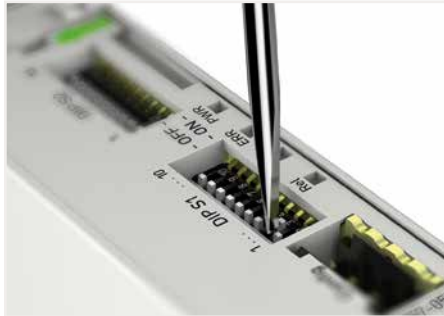
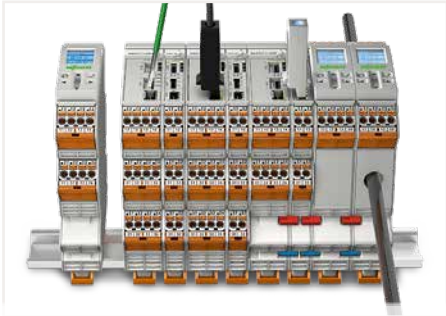


Configuration via push/slide switch

Signal Conditioners

2857 Series

Configuration Options



Configuration via DIP switch

Commoning, not discrete wiring – Same outline allows use of a single in-line, push-in jumper.

The success of the 857 Series Signal Conditioners shaped the design of the new 2857 Series. Just like the 857 Series, usability and absolute reliability are at the core of the 2857 Series. However, the 2857 Series takes flexibility to new levels by providing several convenient configuration options. In addition to DIP switches, PC configuration software and a smartphone configuration app, there is also a touch panel display. Every aspect has been engineered for maximum flexibility – exactly what you'd expect from WAGO.

Directly Connect:

Simple, push-in termination of solid and ferruled conductors –no operating tool needed.

PUSH-IN CAGE CLAMP®

Highest Safety:

All devices provide "safe isolation" with 4 kV test voltage according to DIN EN 61010-1.



Configuration via JUMPFLEX®-ToGo Smartphone App



For extreme applications – Extended temperature range of -40 °C to +70 °C to support more applications.



Configuration via PC software



Lock-out seal option



Configuration via touch panel – an innovative display



Pluggable connection technology

Isolation Amplifiers with a Power Supply

Pre-Configured Isolation Amplifiers

Pre-configured isolation amplifiers convert, amplify, filter and electrically isolate analog standard signals (e.g., 0 ... 10 V into 0 ... 20 mA).

Configurable Isolation Amplifiers

For signal conditioners, and particularly two-wire signal conditioners, the measured signal is often in the 4 ... 20 mA range as a current value. For the analog input card of a PLC, however, input voltages in the ranges of 0 ... 10 V or 0 ... 5 V are required.

Configurable isolation amplifiers support various standard signals at the input and output; the devices also convert, amplify, filter and electrically isolate analog standard signals. DIP switches accessible from the side can be used to configure the input and output signals. Measurement range configuration via DIP switch is calibrated.

Universal Isolation Amplifiers

In addition to the configurable isolation amplifiers, the universal isolation amplifiers can also be configured via PC configuration software or smartphone app. The configuration software also offers additional options, such as special input and output signal combinations with intermediate values or inversion of the analog output. An error message can be signaled via digital switching output.

Bipolar Isolation Amplifiers

Bipolar measurement signals often require processing, e.g., when motor currents are measured in both directions of rotation. Bipolar signals are also processed for recording distances or for better resolution of measurement signals.

Repeater Power Supplies

Repeater power supplies energize transmitters.

Two-wire transmitters regulate their own current consumption proportional to the measured value; the 4 ... 20 mA connection provides auxiliary power for the transmitter and the magnitude of the current is the same as the output measured value.

Three-wire transmitters usually have an active current output for the measured value and additional connections for the supply voltage (auxiliary power).

Signal Splitters

Signal splitters divide a standard signal into two signals. The measured signal can be supplied to different downstream devices without interference.

Example: A signal conditioner supplies 4 ... 20 mA input current. 20 mA.

Output 1 is configured to 4 ... 20 mA and transmits the measured value to a controller.

Output 2 is configured to 0 ... 20 mA and regulates a controller.

Isolation Amplifiers without a Power Supply

Passive Isolators

Passive isolators draw their power from the input signal (4 ... 20 mA) and require no additional wiring or auxiliary power.

Loop-Powered Isolation Amplifiers

Loop-powered isolation amplifiers draw their power from the output signal (4 ... 20 mA) and require no additional wiring or auxiliary power.

Relay Modules



Relay Modules

Conveniently Interface Electronics and Peripheral Devices

In modern automation systems, electromechanical relays safely connect process peripherals with electronic control, alarm and monitoring systems. For example, relays perform the following tasks:

Electrical isolation with high isolation levels between input and output circuits

Adjust different signal levels

Signal amplification and/or signal multiplication if varying potentials coexist

The comprehensive design of modern relays provides applications with the following benefits:

Immunity to electromagnetic interference and transient voltages

High, short-term overload capacity on both input and output sides

Minimal switching loss

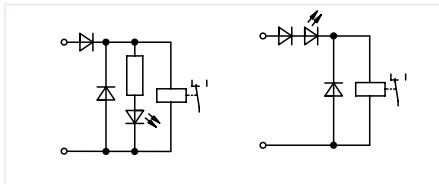
A single module that switches both direct and alternating currents

WAGO offers a complete range of relay modules that perform these tasks for a wide range of applications. Depending on the task and application requirements, there is a choice of relay modules with differently rated voltages, contacts, contact materials, housings and designs. In addition to standard switching relays, other relay models are available including bistable, timer, latching and safety relays with force-guided contacts.

Definitions of Several Important Technical Terms

Coil-Side

The relays can be used within the stated temperature range with nominal voltage plus tolerance at 100% continuous rating. According to the type and application, the relays are triggered with a DC or AC signal. The DC versions (residual ripple $\leq 6\%$) are, unless otherwise stated, equipped with LED function indicators, a recovery diode and a reverse voltage protection diode. The functional details are shown in the wiring diagram.



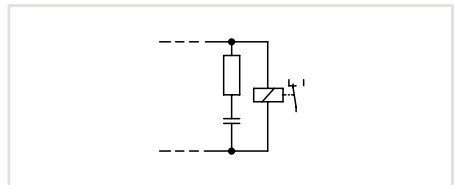
Possible input circuits of relay modules

AC versions of select relays equipped with series connected rectifiers (refer to the wiring diagrams) can be triggered with AC and DC at the stated nominal voltage.

The free-wheel function is in this case actuated by the rectifier. The only input circuit on purely AC relays is the status display.

To guarantee safe operation, residual voltages (due to the cable capacitance of long connection lines or leakage currents of semi-conductor switches and their protective circuits) must be lower than the release voltage of the relays. For DC relays, the release voltage is specified with $\leq 5\%$ of the nominal voltage; for AC relays, it is 15% of the nominal voltage (per EN 61810).

The relay may not reset if a high residual voltage exists. Depending on the reason for the residual voltage, changing the cable routing or a parallel connection of an RC element of $R = 100 \dots 220 \Omega$ and $C = 220 \dots 470 \text{ nF}$ could remedy this situation.



Optionally, modules specially developed for this application are available, e.g., sockets with a miniature switching relay and integrated base load module (857-358/006-000).

Relay Modules

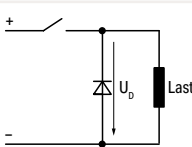
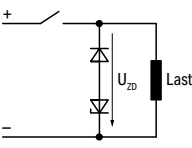
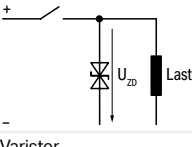
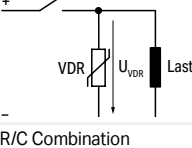
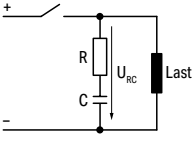
Contact Materials

For contact reliability, the contact resistance over the entire operating life of the relay should remain relatively low and constant. A variety of contact materials can be selected depending on the load type, switching current, switching voltage and the desired number of switching cycles. The accompanying table shows the materials, their properties and applications when used with WAGO relay modules.

Contact Material	Properties and Applications	Application Range
AgNi 0,15 + Au	Excellent corrosion resistance, low and constant contact resistances at extremely low switching power, for dry circuits	$\mu\text{V} \dots 30 \text{ V}$ $\mu\text{A} \dots 0,2 \text{ A}$
AgNi 0,15	Good mechanical stability, low welding tendency and low contact resistance, universal use at moderate loads	$\geq 12 \text{ V}$ $5 \text{ mA} \dots 10 \text{ A}$
AgSnO ₂	Low welding tendency, extremely high burn-off resistance at high switching power, suitable for circuits with high switch on/off loads, DC circuits	$\geq 5 \text{ V} / 100 \text{ mA}$ $\geq 10 \text{ V} / 10 \text{ mA}$ $\geq 24 \text{ V} / 1 \text{ mA}$

Contact Protective Circuit

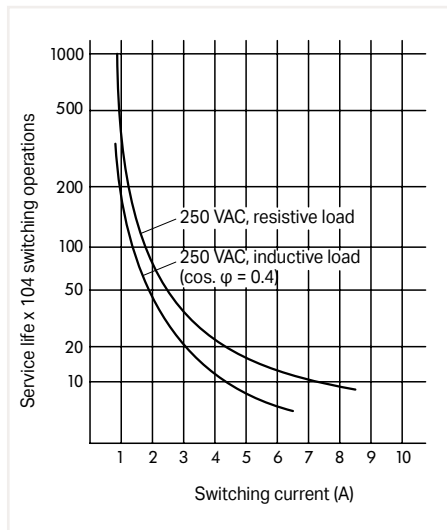
When switching off inductive loads, such as contactors and solenoid valves, transients occur with peak voltages up to several thousand volts. These transients often exceed the permissible EMC standard limits and must therefore be limited by external circuits. They also cause an electric arc at the switching contact, which can destroy the contact or can significantly diminish the relay's service life and reliability. The following protective circuits, which are outlined in the table, are connected directly to the source in parallel to the load and have proven to be successful.

Load Circuit	Additional Fall Delay	Defined Induction Voltage Limitation	Bipolar-Effective Attenuation	
Diode 	Large	Yes (U_D)	No	Advantages: <ul style="list-style-type: none"> • Easy implementation • Cost-effective, reliable • Uncritical dimensioning • Small induction voltages Disadvantages: <ul style="list-style-type: none"> • Attenuation only via load resistor
Diode/Zener Diode Series Circuit 	Medium to small	Yes (U_{ZD})	No	Advantages: <ul style="list-style-type: none"> • Uncritical dimensioning Disadvantages: <ul style="list-style-type: none"> • Attenuation only above U_{ZD}
Suppressor Diode 	Medium to small	Yes (U_{ZD})	Yes	Advantages: <ul style="list-style-type: none"> • High energy absorption • Uncritical dimensioning • Suitable for AC voltage Disadvantages: <ul style="list-style-type: none"> • Attenuation only above U_{VDR}
Varistor 	Medium to small	Yes (U_{VDR})	Yes	Advantages: <ul style="list-style-type: none"> • High energy absorption • Uncritical dimensioning • Suitable for AC voltage Disadvantages: <ul style="list-style-type: none"> • Attenuation only above U_{VDR}
R/C Combination 	Medium to small	No	Yes	Advantages: <ul style="list-style-type: none"> • RF attenuation via power storage • Suitable for AC voltage • Level-independent attenuation Disadvantages: <ul style="list-style-type: none"> • Accurate dimensioning required • High inrush current

Relay Modules

Service Life

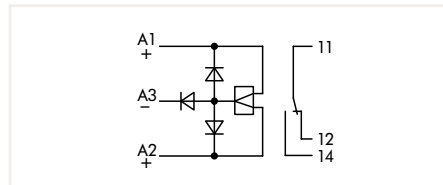
A distinction must be made between the mechanical life, which indicates the number of switching cycles without contact load, and the electrical service life at maximum load, which indicates the number of switching cycles with maximum switching power and resistive load. Reduced power increases the service life compared to the value of the maximum load. The following figure shows the typical curve between switching current and service life of a relay.



More details upon request

Description of Select Relays

Bistable Switching Relays



Bistable switching relays have three coil contacts. According to the wiring scheme, the relay is switched into "working condition" (contacts 11 ... 14 closed) by the common connection A3 and the connection A2 and into "rest position" (contacts 11 ... 14 opened) by the connection A1. After removing the control signal, the relay returns to its respective position and can only be switched over by a control signal circuit. The bistable switching relays are only available for direct voltage with positive or negative triggering.

Current Pulse Switching Relays

One current pulse is needed to change the relay from the rest position to the working position and vice versa. During the triggering process, one of two status indicators displays the actual contact position. The current pulse switching relay is available for direct and alternating voltage.

Safety Relays

Force-guided safety relays have become increasingly recommended and specified for self-regulated systems as they provide protection for personnel, machines and installations. Relays with force-guided contacts are an essential safety component for these circuits, particularly when defects occur. For these applications, WAGO offers specialty relay modules with force-guided contacts as based on EN 61810-3.

Optocouplers

Optocouplers – The Modern and Powerful Alternative

As a link between process peripherals and electronic control, alarm and monitoring systems, optocoupler modules boast the following advantages over electromechanical relays:

- Longer service life – no mechanical wear
- High switching frequency because of fast switching times
- Vibration resistance
- No contact bouncing
- "Noiseless" switching
- Low control power

WAGO provides a full range of optocouplers for all interfaces between control and load circuits in applications where the following advantages are needed:

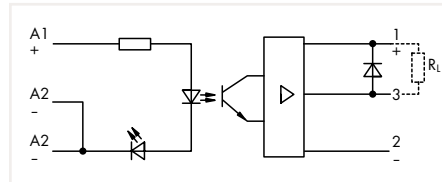
- Electrically isolate input and output circuits
- Adjust different signal levels
- Signal amplification



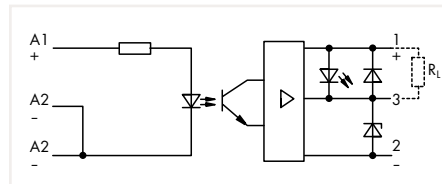
Input circuit

According to the type, triggering the optocoupler modules is performed via DC voltage (residual ripple $RR < 6\%$) or AC voltage (50 ... 60 Hz).

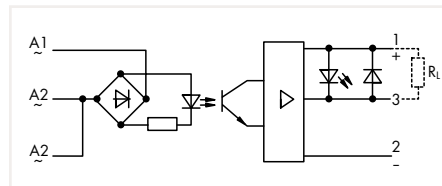
In the DC type, a reverse voltage protection diode is always provided; in the AC type optocoupler element, a rectifier is included. The optocoupler modules are equipped with a LED function indication at either the input side or at the load side, as shown in the wiring diagram.



DC triggering with LED function indication in the triggering circuit



DC triggering with LED function indication in the load circuit



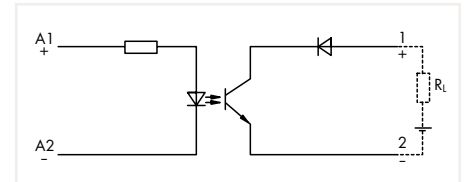
AC triggering with LED function indication in the load circuit

Due to the low threshold voltages, it must be ensured that interference and residual voltages (caused by the cable capacitance of long connection lines or leakage currents of semi-conductor switches and their protective circuits) do not cause any malfunctions.

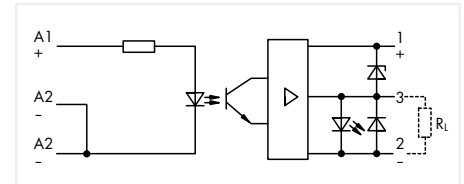
Output Circuit

Depending on the application, an optocoupler module for DC or AC voltage consumers can be selected on the load side. In the case of DC outputs, they can be:

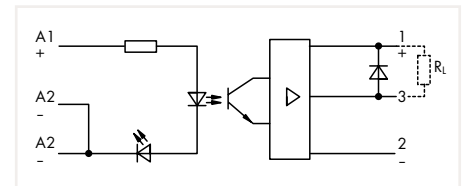
- 2-wire output
- 3-wire high-side switching output
- 3-wire low-side switching output



2-wire output



3-wire high-side switching output

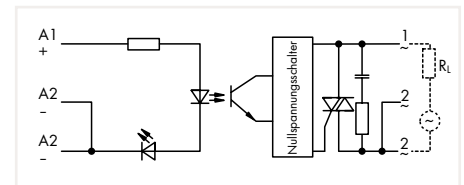


3-wire low-side switching output

In addition to these different functional outputs, the output voltage range and the maximum switching current must be observed.

To ensure proper operation, the specified polarity must be observed.

In order to protect the output transistors, inductive loads must always be equipped with a protective circuit, e.g., a recovery diode. For other types of protective measures, the cut-off voltage peaks must be lower than the indicated cut-off voltage of the output transistors. For the AC outputs a Triac is used as the switching element.



In order to avoid high inrush currents, the AC output is equipped with a zero-voltage switch which turns on the load at the zero-voltage point. In the current zero-crossing, the Triac will cut off the load. Besides observing the maximum switching voltage and maximum switching current for inductive loads, ensure the provision of a protection circuit to cut-off peaks to a value below the reverse voltage.

Relay Modules and Optocouplers Housings and Designs

Modern equipment design requires multiple components that can meet diverse challenges:

User- and maintenance-friendly, limited budgets, safety and availability, simplicity in design and usage.

WAGO offers relay and optocoupler modules in various designs to overcome any of the restraints posed by space requirements.

Sockets with a Miniature Switching Relay or a Solid-State Relay, 788 Series



Socket with a pluggable miniature switching relay

WAGO 788 Series Relay Sockets are an excellent platform for industrial and process automation switching relay applications. Featuring plug-and-play, miniature switching relays (1 or 2 changeover contacts), the 788 Series relays are ultra-compact, fitting where other relays won't. A compact design (W x H x D: 15 x 53 x 86 mm) is just one of the 788 Series' unique and highly beneficial features. A robust, easy-to-use lever lifts/ejects relays, simplifying replacement – even if relay modules are side-by-side. For flexibility and the reduction of part numbers, the 788 Series can be ordered as: a fully equipped relay module, a relay and LED for switching status indication, or as individual components.

Relay and Optocoupler Modules, 857 Series



Relay module with plugged miniature switching relay

WAGO's 857 Series Relay and Optocoupler Modules are supplied in 6 mm-wide housing and share a common profile. The modules feature a single, flexible in-line jumper system, eliminating discrete wiring. The pluggable relays can simply be replaced from the top.



Relay and optocoupler modules

Relay Modules and Optocouplers Housings and Designs

Pluggable Function Modules for Carrier Terminal Blocks,
286 Series



Pluggable function modules for carrier terminal blocks

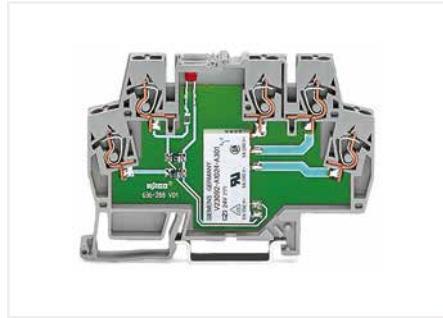
Pluggable modules for carrier terminal blocks maximize flexibility while simplifying maintenance. The carrier terminal block is mounted on the DIN-rail and wired just like a standard terminal block. For ease of maintenance, the modules are replaced in one step without altering the wiring. This intelligent design also saves space and reduces wiring costs.



Pluggable relay modules for carrier terminal blocks

A comprehensive range of function modules is available to complement these relay and optocoupler modules. The modules seamlessly integrate any required function into control cabinets via pluggable modules.

Rail-Mount Terminal Blocks with Relay and Optocoupler,
859 Series



Relay module

With a wide range of relays and optocouplers, the 859 Series will suit any industrial interface application. The compact, 6 mm-wide housing is ideal for space-restricted control panels. Simple commoning at the control and load side streamlines looping through of common input and output potentials.

Relay Modules in a DIN-Rail Mount Enclosure,
789 Series



Relay module in a DIN-rail-mount enclosure

WAGO 789 Series Switching Relays serve a wide variety of applications, from basic lighting control – homes, hotels and commercial structures – to comprehensive industrial control cabinets.

Just 17.5 mm wide, the compact DIN-rail-mount enclosure is ideal for distribution boards and meter cabinets. The relay modules with manual operation allow simple emergency operation to be implemented.

Sockets with an Industrial Relay,
858 Series



Socket with an industrial relay

A robust design and vibration-proof CAGE CLAMP® Spring Pressure Connection Technology ensure continuous and uninterrupted operation for any system. The right choice for applications requiring up to four changeover contacts. Dual conductor entries enable customized potential distribution.

Interface Modules

Safe and Maintenance-Free Connections

Interface modules connect electronics to electrical systems at the control level and perform:

- signal transmission between control and field level (system, machine), as well as
- signal distribution between control and field level and vice versa. Here, the control signals from pre-assembled, plug-in connections are applied to terminal block connections.

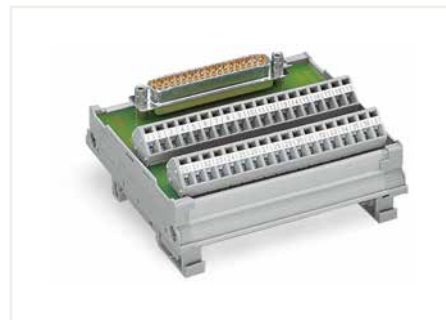
WAGO offers a wide range of interface modules for commonly used connector types. Using these interface modules, the following benefits are provided for system wiring:

- Simple and time-saving planning and calculation
- Quick wiring, commissioning and troubleshooting thanks to clearly laid-out wiring and highly legible pole markings – decrease wiring errors
- Safe and maintenance-free connection of signal lines using CAGE CLAMP® terminal strips
- Space-saving, high-density wiring

The interface modules can be delivered as standard, in a universal DIN-rail mounting carrier for the following connectors:

D-Subminiature Connector per DIN 41652

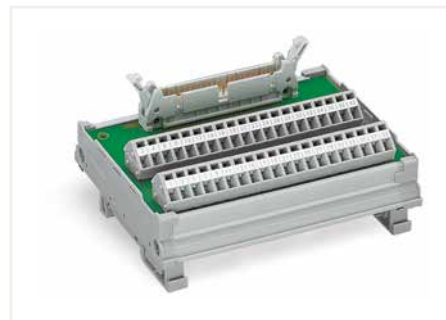
Interface modules for male and female connectors are available with 9, 15, 25, 37 or 50 contacts. Compared with the standard solder connection, the mating connector with IDC connection offers additional advantages.



Interface module with D-subminiature connector per DIN 41652

Pluggable Connector per DIN 41651

Interface modules with 10-, 14-, 16-, 20-, 26-, 34-, 40-, 50- and 64-pole pluggable connectors are available for ribbon cable connectors.



Interface module with pluggable connector per DIN 41651

RJ-45 Interface Modules

The RJ-45 interface modules are switchgear cabinet components for passive and structured network cabling. A range of DIN-rail-mount RJ-45 interface modules in different variants are available for the various applications:

- with shield clamping saddles
- as crossover
- with additional power contacts



RJ-45 Interface Modules

Overvoltage Protection

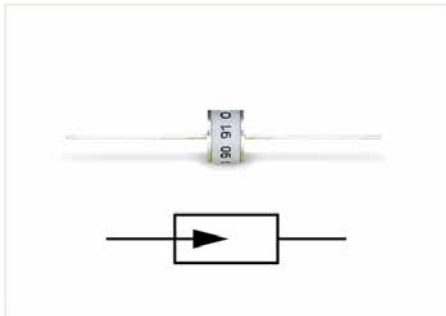
Overvoltage protection for increased safety and longer on-line operation

On-the-line overvoltages cause most operating failures for measuring, control, data and power lines. Failure of electronic and semiconductor components due to surges can cause operating interruptions. The overvoltage (also called transients) can be generated by switching electrical equipment on or off or by lightning discharges. Depending on the application, protective measures for systems and devices can be broken down into:

- Coarse protection
- Medium protection
- Fine protection

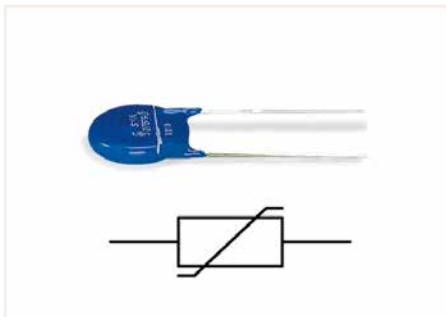
The boundaries between these levels of protection may not be sharply defined. To implement the appropriate protection measures, various components are used for discharging transient overvoltage, depending on the protection type. The following components have proven performance in these applications:

Gas-filled surge arrester



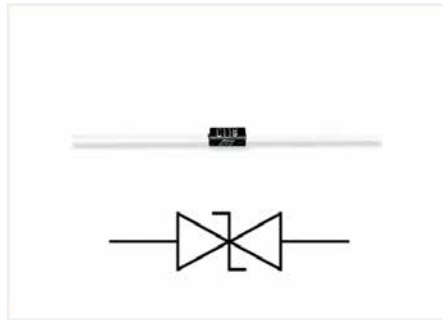
The gas filled surge arrester is comprised of two electrodes in a ceramic or glass tube filled with a pressurized inert gas. Once the ignition voltage is reached, resistance drops due to ionization and current begins to flow. The resistance of the device drops from high to low as it conducts. The voltage across the device after the arc is struck is typically 10 ... 30 V. Therefore, the current will continue to flow until the voltage drops below this level. As this is not a guaranteed occurrence in typical power situations, a fuse must precede the device to ensure disconnection from the supply. This is always the case if the nominal voltage of the protected network is greater than 12 VDC and the nominal voltage of the power supply and the protected circuit is greater than 100 mA.

Varistor



A varistor is a voltage-dependent resistor, in which the resistance becomes low after their "nominal voltage" is exceeded and for the voltage range above it, and can thus cut off any overvoltages through high discharge currents. Varistors can age with continued surge conduction, resulting in lower impedance even in the lower voltage range. However, this normally only occurs when a varistor frequently discharges transients. In this case, they must be replaced and specific time intervals.

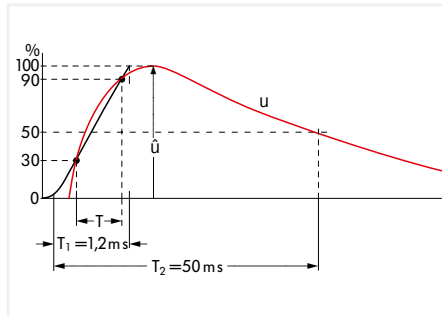
Suppressor Diode



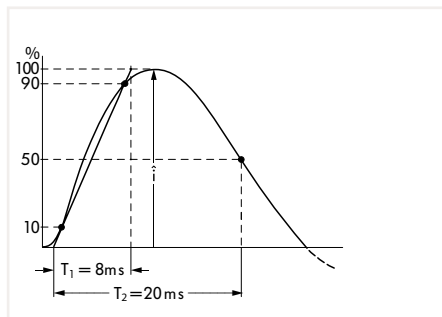
Suppressor diodes have electrical characteristics similar to Zener diodes, but are rated for surge currents. Once the rated breakdown voltage is exceeded (in the non-conductive direction), the diode becomes a conductor. The suppressor diode differs from a Zener in its higher current carrying capability and faster response time (in the picosecond range).

Test Impulse

Surge arresters are subject to standardized test pulses in order to classify capabilities; the effectiveness of protection measures with reference to dissipation capacity and voltage arresting. The form and level of the test pulses are defined by IEC 60060-1 and EN 62475:2010. Preference is given to voltage pulses of 1.2/50 and current pulses of 8/20.



Voltage pulses 1.2/50 per IEC 60060-1



Current pulses 8/20 per EN 62475:2010

Application Recommendations

The advantages of gas-filled surge arresters lie in their high current carrying capacity, making them ideal for coarse protection. One disadvantage, particularly in the medium protection range, is the relatively long response time, as well as the power follow current. Varistors have a considerably shorter response time; however they also have lower leakage currents. This makes them more suitable for medium protection as they offer limited applications for coarse protection. If the connection lines of electronic equipment are already "fine" protected, general coarse and medium protection measures are sufficient. If this is not the case, suppressor diodes with a very short response time may be employed as fine protection. WAGO offers a complete range of modular terminal blocks with integrated surge arresters for coarse, medium and fine protection. Depending on the application, one can choose the appropriate type from the previously mentioned surge arresters. These are electrically connected in the modular terminal blocks between the connection point and mounting rail. Snapping the terminal block onto the grounded (earthed) mounting rail automatically ensures the required overvoltage protection.



Double-deck terminal block, with varistor direct connection to DIN-35 rail

Frequently, only one surge arrester is fitted for cost reasons. However, due to the fact that one surge arrester alone cannot optimally ensure several protection functions, combinations are recommended. Care must be taken to ensure that the single-stage protection devices are decoupled sufficiently by inductors or resistors.

Overvoltage Protection

Interference suppression modules are a special category here.

In addition to overvoltage protection, a high frequency interference filter can be added to the circuitry. This filter cannot only protect the equipment from high frequency energy transmitted by connecting wires, but also prevents a transmission of disturbances to the supply lines. The main component of a filter is an LC network, which produces a mismatch between the filter impedance and the impedance of the disturbance path. This reflects any disturbance back to its source.

Definition of Several Important Technical Terms

Nominal Operating Voltage (U_{BN})

The nominal operating voltage corresponds to the voltage which may be permanently connected to the appropriate connection terminals of the overvoltage protection module. Alternating voltages are quoted as effective values.

Max. Operating Voltage (U_{Bmax})

The maximum operating voltage corresponds to the voltage which may be permanently connected to the appropriate connection terminals without the operating properties changing or activating the individual module's protection elements.

Nominal Current (I_N)

The nominal current corresponds to the current which may permanently flow through the connection terminals of the overvoltage protection device.

Nominal Discharge Current (I_{SN})

The nominal discharge current is the maximum value of a current having the 8/20 μ s waveform, which can flow through the surge arrester five times within a time period of 30 seconds (VDE) without destroying it.

Max. Surge Current (I_{Smax})

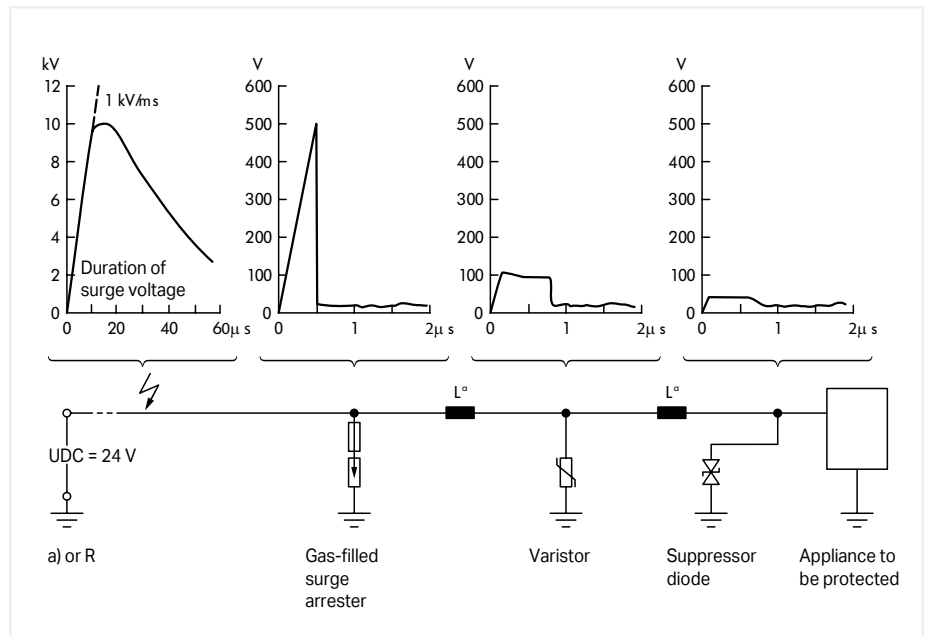
The maximum surge current I_{Smax} defines the maximum value of a current having the 8/20 μ s waveform, which can flow through the surge arrester once without destroying it.

Protection Level (U_p)

The protection level is the value of the residual voltage occurring on the "protected" side of the surge arrester when applying the rated discharge current.

Response Time (t_{resp})

The response time is primarily based on the physical properties of the surge arresters and is dependent upon the wave front duration of the surge voltage. WAGO's data refers to a voltage rise 1kV/ μ s.



Function diagram of a multi-stage surge voltage protection module

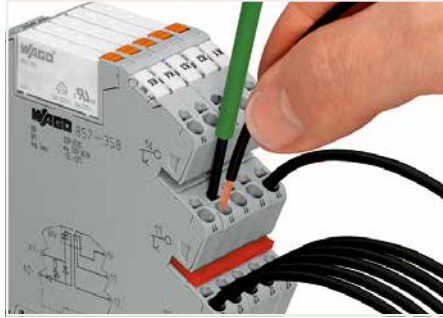
Installation Notes

Relay and Optocoupler Modules, 859 Series



Inserting a conductor via screwdriver.

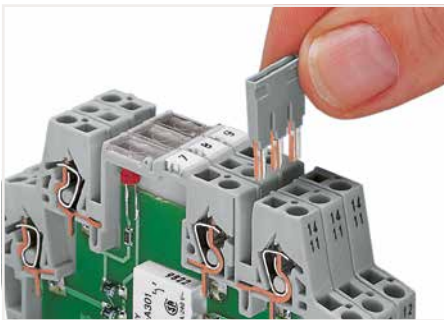
Relay and Optocoupler Modules, 857 Series



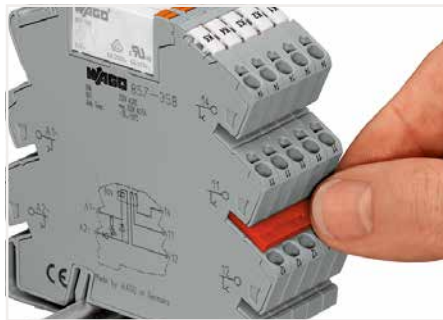
Inserting a conductor via screwdriver.



Removing a relay via ejector.



Easy commoning using adjacent jumpers.



Easy commoning using adjacent jumpers.



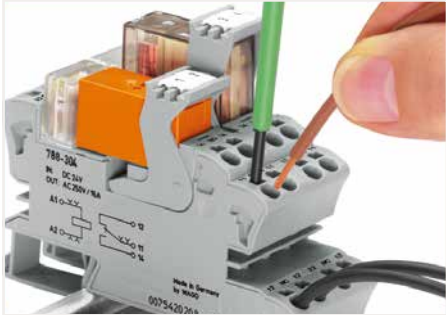
Marking via Mini-WSB Quick Marking System.



Marking via WMB Multi Marking System.

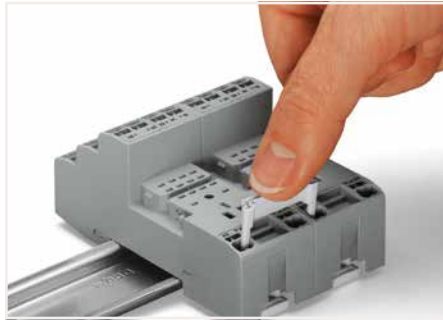
Installation Notes

Sockets with a Miniature Switching Relay, 788 Series

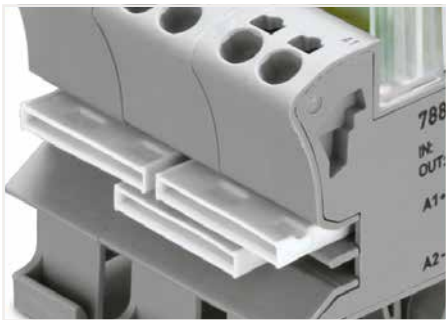


Inserting a conductor via screwdriver.

Sockets with an Industrial Relay, 858 Series



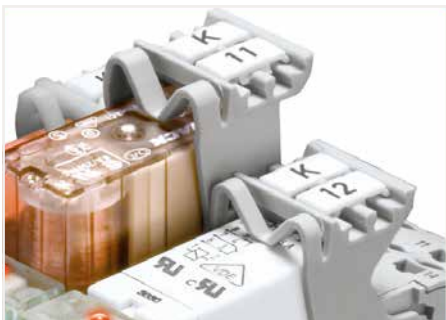
Easy commoning using adjacent jumpers.



Easy commoning using adjacent jumpers.



Removing a conductor via screwdriver.



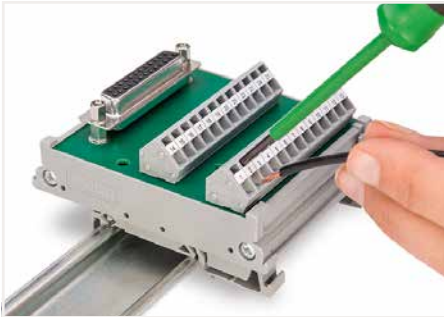
Marking using WMB Multi markers and group marker carriers.



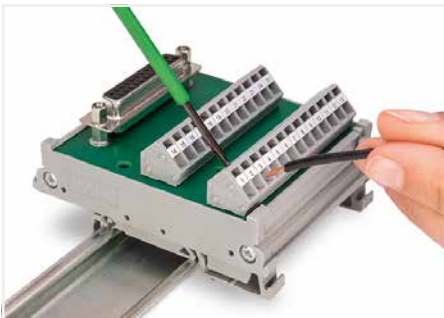
Marking using WMB Multi markers and group marker carriers.

Installation Notes

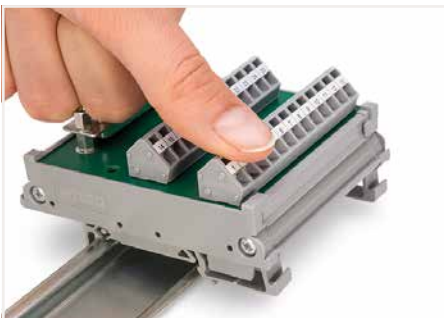
DIN-Rail-Mounted Interface Modules, 289 Series



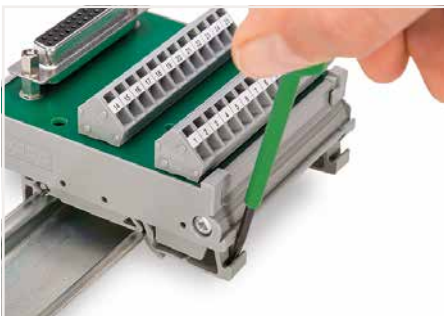
"Front-entry" conductor termination



"Side-entry" conductor termination

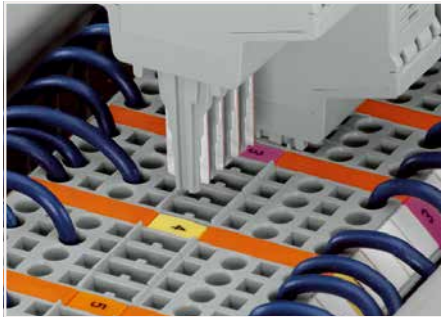


Snapping a module onto DIN-rail.



Removing a module from the DIN-rail.

Pluggable Function Modules for Carrier Terminal Blocks, 286 Series



Coding ensures correct polarity.



Pluggable electronic modules on 2- or 4-conductor carrier terminal blocks

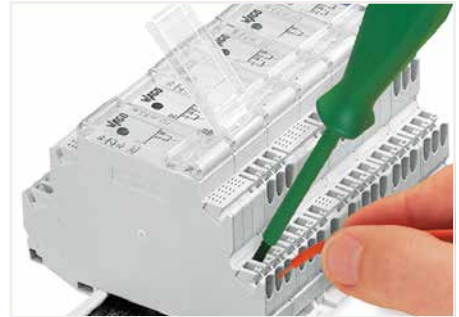


Marking via WMB Multi Marking System.



Function testing via touch-proof test slots.

Relay Modules in a DIN-Rail Mount Enclosure, 789 Series



Inserting a conductor via screwdriver.



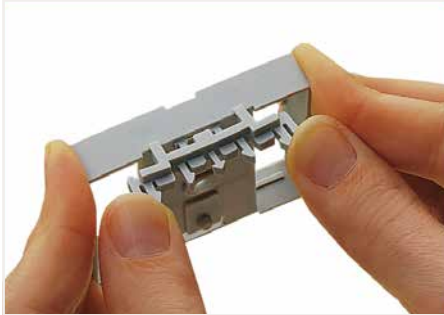
Easy commoning via adjacent jumpers.



Marking via Mini-WSB Quick Marking System.

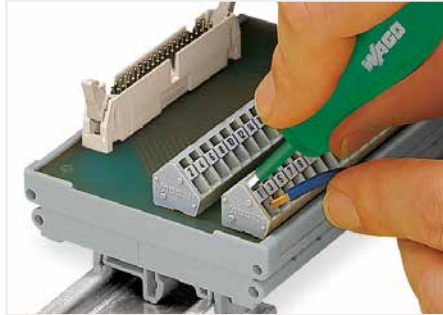
Installation Notes

Interface Modules, 289 Series



Mounting carrier, gray, snap-fit mounting of universal mounting feet

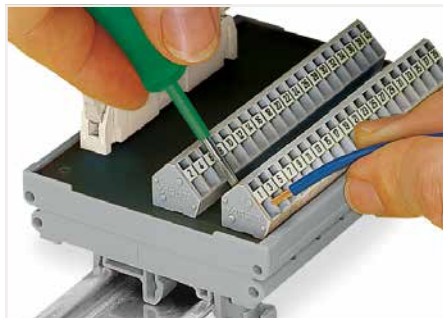
Interface Modules, 289 Series



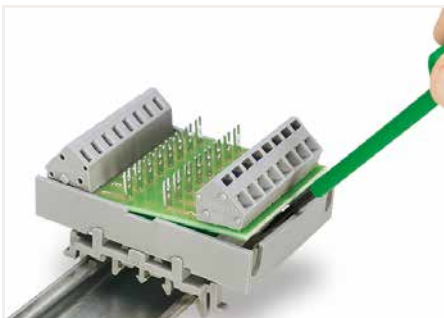
"Front-entry" conductor termination



Fitting an individual module to the mounting carrier.



"Side-entry" conductor termination

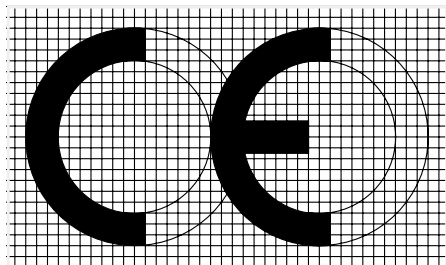


Removing an individual module from the mounting carrier.

CE Marking and EC Directives

CE Conformity Marking:

The CE conformity marking consists of the characters "CE" with the following script:



Communauté Européenne
(European Community)

The CE conformity marking must be applied to all electrical equipment; should on-unit marking not be possible, mark the smallest packing unit. With this marking, manufacturers attest conformity of their products to relevant directives.

In addition to the CE marking, manufacturers provide an EC "Declaration of Conformity" for their products. This declaration of conformity must be retained and submitted to a national surveillance authority upon request.

EC directives are legally binding specifications for the European Union. Their goal is aligning legal and administrative specifications in the various EU member countries, in order to prevent trading hindrances arising from different national specifications.

In order to launch a product on the market, it must comply with the relevant directives. Several directives may apply for one single product, for example, EMC and low voltage directives.

Low Voltage Directive (LVD)

The safety of electrical equipment is guaranteed by the Low Voltage Directive. The LVD covers all electrical equipment operating with a voltage between 50 and 1000 VAC and between 75 and 1500 VDC. Products falling within the scope of the LVD that are designed in such a way that they can be used in other electrical devices and whose safety, for the most part, is dependent on how these components were built into the end product and what features the end product has are defined as basic components in accordance with the LVD. The LVD doesn't apply to basic components.

EMC Directive

The EMC Directive implies that a product must meet the limits of the radiated electromagnetic disturbance and also requires that a product must be immune to electromagnetic interference. Electromagnetic passive components or components with no direct function, like resistors, diodes, capacitors, switching relays or cables (in the form of passive printed circuit boards) are not considered as apparatus within the meaning of the EMC Directive.

Machinery Directive

The Machinery Directive does not apply to WAGO products.

Explosive Atmospheres Directive (ATEX)

Directive for devices and protective systems intended for use in hazardous locations.

Radio Equipment Directive

A device or relevant component thereof, capable of communication by emitting and/or receiving radio waves utilizing the spectrum allocated to terrestrial/space radio communication, falls within the scope of the Radio Equipment Directive. As such, these devices and components are tested and labeled accordingly. This label implicitly includes both Low Voltage and EMC Directives, since the Radio Equipment Directive also encompasses the safety targets for both of these directives.

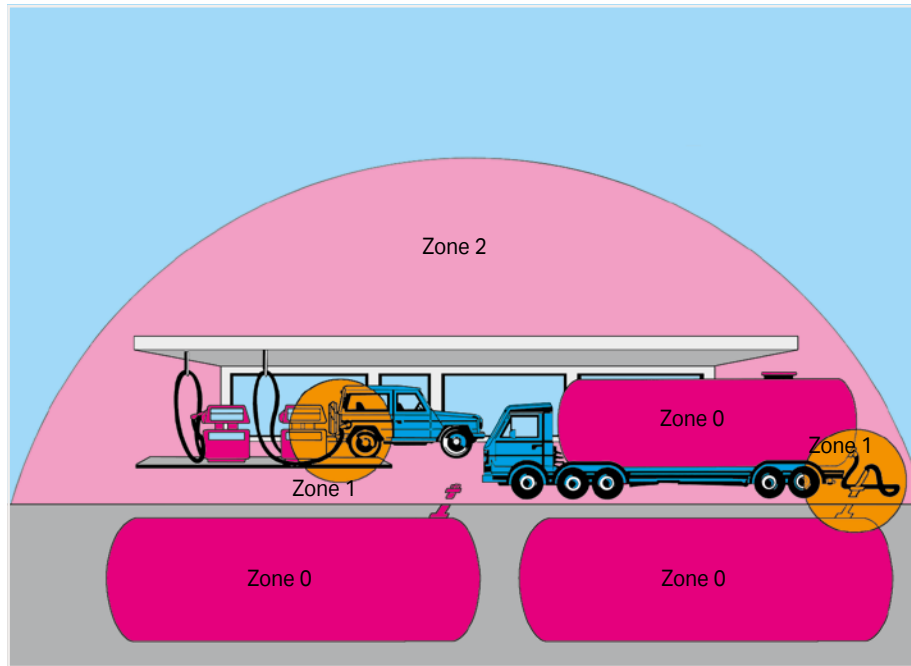
General Technical Information for Electrical Equipment Used in Hazardous Areas

Hazardous Areas

Hazardous environments are areas in which the atmosphere may become explosive. An explosive atmosphere is a mixture of flammable substances

in the form of gases, vapors or mixtures with air under atmospheric conditions in critically mixed ratios such that excessive high temperature, arcs or sparks may cause an explosion.

DIN EN 1127-1 and all other related standards that are commonly known divide up hazardous areas according to the likelihood of the occurrence of an explosive atmosphere into the following zones:



① Hazardous areas due to explosive gases, vapors and mists

Zone 0

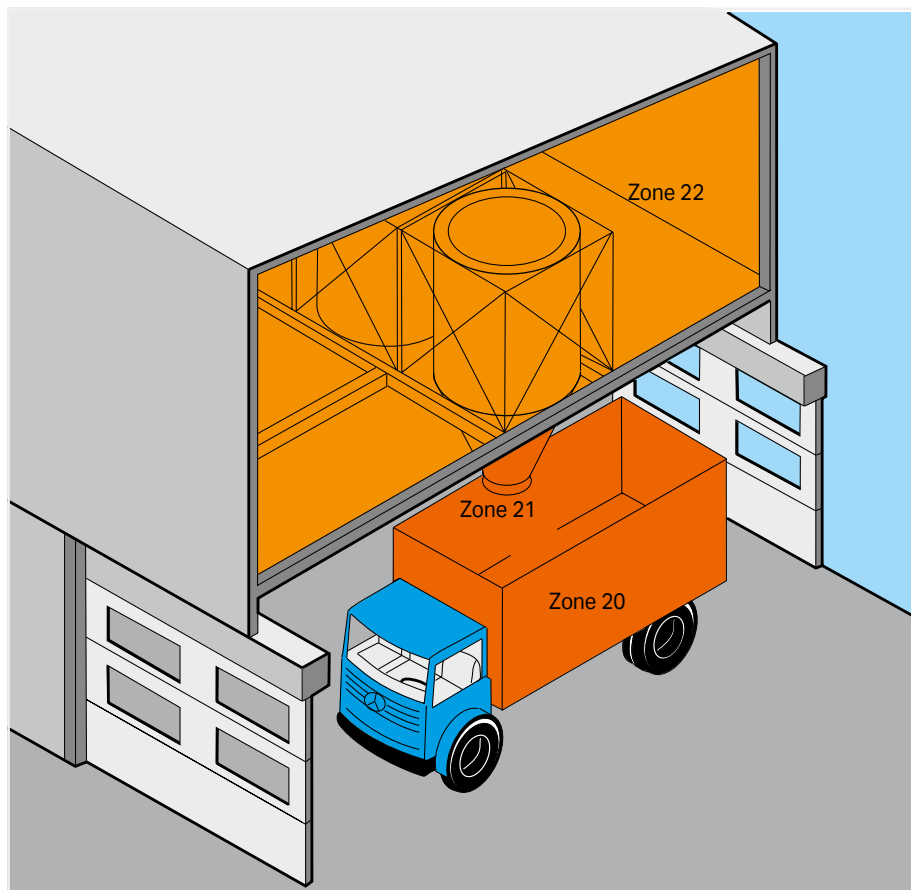
Areas in which an explosive atmosphere is present continuously, for long periods or frequently.

Zone 1

Areas in which an explosive atmosphere is likely to occur occasionally during normal operation.

Zone 2

Areas in which an explosive atmosphere is likely to occur rarely or only for a short period during normal operation.



② Hazardous areas due to explosive dust/air mixtures

Zone 20

Areas in which an explosive atmosphere due to dust/air mixtures is present continuously, for long periods or frequently and in which dust deposits of known or excessive thickness may form. Dust deposits alone do not constitute a Zone 20.

Zone 21

Areas in which the occurrence of an explosive atmosphere due to dust/air mixtures is to be expected occasionally and in which deposits or layers of combustible dust can generally be present.

Zone 22

Areas in which an explosive atmosphere due to dust/air mixtures is not likely to occur during normal operation and, if it occurs, will only exist for a short period, or in which accumulations or layers of combustible dust are present.

Electromagnetic Compatibility and Mechanical Strength (Industrial and Residential Areas)

Immunity to Interference for Industrial Areas per EN 61000-6-2

Test Specification		Test Values	Evaluation Criteria *)
EN 61000-4-2	ESD	4 kV/8 kV (contact/air)	B
EN 61000-4-3	Electromagnetic fields	10 V/m: 80 MHz ... 1 GHz	A
		3V/m: 1.4 ... 2.0 GHz	A
		1V/m: 2.0 ... 2.7 GHz	A
EN 61000-4-4	Burst	1 kV/2 kV (data/supply)	B
EN 61000-4-5	Surge	Data: - / 1 kV (line : line – line : ground)	B
		DC supply: 0.5 kV / 0.5 kV (line : line – line : ground)	B
		AC supply: 1 kV / 2 kV (line : line – line : ground)	B
EN 61000-4-6	RF disturbances	10 V/m, 80 % AM (0.15 ... 80 MHz)	A
EN 61000-4-8	Magnetic field	30 A/m, 50/60Hz	A

*) Criteria A: The device must work in accordance with the regulations during and after the test.
Criteria B: The device must work in accordance with the regulations after the test.

Emission of Interference for Residential Areas per EN 61000-6-3

Test Specification		Limit Values Quasi Peak	Frequency Range	Distance
EN 55016-2-1	AC supply, conducted	66 ... 56 dB(μV)	150 ... 500 kHz	
		56 dB(μV)	500 kHz ... 5 MHz	
		60 dB(μV)	5 ... 30 MHz	
EN 55016-2-1	DC supply/data line conducted	79 dB(μV)	150 ... 500 kHz	
		73 dB(μV)	500 kHz ... 30 MHz	
EN 55016-2-3	radiated	30 dB(μV/m)	30 ... 230 MHz	10 m
		37 dB(μV/m)	230 MHz ... 1 GHz	10 m
EN 55022	Telecommunications/ Mains connection, conducted	84 ... 74 dB(μV)	150 ... 500 kHz	
		74 dB(μV)	500 kHz ... 30 MHz	

Emission of Interference for Industrial Areas per EN 61000-6-4

Test Specification		Limit Values Quasi Peak	Frequency Range	Distance
EN 55016-2-1	AC supply, conducted	79 dB(μV)	150 ... 500 kHz	
		73 dB(μV)	500 kHz ... 30 MHz	
EN 55016-2-3	radiated	40 dB(μV/m)	30 ... 230 MHz	10 m
		47 dB(μV/m)	230 MHz ... 1 GHz	10 m
EN 55022	Telecommunications/ Mains connection, conducted	97 ... 87 dB(μV)	150 ... 500 kHz	
		87 dB(μV)	500 kHz ... 30 MHz	

Mechanical Strength per EN 61131-2

Test Specification		Frequency Range	Limit Values
IEC 60068-2-6	Vibration	5 Hz ≤ f < 9 Hz	1.75 mm amplitude (permanently)
			3.5 mm amplitude (short term)
		9 Hz ≤ f < 150 Hz	0.5 g (permanent)
			1 g (short term)
	Note on vibration test: a) Frequency change: max. 1 octave/minute b) Vibration direction: 3 axes		
IEC 60068-2-27	Shock		15 g
		Note on shock test: a) Type of shock: half sine b) Shock duration: 11 ms c) Shock direction: 3x in positive and 3x in negative direction for each of the three mutually perpendicular axes of the test specimen	

Electromagnetic Compatibility and Mechanical Strength (marine applications)

Immunity to Interference in the Shipping Industry per Germanischer Lloyd

Test Specification		Test Values	Evaluation Criteria *)
IEC 61000-4-2	ESD	6 kV / 8 kV (contact – air)	B
IEC 61000-4-3	Electromagnetic fields	10 V/m 80 MHz ... 2 GHz	A
IEC 61000-4-4	Burst	1 kV / 2 kV (data – supply)	A
IEC 61000-4-5	Surge	0.5 kV / 1 kV (line : line – line : ground)	A
IEC 61000-4-6	RF disturbances	10 V, 80 % AM (0.15 ... 80 MHz)	A
Type Test	AF disturbances (harmonics)	3 V, 2 W	A
Type Test	High voltage	755 VDC	-
		1500 VAC	-

*) Criteria A: The device must work in accordance with the regulations during and after the test.

Criteria B: The device must work in accordance with the regulations after the test.

Immunity to Interference in the Shipping Industry per Germanischer Lloyd

Test Specification		Limit Values Quasi Peak	Frequency Range	Distance
Type Test	EMC 1, conducted (allows for ship bridge control applications)	96 ... 50 dB(μV)	10 ... 150 kHz	
		60 ... 50 dB(μV)	150 ... 350 kHz	
		50 dB(μV)	350 kHz ... 30 MHz	
Type Test	EMC 1, radiated (allows for ship bridge control applications)	80 ... 52 dB(μV/m)	150 ... 300 kHz	3 m
		52 ... 34 dB(μV/m)	300 kHz ... 30 MHz	3 m
		54 dB(μV/m)	30 MHz ... 2 GHz	3 m
		except for:	24 dB(μV/m)	156 ... 165 MHz
Type Test	EMC 2, conducted (allows for machine room applications)	120 ... 69 dB(μV)	10 ... 150 kHz	
		79 dB(μV)	150 ... 500 kHz	
		73 dB(μV)	500 kHz ... 30 MHz	
Type Test	EMC 2, radiated (allows for machine room applications)	80 ... 50 dB(μV/m)	150 kHz ... 30 MHz	3 m
		60 ... 54 dB(μV/m)	30 ... 100 MHz	3 m
		54 dB(μV/m)	100 MHz ... 2 GHz	3 m
		except for:	24 dB(μV/m)	156 ... 165 MHz

Mechanical Strength per Germanischer Lloyd

Test Specification		Frequency Range	Limit Values
IEC 60068-2-6	Vibration (category A, C)	$2 \text{ Hz} \leq f < 13.2 \text{ Hz}$	±1.0 mm amplitude (permanent)
		$13.2 \text{ Hz} \leq f < 100 \text{ Hz}$	0.7 g (permanent)
		Note on vibration test: a) Frequency change: max. 1 octave/minute b) Vibration direction: 3 axes	
IEC 60068-2-6	Vibration (category A-D)	$2 \text{ Hz} \leq f < 25 \text{ Hz}$	±1.6 mm amplitude (permanent)
		$25 \text{ Hz} \leq f < 100 \text{ Hz}$	4 g (permanent)
		Note on vibration test: a) Frequency change: max. 1 octave/minute b) Vibration direction: 3 axes	

Specifications and Test Results

The following standards apply to the design and application of the electrical components contained in this catalog:

DIN VDE 0100
Construction of high current installations with nominal voltages up to 1000 V

EN 50110-1
VDE 0105-1
Operation of electrical installations

IEC 61140
EN 61140
VDE 0140-1
Protection against electric shock – Common aspects for installation and equipment

IEC 60664-1
EN 60664-1
VDE 0110-1
Insulation coordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests

IEC 60204-1
EN 60204-1
VDE 0113-1
Safety of machinery – Electrical equipment of machines – Part 1: General requirements

EN 50178
VDE 0160
Electronic equipment for use in power installations

IEC 62305-1
EN 62305-1
VDE 0185-305-1
Protection against lightning – Part 1: General principles

IEC 60060-1
HD 588.1 S1
VDE 0432-1
High voltage test techniques – Part 1: General specifications and test requirements

IEC 60085
EN 60085
VDE 0301-1
Electrical insulation – Thermal evaluation and designation

IEC 60529
EN 60529
VDE 0470-1
Degrees of protection provided by enclosures (IP code)

IEC 60603-1
EN 60603-1
Connectors for frequencies below 3 MHz for use with printed boards – Part 1: Generic specification: General requirements and guide for the preparation of detail specifications, with assessed quality

IEC 61984
EN 61984
VDE 0627
Connectors – Safety requirements and tests

IEC 60999-1
EN 60999-1
VDE 0609-1
Connecting devices – Electrical copper conductors; Safety requirements for screw-type and screwless-type clamping units – Part 1: General requirements and particular requirements for clamping units for conductors 0.2 mm² up to 35 mm²

IEC 60617-2
EN 60617-2
Graphical symbols for diagrams – Part 2: Symbol elements, qualifying symbols and other symbols having general application

IEC 61558-1
EN 61558-1
VDE 0570-1
Safety of power transformers, power supplies, reactors and similar products – Part 1: General requirements and tests

IEC 60669-2-1
EN 60669-2-1
VDE 0632-2-1
Switches for household and similar fixed electrical installations – Part 2-1: Particular requirements – Electronic switches

IEC 60947-7-1
EN 60947-7-1
VDE 0611-1
Low-voltage switchgear and controlgear – Part 7-1: Ancillary equipment – Terminal blocks for copper conductors

IEC 60998-2-2
EN 60998-2-2
VDE 0613-2-2
Connecting devices for low-voltage circuits for household and similar purposes – Part 2-2: Particular requirements for connecting devices as separate entities with screwless-type clamping units

IEC 60947-1
EN 60947-1
VDE 0660-100
Low-voltage switchgear and controlgear – Part 1: General rules

IEC 60947-5-6
EN 60947-5-6
VDE 0660-212
Low-voltage switchgear and controlgear – Part 5-6: Control circuit devices and switching elements, DC interface for proximity sensors and switching amplifiers (NAMUR)

IEC 60439-1
EN 60439-1
VDE 0660-500
Low-voltage switchgear and controlgear assemblies – Part 1: Type-tested and partially type-tested assemblies

IEC 60555-1
EN 60555 Part 1
VDE 0838-1
Disturbances in supply systems caused by household appliances and similar electrical equipment; Part 1: definitions

IEC 60715
EN 60715
Dimensions of low-voltage switchgear and controlgear – Standardized mounting on rails for mechanical support of electrical devices in switchgear and controlgear installations

IEC 60950-1
EN 60950-1
VDE 0805-1
Information technology equipment – Safety Part 1: General requirements

IEC 60127-6
EN 60127-6
VDE 0820-6
Miniature fuses – Part 6: Fuse-holders for miniature fuse-links

EN 50155 VDE 0115-200 Railway applications – Electronic equipment used on rolling stock	Interfaces – Fieldbuses	IEC 60079-14 EN 60079-14 VDE 0165-1 Explosive atmospheres – Part 14: Electrical installations design, selection and erection
EN 50090-2-2 VDE 0829-2-2 Home and Building Electronic Systems (HBES) – Part 2-2: System overview – General technical requirements; German version	DIN 66259-1 Electrical characteristics for unbalanced double-current interchange circuits	IEC 60079-15 EN 60079-15 VDE 0170-16 Electrical apparatus for explosive gas atmospheres – Part 15: Construction, test and marking of type of protection "n" electrical apparatus
IEC 60099-1 EN 60099-1 VDE 0675-1 Surge arresters – Part 1: Non-linear resistor type gapped surge arresters for a.c. systems	EN 50325-1 Industrial communications subsystem based ISO 11898 (CAN) for controller-device interfaces – Part 1: General requirements	IEC 61241-0 EN 61241-0 VDE 0170-15-0 Electrical apparatus for use in the presence of combustible dust – Part 0: General requirements
IEC 61643-1 EN 61643-11 VDE 0675-6-11 Low-voltage surge protective devices – Part 11: Surge protective devices connected to low-voltage power systems – Requirements and tests	IEC 61784-1 EN 61784-1 Industrial communication networks – Profiles – Part 1: Fieldbus profiles	IEC 61241-1 EN 61241-1 VDE 0170-15-1 Electrical apparatus for use in the presence of combustible dust – Part 1: Protection by enclosures "tD"
IEC 61643-21 EN 61643-21 VDE 0845-3-1 Low voltage surge protective devices – Part 21: Surge protective devices connected to telecommunications and signalling networks; Performance requirements and testing methods	IEC 61158-2 EN 61158-2 Industrial communication networks – Fieldbus specifications – Part 2: Physical layer specification and service definition	IEC 61241-11 EN 61241-11 VDE 0170-15-11 Electrical apparatus for use in the presence of combustible dust – Part 11: Protection by intrinsic safety "tD"
IEC 61508-1 EN 61508-1 VDE 0803-1 Functional safety of electrical/electronic/programmable electronic safety-related systems – Part 1: General requirements	IEC 61158-6-x EN 61158-6-x DIN EN 61158-6-x Industrial communication networks – Fieldbus specifications – Part 6-x	IEC 60079-0 EN 60079-0 VDE 0170-1 Electrical apparatus for explosive gas atmospheres – Part 0: General requirements
IEC 62061 EN 62061 VDE 0113-50 Safety of machinery – Functional safety of safety-related electrical, electronic and programmable electronic control systems	Explosion Protection	IEC 60079-7 EN 60079-7 VDE 0170-6 Explosive atmospheres – Part 7: Equipment protection by increased safety "e"
	IEC 60079-11 EN 60079-11 VDE 0170-7 Explosive atmospheres – Part 11: Equipment protection by intrinsic safety "i"	

Specifications and Test Results (continued)

Environmental Testing

IEC 60068-2-6
EN 60068-2-6
VDE 0468-2-6
Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)

IEC 60068-2-27
EN 60068-2-27
Basic environmental testing procedures – Part 2: Tests
– Test Ea and guidance: Shock

IEC 60068-2-42
EN 60068-2-42
Environmental testing – Part 2-42: Tests – Test Kc: Sulphur dioxide test for contacts and connections

IEC 60068-2-43
EN 60068-2-43
Environmental testing – Part 2-43: Tests – Test Kd: Hydrogen sulphide test for contacts and connections

EMC Requirements

IEC 61000-6-1
EN 61000-6-1
VDE 0839-6-1
Electromagnetic compatibility (EMC) – Part 6-1: Generic standards
– Immunity for residential, commercial and light-industrial environments

IEC 61000-6-2
EN 61000-6-2
VDE 0839-6-2
Electromagnetic compatibility (EMC) – Part 6-2: Generic standards
– Immunity for industrial environments

IEC 61000-6-3
EN 61000-6-3
VDE 0839-6-3
Electromagnetic compatibility (EMC) – Part 6-3: Generic standards – Emission standard for residential, commercial and light-industrial environments

IEC 61000-6-4
EN 61000-6-4
VDE 0839-6-4
Electromagnetic compatibility (EMC) – Part 6-4: Generic standards
– Emission standard for industrial environments

IEC 61000-3-2
EN 61000-3-2
VDE 0838-2
Electromagnetic compatibility (EMC) – Part 3-2: Limits
– Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)

IEC/CISPR 11
EN 55011
VDE 0875-11
Industrial scientific and medical (ISM) radio-frequency equipment
– Electromagnetic disturbance characteristics
– Limits and methods of measurement

IEC/CISPR 22
EN 55022
VDE 0878-22
Information technology equipment
– Radio disturbance characteristics
– Limits and methods of measurement

IEC/CISPR 24
EN 55024
VDE 0878-24
Information technology equipment
– Immunity characteristics
– Limits and methods of measurement

IEC 61326-3-1
EN 61326-3-1
VDE 0843-20-3-1
Electrical equipment for measurement, control and laboratory use – EMC requirements – Part 3-1: Immunity requirements for safety-related systems and for equipment intended to perform safety-related functions (functional safety) – General industrial applications

PLC

IEC 61131-1
EN 61131-1
Programmable controllers – Part 1: General information

IEC 61131-2
EN 61131-2
VDE 0411-500
Programmable controllers – Part 2: Equipment requirements and tests

IEC 61131-3
EN 61131-3
Programmable controllers – Part 3: Programming languages

Relay

IEC 61810-1
EN 61810-1
VDE 0435-201
Electromechanical elementary relays – Part 1: General requirements

IEC 61810-2
EN 61810-2
VDE 0435-120
Electromechanical elementary relays – Part 2: Reliability

IEC 61810-5
EN 50205
VDE 0435-2022
Electromechanical non-specified time all-or-nothing relays – Part 5: Insulation coordination

IEC 60255-5
EN 60255-5
VDE 0435-130
Electrical relays – Part 5: Insulation coordination for measuring relays and protection equipment – Requirements and tests

UL Directives

UL 1059; ANSI 1059
Terminal blocks

UL 486E
Equipment wiring terminals for use with aluminum and/or copper conductors

UL 508
Industrial control equipment

ANSI/ISA12.12.01
Nonincendive electrical equipment for use in Class I and Class II, Division 2 and Class III, Divisions 1 and 2 hazardous (classified) locations

Ship Classifications

ABS (American Bureau of Shipping)
Steel Vessels
Part 4: Vessel Systems and Machinery

BV (Bureau Veritas)
Rules for the classification of steel ships and offshore units

DNV (Det Norsk Veritas)
Det Norsk Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norsk Veritas' Offshore Standards: 2007

GL (Germanischer Lloyd)
Rules for Classification and Construction
VI Additional Rules and Guidelines
7 Guidelines for the Performance of Type Test
2 Test Requirements for Electrical/Electronic Devices and Systems

LR (Lloyds Register)
Type Approval System
Test Specification Number1

RINA (Registro Italiano Navale)
Rules for the classification of ships
Part C – Machinery, systems and fire protection Ch.3, Sect.6, Table1

BSH (Federal Maritime and Hydrographic Agency)
Certificate on measurement of safe distance to the standard magnetic and steering magnetic compass in accordance with ISO R 695 and DIN EN 60945 Section 11.2

KR (Korean Register of Shipping)
List of approved Manufacturers And Type Approval Equipment; Pt.6, Ch.1, Sec.3 of the Rules for Classification, Steel Ships

NKK (Nippon Kaiji Kyokai)

Guidance for the approval and type approval of materials and equipment for marine use

PRS (Polski Rejestr Statkow)
Publication No.11/P
Environmental Tests on Marine Equipment

Electrical Engineering Laboratory Product Safety for Our Customers

To use terminal blocks globally, they must satisfy certain standards and obtain test certificates. These requirements apply to every manufacturer. WAGO also conducts its own tests to increase standards and offer greater reliability with its products. Products undergo a full range of mechanical, electrical and climatic testing, and we'll share a few of those processes with you.

Pull-Out Test (per EN 60947-7-1, EN 60998-2-2)

During the pull-out force test, a conductor is pulled on until it is removed from the clamping unit. The design of the terminals means that extraction only occurs after the standard pull-out force has been exceeded many times over.

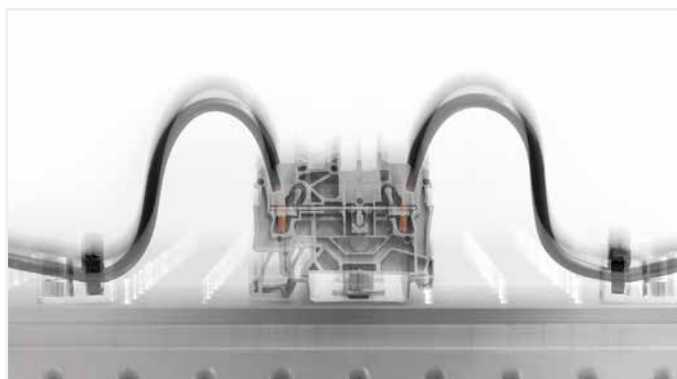
WAGO Test Lab

This means that WAGO's products can be used safely and reliably both in Europe and anywhere globally for a wide variety of applications. We heavily emphasize the importance of global acceptance during development. As a result, we can present documentation that verifies our high levels of product safety and reliability while ensuring the fulfillment and accuracy of technical data, which are the highest priorities for our customers and users worldwide. On December 22, 2009, our test lab was accredited by the German Accreditation Association (Deutsche Gesellschaft für Akkreditierung GmbH) in accordance with DIN EN ISO/IEC 17025.



Vibration Test (per IEC/EN 60068-2-6)

Depending on the application, such as railway (per EN 61373) or marine (per GL, LR, DNV), there are various testing requirements to determine if the long-term effects of vibrations degrade electrical connections. The test specimen is subjected to different loads on three axes in an electrodynamic vibration system. The amplitude, the acceleration, and particularly the frequency of the vibration vary during the test. The test values are increased many times over the standard values to meet special customer requirements.



Shock Test (per IEC/EN 60068-2-27)

The shock test is very similar to the vibration test except that, instead of continuous vibrations, single shocks are applied to the test specimen. Shock tests are usually performed, for example, at an acceleration of 20g over a period of 11 ms. Tests for special requirements often call for much higher values and are also conducted in our laboratory.



Voltage Drop Test under Bending Stress (per WAGO test requirements)

The voltage drop test under bending stress simulates mechanical stress on the clamping unit. In everyday use, this stress can occur during installation, for example, when an electrician shoves connected conductors to the side in order to access a specific component. The quality of the clamping unit when moving a connected conductor can be validated by the constantly stable measured value of the voltage drop.





Deutsche Akkreditierungsstelle GmbH

Beliehene gemäß § 8 Absatz 1 AkkStelleG i.V.m. § 1 Absatz 1 AkkStelleGBV
Unterzeichnerin der Multilateralen Abkommen
von EA, ILAC und IAF zur gegenseitigen Anerkennung

Akkreditierung



Die Deutsche Akkreditierungsstelle GmbH bestätigt hiermit, dass das Prüflaboratorium

WAGO Kontakttechnik GmbH & Co. KG
Hansastraße 27, 32423 Minden

die Kompetenz nach DIN EN ISO/IEC 17025:2005 besitzt, Prüfungen in folgenden Bereichen durchzuführen:

**Elektrische und mechanische Prüfungen an Klemmen und Steckverbinder
sowie Umweltsimulation**

Die Akkreditierungsurkunde gilt nur in Verbindung mit dem Bescheid vom 18.12.2014 mit der Akkreditierungsnummer D-PL-19704-01 und ist gültig bis 17.12.2019. Sie besteht aus diesem Deckblatt, der Rückseite des Deckblatts und der folgenden Anlage mit insgesamt 5 Seiten.

Registrierungsnummer der Urkunde: **D-PL-19704-01-00**

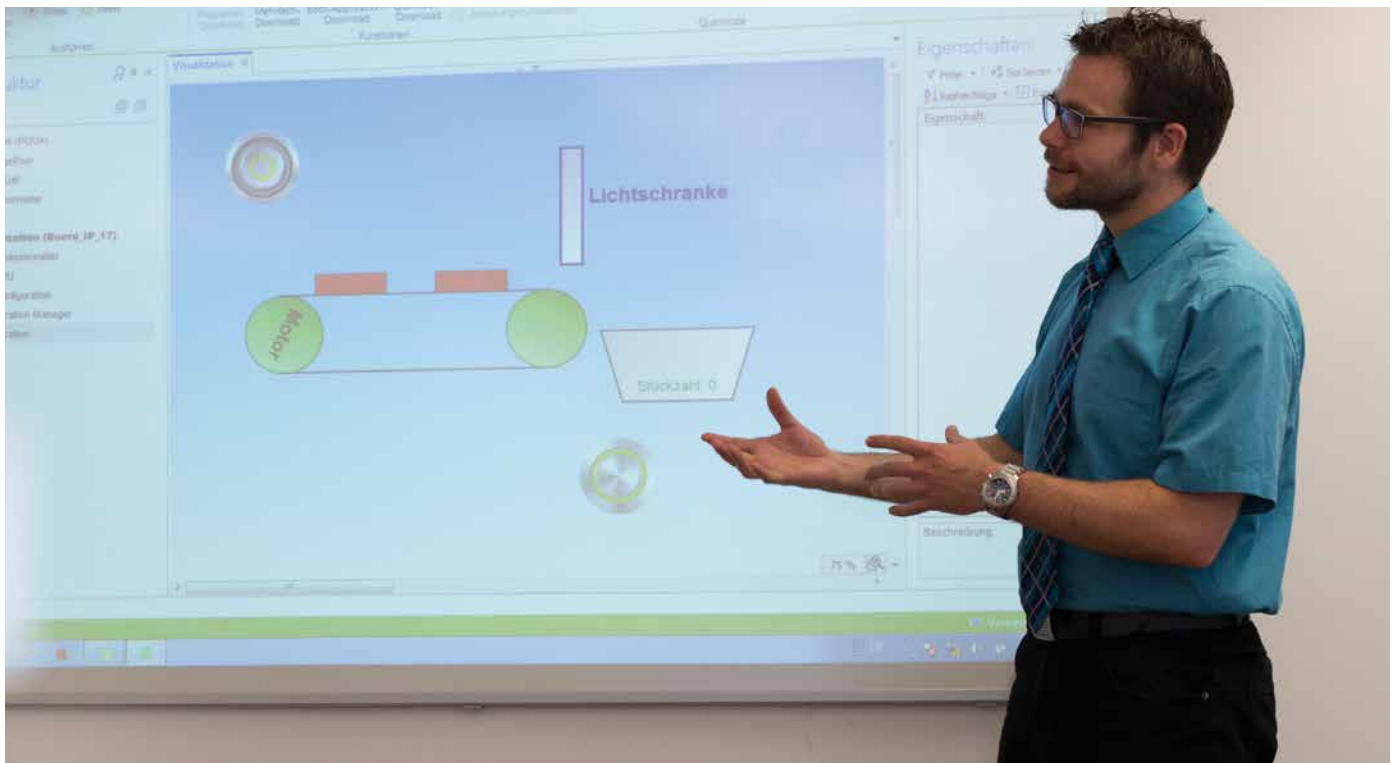
Frankfurt am Main, 18.12.2014


Im Auftrag Dipl.-Ing. (FH) Ralf Egner
Abteilungsleiter

Siehe Hinweise auf der Rückseite

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The small class sizes of WAGO training seminars ensures that no question goes unanswered and no one is overlooked.



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WAGO-Seminars

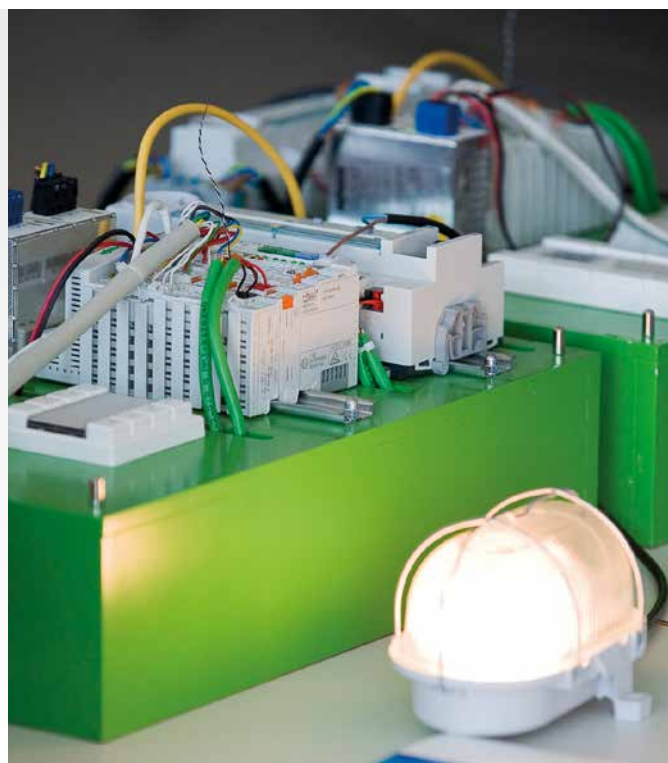
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Indexes and Addresses

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859-392	85	2042-341	575	2042-351	575
859-397	87	2042-1008	518	2042-1008	518
859-398	87	2042-1108	519	2042-1108	519
859-399	87	2042-3004	92	2042-3004	92
859-402	29	2042-3014	98	2042-3014	98
859-403	29	2042-3024	104	2042-3024	104
859-404	29	2042-3034	96	2042-3034	96
859-405	91	2042-3044	99	2042-3044	99
859-406	29	2042-3054	93	2042-3054	93
859-407	29	2042-3064	100	2042-3064	100
859-408	29	2042-3074	105	2042-3074	105
859-409	29	2042-3084	106	2042-3084	106
859-410	29	2042 Series		2042 Series	
859-500	90	2042-321	575	2042-321	575
859-501	581	2042-331	575	2042-331	575
859-525	90	2042-341	575	2042-341	575
859-702	209	2042-351	575	2042-351	575
859-706	214	2042-1008	518	2042-1008	518
859-708	210	2042-1108	519	2042-1108	519
859-712	207	2042-3004	92	2042-3004	92
		2042-3014	98	2042-3014	98
		2042-3024	104	2042-3024	104
		2042-3034	96	2042-3034	96
		2042-3044	99	2042-3044	99
		2042-3054	93	2042-3054	93
		2042-3064	100	2042-3064	100
		2042-3074	105	2042-3074	105
		2042-3084	106	2042-3084	106

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