Automation Technology

Full Line Catalog, Volume 3 – Edition 2021/2022

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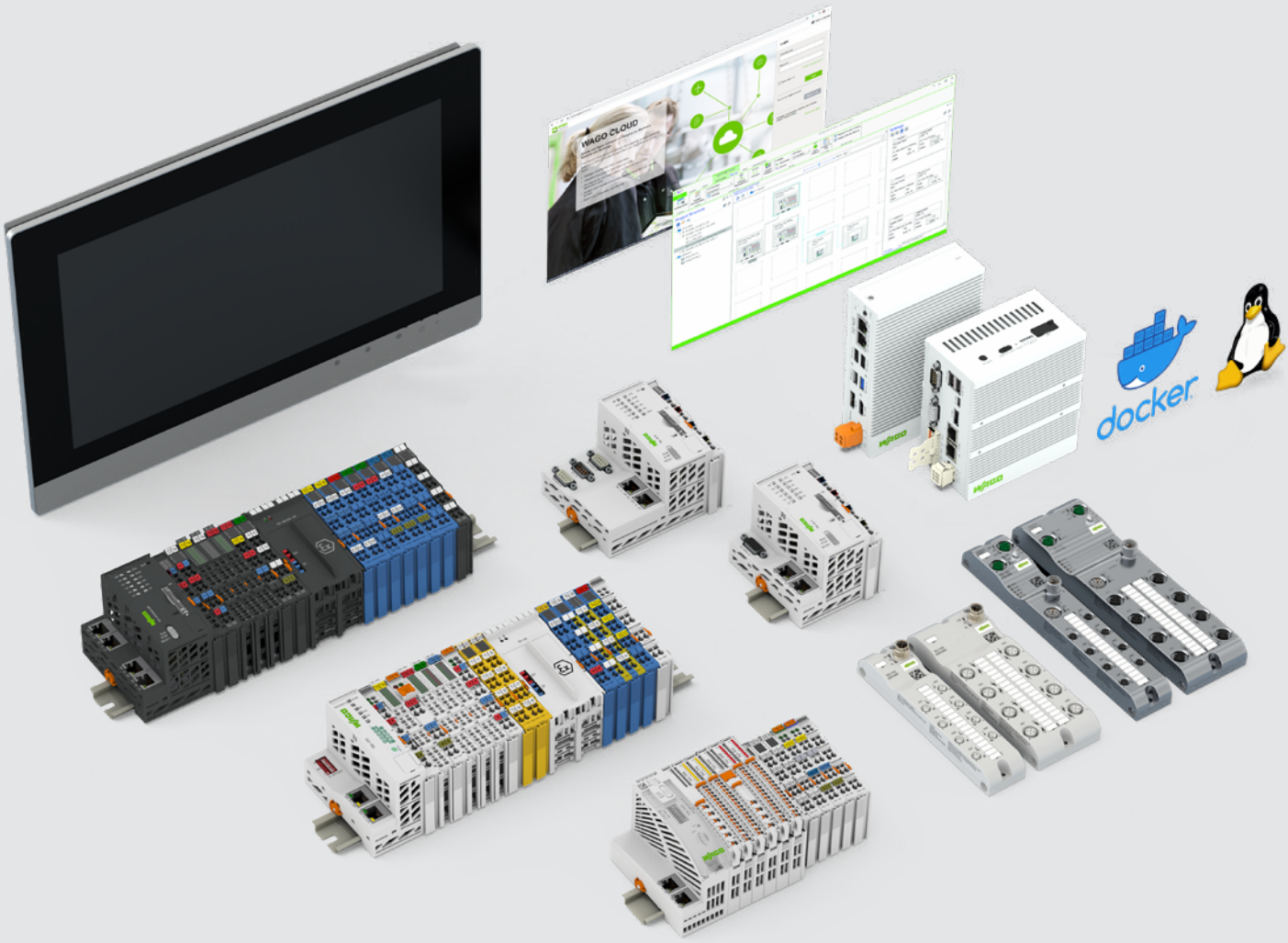


WAGO Full Line Catalogs

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 3, Automation Technology

WAGO Automation Technology

Solutions & Software

Solutions

- Cloud Solutions
- Reusable, customizable software applications

1

Engineering Software

- PC-based software
- Customized tools for every automation task

Runtime Software

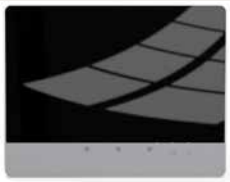
- Standard machine component
- Comprehensive, tested software modules for control, regulation, operation & monitoring

Operation & Monitoring Edge Computing

Touch Panels 600 Standard Line

- High-performance touch panels with resistive touch-screens
- 10.9 … 54.7 cm (4.3 … 21.5")
- Models include Control, Visu or Web Panels for display of *e!COCKPIT* visualizations

Touch Panels 600 Advanced Line



- High-performance touch panels with capacitive touch-screens and glass surfaces
- 18 … 54.7 cm (7 … 21.5")
- Models include Control or Visu Panels

Touch Panels 600 Marine Line

- High-performance touch panels with resistive touch-screens
- Ideal for marine applications
- 10.9 … 25.7 cm (4.3 … 10.1")
- Models include Control or Visu Panels

Controllers

Controllers PFC100/PFC200

5.1

- Maximum performance in a minimum space
- Also programmable in high-level languages based on Linux®
- Security packages with SSH and SSL/TLS
- Runtime system for CODESYS V2 (only PFC200) and V3

Controllers PFC200 XTR

5.2

- The advantages of WAGO's PFC Controllers combined with the capabilities for extreme environments:
- High processing speed
- Multiple interfaces
- eXTRemely robust and maintenance-free

Controllers 750

5.3

- Controllers for all prominent fieldbus systems
- Programmable to IEC 61131-3
- Readily combine with the modules of the WAGO I/O System 750

I/O Systems

I/O System Advanced

6

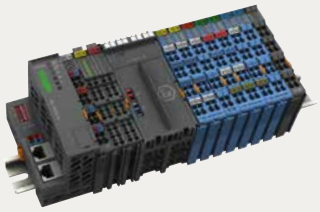
- Open, innovative and future-proof industrial automation
- Short reaction times and high signal transmission synchronicity
- Fast ETHERNET fieldbuses – EtherCAT®

I/O System – 750 and 753 Series

7

- Highly versatile
- More than 500 modules available
- Functional Safety
- Ex i

I/O System – 750 XTR Series



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For demanding applications where the following are critical:
- Extreme temperature resistance
- Immunity to electromagnetic interference and impulse voltages
- Vibration and shock resistance

Infrastructure

Industrial Switches

10

- Copper cable
- Fiber optic cable
- Ring redundancy

Radio Technology

11

- *Bluetooth*®
- WLAN
- EnOcean®

Sensor/Actuator Boxes

12

- M8 and M12 sensor/actuator boxes
- Passive signal acquisition and output at the machine level
- Fully encapsulated

Mobile Software (Apps)

- Machine operation and monitoring on tablet and smartphone

2

Touch Panels e!DISPLAY 7300T

- Touch panels with resistive touchscreens
- 10.9 … 25.7 cm (4.3 … 10.1")
- Versions include Web Panels for display of CODESYS V2 or *e!COCKPIT* visualizations

3

Edge Computing

- Versions include Edge Controllers or Edge Computers
- Perfect in-the-field data usage
- Easy cloud connection
- Equipped for high security

4

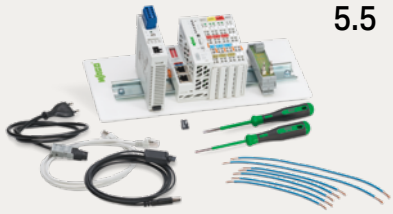
Controllers 750 XTR

5.4

For demanding applications where the following are critical:
- Extreme temperature resistance
- Immunity to electromagnetic interference and impulse voltages
- Vibration and shock resistance

Starter Kits

5.5



To get you up and running quickly, we offer starter kits to suit the most diverse applications:
with Controller PFC100
with Controller PFC200
with Controller 750 KNX IP
with Touch Panel 600

5

I/O System Field

9

Automate and network modular machines for the future:
- Ethernet-based fieldbus standards (EtherCAT®, EtherNet/ IPTM, PROFINET)
- Integrated Bluetooth interface (Android/iOS App), OPC UA Server, Webserver
- IO-Link master and devices

Accessories
Tools

13

Solutions

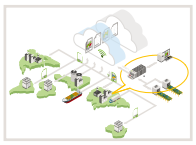
Cloud Solutions

- "Internet of Things" (IoT) applications

Software Applications

- Reusable, customizable solutions

Solutions
Cloud Solutions, Software Applications



Solutions
General Product Information

1

We Make It Simple!

WAGO products are at home in many industries. Tailored solutions make it easy for the customer to accomplish the task using WAGO products – in the form of libraries and complete products, regardless of industry.

Cloud Solutions

Digitalization and networking offer great opportunities for every company. To use them, every company has to do its homework – in fact, the challenges are just as varied and diverse as the companies themselves. While there is no such thing as an all-in-one solution, smart products, methods and partners will help you advance digitalization in your business in a way that benefits all involved.

WAGO shapes the digital future with you. Cloud solutions have become popular industry staples. They link the real and digital worlds, allow efficient use of production-related data and simplify cross-site networking of global communication structures. This creates many new opportunities for the manufacturing industry – especially for plant availability and process optimization.

SOFTWARE M&M
BY PEOPLE WITH PASSION
Member of WAGO Group

Scalable Solution Thanks to Our Reliable Partner

With M&M as a member of the WAGO Group, WAGO has a partner for holistically developing industrial and technical software solutions, which also allows customer-specific applications to be implemented. We collaborate closely with Microsoft to implement corresponding solutions in the cloud and IoT, primarily using Azure.

Application Software

Prepared applications make it easy to use WAGO products. We offer a range of complete industry-specific solutions such as ***flex***ROOM®, that dramatically shorten time to completion. But also industry-independent universally usable solutions are available (closed or adaptable) and are optimally adapted to the respective hardware.

Standardized Applications

The better prepared, the easier it gets. For many applications, we offer configuration via web browser with a standard PC without special software. Thanks to a flexible software architecture, it is also possible to realize individual configurations. Here we combine the advantage of reusing a standardized and field-proven solution with customization via parameterization instead of individual programming. This saves costs by shortening the time required and makes commissioning easy!

Tailor-Made Applications

If a standard solution does not fit, we can create a highly tailored, customer-specific approach that's as unique as your application. Start by contacting us, we'll be happy to assist you.

Your Benefits:

- Solutions for digitalization
- Support for Industry 4.0/Internet of Things (IoT)
- Prepared field-tested applications for solving standard requirements in various industries
- Support with individual adjustments

Solutions
General Product Information

Cloud Solutions

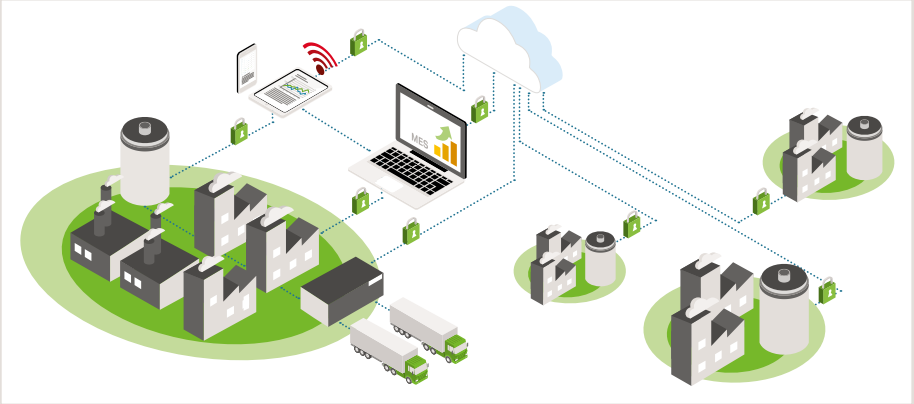
WAGO's universal cloud solutions are suitable for a wide variety of applications. These solutions offer:

WAGO Cloud:

- Collecting and saving data
- Setting up individual dashboards
- Central condition monitoring and alarm handling
- Central data visualization via location-independent access

Cloud Connectivity:

- Establishing connections
- Secure communication



Application Software – Industry-Independent Solutions

Many solutions can be used regardless of industry, such as our energy management. For our modular energy data acquisition, we rely on an open and flexible system that you can easily install and extend. It doesn't matter if you are looking for an individual solution or want to use our standard solution.

Building Automation

Whether you are planning lighting installations and automation in your office building, retrofitting a heating, ventilation and air-conditioning system or involved with room automation, WAGO helps implement your requirements in buildings, both in office and administrative buildings, as well as in production and warehouses, retail or infrastructure buildings.

Power Engineering

Energy suppliers need to change the way they think. Instead of merely selling green energy, they also need to organize and market the flexibility that is required for maintaining stability on the electrical grid. This means that the energy system needs to be controllable from production to consumption using intelligent communication networks. WAGO supports digitizing the energy sector and designing smart grids with state-of-the-art control and measurement technology, along with software solutions that enable a simple and secure connection to the cloud.

WAGO Cloud

1

Collect, Analyze and Manage Data Centrally

WAGO Cloud lets you collect and centrally manage data from various machines.

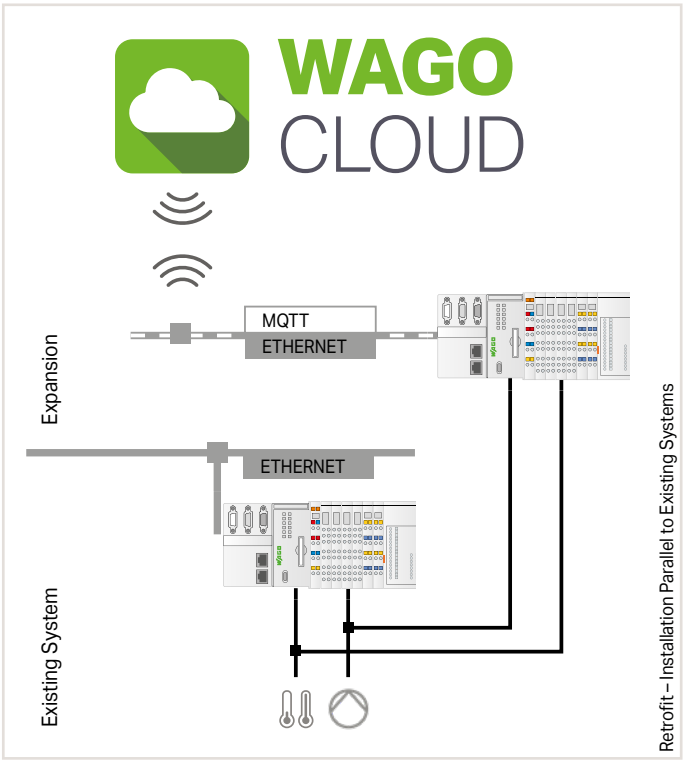
It also allows you to manage and monitor WAGO's controllers along with their data and applications. WAGO Cloud is hosted on Microsoft's Azure Cloud. Combining simplicity with usability, WAGO Cloud was designed so that people without IT experience can use it.

The cloud service is available online at https://cloud.wago.com/. After registering for free and linking to WAGO's controllers, you can get started in just a few minutes.

How does machine data get to WAGO Cloud?

A WAGO PFC Controller or Touch Panel acts as a gateway, collecting and sending data to WAGO Cloud. Users log into their user interface on the Web portal, where they can use various applications and access functions like visualizations, controller and user management and status monitoring. They can also activate alarm functions and use them to automatically send email notifications if defined limit values are exceeded, for example. Data can be graphically visualized, evaluated and exported as needed.

Do you need to restrict and select what data is sent to the cloud? No problem! Configure the WAGO PFC Controller and specify what data to send to the cloud (or not) via IEC programming.



Illustrations: Data Transfer to WAGO Cloud
The WAGO PFC Controller acts as a gateway for existing systems that it can easily expand. Various protocols allow the controller to collect and transmit data to the WAGO Cloud via TLS-encrypted MQTT connection. If a new system is installed and the WAGO PFC Controller is used, it can send the data directly to the cloud.

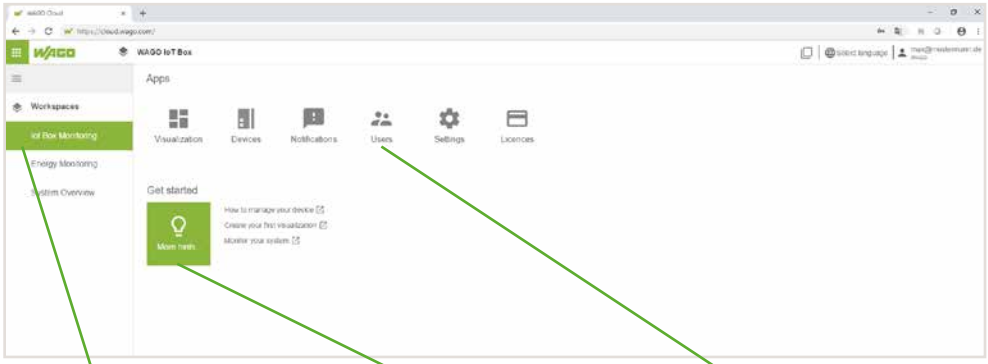
What advantages does WAGO Cloud offer?

- **Simplicity**
  The solution is intuitive thanks to a clear functional range. Within minutes, you can send data to the cloud, without extensive IT expertise.
- **Flexibility**
  Customize your cloud solution at any time and from any place. For instance, you can double your number of controllers from one day to the next without affecting performance and availability. Would you like a special expansion? We offer that as a project service through customized cloud expansions.
- **Everything from a Single Source**
  Take advantage of the benefits of WAGO Cloud – software as a service. Save time by leaving the tasks of infrastructure, security platform and application management to WAGO.

WAGO Cloud

App Overview:

All functions at a glance thanks to an intuitive app structure



Quick Access:

- Quickly discover what you are looking for – you have all your workspaces in view.

Easy to Use:

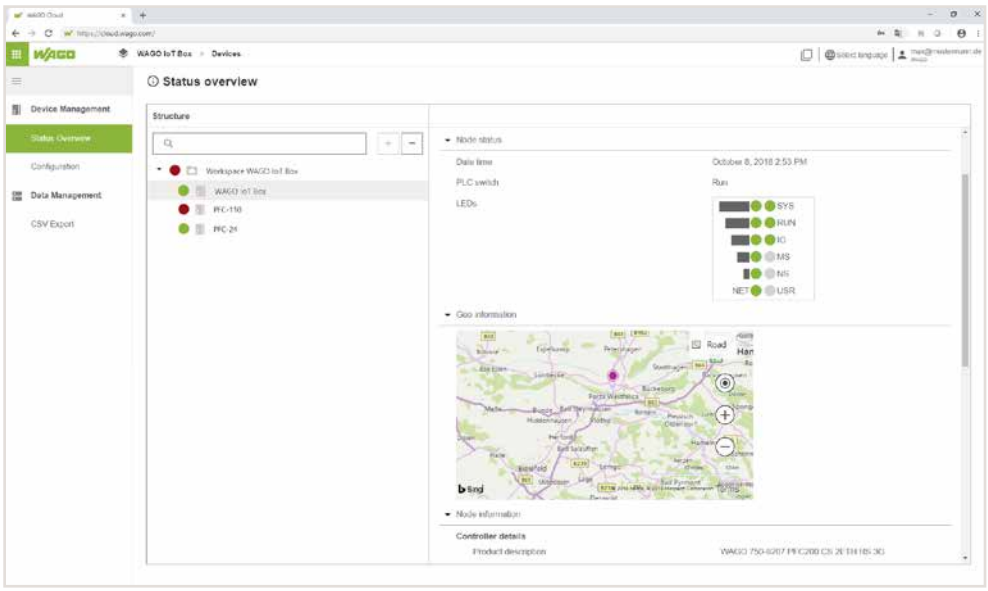
- Let us guide you in creating cloud projects.

Relevant Functions:

- Only see the features that you have access to.

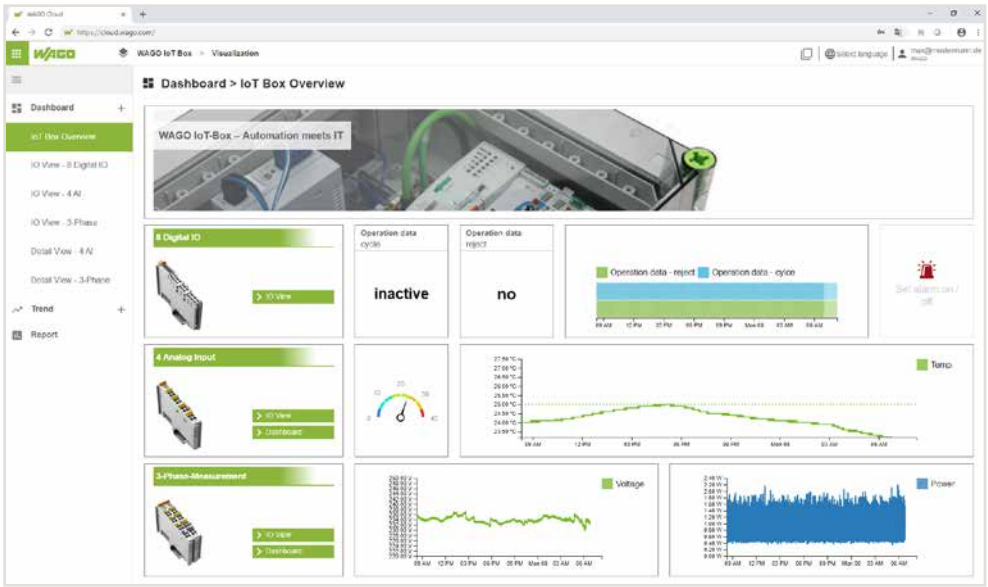
Controller Status Overview:

See your connected and disconnected controllers, as well as relevant connection details.



Dashboard:

Create your own custom dashboard, use both graphics and trends.



WAGO Cloud

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What kind of services can I use on WAGO Cloud?

WAGO Cloud is a universal, industrial-strength data logger with data visualization. It allows customizable dashboards and analyses to be created quickly and easily in the cloud. Use interfaces via REST and CSV data export for further processing of data, or use them as a data supplier to perform detailed analyses in other systems, for example. Monitor controller statuses and receive notifications if specified limit values are exceeded.

How can I use the functions?

Try WAGO Cloud for 30 days with no commitment to see if it's right for you.

The cloud service is available online at https://cloud.wago.com/. After registering for free and linking to WAGO's controllers, you can get started in just a few minutes.

After that, you book license points with a prepaid model, via our WAGO eShop for example, and simply redeem them in the cloud. Transparent billing management in the cloud allows you to fully monitor the current and anticipated scope of the functions used. When your license points are almost depleted, you will receive a notice to reload your points account soon.

You can find an overview of the functions we currently offer in the following table. There are various tiers for each individual function – depending on how many components you need – such as the number of connected controllers.

	Trial Period	• Try WAGO Cloud for free for 30 days (limited test points). • Points account may be exceeded after the trial period.

	Functions		
Data Management	Data Package	• Connect the WAGO PFC Controller to the cloud. • Transfer data from the controller to the cloud. • Mount devices and data. • Visualize data.	• Basic package, required for using WAGO Cloud • Minimum purchase: 50 license points/month • Volume-dependent, decreasing license point consumption
	Restful API	• Provide data for other cloud services and customer systems.	• Volume-dependent, decreasing license point consumption
Device Management	Firmware & Application Update	• Select/download firmware catalog. • Manage your own firmware application catalog. • Replace firmware on the device. • Install application updates.	• 1 license point/update
	Remote Visu Access	• Access local configurations and visualizations remotely (diagnostics, monitoring and remote maintenance).	• 10 license points/hour
	User Management	• In a customer area, up to 10 users have free access. More can be booked upon request.	

Item Description	
	Item No.
WAGO Cloud; 100 license points	**2759-1061/651-010**
WAGO Cloud; 500 license points	**2759-1061/651-050**
WAGO Cloud; 1000 license points	**2759-1061/651-100**

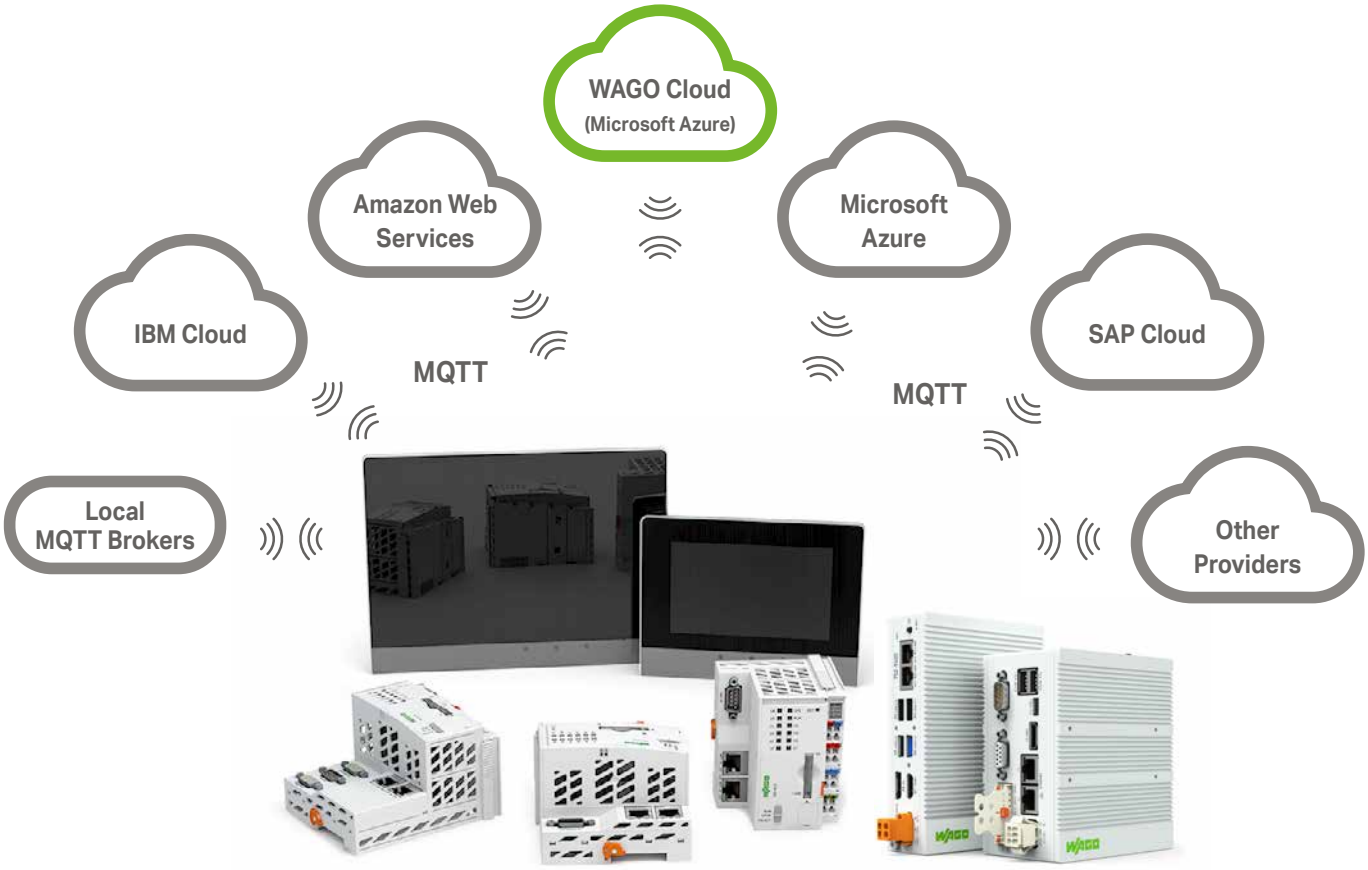
Redeem license points at: https://cloud.wago.com/

Cloud Connectivity via MQTT

Recording, digitizing and linking data profitably...

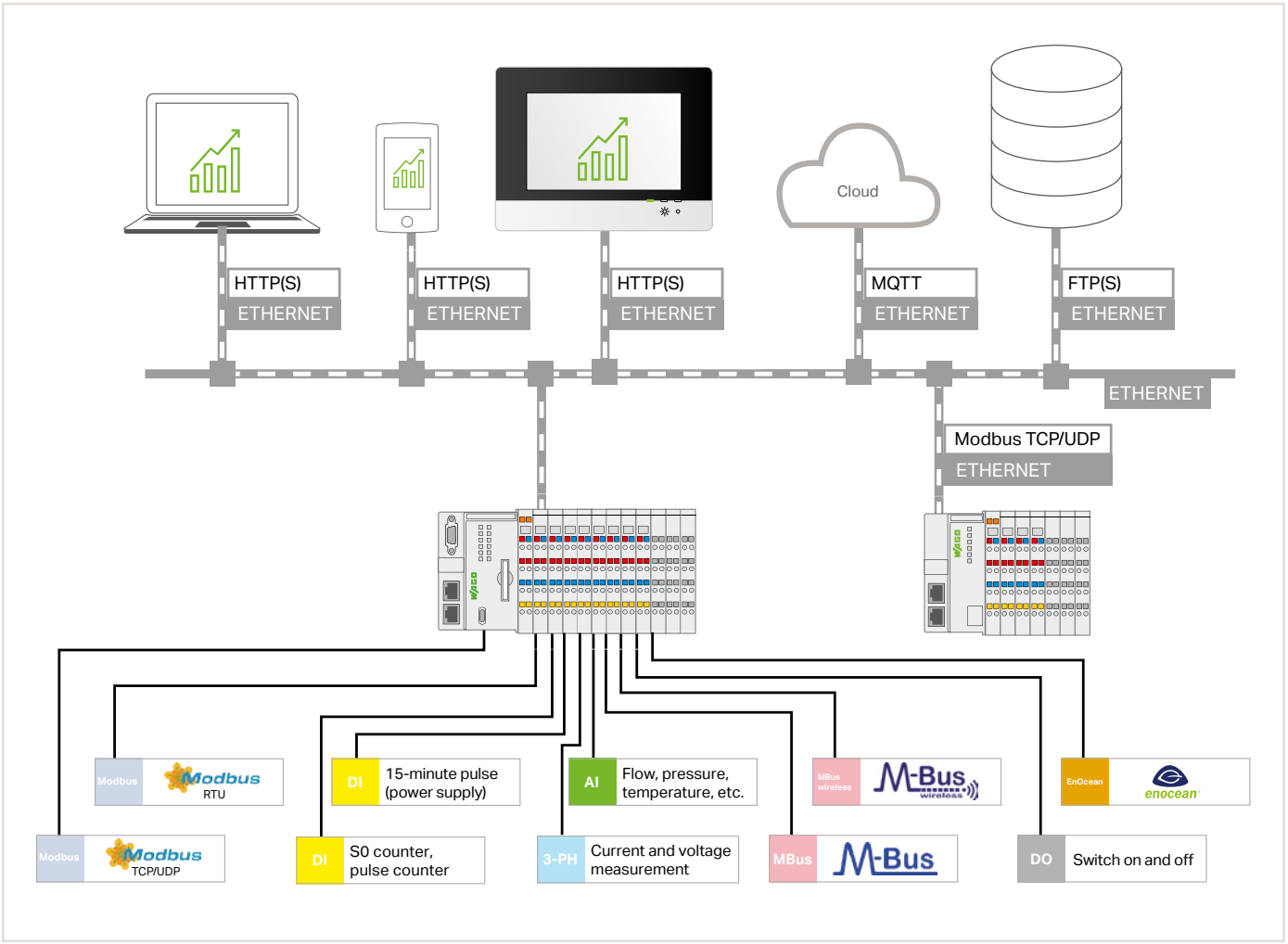
...this is the core concept behind Industry 4.0. Field level connection is established with the open WAGO I/O System 750, 750 XTR or Advanced, and a WAGO PFC Controller or Touch Panel 600 sends data to the cloud or a local MQTT broker. Once in the cloud, data can be aggregated and used for analysis. This capability creates tremendous added value for your company – whether it's increasing the efficiency of in-house production, implementing energy management in buildings or developing additional end-customer services.
Existing systems also become IoT-ready, making them future-proof. Communication between PFCs and cloud suppliers is performed via the MQTT protocol and encrypted via TLS 1.2.
Cloud connection data is configured via Web-Based Management (WBM). WAGO *e!COCKPIT* includes appropriate libraries for specifying the variables for transfer to the cloud in the PLC program, allowing the PLC programmer to maintain complete control. Controller information, such as run/stop, connection status and device information, can also be transferred to a cloud solution with cloud connectivity or distributed via MQTT broker.

With a wide variety of interfaces, WAGO's controllers also provide the perfect foundation for an IoT gateway.
They can collect numerous field signals, communicate in many industrial protocols and even enable cloud connection of sensors and actuators that themselves have no Web interface. Thanks to the standardized MQTT protocol, it is possible to connect to cloud providers such as Microsoft Azure, Amazon Web Services, IBM Cloud and SAP Cloud. Of course, other MQTT brokers or solutions like WAGO Cloud can also be connected. Cloud connectivity has been a standard feature of the PFC Controllers since firmware version 11; the required library has been included in *e!COCKPIT* since version V1.4. With firmware version V12 and higher, WAGO's Touch Panels 600 supply the connection; from version V1.5 on, *e!COCKPIT* contains the required libraries.



Cloud connectivity is possible with all PFC100 and PFC200 Controllers, Touch Panels 600 and Edge Devices.

WAGO Energy Data Management



With WAGO's Energy Data Management solution, you can record and visualize your measurement data for different media and influencing variables (as well as the key figures calculated from it) in no time. Continuous acquisition and monitoring provide the basis for resource-efficient energy usage – the environment will thank you, and your operating costs will be minimized. As an added bonus, conformity with DIN EN 50001 for energy evaluation is part of the package.
WAGO Energy Data Management consists of Web-based application software combined with a modular control system. It records measurement data for different media along with influencing variables for energy monitoring – all are processed for additional analysis, archiving and reporting. The software automatically detects different signals from the connected meters and sensors, making them available to additional energy analysis tools via simple parameter settings. This insight guides you in optimizing energy consumption in your building or production facility – either locally or across the globe.

Your Benefits:

- Ready to go in a few easy steps
- No programming experience required
- Integrated cloud connectivity

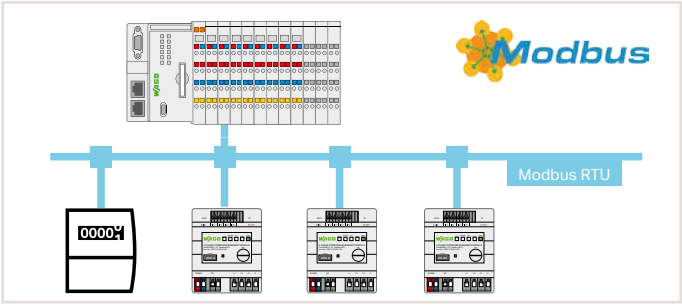
Item Description	
	Item No.
Energy Data Management Application; Single License; Online Activation	**2759-206/261-1000**
Energy Data Management Visualization; Single License; Online Activation	**2759-207/271-1000**
Compatible Controllers/Touch Panels	
Controller PFC200; G2	**750-821x**
Controller PFC200; G2; XTR	**750-821x/000-040**
Touch Panel 600 Standard Line; PIO3	**762-43xx/8000-002**
Touch Panel 600 Advanced Line; PIO3	**762-53xx/8000-002**

A single license allows installation on one controller/touch panel.
One license per controller/touch panel is required.

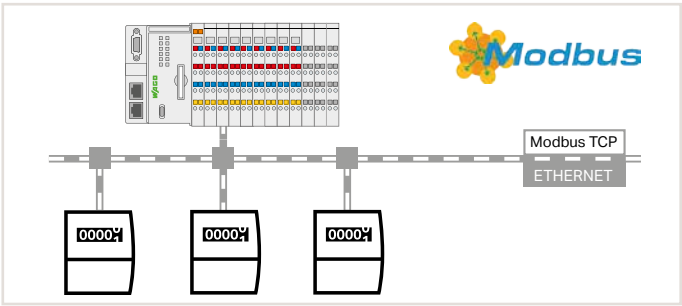
Delivery type	License certificate by email (software available for download)
Data sheet and additional information, see:	wago.com/2759-206/261-1000 wago.com/2759-207/271-1000 wago.com/energy-data-management

The "Energy Data Management" software is a pre-programmed application based on the *e!COCKPIT* Development Environment and can be used for both PFC200 G2 Controllers or Touch Panels 600.

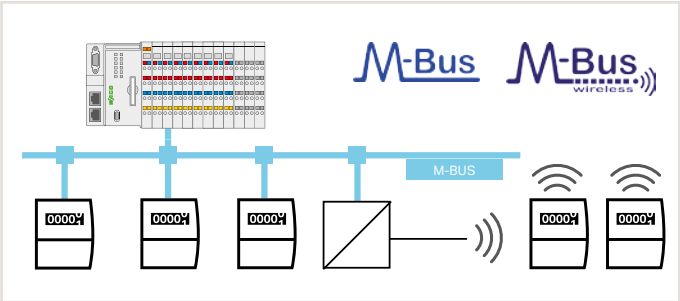
To download the application and license to the device, WAGOupload software is required, which can be obtained free of charge from the WAGO homepage. Internet connection may be required for license activation.



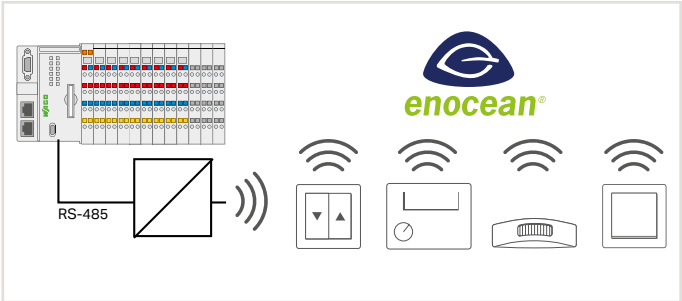
Energy Data Collection with Remote Devices via Modbus RTU



Energy Data Collection with Remote Devices via Modbus TCP



Measured Value Acquisition via M-Bus

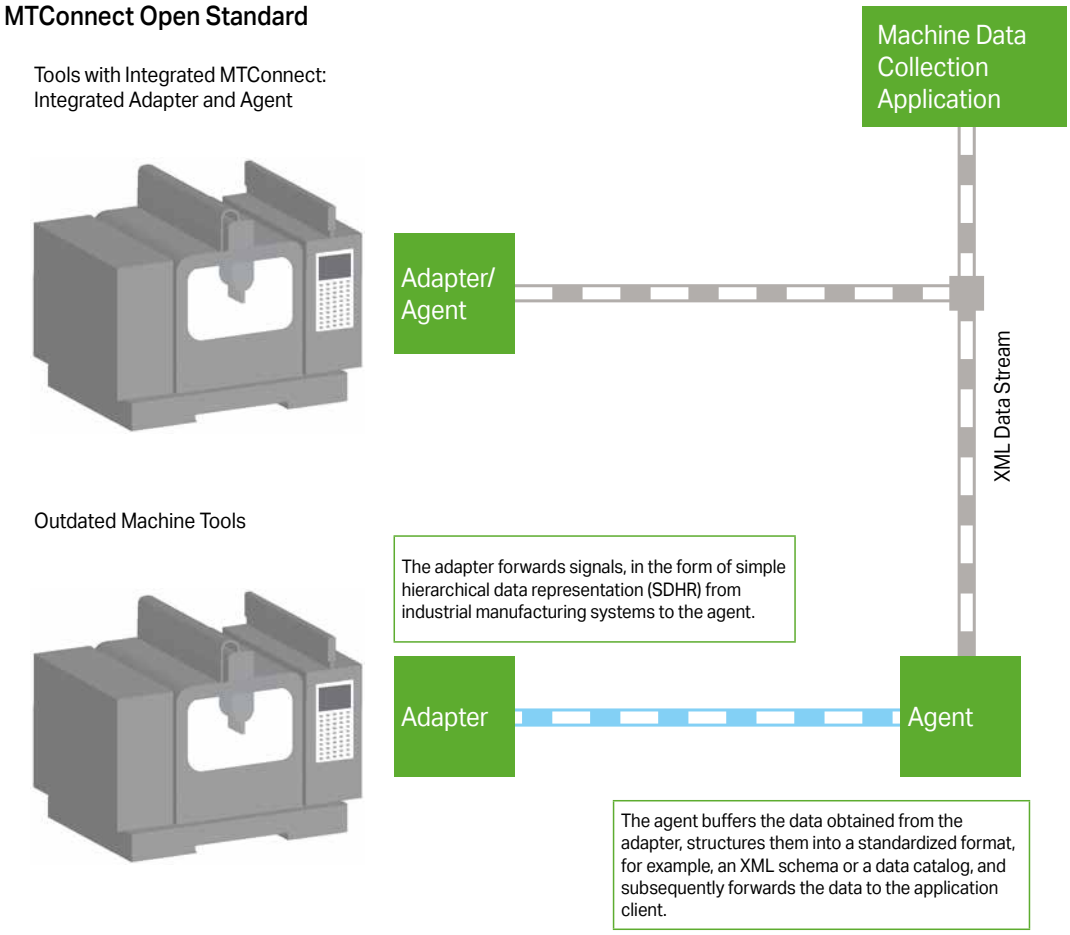


Data Acquisition via EnOcean®

The products listed below are typically used in conjunction with the "Energy Data Management" Application. Detailed information about the products, as well as other variants and accessories, can be found in our Full Line Catalog, Volume 3 or Volume 4.

Energy Data Management		
Required Products	**Description**	**Item No.**
Software Licenses		
WAGO Cloud; 100 license points	Licenses to use WAGO Cloud as a data collector with data visualization; the number of required license points depends on the functions used and the data volume (for details see www.wago.com/cloud).	2759-1061/651-010
WAGO Cloud; 500 license points		2759-1061/651-050
WAGO Cloud; 1000 license points		2759-1061/651-100
Digital I/O Modules		
4-Channel Digital Input; 24 VDC; 3 ms	E.g., for recording the PSC effective power pulse	750-402
4-Channel Digital Output; 24 VDC; 0.5 A	E.g., for switching outputs when alarm thresholds are reached	750-504
8-Channel Digital Output; 24 VDC; 0.5 A		750-530
Analog I/O Modules	Recording temperature, pressure, flow meters and other analog signals	
8-Channel Analog Input; Resistance Measurement; Adjustable		750-451
8-Channel Analog Input; 0/4 … 20 mA; Single-Ended		750-496
8-Channel Analog Input; 0 … 10 VDC/±10 V; Single-Ended		750-497
2-Channel Analog Input; 0 … 20 mA; Differential Input		750-452
4-Channel Analog Input; Voltage/Current; Differential Input; Electrically Isolated Channels		750-471
Power Measurement Modules	Power measurement directly connected to the controller	
3-Phase Power Measurement Module; 480 VAC; 1 A	With split-core or plug-in current transformers	750-494
3-Phase Power Measurement Module; 690 VAC; 1 A	With split-core or plug-in current transformers	750-495
3-Phase Power Measurement Module; 690 VAC; 0.5 A	With split-core or plug-in current transformers	750-495/000-001
3-Phase Power Measurement; 690 VAC; RTC	With Rogowski coils	750-495/000-002
Communication and Technology Modules		
M-Bus Master	Reading in separately recorded meter readings via M-Bus	753-649
RS-232/RS-485 Serial Interface	Reading in data via RS-232 or RS-485 gateways (e.g., EnOcean®)	750-652
2-Channel Up/Down Counter; 24 VDC; 16-bit; 500 Hz	Recording S0 and pulse counters	750-638
Power Supplies		
Compact Power Supply; Switched-Mode; 1-Phase	24 VDC output voltage; 2.5 A output current	787-1012
Pro 2 Power Supply; 1- or 3-Phase	24 VDC output voltage; 5 … 40 A output current	2787-2xxx
Distributed Power Measurement Modules	For distributed energy acquisition via Modbus RTU	
3-Phase Power Measurement Module; Input: Current Transformer (1 A)		2857-570/024-001
3-Phase Power Measurement Module; Input: Current Transformer (5 A)		2857-570/024-005
3-Phase Power Measurement Module; Input: Rogowski Coil		2857-570/024-000
Gateways		
STC65-RS-485 EVC EnOcean® Receiver/Sender with RS-485 EVC Interface	Gateway for the acquisition of EnOcean® signals	2852-7101
WLAN ETHERNET Gateway; 2.4 GHz	Gateway for creating wireless ETHERNET connections	758-916

Machine Data Collection with the digitalTAP™ Software, Powered by MTConnect



WAGO offers an economical solution for integrating the machine data of existing systems into higher-level analytic software applications.
WAGO's DigitalTAP™ captures your machine's information and converts it into digital signals that can be used by analytic and data logger applications. The solution provides real-time device data in a standardized format for every machine type. This solution requires no programming. The user merely needs to configure the wired inputs via web visualization tool. Each input can be assigned a unique name individually with its own parameters, such as units and scaling range. These configuration parameters are stored automatically in the WAGO Controller and are available immediately.

Through use of the open, license-free MTConnect® standard, the machine information is formatted in a standardized table and uses proven Internet protocols for data transport.

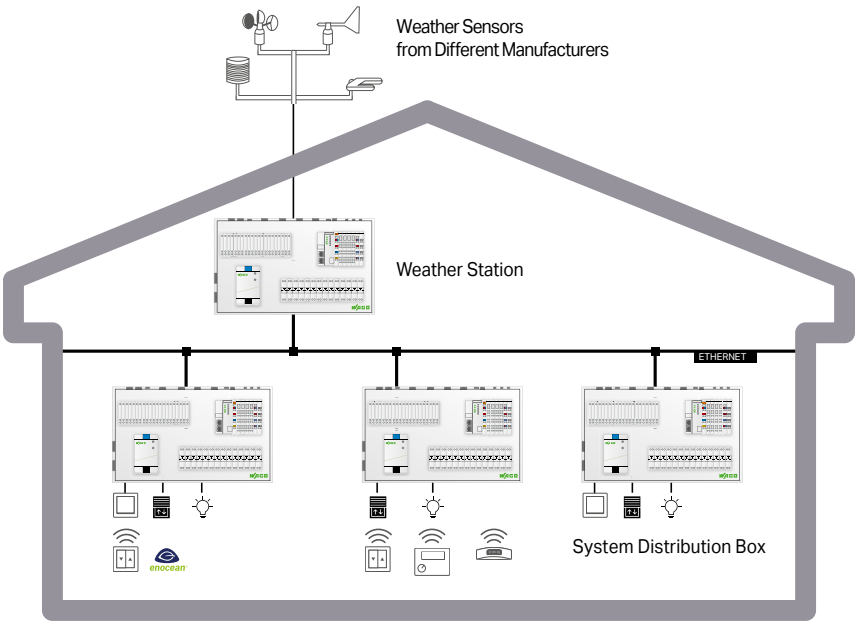
Machine Data Collection with MTConnect			
	Components		Item No.
Application Controller	Controller PFC100; FG0; 2 x ETHERNET		750-8101/000-010
	digitalTAP™ Application Software		Download: wago.com/applica-tioncontroller
Supported Modules	Digital Input/Output Modules	8-Channel Digital Input; 24 VDC; 3 ms	750-430
		4-Channel Digital Input; 24 VDC; 3 ms; 2-Wire Connection	750-432
		4-Channel Digital Input; 24 VDC; 0.2 ms; 2-Wire Connection	750-433
		8-Channel Digital Input; 24 VDC; 3 ms; Low-Side Switching	750-436
		16-Channel Digital Input; 24 VDC; 3 ms	750-1405
		8-Channel Digital Output; 24 VDC; 0.5 A	750-530
	Analog Input Modules	2-Channel Analog Input; 0 … 20 mA; Differential Input	750-452
		2-Channel Analog Input; 4 … 20 mA; Single-Ended	750-466
		4-Channel Analog Input; 4 … 20 mA; Single-Ended	750-455
		8-Channel Analog Input; 0/4 … 20 mA; Single-Ended	750-496
		2-Channel Analog Input; 0 … 10 VDC; Single-Ended	750-467
		8-Channel Analog Input; 0 … 10 VDC/±10 V; Single-Ended	750-497
		4-Channel Analog Input; Resistance Measurement; Adjustable	750-450
		8-Channel Analog Input; Resistance Measurement; Adjustable	750-451
		2-Channel Analog Input; Thermocouple K; Diagnostics; Adjustable	750-469/003-000
		8-Channel Analog Input; Thermocouple; Adjustable	750-458
		3-Phase Power Measurement; 480 VAC 1 A	750-494
	Function and Technology Modules	2-Channel Vibration Velocity/Bearing Condition Monitoring VIB I/O Module	750-645
Other Modules	End Module		750-600

750-8101/000-010

MTConnect

Get started with the Smart Factory comfortably and efficiently with digitalTAP(tm) – powered by MTConnect.

WAGO *flex*ROOM® Application
A Flexible Room Solution



Our Solution

Planning, commissioning and building operation must demonstrate maximum efficiency and a high degree of adaptability. Pre-configured programs and pre-defined hardware significantly streamline planning and commissioning. The more applications created within a project, the greater the benefit. Flexible building operation (e.g., conversions and room remodeling) via special maintenance programs eliminates external service costs because the user can make their own changes.
Install, commission and configure according to project specifications – WAGO ***flex***ROOM® combines these strengths into a standard module. The integrated control unit and application software are precisely tailored to room requirements.

Parameter Setting

For each room, parameters can be individually stored for lighting, shading and room control. All parameters are cyclically saved either directly in the distribution box or on a separate computer via network connection. A higher-level management station accesses the distribution box parameters via the open Modbus TCP/IP protocol. This ensures that all modifications can be implemented on site or via the management station. BACnet or KNX IP systems can also be connected via Modbus TCP/IP.

Configuring – Not Programming

Each WAGO ***flex***ROOM® Distribution Box has a Web interface. Both the commissioning technician and end user can configure the controls for each room via Web browser, regardless of the user's location and the distribution box in use. Complete wall relocations, room assignments, lighting and shading groups can be changed from the parameter interface. No additional software is required.

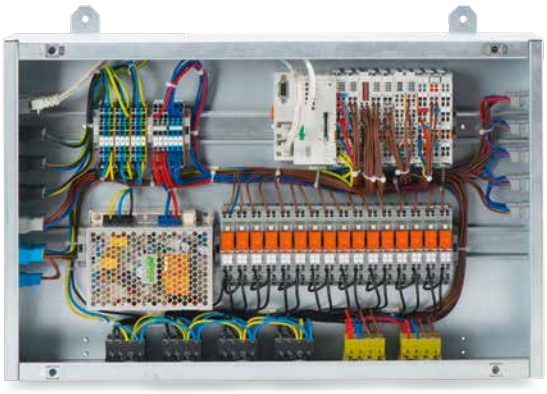
Item Description	
	Item No.
flexROOM Application; Single License; Online Activation	2759-2110/261-1000
Weather Station Application; Single License; Online Activation	2759-241/261-1000
Compatible Controller	
Controller PFC200; G2; 2ETH RS	750-8212

A single license allows installation on one controller.
One license per controller is required.

Delivery type	License certificate by email (software available for download)
Data sheet and additional information, see:	wago.com/2759-2110/261-1000 wago.com/2759-241/261-1000 wago.com/room-automation

The "***flex***ROOM" or "Weather Station" software is a pre-programmed application based on the ***e!COCKPIT*** Development Environment and can be used for PFC200 G2 Controllers.

To download the application and the license to the device, the WAGOupload software is required, which can be obtained free of charge from the WAGO homepage. Internet connection may be required for license activation.



Benefits:

The distribution box is delivered ready to operate and can be installed directly in a suspended ceiling or a sub-floor. Room segment configuration is performed directly in the distribution box via standard Web browser. No expert knowledge is required to configure rooms or convert them later. Several ***flex***ROOM® Distribution Boxes can be wired into a building automation network via ETHERNET to automate a building area, a floor or an entire office section. A standard Web browser also establishes communication between the distribution boxes. If electrical distribution boxes are present, ***flex***ROOM® components can also be installed or retrofitted during facility renovation. Space conversion costs are reduced with ***flex***ROOM® because expenses are transparent and predictable.

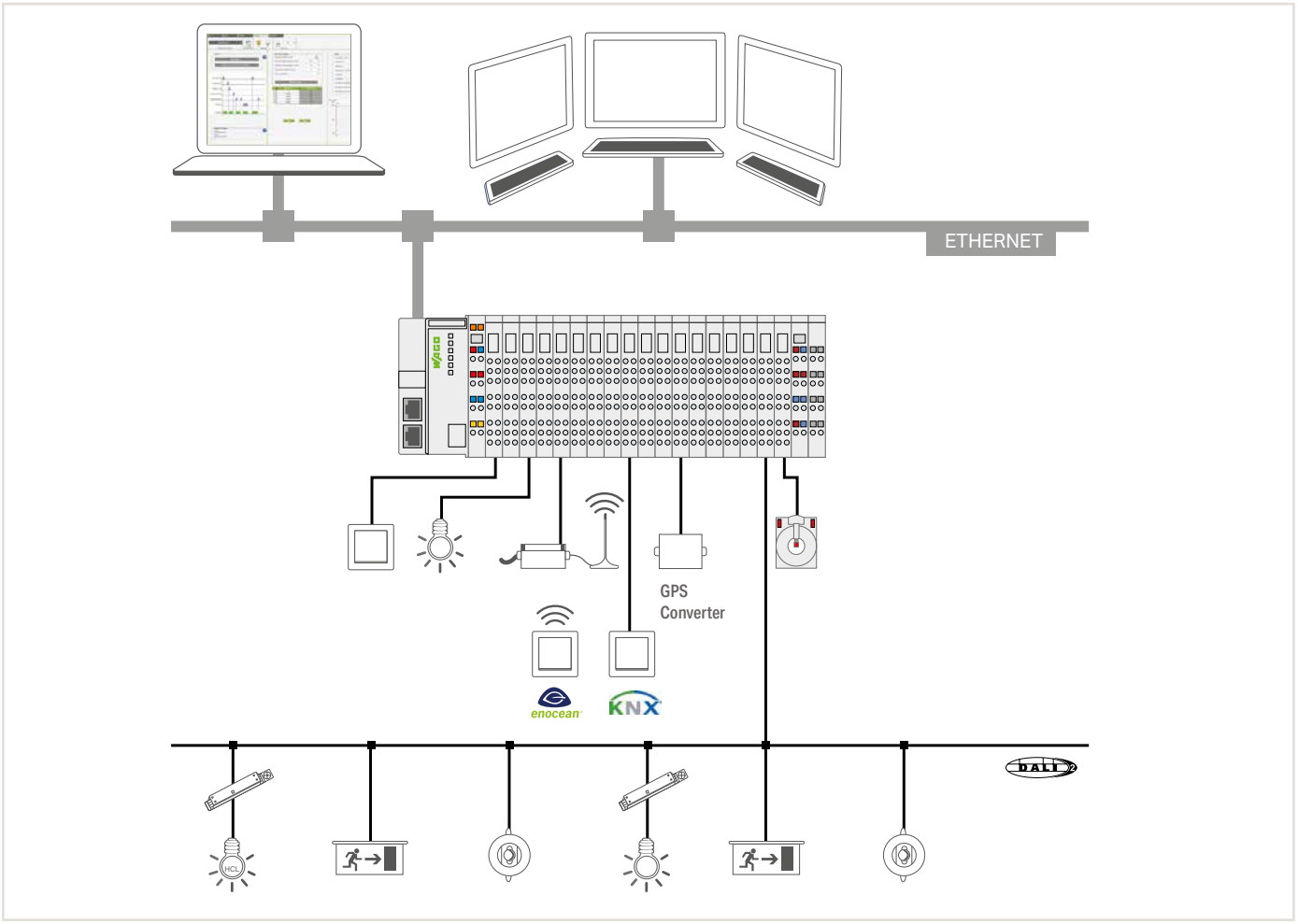
Number of Room Segments	Subsystems (support for other subsystems upon request)				Office Areas (Segments)					Special Areas					
					Inputs		Outputs			Inputs			Outputs		
	DALI	SMI	EnOcean	KNX	Multi-sensors (conventional)	Dew point detectors	Lighting (DALI)	Sun protection (SMI)	Heating/cooling	Light switches	Sunblind switches	Dew point detectors	Lighting (relays)	Sun protection (relays)	Heating/cooling
8 segments	x	x	x	x	x	8	x	x	8	-	-	-	-	-	-
8 segments and 4 special areas	x	x	x	x	x	8	x	x	8	8	4	4	4	4	4
16 segments	x	x	x	x	x	16	x	x	16	-	-	-	-	-	-
16 segments and 4 special areas	x	x	x	x	x	16	x	x	16	8	4	4	4	4	4
24 segments	x	x	x	x	x	24	x	x	24	-	-	-	-	-	-
24 segments and 8 special areas	x	x	x	x	x	24	x	x	24	16	8	8	8	8	8

Note: The table displays only a portion of the different ***flex***ROOM® Distribution Box versions that are available. For more information, please visit www.flexROOM.com.

The products listed below are typically used in conjunction with the "***flex***ROOM" Application. Detailed information about the products, as well as other variants and accessories, can be found in our Full Line Catalog, Volume 3 or Volume 4.

flexROOM® Application		
Required Products	**Description**	**Item No.**
I/O System		
Serial Interface Module RS-232/RS-485	Connects to devices with a serial interface (e.g., weather sensors, EnOcean receivers)	750-652
End Module	Properly terminates the I/O bus	750-600
Power Supply 24 VDC, 2.5 A	Supplies both controllers and modules	787-1012
I/O Modules		
Digital Input Modules	Connect to push-buttons, switches and sensors with a potential-free contact	75x-4xx, 750-14xx
Digital Output Modules	Connect to digital actuators and relays	75x-5xx, 750-15xx
Relay Module	For lamp loads	788-354
Relay Module	For sunblind actuators	788-304
Analog Input Modules	Connect to sensors with analog output signal (0 ... 10 V)	75x-4xx
Analog Output Modules	Connect to actuators with analog control signal (0 ... 10 V)	750-5xx
DALI		
DALI Multi-Master Module	Connects to a maximum of 64 DALI actuators (ECGs) and a maximum of 16 DALI multi-sensors (max. 64 sensor addresses)	753-647
DALI Multi-Master DC/DC Converter	Supplies (24 VDC/18 VDC) one DALI Multi-Master Module	753-620
Power Supply to DALI Multi-Master	Supplies a maximum of five DALI Multi-Master Modules	787-1007
DALI-2 Certified Sensors and other DALI Sensors	DALI compatibility list available at www.wago.com/room-automation	
SMI		
SMI Master	Connects to a maximum of 16 SMI drives (230 VAC)	753-1630
SMI Master LoVo	Connects to a maximum of 16 SMI low-voltage drives (24 VDC)	753-1631
EnOcean		
EnOcean Receiver	Receiver with serial interface for EnOcean switches, sensors and room control units	2852-7101
EnOcean Repeater	Improves coverage – further information on planning can be found at www.enocean.com	2852-7102
EnOcean Light Push-Button (2 Channels)	For one light circuit	758-940/001-000
EnOcean Light Push-Button (4 Channels)	For two light circuits	758-940/003-000
EnOcean Sunblind Button (2 Channels)	For one blind	758-940/002-000
EnOcean Sunblind Button (4 Channels)	For two blinds	758-940/004-000
EnOcean Room Control Unit, SR04 P	With integrated temperature sensor and rotary wheel for setpoint correction, for surface mounting	2852-7112
EnOcean Room Control Unit with LCD, SR06-LCD	With integrated temperature sensor and buttons for setpoint correction, for 55 x 55 switch programs	2852-7113
KNX		
KNX TP1 Module	Connects to KNX TP1 components (e.g., room control units and buttons)	753-646

WAGO Lighting Management Application



WAGO Lighting Management is a proven solution based on predefined hardware and preconfigured software, which greatly simplifies planning, commissioning and operation.
The basic idea: WAGO Lighting Management is ready for the vastly different light requirements of warehouses and production facilities. For example, a production facility is divided into virtual rooms in which the light can be flexibly adapted. Each virtual room receives signals from sensors and actuators in order to automatically set the appropriate light intensity. Virtual rooms allow both conversions and remodeling to be implemented quickly and simply via Web configuration.
A separate HTML5 user interface is available for convenient and intuitive operation of WAGO Lighting Management. Operation is optimized for display on different end devices, such as tablets, smartphones and touch panels.

Item Description		
		Item No.
Lighting Management Application; Single License; Online Activation		**2759-204/261-1000**
Lighting Management Visualization; Single License; Online Activation		
Visualization – S	1 controller	**2759-2101/271-1000**
Visualization – M	up to 3 controllers	**2759-2102/271-1000**
Visualization – L	up to 10 controllers	**2759-2103/271-1000**
Compatible Controllers/Touch Panels		
Controller PFC200; G2; 2ETH RS		**750-8212**
Touch Panel 600 Advanced Line; PIO3		**762-53xx/8000-002**

A single license allows installation on one controller/touch panel.
One license per controller/touch panel is required.

Delivery type	License certificate by email (software available for download)
Data sheet and additional information, see:	wago.com/2759-204/261-1000 wago.com/2759-210x/271-1000 wago.com/lighting-management

The "Lighting Management" software is a pre-programmed application based on the *e!COCKPIT* Development Environment and can be used for both PFC200 G2 Controllers or Touch Panels 600.

To download the application and the license to the device, the WAGOupload software is required, which can be obtained free of charge from the WAGO homepage. Internet connection may be required for license activation.

The products listed below are typically used in conjunction with the "Lighting Management" Application. Detailed information about the products, as well as other variants and accessories, can be found in our Full Line Catalog, Volume 3 or Volume 4.

Lighting Management Application		
Required Products	**Description**	**Item No.**
Base Unit		
DALI Multi-Master	In addition to 64 DALI actuators (ECGs), a DALI Multi-Master Module supports up to 16 DALI Multi-sensors (max. 64 sensor addresses); max. 10 DALI modules per base package.	753-647
End Module	An end module must be snapped onto the assembly at the end of a fieldbus node.	750-600
Power Supply to I/O Node	24 VDC power supply to controllers and additional modules	787-1012
Power Supply to DALI Multi-Master	Supplies a maximum of five DALI Multi-Master modules	787-1007
Extension for Inputs/Buttons		
16-Channel Digital Input; 24 VDC; 3 ms	For 1...16 light button/switch inputs; max. 4 extensions per base package	750-1405
Extension for Outputs/Actuators		
16-Channel Digital Output; 24 VDC; 0.5 A	For 1 … 16 actuators/lamps/relays/ECG control; max. 2 extensions per base package	750-1504
Socket with Relay and Status Indicator; 1 Make Contact; 24 VDC	Light switching via relay	788-357
Extension for EnOcean Radio		
RS-232/-485 Serial Interface	Serial interface connects to STC65-RS-485 EVC EnOcean Radio Transmitter/Receiver (for 1 … 64 rocker switches)	750-652
EnOcean Receiver/Transmitter	Receives EnOcean radio signals and transmits them to the I/O node	2852-7101
EnOcean Repeater	Extends the transmission range (for more planning information, visit the EnOcean website)	2852-7102
Radio Transmitter; EnOcean easyfit PTM 250; 2-Channel Lighting Control	1 … 2 or 1 … 4 signals; range of 30 meters from the radio receiver in buildings	758-940/001-000
Radio Transmitter; EnOcean easyfit PTM 250; 4-Channel Lighting Control		758-940/003-000
Extension for External Time Request		
Real-Time Clock Module	Time synchronization module, if no time server connection is possible	750-640
GPS DCF Converter	Converter/external receiver for time synchronization	2852-7901
Extension for Energy Data Measurement		
3-Phase Power Measurement; 690 VAC	The 3-Phase Power Measurement Module (750-495) measures electrical data in a three-phase supply network.	750-495/xxx-xxx
Current and Voltage Connections	Pre-assembled terminal block assemblies for easy connection and short-circuiting of current transformers (for current transformers, see Full Line Catalog, Volume 4)	2007-8874; 2007-8877
Extension for KNX Buttons		
KNX/EIB/TP1 Interface	Connects KNX buttons to the I/O node; max. 1 module per base package	753-646
Extension for Sensors (DALI-2)		
DALI Sensor; PD11-BMS-FLAT	LOW BAY Sensor for offices (2 … 5 m)	2852-7210
DALI Sensor; PD4-BMS-GH	HIGH BAY Sensor for warehouses (5 … 16 m)	2852-7213
DALI Sensor; PD4N-BMS	MID BAY Sensor for open-plan offices, underground garages, entrance halls, production facilities (2 … 10 m)	2852-7214
Adapter; AP Assembly Kit IP54; Accessories for 2852-7214	Accessories for surface mounting of the PD4N-BMS (B.E.G.)	2852-7215
DALI Sensor; MSensor G3 SRC 30 PIR 5DPI WH	LOW BAY Sensor for offices (up to 5 m)	2852-7220
DALI Sensor; MSensor G3 SSM 30 10DPI WH	MID BAY Sensor for high-ceiling rooms (up to 10 m)	2852-7221
DALI Sensor; IR Quattro HD DALI-2	LOW/MID BAY Sensor for offices (2.5 … 10 m)	2852-7230
DALI Sensor; IR Quattro SLIM XS DALI-2	LOW BAY Sensor for offices, slim design (2.5 … 4 m)	2852-7231
DALI Sensor; IS3360 MX HIGH BAY DALI-2	HIGH BAY Sensor for industrial buildings, circular detection range (4 … 14 m)	2852-7232
DALI Sensor; IS345 MX HIGH BAY DALI-2	HIGH BAY Sensor for industrial buildings, rectangular detection range (4 … 14 m)	2852-7233
DALI XC G3 (DALI-2)	Push-button coupler connects 4 conventional push-buttons to DALI	2852-7225
DALI Sensors		
DALI Multi-Sensor Kit	Brightness measurement and motion sensor: Kit connects to a DALI bus system	2851-8201
DALI Sensor Coupler	Sensor coupler connects MULTI-3-CI Sensors to DALI (max. 16 DALI Sensor Couplers per 753-647 DALI Multi-Master)	2851-8202
DALI HIGHBAY ADAPTER + HIGH BAY	Brightness measurement and motion sensor for large installation heights (3 … 13 m)	2852-7207, 2852-7201
DALI HIGHBAY ADAPTER + VISION	Motion sensor for large areas, open offices, hallways or warehouses	2852-7207, 2852-7202
DALI LS/PD LI	Motion sensor for office lighting (1 … 5 m)	2852-7203
DALI Sensor Coupler HF LS LI +	Light and recessed ceiling sensor: combined daylight and motion detection, motion detection via radar	2852-7205
Radar Sensor HF LS LI		2852-7206
4p4c Connection Cable, 50 cm		2852-7208
DALI XC	Push-button coupler connects 4 conventional push-buttons to DALI	2852-7301
DALI Sensor Coupler E	Sensor coupler connects standard sensors to DALI	2852-7204

Module Type Package (MTP)

1

Modular systems are becoming increasingly common in manufacturing and process engineering. Fluctuating quantities and highly specialized products require efficient production in small quantities. In other industries (e.g., shipbuilding), modular systems are used where simple integration into higher-level systems for a dedicated task is the key to success.

The following requirements must be met:
- Rapid creation of new systems by reusing ready-made modules
- Simple adaptation of existing systems to changing operating conditions (plug & produce)
  - E.g., product change – requires other modules
  - E.g., capacity change – requires more or less modules of the same type
  - E.g., maintenance/repair – requires module replacement
- Interface standardization

Solution: MTP

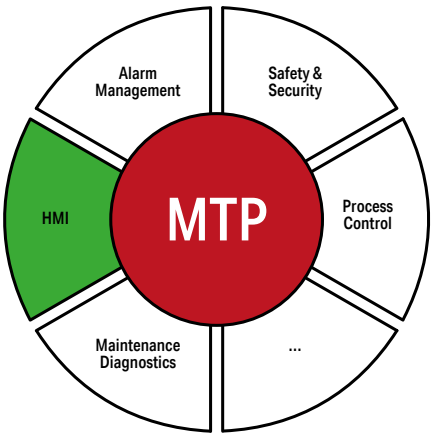
With the Module Type Package (MTP), properties of process modules are functionally described – regardless of manufacturer and technology. The self-contained modules, which can come from different manufacturers, are easily reused and interconnected into complex overall systems with little effort. Functionalities encapsulated within the modules reduce dependencies among each other, ensuring largely interference-free behaviors.

An MTP includes the following information:
- Description of the data objects
- Description of the control image
- In the future: Description of services, etc.

This description file can be read in and processed by higher-level systems, such as visualization or process control systems, called "Process Orchestration Layer" (POL) in the following. Based on this information:
- the variable lists/process control points can be displayed and, if necessary, input options are offered
- the pictures can be interpreted and displayed in their respective style.

Processes can be modified without much engineering effort and production quantities can be easily adapted by adding or removing modules.

The VDI/VDE/NAMUR 2658 standard adopted jointly by NAMUR, ZVEI and VDMA addresses these requirements. It makes it possible to meet the increasing requirements of digitalization within Industry 4.0 by defining how to describe system modules and how to integrate these into the process control technology of the entire system in a standardized manner.



Your Benefits:

- Simple integration of system modules into control and visualization systems
- Dynamic adaptation without extensive engineering
- Uniform look and feel – even with modules from different manufacturers

Item Description	
***e!COCKPIT* MTP; Single License; Online Activation**	**Item No.**
e!COCKPIT add-on license for generating MTPs, single license per PC	2759-120/1121-1000
Library MTP; Single License; Online Activation	
Library license to easily create programs for modules to be exported as MTP; single license per controller/touch panel	2759-208/211-1000
Compatible Controllers/Touch Panels	
Controller PFC200; G2	750-821x
Controller PFC200; G2; XTR	750-821x/000-040
Touch Panel 600 Standard Line*	762-4xxx/xxx-xxx
Touch Panel 600 Advanced Line*	762-5xxx/xxx-xxx
Touch Panel 600 Marine Line*	762-6xxx/xxx-xxx

Depending on the factory license, the following additional license may be required:
e!RUNTIME; IEC-61131 Runtime Environment; 600

Minimum *e!COCKPIT* version	V1.6
Delivery type	License certificate by email (software available for download)
Data sheet and additional information, see:	wago.com/2759-120/1121-1000 wago.com/2759-208/211-1000

An Internet connection to the PC that's equipped with *e!COCKPIT* may be required for license activation.

The simple creation of the MTP at the touch of a button requires the use of a licensed library per controller. Additionally, an engineering add-on license is required for each PC. The software is available online for download via *e!COCKPIT*, or alternatively via the download area of the WAGO homepage.

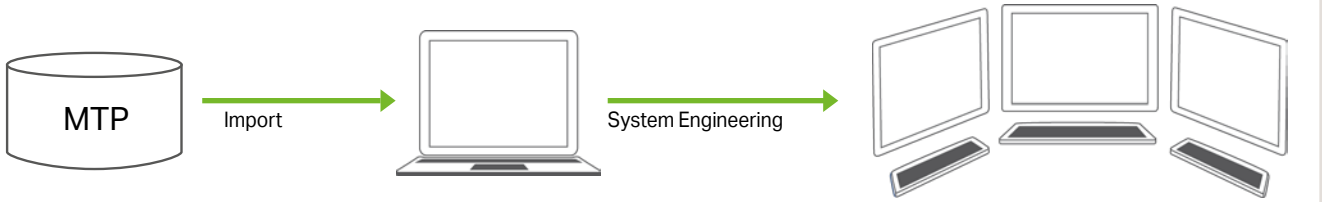
The engineering of a system modeled with MTP occurs in two steps:

1. Module engineering (project-independent)

- Defining information technology interfaces (process control points)
- Creating the control logic
- Creating the control images

2. System engineering (project-related)

- Integration of the modules into the POL
- Parameterization of the modules
- Network engineering
- Coordination and procedure control of the modules among themselves (orchestration)



WAGO offers a complete automation system consisting of a modular control system with I/O modules for almost every signal, a touch panel portfolio and a matching engineering system. With the WAGO Library MTP, it is possible to automate modules, and with ***e!****COCKPIT* and an additional add-on at the push of a button, the MTP module description can be easily integrated into a wide variety of visualization and control systems.

The following products are typically used in conjunction with the Module Type Package (MTP) solution. Detailed information about the products, as well as other variants and accessories, can be found in our Full Line Catalog, Volume 3 or Volume 4.

Module Type Package (MTP)		
Required Products	**Description**	**Item No.**
Software Licenses		
e!COCKPIT	Engineering software license for programming both controllers and touch panels; different license forms	2759-101/1110-xxxx
e!RUNTIME; **IEC-61131 Runtime Environment; 600**	License to upgrade a touch panel (hardware version PIO2) to a control panel	2759-216/211-1000
Power Supplies		
Compact Power Supply; Switched-Mode; 1-Phase	24 VDC output voltage; 2.5 A output current	787-1012
Pro 2 Power Supply; 1- or 3-Phase	24 VDC output voltage; 5 … 40 A output current	2787-2xxx

xx is a placeholder for the exact item number. A detailed overview can be found in our current Full Line Catalog, Volume 3 or Volume 4.

Controller Redundancy Master Library

1

Description:
Increase availability in central ship alarm systems with WAGO's Application-Based Controller Redundancy (ACR).
The licensed software library (2759-245/211-1000) and an ***e!COCKPIT*** redundancy framework allows you to easily program and operate redundant master PLCs in single point of failure (SPOF) tolerant systems.
A large number of the available 750 Series I/O Modules can be integrated into the system via Smart Couplers. These decentralized PLCs automatically recognize the input and output modules, which makes commissioning easy. The redundant communication of the two Master PLCs and the Smart Couplers is performed either via two separate networks (Dual-LAN) or a ring topology.
These Master PLCs (2nd generation PFC200) communicates with higher-level SCADA systems, for example, via the Modbus TCP protocol.
The application notes (a2020003 and a2020004) describe the practical use of the library and define the application area and the maximum number of participants within the system.

Benefits:
- Easy commissioning of the entire system with WAGO's standard hardware
- Simple/slow control loops can be mapped (Alarm & Monitoring, Data Acquisition, Slow Running Processes)
- Low switchover time (per marine classification society requirements)
- Use of complex modules such as HART or DALI

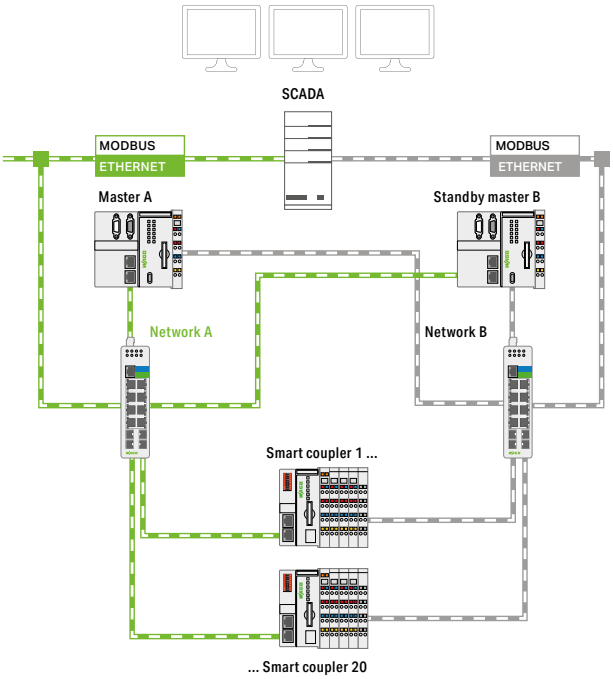
Benefits:
- With the application redundancy concept, WAGO provides you with a redundant framework for simple and economical system integration in ship technology.
- You save engineering effort and can focus on your application.

Licensing:
To use the "WagoAppRedundancyMaster.library," a "Controller Redundancy Master Library" license (2759-245/211-1000) must be purchased for each Master PLC. An SD card image in the redundancy framework is available for the Smart Couplers.

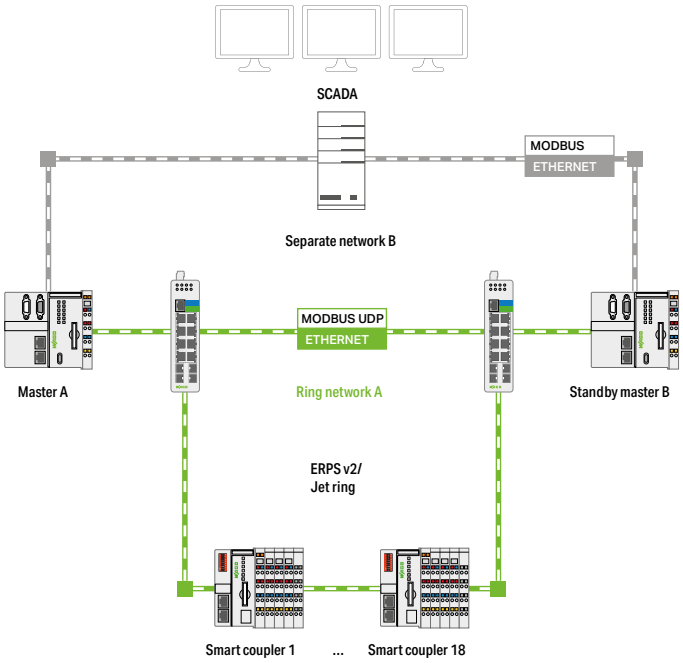
Use:
Enter the "Controller Redundancy Master Library" license into ***e!COCKPIT***, assign it to a device and load both the license and project into the device. No other steps are required.

Note:
Register here to download the redundancy framework and test ACR free of charge for 30 days.

Controller Redundancy in the DUAL LAN



Controller Redundancy in the SINGLE LAN

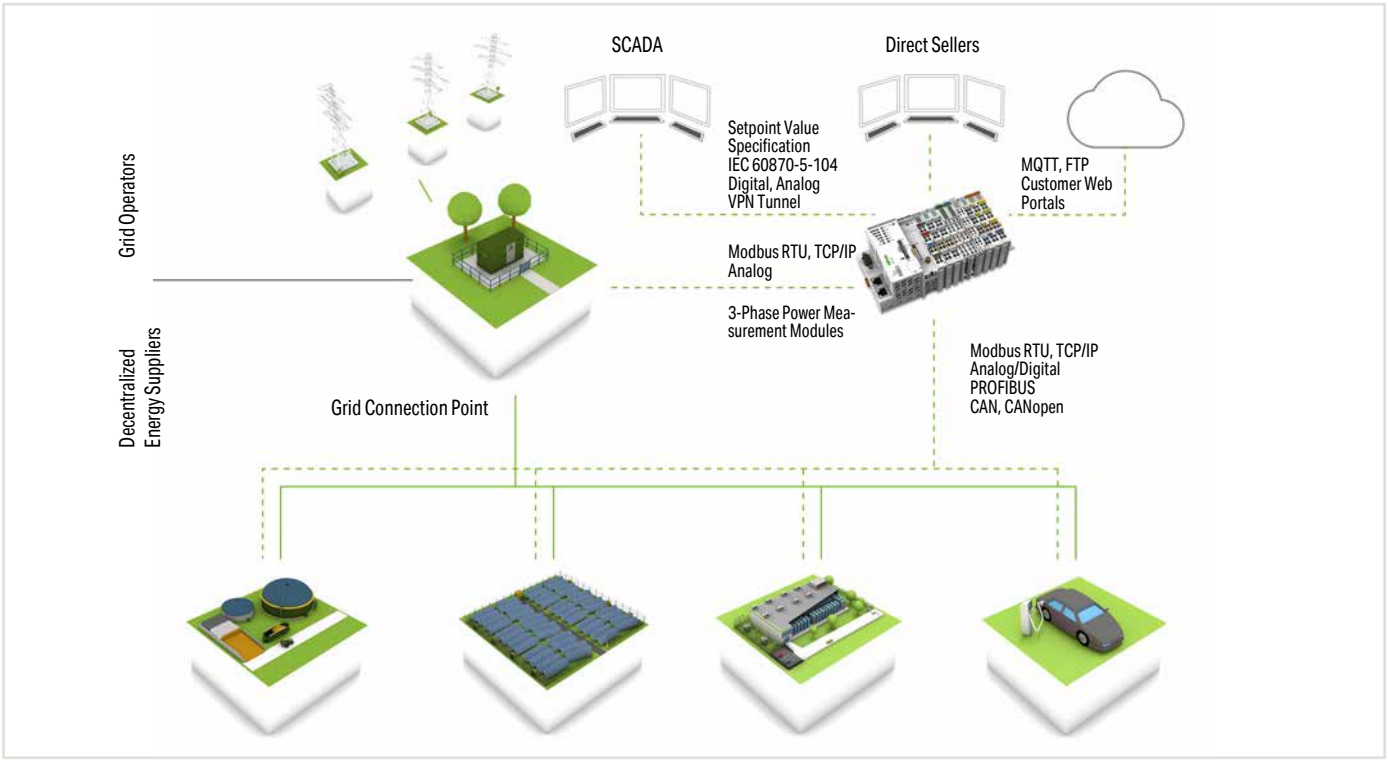


Item Description	
Controller Redundancy Master Library	**Item No.**
Single License; Online Activation	2759-245/211-1000
Recommended Controller	
PFC200; G2; 2ETH RS	750-8212

Delivery type	License certificate by email (software available for download)
Data sheet and additional information, see:	wago.com/2759-245/211-1000

An Internet connection to the PC that's equipped with ***e!COCKPIT*** may be required for license activation.
A single license allows installation on one computer.

WAGO Power Plant Control Library



The WAGO Power Plant Control Library is an ***e!COCKPIT*** library with a control algorithm for the active and/or reactive power in energy generation plants.

The control algorithm for active and/or reactive power and corresponding setpoint specifications required by the operator can be adjusted during operation per IEC 60870 by, e.g., telecontrol technology.
The controller compares the specified setpoint values with the actual values measured at the network connection point and provides the calculated correction variables for the energy generation plant.

This library can be used on second-generation PFC200 Controllers and is certified per VDE-AR-N 4110 or 4120.

The library can be used for a 30 day trial period at no cost, after which a license for the respective controller is required.
The license can be separately purchased under Item Number 2759-203/211-1000.

Functions:

- Pfix, Qfix: Fixed active/reactive power specifications
- P(f): Frequency-dependent active power regulation
- P(Uoff): Active power ramp – restart after network failure
- Q(P): Reactive power control per active power characteristic
- Q(U): Reactive power control per voltage characteristic
- Q(Udb): Reactive power control per voltage characteristic with voltage limiting function
- cosφfix: Fixed displacement factor specification
- PSM, QSM: Slave mode, looping through the external active/reactive power specifications

Item Description	
WAGO Power Plant Control Library	**Item No.**
Single License; Online Activation	**2759-203/211-1000**
Compatible Controllers	
Controller PFC200; G2; 2ETH RS; Tele; T	**750-8212/025-001**
Controller PFC200; G2; 2ETH RS; Tele; T; ECO	**750-8212/025-002**
Controller PFC200; G2; 2ETH RS CAN DPS; Tele; T	**750-8216/025-001**

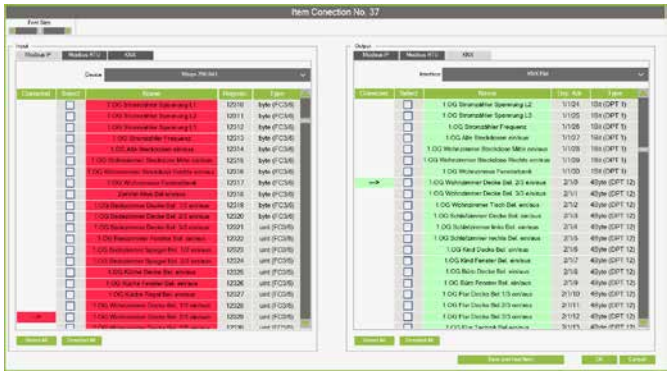
A single license allows installation on one controller.
One license per controller is required.

Minimum ***e!COCKPIT*** version	V1.6
Certification	VDE-AR-N 4110 / 4120
Delivery type	License certificate per email
Data sheet and additional information, see:	wago.com/2759-203/211-1000

An Internet connection to the PC that's equipped with ***e!COCKPIT*** may be required for license activation.

WAGO Gateway Application

With the new WAGO Gateway Application, it is possible to implement information exchange between different bus systems. This is supported by a user-friendly interface, so no programming is necessary – nothing but configuring connections.

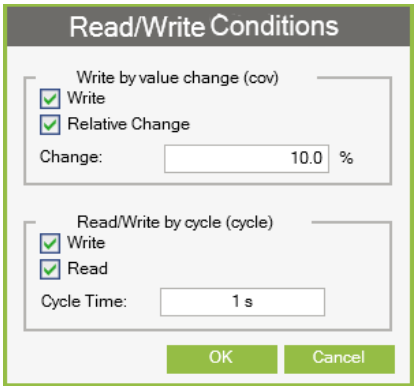


Benefits:

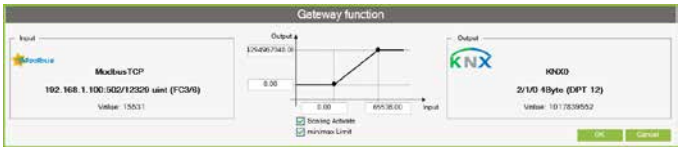
- Exchange of information between the bus systems:
  - Modbus TCP
  - Modbus UDP
  - Modbus RTU
  - KNX
- Commissioning time reduced through interface-supported configuration instead of programming
- Easily manage up to 255 KNX data points per KNX module via ETS import and export

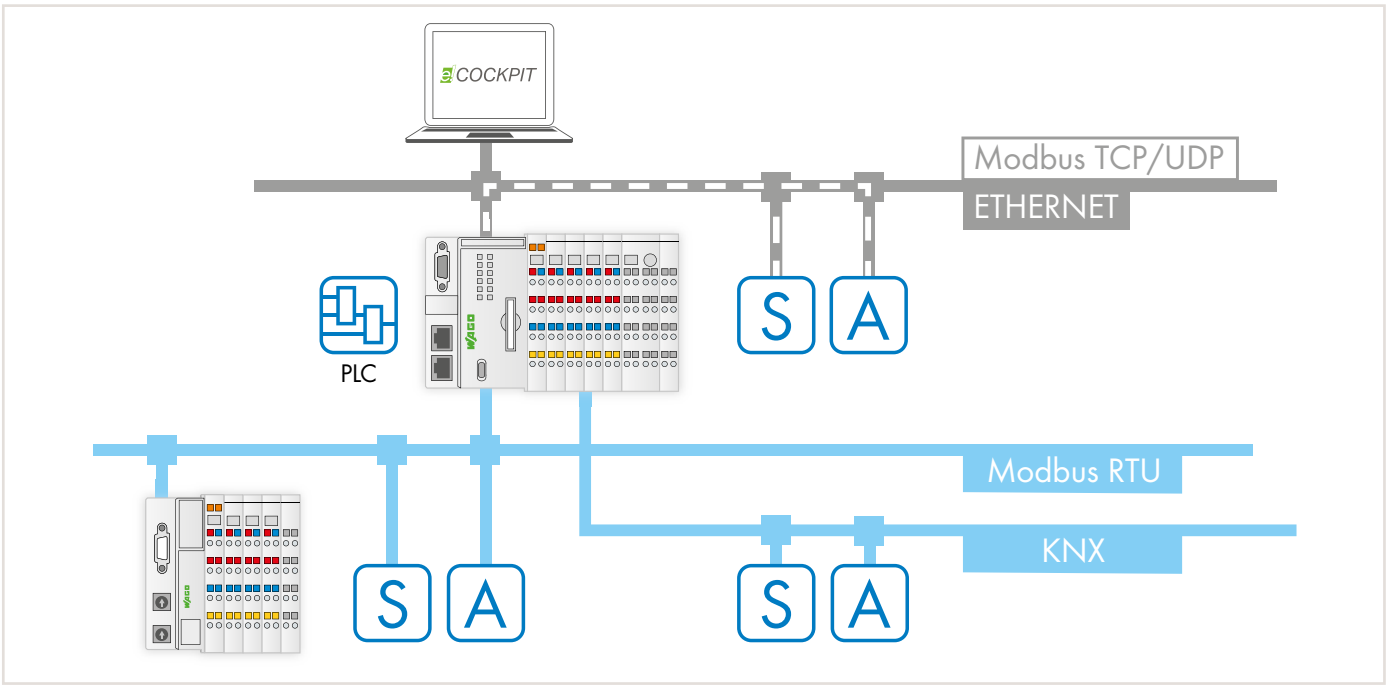
Function in Detail:

- Automatic detection of station structure
- Display of the available interfaces
- Creation of data points
- Import/export of ETS files (KNX)
- Linking of data points
- Conditional reading/writing



- Functional coupling

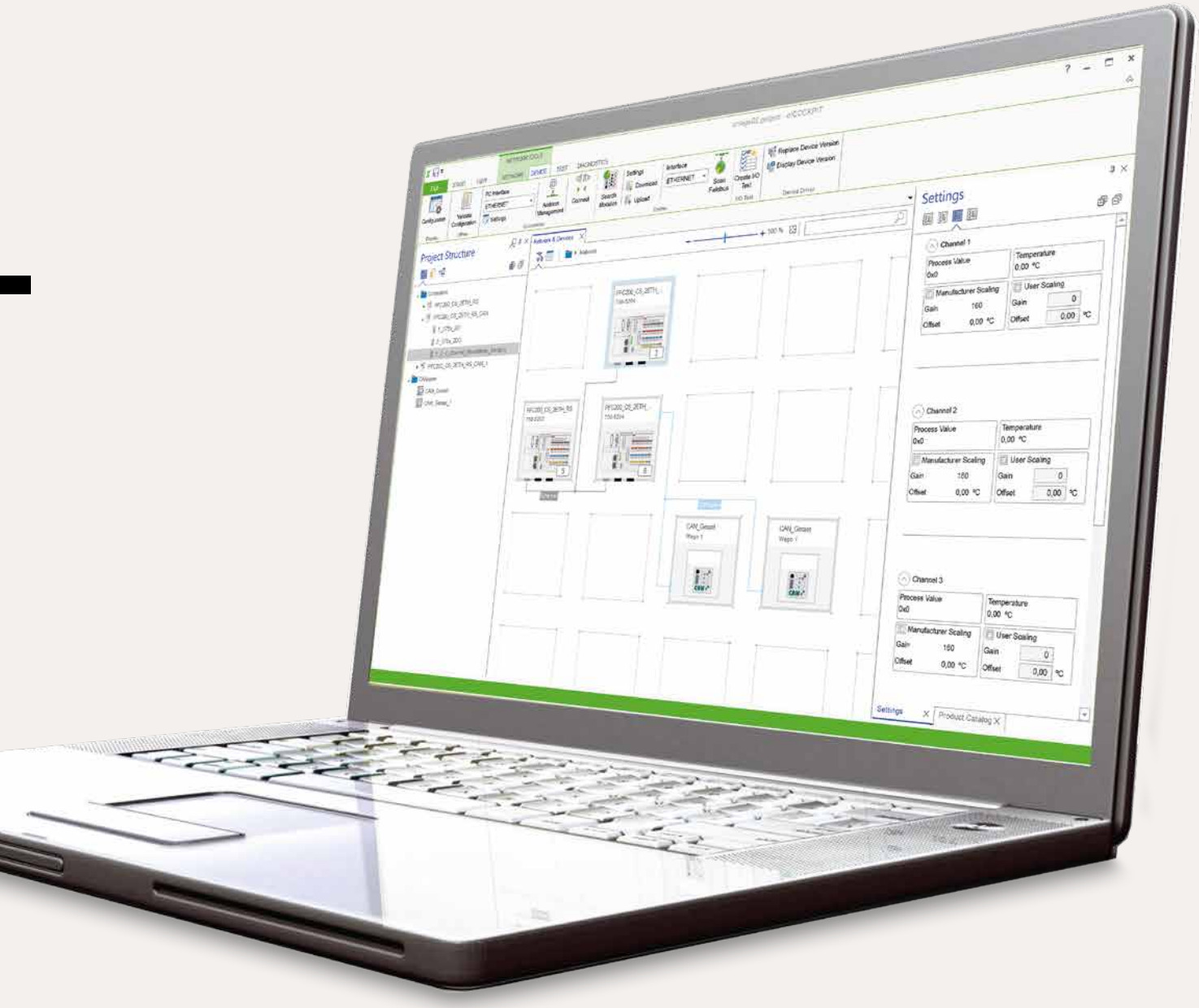




Item Description	Item No.
WAGO Gateway Application	Download

Delivery type	Closed application Download at www.wago.com
Compatible Controller	
PFC200; G2; 2ETH RS	750-8212

You can find detailed information on the controllers in Section Controller PFC200.



Software

Engineering Software

- PC-based software
- Customized tools for every automation task

Runtime Software

- Standard machine component
- Comprehensive, tested software modules for control, regulation, operation and monitoring

Mobile Software (Apps)

- Machine operation and monitoring via tablet and smartphone

Solutions

- Cloud solutions
- Reusable, customizable software applications

◂ Section 1

Software
Engineering Software, Runtime Software and Mobile Software

Software
General Product Information

2

Software Factors into Success

Projects in production, process and building automation are characterized by shorter and shorter implementation times, ever more complex structures and the increasing role of software as part of the overall solution. In fact, software is becoming an essential factor that influences the success of a project.

Engineering software is used for both machine and system development, as well as the implementation of building automation projects. Runtime software controls the devices during operation.

Customized Software Tools

Significant challenges must be overcome to develop, operate and maintain modern machines and systems, as well as program, configure and commission building automation applications. Customized software tools are available as needed for every task – embedded within integrated engineering processes or as stand-alone tools for a set of dedicated functions.

CODESYS as an Integrated Environment

CODESYS

All WAGO Controllers are equipped with the high-performing CODESYS industry-standard development environment. This enables software development in both IEC 61131-3 PLC programming languages (ST, FBD, LD, IL, SFC) and CFC. As a trusted programming environment, CODESYS guides developers, enabling them to reuse and further develop existing projects without relearning software. This means that advanced paradigms, such as object-oriented programming (OOP), or modern visualization technologies, are available.

Pre-Made Software Solutions

Pre-made software solutions and applications simplify automation. Such solutions involve reusable software that can be used for a specific application by making simple adjustments. This approach saves time and money.
WAGO's pre-made software solutions can be found in Section 1.

Open to Proven Standards

WAGO Software is open to well-established standards and supports all prominent fieldbuses, making it an investment in the future. This allows all of WAGO's components to be seamlessly integrated into engineering software via standardized device description files. Furthermore, connecting controllers to fieldbus systems via WAGO Engineering Software is incredibly simple, opening up all the advantages of existing field devices. Ultimately, WAGO Software is based on modern IT standards and development methods for long-term viability.

Extensive Import and Export Functionality

WAGO's software tools demonstrate an impressive ability to exchange project data with the external software tools involved in the development process – preventing costly, error-prone double entry.

Industry-Specific Configurators

Whether industry, process or building automation, every sector and industry has specific requirements. Therefore, plug-ins specifically customized for the needs of individual industries are available in addition to WAGO's software portfolio. For example, these plug-ins can be used to measure energy or easily configure a DALI network.

Your Benefits:

- Customized software for every automation task
- Extensive import functions from external design tools
- Plug-ins for industry-specific development environments
- Comprehensive software solutions for various industries
- Simple and secure licensing

Software
General Product Information

Software for Mechanical Engineering

WAGO Software is used in every phase of machine and system automation – from design to successful machine operation.

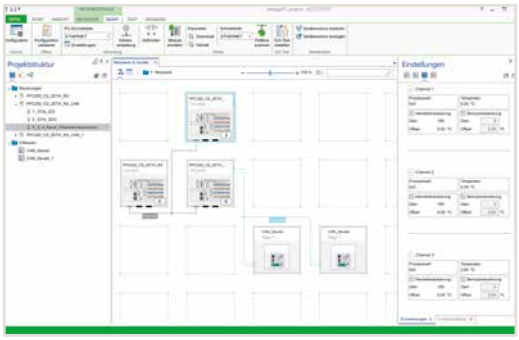
Design	Software Development	Commissioning	Machine Operation
• CAD and ECAD • Component selection	• Configuration • Parameterization • Programming • Simulation • Visualization	• Testing • Diagnostics	• Updating • (Remote) maintenance • Monitoring • Controlling, regulating, operating and monitoring

Engineering Software

Quickly implementing complex machine functions is critical in modern mechanical engineering applications. WAGO's PC-based engineering software supports all development activities. The focus is on simple configuration, timely programming and efficient commissioning of automation network components.

Engineering tools are typically not permanently linked to the machine – they only communicate with the machine during startup and maintenance.

Design | Software Development | Commissioning | **Machine Operation**



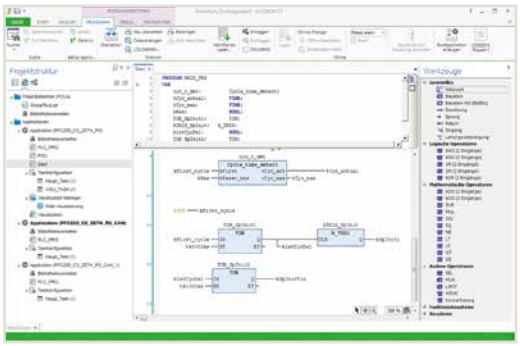
eCOCKPIT

Runtime Software

Machines are controlled by runtime software that determines behavior, while enabling both operation and current status monitoring for the user. It also transmits operating data to higher-level systems. With comprehensive, tried-and-tested software function blocks (IEC libraries), development goals are reached more quickly.

Unlike engineering software, runtime software operates continuously – it is a part of the machine and ensures correct operation.

Design | Software Development | Commissioning | **Machine Operation**



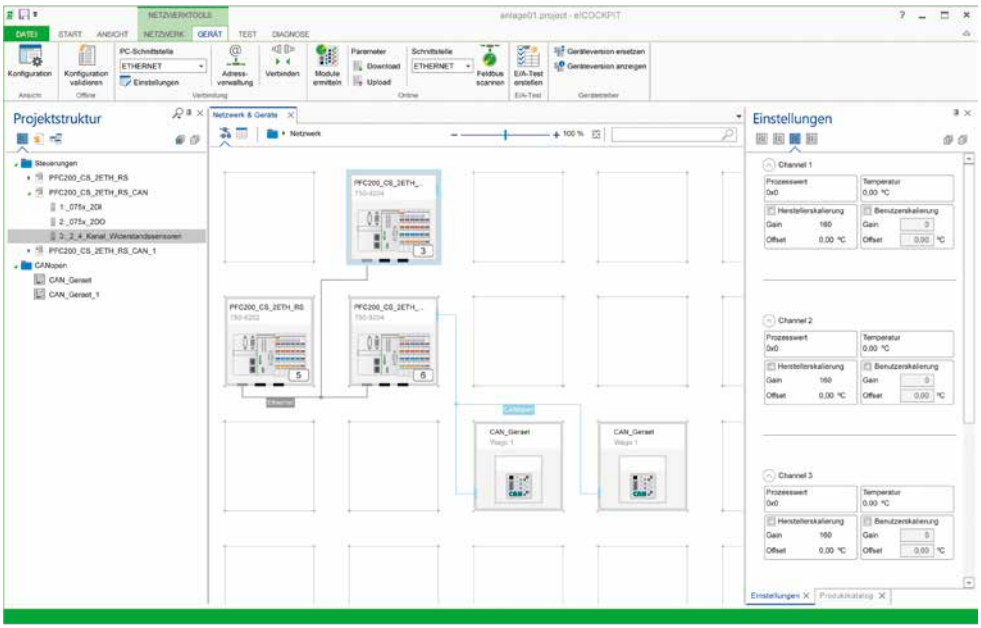
Mobile Software (Apps)

Software on mobile devices offers productivity advantages in an industrial environment as well. This integration enables users to quickly and easily operate and monitor automation processes via smartphone or tablet – from virtually anywhere.

Mobile software typically communicates only with the machine's controller for a specific application.

Design | Software Development | Commissioning | **Machine Operation**

e!COCKPIT
Engineering Software based on CODESYS V3



WAGO Automation Software ***e!COCKPIT*** for faster machine and system startup: WAGO's new engineering software shortens development time for automation projects while impressing with a modern and clearly laid out user interface. At the software's core is CODESYS V3 for simple and versatile creation of applications.
Ensuring a project's long-term viability through sustainable cost savings hinges on the user's ability to quickly adapt to new software that offers a high degree of reusability.

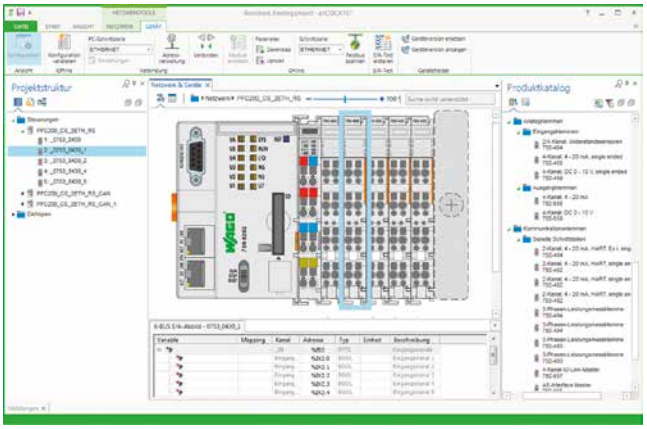
WAGO set out to fulfill these exact requirements by developing its own engineering software: ***e!COCKPIT***. This integrated development environment supports every automation task, from hardware configuration, programming, simulation and visualization, to commissioning – all in one software package.

Use the programming tool to handle all important automation tasks, and implement especially complex projects quickly and easily.

e!COCKPIT				
License Type	**Number of PCs**	**Item No.**	**Order Text**	
Workstation license	2	**2759-0101/1110-2002**	***e!COCKPIT***; Workstation License	Can be installed on up to two computers (e.g., a notebook & desktop)
Multi-user license	5	**2759-0101/1110-2005**	***e!COCKPIT***; Multi-User License; 5	Multiple installations up to specified number
Multi-user license	10	**2759-0101/1110-2010**	***e!COCKPIT***; Multi-User License; 10	
Multi-user license	15	**2759-0101/1110-2015**	***e!COCKPIT***; Multi-User License; 15	
Multi-user license	20	**2759-0101/1110-2020**	***e!COCKPIT***; Multi-User License; 20	
Site license	Unlimited	**2759-0101/1110-3000**	***e!COCKPIT***; Site License	Unlimited installations at a company location
Buy-out license	Unlimited	**2759-0101/1110-4000**	***e!COCKPIT***; Buy-out License	Unlimited installations within a company at all locations in a country; in addition, the software may be used in company products that contain WAGO's automation technology to form a functional unit.

Supported operating systems	Windows 7 (32- and 64-bit), Windows 8, Windows 8.1 (32- and 64-bit), Windows 10
System Requirements	
Processor	Dual-core
Memory	4 GB
Hard disk space	10 GB
Graphics resolution	1,366 × 768 px
Supported devices	Controllers based on CODESYS V3, I/O Modules (750/753)
Supported fieldbuses	CANopen; Modbus TCP/UDP; Modbus RTU; PROFIBUS
Supported device descriptions	DTP; EDS; GSD
Connectivity	TCP; USB; OPC; CODESYS network variables; CODESYS DataServer
Programming languages per IEC 61131-3	ST; LD; FBD; IL; FC; CFC
Import/Export formats	CODESYS V3 project files (*.project)
Delivery type	Installation file (download)
For data sheet and additional information, see:	wago.com/ecockpit

Internet connection may be required for license activation.
Windows® is a registered trademark of Microsoft Corporation.

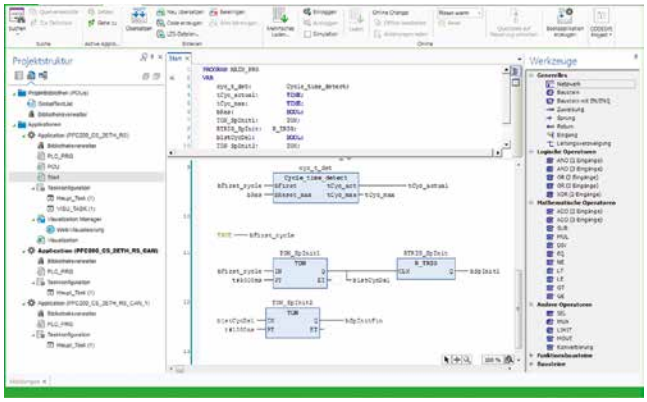


Configuration and Parameterization

The integrated *e!COCKPIT* configurators provide state-of-the-art operating tools and workspaces, such as:
- Graphical network topology: Complex relationships between network devices and their current states can be identified easily and intuitively.
- Drag & drop: Simplifies device interaction.
- Copy & paste: Individual devices or whole network branches can be duplicated quickly.
- Batch processing: Parameter values are set simultaneously for several devices.

Programming

e!COCKPIT offers extensive software development options:
- IEC 61131-3 PLC programming languages: Structured Text (ST), Ladder Diagram (LD), Function Block Diagram (FBD), Instruction List (IL), Sequential Function Chart (SFC), Continuous Function Chart (CFC)
- For flexibility, all programming languages can be combined with one another.
- Created programs can be easily debugged on the engineering PC via simulation.
- New paradigms such as object-oriented programming are included.

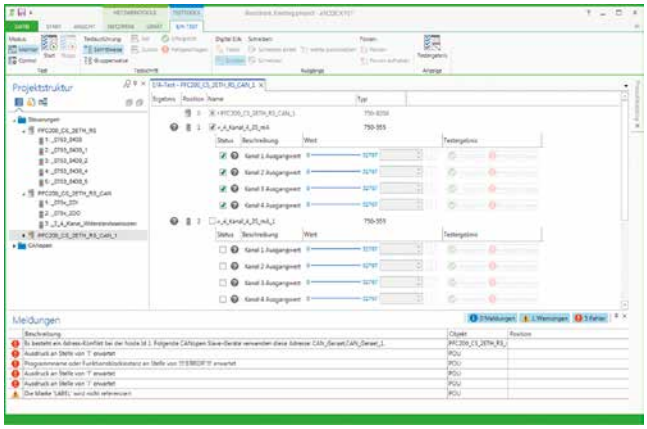


Visualization

Advanced user interfaces for machine operation and monitoring are standard. Today, HMI-based design is a critical factor that influences the purchase of an entire automation line. *e!COCKPIT* employs drag and drop to streamline the design of modern user interfaces. The integrated visualization editor provides:
- Access to IEC program variables
- Closed simulation of HMI and PLC programs on the engineering PC
- Guaranteed language independence via Unicode character set
- Current standards such as HTML 5 and CSS

Diagnostics

Being acutely aware of the automation network's current status is vital for rapid fault localization and debugging – be it during development in the office or directly on the machine during commissioning.
e!COCKPIT provides comprehensive diagnostic capabilities:
Individual views, for example, always display the controllers' status information both graphically and in tabular form.
To keep the project on time, error messages are transmitted directly and clearly.
The structured wiring test function systematically identifies wiring errors.



e!COCKPIT SVN

Source Code Management and Revision:

The ***e!****COCKPIT* SVN add-on provides an integrated connection to the software versioning system Apache® Subversion® (SVN). SVN is a tool for version and revision control of current or historical versions of documents. This version control system tracks and controls changes to the program source code and other information stored as computer files. It is most commonly used in software development when a team works on the same files. The add-on integrates seamlessly into the ***e!****COCKPIT* Engineering Software.

2

Benefits:

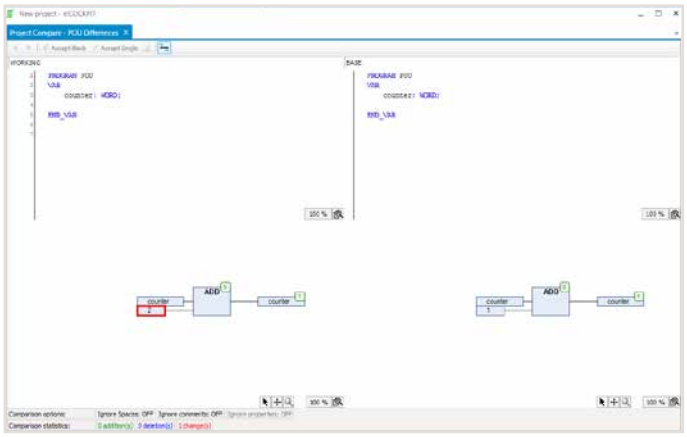
- Change logging: Changes can always be traced.
- Compare different revisions.
- Restore old revisions: Accidental changes to files can be undone at any time.
- Archive specific revisions: An older version can always be restored.
- Simultaneously work in several branches of a development project.

Main Functions:

The SVN functions are integrated directly into ***e!****COCKPIT* and expand the corresponding menus and icons so that the following properties of the documents are directly visible:
- Object has been added
- Object with conflict
- Object has been deleted
- Object was changed
- Normal object
- Object has deleted sub-objects
- Object is ignored during transfer
- External object
- Unversioned object

Functions:

The following functions can be performed via ***e!****COCKPIT*:
- Import project into Subversion®
- Connect the project archive to Subversion®
- Separate project from Subversion®
- Check out object for editing
- Transfer
- Compare object
  - Comparison with HEAD revision
  - Comparison with revision
  - Comparison with project on server
- Add
- Integration of external files
- Ignore
- Subversion® info
- Show properties
- Show log
- Undo change (to specific revision)
- Update file (to specific revision)
- Merge changes



Item Description	
e!*COCKPIT* SVN	Item No.
Single license	2759-401/1420-1000

A single license allows installation on one computer.

Subversion® is a trademark of the Apache Software Foundation.

Minimum ***e!****COCKPIT* version	V1.6.1
Hard disk space	50 MB
Delivery type	Installation file (download)
For data sheet and additional information, see:	wago.com/2759-401/1421-1000

An Internet connection to your PC may be required for license activation.

e!COCKPIT UML
Software Modeling in UML

UML (Unified Modeling Language) is a graphical language for specifying, designing and documenting object-oriented software. It clearly facilitates discussions between programming and other disciplines within system development. The *e!COCKPIT* UML add-on extends the *e!COCKPIT* Engineering Software with two languages of the "Unified Modeling Language": the class diagram and the status diagram.

Benefits:

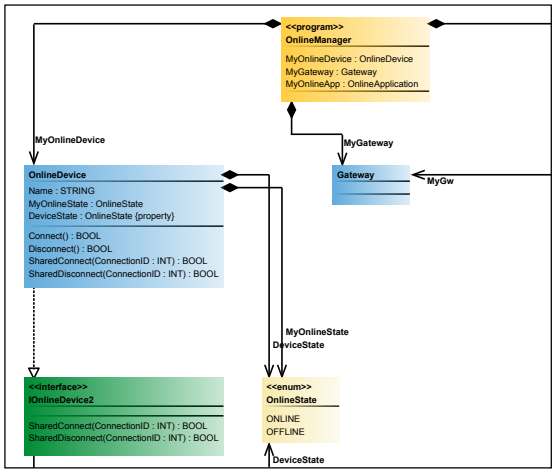
- Improved readability of the program code via clear class and behavior diagrams in standardized form
- Reduce programming errors by generating program code from UML diagrams
- Easier debugging through online data in the state diagram

Class Diagram:

The class diagram belongs to the group of UML structure diagrams. With the additional graphic editor, the object-oriented structure of *e!COCKPIT* projects can be mapped or designed. The various object classes (e.g., function blocks or interfaces), including the variables and methods used in them, and their relationships are clearly displayed.
The existing project structure can be imported directly from the device structure when creating a class diagram. However, a project structure can also be rebuilt using the following available class and relationship elements:

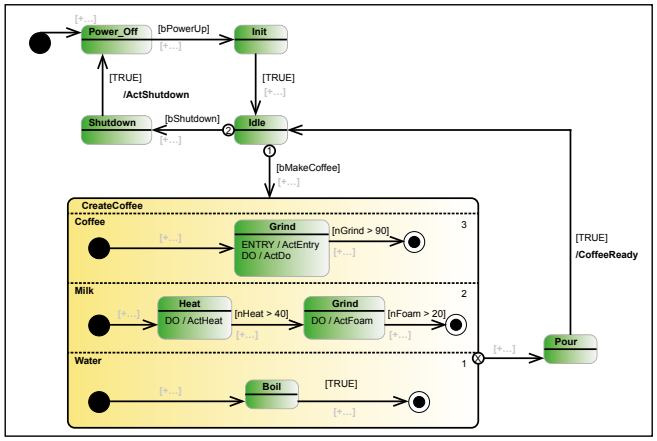
- Class (POU)
- Interface
- Variable declaration
- Property
- Method
- Generalization
- Realization relationship
- Association
- Composition

New objects in the class diagram editor are automatically inserted into the device structure.



State Diagram:

The state diagram belongs to the group of UML behavior diagrams. It is a graphical language for specifying and designing the sequence of event-discrete systems. Unlike the class diagram, executable application code is generated when compiling a state diagram.



The state diagram editor includes a selection of step and transition elements:

- Start state
- End state
- State
- Composite state
- Junction/connection
- Selection
- Transition
- End transition
- Exception transition

When the application is running, the status diagram is switched according to the clock cycle. In addition, an independent switching behavior can be realized via cyclic internal state diagrams. In online mode, the state diagram is animated so that the current status of the process can be tracked at any time.

Item Description	
***e!COCKPIT* UML**	**Item No.**
Single license	2759-402/1420-1000

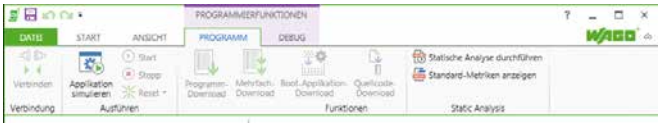
A single license allows installation on one computer.

Minimum *e!COCKPIT* version	V1.3.0
Hard disk space	20 MB
Delivery type	Installation file (download)
For data sheet and additional information, see:	wago.com/2759-402/1420-1000

Internet connection may be required for license activation.

e!COCKPIT Static Analysis
Static Code Analysis

In addition to the compiler check, the *e!COCKPIT* Static Analysis add-on checks the source code based on defined rules and naming conventions. This add-on displays potential development problems, allowing errors to be detected and corrected before field testing. More than 100 partly parameterizable rules have already been implemented that can be combined into individual rule sets. The add-on functions are seamlessly integrated into the *e!COCKPIT* development environment.



Benefits:

- Avoid errors during program creation
- Save time-consuming troubleshooting during application development
- Ensure that the program code conforms to the defined rules and is easily readable

Main Functions:

- Check the application explicitly via menu command
- Alternatively: automatic verification during code generation
- Control pre-processor instructions, and determine which parts of the code will be analyzed

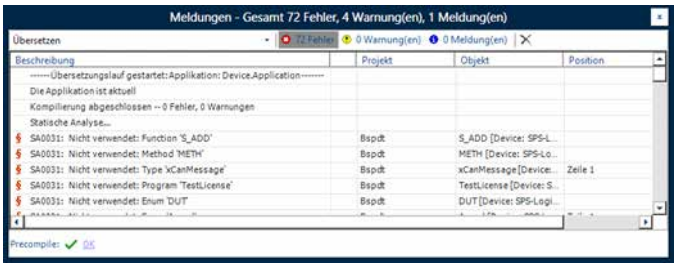
Rules and Naming Conventions:

Within the *e!COCKPIT* project settings, a standard set of programming rules and naming conventions can be configured in the standard version:
- Unused variables
- Overlapping memory areas
- Simultaneous access
- Multiple write access to output
- Multiple uses of the name

Additionally, the following analytics can be performed with *e!COCKPIT* Static Analysis:
- Discover unreachable parts of the code
- Find empty objects
- Find empty instructions
- Find useless declarations
- Conversions
- Write access to input variables
- Rules for operators
- Rules for FOR and CASE instructions
- Strict testing of IEC rules

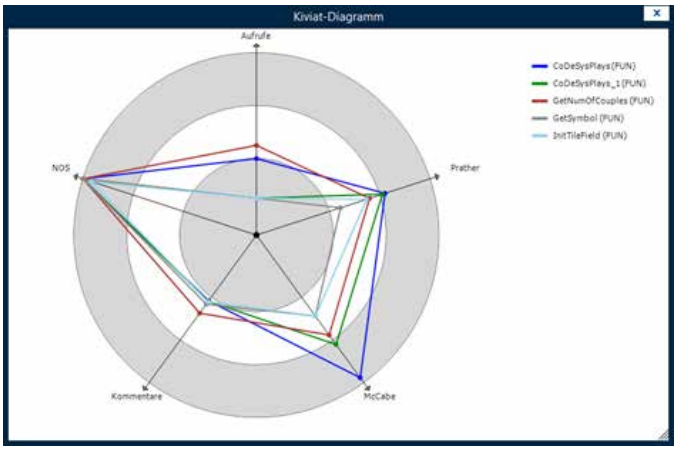
Result of the Analysis:

The result of the analysis is displayed in the message window. Each violation has a unique number and can be uniquely associated with the configured rules and naming conventions.



Metrics:

Various metrics, such as the number of code lines, memory consumption or the evaluation of software complexity, as well as the upper and lower limits to be observed, can be configured for evaluation of the code quality.
The results of the applied metrics can be displayed in tabular and graphical form as a Kiviat diagram.



Item Description	
***e!COCKPIT* Static Analysis**	**Item No.**
Single license	**2759-403/1420-1000**

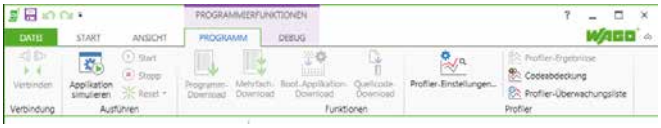
A single license allows installation on one computer.

Minimum *e!COCKPIT* version	V1.4.0
Hard disk space	30 MB
Delivery type	Installation file (download)
For data sheet and additional information, see:	wago.com/2759-403/1420-1000

Internet connection may be required for license activation.

e!COCKPIT Profiler
Runtime Behavior Analysis

The ***e!COCKPIT*** Profiler add-on allows programmers and application developers to measure and evaluate the processing times and code coverage of different blocks in an IEC 61131-3 application at an early stage. This add-on can be seamlessly integrated into the ***e!COCKPIT*** Engineering Software. Measurement may be performed parallel to the application development in the standard development environment.



Benefits:

- Measure both machine code's runtime behavior and code coverage right at the beginning of the development phase
- Detect runtime problems at an early stage
- Identify both time-consuming program parts and unused programming blocks
- Overall and individual measurement of all application blocks
- Identify the code efficiency by comparing historical and current measurements
- Increase the software quality

Main Functions:

- Implicit binary code extension during translation, without changing the program code of a project
- Dynamic measurement via code instrumentation at each function entry and exit
- Only during measurement: temporary code enlargement and runtime extension of 10 to 50%
- Measurement start via variable or command
- Overview of the measurement results in the development environment

Functions:

- Control the runtime measurement via freely selectable Boolean variable
- Measure the runtime of individual programming blocks and function block instances within the "profiler watch list"
- Measure the percentage of missed instructions per block via code coverage
- Measurement results show the time-critical path

- Setting options:
  - Select the task to be measured
  - Select the unit base (tick, milliseconds or microseconds)
  - Define the memory size required for the measurement
  - Adjust the measurement behavior (next or maximum cycle)
  - Select the calls to be measured in the monitoring list
  - Select the program blocks to be measured to determine the code coverage

- Detailed results:
  - Percentage of time spent in the call
  - Total time spent in call
  - Average time of all POU calls in a single cycle
  - Minimum and maximum processing time over multiple cycles
  - Number of calls
  - Time spent for each call
  - Standard deviation of average measured time
  - Percentage of the iterated code

- Display the results as:
  - Summary table
  - Call tree (time- or process-oriented)
  - Tables
  - Watch list

Item Description	
e!COCKPIT Profiler	Item No.
Single license	2759-404/1420-1000

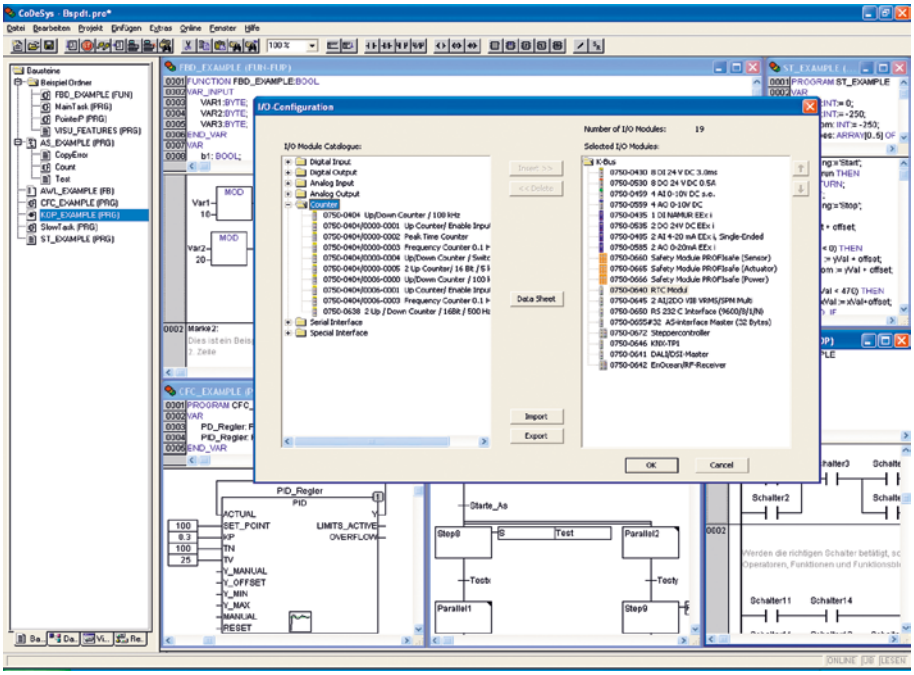
A single license allows installation on one computer.

Minimum ***e!COCKPIT*** version	V1.4.0
Hard disk space	30 MB
Delivery type	Installation file (download)
For data sheet and additional information, see:	wago.com/2759-404/1420-1000

Internet connection may be required for license activation.

WAGO-I/O-*PRO*

Engineering Software based on CODESYS V2.3



WAGO-I/O-PRO is a programming and visualization tool for control programs. This software is used to develop PLC applications for the WAGO I/O System 750's controllers.

WAGO-I/O-PRO runs in compliance with the IEC 61131-3 standard, which specifies the requirements for a programming system. The IL, SFC, LD, FBD and ST programming languages are supported. The optimal programming language can be chosen for each application.

With extensive programming functions, the software readily meets the increasing demands on control program development, e.g., reusability and modularization.

- Efficiently translate between programming languages
- Automatic variable declaration
- Library management

Integrated test and diagnostic functions also streamline and accelerate the steps for implementing PLC projects.

- Online status display using the program code
- Offline simulation
- Integrated process visualization
- Record and graphically display project variables

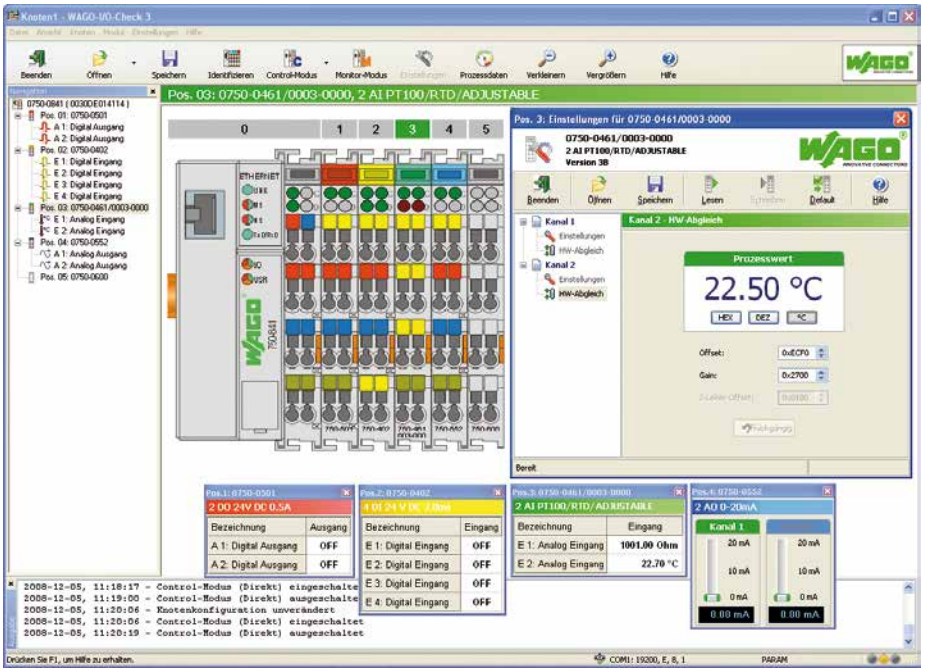
WAGO-I/O-PRO also offers the option of programming your existing products from other manufacturers within the CODESYS automation alliance in addition to WAGO's standard programmable CODESYS automation alliance products.

WAGO-I/O-*PRO*		
Version	**Delivery Type**	**Item No.**
RS-232 Set	CD-ROM and serial communication cable	759-333
USB Set	CD-ROM and USB communication cable	759-333/000-923

Supported operating systems	Windows 7; Windows 10
System Requirements	
Processor	1 GHz or higher; 32-bit (x86) or 64-bit (x64)
Memory	1 GB of RAM (min.)
Hard disk space	300 MB (min.)
Graphics resolution	1024 x 786 (min.)
Other system requirements	Open serial interface; CD-ROM and mouse required
Delivery type	Installation file (CD-ROM)
For data sheet and additional information, see:	wago.com/759-333

Windows® is a registered trademark of Microsoft Corporation.

WAGO-I/O-*CHECK*



WAGO-I/O-CHECK is an easy-to-use Windows application for operating and displaying a WAGO I/O System 750's node without connecting to a fieldbus system.
The software reads the configuration from the node and displays it graphically on the screen. This graphic can be printed together with a configuration list as documentation.

With WAGO-I/O-CHECK, it is possible to display and specify the process data of the I/O modules. The field wiring, including all sensors and actuators, can thus be checked before startup.

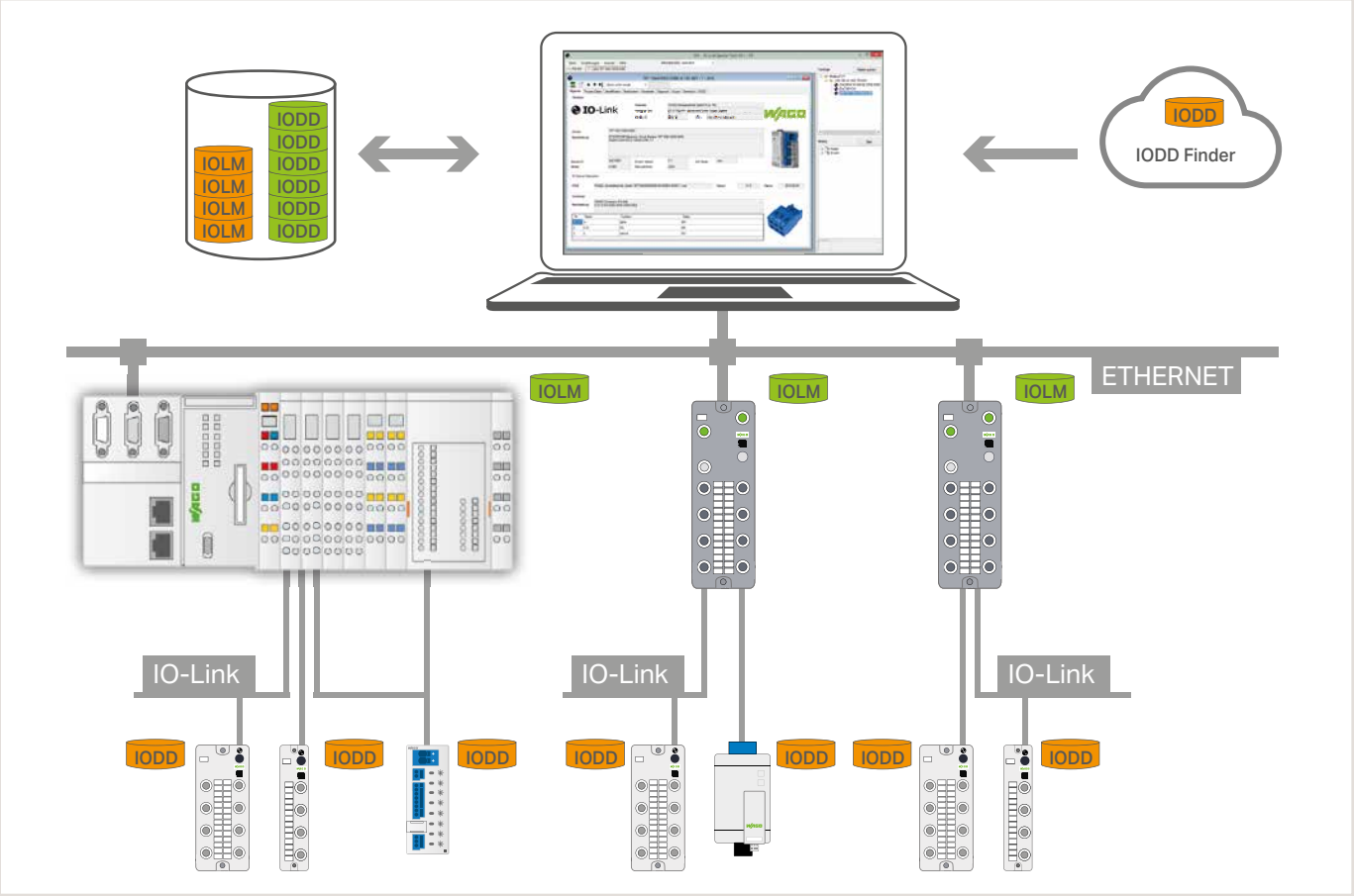
For some types of interface, Pt100 and thermocouple modules, application-specific settings can be made, such as the baud rate or sensor types.

The coupler must be connected to a free serial or USB port of the PC using the communication cable supplied in the set with the system to enable communication between WAGO-I/O-CHECK and the node.

WAGO-I/O-*CHECK*		
Version	**Delivery Type**	**Item No.**
RS-232 Set	CD-ROM and serial communication cable	759-302
USB Set	CD-ROM and USB communication cable	759-302/000-923
CD	CD-ROM	759-920

Supported operating systems	Windows 7; Windows 10
System Requirements	
Processor	1 GHz or higher; 32-bit (x86) or 64-bit (x64)
Memory	1 GB of RAM (min.)
Hard disk space	150 MB (min.)
Graphics resolution	1024 x 786 (min.)
Other system requirements	CD-ROM and mouse required
Delivery type	Installation file (CD-ROM)
For data sheet and additional information, see:	wago.com/759-302

WAGO IO-Link Configurator, WAGO-I/O-*CHECK*



The WAGO IO-Link Configurator enables configuration and parameterization, as well as operation and monitoring of WAGO IO-Link Masters in the WAGO I/O System 750 and WAGO I/O System Field and, in particular, the WAGO IO-Link devices connected to them.

Additionally, IO-Link devices from all third-party manufacturers can be completely configured and operated via the WAGO IO-Link Configurator, as long as they comply with the IO-Link specification.
The process data of a product can be graphically visualized and stored in trend curves. Up to eight elements can be selected for visualization, and the data can be recorded for up to 24 hours.

Device description files for the IO-Link Masters (IOLM) or IO-Link Devices (IODD) can be used to integrate new devices into the tool at any time. Convenient access to the IODD finder of the IO-Link user organization is available for the IODDs. It allows an automated and selective download of IODDs when integrating new IO-Link devices.

WAGO IO-Link Configurator can be used either as a standalone program or integrated into engineering systems with a TCI interface and WAGO-I/O-CHECK.

An integrated IODD viewer allows detailed insight into the IODD device description.

The license is assigned to the respective PC on which it is installed (workstation license).

Item Description	
WAGO IO-Link Configurator	**Item No.**
Single License; Online Activation	2759-106/1121-1000

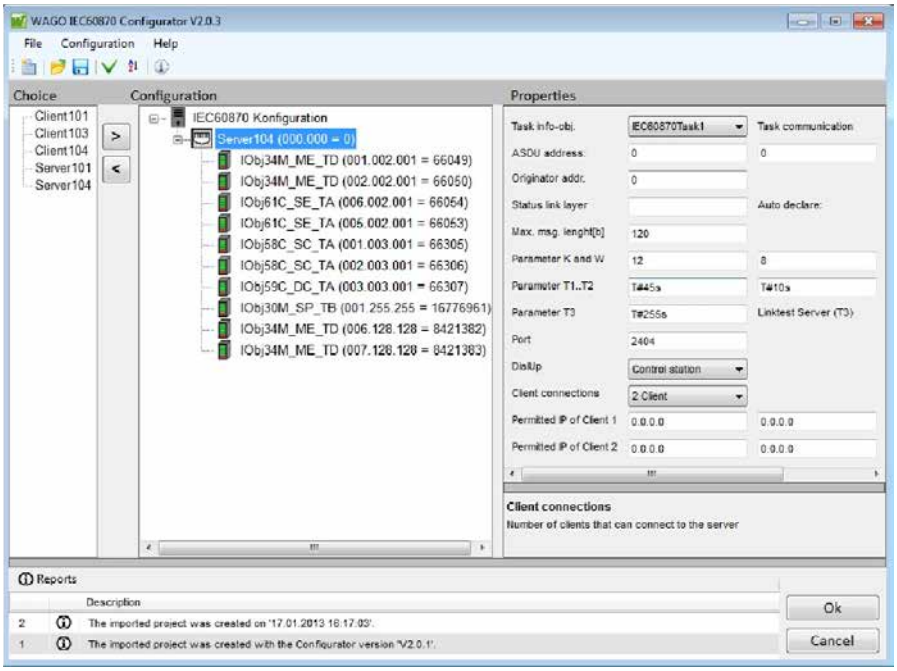
A single license allows installation on one device.

Every additional device requires its own license.

Operating system	Windows 7 or higher
Memory	2 GB or larger
Processor	1 GHz with 32 bits or 64 bits
Free hard disk space	150 MB
Screen resolution	800 x 600 pixels
Delivery type	License certificate by email (necessary library provided via *e!COCKPIT*)
For data sheet and additional information, see:	wago.com/2759-106/1121-1000

Internet connection is required for license activation.

WAGO IEC 60870 Configurator



The WAGO IEC 60870 Configurator is part of the WAGO-I/O-PRO V2.3 Software. The configurator fully supports the IEC 60870-5-101/-103/-104 specific functions of all WAGO telecontrollers.

The configurator sets up IEC 60870 objects while configuring data exchange to the PLC application or I/O modules.
Import and export functions in CSV format allow configured data to be transmitted to other engineering tools.

The IEC 60870-5-101 and -104 protocols are supported on both client and server sides, while the IEC 60870-5-103 protocol is exclusively supported on the client side. This permits the creation of gateways that convert one protocol into another, e.g., allowing protection devices to be read out via IEC 60870-5-103 and data to be transmitted to the network control system via IEC 60870-5-104.

Various options are available for the time synchronization of telecontrol substations (server). Time can be synchronized either via the IEC 60870 protocol with object 103 or via (S)NTP. With the WAGO 750-640 Module, clock time can also be synchronized via DCF77 or GPS.

IEC 60870-5-101/-104 Information Objects can be used to monitor the direction of single, double and step messages. Bit patterns, counter values, as well as normalized, scaled and floating-point measurement values can also be used. All information objects can be transmitted with or without a time stamp. This also applies to information objects in control direction.

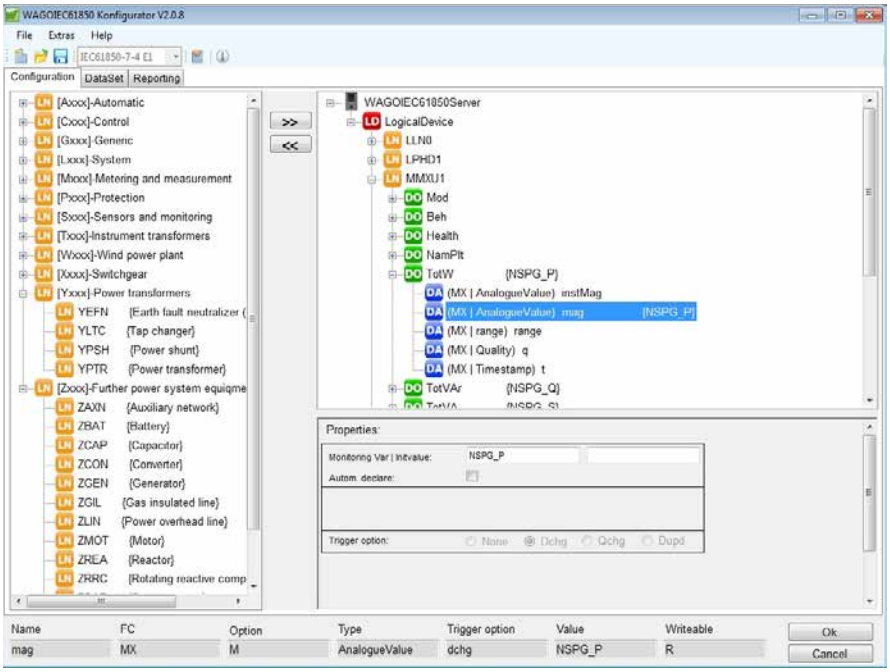
An IEC 60870-5-104 Server can simultaneously maintain up to four connections to the control system (client).

IEC 60870-5 can be used in co-existence with other services such as IEC61850, DNP3 and Modbus®.
The combination of different client/server protocols allows for individual gateway functions within the system boundaries.

WAGO IEC 60870 Configurator
Integrated in WAGO-I/O-PRO V2.3

System requirements	WAGO-I/O-PRO Version 2.3.9.40 or higher
Function	IEC 60870-5-101 Server and Client IEC 60870-5-103 Client IEC 60870-5-104 Server and Client
Supported Controllers	
Controllers PFC200	750-8212/025-001 750-8216/025-001
Controllers PFC200 XTR	750-8202/040-001 750-8206/040-001
Controllers 750	750-890/025-001 750-890/025-002
Controller 750 XTR	750-890/040-001

WAGO IEC 61850 Configurator



The WAGO IEC 61850 Configurator is part of the WAGO-I/O-PRO V2.3 Software. The configurator fully supports the IEC-61850-specific functions of the WAGO telecontrollers.

The configurator sets up IEC 61850 objects while configuring data exchange to the PLC application or I/O modules.
Import and export functions in IEC 61850 SCL exchange format allow configured data to be transmitted to other engineering tools.

On the server side, the IEC 61850 protocol is supported for MMS* communication to the control system. The controllers can also be operated as a GOOSE publisher or subscriber. This permits the creation of gateways that convert one protocol into another, e.g., allowing data from protection devices to be received via the IEC 61850 Client and transmitted to the network control system via IEC 60870-5-104 Protocol.
Time synchronization is performed via SNTP, NTP, DCF77 and GPS (750-640 Module is also required for GPS).

Various options are available for the time synchronization of telecontrol substations (server): It can either be done via (S)NTP or synchronized with the WAGO 750-640 Module via DCF77 or GPS.

The IEC 61850 MMS Server can simultaneously maintain up to five connections to the control system (client).

The IEC 61850 Client processes data from up to 10 servers with each 32 requests.

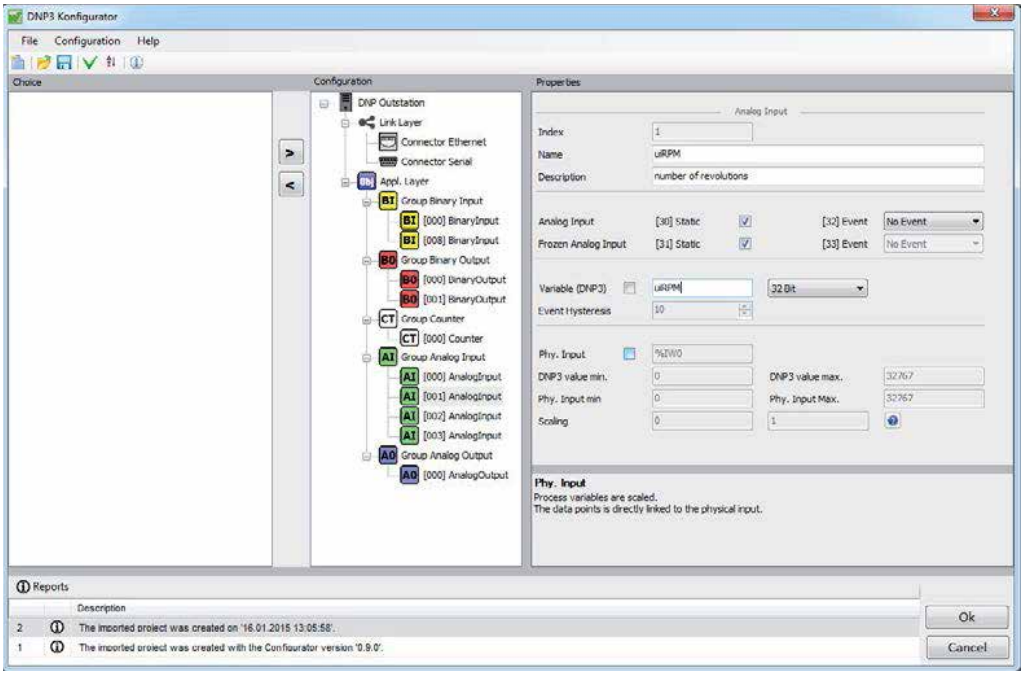
IEC 61850 can be used in co-existence with other services such as IEC 60870-5, DNP3 and Modbus®.
The combination of different client/server protocols allows for individual gateway functions within the system boundaries.

*MMS = Manufacturing Messaging Specification

WAGO IEC 61850 Configurator
Integrated in WAGO-I/O-PRO V2.3

System requirements	WAGO-I/O-PRO Version 2.3.9.47 or higher
Function	IEC-61850 Server and Client
Object types	IEC 61850-7-4 and IEC 61400-25
Data sets	Static and dynamic
Reporting	Buffered and unbuffered
Supported Controller IEC 61850 Server	
Controller 750	750-872
Supported Controllers IEC 61850 Server and Client	
Controllers PFC200	750-8212/025-001 750-8212/025-002 750-8216/025-001 750-8217/025-001
Controllers PFC200 XTR	750-8202/040-001 750-8206/040-001
Controllers 750	750-890/025-001 750-890/025-002
Controller 750 XTR	750-890/040-001

WAGO DNP3 Configurator



The WAGO DNP3 Configurator is part of the WAGO-I/O-PRO V2.3. Software. The configurator fully supports the DNP3-specific functions of all WAGO telecontrollers.

The configurator sets up DNP3 objects while configuring data exchange to the PLC application or I/O modules. The settings can be imported and exported in DNP3 XML device profile format.

WAGO's telecontrollers can work as TCP, UDP and serial DNP3 slaves.

Cyclical time synchronization of the telecontrol substation (slave) can be performed by the master according to DNP3 Device Profile 1.7.2.

In the monitoring direction, the WAGO DNP3 Slave can send digital, analog and count values to the master. Both digital and analog values can be received in the control direction. Analog values can be processed in 16-bit, 32-bit or FLOAT format. Count values can be processed in 16-bit or 32-bit format.

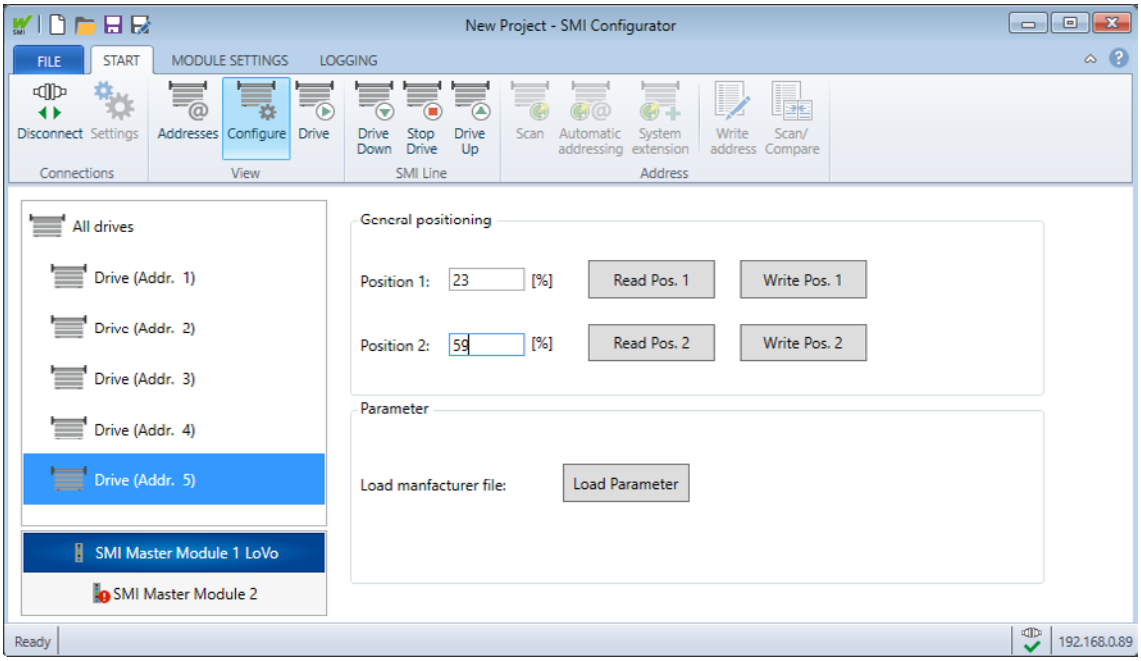
The WAGO DNP3 Slave can simultaneously maintain connections to up to four DNP3 masters.

DNP3 can be used in co-existence with other services such as IEC 60870-5, IEC 61850 and Modbus®.
The combination of different client/server protocols allows for individual gateway functions within the system boundaries.

WAGO DNP3 Configurator
Integrated in WAGO-I/O-PRO V2.3

System requirements	WAGO-I/O-PRO Version 2.3.9.48 or higher
Function	Serial DNP3 Slave (RS-232), DNP3 TCP/IP Slave
Supported Controllers	
Controllers PFC200	750-8212/025-001 750-8212/025-002 750-8216/025-001 750-8217/025-001
Controllers PFC200 XTR	750-8202/040-001 750-8206/040-001
Controllers 750	750-890/025-001 750-890/025-002
Controller 750 XTR	750-890/040-001
Baud rates	300; 600; 1200; 2400; 4800; 9600; 19200; 38400
Number of control stations	4 (max.)

WAGO SMI Configurator



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The WAGO SMI Configurator is a parameterization software for SMI master modules. You can use the software to commission SMI drives that are connected to SMI master modules.

The SMI Configurator offers functions for commissioning and configuring SMI drives. Besides the online mode, in which you can control the SMI drives directly, you have the option of using the SMI Configurator in offline mode. This includes offline configuration of all SMI drives connected to available SMI master modules within a node, as well as saving and restoring SMI drive configurations from existing CSV addressing files.

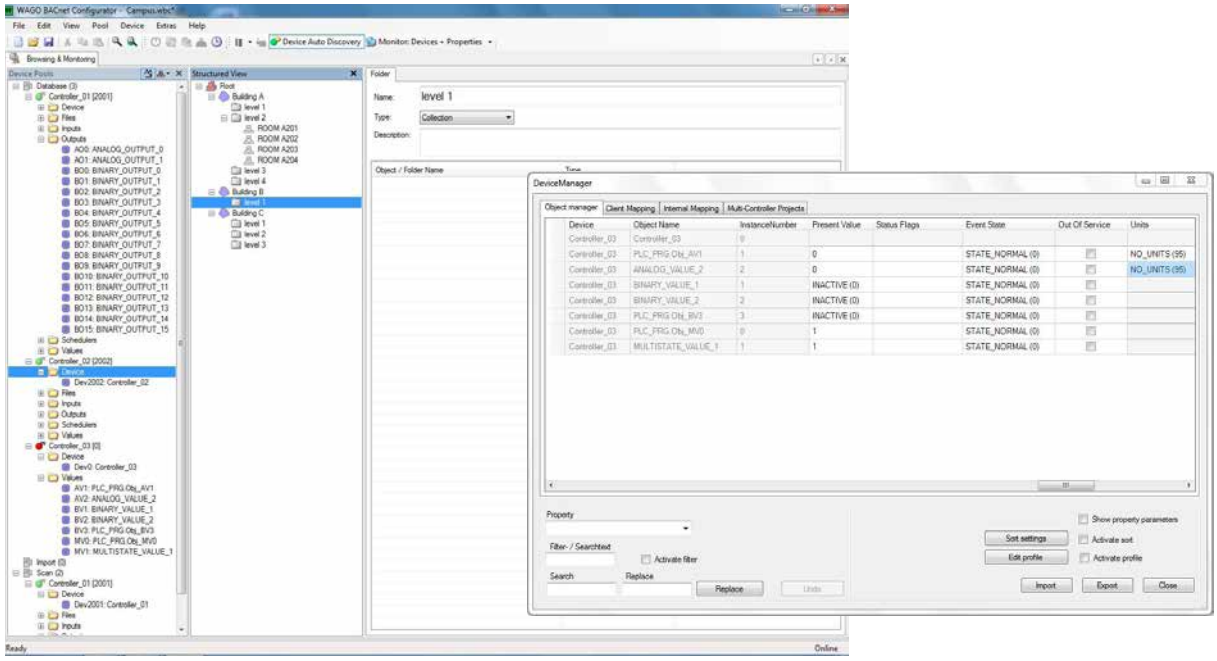
You can directly transfer all module settings of an SMI master module to any number of additional SMI master modules with the "Transfer settings" function. Furthermore, you have the option of using the SMI Configurator to generate project documentation and display the log data of a selected SMI master module.

A scan function makes it possible to identify the SMI drives connected to an SMI master module and display the settings in the SMI Configurator. If SMI addresses are missing or there is an address conflict, you can use automatic addressing to assign a new SMI address to all drives automatically, or alternatively use system extension to resolve the address conflict and delete any missing SMI drives.

WAGO SMI Configurator
Download: www.wago.com

Supported operating systems	Windows 7; Windows 10
System Requirements	
Processor	1 GHz (min.)
Memory	1 GB (min.)
Hard disk space	20 MB (min.) for the SMI Configurator and 60 MB for the .NET Framework 4.0
Other system requirements	.NET Framework 4.0
Delivery type	Download

WAGO BACnet Configurator



The WAGO BACnet Configurator is an independent commissioning, configuration and management software program. The configurator fully supports the BACnet-specific functions of WAGO's 750-829, 750-830, 750-831 and 750-832, as well as the BACnet/IP PFC200 Controller (750-8212/000-100), which is programmed via ***e!****COCKPIT*.

The configurator creates and configures WAGO BACnet Controllers and sets up data exchange between the IEC application and BACnet objects. Import and export functions allow further processing of the configuration data.

For integration into existing BACnet networks, the BACnet devices available can be scanned and displayed in a browser; also, data exchange can be implemented for WAGO devices.

Among the configurator's capabilities are the logical structuring of the project and network, addressing of the controller and client/server configuration in every WAGO BACnet Controller.
The devices, objects and configuration data are displayed in a logical, structured network and browser view.

Depending on the function used, both online and offline operation is possible.

The configurator displays all configuration data. To edit BACnet objects, the configurator offers specific table views in which the corresponding properties of the object can be modified. Typical table editing functions, e.g., search/replace, sort, filter and show/hide, are available. The user can upload the updated configuration data to one or more controllers and save as a project.

The configurator provides a browser to view the BACnet object properties and modify current parameters (communicate value changes, write property values, utilize BACnet services, etc.). Additionally, a transaction log window is available for client services.

WAGO BACnet Configurator
The WAGO BACnet Configurator can be downloaded for free at: www.wago.com

Supported operating systems	Windows 7; Windows 10

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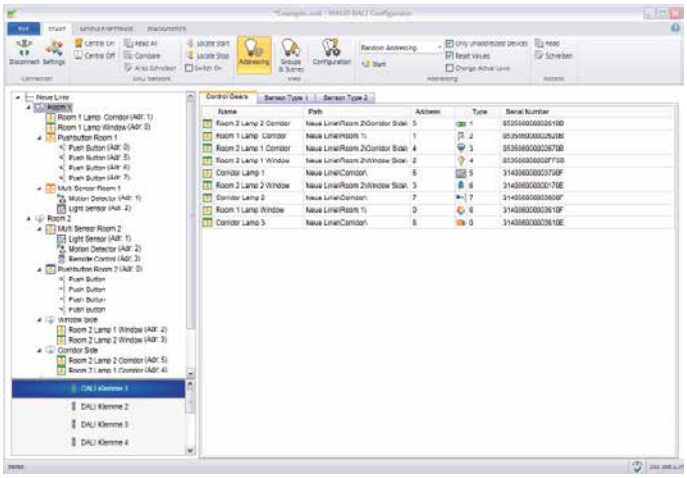
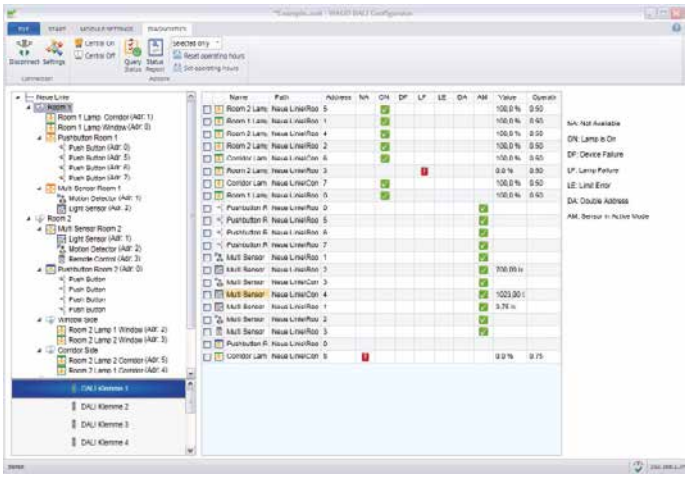
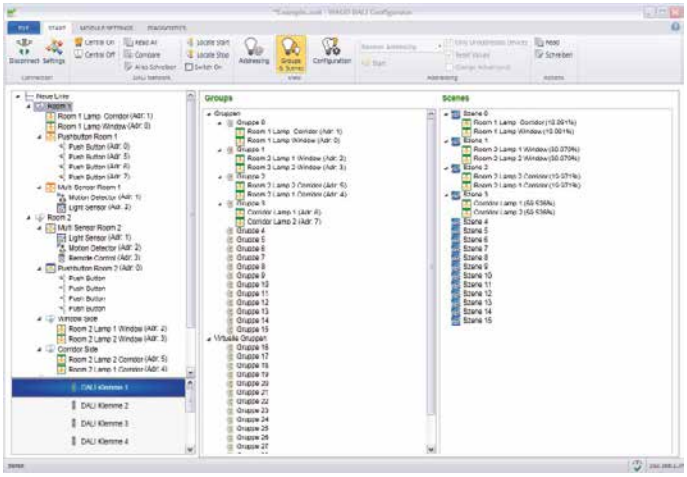
WAGO DALI Configurator







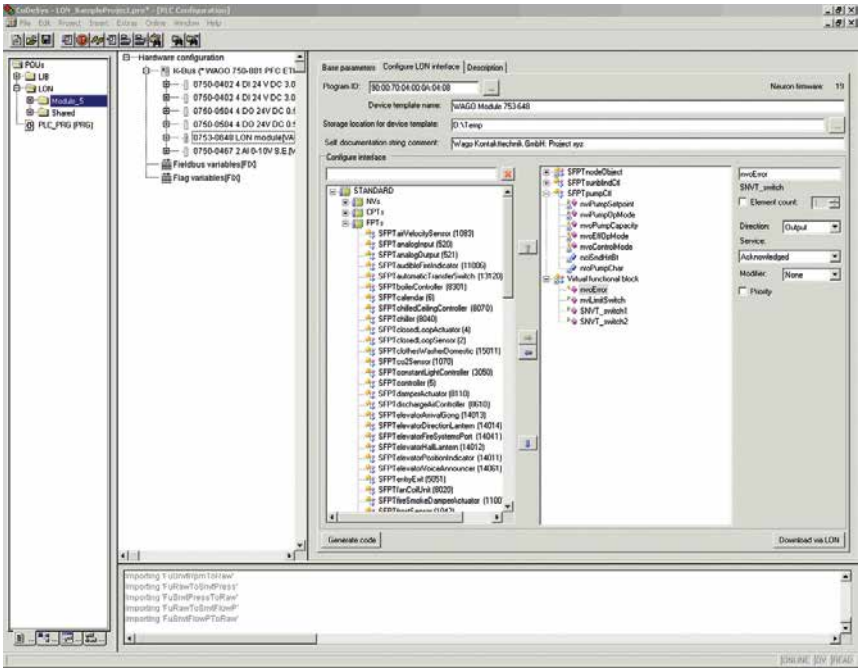
The WAGO DALI Configurator simplifies commissioning of a DALI network via 753-647 DALI Multi-Master. The configurator is available as a stand-alone Windows application or for use with WAGO-I/O-CHECK Software.

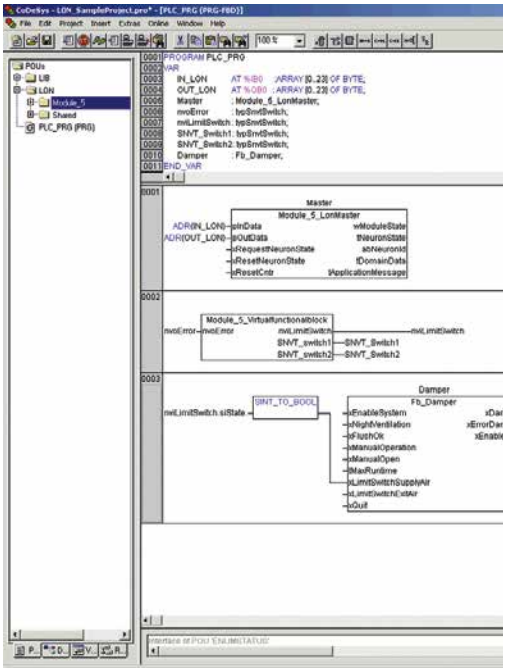
It provides the following functions: easy commissioning, configuration, service, support and maintenance of a DALI network.
Comprehensive backup & restore features, as well as an offline configuration option for the entire DALI network (including ECGs and sensors) are available.

WAGO DALI Configurator
The WAGO DALI Configurator is available as part of WAGO-I/O-CHECK (Version 3.5.1 or higher) or as a stand-alone version (www.wago.com).

Features	Stand-alone software or for use with WAGO-I/O-CHECK
Commissioning function	Addressing, scenes and group formation; control gear configuration, optional offline configuration, import and export functions, project documentation
Service, support and maintenance functions	Backup & restore, reporting ECG illuminant failures, identification of doubled addresses, diagnostics report
Windows-compliant user interface	Multiple selection for time-optimized configuration and a clearly organized network display with tree structure support different commissioning workflows

WAGO LON® Configurator





The WAGO LON® Configurator is an integral part of the WAGO-I/O-PRO IEC-61131-3 Programming Environment. The configurator supports both the 753-648 LON® Module's LonWorks® network interface configuration and WAGO-I/O-PRO project integration.

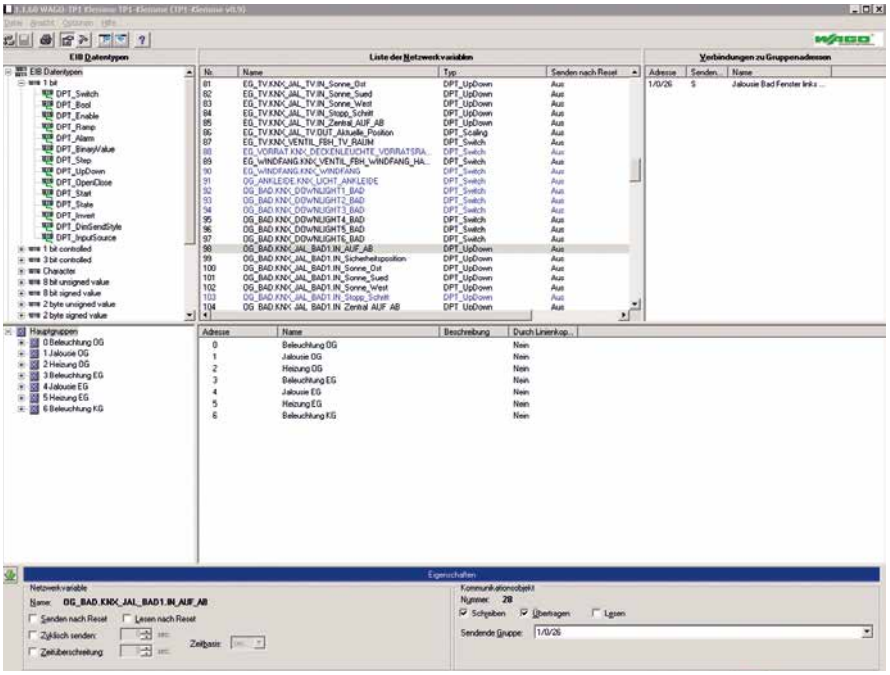
Network variables of any type can be defined. In addition to standard network variable types (SNVTs) and standard configuration property types (SCPTs), user-defined types (UNVTs/UCPTs) and LonMark® functional profiles (FPTs) are also supported. Network variables are defined using the types and objects of the LonMark® resources installed on your computer.

IEC-61131-3 function blocks are automatically created in the IEC application, simplifying operation. The function blocks represent the LON® network interface in the IEC application. When starting the controller, both network variable interface and configuration data are automatically downloaded into the I/O module.
An external interface file (XIF) is created for offline configuration in a network management tool.

WAGO LON® Configurator
The WAGO LON® Configurator is available as part of WAGO-I/O-PRO (Version 2.3.9.34 or higher)

- Integral part of WAGO-I/O-PRO programming software
- Defines and implements a LON® network interface
- Automatically generates IEC 61131-3 function blocks to represent the LON® network interface within an IEC application
- Downloads both network interface and configuration data when controller is started
- Configuration check and test
- Generates XIF files

WAGO ETS Plug-in



The WAGO ETS Plug-in is a WAGO ETS product database extension that allows the use of WAGO devices, such as the 753-646 KNX/EIB/TP1 Interface, 750-889 KNX IP Controller and KNXnet/IP Router (consisting of KNX/EIB/TP1 Interface and KNX IP Controller).

The software's enhanced structure offers intuitive navigation – providing both new and experienced ETS users with exceptional usability.

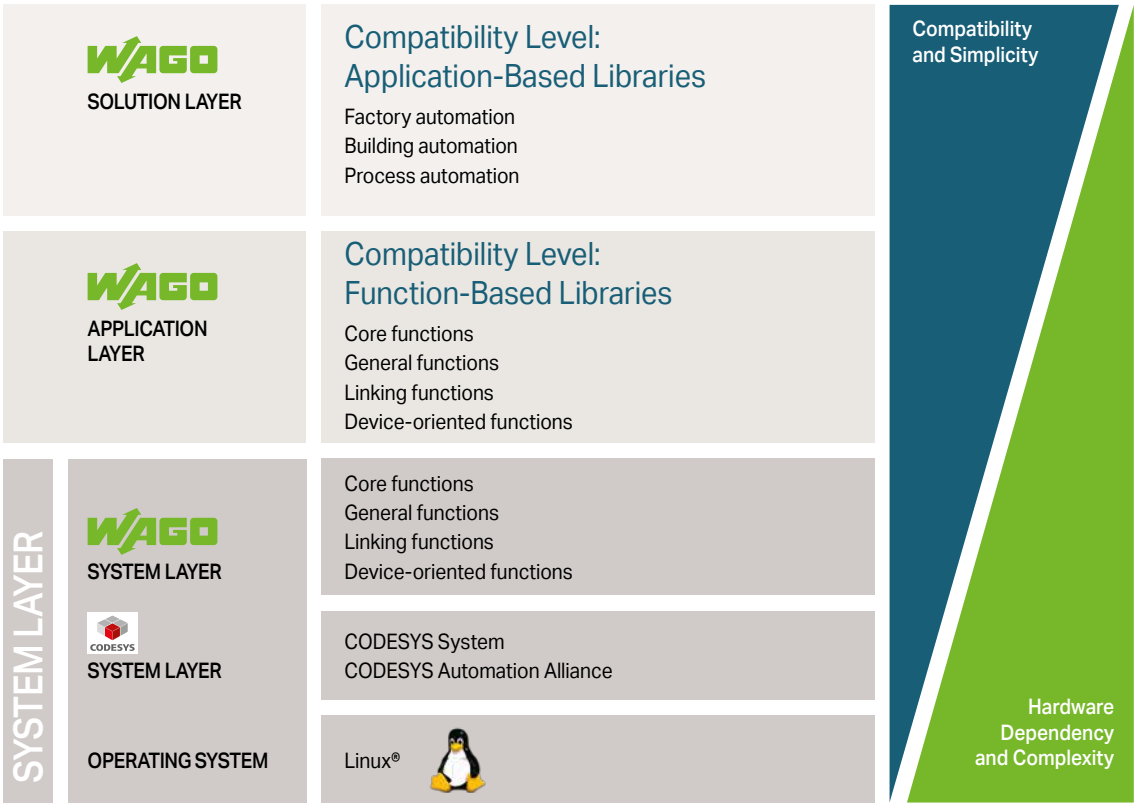
The WAGO ETS Plug-in provides three clearly structured user interfaces for the various devices. Depending on the mode selected, either the KNX/EIB/TP1 Module, KNX IP Controller or the KNXnet/IP Router (IP Controller with KNX/EIB/TP1 Module in first position) are supported.

In the graphical interfaces, device parameters are easy to configure. Only the options pertaining to the selected device are displayed.
During software development, creating a convenient and time-saving graphical user interface was heavily emphasized – and this is beneficial when assigning communication objects to group addresses. Two different drag-and-drop options and a context menu with automatic filter function are available allowing users to select their favorite procedure.

WAGO ETS Plug-in
The WAGO ETS Plug-in can be downloaded for free at: www.wago.com

Supported operating systems	Windows 7; Windows 10
Other	The plug-in requires the ETS product database.
Configuration	
KNX/EIB/TP1 Module	Load/assign IEC variables (communication objects); Create/configure group addresses
KNX IP Controller	Allocate IP addresses; Download IEC application to controller; Load/assign IEC variables (communication objects); Create/configure group addresses
KNXnet/IP Router	Allocate IP addresses; Set routing multicast addresses; Filter/transmit telegrams

Runtime Software – Libraries
e!COCKPIT (based on CODESYS V3)



2

Runtime Software Controls the Machine

Machines and systems are controlled by runtime software that determines behavior, while enabling both operation and current status monitoring for the user. It also transmits operating data to higher-level systems. Unlike engineering software, runtime software operates continuously – it is a part of the machine and ensures correct operation.

Ready-to-Use Function Blocks Save Development Time

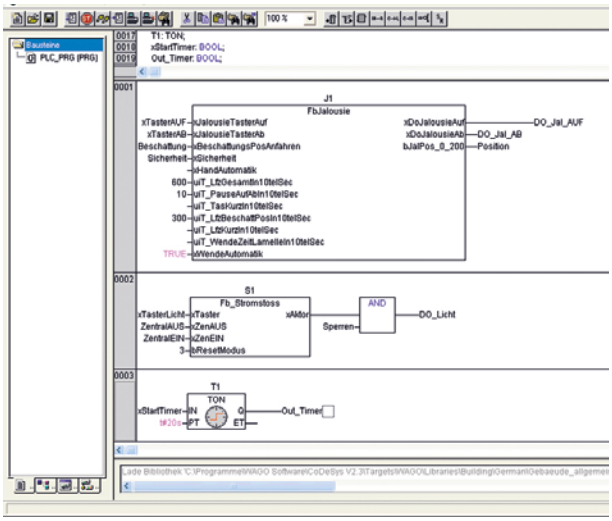
Comprehensive, tried-and-tested software function blocks (IEC libraries) expedite development. Thus, ***e!COCKPIT*** is supplemented with comprehensive IEC libraries.

Essentially, the libraries are divided into three abstraction layers:
The solution layer primarily contains complete, easy-to-use software solutions for production, building and process automation.
The application layer contains technology functions, e.g., for communication, that are ideal for convenient, easy application. The system layer provides experts with complete system access.

The upper layers are separated by compatibility levels. Essentially, this enables software to be developed independently of the hardware it will be used on. This provides the greatest degree of flexibility in selecting the right device for the right application, while retaining a uniform software base. It also provides investment security.

Function Modules and Libraries
Integrated into the ***e!COCKPIT*** Software

Runtime Software – Libraries
WAGO-I/O-PRO (based on CODESYS V2.3)



Room Applications

Integrated into WAGO-I/O-PRO Software

This library contains custom function blocks for building automation, which accelerate the programming of building applications.

- Lighting
- Dimming
- Lighting scenes
- Constant light control
- Sun protection
- Shading
- Other applications

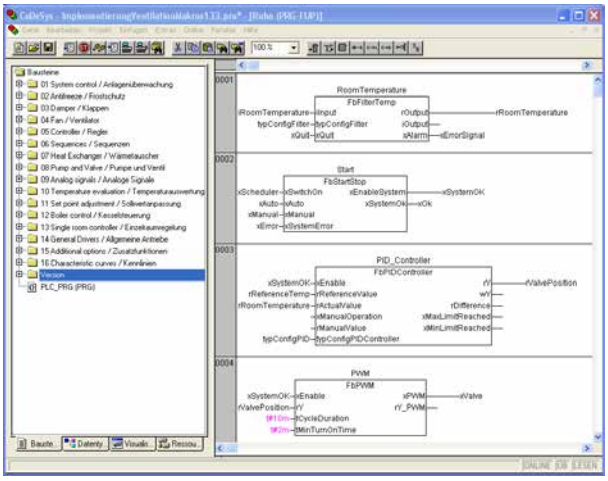
Application Notes

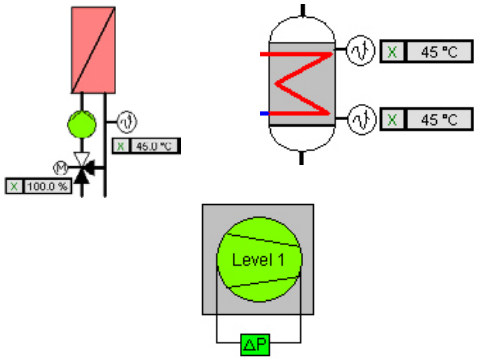
Download: Current application notes available at:
www.wago.com

The application notes contain function blocks (FBs) for communication applications.

- KNX/EIB
- DALI
- EnOcean Radio Technology
- Modbus
- M-Bus
- MP-Bus
- SMI
- LonWorks®
- Email
- SMS
- Other applications

Runtime Software – Libraries
WAGO-I/O-PRO (based on CODESYS V2.3)





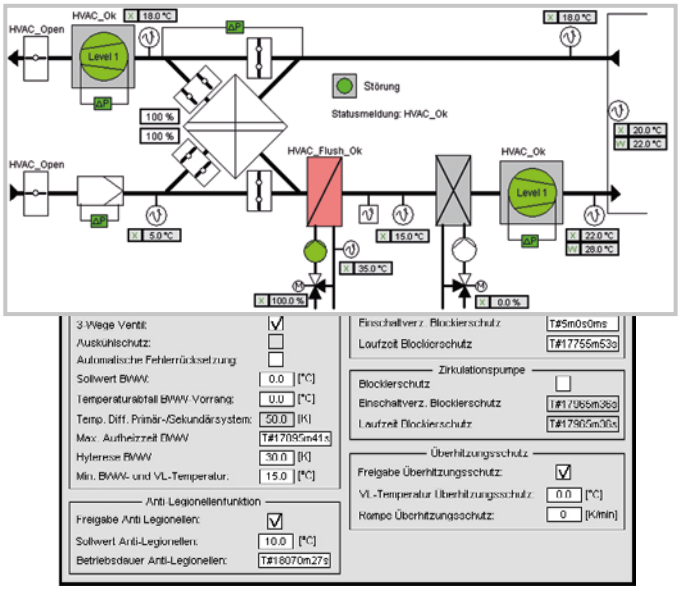
Graphical elements for HVAC applications

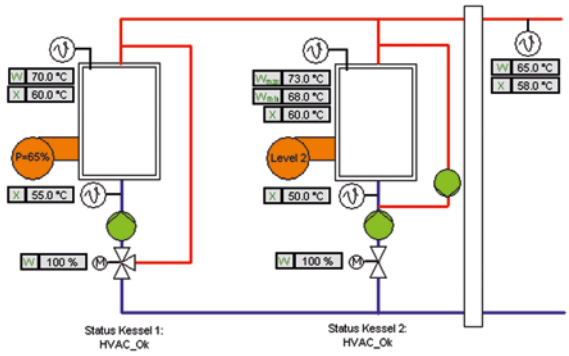
Heating, Ventilation, Air Conditioning

Integrated into WAGO-I/O-PRO Software

This library contains function blocks (FBs) to create automation applications for complex heating, ventilation and air-conditioning (HVAC) systems.

These include: fault monitoring, starter circuits, monitoring frost protection systems, fan control (stepped/continuous), air mixture valve control, air heater/cooler control, cascade control of room/feed air temperature, free night cooling, summer/winter compensators, enthalpy calculations, PID controllers, filter monitoring, blockage protection, heating circuit control, heat recovery control, boiler control (stepped/continuous), boiler sequence, domestic hot water control, start/stop optimization, humidification and dehumidification (climate) and more.





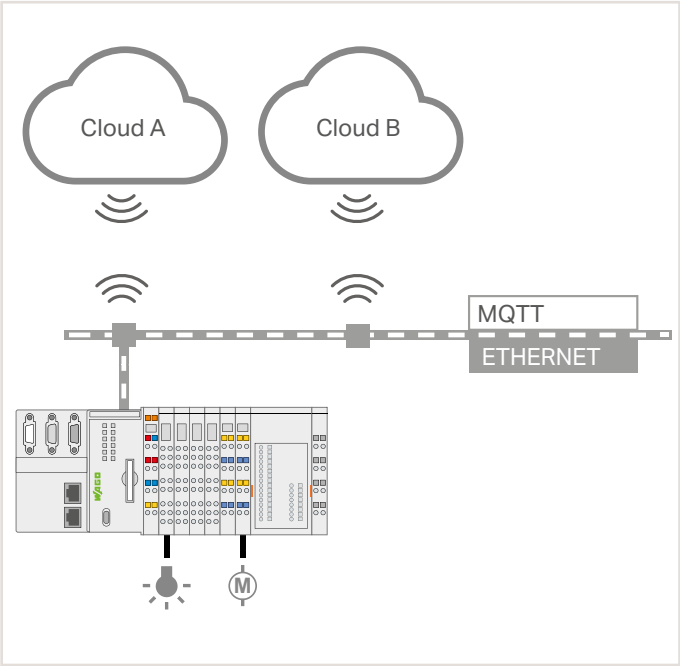
Boiler sequence control

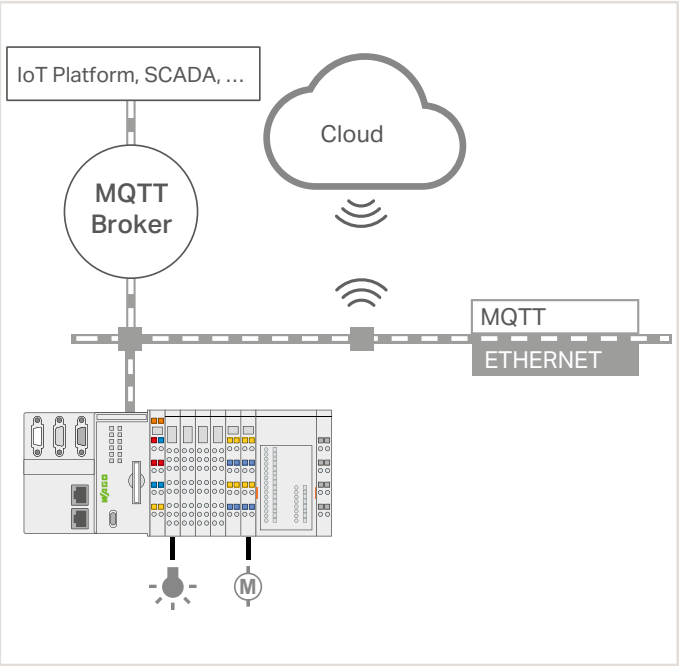
System Macros

Download: Current application notes available at:
www.wago.com

- District heating transfer station macros
- Boiler macros
- Heating circuit macros
- Drinking water heating macros
- Ventilation macros

Runtime Software
e!RUNTIME; Multi-Cloud Connectivity





Function:
MQTT is a powerful IoT protocol that has become standard in many industrial automation applications. Both PFC200 Controller (Generation 2) and Touch Panel 600 support an MQTT connection by default. "Multi-Cloud Connectivity" enables the parallel connection of a device to two different cloud systems, IoT platforms or MQTT brokers, allowing different tasks to be implemented in the appropriate cloud application. For example, device management can be performed within WAGO Cloud. At the same time, specific tasks can be implemented in another cloud-based solution, e.g., IBM Watson, Amazon Web Services (AWS) or other specialized IoT platform. Data can also be split up, allowing critical data to go to a local MQTT broker and less critical data to a cloud.

Your Benefits:
- More options and flexibility
- Simple error analysis via configuration in WBM, programming in ***e!COCKPIT***
- Taking advantage of two cloud solutions/IoT platforms

Use:
Enter the license into ***e!COCKPIT***, assign it to a PFC200 Controller (Generation 2)/Edge Device/Touch Panel and load both the license and project into the device. No other installation steps are required.

Item Description	
e!RUNTIME; Multi-Cloud Connectivity	Item No.
Single License; Online Activation	2759-248/211-1000

A single license allows installation on one device.
One license per device is required.

Minimum ***e!COCKPIT*** version	V1.7
Minimum firmware version	17
Delivery type	License certificate by email (necessary library provided via ***e!COCKPIT***)
For data sheet and additional information, see:	wago.com/2759-248/211-1000

An Internet connection to the PC that's equipped with ***e!COCKPIT*** may be required for license activation.

Runtime Software
e!RUNTIME; Sparkplug

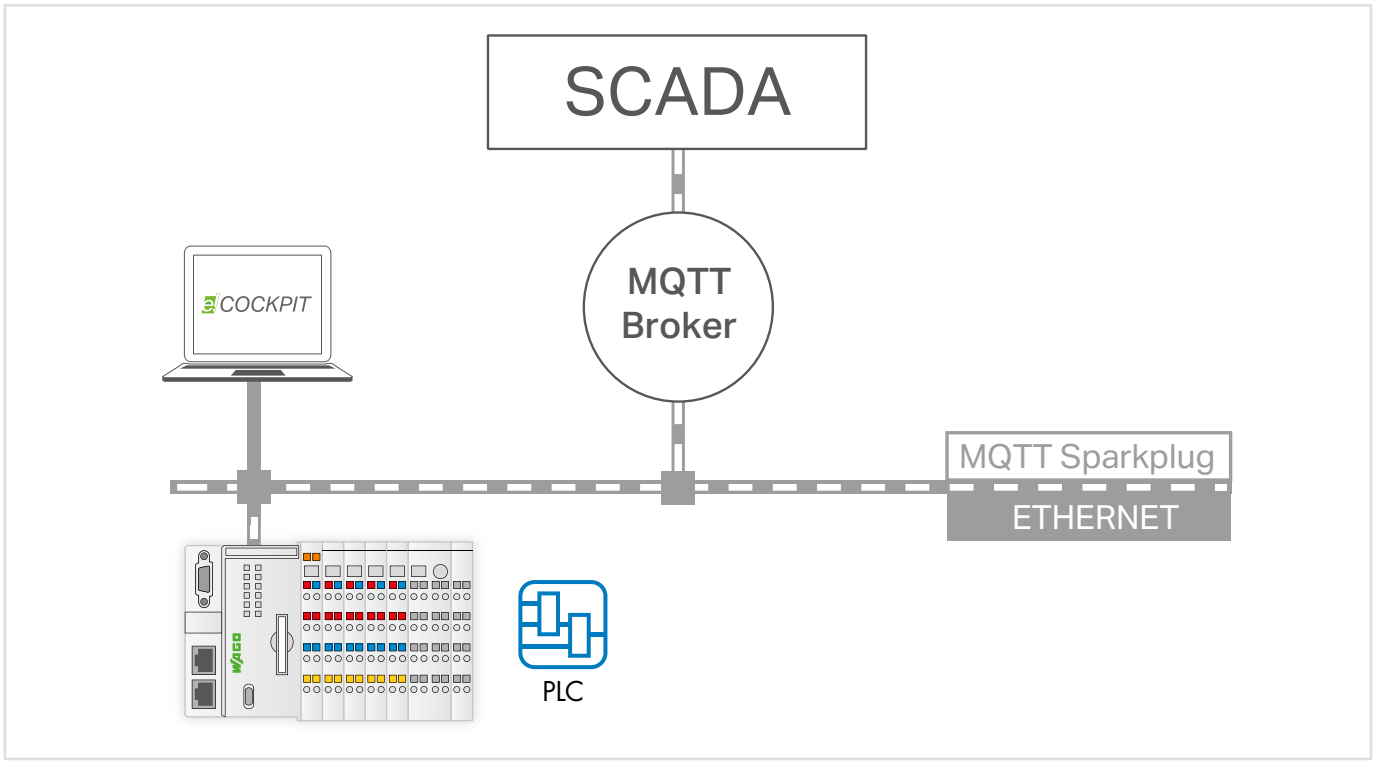
Function:
MQTT is a powerful IoT protocol that has become standard in many industrial automation applications. WAGO's PFC200 Controller (Generation 2) supports the MQTT protocol and the Sparkplug specification that defines both topic and payload, allowing the controller to exchange data directly with Sparkplug-enabled systems (e.g., SCADA). This requires a license for the controller.

Configuration is performed via the controller's Web-Based Management and the variables to be transmitted or received are defined by the ***e!COCKPIT*** Engineering Software and its library.

Benefits:
- The PFC200 communicates directly with Sparkplug-enabled systems (e.g., SCADA) without requiring any additional gateway.

Use:
- Enter the license into ***e!COCKPIT***, assign it to a controller and load both the license and project into the controller. No other installation steps are required.

Technical Data:
- Sparkplug B payload
- Publish data
- Subscribe to data



Item Description	
e!RUNTIME; Sparkplug	Item No.
Single License; Online Activation	2759-247/211-1000
Compatible Devices	
Controller PFC200; G2	750-821x
Touch Panel 600; Control Panel	762-x3xx/8000-002
Edge Controller	752-8303/8000-002

Besides the basic controller variants listed here, the license can also be used on these controllers' variants. For details, see the product information of the corresponding controller.
For detailed information on the controllers and touch panels, go to: www.wago.com/item-numbers

Minimum ***e!COCKPIT*** version	V1.5.0
Minimum firmware version	12
Delivery type	Licence certificate via email (***e!COCKPIT*** already contains the software itself)
For data sheet and additional information, see:	wago.com/2759-247/211-1000

An Internet connection to the PC that's equipped with ***e!COCKPIT*** may be required for license activation.
The single license allows installation on one controller.
Every additional device requires its own license.

Runtime Software
e!RUNTIME; IEC-61131 Runtime Environment; 600

Function:
This license allows a properly prepared device to expand into a programmable logic controller (PLC). A PLC is a device in which logical connections and operations are programmed, typically in graphical or textual languages adhering to IEC 61131-3. This can be either a device in a standard housing for control cabinet installation or a device with a completely different form factor (e.g., a touch panel).

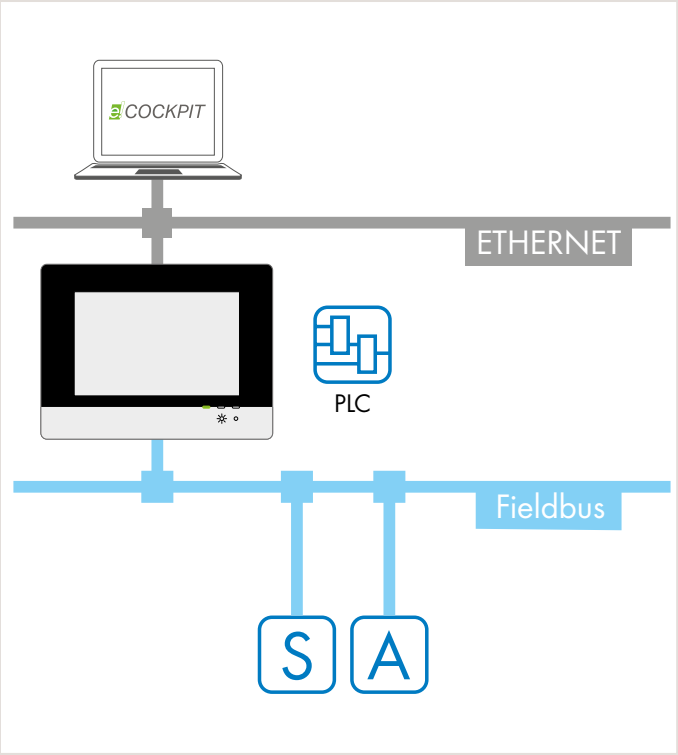
The ***e!COCKPIT*** Engineering Software is used for programming, which in addition to pure programming is also responsible for configuring devices and creating visualization projects.

Technical Data:
- PLC functionality per IEC 61131-3
- Performance dependent on target platform
- Multitasking operation

Benefits:
- Controlling processes
- Reading in data via a fieldbus
- Very compact automation solutions by combining several functions into one device (e.g., controlling and visualizing)

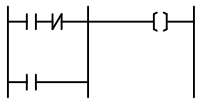
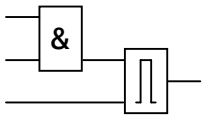
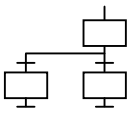
Use:
Enter the license into ***e!COCKPIT***, assign it to a device and load both the license and project into the device. No other installation steps are required.

Programming:
Programming the control function may also be performed in different graphical or textual programming languages.



Textual	
Instruction List	**Structured Text**

LD VAR_1 Load value of Var_1
AND %IX1.0 AND input 1.0
OR %QX2.1 OR output 2.1
ST Var_4 Save result in Var_4
	IF Bed1 THEN
	Z := -1;
	ELSE
	Z := 1
	END_IF

Graphical		
Ladder Diagram	**Function Block**	**Sequential Function Chart**
		

Item Description	
e!RUNTIME; IEC-61131 Runtime Environment; 600	Item No.
Single License; Online Activation	2759-216/211-1000
Compatible Touch Panels	
Touch Panel 600 Standard Line; PIO2	762-42xx/8000-001
Touch Panel 600 Advanced Line; PIO2	762-52xx/8000-001
Touch Panel 600 Marine Line; PIO2	762-62xx/8000-001

xx is a wildcard; the license applies to all Touch Panel sizes.

Minimum ***e!COCKPIT*** version	V1.5.1
Delivery type	Licence certificate via email (***e!COCKPIT*** already contains the software itself)
For data sheet and additional information, see:	wago.com/2759-216/211-1000

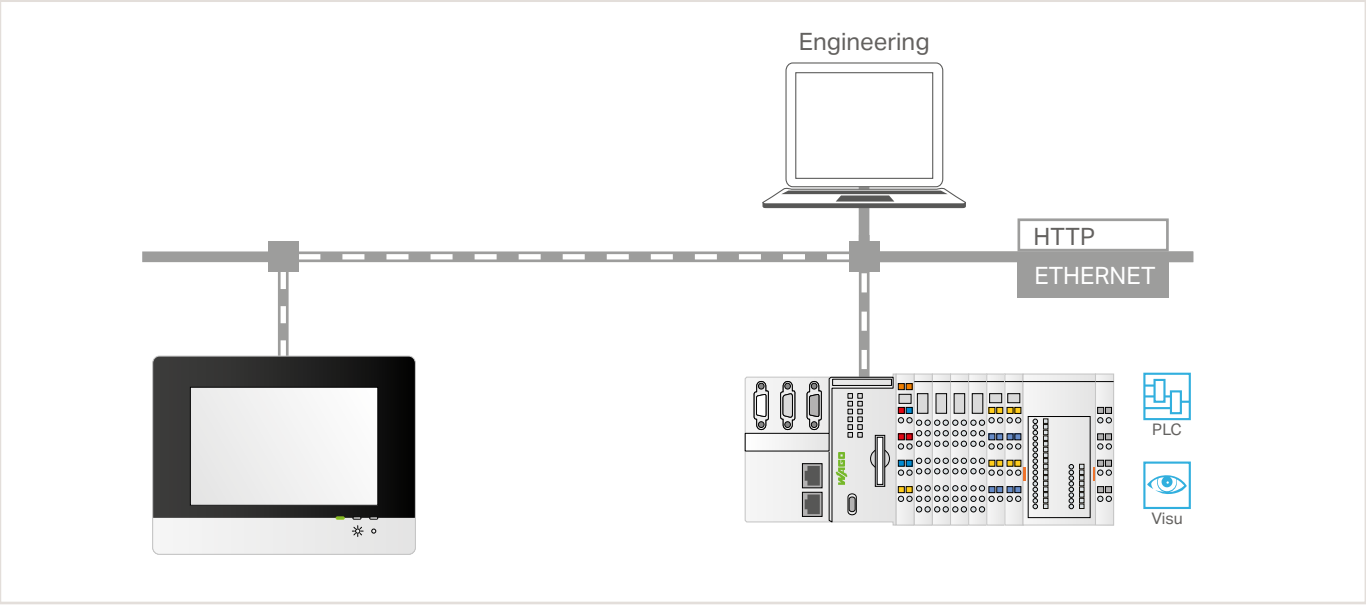
An Internet connection to the PC that's equipped with ***e!COCKPIT*** may be required for license activation.
A single license allows installation on one device.
One license per device is required.

Runtime Software
e!RUNTIME; MicroBrowser

Function:
The MicroBrowser extends the application range of the Touch Panels 600. With the ***e!****RUNTIME* MicroBrowser license, each Touch Panel can also now display the Java-based visualization of CS2.3 Controllers.

Benefits:
- MicroBrowser integration also allows the customer to use the powerful Touch Panel 600 in previous systems.

Use:
Enter the license into ***e!****COCKPIT* or WAGOupload, assign it to a Touch Panel and load the license into the device. No other installation steps are required.



Item Description	
e!RUNTIME MicroBrowser	Item No.
Single License; Online Activation	2759-230/211-1000
Compatible Devices	
Touch Panel 600 Standard Line	762-4xxx/xxxx-xxxx
Touch Panel 600 Advanced Line	762-5xxx/xxxx-xxxx
Touch Panel 600 Marine Line	762-6xxx/xxxx-xxxx

xx is a wildcard; the license applies to all Touch Panel sizes.

Other required software	Firmware version 18 or higher (Touch Panel 600)
Delivery type	License certificate via email (the firmware already contains the software itself)
For data sheet and additional information, see:	wago.com/2759-230/211-1000

An Internet connection to the PC that's equipped with ***e!****COCKPIT* or the WAGOupload tool may be required for license activation.
A single license allows installation on one device.
One license per device is required.

Runtime Software
e!RUNTIME; EtherNet/IP™ Scanner

Function:
EtherNet/IP™ is one of the leading industrial ETHERNET fieldbus systems in the USA. It adapts the "Common Industrial Protocol" (CIP) known from standard fieldbuses to standard ETHERNET and has become a standard in many industrial automation applications. Some WAGO devices can be operated as EtherNet/IP™ scanners to provide fieldbus master functionality. This requires that the devices are equipped with a license.

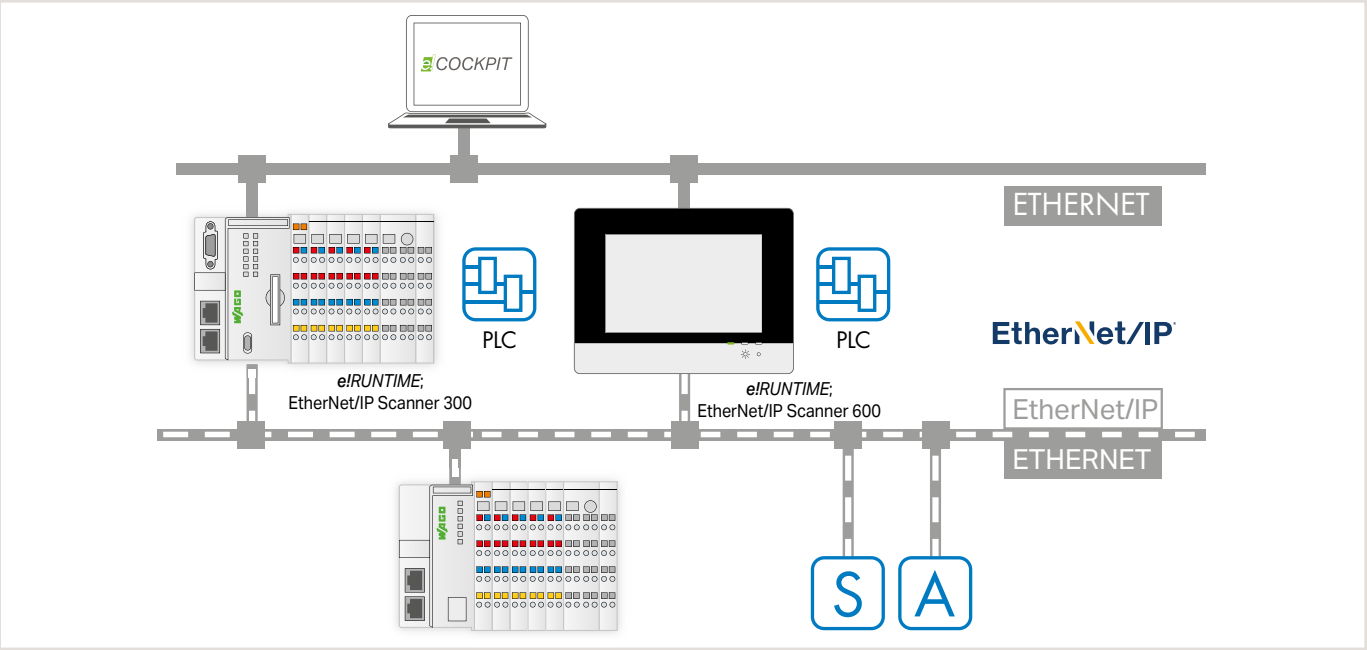
The EtherNet/IP™ system is configured via special configuration dialogs in the *e!COCKPIT* Engineering Software. These specify:
- That the device should function as an EtherNet/IP™ scanner
- What field devices should be addressed
- On which control program variables the process values are to be mapped
- Which communication parameters must be observed and
- What parameter values should be sent to the slaves upon startup

Besides the protocol stack in the form of a library, the runtime system also provides components for direct access to the EtherNet/IP™ services (e.g., for reading and writing attributes).

Benefits:
- Using the device as an EtherNet/IP™ scanner (master)
- Controlling WAGO slaves with the EtherNet/IP™ fieldbus system, e.g., the EtherNet/IP™ Fieldbus Coupler of the WAGO I/O System 750
- Controlling additional field devices that can be addressed as EtherNet/IP™ adapters and which can be declared in *e!COCKPIT*, e.g., via a standardized device description

Use:
Enter the license into *e!COCKPIT*, assign it to a device and load both the license and project into the device. No other installation steps are required.

Technical Data:
- EDS import
- Device status display
- Connection error display
- Connection types:
  - Class 1 (I/O messaging)
  - Class 3 (explicit messaging)
  - Unconnected message (UCMM)
- I/O connection types:
  - Point-to-point and multicast
  - Cyclic transmission
  - Exclusive owner, listen only, input only



Item Description	
***e!RUNTIME* EtherNet/IP™ Scanner 300**	**Item No.**
Single License; Online Activation	2759-273/211-1000
Compatible Controllers*	
Controller PFC200; G2	750-821x

Item Description		
***e!RUNTIME* EtherNet/IP™ Scanner 600**		**Item No.**
Single License; Online Activation		2759-276/211-1000
Compatible Devices		
Hardware Configuration PIO 3	Touch Panel 600 Standard Line**	762-43xx/8000-002
	Touch Panel 600 Advanced Line**	762-53xx/8000-002
Hardware Configuration PIO 2	Touch Panel 600 Standard Line ***	762-42xx/8000-001
	Touch Panel 600 Advanced Line ***	762-52xx/8000-001
	Touch Panel 600 Marine Line ***	762-62xx/8000-001
WAGO Edge Controller		752-8303/8000-002

Minimum *e!COCKPIT* version	V1.8
Delivery type	Licence certificate via email (*e!COCKPIT* already contains the software itself)
For data sheet and additional information, see:	wago.com/2759-273/211-1000 wago.com/2759-276/211-1000

An Internet connection to the PC that's equipped with *e!COCKPIT* may be required for license activation.
Single license allows installation on one device.
One license per device is required.

ETHERNET/IP™ is a registered trademark of the Open DeviceNet Vendor Association, Inc (ODVA).

*Besides the basic controller variants listed here, the license can also be used on these controllers' variants. For details, see the product information of the corresponding controller.
**xx is a wildcard, the license applies to all Touch Panel sizes.
***The prerequisite for using the EtherNet/IP™ Scanner is the license equipment of the device with a PLC license as Control Panel.

Runtime Software
e!RUNTIME; EtherCAT Master

Function:
EtherCAT is a powerful real-time ETHERNET fieldbus system that has become standard in many industrial automation applications. Some WAGO devices can be operated as an EtherCAT Master. This requires a license.

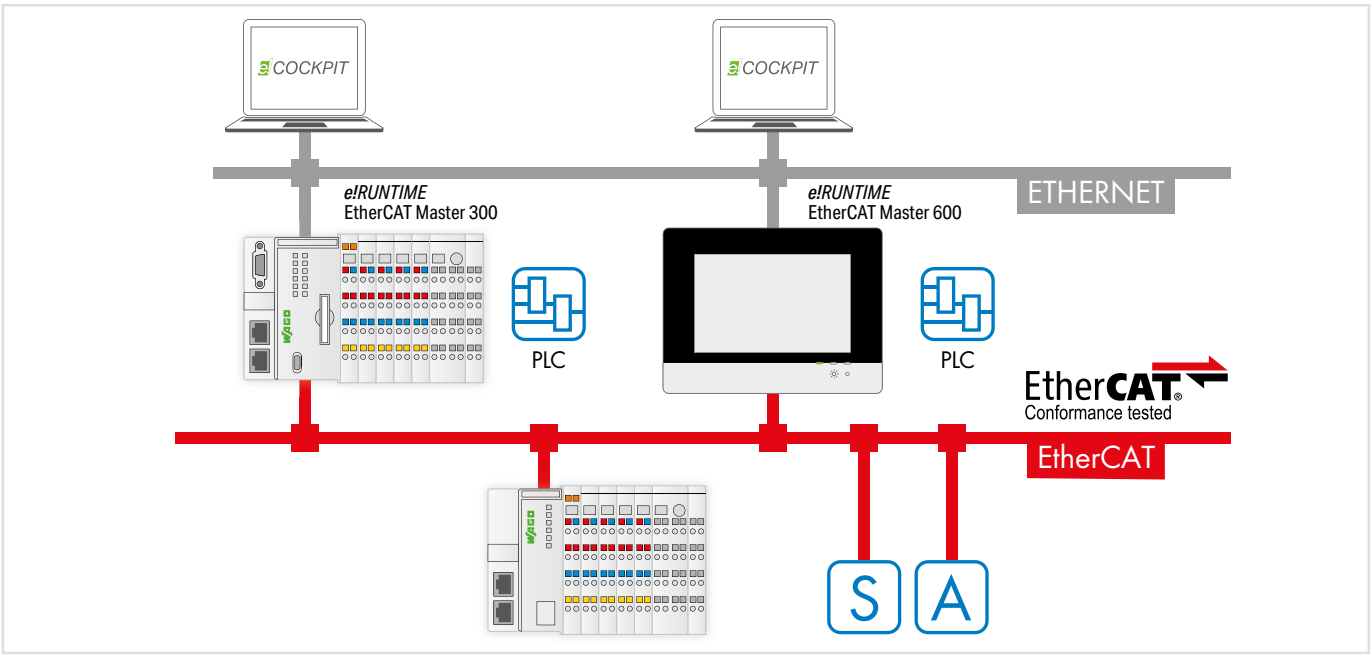
The EtherCAT system is configured via special configuration dialogs in the *e!COCKPIT* Engineering Software. These specify:
- That the device should function as an EtherCAT Master
- What field devices should be addressed
- What form the topology of the network takes
- What parameter values should be sent to the slaves upon startup

Besides the protocol stack in the form of a library, the runtime system also provides components for direct access to the ETHERNET interface and diagnostics.

Benefits:
- Using the device as an EtherCAT Master
- Controlling WAGO slaves with the EtherCAT fieldbus system, e.g., the EtherCAT Fieldbus Coupler of the WAGO I/O System 750
- Controlling additional field devices, which can be declared in ***e!COCKPIT*** via a standardized device description

Use:
Enter the license into ***e!COCKPIT***, assign it to a device and load both the license and project into the device. No other installation steps are required.

Technical Data:
- Distributed clocks
- Hot connect
- Bus diagnostics: In the configurator and with the PLC application
- Supported layer 7 protocols:
  - CoE (CANopen/CAN over EtherCAT)
  - FoE (File over EtherCAT),
  - VoE (Vendor over EtherCAT)



Item Description	
e!RUNTIME **EtherCAT Master 300**	**Item No.**
Single License; Online Activation	2759-263/211-1000
Compatible Controller*	
Controller PFC200; G2	750-821x

Item Description		
e!RUNTIME **EtherCAT Master 600**		**Item No.**
Single License; Online Activation		2759-266/211-1000
Compatible Devices		
Hardware Configuration PIO 3	Touch Panel 600 Standard Line**	762-43xx/8000-002
	Touch Panel 600 Advanced Line**	762-53xx/8000-002
Hardware Configuration PIO 2	Touch Panel 600 Standard Line ***	762-42xx/8000-001
	Touch Panel 600 Advanced Line ***	762-52xx/8000-001
	Touch Panel 600 Marine Line ***	762-62xx/8000-001
WAGO Edge Controller		752-8303/8000-002

Minimum *e!COCKPIT* version	V1.5.0
Delivery type	Licence certificate via email (*e!COCKPIT* already contains the software itself)
For data sheet and additional information, see:	wago.com/2759-263/211-1000 wago.com/2759-266/211-1000

An Internet connection to the PC that's equipped with ***e!COCKPIT*** may be required for license activation.
The single license allows installation on one controller.
One license per controller is required.

EtherCAT® is a registered trademark and patented technology of Beckhoff Automation GmbH.

*Besides the basic controller variants listed here, the license can also be used on these controllers' variants. For details, see the product information of the corresponding controller.
**xx is a wildcard, the license applies to all Touch Panel sizes.
***To use the EtherCAT Master, a PLC license as Control Panel is required on the device.

Runtime Software
e!RUNTIME; BACnet/IP

Function:
"Building Automation and Control Networks" (BACnet) is a data transfer protocol for building automation that simplifies communication between products from different manufacturers.
The PFC200 Controller (2nd generation) or WAGO Touch Panel can be operated as a BACnet building controller and supports the B-BC device profile with all major BACnet objects and interoperability building blocks (BIBBs). The device communicates via BACnet/IP and offers the functionality of a BACnet Client and BACnet Server.

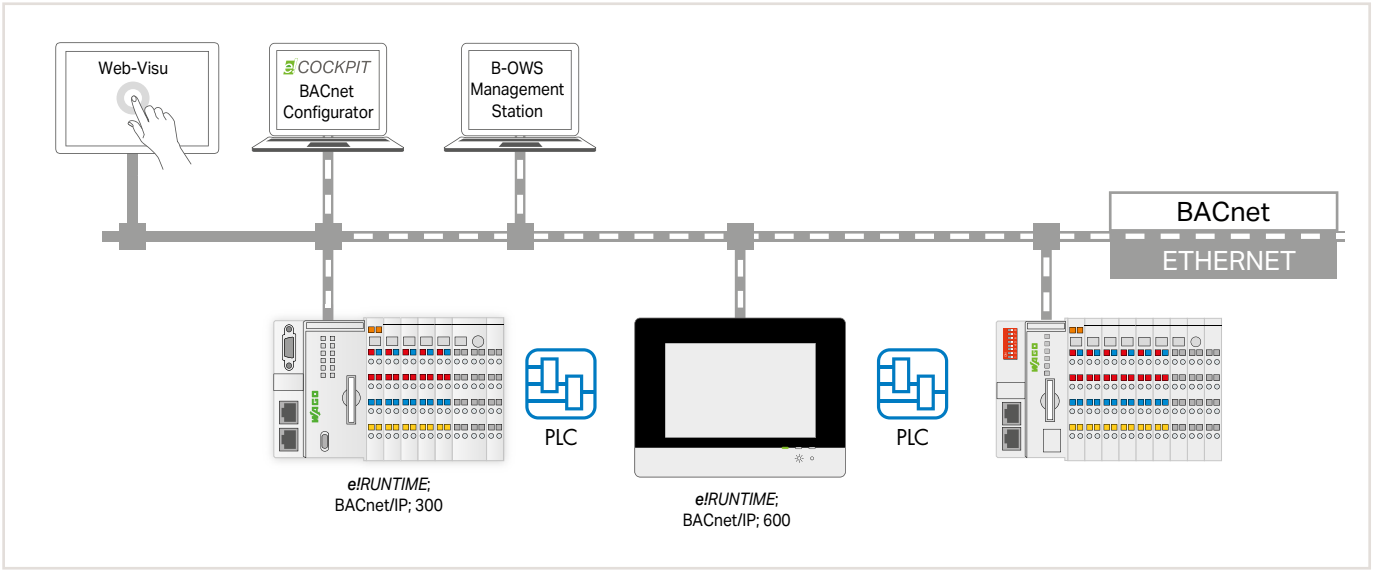
To use BACnet/IP, it is necessary to equip the device with a license.

The BACnet network is configured using the WAGO BACnet Configurator and the *e!COCKPIT* Engineering Software.

Benefits:
- Use the device as a BACnet Building Controller (B-BC)
- Control and detect distributed I/O signals from WAGO BACnet/IP Couplers via BACnet Fieldbus Protocol
- Data exchange with other BACnet Devices as a BACnet Client or Server

Use:
Enter the license into *e!COCKPIT*, assign it to a device and load both the license and project into the controller. No other installation steps are required.

Technical Data:
See "Protocol Implementation Conformance Statement" (PICS)



Item Description	
e!RUNTIME*; BACnet/IP; 300; without limitation of the BACnet objects	**Item No.**
Single License; Online Activation	2759-283/211-1000
***e!RUNTIME*; BACnet/IP; 300; M; up to 256 BACnet objects**	
Single License; Online Activation	2759-2283/211-1000
Compatible Controllers	
PFC200; G2; 4ETH	750-8210
PFC200; G2; 2ETH 2SFP	750-8211
PFC200; G2; 2ETH RS	750-8212
PFC200; G2; 2ETH CAN	750-8213
PFC200; G2; 2ETH RS CAN DPS	750-8216
PFC200; G2; 2ETH RS; 4G	750-8217

Item Description		
e!RUNTIME*; BACnet/IP; 600; without limitation of the BACnet objects		**Item No.**
Single License; Online Activation		2759-286/211-1000
***e!RUNTIME*; BACnet/IP; 600; M; up to 256 BACnet objects**		
Single License; Online Activation		2759-2286/211-1000
Compatible Devices		
Hardware Configuration PIO 3	Touch Panel 600 Standard Line	762-43xx/8000-002
	Touch Panel 600 Advanced Line	762-53xx/8000-002
	Touch Panel 600 Marine Line	762-63xx/8000-002
WAGO Edge Controller		752-8303/8000-002

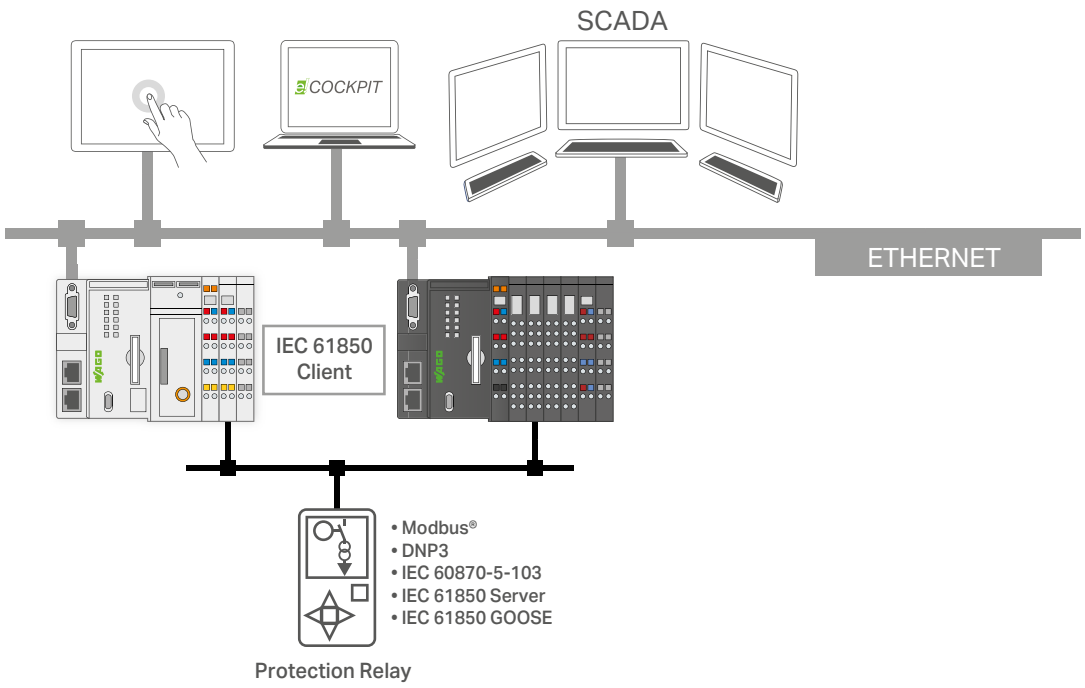
*Number of BACnet objects: without limitation – but depends on the application used

Minimum firmware version	Firmware (16)
Minimum *e!COCKPIT* version	V1.6.1
Delivery type	Licence certificate via email (*e!COCKPIT* already contains the software itself)
For data sheet and additional information, see:	wago.com/2759-0283/211-1000 wago.com/2759-0286/211-1000

An Internet connection to the PC that's equipped with *e!COCKPIT* may be required for license activation.
A single license allows installation on one device.
One license per device is required.

BACnet® is a registered trademark of the American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc. (ASHRAE).

Runtime Software
e!RUNTIME; IEC 61850 Client 300



Function:
The parameters for communication per the IEC 61850 Protocol can be set with a configurator that is integrated into the ***e!COCKPIT*** Software.

The configurator sets up the reading of IEC 61850 object data from protection devices, for example. If the configuration of the third-party device is available in IEC-61850 SCL exchange format, it can be read in using the configurator's import functions. Alternatively, it is also possible to read the configuration from the third-party device using the configurator's online browsing function.

With this license, the IEC 61850 Protocol can be activated on the client. This permits the creation of gateways that convert one protocol into another, e.g., allowing protection devices to be read out via IEC 61850 and data to be transmitted to the network control system via IEC 60870-5-104.

The IEC 61850 Client processes data from up to 4 servers with each 10 requests.

Your Benefits:
Use the controller as a telecontrol master (client) to read data from IEC 61850 Protection Devices (servers) and process it locally in the controller. Create a gateway application to use this client function to forward read data to a higher-level control system or cloud. This may require additional software licenses, such as the WAGO IEC 60870 Slave, DNP 3 Slave, Sparkplug or WAGO Cloud.

Use:
Enter the license into ***e!COCKPIT***, assign it to a device and load both the license and project into the controller. No other installation steps are required.

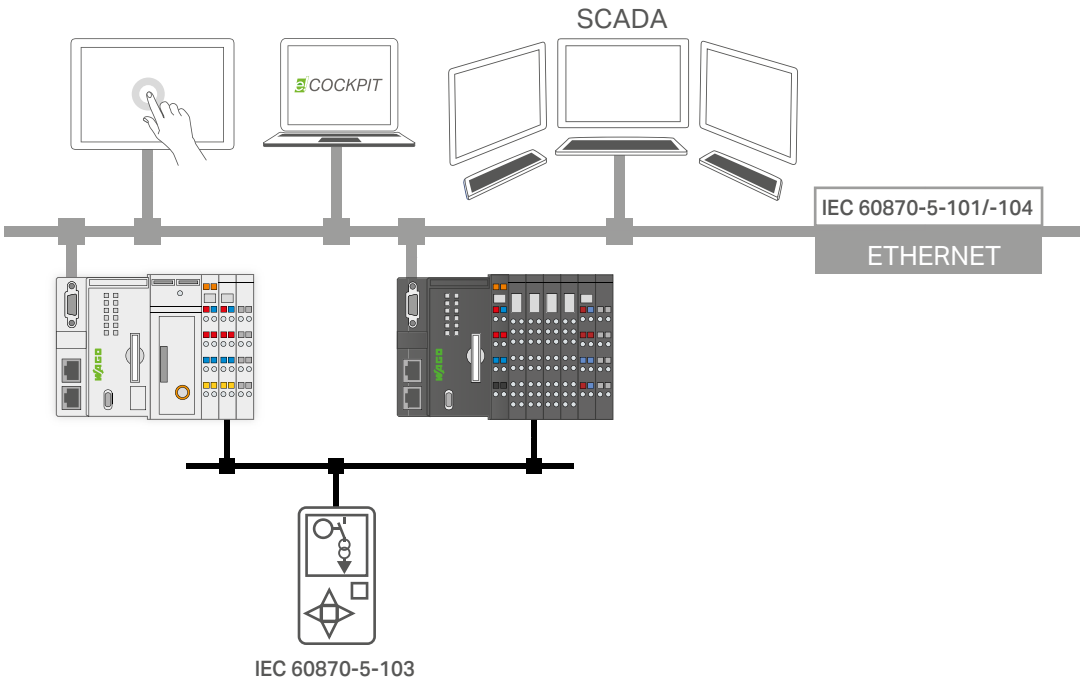
Technical Data:
See Product Manual "Planning the IEC 61850 Protocol with the Telecontrol Configurator and ***e!COCKPIT***."

Item Description	
***e!RUNTIME*; IEC 61850 Client 300**	**Item No.**
Single License; Online Activation	**2759-2243/211-1000**
Compatible Controllers	
PFC200; G2; 4ETH RS	**750-8210**
PFC200; G2; 4ETH RS; T	**750-8210/025-000**
PFC200; G2; 4ETH RS; XTR	**750-8210/040-000**
PFC200; G2; 2ETH 2SFP	**750-8211**
PFC200; G2; 2ETH 2SFP; XTR	**750-8211/040-000**
PFC200; G2; LTE 2ETH RS	**750-8217**
PFC200; G2; LTE 2ETH RS; T	**750-8217/025-000**

Minimum ***e!COCKPIT*** version	V1.8
Delivery type	Licence certificate via email (***e!COCKPIT*** already contains the software itself)
For data sheet and additional information, see:	wago.com/2759-2243/211-1000

An Internet connection to the PC that's equipped with ***e!COCKPIT*** may be required for license activation.
A single license allows installation on one controller.
One license per controller is required.

Runtime Software
e!RUNTIME; IEC 60870 Slave



Function:
The parameters for communication per the IEC 60870 Protocol can be set with a configurator integrated into the ***e!COCKPIT*** Software.
The configurator sets up IEC 60870 objects, while configuring data exchange to the PLC application or I/O modules. Import and export functions in CSV format allow configured data to be transmitted to other engineering tools.
With this license, the IEC 60870-5-101 and -104 Protocols can be activated on the slave, and the protocol -103 activated on the master only. This permits the creation of gateways that convert one protocol into another, e.g., allowing protection devices to be read out via IEC 60870-5-103 and data to be transmitted to the network control system via IEC 60870-5-104.
The time on the telecontrol substation (slave) can be directly synchronized via either the IEC 60870 Protocol with object 103 or via (S)NTP.
IEC 60870-5-101/-104 Information Objects can be used to monitor the direction of single, double and step messages – bit patterns, counter values, as well as normalized, scaled and floating-point measurement values can also be used. All information objects can be transmitted with or without a time stamp. This also applies to information objects in the control direction.

An IEC 60870-5-104 Slave can simultaneously maintain up to four connections to the control system (master).

Your Benefits:
Use the PFC200 Controller as a telecontrol substation (slave) on an IEC 60870-5-101/-104 Control System (master).
Process data from one or more IEC 60870-5-103 Protection Devices (slaves) with the PFC200 Controller (master).
Create a gateway application to transfer data from IEC 60870-5-103 Protection Devices to an IEC 60870-5-101/-104 Control System.

Use:
Enter the license into ***e!COCKPIT***, assign it to a device and load both the license and project into the controller. No other installation steps are required.

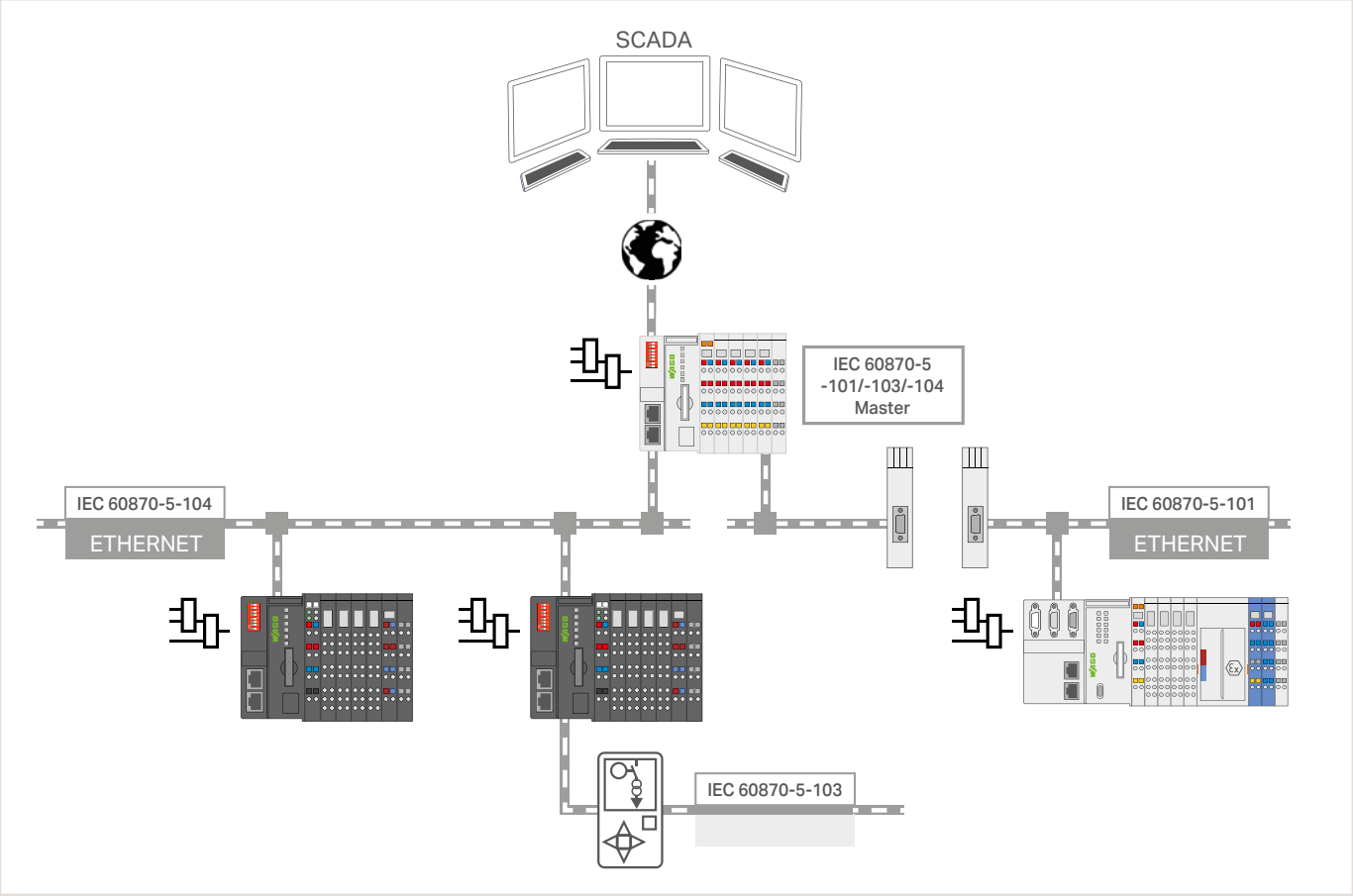
Technical Data:
See Section "Functionality of the WAGO Protocol Library according to IEC 60870-5-101, and -104" in Product Manual "Planning DNP3 / IEC 60870 with the Telecontrol Configurator and ***e!COCKPIT***."

Item Description	
***e!RUNTIME*; IEC 60870 Slave**	**Item No.**
Single License; Online Activation	2759-290/211-1000
Compatible Controllers	
PFC200; G2; 4ETH RS	750-8210
PFC200; G2; 4ETH RS; T	750-8210/025-000
PFC200; G2; 4ETH RS; XTR	750-8210/040-000
PFC200; G2; 2ETH 2SFP	750-8211
PFC200; G2; 2ETH 2SFP; XTR	750-8211/040-000
PFC200; G2; LTE 2ETH RS	750-8217
PFC200; G2; LTE 2ETH RS; T	750-8217/025-000

Minimum ***e!COCKPIT*** version	V1.7
Delivery type	Licence certificate via email (***e!COCKPIT*** already contains the software itself)
For data sheet and additional information, see:	wago.com/2759-290/211-1000

An Internet connection to the PC that's equipped with ***e!COCKPIT*** may be required for license activation.
A single license allows installation on one controller.
One license per controller is required.

Runtime Software
e!RUNTIME; IEC 60870 Master 300



Function:
The parameters for communication per the IEC 60870 Protocol can be set with a configurator integrated into the ***e!COCKPIT*** Software.
The configurator sets up IEC 60870 objects, while configuring data exchange to the PLC application or I/O modules. Import and export functions in CSV format allow configured data to be transmitted to other engineering tools.
With this license, the IEC 60870-5-101, -103 and -104 Protocols can be activated on the master. This permits the creation of gateways that convert one protocol into another, e.g., allowing protection devices to be read out via IEC 60870-5-103 and data to be transmitted to the network control system via IEC 60870-5-104.

IEC 60870-101/-104 Information Objects can be used to monitor the direction of single, double and step messages – bit patterns, counter values, as well as normalized, scaled and floating-point measurement values can also be used. All information objects can be received with or without a time stamp. This also applies to information objects in the control direction.

The IEC 60870-5 Master can support connections to up to 16 IEC 60870-5 Slave Devices.

Your Benefits:
Use the controller as a telecontrol master to read data from IEC-60870-5-101/-104 Field Devices or IEC-60870-5-103 Protection Devices (slaves) and process it locally in the controller.
Create a gateway application to use this master function to forward read data to a higher-level control system or cloud. This may require additional software licenses, such as the WAGO IEC 60870 Slave, DNP 3 Slave, Sparkplug or WAGO Cloud.

Use:
Enter the license into ***e!COCKPIT***, assign it to a device and load both the license and project into the controller. No other installation steps are required.

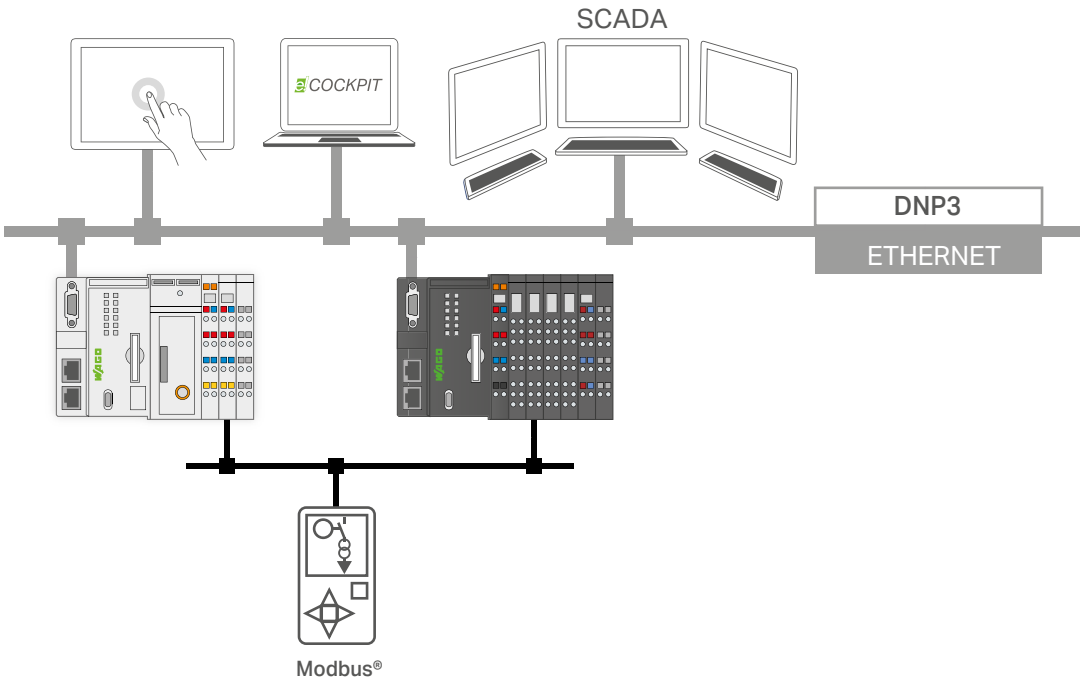
Technical Data:
See Section "Functionality of the WAGO Protocol Library according to IEC 60870-5-101, and -104" in Product Manual "Planning the IEC 60870 Protocol with the Telecontrol Configurator and ***e!COCKPIT***."

Item Description	
e!RUNTIME; IEC 60870 Master 300	Item No.
Single License; Online Activation	2759-293/211-1000
Compatible Controllers	
PFC200; G2; 4ETH RS	750-8210
PFC200; G2; 4ETH RS; T	750-8210/025-000
PFC200; G2; 4ETH RS; XTR	750-8210/040-000
PFC200; G2; 2ETH 2SFP	750-8211
PFC200; G2; 2ETH 2SFP; XTR	750-8211/040-000
PFC200; G2; LTE 2ETH RS	750-8217
PFC200; G2; LTE 2ETH RS; T	750-8217/025-000

Minimum ***e!COCKPIT*** version	V1.8
Delivery type	Licence certificate via email (***e!COCKPIT*** already contains the software itself)
For data sheet and additional information, see:	wago.com/2759-293/211-1000

An Internet connection to the PC that's equipped with ***e!COCKPIT*** may be required for license activation.
A single license allows installation on one controller.
One license per controller is required.

Runtime Software
e!RUNTIME; DNP3 Slave



Function:
The DNP3 Configurator is part of the ***e!COCKPIT*** Software. With this license, the DBP3 Protocol can be activated on the slave. The configurator fully supports the DNP3-specific functions of all WAGO telecontrollers.
The configurator sets up DNP3 objects, while configuring data exchange to the PLC application or I/O modules. The settings can be imported and exported in DNP3 XML device profile format.
WAGO's telecontrollers can work as TCP, UDP and serial DNP3 slaves.
Cyclical time synchronization of the telecontrol substation (slave) can be performed by the master according to DNP3 Device Profile 1.7.2.

In the monitoring direction, the WAGO DNP3 Slave can send digital, analog and count values to the master. Both digital and analog values can be received in the control direction. Analog values can be processed in 16-bit, 32-bit or FLOAT format. Count values can be processed in 16-bit or 32-bit format.

Your Benefits:
Use the PFC200 Controller as a telecontrol substation (slave) on an DNP3 Control System (master) via TCP, UDP or serially.
Create a gateway application to transfer data, e.g., from Modbus® Field Devices to a DNP3 Control System.

Use:
Enter the license into ***e!COCKPIT***, assign it to a device and load both the license and project into the controller. No other installation steps are required.

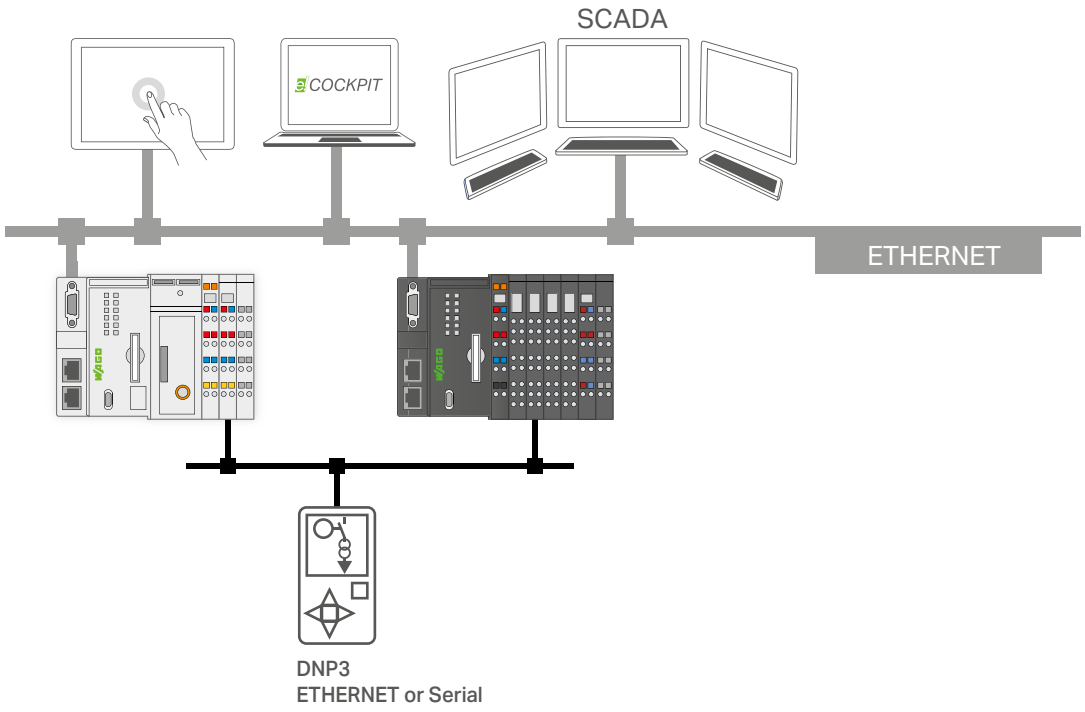
Technical Data:
See the document "***e!RUNTIME*** DNP3 Slave Device Profile" on www.wago.com.

Item Description	
***e!RUNTIME*; DNP3 Slave**	**Item No.**
Single License; Online Activation	2759-2290/211-1000
Compatible Controllers	
PFC200; G2; 4ETH RS	750-8210
PFC200; G2; 4ETH RS; T	750-8210/025-000
PFC200; G2; 4ETH RS; XTR	750-8210/040-000
PFC200; G2; 2ETH 2SFP	750-8211
PFC200; G2; 2ETH 2SFP; XTR	750-8211/040-000
PFC200; G2; LTE 2ETH RS	750-8217
PFC200; G2; LTE 2ETH RS; T	750-8217/025-000

Minimum ***e!COCKPIT*** version	V1.7
Delivery type	Licence certificate via email (***e!COCKPIT*** already contains the software itself)
For data sheet and additional information, see:	wago.com/2759-2290/211-1000

An Internet connection to the PC that's equipped with ***e!COCKPIT*** may be required for license activation.
A single license allows installation on one controller.
One license per controller is required.

Runtime Software
e!RUNTIME; DNP3 Master; 300



Function:
The DNP3 Configurator is part of the ***e!COCKPIT*** Software. With this license, the DNP3 Protocol can be activated on the master. The configurator fully supports the DNP3-specific functions of all WAGO telecontrollers.
The configurator sets up DNP3 objects, while configuring data exchange to the PLC application or I/O modules. As an alternative to manually configuring connections to DNP3 Slaves, it is also possible to use a description file to import the configurations in the standard DNP3 XML device profile format.

In performance class 300, the master can maintain connections to up to four DNP3 Slaves, thereby working as TCP or serial DNP3 Master. Up to 10000 events from connected DNP3 Slaves can be saved in the controller's internal RAM or on the SD card.

In the monitoring direction, the WAGO DNP3 Master can receive digital, analog and count values from the slave. Both digital and analog values can be sent in the control direction. Analog values can be processed in 16-bit, 32-bit or FLOAT format. Count values can be processed in 16-bit or 32-bit format.

Your Benefits:
Use of the PFC200 Controller as a DNP3 Master to read and process data from DNP3 Slaves (field devices) via TCP, UDP or serially.
Create a gateway application to transfer data from DNP3 Slaves (field devices) and other protocols (e.g., IEC 60870, Modbus®).

Use:
Enter the license into ***e!COCKPIT***, assign it to a device and load both the license and project into the controller. No other installation steps are required.

Technical Data:
See the document "***e!RUNTIME*** DNP3 Master Device Profile" on www.wago.com.

Item Description	
e!RUNTIME; DNP3 Master; 300	Item No.
Single License; Online Activation	2759-2293/211-1000
Compatible Controllers	
PFC200; G2; 4ETH RS	750-8210
PFC200; G2; 4ETH RS; T	750-8210/025-000
PFC200; G2; 4ETH RS; XTR	750-8210/040-000
PFC200; G2; 2ETH 2SFP	750-8211
PFC200; G2; 2ETH 2SFP; XTR	750-8211/040-000
PFC200; G2; LTE 2ETH RS	750-8217
PFC200; G2; LTE 2ETH RS; T	750-8217/025-000

Minimum ***e!COCKPIT*** version	V1.7
Delivery type	Licence certificate via email (***e!COCKPIT*** already contains the software itself)
For data sheet and additional information, see:	wago.com/2759-2293/211-1000

An Internet connection to the PC that's equipped with ***e!COCKPIT*** may be required for license activation.
A single license allows installation on one controller.
One license per controller is required.

WAGO WebVisu App
For Mobile System Operation/Monitoring

With the WAGO WebVisu App, you can visualize web pages created for WAGO Controllers via ***e!****COCKPIT* or CODESYS V2. The app features both automated management and routing capabilities, allowing the website to be simply accessed via URL entry. The system or machine to be monitored can then be operated and monitored at any time on the go. You can define up to 100 controllers for direct and quick access via the URL.

The free WAGO WebVisu App is available in iOS for iPhones and iPads in the "Apple Store," and in Android for smartphones and tablets in the "Google Store."

Note: An overview of the supported WAGO Controllers, operating manuals and application notes can be found on our website.

QR Code for WebVisu App:

Simply scan the QR code with your mobile device, and you will automatically be directed to the WebVisu app in "Apple Store" or "Google Play™."

Download on the App Store

GET IT ON Google play

Trademarks:

Apple, the Apple logo, iPhone, iPad and iPod touch are registered trademarks of Apple Inc. registered in the USA and other countries. "App Store" is a service mark of Apple Inc.

Google Play™ is a registered trademark of Google Inc.

WAGO WebVisu App
Download: Apple Store or Google Store

System Requirements	
Operating system	iOS version 10.2 or later, Android version 4.2 or later
Compatibility	iPhone; iPad and iPad Air; Android smartphones and tablets
For additional information, see:	wago.com/webvisu

WAGO I/O Field App

For Maintenance, Diagnostics, Operation and Monitoring of Installed WAGO I/O System Field Modules

I/O Field

The WAGO I/O Field App allows you to display product information, make settings and adjust parameters for both fieldbus modules and IO-Link hubs.

Communication is performed via the *Bluetooth*® interface of a WAGO I/O System Field Module once a Data Matrix code has been scanned to select the product.

The current measured values of a port can be displayed (temperature, voltage, current and states) and configured (e. g., operating mode, filters).

- Identification via Data Matrix codes
- Communication via *Bluetooth*®
- Download of IODDs (IODD finder)
- Access to all process and parameter data
- Simulating inputs
- Forcing outputs (DO)
- Management of datasheets, manuals etc.
- User and rights management

Trademarks:

Download on the App Store

Apple, the Apple logo, iPhone, iPad and iPod touch are registered trademarks of Apple Inc. registered in the USA and other countries. "App Store" is a service mark of Apple Inc.

GET IT ON Google play

Google Play™ is a registered trademark of Google Inc.

WAGO I/O Field App
Download: Apple Store or Google Store

System Requirements	
Operating system	iOS version 11.0 or later, Android version 6.0 or later
Compatibility	iPhone; iPad and iPad Air; Android smartphones and tablets
For additional information, see:	wago.com/IOField

Accessories

USB Communication Cable; USB-A; WAGO I/O System 750 Service Interface		
Length	Item No.	PU
2.5 m	750-923	1
5 m	750-923/000-001	1

RS-232 Communication Cable; RS-232 (D-Sub 9-Pole); WAGO I/O System 750 Service Interface		
Length	Item No.	PU
1 m	750-920	1

Bluetooth® Adapter; WAGO I/O System 750 Service Interface		
	Item No.	PU
	750-921	1

Operation and Monitoring

Touch Panels 600 Standard Line

- High-performance Touch Panels with resistive touchscreens
- 10.9 … 54.7 cm (4.3 … 21.5″)
- Models include Control, Visu or Web Panels for display of e!COCKPIT visualizations

Touch Panels 600 Advanced Line

- High-performance Touch Panels with capacitive touchscreens and glass surfaces
- 18 … 54.7 cm (7 … 21.5″)
- Models include Control or Visu Panels

Touch Panels 600 Marine Line

- High-performance Touch Panels with resistive touchscreens
- Ideal for marine applications
- 10.9 … 25.7 cm (4.3 … 10.1″)
- Models include Control or Visu Panels

Edge Computing

- Models include Edge Controllers or Edge Computers
- Perfect in-the-field data usage
- Easy cloud connection
- Equipped for high security

Section 4 ►

Controllers PFC200

- Maximum performance in a minimum space
- Also programmable in high-level languages based on Linux®
- Security packages with SSH and SSL/TLS
- Runtime system for CODESYS V2 (only PFC200) and V3

Section 5.1 ►►

Starter Kits

To get you up and running quickly, we offer starter kits to suit the most diverse applications with:

- Controller PFC100 or PFC200
- Controller 750 KNX IP
- Touch Panel 600

Section 5.5 ►►►►►►

Operation and Monitoring
Contents

	Display	CPU	Web Browser	Modbus (TCP, UDP)	EtherNet/IP	EtherCAT	BACnet/IP	CANopen	IoT Protocols	Hardware	Display Diagonal	Item No.	
 **Touch Panels 600 Standard Line**	Resistive touchscreen	Cortex A9	x	M/S	S	M*	x*	M/S	x	PIO3; Control Panel	10.9 cm (4.3″)	762-4301/8000-002	76
			x	M/S	S	M*	x*	M/S	x		14.5 cm (5.7″)	762-4302/8000-002	77
			x	M/S	S	M*	x*	M/S	x		18 cm (7.0″)	762-4303/8000-002	78
			x	M/S	S	M*	x*	M/S	x		25.7 cm (10.1″)	762-4304/8000-002	79
			x	M/S	S	M*	x*	M/S	x		39.6 cm (15.6″)	762-4305/8000-002	80
			x	M/S	S	M*	x*	M/S	x		54.7 cm (21.5″)	762-4306/8000-002	81
			x	M		M*				PIO2; Visu Panel	10.9 cm (4.3″)	762-4201/8000-001	76
			x	M		M*					14.5 cm (5.7″)	762-4202/8000-001	77
			x	M		M*					18 cm (7.0″)	762-4203/8000-001	78
			x	M		M*					25.7 cm (10.1″)	762-4204/8000-001	79
			x	M		M*					39.6 cm (15.6″)	762-4205/8000-001	80
			x	M		M*					54.7 cm (21.5″)	762-4206/8000-001	81
			x							PIO1; Web Panel	10.9 cm (4.3″)	762-4101	76
			x								14.5 cm (5.7″)	762-4102	77
			x								18 cm (7.0″)	762-4103	78
			x								25.7 cm (10.1″)	762-4104	79
 **Touch Panels 600 Advanced Line**	Capacitive touchscreen with a glass surface	Cortex A9	x	M/S	S	M*	x*	M/S	x	PIO3; Control Panel	18 cm (7.0″)	762-5303/8000-002	82
			x	M/S	S	M*	x*	M/S	x		25.7 cm (10.1″)	762-5304/8000-002	83
			x	M/S	S	M*	x*	M/S	x		39.6 cm (15.6″)	762-5305/8000-002	84
			x	M/S	S	M*	x*	M/S	x		54.7 cm (21.5″)	762-5306/8000-002	85
			x	M		M*				PIO2; Visu Panel	18 cm (7.0″)	762-5203/8000-001	82
			x	M		M*					25.7 cm (10.1″)	762-5204/8000-001	83
			x	M		M*					39.6 cm (15.6″)	762-5205/8000-001	84
			x	M		M*					54.7 cm (21.5″)	762-5206/8000-001	85
 **Touch Panels 600 Marine Line**	Resistive touchscreen, marine version	Cortex A9	x	M/S	S	M*	x*	M/S	x	PIO3; Control Panel	10.9 cm (4.3″)	762-6301/8000-002	86
			x	M/S	S	M*	x*	M/S	x		14.5 cm (5.7″)	762-6302/8000-002	87
			x	M/S	S	M*	x*	M/S	x		18 cm (7.0″)	762-6303/8000-002	88
			x	M/S	S	M*	x*	M/S	x		25.7 cm (10.1″)	762-6304/8000-002	89
			x	M		M*				PIO2; Visu Panel	10.9 cm (4.3″)	762-6201/8000-001	86
			x	M		M*					14.5 cm (5.7″)	762-6202/8000-001	87
			x	M		M*					18 cm (7.0″)	762-6203/8000-001	88
			x	M		M*					25.7 cm (10.1″)	762-6204/8000-001	89
 **Touch Panels *e!DISPLAY 7300T***	Resistive touchscreen	Cortex A8	x							Web Panel	10.9 cm (4.3″)	762-3000	90
			x								14.5 cm (5.7″)	762-3001	91
			x								18 cm (7.0″)	762-3002	92
			x								25.7 cm (10.1″)	762-3003	93

Accessories

Memory Cards; Mounting Set; Flush-Mount Housings

94

M: Master; S: Slave; *requires an additional license

Operation and Monitoring
General Product Information

Operate, observe, visualize and diagnose in production and the process industry: WAGO's Touch Panels with various hardware configurations are available for small- to mid-sized control and visualization tasks. Focus on saving time with perfect usability and quickly created visualizations.

Adapted Versions

The right version is available for every application:
Devices with resistive touchscreens for standard control cabinet applications
Multi-touch devices with a glass surface for advanced requirements
Devices for marine applications

Touch Panels that Merge Aesthetics with High Performance

Underneath a contemporary design, WAGO's Touch Panels pack some of the industry's most powerful equipment, allowing you to solidify the high-tech image of your machine through high-quality visualizations from both ***e!****COCKPIT* (CODESYS V3) and CODESYS V2 Engineering Software. The Web-Based Management feature of WAGO's controllers may also be operated using the stylish Web Panels. When configuring with ***e!****COCKPIT*, visualizations are created based on modern technologies such as HTML5.

Industry 4.0/IoT

Recording, digitizing and linking data profitably – these are the core ideas of Industry 4.0. Using a dedicated library, WAGO's Control Panels become IoT controllers that send data from the field level to the cloud. Once in the cloud, this data can be aggregated and used for analysis. This capability creates tremendous added value for your company – whether it's increasing the efficiency of in-house production, implementing energy management in buildings or developing additional end-customer services. Existing systems also become IoT-ready, making them future-proof.

Quick Installation via Unique Mounting Design

WAGO's Touch Panel directly latches onto the control cabinet via mounting clips for quick and easy tool-free installation. Thanks to custom-developed clamps, the front of the display meets lofty IP65 protection standards. This design flexibility makes the display extremely versatile and suitable for a wide variety of applications. Furthermore, the VESA mount allows installation on a swivel arm or stand outside of the control cabinet.

Easy to Use – Directly on the Display

All WAGO's Touch Panels have status LEDs that indicate operating status and provide operational feedback. A customized configuration interface is available for customizing and commissioning the Touch Panels. All important settings are made here via Web-Based Management. For quick and easy custom settings, the display brightness can also be manually adjusted via front-mount button.

Energy-Saving Sensors Ensure Safety

WAGO's Touch Panels have an integrated proximity sensor, allowing the visualization to be automatically re-displayed from the energy-saving screensaver. An integrated sensor simultaneously detects ambient lighting levels for automatic brightness control.

Integrated PLC

In the "Control Panel" function, the devices offer an integrated PLC functionality, which is configured via ***e!****COCKPIT*, based on IEC 61131-compatible CODESYS. This makes them programmable in five standardized languages. In addition to pure programming, ***e!****COCKPIT* is also used for offline simulation, fieldbus configuration, recipe management and much more.

Scaled Visualization Functions

Displaying a visualization in a Web browser makes flexible options available. In addition to the Web Panels, visualizations can be displayed on nearly any device with a browser, including smartphones and tablets by using the WebVisu app.

When greater performance is required, devices are used as Visu Panels. In the process, all operating functions are evaluated within the device without a delay and can affect the visualization directly. Data to be displayed is read in via standardized bus systems (e.g., Modbus TCP).

Open-Source Software and Linux®

We unite what belongs together: High-performance WAGO Hardware and the future-proof Linux® Operating System. For complex tasks, you can choose between programming in IEC 61131 or directly under Linux®. WAGO's "Embedded Linux" Controllers impress with base images that are expandable via open-source packages. As a "Gold Member" of the Open Source Automation Development Lab (OSADL), WAGO supports both financing and further development of Linux® in the industrial sector. The controller firmware itself is available as a "Board Support Package" (BSP).
If you are interested, simply contact our AUTOMATION technical support.

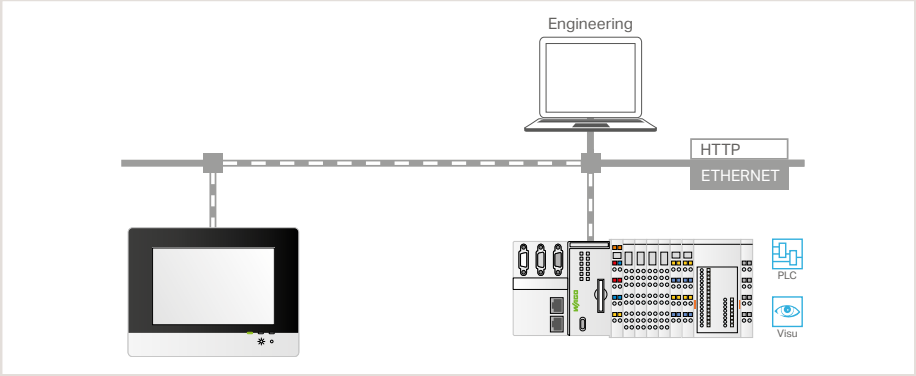
Benefits:

- An aesthetic design meets high performance
- Scaled portfolio in design and functionality
- Easy to use – directly on the display
- Quick installation via unique mounting design
- IoT-ready

Operation and Monitoring
Functional Variants

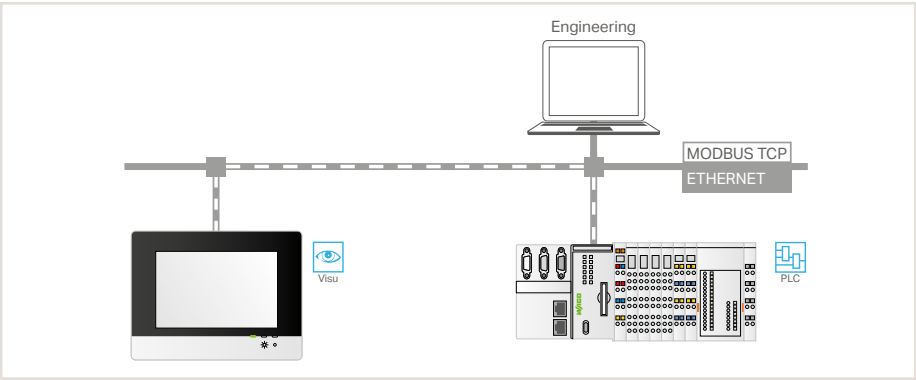
Web Panels

The operating and display devices in the "Web Panel" software configuration are provided with a Web browser for accessing and displaying controllers with integrated Web visualization via standard Web protocols. Depending on the type of execution, Web visualizations that are created with ***e!****COCKPIT* (based on CODESYS V3) and/or with CODESYS V2 can be displayed. Web visualizations have the advantage of being displayed not only on special Visu Panels, but also on standard commercial mobile devices.



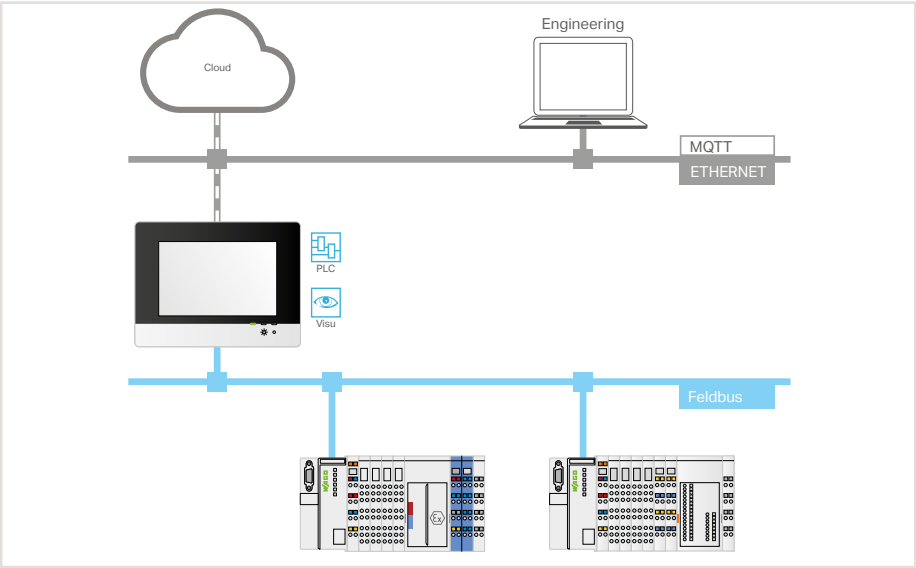
Visu Panels

Operating and display devices in the "Visu Panel" software configuration are suitable for displaying a visualization generated with ***e!****COCKPIT* and obtaining the data referenced in it from any field devices via TCP, e.g., from PFC200 Controllers. In contrast to Web Panels, the computing power required here is divided between two devices, so the computing necessary for displaying the visualization is basically performed by the Visu Panel, offloading the controller. The Visu Panel can also provide a Web visualization via the integrated Webserver.



Control Panels

Operating and display devices in the "Control Panel" software configuration allow control and visualization to be performed simultaneously, providing a very compact automation solution.
WAGO's Control Panels handle all the usual tasks that would otherwise be performed by a separate controller, including establishing a connection to the cloud, for example.

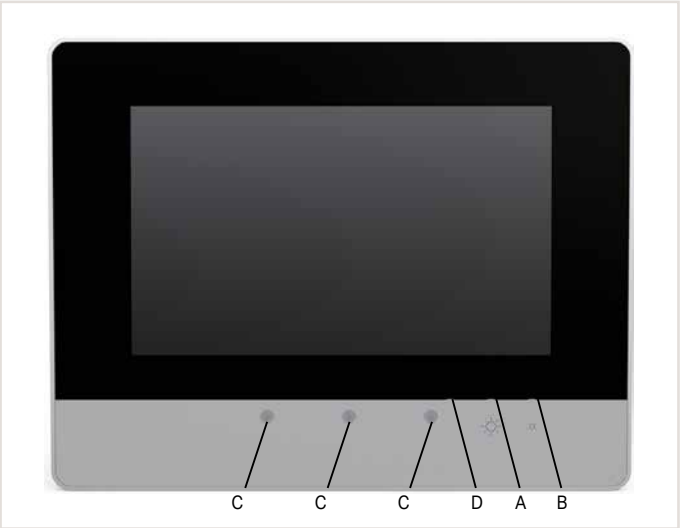


Operation and Monitoring
Interfaces and Types

Touch Panels Standard Line

By default, WAGO's Touch Panels are equipped with resistive touchscreens. In addition, they have two capacitive buttons (A and B) for on-device brightness settings. A 3-color LED (D) indicates the device status. An integrated motion and brightness sensor (C) detects when a person is approaching and automatically turns off the screensaver. In addition, it can be used for automatic brightness change (day/night).

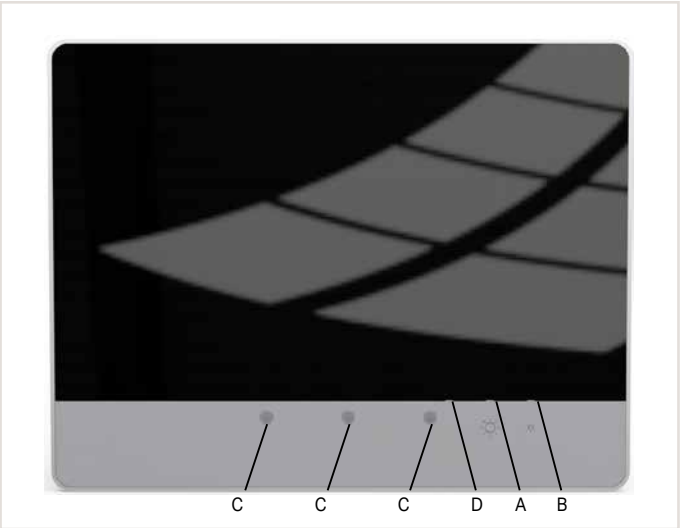
Available sizes:
- 10.9 cm (4.3″)
- 14.5 cm (5.7″)
- 18 cm (7.0″)
- 25.7 cm (10.1″)
- 39.6 cm (15.6″)
- 54.7 cm (21.5″)



Touch Panels Advanced Line

In contrast to the standard version, these devices are equipped with a capacitive touchscreen and a glass surface. This allows gesture recognition, e.g., swiping for turning pages or enlarging. In addition, the glass front features greater mechanical and chemical resistance. Operation while wearing gloves is also possible.

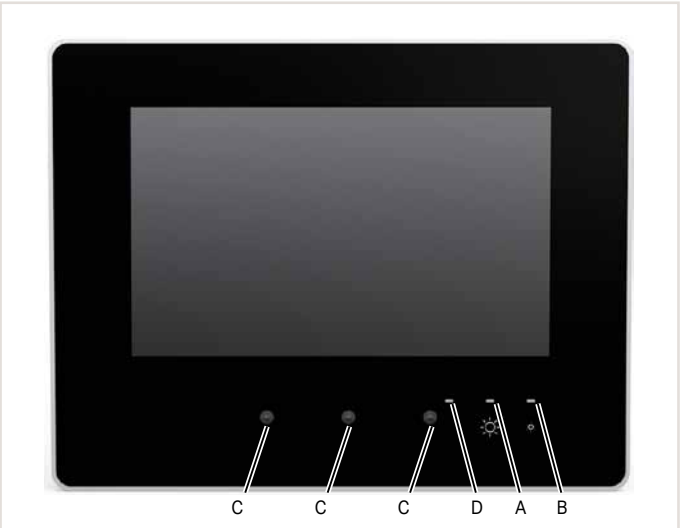
Available sizes:
- 18 cm (7.0″)
- 25.7 cm (10.1″)
- 39.6 cm (15.6″)
- 54.7 cm (21.5″)



Touch Panels Marine Line

In this version, WAGO's Touch Panels are ideal for shipbuilding applications and have special marine approvals. The matte black surface prevents disturbing reflections.

Available sizes:
- 10.9 cm (4.3″)
- 14.5 cm (5.7″)
- 18 cm (7.0″)
- 25.7 cm (10.1″)

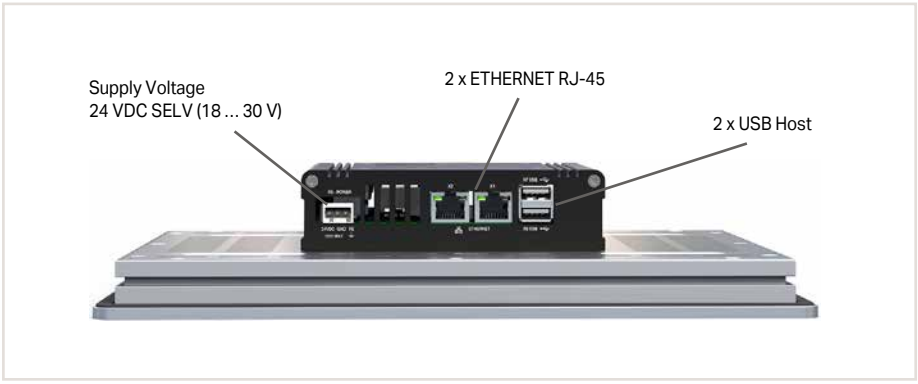


Operation and Monitoring
Interfaces and Types

Hardware Configuration PIO1

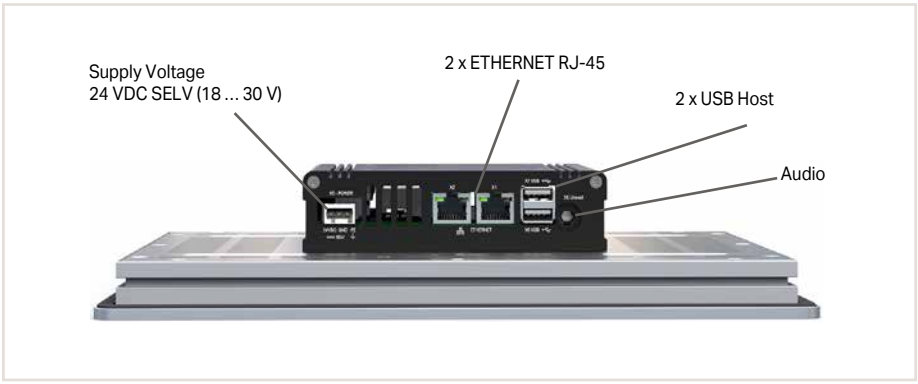
Besides the power supply connection, devices with the PIO1 hardware configuration provide:
- 2 x ETHERNET port for connecting to field devices and the engineering tool
- 2 x USB port for optional connection of a USB stick, mouse or keyboard

Devices of this type are primarily used as Web Panels.



Hardware Configuration PIO2

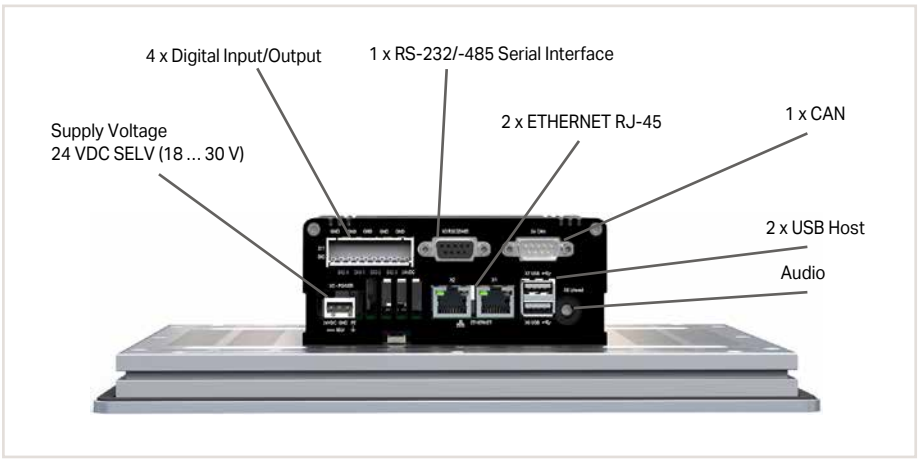
The PIO2 hardware configuration contains the same connections as PIO1 hardware. In addition, the devices are equipped with an audio interface for connecting headphones or a loudspeaker. Devices of this type are primarily used as Visu Panels.



Hardware Configuration PIO3

Devices of this type are primarily used as Control Panels. Besides the interfaces of the PIO2 configuration, they also have the following interfaces:
- 1 x CAN for controlling field devices
- 1 x RS-232/485 interface for controlling field devices with a serial interface
- 4 x digital input/output for reading/triggering digital signals

In addition, this hardware configuration has a rapid, power-failure-proof storage component that can back up retain variables of the controller without additional UPS features.



Common Control Elements

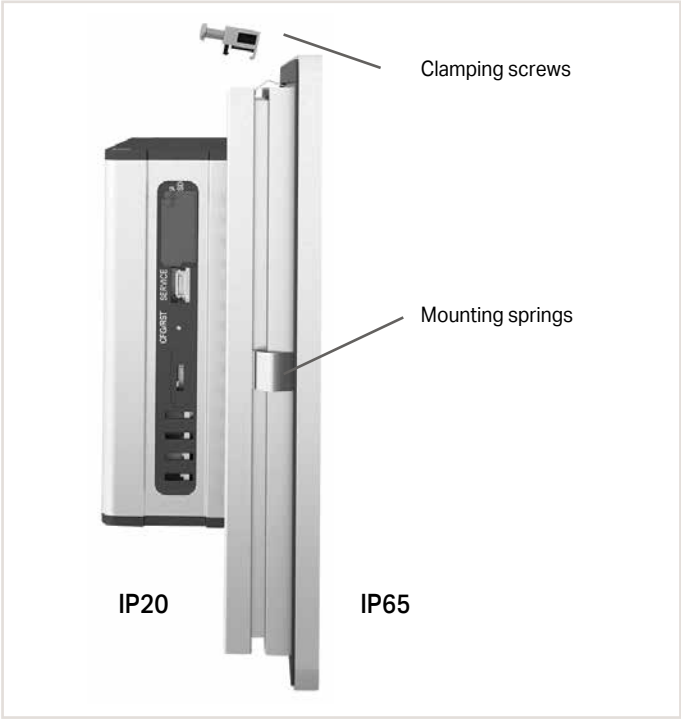
The following control elements are provided on the side of all devices:

Touch Panels 600:
- Run/Stop switch (only relevant for Control Panels)
- Service Switch
- 5 x LED for signaling:
  - General device states
  - Special states of the PLC runtime environment
  - States of the fieldbus connections
- 1 x microSD card for data exchange

Touch Panels *e!DISPLAY*:
- 1 x microSD card for data exchange

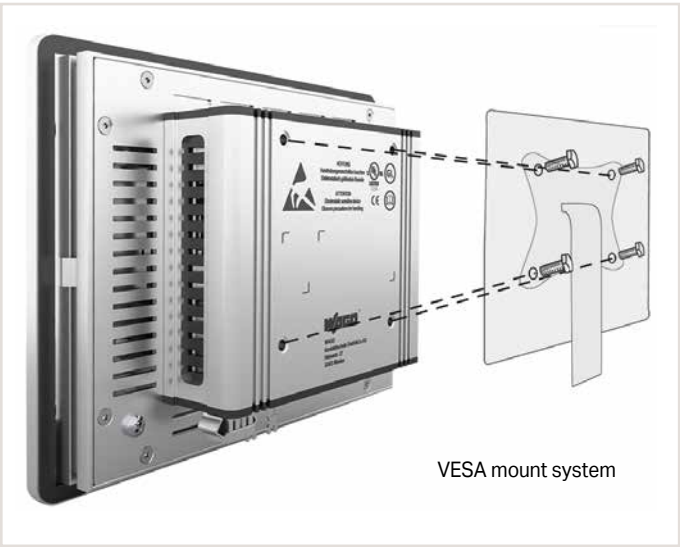
Operation and Monitoring
Application and Installation Instructions

Two brightness adjustment keys are located directly on the front of the device, along with three diagnostics LEDs.



Mounting

WAGO's Touch Panel directly latches onto the control cabinet via mounting spring clips for quick and easy tool-free installation. IP65 levels of protection can be achieved for the front of the display via additional clamping screws. This design flexibility makes the display extremely versatile and suitable for a wide variety of applications.

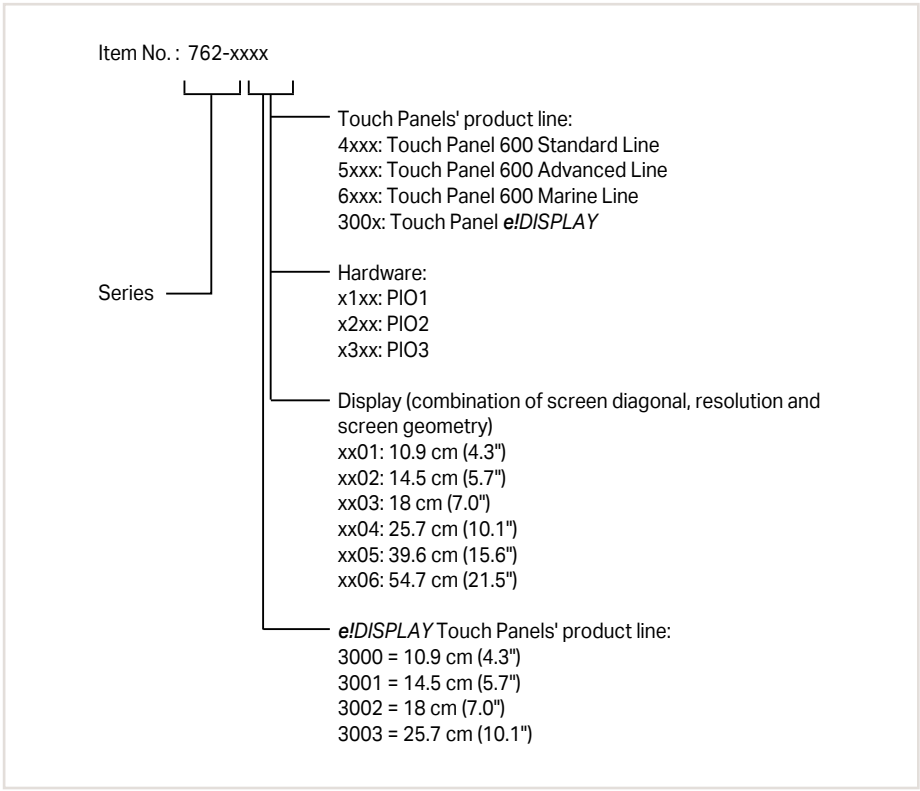


VESA mount system

The VESA mount (VESA 75 standard, 75 mm hole spacing) allows universal mounting accessories to be conveniently used outside of the control cabinet.

Operation and Monitoring
Item Number Key

Explanation of an item number key's components



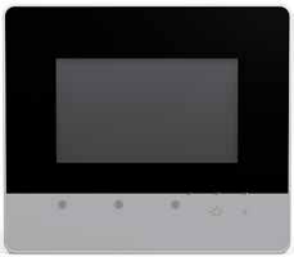
Standards and Rated Conditions

General Technical Data	
Operating system	Linux®
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor
Durability	100,000 activations with touch pen
Supply voltage	24 VDC, SELV (−25 … +30 %) with reverse voltage protection
Indicators	Diagnostic indication (LED)
Surrounding air temperature (operation)	0 … +55 °C
Surrounding air temperature (storage)	−20 … +80 °C
Relative humidity	10 … 90 %; non-condensing
Protection type	IP65 (front side); IP20 (rear side)

Approvals

For approvals overview (item comparison), see Section 14 (Technical Section) or visit www.wago.com.

Touch Panels ▸ Standard Line ▸ 10.9 cm (4.3 Inches)



3

Version	PIO3 Hardware Configuration; Control Panel	PIO2 Hardware Configuration; Visu Panel	PIO1 Hardware Configuration; Web Panel
Item No.	**762-4301/8000-002**	**762-4201/8000-001**	**762-4101**
Order Text	**TP600; 4.3; 480x272; PIO3; CP**	**TP600; 4.3; 480x272; PIO2; VP**	**TP600; 4.3; 480x272; PIO1; WP**
Technical Data			
Display	Resistive touchscreen		
Display diagonal	10.9 cm (4.3 Inches)		
Contrast ratio	600:1		
Aspect ratio	16:9		
Display colors	16 million colors		
Graphics resolution	(480 x 272) px		
Viewing angle (horizontal/vertical)	80° / 80°		
Brightness	500 cd/m²		
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor		
Communication	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; Modbus TCP Master/Slave; CANopen; Modbus (UDP); RS-232 serial interface; RS-485 serial interface; MQTT; EtherCAT Master, **requires an additional license**; BACnet/IP, **requires an additional license**	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP Master/Slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT Master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)	Web browser (HTML5)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH		
Programming environment	***e!****COCKPIT* (based on CODESYS V3)		
Operating system	Real-time Linux (with RT-Preempt patch)		
Processor	ARM® Cortex™ A9		
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB		
Program memory/data memory/non-volatile memory (software)	***e!****RUNTIME*: 32 MB / 128 MB / 128 KB	***e!****RUNTIME*: 32 MB / 128 MB / -	
Memory card type	microSD (max. 2 GB); microSDHC (max. 32 GB)		
Interfaces (USB)	2 x USB host 2.0 (type A)		
Onboard I/Os	Audio; 4 x DIO, configurable	Audio	
Dimensions W x H x D	(155 x 135 x 78) mm	(155 x 135 x 58) mm	
Panel cutout (W x H)	(140 x 120) mm		
Mounting type	Clamping elements (included) or VESA mount (4 x M4x8)		
Supply voltage	24 VDC, SELV (18 … 31.2 V); with reverse voltage protection		
Input current (typ.)	310 mA, without USB load; 575 mA, with USB load	290 mA, without USB load; 555 mA, with USB load	
Operating power	6.0 W, without USB load; 11.5 W, with USB load	5.8 W, without USB load; 11.3 W, with USB load	
Surrounding air temperature (operation)	-20 … 55 °C (when mounted vertically; −20 … +50 °C, other mounting positions)		
Approvals	CE; Marine; OrdLoc		
Data sheet and further information, see:	wago.com/762-4301/8000-002	wago.com/762-4201/8000-001	wago.com/762-4101
Accessories	**Item No.**	**Item No.**	**Item No.**
Memory Card SD Micro; 2 GByte	758-879/000-3102	758-879/000-3102	758-879/000-3102
e!RUNTIME; BACnet; 600; Single License; Online activation	2759-286/211-1000	2759-286/211-1000	
e!RUNTIME; EtherCAT Master; 600; Single License; Online activation	2759-266/211-1000	2759-266/211-1000	
Memory Card SD Micro; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-3108	758-879/000-3108	758-879/000-3108
e!RUNTIME; IEC 61131 runtime environment; 600; Single License; Online activation		2759-216/211-1000	

Touch Panels ▶ Standard Line ▶ 14.5 cm (5.7 Inches)

Version	PIO3 Hardware Configuration; Control Panel	PIO2 Hardware Configuration; Visu Panel	PIO1 Hardware Configuration; Web Panel
Item No.	**762-4302/8000-002**	**762-4202/8000-001**	**762-4102**
Order Text	**TP600; 5.7; 640x480; PIO3; CP**	**TP600; 5.7; 640x480; PIO2; VP**	**TP600; 5.7; 640x480; PIO1; WP**
Technical Data			
Display	Resistive touchscreen		
Display diagonal	14.5 cm (5.7 Inches)		
Contrast ratio	300:1		
Aspect ratio	4:3		
Display colors	262,000 colors		
Graphics resolution	(640 x 480) px		
Viewing angle (horizontal/vertical)	80° / 80°		
Brightness	630 cd/m²		
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor		
Communication	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; Modbus TCP Master/Slave; CANopen; Modbus (UDP); RS-232 serial interface; RS-485 serial interface; MQTT; EtherCAT Master, **requires an additional license**; BACnet/IP, **requires an additional license**	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP Master/Slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT Master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)	Web browser (HTML5)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH		
Programming environment	***e!****COCKPIT* (based on CODESYS V3)		
Operating system	Real-time Linux (with RT-Preempt patch)		
Processor	ARM® Cortex™ A9		
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB		
Program memory/data memory/non-volatile memory (software)	***e!****RUNTIME*: 32 MB / 128 MB / 128 KB	***e!****RUNTIME*: 32 MB / 128 MB / -	
Memory card type	microSD (max. 2 GB); microSDHC (max. 32 GB)		
Interfaces (USB)	2 x USB host 2.0 (type A)		
Onboard I/Os	Audio; 4 x DIO, configurable	Audio	
Dimensions W x H x D	(172 x 163 x 78) mm	(172 x 163 x 58) mm	
Panel cutout (W x H)	(157 x 148) mm		
Mounting type	Clamping elements (included) or VESA mount (4 x M4x8)		
Supply voltage	24 VDC, SELV (18 … 31.2 V); with reverse voltage protection		
Input current (typ.)	360 mA, without USB load; 640 mA, with USB load	340 mA, without USB load; 620 mA, with USB load	
Operating power	7.0 W, without USB load; 12.0 W, with USB load	6.8 W, without USB load; 11.8 W, with USB load	
Surrounding air temperature (operation)	-20 … 55 °C (when mounted vertically; −20 … +50 °C, other mounting positions)		
Approvals	CE; Marine; OrdLoc		
Data sheet and further information, see:	wago.com/762-4302/8000-002	wago.com/762-4202/8000-001	wago.com/762-4102
Accessories	**Item No.**	**Item No.**	**Item No.**
Memory Card SD Micro; 2 GByte	758-879/000-3102	758-879/000-3102	758-879/000-3102
e!RUNTIME; BACnet; 600; Single License; Online activation	2759-286/211-1000	2759-286/211-1000	
e!RUNTIME; EtherCAT Master; 600; Single License; Online activation	2759-266/211-1000	2759-266/211-1000	
Memory Card SD Micro; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-3108	758-879/000-3108	758-879/000-3108
e!RUNTIME; IEC 61131 runtime environment; 600; Single License; Online activation		2759-216/211-1000	

Touch Panels ▸ Standard Line ▸ 17.8 cm (7 Inches)

3

Version	PIO3 Hardware Configuration; Control Panel	PIO2 Hardware Configuration; Visu Panel	PIO1 Hardware Configuration; Web Panel
Item No.	**762-4303/8000-002**	**762-4203/8000-001**	**762-4103**
Order Text	**TP600; 7.0; 800x480; PIO3; CP**	**TP600; 7.0; 800x480; PIO2; VP**	**TP600; 7.0; 800x480; PIO1; WP**
Technical Data			
Display	Resistive touchscreen		
Display diagonal	17.8 cm (7 Inches)		
Contrast ratio	800:1		
Aspect ratio	16:9		
Display colors	16 million colors		
Graphics resolution	(800 x 480) px		
Viewing angle (horizontal/vertical)	89° / 89°		
Brightness	450 cd/m²		
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor		
Communication	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; Modbus TCP Master/Slave; CANopen; Modbus (UDP); RS-232 serial interface; RS-485 serial interface; MQTT; EtherCAT Master, **requires an additional license**; BACnet/IP, **requires an additional license**	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP Master/Slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT Master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)	Web browser (HTML5)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH		
Programming environment	***e!****COCKPIT* (based on CODESYS V3)		
Operating system	Real-time Linux (with RT-Preempt patch)		
Processor	ARM® Cortex™ A9		
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB		
Program memory/data memory/non-volatile memory (software)	***e!****RUNTIME*: 32 MB / 128 MB / 128 KB	***e!****RUNTIME*: 32 MB / 128 MB / -	
Memory card type	microSD (max. 2 GB); microSDHC (max. 32 GB)		
Interfaces (USB)	2 x USB host 2.0 (type A)		
Onboard I/Os	Audio; 4 x DIO, configurable	Audio	
Dimensions W x H x D	(213 x 167 x 78) mm	(213 x 167 x 58) mm	
Panel cutout (W x H)	(198 x 152) mm		
Mounting type	Clamping elements (included) or VESA mount (4 x M4x8)		
Supply voltage	24 VDC, SELV (18 … 31.2 V); with reverse voltage protection		
Input current (typ.)	460 mA, without USB load; 760 mA, with USB load	420 mA, without USB load; 720 mA, with USB load	
Operating power	8.8 W, without USB load; 13.9 W, with USB load	8.6 W, without USB load; 13.7 W, with USB load	
Surrounding air temperature (operation)	-20 … 55 °C (when mounted vertically; −20 … +50 °C, other mounting positions)		
Approvals	CE; Marine; OrdLoc		
Data sheet and further information, see:	wago.com/762-4303/8000-002	wago.com/762-4203/8000-001	wago.com/762-4103
Accessories	**Item No.**	**Item No.**	**Item No.**
Memory Card SD Micro; 2 GByte	758-879/000-3102	758-879/000-3102	758-879/000-3102
e!RUNTIME; BACnet; 600; Single License; Online activation	2759-286/211-1000	2759-286/211-1000	
e!RUNTIME; EtherCAT Master; 600; Single License; Online activation	2759-266/211-1000	2759-266/211-1000	
Memory Card SD Micro; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-3108	758-879/000-3108	758-879/000-3108
e!RUNTIME; IEC 61131 runtime environment; 600; Single License; Online activation		2759-216/211-1000	

Touch Panels ▸ Standard Line ▸ 25.7 cm (10.1 Inches)

Version	PIO3 Hardware Configuration; Control Panel	PIO2 Hardware Configuration; Visu Panel	PIO1 Hardware Configuration; Web Panel
Item No.	**762-4304/8000-002**	**762-4204/8000-001**	**762-4104**
Order Text	**TP600; 10.1; 1280x800; PIO3; CP**	**TP600; 10.1; 1280x800; PIO2; VP**	**TP600; 10.1; 1280x800; PIO1; WP**
Technical Data			
Display	Resistive touchscreen		
Display diagonal	25.7 cm (10.1 Inches)		
Contrast ratio	800:1		
Aspect ratio	16:9		
Display colors	16 million colors		
Graphics resolution	(1280 x 800) px		
Viewing angle (horizontal/vertical)	85° / 85°		
Brightness	800 cd/m²		
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor		
Communication	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; Modbus TCP Master/Slave; CANopen; Modbus (UDP); RS-232 serial interface; RS-485 serial interface; MQTT; EtherCAT Master, **requires an additional license**; BACnet/IP, **requires an additional license**	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP Master/Slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT Master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)	Web browser (HTML5)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH		
Programming environment	***e!****COCKPIT* (based on CODESYS V3)		
Operating system	Real-time Linux (with RT-Preempt patch)		
Processor	ARM® Cortex™ A9		
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB		
Program memory/data memory/non-volatile memory (software)	***e!****RUNTIME*: 32 MB / 128 MB / 128 KB	***e!****RUNTIME*: 32 MB / 128 MB / -	
Memory card type	microSD (max. 2 GB); microSDHC (max. 32 GB)		
Interfaces (USB)	2 x USB host 2.0 (type A)		
Onboard I/Os	Audio; 4 x DIO, configurable	Audio	
Dimensions W x H x D	(293 x 223 x 78) mm	(293 x 223 x 58) mm	
Panel cutout (W x H)	(278 x 208) mm		
Mounting type	Clamping elements (included) or VESA mount (4 x M4x8)		
Supply voltage	24 VDC, SELV (18 … 31.2 V); with reverse voltage protection		
Input current (typ.)	640 mA, without USB load; 940 mA, with USB load	620 mA, without USB load; 920 mA, with USB load	
Operating power	11.8 W, without USB load; 17.0 W, with USB load	11.6 W, without USB load; 16.8 W, with USB load	
Surrounding air temperature (operation)	-20 … 55 °C (when mounted vertically; −20 … +50 °C, other mounting positions)		
Approvals	CE; Marine; OrdLoc		
Data sheet and further information, see:	wago.com/762-4304/8000-002	wago.com/762-4204/8000-001	wago.com/762-4104
Accessories	**Item No.**	**Item No.**	**Item No.**
Memory Card SD Micro; 2 GByte	758-879/000-3102	758-879/000-3102	758-879/000-3102
e!RUNTIME; BACnet; 600; Single License; Online activation	2759-286/211-1000	2759-286/211-1000	
e!RUNTIME; EtherCAT Master; 600; Single License; Online activation	2759-266/211-1000	2759-266/211-1000	
Memory Card SD Micro; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-3108	758-879/000-3108	758-879/000-3108
e!RUNTIME; IEC 61131 runtime environment; 600; Single License; Online activation		2759-216/211-1000	

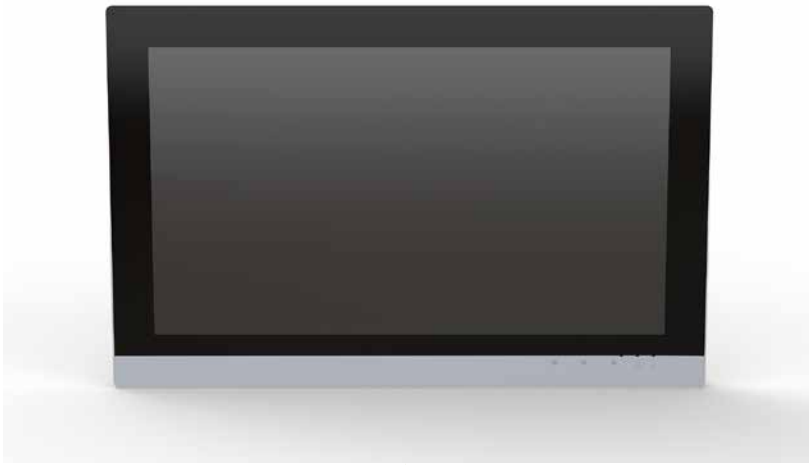
Touch Panels ▸ Standard Line ▸ 39.6 cm (15.6 Inches)

3

Version	PIO3 Hardware Configuration; Control Panel	PIO2 Hardware Configuration; Visu Panel
Item No.	**762-4305/8000-002**	**762-4205/8000-001**
Order Text	**TP600; 15.6; 1920x1080; PIO3; CP**	**TP600; 15.6; 1920x1080; PIO2; VP**
Technical Data		
Display	Resistive touchscreen	
Display diagonal	39.6 cm (15.6 Inches)	
Contrast ratio	800:1	
Display colors	16.7 million colors	
Graphics resolution	(1920 x 1080) px	
Viewing angle (horizontal/vertical)	85° / 85°	
Brightness	500 cd/m²	
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor	
Communication	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; Modbus TCP Master/Slave; CANopen; Modbus (UDP); RS-232 serial interface; RS-485 serial interface; MQTT; EtherCAT Master, **requires an additional license**; BACnet/IP, **requires an additional license**	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP Master/Slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT Master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH	
Programming environment	***e!****COCKPIT* (based on CODESYS V3)	
Operating system	Real-time Linux (with RT-Preempt patch)	
Processor	ARM® Cortex™ A9	
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB	
Program memory/data memory/non-volatile memory (software)	***e!****RUNTIME*: 32 MB / 128 MB / 128 KB	***e!****RUNTIME*: 32 MB / 128 MB / -
Memory card type	microSD (max. 2 GB); microSDHC (max. 32 GB)	
Interfaces (USB)	2 x USB host 2.0 (type A)	
Onboard I/Os	Audio; 4 x DIO, configurable	Audio
Dimensions W x H x D	(420 x 283 x 78) mm	(420 x 283 x 58) mm
Panel cutout (W x H)	(406 x 268) mm	
Mounting type	Clamping elements (included)	
Supply voltage	24 VDC, SELV (18 … 31.2 V); with reverse voltage protection	
Input current (typ.)	450 mA, without USB load; 679 mA, with USB load	430 mA, without USB load; 658 mA, with USB load
Operating power	10.8 W, without USB load; 16.3 W, with USB load	10.3 W, without USB load; 15.8 W, with USB load
Surrounding air temperature (operation)	-20 … 55 °C (when mounted vertically; −20 … +50 °C, other mounting positions)	
Approvals	CE; cULus OrdLoc	
Data sheet and further information, see:	wago.com/762-4305/8000-002	wago.com/762-4205/8000-001

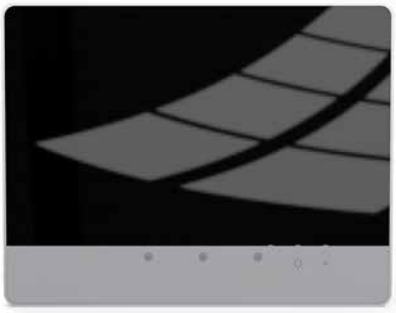
Accessories	**Item No.**	**Item No.**
Memory Card SD Micro; 2 GByte	758-879/000-3102	758-879/000-3102
e!RUNTIME; BACnet; 600; Single License; Online activation	2759-286/211-1000	2759-286/211-1000
e!RUNTIME; EtherCAT Master; 600; Single License; Online activation	2759-266/211-1000	2759-266/211-1000
Memory Card SD Micro; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-3108	758-879/000-3108
e!RUNTIME; IEC 61131 runtime environment; 600; Single License; Online activation		2759-216/211-1000

Touch Panels ▸ Standard Line ▸ 54.7 cm (21.5 Inches)



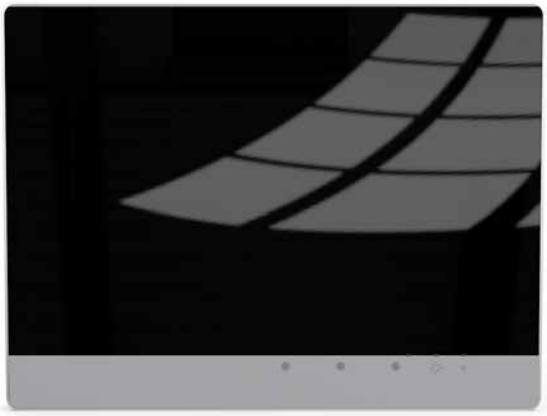
Version	PIO3 Hardware Configuration; Control Panel	PIO2 Hardware Configuration; Visu Panel
Item No.	**762-4306/8000-002**	**762-4206/8000-001**
Order Text	**TP600; 21.5; 1920x1080; PIO3; CP**	**TP600; 21.5; 1920x1080; PIO2; VP**
Technical Data		
Display	Resistive touchscreen	
Display diagonal	54.7 cm (21.5 Inches)	
Contrast ratio	1000:1	
Display colors	16.7 million colors	
Graphics resolution	(1920 x 1080) px	
Viewing angle (horizontal/vertical)	89° / 89°	
Brightness	350 cd/m²	
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor	
Communication	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; Modbus TCP Master/Slave; CANopen; Modbus (UDP); RS-232 serial interface; RS-485 serial interface; MQTT; EtherCAT Master, **requires an additional license**; BACnet/IP, **requires an additional license**	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP Master/Slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT Master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH	
Programming environment	***e!****COCKPIT* (based on CODESYS V3)	
Operating system	Real-time Linux (with RT-Preempt patch)	
Processor	ARM® Cortex™ A9	
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB	
Program memory/data memory/non-volatile memory (software)	***e!****RUNTIME*: 32 MB / 128 MB / 128 KB	***e!****RUNTIME*: 32 MB / 128 MB / -
Memory card type	microSD (max. 2 GB); microSDHC (max. 32 GB)	
Interfaces (USB)	2 x USB host 2.0 (type A)	
Onboard I/Os	Audio; 4 x DIO, configurable	Audio
Dimensions W x H x D	(554 x 358 x 78) mm	(554 x 358 x 58) mm
Panel cutout (W x H)	(540 x 344) mm	
Mounting type	Clamping elements (included)	
Supply voltage	24 VDC, SELV (18 … 31.2 V); with reverse voltage protection	
Input current (typ.)	350 mA, without USB load; 579 mA, with USB load	330 mA, without USB load; 558 mA, with USB load
Operating power	8.4 W, without USB load; 13.9 W, with USB load	7.9 W, without USB load; 13.4 W, with USB load
Surrounding air temperature (operation)	0 … 45 °C (when mounted vertically; −0 … +40 °C, other mounting positions)	
Approvals	CE; cULus OrdLoc	
Data sheet and further information, see:	wago.com/762-4306/8000-002	wago.com/762-4206/8000-001
Accessories	**Item No.**	**Item No.**
Memory Card SD Micro; 2 GByte	758-879/000-3102	758-879/000-3102
e!RUNTIME; BACnet; 600; Single License; Online activation	2759-286/211-1000	2759-286/211-1000
e!RUNTIME; EtherCAT Master; 600; Single License; Online activation	2759-266/211-1000	2759-266/211-1000
Memory Card SD Micro; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-3108	758-879/000-3108
e!RUNTIME; IEC 61131 runtime environment; 600; Single License; Online activation		2759-216/211-1000

Touch Panels ▸ Advanced Line ▸ 17.8 cm (7 Inches)



Version	PIO3 Hardware Configuration; Control Panel	PIO2 Hardware Configuration; Visu Panel
Item No.	**762-5303/8000-002**	**762-5203/8000-001**
Order Text	**TP600; 7.0; 800x480; PIO3; CP**	**TP600; 7.0; 800x480; PIO2; VP**
Technical Data		
Display	Multitouch glass front; Capacitive touchscreen with a glass surface	
Display diagonal	17.8 cm (7 Inches)	
Contrast ratio	800:1	
Aspect ratio	16:9	
Display colors	16 million colors	
Graphics resolution	(800 x 480) px	
Viewing angle (horizontal/vertical)	89° / 89°	
Brightness	450 cd/m²	
Controls	Capacitive (glass); 2 capacitive keys; proximity sensor	
Communication	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; Modbus TCP Master/Slave; CANopen; Modbus (UDP); RS-232 serial interface; RS-485 serial interface; MQTT; EtherCAT Master, **requires an additional license**; BACnet/IP, **requires an additional license**	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP Master/Slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT Master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH	
Programming environment	***e!****COCKPIT* (based on CODESYS V3)	
Operating system	Real-time Linux (with RT-Preempt patch)	
Processor	ARM® Cortex™ A9	
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB	
Program memory/data memory/non-volatile memory (software)	***e!****RUNTIME*: 32 MB / 128 MB / 128 KB	***e!****RUNTIME*: 32 MB / 128 MB / -
Memory card type	microSD (max. 2 GB); microSDHC (max. 32 GB)	
Interfaces (USB)	2 x USB host 2.0 (type A)	
Onboard I/Os	Audio; 4 x DIO, configurable	Audio
Dimensions W x H x D	(213 x 167 x 78) mm	(213 x 167 x 58) mm
Panel cutout (W x H)	(198 x 152) mm	
Mounting type	Clamping elements (included) or VESA mount (4 x M4x8)	
Supply voltage	24 VDC, SELV (18 … 31.2 V); with reverse voltage protection	
Input current (typ.)	460 mA, without USB load; 760 mA, with USB load	420 mA, without USB load; 720 mA, with USB load
Operating power	8.8 W, without USB load; 13.9 W, with USB load	8.6 W, without USB load; 13.7 W, with USB load
Surrounding air temperature (operation)	-20 … 55 °C (when mounted vertically; −20 … +50 °C, other mounting positions)	
Approvals	CE; Marine; OrdLoc	
Data sheet and further information, see:	wago.com/762-5303/8000-002	wago.com/762-5203/8000-001
Accessories	**Item No.**	**Item No.**
Memory Card SD Micro; 2 GByte	758-879/000-3102	758-879/000-3102
e!RUNTIME; BACnet; 600; Single License; Online activation	2759-286/211-1000	2759-286/211-1000
e!RUNTIME; EtherCAT Master; 600; Single License; Online activation	2759-266/211-1000	2759-266/211-1000
Memory Card SD Micro; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-3108	758-879/000-3108
e!RUNTIME; IEC 61131 runtime environment; 600; Single License; Online activation		2759-216/211-1000

Touch Panels ▶ Advanced Line ▶ 25.7 cm (10.1 Inches)

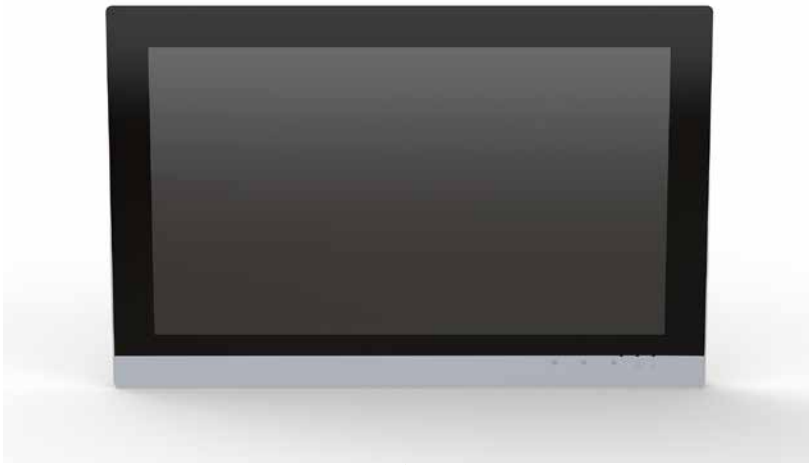


Version	PIO3 Hardware Configuration; Control Panel	PIO2 Hardware Configuration; Visu Panel
Item No.	**762-5304/8000-002**	**762-5204/8000-001**
Order Text	**TP600; 10.1; 1280x800; PIO3; CP**	**TP600; 10.1; 1280x800; PIO2; VP**
Technical Data		
Display	Multitouch glass front; Capacitive touchscreen with a glass surface	
Display diagonal	25.7 cm (10.1 Inches)	
Contrast ratio	800:1	
Aspect ratio	16:9	
Display colors	16 million colors	
Graphics resolution	(1280 x 800) px	
Viewing angle (horizontal/vertical)	85° / 85°	
Brightness	800 cd/m²	
Controls	Capacitive (glass); 2 capacitive keys; proximity sensor	
Communication	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; Modbus TCP Master/Slave; CANopen; Modbus (UDP); RS-232 serial interface; RS-485 serial interface; MQTT; EtherCAT Master, **requires an additional license**; BACnet/IP, **requires an additional license**	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP Master/Slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT Master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH	
Programming environment	***e!****COCKPIT* (based on CODESYS V3)	
Operating system	Real-time Linux (with RT-Preempt patch)	
Processor	ARM® Cortex™ A9	
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB	
Program memory/data memory/non-volatile memory (software)	***e!****RUNTIME*: 32 MB / 128 MB / 128 KB	***e!****RUNTIME*: 32 MB / 128 MB / -
Memory card type	microSD (max. 2 GB); microSDHC (max. 32 GB)	
Interfaces (USB)	2 x USB host 2.0 (type A)	
Onboard I/Os	Audio; 4 x DIO, configurable	Audio
Dimensions W x H x D	(293 x 223 x 78) mm	(293 x 223 x 58) mm
Panel cutout (W x H)	(278 x 208) mm	
Mounting type	Clamping elements (included) or VESA mount (4 x M4x8)	
Supply voltage	24 VDC, SELV (18 … 31.2 V); with reverse voltage protection	
Input current (typ.)	640 mA, without USB load; 940 mA, with USB load	620 mA, without USB load; 920 mA, with USB load
Operating power	11.8 W, without USB load; 17.0 W, with USB load	11.6 W, without USB load; 16.8 W, with USB load
Surrounding air temperature (operation)	-20 … 55 °C (when mounted vertically; −20 … +50 °C, other mounting positions)	
Approvals	CE; Marine; OrdLoc	
Data sheet and further information, see:	wago.com/762-5304/8000-002	wago.com/762-5204/8000-001
Accessories	**Item No.**	**Item No.**
Memory Card SD Micro; 2 GByte	758-879/000-3102	758-879/000-3102
e!RUNTIME; BACnet; 600; Single License; Online activation	2759-286/211-1000	2759-286/211-1000
e!RUNTIME; EtherCAT Master; 600; Single License; Online activation	2759-266/211-1000	2759-266/211-1000
Memory Card SD Micro; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-3108	758-879/000-3108
e!RUNTIME; IEC 61131 runtime environment; 600; Single License; Online activation		2759-216/211-1000

Touch Panels ▸ Advanced Line ▸ 39.6 cm (15.6 Inches)

Version	PIO3 Hardware Configuration; Control Panel	PIO2 Hardware Configuration; Visu Panel
Item No.	**762-5305/8000-002**	**762-5205/8000-001**
Order Text	**TP600; 15.6; 1920x1080; PIO3; CP**	**TP600; 15.6; 1920x1080; PIO2; VP**
Technical Data		
Display	Multitouch glass front; Capacitive touchscreen with a glass surface	
Display diagonal	39.6 cm (15.6 Inches)	
Contrast ratio	800:1	
Display colors	16.7 million colors	
Graphics resolution	(1920 x 1080) px	
Viewing angle (horizontal/vertical)	85° / 85°	
Brightness	500 cd/m²	
Controls	Capacitive (glass); 2 capacitive keys; proximity sensor	
Communication	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; Modbus TCP Master/Slave; CANopen; Modbus (UDP); RS-232 serial interface; RS-485 serial interface; MQTT; EtherCAT Master, **requires an additional license**; BACnet/IP, **requires an additional license**	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP Master/Slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT Master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH	
Programming environment	***e!****COCKPIT* (based on CODESYS V3)	
Operating system	Real-time Linux (with RT-Preempt patch)	
Processor	ARM® Cortex™ A9	
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB	
Program memory/data memory/non-volatile memory (software)	***e!****RUNTIME*: 32 MB / 128 MB / 128 KB	***e!****RUNTIME*: 32 MB / 128 MB / -
Memory card type	microSD (max. 2 GB); microSDHC (max. 32 GB)	
Interfaces (USB)	2 x USB host 2.0 (type A)	
Onboard I/Os	Audio; 4 x DIO, configurable	Audio
Dimensions W x H x D	(420 x 283 x 78) mm	(420 x 283 x 58) mm
Panel cutout (W x H)	(406 x 268) mm	
Mounting type	Clamping elements (included)	
Supply voltage	24 VDC, SELV (18 … 31.2 V); with reverse voltage protection	
Input current (typ.)	450 mA, without USB load; 679 mA, with USB load	430 mA, without USB load; 658 mA, with USB load
Operating power	10.8 W, without USB load; 16.3 W, with USB load	10.3 W, without USB load; 15.8 W, with USB load
Surrounding air temperature (operation)	-20 … 55 °C (when mounted vertically; −20 … +50 °C, other mounting positions)	
Approvals	CE; cULus OrdLoc	
Data sheet and further information, see:	wago.com/762-5305/8000-002	wago.com/762-5205/8000-001
Accessories	**Item No.**	**Item No.**
Memory Card SD Micro; 2 GByte	758-879/000-3102	758-879/000-3102
e!RUNTIME; BACnet; 600; Single License; Online activation	2759-286/211-1000	2759-286/211-1000
e!RUNTIME; EtherCAT Master; 600; Single License; Online activation	2759-266/211-1000	2759-266/211-1000
Memory Card SD Micro; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-3108	758-879/000-3108
e!RUNTIME; IEC 61131 runtime environment; 600; Single License; Online activation		2759-216/211-1000

Touch Panels ▶ Advanced Line ▶ 54.7 cm (21.5 Inches)



Version	PIO3 Hardware Configuration; Control Panel	PIO2 Hardware Configuration; Visu Panel
Item No.	**762-5306/8000-002**	**762-5206/8000-001**
Order Text	**TP600; 21.5; 1920x1080; PIO3; CP**	**TP600; 21.5; 1920x1080; PIO2; VP**
Technical Data		
Display	Multitouch glass front; Capacitive touchscreen with a glass surface	
Display diagonal	54.7 cm (21.5 Inches)	
Contrast ratio	1000:1	
Display colors	16.7 million colors	
Graphics resolution	(1920 x 1080) px	
Viewing angle (horizontal/vertical)	89° / 89°	
Brightness	350 cd/m²	
Controls	Capacitive (glass); 2 capacitive keys; proximity sensor	
Communication	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; Modbus TCP Master/Slave; CANopen; Modbus (UDP); RS-232 serial interface; RS-485 serial interface; MQTT; EtherCAT Master, **requires an additional license**; BACnet/IP, **requires an additional license**	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP Master/Slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT Master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH	
Programming environment	***e!****COCKPIT* (based on CODESYS V3)	
Operating system	Real-time Linux (with RT-Preempt patch)	
Processor	ARM® Cortex™ A9	
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB	
Program memory/data memory/non-volatile memory (software)	***e!****RUNTIME*: 32 MB / 128 MB / 128 KB	***e!****RUNTIME*: 32 MB / 128 MB / -
Memory card type	microSD (max. 2 GB); microSDHC (max. 32 GB)	
Interfaces (USB)	2 x USB host 2.0 (type A)	
Onboard I/Os	Audio; 4 x DIO, configurable	Audio
Dimensions W x H x D	(554 x 358 x 78) mm	(554 x 358 x 58) mm
Panel cutout (W x H)	(540 x 344) mm	
Mounting type	Clamping elements (included)	
Supply voltage	24 VDC, SELV (18 … 31.2 V); with reverse voltage protection	
Input current (typ.)	350 mA, without USB load; 579 mA, with USB load	330 mA, without USB load; 558 mA, with USB load
Operating power	8.4 W, without USB load; 13.9 W, with USB load	7.9 W, without USB load; 13.4 W, with USB load
Surrounding air temperature (operation)	0 … 45 °C (when mounted vertically; −0 … +40 °C, other mounting positions)	
Approvals	CE; cULus OrdLoc	
Data sheet and further information, see:	wago.com/762-5306/8000-002	wago.com/762-5206/8000-001
Accessories	**Item No.**	**Item No.**
Memory Card SD Micro; 2 GByte	758-879/000-3102	758-879/000-3102
e!RUNTIME; BACnet; 600; Single License; Online activation	2759-286/211-1000	2759-286/211-1000
e!RUNTIME; EtherCAT Master; 600; Single License; Online activation	2759-266/211-1000	2759-266/211-1000
Memory Card SD Micro; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-3108	758-879/000-3108
e!RUNTIME; IEC 61131 runtime environment; 600; Single License; Online activation		2759-216/211-1000

Touch Panels ▸ Marine Line ▸ 10.9 cm (4.3 Inches)

Version	PIO3 Hardware Configuration; Control Panel	PIO2 Hardware Configuration; Visu Panel
Item No.	**762-6301/8000-002**	**762-6201/8000-001**
Order Text	**TP600; 4.3; 480x272; PIO3; CP**	**TP600; 4.3; 480x272; PIO2; VP**
Technical Data		
Display	Resistive touchscreen (black front)	
Display diagonal	10.9 cm (4.3 Inches)	
Contrast ratio	600:1	
Aspect ratio	16:9	
Display colors	16 million colors	
Graphics resolution	(480 x 272) px	
Viewing angle (horizontal/vertical)	80° / 80°	
Brightness	500 cd/m²	
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor	
Communication	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; Modbus TCP Master/Slave; CANopen; Modbus (UDP); RS-232 serial interface; RS-485 serial interface; MQTT; EtherCAT Master, **requires an additional license**; BACnet/IP, **requires an additional license**	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP Master/Slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT Master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH	
Programming environment	***e!****COCKPIT* (based on CODESYS V3)	
Operating system	Real-time Linux (with RT-Preempt patch)	
Processor	ARM® Cortex™ A9	
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB	
Program memory/data memory/non-volatile memory (software)	***e!****RUNTIME*: 32 MB / 128 MB / 128 KB	***e!****RUNTIME*: 32 MB / 128 MB / -
Memory card type	microSD (max. 2 GB); microSDHC (max. 32 GB)	
Interfaces (USB)	2 x USB-Host 2.0 (Typ A)	2 x USB host 2.0 (type A)
Onboard I/Os	Audio; 4 x DIO, configurable	Audio
Dimensions W x H x D	(155 x 135 x 78) mm	(155 x 135 x 58) mm
Panel cutout (W x H)	(140 x 120) mm	
Mounting type	Clamping elements (included) or VESA mount (4 x M4x8)	
Supply voltage	24 VDC, SELV (18 … 31.2 V); with reverse voltage protection	
Input current (typ.)	310 mA, without USB load; 575 mA, with USB load	290 mA, without USB load; 555 mA, with USB load
Operating power	6.0 W, without USB load; 11.5 W, with USB load	5.8 W, without USB load; 11.3 W, with USB load
Surrounding air temperature (operation)	-20 … 55 °C (when mounted vertically; −20 … +50 °C, other mounting positions)	
Approvals	CE; Marine; OrdLoc	
Data sheet and further information, see:	wago.com/762-6301/8000-002	wago.com/762-6201/8000-001
Accessories	**Item No.**	**Item No.**
Memory Card SD Micro; 2 GByte	758-879/000-3102	758-879/000-3102
e!RUNTIME; BACnet; 600; Single License; Online activation	2759-286/211-1000	2759-286/211-1000
e!RUNTIME; EtherCAT Master; 600; Single License; Online activation	2759-266/211-1000	2759-266/211-1000
Memory Card SD Micro; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-3108	758-879/000-3108
e!RUNTIME; IEC 61131 runtime environment; 600; Single License; Online activation		2759-216/211-1000

Touch Panels ▶ Marine Line ▶ 14.5 cm (5.7 Inches)

Version	PIO3 Hardware Configuration; Control Panel	PIO2 Hardware Configuration; Visu Panel
Item No.	**762-6302/8000-002**	**762-6202/8000-001**
Order Text	**TP600; 5.7; 640x480; PIO3; CP**	**TP600; 5.7; 640x480; PIO2; VP**
Technical Data		
Display	Resistive touchscreen (black front)	
Display diagonal	14.5 cm (5.7 Inches)	
Contrast ratio	300:1	
Aspect ratio	4:3	
Display colors	262,000 colors	
Graphics resolution	(640 x 480) px	
Viewing angle (horizontal/vertical)	80° / 80°	
Brightness	630 cd/m²	
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor	
Communication	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; Modbus TCP Master/Slave; CANopen; Modbus (UDP); RS-232 serial interface; RS-485 serial interface; MQTT; EtherCAT Master, **requires an additional license**; BACnet/IP, **requires an additional license**	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP Master/Slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT Master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH	
Programming environment	***e!****COCKPIT* (based on CODESYS V3)	
Operating system	Real-time Linux (with RT-Preempt patch)	
Processor	ARM® Cortex™ A9	
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB	
Program memory/data memory/non-volatile memory (software)	***e!****RUNTIME*: 32 MB / 128 MB / 128 KB	***e!****RUNTIME*: 32 MB / 128 MB / -
Memory card type	microSD (max. 2 GB); microSDHC (max. 32 GB)	
Interfaces (USB)	2 x USB-Host 2.0 (Typ A)	2 x USB host 2.0 (type A)
Onboard I/Os	Audio; 4 x DIO, configurable	Audio
Dimensions W x H x D	(172 x 163 x 78) mm	(172 x 163 x 58) mm
Panel cutout (W x H)	(157 x 148) mm	
Mounting type	Clamping elements (included) or VESA mount (4 x M4x8)	
Supply voltage	24 VDC, SELV (18 … 31.2 V); with reverse voltage protection	
Input current (typ.)	360 mA, without USB load; 640 mA, with USB load	340 mA, without USB load; 620 mA, with USB load
Operating power	7.0 W, without USB load; 12.0 W, with USB load	6.8 W, without USB load; 11.8 W, with USB load
Surrounding air temperature (operation)	-20 … 55 °C (when mounted vertically; −20 … +50 °C, other mounting positions)	
Approvals	CE; Marine; OrdLoc	
Data sheet and further information, see:	wago.com/762-6302/8000-002	wago.com/762-6202/8000-001
Accessories	**Item No.**	**Item No.**
Memory Card SD Micro; 2 GByte	758-879/000-3102	758-879/000-3102
e!RUNTIME; BACnet; 600; Single License; Online activation	2759-286/211-1000	2759-286/211-1000
e!RUNTIME; EtherCAT Master; 600; Single License; Online activation	2759-266/211-1000	2759-266/211-1000
Memory Card SD Micro; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-3108	758-879/000-3108
e!RUNTIME; IEC 61131 runtime environment; 600; Single License; Online activation		2759-216/211-1000

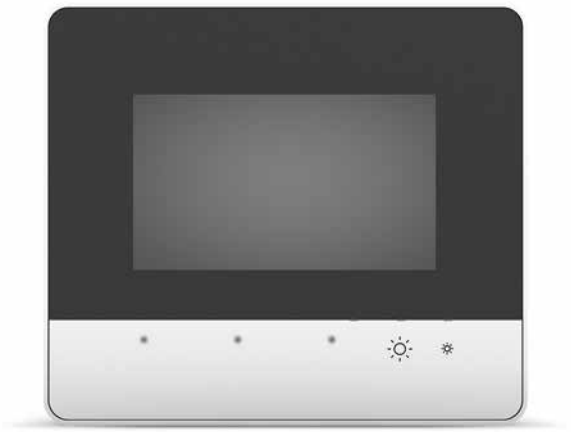
Touch Panels ▶ Marine Line ▶ 17.8 cm (7 Inches)

Version	PIO3 Hardware Configuration; Control Panel	PIO2 Hardware Configuration; Visu Panel
Item No.	**762-6303/8000-002**	**762-6203/8000-001**
Order Text	**TP600; 7.0; 800x480; PIO3; CP**	**TP600; 7.0; 800x480; PIO2; VP**
Technical Data		
Display	Resistive touchscreen (black front)	
Display diagonal	17.8 cm (7 Inches)	
Contrast ratio	800:1	
Aspect ratio	16:9	
Display colors	16 million colors	
Graphics resolution	(800 x 480) px	
Viewing angle (horizontal/vertical)	89° / 89°	
Brightness	450 cd/m²	
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor	
Communication	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; Modbus TCP Master/Slave; CANopen; Modbus (UDP); RS-232 serial interface; RS-485 serial interface; MQTT; EtherCAT Master, **requires an additional license**; BACnet/IP, **requires an additional license**	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP Master/Slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT Master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH	
Programming environment	***e!****COCKPIT* (based on CODESYS V3)	
Operating system	Real-time Linux (with RT-Preempt patch)	
Processor	ARM® Cortex™ A9	
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB	
Program memory/data memory/non-volatile memory (software)	***e!****RUNTIME*: 32 MB / 128 MB / -	
Memory card type	microSD (max. 2 GB); microSDHC (max. 32 GB)	
Interfaces (USB)	2 x USB-Host 2.0 (Typ A)	2 x USB host 2.0 (type A)
Onboard I/Os	Audio; 4 x DIO, configurable	Audio
Dimensions W x H x D	(213 x 167 x 78) mm	(213 x 167 x 58) mm
Panel cutout (W x H)	(198 x 152) mm	
Mounting type	Clamping elements (included) or VESA mount (4 x M4x8)	
Supply voltage	24 VDC, SELV (18 … 31.2 V); with reverse voltage protection	
Input current (typ.)	460 mA, without USB load; 760 mA, with USB load	420 mA, without USB load; 720 mA, with USB load
Operating power	8.8 W, without USB load; 13.9 W, with USB load	8.6 W, without USB load; 13.7 W, with USB load
Surrounding air temperature (operation)	-20 … 55 °C (when mounted vertically; −20 … +50 °C, other mounting positions)	
Approvals	CE; Marine; OrdLoc	
Data sheet and further information, see:	wago.com/762-6303/8000-002	wago.com/762-6203/8000-001
Accessories	**Item No.**	**Item No.**
Memory Card SD Micro; 2 GByte	758-879/000-3102	758-879/000-3102
e!RUNTIME; BACnet; 600; Single License; Online activation	2759-286/211-1000	2759-286/211-1000
e!RUNTIME; EtherCAT Master; 600; Single License; Online activation	2759-266/211-1000	2759-266/211-1000
Memory Card SD Micro; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-3108	758-879/000-3108
e!RUNTIME; IEC 61131 runtime environment; 600; Single License; Online activation		2759-216/211-1000

Touch Panels ▶ Marine Line ▶ 25.7 cm (10.1 Inches)

Version	PIO3 Hardware Configuration; Control Panel	PIO2 Hardware Configuration; Visu Panel
Item No.	**762-6304/8000-002**	**762-6204/8000-001**
Order Text	**TP600; 10.1; 1280x800; PIO3; CP**	**TP600; 10.1; 1280x800; PIO2; VP**
Technical Data		
Display	Resistive touchscreen (black front)	
Display diagonal	25.7 cm (10.1 Inches)	
Contrast ratio	800:1	
Aspect ratio	16:9	
Display colors	16 million colors	
Graphics resolution	(1280 x 800) px	
Viewing angle (horizontal/vertical)	85° / 85°	
Brightness	800 cd/m²	
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor	
Communication	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; Modbus TCP Master/Slave; CANopen; Modbus (UDP); RS-232 serial interface; RS-485 serial interface; MQTT; EtherCAT Master, **requires an additional license**; BACnet/IP, **requires an additional license**	EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME* (prerequisite: ***e!****RUNTIME* PLC 600 license); Modbus TCP Master/Slave (prerequisite: ***e!****RUNTIME* PLC 600 license); EtherCAT Master, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license); BACnet/IP, **requires an additional license** (prerequisite: ***e!****RUNTIME* PLC 600 license)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH	
Programming environment	***e!****COCKPIT* (based on CODESYS V3)	
Operating system	Real-time Linux (with RT-Preempt patch)	
Processor	ARM® Cortex™ A9	
Main memory (RAM)/internal memory (flash)	2 GB / 4 GB	
Program memory/data memory/non-volatile memory (software)	***e!****RUNTIME*: 32 MB / 128 MB / -	
Memory card type	microSD (max. 2 GB); microSDHC (max. 32 GB)	
Interfaces (USB)	2 x USB-Host 2.0 (Typ A)	2 x USB host 2.0 (type A)
Onboard I/Os	Audio; 4 x DIO, configurable	Audio
Dimensions W x H x D	(293 x 223 x 78) mm	(293 x 223 x 58) mm
Panel cutout (W x H)	(278 x 208) mm	
Mounting type	Clamping elements (included) or VESA mount (4 x M4x8)	
Supply voltage	24 VDC, SELV (18 … 31.2 V); with reverse voltage protection	
Input current (typ.)	640 mA, without USB load; 940 mA, with USB load	620 mA, without USB load; 920 mA, with USB load
Operating power	11.8 W, without USB load; 17.0 W, with USB load	11.6 W, without USB load; 16.8 W, with USB load
Surrounding air temperature (operation)	-20 … 55 °C (when mounted vertically; −20 … +50 °C, other mounting positions)	
Approvals	CE; Marine; OrdLoc	
Data sheet and further information, see:	wago.com/762-6304/8000-002	wago.com/762-6204/8000-001
Accessories	**Item No.**	**Item No.**
Memory Card SD Micro; 2 GByte	758-879/000-3102	758-879/000-3102
e!RUNTIME; BACnet; 600; Single License; Online activation	2759-286/211-1000	2759-286/211-1000
e!RUNTIME; EtherCAT Master; 600; Single License; Online activation	2759-266/211-1000	2759-266/211-1000
Memory Card SD Micro; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-3108	758-879/000-3108
e!RUNTIME; IEC 61131 runtime environment; 600; Single License; Online activation		2759-216/211-1000

Touch Panels ▸ *e!DISPLAY 7300T* ▸ 10.9 cm (4.3 Inches)



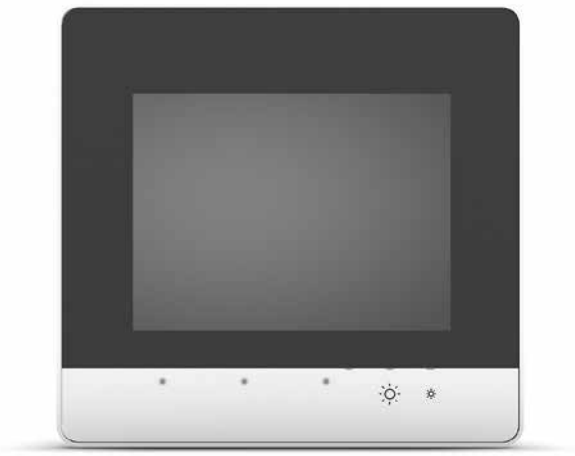
762-3000

Version	**Web Panel**
Item No.	**762-3000**
Order Text	**WP; 4.3; 480x272; PIO1**

Technical Data	
Display	Resistive touchscreen
Display diagonal	10.9 cm (4.3 Inches)
Contrast ratio	600:1
Aspect ratio	16:9
Display colors	16 million colors
Graphics resolution	(480 x 272) px
Viewing angle (horizontal/vertical)	80° / 80°
Brightness	500 cd/m²
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor
Communication	Web browser (CODESYS2)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH
Operating system	Linux®
Processor	ARM® Cortex™ A8 600 MHz
Main memory (RAM)/internal memory (flash)	512 MB / 1024 MB
Memory card type	microSD (max. 2 GB); microSDHC (max. 32 GB)
Interfaces (USB)	2 x USB host 2.0 (type A)
Dimensions W x H x D	(155 x 135 x 58) mm
Panel cutout (W x H)	(140 x 120) mm
Mounting type	Clamping elements (included) or VESA mount (4 x M4x8)
Supply voltage	24 VDC, SELV (18 … 31.2 V); with reverse voltage protection
Operating power	4.0 W (max.)
Surrounding air temperature (operation)	0 … 55 °C
Data sheet and further information, see:	wago.com/762-3000

Accessories	**Item No.**
Memory Card SD Micro; 2 GByte	758-879/000-3102
Memory Card SD Micro; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-3108

Touch Panels ▶ *e!DISPLAY 7300T* ▶ 14.5 cm (5.7 Inches)



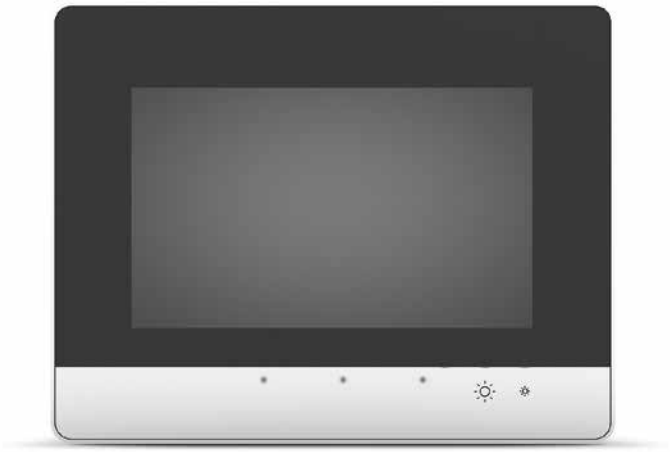
762-3001

Version	**Web Panel**
Item No.	**762-3001**
Order Text	**WP; 5.7; 640x480; PIO1**

Technical Data	
Display	Resistive touchscreen
Display diagonal	14.5 cm (5.7 Inches)
Contrast ratio	300:1
Aspect ratio	4:3
Display colors	262,000 colors
Graphics resolution	(640 x 480) px
Viewing angle (horizontal/vertical)	80° / 80°
Brightness	630 cd/m²
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor
Communication	Web browser (CODESYS2)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH
Operating system	Linux®
Processor	ARM® Cortex™ A8 600 MHz
Main memory (RAM)/internal memory (flash)	512 MB / 1024 MB
Memory card type	microSD (max. 2 GB); microSDHC (max. 32 GB)
Interfaces (USB)	2 x USB host 2.0 (type A)
Dimensions W x H x D	(172 x 163 x 58) mm
Panel cutout (W x H)	(157 x 148) mm
Mounting type	Clamping elements (included) or VESA mount (4 x M4x8)
Supply voltage	24 VDC, SELV (18 … 31.2 V); with reverse voltage protection
Operating power	5.1 W (max.)
Surrounding air temperature (operation)	0 … 55 °C
Data sheet and further information, see:	wago.com/762-3001

Accessories	**Item No.**
Memory Card SD Micro; 2 GByte	758-879/000-3102
Memory Card SD Micro; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-3108

Touch Panels ▶ *e!DISPLAY 7300T* ▶ 17.8 cm (7 Inches)



762-3002

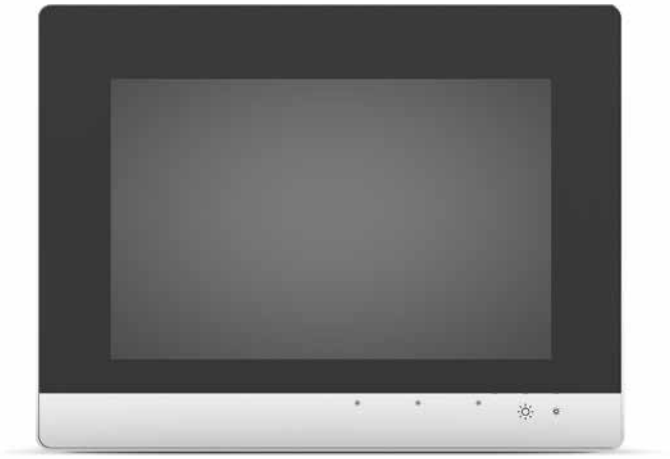
3

Version	Web Panel
Item No.	**762-3002**
Order Text	**WP; 7.0; 800x480; PIO1**

Technical Data	
Display	Resistive touchscreen
Display diagonal	17.8 cm (7 Inches)
Contrast ratio	800:1
Aspect ratio	16:9
Display colors	16 million colors
Graphics resolution	(800 x 480) px
Viewing angle (horizontal/vertical)	89° / 89°
Brightness	450 cd/m²
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor
Communication	Web browser (CODESYS2)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH
Operating system	Linux®
Processor	ARM® Cortex™ A8 600 MHz
Main memory (RAM)/internal memory (flash)	512 MB / 1024 MB
Memory card type	microSD (max. 2 GB); microSDHC (max. 32 GB)
Interfaces (USB)	2 x USB host 2.0 (type A)
Dimensions W x H x D	(213 x 167 x 58) mm
Panel cutout (W x H)	(198 x 152) mm
Mounting type	Clamping elements (included) or VESA mount (4 x M4x8)
Supply voltage	24 VDC, SELV (18 … 31.2 V); with reverse voltage protection
Operating power	7.3 W (max.)
Surrounding air temperature (operation)	0 … 55 °C
Data sheet and further information, see:	wago.com/762-3002

Accessories	**Item No.**
Memory Card SD Micro; 2 GByte	758-879/000-3102
Memory Card SD Micro; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-3108

Touch Panels ▶ *e!DISPLAY 7300T* ▶ 25.7 cm (10.1 Inches)



762-3003

Version	**Web Panel**
Item No.	**762-3003**
Order Text	**WP; 10.1; 1280x800; PIO1**

Technical Data	
Display	Resistive touchscreen
Display diagonal	25.7 cm (10.1 Inches)
Contrast ratio	800:1
Aspect ratio	16:9
Display colors	16 million colors
Graphics resolution	(1280 x 800) px
Viewing angle (horizontal/vertical)	85° / 85°
Brightness	800 cd/m²
Controls	Resistive touch panel; 2 capacitive keys; proximity sensor
Communication	Web browser (CODESYS2)
ETHERNET protocols	DHCP; DNS; FTP; FTPS; HTTP; HTTPS; SSH
Operating system	Linux®
Processor	ARM® Cortex™ A8 600 MHz
Main memory (RAM)/internal memory (flash)	512 MB / 1024 MB
Memory card type	microSD (max. 2 GB); microSDHC (max. 32 GB)
Interfaces (USB)	2 x USB host 2.0 (type A)
Dimensions W x H x D	(293 x 223 x 58) mm
Panel cutout (W x H)	(278 x 208) mm
Mounting type	Clamping elements (included) or VESA mount (4 x M4x8)
Supply voltage	24 VDC, SELV (18 … 31.2 V); with reverse voltage protection
Operating power	9.9 W (max.)
Surrounding air temperature (operation)	0 … 50 °C
Data sheet and further information, see:	wago.com/762-3003

Accessories	**Item No.**
Memory Card SD Micro; 2 GByte	758-879/000-3102
Memory Card SD Micro; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-3108

Accessories

Item Description	microSD Memory Card; Temperature range: −40 … +90 °C	microSD Memory Card; Temperature range: −40 … +90 °C
Version	SLC-NAND; 2 GB	pSLC-NAND; 8 GB
Item No.	758-879/000-3102	758-879/000-3108
Technical Data		
Memory	2 GB (SLC)	8 GB (pSLC)
Read/write cycles (max.)	20 MB/s / 17 MB/s	48 MB/s / 45 MB/s
MTBF	4,000,000 h	2,000,000 h
Service life	100,000 write cycles (per cell)	20,000 write cycles (per cell)
Data storage	10 years	10 years
Surrounding air temperature (operation)	−40 … +90 °C	−40 … +90 °C
Surrounding air temperature (storage)	−40 … +90 °C	−40 … +90 °C
Relative humidity	95 %, non-condensing	95 %, non-condensing
Dimensions W x H x D	15 x 11 x 1 mm	15 x 11 x 1 mm
Vibration resistance	15g	15g
Shock resistance	50g	50g

Connection Cable		
USB A-B	Item No.	PU
3 m	758-879/000-101	1

Clamping Element; for Touch Panels		
	Item No.	PU
4 pcs	762-9001	1

Item Description	**WAGO Flush-Mount Housing for Touch Panels 600**
Version	**25.7 cm (10.1") 80.0 mm**
Item No.	**762-9324**

Technical Data

Dimensions W x H x D (mm)	293 x 223 x 80
Panel cutout W x H (mm)	281 x 211
Weight	1330 g
Surrounding air temperature (operation)	–20 … +40 °C

Item Description	**WAGO Flush-Mount Housing for Touch Panels 600**
Version	**39.6 cm (15.6") 80.0 mm**
Item No.	**762-9325**

Technical Data

Dimensions W x H x D (mm)	420 x 282 x 80
Panel cutout W x H (mm)	409 x 271
Weight	2120 g
Surrounding air temperature (operation)	–20 … +40 °C

Edge Computing

Touch Panels 600; Control Panel Hardware Configuration

- Merging of control and visualization
- 10.9 … 54.7 cm (4.3 … 21.5")

Edge Computing

- Models include Edge Controllers or Edge Computers
- Perfect in-the-field data usage
- Easy cloud connection
- Equipped for high security

Controllers

- Scalable controller family with various interfaces
- Microcontrollers

◄ Section 3

Section 5 ►

Edge Computing
Contents

	CPU	Modbus (TCP, UDP)	EtherCAT	CANopen	BACnet/IP	Telecontrol Protocols	IoT Protocols	Description	Item No.	
	ARM® Cortex A9; 1 GHz	**M/S**	**x***	**x**	**x***	**x***	**x**	Edge Controller; 2 x ETHERNET, 2 x USB, 1 x USB-C, HDMI, CAN, DI/DO, RS-232/485, Audio; Control	**752-8303/8000-002**	100
	Intel® Atom Quad Core E3845 1.91 GHz						**x**	Edge Computer; 2 x ETHERNET, 4 x USB, HDMI, DP; 4GB RAM; 64GB FLASH	**752-9400**	101
							x	Edge Computer; 2 x ETHERNET, 4 x USB, HDMI, DP; 8GB RAM; 64GB FLASH	**752-9401**	101

M: Master, S: Slave; *requires an additional license

4

Edge Computing
General Product Information

Edge Computing

In many cases, transferring data from machines and systems directly to a cloud solution is resource-intensive and infeasible due to the low latency required in industrial environments. Edge computing has established itself because it combines the advantages of decentralized cloud architectures with those of a local network architecture.

Perfectly Use Data in the Field

Intelligent processes are requiring more and more computing power, and this places corresponding demands on databases directly in the field. WAGO offers the right hardware for any edge application.

Where real-time data is involved, data processing is becoming increasingly important. More and more computing power is needed, and this places corresponding demands on databases, as well as analysis and optimization algorithms, directly in the field. WAGO offers solutions in the form of the Edge Controller and Edge Computer. These devices process applications right on the machine, offloading the controllers so they can focus on their actual control duties with low latency and a high level of determinism.

Easy Cloud Connection

Collected data can be evaluated directly, displayed graphically and made available to WAGO Cloud, for example. Transfer may be appropriate for especially critical data, for instance. Both of the new devices have additional advantages when data needs to be buffered temporarily, for instance in mobile applications. They are based on cabinet-compatible hardware and can be powered with 24 V, making them a perfect fit for the automation environment.

Equipped for High Security

With a large share of open source software, the devices are well equipped for cybersecurity because the large open-source community continually reviews the source code and provides bug fixes. Besides the standard VPN applications, the devices are open for special security solutions such as Tosibox and Hooc. Thus, in addition to WAGO's own VPN solution, users can also access other remote maintenance solutions with a high degree of security, in line with the #openandeasy principle. The Edge Computer also offers a TPM 2.0 chip, which provides encryption generators as well as a safe haven for certificates and keys.

docker OPC UA

WAGO Edge Devices
General Product Information

WAGO Edge Controller

The Edge Controller features an ARM Cortex-A9 quad-core processor and offers an extensive selection of interfaces, including two ETHERNET ports, one CANopen port and two USB ports. It also has a serial interface and four digital inputs/outputs for connecting local devices or sensors.

Your Benefits:

- Easy integration into existing systems
- Space-saving installation
- Can be configured in the familiar ***e!****COCKPIT* environment

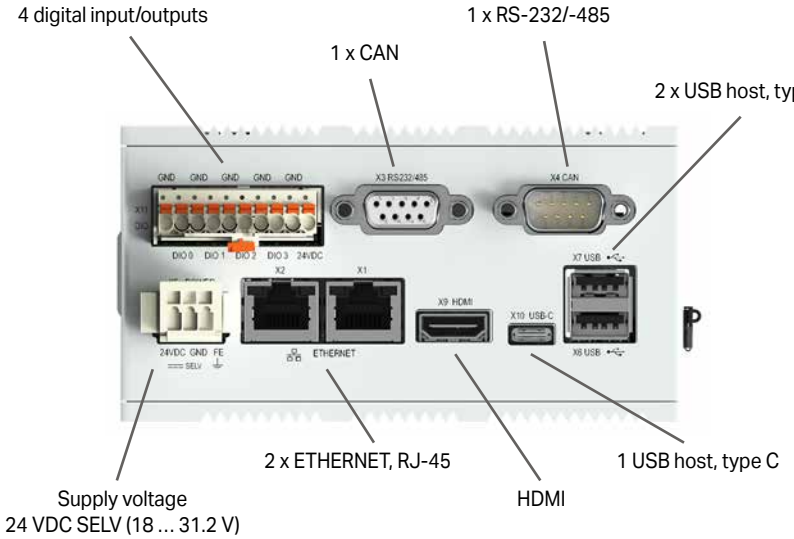
WAGO Edge Computer

Where demands on computing power and memory are high, WAGO offers the perfect solution with the Edge Computer. It features a 1.91 GHz quad-core Atom processor and is equipped with standard Debian Linux. Users can draw on abundant resources and model entire automation processes on them.

Your Benefits:

- Features high computing power and scalable storage
- Compact and low-maintenance
- Allows use of standard software

Edge Controller; 2 x ETHERNET, 2 x USB, 1 x USB-C, HDMI, CAN, DI/DO, RS-232/485, Audio; Control

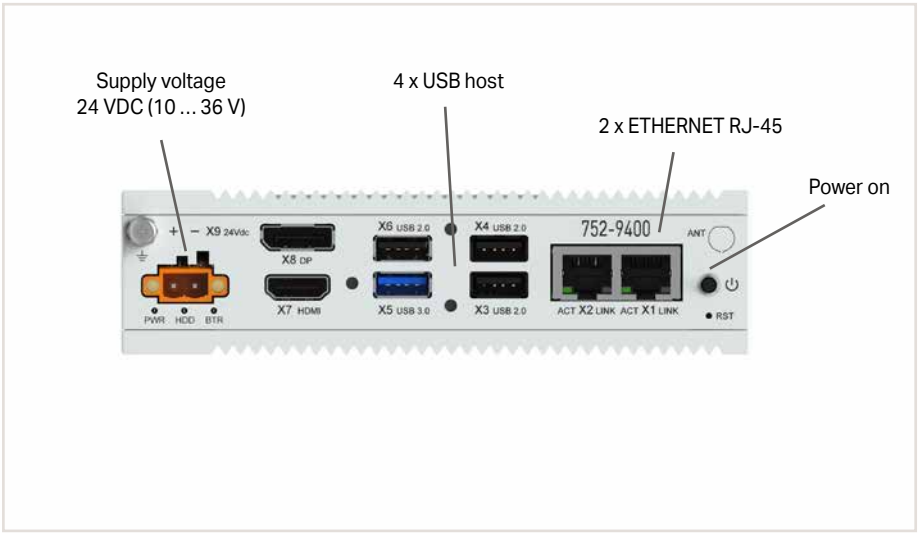


4

Item Description	Edge Controller; 2 x ETHERNET, 2 x USB, 1 x USB-C, HDMI, CAN, DI/DO, RS-232/485, Audio; Control
Item No.	752-8303/8000-002
Order Text	Edge Controller

Technical Data	
Communication	Web Browser
Visualization	Web Visu; Target Visu
ETHERNET protocols	DHCP, DNS, FTP, FTPS, HTTP, HTTPS, SSH
Operating system	Real-time Linux (with RT-Preempt patch)
Processor	ARM®Cortex® A9
Main memory (RAM)	2 GB, DDR3 SDRAM
Internal memory (flash)	4 GB, eMMC
Non-volatile memory (hardware)	128 kB
Memory expansion	microSD (max. 2 GB), microSDHC (max. 32 GB)
RTC (Real-Time Clock)	Maintenance-free, buffering: min. 6 weeks
Connection technology: communication/fieldbus	ETHERNET: 2 x RJ-45 socket; CAN: D-sub 9 plug; RS-232/-485: D-sub 9 socket
Transmission rate	ETHERNET: 10/100 Mbit/s; CAN: 1 Mbaud
Interfaces	2 x USB 2.0 socket, type A; 1 x USB OTG socket, type C; HDMI; Audio
Onboard I/Os	4 x DIO, configurable
Indicators	3-color LED – red, green, blue; 4 x red/green LED
Supply voltage	SELV 24 VDC (–25 ... +30 %), LPS; with reverse voltage protection
Input current (24 V)	120 mA; without USB load; 390 mA; with USB load
Operating power	2.9 W; without USB load; 9.4 W; with USB load
Dimensions (W x H x D)	65 × 123 × 115 mm
Weight	815 g
Housing material	Aluminum, powder-coated
Mounting type	DIN-35-rail mount
Surrounding air temperature (operation)	–20 ... +60 °C
Surrounding air temperature (storage)	–20 ... +80 °C
Protection type	IP20
Relative humidity (without condensation)	90 %
Approvals	CE
For data sheet and additional information, see:	wago.com/752-8303/8000-002

Edge Computer; 2 x ETHERNET, 4 x USB, HDMI, DP; 4 or 8 GB RAM, 64 GB Flash



- 2 x ETHERNET interface for connecting to field devices and IT networks
- 4 x USB interface for optional connection of a USB stick, mouse or keyboard
- HDMI and display port interfaces for connecting a display

4

Item Description	Edge Computer; 2 x ETHERNET, 4 x USB, HDMI, DP	
Version	4 GB RAM, 64 GB Flash	8 GB RAM, 64 GB Flash
Item No.	752-9400	752-9401
Order Text	EC; 2ETH, 4USB, HDMI, DP; 4GB RAM, 64GB Flash	EC; 2ETH, 4USB, HDMI, DP; 8GB RAM, 64GB Flash

Technical Data		
Display interfaces	1 x DisplayPort 1.2, 2560 x 1440p; 1 x HDMI v1.4, 1920 x 1080p @60Hz; Intel® HD Graphics	
Visualization	Web server	
ETHERNET protocols	DHCP; DNS; HTTP; HTTPS; SSH; SCP; SFTP	
Operating system	Debian Linux 10.5	
Processor	Intel® Atom Quad Core E3845 1.91 GHz	
Main memory (RAM)	4 GB; DDR3L 1333 MHz	8 GB; DDR3L 1333 MHz
Internal memory (flash)	64 GB; mSATA SSD	
Memory expansion	Full-size mPCIe slot; Drive mount for a 2.5" SSD HDD memory card (height: 9.5 mm)	
RTC (Real-Time Clock)	Battery type BR2032; 3 VDC	
Indicators	3 x LED	
Connection technology: communication/fieldbus	2 x RJ-45 1000BASE-T; 3 x USB 2.0 (Type A); 1 x USB 3.0 (Type A)	
Supply voltage	24 VDC (10 … 36 V)	
Operating power	30 W (typ.); 42 W (max.)	
Input current (24 V)	1250 mA (typ.); 1750 mA (max.)	
Dimensions (W x H x D)	40 x 150 x 105 mm	
Housing material	Aluminum, powder-coated	
Weight	809 g	
Surrounding air temperature (operation)	–20 … +60 °C	
Surrounding air temperature (storage)	–40 … +85 °C	
Protection type	IP40	
Relative humidity (without condensation)	95 %	
Mounting type	DIN-35-rail mount	
Approvals	E482462 Ordinary Locations, UL62368	
For data sheet and additional information, see:	wago.com/752-9400	wago.com/752-9401

Controllers

Touch Panels 600; Control Panel Hardware Configuration

◄◄ Section 3

Edge Controller

◄ Section 4

Controllers PFC100/PFC200

- Maximum performance in a minimum space
- Also programmable in high-level languages based on Linux®
- Security packages with SSH and SSL/TLS
- Runtime system for CODESYS V2 (only PFC200) and V3

Section 5.1 ►

Controllers PFC200 XTR

- The advantages of WAGO's PFC Controllers combined with the capabilities for extreme environments:
- High processing speed
- Multiple interfaces
- eXTRemely robust and maintenance-free

Section 5.2 ►►

Controllers 750

- Controllers for all common fieldbus systems
- Programmable per IEC 61131-3
- Readily combines with the modules of the WAGO I/O System 750

Section 5.3 ►►►

Controllers 750 XTR

- For demanding applications in which the following are critical:
- Extreme temperature resistance
- Immunity to electromagnetic interference and impulse voltages
- Vibration and shock resistance

Section 5.4 ►►►►

Starter Kits

To get you up and running quickly, we offer starter kits to suit the most diverse applications:

- with Controller PFC100 or PFC200
- with Controller 750 KNX IP
- with Touch Panel 600

Section 5.5 ►►►►►

Controllers
Overview

Benefits:

- Fieldbus-independent – compatible with all prominent fieldbus protocols and ETHERNET standards
- Scalable performance – Controllers, Control Panels, PFC100 and PFC200
- Programming per IEC 61131-3
- Flexible platform adapts to diverse applications and environments
- Combinable with the WAGO I/O System 750 – modular, compact, versatile

Controllers PFC100/PFC200

Touch Panels 600; Control Panel Hardware Configuration

◄◄ Section 3

Edge Controller

◄ Section 4

Controllers PFC100/PFC200

- Maximum performance in a minimum space
- Also programmable in high-level languages based on Linux®
- Security packages with SSH and SSL/TLS
- Runtime system for CODESYS V2 (only PFC200) and V3

Controllers PFC200 XTR

The advantages of WAGO's PFC Controllers combined with the capabilities for extreme environments:

- High processing speed
- Multiple interfaces
- eXTRemely robust and maintenance-free

Section 5.2 ►

Controllers 750

- Controllers for all common fieldbus systems
- Programmable per IEC 61131-3
- Readily combines with the modules of the WAGO I/O System 750

Section 5.3 ►►

Controllers 750 XTR

For demanding applications in which the following are critical:

- Extreme temperature resistance
- Immunity to electromagnetic interference and impulse voltages
- Vibration and shock resistance

Section 5.4 ►►►

Starter Kits

To get you up and running quickly, we offer starter kits to suit the most diverse applications:

- with Controller PFC100 or PFC200
- with Controller 750 KNX IP
- with Touch Panel 600

Section 5.5 ►►►►

Controllers PFC100/PFC200
Contents

	CPU	Modbus (TCP, UDP)	Ethernet/IPTM	EtherCAT	PROFINET	PROFIBUS	CANopen	BACnet/IP	Modbus RTU	Telecontrol Protocols	IoT Protocols	Description	Item No. Standard	Item No. Ext. Temperature	Page
	Cortex A8; 600 MHz	M/S	S								x	Controller PFC100; 2 x ETHERNET; Eco	750-8100		110
	Cortex A8; 600 MHz	M/S	S								x	Controller PFC100; 2 x ETHERNET	750-8101	750-8101/025-000	111
		M/S	S						x		x	Controller PFC100; 2 x ETHERNET, RS-232/-485	750-8102	750-8102/025-000	112
	Cortex A8; 1 GHz	M/S	S	M*				x*	x	x*	x	Controller PFC200; 2nd Generation; 4 x ETHERNET	750-8210	750-8210/025-000	113
	Cortex A8; 1 GHz	M/S	S	M*				x*	x	x*	x	Controller PFC200; 2nd Generation; 2 x ETHERNET, 2 x SFP Ports	750-8211		114
	Cortex A8; 1 GHz	M/S	S	M*				x*	x		x	Controller PFC200; 2nd Generation; 2 x ETHERNET, RS-232/-485	750-8212	750-8212/025-000	115
		M/S	S	M*				x*	x	x	x	Controller PFC200; 2nd Generation; 2 x ETHERNET, RS-232/-485; Telecontrol Technology		750-8212/025-001 750-8212/025-002	115
		M/S	S	M*				x	x		x	Controller PFC200; 2nd Generation; 2 x ETHERNET, RS-232/-485; BACnet/IP	750-8212/000-100		116
	Cortex A8; 1 GHz	M/S	S	M*			M/S	x*			x	Controller PFC200; 2nd Generation; 2 x ETHERNET, CAN, CANopen	750-8213		117
	Cortex A8; 1 GHz	M/S	S	M*			M/S		x		x	Controller PFC200; 2nd Generation; 2 x ETHERNET, RS-232/-485, CAN, CANopen	750-8214		118
	Cortex A8; 1 GHz	M/S	S	M*	S		M/S				x	Controller PFC200; 2nd Generation; 4 x ETHERNET, CAN, CANopen, USB	750-8215		119
	Cortex A8; 1 GHz	M/S	S	M*		S	M/S	x*	x		x	Controller PFC200; 2nd Generation; 2 x ETHERNET, RS-232/-485, CAN, CANopen, PROFIBUS Slave	750-8216	750-8216/025-000	120
		M/S	S	M*		S	M/S	x*	x	x	x	Controller PFC200; 2nd Generation; 2 x ETHERNET, RS-232/-485, CAN, CANopen, PROFIBUS Slave; Telecontrol Technology		750-8216/025-001	120
	Cortex A8; 1 GHz	M/S	S	M*				x*	x	x*	x	Controller PFC200; 2nd Generation; 2 x ETHERNET, RS-232/-485, Mobile Radio Module	750-8217	750-8217/025-000	121
	Cortex A8; 600 MHz	M/S	S			M			x		x	Controller PFC200; 2 x ETHERNET, RS-232/-485, CAN, CANopen, PROFIBUS Master	750-8208	750-8208/025-000	122
		M/S	S			M			x	x	x	Controller PFC200; 2 x ETHERNET, RS-232/-485, CAN, CANopen, PROFIBUS Master; Telecontrol Technology		750-8208/025-001	122

M: Master, S: Slave; *requires an additional license

Controllers PFC100/PFC200
General Product Information

PFC100/PFC200:
Maximum Performance in a Minimum Space

As a member of the WAGO control family, the PFC100/PFC200 Controllers with ***e!RUNTIME*** excel with high processing speed and multiple interfaces for parallel communication. All variants feature at least two ETHERNET ports and – depending on the model – additional interfaces. The CANopen, PROFIBUS DP, Modbus TCP/UPD/RTU, PROFINET, EtherNet/IP and EtherCAT protocols provide a flexible connection to fieldbus systems and external input/output devices. These fieldbus systems can be easily configured directly in WAGO's easy-to-use ***e!COCKPIT*** development environment.
The ETHERNET interfaces with an integrated switch also support all major IT protocols. In addition to multiple interfaces, the PFC100/PFC200 Controllers offer ample memory for your applications provided by the internal flash memory and an integrated interface for memory cards.

Industry 4.0 / IoT

Recording, digitizing and linking data profitably – these are the core ideas of Industry 4.0. Using a dedicated library, WAGO's PFC100/PFC200 Controllers become IoT controllers that send data from the field level to the cloud. Once in the cloud, data can be aggregated and used for analysis. This capability creates tremendous added value for your company – whether it's increasing the efficiency of in-house production, implementing energy management in buildings or developing additional end-customer services. Existing systems also become IoT-ready, making them future-proof. The WAGO PFC family of controllers thus forms the basis for a sustainable corporate world.

Telecontrol Technology

Standardized telecontrol protocols according to IEC 60870-5, IEC 61850, IEC 61400-25 or DNP3 ensure use of the PFC Controllers in telecontrol technology.

Starter Kits

For a quick start, WAGO offers every customer the unique opportunity to purchase a starter kit that already contains all the components needed to begin programming and getting to know the controllers. For starter kits, see Section 5.5.

Link between Process Data and IT Application

The PFC100/PFC200 Controllers ideally combine real-time requirements with IT functionality. They support both Modbus/TCP and EtherNet/IP for use in industrial environments. HTTP, SNTP, SNMP, FTP, BootP, DHCP, DNS, Telnet, SSH and other protocols simplify integration into IT environments. Integrated Web pages and Web-based visualization provide IT applications with real-time process data. Furthermore, the controllers incorporate library functions for email, SOAP, ASP, IP configuration, ETHERNET sockets and file system.

Security on Board

The topics of ETHERNET communication and security are closely linked. To provide PFC Controller users with a high level of security, mechanisms for secure connections such as VPN, integrated firewall, HTTPS, FTPS, SSH and SSL/TLS are standard.

Demand-Oriented Extensibility

Some controllers offer the option of activating functions that go beyond the standard via runtime licenses, making it possible to price as needed. This also offers the advantage that with the same exact controller, different functions can be realized and also combined, which otherwise would only be replicated via additional variants. The licenses are simply loaded into the controller together with the project. The additional licenses available for each controller are specified by the controller and described in detail in the "Software" section.

Worldwide Approvals

International approvals for building and industrial automation, as well as the process and marine industries, guarantee worldwide use – even under harsh operating conditions. These recognitions include: ATEX, BR-Ex, IECEx, UL508, UL ANSI/ISA, AEx and numerous marine certifications.

Modular and Expandable

With the WAGO I/O System 750, the PFC100/PFC200 Controllers can be expanded to almost any input/output interface. A modular, DIN-rail-mount design permits easy installation, expansion and modification of the I/O node without tools. The straightforward design prevents installation errors. Additionally, proven CAGE CLAMP® technology ensures that all connections made in the field are quick, vibration-proof and maintenance-free. Depending on the I/O modules' granularity, the field level can be directly wired using 1-, 2-, 3- or 4-conductor technology.

Maximum Reliability and Ruggedness

The PFC100/PFC200 Controllers are engineered and tested for use in the most demanding environments (e.g., temperature cycling, shock/vibration loading and ESD) according to the highest standards. Spring pressure connection technology guarantees continuous operation. Integrated QA measures in the production process and 100% function testing ensure consistent quality.

Open-Source Software and Linux®

We unite what belongs together: High-performance WAGO Hardware and the future-proof Linux® Operating System. For complex tasks, you can choose between programming in IEC 61131 or directly under Linux®. WAGO's "Embedded Linux" Controllers impress with base images that are expandable via open-source packages. As a "Gold Member" of the Open Source Automation Development Lab (OSADL), WAGO supports both financing and further development of Linux® in the industrial sector. The controller firmware itself is available as a "Board Support Package" (BSP). If you are interested, simply contact our AUTOMATION technical support.

Benefits:

- Programming per IEC 61131-3
- Applications with higher-level languages
- Linux® real-time operating system
- Rugged and maintenance-free
- Integrated cybersecurity packages
- IoT ready

Controllers PFC100/PFC200
Variants

Extended Temperature Range

Industrial automation technology is typically operated in temperatures ranging from 0°C to 55°C. However, there are applications like telecontrol technology that require an extended temperature range. Select controllers are available in an extended temperature range of –20°C to +60°C.

Eco

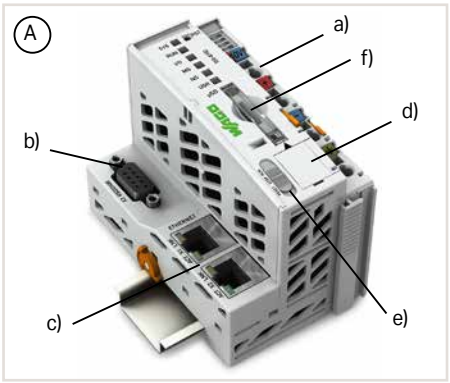
The Eco version of the PFC200 limits the number of I/O modules to four.

Telecontrol Technology

The PFC200 models for telecontrol technology integrate the following standardized telecontrol protocols:

- IEC 60870-5
- IEC 61850
- IEC 61400-25
- DNP3

Interfaces and Types



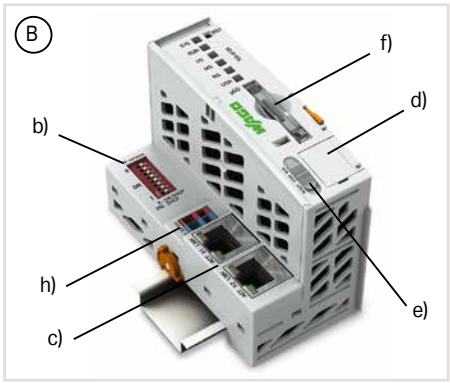
- Includes a supply module (a) to power downstream I/O modules; Connection technology (system/field supply): CAGE CLAMP®; Conductor range: 0.08 … 2.5 mm²/28 … 14 AWG
- Technical differences on the connection level (b)
- ETHERNET 2 x RJ-45 (c)
- Service interface (d)
- Start/stop switch (e)

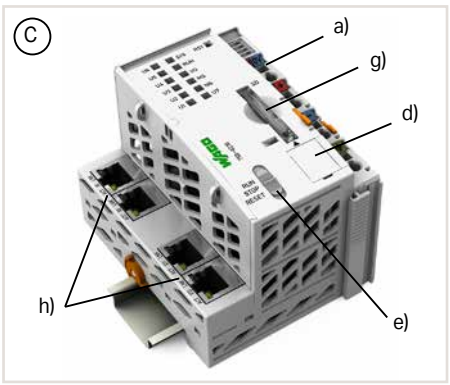
Housing Design PFC100 (A, B)

- microSD card slot for external storage media (f)

Housing Design PFC200 (C, D, E, F, G, H)

- SD card slot for external storage media (g)



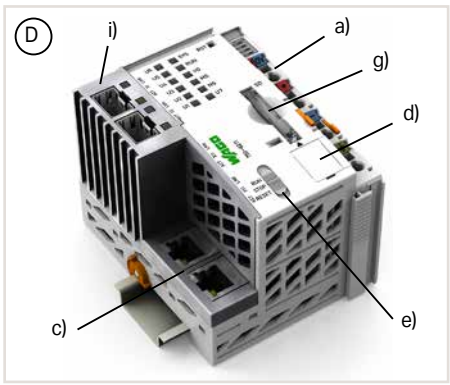


Housing Design (A)

- W x H x D (mm): 61.5 x 100 x 71.9

Housing Design (B)

- W x H x D (mm): 49.5 x 96.8 x 71.9
- Supply system connection technology (h): CAGE CLAMP®; Conductor range: 0.08 … 1.5 mm²/28 … 16 AWG

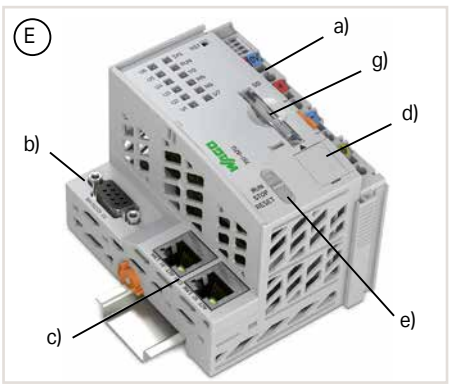


Housing Design (C)

- ETHERNET 4 x RJ-45 (h)
- W x H x D (mm): 78.6 x 100 x 71.9

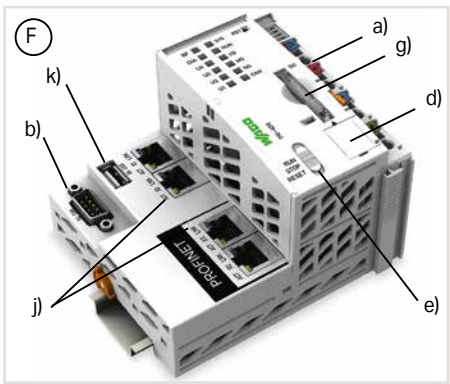
Housing Design (D)

- 2 x SFP port; 100BASE-FX, LC, fiber optic (SFP type) (i)
- W x H x D (mm): 78.6 x 100 x 71.9



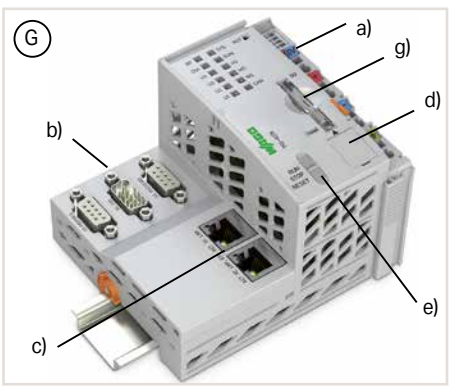
Housing Design (E)

- W x H x D (mm): 78.6 x 100 x 71.9



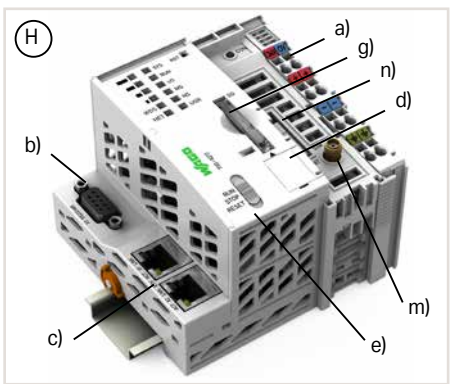
Housing Design (F)

- ETHERNET 4 x RJ-45 (j)
- USB interface (k)
- W x H x D (mm): 112 x 100 x 71.9



Housing Design (G)

- W x H x D (mm): 112 x 100 x 71.9



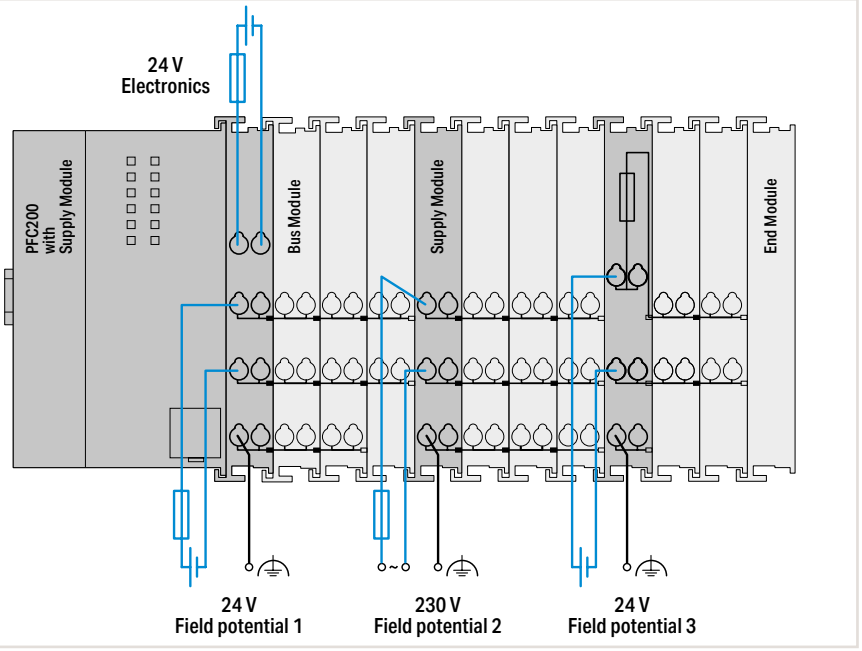
Housing Design (H)

- GSM antenna connection (m)
- SIM card slot (n)
- W x H x D (mm): 102.5 x 100 x 71.9

Controllers PFC100/PFC200
Installation Instructions

Power Supply

The controller powers the internal electronics. The power supply to the field-side supply is electrically isolated. This division enables a separate supply for sensors and actuators. Snapping the I/O modules together automatically routes the supply voltages. Supply modules with diagnostics also enable power supply monitoring. This ensures a flexible and customized supply configuration for a fieldbus node. Power supply to the electronics is limited by a maximum value. If the sum of the internal current demand of all the I/O modules should exceed this value, an additional system supply module is necessary. Furthermore, the current consumed for field-side supply must not exceed 10 A. A variety of power supply modules allows re-feeding, creating potential groups and implementing emergency stops.



Notes

Additional steps must be implemented based on where the I/O system is installed:

Specific power and field-side power supply filters (750-624 or 750-626) are required for marine and onshore/offshore applications.
A specific supply module (750-606) is required to operate intrinsically safe Ex i modules.

Additionally, both a supply module and a field-side power supply filter are recommended when operating intrinsically safe Ex i modules for marine and onshore/offshore applications.
When operating safety-related I/O modules, PELV/SELV power supply units must be used for 24 VDC supply of electronics and field. Furthermore, specific power and field-side power supply filters (750-626) must be provided.

Please refer to the manual for details about the power supply's design.

5.1

Item Number Key

Explanation of an item number key's components

Item No.: 750-81xx = PFC100

00:	2 x ETHERNET, Eco
01:	2 x ETHERNET
02:	2 x ETHERNET, RS-232/-485

Item No.: 750-82xy = PFC200

0y:	Generation 1
1y:	Generation 2
x0:	4 x ETHERNET
x1:	2 x ETHERNET, 2 x SFP Port
x2:	2 x ETHERNET, RS-232/-485
x3:	2 x ETHERNET, CAN
x4:	2 x ETHERNET, RS-232/-485, CAN
x5:	4 x ETHERNET, CAN, CANopen, USB
x6:	2 x ETHERNET, RS-232/-485, CAN, PROFIBUS DP Slave
x7:	2 x ETHERNET, RS-232/-485, Mobile Radio Module
x8:	2 x ETHERNET, RS-232/-485, CAN, CANopen, PROFIBUS Master

.../025-yyy: Extended Temperature Range (–20 ... +60 °C)

000: Standard
001: Telecontrol Technology
002: Telecontrol Eco

Standards and Rated Conditions

General Specifications	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Surrounding air temperature (storage)	-25 … 85 °C
Relative humidity (without condensation)	95 %
Operating altitude	Without temperature derating: 0 … 2000 m; with temperature derating: 2000 … 5000 m (0.5 K/100 m); 5000 m (max.)
Pollution degree (5)	2 per IEC 61131-2
Vibration resistance	4g per IEC 60068-2-6
Shock resistance	15g per IEC 60068-2-27
EMC immunity to interference	Per EN 61000-6-2, marine applications
EMC emission of interference	Per EN 61000-6-3, marine applications
Protection type	IP20
Mounting position	Any
Mounting type	DIN-35 rail
Housing material	Polycarbonate; polyamide 6.6
Exposure to pollutants	Per IEC 60068-2-42 and IEC 60068-2-43
Permissible SO_2 contaminant concentration at a relative humidity 75 %	25 ppm
Permissible H_2S contaminant concentration at a relative humidity 75 %	10 ppm
Connection technology: system supply	2 x CAGE CLAMP®
Solid conductor	0.08 … 1.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 1.5 mm² / 28 … 14 AWG
Strip length	5 … 6 mm / 0.2 … 0.24 inch

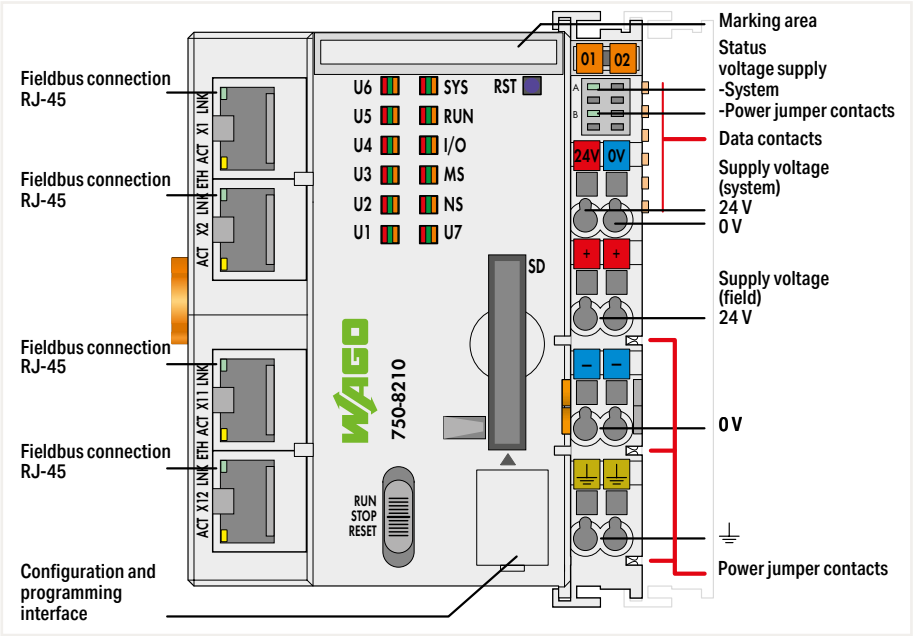
Approvals

Overview of the approvals in the item comparison in Section 14, Technical Section, or online at www.wago.com

Cables and pluggable connectors	Page 671
DIN-rail	Page 706
General accessories	Page 614
Marking	Page 704
Shield termination	Page 698
Software	Page 12
System enclosure	Page 683

Controller PFC100 ▶ 2 x ETHERNET; ECO

750-8100



Version	Default
Item No.	**750-8100**
Order Text	**PFC100; 2ETH; ECO**

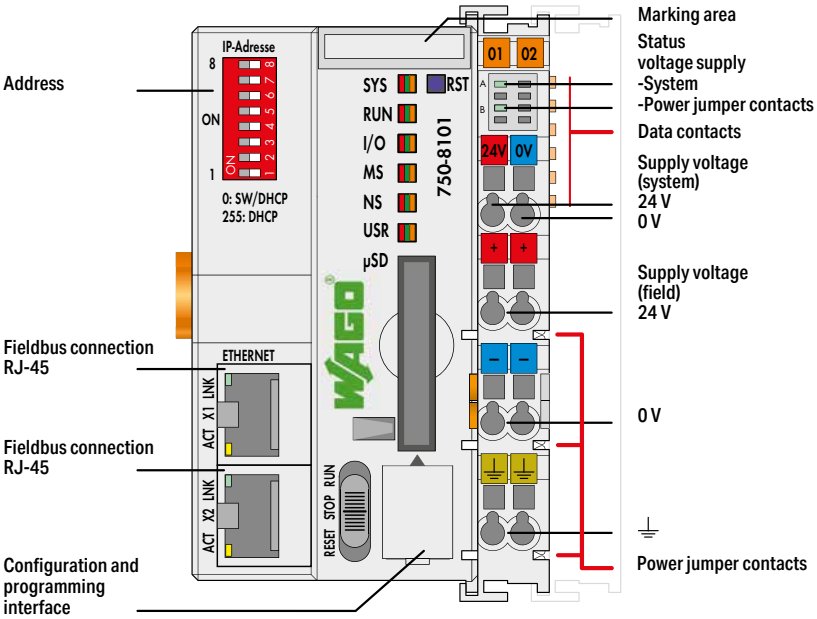
Technical Data	
Communication	Modbus (TCP, UDP); ETHERNET; EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; MQTT
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH
Visualization	Web Visu
Programming environment	***e!****COCKPIT* (based on CODESYS V3)
CPU	Cortex A8; 600 MHz
Operating system	Real-time Linux 3.18 (with RT-Preempt patch)
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	256 MB / 256 MB / 64 KB
Program memory/data memory/non-volatile memory (software)	***e!****RUNTIME*: 10 MB / 10 MB / 64 KB (Program and data memory (dynamically distributed))
Number of modules per node (max.)	250
Input and output (internal) process image (max.)	1000 words/1000 words
Input and output (MODBUS) process image (max.)	***e!****RUNTIME*: 32000 words/32000 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector
Input current (typ.) at nominal load (24 V)	300 mA
Total current (system supply)	700 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-8100

Accessories	**Item No.**
Memory Card SD Micro; 2 GByte	758-879/000-3102
Memory Card SD Micro; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-3108

5.1

Controller PFC100 ▶ 2 x ETHERNET

750-8101



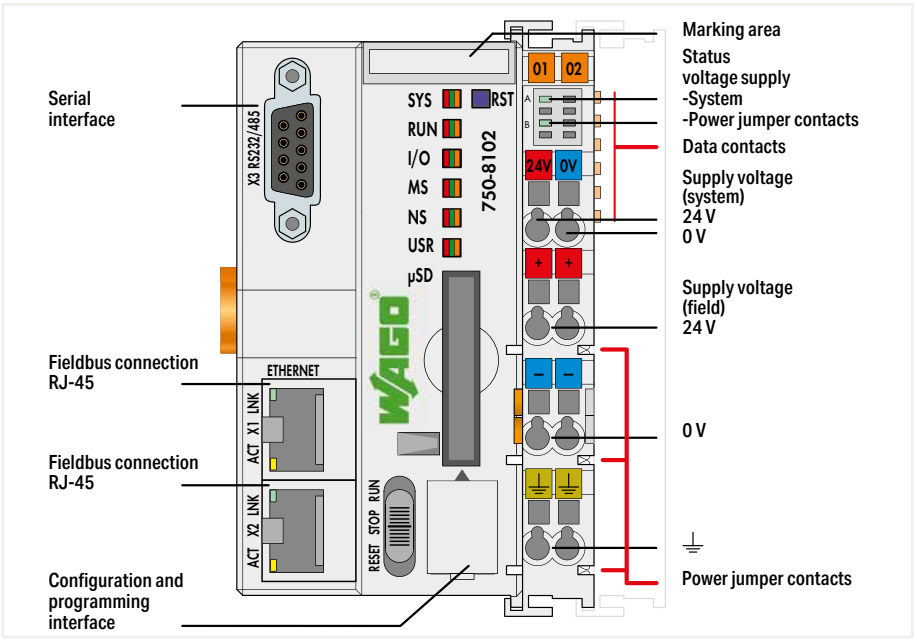
Version	Default	Ext. Temperature
Item No.	**750-8101**	**750-8101/025-000**
Order Text	**PFC100; 2ETH**	**PFC100; 2ETH; T**

Technical Data		
Communication	Modbus (TCP, UDP); ETHERNET; EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; MQTT	
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH	
Visualization	Web Visu	
Programming environment	***e!****COCKPIT* (based on CODESYS V3)	
CPU	Cortex A8; 600 MHz	
Operating system	Real-time Linux 3.18 (with RT-Preempt patch)	
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	256 MB / 256 MB / 64 KB	
Program memory/data memory/non-volatile memory (software)	***e!****RUNTIME*: 12 MB / 12 MB / 64 KB (Program and data memory (dynamically distributed))	
Number of modules per node (max.)	250	
Input and output (internal) process image (max.)	1000 words/1000 words	
Input and output (MODBUS) process image (max.)	***e!****RUNTIME*: 32000 words/32000 words	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	550 mA	
Total current (system supply)	1700 mA	
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C
Dimensions W x H x D	(61.5 x 100 x 71.9) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-8101	

Accessories	Item No.	Item No.
Memory Card SD Micro; 2 GByte	758-879/000-3102	758-879/000-3102
Memory Card SD Micro; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-3108	758-879/000-3108

Controller PFC100 ▶ 2 x ETHERNET, RS-232/-485

750-8102



Version	Default	Ext. Temperature
Item No.	**750-8102**	**750-8102/025-000**
Order Text	**PFC100; 2ETH RS**	**PFC100; 2ETH RS; T**

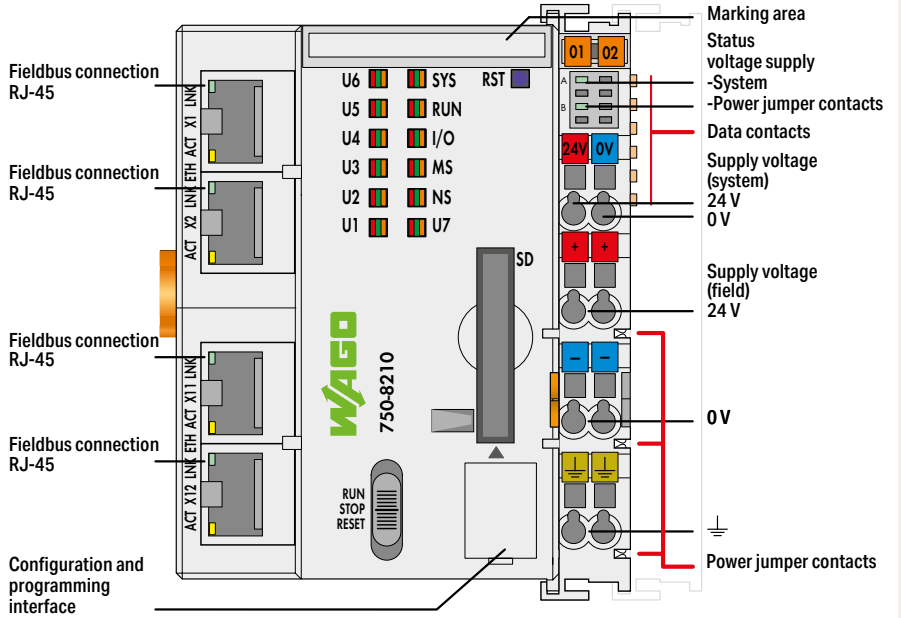
Technical Data		
Communication	Modbus (TCP, UDP); ETHERNET; EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; Modbus® RTU; RS-232 serial interface; RS-485 serial interface; MQTT	
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH	
Visualization	Web Visu	
Programming environment	***e!****COCKPIT* (based on CODESYS V3)	
CPU	Cortex A8; 600 MHz	
Operating system	Real-time Linux 3.18 (with RT-Preempt patch)	
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	256 MB / 256 MB / 128 KB	
Program memory/data memory/non-volatile memory (software)	***e!****RUNTIME*: 12 MB / 12 MB / 128 KB (Program and data memory (dynamically distributed))	
Number of modules per node (max.)	250	
Input and output (internal) process image (max.)	1000 words/1000 words	
Input and output (MODBUS) process image (max.)	***e!****RUNTIME*: 32000 words/32000 words	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	550 mA	
Total current (system supply)	1700 mA	
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C
Dimensions W x H x D	(61.5 x 100 x 71.9) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-8102	

Accessories	Item No.	Item No.
Memory Card SD Micro; 2 GByte	758-879/000-3102	758-879/000-3102
Memory Card SD Micro; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-3108	758-879/000-3108

5.1

Controller PFC200 ▸ 4 x ETHERNET

750-8210



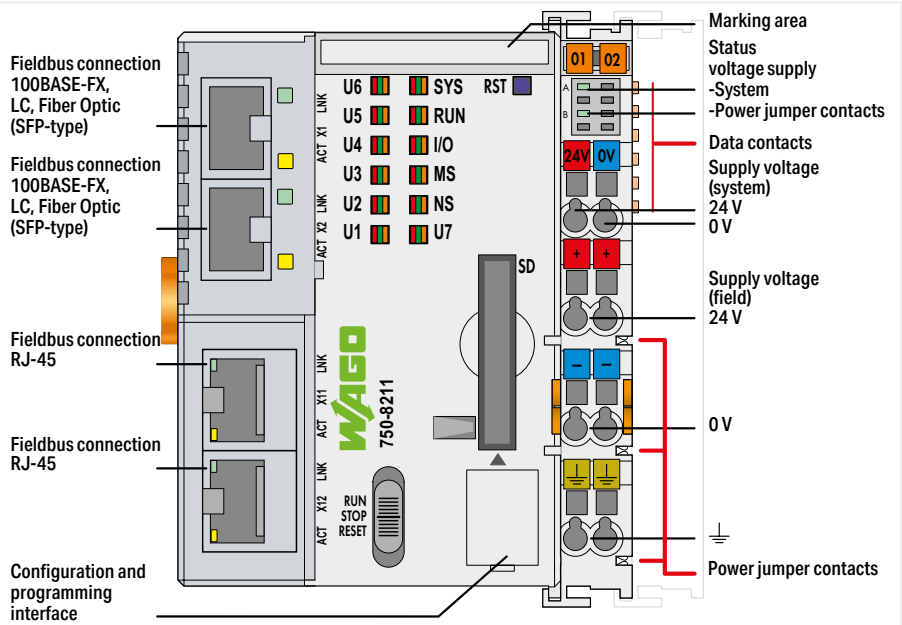
Version	Default	Ext. Temperature
Item No.	**750-8210**	**750-8210/025-000**
Order Text	**PFC200; G2; 4ETH**	**PFC200; G2; 4ETH; T**

Technical Data		
Communication	Modbus (TCP, UDP); ETHERNET; EtherNet/IP™ Adapter (slave), library for ***e!RUNTIME***; Modbus® RTU; MQTT; EtherCAT Master, **requires an additional license**; BACnet/IP, **requires an additional license**; Telecontrol protocols (requires an additional license on the device)	
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH	
Telecontrol protocols	IEC 60870-5-101/-103/-104 (additional license as slave or master); IEC-61850 (additional license as Client 300); DNP3 (additional license as Slave or Master 300)	
Visualization	Web Visu	
Programming environment	***e!COCKPIT*** (based on CODESYS V3); WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)	
CPU	Cortex A8; 1 GHz	
Operating system	Real-time Linux (with RT-Preempt patch)	
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB	
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB; ***e!RUNTIME***: 32 MB / 128 MB / 128 KB	
Number of modules per node (max.)	250	
Input and output (internal) process image (max.)	1000 words/1000 words	
Input and output (MODBUS) process image (max.)	CODESYS V2: 1000 words/1000 words; ***e!RUNTIME***: 32000 words/32000 words	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	550 mA	
Total current (system supply)	1700 mA	
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C
Dimensions W x H x D	(78.6 x 100 x 71.9) mm	
Approvals	CE; Marine; OrdLoc	
Data sheet and further information, see:	wago.com/750-8210	

Accessories	**Item No.**	**Item No.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001	758-879/000-001
e!RUNTIME; BACnet; 300; Single License; Online activation	2759-283/211-1000	2759-283/211-1000
e!RUNTIME; EtherCAT Master; 300; Single License; Online activation	2759-263/211-1000	2759-263/211-1000
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108	758-879/000-2108
e!RUNTIME; DNP3 Master; 300; Single License; Online activation	2759-2293/211-1000	2759-2293/211-1000
e!RUNTIME; IEC60870 Slave; Single License; Online activation	2759-290/211-1000	2759-290/211-1000
e!RUNTIME; DNP3 Slave; Single License; Online activation	2759-2290/211-1000	2759-2290/211-1000
e!RUNTIME; IEC60870 Master; 300; Single License; Online activation	2759-293/211-1000	2759-293/211-1000
e!RUNTIME; IEC61850 Client; 300; Single License; Online activation	2759-2243/211-1000	2759-2243/211-1000

Controller PFC200 ▶ 2 x ETHERNET, 2 x SFP Ports

750-8211



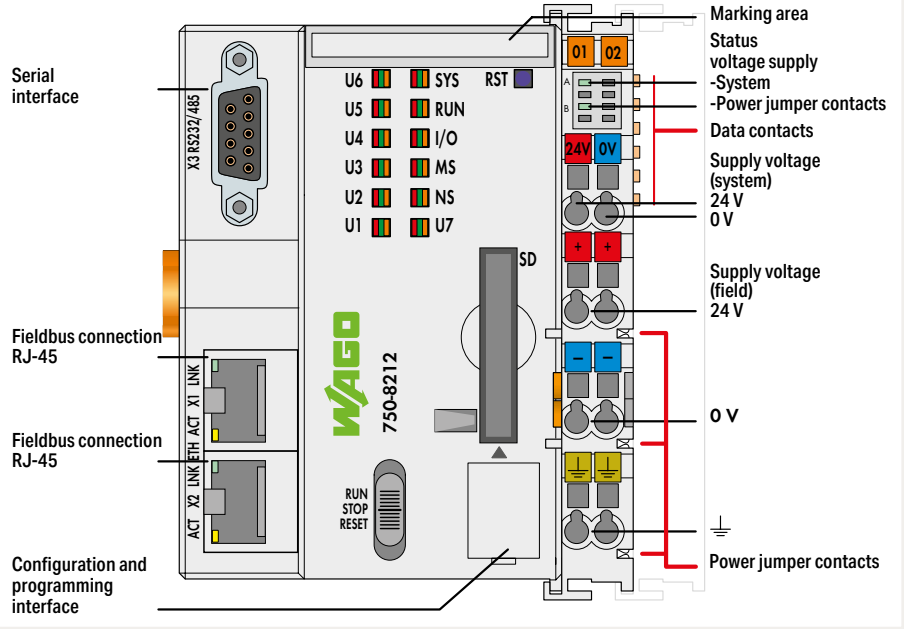
Version	**Default**
Item No.	**750-8211**
Order Text	**PFC200; G2; 2ETH 2SFP**

Technical Data	
Communication	Modbus (TCP, UDP); ETHERNET; EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; Modbus® RTU; MQTT; EtherCAT Master, **requires an additional license**; BACnet/IP, **requires an additional license**; Telecontrol protocols (requires an additional license on the device)
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH
Telecontrol protocols	IEC 60870-5-101/-103/-104 (additional license as slave or master); IEC-61850 (additional license as Client 300); DNP3 (additional license as Slave or Master 300)
Visualization	Web Visu
Programming environment	***e!****COCKPIT* (based on CODESYS V3); WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
CPU	Cortex A8; 1 GHz
Operating system	Real-time Linux (with RT-Preempt patch)
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB; ***e!****RUNTIME*: 32 MB / 128 MB / 128 KB
Number of modules per node (max.)	250
Input and output (internal) process image (max.)	1000 words/1000 words
Input and output (MODBUS) process image (max.)	CODESYS V2: 1000 words/1000 words; ***e!****RUNTIME*: 32000 words/32000 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	550 mA
Total current (system supply)	1700 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(78.6 x 100 x 71.9) mm
Approvals	CE; Marine; OrdLoc
Data sheet and further information, see:	wago.com/750-8211

Accessories	**Item No.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001
SFP Module 100BASE; FX Multi-Mode 1310 nm LC; 2 km; DDM; Extreme	852-202
e!RUNTIME; BACnet; 300; Single License; Online activation	2759-283/211-1000
e!RUNTIME; EtherCAT Master; 300; Single License; Online activation	2759-263/211-1000
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108
e!RUNTIME; DNP3 Master; 300; Single License; Online activation	2759-2293/211-1000
e!RUNTIME; IEC60870 Slave; Single License; Online activation	2759-290/211-1000
e!RUNTIME; DNP3 Slave; Single License; Online activation	2759-2290/211-1000
e!RUNTIME; IEC60870 Master; 300; Single License; Online activation	2759-293/211-1000
e!RUNTIME; IEC61850 Client; 300; Single License; Online activation	2759-2243/211-1000

Controller PFC200 ▸ 2 x ETHERNET, RS-232/-485

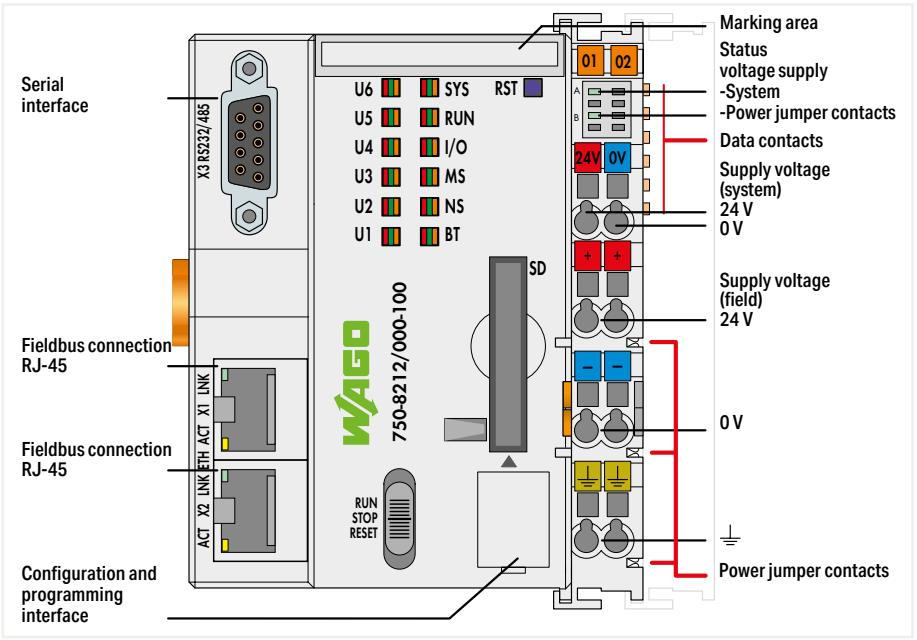
750-8212



Version	Default	Ext. Temperature	Telecontrol technology; Ext. Temperature	Telecontrol technology; Ext. Temperature; ECO
Item No.	**750-8212**	**750-8212/025-000**	**750-8212/025-001**	**750-8212/025-002**
Order Text	**PFC200; G2; 2ETH RS**	**PFC200; G2; 2ETH RS; T**	**PFC200; G2; 2ETH RS; Tele; T**	**PFC200; G2; 2ETH RS; Tele; T; ECO**
Technical Data				
Communication	Modbus (TCP, UDP); ETHERNET; EtherNet/IP™ Adapter (slave), library for ***e!RUNTIME***; Modbus® RTU; RS-232 serial interface; RS-485 serial interface; MQTT; EtherCAT Master, **requires an additional license**; BACnet/IP, **requires an additional license**		Modbus (TCP, UDP); ETHERNET; EtherNet/IP™ Adapter (slave), library for ***e!RUNTIME***; Modbus® RTU; RS-232 serial interface; RS-485 serial interface; MQTT; EtherCAT Master, **requires an additional license**; BACnet/IP, **requires an additional license**; Telecontrol protocols	
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH			
Telecontrol protocols			IEC 60870-5-101/-103/-104; IEC 61400-25; IEC 61850-7; DNP3	
Visualization	Web Visu			
Programming environment	***e!COCKPIT*** (based on CODESYS V3); WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)			
CPU	Cortex A8; 1 GHz			
Operating system	Real-time Linux (with RT-Preempt patch)			
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB			
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB; ***e!RUNTIME***: 32 MB / 128 MB / 128 KB			
Number of modules per node (max.)	250			4
Input and output (internal) process image (max.)	1000 words/1000 words			
Input and output (MODBUS) process image (max.)	CODESYS V2: 1000 words/1000 words; ***e!RUNTIME***: 32000 words/32000 words			
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)			
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts			
Input current (typ.) at nominal load (24 V)	550 mA			
Total current (system supply)	1700 mA			
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C		
Dimensions W x H x D	(78.6 x 100 x 71.9) mm			
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx			
Data sheet and further information, see:	wago.com/750-8212			
Accessories	**Item No.**	**Item No.**	**Item No.**	**Item No.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001	758-879/000-001	758-879/000-001	758-879/000-001
e!RUNTIME; BACnet; 300; Single License; Online activation	2759-283/211-1000	2759-283/211-1000	2759-283/211-1000	2759-283/211-1000
e!RUNTIME; EtherCAT Master; 300; Single License; Online activation	2759-263/211-1000	2759-263/211-1000	2759-263/211-1000	2759-263/211-1000
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108	758-879/000-2108	758-879/000-2108	758-879/000-2108

Controller PFC200 ▶ 2 x ETHERNET, RS-232/-485, BACnet/IP

750-8212/000-100



Version	BACnet/IP
Item No.	**750-8212/000-100**
Order Text	**PFC200; G2; 2ETH RS; BACnet/IP**

Technical Data	
Communication	BACnet/IP; Modbus (TCP, UDP); ETHERNET; EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; Modbus® RTU; RS-232 serial interface; RS-485 serial interface; MQTT; EtherCAT Master, **requires an additional license**
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH
Device-specific	BACnet/IP protocol: ISO 16484-5; BACnet device profile: B-BC (BACnet Building Controller); BACnet revision: 14
Visualization	Web Visu
Programming environment	***e!****COCKPIT* (based on CODESYS V3)
CPU	Cortex A8; 1 GHz
Operating system	Real-time Linux (with RT-Preempt patch)
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB
Program memory/data memory/non-volatile memory (software)	***e!****RUNTIME*: 32 MB / 128 MB / 128 KB
Number of modules per node (max.)	250
Input and output (internal) process image (max.)	1000 words/1000 words
Input and output (MODBUS) process image (max.)	***e!****RUNTIME*: 32000 words/32000 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	550 mA
Total current (system supply)	1700 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(78.6 x 100 x 71.9) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
Approvals (pending)	BACnet approvals: WSPCert certification; BTL listing
Data sheet and further information, see:	wago.com/750-8212/000-100

Accessories	**Item No.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001
e!RUNTIME; EtherCAT Master; 300; Single License; Online activation	2759-263/211-1000
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108

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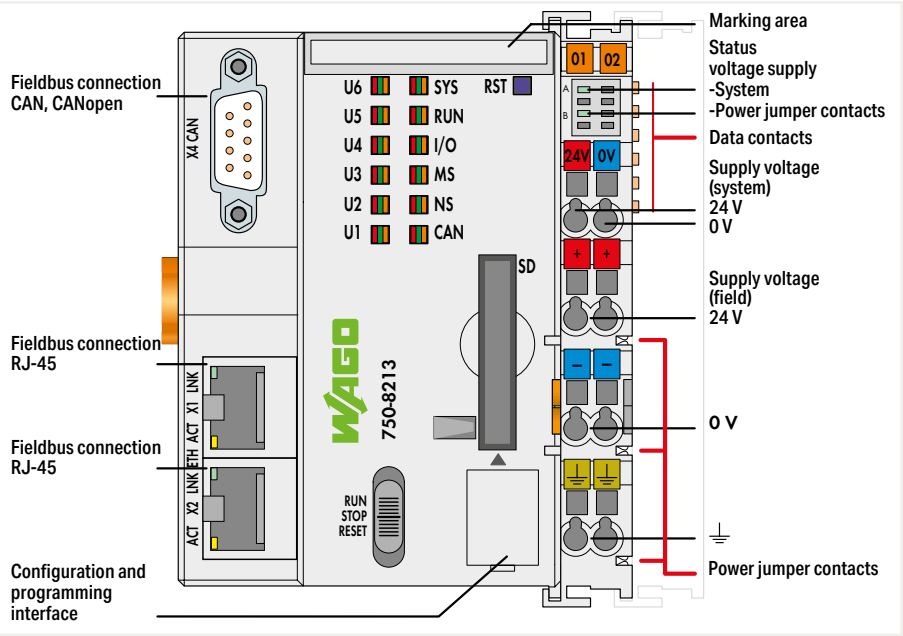
Controller PFC200 ▶ 2 x ETHERNET, CAN, CANopen

750-8213



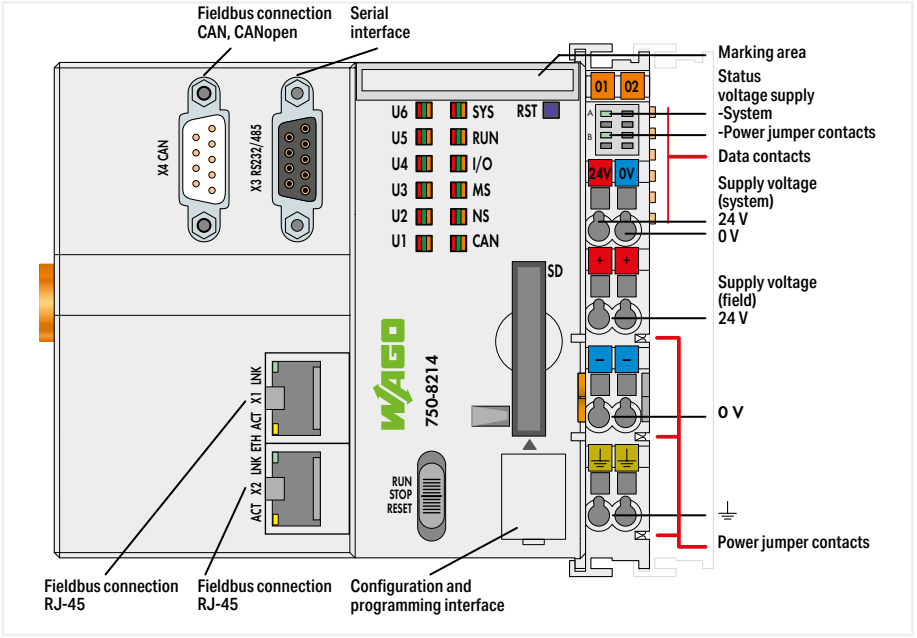
Version	**Default**
Item No.	**750-8213**
Order Text	**PFC200; G2; 2ETH CAN**

Technical Data	
Communication	CANopen; Modbus (TCP, UDP); ETHERNET; EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; MQTT; EtherCAT Master, **requires an additional license**; BACnet/IP, **requires an additional license**
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH
Visualization	Web Visu
Programming environment	***e!****COCKPIT* (based on CODESYS V3); WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
CPU	Cortex A8; 1 GHz
Operating system	Real-time Linux (with RT-Preempt patch)
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB; ***e!****RUNTIME*: 32 MB / 128 MB / 128 KB
Number of modules per node (max.)	250
Input and output (internal) process image (max.)	1000 words/1000 words
Input and output (MODBUS) process image (max.)	CODESYS V2: 1000 words/1000 words; ***e!****RUNTIME*: 32000 words/32000 words
Input and output (CAN) process image (max.)	2000 words/2000 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	550 mA
Total current (system supply)	1700 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(78.6 x 100 x 71.9) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-8213

Accessories	**Item No.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001
e!RUNTIME; BACnet; 300; Single License; Online activation	2759-283/211-1000
e!RUNTIME; EtherCAT Master; 300; Single License; Online activation	2759-263/211-1000
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108

Controller PFC200 ▶ 2 x ETHERNET, RS-232/-485, CAN, CANopen

750-8214



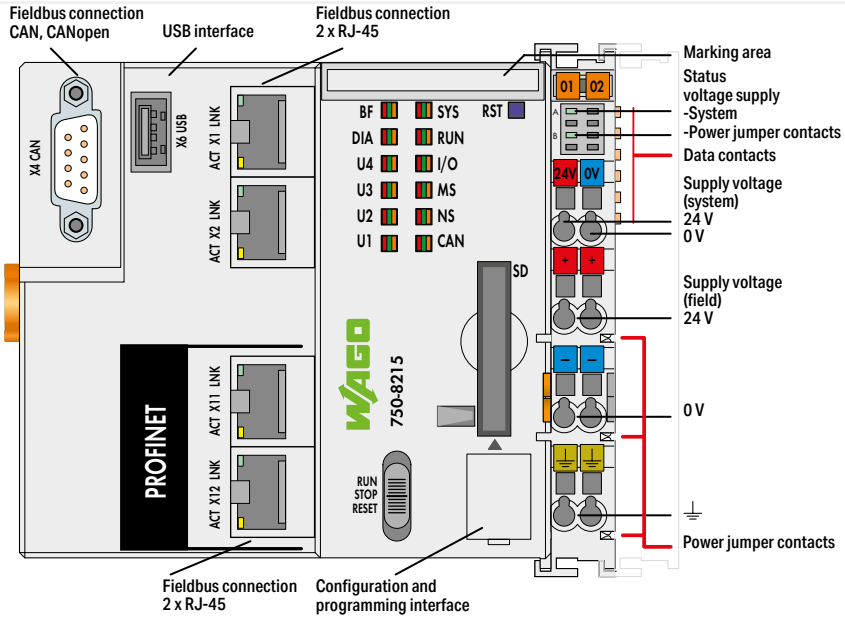
Version	**Default**
Item No.	**750-8214**
Order Text	**PFC200; G2; 2ETH RS CAN**

Technical Data	
Communication	CANopen; Modbus (TCP, UDP); ETHERNET; EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; Modbus® RTU; RS-232 serial interface; RS-485 serial interface; MQTT; EtherCAT Master, **requires an additional license**
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH
Visualization	Web Visu
Programming environment	***e!****COCKPIT* (based on CODESYS V3); WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
CPU	Cortex A8; 1 GHz
Operating system	Real-time Linux (with RT-Preempt patch)
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB; ***e!****RUNTIME*: 32 MB / 128 MB / 128 KB
Number of modules per node (max.)	250
Input and output (internal) process image (max.)	1000 words/1000 words
Input and output (MODBUS) process image (max.)	CODESYS V2: 1000 words/1000 words; ***e!****RUNTIME*: 32000 words/32000 words
Input and output (CAN) process image (max.)	2000 words/2000 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	550 mA
Total current (system supply)	1700 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(112 x 100 x 71.9) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-8214

Accessories	**Item No.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001
e!RUNTIME; EtherCAT Master; 300; Single License; Online activation	2759-263/211-1000
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108

Controller PFC200 ▶ 4 x ETHERNET, CAN, CANopen, USB

750-8215



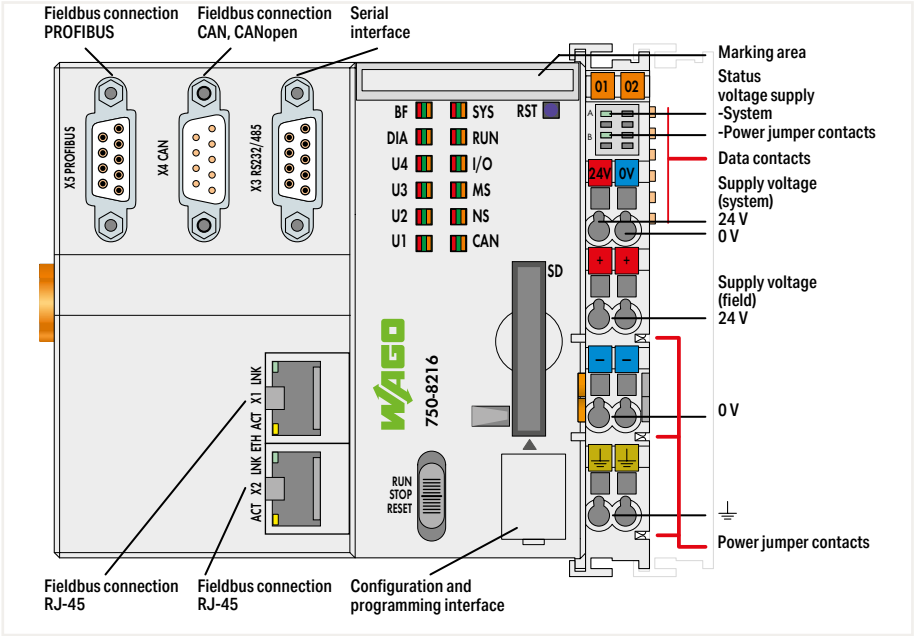
Version	**Default**
Item No.	**750-8215**
Order Text	**PFC200; G2; 4ETH CAN USB**

Technical Data	
Communication	PROFINET RT; Modbus (TCP, UDP); ETHERNET; CANopen; EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; MQTT; EtherCAT Master, **requires an additional license**
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH
Device-specific	PROFINET IO features: PROFINET IO V2.3; Media redundancy (MRP); Shared device
Visualization	Web Visu
Programming environment	***e!****COCKPIT* (based on CODESYS V3)
CPU	Cortex A8; 1 GHz
Operating system	Real-time Linux (with RT-Preempt patch)
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB
Program memory/data memory/non-volatile memory (software)	***e!****RUNTIME*: 32 MB / 128 MB / 128 KB
Number of modules per node (max.)	250
Input and output (internal) process image (max.)	1000 words/1000 words
Input and output (MODBUS) process image (max.)	***e!****RUNTIME*: 32000 words/32000 words
Input and output (CAN) process image (max.)	2000 words/2000 words
Input and output process image (PROFINET) (max.)	1024 Byte/1024 Byte
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	550 mA
Total current (system supply)	1700 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(112 x 100 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-8215

Accessories	**Item No.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001
e!RUNTIME; EtherCAT Master; 300; Single License; Online activation	2759-263/211-1000
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108

Controller PFC200 ▶ 2 x ETHERNET, RS-232/-485, CAN, CANopen, PROFIBUS Slave

750-8216



Version	Default	Ext. Temperature	Telecontrol technology; Ext. Temperature
Item No.	750-8216	750-8216/025-000	750-8216/025-001
Order Text	PFC200; G2; 2ETH RS CAN DPS	PFC200; G2; 2ETH RS CAN DPS; T	PFC200; G2; 2ETH RS CAN DPS; Tele; T
Technical Data			
Communication	PROFIBUS; Modbus (TCP, UDP); ETHERNET; CANopen; EtherNet/IP™ Adapter (slave), library for ***e!RUNTIME***; Modbus® RTU; RS-232 serial interface; RS-485 serial interface; MQTT; EtherCAT Master, **requires an additional license**; BACnet/IP, **requires an additional license**		PROFIBUS; Modbus (TCP, UDP); ETHERNET; CANopen; EtherNet/IP™ Adapter (slave), library for ***e!RUNTIME***; Modbus® RTU; RS-232 serial interface; RS-485 serial interface; MQTT; EtherCAT Master, **requires an additional license**; BACnet/IP, **requires an additional license**; Telecontrol protocols
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH		
Telecontrol protocols			IEC 60870-5-101/-103/-104; IEC 61400-25; IEC 61850-7; DNP3
Visualization	Web Visu		
Programming environment	***e!COCKPIT*** (based on CODESYS V3); WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)		
CPU	Cortex A8; 1 GHz		
Operating system	Real-time Linux (with RT-Preempt patch)		
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB		
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB; ***e!RUNTIME***: 32 MB / 128 MB / 128 KB		CODESYS V2: 16 MB / 64 MB / 128 KB
Number of modules per node (max.)	250		
Input and output (internal) process image (max.)	1000 words/1000 words		
Input and output (MODBUS) process image (max.)	CODESYS V2: 1000 words/1000 words; ***e!RUNTIME***: 32000 words/32000 words		
Input and output (PROFIBUS)process image (max.)	244 bytes/244 bytes		
Input and output (CAN) process image (max.)	2000 words/2000 words		
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts		
Input current (typ.) at nominal load (24 V)	550 mA		
Total current (system supply)	1700 mA		
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C	
Dimensions W x H x D	(112 x 100 x 71.9) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
Data sheet and further information, see:	wago.com/750-8216		
Accessories	**Item No.**	**Item No.**	**Item No.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001	758-879/000-001	758-879/000-001
e!RUNTIME; BACnet; 300; Single License; Online activation	2759-283/211-1000	2759-283/211-1000	2759-283/211-1000
e!RUNTIME; EtherCAT Master; 300; Single License; Online activation	2759-263/211-1000	2759-263/211-1000	2759-263/211-1000
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108	758-879/000-2108	758-879/000-2108

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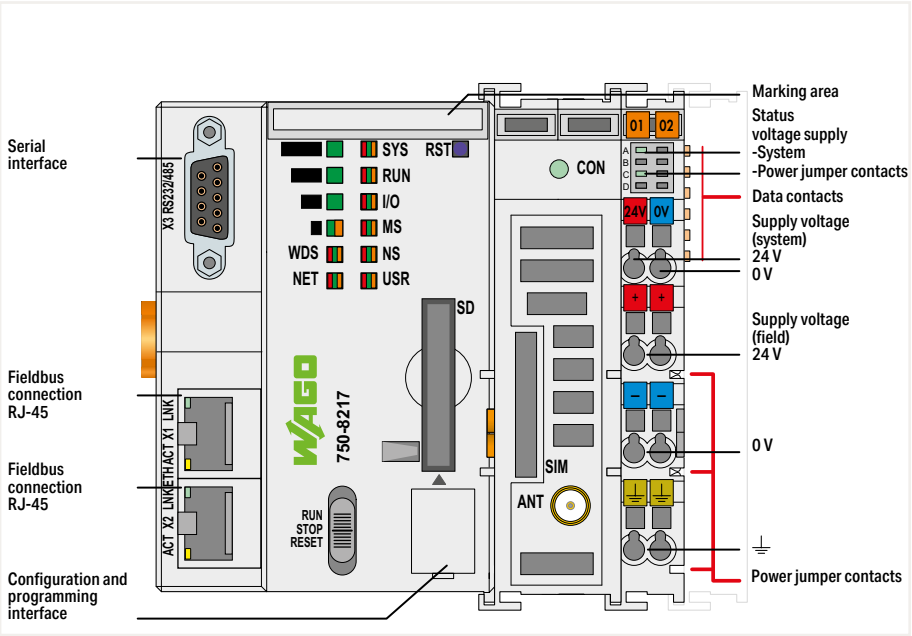
Controller PFC200 ▸ 2 x ETHERNET, RS-232/-485, Mobile Radio Module

750-8217



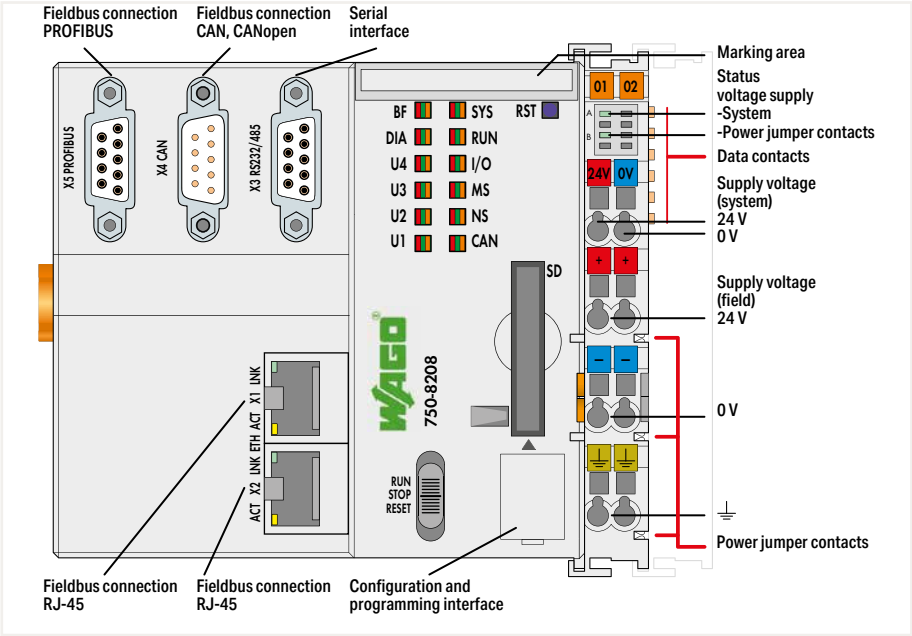
Version	Default	Ext. Temperature
Item No.	**750-8217**	**750-8217/025-000**
Order Text	**PFC200; 2ETH RS 4G**	**PFC200; 2ETH RS 4G; T**

Technical Data		
Communication	Modbus (TCP, UDP); ETHERNET; EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; Modbus® RTU; RS-232 serial interface; RS-485 serial interface; MQTT; BACnet/IP, **requires an additional license**; EtherCAT Master, **requires an additional license**; Telecontrol protocols (requires an additional license on the device)	
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH	
Telecontrol protocols	IEC 60870-5-101/-103/-104 (additional license as slave or master); IEC-61850 (additional license as Client 300); DNP3 (additional license as Slave or Master 300)	
Radio technology	GSM/UMTS/LTE	
Frequency band	GSM dual band (B3; B8); E-UTRA bands (B1; B3; B5; B7; B8; B20; B38; B40; B41)	
Services	GPRS connection to Internet	
Security encryption	OpenVPN, IPsec, firewall	
Visualization	Web Visu	
Programming environment	***e!****COCKPIT* (based on CODESYS V3)	
CPU	Cortex A8; 1 GHz	
Operating system	Real-time Linux (with RT-Preempt patch)	
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB	
Program memory/data memory/non-volatile memory (software)	***e!****RUNTIME*: 32 MB / 128 MB / 128 KB	
Number of modules per node (max.)	250	
Input and output (internal) process image (max.)	1000 words/1000 words	
Input and output (MODBUS) process image (max.)	***e!****RUNTIME*: 32000 words/32000 words	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	550 mA	
Total current (system supply)	700 mA	
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C
Dimensions W x H x D	(102.5 x 100 x 71.9) mm	
Approvals	CE; Marine	
Data sheet and further information, see:	wago.com/750-8217	

Accessories	**Item No.**	**Item No.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001	758-879/000-001
e!RUNTIME; BACnet; 300; Single License; Online activation	2759-283/211-1000	2759-283/211-1000
e!RUNTIME; EtherCAT Master; 300; Single License; Online activation	2759-263/211-1000	2759-263/211-1000
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108	758-879/000-2108
Magnetic foot antenna; with 2.5m cable and SMA plug; GSM/ UMTS/ LTE/ Bluetooth®/ WLAN; 698-960, 1400-1518, 1710-2700 MHz	758-975	758-975
e!RUNTIME; DNP3 Master; 300; Single License	2759-2293/211-1000	2759-2293/211-1000
e!RUNTIME; IEC60870 Slave; Single License	2759-290/211-1000	2759-290/211-1000
e!RUNTIME; DNP3 Slave; Single License	2759-2290/211-1000	2759-2290/211-1000
e!RUNTIME; IEC60870 Master; 300; Single License	2759-293/211-1000	2759-293/211-1000
e!RUNTIME; IEC61850 Client; 300; Single License	2759-2243/211-1000	2759-2243/211-1000

Controller PFC200 ▶ 2 x ETHERNET, RS-232/-485, CAN, CANopen, PROFIBUS Master

750-8208



Version	Default	Ext. Temperature	Telecontrol technology; Ext. Temperature
Item No.	**750-8208**	**750-8208/025-000**	**750-8208/025-001**
Order Text	**PFC200; 2ETH RS CAN DPM**	**PFC200; 2ETH RS CAN DPM; T**	**PFC200; 2ETH RS CAN DPM; Tele; T**
Technical Data			
Communication	PROFIBUS DP Master; CANopen; Modbus (TCP, UDP); ETHERNET; Modbus® RTU; RS-232 serial interface; RS-485 serial interface; MQTT		PROFIBUS DP Master; CANopen; Modbus (TCP, UDP); ETHERNET; Modbus® RTU; RS-232 serial interface; RS-485 serial interface; MQTT; Telecontrol protocols
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH		
Telecontrol protocols			IEC 60870-5-101/-103/-104; IEC 61400-25; IEC 61850-7; DNP3
Visualization	Web Visu		
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)		
CPU	Cortex A8; 600 MHz		
Operating system	Real-time Linux (with RT-Preempt patch)		
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	256 MB / 256 MB / 128 KB		
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB		
Number of modules per node (max.)	250		
Input and output (internal) process image (max.)	1000 words/1000 words		
Input and output (MODBUS) process image (max.)	CODESYS V2: 1000 words/1000 words		
Input and output (PROFIBUS)process image (max.)	5000 bytes/5000 bytes		
Input and output (CAN) process image (max.)	2000 words/2000 words		
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts		
Input current (typ.) at nominal load (24 V)	670 mA		
Total current (system supply)	1700 mA		
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C	
Dimensions W x H x D	(112 x 100 x 71.9) mm		
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx		
Data sheet and further information, see:	wago.com/750-8208		
Accessories	**Item No.**	**Item No.**	**Item No.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001	758-879/000-001	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108	758-879/000-2108	758-879/000-2108

5.1

Controllers PFC200 XTR

Touch Panels 600; Control Panel Hardware Configuration

◄◄◄ Section 3

Edge Controller

◄◄ Section 4

Controllers PFC100/PFC200

- Maximum performance in a minimum space
- Also programmable in high-level languages based on Linux®
- Security packages with SSH and SSL/TLS
- Runtime system for CODESYS V2 (only PFC200) and V3

◄ Section 5.1

Controllers PFC200 XTR

The advantages of WAGO's PFC Controllers combined with the capabilities for extreme environments:

- High processing speed
- Multiple interfaces
- eXTRemely robust and maintenance-free

Controllers 750

- Controllers for all common fieldbus systems
- Programmable per IEC 61131-3
- Readily combines with the modules of the WAGO I/O System 750

Section 5.3 ►

Controllers 750 XTR

For demanding applications in which the following are critical:

- Extreme temperature resistance
- Immunity to electromagnetic interference and impulse voltages
- Vibration and shock resistance

Section 5.4 ►►

Starter Kits

To get you up and running quickly, we offer starter kits to suit the most diverse applications:

- with Controller PFC100 or PFC200
- with Controller 750 KNX IP
- with Touch Panel 600

Section 5.5 ►►►

Controllers PFC200 XTR
Contents

	CPU	Modbus (TCP, UDP)	Ethernet/IPTM	EtherCAT	PROFIBUS	CANopen	BACnet/IP	Modbus RTU	Telecontrol Protocols	IoT Protocols	Description	Item No.	
	Cortex A8; 1 GHz	M/S	S	M*			x*	x	x*	x	Controller PFC200; 2nd Generation; 4 x ETHERNET; Extreme	750-8210/040-000	130
	Cortex A8; 1 GHz	M/S	S	M*			x*	x	x*	x	Controller PFC200; 2nd Generation; 2 x ETHERNET, 2 x 100Base-FX; Extreme	750-8211/040-000	131
	Cortex A8; 600 MHz	M/S	S					x		x	Controller PFC200; 2 x ETHERNET, RS-232/-485; Extreme	750-8202/040-000	132
		M/S	S					x	x	x	Controller PFC200; 2 x ETHERNET, RS-232/485; Telecontrol Technology; Extreme	750-8202/040-001	132
	Cortex A8; 1 GHz	M/S	S	M*			x*	x		x	Controller PFC200; 2nd Generation; 2 x ETHERNET M12, RS-232/-485; Extreme	750-8212/040-010	133
	Cortex A8; 1 GHz	M/S	S	M*		M/S	x*	x		x	Controller PFC200; 2nd Generation; 2 x ETHERNET M12, CAN, CANopen; Extreme	750-8213/040-010	134
	Cortex A8; 600 MHz	M/S	S		S	M/S		x		x	Controller PFC200; 2 x ETHERNET, RS-232/-485, CAN, CANopen, PROFIBUS Slave; Extreme	750-8206/040-000	135
		M/S	S		S	M/S		x	x	x	Controller PFC200; 2 x ETHERNET, RS-232/-485, CAN, CANopen, PROFIBUS Slave; Telecontrol Technology; Extreme	750-8206/040-001	135

M: Master, S: Slave; *requires an additional license

Controller PFC200 XTR
General Product Information

PFC200 XTR:

Taking It to the eXTReme – The Standard for 750 XTR

With the dark gray XTR version of the PFC200 Controller, you will benefit from the unique added value of this fast and highly communicative multi-talented controller for applications that are subjected to extreme environments.

The PFC200 XTR Controller excels with high processing speed and multiple interfaces for parallel communication. All variants of this controller feature two ETHERNET ports and – depending on the model – additional interfaces. The CANopen, PROFIBUS DP and Modbus TCP/UDP/RTU protocols allow flexible connection to fieldbus systems and external input/output devices. These fieldbus systems can be easily configured directly in WAGO's easy-to-use ***e!COCKPIT*** development environment. The ETHERNET interfaces with an integrated switch also support all major IT protocols. In addition to multiple interfaces, the PFC200 XTR offers ample memory for your applications provided by the internal flash memory and an integrated interface for SD/SDHC cards.

Extremely temperature-resistant, immune to interference, as well as unfazed by vibrations and impulse voltages –
the WAGO I/O System 750 XTR is the first choice for demanding applications including:
- Marine systems and onshore/offshore installations
- Renewable energy systems (wind turbines, solar systems and biogas plants)
- Transformer stations and power distribution systems
- Petrochemical processing
- Water and wastewater treatment systems
- Custom machines
- Railway systems

Industry 4.0 / IoT

Recording, digitizing and linking data profitably – these are the core ideas of Industry 4.0. Using a dedicated library, WAGO's PFC100/PFC200 Controllers become IoT controllers that send data from the field level to the cloud. Once in the cloud, data can be aggregated and used for analysis. This capability creates tremendous added value for your company – whether it's increasing the efficiency of in-house production, implementing energy management in buildings or developing additional end-customer services. Existing systems also become IoT-ready, making them future-proof. The WAGO PFC family of controllers thus forms the basis for a sustainable corporate world.

Link between Process Data and IT Application – Even under eXTReme Conditions

The PFC200 XTR ideally combines real-time requirements with IT functionality. It supports both Modbus/TCP and EtherNet/IP for use in industrial environments. HTTP, SNTP, SNMP, FTP, BootP, DHCP, DNS and other protocols simplify integration into IT environments. Integrated Web pages and Web-based visualization provide IT applications with real-time process data. Furthermore, the controller incorporates library functions for email, SOAP, ASP, IP configuration, ETHERNET sockets and file system.

Security on Board

The topics of ETHERNET communication and security are closely linked. To provide PFC Controller users with a high level of security, mechanisms for secure connections such as HTTPS, FTPS, SSH and SSL/TLS are standard.

Worldwide Approvals

International approvals for industrial automation, building technology, shipbuilding and onshore/offshore applications guarantee worldwide use – even under harsh operating conditions, e.g., Germanischer Lloyd, Det Norske Veritas, American Bureau of Shipping, Korean Register of Shipping, Nippon Kaiji Kyokai, Registro Italiano Navale and Polski Rejestr Stratkow.

Superior Reliability in Extreme Climates

Engineered for freezing cold, extreme heat and high humidity, the WAGO I/O System 750 XTR provides absolute dependability in virtually any weather. The XTR version of the PFC200 is unfazed by both freezing cold down to –40°C and scorching heat up to +70°C. And this applies equally to both start-up and ongoing operation. The maximum approved operating altitude of 5,000 m is another highlight. Even in the thin air of a mountain-top station, the system impressively demonstrates its high performance and availability.

Additional Protection against Interference Pulses

The WAGO I/O System 750 XTR provides greater isolation up to 5 kV of impulse voltage, lower EMC emission of interference and higher insensitivity to EMC interference. These strengths ensure trouble-free operation.

High Mechanical Performance

Automation systems must be incredibly vibration-resistant, especially when installed close to vibration-prone and shock-generating system components. Powerful motors and power circuit breakers are just two examples of the many applications that can stress automation systems. The WAGO I/O System 750 XTR continues to set new standards here. Count on long-lasting, trouble-free operation and industry-topping levels of safety – even in the most severe applications, such as tunnel boring machines.

Modular and Expandable

With the WAGO I/O System 750 XTR, the PFC200 Controllers can be expanded to almost any input/output interface. Using an industry-leading platform, the 750 XTR boasts the same proven benefits.

Open-Source Software and Linux®

We unite what belongs together: High-performance WAGO Hardware and the future-proof Linux® Operating System. For complex tasks, you can choose between programming in IEC 61131 or directly under Linux®. WAGO's "Embedded Linux" Controllers impress with base images that are expandable via open-source packages. As a "Gold Member" of the Open Source Automation Development Lab (OSADL), WAGO supports both financing and further development of Linux® in the industrial sector. The controller firmware itself is available as a "Board Support Package" (BSP). If you are interested, simply contact our AUTOMATION technical support.

Benefits:

- Controllers for eXTReme environmental conditions
  - No air conditioning required
  - Can be used in unshielded areas
  - Install close to vibrating and shock-generating system components
- Programming per IEC 61131-3
- Can be combined with high-level languages
- Linux® real-time operating system
- Rugged and maintenance-free
- Integrated IT security standards
- IoT ready

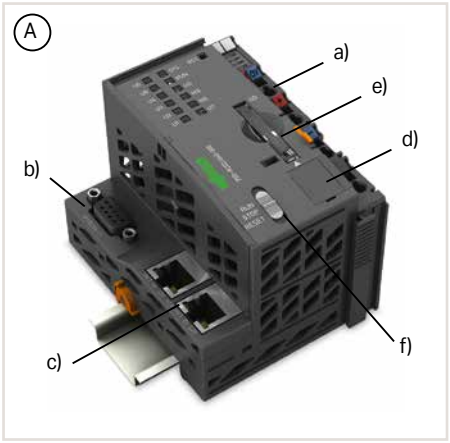
Controller PFC200 XTR
Variants

Telecontrol Technology

The PFC200 models for telecontrol technology integrate the following standardized telecontrol protocols:
- IEC 60870-5
- IEC 61850
- IEC 61400-25
- DNP3

These controllers also meet stricter requirements for immunity to impulse voltages and electromagnetic interference according to EN 60870-2-1.

Interfaces and Types



- Includes a supply module (a) to power downstream I/O modules
- Technical differences on the connection level (b)
- ETHERNET 2 x RJ-45 (c)
- Service interface (d)
- SD card slot for external storage media (e)
- Start/stop switch (f)

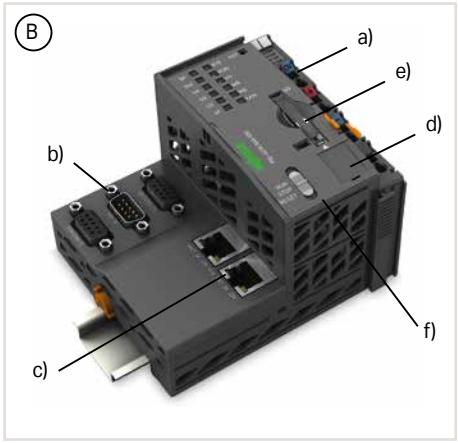
Housing Design (A)

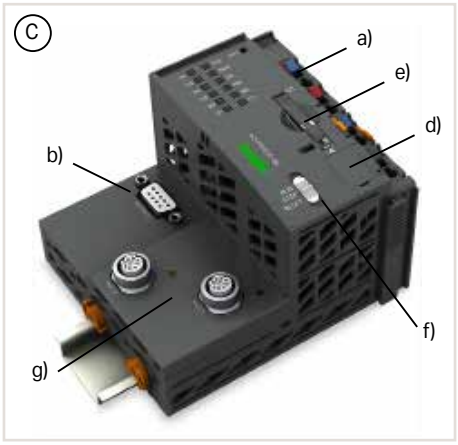
- W x H x D (mm): 78.6 x 100 x 71.9

Housing Design (B)

- W x H x D (mm): 112 x 100 x 71.9

Housing Design (C)
- ETHERNET 2 x M12 connector (g)
- W x H x D (mm): 112 x 100 x 71.9





Item Number Key

Explanation of an item number key's components

Item No. : 750-82xy/040-000

0y: Generation 1
1y: Generation 2

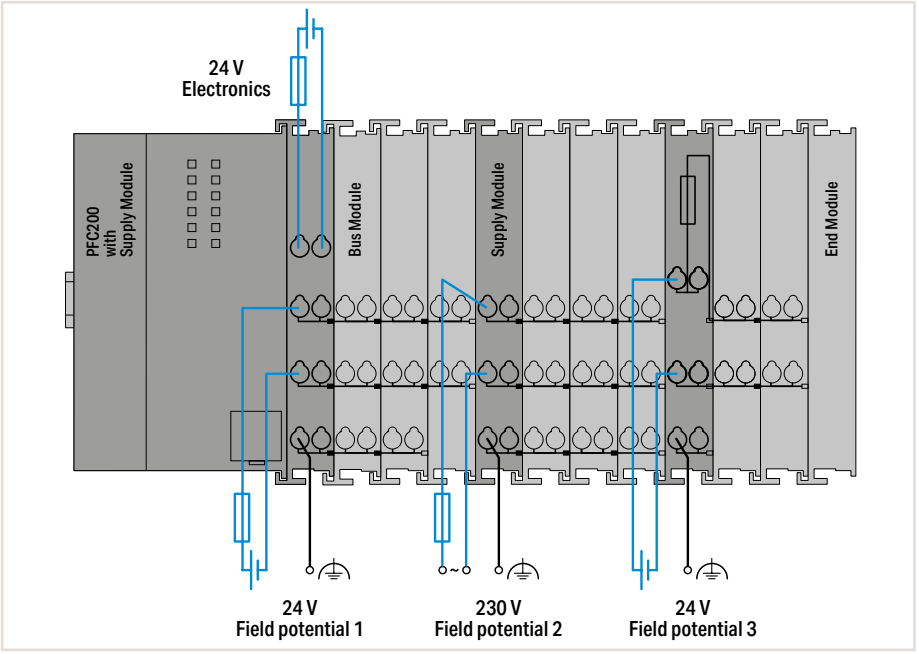
x0: 4 x ETHERNET
x1: 2 x ETHERNET, 2 x SFP port
x2: 2 x ETHERNET, RS-232/-485
x3: 2 x ETHERNET, CAN
x6: 2 x ETHERNET, RS-232/-485, CAN, CANopen

.../040-000: Standard
.../040-001: Telecontrol technology
.../040-010: M12 connector

Controller PFC200 XTR
Installation Instructions

Power Supply

The controller powers the internal electronics. The power supply to the field-side supply is electrically isolated. This division enables a separate supply for sensors and actuators. Snapping the I/O modules together automatically routes the supply voltages. Supply modules with diagnostics also enable power supply monitoring. This ensures a flexible and customized supply configuration for a fieldbus node. Power supply to the electronics is limited by a maximum value. If the sum of the internal current demand of all the I/O modules should exceed this value, an additional system supply module is necessary. Furthermore, the current consumed for field-side supply must not exceed 10 A. A variety of power supply modules allows re-feeding, creating potential groups and implementing emergency stops.



Notes

Additional steps must be implemented based on where the I/O system is installed:

Specific power and field-side power supply filters (750-624/040-001 or 750-626/040-000) are ready for marine and onshore/offshore applications, as well as in telecontrol and railway systems.

Please refer to the manual for details about the power supply's design.

Mixed Operation

Mixed operation (standard/XTR modules) within a node is possible when groups of modules are electrically isolated on the field side (i.e., electrically isolated power supply). This combination may be useful, for example, when there are only increased requirements for immunity to impulse voltages and interference, but the surrounding air temperature is not critical.

5.2

Standards and Rated Conditions for Railway Applications (EN 50155)

Railway Applications (EN 50155)	Class/Standard Compliance
4.1 Rated operating conditions	
4.1.1 Altitude above sea level	AX (EN 50125-1)
4.1.2 Surrounding air temperature	TX
4.1.3 Shock and vibration	1A and 1B (EN 61373)
4.1.4 Relative humidity	95 % (coated PCBs)
5.1 Power supply	
5.1.1.1 Voltage fluctuations	
Minimum voltage	0.725 x Un
Maximum voltage	1.3 x Un
5.1.1.2 Power interruptions	S1
5.4 Surge, ESD, burst tests	**EN 50121-3-2**
5.5 EMC (emission of interference, immunity to interference)	**EN 50121-3-2, EN 50121-4, -5**
Fire behavior: per EN 45545-2 hazard level HL3	

WAGO is certified in accordance with the IRIS quality standard.

Controller PFC200 XTR
Standards and Rated Conditions

General Specifications	
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Surrounding air temperature (operation)	-40 … 70 °C
Surrounding air temperature (storage)	-40 … 85 °C
Relative humidity (without condensation)	95 %
Relative humidity (with condensation)	Short-term condensation per Class 3K7/IEC EN 60721-3-3 and E-DIN 40046-721-3 (except for wind-driven precipitation, water and ice formation)
Operating altitude	Without temperature derating: 0 … 2000 m; with temperature derating: 2000 … 5000 m (0.5 K/100 m); 5000 m (max.)
Pollution degree (5)	2 per IEC 61131-2
Vibration resistance	Per IEC 60068-2-6 (acceleration: 5g), EN 60870-2-2, IEC 60721-3-1, -3, EN 50155; EN 61373
Shock resistance	Per IEC 60068-2-27 (15g/11 ms/half-sine/1,000 shocks; 25g/6 ms/1,000 shocks), EN 50155, EN 61373
EMC immunity to interference	Per EN 61000-6-1, -2; EN 61131-2; marine applications; EN 50121-3-2; EN 50121-4, -5; EN 60255-26; EN 60870-2-1; EN 61850-3; IEC 61000-6-5; IEEE 1613; VDEW: 1994
EMC emission of interference	Per EN 61000-6-3, -4, EN 61131-2, EN 60255-26, marine applications, EN 60870-2-1, EN 61850-3, EN 50121-3-2, EN 50121-4, -5
Protection type	IP20
Mounting position	Horizontal (standing/lying); vertical
Mounting type	DIN-35 rail
Housing material	Polycarbonate; polyamide 6.6
Exposure to pollutants	Per IEC 60068-2-42 and IEC 60068-2-43
Connection technology: system supply	2 x CAGE CLAMP®
Connection technology: field supply	4 x CAGE CLAMP®
Solid conductor	0.25 … 2.5 mm² / 24 … 14 AWG
Fine-stranded conductor	0.25 … 2.5 mm² / 24 … 14 AWG
Strip length	8 … 9 mm / 0.31 … 0.35 inch
Current carrying capacity (power jumper contacts)	10 A

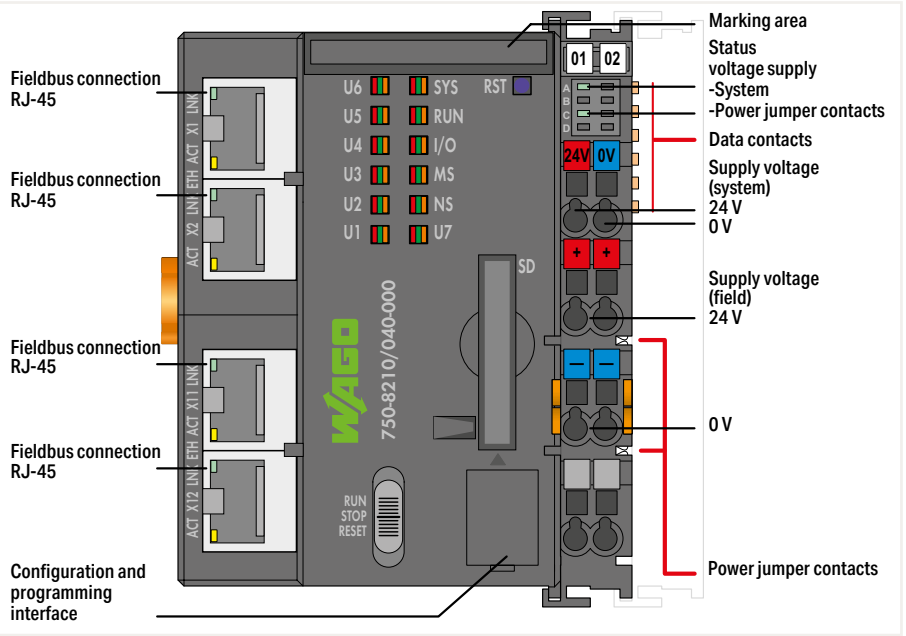
Approvals

Overview of the approvals in the item comparison in Section 14, Technical Section, or online at www.wago.com

Cables and pluggable connectors	Page 671
DIN-rail	Page 706
General accessories	Page 614
Marking	Page 704
Shield termination	Page 698
Software	Page 20
System enclosure	Page 683

Controller PFC200 XTR ▸ 4 x ETHERNET

750-8210/040-000



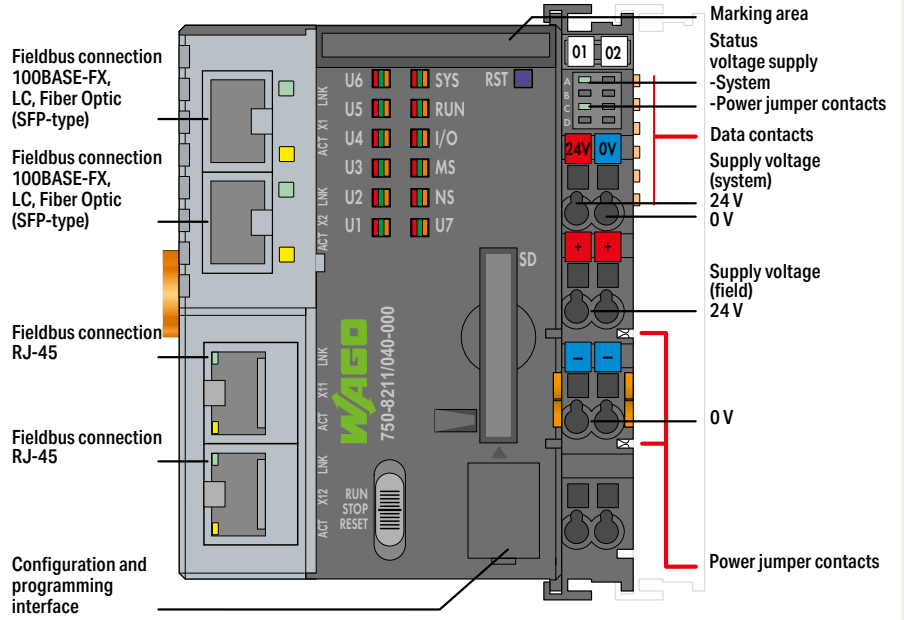
Version	Extreme
Item No.	**750-8210/040-000**
Order Text	**PFC200; G2; 4ETH; XTR**

Technical Data	
Communication	Modbus (TCP, UDP); ETHERNET; EtherNet/IP™ Adapter (slave), library for ***e!RUNTIME***; Modbus® RTU; MQTT; EtherCAT Master, **requires an additional license**; BACnet/IP, **requires an additional license**; Telecontrol protocols (requires an additional license on the device)
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH
Telecontrol protocols	IEC 60870-5-101/-103/-104 (additional license as slave or master); IEC-61850 (additional license as Client 300); DNP3 (additional license as Slave or Master 300)
Visualization	Web Visu
Programming environment	***e!COCKPIT*** (based on CODESYS V3); WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
CPU	Cortex A8; 1 GHz
Operating system	Real-time Linux (with RT-Preempt patch)
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB; ***e!RUNTIME***: 32 MB / 128 MB / 128 KB
Number of modules per node (max.)	64
Input and output (internal) process image (max.)	1000 words/1000 words
Input and output (MODBUS) process image (max.)	CODESYS V2: 1000 words/1000 words; ***e!RUNTIME***: 32000 words/32000 words
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Supply voltage (field)	24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	500 mA
Total current (system supply)	1700 mA
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(78.6 x 100 x 71.9) mm
Approvals	CE; cULus OrdLoc
Data sheet and further information, see:	wago.com/750-8210/040-000

Accessories	**Item No.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001
e!RUNTIME; BACnet; 300; Single License; Online activation	2759-283/211-1000
e!RUNTIME; EtherCAT Master; 300; Single License; Online activation	2759-263/211-1000
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108
e!RUNTIME; DNP3 Master; 300; Single License	2759-2293/211-1000
e!RUNTIME; IEC60870 Slave; Single License	2759-290/211-1000
e!RUNTIME; DNP3 Slave; Single License	2759-2290/211-1000
e!RUNTIME; IEC60870 Master; 300; Single License	2759-293/211-1000
e!RUNTIME; IEC61850 Client; 300; Single License	2759-2243/211-1000

Controller PFC200 XTR ▸ 2 x ETHERNET, 2 x SFP Ports

750-8211/040-000



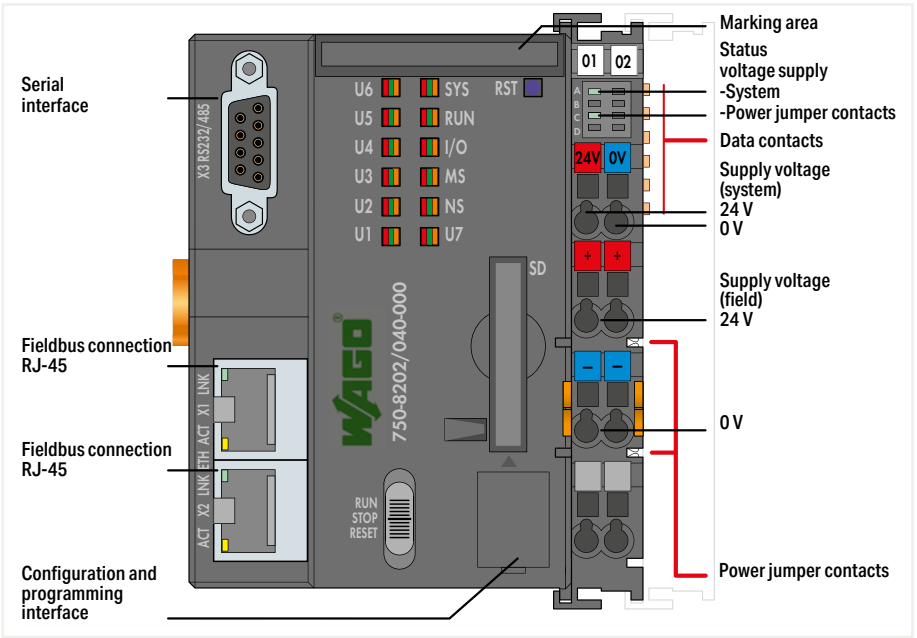
Version	**Extreme**
Item No.	**750-8211/040-000**
Order Text	**PFC200; G2; 2ETH, 2SFP; XTR**

Technical Data	
Communication	Modbus (TCP, UDP); ETHERNET; EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; Modbus® RTU; MQTT; EtherCAT Master, **requires an additional license**; BACnet/IP, **requires an additional license**; Telecontrol protocols (requires an additional license on the device)
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH
Telecontrol protocols	IEC 60870-5-101/-103/-104 (additional license as slave or master); IEC-61850 (additional license as Client 300); DNP3 (additional license as Slave or Master 300)
Visualization	Web Visu
Programming environment	***e!****COCKPIT* (based on CODESYS V3); WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
CPU	Cortex A8; 1 GHz
Operating system	Real-time Linux (with RT-Preempt patch)
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB; ***e!****RUNTIME*: 32 MB / 128 MB / 128 KB
Number of modules per node (max.)	64
Input and output (internal) process image (max.)	1000 words/1000 words
Input and output (MODBUS) process image (max.)	CODESYS V2: 1000 words/1000 words; ***e!****RUNTIME*: 32000 words/32000 words
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Supply voltage (field)	24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	550 mA
Total current (system supply)	1700 mA
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(78.6 x 100 x 71.9) mm
Approvals	CE; Marine; OrdLoc
Data sheet and further information, see:	wago.com/750-8211/040-000

Accessories	**Item No.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001
SFP Module 100BASE; FX Multi-Mode 1310 nm LC; 2 km; DDM; Extreme	852-202
e!RUNTIME; BACnet; 300; Single License; Online activation	2759-283/211-1000
e!RUNTIME; EtherCAT Master; 300; Single License; Online activation	2759-263/211-1000
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108
e!RUNTIME; DNP3 Master; 300; Single License	2759-2293/211-1000
e!RUNTIME; IEC60870 Slave; Single License	2759-290/211-1000
e!RUNTIME; DNP3 Slave; Single License	2759-2290/211-1000
e!RUNTIME; IEC60870 Master; 300; Single License	2759-293/211-1000
e!RUNTIME; IEC61850 Client; 300; Single License	2759-2243/211-1000

Controller PFC200 XTR ▸ 2 x ETHERNET, RS-232/-485

750-8202/040-000

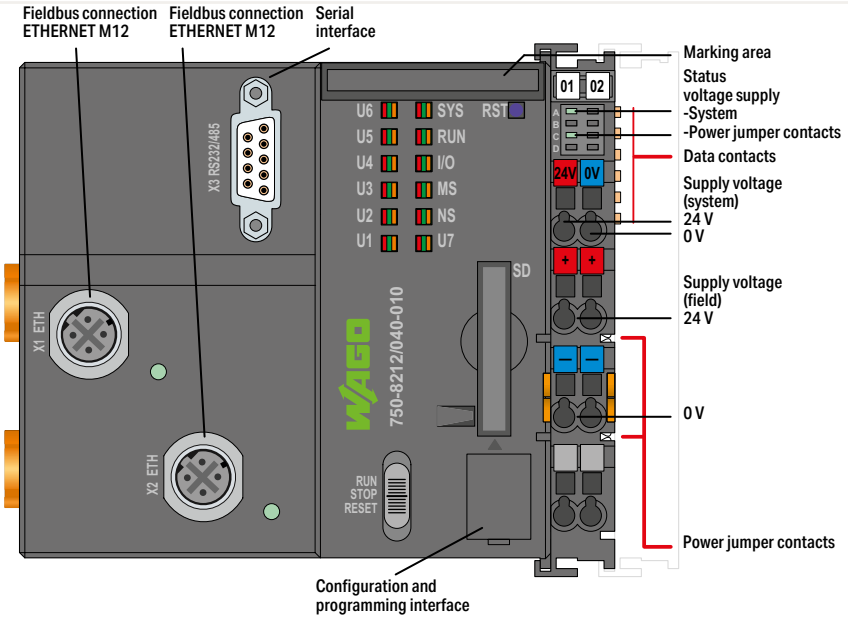


Version	Extreme	Telecontrol Technology; Extreme
Item No.	**750-8202/040-000**	**750-8202/040-001**
Order Text	**PFC200; 2ETH RS; XTR**	**PFC200; 2ETH RS; Tele; XTR**
Technical Data		
Communication	Modbus (TCP, UDP); ETHERNET; EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; Modbus® RTU; RS-232 serial interface; RS-485 serial interface; MQTT	Modbus (TCP, UDP); ETHERNET; EtherNet/IP™ Adapter (slave), library for ***e!****RUNTIME*; Modbus® RTU; RS-232 serial interface; RS-485 serial interface; MQTT; Telecontrol protocols
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH	
Telecontrol protocols		IEC 60870-5-101/-103/-104; IEC 61400-25; IEC 61850-7; DNP3
Visualization	Web Visu	
Programming environment	***e!****COCKPIT* (based on CODESYS V3); WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)	
CPU	Cortex A8; 600 MHz	
Operating system	Real-time Linux (with RT-Preempt patch)	
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	256 MB / 256 MB / 128 KB	
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB; ***e!****RUNTIME*: 60 MB / 60 MB / 128 KB (Program and data memory (dynamically distributed))	
Number of modules per node (max.)	64	
Input and output (internal) process image (max.)	1000 words/1000 words	
Input and output (MODBUS) process image (max.)	CODESYS V2: 1000 words/1000 words; ***e!****RUNTIME*: 32000 words/32000 words	
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!	
Supply voltage (field)	24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed!	
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)	
Input current (typ.) at nominal load (24 V)	550 mA	
Power consumption (5 V system supply)	510 mA	
Total current (system supply)	1700 mA	
Surrounding air temperature (operation)	-40 … 70 °C	
Dimensions W x H x D	(78.6 x 100 x 71.9) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-8202/040-000	
Accessories	**Item No.**	**Item No.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108	758-879/000-2108

5.2

Controller PFC200 XTR ▶ 2 x ETHERNET M12, RS-232/-485

750-8212/040-010



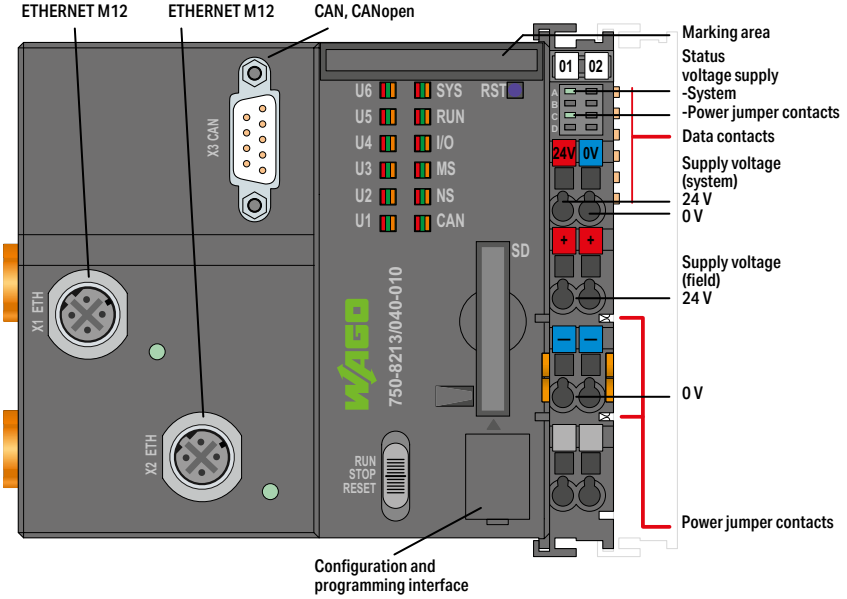
Version	M12; Extreme
Item No.	**750-8212/040-010**
Order Text	**PFC200 G2 2ETH M12 RS; XTR**

Technical Data	
Communication	Modbus (TCP, UDP); ETHERNET; EtherNet/IP™ Adapter (slave), library for ***e!RUNTIME***; Modbus® RTU; RS-232 serial interface; RS-485 serial interface; MQTT; EtherCAT Master, **requires an additional license**; BACnet/IP, **requires an additional license**
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH
Visualization	Web Visu
Programming environment	***e!COCKPIT*** (based on CODESYS V3); WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
CPU	Cortex A8; 1 GHz
Operating system	Real-time Linux (with RT-Preempt patch)
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB; ***e!RUNTIME***: 32 MB / 128 MB / 128 KB
Number of modules per node (max.)	64
Input and output (internal) process image (max.)	1000 words/1000 words
Input and output (MODBUS) process image (max.)	CODESYS V2: 1000 words/1000 words; ***e!RUNTIME***: 32000 words/32000 words
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Supply voltage (field)	24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	550 mA
Total current (system supply)	1700 mA
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(112 x 100 x 71.9) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-8212/040-010

Accessories	**Item No.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001
e!RUNTIME; BACnet; 300; Single License; Online activation	2759-283/211-1000
e!RUNTIME; EtherCAT Master; 300; Single License; Online activation	2759-263/211-1000
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108

Controller PFC200 XTR ▸ 2 x ETHERNET M12, CAN, CANopen

750-8213/040-010



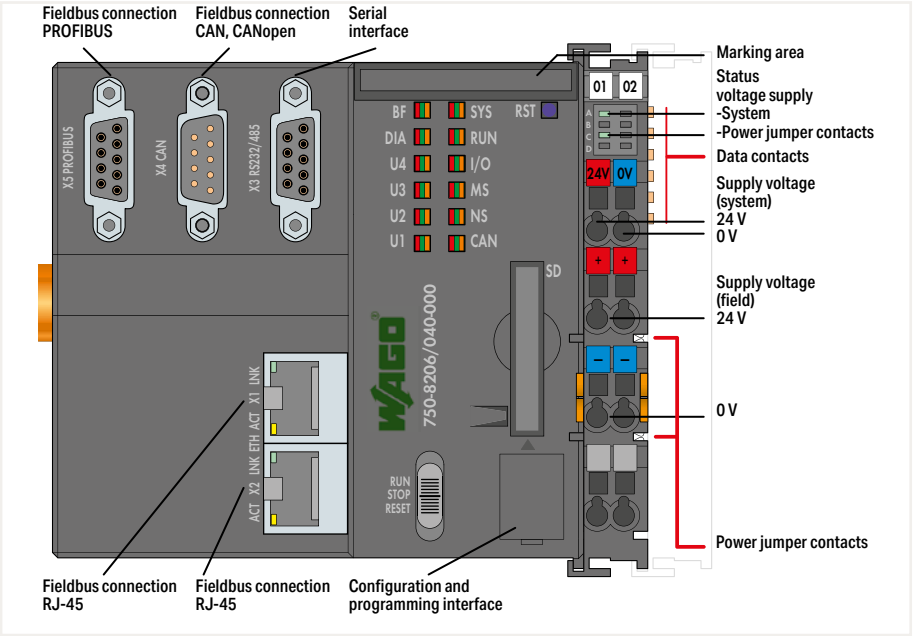
Version	**M12; Extreme**
Item No.	**750-8213/040-010**
Order Text	**PFC200 G2 2ETH M12 CAN; XTR**

Technical Data	
Communication	CANopen; Modbus (TCP, UDP); ETHERNET; EtherNet/IP™ Adapter (slave), library for ***e!RUNTIME***; MQTT; EtherCAT Master, **requires an additional license**; BACnet/IP, **requires an additional license**
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH
Visualization	Web Visu
Programming environment	***e!COCKPIT*** (based on CODESYS V3); WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
CPU	Cortex A8; 1 GHz
Operating system	Real-time Linux (with RT-Preempt patch)
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	512 MB / 4 GB / 128 KB
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB; ***e!RUNTIME***: 32 MB / 128 MB / 128 KB
Number of modules per node (max.)	64
Input and output (internal) process image (max.)	1000 words/1000 words
Input and output (MODBUS) process image (max.)	CODESYS V2: 1000 words/1000 words; ***e!RUNTIME***: 32000 words/32000 words
Input and output (CAN) process image (max.)	2000 words/2000 words
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Supply voltage (field)	24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	550 mA
Total current (system supply)	1700 mA
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(112 x 100 x 71.9) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-8213/040-010

Accessories	**Item No.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001
e!RUNTIME; BACnet; 300; Single License; Online activation	2759-283/211-1000
e!RUNTIME; EtherCAT Master; 300; Single License; Online activation	2759-263/211-1000
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108

Controller PFC200 XTR ▶ 2 x ETHERNET, RS-232/-485, CAN, CANopen, PROFIBUS Slave

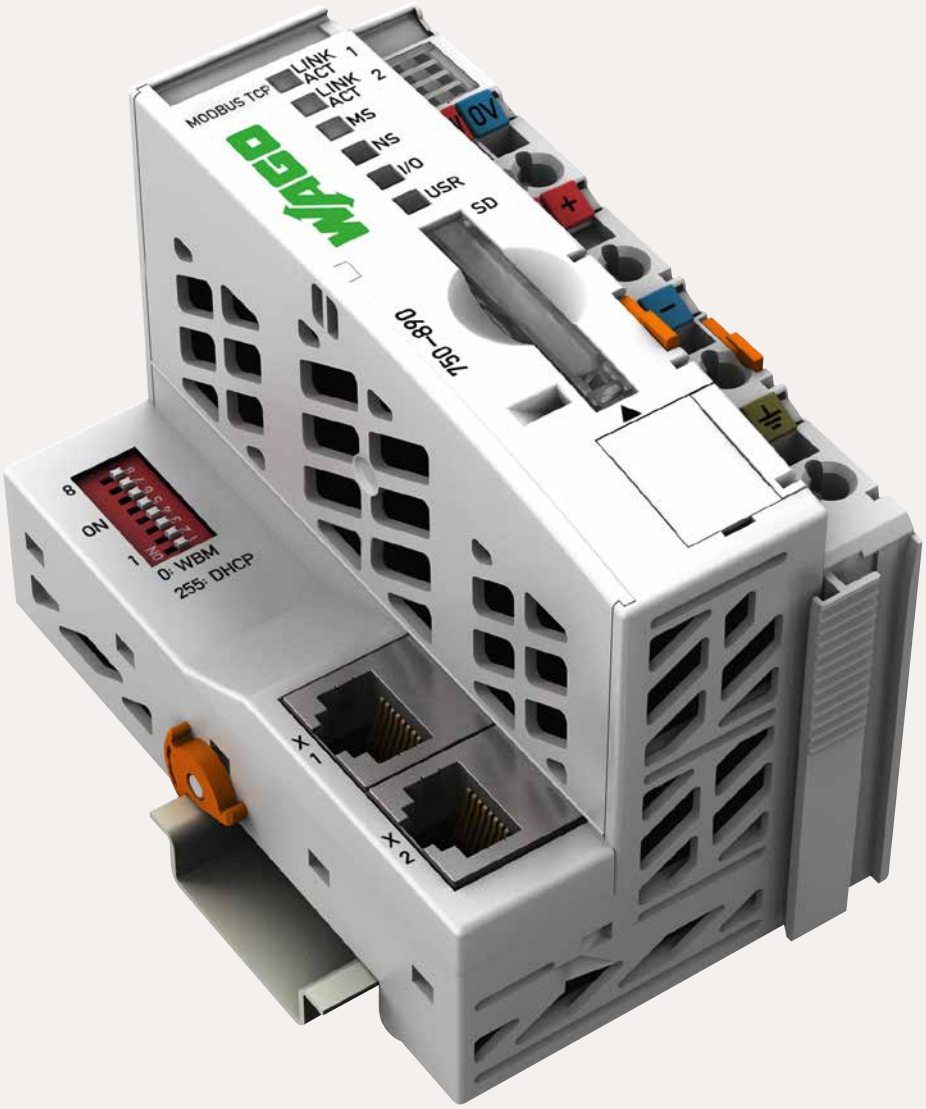
750-8206/040-000



Version	Extreme	Telecontrol Technology; Extreme
Item No.	**750-8206/040-000**	**750-8206/040-001**
Order Text	**PFC200; 2ETH RS CAN DPS; XTR**	**PFC200; 2ETH RS CAN DPS; Tele; XTR**

Technical Data		
Communication	PROFIBUS; CANopen; Modbus (TCP, UDP); ETHERNET; EtherNet/IP™ Adapter (slave), library for ***e!RUNTIME***; Modbus® RTU; RS-232 serial interface; RS-485 serial interface; MQTT	PROFIBUS; CANopen; Modbus (TCP, UDP); ETHERNET; EtherNet/IP™ Adapter (slave), library for ***e!RUNTIME***; Modbus® RTU; RS-232 serial interface; RS-485 serial interface; MQTT; Telecontrol protocols
ETHERNET protocols	DHCP; DNS; NTP; FTP; FTPS; SNMP; HTTP; HTTPS; SSH	
Telecontrol protocols		IEC 60870-5-101/-103/-104; IEC 61400-25; IEC 61850-7; DNP3
Visualization	Web Visu	
Programming environment	***e!COCKPIT*** (based on CODESYS V3); WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)	
CPU	Cortex A8; 600 MHz	
Operating system	Real-time Linux (with RT-Preempt patch)	
Main memory (RAM)/internal memory (flash)/non-volatile memory (hardware)	256 MB / 256 MB / 128 KB	
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 16 MB / 64 MB / 128 KB; ***e!RUNTIME***: 60 MB / 60 MB / 128 KB (Program and data memory (dynamically distributed))	
Number of modules per node (max.)	64	
Input and output (internal) process image (max.)	1000 words/1000 words	
Input and output (MODBUS) process image (max.)	CODESYS V2: 1000 words/1000 words; ***e!RUNTIME***: 32000 words/32000 words	
Input and output (PROFIBUS)process image (max.)	244 Byte/244 Byte	
Input and output (CAN) process image (max.)	2000 words/2000 words	
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!	
Supply voltage (field)	24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed!	
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: –27.5 % (including 15 % residual ripple)	
Input current (typ.) at nominal load (24 V)	550 mA	
Power consumption (5 V system supply)	600 mA	
Total current (system supply)	1700 mA	
Surrounding air temperature (operation)	-40 … 70 °C	
Dimensions W x H x D	(112 x 100 x 71.9) mm	
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-8206/040-000	

Accessories	**Item No.**	**Item No.**
Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879/000-001	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108	758-879/000-2108



Controllers 750

Touch Panels 600; Control Panel Hardware Configuration

◄◄◄◄ Section 3

Edge Controller

◄◄◄ Section 4

Controllers PFC100/PFC200

- Maximum performance in a minimum space
- Also programmable in high-level languages based on Linux®
- Security packages with SSH and SSL/TLS
- Runtime system for CODESYS V2 (only PFC200) and V3

◄◄ Section 5.1

Controllers PFC200 XTR

The advantages of WAGO's PFC Controllers combined with the capabilities for extreme environments:

- High processing speed
- Multiple interfaces
- eXTRemely robust and maintenance-free

◄ Section 5.2

Controllers 750

- Controllers for all common fieldbus systems
- Programmable per IEC 61131-3
- Readily combines with the modules of the WAGO I/O System 750

Controllers 750 XTR

For demanding applications in which the following are critical:

- Extreme temperature resistance
- Immunity to electromagnetic interference and impulse voltages
- Vibration and shock resistance

Section 5.4 ►

Starter Kits

To get you up and running quickly, we offer starter kits to suit the most diverse applications:

- with Controller PFC100 or PFC200
- with Controller 750 KNX IP
- with Touch Panel 600

Section 5.5 ►►

Controllers 750
Contents

	CPU	ETHERNET: Modbus (TCP, UDP)	ETHERNET: Ethernet/IPTM	ETHERNET: BACnet/IP	ETHERNET: KNX IP	Modbus RTU	Telecontrol Protocols	BACnet MS/TP	DeviceNet	PROFIBUS	CANopen	Description	Item No. Standard	Item No. Extended Temperature	Page
	32 bits	M/S										Controller Modbus TCP; 4th Generation; 2 x ETHERNET, SD Card Slot	750-890	750-890/025-000	142
		M/S					x					Controller Modbus TCP; 4th Generation; 2 x ETHERNET, SD Card Slot; Telecontrol Technology; Ext. Temperature		750-890/025-001 750-890/025-002	142
 	32 bits	M/S										Controller Modbus TCP; 4th Generation; 2 x ETHERNET	750-891		143
		M/S										Controller Modbus TCP; 4th Generation; ECO	750-862		144
 	32 bits	M/S	S									Controller EtherNet/IPTM; 4th Generation; 2 x ETHERNET, SD Card Slot	750-893		145
		M/S	S									Controller EtherNet/IPTM; 4th Generation; 2 x ETHERNET; ECO	750-823		146
 	32 bits	M/S	S									Controller ETHERNET; 3rd Generation; SD Card Slot; Media Redundancy	750-885	750-885/025-000	147
		M/S	S									Controller ETHERNET; 3rd Generation; Media Redundancy	750-882		148
	16 bits	M/S										Controller ETHERNET; 1st Generation	750-842		149
		M/S										Controller ETHERNET; 1st Generation; ECO	750-843		150
	32 bits	M/S		x								Controller BACnet/IP	750-832		151
		M/S		x								Controller BACnet/IP; ECO	750-832/000-002		151
	32 bits	M/S						x				Controller BACnet MS/TP	750-829		152
	32 bits	M/S			x							Controller KNX/IP	750-889		153
	16 bits					x						Controller Modbus; RS-485; 115.2 kBd	750-815/300-000	750-815/325-000	154
						x						Controller Modbus; RS-232; 115.2 kBd	750-816/300-000		155
	16 bits									S		Controller PROFIBUS Slave	750-833	750-833/025-000	156
	16 bits								x			Controller DeviceNet	750-806		157
	16 bits										M/S	Controller CANopen; 128/64 KB Program/ RAM; MCS	750-837		158
											M/S	Controller CANopen; 640/832 KB Program/ RAM; MCS	750-837/021-000		158
											M/S	Controller CANopen; 128/64 KB Program/ RAM; D-Sub	750-838		159
											M/S	Controller CANopen; 640/832 KB Program/ RAM; D-Sub	750-838/021-000		159

M: Master, S: Master

Controllers 750
General Product Information

Controllers 750:
Open – Flexible – Compact

WAGO's controllers are ideal for a wide variety of applications ranging from industrial, process and building automation to measurement and data collection. Based on the fieldbus couplers for all standard fieldbus systems, they are programmable to IEC 61131-3. Direct connection to a wide range of I/O modules from the WAGO I/O System 750 provides perfect adaptation to any application.

Building Automation

Dedicated controllers for the BACnet/IP and KNX IP bus systems are ideal for building automation applications. The wide range of I/O modules allows integration of external systems such as lighting control (DALI), sun protection (SMI), wireless switches (EnOcean) and much more.

Marine and Onshore/Offshore Industries

International approvals coupled with industry-specific features permit use in marine applications and other harsh sectors. Addressing requirements inherent in specific industries and operating environments has enabled use on marine diesels and in the EMC-sensitive area of a vessel's bridge. Because the requirements are significantly greater for both interference immunity and emission, along with superior mechanical performance in these sensitive areas, the WAGO I/O System will readily meet the needs of other industries.

Telecontrol Technology

Standardized IEC 60870-5, IEC 61850, IEC 61400-25 and DNP3 Telecontrol Protocols allow the Controllers 750 to be used in telecontrol applications.

Starter Kits

For a quick start, WAGO offers every customer the unique opportunity to purchase a starter kit that already contains all the components needed to begin programming and getting to know the controllers. For starter kits, see Section 5.5.

Link between Process Data and IT Application

WAGO's controllers ideally combine real-time requirements with IT functionality. They support Modbus/TCP and EtherNet/IP for use in industrial environments. HTTP; HTTPS, SNTP, SNMP, FTP, BootP, DHCP, DNS and other protocols simplify integration into IT environments. Integrated Web pages and Web-based visualization provide IT applications with real-time process data. Furthermore, the controllers incorporate library functions for email, SOAP, ASP, IP configuration, ETHERNET sockets and file system.

Worldwide Approvals

International approvals for building and industrial automation, as well as the process and marine industries, guarantee worldwide use – even under harsh operating conditions. These recognitions include: ATEX, BR-Ex, IECEx, UL508, UL ANSI/ISA, AEx and numerous marine certifications.

Modular and Expandable

With the WAGO I/O System 750, the Controllers 750 can be expanded to almost any input/output interface. A modular, DIN-rail-mount design permits easy installation, expansion and modification of the I/O node without tools.
The straightforward design prevents installation errors. Additionally, proven CAGE CLAMP® technology ensures that all connections made in the field are quick, vibration-proof and maintenance-free. Depending on the I/O modules' granularity, the field level can be directly wired using 1-, 2-, 3- or 4-conductor technology.

Maximum Reliability and Ruggedness

The WAGO I/O System is engineered and tested for use in the most demanding environments (e.g., temperature cycling, shock/vibration loading and ESD) according to the highest standards. Spring pressure connection technology guarantees continuous operation. Integrated QA measures in the production process and 100% function testing ensure consistent quality.

Benefits:

- Controllers for all prominent fieldbus systems
- Industry-specific features
- Programmable via CODESYS 3 (IEC 61131-3)
- Expandable with the WAGO I/O System 750's comprehensive product range
- Extensive IT integration possibilities
- Tested and approved worldwide
- Maintenance-free

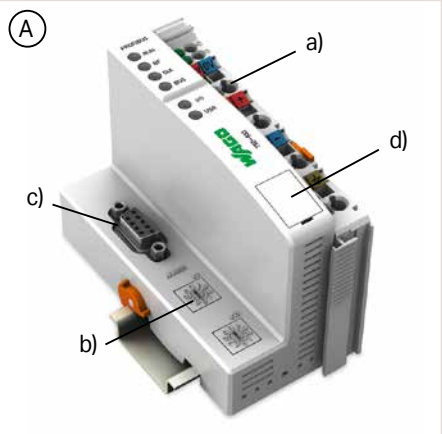
Controllers 750
Variants

Extended Temperature Range

Industrial automation technology is typically operated in temperatures ranging from 0°C to 55°C. However, some applications require an extended temperature range. Select controllers are available in an extended temperature range of –20°C to +60°C.

For extreme applications, where even this extended temperature range is not sufficient, the WAGO I/O System 750 XTR is available.

Interfaces and Types



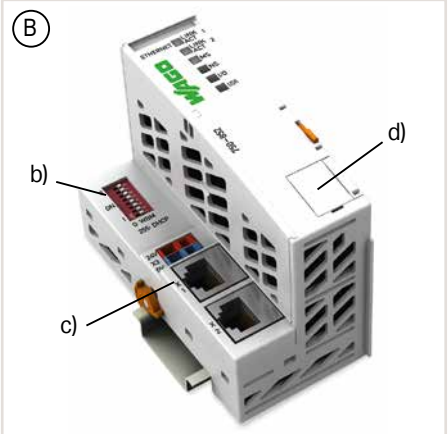
- Technical differences on the connection level; optional addressing switch (b) and fieldbus interface (c)
- Service interface (d)

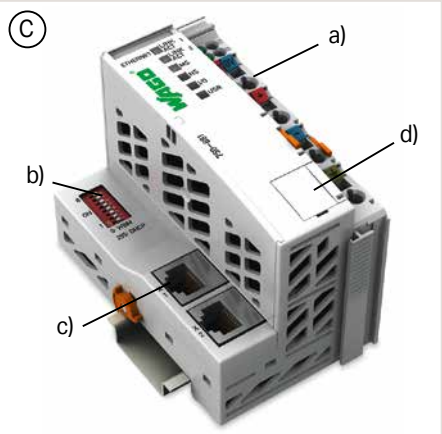
Housing Design (A)

- Includes a supply module (a) to power downstream I/O modules
- W x H x D (mm): 50.5 x 100 x 71.1

Housing Design Eco (B)

- W x H x D (mm): 49.5 x 96.8 x 71.9



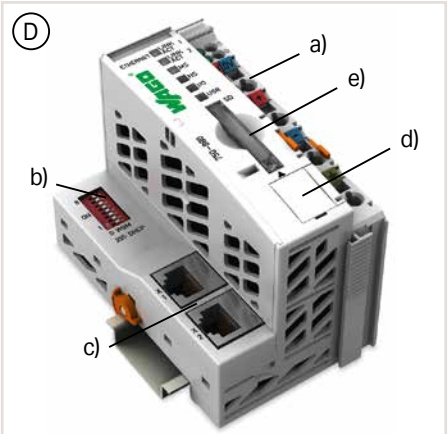


Housing Design (C)

- Includes a supply module (a) to power downstream I/O modules
- W x H x D (mm): 61.5 x 100 x 71.9

Housing Design (D)

- Includes a supply module (a) to power downstream I/O modules
- SD card slot for external storage media (e)
- W x H x D (mm): 61.5 x 100 x 71.9



Item Number Key

Explanation of an item number key's components

Item No. : 750-8xx

0x, 1x:	16-bit CPU	INTERBUS, DeviceNet, Modbus
3x, 4x:	16-bit CPU	BACnet, PROFIBUS, CANopen, ETHERNET
6x:	32 bits	ETHERNET Eco
2x, 7x, 8x:	32-bit multitasking	ETHERNET, telecontrol technology, media redundancy, BACnet, KNX IP

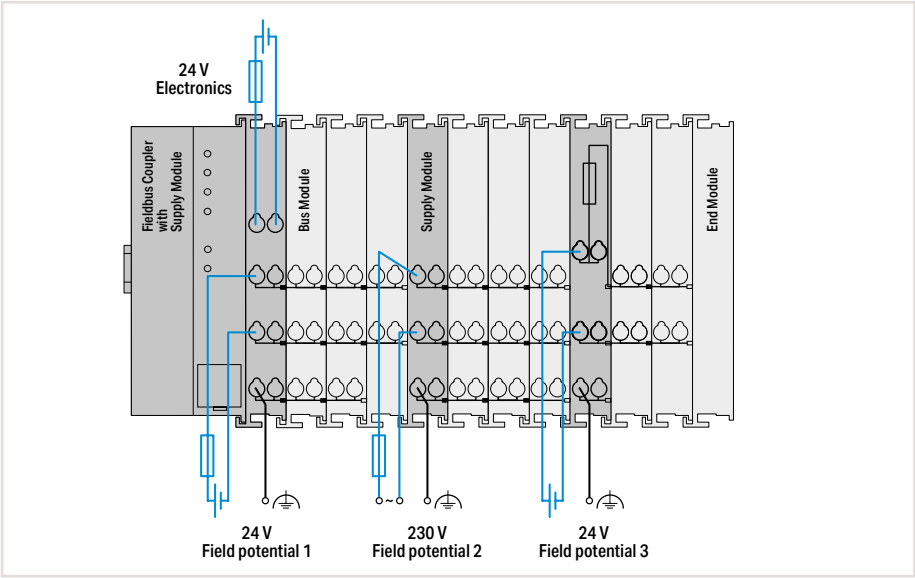
.../025-yyy: Extended temperature range (–20 ... +60 °C)

000: Standard, 001: Telecontrol technology, 002: Telecontrol technology Eco

Controllers 750
Installation Instructions

Power Supply

The controller powers the internal electronics. The field-side power supply is electrically isolated via the supply module on the controller or a separate power supply module. This division enables a separate supply for sensors and actuators. Snapping the I/O modules together automatically routes the supply voltages (system power supply 5 VDC via the data contacts and field supply via the optional power jumper contacts). Supply modules with diagnostics also enable power supply monitoring. This ensures a flexible and customized supply configuration for a fieldbus node.
Power supply to the electronics is limited by a maximum value. This value is dependent on the controller used. If the sum of the internal current demand of all the I/O modules should exceed this value, an additional system supply module is necessary. Furthermore, the current consumed for field-side supply must not exceed 10 A. A variety of power supply modules allows re-feeding, creating potential groups and implementing emergency stops.



Interference-Free in Safety-Related Applications

To easily and safely perform a cost-effective and centralized deactivation of complete actuator groups, the actuator's power supply can be switched off using a safety switching device. This can either be performed for each individual actuator or by turning off the power supply to a group of control outputs.
In the event of failure, ensure that no interference from other current or power circuits occurs – even when the control voltage is switched off – so the defined safety function properties (logic and time response) remain unchanged.

Some modules are designed to provide interference-free safety functionality. These modules comply with safety requirements up to Category 4 of DIN EN ISO 13849-1:2007. Safety category and performance level depend solely on the safety components and their wiring.

Notice:

WAGO's interference-free I/O modules are not a component of the safety function and do not replace the safety switching device! When using the components in safety functions, the corresponding notes must be observed in the relevant manual.

Notes:

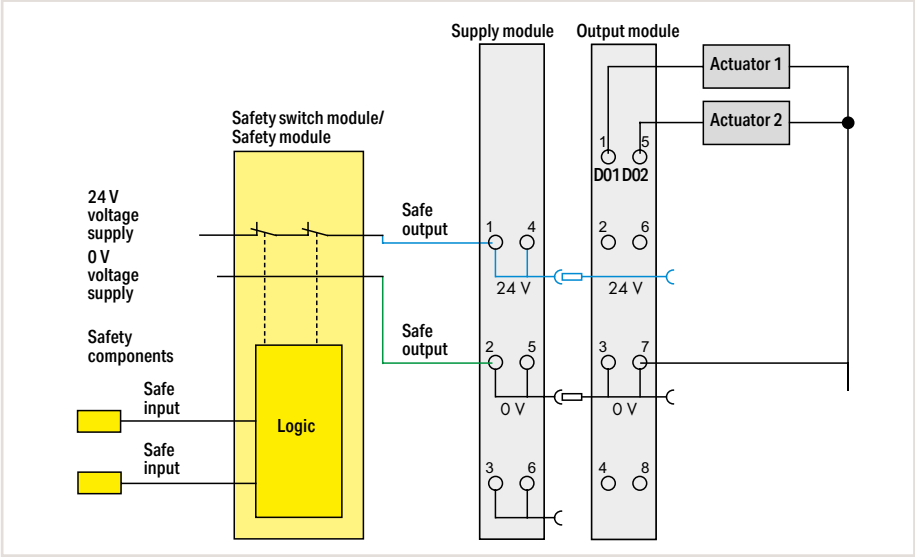
Additional steps must be implemented based on where the I/O system is installed:

Specific power and field-side power supply filters (750-624 or 750-626) are required for marine and onshore/offshore applications.

A specific supply module (750-606) is required to operate intrinsically safe Ex i modules.

Additionally, both a supply module and a field-side power supply filter are recommended when operating intrinsically safe Ex i modules for marine and onshore/offshore applications.
When operating safety-related I/O modules, PELV/SELV power supply units must be used for 24 VDC supply of electronics and field. Furthermore, specific power and field-side power supply filters (750-626) must be provided.

Please refer to the manual for details about the power supply's design.



Example: 2-channel, double-pole power supply disconnection

Controller 750
Standards and Rated Conditions

General Specifications	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Surrounding air temperature (storage)	-25 … 85 °C
Relative humidity (without condensation)	95 %
Operating altitude	Without temperature derating: 0 … 2000 m; with temperature derating: 2000 … 5000 m (0.5 K/100 m); 5000 m (max.)
Pollution degree (5)	2 per IEC 61131-2
Vibration resistance	4g per IEC 60068-2-6
Shock resistance	15g per IEC 60068-2-27
EMC immunity to interference	Per EN 61000-6-2, marine applications
EMC emission of interference	Per EN 61000-6-3, marine applications
Protection type	IP20
Mounting position	Any
Mounting type	DIN-35 rail
Housing material	Polycarbonate; polyamide 6.6
Exposure to pollutants	Per IEC 60068-2-42 and IEC 60068-2-43
Permissible SO_2 contaminant concentration at a relative humidity 75 %	25 ppm
Permissible H_2S contaminant concentration at a relative humidity 75 %	10 ppm
Connection technology: system supply	2 x CAGE CLAMP®
Connection technology: field supply	6 x 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	8 … 9 mm / 0.31 … 0.35 inch
Current carrying capacity (power jumper contacts)	10 A

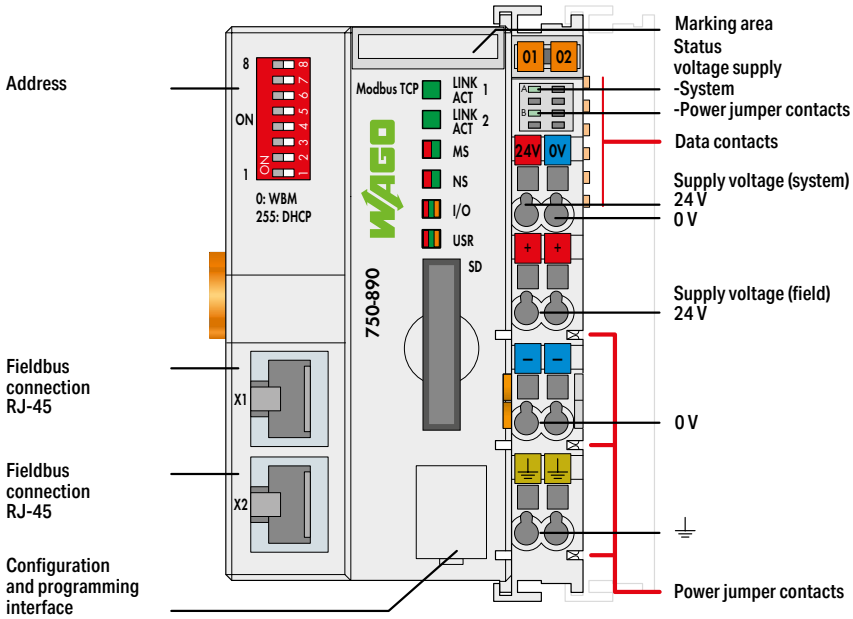
Approvals

Overview of the approvals in the item comparison in Section 14, Technical Section, or online at www.wago.com

Cables and pluggable connectors	Page 671
DIN-rail	Page 706
General accessories	Page 614
Marking	Page 704
Shield termination	Page 698
Software	Page 36
System enclosure	Page 683

Controller 750 ▸ Modbus TCP; SD card slot

750-890



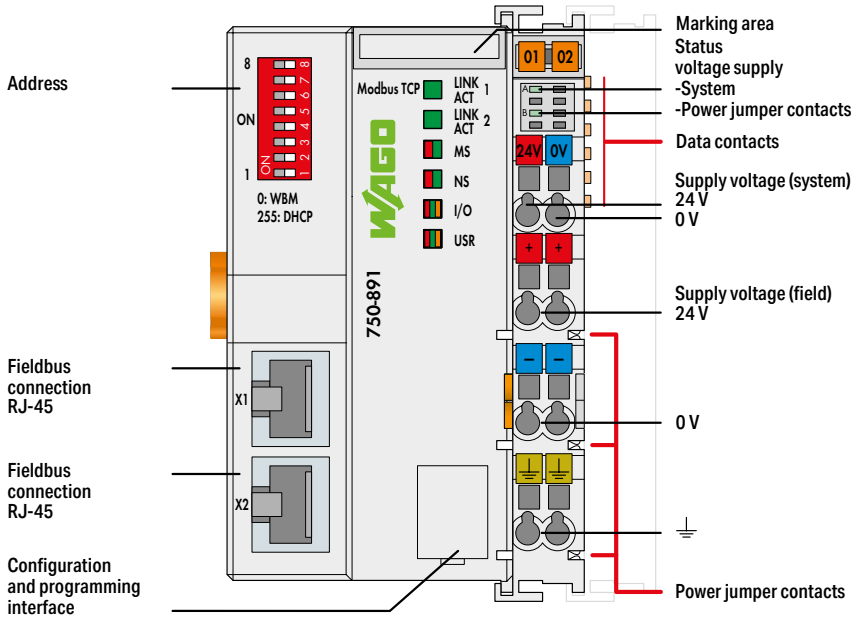
Version	Default	Ext. Temperature	Telecontrol Technology; Ext. Temperature	Telecontrol Technology; Ext. Temperature; ECO
Item No.	750-890	750-890/025-000	750-890/025-001	750-890/025-002
Order Text	Controller Modbus TCP; G4; 2ETH SD	Controller Modbus TCP; G4; 2ETH SD; T	Controller Modbus TCP; G4; 2ETH SD; Tele; T	Controller Modbus TCP; G4; 2ETH SD; Tele; T; ECO

Technical Data				
Communication	Modbus (TCP, UDP)		Modbus (TCP, UDP); Telecontrol protocols	
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; SNTP; FTP(S); SNMP			
Telecontrol protocols			IEC 60870-5-101/-103/-104; IEC 61400-25; IEC 61850-7; DNP3	
Connection technology: communication/fieldbus	Modbus TCP/UDP: 2 x RJ-45		Modbus TCP/UDP: 2 x RJ-45; Telecontrol protocol IEC 60870-5-101/-103: 1 x Serial interface via I/O module; Telecontrol protocol IEC 60870-5-104: 1 x RJ-45; Telecontrol protocol IEC 61850: 1 x RJ-45; Telecontrol protocol DNP3: 1 x RJ-45	
Baud rate	10/100 Mbit/s			
Visualization	Web Visu			
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)			
Memory card type	SD and SDHC up to 32 GB (all guaranteed properties only valid with WAGO Memory Card)			
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 8 MB / 8 MB / 32 KB			
Number of modules per node (max.)	250			4
Input and output (fieldbus) process image (max.)	1020 words/1020 words			
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)			
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts			
Input current (typ.) at nominal load (24 V)	500 mA			
Power consumption (5 V system supply)	440 mA			
Total current (system supply)	1700 mA			
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C		
Dimensions W x H x D	(61.5 x 100 x 71.9) mm			
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx			
Data sheet and further information, see:	wago.com/750-890			

Accessories	Item No.	Item No.	Item No.	Item No.
Memory Card SD; SLC-NAND; 2 Gbytes; Temperature from -40 to 90 °C	758-879/000-001	758-879/000-001	758-879/000-001	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108	758-879/000-2108	758-879/000-2108	758-879/000-2108

Controller 750 ▸ Modbus TCP

750-891

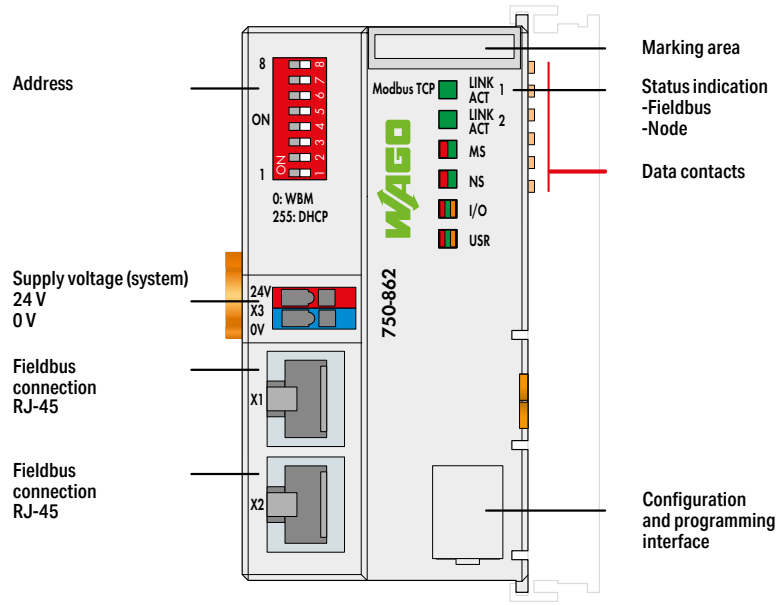


Version	**Default**
Item No.	**750-891**
Order Text	**Controller Modbus TCP; G4; 2ETH**

Technical Data	
Communication	Modbus (TCP, UDP)
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; SNTP; FTP(S); SNMP
Connection technology: communication/fieldbus	Modbus TCP/UDP: 2 x RJ-45
Baud rate	10/100 Mbit/s
Visualization	Web Visu
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 4 MB / 4 MB / 32 KB
Number of modules per node (max.)	250
Input and output (fieldbus) process image (max.)	1020 words/1020 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	390 mA
Total current (system supply)	1700 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(61.5 x 100 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-891

Controller 750 ▸ Modbus TCP; ECO

750-862

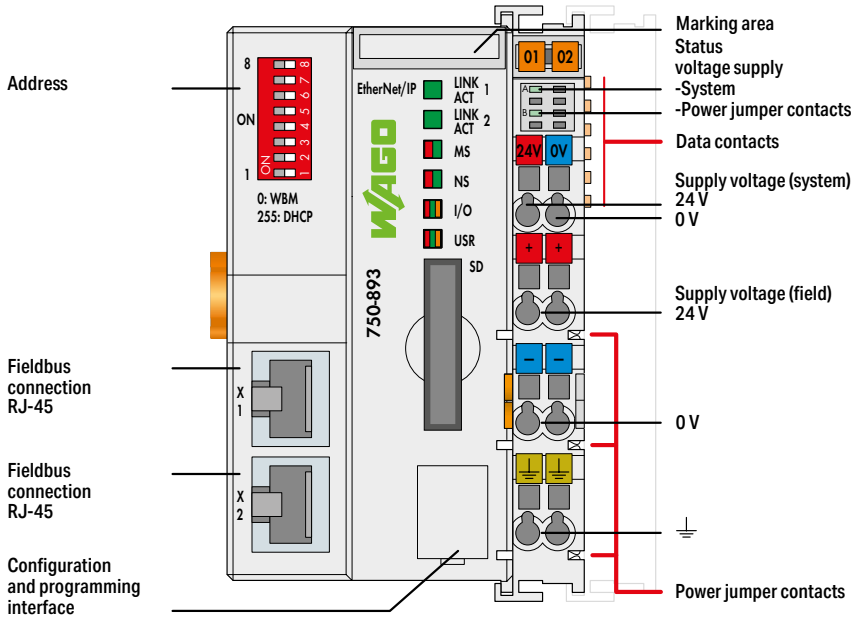


Version	**Default**
Item No.	**750-862**
Order Text	**Controller Modbus TCP; G4; 2ETH; ECO**

Technical Data	
Communication	Modbus (TCP, UDP)
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; SNTP; FTP(S); SNMP
Connection technology: communication/fieldbus	Modbus TCP/UDP: 2 x RJ-45
Baud rate	10/100 Mbit/s
Visualization	Webserver
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 2 MB / 2 MB / 16 KB
Number of modules per node (max.)	250
Input and output (fieldbus) process image (max.)	1020 words/1020 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector
Input current (typ.) at nominal load (24 V)	300 mA
Power consumption (5 V system supply)	390 mA
Total current (system supply)	700 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-862

Controller 750 ▸ EtherNet/IP™; SD card slot

750-893



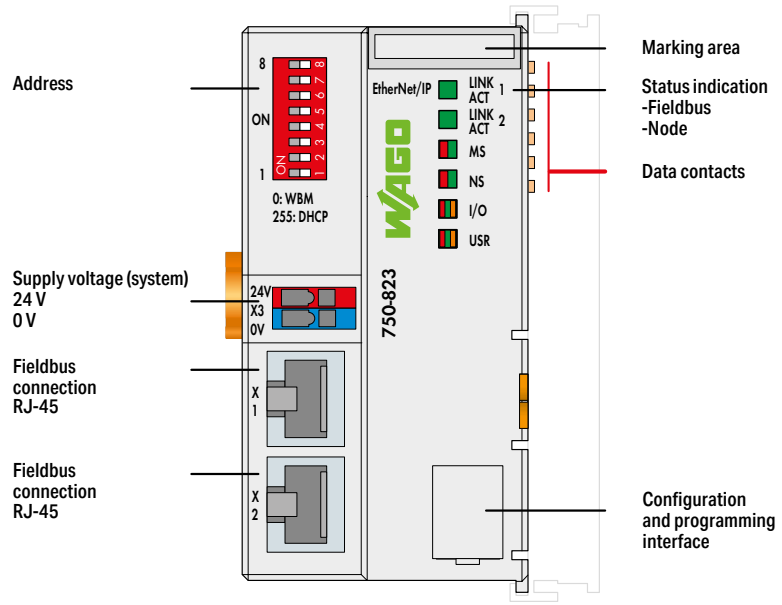
Version	Default
Item No.	**750-893**
Order Text	**Controller EtherNet/IP; SD**

Technical Data	
Communication	EtherNet/IP™
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; SNTP; FTP(S); SNMP
Connection technology: communication/fieldbus	EtherNet/IP™: 2 x RJ-45
Baud rate	10/100 Mbit/s
Visualization	Web Visu
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Memory card type	SD and SDHC up to 32 GB (all guaranteed properties only valid with WAGO Memory Card)
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 8 MB / 8 MB / 32 KB
Number of modules per node (max.)	250
Input and output (fieldbus) process image (max.)	1020 words/1020 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	440 mA
Total current (system supply)	1700 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(61.5 x 100 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-893

Accessories	Item No.
Memory Card SD; SLC-NAND; 2 Gbytes; Temperature from -40 to 90 °C	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108

Controller 750 ▸ EtherNet/IP™; ECO

750-823

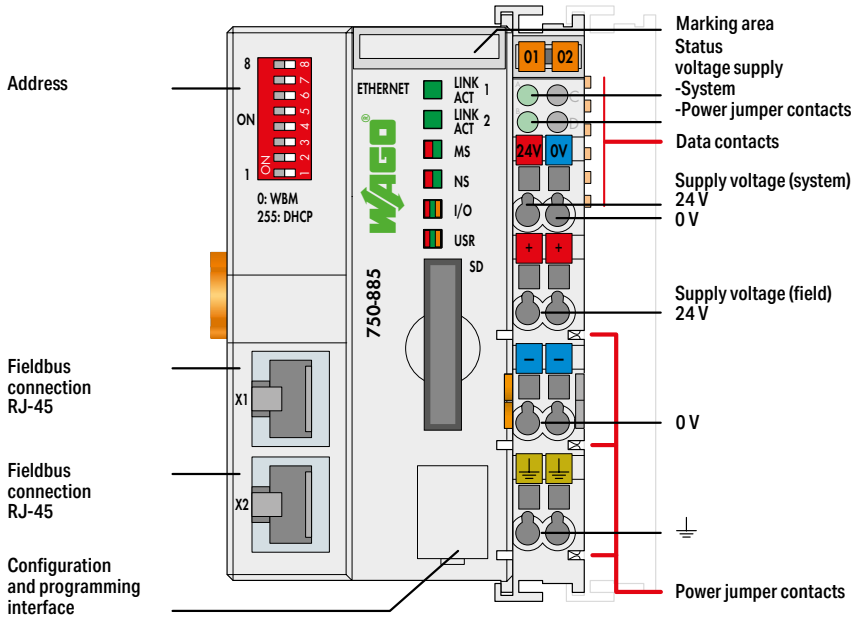


Version	**Default**
Item No.	**750-823**
Order Text	**Controller EtherNet/IP; ECO**

Technical Data	
Communication	EtherNet/IP™
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; SNTP; FTP(S); SNMP
Connection technology: communication/fieldbus	EtherNet/IP™: 2 x RJ-45
Baud rate	10/100 Mbit/s
Visualization	Web Visu
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 2 MB / 2 MB / 32 KB
Number of modules per node (max.)	250
Input and output (fieldbus) process image (max.)	1020 words/1020 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector
Input current (typ.) at nominal load (24 V)	300 mA
Power consumption (5 V system supply)	390 mA
Total current (system supply)	700 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-823

Controller 750 ▶ 2 x ETHERNET; SD card slot; Media redundancy

750-885



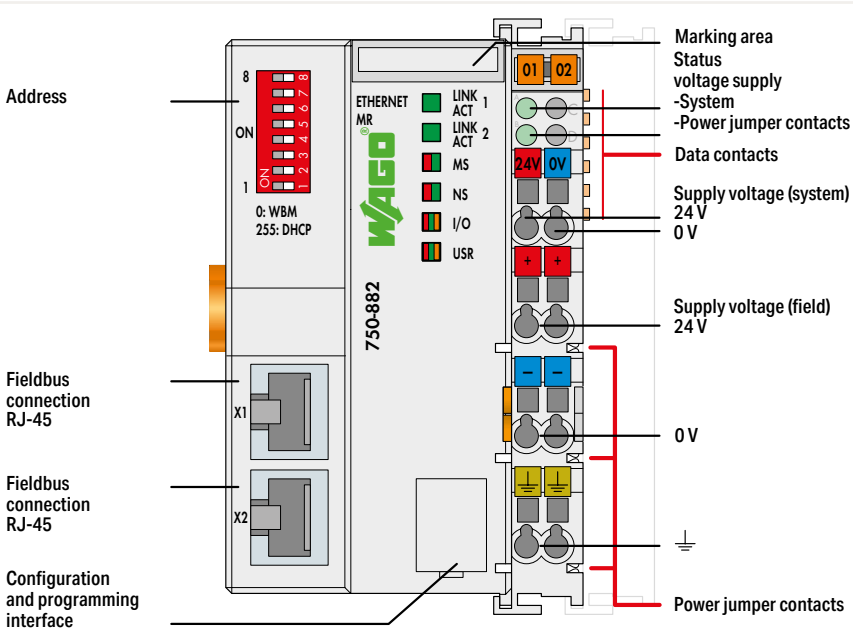
Version	Default	Ext. Temperature
Item No.	**750-885**	**750-885/025-000**
Order Text	**Controller ETHERNET; G3; SD; MR**	**Controller ETHERNET; G3; SD; MR; T**

Technical Data		
Communication	EtherNet/IP™; Modbus (TCP, UDP); ETHERNET	
ETHERNET protocols	HTTP; BootP; DHCP; DNS; SNTP; FTP; SNMP	
Connection technology: communication/fieldbus	EtherNet/IP™: 2 x RJ-45; Modbus TCP/UDP: 2 x RJ-45	
Baud rate	10/100 Mbit/s	
Redundancy function	Via two logically separated ETHERNET interfaces	
Visualization	Web Visu	
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)	
Memory card type	SD and SDHC up to 32 GB (all guaranteed properties only valid with WAGO Memory Card)	
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 1024 kbytes / 1024 kbytes / 32 KB	
Number of modules per node (max.)	250	
Input and output (fieldbus) process image (max.)	1020 words/1020 words	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	500 mA	
Power consumption (5 V system supply)	450 mA	
Total current (system supply)	1700 mA	
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C
Dimensions W x H x D	(61.5 x 100 x 71.9) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-885	

Accessories	Item No.	Item No.
Memory Card SD; SLC-NAND; 2 Gbytes; Temperature from -40 to 90 °C	758-879/000-001	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108	758-879/000-2108

Controller 750 ▸ 2 x ETHERNET; Media redundancy

750-882



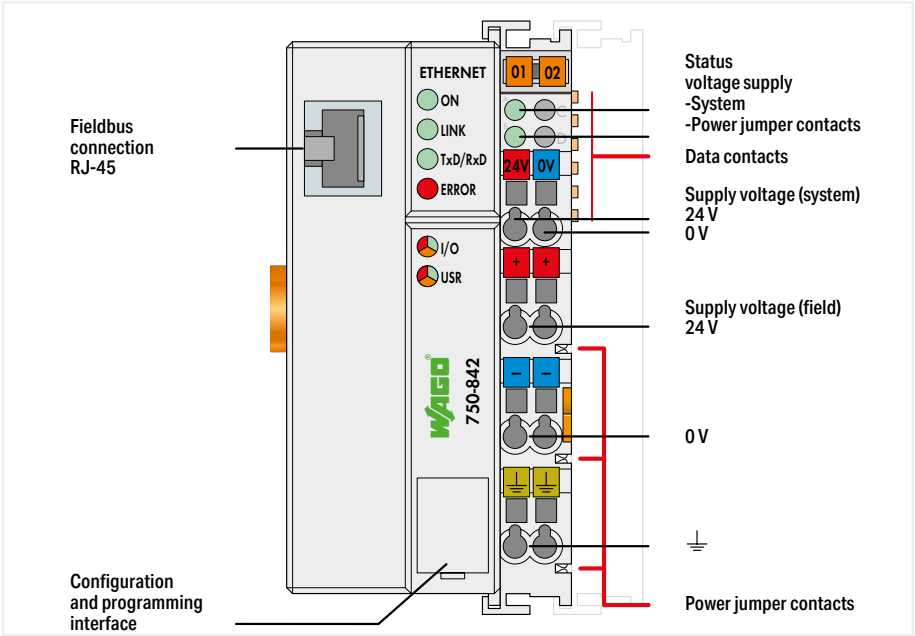
Version	Default
Item No.	**750-882**
Order Text	**Controller ETHERNET; G3; MR**

Technical Data	
Communication	EtherNet/IP™; Modbus (TCP, UDP); ETHERNET
ETHERNET protocols	HTTP; BootP; DHCP; DNS; SNTP; FTP; SNMP
Connection technology: communication/fieldbus	EtherNet/IP™: 2 x RJ-45; Modbus TCP/UDP: 2 x RJ-45
Baud rate	10/100 Mbit/s
Redundancy function	via two logically separated ETHERNET interfaces
Visualization	Web Visu
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 1024 kbytes / 512 kbytes / 32 KB
Number of modules per node (max.)	250
Input and output (fieldbus) process image (max.)	1020 words/1020 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	450 mA
Total current (system supply)	1700 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(61.5 x 100 x 71.9) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-882

5.3

Controller 750 ▸ ETHERNET

750-842

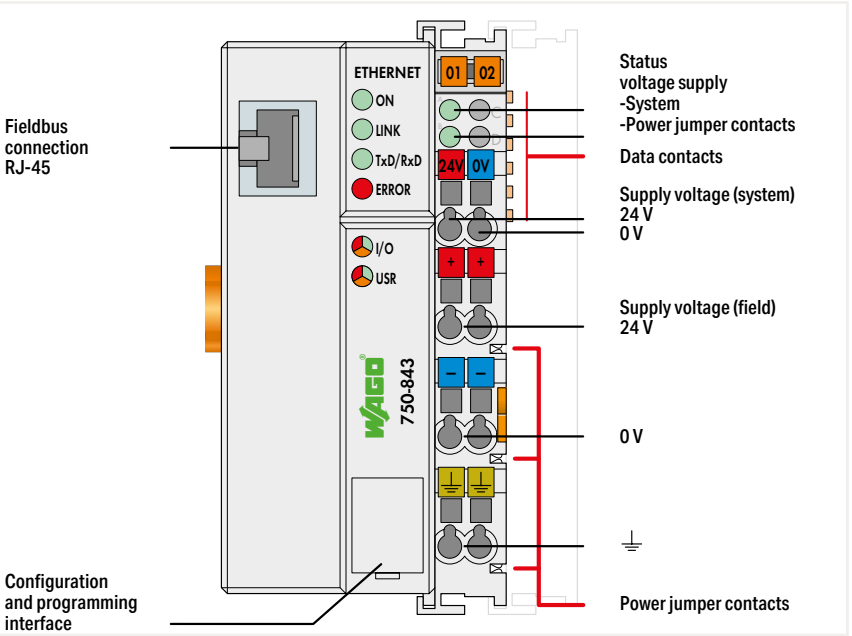


Version	Default
Item No.	**750-842**
Order Text	**Controller ETHERNET; G1**

Technical Data	
Communication	Modbus (TCP, UDP); ETHERNET
ETHERNET protocols	HTTP; BootP
Connection technology: communication/fieldbus	Modbus TCP/UDP: 1 x RJ-45
Bus segment length (max.)	100 m
Baud rate	10 Mbit/s
Visualization	Without
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 128 kbytes / 64 kbytes / 8 KB
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	512 bytes/512 bytes
Memory for fieldbus input variables (max.)	512 bytes
Memory for fieldbus output variables (max.)	512 bytes
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	200 mA
Total current (system supply)	1800 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-842

Controller 750 ▸ ETHERNET ECO

750-843

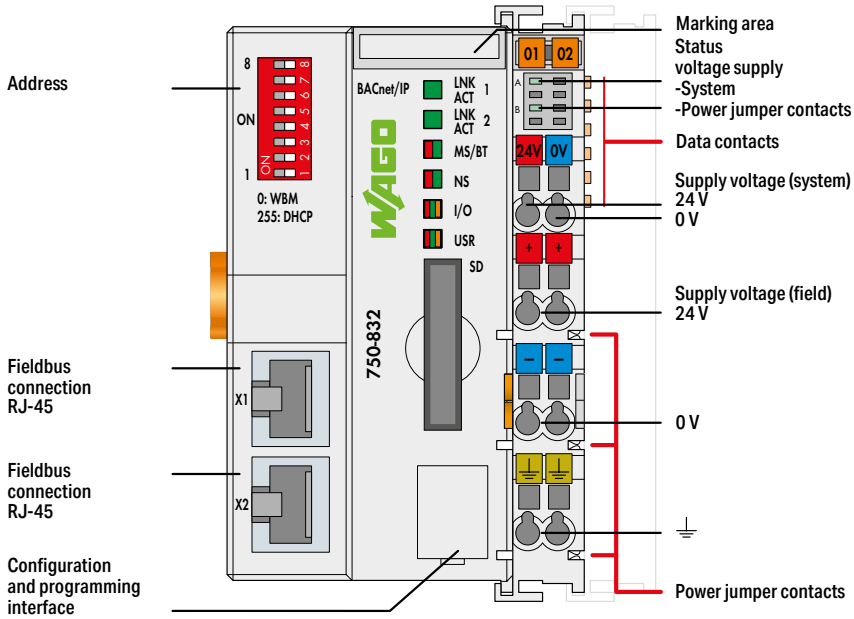


Version	**Default**
Item No.	**750-843**
Order Text	**Controller ETHERNET; G1; ECO**

Technical Data	
Communication	Modbus (TCP, UDP); ETHERNET
ETHERNET protocols	HTTP; BootP
Connection technology: communication/fieldbus	Modbus TCP/UDP: 1 x RJ-45
Bus segment length (max.)	100 m
Baud rate	10 Mbit/s
Visualization	Without
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 64 kbytes / 64 kbytes / 8 KB
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	512 bytes/512 bytes
Memory for fieldbus input variables (max.)	512 bytes
Memory for fieldbus output variables (max.)	512 bytes
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	200 mA
Total current (system supply)	1800 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-843

Controller 750 ▸ BACnet/IP; SD card slot

750-832



Version	Default	ECO
Item No.	**750-832**	**750-832/000-002**
Order Text	**Controller BACnet/IP; G4; 2xETH; SD**	**Controller BACnet/IP; G4; 2xETH; SD; ECO**

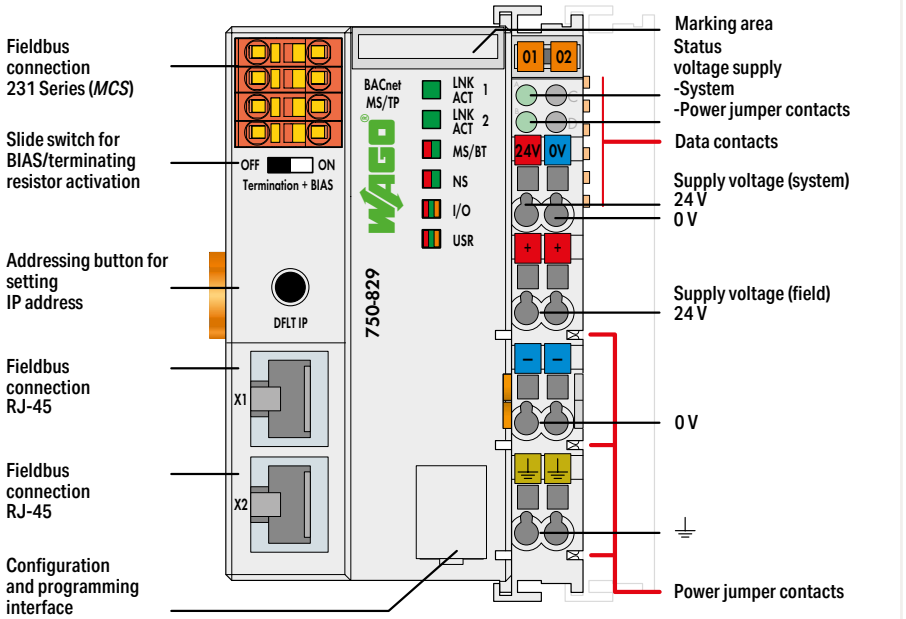
Technical Data		
Communication	BACnet/IP; Modbus (TCP, UDP)	
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; SNTP; FTP(S); SNMP	
Connection technology: communication/fieldbus	BACnet/IP: 2 x RJ-45; Modbus TCP/UDP: 2 x RJ-45	
Baud rate	10/100 Mbit/s	
Visualization	Web Visu	
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)	
Memory card type	SD and SDHC up to 32 GB (all guaranteed properties only valid with WAGO Memory Card)	
Device-specific	BACnet device profile: B-BC (BACnet building controller); BACnet revision: 12	
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 8 MB / 8 MB / 32 KB	
Number of modules per node (max.)	250	
Input and output (fieldbus) process image (max.)	1020 words/1020 words	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	500 mA	
Power consumption (5 V system supply)	440 mA	
Total current (system supply)	1700 mA	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(61.5 x 100 x 71.9) mm	
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx; BACnet approvals: WSPCert certification; BTL listing	
Data sheet and further information, see:	wago.com/750-832	

Accessories	Item No.	Item No.
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108	758-879/000-2108

750-832/000-002 Controllers support a maximum of 256 BACnet objects.

Controller 750 ▸ BACnet MS/TP

750-829



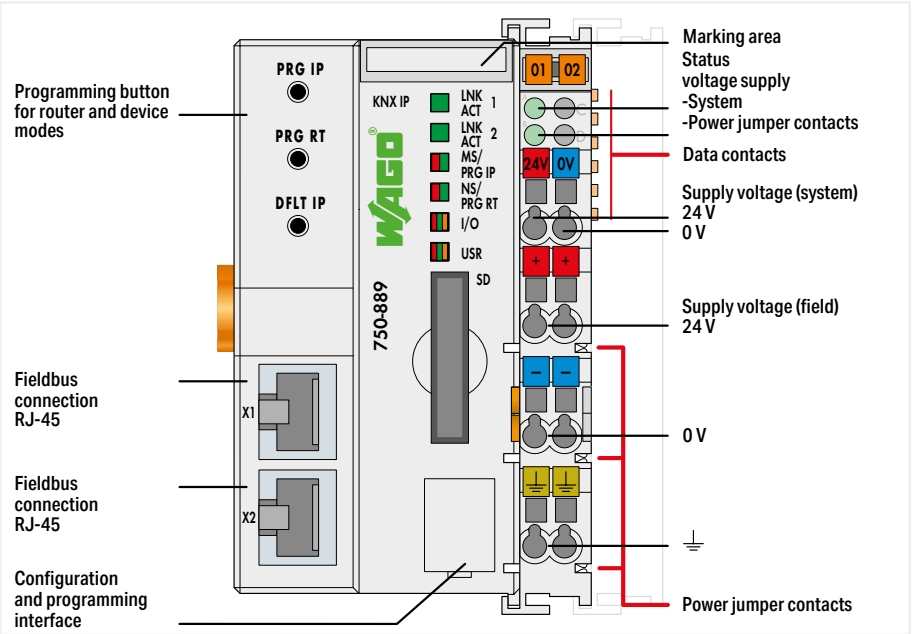
Version	**Default**
Item No.	**750-829**
Order Text	**Controller BACnet MS/TP**

Technical Data	
Communication	BACnet MS/TP; Modbus (TCP, UDP); ETHERNET
ETHERNET protocols	HTTP; BootP; DHCP; DNS; SNTP; FTP; SNMP; SMTP
Connection technology: communication/fieldbus	BACnet MS/TP: 1 x Male connector; 4-pole; Modbus TCP/UDP: 2 x RJ-45
Bus segment length (max.)	BACnet MS/TP: 1200 m; Depends on baud rate/cable (per BACnet standard) 1200 m at ≤ 76800 baud; 1000 m at > 76800 baud; ETHERNET: 100 m
Baud rate	BACnet MS/TP: 38.4 kBd (9600, 19200, 38400*, 57600, 76800, 115200 Bd (per BACnet standard); * Factory setting)
Visualization	Web Visu
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Device-specific	BACnet device profile: B-BC (BACnet building controller); BACnet revision: 1.7
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 1024 kbytes / 1024 kbytes / 32 KB
Number of modules per node (max.)	99
Input and output (fieldbus) process image (max.)	1020 words/1020 words
Memory for fieldbus input variables (max.)	512 bytes
Memory for fieldbus output variables (max.)	512 bytes
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	450 mA
Total current (system supply)	1700 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(61.5 x 100 x 71.9) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc
Data sheet and further information, see:	wago.com/750-829

5.3

Controller 750 ▸ KNX/IP

750-889



Version	**Default**
Item No.	**750-889**
Order Text	**Controller KNX/IP**

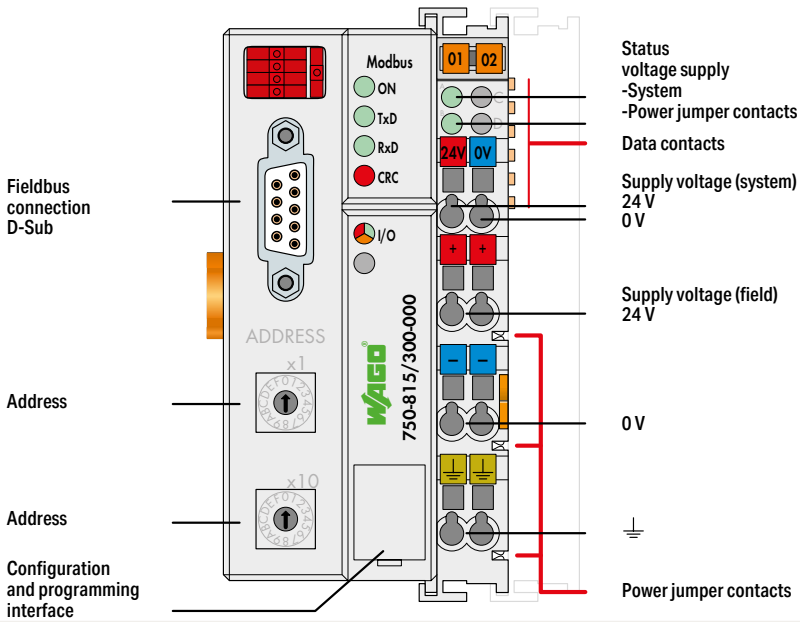
Technical Data	
Communication	KNX IP; Modbus (TCP, UDP); ETHERNET
ETHERNET protocols	HTTP; BootP; DHCP; DNS; AutoIP; SNTP; FTP; SNMP V3; SMTP
Connection technology: communication/fieldbus	KNX IP: 2 x RJ-45; Modbus TCP/UDP: 2 x RJ-45
Bus segment length (max.)	100 m
Baud rate	10/100 Mbit/s
Visualization	Web Visu
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Memory card type	SD and SDHC up to 32 GB (all guaranteed properties only valid with WAGO Memory Card)
Device specification	KNX/TP1 Bus Specification: 1.0
Device-specific	Number of group addresses: 254; Number of communication objects: 253
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 1024 kbytes / 1024 kbytes / 32 KB
Number of modules per node (max.)	250
Input and output (fieldbus) process image (max.)	1020 words/1020 words
Memory for fieldbus input variables (max.)	512 bytes
Memory for fieldbus output variables (max.)	512 bytes
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	450 mA
Total current (system supply)	1700 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(61.5 x 100 x 71.9) mm
KNX certified	IP Controller: 61/8316/08; IP Router: 61/8317/08
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc
Data sheet and further information, see:	wago.com/750-889

Accessories	**Item No.**
Memory Card SD; SLC-NAND; 2 Gbytes; Temperature from -40 to 90 °C	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108

This controller can accommodate two KNX logic devices at the same time: Programmable controller or KNX Router in connection with. KNX/EIB/TP1 Module Commissioning (KNX-side): via ETS plug-in, 2 programming buttons

Controller 750 ▸ MODBUS; RS-485; 115.2 kBd

750-815/300-000



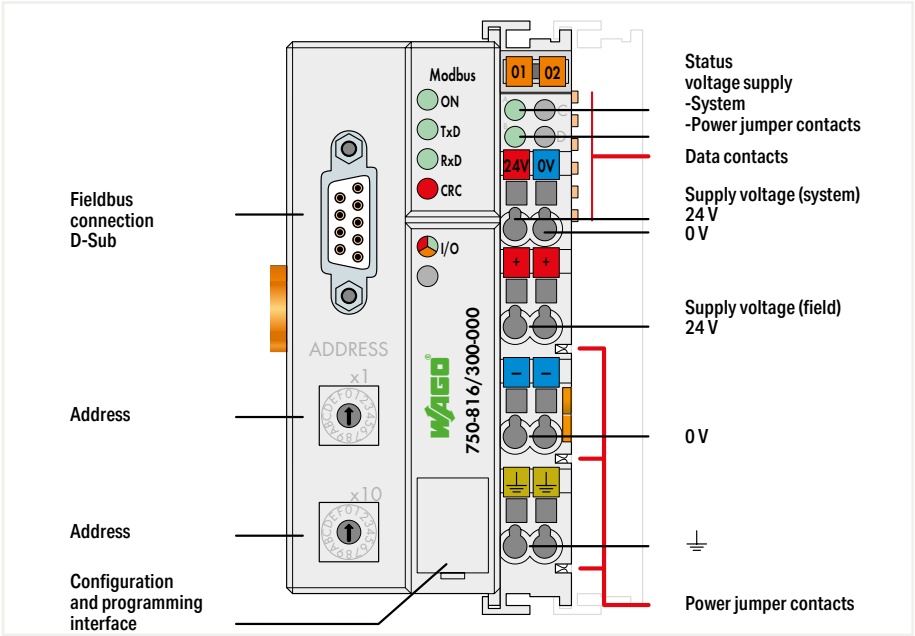
Version	Default	Ext. Temperature
Item No.	**750-815/300-000**	**750-815/325-000**
Order Text	**Controller MODBUS; RS485; 115.2kBd**	**Controller MODBUS; RS485; 115.2kBd; T**

Technical Data		
Communication	Modbus® RTU	
Connection technology: communication/fieldbus	Modbus RTU: 1 x D-sub 9 socket	
Bus segment length (max.)	1200 m	
Baud rate	150 Baud ... 115.2 kBd	
Number of fieldbus nodes on master (max.)	247	
Visualization	Without	
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)	
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 32 kbytes / 32 kbytes / 8 KB	
Number of modules per node (max.)	64	
Input and output (fieldbus) process image (max.)	1024 bytes/1024 bytes	
Memory for fieldbus input variables (max.)	512 bytes	
Memory for fieldbus output variables (max.)	512 bytes	
Supply voltage (system)	24 VDC (-25 ... +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	500 mA	
Power consumption (5 V system supply)	350 mA	
Total current (system supply)	1650 mA	
Surrounding air temperature (operation)	0 ... 55 °C	-20 ... 60 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-815/300-000	

5.3

Controller 750 ▸ MODBUS; RS-232; 115.2 kBd

750-816/300-000

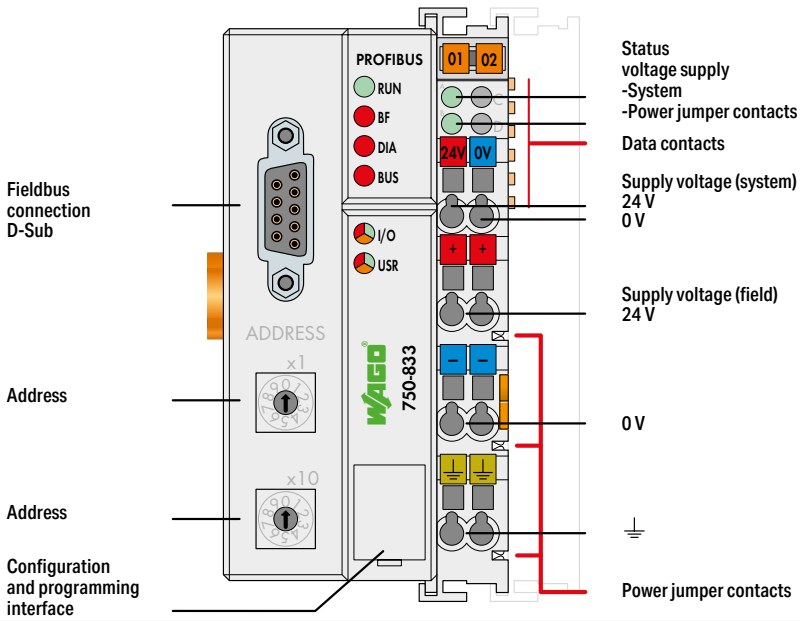


Version	**Default**
Item No.	**750-816/300-000**
Order Text	**Controller MODBUS; RS232; 115.2kBd**

Technical Data	
Communication	Modbus® RTU
Connection technology: communication/fieldbus	Modbus RTU: 1 x D-sub 9 socket
Bus segment length (max.)	1200 m
Baud rate	150 Baud ... 115.2 kBd
Number of fieldbus nodes on master (max.)	247
Visualization	Without
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 32 kbytes / 32 kbytes / 8 KB
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	1024 bytes/1024 bytes
Memory for fieldbus input variables (max.)	512 bytes
Memory for fieldbus output variables (max.)	512 bytes
Supply voltage (system)	24 VDC (-25 ... +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	350 mA
Total current (system supply)	1650 mA
Surrounding air temperature (operation)	0 ... 55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-816/300-000

Controller 750 ▶ PROFIBUS Slave

750-833



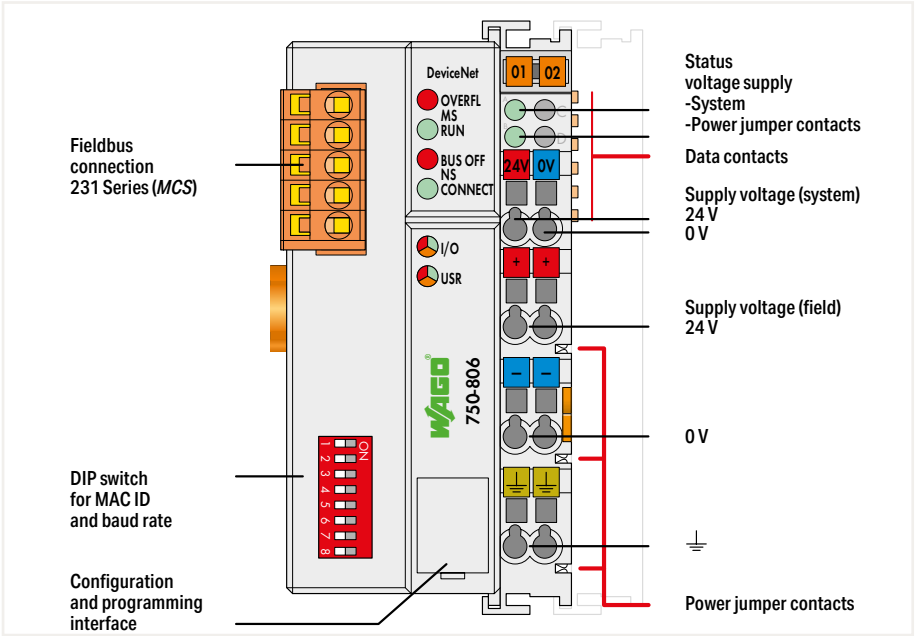
Version	Default	Ext. Temperature
Item No.	**750-833**	**750-833/025-000**
Order Text	**Controller PROFIBUS Slave**	**Controller PROFIBUS Slave; T**

Technical Data		
Communication	PROFIBUS	
Connection technology: communication/fieldbus	PROFIBUS: 1 x D-sub 9 socket	
Bus segment length (max.)	1200 m	
Baud rate	9.6 kBd ... 12 MBd	
Number of fieldbus nodes on master (max.)	96	
Visualization	Without	
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)	
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 128 kbytes / 64 kbytes / 8 KB	
Number of modules per node (max.)	63	
Input and output (fieldbus) process image (max.)	244 bytes/244 bytes	
Memory for fieldbus input variables (max.)	244 bytes	
Memory for fieldbus output variables (max.)	244 bytes	
Supply voltage (system)	24 VDC (-25 ... +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	500 mA	
Power consumption (5 V system supply)	200 mA	
Total current (system supply)	1800 mA	
Surrounding air temperature (operation)	0 ... 55 °C	-20 ... 60 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-833	

5.3

Controller 750 ▸ DeviceNet

750-806

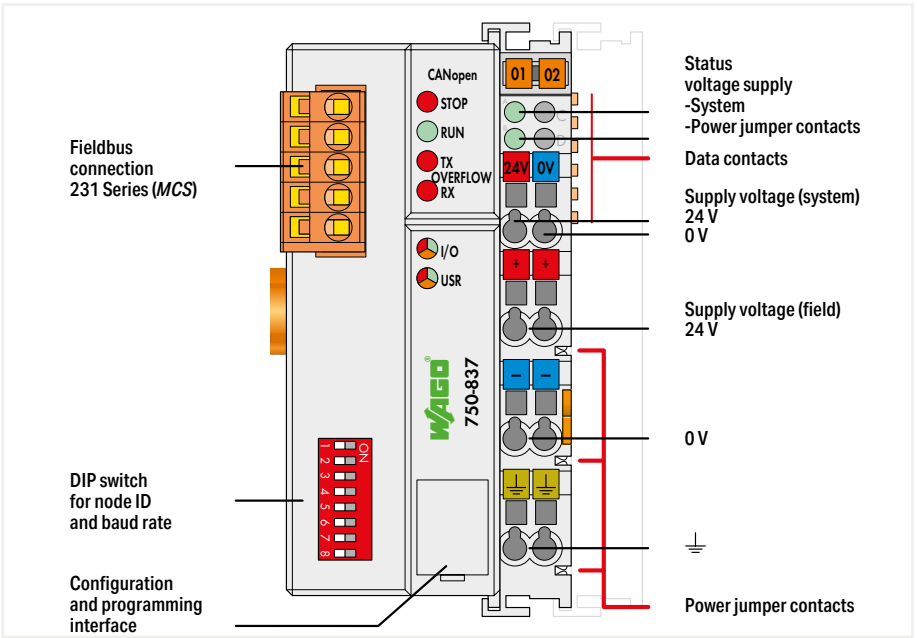


Version	**Default**
Item No.	**750-806**
Order Text	**Controller DeviceNet**

Technical Data	
Communication	DeviceNet
Connection technology: communication/fieldbus	DeviceNet: 1 x Male connector; 5-pole
Bus segment length (max.)	500 m
Baud rate	500 kBd (125 kBd, 250 kBd, 500 kBd)
Number of fieldbus nodes on master (max.)	64
Visualization	Without
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 128 kbytes / 64 kbytes / 8 KB
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	1024 bytes/1024 bytes
Memory for fieldbus input variables (max.)	512 bytes
Memory for fieldbus output variables (max.)	512 bytes
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	350 mA
Input current via DeviceNet interface at 11 V	120 mA
Total current (system supply)	1650 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-806

Controller 750 ▸ CANopen; MCS

750-837

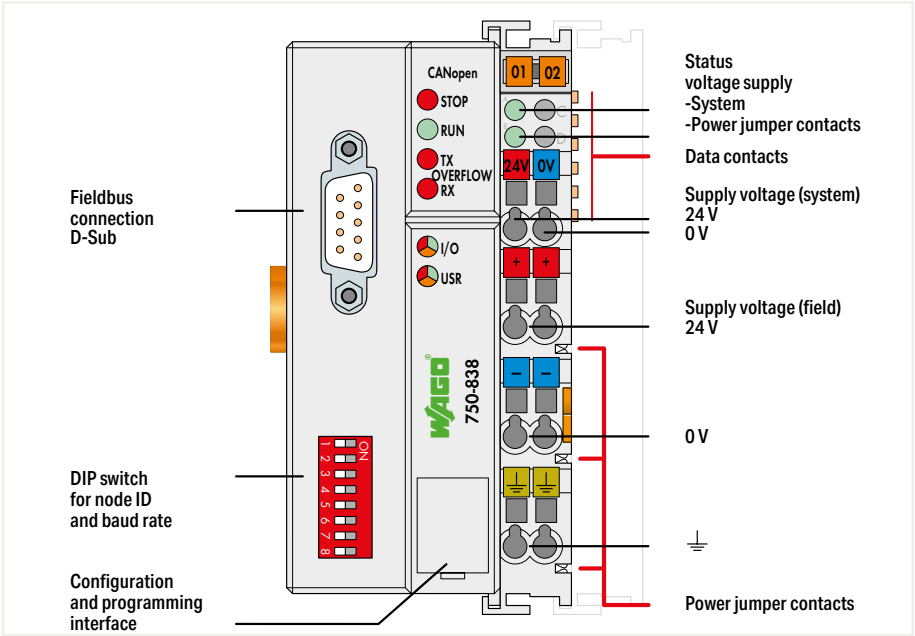


Version	Default	640/832 KB Program/RAM
Item No.	**750-837**	**750-837/021-000**
Order Text	**Controller CANopen; M1; MCS**	**Controller CANopen; M3; MCS**

Technical Data		
Communication	CANopen	
Connection technology: communication/fieldbus	CANopen: 1 x Male connector; 5-pole	
Bus segment length (max.)	1000 m	
Baud rate	10 kBd ... 1 MBd	
Number of fieldbus nodes on master (max.)	110	
Visualization	Without	
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)	
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 128 kbytes / 64 kbytes / 8 KB	CODESYS V2: 640 kbytes / 832 kbytes / 8 KB
Number of modules per node (max.)	64	
Input and output (fieldbus) process image (max.)	512 bytes/512 bytes	
Memory for fieldbus input variables (max.)	512 bytes	
Memory for fieldbus output variables (max.)	512 bytes	
Communication profile	DS-301 V4.01	
Device profile	DS-401 V2.0; Limit value monitoring; Edge-triggered PDOs; Configurable response in the event of an error; DSP 405; NMT master can be programmed using function blocks	
Number of PDOs	32 Tx / 32 Rx	
Number of SDOs	2 SDO servers / 16 SDO clients	
Supply voltage (system)	24 VDC (-25 ... +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	500 mA	
Power consumption (5 V system supply)	350 mA	
Total current (system supply)	1650 mA	
Surrounding air temperature (operation)	0 ... 55 °C	
Dimensions W x H x D	(50.5 x 100 x 71.1) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-837	

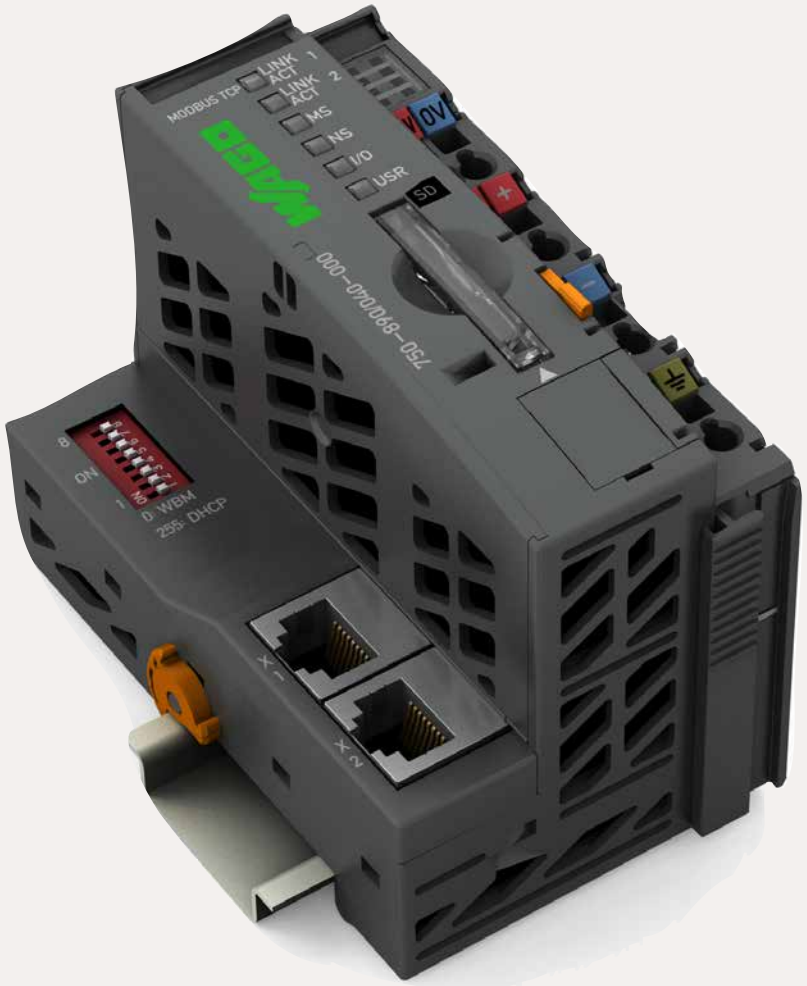
Controller 750 ▸ CANopen; D-sub

750-838



Version	Default	640/832 KB Program/RAM
Item No.	**750-838**	**750-838/021-000**
Order Text	**Controller CANopen; M1; DSub**	**Controller CANopen; M3; DSub**

Technical Data		
Communication	CANopen	
Connection technology: communication/fieldbus	CANopen: 1 x D-sub 9 plug	
Bus segment length (max.)	1000 m	
Baud rate	10 kBd … 1 MBd	
Number of fieldbus nodes on master (max.)	110	
Visualization	Without	
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)	
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 128 kbytes / 64 kbytes / 8 KB	CODESYS V2: 640 kbytes / 832 kbytes / 8 KB
Number of modules per node (max.)	64	
Input and output (fieldbus) process image (max.)	512 bytes/512 bytes	
Memory for fieldbus input variables (max.)	512 bytes	
Memory for fieldbus output variables (max.)	512 bytes	
Communication profile	DS-301 V4.01	
Device profile	DS-401 V2.0; Limit value monitoring; Edge-triggered PDOs; Configurable response in the event of an error; DSP 405; NMT master can be programmed using function blocks	
Number of PDOs	32 Tx / 32 Rx	
Number of SDOs	2 SDO servers / 16 SDO clients	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	500 mA	
Power consumption (5 V system supply)	350 mA	
Total current (system supply)	1650 mA	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(50.5 x 100 x 71.1) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-838	



Controllers 750 XTR

Touch Panels 600; Control Panel Hardware Configuration

◄◄◄◄◄ Section 3

Edge Controller

◄◄◄◄ Section 4

Controllers PFC100/PFC200

- Maximum performance in a minimum space
- Also programmable in high-level languages based on Linux®
- Security packages with SSH and SSL/TLS
- Runtime system for CODESYS V2 (only PFC200) and V3

◄◄◄ Section 5.1

Controllers PFC200 XTR

The advantages of WAGO's PFC Controllers combined with the capabilities for extreme environments:

- High processing speed
- Multiple interfaces
- eXTRemely robust and maintenance-free

◄◄ Section 5.2

Controllers 750

- Controllers for all common fieldbus systems
- Programmable per IEC 61131-3
- Readily combines with the modules of the WAGO I/O System 750

◄ Section 5.3

Controllers 750 XTR

For demanding applications in which the following are critical:

- Extreme temperature resistance
- Immunity to electromagnetic interference and impulse voltages
- Vibration and shock resistance

Starter Kits

To get you up and running quickly, we offer starter kits to suit the most diverse applications:

- with Controller PFC100 or PFC200
- with Controller 750 KNX IP
- with Touch Panel 600

Section 5.5 ►

Controllers 750 XTR
Contents

	CPU	ETHERNET: Modbus (TCP, UDP)	ETHERNET: Ethernet/IPTM	CANopen	Telecontrol Protocols: IEC 60870, IEC 61850/61400, DNP3	Description	Item No.	
	32 bits	M/S				Controller Modbus TCP; 4th Generation; 2 x ETHERNET, SD Card Slot; Extreme	750-890/040-000	166
	32 bits	M/S	S		x	Controller ETHERNET; 3rd Generation; SD Card Slot; Telecontrol Technology; Extreme	750-880/040-001	167
	32 bits			M/S		Controller CANopen; 640/832 KB Program/ RAM; D-Sub; Extreme	750-838/040-000	168

M: Master, S: Slave

Controllers 750 XTR
General Product Information

Controllers 750 XTR:
Taking It to the eXTReme – The Standard for 750 XTR

With the dark gray XTR version of the Controllers 750, you will benefit from the unique added value of this system for applications that are subjected to extreme environments.

Extremely temperature-resistant, immune to interference, as well as unfazed by vibrations and impulse voltages – the WAGO I/O System 750 XTR is the first choice for demanding applications including:

- Marine systems and onshore/offshore installations
- Renewable energy systems (wind turbines, solar systems and biogas plants)
- Transformer stations and power distribution systems
- Petrochemical processing
- Water and wastewater treatment systems
- Custom machines
- Railway systems

Marine and Onshore/Offshore Industries

International approvals coupled with industry-specific features permit use in marine applications and other harsh sectors. Addressing requirements inherent in specific industries and operating environments has enabled use on marine diesels and in the EMC-sensitive area of a vessel's bridge. Because the requirements are significantly greater for both interference immunity and emission, along with superior mechanical performance in these sensitive areas, the WAGO I/O System will readily meet the needs of other industries.

Telecontrol Technology

Standardized IEC 60870-5, IEC 61850, IEC 61400-25 and DNP3 Telecontrol Protocols allow the Controllers 750 XTR to be used in telecontrol applications. These controllers also meet stricter requirements for immunity to impulse voltages according to EN 60870-2-1.
The result is a tailor-made solution for demanding telecontrol applications that readily meets all requirements.

Link between Process Data and IT Application – Even under eXTReme Conditions

WAGO's controllers ideally combine real-time requirements with IT functionality. They support Modbus/TCP and EtherNet/IP for use in industrial environments. HTTP, SNTP, SNMP, FTP, BootP, DHCP, DNS and other protocols simplify integration into IT environments. Integrated Web pages and Web-based visualization provide IT applications with real-time process data. Furthermore, the controllers incorporate library functions for email, SOAP, ASP, IP configuration, ETHERNET sockets and file system.

Modular and Expandable

With the WAGO I/O System 750 XTR, the Controllers 750 XTR can be expanded to almost any input/output interface. Using an industry-leading platform, the 750 XTR boasts the same proven benefits.

Worldwide Approvals

International approvals for industrial automation, building technology, shipbuilding and onshore/offshore applications guarantee worldwide use – even under harsh operating conditions, e.g., Germanischer Lloyd, Det Norske Veritas, American Bureau of Shipping, Korean Register of Shipping, Nippon Kaiji Kyokai, Registro Italiano Navale and Polski Rejestr Stratkow.

Superior Reliability in Extreme Climates

Engineered for freezing cold, extreme heat and high humidity, the WAGO I/O System 750 XTR provides absolute dependability in virtually any weather. The XTR version of the Controllers 750 is unfazed by both freezing cold down to −40°C and scorching heat up to +70°C. And this applies equally to both start-up and ongoing operation. The maximum approved operating altitude of 5,000 m is another highlight. Even in the thin air of a mountain-top station, the system impressively demonstrates its high performance and availability.

Additional Protection against Interference Pulses

The WAGO I/O System 750 XTR provides greater immunity to impulse voltages up to 5 kV, lower EMC emission of interference and higher insensitivity to EMC interference. These strengths ensure trouble-free operation.

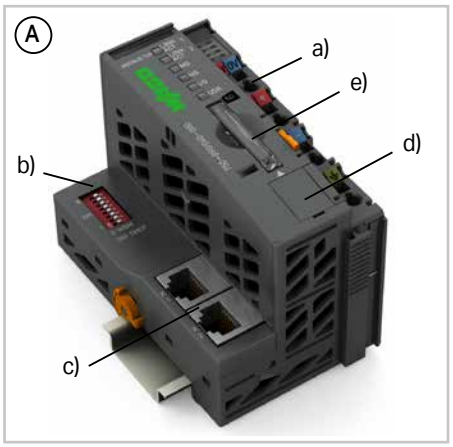
High Mechanical Performance

Automation systems must be incredibly vibration-resistant, especially when installed close to vibration-prone and shock-generating system components. Powerful motors and power circuit breakers are just two examples of the many applications that can stress automation systems. The WAGO I/O System 750 XTR continues to set new standards here. Count on long-lasting, trouble-free operation and industry-topping levels of safety – even in the most severe applications, such as tunnel boring machines.

Benefits:

- Controllers for eXTReme environmental conditions
  - No air conditioning required
  - Can be used in unshielded areas
  - Install close to vibrating and shock-generating system components
- Extensive IT integration possibilities
- Expandable with the WAGO I/O System 750 XTR's comprehensive product range
- Maintenance-free
- Vibration-proof, fast and maintenance-free CAGE CLAMP® spring connections

Controllers 750 XTR
Interfaces and Types



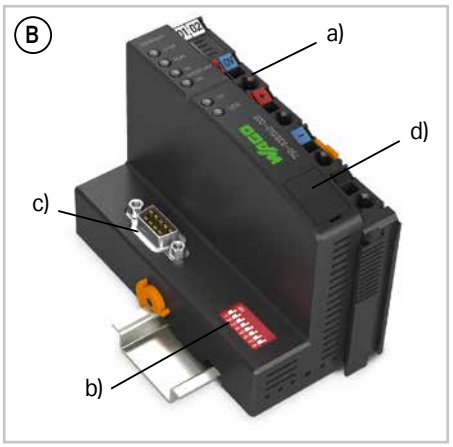
- Includes a supply module (a) to power downstream I/O modules
- Technical differences on the connection level; addressing switch (b) and fieldbus interface (c)
- Service interface (d)

Housing Design (A)

- SD card slot for external storage media (e)
- W x H x D (mm): 61.5 x 100 x 71.9

Housing Design (B)

- W x H x D (mm): 50.5 x 100 x 71.1



Item Number Key

Explanation of an item number key's components

Item No. : 750-8xx/040-00y

3x: 16 bits	CANopen
8x, 9x: 32-bit multitasking	ETHERNET
001:	Telecontrol Technology

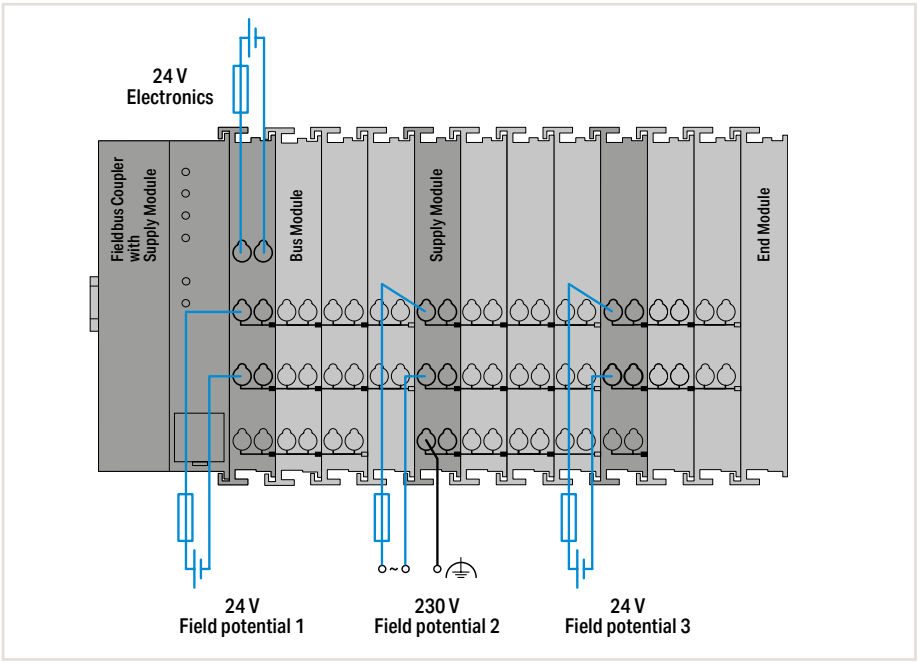
Standards and Rated Conditions for Railway Applications (EN 50155)

Railway Applications (EN 50155)	Class/Standard Compliance
4.1 Rated operating conditions	
4.1.1 Altitude above sea level	AX (EN 50125-1)
4.1.2 Surrounding air temperature	TX
4.1.3 Shock and vibration	1A and 1B (EN 61373)
4.1.4 Relative humidity	95 % (coated PCBs)
5.1 Power supply	
5.1.1.1 Voltage fluctuations	
Minimum voltage	0.725 x Un
Maximum voltage	1.3 x Un
5.1.1.2 Power interruptions	S1
5.4 Surge, ESD, burst tests	**EN 50121-3-2**
5.5 EMC (emission of interference, immunity to interference)	**EN 50121-3-2, EN 50121-4, -5**
Fire behavior: per EN 45545-2 hazard level HL3	
WAGO is certified in accordance with the IRIS quality standard.	

Controllers 750 XTR
Installation Instructions

Power Supply

The controller powers the internal electronics. The power supply to the field-side supply is electrically isolated. This division enables a separate supply for sensors and actuators. Snapping the I/O modules together automatically routes the supply voltages. Supply modules with diagnostics also enable power supply monitoring. This ensures a flexible and customized supply configuration for a fieldbus node.
Power supply to the electronics is limited by a maximum value. This value is dependent on the controller used. If the sum of the internal current demand of all the I/O modules should exceed this value, an additional system supply module is necessary. Furthermore, the current consumed for field-side supply must not exceed 10 A. A variety of power supply modules allows re-feeding, creating potential groups and implementing emergency stops.



Interference-Free in Safety-Related Applications

To easily and safely perform a cost-effective and centralized deactivation of complete actuator groups, the actuator's power supply can be switched off using a safety switching device. This can either be performed for each individual actuator or by turning off the power supply to a group of control outputs.
In the event of failure, ensure that no interference from other current or power circuits occurs – even when the control voltage is switched off – so the defined safety function properties (logic and time response) remain unchanged.

All 750 XTR Series Digital Output Modules are designed to provide interference-free safety functionality. The modules can be used in safety applications up to category 4 per DIN EN ISO 13849-1:2007. Safety category and performance level depend solely on the safety components and their wiring.

Notice:

WAGO's interference-free I/O modules have no active influence on the safety function, they are not an active part of the safety application and are not a substitute for the safety switching device! When using the components in safety functions, the corresponding notes must be observed in the relevant manual.

Notes:

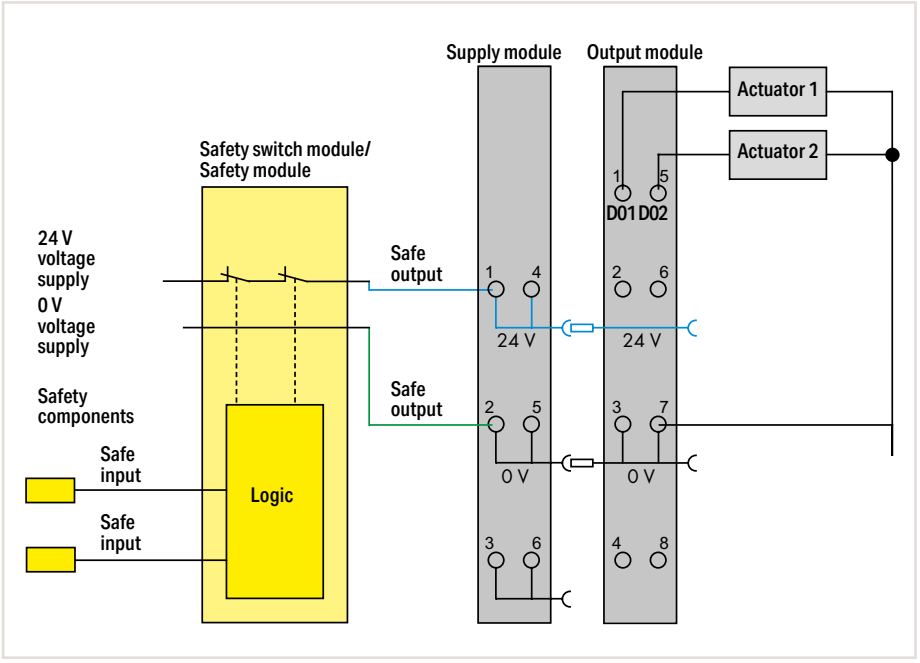
Additional steps must be implemented based on where the I/O system is installed:

Specific power and field-side power supply filters (750-624/040-001 or 750-626/040-000) are required for marine and onshore/offshore applications, as well as in telecontrol and rail technology.

Please refer to the manual for details about the power supply's design.

Mixed Operation

Mixed operation (standard/XTR modules) within a node is possible when groups of modules are electrically isolated on the field side (i.e., electrically isolated power supply). This combination may be useful, for example, when there are only increased requirements for immunity to impulse voltages and interference, but the surrounding air temperature is not critical.



Controller 750 XTR
Standards and Rated Conditions

General Specifications	
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Surrounding air temperature (operation)	-40 … 70 °C
Surrounding air temperature (storage)	-40 … 85 °C
Relative humidity (without condensation)	95 %
Relative humidity (with condensation)	Short-term condensation per Class 3K7/IEC EN 60721-3-3 and E-DIN 40046-721-3 (except for wind-driven precipitation, water and ice formation)
Operating altitude	Without temperature derating: 0 … 2000 m; with temperature derating: 2000 … 5000 m (0.5 K/100 m); 5000 m (max.)
Pollution degree (5)	2 per IEC 61131-2
Vibration resistance	Per IEC 60068-2-6 (acceleration: 5g), EN 60870-2-2, IEC 60721-3-1, -3, EN 50155; EN 61373
Shock resistance	Per IEC 60068-2-27 (15g/11 ms/half-sine/1,000 shocks; 25g/6 ms/1,000 shocks), EN 50155, EN 61373
EMC immunity to interference	Per EN 61000-6-1, -2; EN 61131-2; marine applications; EN 50121-3-2; EN 50121-4, -5; EN 60255-26; EN 60870-2-1; EN 61850-3; IEC 61000-6-5; IEEE 1613; VDEW: 1994
EMC emission of interference	Per EN 61000-6-3, -4, EN 61131-2, EN 60255-26, marine applications, EN 60870-2-1, EN 61850-3, EN 50121-3-2, EN 50121-4, -5
Protection type	IP20
Mounting position	Horizontal (standing/lying); vertical
Mounting type	DIN-35 rail
Housing material	Polycarbonate; polyamide 6.6
Exposure to pollutants	Per IEC 60068-2-42 and IEC 60068-2-43
Permissible SO_2 contaminant concentration at a relative humidity 75 %	25 ppm
Permissible H_2S contaminant concentration at a relative humidity 75 %	10 ppm
Connection technology: system supply	2 x CAGE CLAMP®
Connection technology: field supply	4 x CAGE CLAMP®
Solid conductor	0.25 … 2.5 mm² / 24 … 14 AWG
Fine-stranded conductor	0.25 … 2.5 mm² / 24 … 14 AWG
Strip length	8 … 9 mm / 0.31 … 0.35 inch
Current carrying capacity (power jumper contacts)	10 A

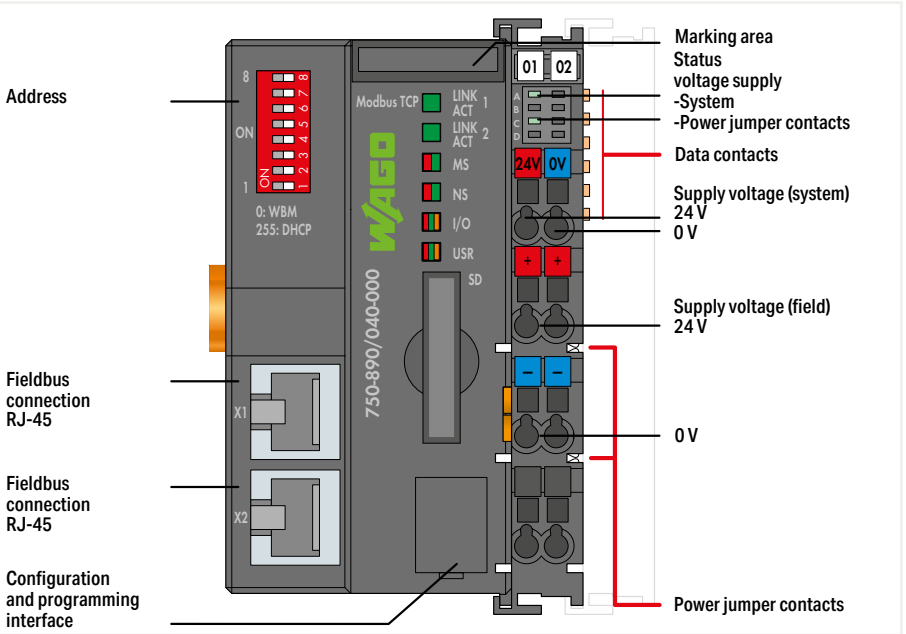
Approvals

Overview of the approvals in the item comparison in Section 14, Technical Section, or online at www.wago.com

Cables and pluggable connectors	Page 671
DIN-rail	Page 706
General accessories	Page 614
Marking	Page 704
Shield termination	Page 698
Software	Page 36
System enclosure	Page 683

Controller 750 XTR ▸ Modbus TCP; SD card slot

750-890/040-000



Version	**Extreme**
Item No.	**750-890/040-000**
Order Text	**Controller Modbus TCP; G4; SD; XTR**

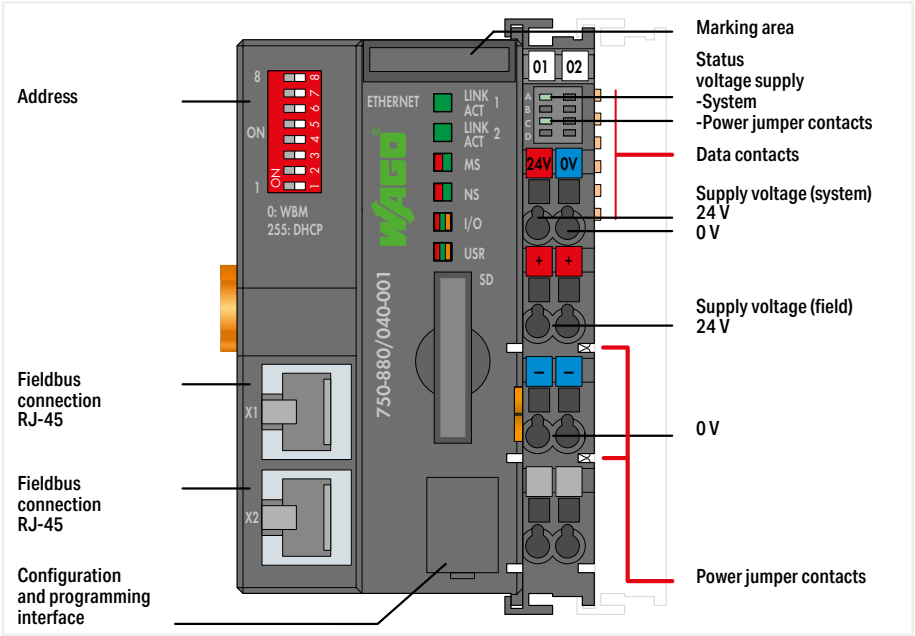
Technical Data	
Communication	Modbus (TCP, UDP)
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; SNTP; FTP(S); SNMP
Connection technology: communication/fieldbus	Modbus TCP/UDP: 2 x RJ-45
Baud rate	10/100 Mbit/s
Visualization	Web Visu
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Memory card type	SD and SDHC up to 32 GB (all guaranteed properties only valid with WAGO Memory Card)
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 8 MB / 8 MB / 32 KB
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	1020 words/1020 words
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Supply voltage (field)	24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	440 mA
Total current (system supply)	1700 mA
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(61.5 x 100 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-890/040-000

Accessories	**Item No.**
Memory Card SD; SLC-NAND; 2 Gbytes; Temperature from -40 to 90 °C	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108

5.4

Controller 750 XTR ▸ 2 x ETHERNET; SD card slot

750-880/040-001



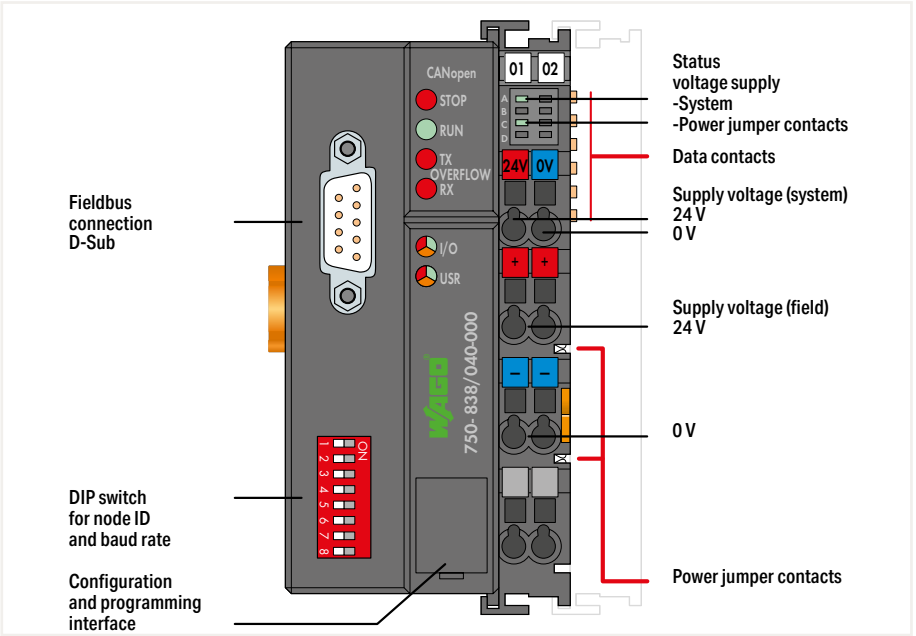
Version	**Telecontrol Technology; Extreme**
Item No.	**750-880/040-001**
Order Text	**Controller ETHERNET; G3; SD; Tele; XTR**

Technical Data	
Communication	EtherNet/IP™; Modbus (TCP, UDP); ETHERNET; Telecontrol protocols
ETHERNET protocols	HTTP; BootP; DHCP; DNS; SNTP; FTP; SNMP
Telecontrol protocols	IEC 60870-5-101/-103/-104; IEC 61400-25; IEC 61850-7; DNP3
Connection technology: communication/fieldbus	EtherNet/IP™: 2 x RJ-45; Modbus TCP/UDP: 2 x RJ-45; Telecontrol protocol IEC 60870-5-101/-103: 1 x Serial interface via I/O module; Telecontrol protocol IEC 60870-5-104: 1 x RJ-45; Telecontrol protocol IEC 61850: 1 x RJ-45; Telecontrol protocol DNP3: 1 x RJ-45
Baud rate	10/100 Mbit/s
Visualization	Web Visu
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Memory card type	SD and SDHC up to 32 GB (all guaranteed properties only valid with WAGO Memory Card)
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 1024 kbytes / 1024 kbytes / 32 KB
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	1020 words/1020 words
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Supply voltage (field)	24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed!
Derating	Total current for system supply: 1700 mA (surrounding air (operating) temperature < 60 °C; 1500 mA (surrounding air (operating) temperature: 60 … 70 °C); Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	450 mA
Total current (system supply)	1700 mA
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(61.5 x 100 x 71.9) mm
Approvals	CE; KC; schiff Marine; cULus OrdLoc/HazLoc; Ex ATEX/IECEx
Data sheet and further information, see:	wago.com/750-880/040-001

Accessories	**Item No.**
Memory Card SD; SLC-NAND; 2 Gbytes; Temperature from -40 to 90 °C	758-879/000-001
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108

Controller 750 XTR ▸ CANopen; D-sub

750-838/040-000



Version	Extreme
Item No.	**750-838/040-000**
Order Text	**Controller CANopen; M3; DSub; XTR**

Technical Data	
Communication	CANopen
Connection technology: communication/fieldbus	CANopen: 1 x D-sub 9 plug
Bus segment length (max.)	1000 m
Baud rate	10 kBd ... 1 MBd
Number of fieldbus nodes on master (max.)	110
Visualization	Without
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Program memory/data memory/non-volatile memory (software)	CODESYS V2: 640 kbytes / 832 kbytes / 8 KB
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	512 bytes/512 bytes
Memory for fieldbus input variables (max.)	512 bytes
Memory for fieldbus output variables (max.)	512 bytes
Communication profile	DS-301 V4.01
Device profile	DS-401 V2.0; Limit value monitoring; Edge-triggered PDOs; Configurable response in the event of an error; DSP 405; NMT master can be programmed using function blocks
Number of PDOs	32 Tx / 32 Rx
Number of SDOs	2 SDO servers / 16 SDO clients
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Supply voltage (field)	24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed!
Derating	Total current for system supply: 1650 mA (surrounding air (operating) temperature < 60 °C; 1250 mA (surrounding air (operating) temperature: 60 ... 70 °C); Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 ... +30 %); for -40 ... +55 °C: 24 V (-25 ... +20 %); for +55 ... +70 °C: 24 V (-25 ... +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	350 mA
Total current (system supply)	1650 mA
Surrounding air temperature (operation)	-40 ... 70 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-838/040-000

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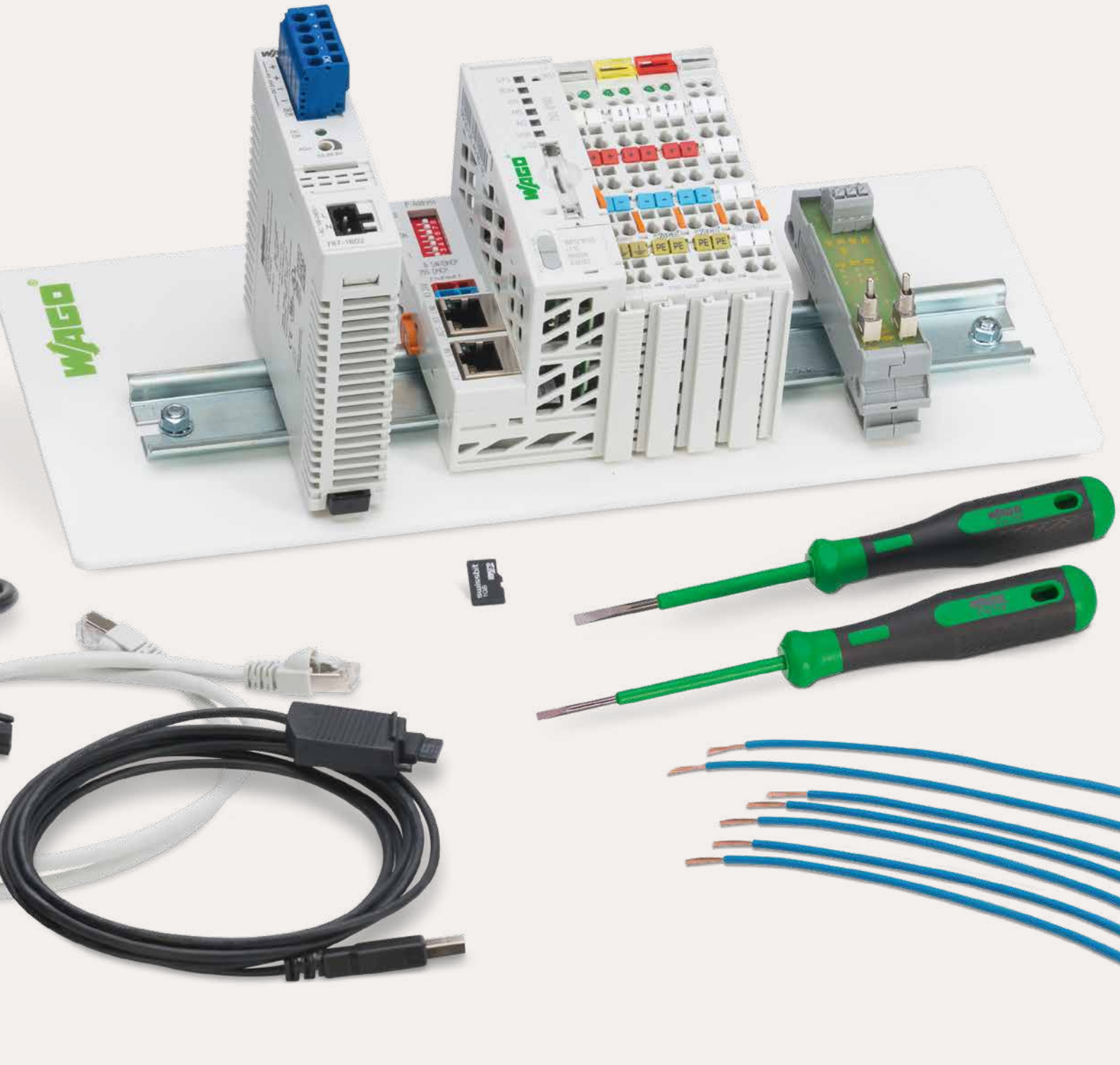


Starter Kits

Controllers PFC100/PFC200

- Maximum performance in a minimum space
- Also programmable in high-level languages based on Linux®
- Security packages with SSH and SSL/TLS
- Runtime system for CODESYS V2 (only PFC200) and V3

◄◄◄◄ Section 5.1

Controllers 750

- Controllers for all prominent fieldbus systems
- Programmable per IEC 61131-3
- Readily combines with the modules of the WAGO I/O System 750

◄◄ Section 5.3

I/O System – 750 and 753 Series

- Highly versatile
- More than 500 modules available
- Functional safety
- Ex i

Section 7 ►►

Starter Kits

To get you up and running quickly, we offer starter kits to suit the most diverse applications:
- with Controller PFC100 or PFC200
- with Controller 750 KNX IP
- with Touch Panel 600

WAGO Starter Kits
Contents

M: Master, S: Slave; *requires an additional license

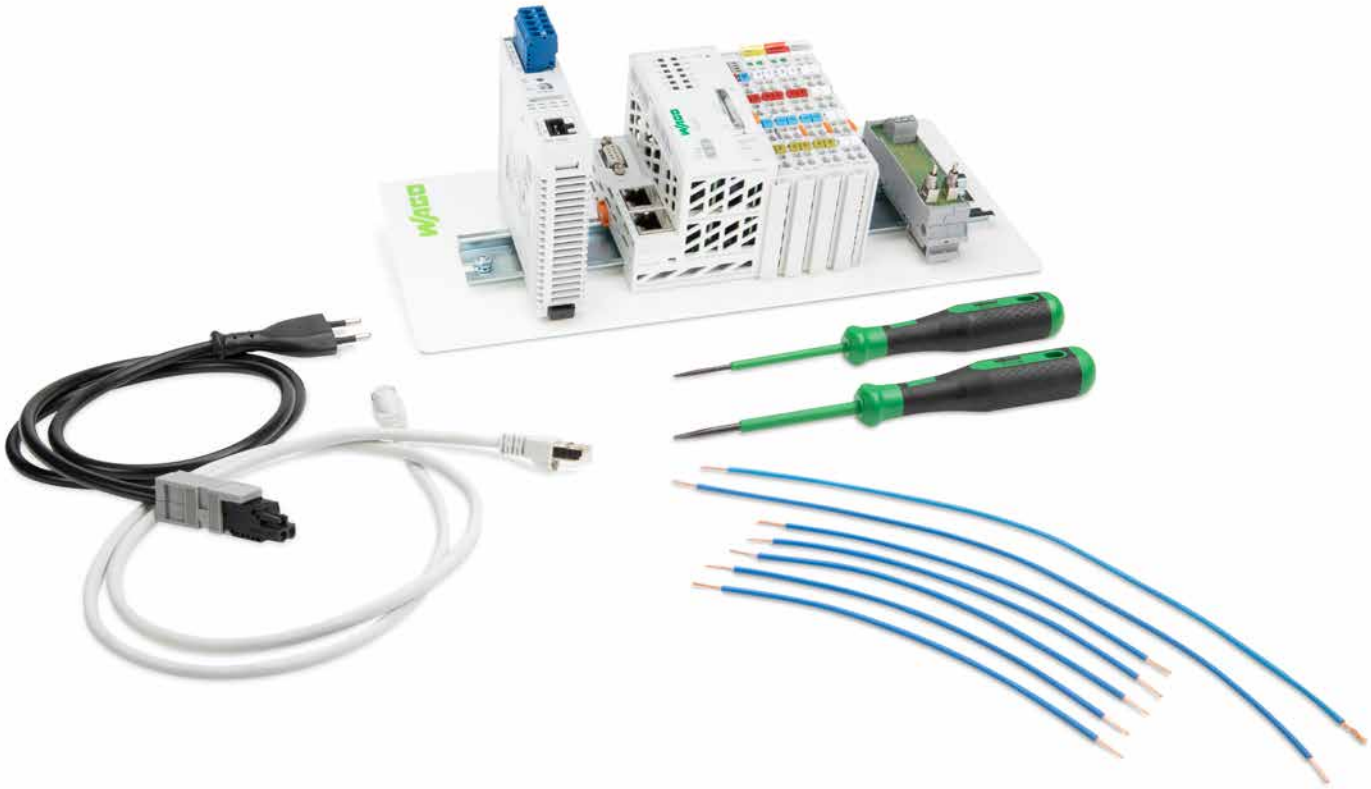
Starter Kit; *e!COCKPIT* with Controller PFC100; 2 x ETHERNET; Eco

The PFC100 Controller can be seamlessly integrated into WAGO's ***e!COCKPIT*** Engineering Software, which can be used for hardware configuration, programming, simulation and visualization of complex control tasks.

Tightly integrated automation software and controller hardware provide the ideal platform for advanced and intuitive CODESYS V3-based engineering.

Item Description	Item No.
Starter Kit; *e!COCKPIT*	**8003-099/750-8100**
The WAGO Starter Kit *e!COCKPIT* includes:	
Controller PFC100; 2 x ETHERNET; Eco	**750-8100**
Supply Module; 24 VDC	**750-602**
2-Channel Digital Input; 24 VDC; 3 ms	**750-400**
2-Channel Digital Output; 24 VDC; 0.5 A	**750-501**
End Module	**750-600**
Power Supply Classic; 24 VDC output voltage; 1 A	**787-1602**
Switching Module; 2-way DI simulator	**288-863**
Development Environment ***e!COCKPIT***; Licence for 1 PC	**2759-0101/1111-5000**
USB Communication Cable; 2.5 m	**750-923**
Memory Card microSD; 2 GB	**758-879/000-3102**
Operating Tool; Type 1; (3.5 x 0.5) mm blade	**210-720**
Operating Tool; Type 1; (2.5 x 0.4) mm blade	**210-719**
Patch Cable; 1.0 m	

Starter Kit; Linux®
with Controller PFC200; 2nd Generation; 2 x ETHERNET, RS-232/-485



With the PFC200 Controller as its central component, the Linux® Starter Kit provides an entry to the world of open programming. In addition to its scalability through the open-source community, the primary advantage of having a controller with an open-source operating system is its continual development and maintenance.

Besides the PFC200, other components of the starter kit include input and output modules, a power supply, a switching module and the accessories needed to start programming immediately with Linux®.

Additional information on Linux® is available at:
wago.com/linux

Item Description	Item No.
Starter Kit; Linux®	**8003-099/750-8212**
The WAGO Starter Kit Linux® includes:	
Controller PFC200; 2nd Generation; 2 x ETHERNET, RS-232/-485	**750-8212**
2-Channel Digital Input; 24 VDC; 3 ms	**750-400**
2-Channel Digital Output; 24 VDC; 0.5 A	**750-501**
End Module	**750-600**
Power Supply Classic; 24 VDC output voltage; 1 A	**787-1602**
Switching Module; 2-way DI simulator	**288-863**
Operating Tool; Type 1; (3.5 x 0.5) mm blade	**210-720**
Operating Tool; Type 1; (2.5 x 0.4) mm blade	**210-719**
Patch Cable; 1.0 m	

Starter Kit; Touch Panel 600, Advanced Line, Control Panel

The WAGO Starter Kit Touch Panel 600 contains an Advanced Control Panel 17.8 cm (7.0") with a full single-user license of the ***e!COCKPIT*** Engineering Software (based on CODESYS V3).
Required accessories for power supply, assembly and installation of the panel are included for easy commissioning.

Demo applications, which illustrate the extensive possibilities of visualization, web connectivity and programming with ***e!COCKPIT***, can be started directly from the SD card.
Additionally, a Docker® application demonstrates another option for creating applications under Linux® via open-source software.

After a successful start, both the open operating system and the full version of the engineering software are available for the free creation of applications.
WAGO's Touch Panel has 2 x LAN, 1 x RS, 1 x CAN, DI/O interfaces and supports communication protocols such as Modbus/UDP/TCP/RTU, CANopen, CAN2.0, OPC UA, MQTT.
Additional protocols, such as BACnet/IP or EtherCAT® (Master), can be licensed optionally.

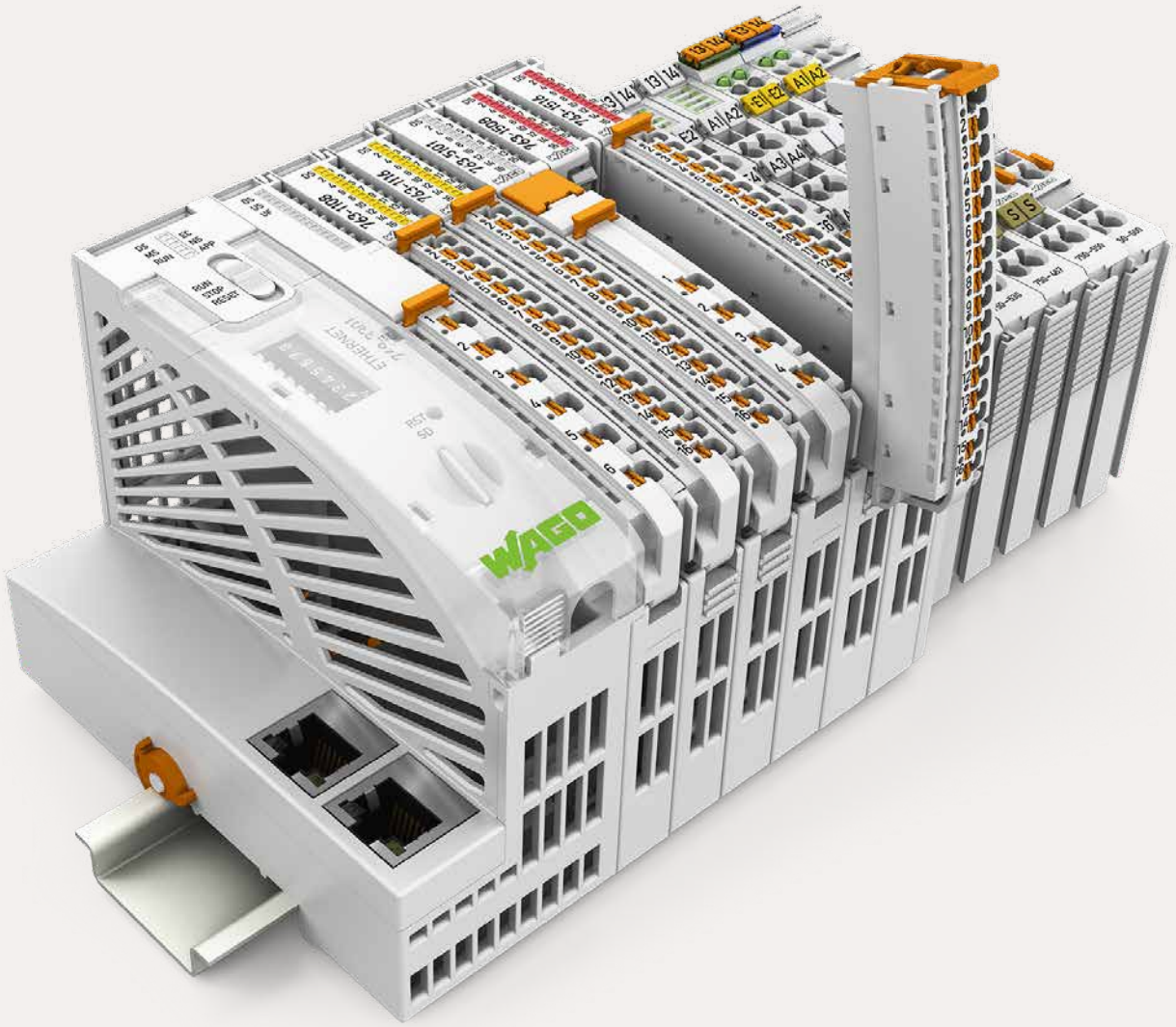
Item Description	Item No.
Starter Kit; Touch Panel 600, Advanced Line, Control Panel	**8003-099/762-5303**
The WAGO Starter Kit Touch Panel 600 includes:	
Touch Panel 600; 17.8 cm (7.0"); 800 x 480 pixels; 2 x ETHERNET, 2 x USB, CAN, DI/DO, RS-232/485, Audio; Control Panel	**762-5303/8000-002**
Power Supply Classic; 24 VDC output voltage; 1 A	**787-1602**
Development Environment ***e!COCKPIT***; Licence for 1 PC	**2759-0101/1111-5000**
Memory Card microSD; pSLC-NAND; 8 GB	**758-879/000-3108**
Operating Tool; Type 1; (2.5 x 0.4) mm blade	**210-719**
Allen Wrench	
Cable; black/red; 2 x 0.5; 0.3 m	
Power Cable; 230 V	
Aluminum Feet; with groove	
Product Display; with cutout for 7" Touch Panel	
Mounting Accessories (Locking Clips, Mounting Brackets, M4×8 Screws)	
Patch Cable F/UTP; 1.0 m	

Starter Kit; KNX IP with Controller KNX IP

The WAGO Starter Kit KNX IP is available for those new to KNX IP. This starter kit is particularly well-suited to users seeking to:

- Expand existing KNX/EIB networks via the KNX/EIB/TP1 Interface to include the functionality of the modular WAGO I/O System and program applications themselves (IEC 61131-3)
- Have remote access to their KNX/EIB/TP1 network via the router
- Exploit the advantages of an ETHERNET network with KNX/EIB projects via the IP controller

Item Description	Item No.
Starter Kit; KNX IP	**8003-001/K999-9999/000-901**
The WAGO Starter Kit KNX IP includes:	
Controller KNX IP	**750-889**
4-Channel Digital Input; 24 VDC; 3 ms	**750-402**
4-Channel Digital Output; 24 VDC; 0.5 A	**750-504**
End Module	**750-600**
KNX/EIB/TP1 Interface	**753-646**
Switched-Mode Power Supply; 24 VDC output voltage; 1.3 A	**787-602**
Development Environment, incl. USB Communication Cable; WAGO-I/O-*PRO*; USB Kit	**759-333/000-923**
Patch Cable; Cross-Over	



I/O System Advanced

I/O System Advanced

- Open, innovative and future-proof industrial automation
- Short reaction times and high signal transmission synchronicity
- Fast ETHERNET fieldbuses – EtherCAT®

I/O System – 750 and 753 Series

- Highly versatile
- More than 500 modules available
- Functional safety
- Ex i

Section 7 ►

I/O System – 750 XTR Series

For demanding applications in which the following are critical:

- Extreme temperature resistance
- Immunity to electromagnetic interference and impulse voltages
- Vibration and shock resistance

Section 8 ►►

I/O System Field

Automate and Network Modular Machines for the Future

- Ethernet-based fieldbus standards (EtherCAT®, EtherNet/ IPTM, PROFINET)
- Integrated Bluetooth® interface (Android/iOS App), OPC UA Server, Webserver
- IO-Link Master and Devices

Section 9 ►►►

I/O System Advanced
Contents

WAGO I/O System Advanced
General Product Information

Top Performance for Industrial Automation

Short reaction times, high signal transmission synchronicity and the ability to use fast ETHERNET fieldbuses like PROFINET, EtherCAT® and EtherNet/IP™ make WAGO's Advanced I/O System the new benchmark for high-end industrial automation systems.

The inherent strengths of the Advanced I/O System mean that more performance is on the horizon with the integration of communication protocols via TSN (Time-Sensitive Networking).

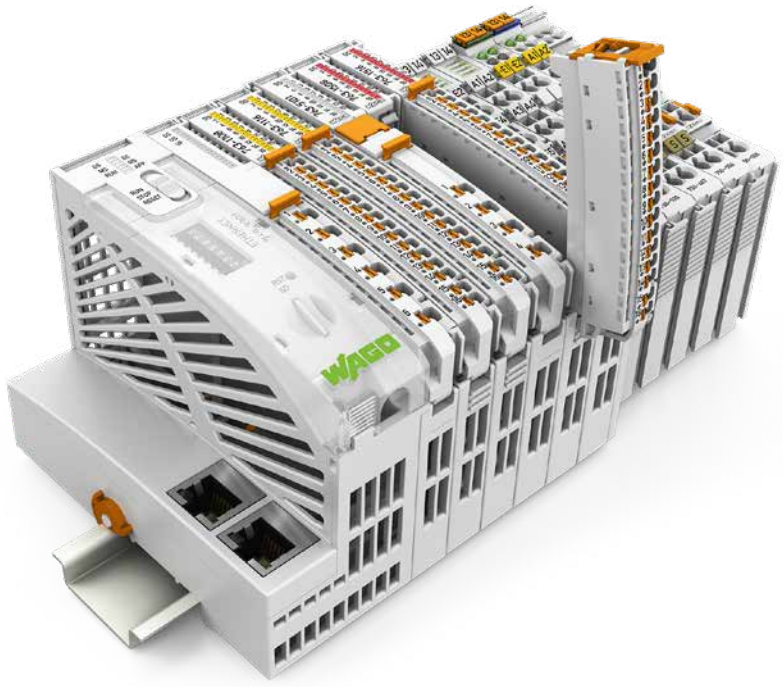
WAGO I/O System Advanced Unites the Proven with Peak Performance

The WAGO I/O System Advanced capitalizes on the continuous development of the proven WAGO I/O System 750, uniting its industry-proven strengths with outstanding performance in a fresh and user-friendly design.
The Advanced PFC200 Controller for WAGO's new I/O System is based on technology that is both time-tested and future-proof. This controller brings the industry-proven PFC functionalities from the WAGO I/O System 750 to the Advanced I/O System. The new controller is a bridge to various IT and OT technologies. Sending data to the cloud and leveraging all the benefits of cloud computing are straightforward, thanks to a large number of interfaces and the highest cybersecurity standards.

At the same time, operators benefit from the system's added value. Thus, programming with intuitive *e!COCKPIT* Engineering Software comes into play for automation tasks. To fulfill specialized requirements, the possibilities of the open Linux® operating systems and Docker process visualization can be used.
This gateway offers a direct start with the wide WAGO I/O System 750's product line. Thanks to a large variety of I/O modules available, the system is ready for immediate use in virtually any application.

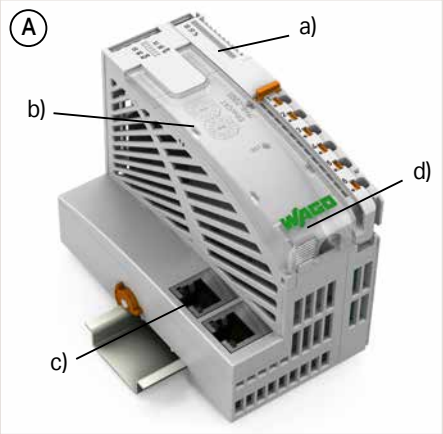
Made for TSN

Connectivity and speed are the foundations of modern production facilities. With the WAGO I/O System Advanced, WAGO has developed a new IP20 solution that incorporates cutting-edge technologies such as TSN and OPC UA.
This means the new Advanced I/O System readily meets all the requirements placed on a future-proof automation system.

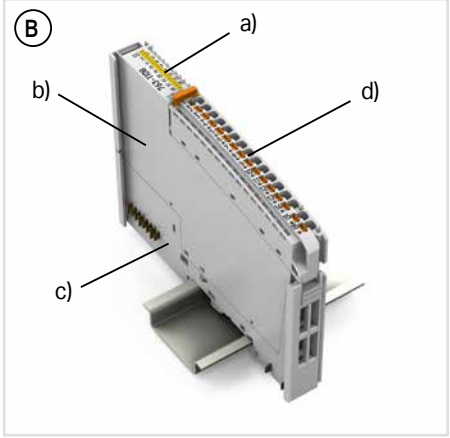


Your Benefits:
- An open, innovative and future-proof automation system for mechanical engineering
- The WAGO I/O System Advanced combines the proven benefits and functionality of the 750 Series with an ergonomic design, error-preventing mechanics and outstanding performance.

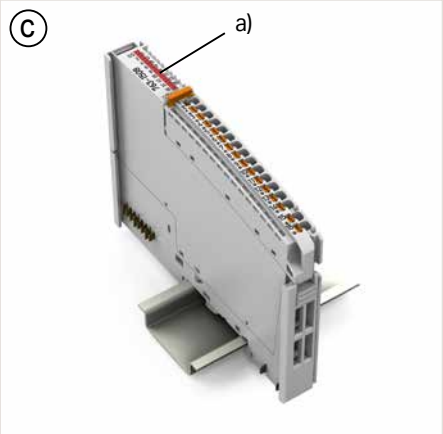
WAGO I/O System Advanced
Interfaces and Types

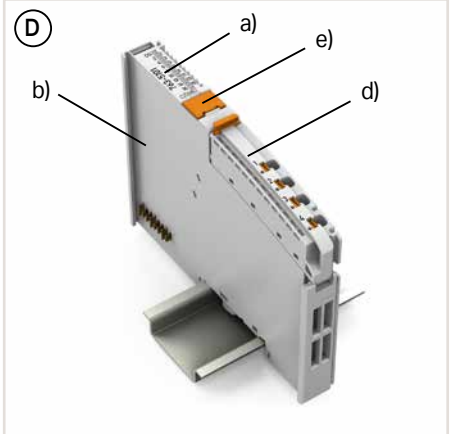


Housing Design: Fieldbus Coupler (A)
- Includes a supply module (a) to power downstream I/O modules
- Connection technology (system/field supply): Push-in CAGE CLAMP®; conductor cross-section, mechanical: solid/fine-stranded: 0.25 … 2.5 mm² / 22 … 14 AWG
- Address switch (b)
- Fieldbus interface 2 x RJ-45 (c)
- Service interface (d)
- W x H x D (mm): 63 x 105 x 75



Housing Design: I/O Module (B, C)
- Function differentiation by color coding (a) yellow = digital input; red = digital output; gray = supply
- I/O modules consist of an electronic unit (b), a base unit (c) and a pluggable wiring unit (d).
- 16 connection points (Push-in CAGE CLAMP®) Conductor cross-section (mechanical): solid/fine-stranded: 0.25 … 1.5 mm² / 22 … 16 AWG
- W x H x D (mm): 12 x 105 x 75





Housing Design: Supply Module (D, E)
- Supply modules consist of an electronic unit with integrated base unit (b) and pluggable wiring unit (d).
- Conductor cross-section (mechanical): solid/fine-stranded: 0.25 … 2.5 mm² / 22 … 14 AWG
- W x H x D (mm): 12 x 105 x 75

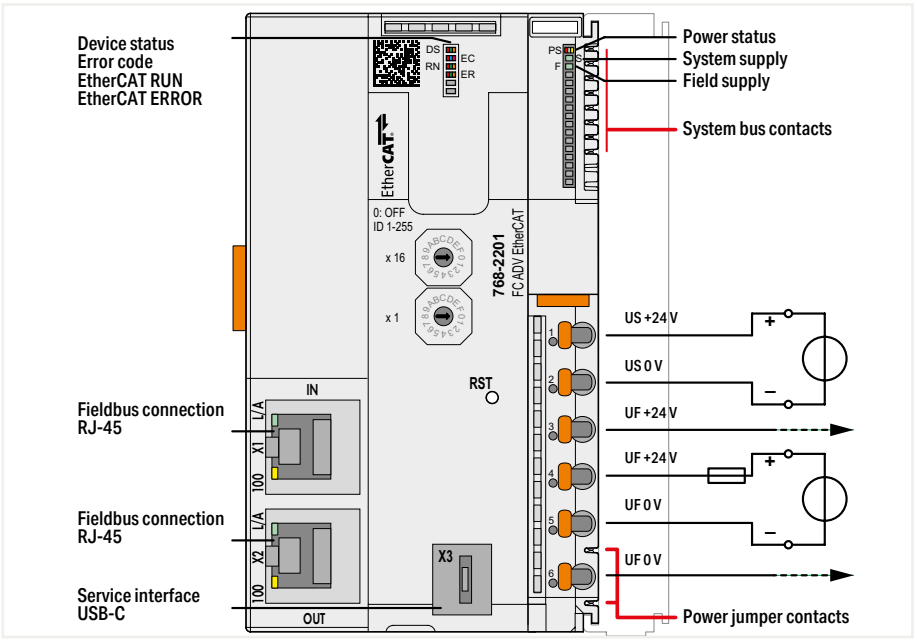
Supply Module with Fuse Holder (D)
- Fuse holder (e) for (5 x 20) mm fuse
- 4 connection points (Push-in CAGE CLAMP®) for field supply

System Power Supply (E)
- 6 connection points (Push-in CAGE CLAMP®) for system/field supply

Housing Design: End Module (F)
- The end module completes the internal data bus and protects the contacts.
- W x H x D (mm): 8.5 x 105 x 75

I/O System Advanced ▸ Fieldbus coupler

768-2201



Version	**Default**
Item No.	**768-2201**
Order Text	**FC ADV ETHERCAT**

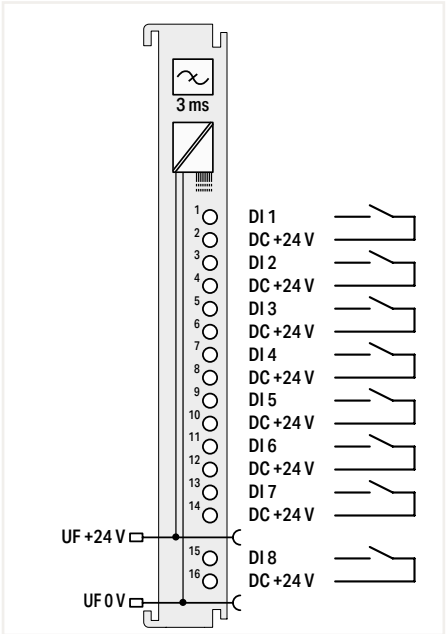
Technical Data

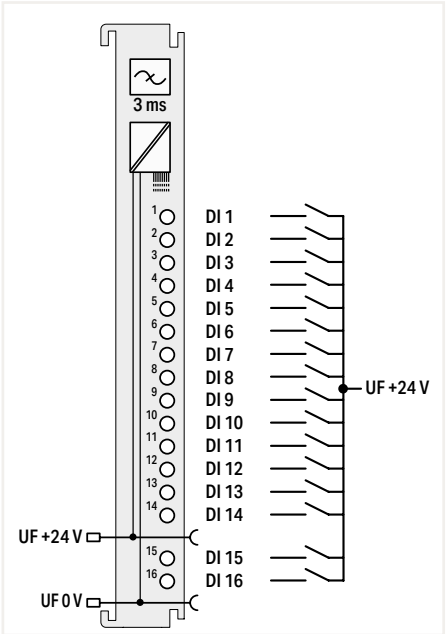
Communication	EtherCAT
Connection technology: communication/fieldbus	EtherCAT: 2 x RJ-45
Baud rate	100 Mbit/s
Transmission medium (communication/fieldbus)	Shielded twisted pair S/FTP, F/FTP or SF/FTP; 100 Ω; Cat. 6
Transmission performance	Class D per EN 50173
Number of modules per node (max.)	250
Input and output (internal) process image (max.)	1000 words/1000 words
Supply voltage (system)	24 VDC, SELV (-25 … +30 %); US
Power consumption – system supply (power supply) at max. local bus supply	900 mA
Power consumption – system supply (power supply) without local bus supply	160 mA
Total current for system supply (local bus) max.	3000 mA
Supply voltage (field)	24 VDC, SELV (-25 … +30 %); UF
Current carrying capacity (power jumper contacts)	12 A
Current carrying capacity (power jumper contacts) note	Requires external fusing (12.5 A fast) of the field supply
Isolation (field/system)	Min. 1000 VDC (1 min); per EN/UL 61010-2-201
Surrounding air temperature (operation)	-25 … 60 °C (Horizontal, typical control cabinet installation; –25 … +50 °C, other mounting positions)
Dimensions W x H x D	(63 x 105 x 75) mm
EMC immunity to interference	Per EN 61000-6-1, -2
EMC emission of interference	Per EN 61000-6-3, -4
Approvals	CE; cULus OrdLoc/HazLoc
Data sheet and further information, see:	wago.com/768-2201

EtherCAT® is a registered trademark and patented technology of Beckhoff Automation GmbH.

I/O System Advanced ▸ Digital input

763-1108

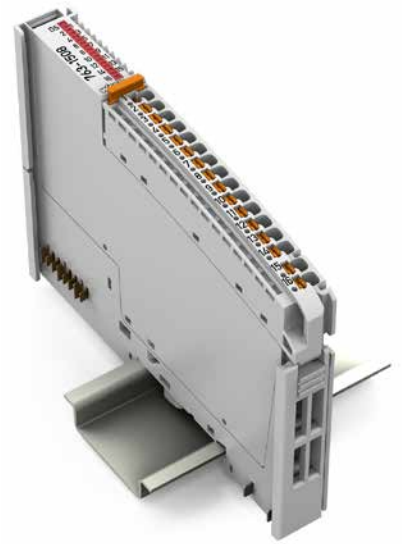




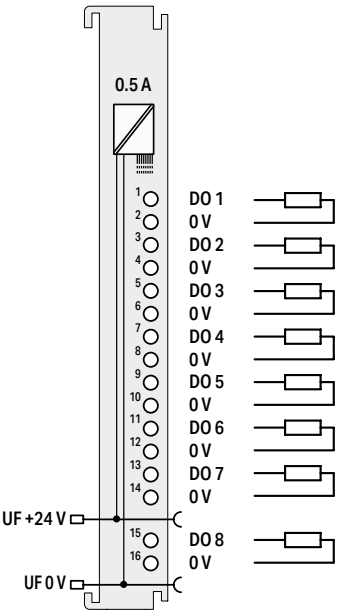
Version	Fast	Default
Item No.	**763-1108**	**763-1116**
Order Text	**8DI ADV 24 VDC HS**	**16DI ADV 24 VDC**

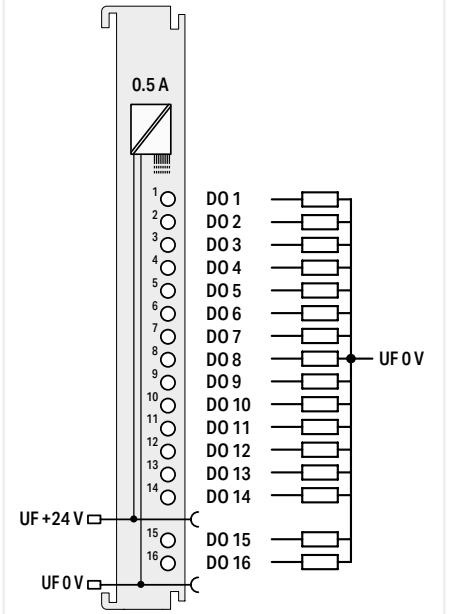
Technical Data		
Number of digital inputs	8	16
Signal type	Voltage	Voltage
Voltage signal type	24 VDC	24 VDC
Input characteristic	Type 3, per IEC 61131-2	Type 3, per IEC 61131-2
Sensor connection	8 x (2-wire)	16 x (1-wire)
Total current – sensor supply (max.)	600 mA	
Input characteristic	High-side switching	High-side switching
Pulse width (min.)	10 µs	
Delay time T_off from 1 to 0	6 µs	300 µs
Delay time T_on from 0 to 1	3 µs	300 µs
Input filter	1 µs	3 ms
Input current at specific input voltage	2.4 mA at 24 V	2.4 mA at 24 V
Dielectric strength	Up to ±35 V, at the digital input	Up to ±35 V, at the digital input
Ground reference of the inputs	Common ground (0 V)	Common ground (0 V)
Power consumption, field supply (module with no external load)	14 mA	5 mA
Supply voltage (field)	24 VDC, SELV (-25 … +30 %); UF	24 VDC, SELV (-25 … +30 %); UF
Power consumption (system supply) (local bus)	47 mA	47 mA
Data width	8-bit channel status	16-bit channel status
Isolation (field/system)	Min. 1000 VDC (1 min); per EN/UL 61010-2-201	Min. 1000 VDC (1 min); per EN/UL 61010-2-201
Surrounding air temperature (operation)	-25 … 60 °C (Horizontal, typical control cabinet installation; −25 … +50 °C, other mounting positions)	-25 … 60 °C (Horizontal, typical control cabinet installation; −25 … +50 °C, other mounting positions)
Dimensions W x H x D	(12 x 105 x 75) mm	(12 x 105 x 75) mm
Approvals	CE; cULus OrdLoc/HazLoc	CE; cULus OrdLoc/HazLoc
Data sheet and further information, see:	wago.com/763-1108	wago.com/763-1116

I/O System Advanced ▶ Digital output



763-1508

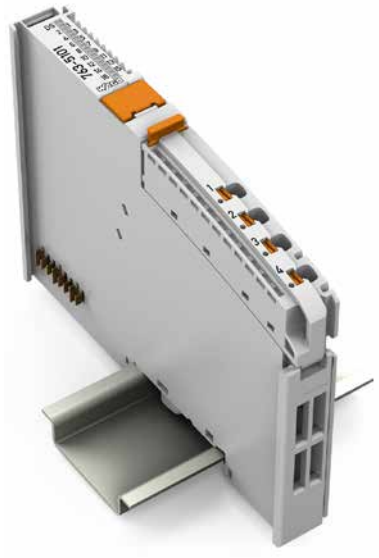




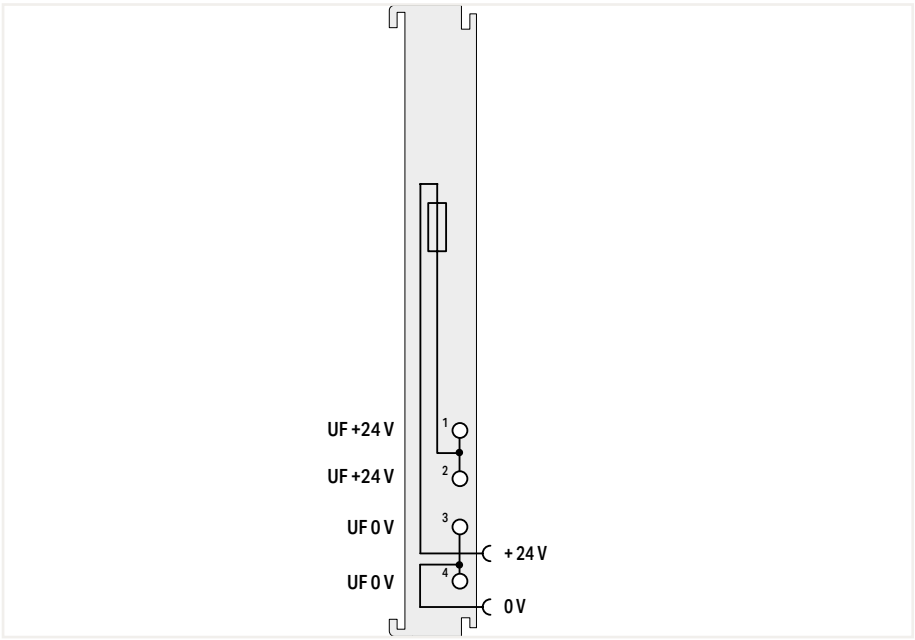
Version	Fast	Default
Item No.	**763-1508**	**763-1516**
Order Text	**8DO ADV 24 VDC 0.5A HS**	**16DO ADV 24 VDC 0.5A**

Technical Data		
Number of digital outputs	8	8
Signal type	Voltage	Voltage
Voltage signal type	24 VDC	24 VDC
Output characteristic	Semiconductor, push-pull	Semiconductor, high-side switching
Output current per channel	0.5 A	0.5 A
Output current (module)	4 A	8 A
Delay time T_off from 1 to 0	2 µs	
Delay time T_on from 0 to 1	2 µs	
Load type	Resistive: 48 Ω … 16 kΩ, at 24 V; Inductive: DC13; Lamp load: up to 5 W	Resistive: 48 Ω … 16 kΩ, at 24 V; Inductive: DC13; Lamp load: up to 5 W
Actuator connection	8 x (2-wire)	16 x (1-wire)
Switching frequency (max.)	15 kHz; Resistive load	1 kHz; Resistive load
Protection against incorrect wiring	Short-circuit-protected; Self-resetting	Short-circuit-protected; Self-resetting
Supply voltage (field)	24 VDC, SELV (-25 … +30 %); UF	24 VDC, SELV (-25 … +30 %); UF
Power consumption, field supply (module with no external load)	24 mA	26 mA
Power consumption (system supply) (local bus)	70 mA	75 mA
Data width	8-bit channel status	16-bit channel status
Ground reference of the outputs	Common ground (0 V)	Common ground (0 V)
Isolation (field/system)	Min. 1000 VDC (1 min); per EN/UL 61010-2-201	Min. 1000 VDC (1 min); per EN/UL 61010-2-201
Surrounding air temperature (operation)	-25 … 60 °C (Horizontal, typical control cabinet installation; −25 … +50 °C, other mounting positions)	-25 … 60 °C (Horizontal, typical control cabinet installation; −25 … +50 °C, other mounting positions)
Dimensions W x H x D	(12 x 105 x 75) mm	(12 x 105 x 75) mm
Approvals	CE; cULus OrdLoc/HazLoc	CE; cULus OrdLoc/HazLoc
Data sheet and further information, see:	wago.com/763-1508	wago.com/763-1516

I/O System Advanced ▶ Supply module



763-5101

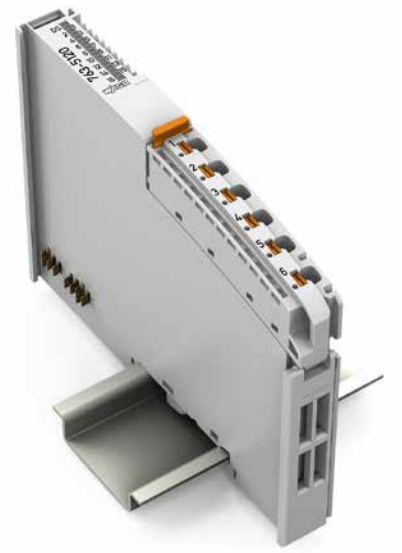


Version	**With fuse holder**
Item No.	**763-5101**
Order Text	**PS ADV 24 VDC FUSE**

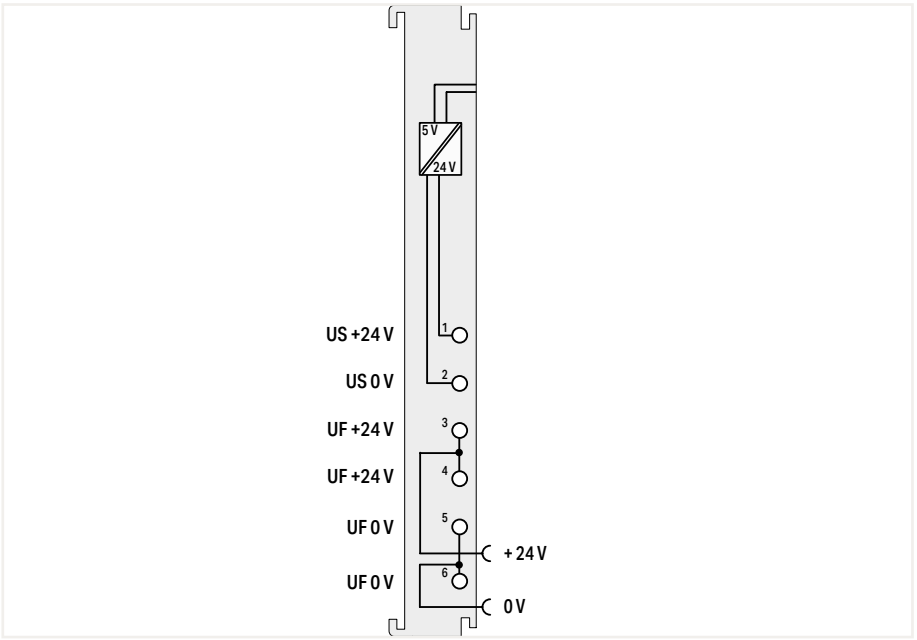
Technical Data	
Supply voltage (field)	24 VDC, SELV (-25 … +30 %); UF
Current carrying capacity (power jumper contacts)	12 A
Total current for field supply (24 V)	6 A
Power consumption (system supply) (local bus)	43 mA
Power consumption, field supply (module with no external load)	6 mA
Isolation (field/system)	Min. 1000 VDC (1 min); per EN/UL 61010-2-201
Fuse	5 x 20; T 6.3 A (not included); PV (max.) = 1.6 W; Observe the fuse derating!
Data width	2 bits; Bit 0: Power supply status (field) in front of the fuse; Bit 1: Power supply status (field) behind the fuse (at the power jumper contacts)
Surrounding air temperature (operation)	-25 … 60 °C (Horizontal, typical control cabinet installation; −25 … +50 °C, other mounting positions)
Dimensions W x H x D	(12 x 105 x 75) mm
Approvals	CE; cULus OrdLoc/HazLoc
Data sheet and further information, see:	wago.com/763-5101

This I/O module provides the applied supply voltage, protected by a fuse, to the field devices connected to downstream I/O modules. An LED indicates a blown fuse failure and the field power supply status.

I/O System Advanced ▸ System power supply



763-5120



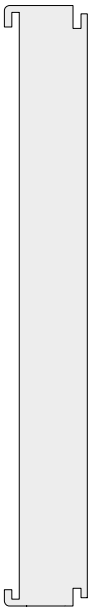
Version	**System power supply**
Item No.	**763-5120**
Order Text	**PS SYSTEM ADV 24 VDC**

Technical Data	
Supply voltage (system)	24 VDC, SELV (-25 … +30 %); US
Power supply efficiency (typ.) at nominal load (24 V)	95 %
Total current for system supply (local bus) max.	3900 mA
Supply voltage (field)	24 VDC, SELV (-25 … +30 %); UF
Power consumption – system supply (power supply) at max. local bus supply	900 mA
Current carrying capacity (power jumper contacts)	12 A
Current carrying capacity (power jumper contacts) note	Requires external fusing (12.5 A fast) of the field supply
Total current for field supply (24 V)	12 A
Power consumption, field supply (module with no external load)	3 mA
Isolation (field/system)	Min. 1000 VDC (1 min); per EN/UL 61010-2-201
Data width	1 bit; Bit 0: Power supply status (field)
Surrounding air temperature (operation)	-25 … 60 °C (Horizontal, typical control cabinet installation; –25 … +50 °C, other mounting positions)
Dimensions W x H x D	(12 x 105 x 75) mm
Approvals	CE; cULus OrdLoc/HazLoc
Data sheet and further information, see:	wago.com/763-5120

This I/O module provides the applied supply voltage to the field devices connected to downstream I/O modules. It also serves as an additional system supply for large nodes, covering the I/O modules' power demands.

I/O System Advanced ▸ Bus end module

763-5600



Version	Default
Item No.	**763-5600**
Order Text	**End Module**

Technical Data	
Surrounding air temperature (operation)	-25 … 60 °C (Horizontal, typical control cabinet installation; −25 … +50 °C, other mounting positions)
Dimensions W x H x D	(8.5 x 105 x 75) mm
Approvals	CE; cULus OrdLoc/HazLoc
Data sheet and further information, see:	wago.com/763-5600

An end module must be snapped onto the assembly at the end of a fieldbus node. The end module completes the internal data bus and protects the contacts. Two fuses (e.g., for the 763-5101 Field Supply Module) can be plugged into the end module as a reserve.

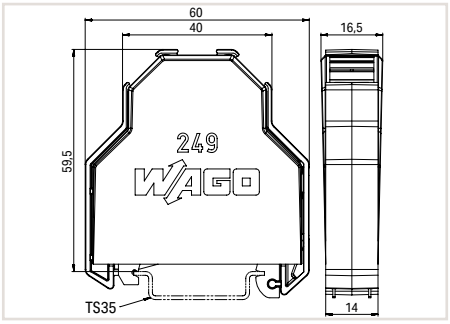
Accessories I/O System Advanced

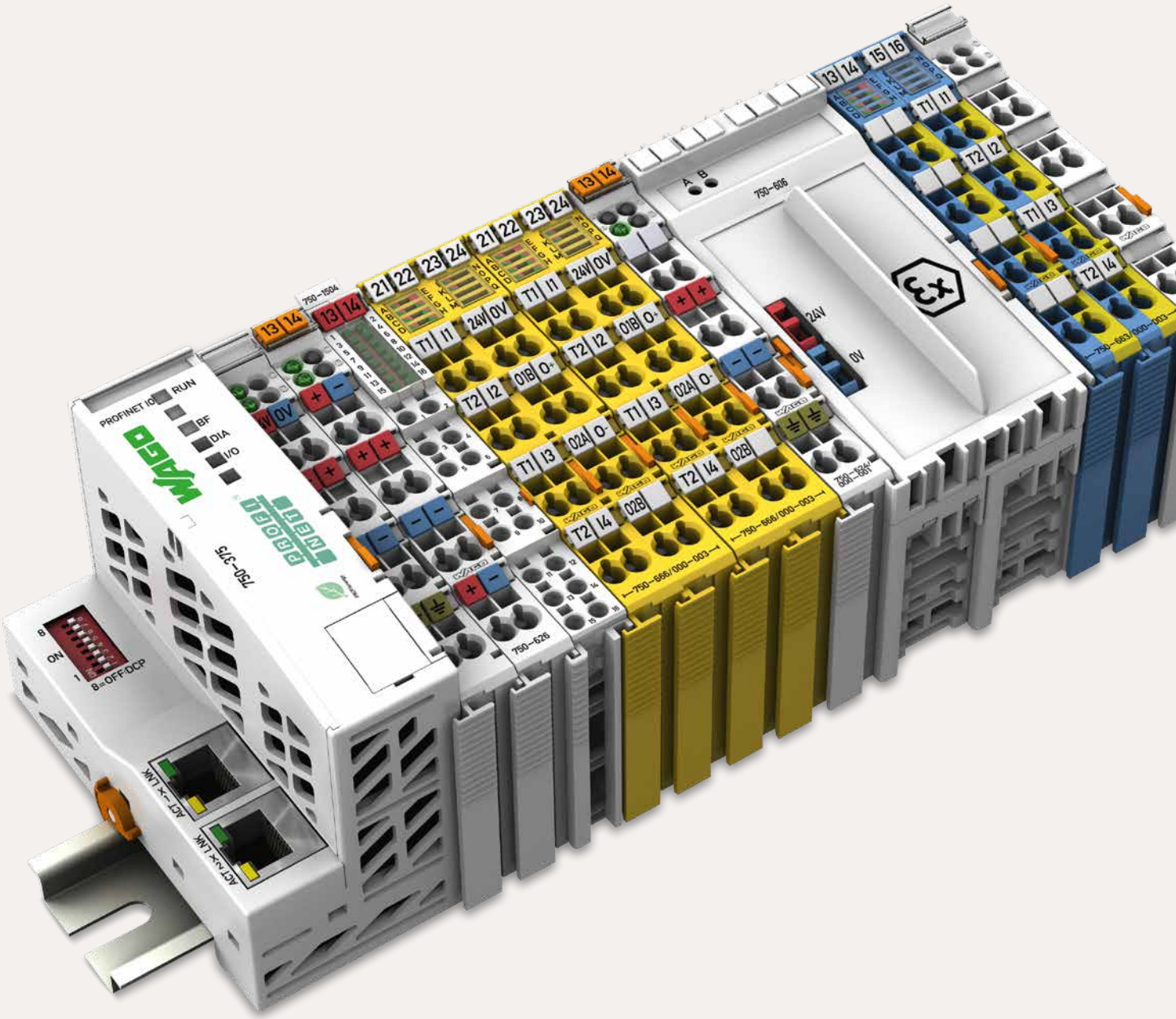
Screwless end stop; 14 mm wide (max. 16.5 mm); for 35 x 15 and 35 x 7.5 DIN-rails

Color	Item No.	PU
gray	249-198	10

Micro-WSB Inline; 2,000 markers per reel; plain; snap-on type

Color	Item No.	PU
white	2009-141	1





I/O System – 750 and 753 Series

I/O System Advanced

- Open, innovative and future-proof industrial automation
- Short reaction times and high signal transmission synchronicity
- Fast ETHERNET fieldbuses – EtherCAT®

◄ Section 6

I/O System – 750 and 753 Series

- Highly versatile
- More than 500 modules available
- Functional safety
- Ex i

I/O System – 750 XTR Series

For demanding applications in which the following are critical:

- Extreme temperature resistance
- Immunity to electromagnetic interference and impulse voltages
- Vibration and shock resistance

Section 8 ►

I/O System Field

Automate and Network Modular Machines for the Future

- Ethernet-based fieldbus standards (EtherCAT®, EtherNet/ IPTM, PROFINET)
- Integrated Bluetooth® interface (Android/iOS App), OPC UA Server, Webserver
- IO-Link Master and Devices

Section 9 ►►

I/O System – 750 and 753 Series
Contents

I/O System – 750 and 753 Series — One System for Every Application
General Product Information

One System for Every Application

The WAGO I/O System 750/753 is distinguished by its universal use and extensive product portfolio. With more than 500 different modules, it is versatile and flexible enough to cover virtually any requirement in a huge variety of industries.

Industrial Automation

The comprehensive selection of I/O modules for different potentials and signal types saves time and money because the sensors/actuators can be wired directly – even in safety-related applications.

Building Automation

The broad portfolio enables flexible, cellar-to-ceiling solutions with conventional I/O modules, standardized industry-specific fieldbus protocols and subsystems for typical applications in lighting, shading, HVAC and much more.

Marine and Onshore/Offshore Automation

International approvals coupled with industry-specific features permit use in marine applications and other harsh sectors. Addressing requirements inherent in specific industries and operating environments has enabled use on marine diesels and in the EMC-sensitive area of a vessel's bridge. Because the requirements are significantly greater for both interference immunity and emission, along with superior mechanical performance in these sensitive areas, the WAGO I/O System will readily meet the needs of other industries.

Process Automation

Even under the harshest environmental conditions, use is possible with special approvals. Potential hazardous area applications include oil and gas production, the chemical industry and power generation. The WAGO I/O System can be installed in Zone 2/22 with its intrinsically safe I/O modules, making it possible to connect sensors/actuators in Zones 1/21 and 0/20.

Maximum Fieldbus Independence

The system's modularity is also reflected in its support for numerous fieldbus systems and ETHERNET standards. Depending on the application, it is possible to choose between fieldbus couplers and communication modules for different protocols.

Easy to Use

A modular, DIN-rail-mount design permits easy installation, expansion and modification of the I/O node without tools. The streamlined design prevents installation errors. Additionally, proven CAGE CLAMP® technology ensures that all connections made in the field are quick, vibration-proof and maintenance-free. Depending on the I/O module's granularity, field peripherals can be directly wired using 1-, 2-, 3- or 4-wire technology.

Worldwide Approvals

International approvals for building and industrial automation, as well as the process and marine industries, guarantee worldwide use. These approvals even include the rigorous operating conditions that ATEX, BR-Ex, IECEx, UL508, UL ANSI/ISA, AEx and numerous other marine certifications apply to.

Extremely Compact

WAGO's patented mechanical design leads to extremely compact I/O nodes. In fact, it can accommodate up to 16 channels in a module width of 12 mm (1/2").

- Finely granular I/O modules provide node customization.
- Space-saving design permits high-density wiring and direct connection.

Maximum Reliability and Ruggedness

The WAGO I/O System is engineered and tested for use in the most demanding environments and to the highest standards, e.g., those required in marine applications. The system differs from other products that are solely intended for industrial use through its:

- Greatly increased vibration rating
- Significantly greater immunity to interference (ESD)
- Lower emission of interference
- Larger voltage fluctuation range
- Greater durability for continuous operation in upper temperature ranges

In addition, CAGE CLAMP® spring pressure connections ensure superior reliability. Integrated QA measures in the production process and 100% function testing ensure consistent quality.

Clear Identification

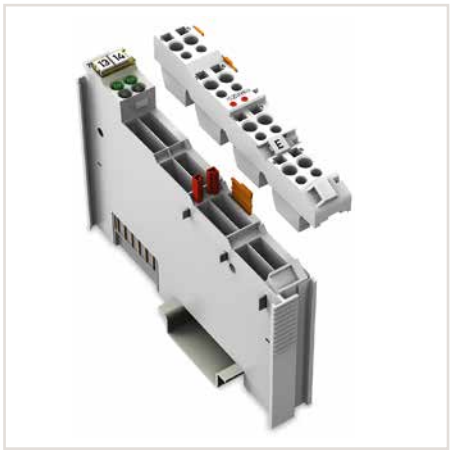
Module functionality is identified via marker carriers (integrated or optional). Terminal assignment and technical data are printed onto the side of the I/O module. WAGO's WSB Marking System also allows for module- and channel-related identification.

Advantages:

- Fieldbus-independent – compatible with all prominent fieldbus protocols and ETHERNET standards
- Flexible platform adapts to diverse applications and environments
- Tested and approved worldwide
- Extensive range of accessories for marking systems and connection technologies
- Vibration-proof, fast and maintenance-free CAGE CLAMP® connections

I/O System – 750 and 753 Series
Variants

Pluggable Connector



The pluggable connectors of the WAGO I/O System 753 allow quick and safe replacement. Optional coding pins prevent plugging a connector into the wrong I/O module. Replacing and connecting the I/O module requires no further action and eliminates possible errors – essentially serving as permanent wiring.

Alternatively, field wiring is possible via interface modules that can be connected to the WAGO I/O System using a ribbon cable (see "Types").

Extended Temperature Range

Industrial automation technology is typically operated in temperatures ranging from 0°C to 55°C. However, some applications require an extended temperature range.
For these applications, WAGO offers a line of WAGO I/O System 750 products for temperatures ranging from –20°C to +60°C.
For extreme applications, where even this extended temperature range is not sufficient, the WAGO I/O System 750 XTR is available.

Functional Safety

In the European Union, the machinery directive defines the requirements for machine and system safety. This ensures a uniform standard for protecting the "life and limb" of workers within a machine's operating area.

The required risk assessment is based on harmonized standards (e.g., EN 13849) and identifies existing risks and required risk reduction (SIL or PL quality). Based on the risk assessment, safety functions can be implemented, e.g., by presence detection or protection zone violations, using secure switches or light arrays to shut down the "risk" immediately. For this purpose, the safety signals are detected by the "yellow" safety modules and transmitted via "PROFIsafe" to the fail-safe PLC for additional processing. The result is then executed via safe actuator (e.g., output module or controller).

The unique safety characteristics of the WAGO modules facilitate calculation of the final safety function up to Cat. 4/PLe according to EN 13849, or SIL3 according to EN 62061 or IEC 61511.

The mixed operation of safe and conventional I/O modules streamlines system configuration. For increased electromagnetic immunity (EMC standard), WAGO offers compact power supply filter modules. Specific power supply features must be considered, which are described in the corresponding manuals.

Use in Hazardous Areas

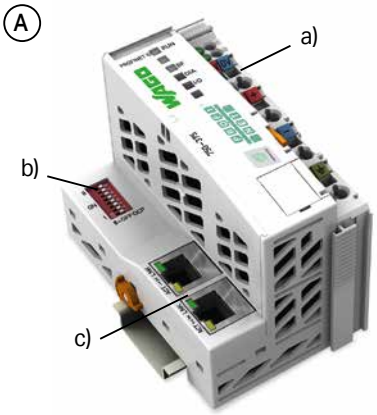
In many plants across the chemical and petrochemical industries, as well as in the production and process automation sectors, installations are operated that process explosive gas- or dust-air mixtures. This is why electrical equipment must be explosion-proof to avoid injuries to personnel and damage to facilities.

The modules within the WAGO I/O System 750 are designed for use in both non-hazardous and hazardous areas.

The direct application of fieldbus technology in hazardous areas is typically resource-intensive. When used in hazardous areas of Zone 2/22, the I/O System 750 offers a safe, easy and economical connection to the sensors/actuators of Zones 0/20 and 1/21. The "blue" Ex i I/O modules were specially developed for this purpose. They form an intrinsically safe section that can be integrated into a standard fieldbus node, offering all the advantages of state-of-the-art fieldbus technology. The WAGO I/O System 750 is also approved for mining applications.

I/O System – 750 and 753 Series
Interfaces and Types

A



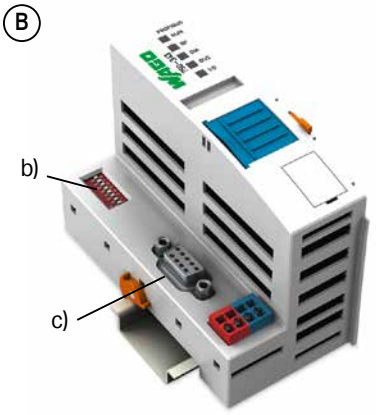
Housing Design: Fieldbus Coupler (A)

- Includes a supply module (a) to power downstream I/O modules
- Technical differences on the connection level; optional addressing switch (b) and fieldbus interface (c)
- W x H x D (mm) 50.5 x 100 x 71.1 or
- W x H x D (mm): 61.5 x 100 x 71.9

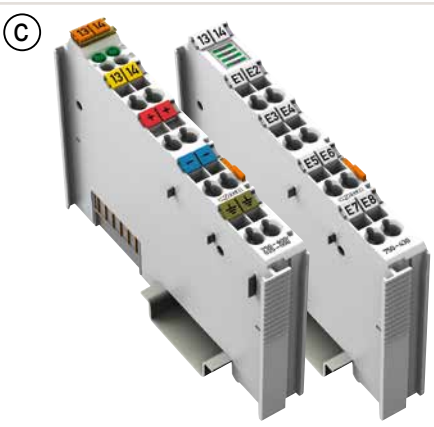
Housing Design: Fieldbus Coupler Eco (B)

- Restriction on power supply and data width
- W x H x D (mm): 49.5 x 96.8 x 71.9

B



C



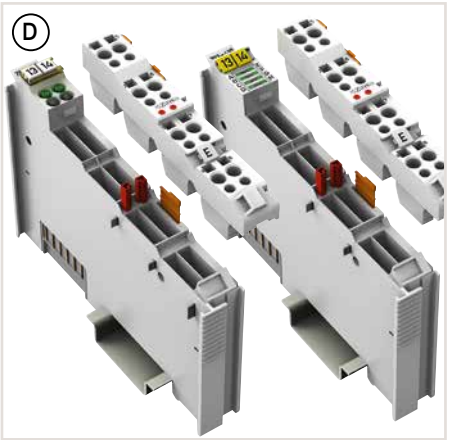
Housing Design: 750 (C)

- 8 connection points (CAGE CLAMP®)
- W x H x D (mm) 12 x 69.8 x 100 (4 LEDs)
- W x H x D (mm) 12 x 67.8 x 100 (8 LEDs)

Housing Design: 753 (D)

- Pluggable connector
- 8 connection points (CAGE CLAMP®)
- W x H x D (mm) 12 x 100 x 69.8 (4 LEDs)
- W x H x D (mm) 12 x 100 x 69 (8 LEDs)
- Pluggable connectors and coding fingers are not included.

D



E

Housing Design: 750 (E)

- 16 connection points (Push-in CAGE CLAMP®)
- W x H x D (mm): 12 x 100 x 69

Housing Design (F)

- For time-saving wiring between I/O system and interface modules
- Ribbon cable connection to interface modules (289 and 704 Series) and interface adapter
- W x H x D (mm): 12 x 100 x 74.1

F

G

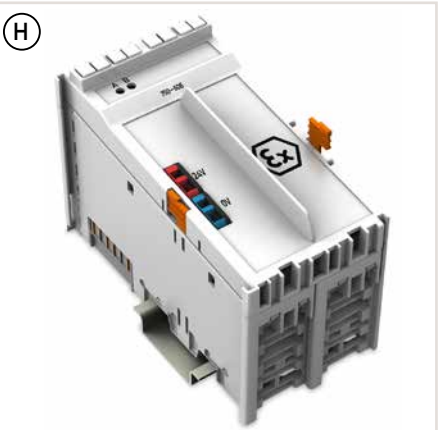
Housing Design: Double Width (G)

- Some modules are integrated into a double housing to address specific technological needs. Despite utilizing the same standardized housing, these modules are twice as wide.
- W x H x D (mm): 24 x 100 x 69.8

Specialty Housing Design (H)

- Some modules are integrated into a specialty housing with a specific width and pluggable connectors. The dimensions are specified on the respective catalog pages.

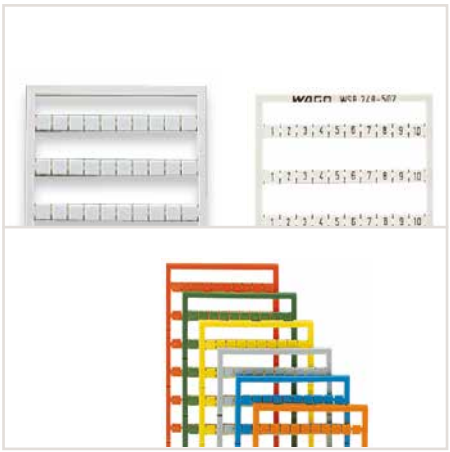
H



I/O System – 750 and 753 Series
Marking and Mounting Accessories

Transparent group marker carriers indicate module type by color.

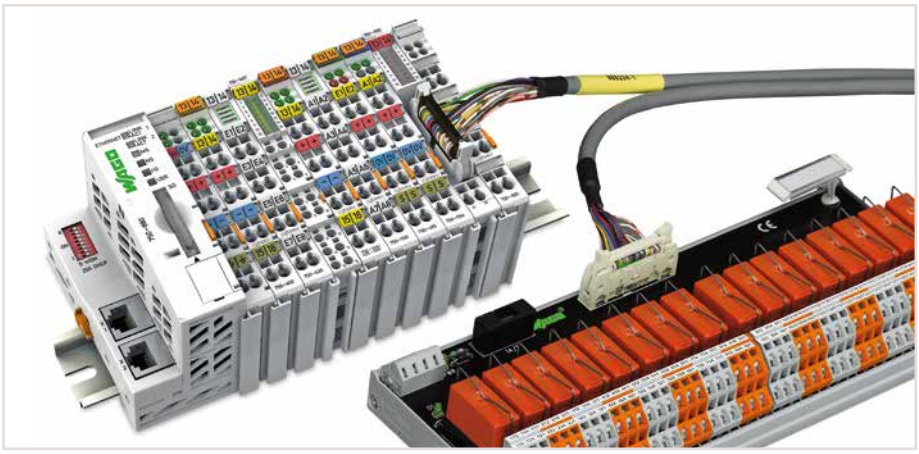
Removable group marker carriers are available for all 750 and 753 Series I/O Modules with a maximum of four LEDs, as well as all fieldbus couplers with a supply module.



Mini-WSB marking cards (blank, pre-marked or colored) are suitable for all 750 and 753 Series I/O Modules.

Marker carrier for a single I/O module (suitable for all 750 and 753 Series I/O Modules); the marker carrier can be accommodated in the upper Mini-WSB marker slot.

Marker carrier for one I/O node; both models (750-106 and 750-107) permit continuous marking regardless of the I/O module housing used.



Interface modules for system wiring

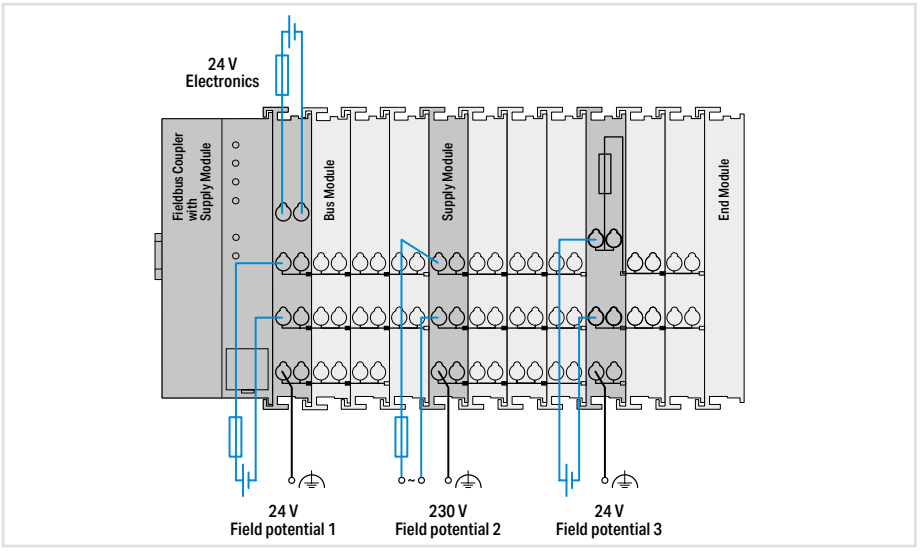
WAGO system cables

I/O System – 750 and 753 Series
Application and Installation Instructions

Power Supply

The fieldbus coupler powers the internal electronics. The field-side power supply is electrically isolated via the supply module on the coupler or a separate power supply module. This division enables a separate supply for sensors and actuators. Snapping the I/O modules together automatically routes the supply voltages (system power supply 5 VDC via the data contacts and field supply via the optional power jumper contacts). Supply modules with diagnostics also enable power supply monitoring. This ensures a flexible and customized supply configuration for a fieldbus node.

Power supply to the electronics is limited by a maximum value. This value depends on the fieldbus coupler used. If the sum of the internal current demand of all the I/O modules should exceed this value, an additional system supply module is necessary. Furthermore, the current consumed for field-side supply must not exceed 10 A. A variety of power supply modules allows re-feeding, creating potential groups and implementing emergency stops.



Interference-Free in Safety-Related Applications

To easily and safely perform a cost-effective and centralized deactivation of complete actuator groups, the actuator's power supply can be switched off using a safety switching device. This can either be performed for each individual actuator or by turning off the power supply to a group of control outputs. In the event of failure, ensure that no interference from other current or power circuits occurs – even when the control voltage is switched off – so the defined safety function properties (logic and time response) remain unchanged.

Some modules are designed to provide interference-free safety functionality. These modules comply with safety requirements up to Category 4 of DIN EN ISO 13849-1:2007. Safety category and performance level depend solely on the safety components and their wiring.

Notice:

WAGO's interference-free I/O modules are not a component of the safety function and do not replace the safety switching device! When using the components in safety functions, the corresponding notes must be observed in the relevant manual.

Notes:

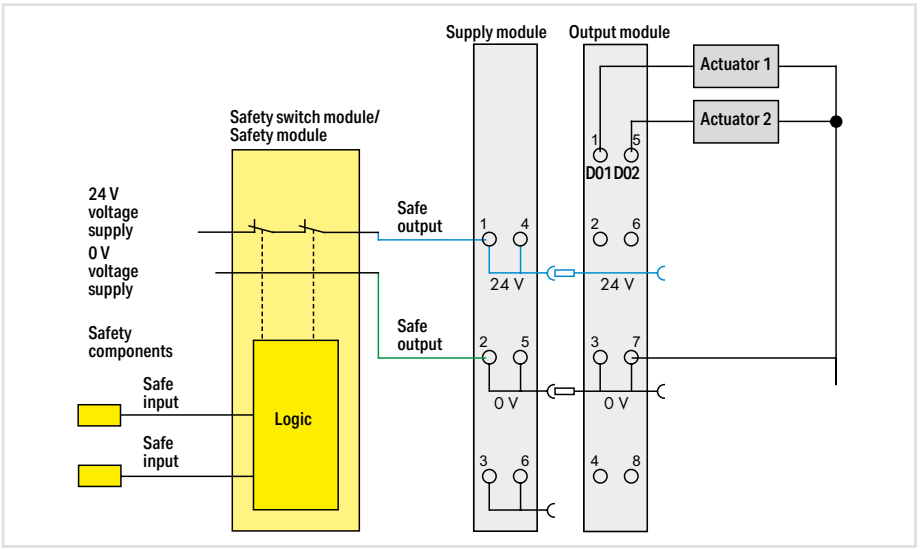
Additional steps must be implemented based on where the I/O system is installed:

Specific power and field-side power supply filters (750-624 or 750-626) are required for marine and onshore/offshore applications.

A specific supply module (750-606) is required to operate intrinsically safe Ex i modules.

Additionally, both supply modules and field-side power supply filters are recommended when operating intrinsically safe Ex i modules for marine and onshore/offshore applications.

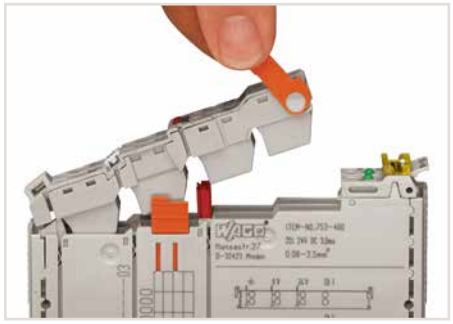
For the 24 VDC power supply of electronics and field, PELV/SELV power supply units are recommended. As part of safety-related applications, they are mandatory. The mixed operation of safe and conventional I/O modules streamlines system configuration. For increased electromagnetic immunity (EMC standard), WAGO offers compact power supply filter modules.
Please refer to the manual for details about the power supply's design.



Example: 2-channel, double-pole power supply disconnection

I/O System – 750 and 753 Series
Application and Installation Instructions

Securing/removing a module from the DIN-rail



Removing a pluggable connector

Optional protection against mismating of a pluggable connector via coding elements

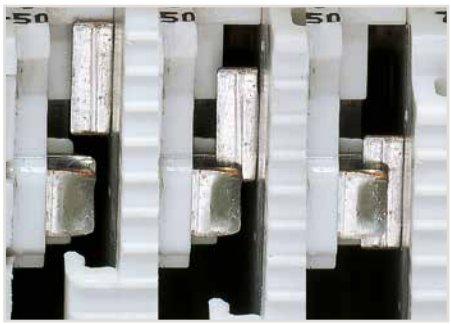
Service interface for configuring the fieldbus coupler; connectivity via configuration cable or radio adapter

Notice:

Some I/O modules do not provide all power jumper contacts. Therefore, a module with three power jumper contacts (e.g., 2-channel digital input) cannot be connected to a module that does not have all power jumper contacts.

To increase electromagnetic compatibility (EMC), some components are connected to the DIN-rail via a discharge contact. The DIN-rail must always have a low-resistance connection to the ground potential.

Wide range of accessories available for EMC-compliant installation, including shield connection



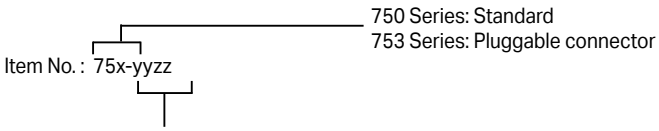
Secure, automatic power supply connection via self-cleaning blade contacts

Secure, automatic data and electronics power supply connection via gold-plated pressure contacts

Securing a cable to the connector

I/O System – 750 and 753 Series
Item Number Key

Explanation of an item number key's components:



01zz: Marker
03zz: Fieldbus coupler
zz: Consecutive number

1yzz: 16 connection points or ribbon cable
y4zz: Input
00 ... 49 = Digital input
50 ... 99 = Analog input
04: Counter
y5zz: Output
00 ... 49 = Digital output
50 ... 99 = Analog input
11: PWM
y6zz: Function/technology/communication/system module
0z: Power supply, field-side connection, end module
1z: Power supply, field-side connection, spacer module
2z: Power supply, bus extension, filter, spacer module
3z: Distance and angle measurement, DC drive controller, counter
4z: Communication (building), radio, RTC, vibration monitoring
5z: Serial interfaces, communication
6z: Functional safety
.../000-003: PROFIsafe V2 iPar
.../000-004: PROFIsafe V2
7z: Stepper

09zz: Accessories

.../025-000: Extended temperature range (-20 ... +60 °C)
.../000-800: Interference-free
.../040-000: 750 XTR Series (see Section 8)

I/O System – 750 and 753 Series
Standards and Rated Conditions

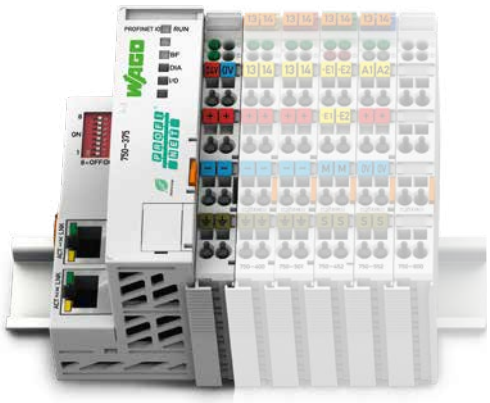
General Technical Data	
System supply voltage	24 VDC (−25 % ... +30 %)*; *for all marine-certified fieldbus couplers and I/O modules
Isolation	500 V (system/supply)
Surrounding air temperature (operation)	0 ... +55 °C
Surrounding air temperature (operation) for versions with an extended temperature range	−20 ... +60 °C
Surrounding air temperature (storage)	−25 ... +85 °C
Surrounding air temperature (storage) for versions with an extended temperature range	−40 ... +85 °C
Relative humidity	95 % (non-condensing)
Relative humidity for versions with an extended temperature range	Max. 95 %; short-term condensation per Class 3K6 / IEC EN 60721-3-3 and E DIN 40046-721-3, taking a temperature range of −20 to +60 °C into consideration (except wind-driven precipitation, water and ice formation)
Operating altitude	0 ... 2000 m / 0 ... 6562 ft
Pollution degree	2 per IEC 61131-2
Vibration resistance	0.5g (4g for all marine-certified fieldbus couplers and I/O modules) per IEC 60068-2-6
Shock resistance	15g per IEC 60068-2-27
EMC immunity to interference	Per EN 61000-6-2
EMC emission of interference	Per EN 61000-6-3; EN 61000-6-4
Protection class	IP20
Mounting type	DIN-35 rail mounting
Housing material	Polycarbonate; polyamide 6.6
Exposure to pollutants	Per IEC 60068-2-42 and IEC 60068-2-43
Permissible SO2 contaminant concentration at a relative humidity < 75 %	25 ppm
Permissible H2S contaminant concentration at a relative humidity < 75 %	10 ppm
Connection technology	CAGE CLAMP®
Conductor cross-section; strip length for:	
Standard modules and couplers	0.08 ... 2.5 mm²/28 ... 14 AWG; 8 ... 9 mm/0.31 ... 0.35 inch
I/O modules (753 Series)	0.08 ... 2.5 mm²/28 ... 14 AWG; 9 ... 10 mm/0.35 ... 0.39 inch
Fieldbus couplers (ECO)	0.08 ... 1.5 mm²/28 ... 16 AWG; 5 ... 6 mm/0.2 ... 0.24 inch
Connection technology	Push-in CAGE CLAMP®
Conductor cross-section; strip length for: I/O modules with 16 connection points	Solid: 0.08 ... 1.5 mm²/28 ... 16 AWG, Fine-stranded: 0.25 ... 1.5 mm²/22 ... 16 AWG; 8 ... 9 mm/0.31 ... 0.35 inch
Current carrying capacity (power jumper contacts)	10 A

Approvals

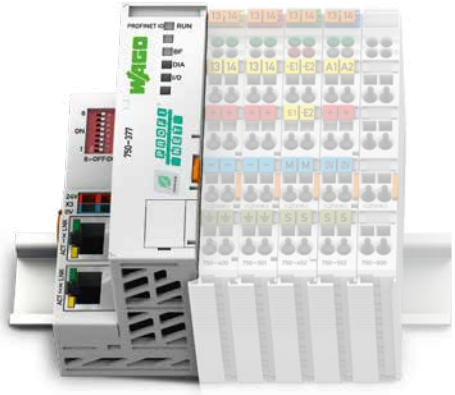
For approvals overview (item comparison), see Section 14 (Technical Section) or visit www.wago.com.

Fieldbus Couplers

Housing Design I with Field Supply	
Dimensions W x H x D	50.5 x 100 x 71.1 mm
Height from upper edge of DIN-rail	63.9 mm
Connection technology (system supply and field supply)	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch



Housing Design II with Field Supply	
Dimensions W x H x D	61.5 x 100 x 71.9 mm
Height from upper edge of DIN-rail	64.7 mm
Connection technology (system supply and field supply)	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch



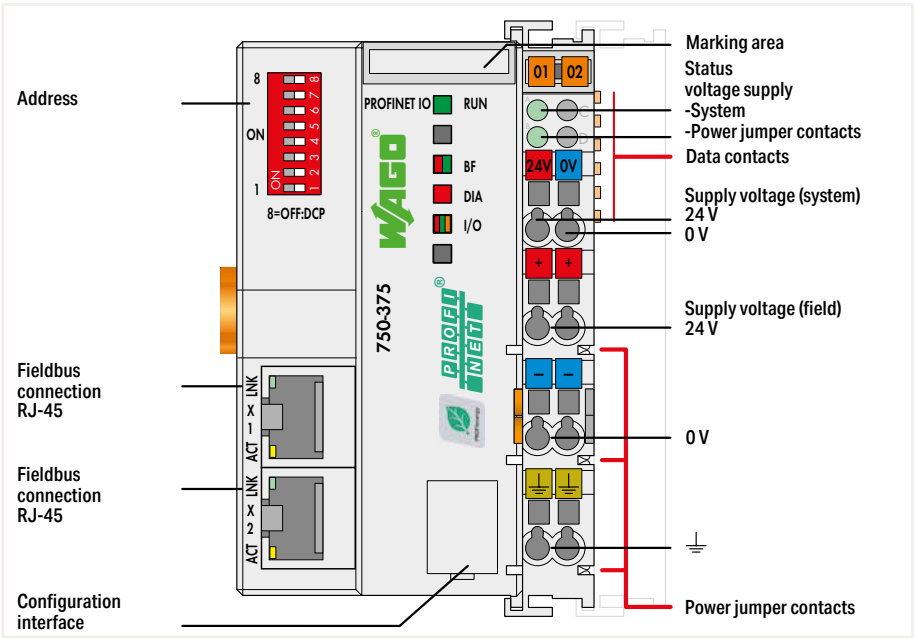
Housing Design without Field Supply	
Dimensions W x H x D	49.5 x 96.8 x 71.9 mm
Height from upper edge of DIN-rail	64.7 mm
Connection technology (system supply)	CAGE CLAMP®
Conductor cross-section	0.08 … 1.5 mm² / 28 … 16 AWG
Strip length	5 … 6 mm / 0.22 inch

Housing Design "Eco" (without Field Supply)	
Dimensions W x H x D	49.5 x 96.8 x 71.9 mm
Height from upper edge of DIN-rail	64.7 mm
Connection technology (system supply)	CAGE CLAMP®
Conductor cross-section	0.08 … 1.5 mm² / 28 … 16 AWG
Strip length	5 … 6 mm / 0.22 inch

I/O System – 750 and 753 Series, Fieldbus Couplers
Contents

Fieldbus coupler ▸ PROFINET IO; Advanced

750-375

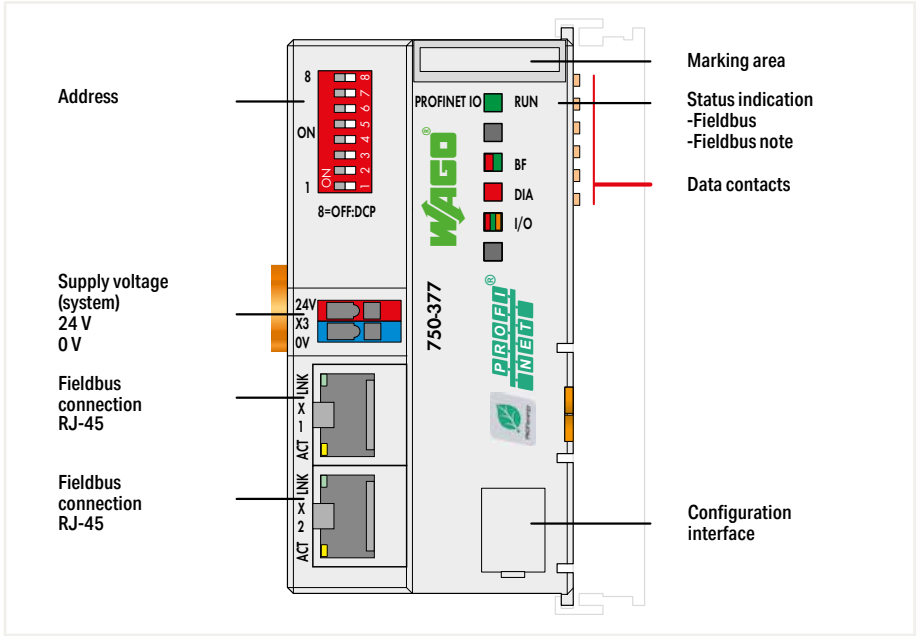


Version	Default	Ext. Temperature
Item No.	**750-375**	**750-375/025-000**
Order Text	**FC PROFINET; G3; Adv**	**FC PROFINET; G3; T; Adv**

Technical Data		
Communication	PROFINET IO	
Protocol	PROFINET IO V2.3 (conformity class C); Topology detection / LLDP; Network diagnostics / SNMP / MIB-2; Media redundancy / MRP; Webserver / HTTP; Shared device	
Connection technology: communication/fieldbus	PROFINET IO: 2 x RJ-45	
PROFINET IO properties	Integrated 2-port switch; Auto-negotiation; Auto-MDIX; Isochronous real-time communication; Transmission clock: 1 ms (RT); 1, 2, 4 ms (IRT); Device replacement without programming tool	
Device-specific	Supported profiles: PROFIsafe V2, PROFIenergy V1.0; ID code: Vendor ID: 0x011D; Device ID: 0x02EE; Module ID: 0x01000177 (firmware version 01, 02), 0x02000177 (from firmware version 03)	
Baud rate	10/100 Mbit/s (10 Mbit/s (ETHERNET protocols), 100 Mbit/s full duplex (PROFINET IO))	
Transmission medium (communication/fieldbus)	Twisted pair S-UTP; 100 Ω; Cat. 5	
Number of modules per node (max.)	250	
Input and output (fieldbus) process image (max.)	512 bytes/512 bytes	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	500 mA	
Power consumption (5 V system supply)	450 mA	
Total current (system supply)	1700 mA	
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C
Dimensions W x H x D	(61.5 x 100 x 71.9) mm	
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-375	

Fieldbus coupler ▸ PROFINET IO; ECO Advanced

750-377

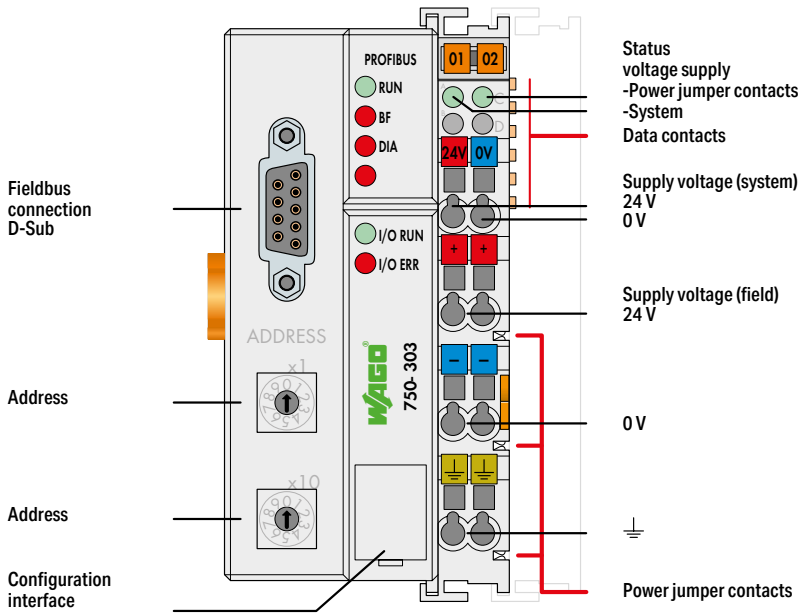


Version	Default	Ext. Temperature
Item No.	750-377	750-377/025-000
Order Text	FC PROFINET; G3; ECO Adv	FC PROFINET; G3; T; ECO Adv

Technical Data		
Communication	PROFINET IO	
Protocol	PROFINET IO V2.3 (conformity class C); Topology detection / LLDP; Network diagnostics / SNMP / MIB-2; Media redundancy / MRP; Webserver / HTTP	
Connection technology: communication/fieldbus	PROFINET IO: 2 x RJ-45	
PROFINET IO properties	Integrated 2-port switch; Auto-negotiation; Auto-MDIX; Isochronous real-time communication; Transmission clock: 1 ms (RT); 1, 2, 4 ms (IRT); Device replacement without programming tool	
Device-specific	Supported profiles: PROFIsafe V2, PROFIenergy V1.0; ID code: Vendor ID: 0x011D; Device ID: 0x02EE; Module ID: 0x01000177 (firmware version 01, 02), 0x02000177 (from firmware version 03)	
Baud rate	10/100 Mbit/s (10 Mbit/s (ETHERNET protocols), 100 Mbit/s full duplex (PROFINET IO))	
Transmission medium (communication/fieldbus)	Twisted pair S-UTP; 100 Ω; Cat. 5	
Number of modules per node (max.)	64	
Input and output (fieldbus) process image (max.)	256 bytes/256 bytes	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector	
Input current (typ.) at nominal load (24 V)	280 mA	
Power consumption (5 V system supply)	450 mA	
Total current (system supply)	700 mA	
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-377	

Fieldbus coupler ▸ PROFIBUS DP; 1st generation

750-303

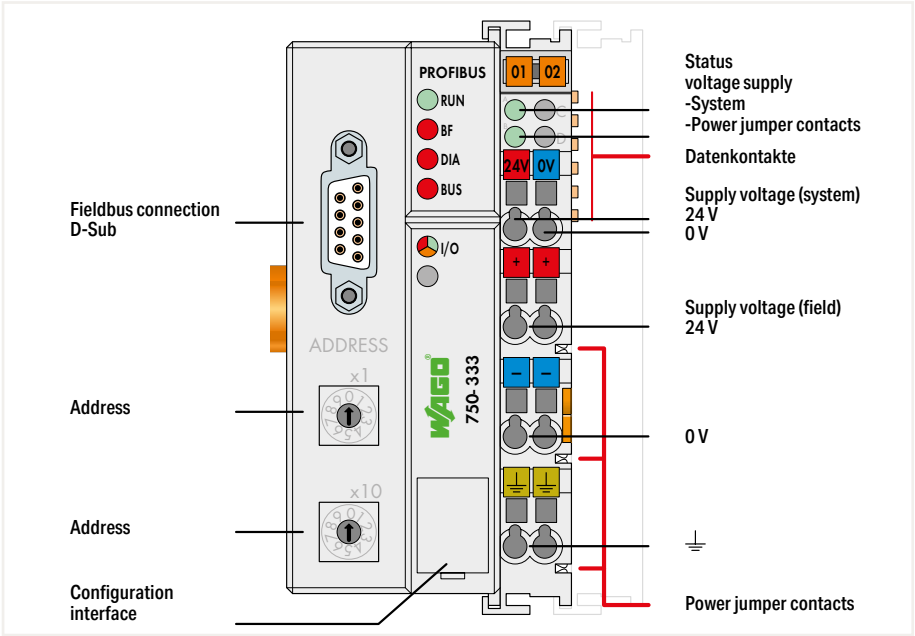


Version	**Default**
Item No.	**750-303**
Order Text	**FC PROFIBUS; G1; 12MBd**

Technical Data	
Communication	PROFIBUS
Protocol	PROFIBUS DP/FMS
Connection technology: communication/fieldbus	PROFIBUS: 1 x D-sub 9 socket
Number of fieldbus nodes on master (max.)	96
Baud rate	9.6 kBd … 12 MBd
Transmission medium (communication/fieldbus)	Cu cable per EN 50170
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	128 bytes/128 bytes
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	350 mA
Total current (system supply)	1650 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-303

Fieldbus coupler ▸ PROFIBUS DP; 2nd generation

750-333

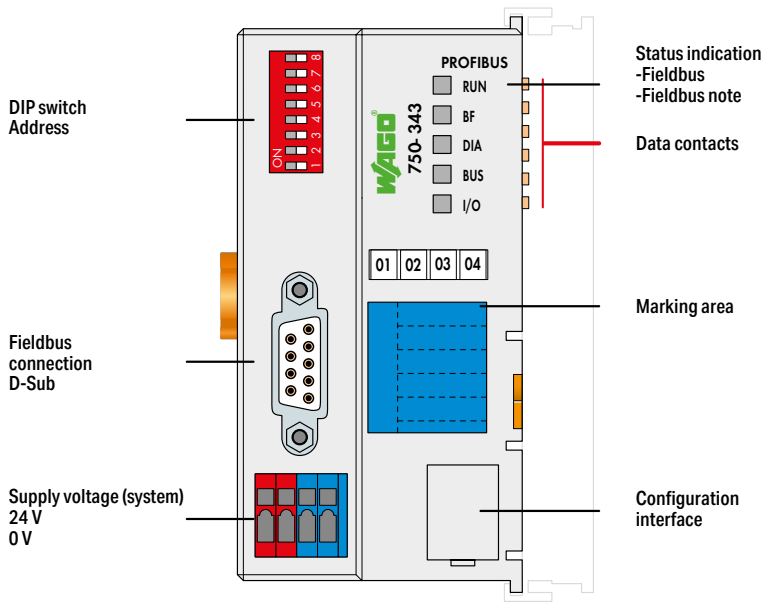


Version	Default	Ext. Temperature
Item No.	**750-333**	**750-333/025-000**
Order Text	**FC PROFIBUS; G2; 12MBd**	**FC PROFIBUS; G2; 12MBd; T**

Technical Data		
Communication	PROFIBUS	
Protocol	PROFIBUS DP/V1	
Connection technology: communication/fieldbus	PROFIBUS: 1 x D-sub 9 socket	
Number of fieldbus nodes on master (max.)	96	
Baud rate	9.6 kBd … 12 MBd	
Transmission medium (communication/fieldbus)	Cu cable per EN 50170	
Number of modules per node (max.)	63	
Input and output (fieldbus) process image (max.)	244 bytes/244 bytes	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	500 mA	
Power consumption (5 V system supply)	200 mA	
Total current (system supply)	1800 mA	
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-333	

Fieldbus coupler ▶ PROFIBUS DP; ECO

750-343

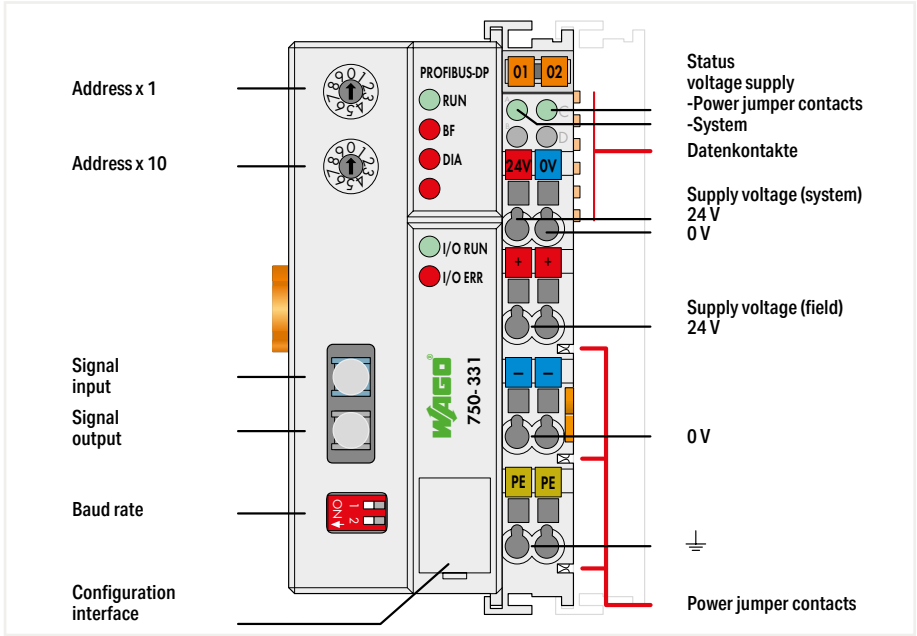


Version	Default
Item No.	**750-343**
Order Text	**FC PROFIBUS; 12MBd; ECO**

Technical Data	
Communication	PROFIBUS
Protocol	PROFIBUS DP
Connection technology: communication/fieldbus	PROFIBUS: 1 x D-sub 9 socket
Number of fieldbus nodes on master (max.)	125
Baud rate	9.6 kBd … 12 MBd
Transmission medium (communication/fieldbus)	Cu cable per EN 50170
Number of modules per node (max.)	63
Input and output (fieldbus) process image (max.)	32 bytes/32 bytes
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector
Input current (typ.) at nominal load (24 V)	260 mA
Power consumption (5 V system supply)	350 mA
Total current (system supply)	650 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-343

Fieldbus coupler ▸ PROFIBUS DP; Fiber-optic connection

750-331

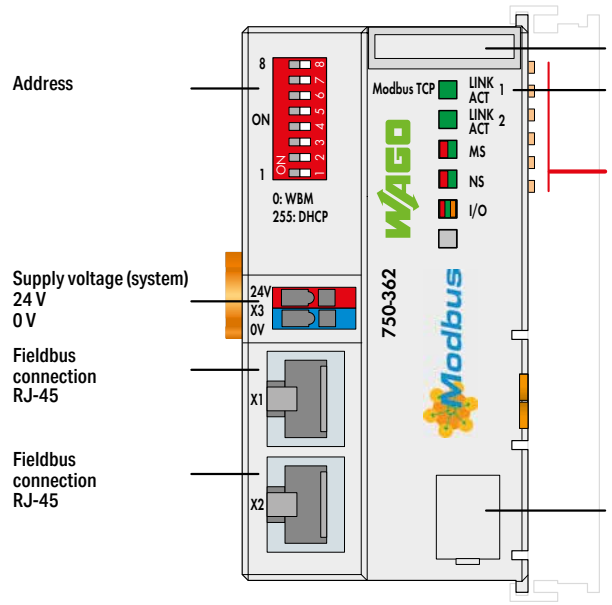


Version	**Default**
Item No.	**750-331**
Order Text	**FC PROFIBUS; FOC; 1.5MBd**

Technical Data	
Communication	PROFIBUS
Protocol	PROFIBUS DP
Connection technology: communication/fieldbus	PROFIBUS: 1 x HP Simplex, FOC plug included with delivery
Number of fieldbus nodes on master (max.)	10
Baud rate	93.75 kBd … 1.5 MBd
Transmission medium (communication/fieldbus)	APF (All Plastic Fiber) (1000 µm)
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	128 bytes/128 bytes
Supply voltage (system)	24 VDC (-15 … +20 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	350 mA
Total current (system supply)	1650 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; cULus OrdLoc
Data sheet and further information, see:	wago.com/750-331

Fieldbus coupler ▶ Modbus TCP; ECO

750-362

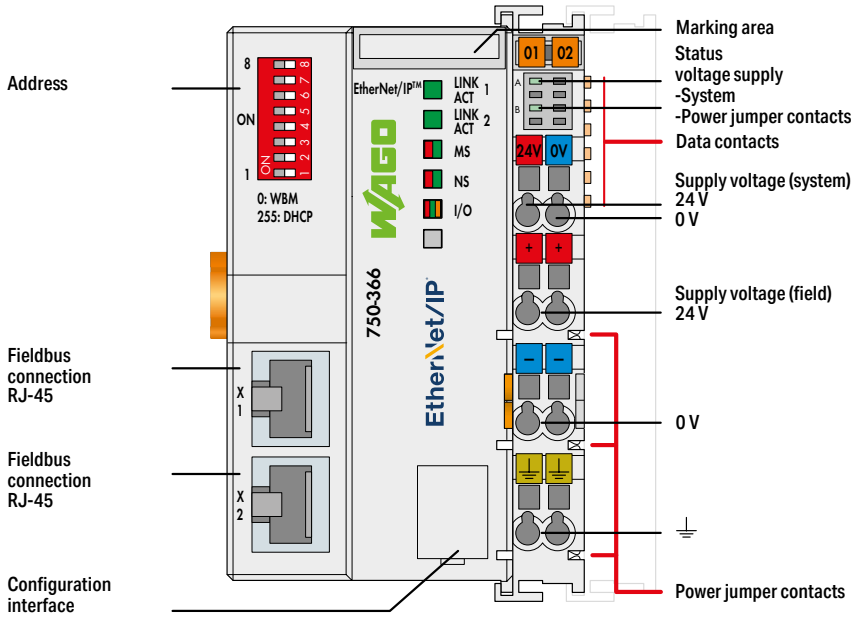


Version	Default
Item No.	**750-362**
Order Text	**FC Modbus TCP; G4**

Technical Data	
Communication	Modbus (TCP, UDP)
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; SNTP; FTP(S); SNMP
Connection technology: communication/fieldbus	Modbus TCP/UDP: 2 x RJ-45
Baud rate	10/100 Mbit/s
Transmission medium (communication/fieldbus)	Twisted Pair S-UTP; 100 Ω; Cat. 5; 100 m maximum cable length
Transmission performance	Class D per EN 50173
Number of modules per node (max.)	250
Input and output (fieldbus) process image (max.)	1020 words/1020 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector
Input current (typ.) at nominal load (24 V)	280 mA
Power consumption (5 V system supply)	350 mA
Total current (system supply)	700 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-362

Fieldbus coupler ▶ EtherNet/IP™

750-366

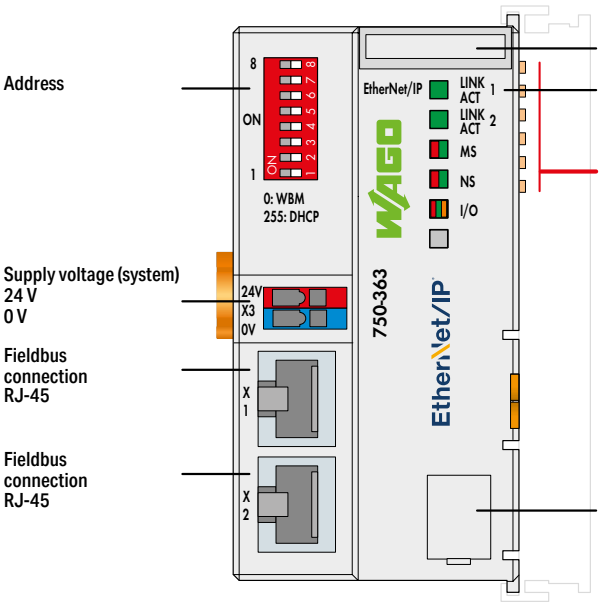


Version	Default
Item No.	**750-366**
Order Text	**FC EtherNet/IP™; G4; DLR**

Technical Data	
Communication	EtherNet/IP™
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; FTP(S); SNMP
Connection technology: communication/fieldbus	EtherNet/IP™: 2 x RJ-45
Baud rate	10/100 Mbit/s
Transmission medium (communication/fieldbus)	Twisted Pair S-UTP; 100 Ω; Cat. 5; 100 m maximum cable length
Transmission performance	Class D per EN 50173
Number of modules per node (max.)	250
Input and output (fieldbus) process image (max.)	1020 words/1020 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	480 mA
Power consumption (5 V system supply)	300 mA
Total current (system supply)	1700 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(62 x 100 x 71.9) mm
Approvals	CE; Marine; cULus OrdLoc/HazLoc
Data sheet and further information, see:	wago.com/750-366

Fieldbus coupler ▶ EtherNet/IP™; ECO

750-363

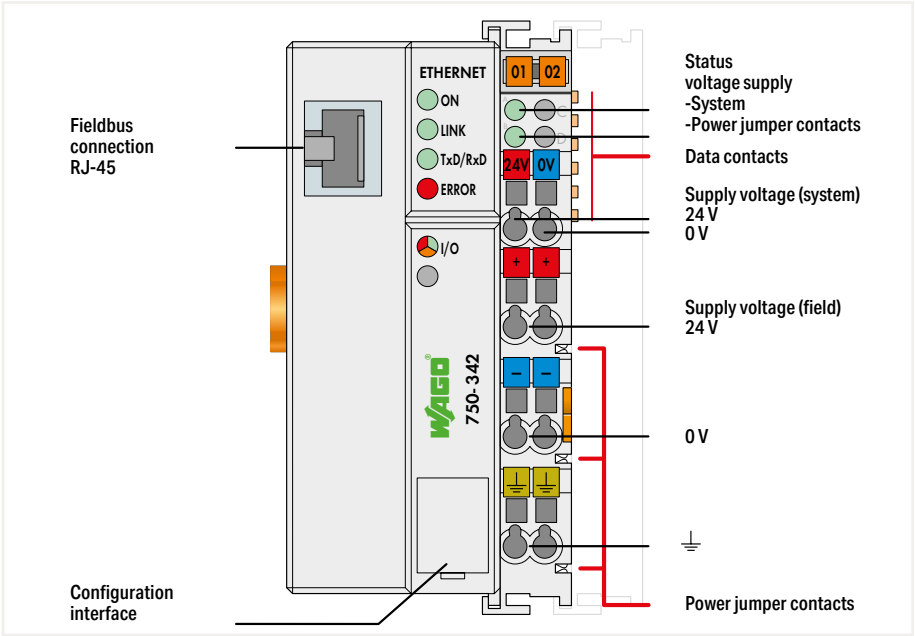


Version	Default
Item No.	**750-363**
Order Text	**FC EtherNet/IP™**

Technical Data	
Communication	EtherNet/IP™
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; SNTP; FTP(S); SNMP
Connection technology: communication/fieldbus	EtherNet/IP™: 2 x RJ-45
Baud rate	10/100 Mbit/s
Transmission medium (communication/fieldbus)	Twisted Pair S-UTP; 100 Ω; Cat. 5; 100 m maximum cable length
Transmission performance	Class D per EN 50173
Number of modules per node (max.)	250
Input and output (fieldbus) process image (max.)	1020 words/1020 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector
Input current (typ.) at nominal load (24 V)	280 mA
Power consumption (5 V system supply)	350 mA
Total current (system supply)	700 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-363

Fieldbus coupler ▸ ETHERNET

750-342

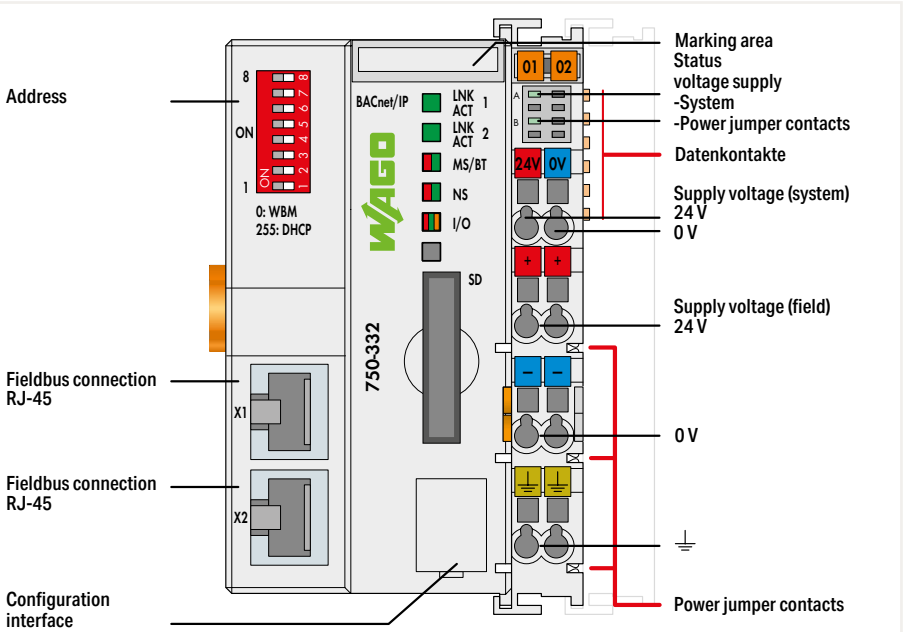


Version	Default
Item No.	**750-342**
Order Text	**FC ETHERNET; G1**

Technical Data	
Communication	Modbus (TCP, UDP); ETHERNET
ETHERNET protocols	HTTP; BootP
Connection technology: communication/fieldbus	Modbus TCP/UDP: 1 x RJ-45
Baud rate	10 Mbit/s
Transmission medium (communication/fieldbus)	Twisted pair S-UTP; 100 Ω; Cat. 5
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	512 bytes/512 bytes
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	200 mA
Total current (system supply)	1800 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-342

Fieldbus coupler ▸ BACnet/IP; SD card slot

750-332



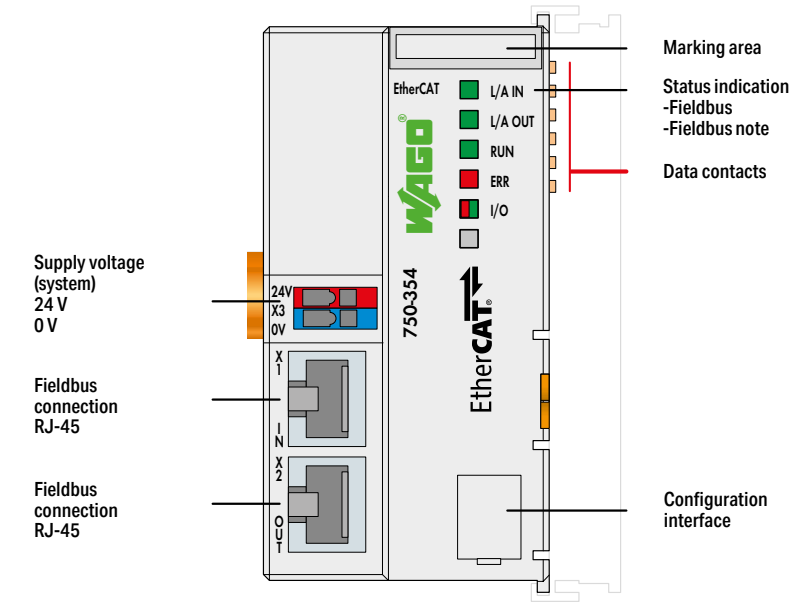
Version	Default
Item No.	**750-332**
Order Text	**FC BACnet/IP**

Technical Data	
Communication	BACnet/IP; Modbus (TCP, UDP)
Protocol	HTTP(S), BootP, DHCP, DNS, (S)FTP, SNMP
Connection technology: communication/fieldbus	BACnet/IP: 2 x RJ-45; Modbus TCP/UDP: 2 x RJ-45
Device-specific	BACnet device profile: B-BC (BACnet building controller); BACnet revision: 12
Baud rate	10/100 Mbit/s
Transmission medium (communication/fieldbus)	Twisted Pair S-UTP; 100 Ω; Cat. 5; 100 m maximum cable length
Transmission performance	Class D per EN 50173
Memory card type	SD and SDHC up to 32 GB (all guaranteed properties only valid with WAGO Memory Card)
Number of modules per node (max.)	250
Input and output (fieldbus) process image (max.)	1020 words/1020 words
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	440 mA
Total current (system supply)	1700 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(61.5 x 100 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-332

Accessories	Item No.
Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C	758-879/000-2108

Fieldbus coupler ▶ EtherCAT

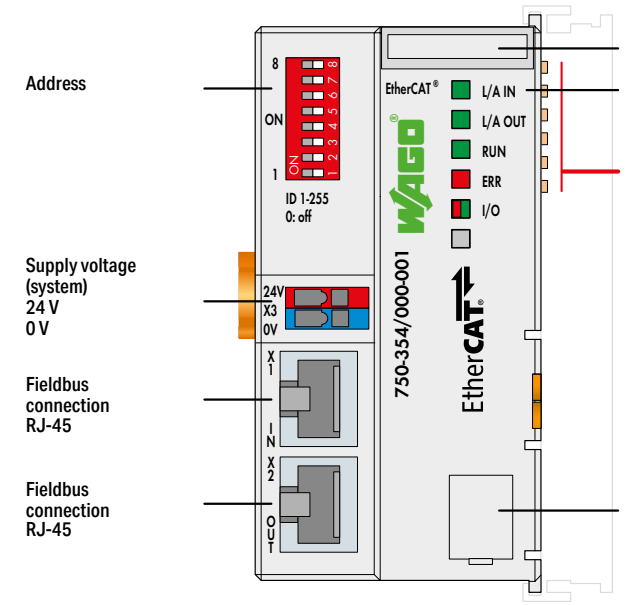
750-354



Version	**Default**
Item No.	**750-354**
Order Text	**FC EtherCAT**

Technical Data	
Communication	EtherCAT
Protocol	EtherCAT® (direct mode)
Connection technology: communication/fieldbus	EtherCAT: 2 x RJ-45
Baud rate	100 Mbit/s
Transmission medium (communication/fieldbus)	Shielded twisted pair S/FTP, F/FTP or SF/FTP; 100 Ω; Cat. 6
Transmission performance	Class D per EN 50173
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	1024 bytes/1024 bytes
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector
Input current (typ.) at nominal load (24 V)	250 mA
Power consumption (5 V system supply)	300 mA
Total current (system supply)	700 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-354

Fieldbus coupler ▶ EtherCAT; ID switch

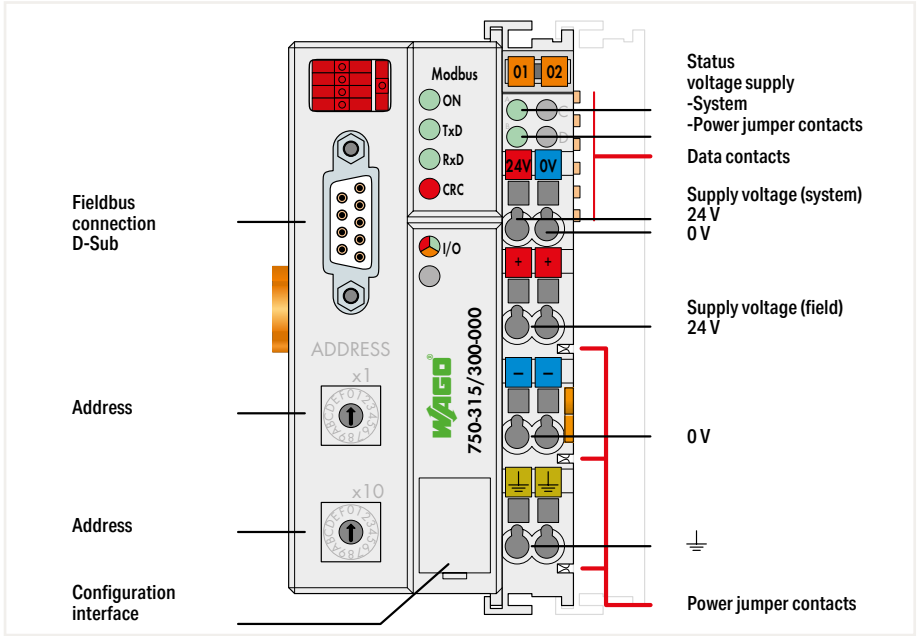


Version	Default	Diagnostics
Item No.	**750-354/000-001**	**750-354/000-002**
Order Text	**FC EtherCAT; ID-Switch**	**FC EtherCAT; ID-Switch; 100Mbit/s; Diagn**

Technical Data		
Communication	EtherCAT	
Protocol	EtherCAT® (direct mode)	
Connection technology: communication/fieldbus	EtherCAT: 2 x RJ-45	
Baud rate	100 Mbit/s	
Transmission medium (communication/fieldbus)	Shielded twisted pair S/FTP, F/FTP or SF/FTP; 100 Ω; Cat. 6	
Transmission performance	Class D per EN 50173	
Number of modules per node (max.)	64	
Input and output (fieldbus) process image (max.)	1024 bytes/1024 bytes	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector	
Input current (typ.) at nominal load (24 V)	250 mA	
Power consumption (5 V system supply)	300 mA	
Total current (system supply)	700 mA	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm	
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx	CE; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-354/000-001	

Fieldbus coupler ▸ MODBUS; RS-485; 115.2 kBd

750-315/300-000

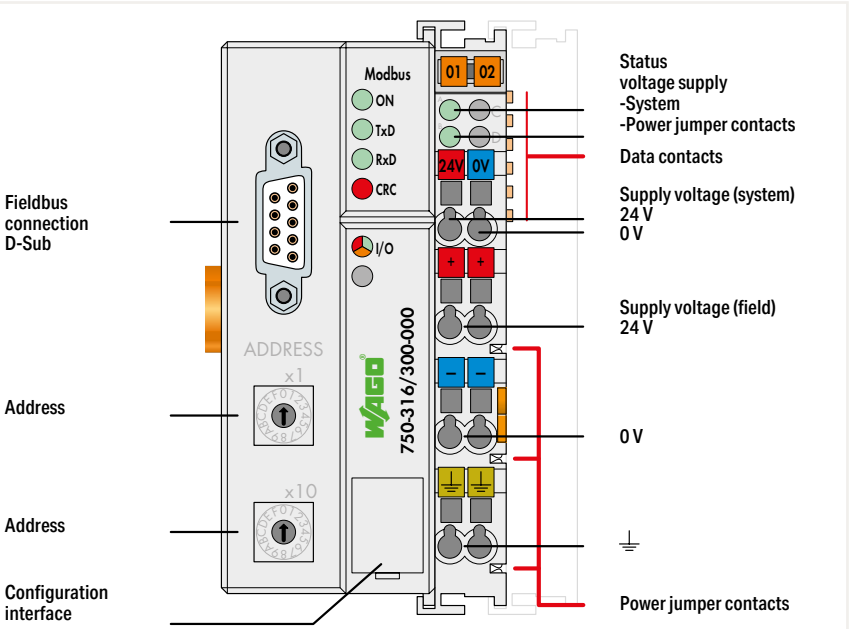


Version	Default
Item No.	**750-315/300-000**
Order Text	**FC MODBUS; RS485; 115.2kBd**

Technical Data	
Communication	Modbus® RTU
Connection technology: communication/fieldbus	Modbus RTU: 1 x D-sub 9 socket
Number of fieldbus nodes on master (max.)	247
Baud rate	150 Baud … 115.2 kBd
Transmission medium (communication/fieldbus)	Shielded Cu cable 2 (4) x 0.25 mm²
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	512 bytes/512 bytes
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	350 mA
Total current (system supply)	1650 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-315/300-000

Fieldbus coupler ▸ MODBUS; RS-232; 115.2 kBd

750-316/300-000

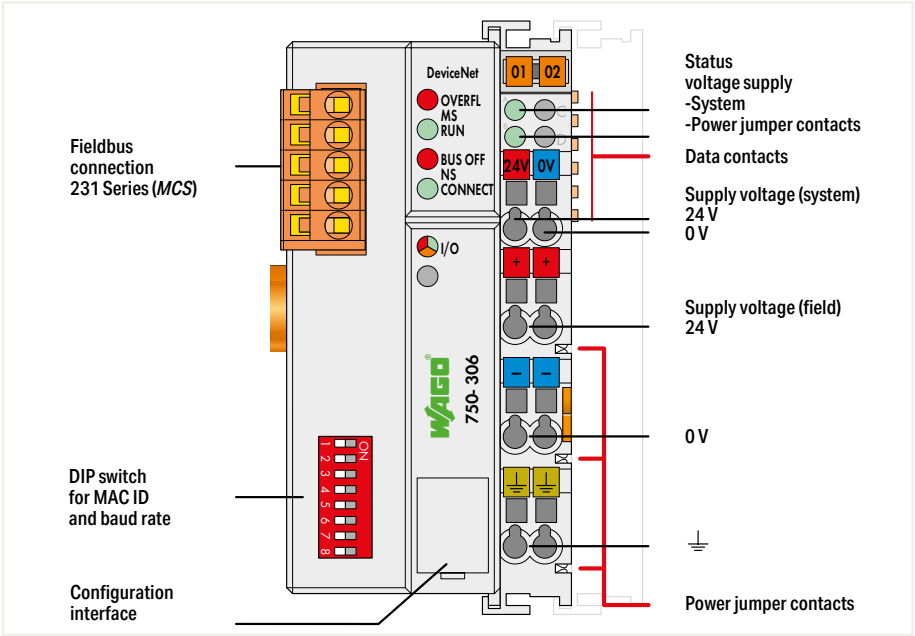


Version	Default
Item No.	**750-316/300-000**
Order Text	**FC MODBUS; RS232; 115.2kBd**

Technical Data	
Communication	Modbus® RTU
Connection technology: communication/fieldbus	Modbus RTU: 1 x D-sub 9 socket
Number of fieldbus nodes on master (max.)	247
Baud rate	150 Baud … 115.2 kBd
Transmission medium (communication/fieldbus)	Shielded Cu cable 2 (4) x 0.25 mm²
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	512 bytes/512 bytes
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	350 mA
Total current (system supply)	1650 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-316/300-000

Fieldbus coupler ▶ DeviceNet

750-306

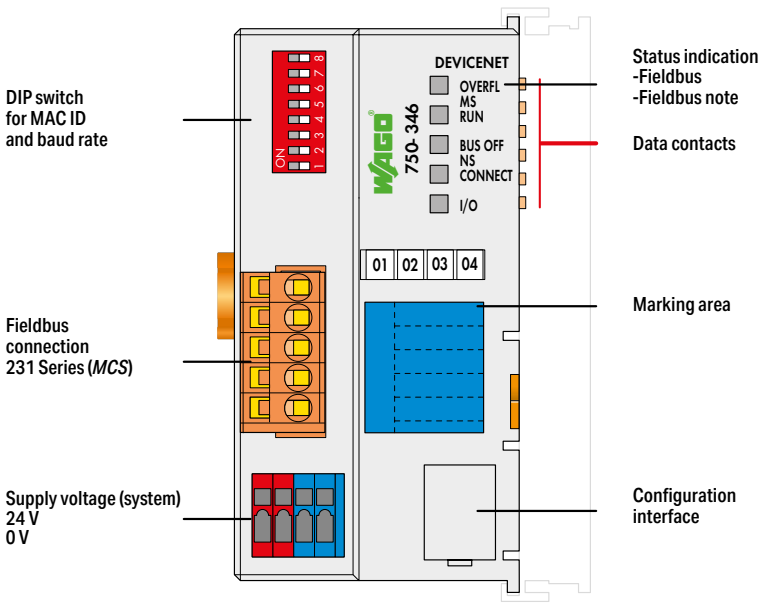


Version	**Default**
Item No.	**750-306**
Order Text	**FC DeviceNet**

Technical Data	
Communication	DeviceNet
Connection technology: communication/fieldbus	DeviceNet: 1 x Male connector; 5-pole
Number of fieldbus nodes on master (max.)	64
Number of I/O points	6000
Bus segment length (max.)	500 m
Baud rate	500 kBd (125 kBd, 250 kBd, 500 kBd)
Transmission medium (communication/fieldbus)	Shielded Cu cable; Remote bus cable: 2 x 0.82 mm² + 2 x 1.7 mm²; Drop cable: 2 x 0.2 mm² + 2 x 0.32 mm²
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	512 bytes/512 bytes
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Input current via DeviceNet interface at 11 V	120 mA
Power consumption (5 V system supply)	350 mA
Total current (system supply)	1650 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-306

Fieldbus coupler ▶ DeviceNet; ECO

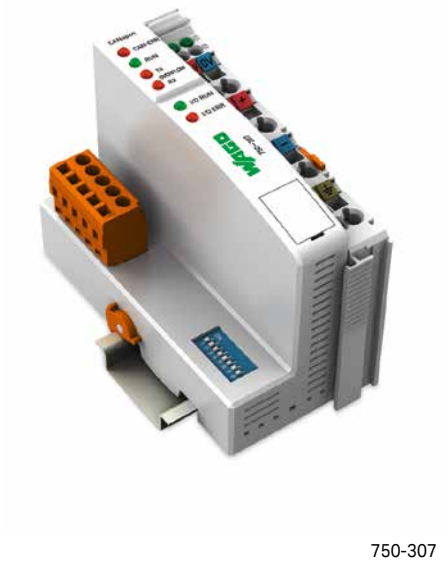
750-346



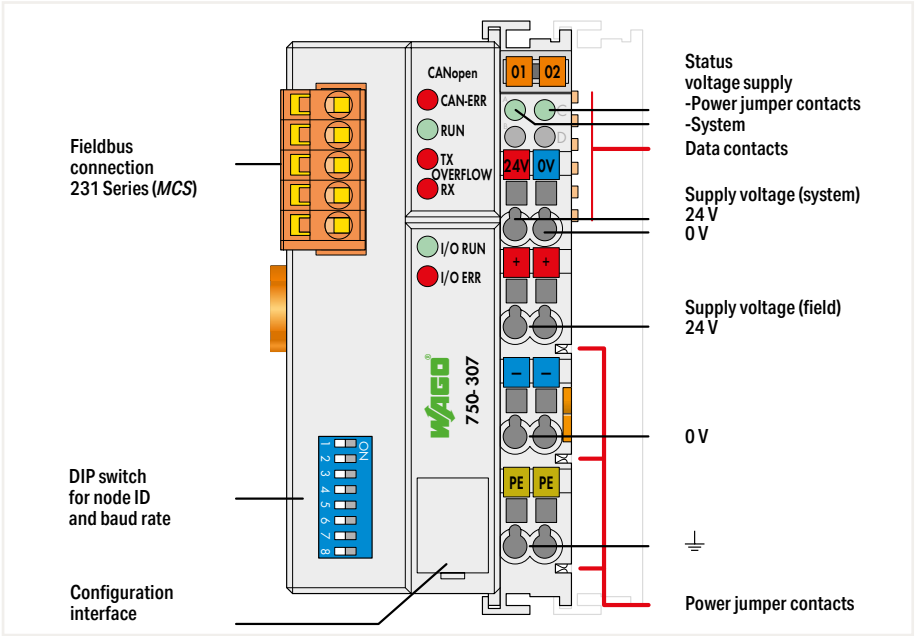
Version	Default
Item No.	**750-346**
Order Text	**FC DeviceNet; ECO**

Technical Data	
Communication	DeviceNet
Connection technology: communication/fieldbus	DeviceNet: 1 x Male connector; 5-pole
Number of fieldbus nodes on master (max.)	64
Number of I/O points	6000
Bus segment length (max.)	500 m
Baud rate	500 kBd (125 kBd, 250 kBd, 500 kBd)
Transmission medium (communication/fieldbus)	Shielded Cu cable; Remote bus cable: 2 x 0.82 mm² + 2 x 1.7 mm²; Drop cable: 2 x 0.2 mm² + 2 x 0.32 mm²
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	32 bytes/32 bytes
Supply voltage (system)	24 VDC (-15 … +20 %); via pluggable connector
Input current (typ.) at nominal load (24 V)	260 mA
Input current via DeviceNet interface at 11 V	120 mA
Power consumption (5 V system supply)	350 mA
Total current (system supply)	650 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE; KC; cULus OrdLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-346

Fieldbus coupler ▸ CANopen



750-307

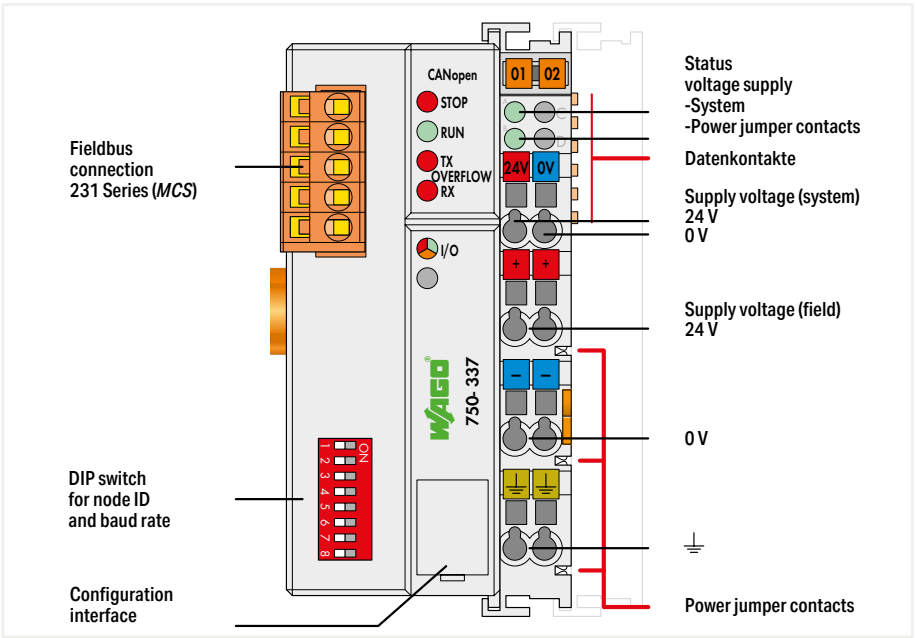


Version	Default
Item No.	750-307
Order Text	FC CANopen

Technical Data	
Communication	CANopen
Connection technology: communication/fieldbus	CANopen: 1 x Male connector; 5-pole
Number of fieldbus nodes on master (max.)	110
Bus segment length (max.)	1000 m
Baud rate	10 kBd … 1 MBd
Transmission medium (communication/fieldbus)	Shielded Cu cable 3 x 0.25 mm²
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	512 bytes/512 bytes
Number of PDOs	5 Tx / 5 Rx
Number of SDOs	2 SDO servers
Communication profile	DS-301 V3.0
Device profile	DS-401 V1.4
Supply voltage (system)	24 VDC (-15 … +20 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	350 mA
Total current (system supply)	1650 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; Ex ATEX/IECEx
Data sheet and further information, see:	wago.com/750-307

Fieldbus coupler ▶ CANopen; MCS

750-337

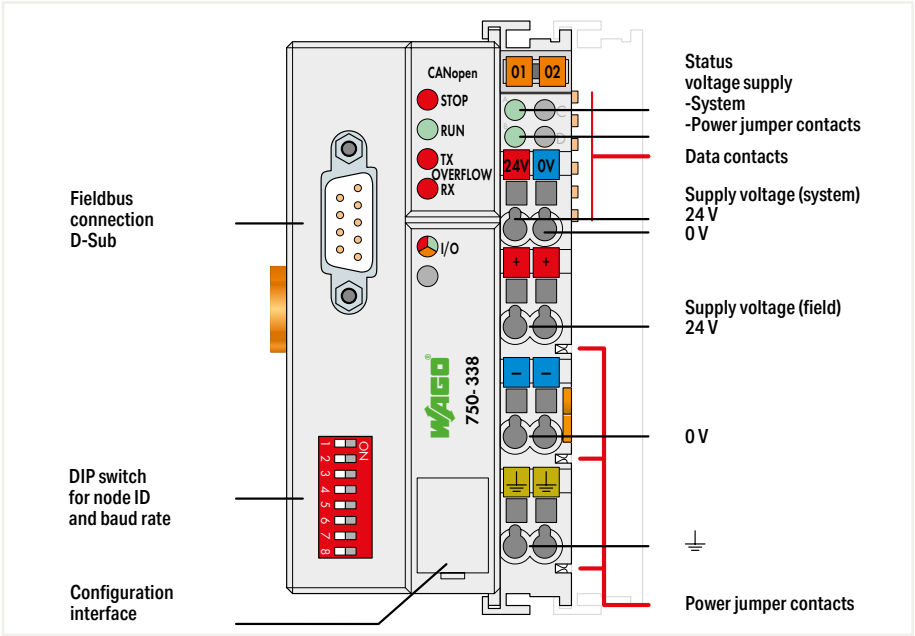


Version	Default	Ext. Temperature
Item No.	**750-337**	**750-337/025-000**
Order Text	**FC CANopen; MCS**	**FC CANopen; MCS; T**

Technical Data		
Communication	CANopen	
Connection technology: communication/fieldbus	CANopen: 1 x Male connector; 5-pole	
Number of fieldbus nodes on master (max.)	110	
Bus segment length (max.)	1000 m	
Baud rate	10 kBd … 1 MBd	
Transmission medium (communication/fieldbus)	Shielded Cu cable 3 x 0.25 mm²	
Number of modules per node (max.)	64	
Input and output (fieldbus) process image (max.)	512 bytes/512 bytes	
Number of PDOs	32 Tx / 32 Rx	
Number of SDOs	2 SDO servers	
Communication profile	DS-301 V4.1	
Device profile	DS-401 V2.0; Limit value monitoring ; Edge-triggered PDOs; Configurable response in the event of an error	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts	
Input current (typ.) at nominal load (24 V)	500 mA	
Power consumption (5 V system supply)	350 mA	
Total current (system supply)	1650 mA	
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-337	

Fieldbus coupler ▸ CANopen; D-sub

750-338

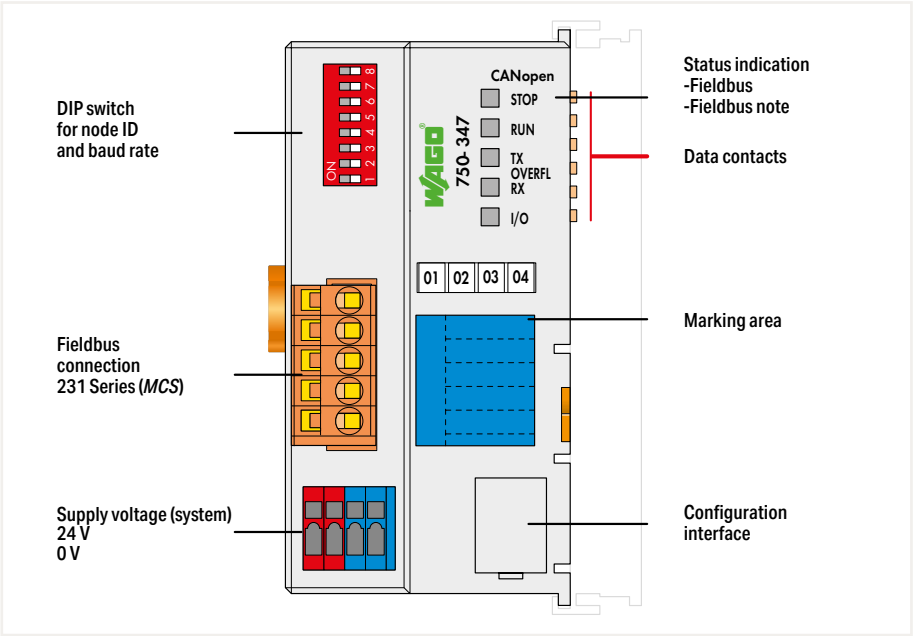


Version	Default
Item No.	**750-338**
Order Text	**FC CANopen; DSub**

Technical Data	
Communication	CANopen
Connection technology: communication/fieldbus	CANopen: 1 x D-sub 9 plug
Number of fieldbus nodes on master (max.)	110
Bus segment length (max.)	1000 m
Baud rate	10 kBd … 1 MBd
Transmission medium (communication/fieldbus)	Shielded Cu cable 3 x 0.25 mm²
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	512 bytes/512 bytes
Number of PDOs	32 Tx / 32 Rx
Number of SDOs	2 SDO servers
Communication profile	DS-301 V4.1
Device profile	DS-401 V2.0; Limit value monitoring ; Edge-triggered PDOs; Configurable response in the event of an error
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	350 mA
Total current (system supply)	1650 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-338

Fieldbus coupler ▶ CANopen; MCS; ECO

750-347

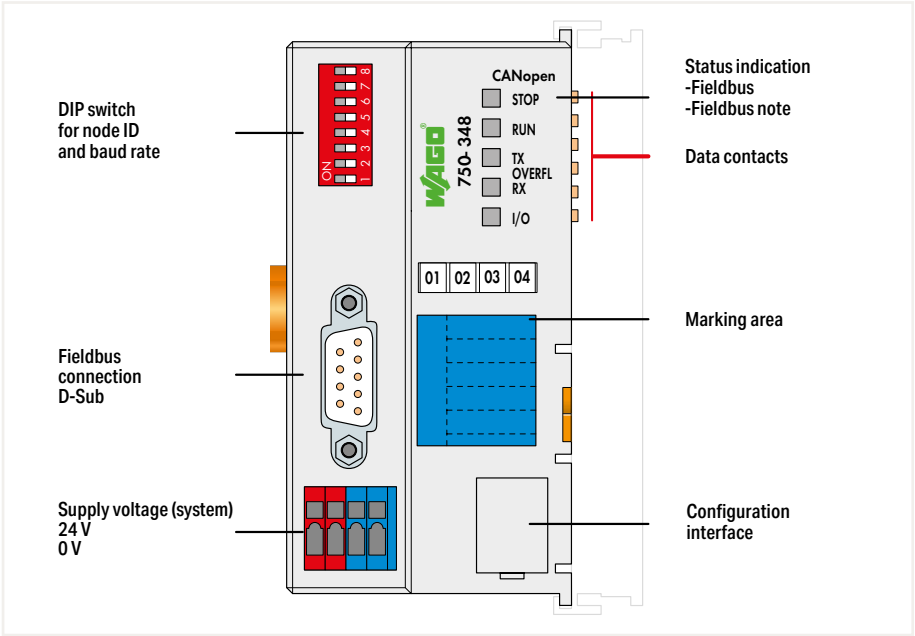


Version	Default
Item No.	**750-347**
Order Text	**FC CANopen; MCS; ECO**

Technical Data	
Communication	CANopen
Connection technology: communication/fieldbus	CANopen: 1 x Male connector; 5-pole
Number of fieldbus nodes on master (max.)	110
Bus segment length (max.)	1000 m
Baud rate	10 kBd … 1 MBd
Transmission medium (communication/fieldbus)	Shielded Cu cable 3 x 0.25 mm²
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	32 bytes/32 bytes
Number of PDOs	5 Tx / 5 Rx
Number of SDOs	1 SDO server
Communication profile	DS-301 V4.1
Device profile	DS-401 V2.0; Configurable response in the event of an error
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector
Input current (typ.) at nominal load (24 V)	260 mA
Power consumption (5 V system supply)	350 mA
Total current (system supply)	650 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-347

Fieldbus coupler ▸ CANopen; D-Sub; ECO

750-348

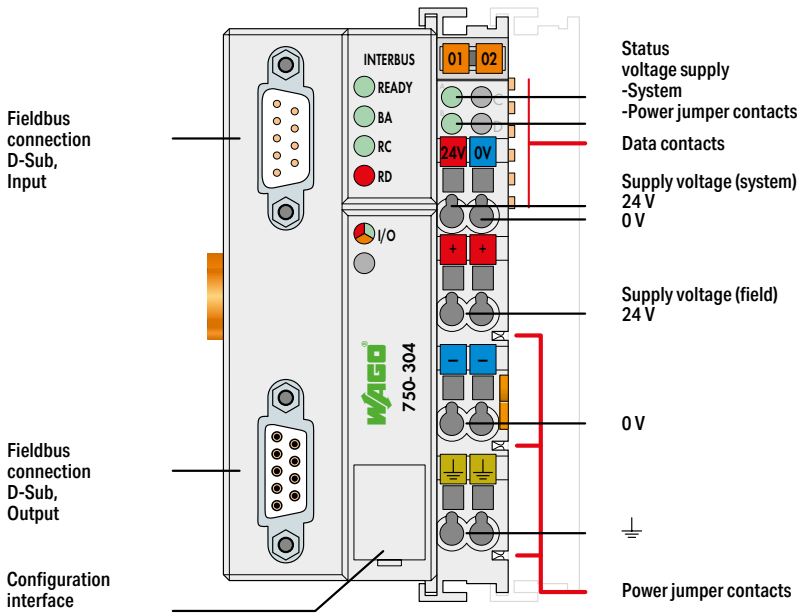


Version	**Default**
Item No.	**750-348**
Order Text	**FC CANopen; DSub; ECO**

Technical Data	
Communication	CANopen
Connection technology: communication/fieldbus	CANopen: 1 x D-sub 9 plug
Number of fieldbus nodes on master (max.)	110
Bus segment length (max.)	1000 m
Baud rate	10 kBd … 1 MBd
Transmission medium (communication/fieldbus)	Shielded Cu cable 3 x 0.25 mm²
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	32 bytes/32 bytes
Number of PDOs	5 Tx / 5 Rx
Number of SDOs	1 SDO server
Communication profile	DS-301 V4.1
Device profile	DS-401 V2.0; Configurable response in the event of an error
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector
Input current (typ.) at nominal load (24 V)	260 mA
Power consumption (5 V system supply)	350 mA
Total current (system supply)	650 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-348

Fieldbus coupler ▶ INTERBUS

750-304

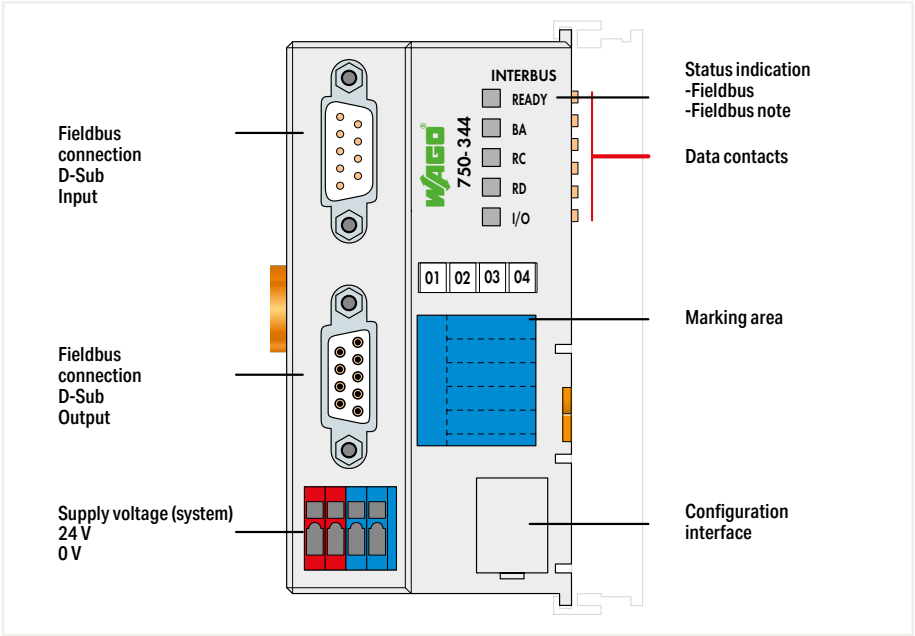


Version	**Default**
Item No.	**750-304**
Order Text	**FC INTERBUS**

Technical Data	
Communication	INTERBUS
Connection technology: communication/fieldbus	INTERBUS: 1 x D-sub 9 plug/socket
Number of fieldbus nodes on master (max.)	256
Number of I/O points	4096
Bus segment length (max.)	400 m
Baud rate	500 kBd
Transmission medium (communication/fieldbus)	Certified Cu cable
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	64 bytes/64 bytes
Supply voltage (system)	24 VDC (-15 … +20 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	300 mA
Total current (system supply)	1700 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-304

Fieldbus coupler ▶ INTERBUS; ECO

750-344

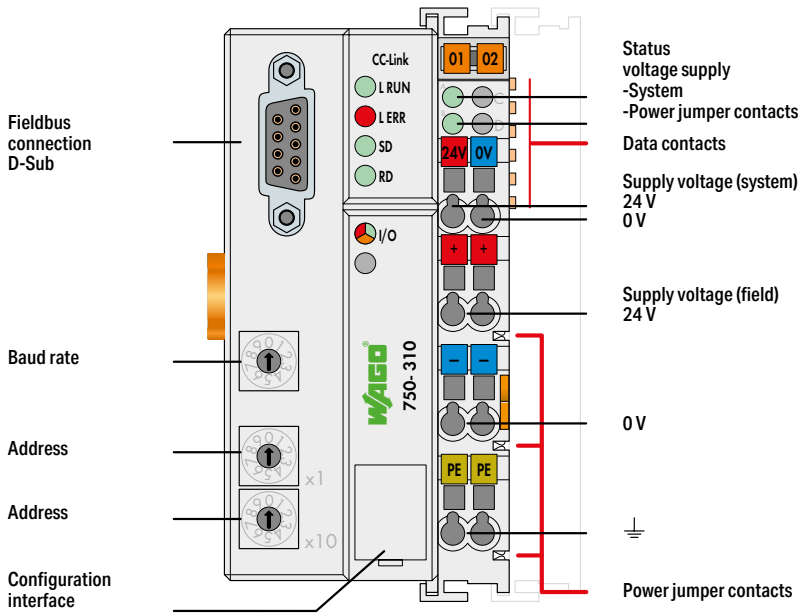


Version	**Default**
Item No.	**750-344**
Order Text	**FC INTERBUS; 500kbit/s; ECO**

Technical Data	
Communication	INTERBUS
Connection technology: communication/fieldbus	INTERBUS: 1 x D-sub 9 plug/socket
Number of fieldbus nodes on master (max.)	256
Number of I/O points	4096
Bus segment length (max.)	400 m
Baud rate	500 kBd
Transmission medium (communication/fieldbus)	Certified Cu cable
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	20 bytes/20 bytes
Supply voltage (system)	24 VDC (-15 … +20 %); via pluggable connector
Input current (typ.) at nominal load (24 V)	260 mA
Power consumption (5 V system supply)	350 mA
Total current (system supply)	650 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; Ex ATEX/IECEx
Data sheet and further information, see:	wago.com/750-344

Fieldbus coupler ▸ CC-Link; D-Sub

750-310

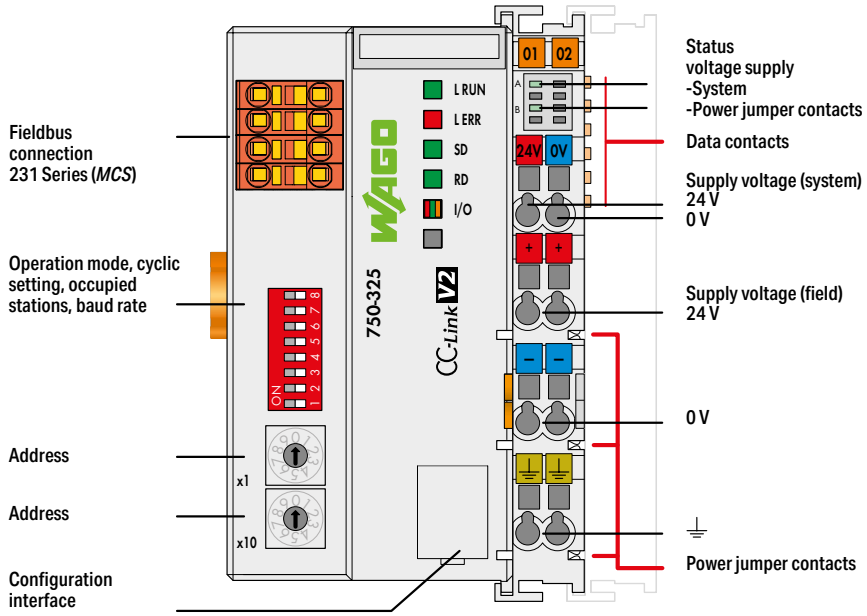


Version	Default
Item No.	**750-310**
Order Text	**FC CC-Link**

Technical Data	
Communication	CC-Link
Connection technology: communication/fieldbus	CC-Link: 1 x D-sub 9 socket
Number of fieldbus nodes on master (max.)	64
Baud rate	156 kBd … 10 MBd
Transmission medium (communication/fieldbus)	Shielded Cu cable 2 / 3 x 0.5 mm²
Number of modules per node (max.)	64
Station addresses	4/1 … 4
Input and output (fieldbus) process image (max.)	48 bytes/48 bytes
Input process image note	14-byte digital, 2-byte system, 32-byte analog
Output process image note	14-byte digital, 2-byte system, 32-byte analog
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	300 mA
Total current (system supply)	1700 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; Ex ATEX/IECEx
Data sheet and further information, see:	wago.com/750-310

Fieldbus coupler ▸ CC-Link; MCS

750-325



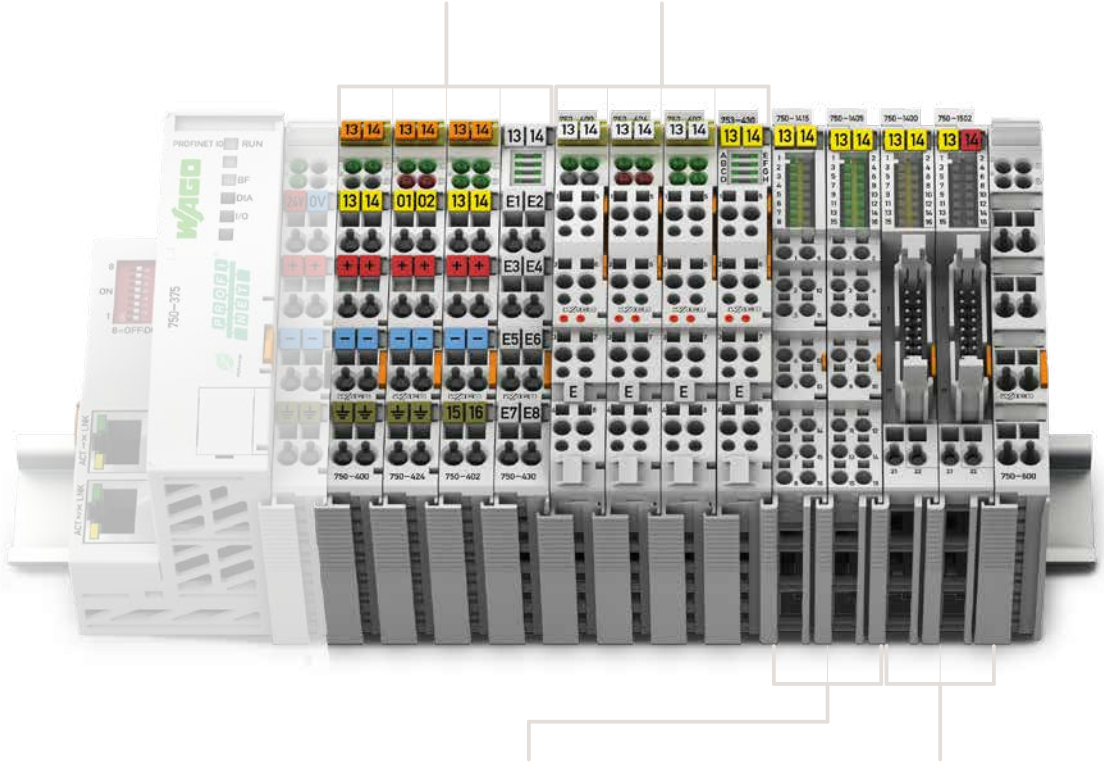
Version	Default
Item No.	750-325
Order Text	FC CC-Link

Technical Data	
Communication	CC-Link
Connection technology: communication/fieldbus	CC-Link: 1 x Male connector; 4-pole
Device-specific	Operating mode: CC-Link V2.0 (default setting)/V1.1; Advanced cycle setting: 1, 2, 4 (default setting), 8 cycles
Number of fieldbus nodes on master (max.)	64
Baud rate	156 kBd … 10 MBd
Transmission medium (communication/fieldbus)	Shielded Cu cable 2 / 3 x 0.5 mm²
Number of modules per node (max.)	64
Station addresses	1 … 4 / 4 (default setting)
Input process image note	RX (digital inputs): V1.1: 16, 48, 80, 112 bits; V2.0: 16, 48, 80, 112 bits (1 cycle); V2.0: 16, 80, 144, 208 bits (2 cycles); V2.0: 48, 176, 304, 432 bits (4 cycles); V2.0: 112, 368, 624, 880 bits (8 cycles) and 16 bits per system area; RWr (analog inputs): V1.1: 4, 8, 12, 16 words (16 bits); V2.0: 4, 8, 12, 16 words (1 cycle); V2.0: 8, 16, 24, 32 words (2 cycles); V2.0: 16, 32, 48, 64 words (4 cycles); V2.0: 32, 64, 96, 128 words (8 cycles)
Output process image note	RY (digital outputs): V1.1: 16, 48, 80, 112 bits; V2.0: 16, 48, 80, 112 bits (1 cycle); V2.0: 16, 80, 144, 208 bits (2 cycles); V2.0: 48, 176, 304, 432 bits (4 cycles); V2.0: 112, 368, 624, 880 bits (8 cycles) and 16 bits per system area; RWw (analog outputs): V1.1: 4, 8, 12, 16 words (16 bits); V2.0: 4, 8, 12, 16 words (1 cycle); V2.0: 8, 16, 24, 32 words (2 cycles); V2.0: 16, 32, 48, 64 words (4 cycles); V2.0: 32, 64, 96, 128 words (8 cycles)
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Input current (typ.) at nominal load (24 V)	600 mA
Power consumption (5 V system supply)	200 mA
Total current (system supply)	1800 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(61.5 x 100 x 71.9) mm
Approvals	CE; KC; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-325

Digital Input Modules

Housing Design (750 Series)	
Dimensions W x H x D	Housing with 4 LEDs: 12 x 100 x 69.8 mm Housing with 8 LEDs: 12 x 100 x 67.8 mm
Depth from upper edge of DIN-rail	Housing with 4 LEDs: 62.6 mm Housing with 8 LEDs: 60.6 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch

Housing Design (753 Series)	
Dimensions W x H x D	Housing with 4 LEDs: 12 x 100 x 69.8 mm Housing with 8 LEDs: 12 x 100 x 69 mm
Depth from upper edge of DIN-rail	Housing with 4 LEDs: 62.6 mm Housing with 8 LEDs: 61.8 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	9 … 10 mm / 0.37 inch



Housing Design (750 Series), with Push-in CAGE CLAMP® Connections (up to 16 connection points)	
Dimensions W x H x D	12 x 100 x 69 mm
Depth from upper edge of DIN-rail	61.8 mm
Connection technology	Push-in CAGE CLAMP®
Conductor cross-section	Solid: 0.08 … 1.5 mm² / 28 … 16 AWG Fine-stranded: 0.25 … 1.5 mm² / 22 … 16 AWG
Strip length	8 … 9 mm / 0.33 inch

Housing Design (750 Series), with Ribbon Cable Connection	
Dimensions W x H x D	12 x 100 x 74.1 mm
Depth from upper edge of DIN-rail	66.9 mm
Connection technology	20-pole male connector + 2 x CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch

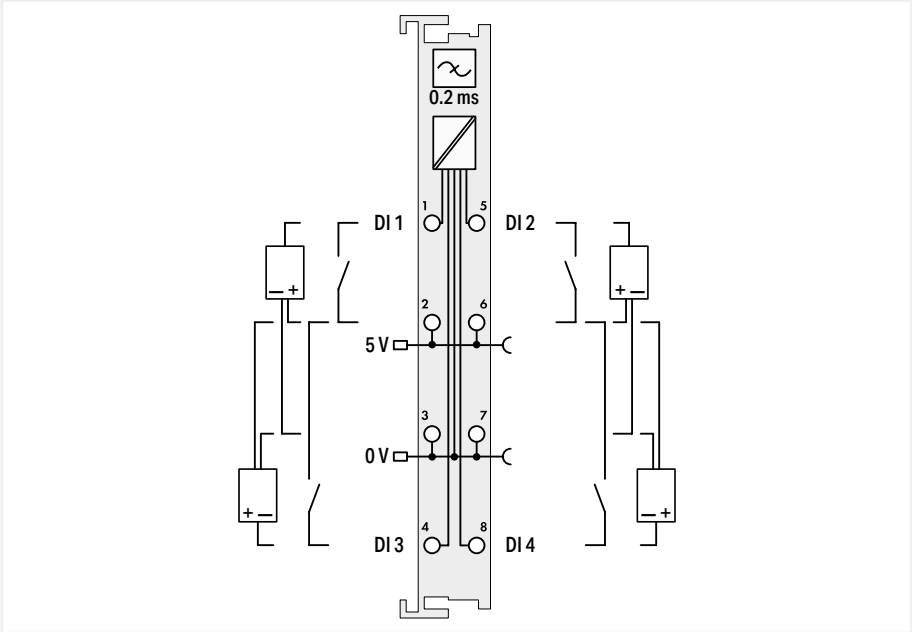
PROFIsafe

I/O System –
750 XTR Series

I/O System – 750 and 753 Series, Digital Input Modules
Contents

Digital input ▸ 5 VDC ▸ High-side switching ▸ 0.2 ms

750-414



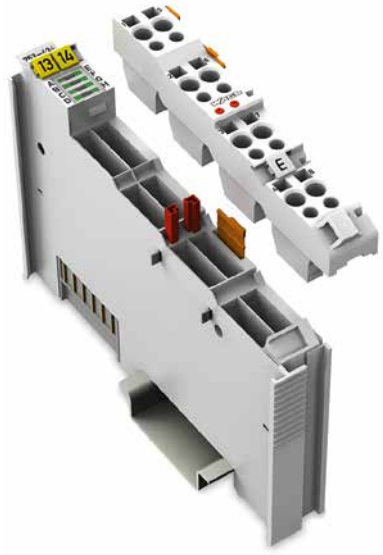
Item Description	**4-Channel Digital Input; 5 VDC; 0.2 ms**
Version	**Default**
Item No.	**750-414**
Order Text	**4DI; 5 VDC; 0.2ms**

7.2

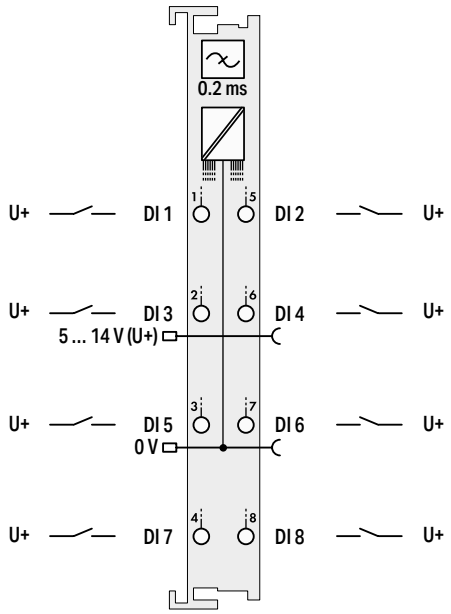
Technical Data	
Wiring interface	Fixed
Number of digital inputs	4
Signal type	Voltage
Voltage signal type	5 VDC
Voltage range for signal (0)	0 … 0.8 VDC
Voltage range for signal (1)	2.4 … 5 VDC
Sensor connection	2 x (2-wire, 3-wire); A suitable field side connection module (e.g., 750-614) must also be used to connect other sensors.
Input characteristic	High-side switching
Input filter (digital)	0.2 ms
Input current per channel for signal (1) (typ.)	0.05 mA
Supply voltage (sensor)	5 VDC
Supply voltage (field)	5 VDC; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	5 mA
Input data width (internal) (max.)	4 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc
Data sheet and further information, see:	wago.com/750-414

Notice: An additional supply module must be added for 5 VDC supply!

Digital input ▸ 5 VDC ▸ High-side switching ▸ 0.2 ms



753-434



Item Description	**8-Channel Digital Input; 5/12 VDC; 0.2 ms**
Version	**Pluggable (delivery without connector)**
Item No.	**753-434**
Order Text	**8DI; 5/12 VDC; 0.2ms**

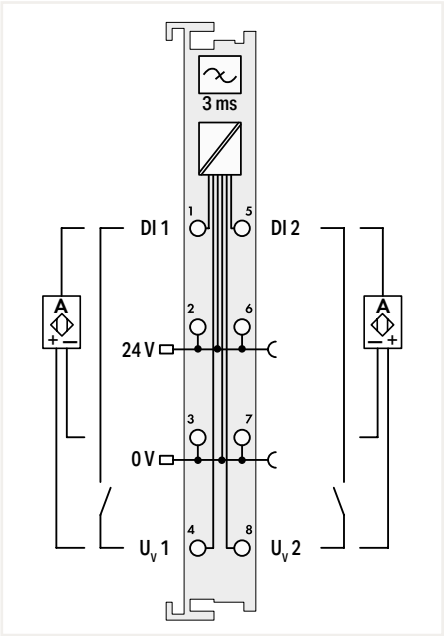
Technical Data	
Wiring interface	Pluggable
Number of digital inputs	8
Signal type	Voltage
Voltage signal type	5 VDC; 12 VDC
Voltage range for signal (0)	−3 ... 0.2 x U_V DC
Voltage range for signal (1)	0.5 x U_V ... 1.1 x U_V DC
Sensor connection	8 x (1-wire)
Input characteristic	High-side switching
Input filter (digital)	0.2 ms
Input current at specific input voltage	0.06 mA at 12 V
Supply voltage (field)	14 VDC; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	4 mA
Input data width (internal) (max.)	8 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 ... 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/753-434

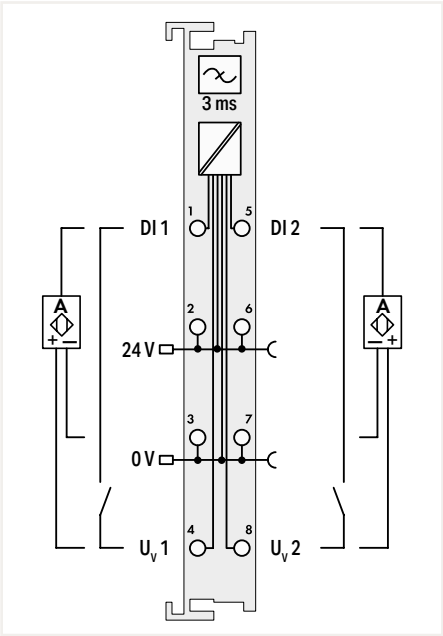
Accessories	**Item No.**
Plug	753-110

Notice: An additional supply module must be added for 5-14 VDC supply!

Digital input ▸ 24 VDC ▸ High-side switching ▸ 3 ms

750-418



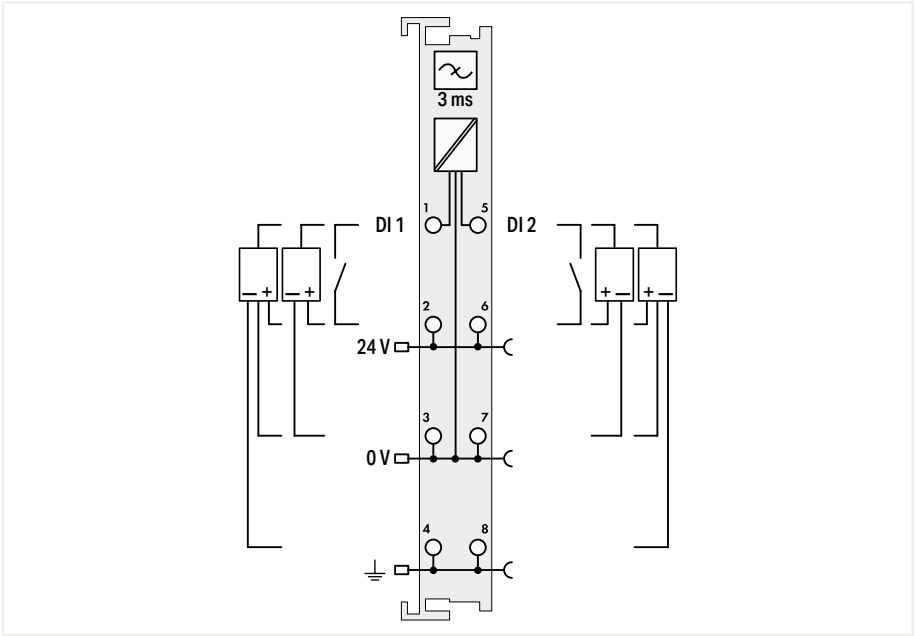


7.2

Item Description	2-Channel Digital Input; 24 VDC; 3 ms; Acknowledgement; Diagnostics		2-Channel Digital Input; 24 VDC; 3 ms; Diagnostics	
Version	Default	Pluggable (delivery without connector)	Default	Pluggable (delivery without connector)
Item No.	**750-418**	**753-418**	**750-421**	**753-421**
Order Text	**2DI; 24 VDC; 3ms; Acknol; Diagn**	**2DI; 24 VDC; 3ms; Acknol; Diagn**	**2DI; 24 VDC; 3ms; Diagn**	**2DI; 24 VDC; 3ms; Diagn**
Technical Data				
Wiring interface	Fixed	Pluggable	Fixed	Pluggable
Number of digital inputs	2		2	
Signal type	Voltage		Voltage	
Voltage signal type	24 VDC		24 VDC	
Voltage range for signal (0)	−3 … +5 VDC		−3 … +5 VDC	
Voltage range for signal (1)	15 … 30 VDC		15 … 30 VDC	
Sensor connection	2 x (2-wire, 3-wire)		2 x (2-wire, 3-wire)	
Input characteristic	High-side switching		High-side switching	
Input filter (digital)	3 ms		3 ms	
Input current per channel for signal (1) (typ.)	3.7 mA		3.7 mA	
Output current per channel	0.5 A		0.5 A	
Diagnostics	Short circuit, active acknowledgment after error rectified		Short circuit, automatic acknowledgment after error rectified	
Supply voltage (sensor)	24 VDC; Short-circuit-protected, isolated channels A short circuit to ground is indicated as an error/fieldbus failure and a message is sent to the supervisory control. The error is canceled via the controller after it has been rectified (active acknowledgment by a user).		24 VDC; Short-circuit-protected, isolated channels A short circuit to ground is indicated as an error/fieldbus failure and a message is sent to the supervisory control. The error is canceled automatically after it has been rectified.	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	12 mA		12 mA	
Input data width (internal) (max.)	4 bits		4 bits	
Output (internal) data width (max.)	4 bits			
Isolation	500 V system/field		500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C		0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm		(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-418	wago.com/753-418	wago.com/750-421	wago.com/753-421
Accessories	**Item No.**	**Item No.**	**Item No.**	**Item No.**
Plug		753-110		753-110

Digital input ▸ 24 VDC ▸ High-side switching ▸ 3 ms

750-400

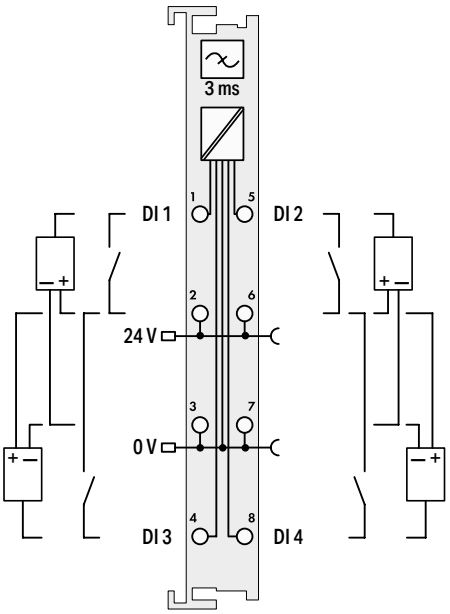


Item Description	2-Channel Digital Input; 24 VDC; 3 ms		
Version	Default	Ext. Temperature	Pluggable (delivery without connector)
Item No.	750-400	750-400/025-000	753-400
Order Text	2DI; 24 VDC; 3ms	2DI; 24 VDC; 3ms; T	2DI; 24 VDC; 3ms

Technical Data			
Wiring interface	Fixed		Pluggable
Number of digital inputs	2		
Signal type	Voltage		
Voltage signal type	24 VDC		
Voltage range for signal (0)	−3 … +5 VDC		
Voltage range for signal (1)	15 … 30 VDC		
Sensor connection	2 x (2-wire, 3-wire, 4-wire)		
Input characteristic	High-side switching		
Input filter (digital)	3 ms		
Input current per channel for signal (1) (typ.)	4.5 mA		
Supply voltage (sensor)	24 VDC		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Power consumption (5 V system supply)	3.7 mA		
Input data width (internal) (max.)	2 bits		
Isolation	500 V system/field		
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
Data sheet and further information, see:	wago.com/750-400		wago.com/753-400
Accessories	**Item No.**	**Item No.**	**Item No.**
Plug			753-110

Digital input ▸ 24 VDC ▸ High-side switching ▸ 3 ms

750-402



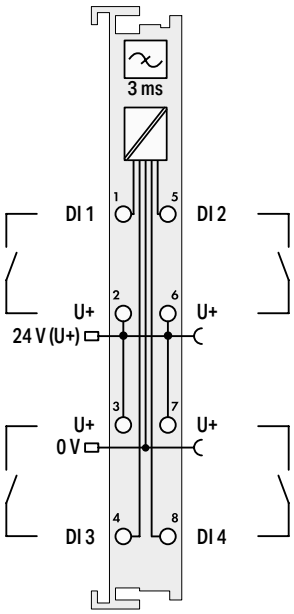
7.2

Item Description	4-Channel Digital Input; 24 VDC; 3 ms		
Version	Default	Ext. Temperature	Pluggable (delivery without connector)
Item No.	**750-402**	**750-402/025-000**	**753-402**
Order Text	**4DI; 24 VDC; 3ms**	**4DI; 24 VDC; 3ms; T**	**4DI; 24 VDC; 3ms**

Technical Data			
Wiring interface	Fixed		Pluggable
Number of digital inputs	4		
Signal type	Voltage		
Voltage signal type	24 VDC		
Voltage range for signal (0)	−3 … +5 VDC		
Voltage range for signal (1)	15 … 30 VDC		
Sensor connection	2 x (2-wire, 3-wire); A suitable field side connection module (e.g., 750-614) must also be used to connect other sensors.		
Input characteristic	High-side switching		
Input filter (digital)	3 ms		
Input current per channel for signal (1) (typ.)	4.5 mA		
Supply voltage (sensor)	24 VDC		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Power consumption (5 V system supply)	7.5 mA		
Input data width (internal) (max.)	4 bits		
Isolation	500 V system/field		
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
Data sheet and further information, see:	wago.com/750-402		wago.com/753-402
Accessories	**Item No.**	**Item No.**	**Item No.**
Plug			753-110

Digital input ▶ 24 VDC ▶ High-side switching ▶ 3 ms

750-432

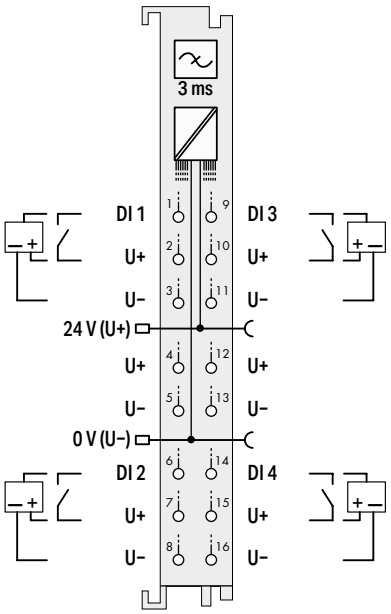


Item Description	4-Channel Digital Input; 24 VDC; 3 ms; 2-wire connection	
Version	Default	Pluggable (delivery without connector)
Item No.	750-432	753-432
Order Text	4DI; 24 VDC; 3ms; 2-wire	4DI; 24 VDC; 3ms; 2-wire

Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital inputs	4	
Signal type	Voltage	
Voltage signal type	24 VDC	
Voltage range for signal (0)	−3 … +5 VDC	
Voltage range for signal (1)	15 … 30 VDC	
Sensor connection	4 x (2-wire)	
Input characteristic	High-side switching	
Input filter (digital)	3 ms	
Input current per channel for signal (1) (typ.)	4.5 mA	
Supply voltage (sensor)	24 VDC	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	5.5 mA	
Input data width (internal) (max.)	4 bits	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-432	wago.com/753-432
Accessories	**Item No.**	**Item No.**
Plug		753-110

Digital input ▸ 24 VDC ▸ High-side switching ▸ 3 ms

750-1420



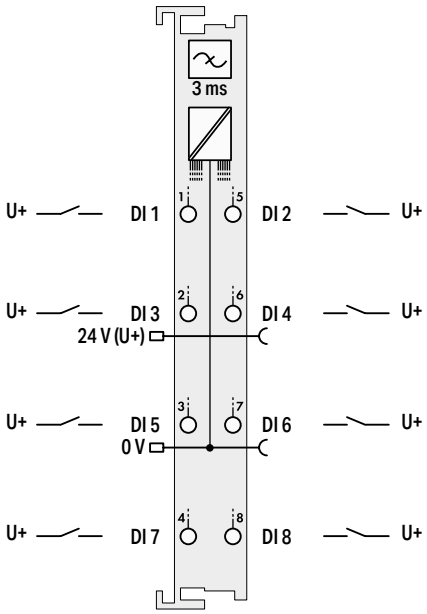
7.2

Item Description	**4-Channel Digital Input; 24 VDC; 3 ms; 3-wire connection**
Version	**Standard with 16 connectors**
Item No.	**750-1420**
Order Text	**4DI; 24 VDC; 3ms; 3-wire**

Technical Data	
Wiring interface	Fixed
Number of digital inputs	4
Signal type	Voltage
Voltage signal type	24 VDC
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	11 … 30 VDC
Input characteristic	Type 3
Sensor connection	4 x (3-wire)
Input characteristic	High-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) (typ.)	4.5 mA
Input current per channel for signal (0) (typ.)	1.6 mA
Power consumption, field supply (module with no external load)	2 mA
Supply voltage (sensor)	24 VDC
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	4 mA
Input data width (internal) (max.)	4 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1420

Digital input ▸ 24 VDC ▸ High-side switching ▸ 3 ms

750-430

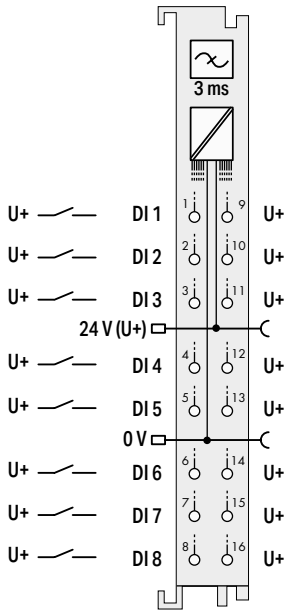


Item Description	8-Channel Digital Input; 24 VDC; 3 ms		
Version	Default	Ext. Temperature	Pluggable (delivery without connector)
Item No.	**750-430**	**750-430/025-000**	**753-430**
Order Text	**8DI; 24 VDC; 3ms**	**8DI; 24 VDC; 3ms; T**	**8DI; 24 VDC; 3ms**

Technical Data			
Wiring interface	Fixed		Pluggable
Number of digital inputs	8		
Signal type	Voltage		
Voltage signal type	24 VDC		
Voltage range for signal (0)	−3 … +5 VDC		
Voltage range for signal (1)	15 … 30 VDC		
Sensor connection	8 x (1-wire)		
Input characteristic	High-side switching		
Input filter (digital)	3 ms		
Input current per channel for signal (1) (typ.)	2.8 mA		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Power consumption (5 V system supply)	17 mA		
Input data width (internal) (max.)	8 bits		
Isolation	500 V system/field		
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm		(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
Data sheet and further information, see:	wago.com/750-430		wago.com/753-430
Accessories	**Item No.**	**Item No.**	**Item No.**
Plug			753-110

Digital input ▸ 24 VDC ▸ High-side switching ▸ 3 ms

750-1415



7.2

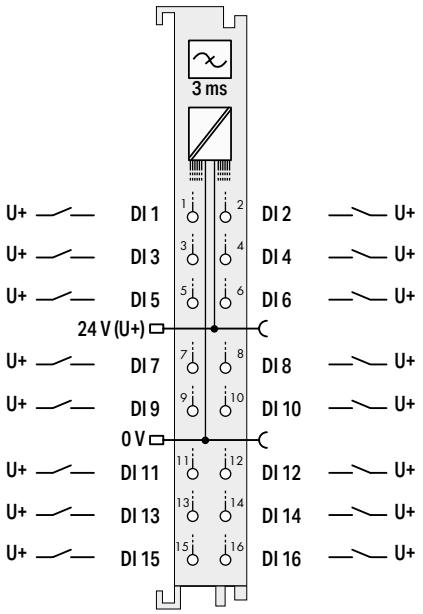
Item Description	**8-Channel Digital Input; 24 VDC; 3 ms; 2-wire connection**
Version	**Standard with 16 connectors**
Item No.	**750-1415**
Order Text	**8DI; 24 VDC; 3ms; 2-wire**

Technical Data

Wiring interface	Fixed
Number of digital inputs	8
Signal type	Voltage
Voltage signal type	24 VDC
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	11 … 30 VDC
Input characteristic	Type 3
Sensor connection	8 x (2-wire)
Input characteristic	High-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) (typ.)	4.5 mA
Input current per channel for signal (0) (typ.)	1.6 mA
Power consumption, field supply (module with no external load)	2 mA
Supply voltage (sensor)	24 VDC
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	6 mA
Input data width (internal) (max.)	8 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1415

Digital input ▶ 24 VDC ▶ High-side switching ▶ 3 ms

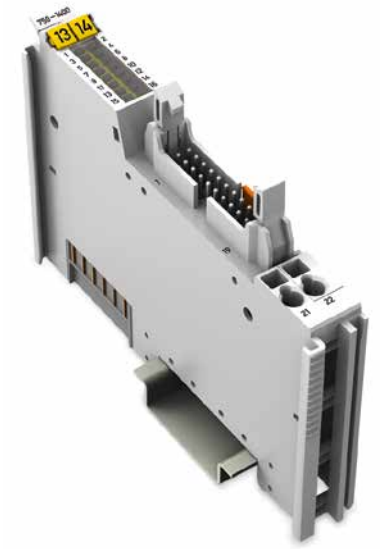
750-1405



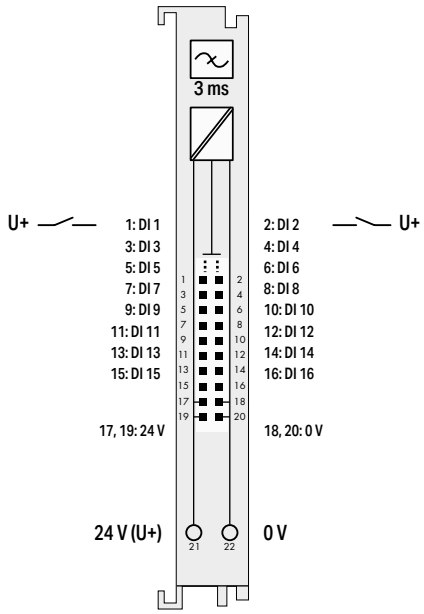
Item Description	**16-Channel Digital Input; 24 VDC; 3 ms**
Version	**Standard with 16 connectors**
Item No.	**750-1405**
Order Text	**16DI; 24 VDC; 3ms**

Technical Data	
Wiring interface	Fixed
Number of digital inputs	16
Signal type	Voltage
Voltage signal type	24 VDC
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Sensor connection	16 x (1-wire)
Input characteristic	High-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) (typ.)	2.3 mA
Input current per channel for signal (0) (typ.)	0.6 mA
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	25 mA
Input data width (internal) (max.)	16 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1405

Digital input ▸ 24 VDC ▸ High-side switching ▸ 3 ms



750-1400



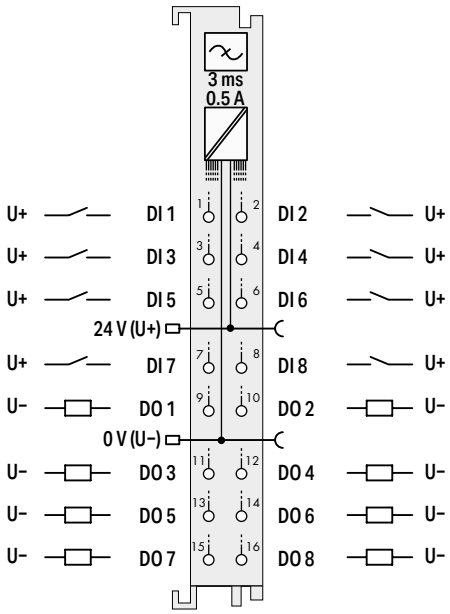
Item Description	**16-Channel Digital Input; 24 VDC; 3 ms; Ribbon cable**
Version	**Standard with ribbon cable connector**
Item No.	**750-1400**
Order Text	**16DI; 24 VDC; 3ms; Ribbon Cable**

7.2

Technical Data	
Wiring interface	Fixed
Number of digital inputs	16
Signal type	Voltage
Voltage signal type	24 VDC
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Sensor connection	16 x (1-wire)
Input characteristic	High-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) (typ.)	2.3 mA
Input current per channel for signal (0) (typ.)	0.6 mA
Supply voltage (sensor)	24 VDC
Supply voltage (field)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Power consumption (5 V system supply)	25 mA
Input data width (internal) (max.)	16 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 74.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1400

Digital input; Digital output ▶ 24 VDC ▶ High-side switching ▶ 3 ms

750-1506

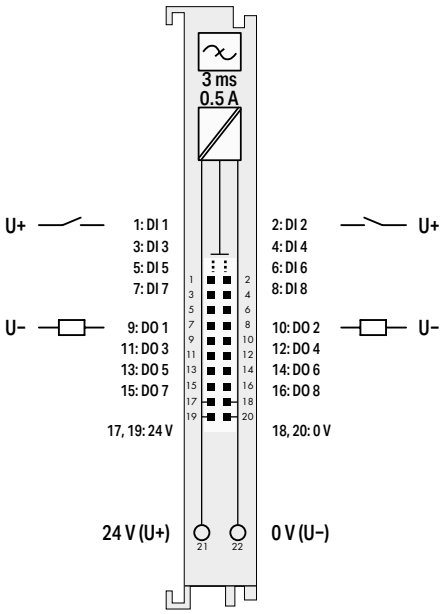


Item Description	**8-Channel Digital Input/Output; 24 VDC; 0.5 A**
Version	**Standard with 16 connectors**
Item No.	**750-1506**
Order Text	**8DIO; 24 VDC; 0.5A**

Technical Data	
Wiring interface	Fixed
Number of digital inputs	8
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Sensor connection	8 x (1-wire)
Input characteristic	High-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) (typ.)	2.4 mA
Number of digital outputs	8
Signal type	Voltage
Voltage signal type	24 VDC
Output characteristic	High-side switching
Output current per channel	0.5 A
Output current	Short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	8 x (1-wire)
Switching frequency (max.)	1 kHz
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	16 mA
Power consumption (5 V system supply)	30 mA
Input data width (internal) (max.)	8 bits
Output (internal) data width (max.)	8 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1506

Digital input; Digital output ▸ 24 VDC ▸ High-side switching ▸ 3 ms

750-1502



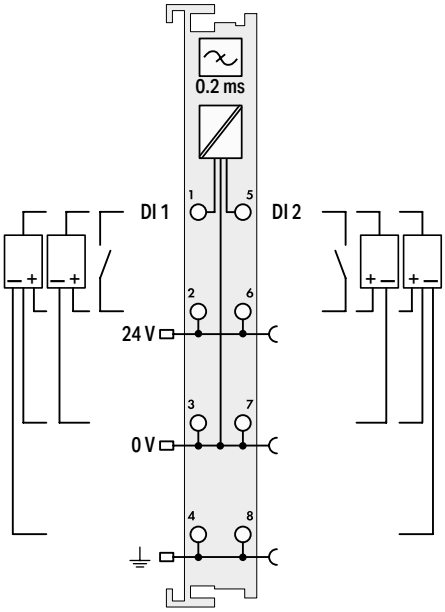
Item Description	**8-Channel Digital Input/Output; 24 VDC; 0.5 A; Ribbon cable**
Version	**Standard with ribbon cable connector**
Item No.	**750-1502**
Order Text	**8DIO; 24 VDC; 0.5A; Ribbon Cable**

7.2

Technical Data	
Wiring interface	Fixed
Number of digital inputs	8
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Sensor connection	8 x (1-wire)
Input characteristic	High-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) (typ.)	2.4 mA
Number of digital outputs	8
Signal type	Voltage
Voltage signal type	24 VDC
Output characteristic	High-side switching
Output current per channel	0.5 A
Output current	Short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	8 x (1-wire)
Switching frequency (max.)	1 kHz
Supply voltage (field)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Power consumption, field supply (module with no external load)	16 mA
Power consumption (5 V system supply)	30 mA
Input data width (internal) (max.)	8 bits
Output (internal) data width (max.)	8 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 74.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1502

Digital input ▸ 24 VDC ▸ High-side switching ▸ 0.2 ms

750-401

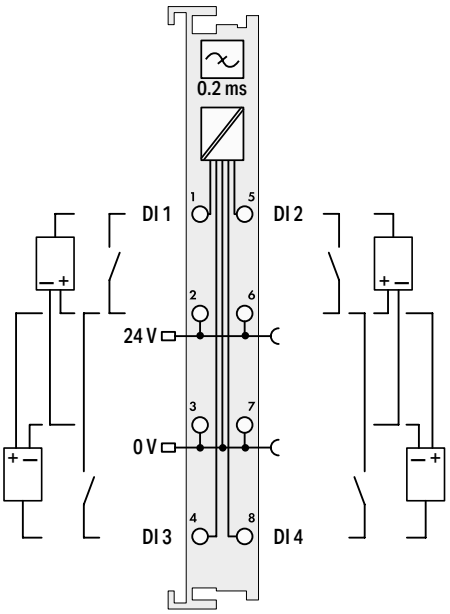


Item Description	2-Channel Digital Input; 24 VDC; 0.2 ms	
Version	Default	Pluggable (delivery without connector)
Item No.	**750-401**	**753-401**
Order Text	**2DI; 24 VDC; 0.2ms**	**2DI; 24 VDC; 0.2ms**

Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital inputs	2	
Signal type	Voltage	
Voltage signal type	24 VDC	
Voltage range for signal (0)	−3 … +5 VDC	
Voltage range for signal (1)	15 … 30 VDC	
Sensor connection	2 x (2-wire, 3-wire, 4-wire)	
Input characteristic	High-side switching	
Input filter (digital)	0.2 ms	
Input current per channel for signal (1) (typ.)	4.5 mA	
Supply voltage (sensor)	24 VDC	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	3.7 mA	
Input data width (internal) (max.)	2 bits	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-401	wago.com/753-401
Accessories	**Item No.**	**Item No.**
Plug		753-110

Digital input ▸ 24 VDC ▸ High-side switching ▸ 0.2 ms

750-403



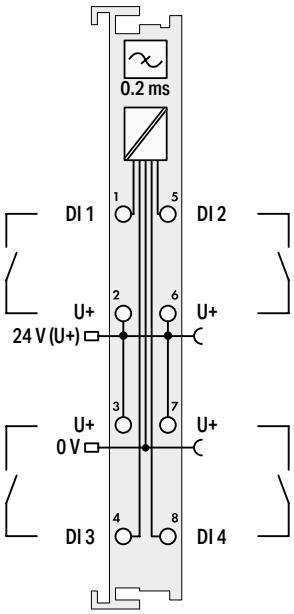
7.2

Item Description	4-Channel Digital Input; 24 VDC; 0.2 ms	
Version	Default	Pluggable (delivery without connector)
Item No.	750-403	753-403
Order Text	4DI; 24 VDC; 0.2ms	4DI; 24 VDC; 0.2ms

Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital inputs	4	
Signal type	Voltage	
Voltage signal type	24 VDC	
Voltage range for signal (0)	−3 … +5 VDC	
Voltage range for signal (1)	15 … 30 VDC	
Sensor connection	2 x (2-wire, 3-wire); A suitable field side connection module (e.g., 750-614) must also be used to connect other sensors.	
Input characteristic	High-side switching	
Input filter (digital)	0.2 ms	
Input current per channel for signal (1) (typ.)	4.5 mA	
Supply voltage (sensor)	24 VDC	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	7.5 mA	
Input data width (internal) (max.)	4 bits	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-403	wago.com/753-403
Accessories	**Item No.**	**Item No.**
Plug		753-110

Digital input ▶ 24 VDC ▶ High-side switching ▶ 0.2 ms

750-433

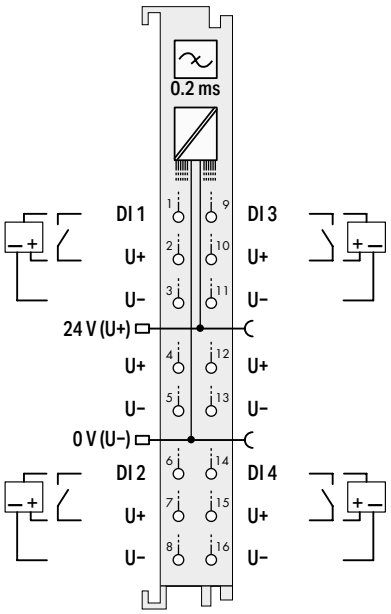


Item Description	4-Channel Digital Input; 24 VDC; 0.2 ms; 2-wire connection	
Version	Default	Pluggable (delivery without connector)
Item No.	750-433	753-433
Order Text	4DI; 24 VDC; 0.2ms; 2-wire	4DI; 24 VDC; 0.2ms; 2-wire

Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital inputs	4	
Signal type	Voltage	
Voltage signal type	24 VDC	
Voltage range for signal (0)	−3 … +5 VDC	
Voltage range for signal (1)	15 … 30 VDC	
Sensor connection	4 x (2-wire)	
Input characteristic	High-side switching	
Input filter (digital)	0.2 ms	
Input current per channel for signal (1) (typ.)	4.5 mA	
Supply voltage (sensor)	24 VDC	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	5.5 mA	
Input data width (internal) (max.)	4 bits	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-433	wago.com/753-433
Accessories	**Item No.**	**Item No.**
Plug		753-110

Digital input ▸ 24 VDC ▸ High-side switching ▸ 0.2 ms

750-1421



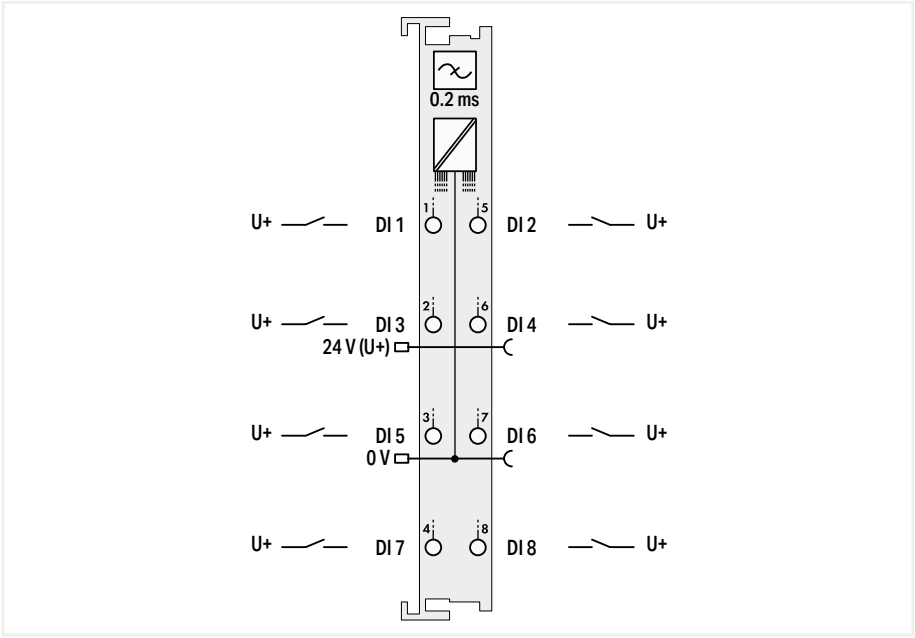
7.2

Item Description	**4-Channel Digital Input; 24 VDC; 0.2 ms; 3-wire connection**
Version	**Standard with 16 connectors**
Item No.	**750-1421**
Order Text	**4DI; 24 VDC; 0.2ms; 3-wire**

Technical Data	
Wiring interface	Fixed
Number of digital inputs	4
Signal type	Voltage
Voltage signal type	24 VDC
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	11 … 30 VDC
Input characteristic	Type 3
Sensor connection	4 x (3-wire)
Input characteristic	High-side switching
Input filter (digital)	0.2 ms
Input current per channel for signal (1) (typ.)	4.5 mA
Input current per channel for signal (0) (typ.)	1.6 mA
Power consumption, field supply (module with no external load)	2 mA
Supply voltage (sensor)	24 VDC
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	4 mA
Input data width (internal) (max.)	4 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1421

Digital input ▸ 24 VDC ▸ High-side switching ▸ 0.2 ms

750-431

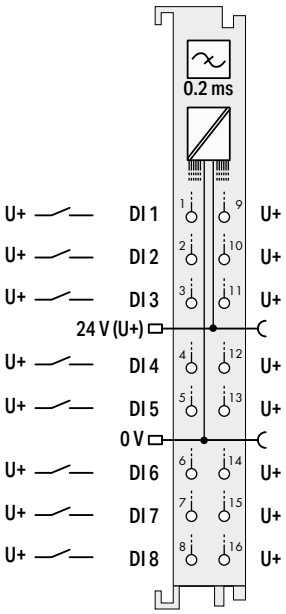


Item Description	8-Channel Digital Input; 24 VDC; 0.2 ms	
Version	Default	Pluggable (delivery without connector)
Item No.	750-431	753-431
Order Text	8DI; 24 VDC; 0.2ms	8DI; 24 VDC; 0.2ms

Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital inputs	8	
Signal type	Voltage	
Voltage signal type	24 VDC	
Voltage range for signal (0)	−3 … +5 VDC	
Voltage range for signal (1)	15 … 30 VDC	
Sensor connection	8 x (1-wire)	
Input characteristic	High-side switching	
Input filter (digital)	0.2 ms	
Input current per channel for signal (1) (typ.)	2.8 mA	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	17 mA	
Input data width (internal) (max.)	8 bits	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-431	wago.com/753-431
Accessories	**Item No.**	**Item No.**
Plug		753-110

Digital input ▸ 24 VDC ▸ High-side switching ▸ 0.2 ms

750-1416



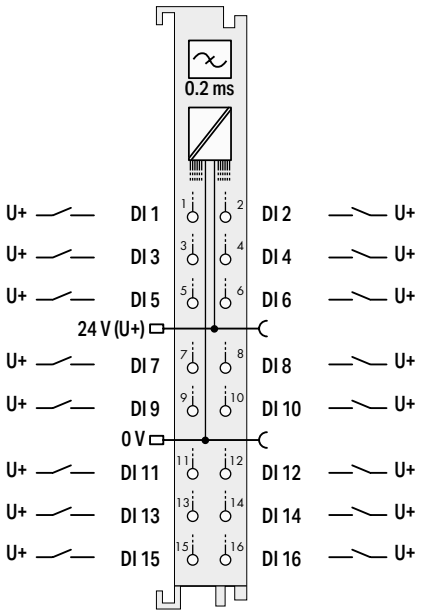
Item Description	**8-Channel Digital Input; 24 VDC; 0.2 ms; 2-wire connection**
Version	**Standard with 16 connectors**
Item No.	**750-1416**
Order Text	**8DI; 24 VDC; 0.2ms; 2-wire**

7.2

Technical Data	
Wiring interface	Fixed
Number of digital inputs	8
Signal type	Voltage
Voltage signal type	24 VDC
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	11 … 30 VDC
Input characteristic	Type 3
Sensor connection	8 x (2-wire)
Input characteristic	High-side switching
Input filter (digital)	0.2 ms
Input current per channel for signal (1) (typ.)	4.5 mA
Input current per channel for signal (0) (typ.)	1.6 mA
Power consumption, field supply (module with no external load)	2 mA
Supply voltage (sensor)	24 VDC
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	6 mA
Input data width (internal) (max.)	8 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1416

Digital input ▶ 24 VDC ▶ High-side switching ▶ 0.2 ms

750-1406

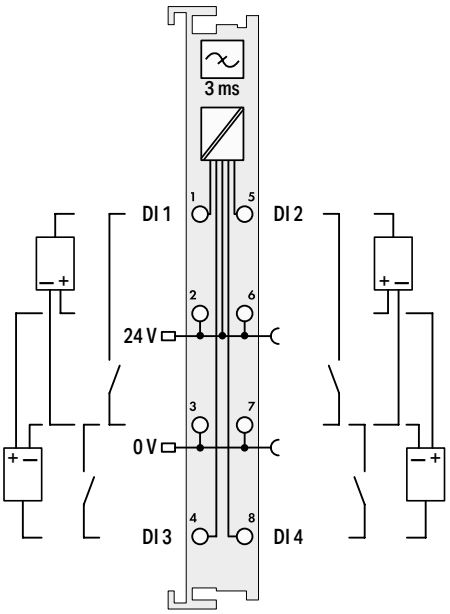


Item Description	**16-Channel Digital Input; 24 VDC; 0.2 ms**
Version	**Standard with 16 connectors**
Item No.	**750-1406**
Order Text	**16DI; 24 VDC; 0.2ms**

Technical Data	
Wiring interface	Fixed
Number of digital inputs	16
Signal type	Voltage
Voltage signal type	24 VDC
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Sensor connection	16 x (1-wire)
Input characteristic	High-side switching
Input filter (digital)	0.2 ms
Input current per channel for signal (1) (typ.)	2.3 mA
Input current per channel for signal (0) (typ.)	0.6 mA
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	25 mA
Input data width (internal) (max.)	16 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1406

Digital input ▸ 24 VDC ▸ Low-side switching ▸ 3 ms

750-408



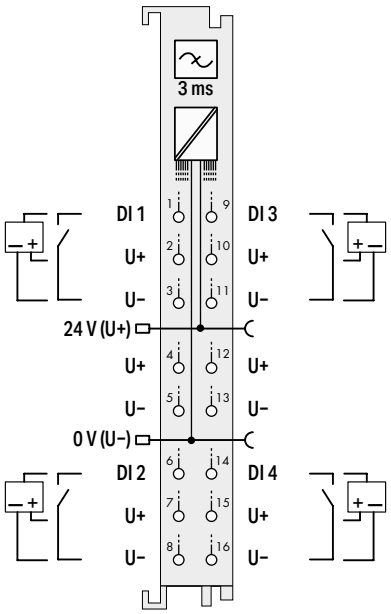
7.2

Item Description	4-Channel Digital Input; 24 VDC; 3 ms; Low-side switching		
Version	Default	Ext. Temperature	Pluggable (delivery without connector)
Item No.	**750-408**	**750-408/025-000**	**753-408**
Order Text	**4DI; 24 VDC; 3ms; LSS**	**4DI; 24 VDC; 3ms; LSS; T**	**4DI; 24 VDC; 3ms; LSS**

Technical Data			
Wiring interface	Fixed		Pluggable
Number of digital inputs	4		
Signal type	Voltage		
Voltage signal type	24 VDC		
Voltage range for signal (0)	(U_V - 5 V) ... U_V DC		
Voltage range for signal (1)	−3 VDC ... (U_V - 15 V)		
Sensor connection	2 x (2-wire, 3-wire); A suitable field side connection module (e.g., 750-614) must also be used to connect other sensors.		
Input characteristic	Low-side switching		
Input filter (digital)	3 ms		
Input current per channel for signal (0) (typ.)	7 mA		
Supply voltage (sensor)	24 VDC		
Supply voltage (field)	24 VDC (-15 ... +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Power consumption (5 V system supply)	5 mA		
Input data width (internal) (max.)	4 bits		
Isolation	500 V system/field		
Surrounding air temperature (operation)	0 ... 55 °C	-20 ... 60 °C	0 ... 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
Data sheet and further information, see:	wago.com/750-408		wago.com/753-408
Accessories	**Item No.**	**Item No.**	**Item No.**
Plug			753-110

Digital input ▸ 24 VDC ▸ Low-side switching ▸ 3 ms

750-1422

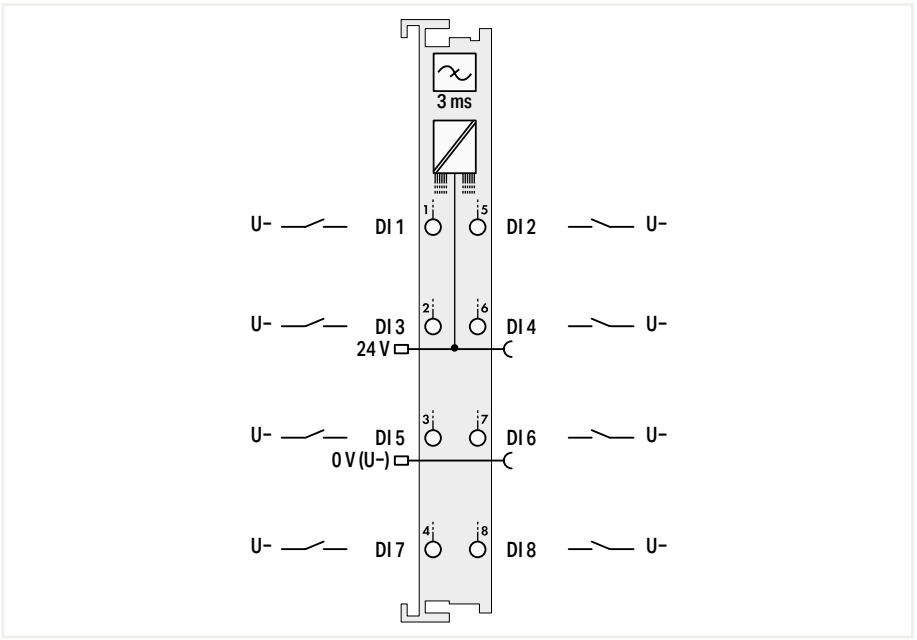


Item Description	**4-Channel Digital Input; 24 VDC; 3 ms; Low-side switching; 3-wire connection**
Version	**Standard with 16 connectors**
Item No.	**750-1422**
Order Text	**4DI; 24 VDC; 3ms; LSS; 3-wire**

Technical Data	
Wiring interface	Fixed
Number of digital inputs	4
Signal type	Voltage
Voltage signal type	24 VDC
Voltage range for signal (0)	(U_V - 5 V) ... U_V DC
Voltage range for signal (1)	−3 VDC ... (U_V - 15 V)
Sensor connection	4 x (3-wire)
Input characteristic	Low-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) (typ.)	-0.6 mA
Input current per channel for signal (0) (typ.)	-2.5 mA
Supply voltage (sensor)	24 VDC
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	7 mA
Input data width (internal) (max.)	4 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 ... 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1422

Digital input ▸ 24 VDC ▸ Low-side switching ▸ 3 ms

750-436



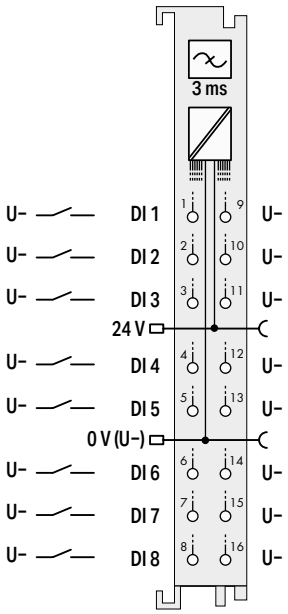
7.2

Item Description	8-Channel Digital Input; 24 VDC; 3 ms; Low-side switching	
Version	Default	Pluggable (delivery without connector)
Item No.	750-436	753-436
Order Text	8DI; 24 VDC; 3ms; LSS	8DI; 24 VDC; 3ms; LSS

Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital inputs	8	
Signal type	Voltage	
Voltage signal type	24 VDC	
Voltage range for signal (0)	15 … 30 VDC	
Voltage range for signal (1)	−3 … +5 VDC	
Sensor connection	8 x (1-wire)	
Input characteristic	Low-side switching	
Input filter (digital)	3 ms	
Input current per channel for signal (0) (typ.)	2.8 mA	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	13 mA	
Input data width (internal) (max.)	8 bits	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-436	wago.com/753-436
Accessories	**Item No.**	**Item No.**
Plug		753-110

Digital input ▸ 24 VDC ▸ Low-side switching ▸ 3 ms

750-1417

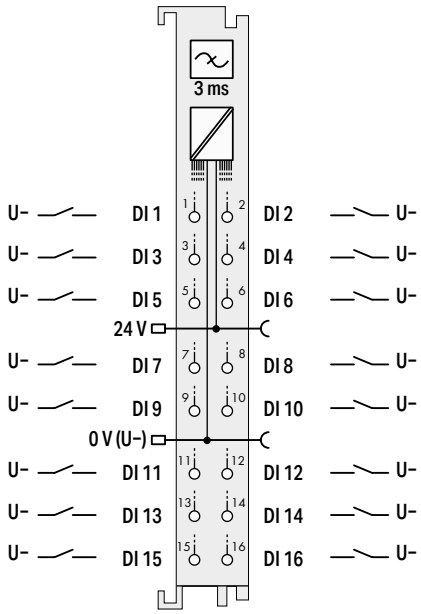


Item Description	**8-Channel Digital Input; 24 VDC; 3 ms; Low-side switching; 2-wire connection**
Version	**Standard with 16 connectors**
Item No.	**750-1417**
Order Text	**8DI; 24 VDC; 3ms; LSS; 2-wire**

Technical Data	
Wiring interface	Fixed
Number of digital inputs	8
Signal type	Voltage
Voltage signal type	24 VDC
Voltage range for signal (0)	(U_V - 5 V) ... U_V DC
Voltage range for signal (1)	−3 VDC ... (U_V - 15 V)
Sensor connection	8 x (2-wire)
Input characteristic	Low-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) (typ.)	-0.6 mA
Input current per channel for signal (0) (typ.)	2.4 mA
Supply voltage (sensor)	24 VDC
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	12 mA
Input data width (internal) (max.)	8 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 ... 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1417

Digital input ▸ 24 VDC ▸ Low-side switching ▸ 3 ms

750-1407



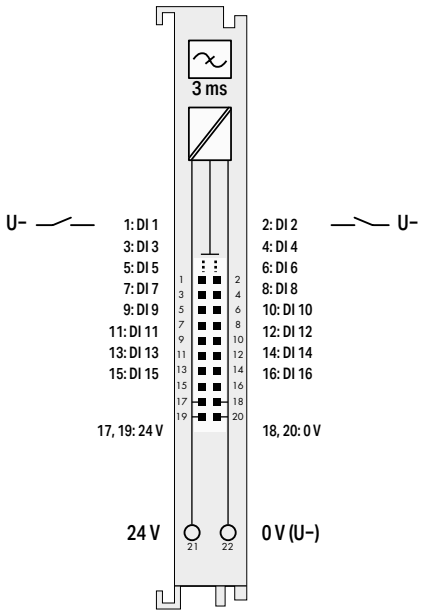
7.2

Item Description	**16-Channel Digital Input; 24 VDC; 3 ms; Low-side switching**
Version	**Standard with 16 connectors**
Item No.	**750-1407**
Order Text	**16DI; 24 VDC; 3ms; LSS**

Technical Data	
Wiring interface	Fixed
Number of digital inputs	16
Signal type	Voltage
Voltage signal type	24 VDC
Voltage range for signal (0)	(U_V - 5 V) ... U_V DC
Voltage range for signal (1)	−3 VDC ... (U_V - 15 V)
Sensor connection	16 x (1-wire)
Input characteristic	Low-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) (typ.)	-0.6 mA
Input current per channel for signal (0) (typ.)	2.3 mA
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	25 mA
Input data width (internal) (max.)	16 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 ... 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1407

Digital input ▸ 24 VDC ▸ Low-side switching ▸ 3 ms

750-1402

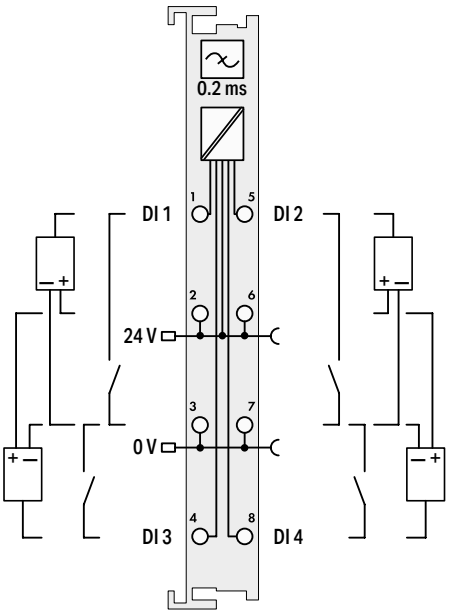


Item Description	**16-Channel Digital Input; 24 VDC; 3 ms; Low-side switching; Ribbon cable**
Version	**Standard with ribbon cable connector**
Item No.	**750-1402**
Order Text	**16DI; 24 VDC; 3ms; LSS; Ribbon Cable**

Technical Data	
Wiring interface	Fixed
Number of digital inputs	16
Signal type	Voltage
Voltage signal type	24 VDC
Voltage range for signal (0)	(U_V - 5 V) ... U_V DC
Voltage range for signal (1)	−3 VDC ... (U_V - 15 V)
Sensor connection	16 x (1-wire)
Input characteristic	Low-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) (typ.)	-0.6 mA
Input current per channel for signal (0) (typ.)	2.3 mA
Supply voltage (sensor)	24 VDC
Supply voltage (field)	24 VDC (-25 ... +30 %); via pluggable connector (CAGE CLAMP® connection)
Power consumption (5 V system supply)	25 mA
Input data width (internal) (max.)	16 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 ... 55 °C
Dimensions W x H x D	(12 x 100 x 74.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1402

Digital input ▸ 24 VDC ▸ Low-side switching ▸ 0.2 ms

750-409



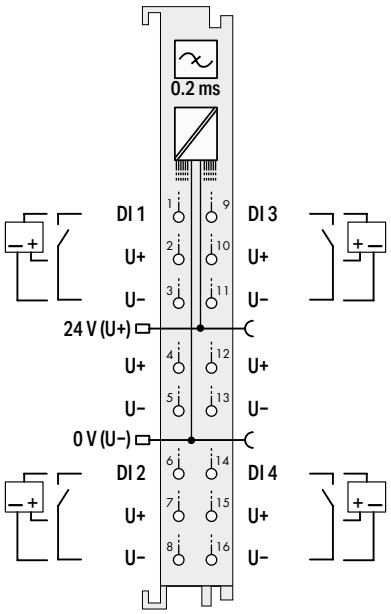
7.2

Item Description	4-Channel Digital Input; 24 VDC; 0.2 ms; Low-side switching	
Version	**Default**	**Pluggable (delivery without connector)**
Item No.	**750-409**	**753-409**
Order Text	**4DI; 24 VDC; 0.2ms; LSS**	**4DI; 24 VDC; 0.2ms; LSS**

Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital inputs	4	
Signal type	Voltage	
Voltage signal type	24 VDC	
Voltage range for signal (0)	(U_V - 5 V) ... U_V DC	
Voltage range for signal (1)	−3 VDC ... (U_V - 15 V)	
Sensor connection	2 x (2-wire, 3-wire); A suitable field side connection module (e.g., 750-614) must also be used to connect other sensors.	
Input characteristic	Low-side switching	
Input filter (digital)	0.2 ms	
Input current per channel for signal (0) (typ.)	7 mA	
Supply voltage (sensor)	24 VDC	
Supply voltage (field)	24 VDC (-15 ... +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	5 mA	
Input data width (internal) (max.)	4 bits	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 ... 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-409	wago.com/753-409
Accessories	**Item No.**	**Item No.**
Plug		753-110

Digital input ▸ 24 VDC ▸ Low-side switching ▸ 0.2 ms

750-1423

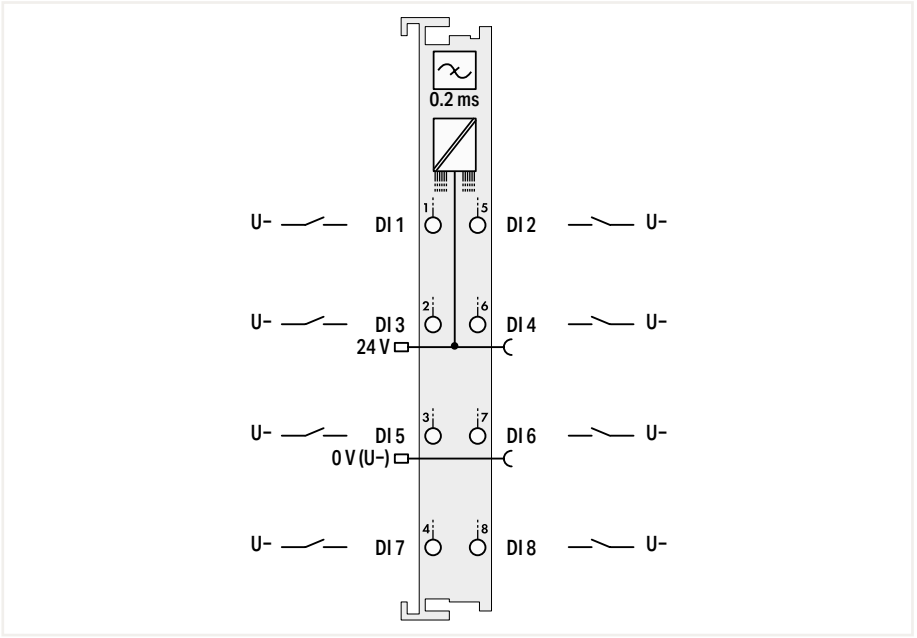


Item Description	**4-Channel Digital Input; 24 VDC; 0.2 ms; Low-side switching; 3-wire connection**
Version	**Standard with 16 connectors**
Item No.	**750-1423**
Order Text	**4DI; 24 VDC; 0.2ms; LSS; 3-wire**

Technical Data	
Wiring interface	Fixed
Number of digital inputs	4
Signal type	Voltage
Voltage signal type	24 VDC
Voltage range for signal (0)	(U_V - 5 V) ... U_V DC
Voltage range for signal (1)	−3 VDC ... (U_V - 15 V)
Sensor connection	4 x (3-wire)
Input characteristic	Low-side switching
Input filter (digital)	0.2 ms
Input current per channel for signal (1) (typ.)	-0.6 mA
Input current per channel for signal (0) (typ.)	2.5 mA
Supply voltage (sensor)	24 VDC
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	7 mA
Input data width (internal) (max.)	4 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 ... 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1423

Digital input ▸ 24 VDC ▸ Low-side switching ▸ 0.2 ms

750-437



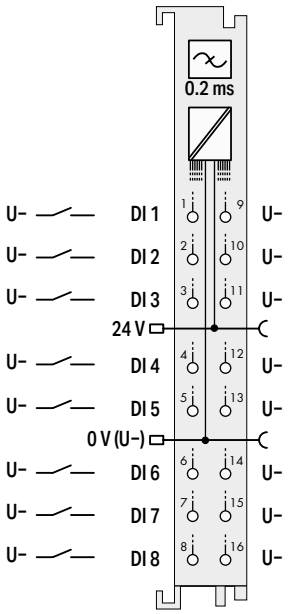
7.2

Item Description	8-Channel Digital Input; 24 VDC; 0.2 ms; Low-side switching	
Version	Default	Pluggable (delivery without connector)
Item No.	**750-437**	**753-437**
Order Text	**8DI; 24 VDC; 0.2ms; LSS**	**8DI; 24 VDC; 0.2ms; LSS**

Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital inputs	8	
Signal type	Voltage	
Voltage signal type	24 VDC	
Voltage range for signal (0)	15 … 30 VDC	
Voltage range for signal (1)	−3 … +5 VDC	
Sensor connection	8 x (1-wire)	
Input characteristic	Low-side switching	
Input filter (digital)	0.2 ms	
Input current per channel for signal (0) (typ.)	2.8 mA	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	13 mA	
Input data width (internal) (max.)	8 bits	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-437	wago.com/753-437
Accessories	**Item No.**	**Item No.**
Plug		753-110

Digital input ▸ 24 VDC ▸ Low-side switching ▸ 0.2 ms

750-1418

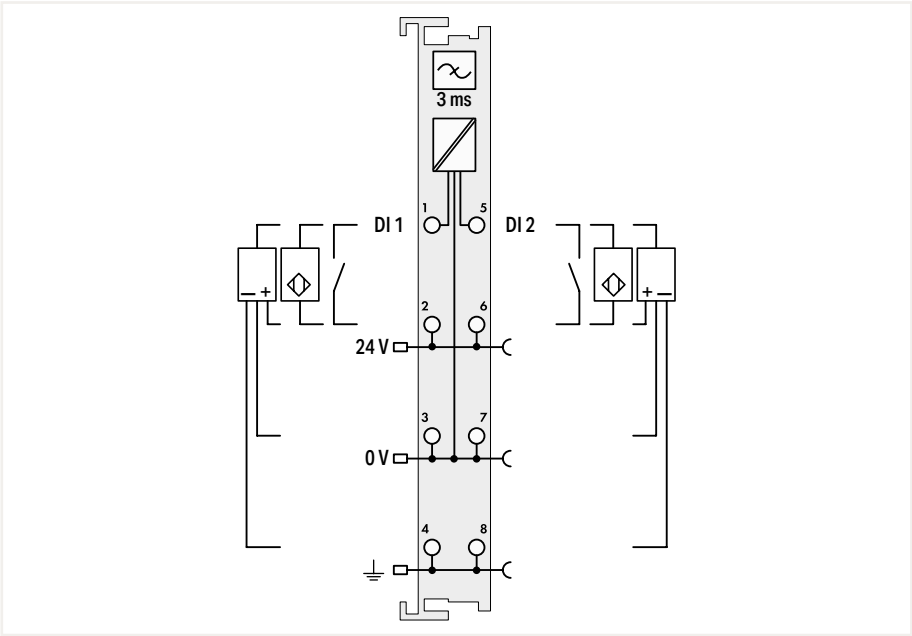


Item Description	**8-Channel Digital Input; 24 VDC; 0.2 ms; Low-side switching; 2-wire connection**
Version	**Standard with 16 connectors**
Item No.	**750-1418**
Order Text	**8DI; 24 VDC; 0.2ms; LSS; 2-wire**

Technical Data	
Wiring interface	Fixed
Number of digital inputs	8
Signal type	Voltage
Voltage signal type	24 VDC
Voltage range for signal (0)	(U_V - 5 V) ... U_V DC
Voltage range for signal (1)	−3 VDC ... (U_V - 15 V)
Sensor connection	8 x (2-wire)
Input characteristic	Low-side switching
Input filter (digital)	0.2 ms
Input current per channel for signal (1) (typ.)	-0.6 mA
Input current per channel for signal (0) (typ.)	2.4 mA
Supply voltage (sensor)	24 VDC
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	12 mA
Input data width (internal) (max.)	8 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 ... 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1418

Digital input ▸ 24 VDC; Proximity sensor ▸ High-side switching ▸ 3 ms

750-410



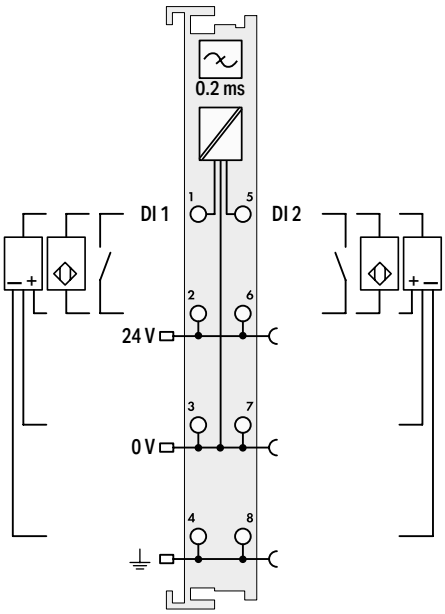
7.2

Item Description	2-Channel Digital Input; 24 VDC; 3 ms; Proximity sensor	
Version	Default	Pluggable (delivery without connector)
Item No.	**750-410**	**753-410**
Order Text	**2DI; 24 VDC; 3ms; Proxi Sensor**	**2DI; 24 VDC; 3ms; Proxi Sensor**

Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital inputs	2	
Signal type	Voltage	
Voltage signal type	24 VDC	
Voltage range for signal (0)	−3 … +5 VDC	
Voltage range for signal (1)	15 … 30 VDC	
Sensor connection	2 x (2-wire, 3-wire, 4-wire); 2-wire proximity sensor	
Input characteristic	High-side switching	
Input filter (digital)	3 ms	
Input current per channel for signal (1) (typ.)	8 mA	
Supply voltage (sensor)	24 VDC	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	2.5 mA	
Input data width (internal) (max.)	2 bits	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-410	wago.com/753-410
Accessories	**Item No.**	**Item No.**
Plug		753-110

Digital input ▸ 24 VDC; Proximity sensor ▸ High-side switching ▸ 0.2 ms

750-411

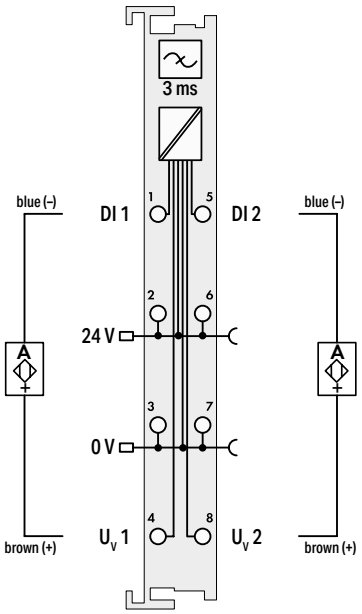


Item Description	2-Channel Digital Input; 24 VDC; 0.2 ms; Proximity sensor	
Version	Default	Pluggable (delivery without connector)
Item No.	750-411	753-411
Order Text	2DI; 24 VDC; 0.2ms; Proxi Sensor	2DI; 24 VDC; 0.2ms; Proxi Sensor

Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital inputs	2	
Signal type	Voltage	
Voltage signal type	24 VDC	
Voltage range for signal (0)	−3 … +5 VDC	
Voltage range for signal (1)	15 … 30 VDC	
Sensor connection	2 x (2-wire, 3-wire, 4-wire); 2-wire proximity sensor	
Input characteristic	High-side switching	
Input filter (digital)	0.2 ms	
Input current per channel for signal (1) (typ.)	8 mA	
Supply voltage (sensor)	24 VDC	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	2.5 mA	
Input data width (internal) (max.)	2 bits	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-411	wago.com/753-411
Accessories	**Item No.**	**Item No.**
Plug		753-110

Digital input ▸ NAMUR ▸ High-side switching ▸ 3 ms

750-425



7.2

Item Description	2-Channel Digital Input; NAMUR	
Version	**Default**	**Pluggable (delivery without connector)**
Item No.	**750-425**	**753-425**
Order Text	**2DI; NAMUR**	**2DI; NAMUR**

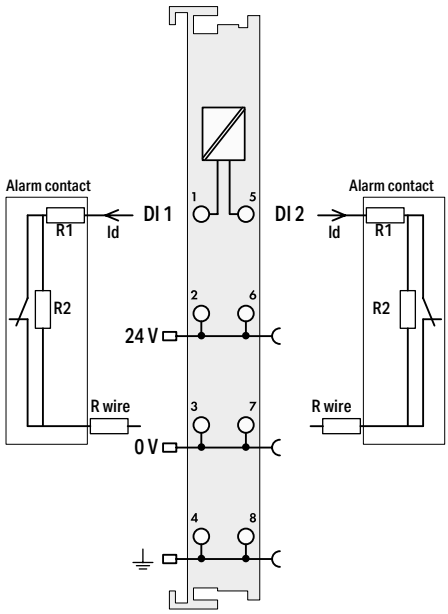
Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital inputs	2	
Signal type	NAMUR	
Signal current (0) NAMUR	1.2 mA	
Signal current (1) NAMUR	2.1 mA	
Sensor connection	2 x (2-wire)	
Input characteristic	High-side switching	
Input filter (digital)	3 ms	
Protection against incorrect wiring	Short circuit monitoring: > 6.5 mA; Wire break monitoring: < 0.2 mA	
Open-circuit voltage	8.2 V	
Diagnostics	Short circuit, wire break	
Supply voltage (sensor)	8.2 VDC; Short-circuit-protected, isolated channels	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	5 mA	
Data width	4-bit input: 2-bit data, 2-bit error (short circuit/wire break)	
Input data width (internal) (max.)	4 bits	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-425	wago.com/753-425
Accessories	**Item No.**	**Item No.**
Plug		753-110

This digital input module receives control signals from NAMUR proximity sensors (per DIN EN 60947-5-6) from the field side.
Each channel of the sensors is supplied with a short-circuit-protected voltage of 8.2 V. A short circuit or a line break is indicated in the process image (1 bit) and via the red LED.
The green LED indicates the input status:
- Signal current (0): LED off
- Signal current (1): LED on

Field and system levels are electrically isolated.

Digital input ▸ Current loop (intruder detection)

750-424



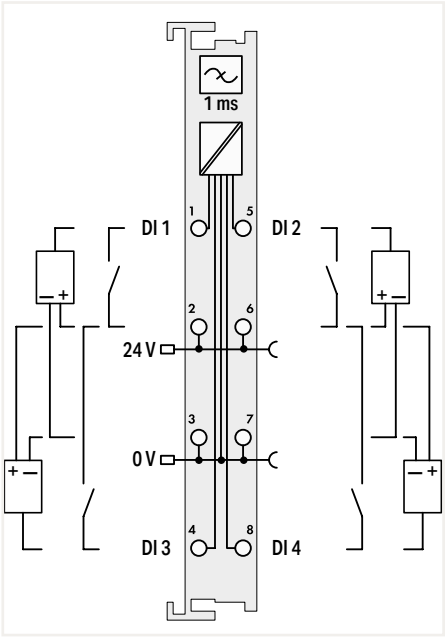
Item Description	2-Channel Digital Input; Intruder detection	
Version	Default	Pluggable (delivery without connector)
Item No.	750-424	753-424
Order Text	2DI; Intruder Detection	2DI; Intruder Detection

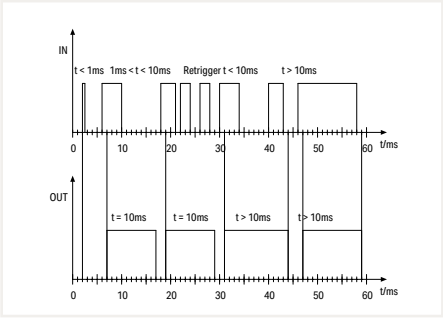
Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital inputs	2	
Signal type	Current loop (intruder detection)	
Sensor connection	2 x (2-wire)	
Specific sensor properties	Alarm contact: R1 = 1.5 kΩ (±5 %); R2 = 2.2 kΩ (±5 %); Conductor resistance (R wire): 200 Ω (max.)	
Output current per channel	0.001 A	
Power consumption, field supply (module with no external load)	16 mA	
Supply voltage (sensor)	24 VDC	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	6 mA	
Data width	4-bit input: 2-bit data, 2-bit error (short circuit/wire break)	
Input data width (internal) (max.)	4 bits	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-424	wago.com/753-424
Accessories	**Item No.**	**Item No.**
Plug		753-110

This I/O module incorporates a current loop, which makes it possible to monitor alarm contacts (window contacts) with a fixed resistance ratio (R1, R2), for intruder detection.
The module indicates the status of the connected contact via LEDs and status bits in the process image.

Digital input ▸ 24 VDC; Pulse extension ▸ High-side switching ▸ 1 ms

750-422





This I/O module extends input signals to at least 10 ms. Only signals ≥ 1 ms will be acquired. Input signals with a pulse duration >10 ms are not extended (without fall delay). Field and system levels are electrically isolated.

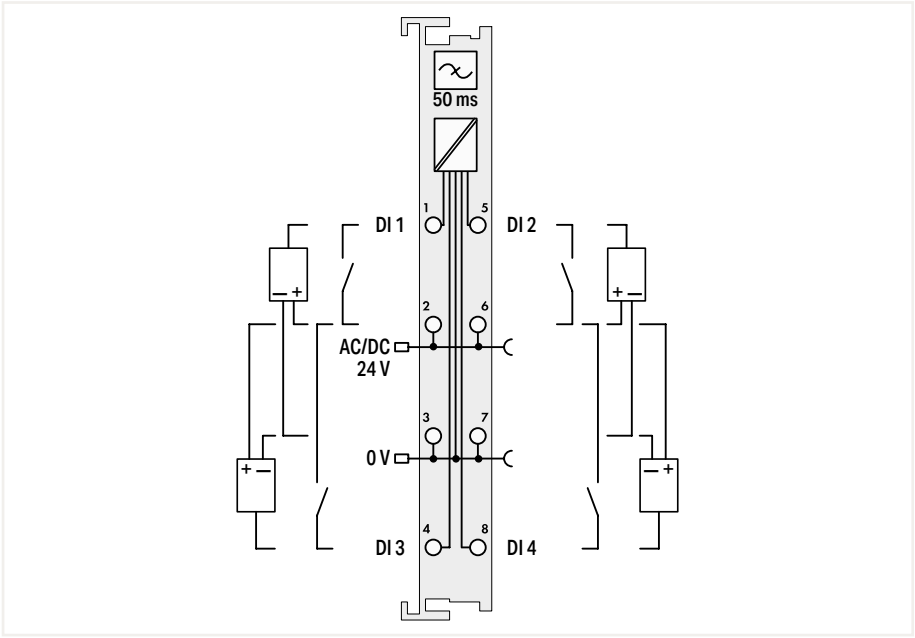
7.2

Item Description	4-Channel Digital Input; 24 VDC; Pulse extension	
Version	**Default**	**Pluggable (delivery without connector)**
Item No.	**750-422**	**753-422**
Order Text	**4DI; 24 VDC; Pulse Extention**	**4DI; 24 VDC; Pulse Extention**

Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital inputs	4	
Signal type	Voltage	
Voltage signal type	24 VDC	
Voltage range for signal (0)	−3 … +5 VDC	
Voltage range for signal (1)	15 … 30 VDC	
Sensor connection	2 x (2-wire, 3-wire); A suitable field side connection module (e.g., 750-614) must also be used to connect other sensors.	
Input characteristic	High-side switching	
Input filter (digital)	1 ms	
Input current per channel for signal (1) (typ.)	4 mA	
Signal frequency (max.)	80 Hz	
Supply voltage (sensor)	24 VDC	
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	9 mA	
Input data width (internal) (max.)	4 bits	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-422	wago.com/753-422
Accessories	**Item No.**	**Item No.**
Plug		753-110

Digital input ▸ 24 VAC/DC ▸ High-side switching ▸ 50 ms

750-423



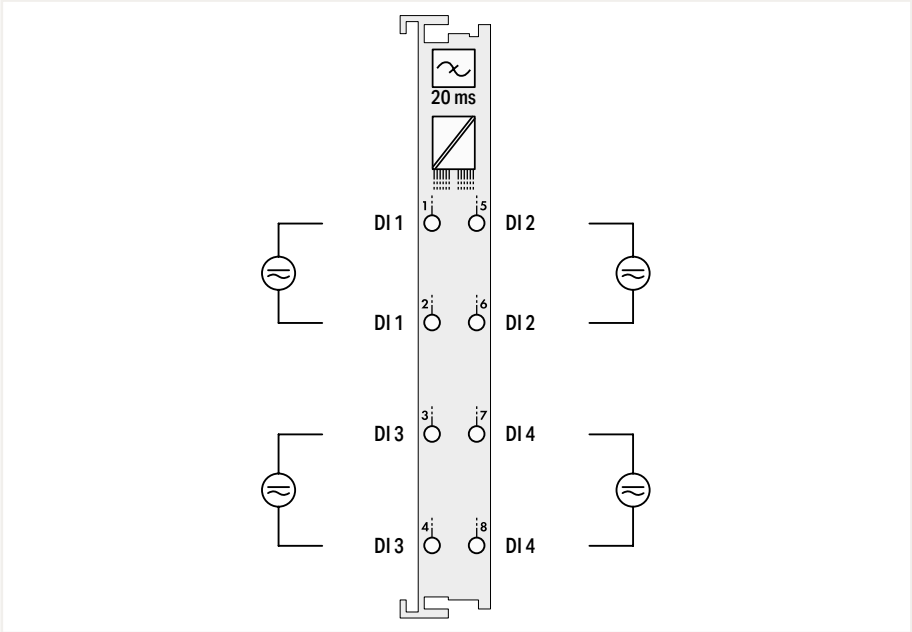
Item Description	4-Channel Digital Input; 24 V AC/DC; 50 ms	
Version	Default	Pluggable (delivery without connector)
Item No.	**750-423**	**753-423**
Order Text	**4DI; 24 VAC/VDC; 50ms**	**4DI; 24 VAC/VDC; 50ms**

Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital inputs	4	
Signal type	Voltage	
Voltage signal type	24 VAC/DC	
Voltage range for signal (0)	−3 … +5 VDC; 0 … 5 VAC	
Voltage range for signal (1)	11 … 30 VDC; 10 … 27 VAC	
Input current (typ.)	7.5 mA (AC); 9.5 mA (DC)	
Sensor connection	2 x (2-wire, 3-wire); A suitable field side connection module (e.g., 750-614) must also be used to connect other sensors.	
Input characteristic	High-side switching	
Input filter (digital)	50 ms	
Supply voltage (sensor)	24 VAC/DC	
Supply voltage (field)	24 VAC/DC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	10 mA	
Input data width (internal) (max.)	4 bits	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-423	wago.com/753-423
Accessories	**Item No.**	**Item No.**
Plug		753-110

Notice: An additional supply module must be added for 24 VAC supply!

Digital input ▸ 24 VAC/DC ▸ High-side switching ▸ 20 ms

750-415



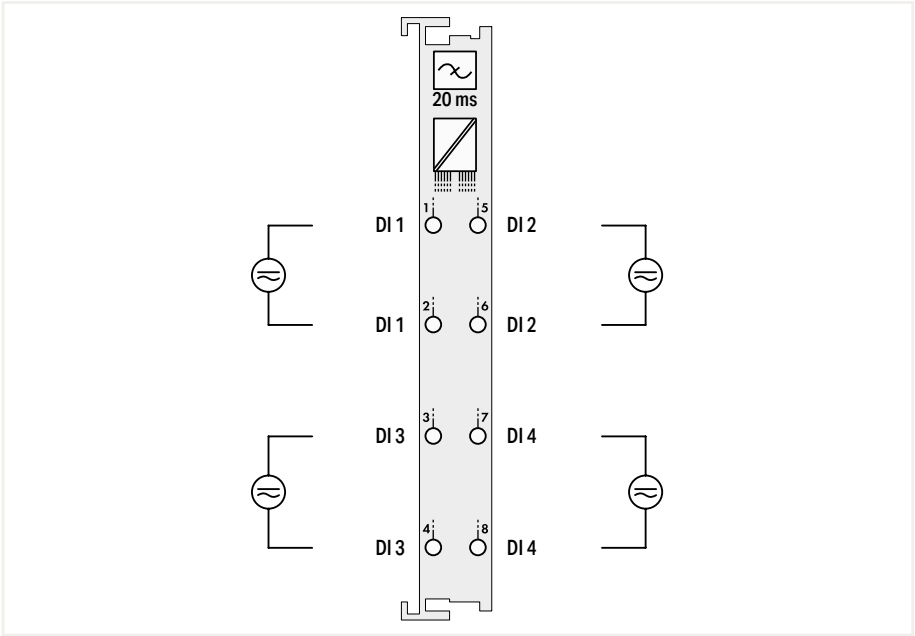
7.2

Item Description	4-Channel Digital Input; 24 V AC/DC; 20 ms	
Version	Default	Pluggable (delivery without connector)
Item No.	**750-415**	**753-415**
Order Text	**4DI; 24 VAC/VDC; 20ms**	**4DI; 24 VAC/VDC; 20ms**

Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital inputs	4	
Signal type	Voltage	
Voltage signal type	24 VAC/DC	
Voltage range for signal (0)	−3 … +5 VDC; 0 … 5 VAC	
Voltage range for signal (1)	11 … 30 VDC; 10 … 27 VAC	
Input current (typ.)	7.5 mA (AC); 9.5 mA (DC)	
Sensor connection	4 x (2-wire)	
Input characteristic	High-side switching	
Input filter (digital)	20 ms	
Power consumption (5 V system supply)	10 mA	
Input data width (internal) (max.)	4 bits	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-415	wago.com/753-415
Accessories	**Item No.**	**Item No.**
Plug		753-110

Digital input ▸ 42 VAC/DC ▸ High-side switching ▸ 20 ms

750-428

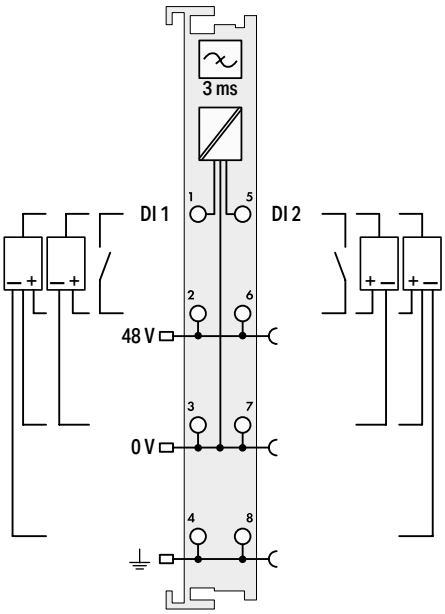


Item Description	4-Channel Digital Input; 42 VAC/VDC; 20 ms	
Version	Default	Pluggable (delivery without connector)
Item No.	750-428	753-428
Order Text	4DI; 42 VAC/VDC; 20ms	4DI; 42 VAC/VDC; 20ms

Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital inputs	4	
Signal type	Voltage	
Voltage signal type	42 VAC/DC	
Voltage range for signal (0)	−3 … +10 VDC; 0 … 10 VAC	
Voltage range for signal (1)	30 … 53 VDC; 30 … 53 VAC	
Input current (typ.)	3.6 mA (AC); 6.0 mA (DC)	
Sensor connection	4 x (2-wire)	
Input characteristic	High-side switching	
Input filter (digital)	20 ms	
Power consumption (5 V system supply)	5 mA	
Input data width (internal) (max.)	4 bits	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-428	wago.com/753-428
Accessories	**Item No.**	**Item No.**
Plug		753-110

Digital input ▸ 48 VDC ▸ High-side switching ▸ 3 ms

750-412



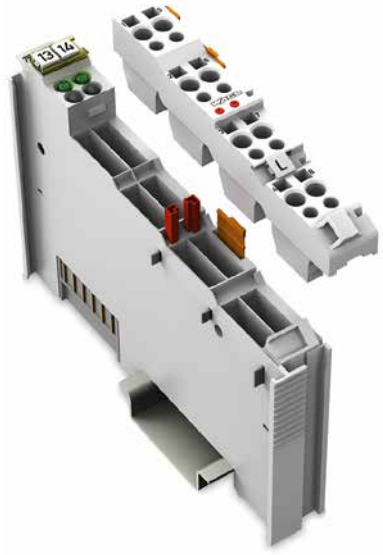
7.2

Item Description	2-Channel Digital Input; 48 VDC; 3 ms	
Version	Default	Pluggable (delivery without connector)
Item No.	**750-412**	**753-412**
Order Text	**2DI; 48 VDC; 3ms**	**2DI; 48 VDC; 3ms**

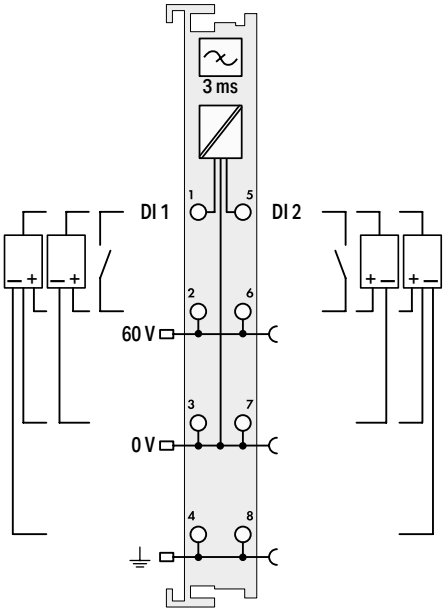
Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital inputs	2	
Signal type	Voltage	
Voltage signal type	48 VDC	
Voltage range for signal (0)	−6 … +10 VDC	
Voltage range for signal (1)	34 … 60 VDC	
Sensor connection	2 x (2-wire, 3-wire, 4-wire)	
Input characteristic	High-side switching	
Input filter (digital)	3 ms	
Input current per channel for signal (1) (typ.)	3.8 mA	
Supply voltage (sensor)	48 VDC	
Supply voltage (field)	48 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	2.5 mA	
Input data width (internal) (max.)	2 bits	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-412	wago.com/753-412
Accessories	**Item No.**	**Item No.**
Plug		753-110

Notice: An additional supply module must be added for 48 VDC supply!

Digital input ▸ 60 VDC ▸ High-side switching ▸ 3 ms



753-429



Item Description	**2-Channel Digital Input; 60 VDC; 3 ms**
Version	**Pluggable (delivery without connector)**
Item No.	**753-429**
Order Text	**2DI; 60 VDC; 3ms**

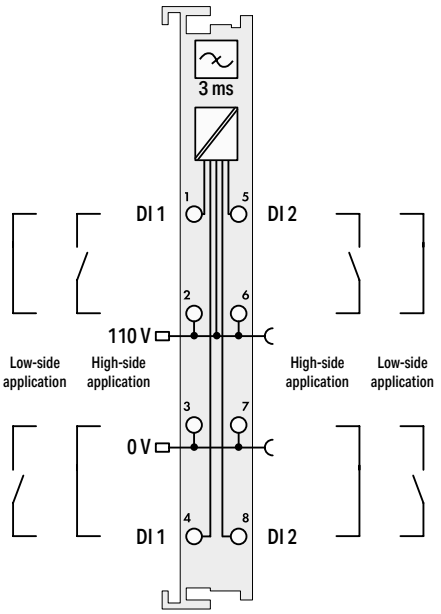
Technical Data	
Wiring interface	Pluggable
Number of digital inputs	2
Signal type	Voltage
Voltage signal type	60 VDC
Voltage range for signal (0)	−7.5 … +12 VDC
Voltage range for signal (1)	44 … 75 VDC
Sensor connection	2 x (2-wire, 3-wire, 4-wire)
Input characteristic	High-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) (typ.)	2.9 mA
Supply voltage (sensor)	60 VDC
Supply voltage (field)	60 VDC (-20 … +25 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	2.5 mA
Input data width (internal) (max.)	2 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; UL OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/753-429

Accessories	**Item No.**
Plug	753-110

Notice: An additional supply module must be added for 60 VDC supply!

Digital input ▸ 110 VDC ▸ High-side/low-side switching, configurable ▸ 3 ms

750-427



7.2

Item Description	2-Channel Digital Input; 110 VDC	
Version	Default	Pluggable (delivery without connector)
Item No.	**750-427**	**753-427**
Order Text	**2DI; 110 VDC**	**2DI; 110 VDC**

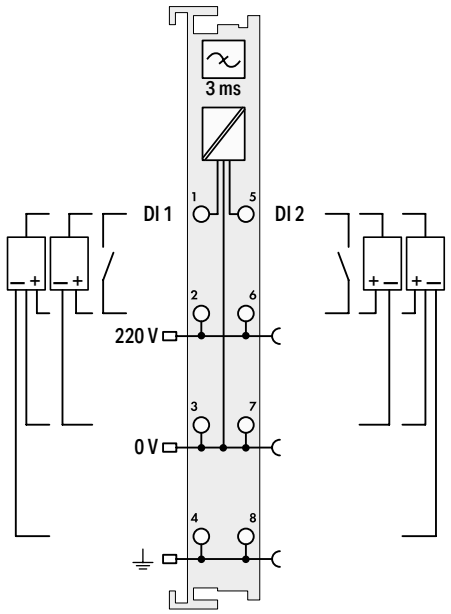
Technical Data

Wiring interface	Fixed	Pluggable
Number of digital inputs	2	
Signal type	Voltage	
Voltage signal type	110 VDC	
Voltage range for signal (0)	−14 … +50 VDC	
Voltage range for signal (1)	70 … 143 VDC	
Sensor connection	2 x (2-wire)	
Input characteristic	High-side/low-side switching, configurable	
Input filter (digital)	3 ms	
Input current per channel for signal (1) (typ.)	2.5 mA	
Supply voltage (sensor)	110 VDC	
Supply voltage (field)	110 VDC (-20 … +25 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	2.5 mA	
Input data width (internal) (max.)	2 bits	
Isolation	1500 V (system/field)	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-427	wago.com/753-427
Accessories	**Item No.**	**Item No.**
Plug		753-110

Notice: An additional supply module must be added for 110 VDC supply!

Digital input ▸ 220 VDC ▸ High-side switching ▸ 3 ms

750-407



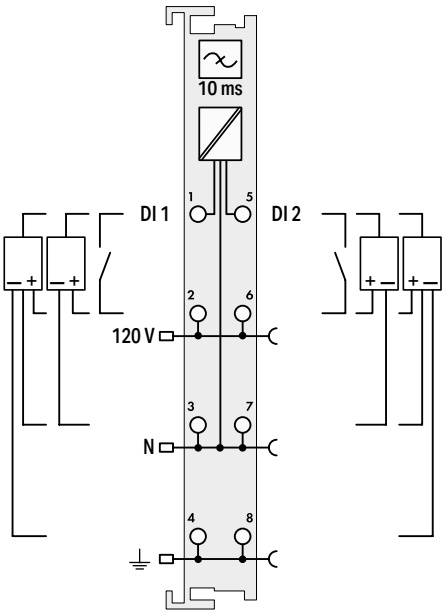
Item Description	**2-Channel Digital Input; 220 VDC**
Version	**Default**
Item No.	**750-407**
Order Text	**2DI; 220 VDC**

Technical Data	
Wiring interface	Fixed
Number of digital inputs	2
Signal type	Voltage
Voltage signal type	220 VDC
Voltage range for signal (0)	−3 … +100 VDC
Voltage range for signal (1)	160 … 286 VDC
Sensor connection	2 x (2-wire, 3-wire, 4-wire)
Input characteristic	High-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) (typ.)	1.2 mA
Supply voltage (sensor)	220 VDC
Supply voltage (field)	220 VDC (-20 … +25 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	5 mA
Input data width (internal) (max.)	2 bits
Isolation	2500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC
Data sheet and further information, see:	wago.com/750-407

Notice: An additional supply module must be added for 220 VDC supply!

Digital input ▸ 120 VAC ▸ High-side switching ▸ 10 ms

750-406



Item Description	2-Channel Digital Input; 120 VAC	
Version	**Default**	**Pluggable (delivery without connector)**
Item No.	**750-406**	**753-406**
Order Text	**2DI; 120 VAC**	**2DI; 120 VAC**

7.2

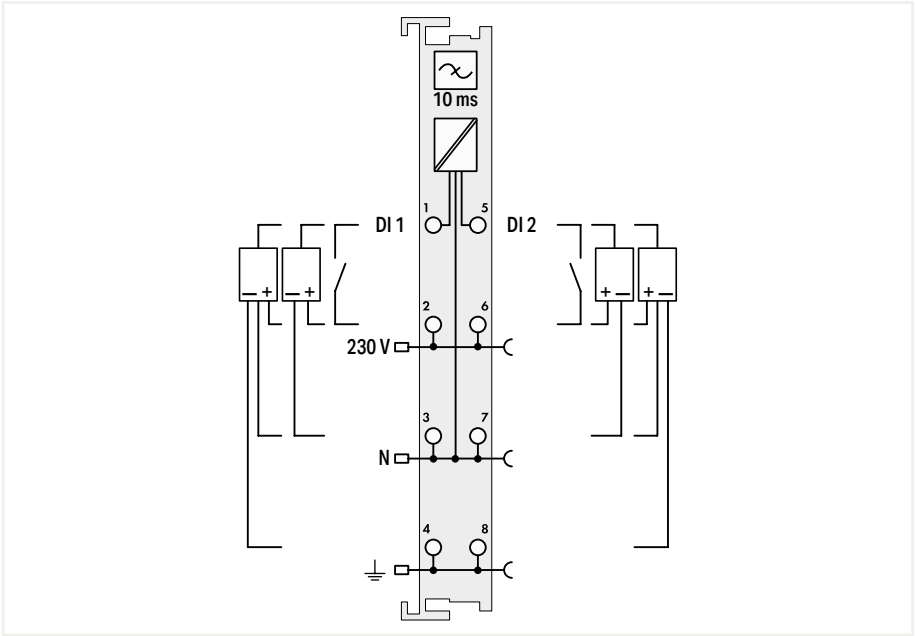
Technical Data

Wiring interface	Fixed	Pluggable
Number of digital inputs	2	
Signal type	Voltage	
Voltage signal type	120 VAC	
Voltage range for signal (0)	0 … 20 VAC	
Voltage range for signal (1)	79 VAC … 1.1 x U_N	
Sensor connection	2 x (2-wire, 3-wire, 4-wire)	
Input characteristic	High-side switching	
Input filter (digital)	10 ms	
Input current per channel for signal (1) (typ.)	4.5 mA	
Signal frequency (min.)	45 Hz	
Signal frequency (max.)	65 Hz	
Supply voltage (sensor)	120 VAC	
Supply voltage (field)	120 VAC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	2 mA	
Input data width (internal) (max.)	2 bits	
Isolation	1500 V (system/field)	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-406	wago.com/753-406
Accessories	**Item No.**	**Item No.**
Plug		753-110

Notice: An additional supply module must be added for 120 VAC supply!

Digital input ▸ 230 VAC ▸ High-side switching ▸ 10 ms

750-405



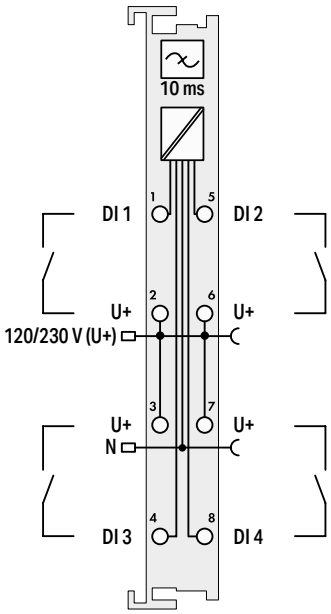
Item Description	2-Channel Digital Input; 230 VAC	
Version	Default	Pluggable (delivery without connector)
Item No.	750-405	753-405
Order Text	2DI; 230 VAC	2DI; 230 VAC

Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital inputs	2	
Signal type	Voltage	
Voltage signal type	230 VAC	
Voltage range for signal (0)	0 … 40 VAC	
Voltage range for signal (1)	164 VAC … 1.1 x U_N	
Sensor connection	2 x (2-wire, 3-wire, 4-wire)	
Input characteristic	High-side switching	
Input filter (digital)	10 ms	
Input current per channel for signal (1) (typ.)	6.5 mA	
Signal frequency (min.)	45 Hz	
Signal frequency (max.)	65 Hz	
Supply voltage (sensor)	230 VAC	
Supply voltage (field)	230 VAC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	2 mA	
Input data width (internal) (max.)	2 bits	
Isolation	1500 V (system/field)	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-405	wago.com/753-405
Accessories	**Item No.**	**Item No.**
Plug		753-110

Notice: An additional supply module must be added for 230 VAC supply!

Digital input ▸ 120 V/230 VAC ▸ High-side switching ▸ 10 ms

753-440



7.2

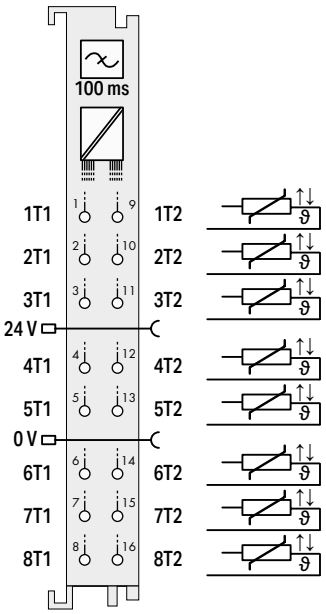
Item Description	**4-Channel Digital Input; 120/230 VAC**
Version	**Pluggable (delivery without connector)**
Item No.	**753-440**
Order Text	**4DI; 120/230 VAC**

Technical Data	
Wiring interface	Pluggable
Number of digital inputs	4
Signal type	Voltage
Voltage signal type	120 VAC
Voltage range for signal (0)	0 … 40 VAC
Voltage range for signal (1)	79 … 230 VAC (–15 … +10 %)
Sensor connection	4 x (2-wire)
Input characteristic	High-side switching
Input filter (digital)	10 ms
Input current at specific input voltage	2.3 mA at 120 V
Input current at specific input voltage (2)	4.7 mA bei 230 V
Signal frequency (min.)	45 Hz
Signal frequency (max.)	65 Hz
Protection against incorrect wiring	Overvoltage protection (275 V) via varistor
Supply voltage (sensor)	230 VAC
Supply voltage (field)	230 VAC; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	15 mA
Input data width (internal) (max.)	4 bits
Isolation	1500 V (system/field)
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/753-440
Accessories	**Item No.**
Plug	753-110

Notice: An additional supply module must be added for 120 / 230 VAC supply!

Digital input ▶ PTC, thermistor per DIN 44081/44082 ▶ 100 ms

750-1425



Item Description	**8-Channel Digital Input; PTC**
Version	**Standard with 16 connectors**
Item No.	**750-1425**
Order Text	**8DI; PTC**

Technical Data	
Wiring interface	Fixed
Number of digital inputs	8
Signal type	PTC, thermistor per DIN 44081/44082
Sensor connection	8 x (2-wire)
Specific sensor properties	Sensor voltage: ≤ 2.5 V / ≤ 7.5 V (based on resistance value); Number of PTCs per channel: max. 6 PTCs in series; Operating value (status bit "1" to "0"): R ≥ 3 kΩ; Return value (status bit "0" to "1"): ≤ 1.5 kΩ; Hysteresis: R = 1.5 kΩ; Wire break value: R ≥ 8 kΩ; Short circuit value: R ≤ 20 Ω
Input filter (digital)	100 ms
Output current per channel	0.001 A
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	52 mA
Data width	16-bit input: 8-bit data, 8-bit error (short circuit/wire break)
Input data width (internal) (max.)	16 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1425

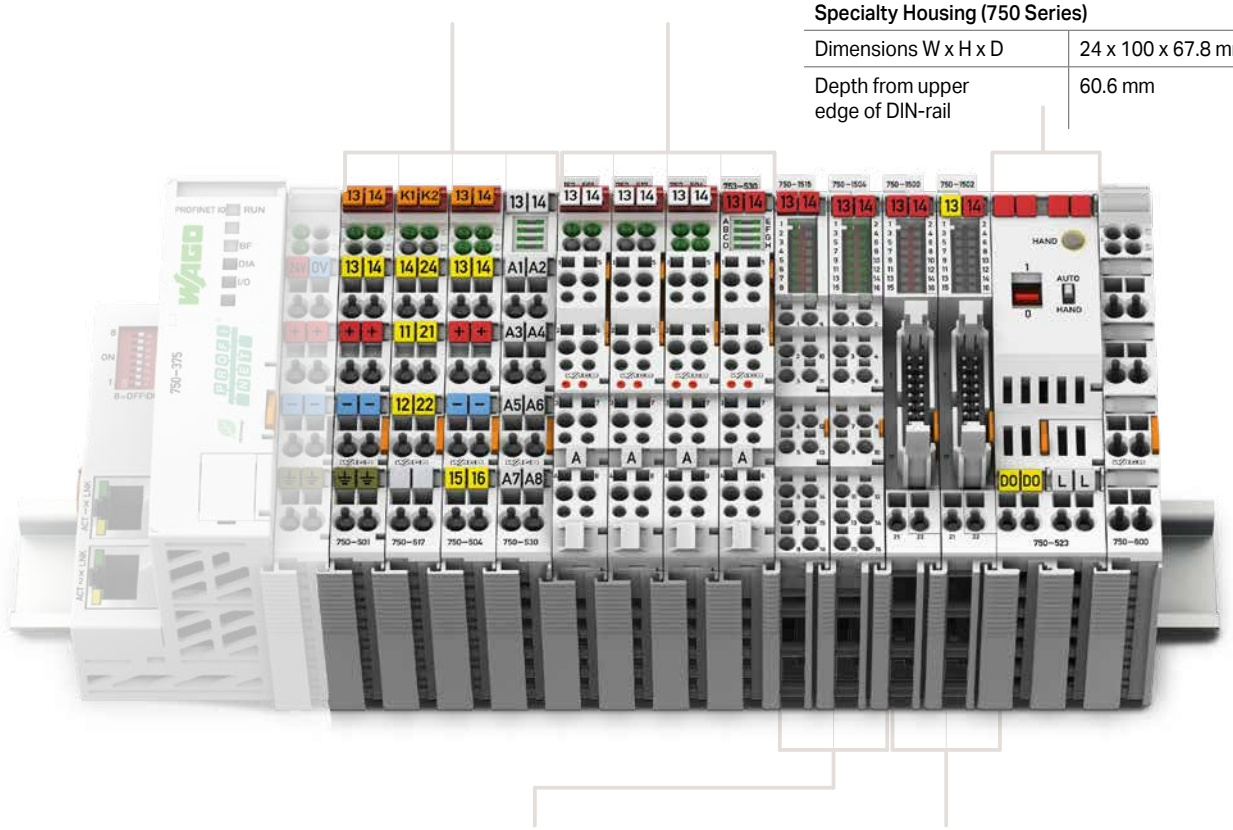
The PTC module is used to connect PTC thermistors according to DIN 44081 and DIN 44082 for thermal monitoring (overload protection) of motors, machinery, bearings, etc. Up to six PTC thermistors can be connected in series per channel. If the nominal response temperature (ϑnat) is exceeded, a bit is set in the module's input process image. In addition, wire breaks and short circuits are monitored for each channel. If an error occurs, a bit is also set in the input process image. One green and one red status LED per channel indicate an overtemperature or wiring errors.

Digital Output Modules

Housing Design (750 Series)	
Dimensions W x H x D	Housing with 4 LEDs: 12 x 100 x 69.8 mm Housing with 8 LEDs: 12 x 100 x 67.8 mm
Depth from upper edge of DIN-rail	Housing with 4 LEDs: 62.6 mm Housing with 8 LEDs: 60.6 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch

Housing Design (753 Series)	
Dimensions W x H x D	Housing with 4 LEDs: 12 x 100 x 69.8 mm Housing with 8 LEDs: 12 x 100 x 69 mm
Depth from upper edge of DIN-rail	Housing with 4 LEDs: 62.6 mm Housing with 8 LEDs: 61.8 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	9 … 10 mm / 0.37 inch

Specialty Housing (750 Series)	
Dimensions W x H x D	24 x 100 x 67.8 mm
Depth from upper edge of DIN-rail	60.6 mm



Housing Design (750 Series), with Push-in CAGE CLAMP® Connections (up to 16 connection points)	
Dimensions W x H x D	12 x 100 x 69 mm
Depth from upper edge of DIN-rail	61.8 mm
Connection technology	Push-in CAGE CLAMP®
Conductor cross-section	Solid: 0.08 … 1.5 mm² / 28 … 16 AWG Fine-stranded: 0.25 … 1.5 mm² / 22 … 16 AWG
Strip length	8 … 9 mm / 0.33 inch

Housing Design (750 Series), with Ribbon Cable Connection	
Dimensions W x H x D	12 x 100 x 74.1 mm
Depth from upper edge of DIN-rail	66.9 mm
Connection technology	20-pole male connector + 2 x CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch

PROFIsafe

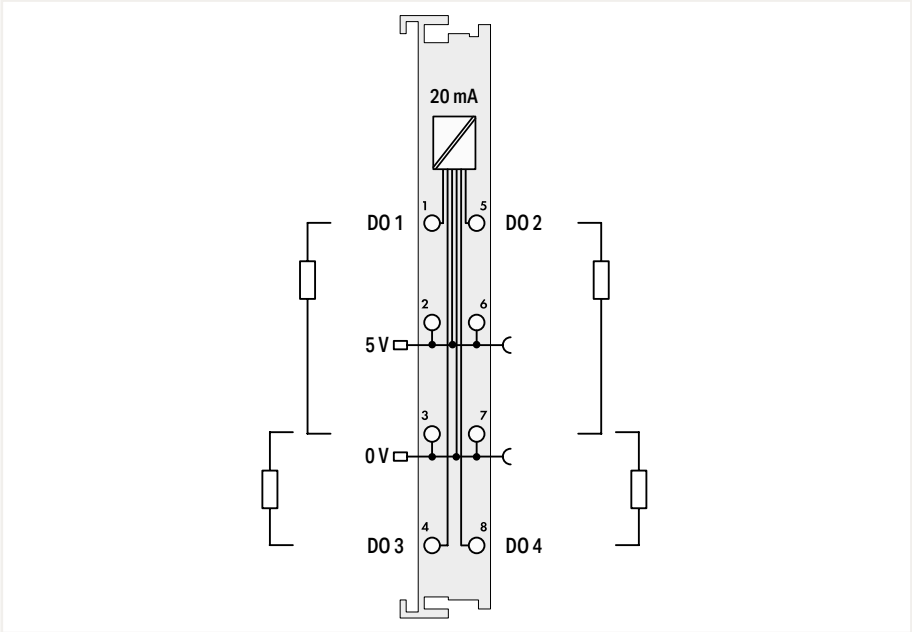
I/O System –
750 XTR Series

I/O System – 750 and 753 Series, Digital Output Modules

Contents

Digital output ▸ 5 VDC ▸ High-side switching ▸ 0.02 A

750-519



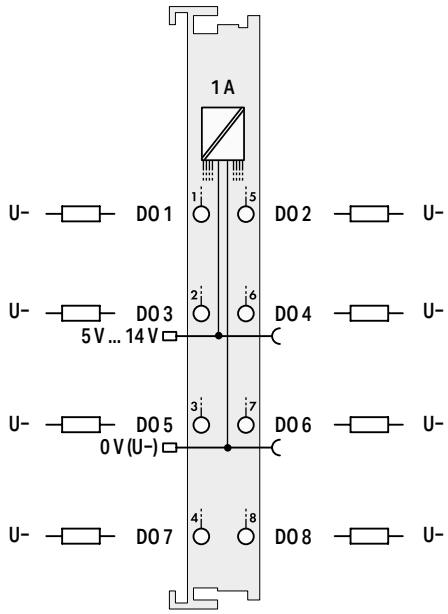
Item Description	**4-Channel Digital Output; 5 VDC; 20 mA**
Version	**Default**
Item No.	**750-519**
Order Text	**4DO; 5 VDC; 20mA**

Technical Data	
Wiring interface	Fixed
Number of digital outputs	4
Signal type	Voltage
Voltage signal type	5 VDC
Output characteristic	High-side switching
Output current per channel	0.02 A
Output current	Short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	2 x (2-wire); A suitable field side connection module (e.g., 750-614) must also be used to connect other actuators.
Switching frequency (max.)	5 kHz
Supply voltage (field)	5 VDC; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	14 mA
Power consumption (5 V system supply)	10 mA
Output (internal) data width (max.)	4 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc
Data sheet and further information, see:	wago.com/750-519

Notice: An additional supply module must be added for 5 VDC supply!

Digital output ▸ 5 VDC ▸ High-side switching ▸ 1 A

750-534



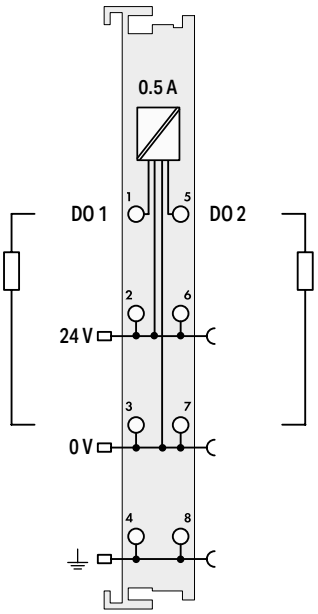
Item Description	8-Channel Digital Output; 12 VDC; 1 A	
Version	Default	Pluggable (delivery without connector)
Item No.	750-534	753-534
Order Text	8DO; 12 VDC; 1A	8DO; 12 VDC; 1A

Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital outputs	8	
Signal type	Voltage	
Voltage signal type	5 VDC; 12 VDC	
Output characteristic	High-side switching	
Output current per channel	1 A	
Output current	Short-circuit-protected	
Load type	Resistive, inductive	
Actuator connection	8 x (1-wire)	
Switching frequency (max.)	2 kHz	
Supply voltage (field)	14 VDC; via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption, field supply (module with no external load)	25 mA	
Power consumption (5 V system supply)	20 mA	
Output (internal) data width (max.)	8 bits	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-534	wago.com/753-534
Accessories	**Item No.**	**Item No.**
Plug		753-110

Notice: An additional supply module must be added for 5-14 VDC supply!

Digital output ▸ 24 VDC ▸ High-side switching ▸ 0.5 A

750-501

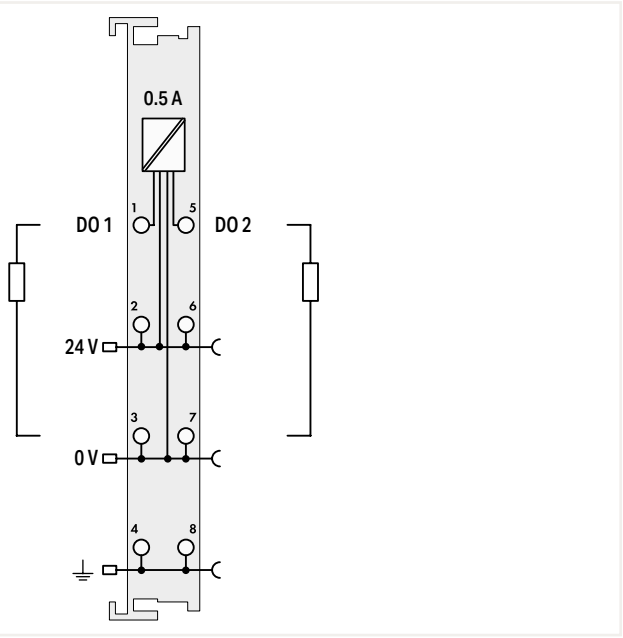


Item Description	2-Channel Digital Output; 24 VDC; 0.5 A			
Version	Default	Interference-free	Pluggable (delivery without connector)	Pluggable (delivery without connector); Interference-free
Item No.	**750-501**	**750-501/000-800**	**753-501**	**753-501/000-800**
Order Text	**2DO; 24 VDC; 0.5A**	**2DO; 24 VDC; 0.5A; IF**	**2DO; 24 VDC; 0.5A**	**2DO; 24 VDC; 0.5A; IF**

Technical Data				
Wiring interface	Fixed		Pluggable	
Interference-free with safety function		Yes		Yes
Number of digital outputs	2			
Signal type	Voltage			
Voltage signal type	24 VDC			
Output characteristic	High-side switching			
Output current per channel	0.5 A			
Output current	Short-circuit-protected			
Load type	Resistive, inductive, lamp load			
Actuator connection	2 x (2-wire, 3-wire, 4-wire)			
Switching frequency (max.)	5 kHz			
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)			
Power consumption, field supply (module with no external load)	15 mA			
Power consumption (5 V system supply)	3.5 mA			
Output (internal) data width (max.)	2 bits			
Isolation	500 V system/field			
Surrounding air temperature (operation)	0 … 55 °C			
Dimensions W x H x D	(12 x 100 x 69.8) mm			
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx			
Data sheet and further information, see:	wago.com/750-501		wago.com/753-501	
Accessories	**Item No.**	**Item No.**	**Item No.**	**Item No.**
Plug			753-110	753-110

Digital output ▸ 24 VDC ▸ High-side switching ▸ 0.5 A

750-506

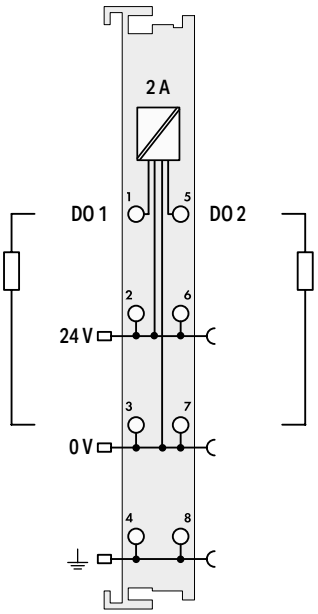


Item Description	2-Channel Digital Output; 24 VDC; 0.5 A; Diagnostics		
Version	Default	Interference-free	Pluggable (delivery without connector)
Item No.	750-506	750-506/000-800	753-506
Order Text	2DO; 24 VDC; 0.5A; Diagn	2DO; 24 VDC; 0.5A; IF; Diagn	2DO; 24 VDC; 0.5A; Diagn

Technical Data			
Wiring interface	Fixed		Pluggable
Interference-free with safety function		Yes	
Number of digital outputs	2		
Signal type	Voltage		
Voltage signal type	24 VDC		
Output characteristic	High-side switching		
Output current per channel	0.5 A		
Output current	Short-circuit-protected		
Load type	Resistive, inductive, lamp load		
Actuator connection	2 x (2-wire, 3-wire, 4-wire)		
Switching frequency (max.)	5 kHz		
Diagnostics	Open circuit, overload and short circuit		
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Power consumption, field supply (module with no external load)	15 mA		
Power consumption (5 V system supply)	15 mA		
Input data width (internal) (max.)	2 bits		
Output (internal) data width (max.)	2 bits		
Isolation	500 V system/field		
Surrounding air temperature (operation)	0 … 55 °C		
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx		
Data sheet and further information, see:	wago.com/750-506		wago.com/753-506
Accessories	**Item No.**	**Item No.**	**Item No.**
Plug			753-110

Digital output ▸ 24 VDC ▸ High-side switching ▸ 2 A

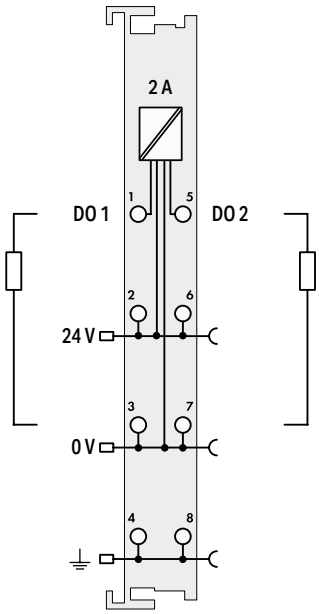
750-502



Item Description	2-Channel Digital Output; 24 VDC; 2.0 A			
Version	Default	Interference-free	Pluggable (delivery without connector)	Pluggable (delivery without connector); Interference-free
Item No.	**750-502**	**750-502/000-800**	**753-502**	**753-502/000-800**
Order Text	**2DO; 24 VDC; 2A**	**2DO; 24 VDC; 2A; IF**	**2DO; 24 VDC; 2A**	**2DO; 24 VDC; 2A; IF**
Technical Data				
Wiring interface	Fixed		Pluggable	
Interference-free with safety function		Yes		Yes
Number of digital outputs	2			
Signal type	Voltage			
Voltage signal type	24 VDC			
Output characteristic	High-side switching			
Output current per channel	2 A			
Output current	Short-circuit-protected			
Load type	Resistive, inductive, lamp load			
Actuator connection	2 x (2-wire, 3-wire, 4-wire)			
Switching frequency (max.)	2.5 kHz			
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)			
Power consumption, field supply (module with no external load)	15 mA			
Power consumption (5 V system supply)	3.5 mA			
Output (internal) data width (max.)	2 bits			
Isolation	500 V system/field			
Surrounding air temperature (operation)	0 … 55 °C			
Dimensions W x H x D	(12 x 100 x 69.8) mm			
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx			
Data sheet and further information, see:	wago.com/750-502		wago.com/753-502	
Accessories	**Item No.**	**Item No.**	**Item No.**	**Item No.**
Plug			753-110	753-110

Digital output ▸ 24 VDC ▸ High-side switching ▸ 2 A

750-508

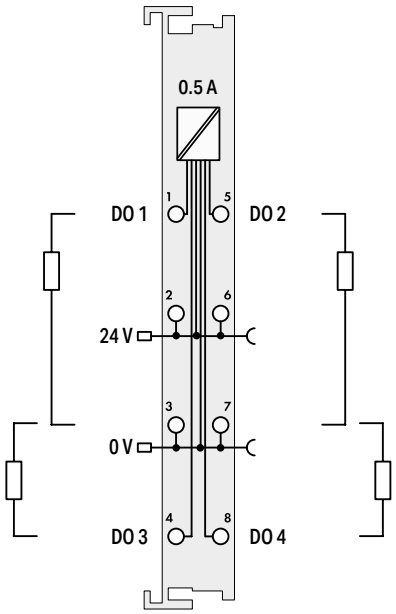


Item Description	2-Channel Digital Output; 24 VDC; 2.0 A; Diagnostics		
Version	Default	Interference-free	Pluggable (delivery without connector)
Item No.	750-508	750-508/000-800	753-508
Order Text	2DO; 24 VDC; 2A; Diagn	2DO; 24 VDC; 2A; IF; Diagn	2DO; 24 VDC; 2A; Diagn

Technical Data			
Wiring interface	Fixed		Pluggable
Interference-free with safety function		Yes	
Number of digital outputs	2		
Signal type	Voltage		
Voltage signal type	24 VDC		
Output characteristic	High-side switching		
Output current per channel	2 A		
Output current	Short-circuit-protected		
Load type	Resistive, inductive, lamp load		
Actuator connection	2 x (2-wire, 3-wire, 4-wire)		
Switching frequency (max.)	1 kHz		
Diagnostics	Open circuit, overload and short circuit		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Power consumption, field supply (module with no external load)	7 mA		
Power consumption (5 V system supply)	14 mA		
Input data width (internal) (max.)	2 bits		
Output (internal) data width (max.)	2 bits		
Isolation	500 V system/field		
Surrounding air temperature (operation)	0 … 55 °C		
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
Data sheet and further information, see:	wago.com/750-508		wago.com/753-508
Accessories	**Item No.**	**Item No.**	**Item No.**
Plug			753-110

Digital output ▸ 24 VDC ▸ High-side switching ▸ 0.5 A

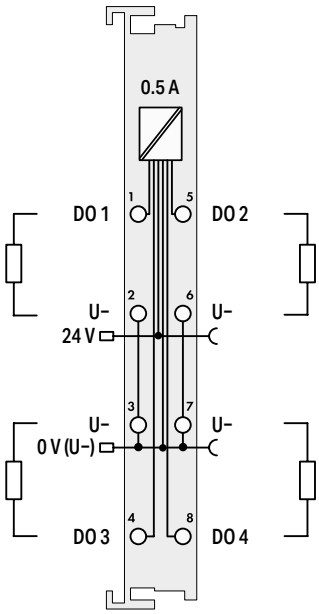
750-504



Item Description	4-Channel Digital Output; 24 VDC; 0.5 A				
Version	Default	Ext. Temperature	Interference-free	Pluggable (delivery without connector)	Interference-free; extended temperature
Item No.	750-504	750-504/025-000	750-504/000-800	753-504	750-504/025-800
Order Text	4DO; 24 VDC; 0.5A	4DO; 24 VDC; 0.5A; T	4DO; 24 VDC; 0.5A; IF	4DO; 24 VDC; 0.5A	4DO; 24 VDC; 0.5A; IF; T
Technical Data					
Wiring interface	Fixed			Pluggable	Fixed
Interference-free with safety function			Yes		Yes
Number of digital outputs	4				
Signal type	Voltage				
Voltage signal type	24 VDC				
Output characteristic	High-side switching				
Output current per channel	0.5 A				
Output current	Short-circuit-protected				
Load type	Resistive, inductive, lamp load				
Actuator connection	2 x (2-wire, 3-wire); A suitable field side connection module (e.g., 750-614) must also be used to connect other actuators.				
Switching frequency (max.)	1 kHz				
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)				
Power consumption, field supply (module with no external load)	30 mA				
Power consumption (5 V system supply)	10 mA				
Output (internal) data width (max.)	4 bits				
Isolation	500 V system/field				
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C	0 … 55 °C		-20 … 60 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm				
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx				
Data sheet and further information, see:	wago.com/750-504			wago.com/753-504	wago.com/750-504/025-800
Accessories	**Item No.**	**Item No.**	**Item No.**	**Item No.**	**Item No.**
Plug				753-110	

Digital output ▸ 24 VDC ▸ High-side switching ▸ 0.5 A

750-531

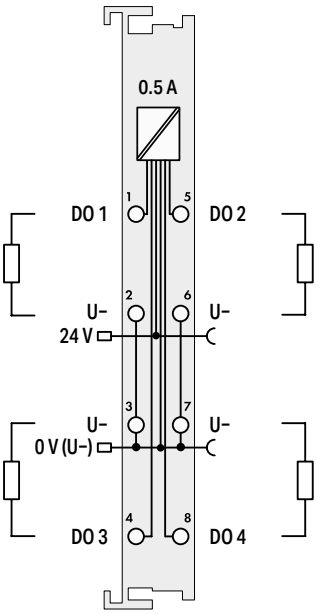


Item Description	4-Channel Digital Output; 24 VDC; 0.5 A; 2-wire connection			
Version	Default	Interference-free	Pluggable (delivery without connector)	Pluggable (delivery without connector); Interference-free
Item No.	750-531	750-531/000-800	753-531	753-531/000-800
Order Text	4DO; 24 VDC; 0.5A; 2-wire	4DO; 24 VDC; 0.5A; IF; 2-wire	4DO; 24 VDC; 0.5A; 2-wire	4DO; 24 VDC; 0.5A; IF; 2-wire

Technical Data				
Wiring interface	Fixed		Pluggable	
Interference-free with safety function		Yes		Yes
Number of digital outputs	4			
Signal type	Voltage			
Voltage signal type	24 VDC			
Output characteristic	High-side switching			
Output current per channel	0.5 A			
Output current	Short-circuit-protected			
Load type	Resistive, inductive, lamp load			
Actuator connection	4 x (2-wire)			
Switching frequency (max.)	1 kHz			
Short-circuit current	1.7 A			
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)			
Power consumption, field supply (module with no external load)	30 mA			
Power consumption (5 V system supply)	10 mA			
Output (internal) data width (max.)	4 bits			
Isolation	500 V system/field			
Surrounding air temperature (operation)	0 … 55 °C			
Dimensions W x H x D	(12 x 100 x 69.8) mm			
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx			
Data sheet and further information, see:	wago.com/750-531		wago.com/753-531	
Accessories	**Item No.**	**Item No.**	**Item No.**	**Item No.**
Plug			753-110	753-110

Digital output ▸ 24 VDC ▸ High-side switching ▸ 0.5 A

750-532

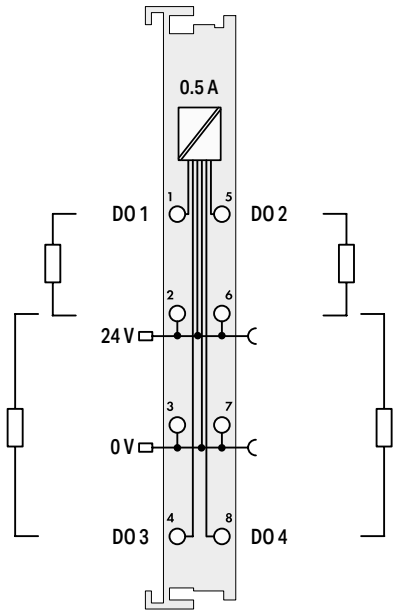


Item Description	**4-Channel Digital Output; 24 VDC; 0.5 A; Diagnostics**
Version	**Default**
Item No.	**750-532**
Order Text	**4DO; 24 VDC; 0.5A; Diagn**

Technical Data	
Wiring interface	Fixed
Number of digital outputs	4
Signal type	Voltage
Voltage signal type	24 VDC
Output characteristic	High-side switching
Output current per channel	0.5 A
Output current	Short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	4 x (2-wire)
Switching frequency (max.)	2 kHz
Diagnostics	Open circuit, overload and short circuit
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	13 mA
Power consumption (5 V system supply)	10 mA
Input data width (internal) (max.)	4 bits
Output (internal) data width (max.)	4 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-532

Digital output ▸ 24 VDC ▸ Low-side switching ▸ 0.5 A

750-516

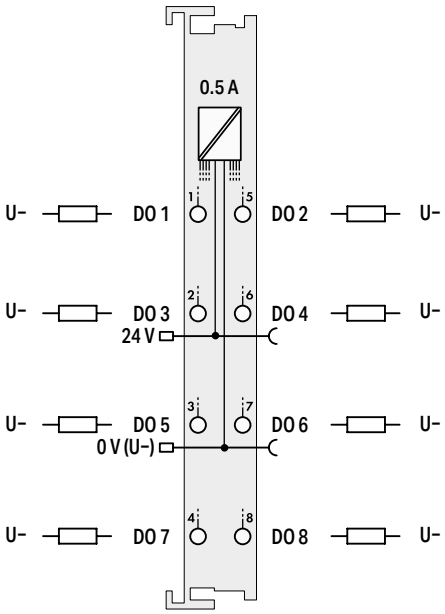


Item Description	4-Channel Digital Output; 24 VDC; 0.5 A; Low-side switching	
Version	Default	Pluggable (delivery without connector)
Item No.	**750-516**	**753-516**
Order Text	**4DO; 24 VDC; 0.5A; LSS**	**4DO; 24 VDC; 0.5A; LSS**

Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital outputs	4	
Signal type	Voltage	
Voltage signal type	24 VDC	
Output characteristic	Low-side switching	
Output current per channel	0.5 A	
Output current	Short-circuit-protected	
Load type	Resistive, inductive, lamp load	
Actuator connection	2 x (2-wire); A suitable field side connection module (e.g., 750-614) must also be used to connect other actuators.	
Switching frequency (max.)	5 kHz	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption, field supply (module with no external load)	30 mA	
Power consumption (5 V system supply)	7 mA	
Output (internal) data width (max.)	4 bits	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-516	wago.com/753-516
Accessories	**Item No.**	**Item No.**
Plug		753-110

Digital output ▸ 24 VDC ▸ High-side switching ▸ 0.5 A

750-530

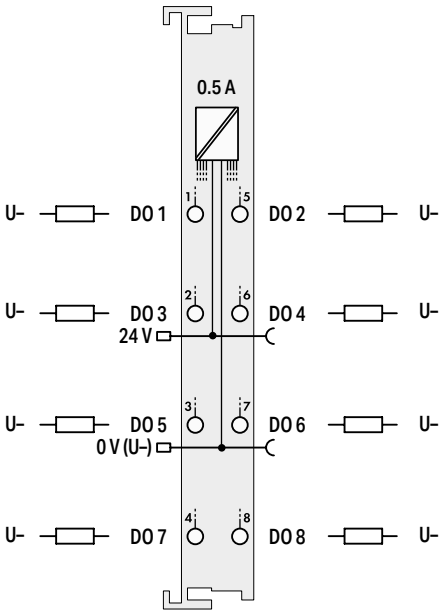


Item Description	8-Channel Digital Output; 24 VDC; 0.5 A		
Version	Default	Ext. Temperature	Pluggable (delivery without connector)
Item No.	**750-530**	**750-530/025-000**	**753-530**
Order Text	**8DO; 24 VDC; 0.5A**	**8DO; 24 VDC; 0.5A; T**	**8DO; 24 VDC; 0.5A**

Technical Data			
Wiring interface	Fixed		Pluggable
Number of digital outputs	8		
Signal type	Voltage		
Voltage signal type	24 VDC		
Output characteristic	High-side switching		
Output current per channel	0.5 A		
Output current	Short-circuit-protected		
Load type	Resistive, inductive, lamp load		
Actuator connection	8 x (1-wire)		
Switching frequency (max.)	2 kHz		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Power consumption, field supply (module with no external load)	15 mA		
Power consumption (5 V system supply)	25 mA		
Output (internal) data width (max.)	8 bits		
Isolation	500 V system/field		
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm		(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
Data sheet and further information, see:	wago.com/750-530		wago.com/753-530
Accessories	**Item No.**	**Item No.**	**Item No.**
Plug			753-110

Digital output ▶ 24 VDC ▶ High-side switching ▶ 0.5 A

750-537

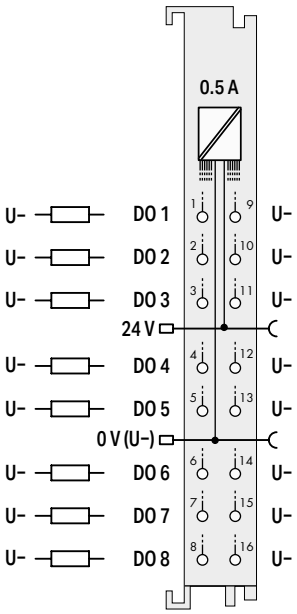


Item Description	8-Channel Digital Output; 24 VDC; 0.5 A; Diagnostics	
Version	Default	Pluggable (delivery without connector)
Item No.	750-537	753-537
Order Text	8DO; 24 VDC; 0.5A; Diagn	8DO; 24 VDC; 0.5A; Diagn

Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital outputs	8	
Signal type	Voltage	
Voltage signal type	24 VDC	
Output characteristic	High-side switching	
Output current per channel	0.5 A	
Output current	Short-circuit-protected	
Load type	Resistive, inductive, lamp load	
Actuator connection	8 x (1-wire)	
Switching frequency (max.)	1 kHz	
Diagnostics	Open circuit, overload and short circuit	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption, field supply (module with no external load)	16 mA	
Power consumption (5 V system supply)	50 mA	
Input data width (internal) (max.)	8 bits	
Output (internal) data width (max.)	8 bits	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-537	wago.com/753-537
Accessories	**Item No.**	**Item No.**
Plug		753-110

Digital output ▸ 24 VDC ▸ High-side switching ▸ 0.5 A

750-1515

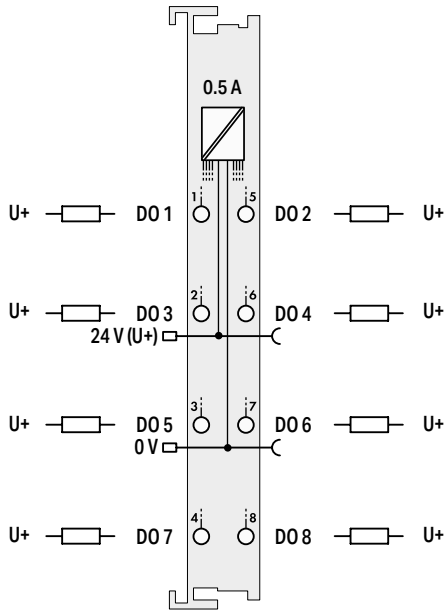


Item Description	**8-Channel Digital Output; 24 VDC; 0.5 A; 2-wire connection**
Version	**Standard with 16 connectors**
Item No.	**750-1515**
Order Text	**8DO; 24 VDC; 0.5A; 2-wire**

Technical Data	
Wiring interface	Fixed
Number of digital outputs	8
Signal type	Voltage
Voltage signal type	24 VDC
Output characteristic	High-side switching
Output current per channel	0.5 A
Output current	Short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	8 x (2-wire)
Switching frequency (max.)	1 kHz
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	15 mA
Power consumption (5 V system supply)	20 mA
Output (internal) data width (max.)	8 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1515

Digital output ▸ 24 VDC ▸ Low-side switching ▸ 0.5 A

750-536

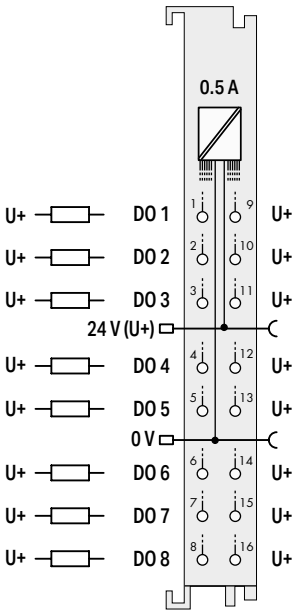


Item Description	8-Channel Digital Output; 24 VDC; 0.5 A; Low-side switching	
Version	Default	Pluggable (delivery without connector)
Item No.	750-536	753-536
Order Text	8DO; 24 VDC; 0.5A; LSS	8DO; 24 VDC; 0.5A; LSS

Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital outputs	8	
Signal type	Voltage	
Voltage signal type	24 VDC	
Output characteristic	Low-side switching	
Output current per channel	0.5 A	
Output current	Short-circuit-protected	
Load type	Resistive, inductive, lamp load	
Actuator connection	8 x (1-wire)	
Switching frequency (max.)	2 kHz	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption, field supply (module with no external load)	12 mA	
Power consumption (5 V system supply)	25 mA	
Output (internal) data width (max.)	8 bits	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-536	wago.com/753-536
Accessories	**Item No.**	**Item No.**
Plug		753-110

Digital output ▸ 24 VDC ▸ Low-side switching ▸ 0.5 A

750-1516

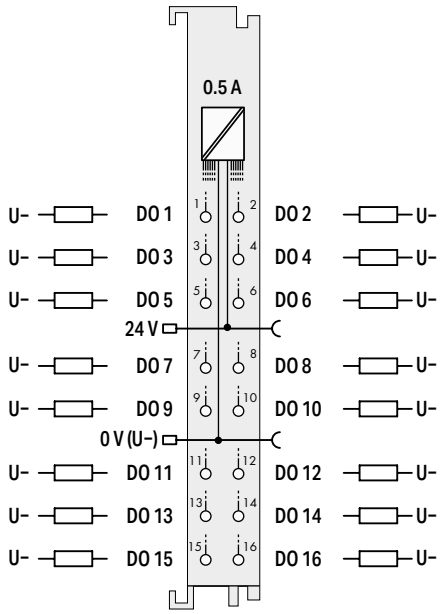


Item Description	8-Channel Digital Output; 24 VDC; 0.5 A; Low-side switching; 2-wire connection
Version	Standard with 16 connectors
Item No.	**750-1516**
Order Text	**8DO; 24 VDC; 0.5A; LSS; 2-wire**

Technical Data	
Wiring interface	Fixed
Number of digital outputs	8
Signal type	Voltage
Voltage signal type	24 VDC
Output characteristic	Low-side switching
Output current per channel	0.5 A
Output current	Short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	8 x (2-wire)
Switching frequency (max.)	1 kHz
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	8 mA
Power consumption (5 V system supply)	20 mA
Output (internal) data width (max.)	8 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1516

Digital output ▸ 24 VDC ▸ High-side switching ▸ 0.5 A

750-1504

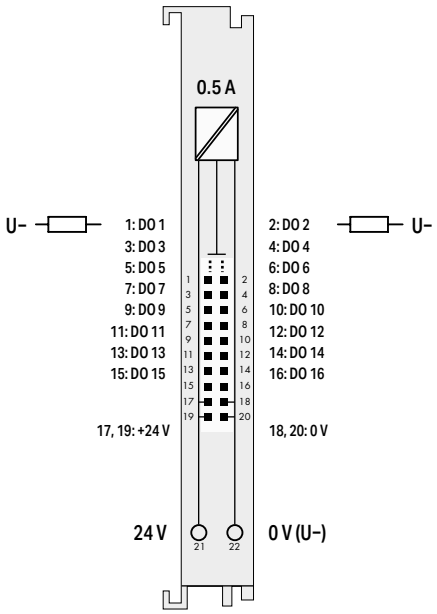


Item Description	**16-Channel Digital Output; 24 VDC; 0.5 A**
Version	**Standard with 16 connectors**
Item No.	**750-1504**
Order Text	**16DO; 24 VDC; 0.5A**

Technical Data	
Wiring interface	Fixed
Number of digital outputs	16
Signal type	Voltage
Voltage signal type	24 VDC
Output characteristic	High-side switching
Output current per channel	0.5 A
Output current	Short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	16 x (1-wire)
Switching frequency (max.)	1 kHz
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	29 mA
Power consumption (5 V system supply)	40 mA
Output (internal) data width (max.)	16 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1504

Digital output ▸ 24 VDC ▸ High-side switching ▸ 0.5 A

750-1500

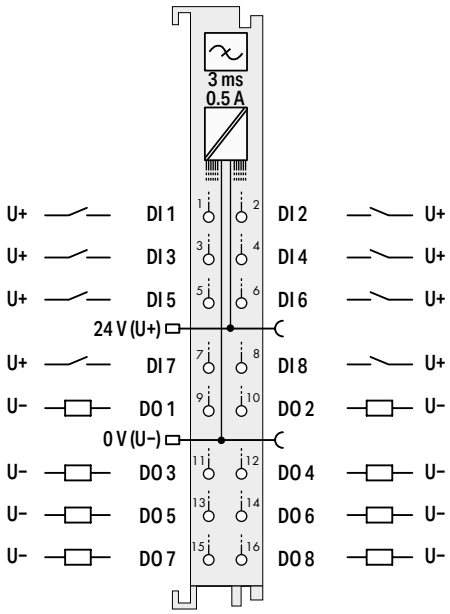


Item Description	**16-Channel Digital Output; 24 VDC; 0.5 A; Ribbon cable**
Version	**Standard with ribbon cable connector**
Item No.	**750-1500**
Order Text	**16DO; 24 VDC; 0.5A; Ribbon Cable**

Technical Data	
Wiring interface	Fixed
Number of digital outputs	16
Signal type	Voltage
Voltage signal type	24 VDC
Output characteristic	High-side switching
Output current per channel	0.5 A
Output current	Short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	16 x (1-wire)
Switching frequency (max.)	1 kHz
Supply voltage (field)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Power consumption, field supply (module with no external load)	29 mA
Power consumption (5 V system supply)	40 mA
Output (internal) data width (max.)	16 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 74.1) mm
Approvals	CE; KC; schiff Marine; cULus OrdLoc/HazLoc; Ex ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1500

Digital input; Digital output ▸ 24 VDC ▸ High-side switching ▸ 0.5 A

750-1506

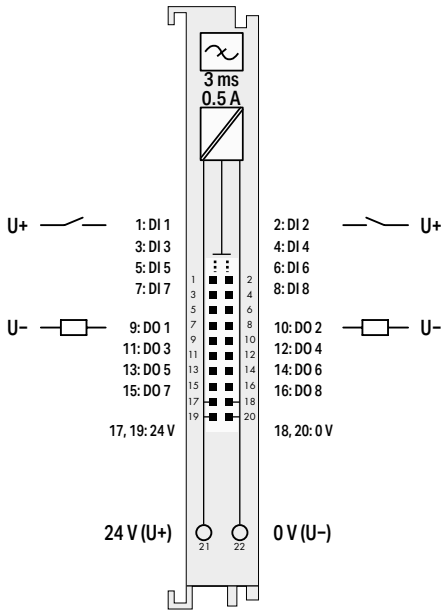


Item Description	**8-Channel Digital Input/Output; 24 VDC; 0.5 A**
Version	**Standard with 16 connectors**
Item No.	**750-1506**
Order Text	**8DIO; 24 VDC; 0.5A**

Technical Data	
Wiring interface	Fixed
Number of digital inputs	8
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Sensor connection	8 x (1-wire)
Input characteristic	High-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) (typ.)	2.4 mA
Number of digital outputs	8
Signal type	Voltage
Voltage signal type	24 VDC
Output characteristic	High-side switching
Output current per channel	0.5 A
Output current	Short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	8 x (1-wire)
Switching frequency (max.)	1 kHz
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	16 mA
Power consumption (5 V system supply)	30 mA
Input data width (internal) (max.)	8 bits
Output (internal) data width (max.)	8 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1506

Digital input; Digital output ▸ 24 VDC ▸ High-side switching ▸ 0.5 A

750-1502

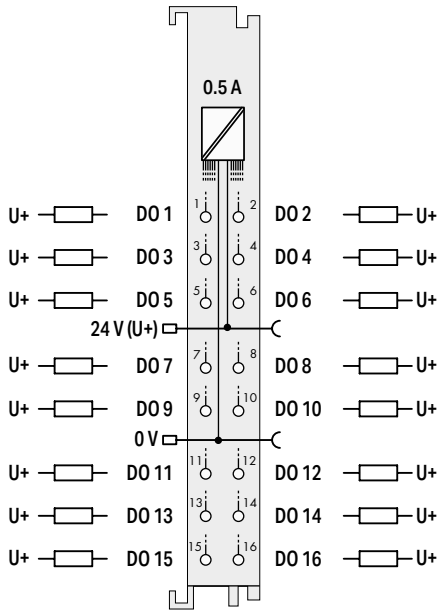


Item Description	**8-Channel Digital Input/Output; 24 VDC; 0.5 A; Ribbon cable**
Version	**Standard with ribbon cable connector**
Item No.	**750-1502**
Order Text	**8DIO; 24 VDC; 0.5A; Ribbon Cable**

Technical Data	
Wiring interface	Fixed
Number of digital inputs	8
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Sensor connection	8 x (1-wire)
Input characteristic	High-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) (typ.)	2.4 mA
Number of digital outputs	8
Signal type	Voltage
Voltage signal type	24 VDC
Output characteristic	High-side switching
Output current per channel	0.5 A
Output current	Short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	8 x (1-wire)
Switching frequency (max.)	1 kHz
Supply voltage (field)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Power consumption, field supply (module with no external load)	16 mA
Power consumption (5 V system supply)	30 mA
Input data width (internal) (max.)	8 bits
Output (internal) data width (max.)	8 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 74.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1502

Digital output ▸ 24 VDC ▸ Low-side switching ▸ 0.5 A

750-1505

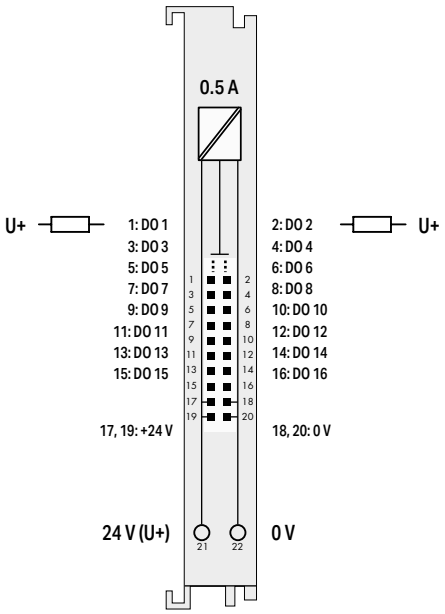


Item Description	**16-Channel Digital Output; 24 VDC; 0.5 A; Low-side switching**
Version	**Standard with 16 connectors**
Item No.	**750-1505**
Order Text	**16DO; 24 VDC; 0.5A; LSS**

Technical Data	
Wiring interface	Fixed
Number of digital outputs	16
Signal type	Voltage
Voltage signal type	24 VDC
Output characteristic	Low-side switching
Output current per channel	0.5 A
Output current	Short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	16 x (1-wire)
Switching frequency (max.)	1 kHz
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	11 mA
Power consumption (5 V system supply)	40 mA
Output (internal) data width (max.)	16 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1505

Digital output ▸ 24 VDC ▸ Low-side switching ▸ 0.5 A

750-1501

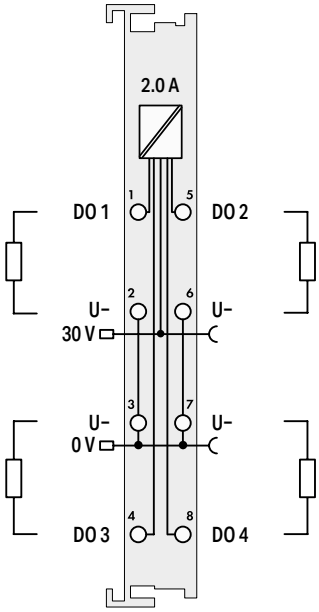


Item Description	**16-Channel Digital Output; 24 VDC; 0.5 A; Low-side switching; Ribbon cable**
Version	**Standard with ribbon cable connector**
Item No.	**750-1501**
Order Text	**16DO; 24 VDC; 0.5A; LSS; Ribbon Cable**

Technical Data	
Wiring interface	Fixed
Number of digital outputs	16
Signal type	Voltage
Voltage signal type	24 VDC
Output characteristic	Low-side switching
Output current per channel	0.5 A
Output current	Short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	16 x (1-wire)
Switching frequency (max.)	1 kHz
Supply voltage (field)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Power consumption, field supply (module with no external load)	11 mA
Power consumption (5 V system supply)	40 mA
Output (internal) data width (max.)	16 bits
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 74.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1501

Digital output ▸ 30 VAC/DC ▸ High-side switching ▸ 2 A

750-527



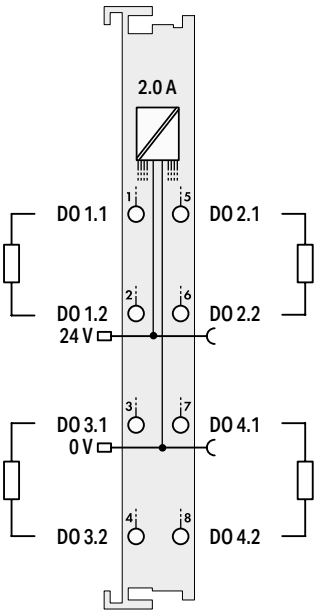
Item Description	**4-Channel Digital Output; 30 VAC/VDC; 2.0 A; Solid-state**
Version	**Default**
Item No.	**750-527**
Order Text	**4DO; 30V AC/DC; 2.0A; SSR**

Technical Data	
Wiring interface	Fixed
Number of digital outputs	4
Signal type	Voltage
Voltage signal type	30 VAC/DC
Output characteristic	High-side switching
Output current per channel	2 A
Output current (module)	8 A
Output current	requires external fuses
Delay time T_off from 1 to 0	20000 µs
Delay time T_on from 0 to 1	1000 µs
Load type	Resistive; inductive (Limit induction voltage peaks externally.)
Actuator connection	4 x (2-wire)
Switching frequency (max.)	1 Hz
Supply voltage (field)	30 VAC/DC, SELV; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	0 mA
Power consumption (5 V system supply)	57 mA
Output (internal) data width (max.)	4 bits
Isolation	500 V system/field
Overvoltage category	II
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; cULus OrdLoc/HazLoc
Data sheet and further information, see:	wago.com/750-527

Note: A suitable supply module (e.g., 750-612) must be provided for AC operation or when using DC voltages >31.2 V!

Digital output ▸ 30 VAC/DC; isolated ▸ High-side switching ▸ 2 A

750-528

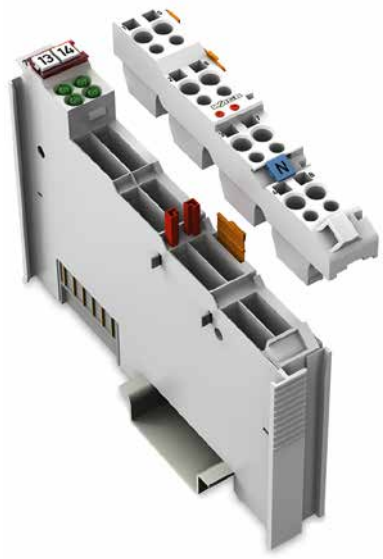


Item Description	**4-Channel Digital Output; 30 VAC/VDC; 2.0 A; Solid-state; isolated**
Version	**Default**
Item No.	**750-528**
Order Text	**4DO; 30V AC/DC; 2.0A; SSR; Isolated**

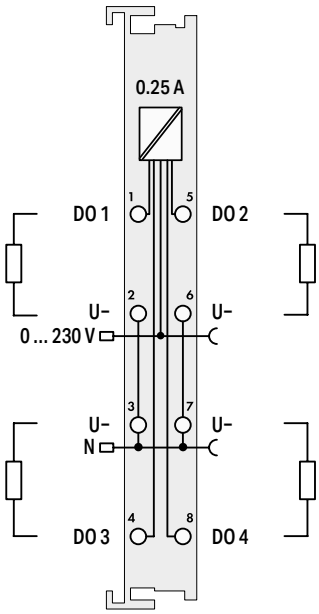
Technical Data	
Wiring interface	Fixed
Number of digital outputs	4
Signal type	Voltage
Voltage signal type	30 VAC/DC
Output characteristic	High-side switching
Output current per channel	2 A
Output current (module)	8 A
Output current	requires external fuses
Delay time T_off from 1 to 0	20000 µs
Delay time T_on from 0 to 1	1000 µs
Load type	Resistive; inductive (Limit induction voltage peaks externally.)
Actuator connection	4 x (2-wire)
Switching frequency (max.)	1 Hz
Supply voltage (field)	30 VAC/DC, SELV; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	0 mA
Power consumption (5 V system supply)	57 mA
Output (internal) data width (max.)	4 bits
Isolation	500 V system/field or channel/channel
Overvoltage category	II
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; cULus OrdLoc/HazLoc
Data sheet and further information, see:	wago.com/750-528

Note: A suitable supply module (e.g., 750-612) must be provided for AC operation or when using DC voltages >31.2 V!

Digital output ▸ 5 … 250 VAC ▸ High-side switching ▸ 0.25 A



753-540



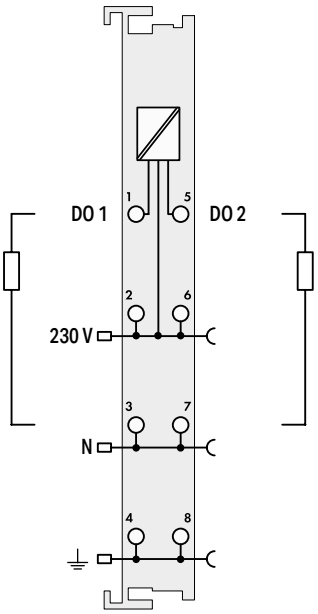
Item Description	**4-Channel Digital Output; 230 VAC; 0.25 A; Solid-state**
Version	**Pluggable (delivery without connector)**
Item No.	**753-540**
Order Text	**4DO; 230 VAC; 0.25A; SSR**

Technical Data	
Wiring interface	Pluggable
Number of digital outputs	4
Signal type	Voltage
Voltage signal type	5 … 250 VAC
Output characteristic	High-side switching
Output current per channel	0.25 A
Output current	Short-circuit-protected
Load type	Resistive, inductive
Actuator connection	4 x (2-wire)
Protection against incorrect wiring	Overvoltage protection (275 V) via varistor
Short-circuit current	max. 10 A (16 ms)
Supply voltage (field)	230 VAC; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	18 mA
Output (internal) data width (max.)	4 bits
Isolation	1500 V (system/field)
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/753-540
Accessories	**Item No.**
Plug	753-110

Notice: An additional supply module must be added for 0 … 250 VAC supply!

Digital output ▸ 0 … 250 VAC/DC ▸ Non-floating ▸ 0.3 A

750-509



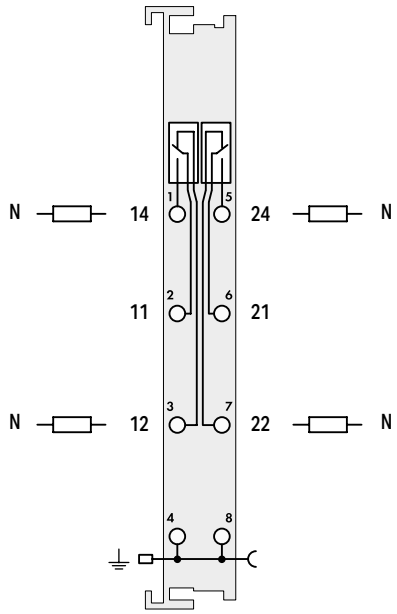
Item Description	2-Channel Digital Output; 230 VAC; 0.3 A; Solid-state	
Version	**Default**	**Pluggable (delivery without connector)**
Item No.	**750-509**	**753-509**
Order Text	**2DO; 230 VAC; 0.3A; SSR**	**2DO; 230 VAC; 0.3A; SSR**

Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital outputs	2	
Signal type	Voltage	
Voltage signal type	0 … 250 VAC/DC	
Output circuit design	Solid-state load relays	
Output characteristic	Non-floating	
Output current per channel	0.3 A	
Load type	Resistive, inductive	
Actuator connection	2 x (2-wire, 3-wire)	
Switching frequency (max.)	5 Hz; 24 V; 0.3 A; DF = 50 %	
Protection against incorrect wiring	Overvoltage protection (275 V) via varistor	
Supply voltage (field)	250 VAC/DC; via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	10 mA	
Output (internal) data width (max.)	2 bits	
Isolation	1500 V (system/field)	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-509	wago.com/753-509
Accessories	**Item No.**	**Item No.**
Plug		753-110

Notice: An additional supply module must be added for 0-230 VAC/DC supply!

Digital output ▸ Switching voltage: 125 VAC; 30 VDC ▸ Potential-free

750-514

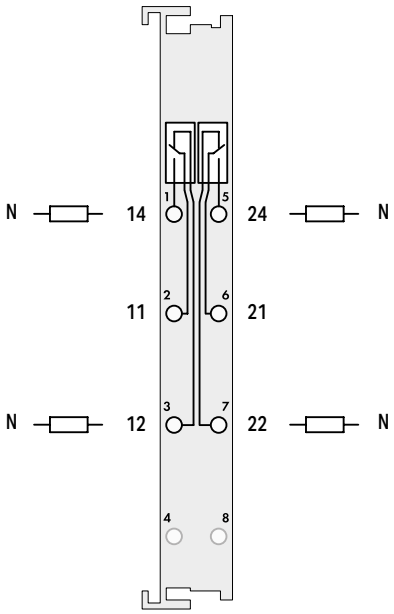


Item Description	2-Channel Relay Output; 125 VAC; 0.5 A; Potential-free; 2 changeover contacts	
Version	Default	Pluggable (delivery without connector)
Item No.	**750-514**	**753-514**
Order Text	**2RO; 125 VAC; 0.5A; Pot-free; Relay2NO**	**2RO; 125 VAC; 0.5A; Pot-free; Relay2NO**

Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital outputs	2	
Switching voltage (max.)	125 VAC, 30 VDC	
Output circuit design	2 changeover contacts; Relays	
Output characteristic	Potential-free	
Switching current (max.)	0.5 A	
Switching current (note)	0.5 A at 125 VAC; 1 A at 30 VDC	
Switching current (min.)	0.01 mA	
Actuator connection	2 x (1-wire)	
Switching frequency (max.)	0.33 Hz	
Mechanical switching operations (min.) (at max. resistive load)	100×10^6	
Electrical switching operations (min.) (at max. resistive load)	1×10^5	
Supply voltage (field)	Transmission of ground potential via power jumper contact	
Power consumption (5 V system supply)	70 mA	
Output (internal) data width (max.)	2 bits	
Isolation	1500 V (system/field)	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE, KC, Marine; cULus OrdLoc	
Data sheet and further information, see:	wago.com/750-514	wago.com/753-514
Accessories	**Item No.**	**Item No.**
Plug		753-110

Digital output ▸ Switching voltage: 250 VAC; 300 VDC ▸ Potential-free

750-517

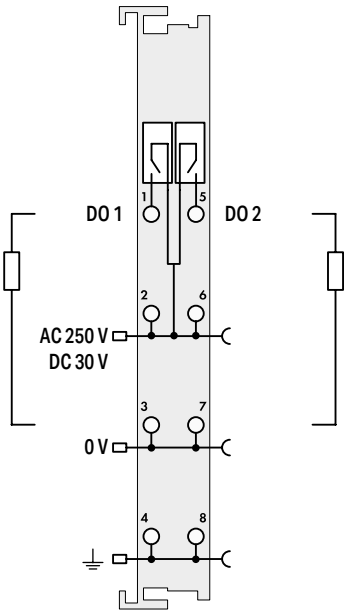


Item Description	2-Channel Relay Output; 250 VAC; 0.5 A; Potential-free; 2 changeover contacts	
Version	Default	Pluggable (delivery without connector)
Item No.	**750-517**	**753-517**
Order Text	**2RO; 250 VAC; 1A; Pot-free; Relay2CO**	**2RO; 250 VAC; 1A; Pot-free; Relay2CO**

Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital outputs	2	
Switching voltage (max.)	250 VAC, 300 VDC	
Output circuit design	2 changeover contacts; Relays	
Output characteristic	Potential-free	
Switching current (max.)	1 A	
Switching current (note)	1 A at 250 VAC and 40 VDC; 0.15 A at 300 VDC	
Switching current (min.)	100 mA	
Actuator connection	2 x (1-wire)	
Switching frequency (max.)	0.1 Hz; Nominal load	
Mechanical switching operations (min.) (at max. resistive load)	5×10^6	
Electrical switching operations (min.) (at max. resistive load)	10×10^5	
Power consumption (5 V system supply)	90 mA	
Output (internal) data width (max.)	2 bits	
Isolation	1500 V (system/field)	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 69.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-517	wago.com/753-517
Accessories	**Item No.**	**Item No.**
Plug		753-110

Digital output ▸ Switching voltage: 250 VAC; 30 VDC ▸ Non-floating

750-512



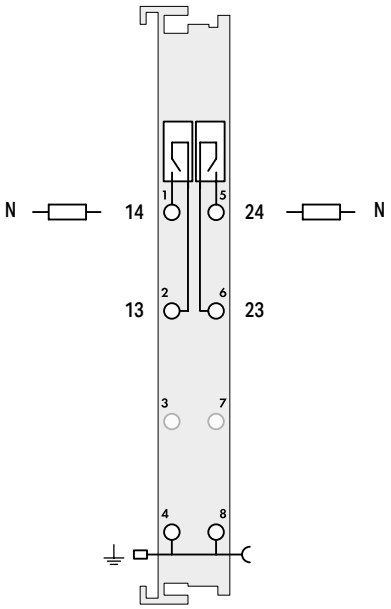
Item Description	2-Channel Relay Output; 250 VAC; 2.0 A; 2 make contacts	
Version	Default	Pluggable (delivery without connector)
Item No.	**750-512**	**753-512**
Order Text	**2RO; 250 VAC; 2A; Relay2NO**	**2RO; 250 VAC; 2A; Relay2NO**

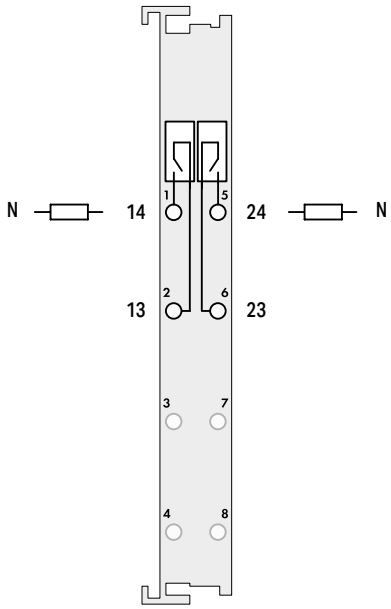
Technical Data		
Wiring interface	Fixed	Pluggable
Number of digital outputs	2	
Switching voltage (max.)	250 VAC, 30 VDC	
Output circuit design	2 make contacts; Relays	
Output characteristic	Non-floating	
Switching current (max.)	2 A	
Switching current (min.)	10 mA	
Actuator connection	2 x (2-wire, 3-wire)	
Switching frequency (max.)	0.5 Hz; Nominal load	
Mechanical switching operations (min.) (at max. resistive load)	20×10^6	
Electrical switching operations (min.) (at max. resistive load)	3×10^5	
Supply voltage (field)	250 VAC; via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	100 mA	
Output (internal) data width (max.)	2 bits	
Isolation	1500 V (system/field)	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-512	wago.com/753-512
Accessories	**Item No.**	**Item No.**
Plug		753-110

Notice: An additional supply module must be added for 0-230 VAC/0-30 VDC supply!

Digital output ▸ Switching voltage: 250 VAC; 30 VDC ▸ Potential-free

750-513

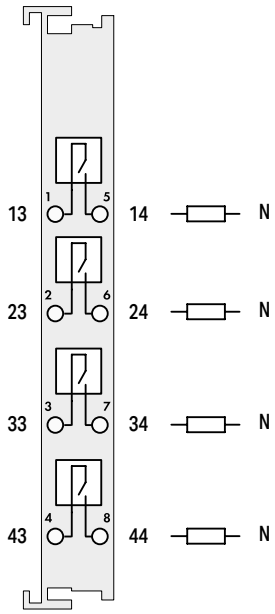




Item Description	2-Channel Relay Output; 250 VAC; 2.0 A; Potential-free; 2 make contacts		2-Channel Relay Output; 250 VAC; 2.0 A; Potential-free; 2 make contacts; without power jumper contacts	
Version	Default	Pluggable (delivery without connector)	Without power jumper contacts	Without power jumper contacts; pluggable (delivery without connector)
Item No.	**750-513**	**753-513**	**750-513/000-001**	**753-513/000-001**
Order Text	**2RO; 250 VAC; 2A; Pot-free; Relay2NO**	**2RO; 250 VAC; 2A; Pot-free; Relay2NO**	**2RO; 250 VAC; 2A; Pot-free; NC; Relay2NO**	**2RO; 250 VAC; 2A; Pot-free; NC; Relay2NO**
Technical Data				
Wiring interface	Fixed	Pluggable	Fixed	Pluggable
Number of digital outputs	2		2	
Switching voltage (max.)	250 VAC, 30 VDC		250 VAC, 30 VDC	
Output circuit design	2 make contacts; Relays		2 make contacts; Relays	
Output characteristic	Potential-free		Potential-free	
Switching current (max.)	2 A		2 A	
Switching current (min.)	10 mA		10 mA	
Actuator connection	2 x (1-wire)		2 x (1-wire)	
Switching frequency (max.)	0.5 Hz; Nominal load		0.5 Hz; Nominal load	
Mechanical switching operations (min.) (at max. resistive load)	20×10^6		20×10^6	
Electrical switching operations (min.) (at max. resistive load)	3×10^5		3×10^5	
Supply voltage (field)	Transmission of ground potential via power jumper contact			
Power consumption (5 V system supply)	100 mA		100 mA	
Output (internal) data width (max.)	2 bits		2 bits	
Isolation	1500 V (system/field)		1500 V (system/field)	
Surrounding air temperature (operation)	0 … 55 °C		0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm		(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-513	wago.com/753-513	wago.com/750-513/000-001	wago.com/753-513/000-001
Accessories	**Item No.**	**Item No.**	**Item No.**	**Item No.**
Plug		753-110		753-110

Digital output ▶ Switching voltage: 250 VAC; 30 VDC; 110 VDC at 0.4 A ▶ Potential-free

750-515

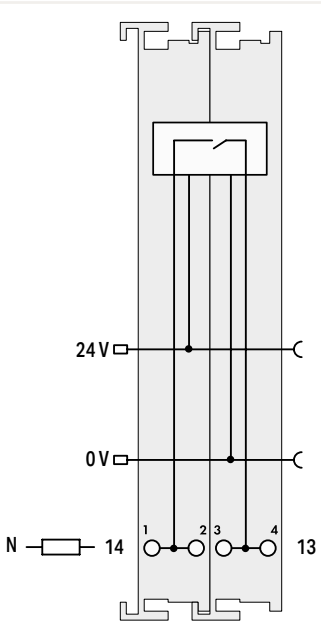


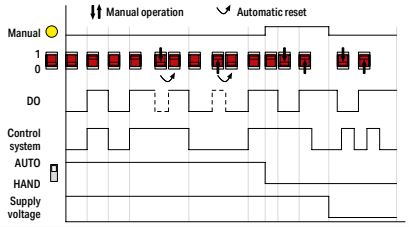
Item Description	**4-Channel Relay Output; 250 VAC; 2.0 A; Potential-free; 4 make contacts**
Version	**Default**
Item No.	**750-515**
Order Text	**4RO; 250 VAC; 2A; Pot-free; Relay4NO**

Technical Data	
Wiring interface	Fixed
Number of digital outputs	4
Switching voltage (max.)	250 VAC; 30 VDC; 110 VDC at 0.4 A
Output circuit design	4 make contacts; Relays
Output characteristic	Potential-free
Switching current (max.)	2 A
Switching current (note)	5 A for single-channel use
Actuator connection	4 x (1-wire)
Switching frequency (max.)	0.33 Hz; 3 A / 250 VAC, 30 VDC
Power consumption (5 V system supply)	95 mA
Output (internal) data width (max.)	4 bits
Isolation	1500 V (system/field)
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-515

Digital output ▸ Switching voltage: 440 VAC ▸ Potential-free

750-523





Item Description	**1-Channel Relay Output; 250 VAC; 16 A; Potential-free; 1 make contact**
Version	**Default**
Item No.	**750-523**
Order Text	**1RO; 230 VAC; 16A; Pot-free; Relay1NO**

Technical Data	
Wiring interface	Fixed
Number of digital outputs	1
Switching voltage (max.)	440 VAC
Output circuit design	1 make contact; Relays
Output characteristic	Potential-free
Switching current (max.)	16 A
Actuator connection	1 x (1-wire)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	80 mA
Power consumption (5 V system supply)	5 mA
Input data width (internal) (max.)	2 bits
Output (internal) data width (max.)	2 bits
Isolation	1500 V (system/field)
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc
Data sheet and further information, see:	wago.com/750-523

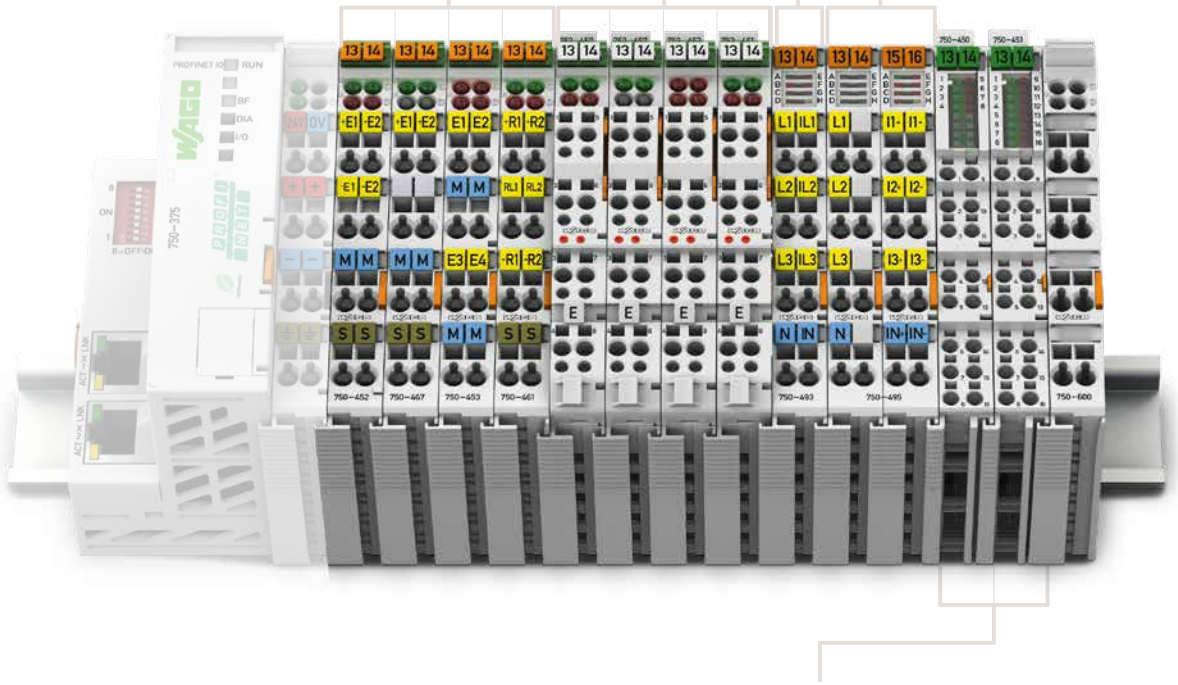
This relay output module switches a connected actuator or load.
The 24 VDC supply is derived from the power jumper contacts to trigger the relays.
The switched status of the relay is shown by the manual switch (1/0). The operating mode can be set using a manual/automatic selector switch. The mode status is indicated by an LED and via status bits in the process image.
Manual: Coil triggering is interrupted. Actuation only via the red manual operating switches.
Auto: The relay is operated via the control system; manual status transitions via the manual switch are reset by the control system after less than 500 ms.
The manual switch can also be used without 24 V supply to switch the output ON.
The relay meets both international standards of IEC and DIN EN 61810 part 1 /VDE 0435 part 201, as well as overload and short circuit requirements of IEC and DIN EN 61036 /61037.

Analog Input Modules

Housing Design (750 Series)	
Dimensions W x H x D	Housing with 4 LEDs: 12 x 100 x 69.8 mm Housing with 8 LEDs: 12 x 100 x 67.8 mm
Depth from upper edge of DIN-rail	Housing with 4 LEDs: 62.6 mm Housing with 8 LEDs: 60.6 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch

Housing Design (753 Series)	
Dimensions W x H x D	Housing with 4 LEDs: 12 x 100 x 69.8 mm Housing with 8 LEDs: 12 x 100 x 69 mm
Depth from upper edge of DIN-rail	Housing with 4 LEDs: 62.6 mm Housing with 8 LEDs: 61.8 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	9 … 10 mm / 0.37 inch

Housing Design (750 Series), Double Width	
Dimensions W x H x D	24 x 100 x 67.8 mm
Depth from upper edge of DIN-rail	60.6 mm



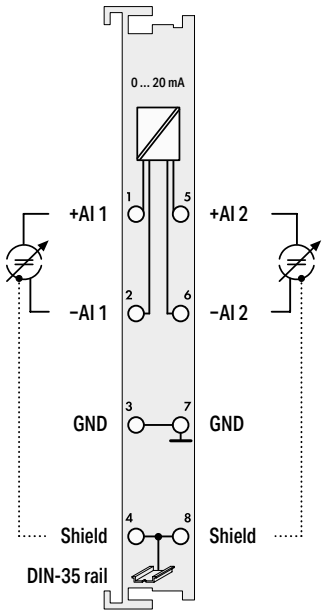
Housing Design (750 Series), with Push-in CAGE CLAMP® Connections (up to 16 connection points)	
Dimensions W x H x D	12 x 100 x 69 mm
Depth from upper edge of DIN-rail	61.8 mm
Connection technology	Push-in CAGE CLAMP®
Conductor cross-section	Solid: 0.08 … 1.5 mm² / 28 … 16 AWG Fine-stranded: 0.25 … 1.5 mm² / 22 … 16 AWG
Strip length	8 … 9 mm / 0.33 inch

I/O System – 750 XTR Series

I/O System – 750 and 753 Series, Analog Input Modules
Contents

Analog input ▸ 0 … 20 mA ▸ Differential

750-452

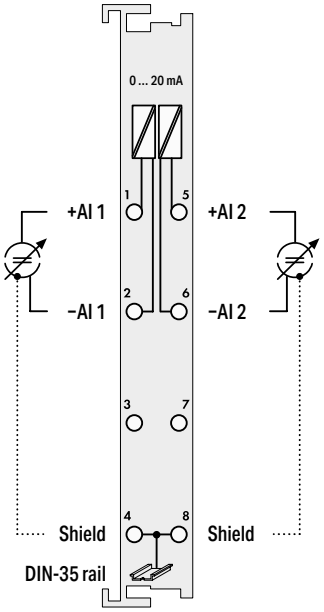


Item Description	2-Channel Analog Input; 0 … 20 mA; Differential Input		
Version	Default	Pluggable (delivery without connector)	Data format (S5 control)
Item No.	**750-452**	**753-452**	**750-452/000-200**
Order Text	**2AI; 0-20mA; Diff**	**2AI; 0-20mA; Diff**	**2AI; 0-20mA; Diff; S5**

Technical Data			
Wiring interface		Pluggable	
Customized data format			The S5 format allows you to import data with the standard S5 FB 250 function block.
Number of analog inputs	2		
Signal type	Current		
Signal type (current)	0 … 20 mADC		
Signal characteristic	Differential		
Sensor connection	2 x (2-wire)		
Resolution [bit]	12 bits		
Conversion time (typ.)	2 ms		
Input resistance (max.)	220 Ω		
Input voltage (max.)	35 V		
Measurement error (reference temperature)	25 °C		
Measurement error – deviation (max.) from the upper-range value	0.2 %		
Temperature error (max.) of the upper-range value	0.01 %/K		
Power consumption (5 V system supply)	70 mA		
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)		
Isolation	500 V system/field		
Surrounding air temperature (operation)	0 … 55 °C		
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
Data sheet and further information, see:	wago.com/750-452	wago.com/753-452	wago.com/750-452/000-200
Accessories	**Item No.**	**Item No.**	**Item No.**
Plug		753-110	

Analog input ▸ 0 … 20 mA ▸ Differential

750-480

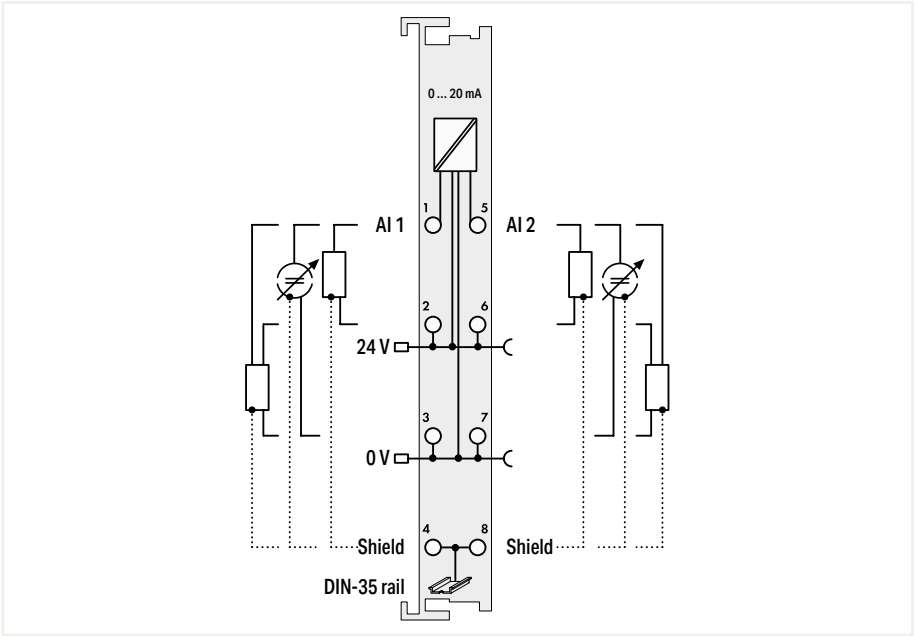


Item Description	2-Channel Analog Input; 0 … 20 mA; Differential Input	
Version	Default	Pluggable (delivery without connector)
Item No.	750-480	753-480
Order Text	2AI; 0-20mA; Diff	2AI; 0-20mA; Diff

Technical Data		
Extended functionality	Time-synchronized measured value acquisition within the module	
Wiring interface		Pluggable
Number of analog inputs	2	
Signal type	Current	
Signal type (current)	0 … 20 mADC	
Signal characteristic	Differential	
Sensor connection	2 x (2-wire)	
Resolution [bit]	13 bits	
Input resistance (max.)	270 Ω	
Admissible continuous overload	30 V	
Measurement error (reference temperature)	25 °C	
Measurement error – deviation (max.) from the upper-range value	0.05 %	
Temperature error (max.) of the upper-range value	0.01 %/K	
Power consumption (5 V system supply)	80 mA	
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)	
Isolation	500 V system/field or channel/channel	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-480	wago.com/753-480
Accessories	**Item No.**	**Item No.**
Plug		753-110

Analog input ▸ 0 … 20 mA ▸ Single-ended

750-465

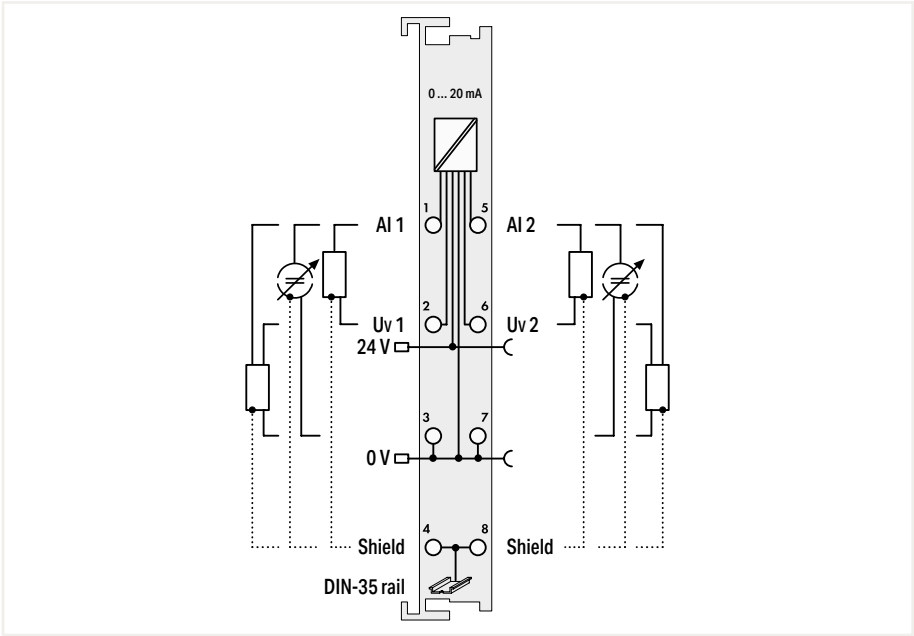


Item Description	2-Channel Analog Input; 0 … 20 mA; Single-ended		
Version	Default	Ext. Temperature	Pluggable (delivery without connector)
Item No.	750-465	750-465/025-000	753-465
Order Text	2AI; 0-20mA; SE	2AI; 0-20mA; SE; T	2AI; 0-20mA; SE

Technical Data			
Wiring interface			Pluggable
Number of analog inputs	2		
Signal type	Current		
Signal type (current)	0 … 20 mADC		
Signal characteristic	Single-ended		
Sensor connection	2 x (2-wire, 3-wire)		
Resolution [bit]	12 bits		
Conversion time (typ.)	2 ms		
Input resistance (max.)	220 Ω		
Input voltage (max.)	10 V		
Measurement error (reference temperature)	25 °C		
Measurement error – deviation (max.) from the upper-range value	0.2 %		
Temperature error (max.) of the upper-range value	0.01 %/K		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Power consumption (5 V system supply)	75 mA		
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)		
Isolation	500 V system/field		
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx		
Data sheet and further information, see:	wago.com/750-465		wago.com/753-465
Accessories	**Item No.**	**Item No.**	**Item No.**
Plug			753-110

Analog input ▸ 0 … 20 mA ▸ Single-ended

750-470

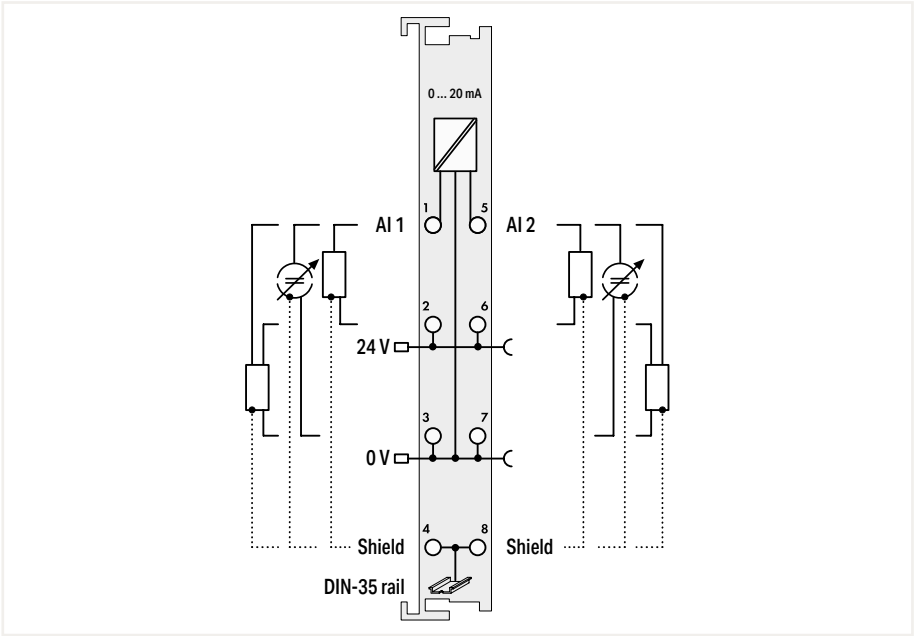


Item Description	2-Channel Analog Input; 0 … 20 mA; Single-ended; Short-circuit-protected sensor supply	
Version	Default	60 Hz
Item No.	750-470	750-470/005-000
Order Text	2AI; 0-20mA; SE	2AI; 0-20mA; SE; 60Hz

Technical Data		
Extended functionality	Short-circuit-protected sensor supply	
Number of analog inputs	2	
Signal type	Current	
Signal type (current)	0 … 20 mADC	
Signal characteristic	Single-ended	
Sensor connection	2 x (2-wire, 3-wire)	
Resolution [bit]	12 bits	
Conversion time (typ.)	80 ms	
Input resistance (max.)	160 Ω	
Input filter frequency (analog)	50 Hz	60 Hz
Measurement error (reference temperature)	25 °C	
Measurement error – deviation (max.) from the upper-range value	0.1 %	
Temperature error (max.) of the upper-range value	0.01 %/K	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	100 mA	
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-470	

Analog input ▸ 0 … 20 mA ▸ Single-ended

750-472

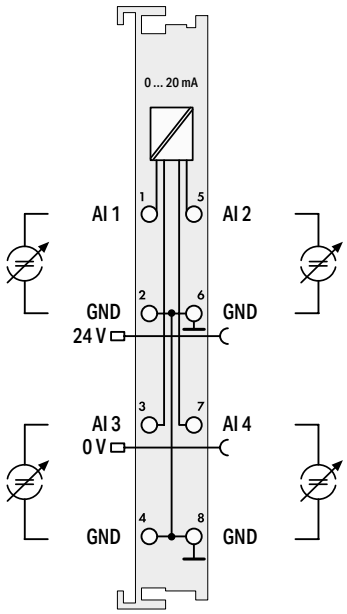


Item Description	2-Channel Analog Input; 0 … 20 mA; Single-ended; 16 bits	
Version	Default	Pluggable (delivery without connector)
Item No.	750-472	753-472
Order Text	2AI; 0-20mA; SE; 16bits	2AI; 0-20mA; SE; 16bits

Technical Data		
Extended functionality	Overload protection	
Wiring interface		Pluggable
Number of analog inputs	2	
Signal type	Current	
Signal type (current)	0 … 20 mADC	
Signal characteristic	Single-ended	
Sensor connection	2 x (2-wire, 3-wire)	
Resolution [bit]	15 bits	
Conversion time (typ.)	80 ms	
Input resistance (max.)	220 Ω	
Input voltage (max.)	24 V	
Input filter frequency (analog)	50 Hz	
Measurement error (reference temperature)	25 °C	
Measurement error – deviation (max.) from the upper-range value	0.1 %	
Temperature error (max.) of the upper-range value	0.01 %/K	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	75 mA	
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-472	wago.com/753-472
Accessories	**Item No.**	**Item No.**
Plug		753-110

Analog input ▸ 0 … 20 mA ▸ Single-ended

750-453

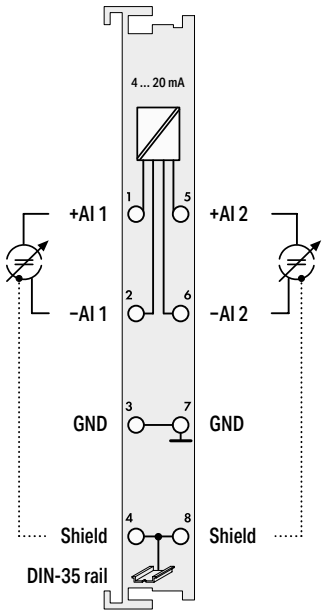


Item Description	4-Channel Analog Input; 0 … 20 mA; Single-ended	
Version	Default	Pluggable (delivery without connector)
Item No.	**750-453**	**753-453**
Order Text	**4AI; 0-20mA; SE**	**4AI; 0-20mA; SE**

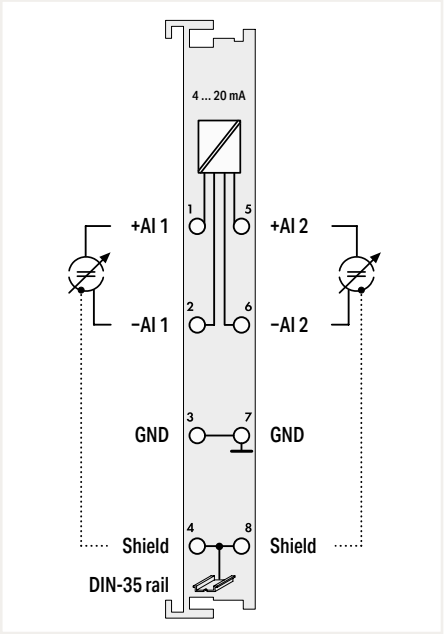
Technical Data		
Wiring interface		Pluggable
Number of analog inputs	4	
Signal type	Current	
Signal type (current)	0 … 20 mADC	
Signal characteristic	Single-ended	
Sensor connection	4 x (2-wire)	
Resolution [bit]	12 bits	
Conversion time (typ.)	10 ms	
Input resistance (max.)	100 Ω	
Input voltage (max.)	32 V	
Measurement error (reference temperature)	25 °C	
Measurement error – deviation (max.) from the upper-range value	0.1 %	
Temperature error (max.) of the upper-range value	0.01 %/K	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	65 mA	
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-453	wago.com/753-453
Accessories	**Item No.**	**Item No.**
Plug		753-110

Analog input ▸ 4 … 20 mA ▸ Differential

750-454



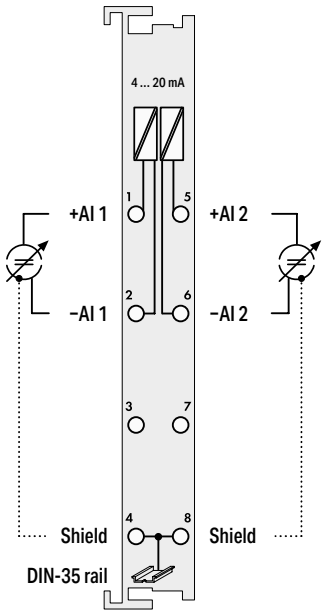
Item Description	2-Channel Analog Input; 4 … 20 mA; Differential input				
Version	Default	Ext. Temperature	Pluggable (delivery without connector)	Data format (S5 control)	Extended measurement range
Item No.	750-454	750-454/025-000	753-454	750-454/000-200	750-454/000-003
Order Text	2AI; 4-20mA; Diff	2AI; 4-20mA; Diff; T	2AI; 4-20mA; Diff	2AI; 4-20mA; Diff; S5	2AI; 4-20mA; Diff; EM
Technical Data					
Wiring interface			Pluggable		
Customized data format				The S5 format allows you to import data with the standard S5 FB 250 function block.	
Number of analog inputs	2				
Signal type	Current				
Signal type (current)	4 … 20 mADC				3.8 … 20.5 mADC
Signal characteristic	Differential				
Sensor connection	2 x (2-wire)				
Resolution [bit]	12 bits				
Conversion time (typ.)	2 ms				
Input resistance (max.)	220 Ω				
Input voltage (max.)	35 V				
Measurement error (reference temperature)	25 °C				
Measurement error – deviation (max.) from the upper-range value	0.2 %				
Temperature error (max.) of the upper-range value	0.01 %/K				
Power consumption (5 V system supply)	70 mA				
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)				
Isolation	500 V system/field				
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C	0 … 55 °C		
Dimensions W x H x D	(12 x 100 x 69.8) mm				
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx				
Data sheet and further information, see:	wago.com/750-454		wago.com/753-454	wago.com/750-454/000-200	
Accessories	**Item No.**	**Item No.**	**Item No.**	**Item No.**	**Item No.**
Plug			753-110		



2-Channel Analog Input; 4 … 20 mA; Differential input
Ext. Temperature; ext. measurement range
750-454/025-003
2AI; 4-20mA; Diff; EM; T
2
Current
3.8 … 20.5 mADC
Differential
2 x (2-wire)
12 bits
2 ms
220 Ω
35 V
25 °C
0.2 %
0.01 %/K
70 mA
2 x 16-bit data; 2 x 8-bit control/status (optional)
500 V system/field
-20 … 60 °C
(12 x 100 x 69.8) mm
CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
wago.com/750-454/000-200
Item No.

Analog input ▸ 4 … 20 mA ▸ Differential

750-492

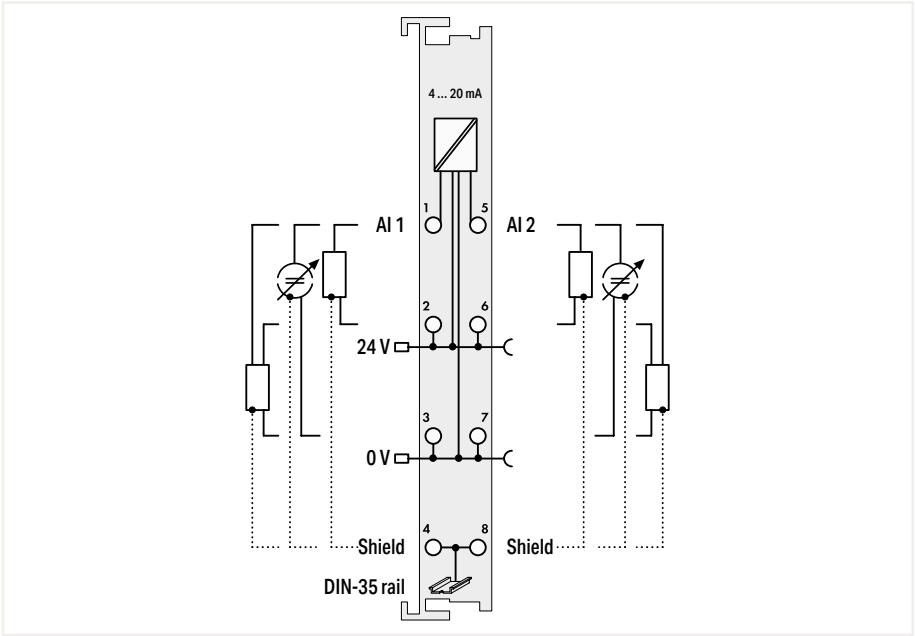


Item Description	2-Channel Analog Input; 4 … 20 mA; Differential input	
Version	**Default**	**Pluggable (delivery without connector)**
Item No.	**750-492**	**753-492**
Order Text	**2AI; 4-20mA; Diff**	**2AI; 4-20mA; Diff**

Technical Data		
Extended functionality	Time-synchronized measured value acquisition within the module	
Wiring interface		Pluggable
Number of analog inputs	2	
Signal type	Current	
Signal type (current)	4 … 20 mADC	
Signal characteristic	Differential	
Sensor connection	2 x (2-wire)	
Resolution [bit]	13 bits	
Input resistance (max.)	270 Ω	
Admissible continuous overload	30 V	
Measurement error (reference temperature)	25 °C	
Measurement error – deviation (max.) from the upper-range value	0.05 %	
Temperature error (max.) of the upper-range value	0.01 %/K	
Power consumption (5 V system supply)	80 mA	
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)	
Isolation	500 V system/field or channel/channel	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-492	wago.com/753-492
Accessories	**Item No.**	**Item No.**
Plug		753-110

Analog input ▸ 4 … 20 mA ▸ Single-ended

750-466

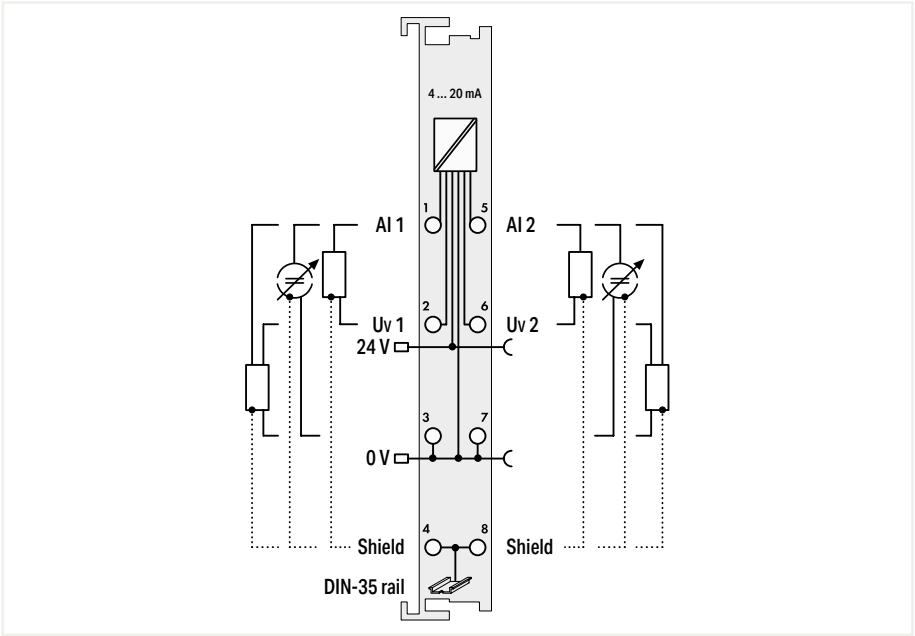


Item Description	2-Channel Analog Input; 4 … 20 mA; Single-ended				
Version	Default	Ext. Temperature	Pluggable (delivery without connector)	Data format (S5 control)	Extended measure-ment range
Item No.	**750-466**	**750-466/025-000**	**753-466**	**750-466/000-200**	**750-466/000-003**
Order Text	**2AI; 4-20mA; SE**	**2AI; 4-20mA; SE; T**	**2AI; 4-20mA; SE**	**2AI; 4-20mA; SE; S5**	**2AI; 4-20mA; SE; EM**

Technical Data					
Wiring interface			Pluggable		
Customized data format				The S5 format allows you to import data with the standard S5 FB 250 function block.	
Number of analog inputs	2				
Signal type	Current				
Signal type (current)	4 … 20 mADC				3.8 … 20.5 mADC
Signal characteristic	Single-ended				
Sensor connection	2 x (2-wire, 3-wire)				
Resolution [bit]	12 bits				
Conversion time (typ.)	2 ms				
Input resistance (max.)	220 Ω				
Input voltage (max.)	10 V				
Measurement error (reference temperature)	25 °C				
Measurement error – deviation (max.) from the up-per-range value	0.2 %				
Temperature error (max.) of the upper-range value	0.01 %/K				
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)				
Power consumption (5 V system supply)	75 mA				
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)				
Isolation	500 V system/field				
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C	0 … 55 °C		
Dimensions W x H x D	(12 x 100 x 69.8) mm				
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx				
Data sheet and further information, see:	wago.com/750-466		wago.com/753-466	wago.com/750-466/000-200	
Accessories	**Item No.**	**Item No.**	**Item No.**	**Item No.**	**Item No.**
Plug			753-110		

Analog input ▸ 4 … 20 mA ▸ Single-ended

750-473

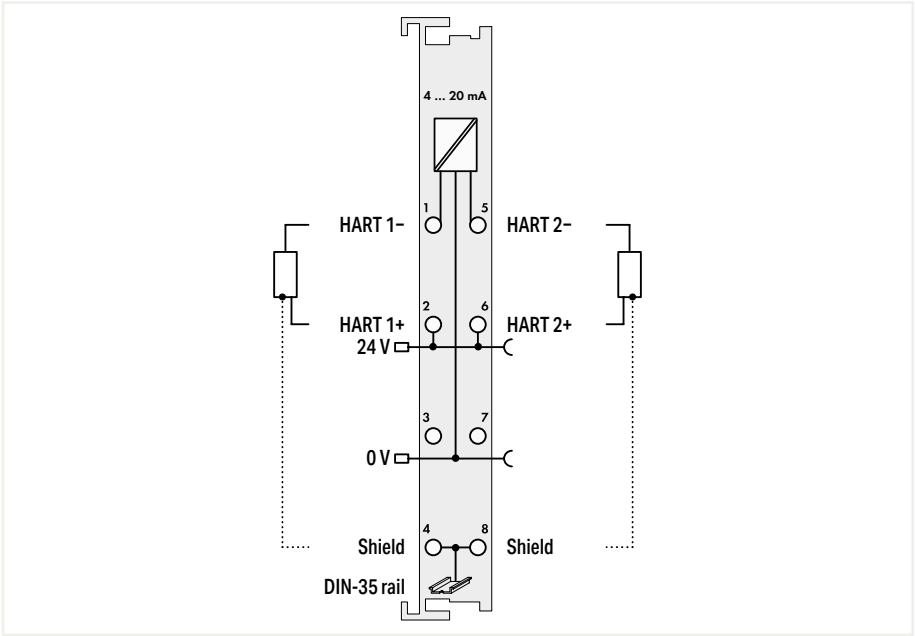


Item Description	2-Channel Analog Input; 4 … 20 mA; Single-ended	
Version	Default	60 Hz
Item No.	**750-473**	**750-473/005-000**
Order Text	**2AI; 4-20mA; SE**	**2AI; 4-20mA; SE; 60Hz**

Technical Data		
Extended functionality	Short-circuit-protected sensor supply	
Number of analog inputs	2	
Signal type	Current	
Signal type (current)	4 … 20 mADC	
Signal characteristic	Single-ended	
Sensor connection	2 x (2-wire, 3-wire)	
Resolution [bit]	12 bits	
Conversion time (typ.)	80 ms	
Input resistance (max.)	160 Ω	
Input filter frequency (analog)	50 Hz	60 Hz
Measurement error (reference temperature)	25 °C	
Measurement error – deviation (max.) from the upper-range value	0.1 %	
Temperature error (max.) of the upper-range value	0.01 %/K	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	100 mA	
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-473	

Analog input ▸ 4 … 20 mA ▸ Single-ended

750-482



Item Description	2-Channel Analog Input; 4 … 20 mA HART			
Version	Default	Ext. Temperature	Pluggable (delivery without connector)	Data format (S7 Controller)
Item No.	750-482	750-482/025-000	753-482	750-482/000-300
Order Text	2AI; 4-20mA HART	2AI; 4-20mA HART; T	2AI; 4-20mA HART	2AI; 4-20mA HART; 12bits; S7

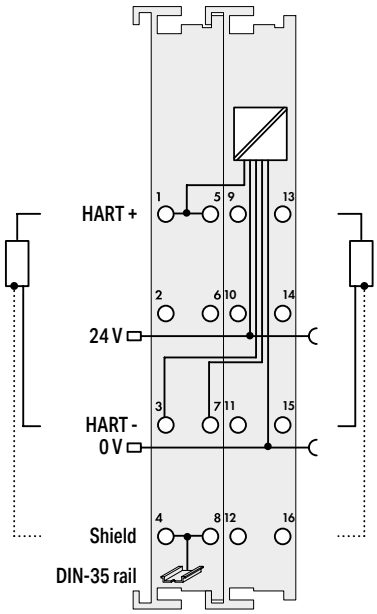
Technical Data				
Extended functionality	Overload protection			
Wiring interface			Pluggable	
Customized data format				for S7 controller
Number of analog inputs	2			
Signal type	Current			
Signal type (current)	4 … 20 mADC			
Signal characteristic	Single-ended			
Sensor connection	2 x (2-wire)			
Resolution [bit]	12 bits			
Conversion time (typ.)	10 ms			
Input voltage (max.)	24 V			
Measurement error (reference temperature)	25 °C			
Measurement error – deviation (max.) from the upper-range value	0.1 %			
Temperature error (max.) of the upper-range value	0.01 %/K			
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)			
Power consumption (5 V system supply)	65 mA			
Data width	2 x 2-byte data; 2 x 2-byte data + 2n x 4-byte data (n = number of dynamic variables); 2 x 2-byte data + 6-byte mailbox			
Configurable functions	4 HART dynamic variables (PV, SV, TV, QV)			
Isolation	500 V system/field			
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm			
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx			
Data sheet and further information, see:	wago.com/750-482		wago.com/753-482	wago.com/750-482/000-300

Accessories	Item No.	Item No.	Item No.	Item No.
Plug			753-110	

HART devices per channel: 1 device (SingleDrop, no MultiDrop)
For select fieldbus couplers, FDT/DTM device drivers are available that can be used to integrate the I/O module into a higher-level control system.

Analog input ▶ 4 … 20 mA ▶ Single-ended

750-482/000-001



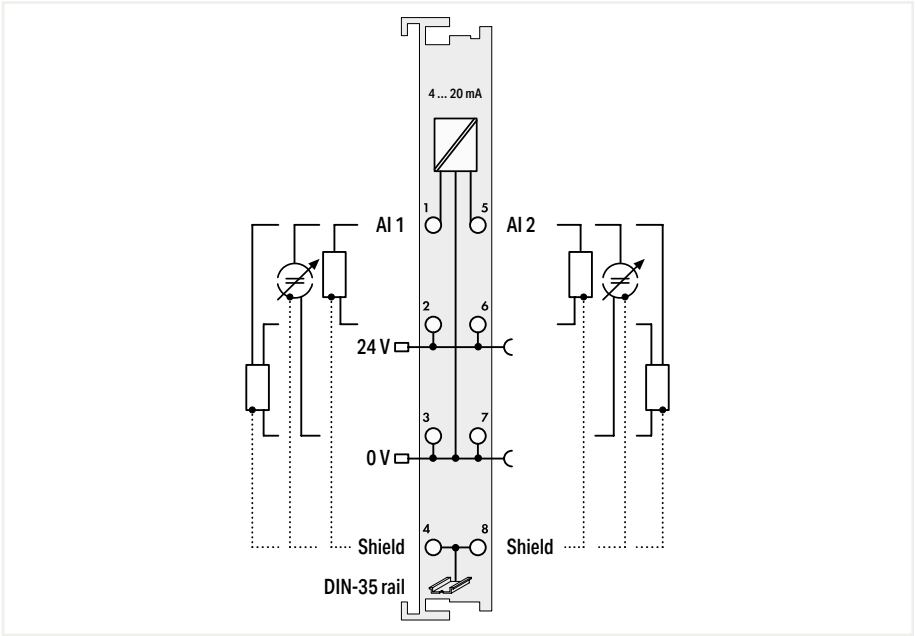
Item Description	2-Channel Analog Input; 4 … 20 mA HART; NAMUR NE 43
Version	NAMUR NE43
Item No.	**750-482/000-001**
Order Text	**2AI; 4-20mA HART; NE43**

Technical Data	
Extended functionality	Overload protection
Number of analog inputs	2
Signal type	Current
Signal type (current)	3.6 … 21 mADC
Signal characteristic	Single-ended
Sensor connection	2 x (2-wire)
Resolution [bit]	12 bits
Conversion time (typ.)	315 ms
Input voltage (max.)	24 V
Measurement error (reference temperature)	25 °C
Measurement error – deviation (max.) from the upper-range value	0.2 %
Temperature error (max.) of the upper-range value	0.01 %/K
Supply voltage (field)	24 VDC; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	25 mA
Data width	2 x 2-byte data; 2 x 2-byte data + 2n x 4-byte data (n = number of dynamic variables); 2 x 2-byte data + 6-byte mailbox
Configurable functions	4 HART dynamic variables (PV, SV, TV, QV)
Isolation	300 VAC system/supply
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Approvals	CE; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-482/000-001

HART devices per channel: 1 device (SingleDrop, no MultiDrop)
For select fieldbus couplers, FDT/DTM device drivers are available that can be used to integrate the I/O module into a higher-level control system.

Analog input ▸ 4 … 20 mA ▸ Single-ended

750-474

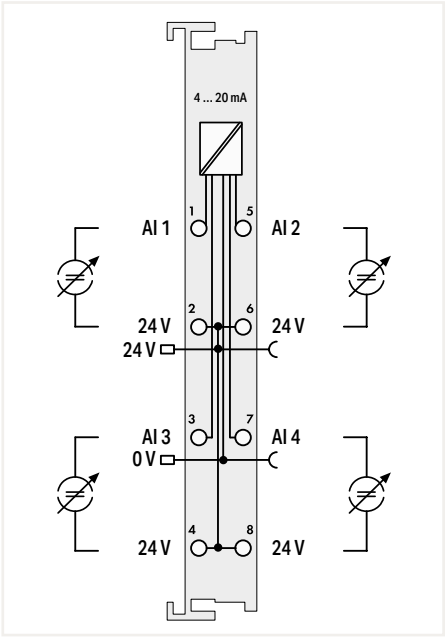


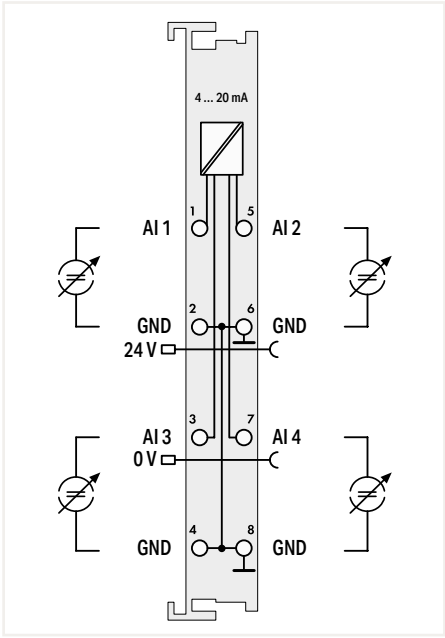
Item Description	2-Channel Analog Input; 4 … 20 mA; Single-ended; 16 bits			
Version	Default	Pluggable (delivery without connector)	Data format (S5 control)	60 Hz
Item No.	750-474	753-474	750-474/000-200	750-474/005-000
Order Text	2AI; 4-20mA; SE; 16bits	2AI; 4-20mA; SE; 16bits	2AI; 4-20mA; SE; 16bits; S5	2AI; 4-20mA; SE; 16bits; 60Hz

Technical Data				
Extended functionality	Overload protection			
Wiring interface		Pluggable		
Customized data format			The S5 format allows you to import data with the standard S5 FB 250 function block.	
Number of analog inputs	2			
Signal type	Current			
Signal type (current)	4 … 20 mADC			
Signal characteristic	Single-ended			
Sensor connection	2 x (2-wire, 3-wire)			
Resolution [bit]	15 bits			
Conversion time (typ.)	80 ms			
Input resistance (max.)	220 Ω			
Input voltage (max.)	24 V			
Input filter frequency (analog)	50 Hz			60 Hz
Measurement error (reference temperature)	25 °C			
Measurement error – deviation (max.) from the upper-range value	0.1 %			
Temperature error (max.) of the upper-range value	0.01 %/K			
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)			
Power consumption (5 V system supply)	75 mA			
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)			
Isolation	500 V system/field			
Surrounding air temperature (operation)	0 … 55 °C			
Dimensions W x H x D	(12 x 100 x 69.8) mm			
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; IECEx ATEX/IECEx			
Data sheet and further information, see:	wago.com/750-474	wago.com/753-474	wago.com/750-474/000-200	
Accessories	**Item No.**	**Item No.**	**Item No.**	**Item No.**
Plug		753-110		

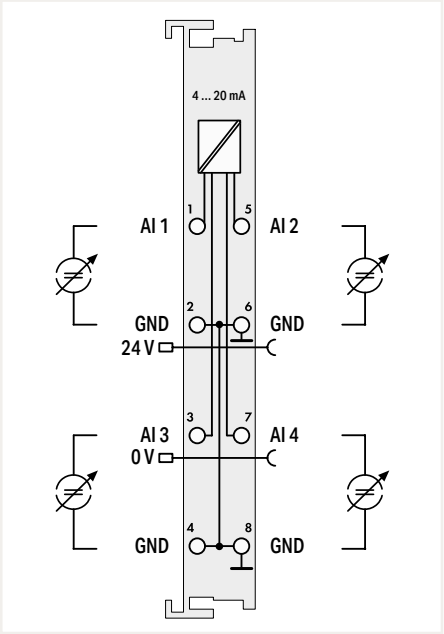
Analog input ▸ 4 … 20 mA ▸ Single-ended

750-455/020-000





Item Description	4-Channel Analog Input; 4 … 20 mA; Single-ended; 4 x 24 V	4-Channel Analog Input; 4 … 20 mA; Single-ended; 4 x GND	
Version	4 x 24 V	Default	Ext. Temperature
Item No.	**750-455/020-000**	**750-455**	**750-455/025-000**
Order Text	**4AI; 4-20mA; SE; 4x24V**	**4AI; 4-20mA; SE**	**4AI; 4-20mA; SE; T**
Technical Data			
Wiring interface			
Number of analog inputs	4	4	
Signal type	Current	Current	
Signal type (current)	4 … 20 mADC	4 … 20 mADC	
Signal characteristic	Single-ended	Single-ended	
Sensor connection	4 x (2-wire)	4 x (2-wire)	
Resolution [bit]	12 bits	12 bits	
Conversion time (typ.)	10 ms	10 ms	
Input resistance (max.)	100 Ω	100 Ω	
Input voltage (max.)	32 V	32 V	
Measurement error (reference temperature)	25 °C	25 °C	
Measurement error – deviation (max.) from the upper-range value	0.1 %	0.1 %	
Temperature error (max.) of the upper-range value	0.01 %/K	0.01 %/K	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	65 mA	65 mA	
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)	4 x 16-bit data; 4 x 8-bit control/status (optional)	
Isolation	500 V system/field	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	0 … 55 °C	-20 … 60 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-455/020-000	wago.com/750-455/020-000	
Accessories	**Item No.**	**Item No.**	**Item No.**
Plug			

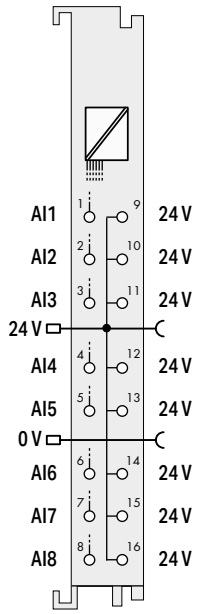


4-Channel Analog Input; 4 … 20 mA; Single-ended; 4 x GND
Pluggable (delivery without connector)
753-455
4AI; 4-20mA; SE

Pluggable
4
Current
4 … 20 mADC
Single-ended
4 x (2-wire)
12 bits
10 ms
100 Ω
32 V
25 °C
0.1 %
0.01 %/K
24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
65 mA
4 x 16-bit data; 4 x 8-bit control/status (optional)
500 V system/field
0 … 55 °C
(12 x 100 x 69.8) mm
CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
wago.com/753-455
Item No.
753-110

Analog input ▸ Adjustable: Current

750-496



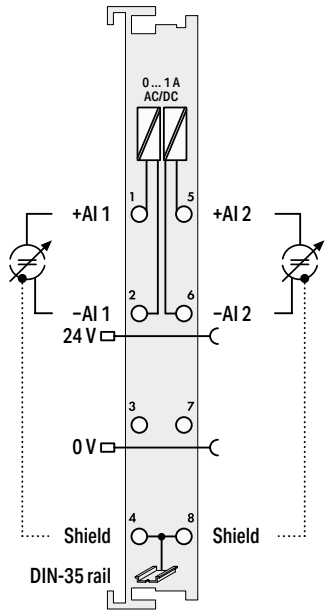
Item Description	**8-Channel Analog Input; 0/4 … 20 mA; Single-ended**
Version	**Standard with 16 connectors**
Item No.	**750-496**
Order Text	**8AI; 0/4-20mA; SE**

Technical Data	
Number of analog inputs	8
Signal type	Current
Signal type (current)	0 … 20 mADC; 4 … 20 mADC; 3.6 … 21 mADC
Sensor connection	8 x (2-wire)
Resolution [bit]	12 bits
Conversion time (typ.)	10 ms
Input resistance (max.)	220 Ω
Input voltage (max.)	31.2 V
Measurement error (reference temperature)	25 °C
Measurement error – deviation (max.) from the upper-range value	0.1 %
Temperature error (max.) of the upper-range value	0.01 %/K
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	69 mA
Data width	8 x 16-bit data; 8 x 8-bit control/status (optional)
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-496

7.4

Analog input ▸ 0 … 1 A rms (peak value 2.0 A) ▸ Differential

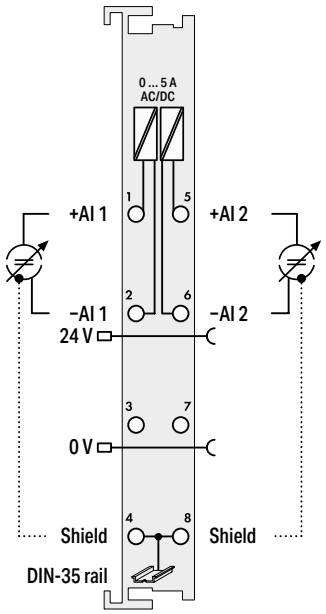
750-475



Item Description	2-Channel Analog Input; 0 … 1 VAC/DC; Differential input	
Version	Default	Pluggable (delivery without connector)
Item No.	750-475	753-475
Order Text	2AI; 0-1A AC/DC; Diff	2AI; 0-1A AC/DC; Diff

Technical Data		
Wiring interface		Pluggable
Number of analog inputs	2	
Signal type	Current	
Signal type (current)	0 … 1 AAC/DC	
Signal characteristic	Differential	
Sensor connection	2 x (2-wire)	
Resolution [bit]	15 bits	
Conversion time (typ.)	200 ms	
Input resistance (max.)	0.022 Ω	
Input voltage (max.)	24V AC/DC (-20% … +20%)	
Measurement error (reference temperature)	25 °C	
Measurement error – deviation (max.) from the upper-range value	0.1 %	
Temperature coefficient	< ± 110 ppm / K of the full scale value	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	80 mA	
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)	
Isolation	500 V system/field or channel/channel	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-475	wago.com/753-475
Accessories	**Item No.**	**Item No.**
Plug		753-110

Analog input ▸ 0 … 5 A rms (peak value 6.0 A) ▸ Differential



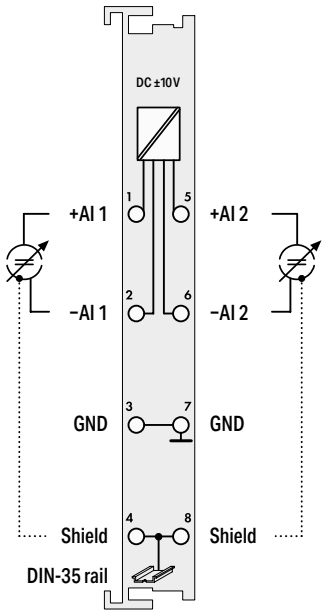
Item Description	**2-Channel Analog Input; 0 … 5 VAC/DC; Differential input**
Version	**0 … 5 AAC/DC**
Item No.	**750-475/020-000**
Order Text	**2AI; 0-5A AC/DC; Diff**

Technical Data	
Number of analog inputs	2
Signal type	Current
Signal type (current)	0 … 5 AAC/DC
Signal characteristic	Differential
Sensor connection	2 x (2-wire)
Resolution [bit]	15 bits
Input resistance (max.)	0.022 Ω
Input voltage (max.)	24V AC/DC (-20% … +20%)
Measurement error (reference temperature)	25 °C
Measurement error – deviation (max.) from the upper-range value	0.1 %
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	80 mA
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)
Isolation	500 V system/field or channel/channel
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-475/020-000

7.4

Analog input ▶ ±10 V ▶ Differential

750-456

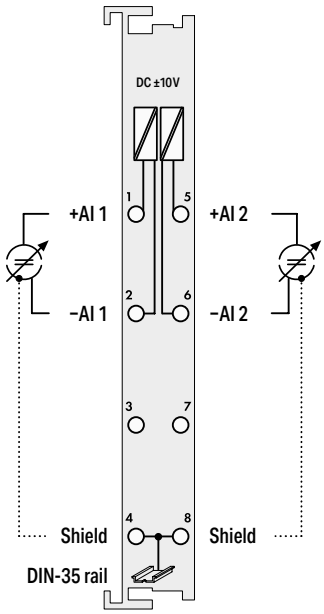


Item Description	2-Channel Analog Input; ±10 VDC; Differential input		
Version	Default	Pluggable (delivery without connector)	Data format (S5 control)
Item No.	**750-456**	**753-456**	**750-456/000-200**
Order Text	**2AI; ±10 VDC**	**2AI; ±10 VDC**	**2AI; ±10 VDC; S5**

Technical Data			
Wiring interface		Pluggable	
Customized data format			The S5 format allows you to import data with the standard S5 FB 250 function block.
Number of analog inputs	2		
Signal type	Voltage		
Voltage signal type	-10 … +10 VDC		
Signal characteristic	Differential		
Sensor connection	2 x (2-wire)		
Resolution [bit]	12 bits		
Conversion time (typ.)	2 ms		
Internal resistance	570 kΩ		
Input voltage (max.)	35 V		
Measurement error (reference temperature)	25 °C		
Measurement error – deviation (max.) from the upper-range value	0.2 %		
Temperature error (max.) of the upper-range value	0.015 %/K		
Power consumption (5 V system supply)	80 mA		
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)		
Isolation	500 V system/field		
Surrounding air temperature (operation)	0 … 55 °C		
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
Data sheet and further information, see:	wago.com/750-456	wago.com/753-456	wago.com/750-456/000-200
Accessories	**Item No.**	**Item No.**	**Item No.**
Plug		753-110	

Analog input ▸ ±10 V ▸ Differential

750-479

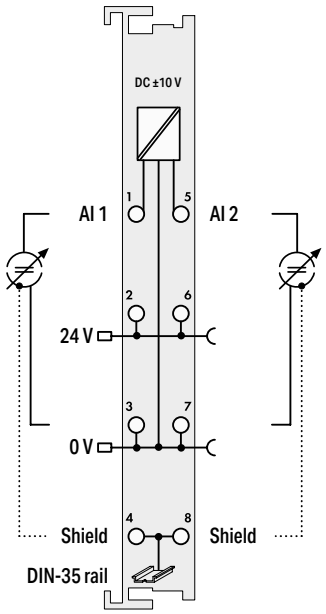


Item Description	2-Channel Analog Input; ±10 VDC; Differential input	
Version	Default	Pluggable (delivery without connector)
Item No.	**750-479**	**753-479**
Order Text	**2AI; ±10 VDC; Diff**	**2AI; ±10 VDC; Diff**

Technical Data		
Extended functionality	Time-synchronized measured value acquisition within the module	
Wiring interface		Pluggable
Number of analog inputs	2	
Signal type	Voltage	
Voltage signal type	-10 … +10 VDC	
Signal characteristic	Differential	
Sensor connection	2 x (2-wire)	
Resolution [bit]	14 bits	
Internal resistance	1000 kΩ	
Admissible continuous overload	60 V	
Measurement error (reference temperature)	25 °C	
Measurement error – deviation (max.) from the upper-range value	0.05 %	
Temperature error (max.) of the upper-range value	0.01 %/K	
Power consumption (5 V system supply)	100 mA	
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)	
Isolation	500 V system/field or channel/channel	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-479	wago.com/753-479
Accessories	**Item No.**	**Item No.**
Plug		753-110

Analog input ▶ ±10 V ▶ Single-ended

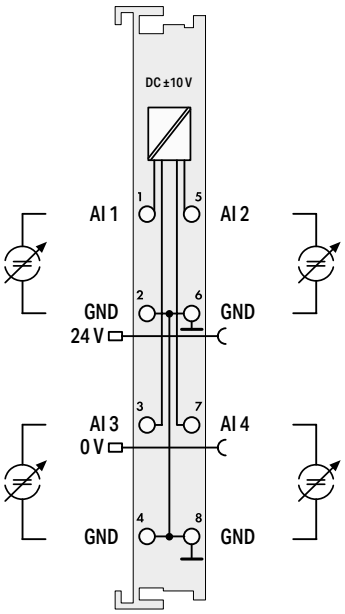
750-476



Item Description	2-Channel Analog Input; ±10 VDC; Single-ended; 16 bits		
Version	Default	Pluggable (delivery without connector)	Data format (S5 control)
Item No.	**750-476**	**753-476**	**750-476/000-200**
Order Text	**2AI; ±10 VDC; SE; 16bits**	**2AI; ±10 VDC; SE; 16bits**	**2AI; ±10 VDC; SE; 16bits; S5**
Technical Data			
Wiring interface		Pluggable	
Customized data format			The S5 format allows you to import data with the standard S5 FB 250 function block.
Number of analog inputs	2		
Signal type	Voltage		
Voltage signal type	-10 … +10 VDC		
Signal characteristic	Single-ended		
Sensor connection	2 x (2-wire)		
Resolution [bit]	16 bits		
Conversion time (typ.)	80 ms		
Internal resistance	130 kΩ		
Input voltage (max.)	24 V		
Input filter frequency (analog)	50 Hz		60 Hz
Measurement error (reference temperature)	25 °C		
Measurement error – deviation (max.) from the upper-range value	0.1 %		
Temperature error (max.) of the upper-range value	0.01 %/K		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Power consumption (5 V system supply)	75 mA		
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)		
Isolation	500 V system/field		
Surrounding air temperature (operation)	0 … 55 °C		
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
Data sheet and further information, see:	wago.com/750-476	wago.com/753-476	wago.com/750-476/000-200
Accessories	**Item No.**	**Item No.**	**Item No.**
Plug		753-110	

Analog input ▸ ±10 V ▸ Single-ended

750-457

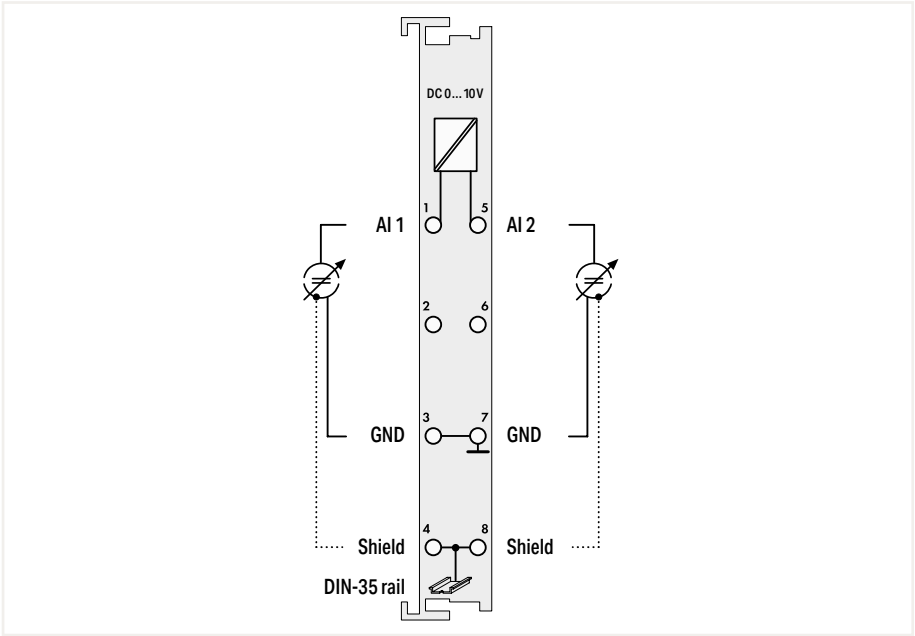


Item Description	4-Channel Analog Input; ±10 VDC; Single-ended		
Version	Default	Ext. Temperature	Pluggable (delivery without connector)
Item No.	**750-457**	**750-457/025-000**	**753-457**
Order Text	**4AI; ±10 VDC; SE**	**4AI; ±10 VDC; SE; T**	**4AI; ±10 VDC; SE**

Technical Data			
Wiring interface			Pluggable
Number of analog inputs	4		
Signal type	Voltage		
Voltage signal type	-10 … +10 VDC		
Signal characteristic	Single-ended		
Sensor connection	4 x (2-wire)		
Resolution [bit]	12 bits		
Conversion time (typ.)	10 ms		
Internal resistance	100 kΩ		
Input voltage (max.)	±40 V		
Measurement error (reference temperature)	25 °C		
Measurement error – deviation (max.) from the upper-range value	0.1 %		
Temperature error (max.) of the upper-range value	0.01 %/K		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Power consumption (5 V system supply)	65 mA		
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)		
Isolation	500 V system/field		
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
Data sheet and further information, see:	wago.com/750-457		wago.com/753-457
Accessories	**Item No.**	**Item No.**	**Item No.**
Plug			753-110

Analog input ▸ 0 … 10 V ▸ Single-ended

750-467

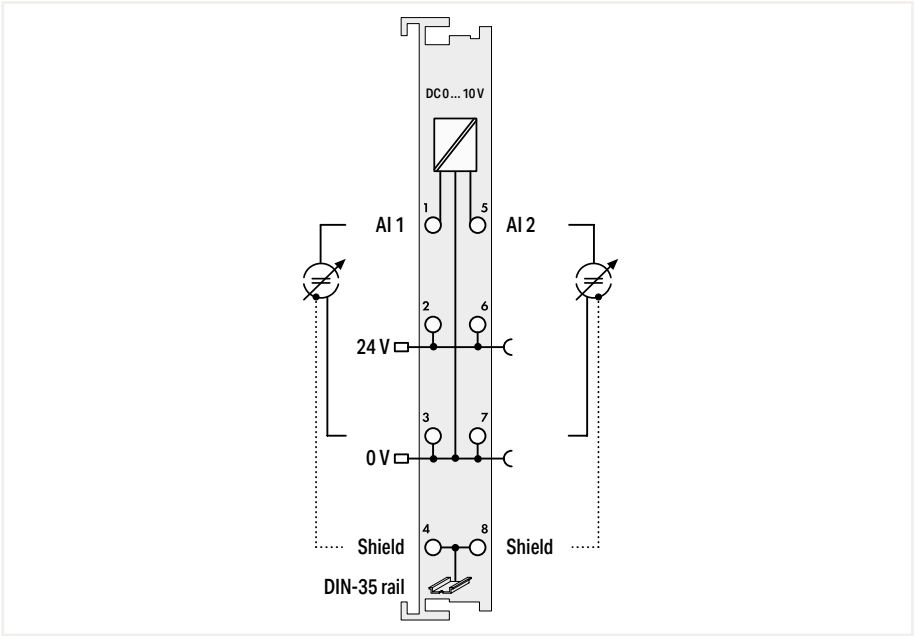


Item Description	2-Channel Analog Input; 0 … 10 VDC; Single-ended	
Version	Default	Pluggable (delivery without connector)
Item No.	**750-467**	**753-467**
Order Text	**2AI; 0-10 VDC; SE**	**2AI; 0-10 VDC; SE**

Technical Data		
Wiring interface		Pluggable
Number of analog inputs	2	
Signal type	Voltage	
Voltage signal type	0 … 10 VDC	
Signal characteristic	Single-ended	
Sensor connection	2 x (2-wire)	
Resolution [bit]	12 bits	
Conversion time (typ.)	2 ms	
Internal resistance	130 kΩ	
Input voltage (max.)	35 V	
Measurement error (reference temperature)	25 °C	
Measurement error – deviation (max.) from the upper-range value	0.2 %	
Temperature error (max.) of the upper-range value	0.01 %/K	
Power consumption (5 V system supply)	60 mA	
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-467	wago.com/753-467
Accessories	**Item No.**	**Item No.**
Plug		753-110

Analog input ▸ 0 … 10 V ▸ Single-ended

750-478

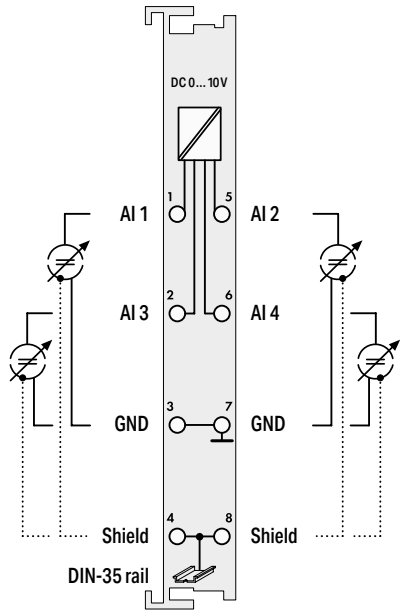


Item Description	2-Channel Analog Input; 0 … 10 VDC; Single-ended; 16 bits		
Version	Default	Pluggable (delivery without connector)	60 Hz
Item No.	**750-478**	**753-478**	**750-478/005-000**
Order Text	**2AI; 0-10 VDC; SE; 16bits**	**2AI; 0-10 VDC; SE; 16bits**	**2AI; 0-10 VDC; SE; 16bits; 60Hz**

Technical Data			
Wiring interface		Pluggable	
Number of analog inputs	2		
Signal type	Voltage		
Voltage signal type	0 … 10 VDC		
Signal characteristic	Single-ended		
Sensor connection	2 x (2-wire)		
Resolution [bit]	16 bits		
Conversion time (typ.)	80 ms		
Internal resistance	130 kΩ		
Input voltage (max.)	24 V		
Input filter frequency (analog)	50 Hz		60 Hz
Measurement error (reference temperature)	25 °C		
Measurement error – deviation (max.) from the upper-range value	0.1 %		
Temperature error (max.) of the upper-range value	0.01 %/K		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Power consumption (5 V system supply)	75 mA		
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)		
Isolation	500 V system/field		
Surrounding air temperature (operation)	0 … 55 °C		
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
Data sheet and further information, see:	wago.com/750-478	wago.com/753-478	wago.com/750-478/005-000
Accessories	**Item No.**	**Item No.**	**Item No.**
Plug		753-110	

Analog input ▸ 0 … 10 V ▸ Single-ended

750-468

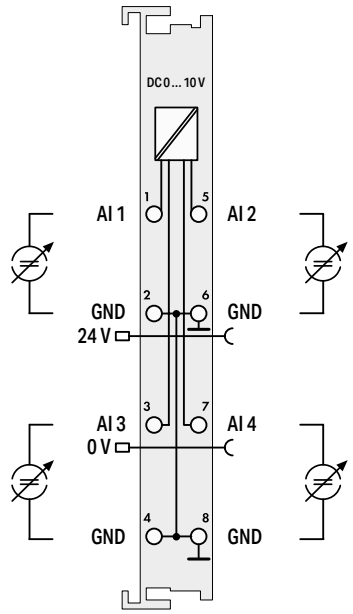


Item Description	4-Channel Analog Input; 0 … 10 VDC; Single-ended	
Version	Default	Ext. Temperature
Item No.	**750-468**	**750-468/025-000**
Order Text	**4AI; 0-10 VDC; SE**	**4AI; 0-10 VDC; SE; T**

Technical Data		
Number of analog inputs	4	
Signal type	Voltage	
Voltage signal type	0 … 10 VDC	
Signal characteristic	Single-ended	
Sensor connection	4 x (2-wire)	
Resolution [bit]	12 bits	
Conversion time (typ.)	4 ms	
Internal resistance	133 kΩ	
Input voltage (max.)	35 V	
Measurement error (reference temperature)	25 °C	
Measurement error – deviation (max.) from the upper-range value	0.2 %	
Temperature error (max.) of the upper-range value	0.01 %/K	
Power consumption (5 V system supply)	60 mA	
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-468	

Analog input ▸ 0 … 10 V ▸ Single-ended

750-459

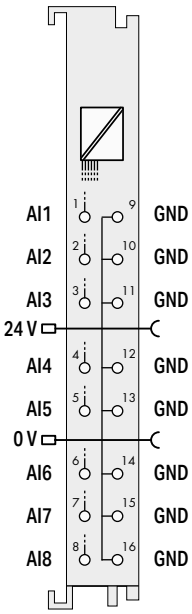


Item Description	4-Channel Analog Input; 0 … 10 VDC; Single-ended	
Version	Default	Pluggable (delivery without connector)
Item No.	**750-459**	**753-459**
Order Text	**4AI; 0-10 VDC; SE**	**4AI; 0-10 VDC; SE**

Technical Data		
Wiring interface		Pluggable
Number of analog inputs	4	
Signal type	Voltage	
Voltage signal type	0 … 10 VDC	
Signal characteristic	Single-ended	
Sensor connection	4 x (2-wire)	
Resolution [bit]	12 bits	
Conversion time (typ.)	10 ms	
Internal resistance	100 kΩ	
Input voltage (max.)	±40 V	
Measurement error (reference temperature)	25 °C	
Measurement error – deviation (max.) from the upper-range value	0.1 %	
Temperature error (max.) of the upper-range value	0.01 %/K	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	65 mA	
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-459	wago.com/753-459
Accessories	**Item No.**	**Item No.**
Plug		753-110

Analog input ▸ Adjustable: Voltage

750-497

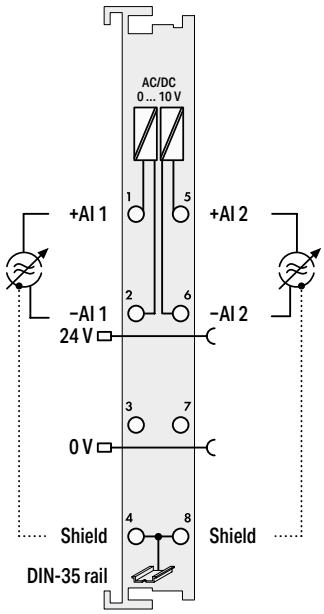


Item Description	**8-Channel Analog Input; 0 … 10 VDC/±10 V; Single-ended**
Version	**Standard with 16 connectors**
Item No.	**750-497**
Order Text	**8AI; 0-10 V/±10 VDC; SE**

Technical Data	
Number of analog inputs	8
Signal type	Voltage
Voltage signal type	0 … 10 VDC; -10 … +10 VDC
Sensor connection	8 x (2-wire)
Resolution [bit]	12 bits
Internal resistance	100 kΩ
Input voltage (max.)	35 V
Measurement error (reference temperature)	25 °C
Measurement error – deviation (max.) from the upper-range value	0.1 %
Temperature error (max.) of the upper-range value	0.01 %/K
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	105 mA
Data width	8 x 16-bit data; 8 x 8-bit control/status (optional)
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-497

Analog input ▸ 0 … 10 V rms (peak value 20 V) ▸ Differential

750-477



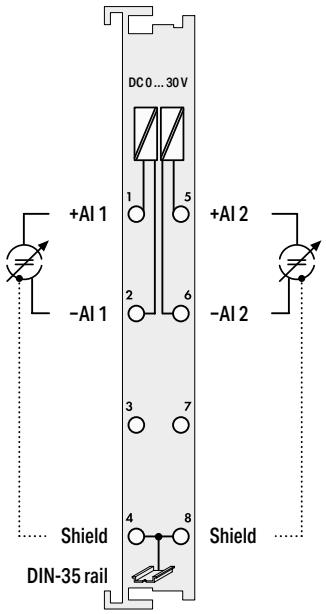
Item Description	2-Channel Analog Input; 0 … 10 VAC/DC; Differential input	
Version	Default	Pluggable (delivery without connector)
Item No.	750-477	753-477
Order Text	2AI; 0-10 VDC; Diff	2AI; 0-10 VAC/VDC; Diff

Technical Data		
Wiring interface		Pluggable
Number of analog inputs	2	
Signal type	Voltage	
Voltage signal type	0 … 10 VAC/DC	
Signal characteristic	Differential	
Sensor connection	2 x (2-wire)	
Resolution [bit]	15 bits	
Conversion time (typ.)	200 ms	
Internal resistance	120 kΩ	
Measurement error (reference temperature)	25 °C	
Measurement error – deviation (max.) from the upper-range value	0.1 %	
Temperature coefficient	< ±110 ppm/K of greatest measurement range	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	80 mA	
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)	
Isolation	500 V system/field or channel/channel	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-477	wago.com/753-477
Accessories	**Item No.**	**Item No.**
Plug		753-110

7.4

Analog input ▸ 0 … 30 V ▸ Differential

750-483

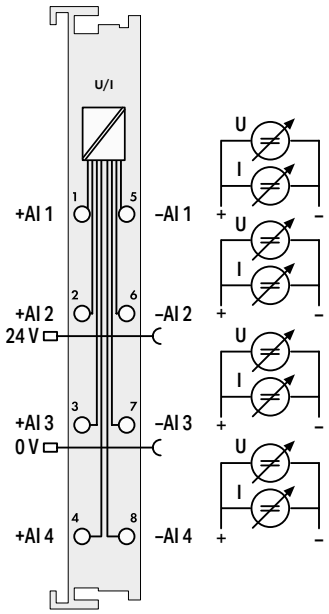


Item Description	2-Channel Analog Input; 0 … 30 VDC; Differential input	
Version	Default	Pluggable (delivery without connector)
Item No.	750-483	753-483
Order Text	2AI; 0-30 VDC; Diff	2AI; 0-30 VDC; Diff

Technical Data		
Extended functionality	Time-synchronized measured value acquisition within the module	
Wiring interface		Pluggable
Number of analog inputs	2	
Signal type	Voltage	
Voltage signal type	0 … 30 VDC	
Signal characteristic	Differential	
Sensor connection	2 x (2-wire)	
Resolution [bit]	14 bits	
Internal resistance	1000 kΩ	
Admissible continuous overload	60 V	
Measurement error (reference temperature)	25 °C	
Measurement error – deviation (max.) from the upper-range value	0.05 %	
Temperature error (max.) of the upper-range value	0.01 %/K	
Power consumption (5 V system supply)	80 mA	
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)	
Isolation	500 V system/field or channel/channel	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-483	wago.com/753-483
Accessories	**Item No.**	**Item No.**
Plug		753-110

Analog input ▸ Voltages and currents (Configurable channel for channel) ▸ Differential

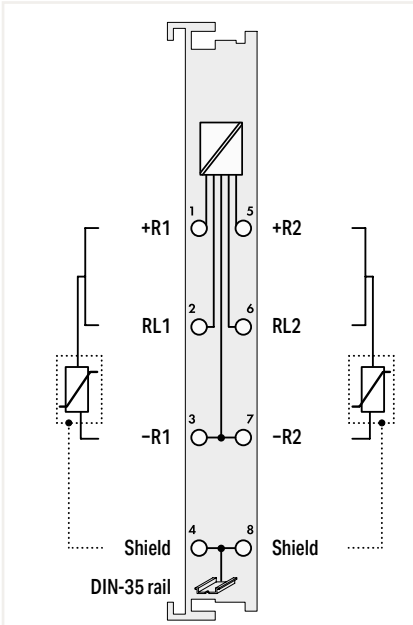
750-471

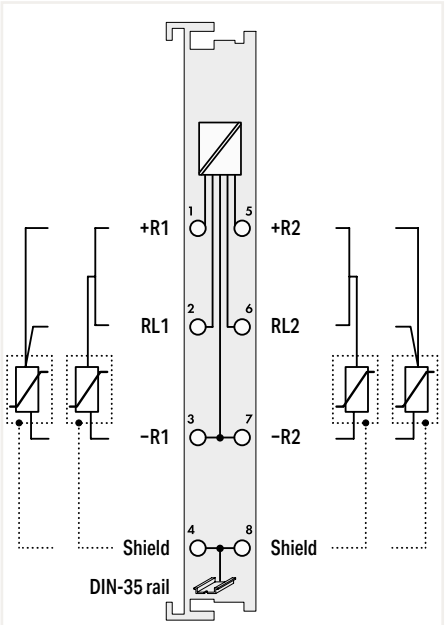


Item Description	**4-Channel Analog Input; for voltage/current**
Version	**Default**
Item No.	**750-471**
Order Text	**4AI; U/I; Diff; 16bits; Diagn**

Technical Data	
Number of analog inputs	4
Signal type	Current; Voltage
Signal type (current)	0 … 20 mADC; 4 … 20 mADC; 3.6 … 21 mADC; -20 … +20 mADC
Voltage signal type	0 … 10 VDC; -10 … +10 VDC; -0.2 … +0.2 VDC
Signal characteristic	Differential
Sensor connection	4 x (2-wire)
Resolution [bit]	16 bits
Conversion time (typ.)	10 ms
Input resistance (max.)	120 Ω
Internal resistance	100 kΩ
Reference for measurement error	Input ranges
Measurement error (reference temperature)	25 °C
Measurement error – deviation (max.) from the upper-range value	0.1 %
Reference for measurement error (2)	±200 mV
Measurement error, reference temperature (2)	25 °C
Measurement error, deviation (max.) of the upper-range value (2)	0.3 %
Temperature error (max.) of the upper-range value	0.01 %/K
Supply voltage (field)	24 VDC; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	100 mA
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-471

Analog input ▶ Resistance Sensors

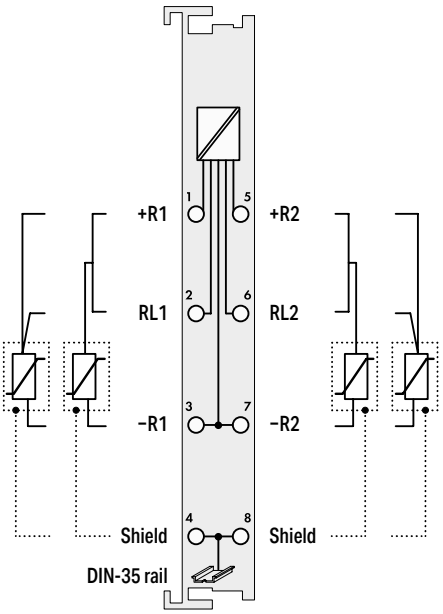




Item Description	2-Channel Analog Input; for resistance sensors	2-Channel Analog Input; Resistance measurement	
Version	NTC 20k	10 … 1200 Ohm	10 … 5000 Ohm
Item No.	750-461/020-000	750-461/000-002	750-461/000-007
Order Text	2AI; NTC 20k	2AI; 10R-1k2	2AI; 10R-5k0

Technical Data			
Number of analog inputs	2	2	
Signal type	Resistance measurement	Potentiometer positions	
Sensor types	NTC 20 kOhm	10R … 1k2	10R … 5k0
Sensor connection	2 x (2-wire)	2 x (2-wire)	
Temperature range	–30 … +130 °C		
Resolution (over entire range)	0.1 °C	0.1 Ohm	0.5 Ohm
Conversion time (typ.)	320 ms	320 ms	
Measured current (typ.)	0.05 mA	0.5 mA	
Measurement error (25 °C)	0.5 … 3.0 K (temperature-dependent)		
Measurement error (reference temperature)		25 °C	
Measurement error – deviation (max.) from the upper-range value		0.2 %	
Temperature error (max.) of the upper-range value	0.002 %/K	0.01 %/K	
Power consumption (5 V system supply)	65 mA	80 mA	
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)	2 x 16-bit data; 2 x 8-bit control/status (optional)	
Isolation	500 V system/field	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-461/020-000	wago.com/750-461/020-000	

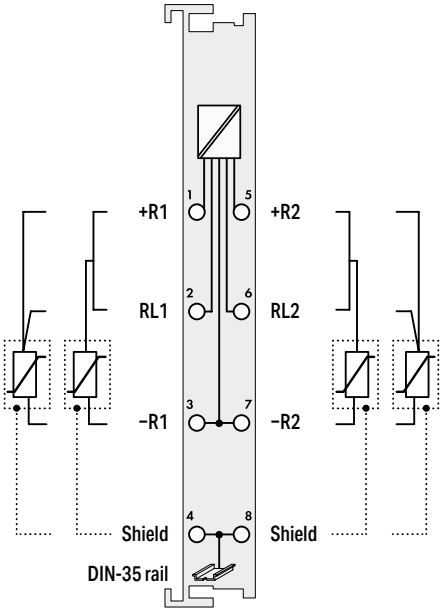
Analog input ▸ Resistance Sensors



Item Description	2-Channel Analog Input; for resistance sensors		
Version	Pt1000/RTD	Ni1000/RTD	Ni1000 TK5000
Item No.	**750-461/000-003**	**750-461/000-005**	**750-461/000-009**
Order Text	**2AI; Pt1000/RTD**	**2AI; Ni1000/RTD**	**2AI; RTD; LS**

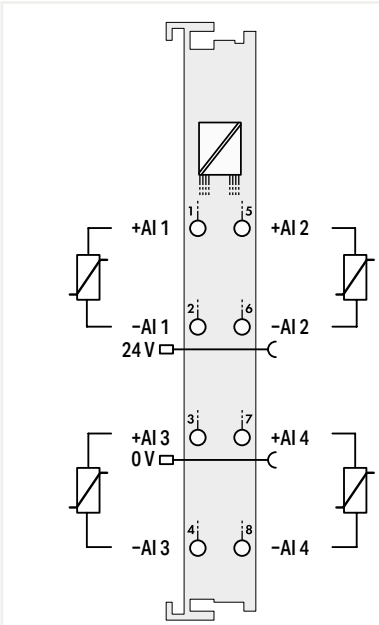
Technical Data			
Wiring interface			
Customized data format			
Number of analog inputs	2		
Signal type	Resistance measurement		
Sensor types	Pt1000	Ni1000 TK6180	Ni1000 TK5000
Sensor connection	2 x (2-wire, 3-wire)		
Temperature range	–200 … +850 °C	–60 … +250 °C	–30 … +122 °C
Resolution (over entire range)	0.1 °C		
Conversion time (typ.)	320 ms		
Measured current (typ.)	0.5 mA		
Measurement error (reference temperature)	25 °C		
Measurement error – deviation (max.) from the upper-range value	0.2 %		
Temperature error (max.) of the upper-range value	0.01 %/K		
Power consumption (5 V system supply)	80 mA		
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)		
Isolation	500 V system/field		
Surrounding air temperature (operation)	0 … 55 °C		
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
Data sheet and further information, see:	wago.com/750-461/000-003		

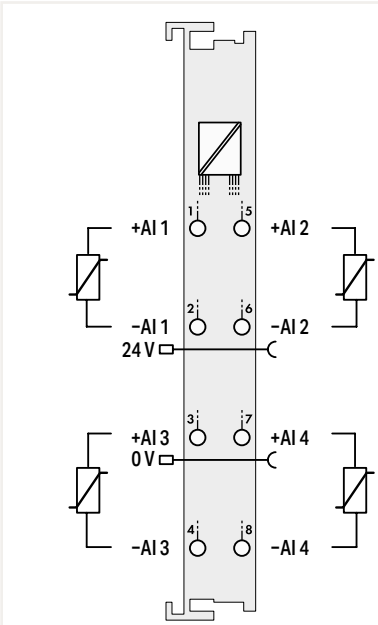
Accessories	Item No.	Item No.	Item No.
Plug			



2-Channel Analog Input; for Pt100/RTD resistance sensors					
Default	Ext. Temperature	Pluggable (delivery without connector)	Data format (S5 control)	Adjustable	Pluggable (delivery without connector); adjustable
750-461	750-461/025-000	753-461	750-461/000-200	750-461/003-000	753-461/003-000
2AI; Pt100/RTD	2AI; Pt100/RTD; Adjust; T	2AI; Pt100/RTD	2AI; Pt100/RTD; S5	2AI; Pt100/RTD; Adjust	2AI; Pt100/RTD; Adjust
		Pluggable			Pluggable
			The S5 format allows you to import data with the standard S5 FB 250 function block.		
2					
Resistance measurement					
Pt100				Pt100; Configurable: Pt, Ni, Ohm	
2 x (2-wire, 3-wire)					
–200 … +850 °C				–200 °C … +850 °C (Pt), –60 °C … +250 °C (Ni)	
0.1 °C					
320 ms					
0.5 mA					
25 °C					
0.2 %					
0.01 %/K					
80 mA					
2 x 16-bit data; 2 x 8-bit control/status (optional)					
500 V system/field					
0 … 55 °C	-20 … 60 °C	0 … 55 °C			
(12 x 100 x 69.8) mm					
CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx					
wago.com/750-461/000-003		wago.com/753-461	wago.com/750-461/000-200		wago.com/753-461/003-000
Item No.	Item No.	Item No.	Item No.	Item No.	Item No.
		753-110			753-110

Analog input ▸ Resistance Sensors



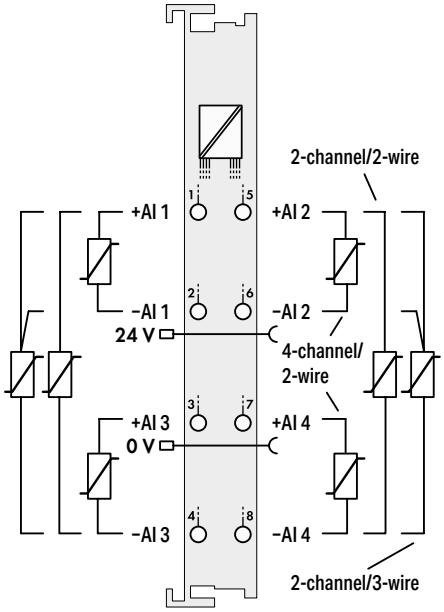


Item Description	4-Channel Analog Input; for NTC resistance sensors; Adjustable	4-Channel Analog Input; Resistance measurement
Version	NTC	Measurement range: –30 °C … +150 °C
Item No.	750-464/020-000	750-463
Order Text	4AI; NTC; Adjust	4AI; RTD; -30°C…+150°C
Technical Data		
Number of analog inputs	4	4
Signal type	Resistance measurement; Potentiometer positions	Resistance measurement
Sensor types	NTC 10 kOhm; Configurable: NTC 10 kOhm Thermokon, NTC 20 kOhm	Pt1000; Configurable: Ni1000, KTY 81
Sensor connection	4 x (2-wire)	4 x (2-wire)
Temperature range	–50 … +150 °C	–30 … +150 °C
Resolution (over entire range)	0.1 °C	0.1 °C
Conversion time (typ.)	320 ms	
Measured current (typ.)	≤ 350 µA	≤ 350 µA
Measurement error (25 °C)	≤ 2 K within the entire temperature range	≤ 0.5 K in temperature range: –30 … +150 °C
Temperature coefficient	≤ 20 ppm/K	≤ 20 ppm/K
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	50 mA	50 mA
Data width	4 (2) x 16-bit data; 4 (2) x 8-bit control/status (optional)	4 x 16-bit data; 4 x 8-bit control/status (optional)
Isolation	500 V system/field	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	CE; KC; OrdLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-464/020-000	wago.com/750-463

7.4

Analog input ▸ Resistance Sensors

750-464

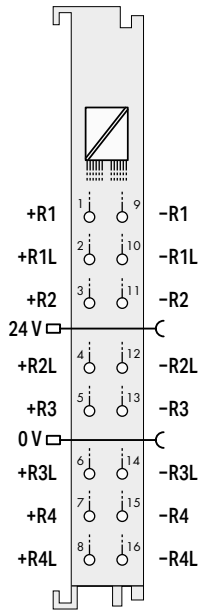


Item Description	**2/4-Channel Analog Input; Resistance measurement; Adjustable**
Version	**Default**
Item No.	**750-464**
Order Text	**2/4AI; RTD; Adjust**

Technical Data	
Number of analog inputs	4
Signal type	Resistance measurement; Potentiometer positions
Sensor types	Pt100; Configurable: Pt200, Pt500, Pt1000, Ni100, Ni120, Ni1000; Potentiometer (2-channel operation only): 10R … 1k2, 10R … 5k0
Sensor connection	4 x (2-wire); 2 x (3-wire)
Temperature range	–200 … +850 °C (Pt100), –60 … +300 °C (Ni 100, Ni 1000), –60 … +250 °C (Ni 1000 TK5000), –80 … +260 °C (Ni 120)
Resolution (over entire range)	0.1 °C
Conversion time (typ.)	320 ms
Measured current (typ.)	≤ 350 µA
Measurement error (25 °C)	≤ 1 K within the entire temperature range, ≤ 0.5 K within the temperature range (–30 … +120 °C, Pt 1000)
Temperature coefficient	≤ 20 ppm/K
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	50 mA
Data width	4 (2) x 16-bit data; 4 (2) x 8-bit control/status (optional)
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-464

Analog input ▸ Resistance Sensors

750-450



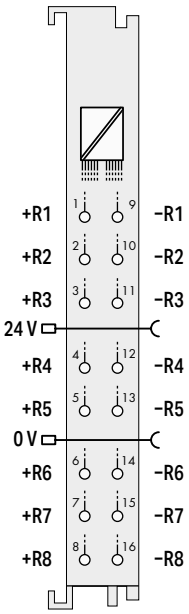
Item Description	**4-Channel Analog Input; Resistance measurement; Adjustable**
Version	**Standard with 16 connectors**
Item No.	**750-450**
Order Text	**4AI; RTD; Adjust**

Technical Data	
Number of analog inputs	4
Signal type	Resistance measurement; Potentiometer positions
Sensor types	Pt100; Configurable: Pt200, Pt500, Pt1000, Ni100, Ni120, Ni1000 (TK6180 + TK5000), Potentiometer: 10R ... 1k2, 10R ... 5k0
Sensor connection	4 x (2-wire, 3-wire, 4-wire)
Temperature range	-200 … +850 °C (Pt100, Pt200, Pt500, Pt1000), -60 … +250 °C (Ni100, Ni1000), -80 … +260 °C (Ni120)
Resolution (over entire range)	0.1 °C (over the entire range); 0.01 °C (–50 … 150 °C; Pt1000, Ni1000)
Conversion time (typ.)	100 ms
Measured current (typ.)	≤ 350 µA
Measurement error (25 °C)	≤ ±0.6 K (Pt100, Pt200, Pt500, Ni100, Ni120); ≤ ±0.2 K (Pt1000, Ni1000); ±0.3 … 0.7 Ω for resistance measurement
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	85 mA
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-450

7.4

Analog input ▶ Resistance Sensors

750-451

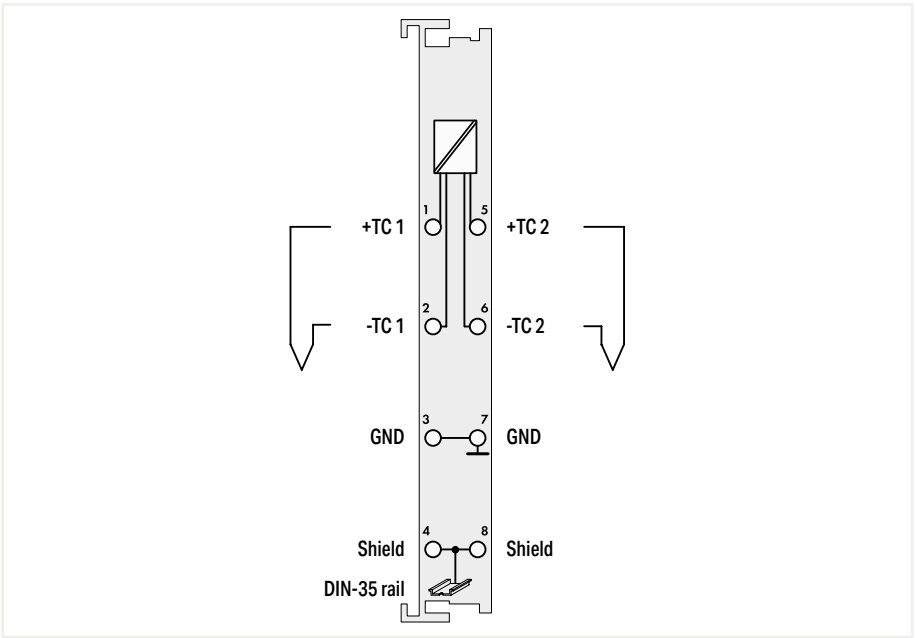


Item Description	8-Channel Analog Input; Resistance measurement; Adjustable	
Version	Standard with 16 connectors	Ext. Temperature
Item No.	**750-451**	**750-451/025-000**
Order Text	**8AI; RTD; Adjust**	**8AI; RTD; Adjust; T**

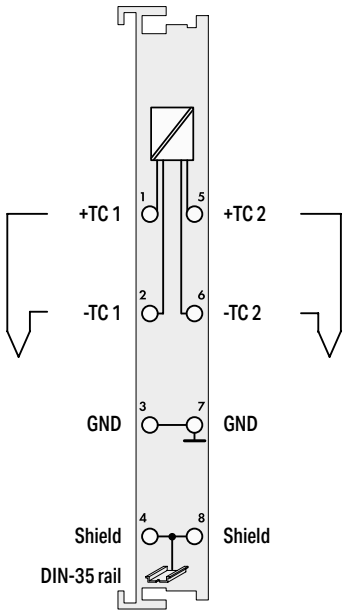
Technical Data		
Number of analog inputs	8	
Signal type	Resistance measurement; Potentiometer positions	
Sensor types	Pt100; Configurable: Pt200, Pt500, Pt1000, Ni100, Ni120, Ni1000 (TK6180 + TK5000), Potentiometer: 10R … 1k2, 10R … 5k0	
Sensor connection	8 x (2-wire)	
Temperature range	−200 … +850 °C (Pt100, Pt200, Pt500, Pt1000), −60 … +250 °C (Ni100, Ni1000), −80 … +260 °C (Ni120)	
Resolution (over entire range)	0.1 °C (over the entire range); 0.01 °C (–50 … 150 °C; Pt1000, Ni1000)	
Conversion time (typ.)	100 ms	
Measured current (typ.)	≤ 350 µA	
Measurement error (25 °C)	≤ ±0.6 K (Pt100, Pt200, Pt500, Ni100, Ni120); ≤ ±0.2 K (Pt1000, Ni1000); ≤ ±0.3 Ω for resistance measurement	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	110 mA	
Data width	8 x 16-bit data; 8 x 8-bit control/status (optional)	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C
Dimensions W x H x D	(12 x 100 x 69) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-451	

Analog input ▸ Thermocouple

750-469



Item Description	2-Channel Analog Input; Thermocouple K; Diagnostics				
Version	Default	Pluggable (delivery without connector)	Data format (S5 control)	Adjustable	Pluggable (delivery without connector); adjustable
Item No.	**750-469**	**753-469**	**750-469/000-200**	**750-469/003-000**	**753-469/003-000**
Order Text	**2AI; TC K; Diagn**	**2AI; TC K; Diagn**	**2AI; TC K; Diagn; S5**	**2AI; TC K; Diagn Adjust**	**2AI; TC K; Diagn Adjust**
Technical Data					
Wiring interface		Pluggable			Pluggable
Customized data format			The S5 format allows you to import data with the standard S5 FB 250 function block.		
Number of analog inputs	2				
Signal type	Thermocouple			Thermocouple; Low voltages	
Sensor types	Thermocouple K			Thermocouple K; Configurable: L, J, E, T, N, U, B, R, S, mV	
Sensor connection	2 x (2-wire)				
Temperature range	–100 … +1370 °C			Sensor-specific	
Resolution (over entire range)	0.1 °C				
Conversion time (typ.)	320 ms				
Internal resistance	1000 kΩ				
Measurement error (25 °C)	< ±6 K (voltage input < ±2 K; cold junction compensation < ±4 K)				
Temperature coefficient	< ±0.2 K/K				
Cold junction compensation	At each pair of terminal blocks				
Power consumption (5 V system supply)	65 mA				
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)				
Isolation	500 V system/field				
Surrounding air temperature (operation)	0 … 55 °C				
Dimensions W x H x D	(12 x 100 x 69.8) mm				
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx				
Data sheet and further information, see:	wago.com/750-469	wago.com/753-469	wago.com/750-469/000-200		wago.com/753-469/003-000
Accessories	**Item No.**	**Item No.**	**Item No.**	**Item No.**	**Item No.**
Plug		753-110			753-110

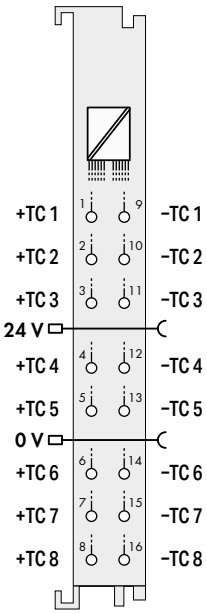


2-Channel Analog Input; Thermocouple; Diagnostics					
Thermocouple S	**Thermocouple T**	**Thermocouple J**	**Thermocouple E**	**Thermocouple L**	**Thermocouple ±120 mV**
750-469/000-001	**750-469/000-002**	**750-469/000-006**	**750-469/000-008**	**750-469/000-012**	**750-469/000-003**
2AI; TC S; Diagn	**2AI; TC T; Diagn**	**2AI; TC J; Diagn**	**2AI; TC E; Diagn**	**2AI; TC L; Diagn**	**2AI; TC ±120mV; Diagn**

		2			
		Thermocouple			Low voltages
Thermocouple S	Thermocouple T	Thermocouple J	Thermocouple E	Thermocouple L	±120 mV
		2 x (2-wire)			
−50 … +1700 °C	−100 … +400 °C	−100 … +1200 °C	−100 … +1000 °C	−100 … +900 °C	
		0.1 °C			
		320 ms			
		1000 kΩ			
		< ±6 K (voltage input < ±2 K; cold junction compensation < ±4 K)			
		< ±0.2 K/K			
		At each pair of terminal blocks			
		65 mA			
		2 x 16-bit data; 2 x 8-bit control/status (optional)			
		500 V system/field			
		0 … 55 °C			
		(12 x 100 x 69.8) mm			
		CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx			
		wago.com/750-469/000-001			
Item No.	**Item No.**	**Item No.**	**Item No.**	**Item No.**	**Item No.**

Analog input ▸ Thermocouple

750-458

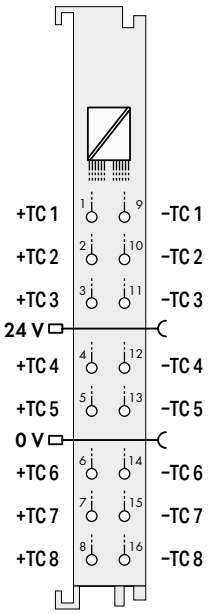


Item Description	**8-Channel Analog Input; Thermocouple; Adjustable**
Version	**Standard with 16 connectors**
Item No.	**750-458**
Order Text	**8AI; TC; Adjust**

Technical Data	
Number of analog inputs	8
Signal type	Thermocouple; Low voltages
Sensor types	Thermocouple K; Configurable: J, B, E, N, R, S, T, U, C; Voltage sensor: ±30 mV, ±60 mV, ±120 mV, ±240 mV
Sensor connection	8 x (2-wire)
Temperature range	Sensor-specific
Resolution (over entire range)	0.1 °C
Conversion time (typ.)	100 ms
Measurement error (25 °C)	Without cold junction compensation: ≤ ±1 K (type E, N, K, T, J, C); ≤ ±2 K (type S, R); ≤ ±3 K (type B); Cold-junction compensation measurement error: ≤ ±4 K
Temperature error (max.) of the upper-range value	0.05 %/K
Cold junction compensation	Internal and external
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	100 mA
Data width	8 x 16-bit data; 8 x 8-bit control/status (optional)
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-458

Analog input ▸ Thermocouple

750-498

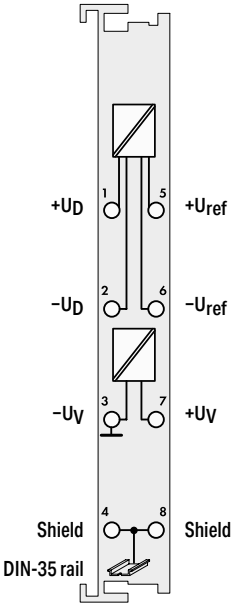


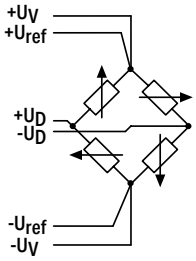
Item Description	**8-Channel Analog Input; Thermocouple; Adjustable**
Version	**Standard with 16 connectors**
Item No.	**750-498**
Order Text	**8AI; TC; Adjust**

Technical Data	
Number of analog inputs	8
Signal type	Thermocouple; Low voltages
Sensor types	Type K, J, B, E, N, R, S, T, C; Voltage measurement: ±30 mV; ±60 mV; ±120 mV; ±240 mV
Sensor connection	8 x (2-wire)
Resolution (over entire range)	0,1 °C
Measurement error (25 °C)	With cold junction compensation: ≤ ±1 K (type E, N, K, T, J) at ≥-50 °C; ≤ ±2 K (type S, R, C) at ≥100 °C; ≤ ±3 K (type B) at ≥350 °C; (Please find additional measurement error information in the manual.)
Temperature coefficient	Type K: ±0.05 K/K of the upper-range value; Voltage measurements: ±50 ppm/K of the upper-range value
Temperature error (max.) of the upper-range value	0.05 %/K
Cold junction compensation	Module-internal based on a cold junction temperature measurement
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	100 mA
Data width	8 x 16-bit data; 8 x 8-bit control/status (optional)
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-498

Analog input ▸ Resistor bridge (strain gauge)

750-491





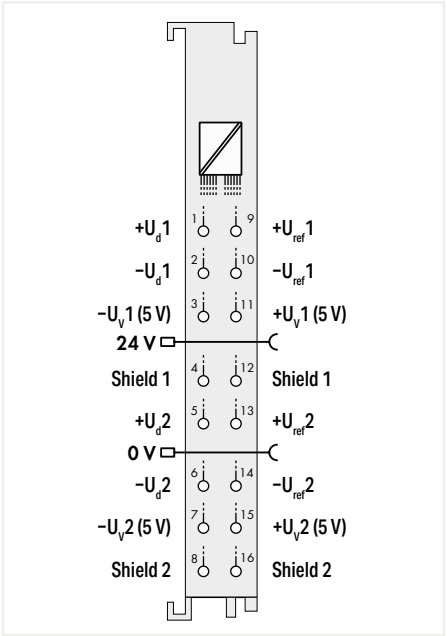
Item Description	1-Channel Analog Input; Resistor bridges (strain gauge)	
Version	Default	Conversion time: 125 ms
Item No.	**750-491**	**750-491/000-001**
Order Text	**1AI; DMS**	**1AI; DMS; 125ms**

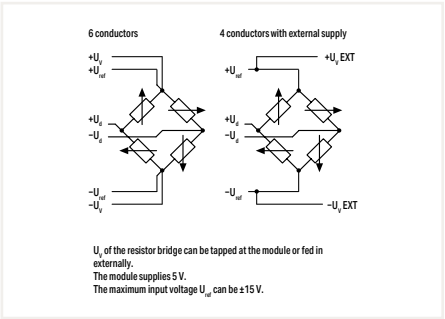
Technical Data		
Number of analog inputs	1	
Signal type	Resistor bridge (strain gauge)	
Signal voltage U_D	−15 … +15 mV	
Signal voltage U_{ref}	2 … 6 V	
Supply voltage (sensor)	5 VDC; Supply voltage U_V	
Resolution [bit]	16 bits	
Conversion time (typ.)	500 ms	
Measurement error	U_D: ±30 µV; U_{ref}: ±10 mV	
Filter	50 Hz	200 Hz
Power consumption (5 V system supply)	65 mA	
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC	
Data sheet and further information, see:	wago.com/750-491	

7.4

Analog input ▸ Resistor bridge (strain gauge)

750-1491



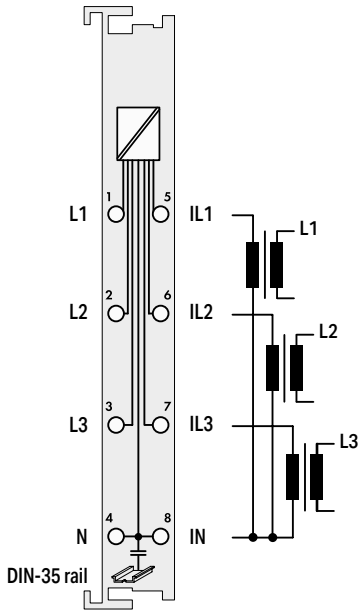


Item Description	**2-Channel Analog Input; Resistor bridges (strain gauge)**
Version	**Standard with 16 connectors**
Item No.	**750-1491**
Order Text	**2AI Resistor Bridge (Strain Gauge)**

Technical Data	
Number of analog inputs	2
Signal type	Resistor bridge (strain gauge)
Signal voltage U_D	±15 mV; ±30 mV; ±60 mV; ±120 mV; ±240 mV; ±360 mV
Signal voltage U_{ref}	Internal +5 V; External ±5 V; ±10 V; ±15 V
Supply voltage (sensor)	5 VDC
Resolution [bit]	16 bits
Measurement error (25 °C)	U_D: ±30 µV; U_{ref}: ±0.05 % of the upper-range value
Power consumption (5 V system supply)	70 mA
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Isolation	Per UL 61010-2-201: 1.2 kVDC system/channel and channel/channel
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE, cULus OrdLoc/HazLoc
Data sheet and further information, see:	wago.com/750-1491

Analog input; Power measurement ▸ 3-Phase Power Measurement

750-493



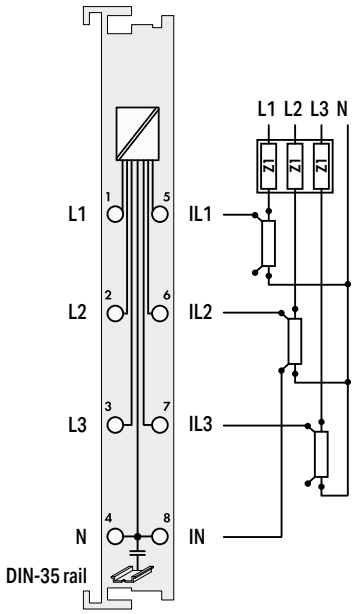
Item Description	3-Phase Power Measurement; 480 VAC 1 A		
Version	Default	Ext. Temperature	480 VAC, 5 A
Item No.	750-493	750-493/025-000	750-493/000-001
Order Text	3-PHASE POM; 480VAC 1A	3-PHASE POM; 480VAC 1A; T	3-PHASE POM; 480VAC 5A

Technical Data			
Signal type	Power measurement		
Calculated values	Active power, active energy, grid frequency, cos φ		
Measured variable	Voltage; Current; Effective power; reactive power; apparent power; Energy consumption; Frequency; cos phi		
Number of measurement inputs	6 (3 voltage measurement inputs, 3 current measurement inputs)		
Rated voltage	U_{LN} = 277 V AC/DC; U_{LL} = 480 VAC		
Voltage path input resistance (typ.)	1071 kΩ		
Measurement current (max.)	1 A		5 A
Current path input resistance (typ.)	0.022 Ω		0.005 Ω
Resolution [bit]	16 bits		
Measurement method	True RMS measurement		
Reference for measurement error	AC current/voltage		
Measurement error (reference temperature)	25 °C		
Measurement error – deviation (max.) from the upper-range value	0.5 %	0.6 %	0.5 %
Frequency range (mains frequency)	45 … 65 Hz		
Limit frequency	7.2 kHz		
Signal form	Any periodic signals (considering the threshold frequencies)		
Power consumption (5 V system supply)	100 mA		
Rated surge voltage	4 kV		
Data width	2 x 48-bit data; 2 x 24-bit control/status (optional)		
Isolation	4 kV system/field		
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm		
Approvals	CE; KC; cULus OrdLoc/HazLoc; Ex ATEX/IECEx		
Data sheet and further information, see:	wago.com/750-493		

7.4

Analog input; Power measurement ▸ 3-Phase Power Measurement

750-494/000-005

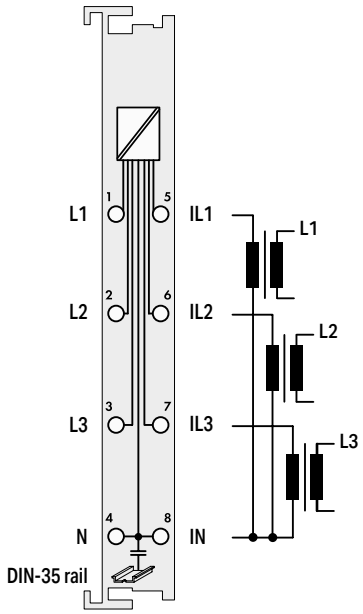


Item Description	**Power Measurement; 277 VAC/DC; external shunts**
Version	**Default**
Item No.	**750-494/000-005**
Order Text	**Power measurement; 277 VAC/DC; external shunts**

Technical Data	
Signal type	Power measurement
Calculated values	Line-to-line voltage, power output, energy, power factors, mains frequency, harmonic analysis (up to the 41st harmonic), THD
Measured variable	Line-to-line voltage; Effective power; reactive power; apparent power; Energy sources; Power factor; Mains frequency; Harmonics analysis (up to 41st harmonic); THD
Number of measurement inputs	6 (3 voltage measurement inputs*, 3 current measurement inputs*) *Only 2 voltage/current measurement inputs can be used for DC measurement!
Rated voltage	V_{LN} = 277 V AC/DC; V_{LL} = 480 V AC
Voltage path input resistance (typ.)	1072 kΩ
Measurement current (max.)	1 … 20,000 A via ext. shunts (DIN 43703, DIN EN 60051 (50 … 300 mV))
Current path input resistance (typ.)	15000 Ω
Resolution [bit]	24 bits
Measurement method	True RMS measurement
Reference for measurement error	AC current/voltage
Measurement error (reference temperature)	25 °C
Measurement error – deviation (max.) from the upper-range value	0.5 %
Reference for measurement error (2)	AC current/voltage; DC measurement (2 channels only)
Measurement error, reference temperature (2)	25 °C
Measurement error, deviation (max.) of the upper-range value (2)	1 %
Frequency range (mains frequency)	45 … 65 Hz
Frequency range (harmonics analysis)	0 … 3300 Hz
Limit frequency	15.9 kHz
Signal form	Any periodic signals (considering the threshold frequencies)
Power consumption (5 V system supply)	100 mA
Data width	2 x 128-bit data; 2 x 64-bit control/status
Isolation	4 kV system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-494/000-005

Analog input; Power measurement ▸ 3-Phase Power Measurement

750-494

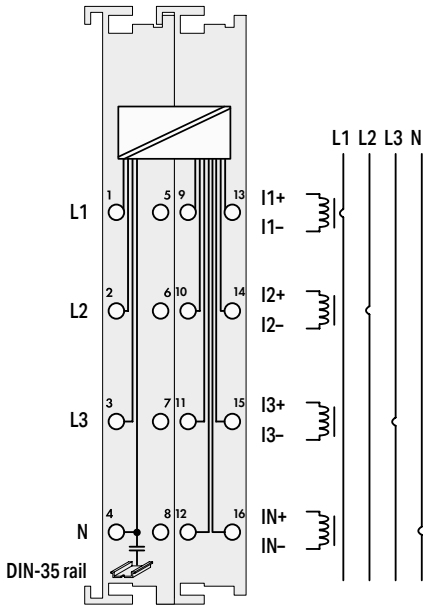


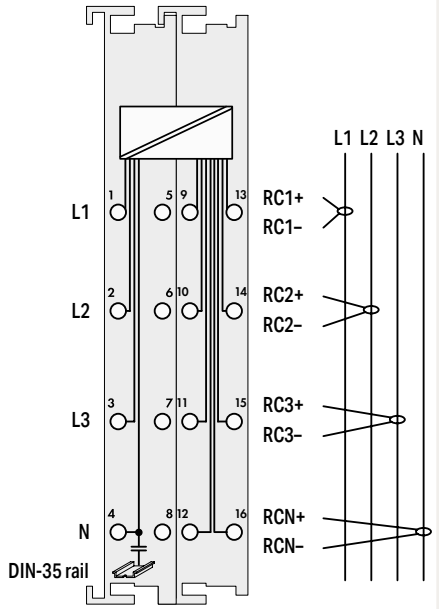
Item Description	3-Phase Power Measurement; 480 VAC 1 A			
Version	Default	Ext. Temperature	480 VAC, 5 A	480 VAC 5 A; extended temperature
Item No.	**750-494**	**750-494/025-000**	**750-494/000-001**	**750-494/025-001**
Order Text	**3-PHASE POM; 480VAC 1A**	**3-PHASE POM; 480VAC 1A; T**	**3-PHASE POM; 480VAC 5A**	**3-PHASE POM; 480VAC 5A; T**
Technical Data				
Signal type	Power measurement			
Calculated values	Line-to-line voltage, power output, energy, power factors, mains frequency, harmonic analysis (up to the 41st harmonic), THD			
Measured variable	Voltage; Current; Effective power; reactive power; apparent power; Energy consumption; Frequency; cos phi; Harmonics (up to 41st harmonic); THD			
Number of measurement inputs	6 (3 voltage measurement inputs, 3 current measurement inputs)			
Rated voltage	U_{LN} = 277 V AC/DC; U_{LL} = 480 VAC			
Voltage path input resistance (typ.)	1072 kΩ			
Measurement current (max.)	1 A		5 A	
Current path input resistance (typ.)	0.022 Ω		0.005 Ω	
Resolution [bit]	24 bits			
Measurement method	True RMS measurement			
Reference for measurement error	AC current/voltage			
Measurement error (reference temperature)	25 °C			
Measurement error – deviation (max.) from the upper-range value	0.5 %			
Frequency range (mains frequency)	45 … 65 Hz			
Frequency range (harmonics analysis)	0 … 3300 Hz			
Limit frequency	15.9 kHz			
Signal form	Any periodic signals (considering the threshold frequencies)			
Power consumption (5 V system supply)	100 mA			
Rated surge voltage	4 kV			
Data width	2 x 128-bit data; 2 x 64-bit control/status			
Isolation	4 kV system/field			
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C	0 … 55 °C	-20 … 60 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm			
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx			
Data sheet and further information, see:	wago.com/750-494			

7.4

Analog input; Power measurement ▸ 3-Phase Power Measurement

750-495





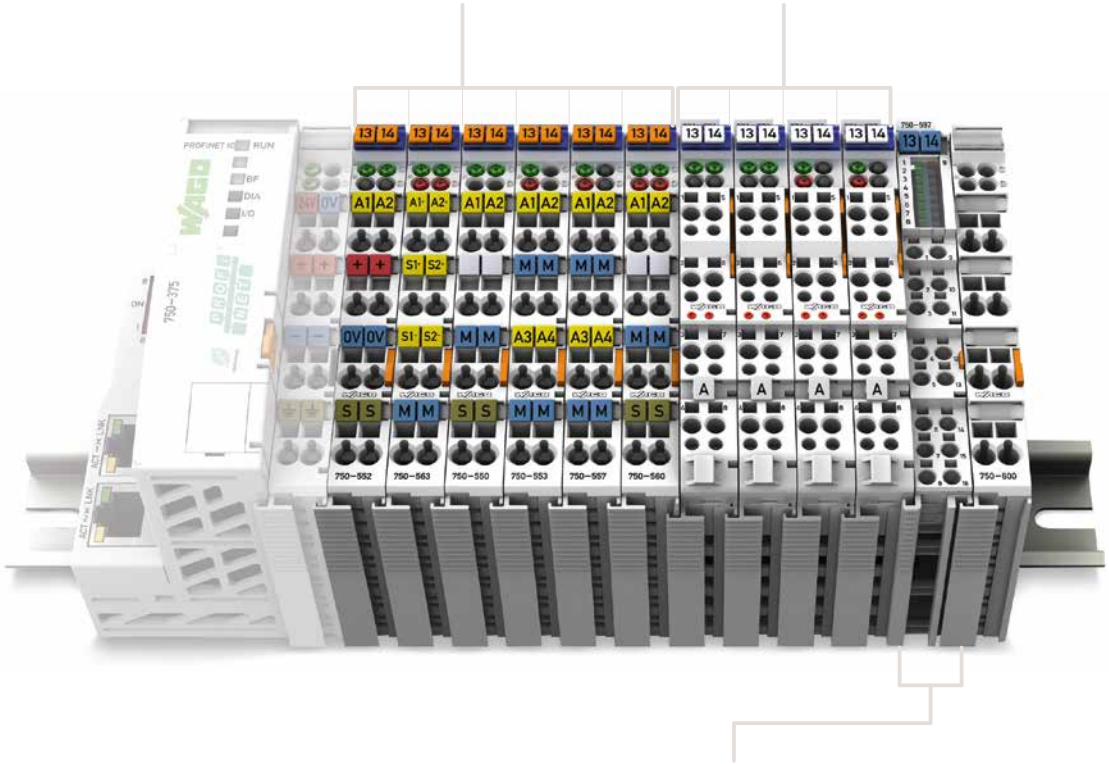
Item Description	3-Phase Power Measurement; 690 VAC 1 A		3-Phase Power Measurement; 690 VAC Rogowski coils
Version	Default	690 VAC 5 A	690 VAC Rogowski coils
Item No.	750-495	750-495/000-001	750-495/000-002
Order Text	3-PHASE POM; 690VAC 1A	3-PHASE POM; 690VAC 5A	3-PHASE POM; 690VAC R.C.

Technical Data			
Signal type	Power measurement		Power measurement
Calculated values	Line-to-line voltage, power output, energy, power factors, mains frequency, harmonic analysis (up to the 41st harmonic), THD		Line-to-line voltage, power output, energy, power factors, mains frequency, harmonic analysis (up to the 41st harmonic), THD
Measured variable	Voltage; Current; Effective power; reactive power; apparent power; Energy consumption; Frequency; cos phi; Harmonics (up to 41st harmonic); THD; Current measurement in N-conductor		Voltage; Current; Effective power; reactive power; apparent power; Energy consumption; Frequency; cos phi; Harmonics (up to 41st harmonic); THD; Current measurement in N-conductor
Number of measurement inputs	7 (3 voltage measurement inputs, 4 differential current measurement inputs)	7 (3 Spannungsmesseingänge, 4 differentielle Strommesseingänge)	7 (3 Spannungsmesseingänge, 4 differentielle Strommesseingänge)
Rated voltage	V_{LN} = 400 V AC; V_{LL} = 690 V AC	U_{LN} = 400 V AC; U_{LL} = 690 V AC	V_{LN} = 400 VAC; V_{LL} = 690 VAC
Voltage path input resistance (typ.)	1429 kΩ		1429 kΩ
Measurement current (max.)	1 A	5 A	Rogowski Coils RT500/RT2000
Current path input resistance (typ.)	0.022 Ω	0.005 Ω	44000 Ω
Resolution [bit]	24 bits		24 bits
Measurement method	True RMS measurement		True RMS measurement
Reference for measurement error	AC current/voltage		AC current/voltage
Measurement error (reference temperature)	25 °C		25 °C
Measurement error – deviation (max.) from the upper-range value	0.5 %		0.5 %
Frequency range (mains frequency)	45 … 65 Hz		45 … 65 Hz
Frequency range (harmonics analysis)	0 … 3300 Hz		0 … 3300 Hz
Limit frequency	15.9 kHz		15.9 kHz
Signal form	Any periodic signals (considering the threshold frequencies)		Any periodic signals (considering the threshold frequencies)
Power consumption (5 V system supply)	100 mA		100 mA
Rated surge voltage	6 kV		6 kV
Data width	2 x 128-bit data; 2 x 64-bit control/status		2 x 128-bit data; 2 x 64-bit control/status
Isolation	6 kV (system/field)		6 kV (system/field)
Surrounding air temperature (operation)	0 … 55 °C		0 … 55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm		(24 x 100 x 67.8) mm
Approvals	CE; KC; Marine		CE; KC; Marine
Data sheet and further information, see:	wago.com/750-495		wago.com/750-495

Analog Output Modules

Housing Design (750 Series)	
Dimensions W x H x D	12 x 100 x 69.8 mm
Depth from upper edge of DIN-rail	62.6 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch

Housing Design (753 Series)	
Dimensions W x H x D	12 x 100 x 69.8 mm
Depth from upper edge of DIN-rail	62.6 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	9 … 10 mm / 0.37 inch



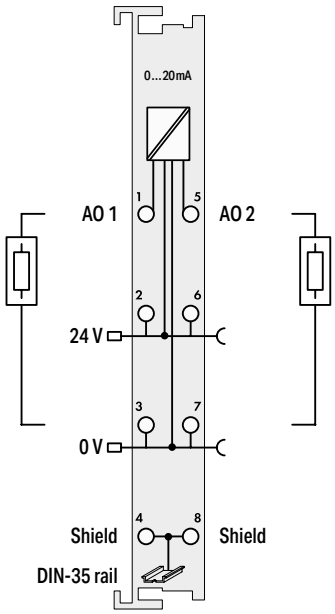
Housing Design (750 Series), with Push-in CAGE CLAMP® Connections (up to 16 connection points)	
Dimensions W x H x D	12 x 100 x 69 mm
Depth from upper edge of DIN-rail	61.8 mm
Connection technology	Push-in CAGE CLAMP®
Conductor cross-section	Solid: 0.08 … 1.5 mm² / 28 … 16 AWG Fine-stranded: 0.25 … 1.5 mm² / 22 … 16 AWG
Strip length	8 … 9 mm / 0.33 inch

I/O System –
750 XTR Series

I/O System – 750 and 753 Series, Analog Output Modules
Contents

Analog output ▸ 0 … 20 mA

750-552



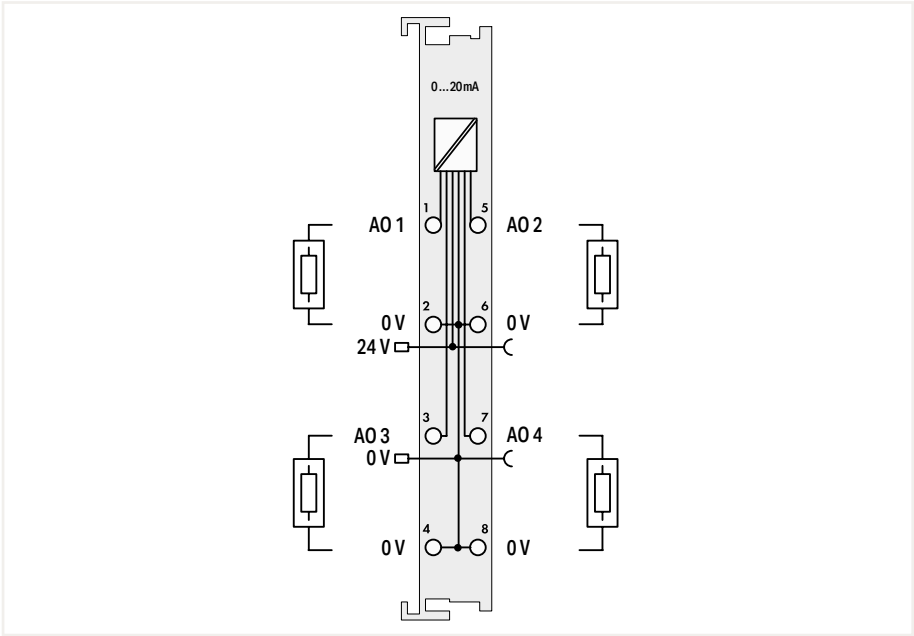
Item Description	2-Channel Analog Output; 0 … 20 mA			
Version	Default	Ext. Temperature	Pluggable (delivery without connector)	Data format (S5 control)
Item No.	750-552	750-552/025-000	753-552	750-552/000-200
Order Text	2AO; 0-20mA	2AO; 0-20mA; T	2AO; 0-20mA	2AO; 0-20mA; S5

Technical Data				
Wiring interface			Pluggable	
Customized data format				The S5 format allows you to import data with the standard S5 FB 250 function block.
Number of analog outputs	2			
Signal type	Current			
Signal type (current)	0 … 20 mADC			
Actuator connection	2 x (2-wire)			
Load impedance (current output)	≤ 600 Ω			
Resolution [bit]	12 bits			
Conversion time (typ.)	2 ms			
Linearity	±10 µA			
Output error, reference temperature	25 °C			
Output error, deviation (max.) of the upper-range value	0.1 %			
Temperature error (max.) of the output range value	0.01 %/K			
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)			
Power consumption (5 V system supply)	70 mA			
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)			
Isolation	500 V system/field			
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm			
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx			
Data sheet and further information, see:	wago.com/750-552		wago.com/753-552	wago.com/750-552/000-200

Accessories	Item No.	Item No.	Item No.	Item No.
Plug			753-110	

Analog output ▸ 0 … 20 mA

750-553

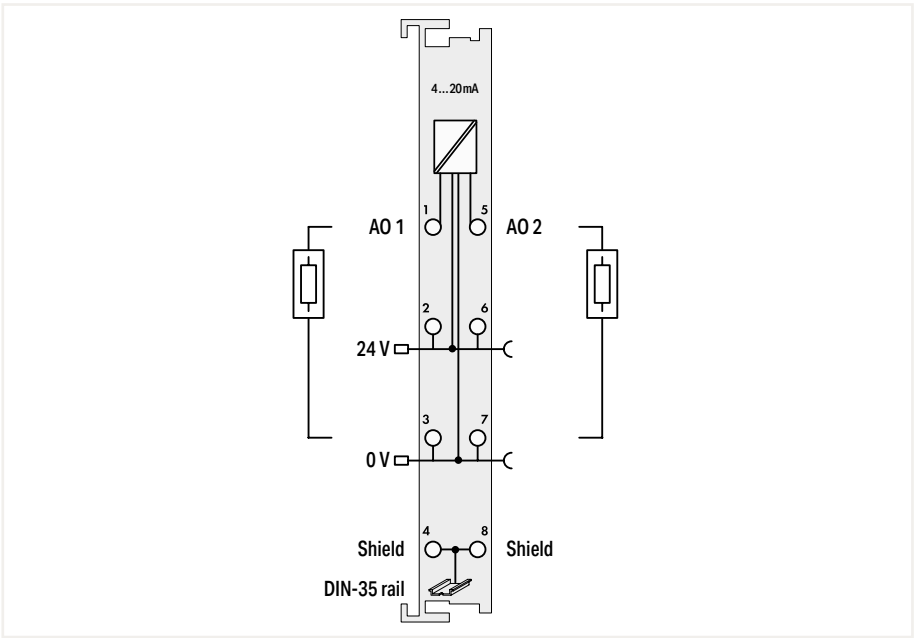


Item Description	4-Channel Analog Output; 0 … 20 mA	
Version	Default	Pluggable (delivery without connector)
Item No.	**750-553**	**753-553**
Order Text	**4AO; 0-20mA**	**4AO; 0-20mA**

Technical Data		
Wiring interface		Pluggable
Number of analog outputs	4	
Signal type	Current	
Signal type (current)	0 … 20 mADC	
Actuator connection	4 x (2-wire)	
Load impedance	Either 0 … 300 Ω or 300 … 600 Ω (same resistance for all load impedances)	
Resolution [bit]	12 bits	
Conversion time (typ.)	10 ms	
Output error, reference temperature	25 °C	
Output error, deviation (max.) of the upper-range value	0.1 %	
Temperature error (max.) of the output range value	0.01 %/K	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	60 mA	
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-553	wago.com/753-553
Accessories	**Item No.**	**Item No.**
Plug		753-110

Analog output ▸ 4 … 20 mA

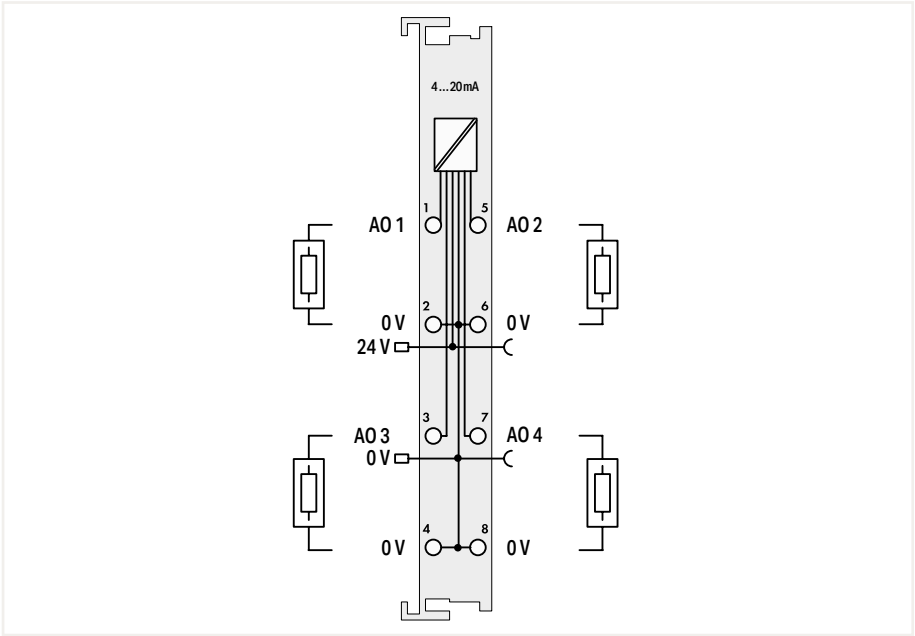
750-554



Item Description	2-Channel Analog Output; 4 … 20 mA			
Version	Default	Ext. Temperature	Pluggable (delivery without connector)	Data format (S5 control)
Item No.	750-554	750-554/025-000	753-554	750-554/000-200
Order Text	2AO; 4-20mA	2AO; 4-20mA; T	2AO; 4-20mA	2AO; 4-20mA; S5
Technical Data				
Wiring interface			Pluggable	
Customized data format				The S5 format allows you to import data with the standard S5 FB 250 function block.
Number of analog outputs	2			
Signal type	Current			
Signal type (current)	4 … 20 mADC			
Actuator connection	2 x (2-wire)			
Load impedance (current output)	≤ 600 Ω			
Resolution [bit]	12 bits			
Conversion time (typ.)	2 ms			
Linearity	±10 µA			
Output error, reference temperature	25 °C			
Output error, deviation (max.) of the upper-range value	0.1 %			
Temperature error (max.) of the output range value	0.015 %/K			
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)			
Power consumption (5 V system supply)	70 mA			
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)			
Isolation	500 V system/field			
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm			
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx			
Data sheet and further information, see:	wago.com/750-554		wago.com/753-554	wago.com/750-554/000-200
Accessories	**Item No.**	**Item No.**	**Item No.**	**Item No.**
Plug			753-110	

Analog output ▸ 4 … 20 mA

750-555

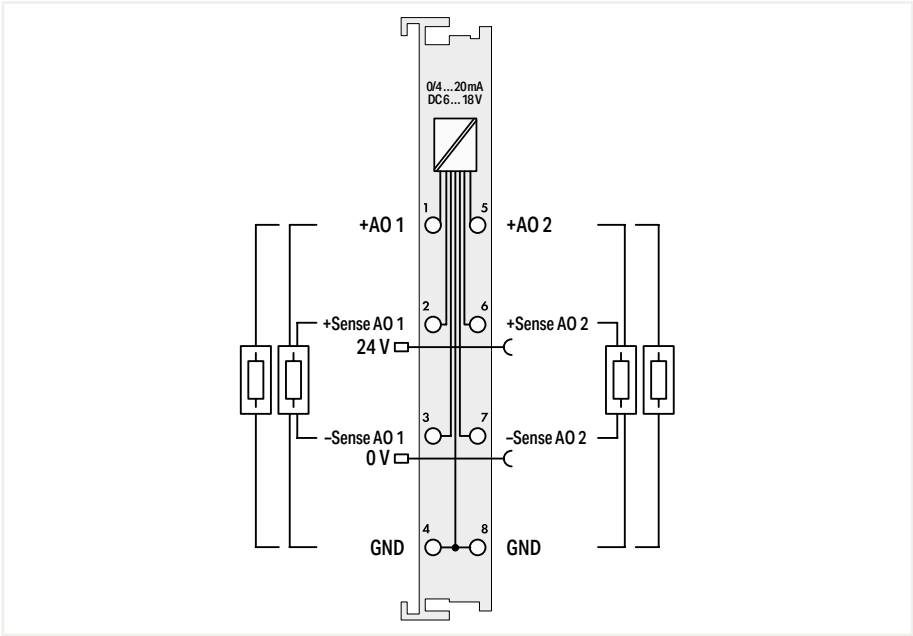


Item Description	4-Channel Analog Output; 4 … 20 mA	
Version	Default	Pluggable (delivery without connector)
Item No.	**750-555**	**753-555**
Order Text	**4AO; 4-20mA**	**4AO; 4-20mA**

Technical Data		
Wiring interface		Pluggable
Number of analog outputs	4	
Signal type	Current	
Signal type (current)	4 … 20 mADC	
Actuator connection	4 x (2-wire)	
Load impedance	Either 0 … 300 Ω or 300 … 600 Ω (same resistance for all load impedances)	
Resolution [bit]	12 bits	
Conversion time (typ.)	10 ms	
Output error, reference temperature	25 °C	
Output error, deviation (max.) of the upper-range value	0.1 %	
Temperature error (max.) of the output range value	0.01 %/K	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	60 mA	
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-555	wago.com/753-555
Accessories	**Item No.**	**Item No.**
Plug		753-110

Analog output ▸ Adjustable: Current/Voltage

750-563

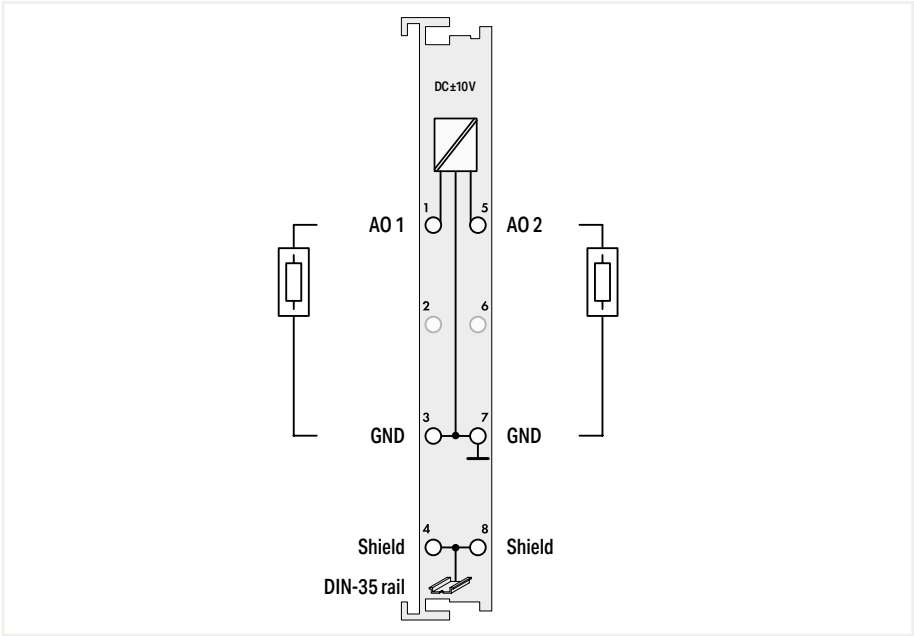


Item Description	**2-Channel Analog Output; 0/4 … 20 mA; 16 Bits; 6 … 18 VDC**
Version	**Default**
Item No.	**750-563**
Order Text	**2AO; 0/4-20mA; 16bits; 6-18 VDC**

Technical Data	
Number of analog outputs	2
Signal type	Current; Voltage
Signal type (current)	0 … 20 mADC; 4 … 20 mADC
Voltage signal type	6 … 18 VDC
Actuator connection	2 x (2-wire, 4-wire)
Load impedance (current output)	≤ 500 Ω
Load impedance (voltage output)	≥ 1.8 kΩ
Resolution [bit]	16 bits
Conversion time (typ.)	5 ms
Output error, reference temperature	25 °C
Output error, deviation (max.) of the upper-range value	0.05 %
Temperature coefficient	< ±100 ppm
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	95 mA
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-563

Analog output ▸ ±10 V

750-556

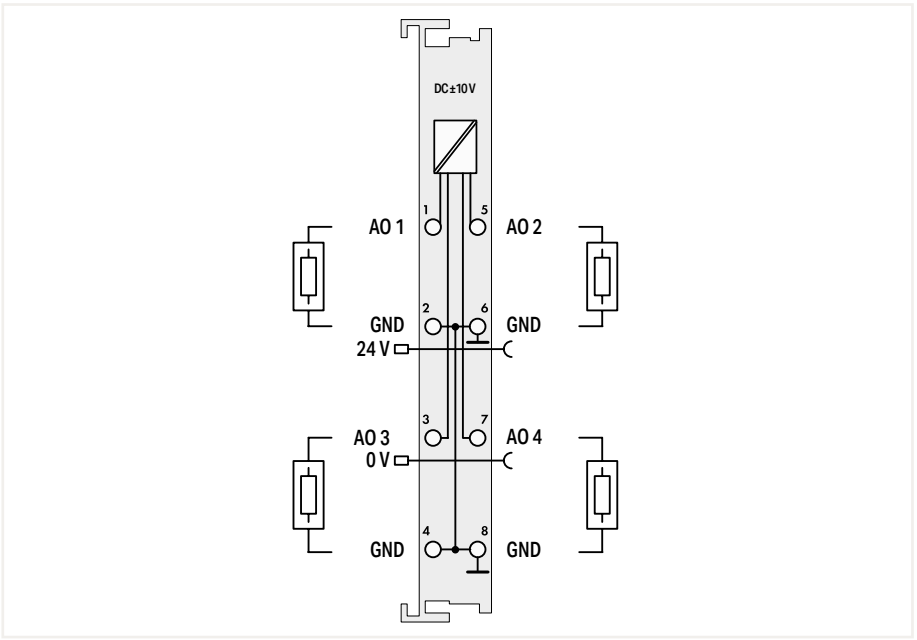


Item Description	2-Channel Analog Output; ±10 VDC		
Version	Default	Pluggable (delivery without connector)	Data format (S5 control)
Item No.	**750-556**	**753-556**	**750-556/000-200**
Order Text	**2AO; ±10 VDC**	**2AO; ±10 VDC**	**2AO; ±10 VDC; S5**

Technical Data			
Wiring interface		Pluggable	
Customized data format			The S5 format allows you to import data with the standard S5 FB 250 function block.
Number of analog outputs	2		
Signal type	Voltage		
Voltage signal type	-10 … +10 VDC		
Actuator connection	2 x (2-wire)		
Load impedance (voltage output)	≥ 5 kΩ		
Resolution [bit]	12 bits		
Conversion time (typ.)	2 ms		
Linearity	±10 mV		
Output error, reference temperature	25 °C		
Output error, deviation (max.) of the upper-range value	0.1 %		
Temperature error (max.) of the output range value	0.01 %/K		
Power consumption (5 V system supply)	65 mA		
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)		
Isolation	500 V system/field		
Surrounding air temperature (operation)	0 … 55 °C		
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
Data sheet and further information, see:	wago.com/750-556	wago.com/753-556	wago.com/750-556/000-200
Accessories	**Item No.**	**Item No.**	**Item No.**
Plug		753-110	

Analog output ▸ ±10 V

750-557

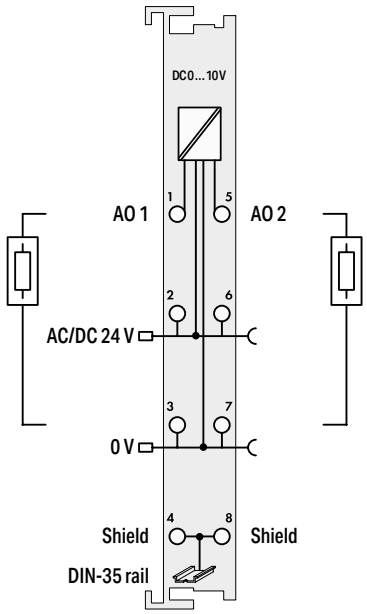


Item Description	4-Channel Analog Output; ±10 VDC	
Version	Default	Pluggable (delivery without connector)
Item No.	**750-557**	**753-557**
Order Text	**4AO; ±10 VDC**	**4AO; ±10 VDC**

Technical Data		
Wiring interface		Pluggable
Number of analog outputs	4	
Signal type	Voltage	
Voltage signal type	-10 … +10 VDC	
Actuator connection	4 x (2-wire)	
Load impedance (voltage output)	≥ 5 kΩ	
Resolution [bit]	12 bits	
Conversion time (typ.)	10 ms	
Output error, reference temperature	25 °C	
Output error, deviation (max.) of the upper-range value	0.1 %	
Temperature error (max.) of the output range value	0.01 %/K	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	125 mA	
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-557	wago.com/753-557
Accessories	**Item No.**	**Item No.**
Plug		753-110

Analog output ▸ 0 … 10 V

750-560

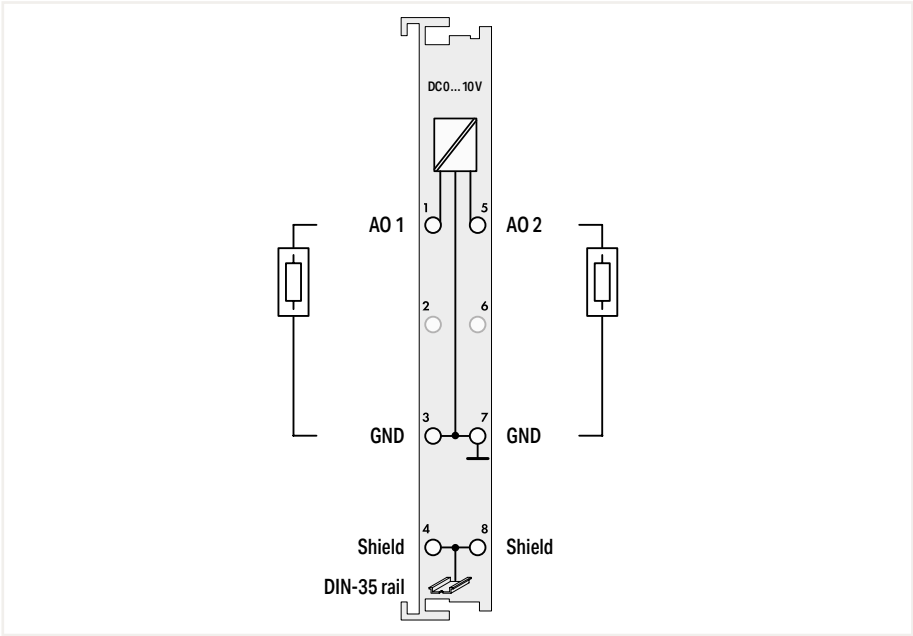


Item Description	**2-Channel Analog Output; 0 … 10 VDC; 10 Bits; 100 mW/24 V**
Version	**Default**
Item No.	**750-560**
Order Text	**2AO; 0-10 VDC; 10Bit; 100mW/ 24V**

Technical Data	
Number of analog outputs	2
Signal type	Voltage
Voltage signal type	0 … 10 VDC
Actuator connection	2 x (2-wire)
Load impedance (voltage output)	≥ 1 kΩ
Resolution [bit]	10 bits
Conversion time (typ.)	10 ms
Output error, reference temperature	25 °C
Output error, deviation (max.) of the upper-range value	0.2 %
Temperature error (max.) of the output range value	0.02 %/K
Supply voltage (field)	24 VAC/DC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	16 mA
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-560

Analog output ▸ 0 … 10 V

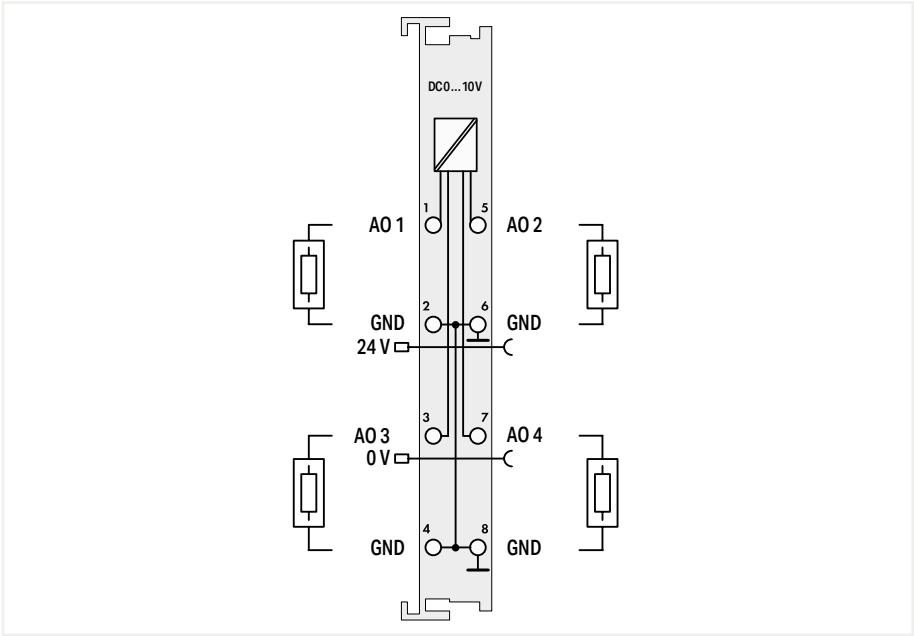
750-550



Item Description	2-Channel Analog Output; 0 … 10 VDC		
Version	Default	Pluggable (delivery without connector)	Data format (S5 control)
Item No.	**750-550**	**753-550**	**750-550/000-200**
Order Text	**2AO; 0-10 VDC**	**2AO; 0-10 VDC**	**2AO; 0-10 VDC; S5**
Technical Data			
Wiring interface		Pluggable	
Customized data format			The S5 format allows you to import data with the standard S5 FB 250 function block.
Number of analog outputs	2		
Signal type	Voltage		
Voltage signal type	0 … 10 VDC		
Actuator connection	2 x (2-wire)		
Load impedance (voltage output)	≥ 5 kΩ		
Resolution [bit]	12 bits		
Conversion time (typ.)	2 ms		
Linearity	±10 mV		
Output error, reference temperature	25 °C		
Output error, deviation (max.) of the upper-range value	0.1 %		
Temperature error (max.) of the output range value	0.01 %/K		
Power consumption (5 V system supply)	65 mA		
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)		
Isolation	500 V system/field		
Surrounding air temperature (operation)	0 … 55 °C		
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx		
Data sheet and further information, see:	wago.com/750-550	wago.com/753-550	wago.com/750-550/000-200
Accessories	**Item No.**	**Item No.**	**Item No.**
Plug		753-110	

Analog output ▸ 0 … 10 V

750-559

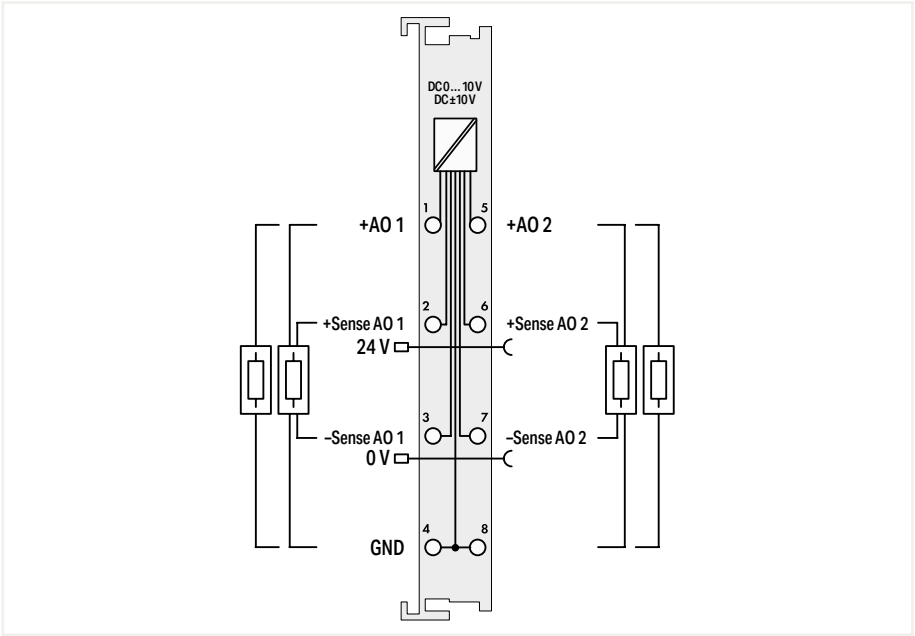


Item Description	4-Channel Analog Output; 0 … 10 VDC		
Version	Default	Ext. Temperature	Pluggable (delivery without connector)
Item No.	**750-559**	**750-559/025-000**	**753-559**
Order Text	**4AO; 0-10 VDC**	**4AO; 0-10 VDC; T**	**4AO; 0-10 VDC**

Technical Data			
Wiring interface			Pluggable
Number of analog outputs	4		
Signal type	Voltage		
Voltage signal type	0 … 10 VDC		
Actuator connection	4 x (2-wire)		
Load impedance (voltage output)	≥ 5 kΩ		
Resolution [bit]	12 bits		
Conversion time (typ.)	10 ms		
Output error, reference temperature	25 °C		
Output error, deviation (max.) of the upper-range value	0.1 %		
Temperature error (max.) of the output range value	0.01 %/K		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Power consumption (5 V system supply)	125 mA		
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)		
Isolation	500 V system/field		
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
Data sheet and further information, see:	wago.com/750-559		wago.com/753-559
Accessories	**Item No.**	**Item No.**	**Item No.**
Plug			753-110

Analog output ▸ Adjustable: Voltage

750-562

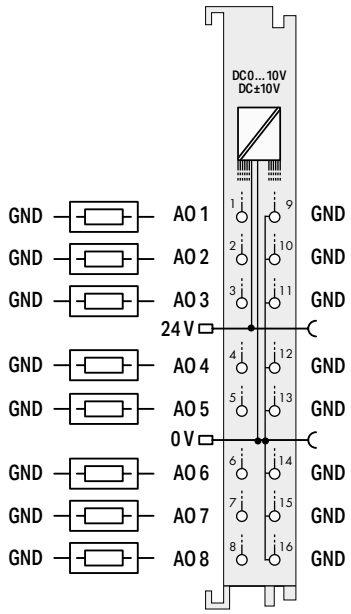


Item Description	**2-Channel Analog Output; 0 … 10 VDC/±10 V; 16 Bits**
Version	**Default**
Item No.	**750-562**
Order Text	**2AO; 0-10 V/±10 VDC; 16bits**

Technical Data	
Number of analog outputs	2
Signal type	Voltage
Voltage signal type	0 … 10 VDC; -10 … +10 VDC
Actuator connection	2 x (2-wire, 4-wire)
Load impedance (voltage output)	≥ 5 kΩ
Resolution [bit]	16 bits
Conversion time (typ.)	5 ms
Output error, reference temperature	25 °C
Output error, deviation (max.) of the upper-range value	0.05 %
Temperature coefficient	< ±100 ppm
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	125 mA
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; Ex ATEX/IECEx
Data sheet and further information, see:	wago.com/750-562

Analog output ▸ Adjustable: Voltage

750-597

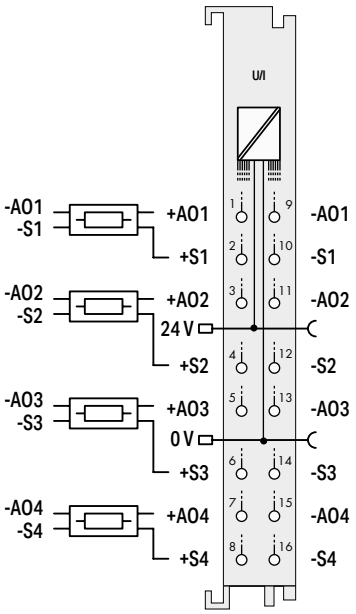


Item Description	**8-Channel Analog Output; 0 … 10 VDC/±10 V**
Version	**Standard with 16 connectors**
Item No.	**750-597**
Order Text	**8AO; 0-10 V/±10 VDC**

Technical Data	
Number of analog outputs	8
Signal type	Voltage
Voltage signal type	0 … 10 VDC
Actuator connection	8 x (2-wire)
Load impedance (voltage output)	≥ 2 kΩ
Resolution [bit]	12 bits
Conversion time (typ.)	13 ms
Output error, reference temperature	25 °C
Output error, deviation (max.) of the upper-range value	0.1 %
Temperature coefficient	≤ ±10 ppm/K of the largest output area
Supply voltage (field)	24 VDC (-15 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	61 mA
Data width	8 x 16-bit data; 8 x 8-bit control/status (optional)
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; UL OrdLoc/HazLoc; Ex ATEX/IECEx
Data sheet and further information, see:	wago.com/750-597

Analog output ▸ Voltages and currents (Configurable channel for channel)

750-564



Item Description	**4-Channel Analog Output; Voltage/Current**
Version	**Standard with 16 connectors**
Item No.	**750-564**
Order Text	**4AO U/I**

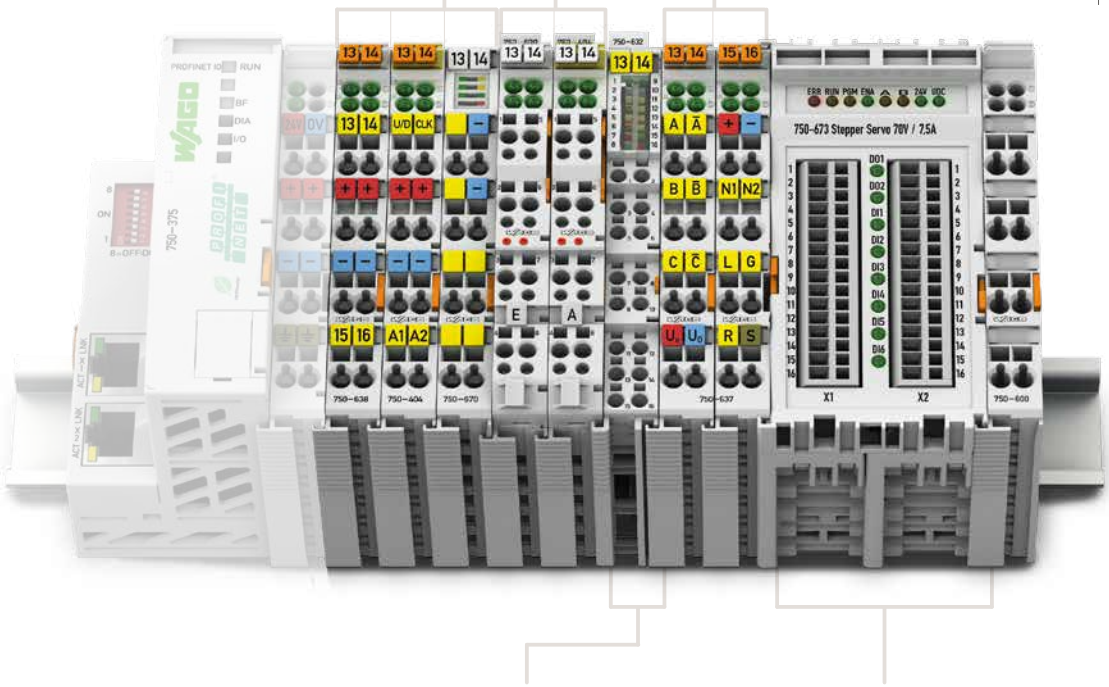
Technical Data	
Number of analog outputs	4
Signal type	Voltage; Current
Signal type (current)	-10 … +10 mA; -20 … +20 mA; -22 … +22 mA; -12 … +12 mA
Voltage signal type	-5 … +5 V; -10 … +10 V; -12 … +12 V
Actuator connection	4 x (2-wire); Voltage outputs can optionally be connected in 4-wire technology via the sense lines.
Load impedance (current output)	≤ 600 Ω
Load impedance (voltage output)	≥ 1 kΩ
Resolution [bit]	16 bits
Conversion time (typ.)	3 ms
Reference for measurement error	Voltage/Current
Output error, reference temperature	25 °C
Output error, deviation (max.) of the upper-range value	0.05 %
Temperature coefficient	U: ±25 ppm/K of the output range value; I: ±50 ppm/K of the output range value
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	55 mA
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-564

Function/Technology Modules

Housing Design (750 Series)	
Dimensions W x H x D	Housing with 4 LEDs: 12 x 100 x 69.8 mm Housing with 8 LEDs: 12 x 100 x 67.8 mm
Depth from upper edge of DIN-rail	Housing with 4 LEDs: 62.6 mm Housing with 8 LEDs: 60.6 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch

Housing Design (753 Series)	
Dimensions W x H x D	Housing with 4 LEDs: 12 x 100 x 69.8 mm Housing with 8 LEDs: 12 x 100 x 69 mm
Depth from upper edge of DIN-rail	Housing with 4 LEDs: 62.6 mm Housing with 8 LEDs: 61.8 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	9 … 10 mm / 0.37 inch

Housing Design (750 Series), Double Width	
Dimensions W x H x D	24 x 100 x 69.8 mm
Depth from upper edge of DIN-rail	62.6 mm



Housing Design (750 Series), with Push-in CAGE CLAMP® Connections (up to 16 connection points)	
Dimensions W x H x D	12 x 100 x 69 mm
Depth from upper edge of DIN-rail	61.8 mm
Connection technology	Push-in CAGE CLAMP®
Conductor cross-section	Solid: 0.08 … 1.5 mm² / 28 … 16 AWG Fine-stranded: 0.25 … 1.5 mm² / 22 … 16 AWG
Strip length	8 … 9 mm / 0.33 inch

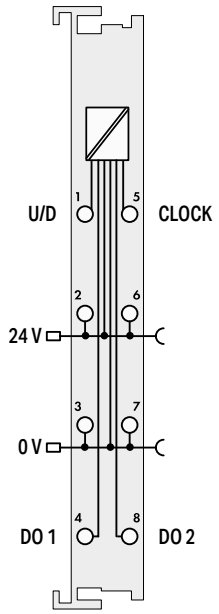
Specialty Housing	
Dimensions W x H x D	51 x 100 x 69.8 mm
Depth from upper edge of DIN-rail	62.6 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 1.5 mm² / 28 … 14 AWG
Strip length	5 … 6 mm / 0.22 inch

I/O System –
750 XTR Series

I/O System – 750 and 753 Series, Function/Technology Modules
Contents

Counter ▸ Up/down counter

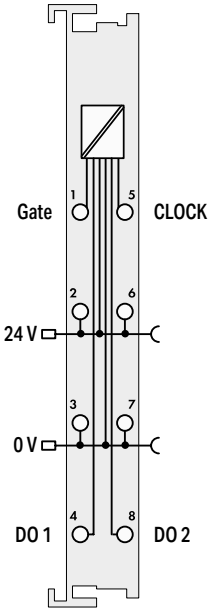
750-404



Item Description	Up/Down Counter				
Version	Default	Pluggable (delivery without connector)	Switch output	Enable input	Peak-time counter
Item No.	**750-404**	**753-404**	**750-404/000-004**	**750-404/000-001**	**750-404/000-002**
Order Text	**Up/Down Counter**	**Up/Down Counter**	**Up/Down Counter; Switch Output**	**Up Counter; Release Input**	**Peak Time Counter**
Technical Data					
Wiring interface		Pluggable			
Number of digital outputs	2				
Number of counters	1				
Output current per channel	0.5 A				
Output current	Short-circuit-protected				
Voltage range for signal (0)	−3 … +5 VDC				
Voltage range for signal (1)	15 … 30 VDC				
Input current (typ.)	6 mA				
Switching frequency (max.)	100 kHz				10 kHz
Counter depth	32 bits				
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)				
Power consumption (5 V system supply)	70 mA				
Data width	32-bit data; 8-bit control/status				
Isolation	500 V system/field				
Surrounding air temperature (operation)	0 … 55 °C				
Dimensions W x H x D	(12 x 100 x 69.8) mm				
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx				
Data sheet and further information, see:	wago.com/750-404	wago.com/753-404	wago.com/750-404/000-004		
Accessories	**Item No.**	**Item No.**	**Item No.**	**Item No.**	**Item No.**
Plug		753-110			
	Up/down counter: When the U/D input is switched with +24 V, the counting direction is upward. When an input is not switched or is 0 V, the counting direction is downward.			Up counter: The counting is locked when the GATE input is open or 0 V is present. Counting is enabled with +24 V at the GATE input.	Peak-time counter: The count pulses at the CLOCK input are recorded over a pre-set period of 10 seconds.

7.6

Counter ▸ Frequency counter

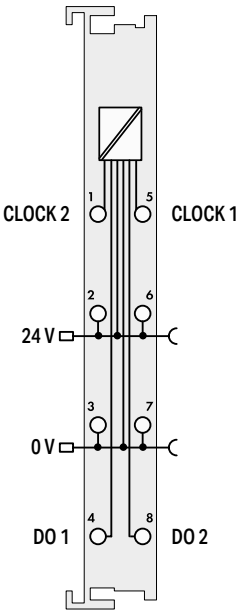


Item Description	**Frequency Counter**	
Version	**Default**	**Pluggable (delivery without connector)**
Item No.	**750-404/000-003**	**753-404/000-003**
Order Text	**Frequency Counter**	**Frequency Counter; 100kHz**

Technical Data		
Wiring interface		Pluggable
Number of digital outputs	2	
Number of counters	1	
Output current per channel	0.5 A	
Output current	Short-circuit-protected	
Voltage range for signal (0)	−3 … +5 VDC	
Voltage range for signal (1)	15 … 30 VDC	
Input current (typ.)	5 mA	
Switching frequency (max.)	100 kHz	
Counter depth	32 bits	
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	70 mA	
Data width	32-bit data; 8-bit control/status	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-404/000-003	wago.com/753-404/000-003
Accessories	**Item No.**	**Item No.**
Plug		753-110

The frequency counter measures the 24 V signal pulse period at the CLOCK input and converts it to a frequency value. The measurement is enabled when the GATE input is open or 0 V is present. Measurement is disabled when 24 V are present at the GATE input.

Counter ▸ 2 up counters



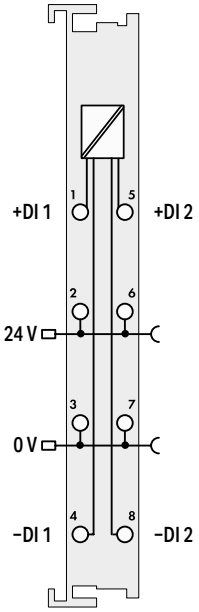
Item Description	2 Up Counters; 16 bits	
Version	**Default**	**Pluggable (delivery without connector)**
Item No.	**750-404/000-005**	**753-404/000-005**
Order Text	**2Up Counter; 16bits**	**2Up Counter; 16bits**

Technical Data		
Wiring interface		Pluggable
Number of digital outputs	2	
Number of counters	2	
Output current per channel	0.5 A	
Output current	Short-circuit-protected	
Voltage range for signal (0)	−3 … +5 VDC	
Voltage range for signal (1)	15 … 30 VDC	
Input current (typ.)	5 mA	
Switching frequency (max.)	5 kHz	
Counter depth	16 bits	
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	70 mA	
Data width	32-bit data; 8-bit control/status	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-404/000-005	wago.com/753-404/000-005
Accessories	**Item No.**	**Item No.**
Plug		753-110

This module is equipped with two 16-bit up counters. The count pulses are recorded at the CLOCK 1 and CLOCK 2 inputs.

Counter ▸ 2 up/down counters

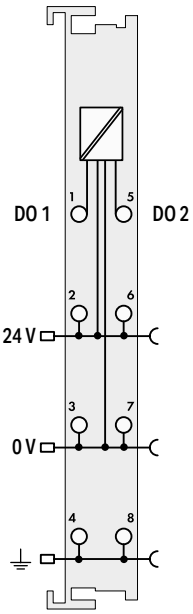
750-638



Item Description	2 Up/Down Counters; 16 bits; 500 Hz		
Version	Default	Ext. Temperature	Pluggable (delivery without connector)
Item No.	**750-638**	**750-638/025-000**	**753-638**
Order Text	**2Up/Down Counter; 16bits; 500Hz**	**2Up/Down Counter; 500Hz; T**	**2Up/Down Counter; 16bits; 500Hz**
Technical Data			
Wiring interface			Pluggable
Number of counters	2		
Voltage range for signal (0)	−3 … +5 VDC (per EN 61131 Type 1)		
Voltage range for signal (1)	15 … 30 VDC (per EN 61131 Type 1)		
Switching frequency (max.)	500 Hz		
Pulse width (min.) (0, 1)	1 ms		
Counter depth	16 bits		
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Power consumption (5 V system supply)	10 mA		
Data width	2 x 16-bit data; 2 x 8-bit control/status		
Isolation	500 V system/field		
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx		
Data sheet and further information, see:	wago.com/750-638		wago.com/753-638
Accessories	**Item No.**	**Item No.**	**Item No.**
Plug			753-110

Pulse width output

750-511

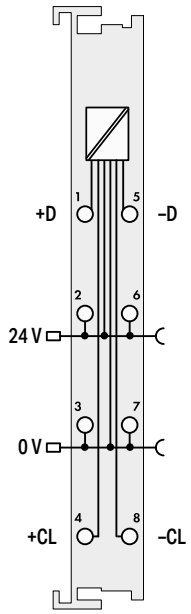


Item Description	2 Pulse Width Outputs; 24 VDC; 0.1 A; 250 Hz			
Version	Default	Pluggable (delivery without connector)	2 kHz; Frequency counter	100 Hz
Item No.	750-511	753-511	750-511/000-001	750-511/000-002
Order Text	2PWM; 24 VDC; 0.1A; 250kHz	2PWM; 24 VDC; 0.1A; 250Hz	2PWM; 24 VDC; 0.1A; 2kHz; Frequency Counter	2PWM; 24 VDC; 0.1A; 100Hz

Technical Data				
Wiring interface		Pluggable		
Number of digital outputs	2			
Load type	Resistive, inductive			
Pulse frequency	250 Hz		2 Hz … 2 kHz	100 Hz
Duty cycle	0 … 100 %		50 %	0 … 100 %
Output current per channel	0.1 A			
Output current	Short-circuit-protected			
Resolution [bit]	10 bits			
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)			
Power consumption (5 V system supply)	70 mA			
Data width	2 x 16-bit data; 2 x 8-bit control/status			
Isolation	500 V system/field			
Surrounding air temperature (operation)	0 … 55 °C			
Dimensions W x H x D	(12 x 100 x 69.8) mm			
Approvals	CE; KC; OrdLoc/HazLoc; ATEX/IECEx			
Data sheet and further information, see:	wago.com/750-511	wago.com/753-511	wago.com/750-511/000-001	
Accessories	**Item No.**	**Item No.**	**Item No.**	**Item No.**
Plug		753-110		

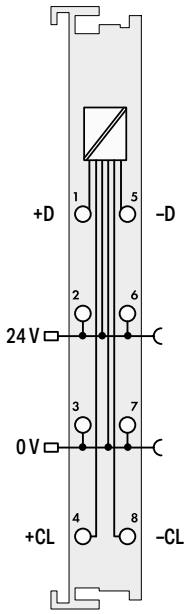
7.6

Distance and angle measurement ▸ SSI transmitter interface



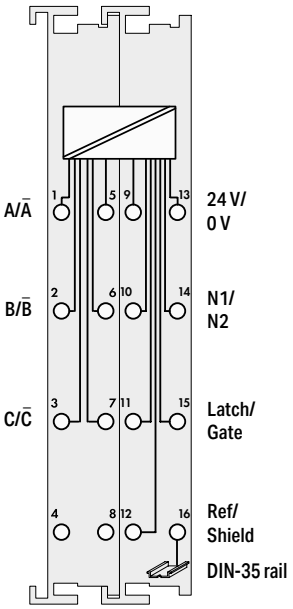
Item Description	SSI Transmitter Interface				
Version	Adjustable	24 bits; 125 kHz; gray code	24 bits; 125 kHz; gray code; status byte	15 bits; 125 kHz; gray code; status byte	24 bits; 250 kHz; gray code
Item No.	**750-630/003-000**	**750-630**	**750-630/000-004**	**750-630/000-005**	**750-630/000-006**
Order Text	**SSI Interface; adjust**	**SSI Interface; 24bits; 125kHz; Gray**	**SSI Interface; 24bits; 125kHz; Gray; Status**	**SSI Interface; 15bits; 125kHz; Gray; Status**	**SSI Interface; 24bits; 250kHz; Gray**
Technical Data					
Transmitter connection	On + D, -D / Off + Cl, - Cl				
Supply voltage (transmitter)	24 VDC; via power jumper contacts				
Data transmission rate	250 kHz	125 kHz			250 kHz
Serial input	Data width: 1 … 32 bits	Data width: 24 bits		Data width: 15 bits	Data width: 24 bits
Code	Gray code/binary code	Gray code			
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)				
Power consumption (5 V system supply)	20 mA				
Data width	1 x 32 bits	1 x 32-bit; 1 x 8-bit control/status (optional)			1 x 32 bits
Isolation	500 V system/field				
Surrounding air temperature (operation)	0 … 55 °C				
Dimensions W x H x D	(12 x 100 x 69.8) mm				
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx				
Data sheet and further information, see:	wago.com/750-630/003-000				

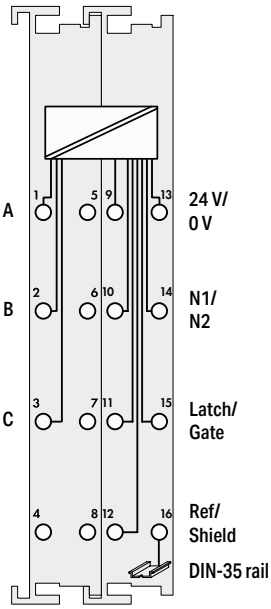
7.6



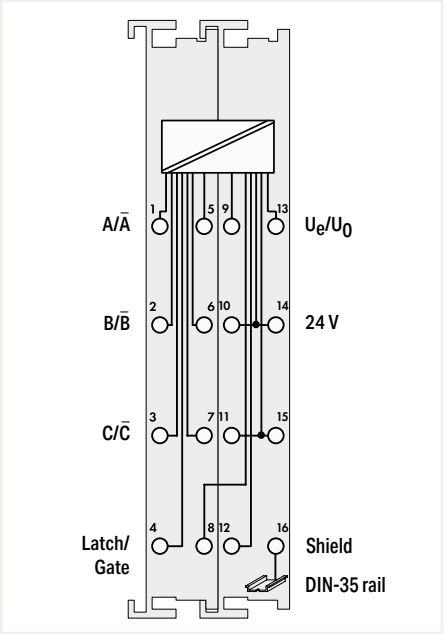
SSI Transmitter Interface						
25 bits; 125 kHz; gray code	13 bits; 125 kHz; gray code	24 bits; 125 kHz; bin. code	25 bits; 125 kHz; bin. code	29 bits; 125 kHz; bin. code	24 bits; 250 kHz; bin. code	13 bits; 250 kHz; bin. code
750-630/000-008	750-630/000-012	750-630/000-001	750-630/000-011	750-630/000-013	750-630/000-002	750-630/000-009
SSI Interface; 25bits; 125kHz; Gray	SSI Interface; 13bits; 125kHz; Gray	SSI Interface; 24bits; 125kHz; Bin	SSI Interface; 25bits; 125kHz; Bin	SSI Interface; 29bits; 125kHz; Bin	SSI Interface; 24bits; 250kHz; Bin	SSI Interface; 13bits; 250kHz; Bin
On + D, -D / Off + Cl, - Cl						
24 VDC; via power jumper contacts						
125 kHz					250 kHz	
Data width: 25 bits	Data width: 13 bits	Data width: 24 bits	Data width: 25 bits	Data width: 29 bits	Data width: 24 bits	Data width: 13 bits
Gray code		Binary code				
24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)						
20 mA						
1 x 32 bits						
500 V system/field						
0 … 55 °C						
(12 x 100 x 69.8) mm						
CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx						
wago.com/750-630/003-000						

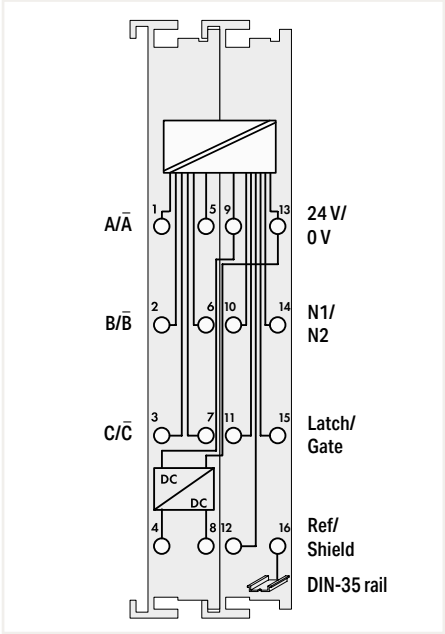
Distance and angle measurement ▸ Incremental encoder interface





Item Description	Incremental Encoder Interface; 24 VDC; Differential input; 32 bits	Incremental Encoder Interface; 24 VDC; Single-ended; 32 bits	
Version	Default	Default	Cam output
Item No.	750-637/000-001	750-637/000-002	750-637/000-004
Order Text	Inc. Encoder; 24 VDC; Diff; 32bits	Inc. Encoder; 24 VDC; SE; 32bits	Inc. Encoder; 24 VDC; SE; 32bits; Cam
Technical Data			
Transmitter connection	A, /A, B, /B, C, /C	A, B, C	
Counter depth	32 bits	32 bits	
Limit frequency	250 kHz	250 kHz	
Quadrature decoder	4x evaluation	4x evaluation	
Zero impulse (latch)	32 bits	32 bits	
Commands	Reading, setting, activating	Reading, setting, activating	
Supply voltage (transmitter)	24 VDC	24 VDC	
Transmitter supply current (max.)	300 mA	300 mA	
Output voltage	24 VDC	24 VDC	
Output current per channel	0.5 A	0.5 A	
Output current	Short-circuit-protected	Short-circuit-protected	
Voltage range for signal (0)	(U_{ABC} - $U_{ABC/}$): -30 … +15 VDC; Latch, gate, ref.: -3 … +5 VDC	−3 … +5 VDC	
Voltage range for signal (1)	(U_{ABC} - $U_{ABC/}$): 15 … 30 VDC; Latch, gate, ref.: 15 … 30 VDC	15 … 30 VDC	
Input current (typ.)	Latch 5 mA, Gate 7 mA, Ref. 7 mA	Latch 5 mA, Gate 7 mA, Ref. 7 mA	
Power consumption, field supply (module with no external load)	35 mA	35 mA	
Power consumption (5 V system supply)	110 mA	110 mA	
Data width	1 x 32-bit data 2 x 8-bit control/status	1 x 32-bit data 2 x 8-bit control/status	
Isolation	500 V system/field	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	0 … 55 °C	
Dimensions W x H x D	(24 x 100 x 69.8) mm	(24 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-637/000-001	wago.com/750-637/000-001	

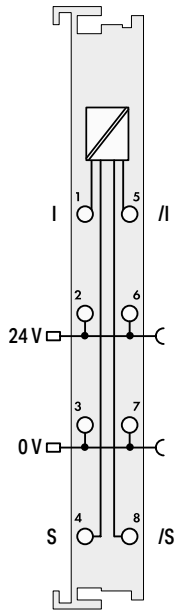




Incremental Encoder Interface; RS-422; 16 bits	Incremental Encoder Interface; RS-422; 32 bits	
Default	Default	Single evaluation
750-631/000-004	750-637	750-637/000-003
Inc. Encoder; RS422	Inc. Encoder; RS422; 32bits	Inc. Encoder; RS422; 32bits; Single Interp.
A, /A, B, /B, C, /C (RS-422 inputs)	A, A/, B, B/, C, C/	A, /A, B, /B, C, /C
16 bits	32 bits	
1000 kHz	250 kHz	
4x evaluation	4x evaluation	1x report
16 bits	32 bits	
Reading, setting, activating	Reading, setting, activating	
5 VDC	5 VDC	
200 mA	300 mA	
	24 VDC	
	0.5 A	
	Short-circuit-protected	
U_{ABC} = 0 V, $U_{ABC/}$ = 5 V; Latch, gate ≤ 5.0 V; External error U ≥ 5.0 V or open input	U_{ABC} = RS-422; Latch, gate, ref.: -3 … +5 VDC	
U_{ABC} = 5 V, $U_{ABC/}$ = 0 V; Latch, gate ≥ 15.0 V; External error U < 0.5 V	U_{ABC} = RS-422; Latch, gate, ref.: 15 … 30 VDC	
	Latch 5 mA, Gate 7 mA, Ref. 7 mA	
10 mA	35 mA	
50 mA	110 mA	
2-byte output; 5-byte input; 2x 8-bit control/status (optional); 3 additional output bytes (reserved)	1 x 32-bit data 2 x 8-bit control/status	
500 V system/field	500 V system/field	
0 … 55 °C	0 … 55 °C	
(24 x 100 x 69.8) mm	(24 x 100 x 69.8) mm	
CE; cULus OrdLoc/HazLoc	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx	
wago.com/750-631/000-004	wago.com/750-637	

Distance and angle measurement ▸ Digital impulse interface

750-635



Item Description	**Digital Impulse Interface**	
Version	**Default**	**Pluggable (delivery without connector)**
Item No.	**750-635**	**753-635**
Order Text	**Digital Impulse Interface**	**Digital Impulse Interface**

Technical Data		
Wiring interface		Pluggable
Transmitter connection	Start/stop; Initialization; Uv; Ground; Shield connection via encoder housing	
Number of inputs	1	
Resolution	1 µm	
Update time	2 ms	
Position sensor length	4 m	
Connection requirement (permissible cable type)	RS-422	
Connection requirement, permissible cable length	500 m	
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	45 mA	
Data width	1 x 24-bit data 1 x 8-bit control/status	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; cULus OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-635	wago.com/753-635
Accessories	**Item No.**	**Item No.**
Plug		753-110

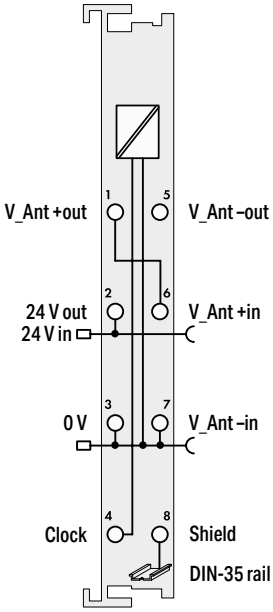
This digital impulse interface connects position sensors equipped with a start/stop interface. After receiving a read pulse, these sensors deliver a time-delayed reply impulse. The time delay is proportional to the sensor distance. Each sensor may have up to four position transmitters (permanent magnets). Their position data can be accessed serially by the control and are stored in the process image of the fieldbus coupler as a 24-bit value.
Position sensors, from manufacturers such as Balluff, with the following features can be used:

- Start/stop interface with RS-422 differential signals
- 24 V sensor supply

7.6

RTC module

750-640



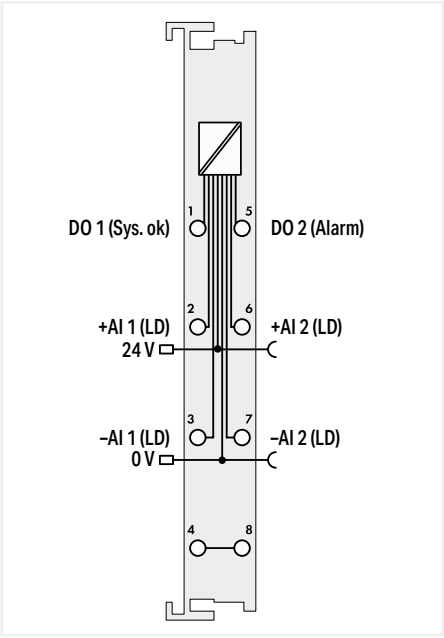
Item Description	**Real-Time Clock Module**
Version	**Default**
Item No.	**750-640**
Order Text	**RTC Module**

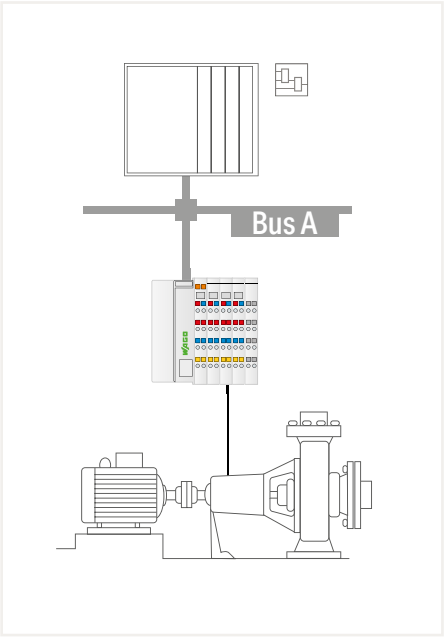
Technical Data	
Output voltage	5 … 24 VDC; Supply $V_{ant, in}$
Device-specific	Accuracy (25 °C): < 1 minutes/month; Accuracy (10 … 40 °C): < 2 minutes/month; Accuracy (-25 … +85 °C): < 7 minutes/month; Drift: < 2 minutes/year
Buffer length	6 Days
Clock timer	32 channels and switch points (32 x on/off)
Voltage range for signal (0)	–24 … +1 VDC
Voltage range for signal (1)	3 … 24 VDC
Input filter	10 ms
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	11 mA
Power consumption (5 V system supply)	20 mA
Data width	1 x 40-bit data (input/output) (5-byte user data) 1 x 8-bit control/status (optional)
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-640

This RTC module provides higher-level control systems with the actual time. The time is buffered and continues to run in the event of a power failure. When an external receiver is connected, the clock can be set using the time signal from DCF77, WWVB, or MSF.
By default, the module is set to receive DCF77 signals. The receiver can be supplied directly via the module. Connecting an external receiver to operate the RTC module is not absolutely necessary.

Vibration monitoring

750-645





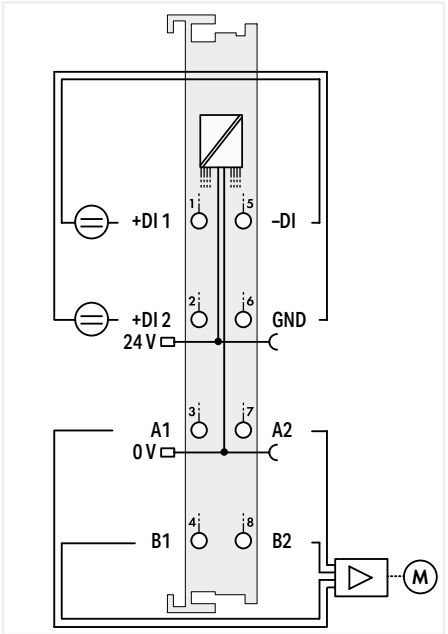
Item Description	**2-Channel Vibration Velocity/Bearing Condition Monitoring VIB I/O Module**
Version	**Default**
Item No.	**750-645**
Order Text	**2VIB VRMS/SPM Multi**

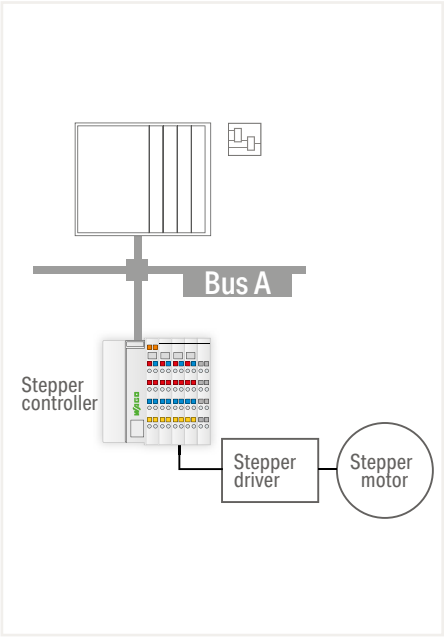
Technical Data	
Transmitter connection	+AI1, -AI1, +AI2, -AI2
Number of inputs	2
Number of digital outputs	2
Output voltage	24 VDC
Output current per channel	0.5 A
Output current	Short-circuit-protected
Device-specific	Both alarm and warning threshold can be set via process image and engineering software.
Oscillating velocity (RMS)	0 … 100 mm/s
Shock impulse (SPM)	-10 … +80 db_{sv}
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	30 mA
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-645

This module is used for online monitoring of machine vibration levels. It records the two key parameters required for condition monitoring: vibration velocity and bearing condition.
Vibration velocity is a measurement for machines' energy and therefore, a suitable indicator for the vibration forces acting on the machine.
Bearing condition is evaluated on the basis of high-frequency shock impulse signals. Shock impulses are momentary impulses arising from mechanical damage to roller bearings or the bearing surfaces.
By recording the measurement results and evaluation in a trend curve, bearing damage can be detected at an early stage. A special Tandem-Piezo® acceleration sensor serves as encoder to facilitate simultaneous measurement of machine vibrations and high-frequency shock impulse signals.

Stepper module ▸ Stepper controller

750-670





Item Description	**Stepper Controller; RS-422/24 VDC; 20 mA**
Version	**Default**
Item No.	**750-670**
Order Text	**Stepper Controller; RS422/24 VDC; 20mA**

Technical Data	
Number of outputs	1 channel (2 differential outputs A1, A2, B1, B2)
Signal voltage	5 VDC (internal), 5 … 24 VDC (external)
Resolution	15 bits + 16 bit prescaler
Stepper resolution	23 bits + sign bit
Load type	RS-422, TTL, optocoupler
Output current per channel	0.03 A
Output current	Short-circuit-protected
Number of digital inputs	2
Voltage range for signal (0)	–3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Input filter	100 µs, software filter can be connected
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	98 mA
Data width	12-byte input/output
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-670

This stepper controller is used to control different drive power sections with pulse/direction interface or incremental encoder input.
The 64-fold microstepping prevents step losses due to resonance in the acceleration phases and reduces wear on the mechanical parts. Adjustable current limits for stop, acceleration and constant speed help minimize motor power dissipation. Two configurable inputs for Start/Stop, limit switches, reference cams, Jog/Tip, etc., are evaluated directly and without any further delay by the internal software.
Versatile functions, such as positioning with different acceleration slopes, command tables, camshaft controller, auto referencing and other event-dependent properties provide this controller with a wide spectrum of possible uses.

Operating modes:

- Step positioning
- Reference motion
- Jog
- Tip
- Command table
- Cam switch

Functions include:

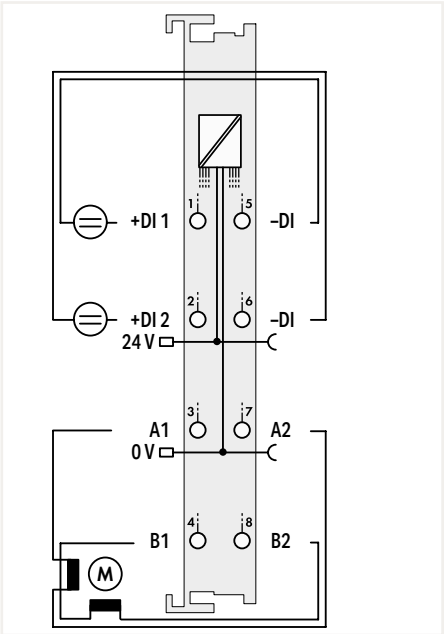
- Absolute/relative positioning
- Setpoint change on the fly
- Rotary axis

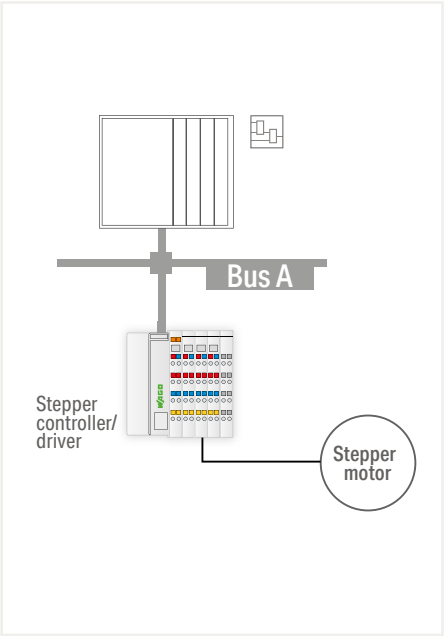
Additional operating modes:

- Pulse width modulation
- Frequency generator
- Single-shot mode

Stepper module ▸ Stepper controller

750-671





Item Description	**Stepper Controller; 24 VDC; 1.5 A**
Version	**Default**
Item No.	**750-671**
Order Text	**Stepper Controller; 24 VDC; 1.5A**

Technical Data	
Number of outputs	1 stepper motor (2 phases/bipolar)
Output current (max.) (motor)	Up to 2 x 1.5 A peak value; 1 A rms
Full-step stepper frequency (max.)	7812 Hz
Resolution	15 bits + 16 bit prescaler
Stepper resolution	23 bits + sign bit
Number of digital inputs	2
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Input filter	100 µs, software filter can be connected
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	85 mA
Data width	12-byte input/output
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; Ex ATEX/IECEx
Data sheet and further information, see:	wago.com/750-671

This stepper controller has an on-board power driver designed to control 2-phase stepper motors up to 24 V/1.5 A.
The 64-fold microstepping prevents step losses due to resonance in the acceleration phases and reduces wear on the mechanical parts. Adjustable current limits for stop, acceleration and constant speed help minimize motor power dissipation. Two configurable inputs for Start/Stop, limit switches, reference cams, Jog/Tip, etc., are evaluated directly and without any further delay by the internal software.
Versatile functions, such as positioning with different acceleration slopes, command tables, camshaft controller, auto referencing and other event-dependent properties provide this controller with a wide spectrum of possible uses.

Operating modes:

- Step positioning
- Reference motion
- Jog
- Tip
- Command table
- Cam switch

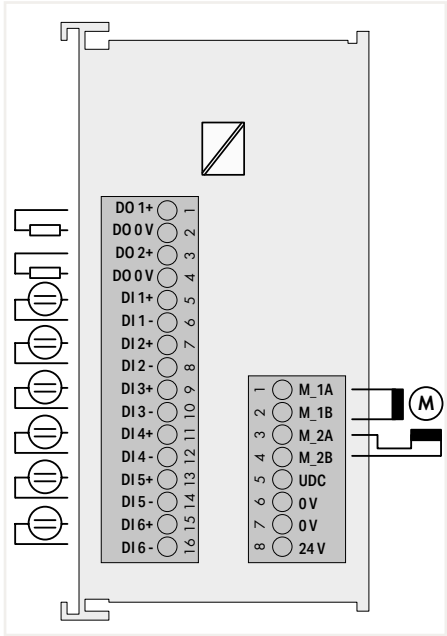
Functions include:

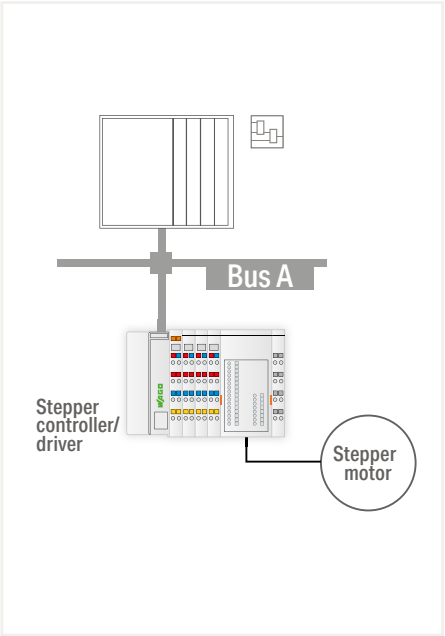
- Absolute/relative positioning
- Setpoint change on the fly
- Rotary axis

7.6

Stepper module ▸ Stepper controller

750-672





Item Description	**Stepper Controller; 70 VDC; 7.5 A**
Version	**Default**
Item No.	**750-672**
Order Text	**Stepper Controller; 70 VDC; 7.5A**

Technical Data	
Number of outputs	1 stepper motor (2 phases)
Supply voltage (motor)	55 VDC; Absolute upper limit: 71.5 V; Absolute lower limit: 18 V
Output current (max.) (motor)	2 x 5.0 A (2 x 7.5 A transient)
Full-step stepper frequency (max.)	7812 Hz
Resolution	15 bits + 16 bit prescaler; 64 microsteps per full step
Stepper resolution	23 bits + sign bit
Load type	Resistive load, inductive load (max. 2 H), lamps
Number of digital outputs	2
Output voltage	**Control voltage**: 24 VDC (-25 % … +30 %), Closed current 120 mA + 2 x 0.5 A (DO1, DO2, load-dependent) **Motor voltage**: Nominal value 55 VDC, Absolute upper limit: 71.5 V, Absolute lower limit: 18 V, Closed current typ. = 5 mA, Protection via external fuse 5 A
Output current per channel	0.5 A
Output current	Short-circuit-protected
Switching frequency (max.)	5 Hz; Inductive load per IEC 947-5-1, DC 13
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Input filter	100 µs, software filter can be connected
Power consumption (5 V system supply)	70 mA
Data width	12-byte input/output
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(48 x 100 x 69.8) mm
Approvals	CE; UL 61800-5-1
Data sheet and further information, see:	wago.com/750-672

This stepper controller has an on-board power driver designed to control 2-phase stepper motors.
The 64-fold microstepping prevents step losses due to resonance in the acceleration phases and reduces wear on the mechanical parts. Adjustable current limits for stop, acceleration and constant speed help minimize motor power dissipation.
Six configurable inputs are directly processed by the internal software without delay. Two outputs can be linked with internal functions or freely allocated. Versatile functions enable a wide application range.

Inputs:

- Start/stop
- Limit switch (positive and negative direction)
- Reference cam
- Jog/tip (positive and negative direction)

Outputs (default setting):

- Target reached
- Error

Operating modes:

- Single positioning with different acceleration ramps
- Reference motion
- Jog
- Tip
- Command table
- Cam switch

Functions include:

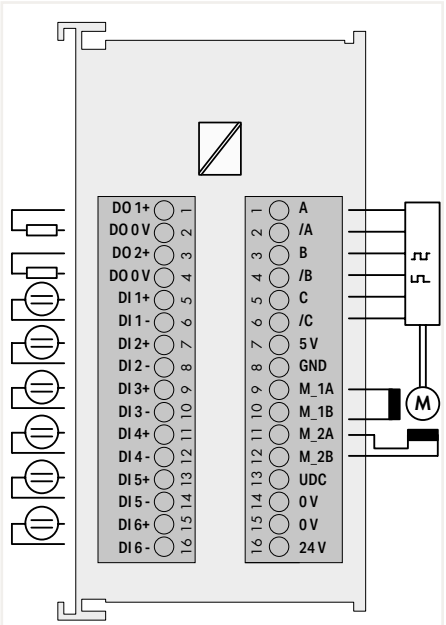
- Absolute/relative positioning
- Setpoint change on the fly
- Rotary axis

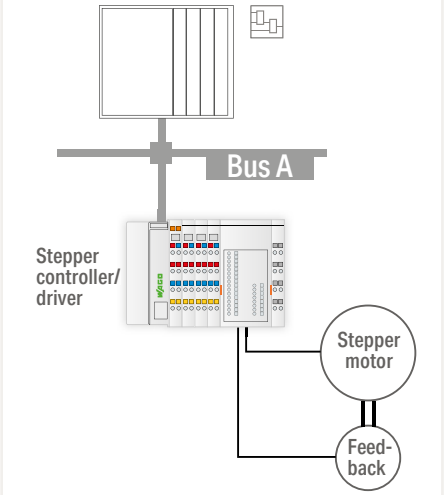
Protection:

- Short circuit monitoring of motor connections: Winding short circuit and short circuit to 0 V and 24 V
- 24 V supply: Reverse voltage protection
- Motor supply: Reverse voltage protection via external fuseg

Stepper module ▸ Servo stepper controller

750-673





Item Description	**Servo Stepper Controller; 55 VDC; 7.5 A**
Version	**Default**
Item No.	**750-673**
Order Text	**Servo Stepper Controller; 55 VDC; 7.5A**

Technical Data	
Number of outputs	1 stepper motor (2 phases)
Supply voltage (motor)	1 stepper motor (2 phases)
Supply voltage (motor)	55 VDC; Absolute upper limit: 71.5 V; Absolute lower limit: 18 V
Output current (max.) (motor)	2 x 5.0 A (2 x 7.5 A transient)
Full-step stepper frequency (max.)	7812 Hz
Signal voltage	Compatible with RS-485/-422, common GND with motor voltage and control voltage
Resolution	15 bits + 16 bit prescaler; 64 microsteps per full step
Stepper resolution	23 bits + sign bit
Load type	Resistive load, inductive load (max. 2 H), lamps
Number of digital outputs	2
Output voltage	**Control voltage**: 24 VDC (-25 % … +30 %), Closed current 120 mA + 2 x 0.5 A (DO1, DO2, load-dependent) + approx. 100 mA (encoder) **Motor voltage**: Nominal value 55 VDC, Absolute upper limit: 71.5 V, Absolute lower limit: 18 V, Closed current typ. = 5 mA, Protection via external fuse 5 A
Output current per channel	0.5 A
Output current	Short-circuit-protected
Switching frequency (max.)	5 Hz; Inductive load per IEC 947-5-1, DC 13
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Input filter	100 µs, software filter can be connected
Transmitter connection	A, /A, B, /B, C, /C
Encoder frequency	1 MHz
Sensor supply	5 VDC, 300 mA, short-circuit-protected
Quadrature decoder	4x evaluation
Counter depth	32 bits
Power consumption (5 V system supply)	70 mA
Data width	12-byte input/output
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(48 x 100 x 69.8) mm
Approvals	CE; UL 61800-5-1
Data sheet and further information, see:	wago.com/750-673

This servo stepper controller has an on-board power driver and an incremental encoder evaluation for controlling 2-phase stepper motors.
The 64-fold microstepping prevents step losses due to resonance in the acceleration phases and reduces wear on the mechanical parts. Together with the incremental encoder, the integrated vector control contributes to efficient, dynamic rotation speed characteristics.
Six configurable inputs are directly processed by the internal software without delay. Two outputs can be linked with internal functions or freely allocated. Versatile functions enable a wide application range.

Inputs:

- Start/stop
- Limit switch (positive and negative direction)
- Reference cam
- Jog/tip (positive and negative direction)

Outputs (default setting):

- Target reached
- Error

Operating modes:

- Single positioning with different acceleration ramps
- Reference motion
- Jog
- Tip
- Command table
- Cam switch

Functions include:

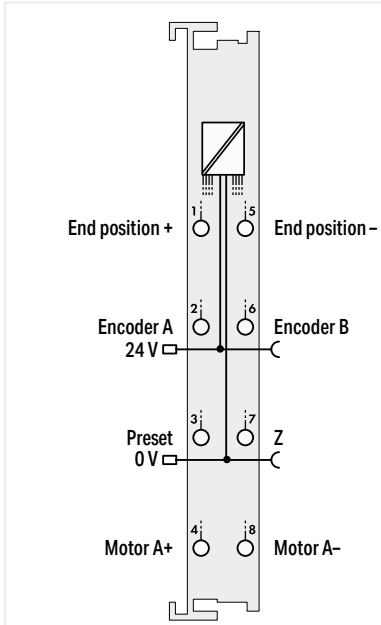
- Absolute/relative positioning
- Setpoint change on the fly
- Rotary axis

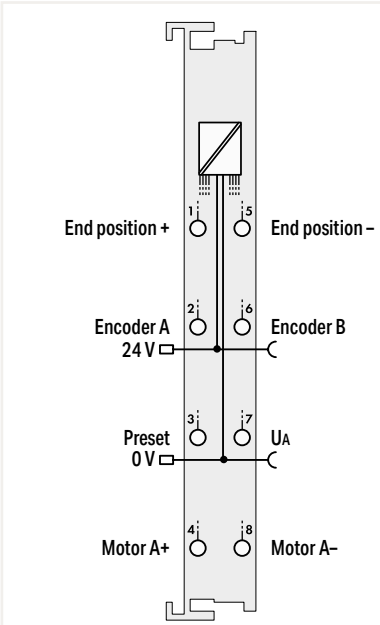
Protection:

- Short circuit monitoring of motor connections: Winding short circuit and short circuit to 0 V and 24 V
- 24 V supply: Reverse voltage protection
- Motor supply: Reverse voltage protection via external fuse

DC drive controller

750-636





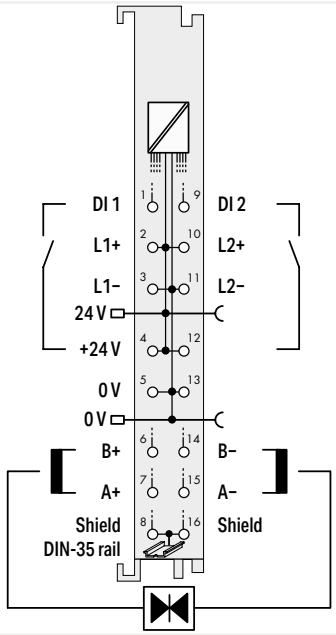
Item Description	DC Drive Controller; 24 VDC; 5 A		DC Drive Controller; 24 VDC; 5 A; External motor voltage	
Version	Default	Ext. Temperature	Separate motor power supply	Separate motor power supply; interference-free
Item No.	**750-636**	**750-636/025-000**	**750-636/000-700**	**750-636/000-800**
Order Text	**DC-Drive Controller; 24 VDC; 5A**	**DC-Drive Controller; 24 VDC; 5A; T**	**DC-Drive Controller; 24 VDC; 5A; UA**	**DC-Drive Controller; 24 VDC; 5A; IF**
Technical Data				
Number of outputs	1 (A+; A-; H-bridge output)		1 (A+; A-; H-bridge output)	
Supply voltage (motor)	24 VDC (–20 … +15 %)		24 VDC (–20 … +15 %); Separate motor voltage: 24 VDC (–20 … +30 %)	
Output current (max.) (motor)	5 A (15 A / 500 ms), short-circuit-protected		5 A (15 A / 500 ms), short-circuit-protected	
Output voltage	19.2 … 27.5 VDC		DC 19,2 … 27,5 V (U_A)	19.2 … 27.5 VDC (U_A)
PWM frequency (typ.)	20 kHz		20 kHz	
Number of digital inputs	3		3	
Input characteristic	Type 1		Type 1	
Input characteristic	High-side switching		High-side switching	
Voltage range for signal (0)	–3 … +1.5 VDC		–3 … +1.5 VDC	
Voltage range for signal (1)	2.4 … 30 VDC		2.4 … 30 VDC	
Transmitter connection	A, B, zero low-side switching; 5 … 24 VDC / open collector		A, B, zero low-side switching; 5 … 24 VDC / open collector	
Quadrature decoder	1x, 2x, 4x evaluation		1x, 2x, 4x evaluation	
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	55 mA		55 mA	
Data width	32-bit set/actual value; 16-bit control or status		32-bit set/actual value; 16-bit control or status	
Isolation	500 V system/field		500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 67.8) mm		(12 x 100 x 67.8) mm	
Approvals	CE		CE	
Data sheet and further information, see:	wago.com/750-636		wago.com/750-636	

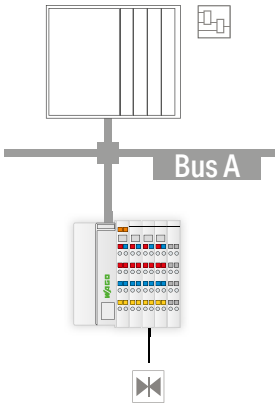
This DC drive controller is a single-channel, intelligent positioning controller for 24 VDC motors up to 5 A with incremental position feedback.
Three 24 V inputs record the limit switches and a preset signal.
An incremental encoder interface evaluates signals from the position sensor and determines actual value.
Current reduction is possible via pulse width modulation (PWM).

As an option, the motor voltage can be supplied separately.

Proportional valve controller

750-632





Item Description	**Proportional Valve Module**
Version	**Standard with 16 connectors**
Item No.	**750-632**
Order Text	**Proportional Valve Module**

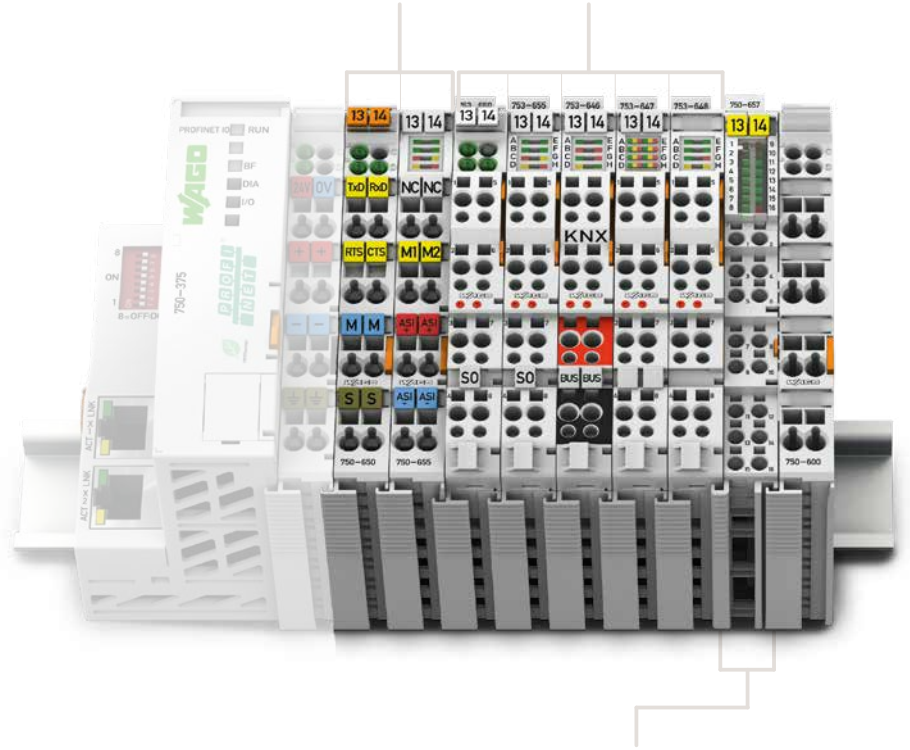
Technical Data	
Number of outputs	2 bipolar outputs (A+, A- and B+, B-)
Output type	H-bridge output with current-regulated PWM output (short-circuit-proof and thermal overload-proof for each channel)
Load type	Operating range: inductive (1 mH … 600 mH); Internal load resistance (> 8 Ohm)
Output current	1-channel operation: 2 A; 2-channel operation: 1.6 A per channel
Input current (typ.)	2.7 mA at 24 V
Dither frequency	250 Hz; 125 Hz; 62.5 … 1 Hz (parameterizable)
PWM frequency (typ.)	50 kHz
Nominal output voltage	24 VDC (–25 … +30 %)
Number of digital inputs	2
Input characteristic	Type 1
Input characteristic	High-side switching
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	125 mA
Data width	6 bytes: single-channel operating mode; 12 bytes: dual-channel operating mode
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-632

This proportional valve module controls two single-coil valves or one valve.
The module features two current-controlled PWM outputs with adjustable dither. Both unipolar and bipolar valve control are possible. Additionally, operation of a valve with two unipolar coils is also provided. The module is single-channel in this operating mode! Characteristic curve adaptations, such as zero offset, dual gain compensation or range limitations, can be adjusted via parameters.
The module functions can be internally triggered via digital outputs without any detours.

Communication Modules

Housing Design (750 Series)	
Dimensions W x H x D	Housing with 4 LEDs: 12 x 100 x 69.8 mm Housing with 8 LEDs: 12 x 100 x 67.8 mm
Depth from upper edge of DIN-rail	Housing with 4 LEDs: 62.6 mm Housing with 8 LEDs: 60.6 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch

Housing Design (753 Series)	
Dimensions W x H x D	Housing with 4 LEDs: 12 x 100 x 69.8 mm Housing with 8 LEDs: 12 x 100 x 69 mm
Depth from upper edge of DIN-rail	Housing with 4 LEDs: 62.6 mm Housing with 8 LEDs: 61.8 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	9 … 10 mm / 0.37 inch



Housing Design (750 Series), with Push-in CAGE CLAMP® Connections (up to 16 connection points)	
Dimensions W x H x D	12 x 100 x 69 mm
Depth from upper edge of DIN rail	61.8 mm
Connection technology	Push-in CAGE CLAMP®
Conductor cross-section	Solid: 0.08 … 1.5 mm² / 28 … 16 AWG Fine-stranded: 0.25 … 1.5 mm² / 22 … 16 AWG
Strip length	8 … 9 mm / 0.33 inch

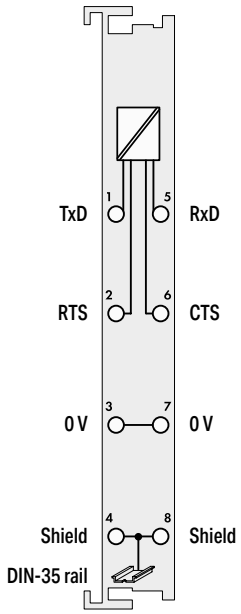
I/O System –
750 XTR Series

I/O System – 750 and 753 Series, Communication Modules
Contents

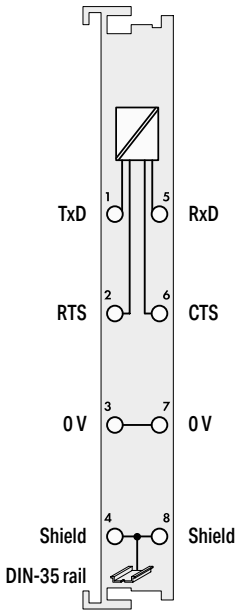
*This module is also available as a variant of the 750 XTR Series.

See Section 8

RS-232 C serial interface



Item Description	Serial Interface RS-232 C				
Version	Adjustable	Pluggable (delivery without connector); adjustable	9600 baud	9600 baud; pluggable (delivery without connector)	9600 baud; 5 bytes
Item No.	**750-650/003-000**	**753-650/003-000**	**750-650**	**753-650**	**750-650/000-001**
Order Text	**RS232 C Interface; Adjust**	**RS232 C Interface; Adjust**	**RS232 C Interface; 9600Bd**	**RS232 C Interface**	**RS232 C Interface; 9600Bd; 5byte**
Technical Data					
Wiring interface		Pluggable		Pluggable	
Signal type	RS-232				
Transmission channels	1 TxD / 1 RxD, full-duplex				
Baud rate	1.2 kBd … 57.6 kBd (9600 baud (default setting))		9.6 kBd		
Parity	None/Even, adjustable		None		
Number of data bits	7/8, adjustable		8		
Number of stop bits	1/2, adjustable		1		
Buffer	120-byte input / 16-byte output				
Power consumption (5 V system supply)	55 mA				
Data width	1 x 24-bit input/output (3-byte user data); 1 x 40-bit input/output (5-byte user data); 1 x 8-bit control/status		1 x 24-bit input/output (3-byte user data); 1 x 8-bit control/status		1 x 24-bit input/output (5-byte user data); 1 x 8-bit control/status
Isolation	500 V system/field				
Surrounding air temperature (operation)	0 … 55 °C				
Dimensions W x H x D	(12 x 100 x 69.8) mm				
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx				
Data sheet and further information, see:	wago.com/750-650/003-000	wago.com/753-650/003-000	wago.com/750-650	wago.com/753-650	wago.com/750-650/000-001
Accessories	**Item No.**	**Item No.**	**Item No.**	**Item No.**	**Item No.**
Plug		753-110		753-110	



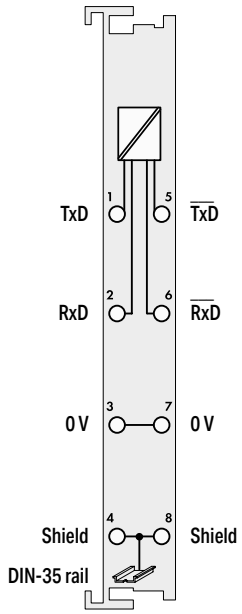
Serial Interface RS-232 C					
9600 baud; even; 7/2 bits	9600 baud; even; 8/1 bits	4800 baud; even; 8/1 bits; 5 bytes	2400 baud; none; 8/1 bits	19200 baud; none; 8/1 bits	19200 baud; even; 8/1 bits
750-650/000-002	750-650/000-006	750-650/000-015	750-650/000-012	750-650/000-010	750-650/000-011
RS232 C Interface; 9600Bd; E; 7/2	RS232 C Interface; 9600Bd; E; 8/1	RS232 C Interface; 4800Bd; E; 8/1; 5byte	RS232 C Interface; 2400Bd; N; 8/1	RS232 C Interface; 19200Bd; N; 8/1	RS232 C Interface; 19200Bd; E; 8/1

RS-232				
1 TxD / 1 RxD, full-duplex				
9.6 kBd	4.8 kBd	2.4 kBd	19.2 kBd	
Even		None		Even
7	8			
2	1			
120-byte input / 16-byte output				
55 mA				
1 x 24-bit input/output (3-byte user data); 1 x 8-bit control/status	1 x 24-bit input/output (5-byte user data); 1 x 8-bit control/status	1 x 24-bit input/output (3-byte user data); 1 x 8-bit control/status		
500 V system/field				
0 … 55 °C				
(12 x 100 x 69.8) mm				
CE; KC; Marine; cULus OrdLoc/HazLoc; IECEx ATEX/IECEx				
wago.com/750-650/000-001				

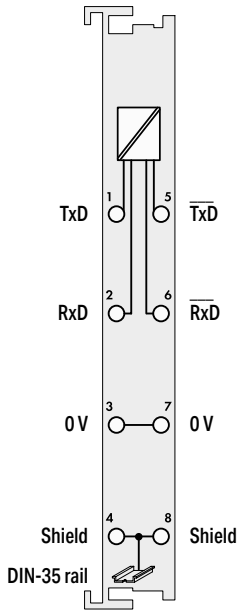
Item No.	Item No.	Item No.	Item No.	Item No.	Item No.

RS-485 serial interface

750-653



Item Description	Serial Interface RS-485				
Version	Default	Pluggable (delivery without connector)	Adjustable	Pluggable (delivery without connector); adjustable	Adjustable; extended temperature
Item No.	**750-653**	**753-653**	**750-653/003-000**	**753-653/003-000**	**750-653/025-000**
Order Text	**RS485 Interface**	**RS485 Interface; 9600Bd; N; 8/1**	**RS485 Interface; Adjust**	**RS485 Interface; Adjust**	**RS485 Interface; Adjust; T**
Technical Data					
Wiring interface		Pluggable		Pluggable	
Signal type	RS-422 / RS-485				
Transmission channels	1 TxD / 1 RxD, full-duplex				
Baud rate	9.6 kBd		1.2 kBd … 19.2 kBd (9600 baud (default setting))		
Parity	None		None/Even, adjustable		
Number of data bits	8		7/8, adjustable		
Number of stop bits	1		1/2, adjustable		
Buffer	120-byte input / 16-byte output				
Power consumption (5 V system supply)	65 mA				
Data width	1 x 24-bit input/output (3-byte user data); 1 x 8-bit control/status				
Isolation	500 V system/field				
Surrounding air temperature (operation)	0 … 55 °C				-20 … 60 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm				
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx				
Data sheet and further information, see:	wago.com/750-653	wago.com/753-653	wago.com/750-653/003-000	wago.com/753-653/003-000	wago.com/750-653/025-000

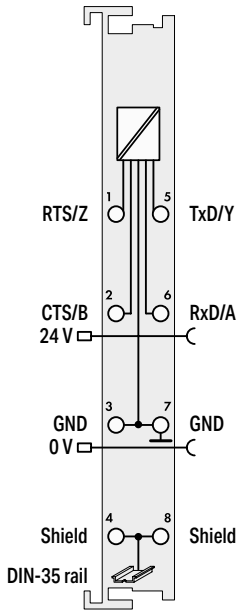


Serial Interface RS-485			
9600 baud; none; 8/1 bits; extended temperature	9600 baud; even; 7/2 bits	9600 baud; even; 8/1 bits	2400 baud; none; 8/1 bits
750-653/025-018	750-653/000-001	750-653/000-002	750-653/000-007
RS485 Interface; 9600Bd; N; 8/1; 5byte; T	RS485 Interface; 9600Bd; E; 7/2	RS485 Interface; 9600Bd; E; 8/1	RS485 Interface; 2400Bd; N; 8/1

RS-422 / RS-485			
1 TxD / 1 RxD, full-duplex			
9.6 kBd			2.4 kBd
None	Even		None
8	7	8	
1	2	1	
120-byte input / 16-byte output			
65 mA			
1 x 40-bit input/output (5-byte user data); 1 x 8-bit control/status	1 x 24-bit input/output (3-byte user data); 1 x 8-bit control/status		
500 V system/field			
-20 … 60 °C	0 … 55 °C		
(12 x 100 x 69.8) mm			
CE; Marine; OrdLoc/HazLoc; ATEX/IECEx			
wago.com/750-653/025-000			

RS-232/485 serial interface

750-652

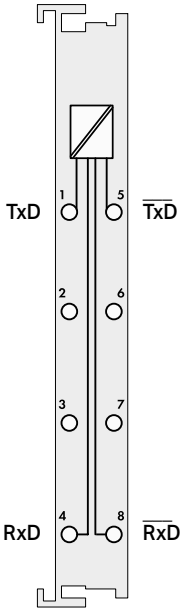


Item Description	Serial Interface RS-232/485		
Version	Default	Ext. Temperature	Pluggable (delivery without connector)
Item No.	**750-652**	**750-652/025-000**	**753-652**
Order Text	**RS232/485 Interface**	**RS232/485 Interface; T**	**RS232/485 Interface**

Technical Data			
Wiring interface			Pluggable
Signal type	RS-232; RS-422 / RS-485		
Transmission channels	1 TxD / 1 RxD, full duplex, half duplex		
Baud rate	300 Baud … 115.2 kBd		
Parity	None/Odd/Even		
Number of data bits	7/8, adjustable		
Number of stop bits	1/2, adjustable		
Buffer	2560-byte input / 512-byte output		
Supply voltage (field)	24 VDC; via power jumper contacts (power supply via blade contact; transmission via spring contact)		
Power consumption (5 V system supply)	85 mA		
Data width	1 x 46/1 x 22/1 x 6-byte input/output (parameterizable), 2-byte control/status		
Isolation	500 V system/field		
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm		(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
Data sheet and further information, see:	wago.com/750-652		wago.com/753-652
Accessories	**Item No.**	**Item No.**	**Item No.**
Plug			753-110

Serial TTY interface

750-651

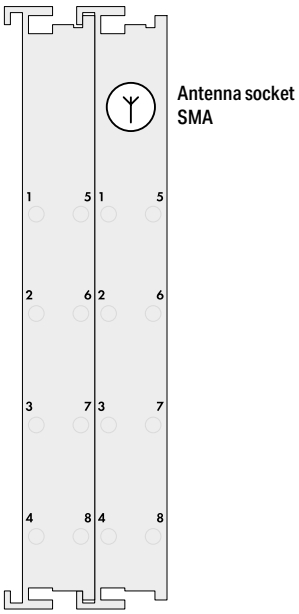


Item Description	Serial TTY Interface	
Version	9600 baud; none; 8/1 bits	9600 baud; even; 8/1 bits
Item No.	750-651	750-651/000-002
Order Text	TTY Interface; 9600Bd; N; 8/1	TTY Interface; 9600Bd; E; 8/1

Technical Data		
Signal type	TTY, 20 mA	
Transmission channels	1 TxD / 1 RxD, full-duplex	
Baud rate	1.2 kBd … 19.2 kBd (9600 baud (default setting))	
Load impedance (current output) (max.)	500 Ω	
Parity	None	Even
Number of data bits	8	
Number of stop bits	1	
Buffer	128-byte input / 16-byte output	
Power consumption (5 V system supply)	55 mA	
Data width	1 x 24-bit input/output (3-byte user data); 1 x 8-bit control/status	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc	
Data sheet and further information, see:	wago.com/750-651	

Radio Receiver EnOcean

750-642



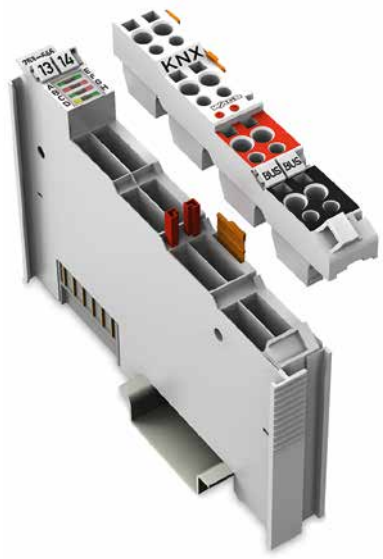
Item Description	**Radio Receiver EnOcean**
Version	**Default**
Item No.	**750-642**
Order Text	**Radio Receiver EnOcean**

Technical Data	
Connection technology: antenna	1 x SMA socket
Frequency band	868.3 MHz
Transmission range	up to 300 m in open spaces (typ. in buildings, see manual)
Radio technology	EnOcean
Power consumption (5 V system supply)	80 mA
Data width	1 x 24-bit input/output (3-byte user data); 1 x 8-bit control/status
Isolation	500 V antenna connection/system
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(24 x 100 x 72) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-642

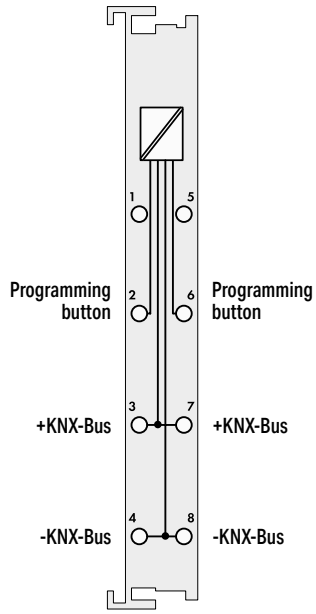
This radio receiver obtains radio telegrams from maintenance-free, self-powered and wireless switches/sensors based on EnOcean radio technology.
The energy required for switch or sensor operation is produced by converting one type of energy (heat, solar or mechanical energy) into usable electrical energy.
The LED (RSSI) indicates a sufficient input level.

Preprogrammed function blocks for WAGO Controllers make integration easy.

KNX/EIB/TP1 Interface



753-646



Item Description	**KNX/EIB/TP1 Interface**
Version	**Pluggable**
Item No.	**753-646**
Order Text	**KNX/EIB/TP1 Interface**

Technical Data	
Wiring interface	Pluggable
Device specification	KNX/TP1 Bus Specification: 1.0
Device-specific	Number of group addresses: 254; Number of communication objects: 253; Number of associations: 254
Baud rate	9.6 kBd (KNX)
Power supply	KNX: via KNX power supply unit
Connection point (other designation)	Programming button; Bridge 2/6
Application	For controllers
Commissioning	WAGO-I/O-*PRO* V2.3
Power consumption (5 V system supply)	25 mA
Data width	24 bytes
Isolation	2.5 kV (rms)
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; cULus OrdLoc
Data sheet and further information, see:	wago.com/753-646

The KNX/EIB/TP1 Module connects to a KNX/EIB/TP1 network. This module supports two different functions:

1. Device mode:
With this module, all programmable fieldbus controllers relevant for building automation can be connected to a KNX/TP1 network. The module is a standard KNX device and is linked via ETS3/4 Professional Commissioning Tool.

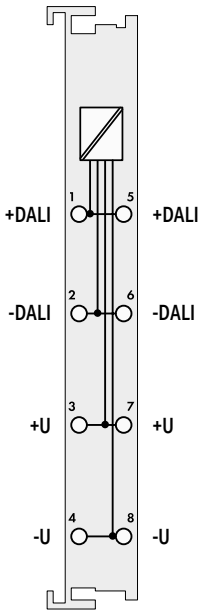
An ETS3/4 plug-in is required so that data from the application program can be allocated to group addresses for the programming software.

2. Router mode:
When connected to a KNX/IP Controller (e.g., 750-889), the combination becomes a KNXnet/IP router. The module is switched to the router mode automatically. An application program is not required for operation in router mode. Additional modules that are connected to a KNX IP Controller are addressed in device mode by the application.

The bus connections are internally bridged inside the plug, so the bus is not interrupted when the plug is pulled from the module. The plug is included with delivery.

DALI Multi-Master

753-647



Item Description	**DALI Multi-Master**
Version	**Pluggable**
Item No.	**753-647**
Order Text	**DALI Multi-Master**

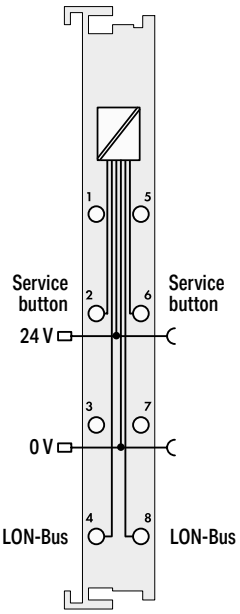
Technical Data	
Wiring interface	Pluggable
Device specification	DALI-2 Specification: DIN IEC 62386 only in conjunction with 753-620 or 787-1007 Power Supplies
Device-specific	Power consumption from DALI bus with alternative supply via DALI bus: 10 mA
Topology	Number of control gears/control devices (DALI): 64 control gears + 64 control devices (addressable)
Power supply	DALI: 18 V (external)
Application	For programmable fieldbus controllers
Commissioning	via WAGO-I/O-CHECK
Power consumption (5 V system supply)	85 mA
Data width	24-byte data
Isolation	2100 VDC DALI bus/local bus
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc
Data sheet and further information, see:	wago.com/753-647

Accessories	**Item No.**
DALI Multi-Master DC/DC Converter	753-620
Switched-mode power supply; for DALI module (753-647); 1-phase; 18 VDC output voltage; 1.1 A output current	787-1007

This manufacturer-independent DALI standard ensures interoperability of DALI devices in lighting applications. This standard is substitute for the 1–10 V dimmer interface.
In addition to 64 DALI actuators (ECGs), a DALI Multi-Master Module supports up to 16 multi-sensors (max. 64 sensor addresses). Each DALI ECG can be assigned to 16 groups and 16 scenes. The DALI Multi-Master Module also offers 16 additional virtual groups on the DALI bus.
DALI control devices can be seamlessly integrated with all other building systems. Several DALI masters can be connected to a single fieldbus node. The maximum number of modules that can be connected to a controller depends on the memory required by the application. Function blocks prepared for DALI are available for programming fieldbus nodes.
Alternatively, an "EASY Mode" allows lighting functions to be readily controlled without any PLC programming.
The DALI Configurator (Section "Software") simplifies commissioning of the DALI network. It provides the following functions: easy commissioning, configuration, service, support and maintenance of the DALI network.

LON® FTT Interface

753-648



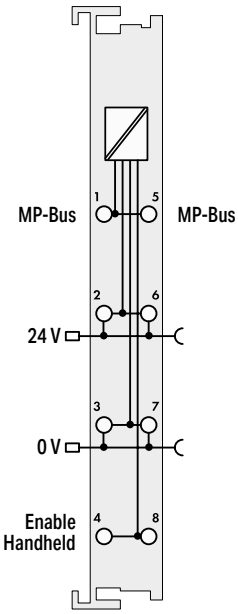
Item Description	**LON® FTT Interface**
Version	**Pluggable**
Item No.	**753-648**
Order Text	**LON FTT Interface**

Technical Data	
Wiring interface	Pluggable
Device-specific	Number of network variables: max. 254 (249 for application)
Number of aliases (max.)	127
Baud rate	0.078 Mbit/s
Bus segment length (max.)	500 m (free topology); 2700 m (bus topology)
Transmission medium	Twisted pair - FTT
Topology	per LON specification
Application	For controllers; max. 2 per controller
Commissioning	via WAGO-I/O-CHECK or WAGO-I/O-*PRO* V2.3
Supply voltage (field)	24 VDC; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	30 mA
Data width	24-byte data
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc
Data sheet and further information, see:	wago.com/753-648

The LON® FTT Interface is a full-fledged and flexible LON® device within LonWorks® FT or LP network. The module's network variable interface defines 249 network variables of any type and supports both LonMark® objects and configuration properties.

MP-Bus Master

750-643



Item Description	**MP-Bus Master**
Version	**Default**
Item No.	**750-643**
Order Text	**MP-Bus Master**

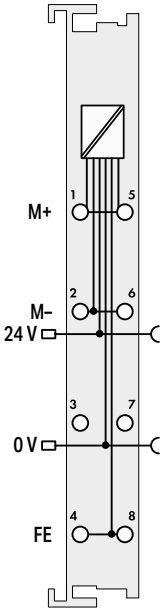
Technical Data	
Device specification	MP-Bus Specification: PP/MP Specification V1.21 from Belimo (Valid since 1.10.2002)
Topology	Number of participants: 8 slaves (max.)
Power supply	MP-Bus: 24 VDC, via power jumper contacts
Application	For controllers
Supply voltage (field)	24 VDC; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	15 mA
Data width	1-byte C/S, 7-byte data
Isolation	500 V (rms) MP-Bus/system
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-643

This module acts as a master for the MP bus (Multi-Point bus from Belimo/Switzerland) and allows the bus to be integrated into a higher level bus network. The MP-Bus controls HVAC actuators for dampers, regulator valves or VAV air volume controls.

The actuators have connections for active and passive sensors (temperature, humidity, ON/OF switch), which may also be accessed via MP-Bus. An MP-Bus master can manage up to 8 slaves (actuators) + 8 sensors (1 sensor per slave) via a common bus line, which considerably reduces actuator and sensor wiring.

M-Bus Master

753-649

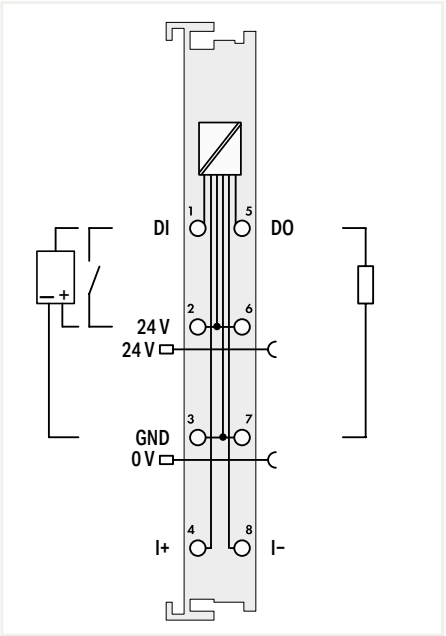


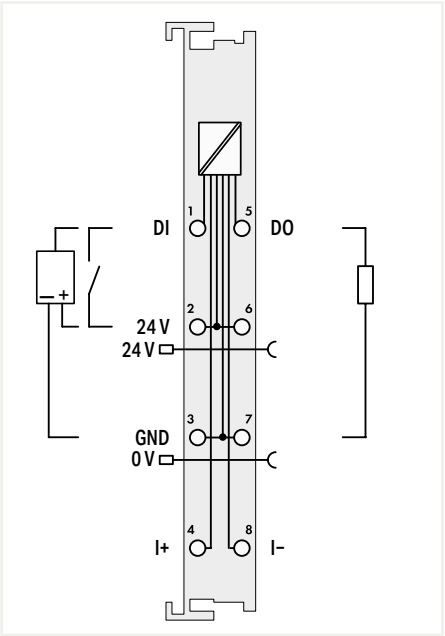
Item Description	**M-Bus Master**
Version	**Pluggable**
Item No.	**753-649**
Order Text	**M-Bus Master**

Technical Data	
Wiring interface	Pluggable
Device-specific	Line length (overall network): up to 1000 m at 9600 baud; up to 2000 m at2400 baud; up to 6000 m at 300 baud; Master/slave distance: up to 500 m at 9600 baud; up to 1000 m at 2400 or 300 baud; M-Bus loads (max.): 40 (1.5 mA each); Overcurrent shutdown: Active current monitoring; Threshold value: approx. 120 mA; Minimum shutdown time: 500 ms
Transmission channels	1, bidirectional
Baud rate	300 Baud … 9.6 kBd (2400 baud (default))
Topology	Star, tree and line topology
Connection requirement (permissible cable type)	2-line, shielded or unshielded
Commissioning	WAGO-I/O-*PRO* V2.3, ***e!****COCKPIT*
Supply voltage (field)	24 VDC (-2.5 … +5 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	40 mA
Data width	24 bytes (mailbox 2.0 with 22-byte length)
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc
Data sheet and further information, see:	wago.com/753-649

SMI Master Module

753-1631



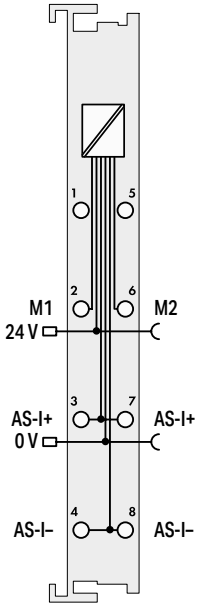


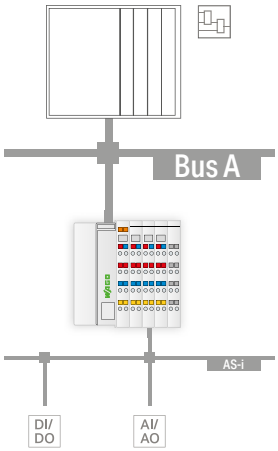
Item Description	SMI Master Module; Low voltage	SMI Master Module; for drives with 230 VAC
Version	LoVo; pluggable	Pluggable
Item No.	**753-1631**	**753-1630**
Order Text	**SMI Master LoVo; 24 VDC**	**SMI Master; 230 VAC**

Technical Data		
Wiring interface	Pluggable	Pluggable
Device specification	SMI Master Interface per "SMI Data Format and Framework Protocol" Specifications Rev. 2.3.2 and "HMI Hardware Specification" Rev. 2.0	SMI Master Interface per "SMI Data Format and Framework Protocol" Specifications Rev. 2.3.2 and "HMI Hardware Specification" Rev. 2.0
Number of SMI channels	1 (1 … 16 SMI slaves per channel)	1 (1 … 16 SMI slaves per channel)
Number of digital inputs	1	1
Input characteristic	Type 1	Type 1
Input voltage (max.)	31.2 VDC	31.2 VDC
Number of digital outputs	1	1
Output current per channel	0.5 A	0.5 A
Connection requirement (permissible cable type)	2-line, unshielded	2-line, unshielded
Connection requirement, permissible cable length	350 m	350 m
Commissioning	via WAGO SMI Configurator or IEC libraries	via WAGO SMI Configurator or IEC libraries
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	42 mA	42 mA
Data width	12-byte data	12-byte data
Isolation	3 kVAC RMS, 4 kV surge (system/SMI); 1.5 kVAC RMS, 2.5 kV surge (system/field)	3 kVAC RMS, 4 kV surge (system/SMI); 1.5 kVAC RMS, 2.5 kV surge (system/field)
Surrounding air temperature (operation)	0 … 55 °C	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm	(12 x 100 x 69.8) mm
Approvals	CE	CE
Data sheet and further information, see:	wago.com/753-1631	wago.com/753-1630

AS-Interface Master

750-655



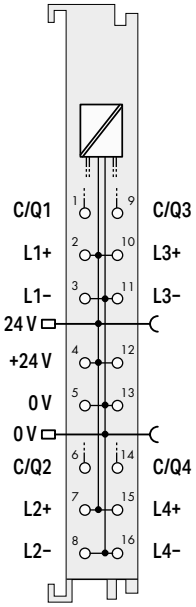


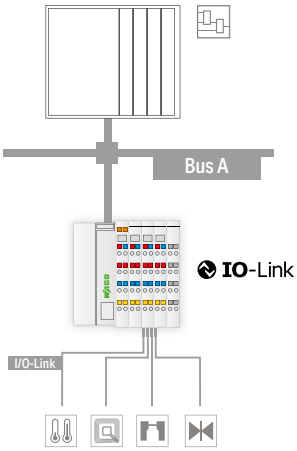
Item Description	AS-Interface Master	
Version	Default	Pluggable (delivery without connector)
Item No.	**750-655**	**753-655**
Order Text	**AS-Interface Master**	**AS-InterfaceMaster**
Technical Data		
Wiring interface		Pluggable
Device specification	AS-i master class: M4; AS-I Specification: 3.0	
Device-specific	AS-I cable length (max.): 100 m, with repeater 300 m	
Topology	Number of slaves: up to 62; Slave profiles: V3.0 with transaction types 1 … 5	
Cycle time (AS-I)	0.3 … 10 ms, depending on the number of slaves	
Power supply	AS-I: 26.5 … 31.6 V	
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	55 mA	
Data width	12 … 48 bytes (max.), configurable, including 1 byte control/status	
Isolation	500 V system/supply/AS-I	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-655	wago.com/753-655
Accessories	**Item No.**	**Item No.**
Plug		753-110

The AS-Interface Master Module connects AS-Interface devices to a higher-level fieldbus.
It acts as a master for the AS-Interface and via the fieldbus coupler, as a slave for the fieldbus. The AS-i functions are provided both cyclically and acyclically via the fieldbus.
Diagnostics, which go far beyond the AS-i specifications, simplify detection of both sporadic configuration errors and AS-i communication interference sources.
An auto-installation mode allows an AS-Interface network to be created via sequential slave installation, with no addressing tool required.
Both signal transmission and operating status, as well as trouble-free local bus communication, are indicated via LEDs.

IO-Link Master

750-657





Item Description	**IO-Link Master**
Version	**Standard with 16 connectors**
Item No.	**750-657**
Order Text	**IO-Link Master**

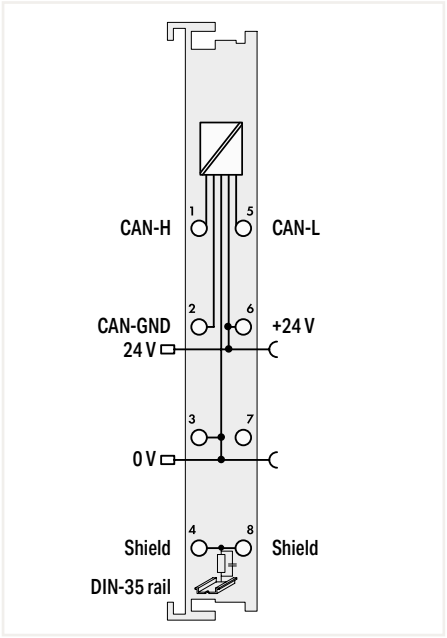
Technical Data	
Transmission modes	4.8 kBaud (COM 1), 38.4 kBaud (COM 2), 230.4 kBaud (COM 3)
Topology	Number of IO-Link ports: 4
Connection requirement, permissible cable length	20 m
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	40 mA
Data width	4–24 bytes, configurable
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; Ex ATEX/IECEx
Data sheet and further information, see:	wago.com/750-657

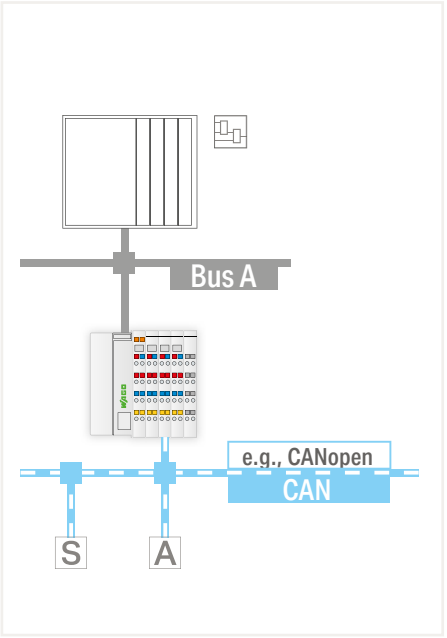
Four different IO-Link devices or standard digital sensors/actuators can simultaneously connect to the IO-Link Master. Process data, as well as acyclic data for identification, configuration, parameterization and diagnostics can be communicated to the respective device via a 3-wire connection.

The functions and performance data are defined in device description files for master and devices; these are easy to customize via engineering tool. If a device must be replaced, the IO-Link devices' configuration and parameterization can be automatically restored without maintenance personnel. Project design, installation and operation are simplified!

CAN Gateway

750-658





Item Description	**CAN Gateway**
Version	**Default**
Item No.	**750-658**
Order Text	**CAN Gateway**

Technical Data	
Device-specific	Operating modes: Sniffer mode, transparent mode, mapped mode
Number of inputs	1 (CAN interface)
Transmission modes	10 kbit/s; 20 kbit/s; 50 kbit/s; 125 kbit/s; 250 kbit/s; 500 kbit/s; 800 kbit/s (auto-baudrate); Data formats: per 2.0 A standard (11-bit ID); per 2.0 B extended (29-bit ID)
Supply voltage (field)	24 VDC; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	50 mA
Data width	Configurable to 8, 12, 16, 20, 24, 32, 40, 48 bytes; incl. control/status byte
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-658

The CAN Gateway allows a CAN bus to be installed as a sub-bus beneath a fieldbus coupler or controller. It enables special sensors/actuators that are only available with the widely used CAN bus to also be integrated under other bus systems. Function blocks allow the gateway to read and write higher-protocol telegrams (e.g., CANopen).

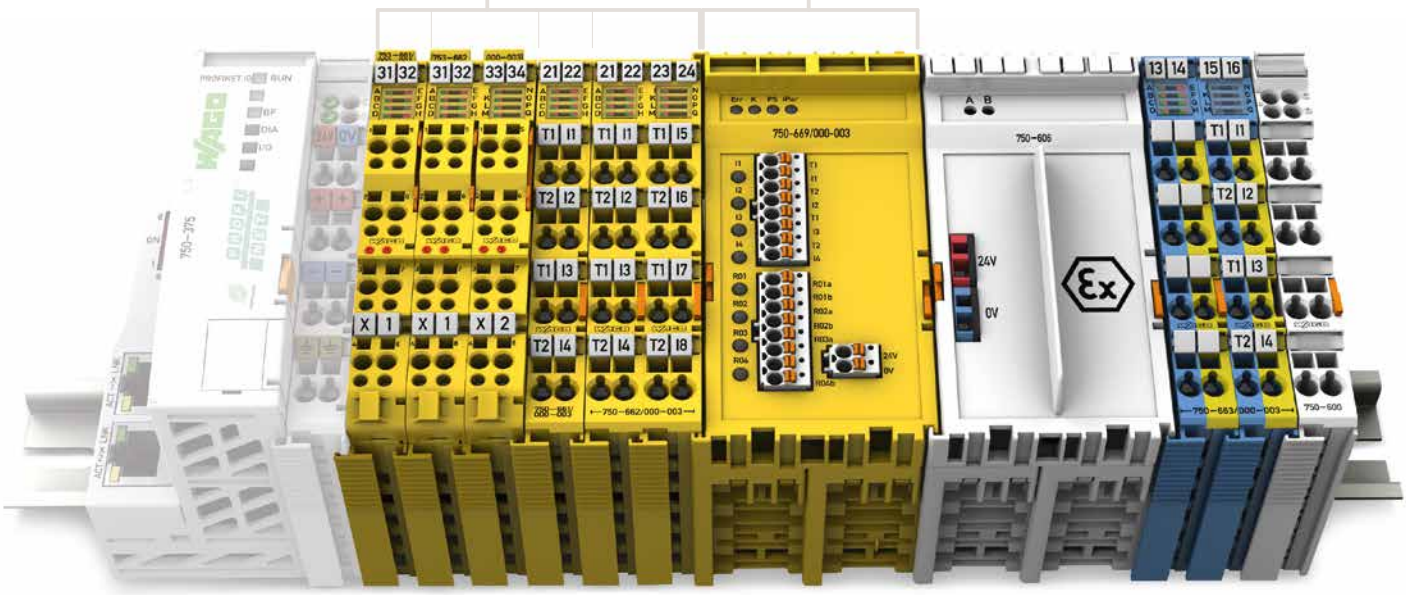
The module offers three different operating modes:

- Sniffer mode: Detailed analysis of the CAN bus through passive “snooping”
- Transparent mode: Active CAN subscriber that can send and receive any type of CAN telegram
- Mapped mode: Enables direct generation of CAN telegrams from the process image, or selective copying of process values from received CAN telegrams into the input process image (cyclic or event-based)

Functional Safety

Housing Design (750/753 Series)	
Dimensions W x H x D	750 Series: 12 or 24 x 67.8 x 100 mm 753 Series: 12 or 24 x 69 x 100 mm
Height from upper edge of DIN-rail	750 Series: 60.6 mm; 753 Series: 61.8 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	750 Series: 8 … 9 mm / 0.33 inch 753 Series: 9 … 10 mm / 0.37 inch

Specialty Housing	
Dimensions W x H x D	48 x 69.8 x 100
Height from upper edge of DIN-rail	62.6 mm
Connection technology	Push-in CAGE CLAMP®
Conductor cross-section	0.05 … 1.5 mm² / 20 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch

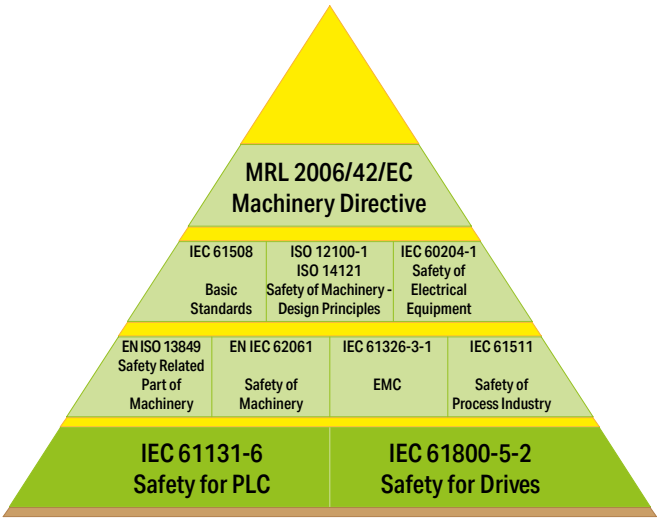


Functional Safety

In the European Union, the machinery directive defines the requirements for machine and system safety. This ensures a uniform standard for protecting the "life and limb" of workers within a machine's operating area.

The required risk assessment is based on harmonized standards (e.g., EN 13849) and identifies existing risks and required risk reduction (SIL or PL quality). Based on the risk assessment, safety functions can be implemented, e.g., by presence detection or protection zone violations, using secure switches or light arrays to shut down the "risk" immediately. For this purpose, the safety signals are detected by the "yellow" safety modules and transmitted via "PROFIsafe" to the fail-safe PLC for additional processing. The result is then executed via safe actuator (e.g., output module or controller).

The unique safety characteristics of the WAGO modules facilitate calculation of the final safety function up to Cat. 4/PLe according to EN 13849, or SIL3 according to EN 62061 or IEC 61511.



I/O System – 750 and 753 Series, Functional Safety
Contents

Position Paper CB24I of the German Electrical and Electronic Manufacturer's Association (ZVEI)

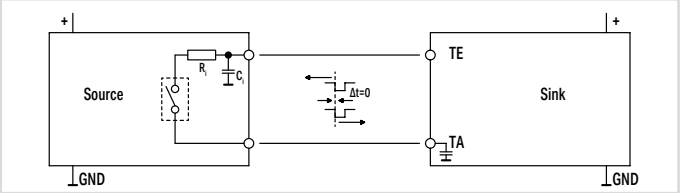
Fail-safe digital interfaces differ from conventional digital interfaces through higher safety testing for both inputs and outputs.
They include dynamic digital interfaces of different characteristics and functions. At first glance, the combination of inputs to outputs results in many possible variants due to the different applications.
For this reason, ZVEI has issued the Position Paper CB24i to increase functional safety and simplify engineering processes.

The purpose of this paper is to:
- describe terms
- define characteristics of interface types
- specify product information (technical data) per interface type to be supplied by the manufacturer.

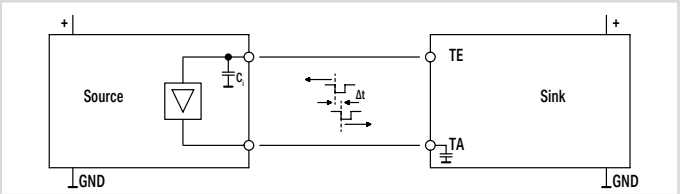
This paper provides a technical description for all interface types.
No safety-related assessment is made.

The variety of possible combinations was divided into just four interface types (see right).

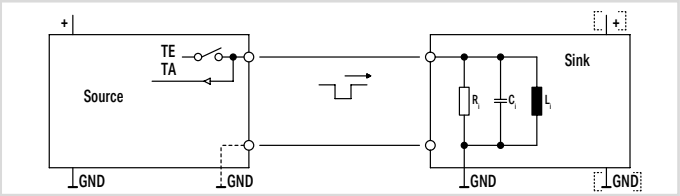
For both interface types C and D, four "performance" classes are also available to match the time requirements of the test pulses.



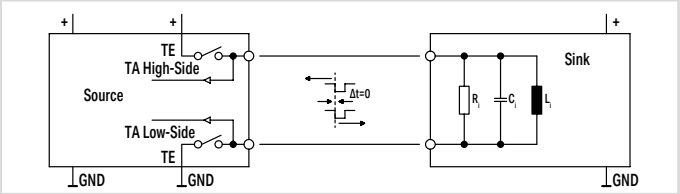
Interface type A



Interface type B



Interface type C



Interface type D

The identifying key has the following structure:

Source/Sink	Interface type (and class)	Additional measures "M"	Sink/Source	Suitable interface type (and class)	Suitable interface type (and class)	Suitable interface type (and class)

The first position describes the interface type and, if necessary, the class of the product. The second position indicates if additional measures are required. Next, the interface type suitable for this product is specified. Up to three interface types can be indicated.
A row can only contain interface types of the same kind. Depending on the product, several identifying keys may also be used.

Examples:

a) Manufacturer information for a source of interface type C/class 2 (e.g., sensor):

Source	C2		Sink	C1	C2	

Explanation: In this case, a source of type C2 is compatible with a sink of type C1 and also with a sink of type C2.

b) Manufacturer information for a sink of interface type C/class 2 (e.g., safety PLC):

Sink	C2		Source		C2	C3

Explanation: In this case, a sink of type C2 is compatible with a source of type C2 and also with a sink of type C3.

c) Manufacturer information for a sink of interface type A (e.g., safety evaluation unit):

Sink	A	M	Source	A		

Explanation: In this case, a sink of type A is compatible with a source of type A subject to "M" additional measures.

Complete information can be found in the ZVEI Position Paper CB24i.
This position paper is available for download in German and English via the ZVEI website.

Classification of Binary 24 V Interfaces with Testing in the Field of Functional Safety per ZVEI Position Paper CB24I

WAGO – Functional Safety		Identifying Key per ZVEI Position Paper CB24I										
					Measures							
Description	Item No.	Source/Sink	Interface type	Additional measures "M"	Parameterize filter time/ short circuit test	Parameterize/switch off test pulse duration	Protected wiring	Sink/Source	Suitable interface type	Suitable interface type	Suitable interface type	Suitable interface type
Inputs												
Fail-Safe Digital Input, 4 Channels; 24 VDC; PROFIsafe V 2.0 iPar	750-661/000-003	Sink	A	-				Source	A	-	-	-
		Sink	C0	M	x			Source	C0	C1	C2	C3
Fail-Safe Digital Input, 4 Channels; 24 VDC; PROFIsafe V 2.0 iPar	753-661/000-003	Sink	A	-				Source	A	-	-	-
		Sink	C0	M	x			Source	C0	C1	C2	C3
Fail-Safe Digital Input, 8 Channels; 24 VDC; PROFIsafe V 2.0 iPar	750-662/000-003	Sink	A	-				Source	A	-	-	-
		Sink	C0	M	x			Source	C0	C1	C2	C3
Fail-Safe Digital Input, 8 Channels; 24 VDC; PROFIsafe V 2.0 iPar	753-662/000-003	Sink	A	-				Source	A	-	-	-
		Sink	C0	M	x			Source	C0	C1	C2	C3
Inputs/outputs												
Fail-Safe Digital Input/Output, 4/2 Channels; 24 VDC; 10 A; PROFIsafe V 2.0 iPar	750-666/000-003	Sink	A	-				Source	A	-	-	-
		Sink	C0	M	x			Source	C0	C1	C2	C3
		Source	C0	M		x		Sink	C0	C1	C2	C3
		Source	D0	M		x		Sink	D0	D1	D2	D3
Fail-Safe Digital Input/Output, 4/2 Channels; 24 VDC; 10 A; PROFIsafe V 2.0 iPar	753-666/000-003	Sink	A	-				Source	A	-	-	-
		Sink	C0	M	x			Source	C0	C1	C2	C3
		Source	C0	M		x		Sink	C0	C1	C2	C3
		Source	D0	M		x		Sink	D0	D1	D2	D3
Fail-Safe Digital Input/Output, 4/4 Channels; 24 VDC; 2 A; PROFIsafe V 2.0 iPar	750-667/000-003	Sink	A	-				Source	A	-	-	-
		Sink	C0	M	x			Source	C0	C1	C2	C3
		Source	C0	M		x		Sink	C0	C1	C2	C3
		Source	D0	M		x		Sink	D0	D1	D2	D3
Fail-Safe Digital Input/Output, 4/4 Channels; 24 VDC; 2 A; PROFIsafe V 2.0 iPar	753-667/000-003	Sink	A	-				Source	A	-	-	-
		Sink	C0	M	x			Source	C0	C1	C2	C3
		Source	C0	M		x		Sink	C0	C1	C2	C3
		Source	D0	M		x		Sink	D0	D1	D2	D3
Fail-Safe Digital Input/Relay Output, 4/4 Channels; 48 VAC/60 VDC; 6 A; PROFIsafe V 2.0 iPar	750-669/000-003	Sink	A	-				Source	A	-	-	-
		Sink	C0	M	x			Source	C0	C1	C2	C3
		Source	A	-				Sink	A	-	-	-
		Source	C0	M			x	Sink	C0	C1	C2	C3
Intrinsically Safe Input												
Intrinsically Safe 4-Channel Digital Input; 24 VDC; PROFIsafe V 2.0 iPar	750-663/000-003	Sink	A	-				Source	A	-	-	-
		Sink	C0	M	x			Source	C0	C1	C2	C3

Classification of Binary 24 V Interfaces with Testing in the Field of Functional Safety per ZVEI Position Paper CB24I

Interface Type A – Sink	Item: 75x-661/000-003; 75x-662/000-003; 75x-666/000-003; 75x-667/000-003; 750-669/000-003			Item: 75x-663/000-003		
Parameters	Min.	Typ. (24 V)	Max.	Min.	Typ. (24 V)	Max.
Input current I_i (in the ON state)	>2 mA	-	<9 mA	>2 mA	3 mA	<9 mA
Output voltage U_i	Field power supply −0.2 V	-	-	Field power supply −0.2 V	-	-
Input capacitance C_i	-	-	12 nF	-	-	12 nF
Additional measure "M"	Parameterize filter time; activate short circuit test			Parameterize filter time; activate short circuit test		

Interface Type C – Sink, Class C0	Item: 75x-661/000-003; 75x-662/000-003; 75x-666/000-003; 75x-667/000-003; 750-669/000-003			Item: 75x-663/000-003		
Parameters	Min.	Typ. (24 V)	Max.	Min.	Typ. (24 V)	Max.
Test pulse duration t_i	0.5 ms	-	200 ms	0.5 ms	-	200 ms
Test pulse interval T	18 ms	42 ms	1230 ms	18 ms	42 ms	1230 ms
Input resistance R	-	3.6 kΩ	8.5 kΩ	-	2.4 kΩ	8.5 kΩ
Input capacitance C_L	-	-	12 nF	-	-	12 nF
Inductance L_L	-	-	-	-	-	-
Additional measure "M"	Parameterize filter time Deactivate short circuit test			Parameterize filter time Deactivate short circuit test		

Interface Type C – Sink, Class C1	Item: 75x-661/000-003; 75x-662/000-003; 75x-666/000-003; 75x-667/000-003; 750-669/000-003			Item: 75x-663/000-003		
Parameters	Min.	Typ. (24 V)	Max.	Min.	Typ. (24 V)	Max.
Test pulse duration t_i	2 ms	-	200 ms	2 ms	-	200 ms
Test pulse interval T	18 ms	42 ms	1230 ms	18 ms	42 ms	1230 ms
Input resistance R	-	3.6 kΩ	8.5 kΩ	-	2.4 kΩ	8.5 kΩ
Input capacitance C_L	-	-	12 nF	-	-	12 nF
Inductance L_L	-	-	-	-	-	-
Additional measure "M"	Parameterize filter time to at least 2 ms Deactivate short circuit test			Parameterize filter time to at least 2 ms Deactivate short circuit test		

Interface Type C – Sink, Class C2	Item: 75x-661/000-003; 75x-662/000-003; 75x-666/000-003; 75x-667/000-003; 750-669/000-003			Item: 75x-663/000-003		
Parameters	Min.	Typ. (24 V)	Max.	Min.	Typ. (24 V)	Max.
Test pulse duration t_i	1 ms	-	200 ms	1 ms	-	200 ms
Test pulse interval T	18 ms	42 ms	1230 ms	18 ms	42 ms	1230 ms
Input resistance R	-	3.6 kΩ	8.5 kΩ	-	2.4 kΩ	8.5 kΩ
Input capacitance C_L	-	-	12 nF	-	-	12 nF
Inductance L_L	-	-	-	-	-	-
Additional measure "M"	Parameterize filter time to at least 1 ms Deactivate short circuit test			Parameterize filter time to at least 1 ms Deactivate short circuit test		

Interface Type C – Sink, Class C3	Item: 75x-661/000-003; 75x-662/000-003; 75x-666/000-003; 75x-667/000-003; 750-669/000-003			Item: 75x-663/000-003		
Parameters	Min.	Typ. (24 V)	Max.	Min.	Typ. (24 V)	Max.
Test pulse duration t_i	0.5 ms	-	200 ms	0.5 ms	-	200 ms
Test pulse interval T	18 ms	42 ms	1230 ms	18 ms	42 ms	1230 ms
Input resistance R	-	3.6 kΩ	8.5 kΩ	-	2.4 kΩ	8.5 kΩ
Input capacitance C_L	-	-	12 nF	-	-	12 nF
Inductance L_L	-	-	-	-	-	-
Additional measure "M"	Parameterize filter time to at least 0.5 ms Deactivate short circuit test			Parameterize filter time to at least 0.5 ms Deactivate short circuit test		

Classification of Binary 24 V Interfaces with Testing in the Field of Functional Safety per ZVEI Position Paper CB24I

Interface Type A – Source	Item: 750-669/000-003		
Parameters	Min.	Typ.	Max.
Switching current I_i	3 mA	-	6 A per contact
Switching voltage U_i	10 V	-	60 VDC / 48 VAC
Internal resistance Ri (in the switched state)	-	-	100 mΩ
Load capacitance C_L	-	-	-
Load inductance L_L	-	-	1.2 H
Potential-free	Yes		

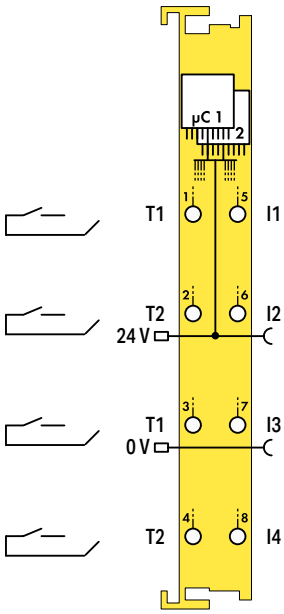
Interface Type C – Source, Class C0	Item: 75x-666/000-003			Item: 75x-667/000-003		
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.
Test pulse duration t_i	2 ms	-	500 ms	1 ms	-	500 ms
Leakage current ILeakage of the output in the OFF state	-	-	<1 mA	-	-	1.2 mA
Nominal current IN of the output in the ON state	-	-	10 A	20 mA	2 A	2.4 A
Capacitive load C_L	-	-	10,000 µF	-	-	2.2 µF
Inductive load L_L	-	-	1.2 H	-	-	1.2 H
Additional measure "M"	Parameterize test pulse duration Parameterize output tolerance time			Parameterize test pulse duration		

Interface Type D – Source, Class D0	Item: 75x-666/000-003			Item: 75x-667/000-003		
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.
Test pulse duration t_i	2 ms	-	500 ms	1 ms	-	500 ms
Leakage current ILeakage of the output in the OFF state	-	-	<1 mA	-	-	1.2 mA
Nominal current IN of the output in the ON state	-	-	10 A	20 mA	2 A	2.4 A
Capacitive load C_L	-	-	10,000 µF	-	-	2.2 µF
Inductive load L_L	-	-	1.2 H	-	-	1.2 H
Additional measure "M"	Parameterize test pulse duration Parameterize output tolerance time			Parameterize test pulse duration		

Interface Type D – Source, Class D1	Item: 75x-667/000-003		
Parameters	Min.	Typ.	Max.
Test pulse duration t_i	-	-	1 ms
Leakage current ILeakage of the output in the OFF state	-	-	1.2 mA
Nominal current IN of the output in the ON state	20 mA	2 A	2.4 A
Capacitive load C_L	-	-	2.2 µF
Inductive load L_L	-	-	1.2 H
Additional measure "M"	Parameterize test pulse duration to 1 ms		

Interface Type D – Source, Class D1, D2, D3	Item: 75x-666/000-003			Item: 75x-667/000-003		
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.
Test pulse duration t_i	-	-	-	-	-	-
Leakage current ILeakage of the output in the OFF state	-	-	<1 mA	-	-	1.2 mA
Nominal current IN of the output in the ON state	20 mA	2 A	10 A	20 mA	2 A	2.4 A
Capacitive load C_L	-	-	10,000 µF	-	-	2.2 µF
Inductive load L_L	-	-	1.2 H	-	-	1.2 H
Additional measure "M"	Parameterize test pulse duration to 0 ms (off) Parameterize output tolerance time Program safety application for automatic test: Switch off the output once every 8 h Parameterize output configuration			Parameterize test pulse duration to 0 ms (off) Program safety application for automatic test: Switch off the output once every 8 h		

Functional safety ▸ Digital input



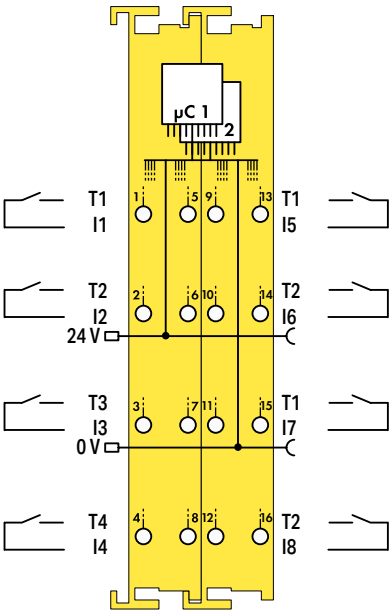
Item Description	**Fail-Safe Digital Input, 4 Channels; 24 VDC; PROFIsafe V 2.0 iPar**	
Version	**Default**	**Pluggable**
Item No.	**750-661/000-003**	**753-661/000-003**
Order Text	**4FDI; 24 VDC; PROFIsafe V2 iPar**	**4FDI; 24 VDC; PROFIsafe V2 iPar**

Technical Data		
Wiring interface		Pluggable
Number of digital inputs	4	
Achievable safety classes	SIL 3; Category 4, PL e	
Protocol	PROFIsafe V2	
Configuration options	PROFIsafe address adjustable via DIP switch or engineering software	
Sensor connection	4 x (Fail-safe input with test pulse)	
Input characteristic	Clock sensitive	
Input characteristic	Type 1 per IEC 61131	
Input current per channel for signal (1) (typ.)	2.2 mA	
Signal frequency (max.)	50 Hz	
Supply voltage (field)	24 VDC, SELV/PELV (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	145 mA	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 69) mm
Functional Safety		
Safety standards	IEC 61508-1 … -7; EN ISO 13849-1; EN 62061	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-661/000-003	wago.com/753-661/000-003
Accessories	**Item No.**	**Item No.**
Plug; Safety		753-120

Support for iPar servers allows automatic parameter restoration when replacing an I/O module.

Functional safety ▸ Digital input

750-662/000-003



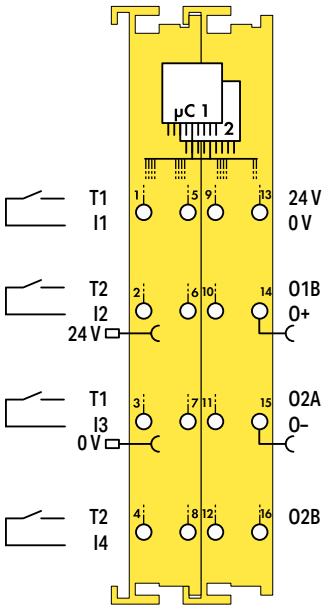
Item Description	Fail-Safe Digital Input, 8 Channels; 24 VDC; PROFIsafe V 2.0 iPar	
Version	Default	Pluggable
Item No.	750-662/000-003	753-662/000-003
Order Text	8FDI; 24 VDC; PROFIsafe V2 iPar	8FDI; 24 VDC; PROFIsafe V2 iPar

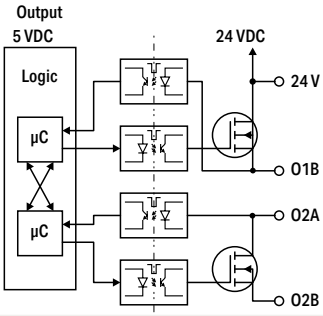
Technical Data		
Wiring interface		Pluggable
Number of digital inputs	8	
Achievable safety classes	SIL 3; Category 4, PL e	
Protocol	PROFIsafe V2	
Configuration options	PROFIsafe address adjustable via DIP switch or engineering software	
Sensor connection	8 x (Fail-safe input with test pulse)	
Input characteristic	Clock sensitive	
Input characteristic	Type 1 per IEC 61131	
Input current per channel for signal (1) (typ.)	2.2 mA	
Signal frequency (max.)	50 Hz	
Supply voltage (field)	24 VDC, SELV/PELV (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	148 mA	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(24 x 100 x 67.8) mm	(24 x 100 x 69) mm
Functional Safety		
Safety standards	IEC 61508-1 … -7; EN ISO 13849-1; EN 62061	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-662/000-003	wago.com/753-662/000-003
Accessories	**Item No.**	**Item No.**
Plug; Safety		753-120

Support for iPar servers allows automatic parameter restoration when replacing an I/O module.

Functional safety ▸ Digital input; Digital output

750-666/000-003





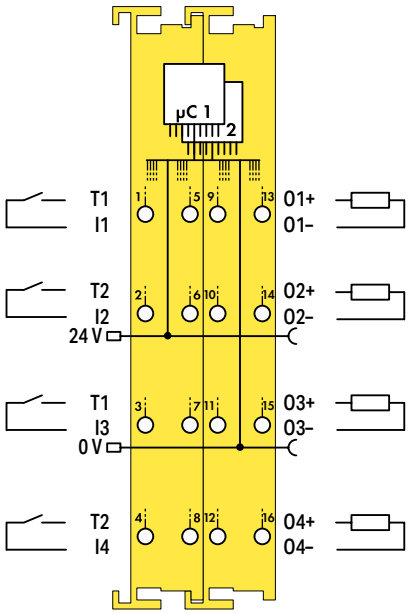
This module enables a fail-safe 2-channel switch-off (single failure protection) when the power outputs are used in a bipolar configuration. If a fail-safe 1-channel switch-off is adequate, two independent switching channels are available.
The module is capable of safely shutting off the supply voltage of entire actuator groups which are connected to the standard modules arranged to the right.
The 2-channel circuit types P-M and P-P, as well as the 1-channel circuit types P, P or P, M are available.

Support for iPar servers allows automatic parameter restoration when replacing an I/O module.

Item Description	Fail-Safe Digital Input/Output, 4/2 Channels; 24 VDC; 10 A; PROFIsafe V 2.0 iPar	
Version	Default	Pluggable
Item No.	**750-666/000-003**	**753-666/000-003**
Order Text	**4FDI/2FDO; 24 VDC; 10A; PROFIsafe V2 iPar**	**4FDI/2FDO; 24 VDC; 10A; PROFIsafe V2 iPar**
Technical Data		
Wiring interface		Pluggable
Number of digital inputs	4	
Achievable safety classes	SIL 3; Category 4, PL e	
Protocol	PROFIsafe V2	
Configuration options	PROFIsafe address adjustable via DIP switch or engineering software	
Sensor connection	4 x (Fail-safe input with test pulse)	
Input characteristic	Clock sensitive	
Input characteristic	Type 1	
Input current per channel for signal (1) (typ.)	2.2 mA	
Signal frequency (max.)	50 Hz	
Number of digital outputs	2	
Output circuit design	Power outputs	
Actuator connection	2 x (Fail-safe output with test pulse)	
Output current per channel	10 A	
Output current	Short-circuit-protected	
Output current (module)	20 A	
Switching frequency (max.)	50 Hz; Resistive load	
Switching frequency (max.) (2)	0.1 Hz; Inductive load	
Supply voltage (field)	24 VDC (-15 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	190 mA	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(24 x 100 x 67.8) mm	(24 x 100 x 69) mm
Functional Safety		
Safety standards	IEC 61508-1 … -7; EN ISO 13849-1; EN 62061	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-666/000-003	wago.com/753-666/000-003
Accessories	**Item No.**	**Item No.**
Plug; Safety		753-120

Functional safety ▸ Digital input; Digital output

750-667/000-003



Item Description	Fail-Safe Digital Input/Output, 4/4 Channels; 24 VDC; 2 A; PROFIsafe V 2.0 iPar	
Version	Default	Pluggable
Item No.	750-667/000-003	753-667/000-003
Order Text	4FDI/4FDO; 24 VDC; 2A; PROFIsafe V2 iPar	4FDI/4FDO; 24 VDC; 2A; PROFIsafe V2 iPar

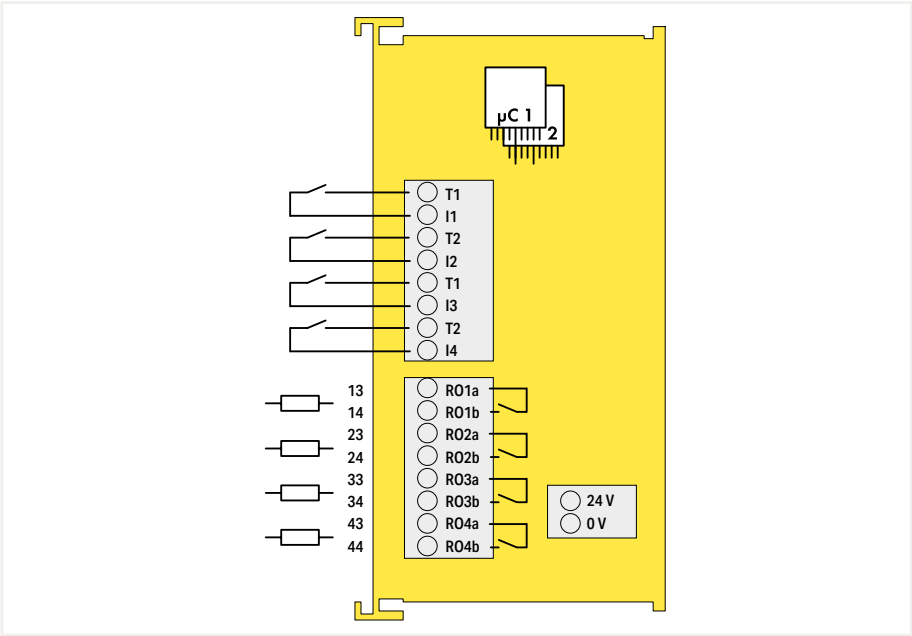
Technical Data		
Wiring interface		Pluggable
Number of digital inputs	4	
Achievable safety classes	SIL 3; Category 4, PL e	
Protocol	PROFIsafe V2	
Configuration options	PROFIsafe address adjustable via DIP switch or engineering software	
Sensor connection	4 x (Fail-safe input with test pulse)	
Input characteristic	Clock sensitive	
Input characteristic	Type 1 per IEC 61131	
Input current per channel for signal (1) (typ.)	2.2 mA	
Signal frequency (max.)	50 Hz	
Number of digital outputs	4	
Output circuit design	Power outputs	
Actuator connection	4 x (Fail-safe output with test pulse)	
Output current per channel	2 A	
Output current	Short-circuit-protected	
Output current (module)	8 A	
Capacitive load for each channel	O1 … O4; 2.2 µF	
Switching frequency (max.)	50 Hz; Resistive load	
Switching frequency (max.) (2)	0.1 Hz; Inductive load	
Supply voltage (field)	24 VDC, SELV/PELV (-15 … +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	180 mA	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(24 x 100 x 67.8) mm	(24 x 100 x 69) mm
Functional Safety		
Safety standards	IEC 61508-1 … -7; EN ISO 13849-1; EN 62061	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-667/000-003	wago.com/753-667/000-003
Accessories	**Item No.**	**Item No.**
Plug; Safety		753-120

The 2-channel circuit types P-M and P-P as well as the 1-channel circuit types P, P or P, M are available at each output. When two 1-channel P circuits are used, Categories 4/PLe or SIL3 are possible.

Support for iPar servers allows automatic parameter restoration when replacing an I/O module.

Functional safety ▸ Digital input; Relay output

750-669/000-003



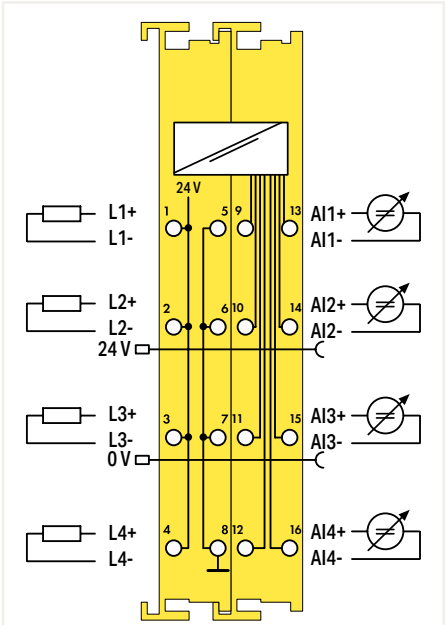
Item Description	**Fail-Safe Digital Input/Relay Output, 4/4 Channels; 48 VAC/60 VDC; 6 A; PROFIsafe V 2.0 iPar**
Item No.	**750-669/000-003**
Order Text	**4FDI/4FRO; 48VAC/ 60VDC; 6A; PROFIsafe V2 iPar**

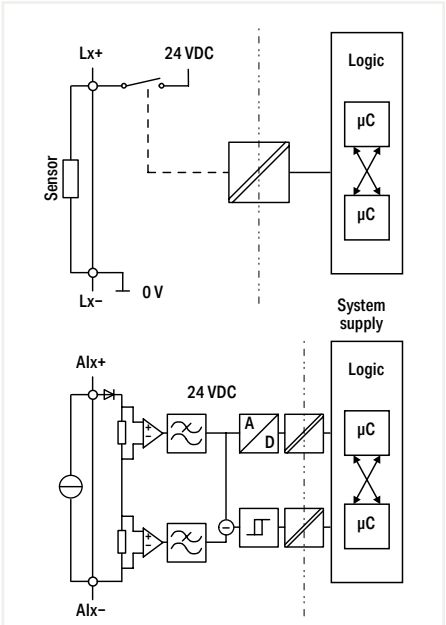
Technical Data	
Number of digital inputs	4
Achievable safety classes	SIL 3; Category 4, PL e
Protocol	PROFIsafe V2
Configuration options	PROFIsafe address adjustable via DIP switch or engineering software
Sensor connection	4 x (Fail-safe input with test pulse)
Input characteristic	Clock sensitive
Input characteristic	Type 1
Input current per channel for signal (1) (typ.)	2.2 mA
Signal frequency (max.)	50 Hz
Number of digital outputs	4
Output circuit design	Relay outputs
Actuator connection	4 x (Fail-safe output with test pulse)
Switching voltage range	5 … 60 VDC (SELV/PELV); 5 … 48 VAC
Isolation voltage	Relay outputs: 48 VAC, 60 VDC
Switching current (note)	Switching current range compatible with the WAGO 75x-66x/000-003 PROFIsafe I/O Module
Output current per channel	6 A
Output current (module)	24 A
Switching delay	50 ms
Supply voltage (system and sensor)	24 VDC(-25 … +30 %)
Supply voltage (field)	24 VDC; via pluggable connector (Push-in CAGE CLAMP®connection)
Power consumption (5 V system supply)	145 mA
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(48 x 100 x 69.8) mm
Functional Safety	
Safety standards	IEC 61508-1 … -7; EN ISO 13849-1; EN 62061
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-669/000-003

Support for iPar servers allows automatic parameter restoration when replacing an I/O module.

Functional safety ▸ Analog input

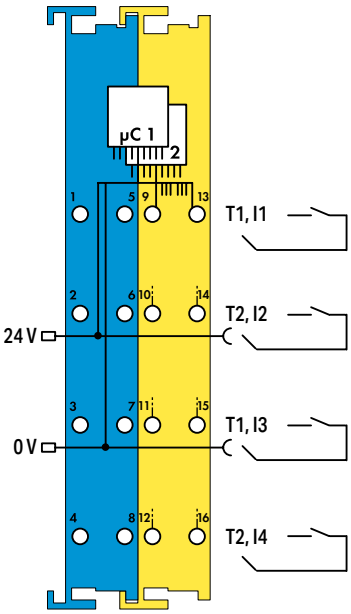
750-668/000-004





Item Description	Fail-Safe Analog Input, 4 Channels; 0/4 … 20 mA; Differential Input; PROFIsafe	
Version	Default	Pluggable
Item No.	**750-668/000-004**	**753-668/000-004**
Order Text	**4FAI 0/4-20 mA Diff PROFIsafe**	**4FAI 0/4-20 mA Diff PROFIsafe**
Technical Data		
Number of analog inputs	4	
Achievable safety classes	SIL 3; Category 4, PLe (two-channel); SIL 2; Category 2; PLd (one-channel)	
Protocol	PROFIsafe V2	
Configuration options	PROFIsafe address adjustable via DIP switch or engineering software	
Sensor connection	4 x (2-wire, 3-wire, 4-wire)	
Signal characteristic	Differential	
Resolution [bit]	16 bits	
Load impedance	300 Ω	
Common mode voltage (max)	60 V	
Noise rejection at sampling frequency	38 dB	
Measurement error (reference temperature)	25 °C	
Measurement error – deviation (max.) from the upper-range value	0.05 %	
Temperature error (max.) of the upper-range value	0.006 %/K	
Output current per channel	1.5 A	
Output current (module)	1.5 A	
Current carrying capacity (module)	40 mA	
Sensor supply	Outputs L1 … L4	
Supply voltage (field)	24 VDC, SELV/PELV (-15 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Power consumption (5 V system supply)	120 mA	
Isolation	500 V system/field	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(24 x 100 x 67.8) mm	(24 x 100 x 69) mm
Functional Safety		
Safety standards	IEC 61508-1 … -7; EN ISO 13849-1; EN 62061	
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-668/000-004	wago.com/753-668/000-004
Accessories	**Item No.**	**Item No.**
Plug; Safety		753-120

Functional safety ▸ Digital input; Intrinsically safe module (Ex i)



Item Description	**Intrinsically Safe 4-Channel Digital Input; 24 VDC; PROFIsafe V 2.0 iPar**
Version	**Intrinsically safe**
Item No.	**750-663/000-003**
Order Text	**4F-Ex i DI; 24 VDC; PROFIsafe V2 iPar**

Technical Data	
Number of digital inputs	4
Protocol	PROFIsafe V2
Configuration options	PROFIsafe address adjustable via DIP switch or engineering software
Sensor connection	4 x (Fail-safe input with test pulse)
Input characteristic	Clock sensitive
Input characteristic	Type 1
Input filter	0 … 200 ms (parameterizable in steps)
Input current per channel for signal (1) (typ.)	3 mA
Signal frequency (max.)	50 Hz
Short-circuit current	≤ 25 mA
Output current per channel	0.05 A
Supply voltage (field)	24 VDC; (Ex i power supply: U_o = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	145 mA
Isolation	300 VAC system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Functional Safety	
Achievable risk reduction	SIL 3 per IEC 61508; SIL 3 per IEC 61511; SIL 3 per IEC 62061; Cat. 4, PL e per EN ISO 13849
Safety standards	IEC 61508; IEC 62061; EN ISO 13849; IEC 61511
Explosion Protection	
Safety-relevant data (circuit)	U_o = 27.3 V; I_o = 23 mA; P_o = 157 mW; Characteristic: Linear
Reactances Ex ia IIC	L_o = 61 mH; C_o = 64 nF
Reactances Ex ia IIB	L_o = 100 mH; C_o = 552 nF
Reactances Ex ia IIA	L_o = 100 mH; C_o = 2,28 µF
Reactances Ex ia I	L_o = 100 mH; C_o = 2.95 µF
Reactances (note)	(The above-listed ratings do not account for the coincidental occurrence of capacitances and inductances. For ratings taking the coincidental occurrence of capacitances and inductances into account, see manual)
Ex guideline	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; OrdLoc/HazLoc/AEx; ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
Data sheet and further information, see:	wago.com/750-663/000-003

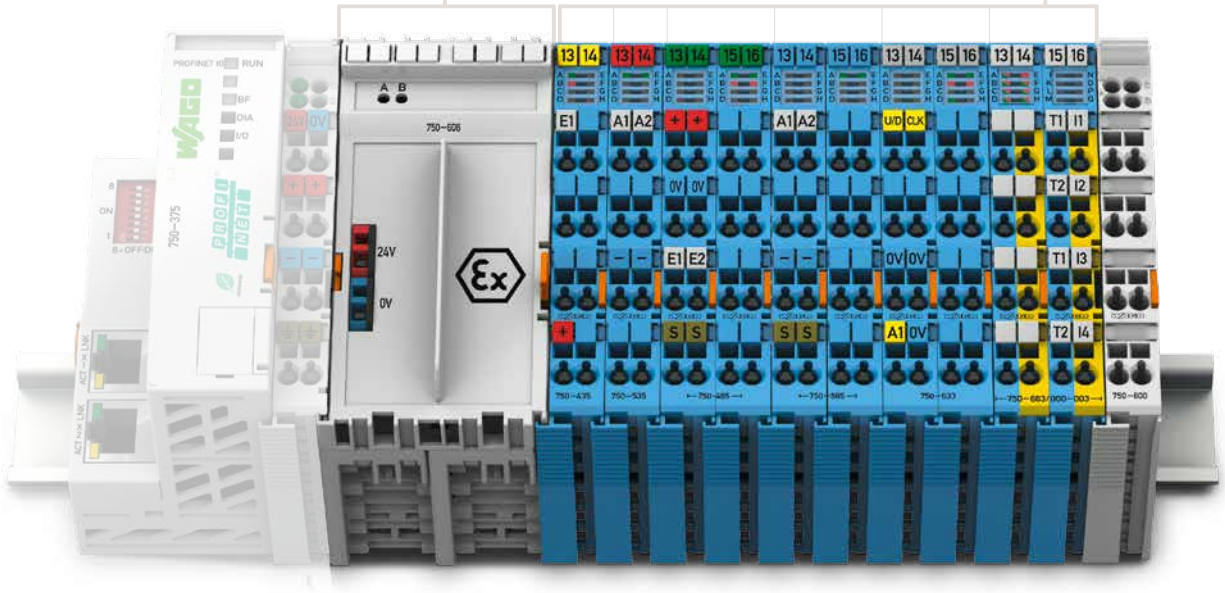
This module combines intrinsic safety with functional safety and was specifically developed for reliable acquisition from potential-free, contact-based emergency stop switches, safety interlock switches, mode selectors and safety sensors that are located in hazardous environments.
Thus, safety functions with fail-safe sensors from Ex Zones 0 and 1 can be implemented.

Support for iPar servers allows automatic parameter restoration when replacing an I/O module.

Intrinsically Safe Modules Ex i

Specialty Housing	
Dimensions W x H x D	48 x 100 x 70.9 mm
Depth from upper edge of DIN-rail	63.7 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 1.5 mm² / 28 … 16 AWG
Strip length	5 … 6 mm / 0.22 inch

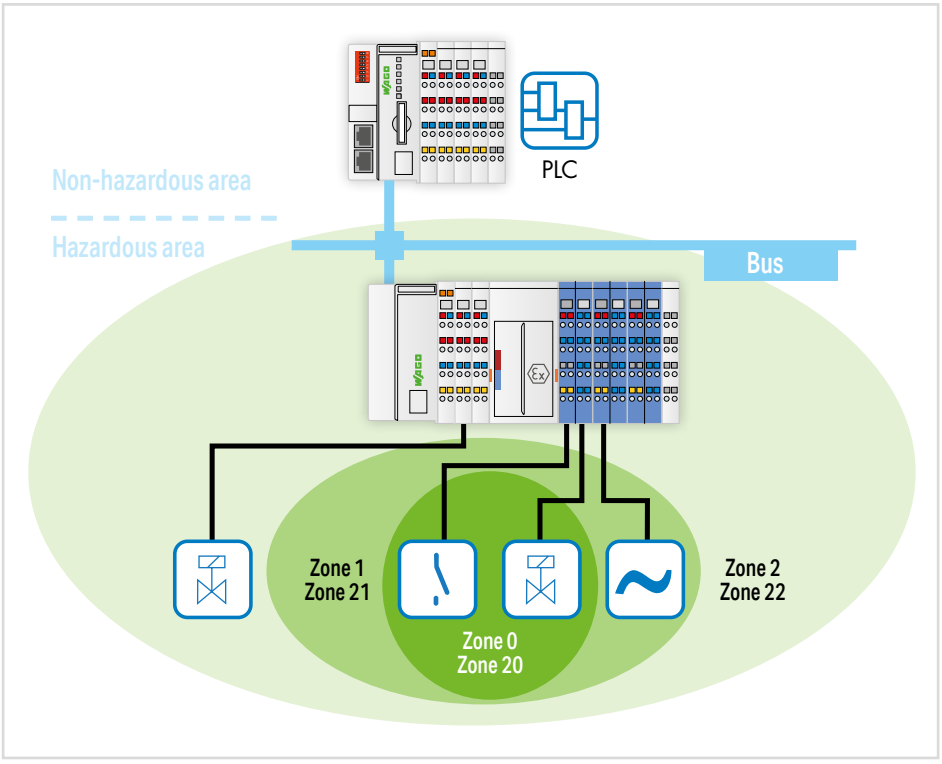
Housing Design (750 Series)	
Dimensions W x H x D	12 or 24 x 100 x 67.8 mm
Depth from upper edge of DIN-rail	60.6 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch



Use in Hazardous Areas

In many plants across the chemical and petro-chemical industries, as well as in the production and process automation sectors, installations are operated that process explosive gas- or dust-air mixtures. This is why electrical equipment must be explosion-proof in order to avoid injuries to personnel and damage to facilities.

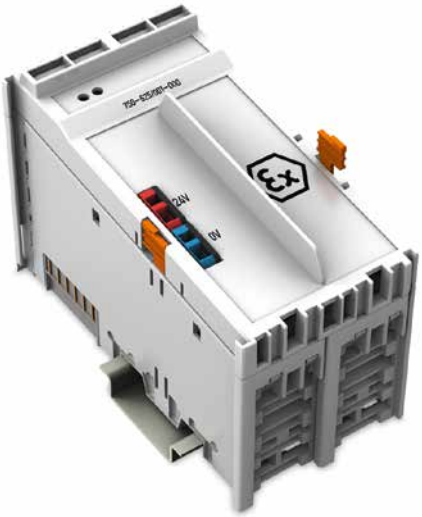
The modules within the WAGO I/O System 750 are designed for use in both non-hazardous and hazardous areas. The direct application of fieldbus technology in potentially explosive areas is typically resource-intensive. When used in hazardous areas of Zone 2/22, the I/O System 750 offers a safe, easy and economical connection to the sensors/actuators of Zones 0/20 and 1/21. The "blue" Ex i I/O modules were specially developed for this purpose. They form an intrinsically safe section that can be integrated into a standard fieldbus node, offering all the advantages of state-of-the-art fieldbus technology. The WAGO I/O System 750 is also approved for mining applications.

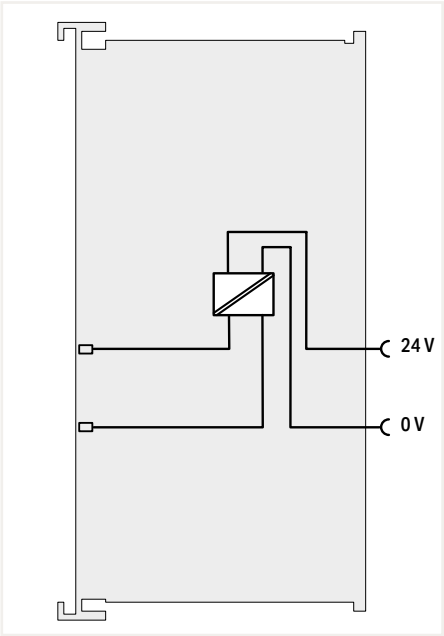


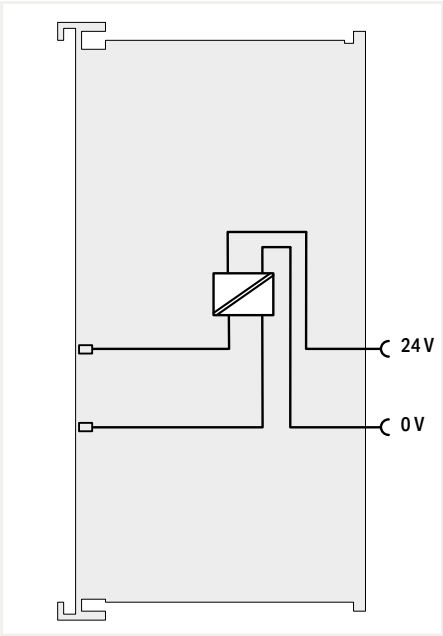
I/O System – 750 and 753 Series, Intrinsically Safe Modules Ex i
Contents

I/O System –
750 XTR Series

Intrinsically safe modules (Ex i) ▸ Supply module





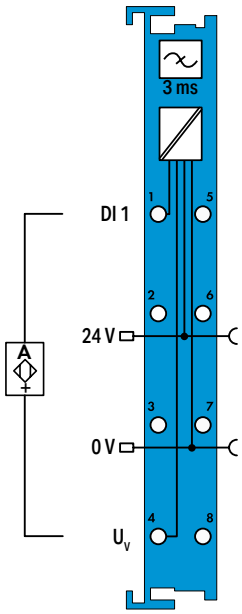


Item Description	**Power Supply; 24 VDC**	**Power Supply; 24 VDC; Diagnostics**
Version	**Intrinsically safe**	**Diagnostics; intrinsically safe**
Item No.	**750-625/000-001**	**750-606**
Order Text	**Power Supply; 24 VDC; Ex i**	**Power Supply; 24 VDC; Diagn; Ex i**
Technical Data		
Power consumption (5 V system supply)	7.5 mA	7.5 mA
Input voltage (note)	24 VDC (–25 % … +30 %)	DC 24 V (-25 % … +30 %)
Supply voltage (field)	24 VDC (-25 … +30 %); (Adjacent Ex i modules are supplied with U_O = max. 27.3 V); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)	24 VDC (-25 … +30 %); (Adjacent Ex i modules are supplied with U_O = max. 27.3 V); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)
Current carrying capacity (power jumper contacts)	1 A	1 A
Fuse	Electronic	Electronic
Data width		2 bits (input voltage failure, fuse triggered)
Surrounding air temperature (operation)	0 … 55 °C	0 … 55 °C
Dimensions W x H x D	(48 x 100 x 70.9) mm	(48 x 100 x 70.9) mm
Explosion Protection		
Power supply (input)	U_n = 24 VDC (–25 % … +30 %); $P_{max.}$ = 29 W; U_m = 253 V	U_n = 24 VDC (-25 … +30 %); $P_{max.}$ = 29 W; U_m = 253 V
Power supply (output)	U_o = 26.8 V (Safe voltage acc. to IEC 60079-11, protection level ia); U_n = 24 V ± 0.3 V, I_n = 1 A	U_o = 26.8 V (Safe voltage acc. to IEC 60079-11, protection level ia); U_n = 24 V ± 0.3 V, I_n = 1 A
Ex guideline	EN IEC 60079-0, -7, -11	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; OrdLoc/HazLoc/AEx; ATEX/IECEx; INMETRO	CE; KC; Marine; OrdLoc/HazLoc/AEx; ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3G Ex ec IIC T4 Gc	ATEX/IECEx: II 3G Ex ec IIC T4 Gc
Data sheet and further information, see:	wago.com/750-625/000-001	wago.com/750-606

The supply modules monitor the voltage supply of the downstream intrinsically safe segment and separate the intrinsically safe from the non-intrinsically safe section of the I/O system. The input and output sides are electrically isolated from each other.
Note: If, due to load conditions, more than one supply module is required per station, four spacer modules (750-616) must be placed between the intrinsically safe sections.
General information (e.g., installation regulations) on explosion protection is available in the WAGO-I/O-SYSTEM 750 manuals!

Intrinsically safe modules (Ex i) ▶ Digital input

750-435

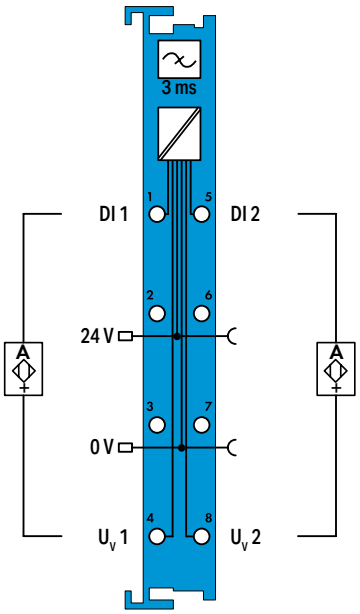


Item Description	**1-Channel Digital Input; NAMUR**
Version	**Intrinsically safe**
Item No.	**750-435**
Order Text	**1DI; NAMUR; Ex i**

Technical Data	
Number of digital inputs	1
Signal type	NAMUR
Sensor connection	1 x (2-wire)
Input characteristic	High-side switching
Input filter (digital)	3 ms
Open-circuit voltage	8.2 V
Diagnostics	Short circuit, wire break
Supply voltage (sensor)	8.2 VDC; Short-circuit-protected, isolated channels
Supply voltage (field)	24 VDC; (Ex i power supply: U_o = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	13 mA
Power consumption (5 V system supply)	2.5 mA
Input data width (internal) (max.)	2 bits
Data width	2-bit input: 1-bit status, 1-bit error (short circuit/wire break)
Isolation	300 VAC system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Explosion Protection	
Safety-relevant data (circuit)	U_o = 12 V; I_o = 16 mA; P_o = 48 mW; Linear characteristic curve
Reactances Ex ia IIC	L_o = 180 mH; C_o = 1.4 µF
Reactances Ex ia IIB	L_o = 560 mH; C_o = 9 µF
Reactances Ex ia IIA	L_o = 900 mH; C_o = 36 µF
Reactances Ex ia I	L_o = 1 H; C_o = 38 µF
Reactances (note)	Reactances without accounting for the concurrence of L and C
Ex guideline	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; OrdLoc/HazLoc/AEx; ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
Data sheet and further information, see:	wago.com/750-435

Intrinsically safe modules (Ex i) ▶ Digital input

750-438

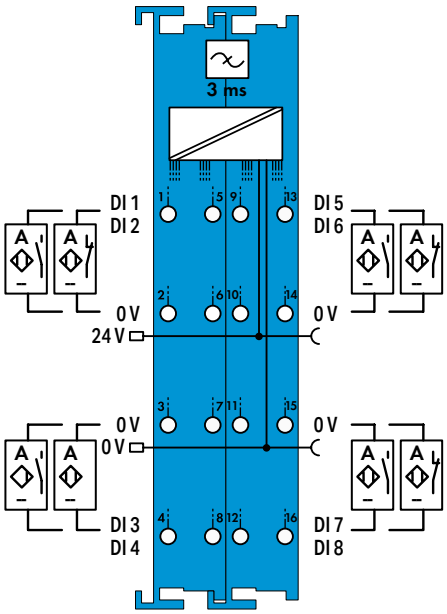


Item Description	**2-Channel Digital Input; NAMUR**
Version	**Intrinsically safe**
Item No.	**750-438**
Order Text	**2DI; NAMUR; Ex i**

Technical Data	
Number of digital inputs	2
Signal type	NAMUR
Sensor connection	2 x (2-wire)
Input characteristic	High-side switching
Input filter (digital)	3 ms
Open-circuit voltage	8.2 V
Supply voltage (sensor)	8.2 VDC; Short-circuit-protected, isolated channels
Supply voltage (field)	24 VDC; (Ex i power supply: U_o = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	16 mA
Power consumption (5 V system supply)	2.5 mA
Input data width (internal) (max.)	2 bits
Isolation	300 VAC system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Explosion Protection	
Safety-relevant data (circuit)	U_o = 12 V; I_o = 13.5 mA; P_o = 40.5 mW; Linear characteristic curve
Reactances Ex ia IIC	L_o = 190 mH; C_o = 1.4 µF
Reactances Ex ia IIB	L_o = 600 mH; C_o = 9 µF
Reactances Ex ia IIA	L_o = 1 H; C_o = 36 µF
Reactances Ex ia I	L_o = 1 H; C_o = 38 µF
Reactances (note)	Reactances without accounting for the concurrence of L and C
Ex guideline	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc/AEx; Ex ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
Data sheet and further information, see:	wago.com/750-438

Intrinsically safe modules (Ex i) ▶ Digital input

750-439



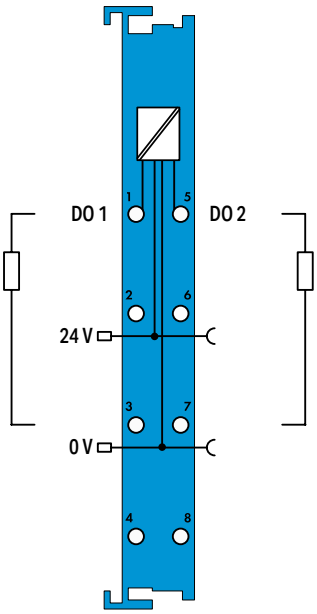
Item Description	**8-Channel Digital Input; NAMUR**
Version	**Intrinsically safe**
Item No.	**750-439**
Order Text	**8DI; NAMUR; Ex i**

Technical Data	
Number of digital inputs	8
Signal type	NAMUR
Sensor connection	4 x (2-wire)
Input characteristic	High-side switching
Input filter (digital)	3 ms
Open-circuit voltage	8.2 V
Diagnostics	Short circuit; wire break (can be switched off)
Supply voltage (sensor)	8.2 VDC; Short-circuit-protected, isolated channels
Supply voltage (field)	24 VDC; (Ex i power supply: U_o = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	11 mA
Power consumption (5 V system supply)	56 mA
Input data width (internal) (max.)	16 bits
Output (internal) data width (max.)	16 bits
Isolation	300 VAC system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion Protection	
Safety-relevant data (circuit)	U_o = 11.76 V; I_o = 12.4 mA; P_o = 36.67 mW; Linear characteristic curve
Reactances Ex ia IIC	L_o = 100 mH; C_o = 1 µF
Reactances Ex ia IIB	L_o = 100 mH; C_o = 9.9 µF
Reactances Ex ia IIA	L_o = 100 mH; C_o = 39 µF
Reactances Ex ia I	L_o = 100 mH; C_o = 30 µF
Reactances (note)	Reactances without accounting for the concurrence of L and C
Ex guideline	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; OrdLoc/HazLoc/AEx; ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
Data sheet and further information, see:	wago.com/750-439

The process image can be used to define the sensor type (break or make contact) as well as to switch off the diagnostics (e.g., if contact monitoring in order to suppress the LED diagnostics).

Intrinsically safe modules (Ex i) ▸ Digital output

750-535

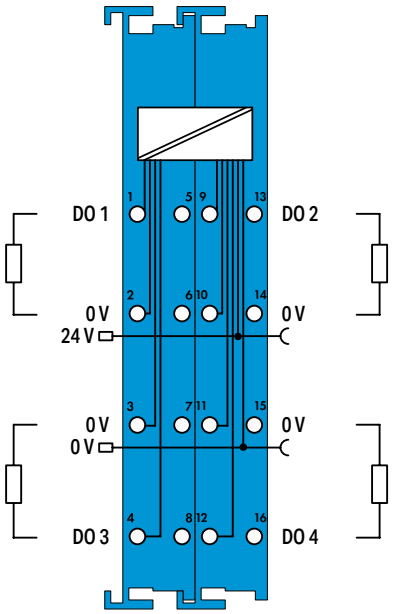


Item Description	**2-Channel Digital Output; 24 VDC**
Version	**Intrinsically safe**
Item No.	**750-535**
Order Text	**2DO; 24 VDC; Ex i**

Technical Data	
Number of digital outputs	2
Signal type	Voltage
Voltage signal type	24 VDC
Output characteristic	High-side switching
Load type	Resistive, inductive, lamp load
Actuator connection	2 x (2-wire)
Switching frequency (max.)	1 kHz
Supply voltage (field)	24 VDC; (Ex i power supply: U_o = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	8.5 mA
Power consumption (5 V system supply)	7 mA
Output (internal) data width (max.)	2 bits
Isolation	300 VAC system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Explosion Protection	
Safety-relevant data (circuit)	U_o = 27.3 V; I_o = 106 mA; P_o = 723 mW; Linear characteristic curve
Reactances Ex ia IIC	L_o = 3 mH; C_o = 88 nF
Reactances Ex ia IIB	L_o = 12 mH; C_o = 680 nF
Reactances Ex ia IIA	L_o = 18 mH; C_o = 2.2 µF
Reactances Ex ia I	L_o = 20 mH; C_o = 3.6 µF
Reactances (note)	Reactances without accounting for the concurrence of L and C
Ex guideline	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; OrdLoc/HazLoc/AEx; ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
Data sheet and further information, see:	wago.com/750-535

Intrinsically safe modules (Ex i) ▶ Digital output

750-539

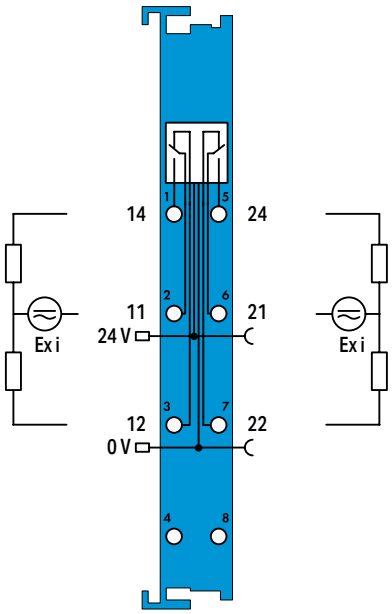


Item Description	**4-Channel Digital Output; 24 VDC; Valve**
Version	**Intrinsically safe**
Item No.	**750-539**
Order Text	**4DO; 24 VDC; valve; Ex i**

Technical Data	
Number of digital outputs	4
Signal type	Voltage
Voltage signal type	24 VDC
Output characteristic	High-side switching
Load type	Resistive, inductive, lamp load
Actuator connection	4 x (2-wire)
Switching frequency (max.)	100 Hz
Supply voltage (field)	24 VDC; (Ex i power supply: U_o = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	10 mA
Power consumption (5 V system supply)	20 mA
Input data width (internal) (max.)	4 bits
Output (internal) data width (max.)	4 bits
Isolation	300 VAC system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion Protection	
Safety-relevant data (circuit)	U_o = 27.3 V; I_o = 117.5 mA; P_o = 800.1 mW; Linear characteristic curve
Reactances Ex ia IIC	L_o = 13 µH; C_o = 88 nF
Reactances Ex ia IIB	L_o = 8.1 mH; C_o = 683 nF
Reactances Ex ia IIA	L_o = 14 mH; C_o = 2.28 µF
Reactances Ex ia I	L_o = 21 mH; C_o = 540 nF
Reactances (note)	Reactances without accounting for the concurrence of L and C
Ex guideline	EN IEC 60079-0, -7, -11
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
Data sheet and further information, see:	wago.com/750-539

Intrinsically safe modules (Ex i) ▶ Digital output

750-538



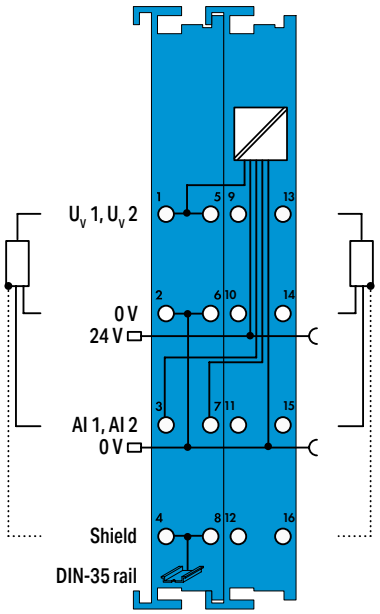
Item Description	**2-Channel Relay Output; Changeover contact; Potential-free**
Version	**Intrinsically safe**
Item No.	**750-538**
Order Text	**2RO; 100 VAC/ 30 VDC; Pot-free; Relay2CO**

Technical Data	
Number of digital outputs	2
Signal type	Voltage
Voltage signal type	100 VAC; 30 VDC
Output circuit design	2 changeover contacts; Relays
Output characteristic	Potential-free
Switching current (max.)	0.5 A
Switching current (note)	0.5 A at 100 VAC; 1 A at 30 VDC
Load type	Resistive, inductive, lamp load
Actuator connection	2 x (2-wire)
Switching frequency (max.)	0.3 Hz
Supply voltage (field)	24 VDC; (Ex i power supply: U_o = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	24 mA
Power consumption (5 V system supply)	26 mA
Output (internal) data width (max.)	2 bits
Isolation	300 VAC system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Explosion Protection	
Safety-relevant data (circuit)	**Relay output:** U_i = 30 VDC; I_i = 1 A; P_i = 30 W; U_i = 100 VAC; I_i = 0.5 A; P_i = 50 VA; L_i = negligibly small; C_i = negligibly small
Ex guideline	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; OrdLoc/HazLoc/AEx; ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
Data sheet and further information, see:	wago.com/750-538

Details on relay!
Both maximum switching current and voltage must comply with EN 60079-11.

Intrinsically safe modules (Ex i) ▶ Analog input ▶ 4 … 20 mA

750-485

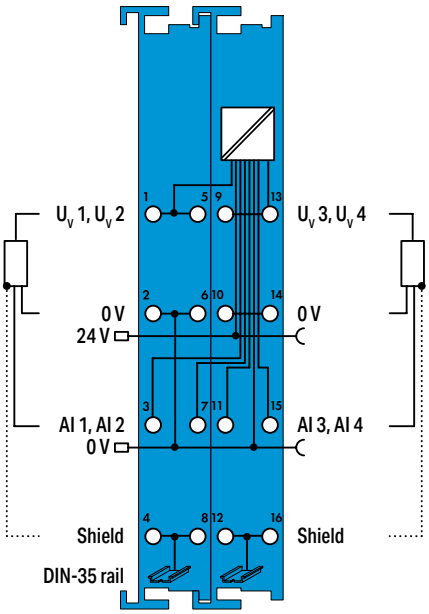


Item Description	**2-Channel Analog Input; 4 … 20 mA**
Version	**Intrinsically safe**
Item No.	**750-485**
Order Text	**2AI; 4-20mA; SE; Ex i**

Technical Data	
Number of analog inputs	2
Signal type	Current
Signal type (current)	4 … 20 mADC
Sensor connection	2 x (3-wire)
Signal characteristic	Single-ended
Resolution [bit]	12 bits
Conversion time (typ.)	2 ms
Input resistance (max.)	100 Ω
Measurement error (reference temperature)	25 °C
Measurement error – deviation (max.) from the upper-range value	0.2 %
Temperature error (max.) of the upper-range value	0.01 %/K
Supply voltage (sensor)	16 VDC; Transmitter supply U_V at 20 mA
Supply voltage (field)	24 VDC; (Ex i power supply: U_O = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	11 mA
Power consumption (5 V system supply)	31 mA
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)
Isolation	300 VAC system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion Protection	
Safety-relevant data (circuit)	U_o = 27.3 V; I_o = 90 mA; P_o = 0.61 W; Linear characteristic curve
Reactances Ex ia IIC	L_o = 5 mH; C_o = 88 nF
Reactances Ex ia IIB	L_o = 18 mH; C_o = 680 nF
Reactances Ex ia IIA	L_o = 40 mH; C_o = 2.2 µF
Reactances Ex ia I	L_o = 100 mH; C_o = 3.5 µF
Reactances (note)	Reactances without accounting for the concurrence of L and C
Ex guideline	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc/AEx; ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
Data sheet and further information, see:	wago.com/750-485

Intrinsically safe modules (Ex i) ▸ Analog input ▸ 0/4 … 20 mA; NAMUR NE43

750-486

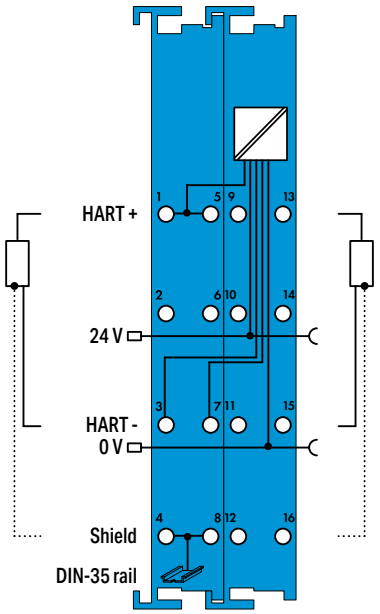


Item Description	**4-Channel Analog Input; 0/4 … 20 mA; NAMUR NE43**
Version	**NAMUR NE43; intrinsically safe**
Item No.	**750-486**
Order Text	**4AI; 0/4-20mA; SE; 12bits; Diagn; Ex i**

Technical Data	
Number of analog inputs	4
Signal type	Current
Signal type (current)	0 … 20 mADC; 4 … 20 mADC
Sensor connection	2 x (3-wire)
Signal characteristic	Single-ended
Resolution [bit]	12 bits
Conversion time (typ.)	10 ms
Input resistance (max.)	200 Ω
Measurement error (reference temperature)	25 °C
Measurement error – deviation (max.) from the upper-range value	0.1 %
Temperature error (max.) of the upper-range value	0.01 %/K
Supply voltage (sensor)	15 VDC; Transmitter supply U_V at 20 mA
Supply voltage (field)	24 VDC; (Ex i power supply: U_O = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	19 mA
Power consumption (5 V system supply)	45 mA
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Isolation	300 VAC system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion Protection	
Safety-relevant data (circuit)	U_o = 27.3 V; I_o = 98.4 mA; P_o = 0.672 W; Linear characteristic curve
Reactances Ex ia IIC	L_o = 970 µH; C_o = 88 nF
Reactances Ex ia IIB	L_o = 13 mH; C_o = 683 nF
Reactances Ex ia IIA	L_o = 22 mH; C_o = 2.28 µF
Reactances Ex ia I	L_o = 31 mH; C_o = 3.6 µF
Reactances (note)	Reactances without accounting for the concurrence of L and C
Ex guideline	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
Data sheet and further information, see:	wago.com/750-486

Intrinsically safe modules (Ex i) ▸ Analog input ▸ 4 … 20 mA HART

750-484



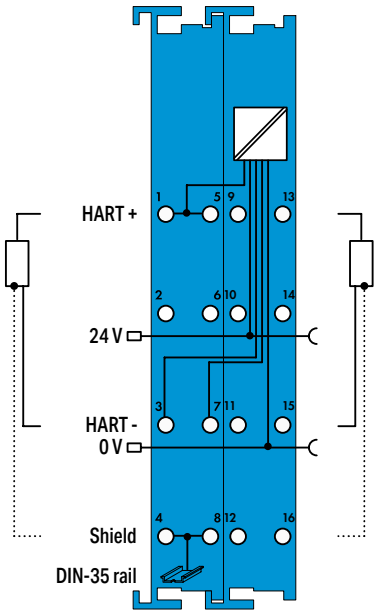
Item Description	2-Channel Analog Input; 4 … 20 mA HART
Version	Intrinsically safe
Item No.	**750-484**
Order Text	**2AI; 4-20mA HART; Ex i**

Technical Data	
Number of analog inputs	2
Signal type	Current
Signal type (current)	4 … 20 mADC
Sensor connection	2 x (2-wire)
Input filter	Parameterizable
Signal characteristic	Single-ended
Resolution [bit]	12 bits
Conversion time (typ.)	10 ms
Measurement error (reference temperature)	25 °C
Measurement error – deviation (max.) from the upper-range value	0.2 %
Temperature error (max.) of the upper-range value	0.01 %/K
Overvoltage protection	30 V, reverse polarity protected
Diagnostics	Wire break, measurement range overflow
Supply voltage (sensor)	16.5 VDC; Transmitter supply U_V at 20 mA
Supply voltage (field)	24 VDC; (Ex i power supply: U_O = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	26 mA
Power consumption (5 V system supply)	25 mA
Data width	2 x 2-byte data; 2 x 2-byte data + 2n x 4-byte data (n = number of dynamic variables); 2 x 2-byte data + 6-byte mailbox
Isolation	300 VAC system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion Protection	
Safety-relevant data (circuit)	U_o = 27.3 V; I_o = 92.7 mA; P_o = 630 mW; Linear characteristic curve
Reactances Ex ia IIC	L_o = 1.5 mH; C_o = 87 nF
Reactances Ex ia IIB	L_o = 15 mH; C_o = 670 nF
Reactances Ex ia IIA	L_o = 38 mH; C_o = 2.2 µF
Reactances Ex ia I	L_o = 36 mH; C_o = 3.49 µF
Reactances (note)	Reactances without accounting for the concurrence of L and C
Ex guideline	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; OrdLoc/HazLoc/AEx; ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
Data sheet and further information, see:	wago.com/750-484

In addition to analog signal processing, this module offers optional HART communication for parameterizing or recording dynamic variables.

Intrinsically safe modules (Ex i) ▸ Analog input ▸ 4 … 20 mA HART; NAMUR NE43

750-484/000-001



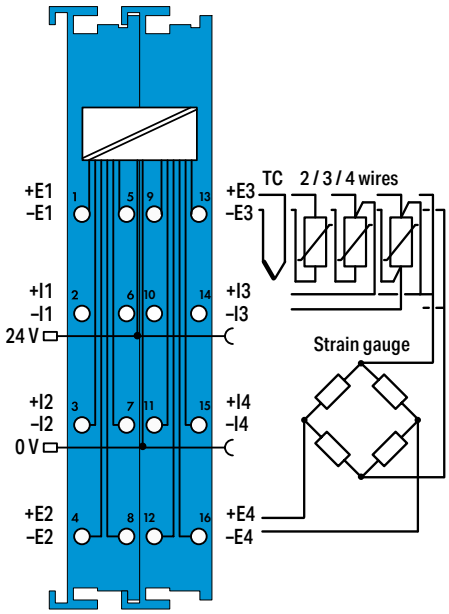
Item Description	**2-Channel Analog Input; 4 … 20 mA HART; NAMUR NE43**
Version	**NAMUR NE43; intrinsically safe**
Item No.	**750-484/000-001**
Order Text	**2AI; 4-20mA HART; NE43; Ex i**

Technical Data	
Number of analog inputs	2
Signal type	Current
Signal type (current)	4 … 20 mADC
Sensor connection	2 x (2-wire)
Input filter	Parameterizable
Signal characteristic	Single-ended
Resolution [bit]	12 bits
Conversion time (typ.)	10 ms
Measurement error (reference temperature)	25 °C
Measurement error – deviation (max.) from the upper-range value	0.2 %
Temperature error (max.) of the upper-range value	0.01 %/K
Overvoltage protection	30 V, reverse polarity protected
Diagnostics	Wire break, measurement range overflow
Supply voltage (sensor)	16.5 VDC; Transmitter supply U_V at 20 mA
Supply voltage (field)	24 VDC; (Ex i power supply: U_O = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	26 mA
Power consumption (5 V system supply)	25 mA
Data width	2 x 2-byte data; 2 x 2-byte data + 2n x 4-byte data (n = number of dynamic variables); 2 x 2-byte data + 6-byte mailbox
Isolation	300 VAC system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion Protection	
Safety-relevant data (circuit)	U_o = 27.3 V; I_o = 92.7 mA; P_o = 630 mW; Linear characteristic curve
Reactances Ex ia IIC	L_o = 1.5 mH; C_o = 87 nF
Reactances Ex ia IIB	L_o = 15 mH; C_o = 670 nF
Reactances Ex ia IIA	L_o = 38 mH; C_o = 2.2 µF
Reactances Ex ia I	L_o = 36 mH; C_o = 3.49 µF
Reactances (note)	Reactances without accounting for the concurrence of L and C
Ex guideline	EN IEC 60079-0, -7, -11
Approvals	CE; cULus OrdLoc/HazLoc; Ex ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
Data sheet and further information, see:	wago.com/750-484/000-001

In addition to analog signal processing, this module offers optional HART communication for parameterizing or recording dynamic variables.

Intrinsically safe modules (Ex i) ▶ Analog input ▶ Resistance Sensors/Thermocouple

750-489

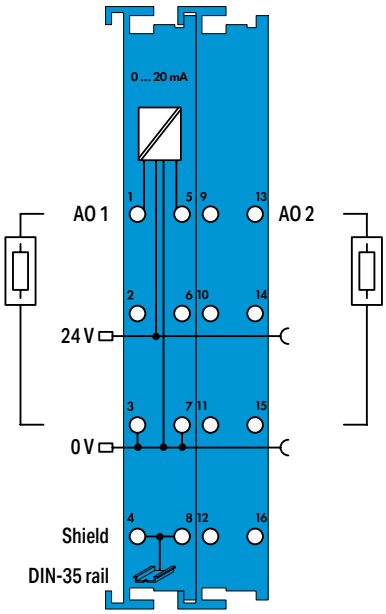


Item Description	**4-Channel Analog Input; RTD/TC**
Version	**Intrinsically safe**
Item No.	**750-489**
Order Text	**4AI; RTD/TC; Ex i**

Technical Data	
Number of analog inputs	4
Signal type	Resistance thermometer; Resistors; Potentiometer positions; Thermocouple; mV transmitter
Sensor connection	4 x (2-wire); RTD/R: 3-wire; 4-wire
Resolution (over entire range)	0.1 K of full scale value; 0.01 K of full scale value (restricted to -50 °C ...+150 °C)
Conversion time	≥10 ms/2 wires (per channel)*; ≥20 ms/3 wires, 4 wires (per channel)*; *for RTD/R; TC/U conversion time depends on module setting
Measurement error (25 °C)	In delivery state: ±0.2 % of the upper-range value (value achieved during calibration in operating environment 0 ≤ TA ≤ 55 °C); After user calibration: ±0.05 % of the upper-range value (only valid in the thermally stable operating state)
Temperature coefficient	±0.001 %/K of the upper-range value
Cold junction compensation	Integrated
Supply voltage (field)	24 VDC; (Ex i power supply: U_o = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	120 mA
Power consumption (5 V system supply)	60 mA
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Isolation	Per EN/IEC 60079-11: 300 VAC system/supply; per EN/UL 61010-2-201: 1200 VDC system/supply/channel
Surrounding air temperature (operation)	0 ... 55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion Protection	
Safety-relevant data (circuit)	U_o = 4 V; I_o = 13,46 mA; P_o = 13,46 mW; Kennlinie: Linear
Reactances Ex ia IIC	L_o = 0.19 H; C_o = 100 µF
Reactances Ex ia IIB	L_o = 0.78 H; C_o = 1000 µF
Reactances Ex ia IIA	L_o = 1.57 H; C_o = 1000 µF
Reactances Ex ia I	L_o = 2.57 H; C_o = 1000 µF
Reactances (note)	Reactance, if the internal inductance L_i or capacitance C_i (without cable) of the connected device ≤ 1 % of the specified values
Ex guideline	EN IEC 60079-0, -7, -11
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
Data sheet and further information, see:	wago.com/750-489

Intrinsically safe modules (Ex i) ▸ Analog output ▸ 0 … 20 mA

750-585

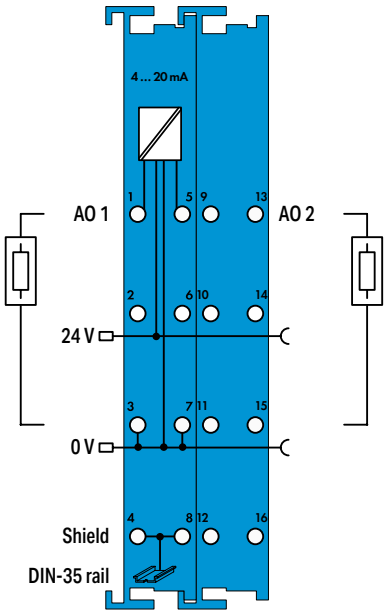


Item Description	**2-Channel Analog Output; 0 … 20 mA**
Version	**Intrinsically safe**
Item No.	**750-585**
Order Text	**2AO; 0-20mA; Ex i**

Technical Data	
Number of analog outputs	2
Signal type	Current
Signal type (current)	0 … 20 mADC
Signal characteristic	Single-ended
Load impedance (current output) (max.)	500 Ω
Resolution [bit]	12 bits
Conversion time (typ.)	2 ms
Output error, reference temperature	25 °C
Output error, deviation (max.) of the upper-range value	0.2 %
Temperature error (max.) of the output range value	0.01 %/K
Actuator connection	2 x (2-wire)
Supply voltage (field)	24 VDC; (Ex i power supply: U_o = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	19 mA
Power consumption (5 V system supply)	21 mA
Data width	2 x 16-bit data
Isolation	300 VAC system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion Protection	
Safety-relevant data (circuit)	U_o = 27.3 V; I_o = 57.5 mA; P_o = 392 mW; Linear characteristic curve
Reactances Ex ia IIC	L_o = 11 mH; C_o = 88 nF
Reactances Ex ia IIB	L_o = 56 mH; C_o = 680 nF
Reactances Ex ia IIA	L_o = 90 mH; C_o = 2.2 µF
Reactances Ex ia I	L_o = 110 mH; C_o = 3.5 µF
Reactances (note)	Reactances without accounting for the concurrence of L and C
Ex guideline	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; OrdLoc/HazLoc/AEx; ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
Data sheet and further information, see:	wago.com/750-585

Intrinsically safe modules (Ex i) ▸ Analog output ▸ 4 … 20 mA

750-586

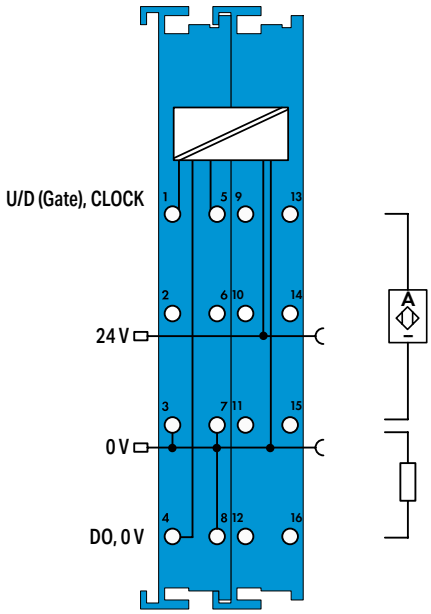


Item Description	**2-Channel Analog Output; 4 … 20 mA**
Version	**Intrinsically safe**
Item No.	**750-586**
Order Text	**2AO; 2-4-wire; Ex i**

Technical Data	
Number of analog outputs	2
Signal type	Current
Signal type (current)	4 … 20 mADC
Signal characteristic	Single-ended
Load impedance (current output) (max.)	500 Ω
Resolution [bit]	12 bits
Conversion time (typ.)	2 ms
Output error, reference temperature	25 °C
Output error, deviation (max.) of the upper-range value	0.2 %
Temperature error (max.) of the output range value	0.01 %/K
Actuator connection	2 x (2-wire)
Supply voltage (field)	24 VDC; (Ex i power supply: U_o = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	19 mA
Power consumption (5 V system supply)	21 mA
Data width	2 x 16-bit data
Isolation	300 VAC system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion Protection	
Safety-relevant data (circuit)	U_o = 27.3 V; I_o = 57.5 mA; P_o = 392 mW; Linear characteristic curve
Reactances Ex ia IIC	L_o = 11 mH; C_o = 88 nF
Reactances Ex ia IIB	L_o = 56 mH; C_o = 680 nF
Reactances Ex ia IIA	L_o = 90 mH; C_o = 2.2 µF
Reactances Ex ia I	L_o = 110 mH; C_o = 3.5 µF
Reactances (note)	Reactances without accounting for the concurrence of L and C
Ex guideline	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; OrdLoc/HazLoc/AEx; ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
Data sheet and further information, see:	wago.com/750-586

Intrinsically safe modules (Ex i) ▸ Counter

750-633



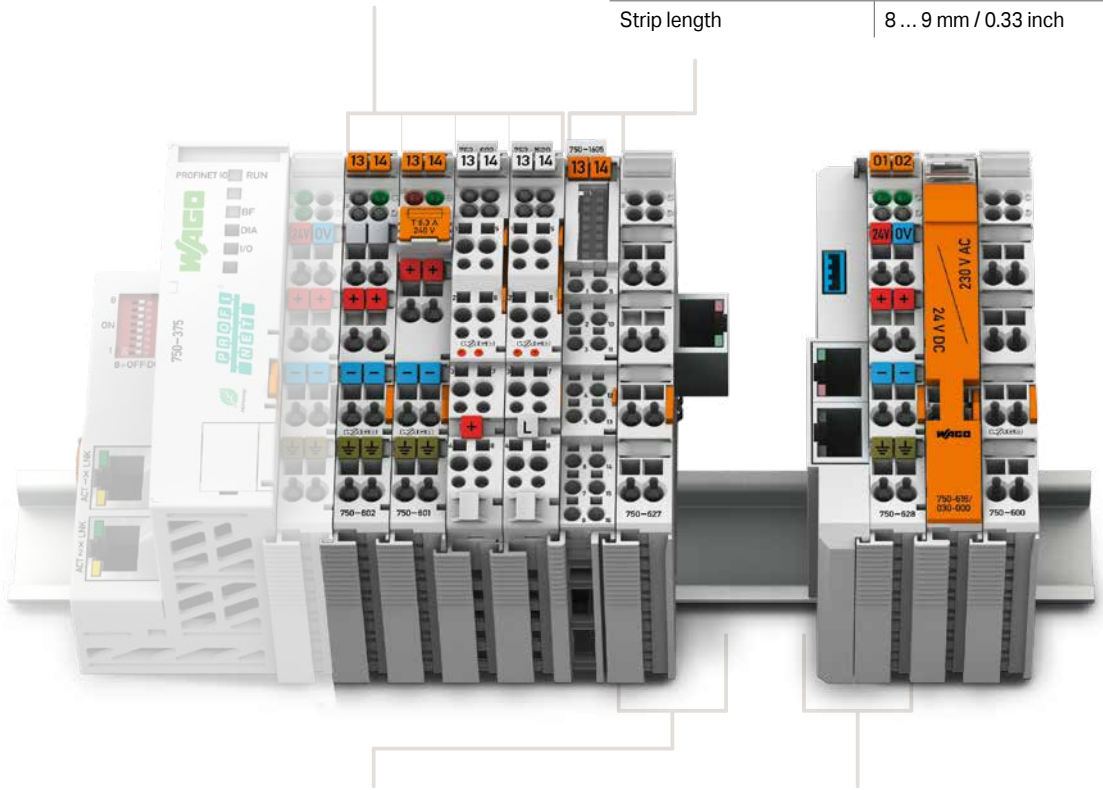
Item Description	**Up/Down Counter**
Version	**Intrinsically safe**
Item No.	**750-633**
Order Text	**Up/Down Counter; Ex i**

Technical Data	
Number of counters	1
Number of digital outputs	1
Sensor supply U_V	8.2 V
Switching frequency	20 Hz … 50 kHz
Counter depth	32 bits
Output voltage	24 VDC
Input filter	10 µs
Input resistance (max.)	1000 Ω
Open-circuit voltage	8.2 V
Supply voltage (field)	24 VDC; (Ex i power supply: U_O = max. 27.3 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	31 mA
Power consumption (5 V system supply)	25 mA
Data width	1 x 32-bit data, 1 x 8-bit status/diagnostics
Isolation	300 VAC system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion Protection	
Safety data (input)	U_o = 12 V; I_o = 13.5 mA; P_o = 40.5 mW; Linear characteristic curve
Reactances of Ex ia IIC inputs	L_o = 100 mH; C_o = 1.4 µF
Reactances of Ex ia IIB inputs	L_o = 100 mH; C_o = 9 µF
Reactances of Ex ia IIA inputs	L_o = 100 mH; C_o = 36 µF
Reactances of Ex ia I inputs	L_o = 100 mH; C_o = 38 µF
Safety data (output)	U_o = 27.3 V; I_o = 103 mA; P_o = 703 mW; Linear characteristic curve
Reactances of Ex ia IIC output	L_o = 0.5 mH; C_o = 88 nF
Reactances of Ex ia IIB output	L_o = 10 mH; C_o = 683 nF
Reactances of Ex ia IIA output	L_o = 18 mH; C_o = 2.2 µF
Reactances of Ex ia I output	L_o = 26 mH; C_o = 3.6 µF
Reactances (note)	Reactances without accounting for the concurrence of L and C
Ex guideline	EN IEC 60079-0, -7, -11
Approvals	CE; KC; Marine; OrdLoc/HazLoc/AEx; ATEX/IECEx; INMETRO
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
Data sheet and further information, see:	wago.com/750-633

Supply/Segment Modules

Housing Design (750/753 Series)	
Dimensions W x H x D	12 x 100 x 69.8 mm
Depth from upper edge of DIN rail	62.6 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	750 Series: 8 … 9 mm / 0.33 inch 753 Series: 9 … 10 mm / 0.37 inch

Housing Design (750 Series), with Push-in CAGE CLAMP® Connections (up to 16 connection points)	
Dimensions W x H x D	12 x 100 x 69 mm
Depth from upper edge of DIN rail	61.8 mm
Connection technology	Push-in CAGE CLAMP®
Conductor cross-section	Solid: 0.08 … 2.5 mm² / 28 … 16 AWG Fine-stranded: 0.25 … 1.5 mm² / 22 … 16 AWG
Strip length	8 … 9 mm / 0.33 inch



Specialty Housing (End Module for Bus Extension)	
Dimensions W x H x D	24 x 100 x 69.8 mm
Depth from upper edge of DIN rail	62.6 mm

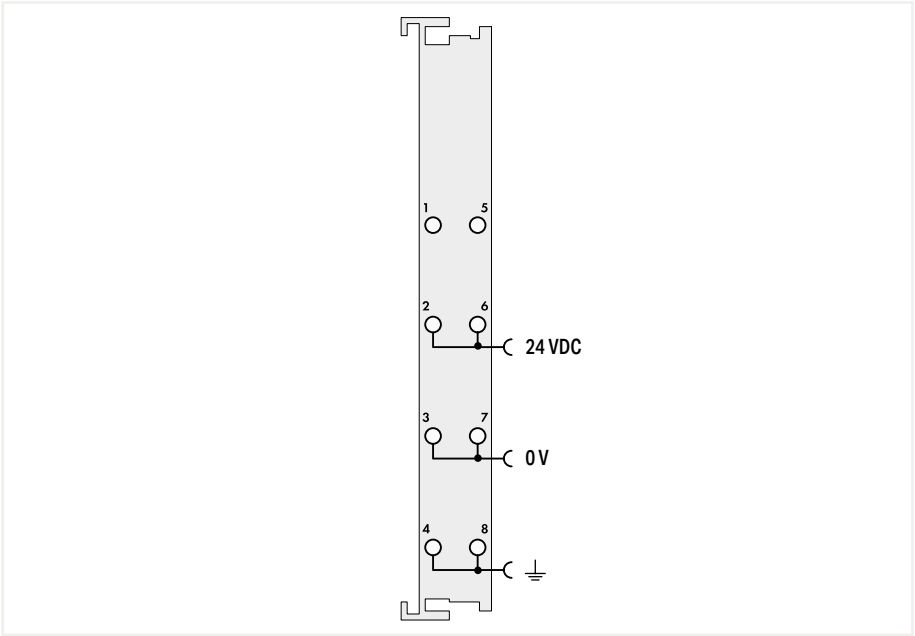
Specialty Housing (Coupler Module for Bus Extension)	
Dimensions W x H x D	24 x 100 x 69.8 mm
Depth from upper edge of DIN rail	62.6 mm

I/O System –
750 XTR Series

I/O System – 750 and 753 Series, Supply/Segment Modules
Contents

Supply module ▶ 24 VDC

750-602



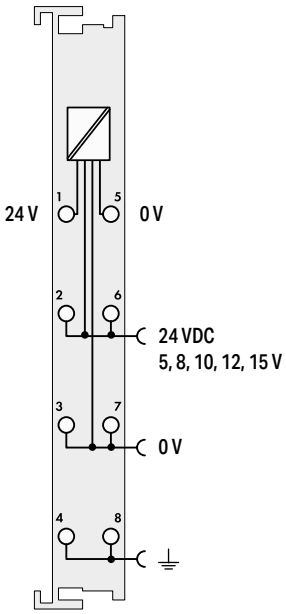
Item Description	Power Supply; 24 VDC		
Version	Default	Ext. Temperature	Pluggable (delivery without connector)
Item No.	**750-602**	**750-602/025-000**	**753-602**
Order Text	**Power Supply; 24 VDC**	**Power Supply; 24 VDC; T**	**Power Supply; 24 VDC**

Technical Data			
Wiring interface			Pluggable
Supply voltage (system)	5 VDC; via data contacts		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)		
Current carrying capacity (power jumper contacts)	10 A		
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx		
Data sheet and further information, see:	wago.com/750-602		wago.com/753-602
Accessories	**Item No.**	**Item No.**	**Item No.**
Plug			753-110

This I/O module provides the applied supply voltage to the field devices connected to downstream I/O modules.

Supply module ▶ 24 VDC; DIP switch

750-623



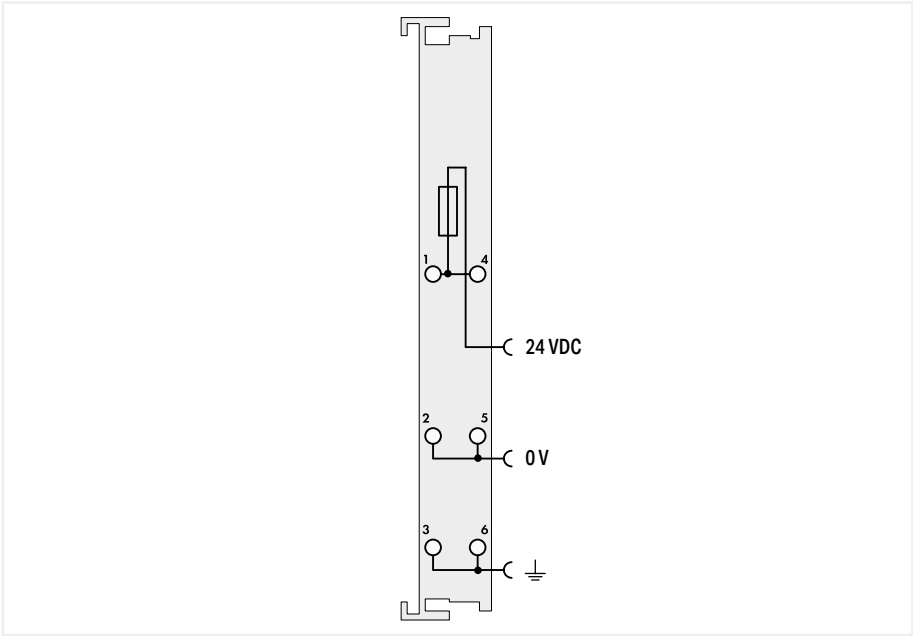
Item Description	**Power Supply; 24 VDC/5 … 15 VDC**
Version	**Default**
Item No.	**750-623**
Order Text	**Power Supply; 24/5-15 VDC**

Technical Data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact); Output voltage adjustable in steps via DIP switch: 5 V; 8 V; 10 V; 12 V; 15 V
Total current (system supply)	500 mA
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-623

This I/O module converts the applied supply voltage to a value selected via DIP switch and provides it to the field devices connected to the downstream I/O modules.

Supply module ▶ 24 VDC; Fuse holder

750-601



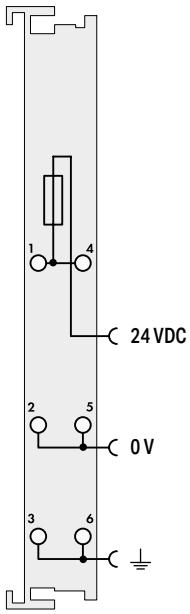
Item Description	**Power Supply; 24 VDC; Fuse holder**
Version	**Default**
Item No.	**750-601**
Order Text	**Power Supply; 24 VDC**

Technical Data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)
Current carrying capacity (power jumper contacts)	6.3 A
Fuse	5 x 20; T 6.3 A (not included)
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-601

This I/O module provides the applied supply voltage, protected by a fuse, to the field devices connected to downstream I/O modules. A blown fuse is indicated by an LED.

Supply module ▶ 24 VDC; Fuse holder; Diagnostics

750-610



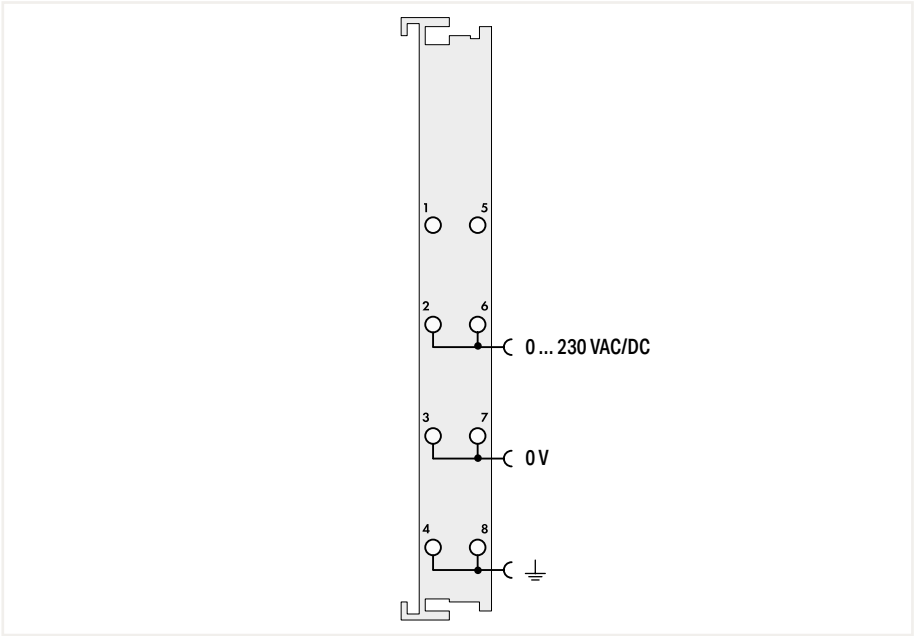
Item Description	**Power Supply; 24 VDC; Fuse holder; Diagnostics**
Version	**Diagnostics**
Item No.	**750-610**
Order Text	**Power Supply; 24 VDC; Fuse; Diagn**

Technical Data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)
Power consumption (5 V system supply)	5 mA
Current carrying capacity (power jumper contacts)	6.3 A
Fuse	5 x 20; T 6.3 A (not included)
Diagnostics	Supply voltage (field): Detection “on” at > 15 VDC; Detection “off” at < 5 VDC
Data width	2 bits (1-bit current monitoring, 1-bit fuse fault)
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-610

This I/O module provides the applied supply voltage, protected by a fuse, to the field devices connected to downstream I/O modules. A blown fuse is indicated by an LED. The fuse status can also be queried from the fieldbus coupler.

Supply module ▶ 0 … 230 VAC/DC

750-612



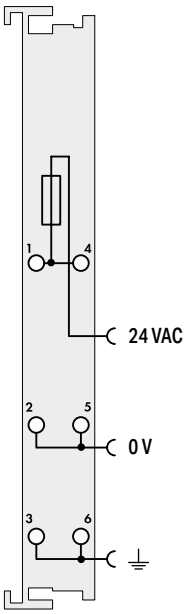
Item Description	**Power Supply; 0 … 230 VAC/DC**	
Version	**Default**	**Pluggable (delivery without connector)**
Item No.	**750-612**	**753-612**
Order Text	**Power Supply; 0-230 VAC/VDC**	**Power Supply; 0-230 VAC/VDC**

Technical Data		
Wiring interface		Pluggable
Supply voltage (system)	5 VDC; via data contacts	
Supply voltage (field)	230 VAC/DC (-15 … +10 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)	
Current carrying capacity (power jumper contacts)	10 A	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-612	wago.com/753-612
Accessories	**Item No.**	**Item No.**
Plug		753-110

This I/O module provides the applied supply voltage to the field devices connected to downstream I/O modules.

Supply module ▶ 24 VAC

750-617



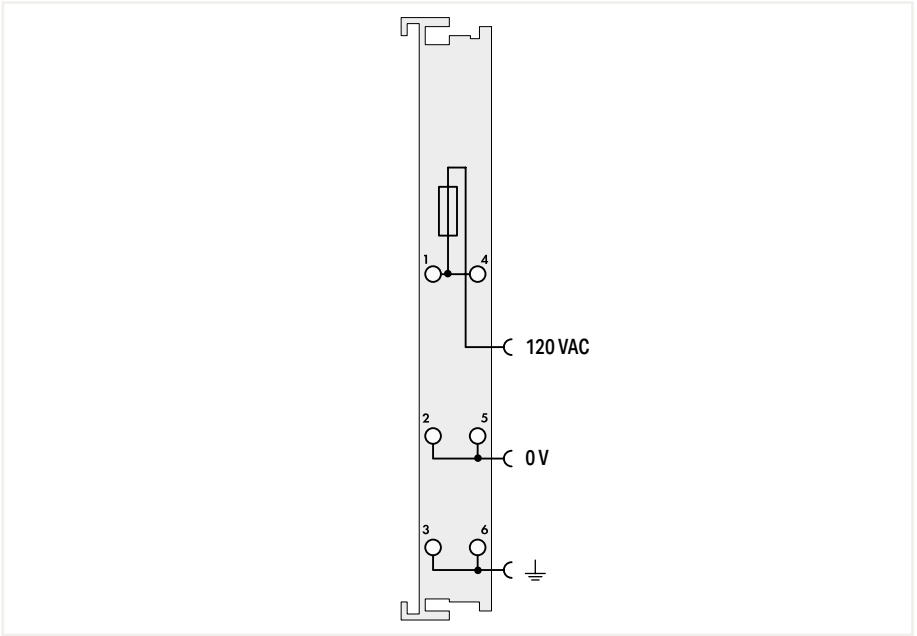
Item Description	**Power Supply; 24 VAC; Fuse holder**
Version	**Default**
Item No.	**750-617**
Order Text	**Power Supply; 24 VAC; Fuse**

Technical Data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VAC; via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)
Current carrying capacity (power jumper contacts)	6.3 A
Fuse	5 x 20; T 6.3 A (not included)
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE, KC, cULus OrdLoc
Data sheet and further information, see:	wago.com/750-617

This I/O module provides the applied supply voltage, protected by a fuse, to the field devices connected to downstream I/O modules. A blown fuse is indicated by an LED.

Supply module ▶ 120 VAC

750-615



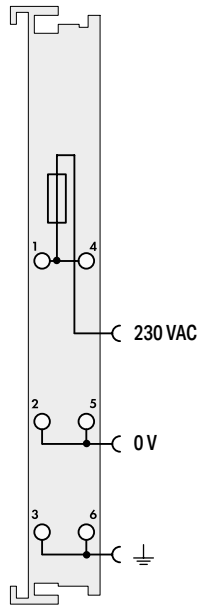
Item Description	**Power Supply; 120 VAC; Fuse holder**
Version	**Default**
Item No.	**750-615**
Order Text	**Power Supply; 120 VAC; Fuse**

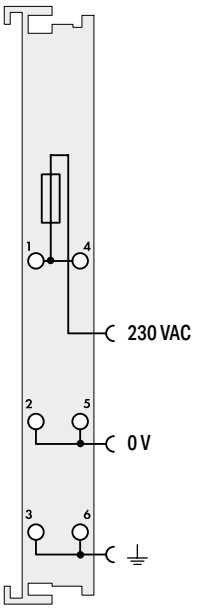
Technical Data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	120 VAC; via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)
Current carrying capacity (power jumper contacts)	6.3 A
Fuse	5 x 20; T 6.3 A (not included)
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-615

This I/O module provides the applied supply voltage, protected by a fuse, to the field devices connected to downstream I/O modules. A blown fuse is indicated by an LED.

Supply module ▶ 230 VAC

750-609





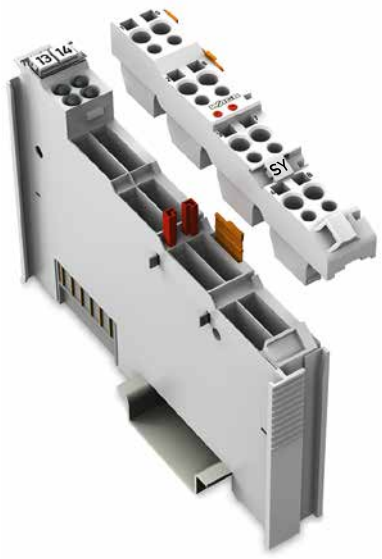
Item Description	Power Supply; 230 VAC; Fuse holder	Power Supply; 230 VAC; Fuse holder; Diagnostics
Version	Default	Diagnostics
Item No.	**750-609**	**750-611**
Order Text	**Power Supply; 230 VAC; Fuse**	**Power Supply; 230 VAC; Fuse; Diagn**

Technical Data		
Supply voltage (system)	5 VDC; via data contacts	5 VDC; via data contacts
Supply voltage (field)	230 VAC (-15 … +10 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)	230 VAC (-15 … +10 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)
Power consumption (5 V system supply)		5 mA
Current carrying capacity (power jumper contacts)	6.3 A	6.3 A
Fuse	5 x 20; T 6.3 A (not included)	5 x 20; T 6.3 A (not included)
Diagnostics		Supply voltage (field): Detection “on” at > 164 VAC; Detection “off” at < 40 VAC
Data width		2 bits (1 bit current monitoring, 1 bit fuse fault)
Surrounding air temperature (operation)	0 … 55 °C	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm	(12 x 100 x 69.8) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-609	wago.com/750-611

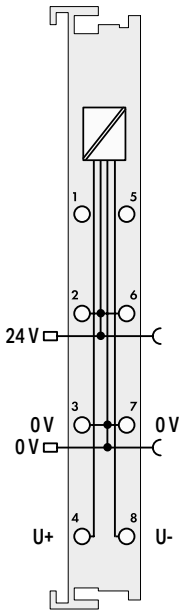
This I/O module provides the applied supply voltage, protected by a fuse, to the field devices connected to downstream I/O modules. A blown fuse is indicated by an LED.

This I/O module provides the applied supply voltage, protected by a fuse, to the field devices connected to downstream I/O modules. A blown fuse is indicated by an LED. The fuse status can also be queried from the fieldbus coupler.

Supply module ▶ DALI



753-620



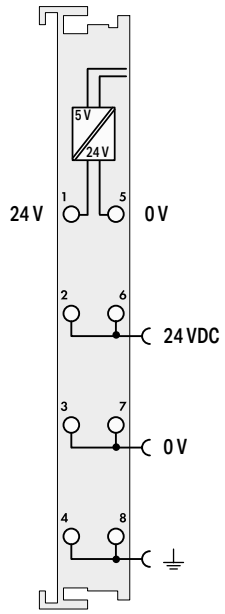
Item Description	**DALI Multi-Master DC/DC Converter**
Version	**Pluggable**
Item No.	**753-620**
Order Text	**DALI Multi-Master DC/DC-Converter**

Technical Data	
Wiring interface	Pluggable
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Supply voltage (DALI): 18 VDC; at +U and -U via CAGE CLAMP® connection
Total current (system supply)	200 mA
Current carrying capacity (power jumper contacts)	10 A
Test voltage (input/output)	1.5 kV
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; Marine; OrdLoc
Data sheet and further information, see:	wago.com/753-620

This I/O module powers the DALI Multi-Master (753-647). It uses the field supply, which is connected via the power jumper contacts. Cable bridges connect the module to the DALI Multi-Master.

System power supply ▸ 24 VDC with Bus power supply

750-613



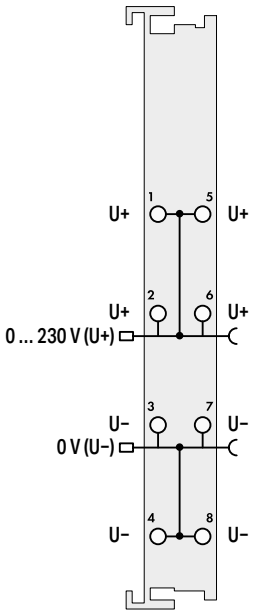
Item Description	**System Power Supply; 24 VDC**
Version	**Default**
Item No.	**750-613**
Order Text	**System Power Supply; 24 VDC**

Technical Data	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Input current (typ.) at nominal load (24 V)	500 mA
Power supply efficiency (typ.) at nominal load (24 V)	90 %
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)
Total current (system supply)	2000 mA
Current carrying capacity (power jumper contacts)	10 A
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-613

This I/O module provides the applied supply voltage to the field devices connected to downstream I/O modules. It also serves as an additional system supply for large nodes, covering the power demands of the I/O modules themselves.

Potential Multiplication ▸ 0 … 230 VAC/DC

750-614

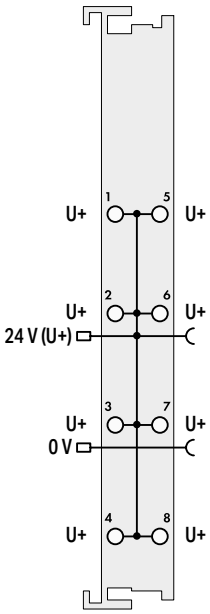


Item Description	Potential Multiplication	
Version	**Default**	**Pluggable (delivery without connector)**
Item No.	**750-614**	**753-614**
Order Text	**Potential Multiplication**	**Potential Multiplication**

Technical Data		
Wiring interface		Pluggable
Supply voltage (system)	5 VDC; via data contacts	
Supply voltage (field)	230 VAC/DC; via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current carrying capacity (power jumper contacts)	10 A	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-614	wago.com/753-614
Accessories	**Item No.**	**Item No.**
Plug		753-110

Potential Multiplication ▸ 8x 24 V

750-603

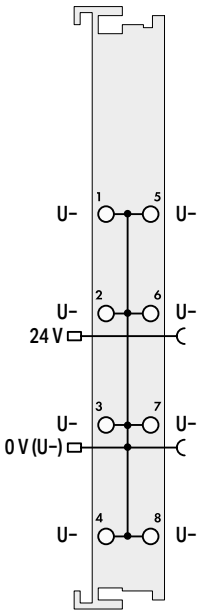


Item Description	Potential Multiplication; 8x 24 V	
Version	Default	Pluggable (delivery without connector)
Item No.	750-603	753-603
Order Text	Potential Multiplication; 8*24V	Potential Multiplication; 8*24V

Technical Data		
Wiring interface		Pluggable
Supply voltage (system)	5 VDC; via data contacts	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current carrying capacity (power jumper contacts)	10 A	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-603	wago.com/753-603
Accessories	**Item No.**	**Item No.**
Plug		753-110

Potential Multiplication ▸ 8x 0 V

750-604

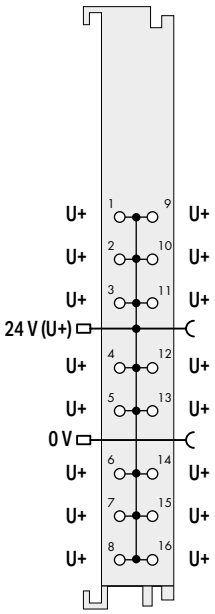


Item Description	Potential Multiplication; 8x 0 V	
Version	**Default**	**Pluggable (delivery without connector)**
Item No.	**750-604**	**753-604**
Order Text	**Potential Multiplication; 8*0V**	**Potential Multiplication; 8*0V**

Technical Data		
Wiring interface		Pluggable
Supply voltage (system)	5 VDC; via data contacts	
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)	
Current carrying capacity (power jumper contacts)	10 A	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-604	wago.com/753-604
Accessories	**Item No.**	**Item No.**
Plug		753-110

Potential Multiplication ▶ 16x 24 V

750-1605

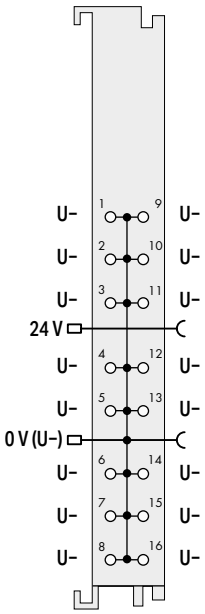


Item Description	**Potential Multiplication; 16x 24 V**
Version	**Standard with 16 connectors**
Item No.	**750-1605**
Order Text	**Potential Multiplication; 16*24V**

Technical Data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current carrying capacity (power jumper contacts)	10 A
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1605

Potential Multiplication ▸ 16x 0 V

750-1606

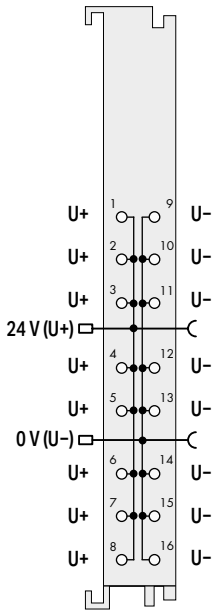


Item Description	**Potential Multiplication; 16x 0 V**
Version	**Standard with 16 connectors**
Item No.	**750-1606**
Order Text	**Potential Multiplication; 16*0V**

Technical Data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current carrying capacity (power jumper contacts)	10 A
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1606

Potential Multiplication ▶ 8x 24 V/8x 0 V

750-1607

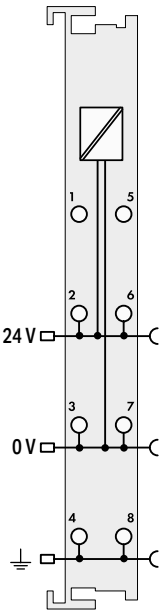


Item Description	**Potential Multiplication; 8x 24 V/8x 0 V**
Version	**Standard with 16 connectors**
Item No.	**750-1607**
Order Text	**Potential Multiplication; 8*24V/8*0V**

Technical Data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current carrying capacity (power jumper contacts)	10 A
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1607

Filter module ▶ Field Supply Filter (Surge)

750-624



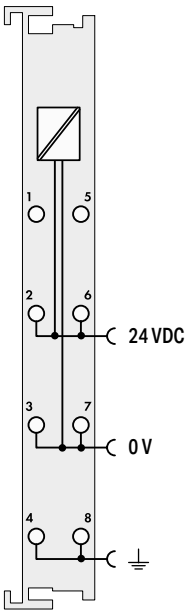
Item Description	Field Supply Filter (Surge); 24 VDC		
Version	Default	Higher isolation	Higher isolation; ground fault diagnostics
Item No.	**750-624**	**750-624/020-000**	**750-624/020-002**
Order Text	**Field Supply Filter; 24 VDC**	**Field Supply Filter; 24 VDC; HI**	**Field Supply Filter; 24 VDC HI; GF**
Technical Data			
Supply voltage (system)	5 VDC; via data contacts		
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)		24 VDC, SELV (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)			29 mA
Current carrying capacity (power jumper contacts)	10 A		
Power consumption, field supply (module with no external load)			16 mA
Application	Marine-certified operation in conjunction with the Ex i supply module and the use of 750 Series PROFIsafe Modules	Marine-certified operation in conjunction with 750 Series I/O Modules	
Data width			8-bit input; 8-bit output
Surrounding air temperature (operation)	0 … 55 °C		
Dimensions W x H x D	(12 x 100 x 69.8) mm		
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx	CE; Marine; OrdLoc/HazLoc	CE; Marine; OrdLoc/HazLoc
Data sheet and further information, see:	wago.com/750-624		

Use in systems with isolation monitoring requires the high isolation variants.

Ground fault diagnostics (response values) 750-624/020-002:

- Pre-alarm 50 kΩ (±15 %)
- Main alarm 25 kΩ (±15 %);
- Hysteresis typ. 25 … 30 %;
- Response time ≤5 s (typ. 2.5 s);
- Internal resistance DC (test circuit)
  > 10 MΩ (test inactive),
  > 90 kΩ (test active)
- Test current ≤180 µA (RF = 0 Ω)
- Permissible system leakage capacitance ≤2 µF

Filter module ▶ Field Supply Filter (Surge); without power jumper contacts



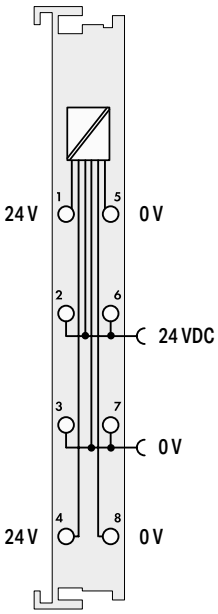
Item Description	Field Supply Filter (Surge); 24 VDC	
Version	Without power jumper contacts	Higher isolation; without power jumper contacts
Item No.	**750-624/000-001**	**750-624/020-001**
Order Text	**Field Supply Filter; 24 VDC; NC**	**Field Supply Filter; 24 VDC; HI; NC**

Technical Data		
Supply voltage (system)	5 VDC; via data contacts	
Supply voltage (field)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)	
Application	Marine-certified operation in conjunction with the Ex i supply module and the use of 750 Series PROFIsafe Modules	Marine-certified operation in conjunction with 750 Series I/O Modules
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-624/000-001	

Use in systems with isolation monitoring requires the high isolation variants.

Filter module ▶ Supply Filter

750-626



Item Description	Supply Filter; 24 VDC				
Version	Default	Ext. Temperature	Higher isolation	Higher isolation; ground fault diagnostics	Higher isolation; extended temperature
Item No.	**750-626**	**750-626/025-000**	**750-626/020-000**	**750-626/020-002**	**750-626/025-001**
Order Text	**Supply Filter; 24 VDC**	**Supply Filter; 24 VDC; T**	**Supply Filter; 24 VDC; HI**	**Supply Filter; 24 VDC HI; GF**	**Supply Filter; 24 VDC; HI; T**
Technical Data					
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)			24 VDC (-25 … +30 %)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)			24 VDC, SELV (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)
Power consumption (5 V system supply)				29 mA	
Current via system voltage (max.)	1.5 A (1 A up to hardware version 04)	1.5 A (1 A up to hardware 04)	1.5 A (1 A up to hardware version 04)		1.5 A (1 A up to hardware 04)
Current carrying capacity (power jumper contacts)	10 A				
Power consumption, field supply (module with no external load)				16 mA	
Isolation				300 VDC (limited by a transient protection device) system/field	
Application	Marine-certified operation in conjunction with the Ex i supply module and the use of 750 Series PROFIsafe Modules		Marine-certified operation in conjunction with 750 Series Couplers and Controllers		
Data width				8-bit input; 8-bit output	
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C	0 … 55 °C		-20 … 60 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm				
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx			CE; Marine; cULus OrdLoc/HazLoc	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx

Data sheet and further information, see: wago.com/750-626

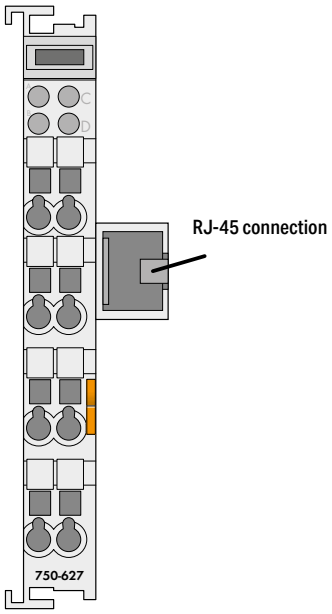
Use in systems with isolation monitoring requires the high isolation variants.

Ground fault diagnostics (response values) 750-626/020-002:

- Pre-alarm 50 kΩ (±15 %)
- Main alarm 25 kΩ (±15 %);
- Hysteresis typ. 25 … 30 %;
- Response time ≤5 s (typ. 2.5 s);
- Internal resistance DC (test circuit)
  > 10 MΩ (test inactive),
  > 90 kΩ (test active)
- Test current ≤180 µA (RF = 0 Ω)
- Permissible system leakage capacitance ≤2 µF

Bus extension ▸ End Module

750-627

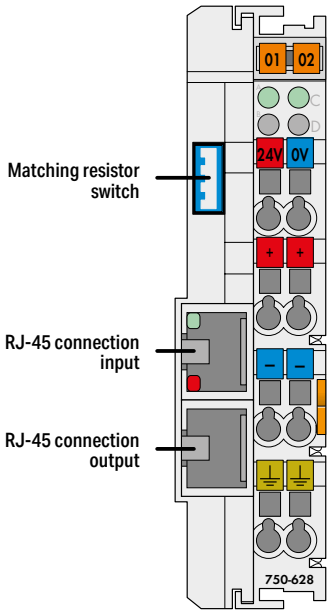


Item Description	**Bus Extension End Module**
Version	**Default**
Item No.	**750-627**
Order Text	**Bus Extension End Module**

Technical Data	
Device-specific	Number of coupler modules: up to 10; Distance (max.): 5 m (10 m see manual); (end/coupler modules or coupler/coupler modules)
Connection technology: communication/fieldbus	Local data bus: 1 x RJ-45
Supply voltage (system)	5 VDC; via data contacts
Power consumption (5 V system supply)	70 mA
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(24 x 100 x 69.8) mm
Approvals	CE; Marine; OrdLoc
Data sheet and further information, see:	wago.com/750-627

Bus extension ▸ Coupler Module

750-628

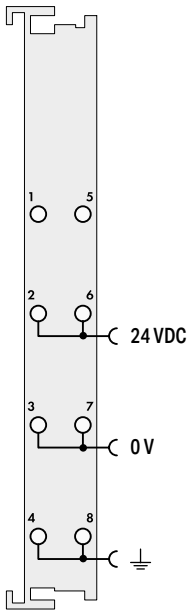


Item Description	**Bus Extension Coupler Module**
Version	**Default**
Item No.	**750-628**
Order Text	**Bus Extension Coupler Module**

Technical Data	
Number of modules per node (max.)	64
Device-specific	Distance (max.): 5 m (10 m see manual); (end/coupler modules or coupler/coupler modules)
Connection technology: communication/fieldbus	Local data bus: 2 x RJ-45
Supply voltage (system)	24 VDC (-15 … +20 %); via pluggable connector (CAGE CLAMP® connection)
Input current (typ.) at nominal load (24 V)	200 mA
Power supply efficiency (typ.) at nominal load (24 V)	76 %
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)
Power consumption (5 V system supply)	150 mA
Total current (system supply)	400 mA
Current carrying capacity (power jumper contacts)	10 A
Isolation	500 V system/field
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(24 x 100 x 69.8) mm
Approvals	CE; KC; Marine; OrdLoc
Data sheet and further information, see:	wago.com/750-628

Spacer module ▶ Binary

750-622

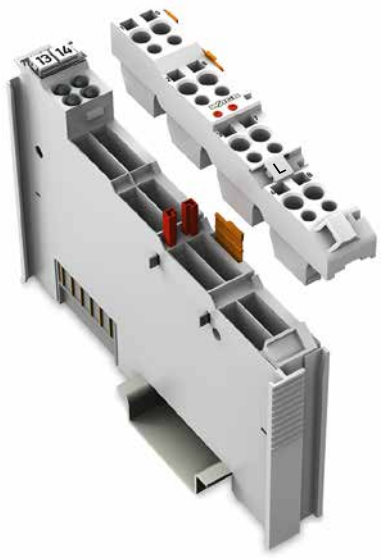


Item Description	**Binary Spacer Module**
Version	**Default**
Item No.	**750-622**
Order Text	**Binary Spacer Module**

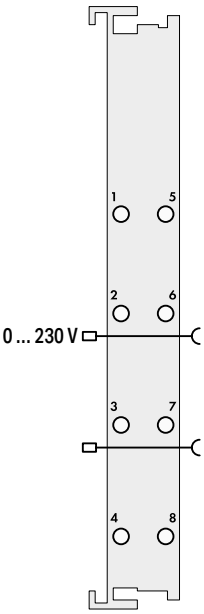
Technical Data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-15 … +20 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)
Power consumption (5 V system supply)	10 mA
Current carrying capacity (power jumper contacts)	10 A
Isolation	500 V system/field
Data width	2, 4, 6 or 8 bits (adjustable via DIP switches)
Operating mode	Inputs DIP 3: OFF; Outputs DIP 3: ON
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-622

This binary spacer module reserves bit addresses in the process image of a fieldbus node.

Spacer module ▸ Active



753-1629

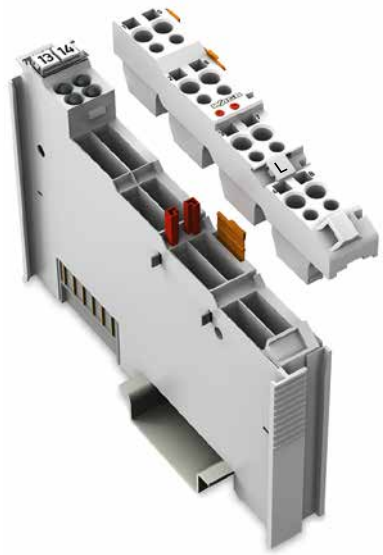


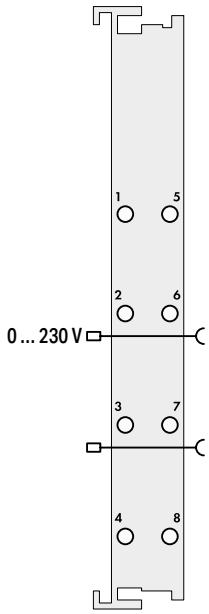
Item Description	Spacer Module	
Version	Active; pluggable (delivery without connector)	Active; without power jumper contacts; pluggable (delivery without connector)
Item No.	**753-1629**	**753-1629/000-001**
Order Text	**Spacer Module; Active**	**Spacer Module; Active; NC**

Technical Data		
Wiring interface	Pluggable	
Supply voltage (system)	5 VDC; via data contacts	
Supply voltage (field)	Field-side supply via power jumper contacts	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; cULus OrdLoc	
Data sheet and further information, see:	wago.com/753-1629	
Accessories	**Item No.**	**Item No.**
Plug	753-110	753-110

This active spacer module enables both hardware and software space reservation for standard function modules (digital input/output modules and analog input/output modules) in PROFIBUS/PROFINET networks (only in conjunction with 750-333, 750-375, 750-377).

Spacer module ▶ Passive





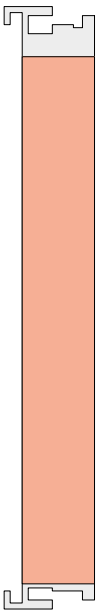
Item Description	**Spacer Module**
Version	**Passive; pluggable (delivery without connector)**
Item No.	**753-629/020-000**
Order Text	**Spacer Module; Passive**

Technical Data	
Wiring interface	Pluggable
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	Field-side supply via power jumper contacts
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; cULus OrdLoc
Data sheet and further information, see:	wago.com/753-629/020-000
Accessories	**Item No.**
Plug	753-110

This passive spacer module enables hardware space reservation for standard function modules (digital input/output modules and analog input/output modules).

Distance module ▸ Distance Module

750-616



Item Description	Distance Module	
Version	Default	Labeled
Item No.	**750-616**	**750-616/030-000**
Order Text	**Distance Module**	**Distance Module; 24 VDC/230 VAC**

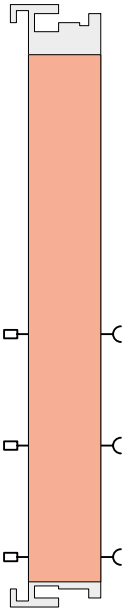
Technical Data		
Supply voltage (system)	5 VDC; via data contacts	
Surrounding air temperature (operation)	0 … 55 °C	
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx	

Data sheet and further information, see: wago.com/750-616

This distance module visually divides a fieldbus node into sections. The 750-616 Distance Module has no power jumper contacts. The labeled version of the distance module is available under the item number 750-616/030-000.
Notice:
Operation of the adjacent I/O modules requires a supply module.

Distance module ▸ Distance Module; with power jumper contacts

750-621



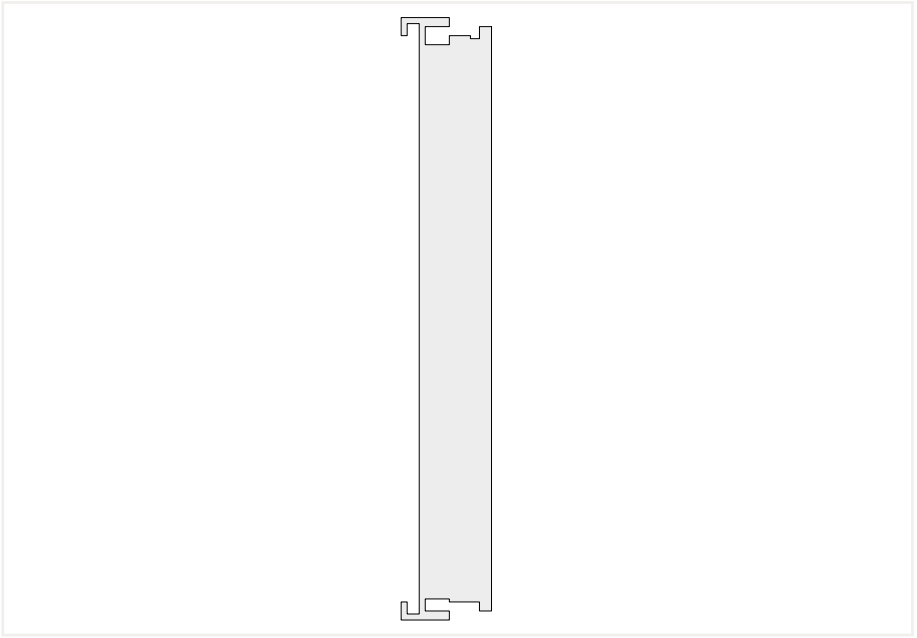
Item Description	**Distance Module**
Version	**With power jumper contacts**
Item No.	**750-621**
Order Text	**Distance Module**

Technical Data	
Supply voltage (system)	5 VDC; via data contacts
Surrounding air temperature (operation)	0 … 55 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-621

The 750-621 Distance Module has power jumper contacts that can supply the power to adjacent I/O modules.

Bus end module

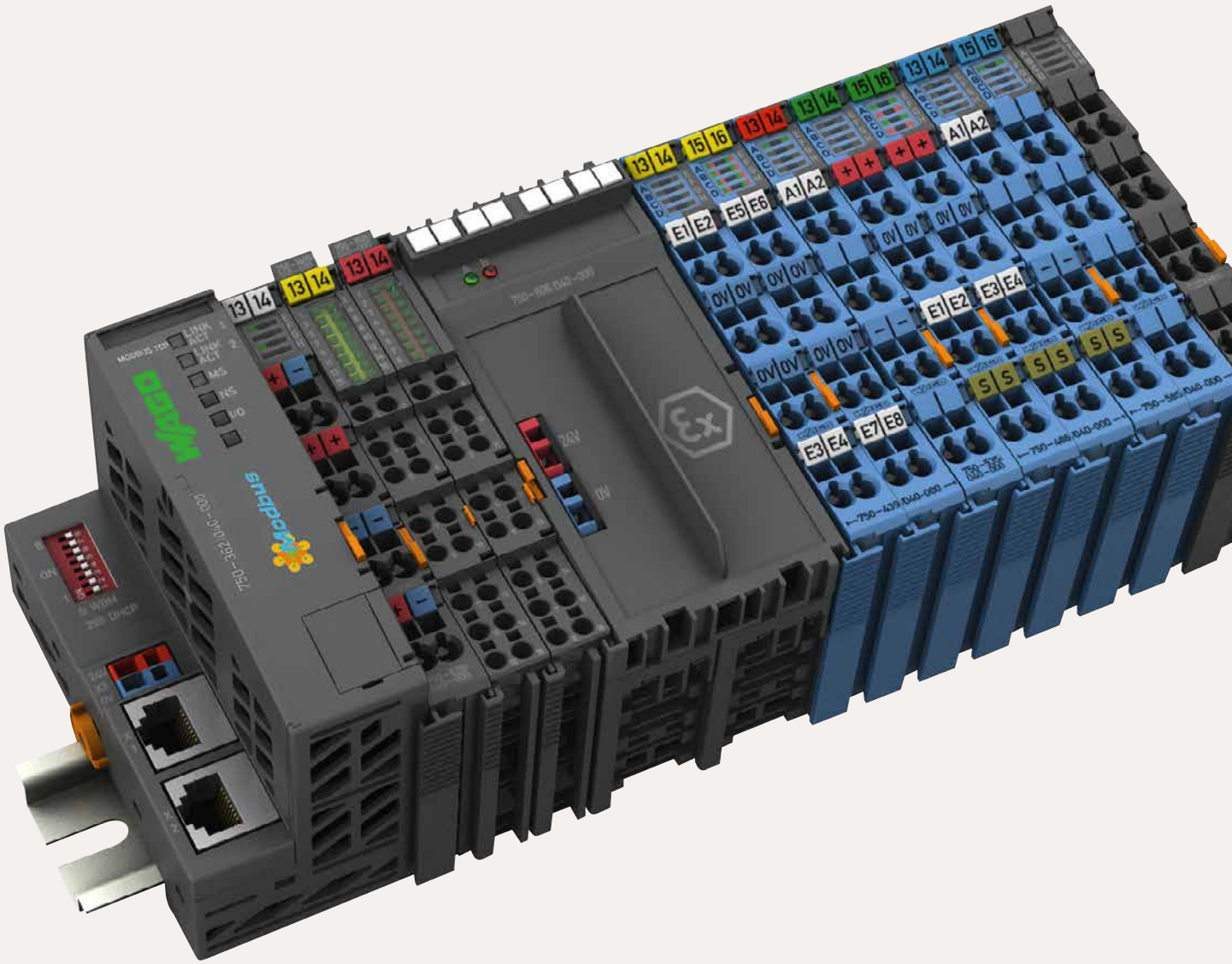
750-600



Item Description	End Module	
Version	Default	Ext. Temperature
Item No.	750-600	750-600/025-000
Order Text	End module	End Module; T

Technical Data		
Surrounding air temperature (operation)	0 … 55 °C	-20 … 60 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm	
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx	
Data sheet and further information, see:	wago.com/750-600	

This end module must be snapped onto the assembly at the end of a fieldbus node.
The end module completes the internal data bus, ensuring flawless data transmission.



I/O System – 750 XTR Series

I/O System Advanced

- Open, innovative and future-proof industrial automation
- Short reaction times and high signal transmission synchronicity
- Fast ETHERNET fieldbuses – EtherCAT®

◄◄ Section 6

I/O System – 750 and 753 Series

- Highly versatile
- More than 500 modules available
- Functional safety
- Ex i

◄ Section 7

I/O System – 750 XTR Series

For demanding applications in which the following are critical:

- Extreme temperature resistance
- Immunity to electromagnetic interference and impulse voltages
- Vibration and shock resistance

I/O System Field

Automate and Network Modular Machines for the Future

- Ethernet-based fieldbus standards (EtherCAT®, EtherNet/ IPTM, PROFINET)
- Integrated Bluetooth® interface (Android/iOS App), OPC UA Server, Webserver
- IO-Link Master and Devices

Section 9 ►►

I/O System – 750 XTR Series
Contents

I/O System – 750 XTR Series
General Product Information

Taking It to the eXTReme – The Standard for 750 XTR

Instantly recognizable by its dark gray modules, you will benefit from the unique added value of the WAGO I/O System 750 XTR for applications that are subjected to extreme environments.

Extremely temperature-resistant, immune to interference, as well as unfazed by vibrations and impulse voltages – the WAGO I/O System 750 XTR is the first choice for demanding applications including:
- Marine systems and onshore/offshore installations
- Renewable energy systems (wind turbines, solar systems and biogas plants)
- Transformer stations and power distribution systems
- Petrochemical processing
- Water and wastewater treatment systems
- Custom machines
- Railway systems

8

Superior Reliability in Extreme Climates

Automation systems are increasingly being located in outdoor and remote locations where components are directly affected by widely fluctuating temperature conditions such as wind turbines or transformer stations.
Engineered for freezing cold, extreme heat and high humidity, the WAGO I/O System 750 XTR provides absolute dependability in virtually any weather. The XTR version of the WAGO I/O System 750 is unfazed by both freezing cold down to −40°C and scorching heat up to +70°C. And this applies equally for both start-up and ongoing operation.
The maximum approved operating altitude of 5,000 m is another highlight. Even in the thin air of a mountain-top station, the system impressively demonstrates its high performance and availability.

eXTReme Evolution of the Tried and Tested

Using an industry-leading platform, the WAGO I/O System 750 XTR boasts the same proven benefits:
- Compact design: up to 16 channels in a module width of 12 mm (1/2")
- Easy to use
- Vibration-proof, fast and maintenance-free CAGE CLAMP® spring connections
- Fieldbus independence due to its modular design
- Clear identification with the WAGO WSB Marking System

Additional Protection against Interference Pulses

The WAGO I/O System 750 XTR provides greater immunity to impulse voltages up to 5 kV, lower EMC emission of interference and higher insensitivity to EMC interference. These strengths ensure trouble-free operation.

High Mechanical Performance

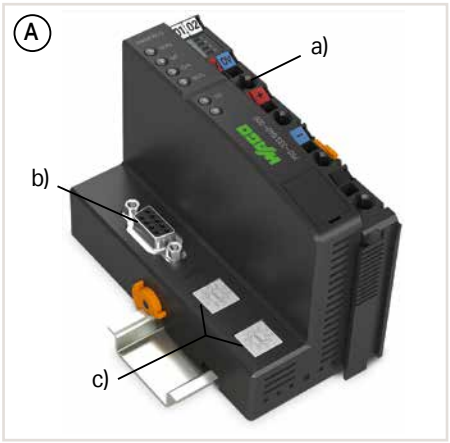
Automation systems must be incredibly vibration-resistant, especially when installed close to vibration-prone and shock-generating system components. Powerful motors and power circuit breakers are just two examples of the many applications that can stress automation systems. To perform in these demanding environments, the WAGO I/O System 750 XTR was developed to set new standards. With 5g of vibration resistance per DIN EN 60068-2-6 (acceleration: 50 m/s2) and shock resistance of 15g (150 m/s2) or 25g (250 m/s2) per IEC 60068-2-27, the system is engineered for dependability – no matter what. Count on long-lasting, trouble-free operation and industry-topping levels of safety – even in the most severe applications, such as tunnel boring machines.

Worldwide Approvals

International approvals for industrial automation, marine automation and onshore/offshore applications guarantee worldwide use – even under harsh operating conditions, e.g., Germanischer Lloyd, Det Norske Veritas, American Bureau of Shipping, Korean Register of Shipping, Nippon Kaiji Kyokai, Registro Italiano Navale and Polski Rejestr Stratkow.

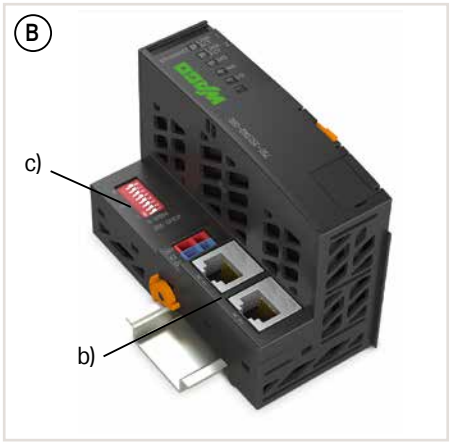
Benefits:
- No need for air conditioning
  - Requires less space
  - Lower energy and maintenance costs
- Can be used in unshielded areas
- Maximum system uptime
- Use on vibrating/shock-generating system components
- Vibration-proof, fast and maintenance-free CAGE CLAMP® connections

I/O System – 750 XTR Series
Interfaces and Types



Housing Design: Fieldbus Coupler (A)
- Includes a supply module (a) to power downstream I/O modules
- Technical differences on the connection level; fieldbus interface (b) and optional addressing switch (c)
- W x H x D (mm): 50.5 x 100 x 71.1

Housing Design: Fieldbus Coupler Eco (B)
- Restriction on power supply and data width
- W x H x D (mm): 49.5 x 96.8 x 71.9



Housing Design: 750 (C)
- 8 connection points (CAGE CLAMP®)
- W x H x D (mm): 12 x 100 x 67.8

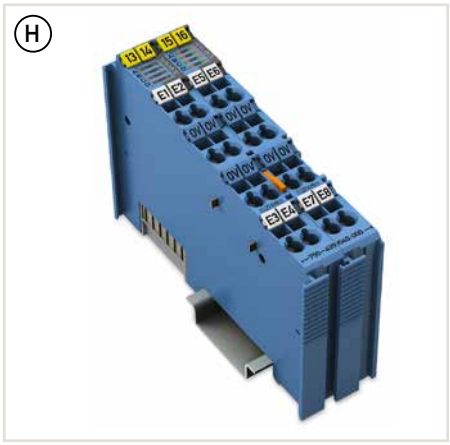
Housing Design: 750 (D)
- 16 connection points (Push-in CAGE CLAMP®)
- W x H x D (mm): 12 x 100 x 69

Housing Design: Double Width (E)
Some modules are integrated into a double housing to address specific technological needs. Despite utilizing the same standardized housing, these modules are twice as wide.
- W x H x D (mm): 24 x 100 x 67.8

Specialty Housing Design (F)
Some modules are integrated into a specialty housing with a specific width and pluggable connectors. The dimensions are specified on the respective catalog pages.

Housing Design: Intrinsically Safe XTR Modules (G)
- 8 connection points (CAGE CLAMP®)
- W x H x D (mm): 12 x 100 x 67.8

Housing Design (Intrinsically Safe XTR Modules): Double Width (H)
- 16 connection points (CAGE CLAMP®)
- W x H x D (mm): 24 x 100 x 67.8

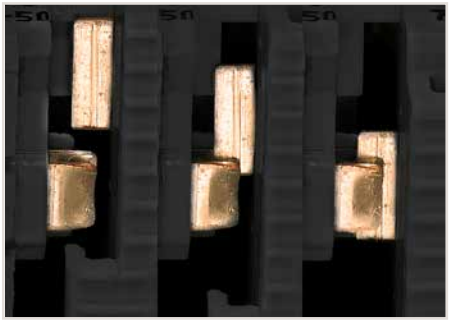


I/O System – 750 XTR Series
Application and Installation Instructions

Securing/Removing a module from the DIN-rail

Secure, automatic data and electronics power supply connection via gold-plated pressure contacts

Service interface for configuring the fieldbus coupler; connectivity via configuration cable or radio adapter



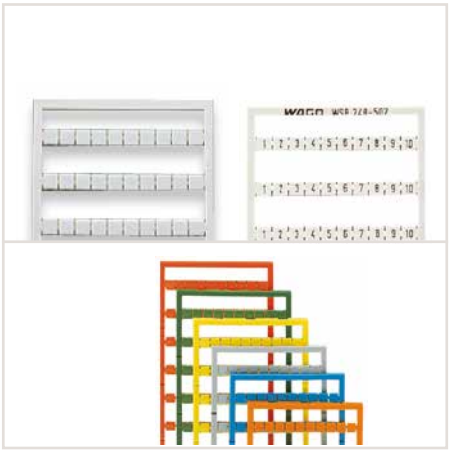
Secure, automatic power supply connection via self-cleaning blade contacts

Notice:
Some I/O modules do not provide all power jumper contacts. Therefore, an I/O module with three power jumper contacts (e.g., 2-channel digital input) cannot be connected to an I/O module that do not have all power jumper contacts.

To increase electromagnetic compatibility (EMC), some components are connected to the DIN-rail via a discharge contact. The DIN-rail must always have a low-resistance connection to the ground potential.

Wide range of accessories available for EMC-compliant installation, including shield connection

Marking Accessories



Mini-WSB marking cards (blank, pre-marked or colored) are suitable for all 750 Series I/O Modules.

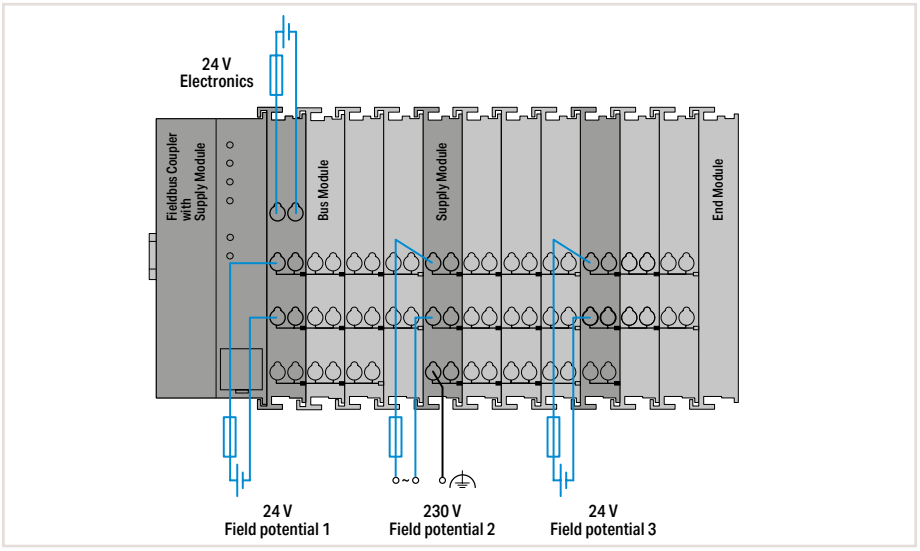
Marker carrier for a single I/O module (suitable for all 750 and 753 Series I/O Modules); the marker carrier can be accommodated in the upper Mini-WSB marker slot.

Marker carrier for one I/O node; both models (750-106 and 750-107) permit continuous marking regardless of the I/O module housing used.

I/O System – 750 XTR Series
Application and Installation Instructions

Power Supply

The internal electronics are powered by the fieldbus coupler. The power supply to the field-side supply is electrically isolated. This division enables a separate supply for sensors and actuators. Snapping the I/O modules together automatically routes the supply voltages. Supply modules with diagnostics also enable power supply monitoring. This ensures a flexible and customized supply configuration for a fieldbus node.
Power supply to the electronics is limited by a maximum value. This value depends on the fieldbus coupler used. If the sum of the internal current demand of all the I/O modules should exceed this value, an additional system supply module is necessary. Furthermore, the current consumed for field-side supply must not exceed 10 A. A variety of power supply modules allows re-feeding, creating potential groups and implementing emergency stops.



Interference-Free in Safety-Related Applications

To easily and safely perform a cost-effective and centralized deactivation of complete actuator groups, the actuator's power supply can be switched off using a safety switching device. This can either be performed for each individual actuator or by turning off the power supply to a group of control outputs. In the event of failure, ensure that no interference from other current or power circuits occurs – even when the control voltage is switched off – so the defined safety function properties (logic and time response) remain unchanged.

All 750 XTR Series Digital Output Modules are designed to provide interference-free safety functionality. The modules can be used in safety applications up to category 4 per DIN EN ISO 13849-1:2007. Safety category and performance level depend solely on the safety components and their wiring.

Notice:
WAGO's interference-free I/O modules are not a component of the safety function and do not replace the safety switching device! When using the components in safety functions, the corresponding notes must be observed in the relevant manual.

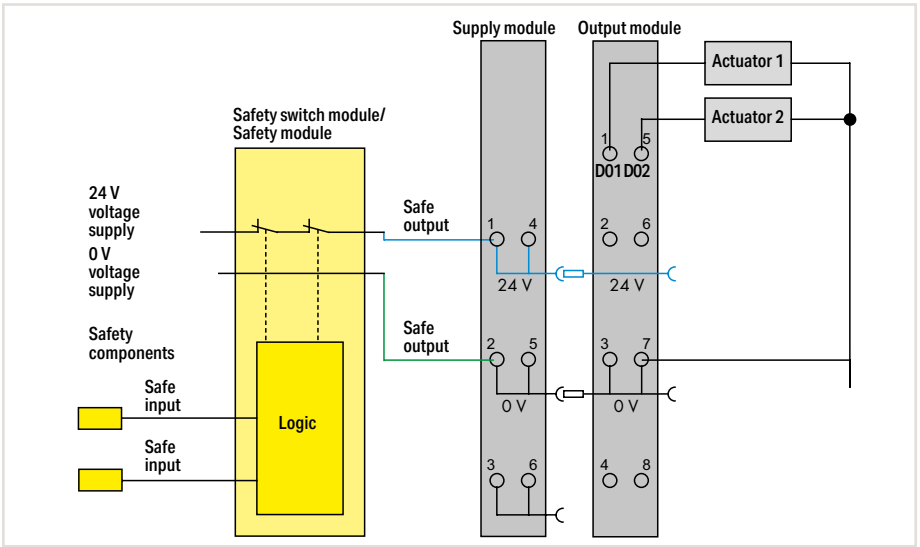
Notes:
Additional steps must be implemented based on where the I/O system is installed:
Specific power and field-side power supply filters (750-624/040-001 or 750-626/040-000) are required for marine and onshore/offshore applications, as well as in telecontrol and railway systems.

A specific supply module (750-606/040-000) is required to operate intrinsically safe Ex i modules. Additionally, both supply modules and field-side power supply filters are recommended when operating intrinsically safe Ex i modules for marine and onshore/offshore applications.

Please refer to the manual for details about the power supply's design.

Mixed Operation

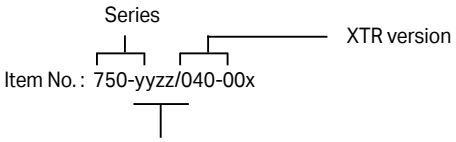
Mixed operation (standard/XTR modules) within a node is possible when groups of modules are electrically isolated on the field side (i.e., electrically isolated power supply). This combination may be useful, for example, when there are only increased requirements for immunity to impulse voltages and interference, but the surrounding air temperature is not critical.



Example: 2-channel, double-pole power supply disconnection

I/O System – 750 XTR Series
Item Number Key

Explanation of an item number key's components



01zz:	Marker
03zz:	Fieldbus coupler zz: Consecutive number
1yzz:	16 connection points or ribbon cable
y4zz:	Input 00 ... 49 = Digital input 50 ... 99 = Analog input
y5zz:	Output 00 ... 49 = Digital output 50 ... 99 = Analog input
y6zz:	Communication/system modules 0z: Power supply, field-side connection, end module 1z: Power supply, distance module 2z: Filter 5z: Serial interface
09zz:	Accessories

8

Approvals

For approvals overview (item comparison), see Section 14 (Technical Section) or visit www.wago.com.

Standards and Rated Conditions for Rail Applications (EN 50155), not for Intrinsically Safe XTR Modules

Railway Applications (EN 50155)	Class/Standard Compliance
4.1 Rated operating conditions	
4.1.1 Altitude above sea level	AX (EN 50125-1)
4.1.2 Surrounding air temperature	TX
4.1.3 Shock and vibration	1A and 1B (EN 61373)
4.1.4 Relative humidity	95 % (coated PCBs)
5.1 Power supply	
5.1.1.1 Voltage fluctuations	
Minimum voltage	0.725 x Un
Maximum voltage	1.3 x Un
5.1.1.2 Power interruptions	S1
5.4 Surge, ESD, burst tests	EN 50121-3-2
5.5 EMC (emission of interference, immunity to interference)	EN 50121-3-2, EN 50121-4, -5
Fire behavior: per EN 45545-2 hazard level HL3	

WAGO is certified in accordance with the IRIS quality standard.

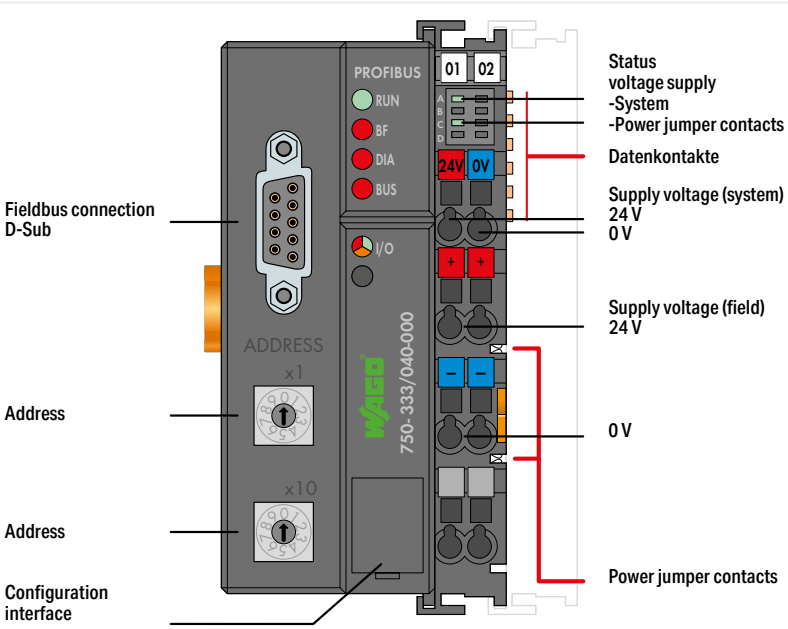
Standards and Rated Conditions

General Specifications	
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Surrounding air temperature (operation)	-40 … 70 °C
Surrounding air temperature (storage)	-40 … 85 °C
Relative humidity (without condensation)	95 %
Relative humidity (with condensation)	Short-term condensation per Class 3K7/IEC EN 60721-3-3 and E-DIN 40046-721-3 (except for wind-driven precipitation, water and ice formation)
Operating altitude	Without temperature derating: 0 … 2000 m; with temperature derating: 2000 … 5000 m (0.5 K/100 m); 5000 m (max.)
Pollution degree (5)	2 per IEC 61131-2
Vibration resistance	Per IEC 60068-2-6 (acceleration: 5g), EN 60870-2-2, IEC 60721-3-1, -3, EN 50155; EN 61373
Shock resistance	Per IEC 60068-2-27 (15g/11 ms/half-sine/1,000 shocks; 25g/6 ms/1,000 shocks), EN 50155, EN 61373
EMC immunity to interference	Per EN 61000-6-1, -2; EN 61131-2; marine applications; EN 50121-3-2; EN 50121-4, -5; EN 60255-26; EN 60870-2-1; EN 61850-3; IEC 61000-6-5; IEEE 1613; VDEW: 1994
EMC emission of interference	Per EN 61000-6-4, EN 61131-2, EN 60255-26, marine applications, EN 60870-2-1, EN 61850-3, EN 50121-3-2, EN 50121-4, -5
Protection type	IP20
Mounting position	Horizontal (standing/lying); vertical
Mounting type	DIN-35 rail
Housing material	Polycarbonate; polyamide 6.6
Exposure to pollutants	Per IEC 60068-2-42 and IEC 60068-2-43
Permissible SO_2 contaminant concentration at a relative humidity 75 %	25 ppm
Permissible H_2S contaminant concentration at a relative humidity 75 %	10 ppm
Connection technology: system supply	2 x CAGE CLAMP®
Connection technology: field supply	4 x CAGE CLAMP®
Solid conductor	0.25 … 2.5 mm² / 24 … 14 AWG
Fine-stranded conductor	0.25 … 2.5 mm² / 24 … 14 AWG
Strip length	8 … 9 mm / 0.31 … 0.35 inch
Current carrying capacity (power jumper contacts)	10 A

Cables and pluggable connectors	Page 671
DIN-rail	Page 706
General accessories	Page 614
Marking	Page 704
Power supply	Page 533
Shield termination	Page 698
Supply module	Page 518
System enclosure	Page 683
Tool	Page 709

Fieldbus coupler ▶ PROFIBUS DP; 2nd generation

750-333/040-000

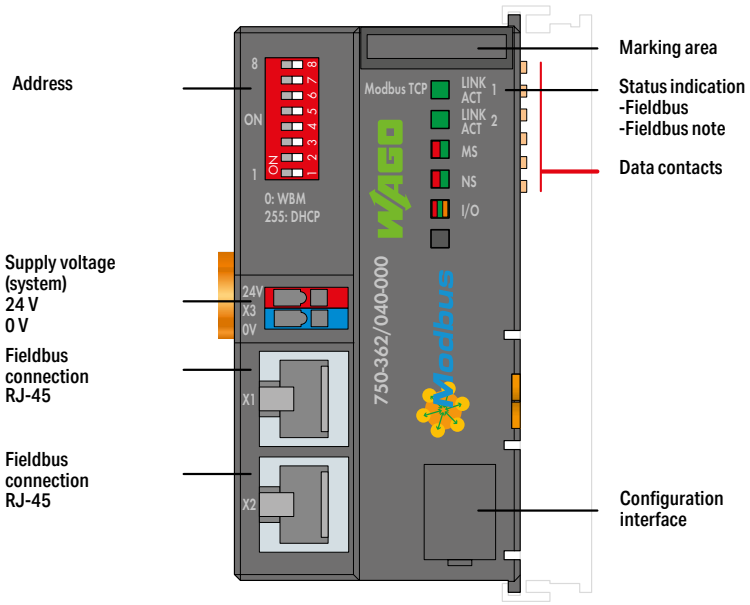


Version	**Extreme**
Item No.	**750-333/040-000**
Order Text	**FC PROFIBUS; G2; 12MBd; XTR**

Technical Data	
Communication	PROFIBUS
Protocol	PROFIBUS DP/V1
Connection technology: communication/fieldbus	PROFIBUS: 1 x D-sub 9 socket
Number of fieldbus nodes on master (max.)	96
Baud rate	9.6 kBd … 12 MBd
Transmission medium (communication/fieldbus)	Cu cable per EN 50170
Number of modules per node (max.)	63
Input and output (fieldbus) process image (max.)	244 bytes/244 bytes
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Supply voltage (field)	24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	200 mA
Total current (system supply)	1800 mA
Rated surge voltage	1 kV
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-333/040-000

Fieldbus coupler ▸ Modbus TCP; ECO

750-362/040-000

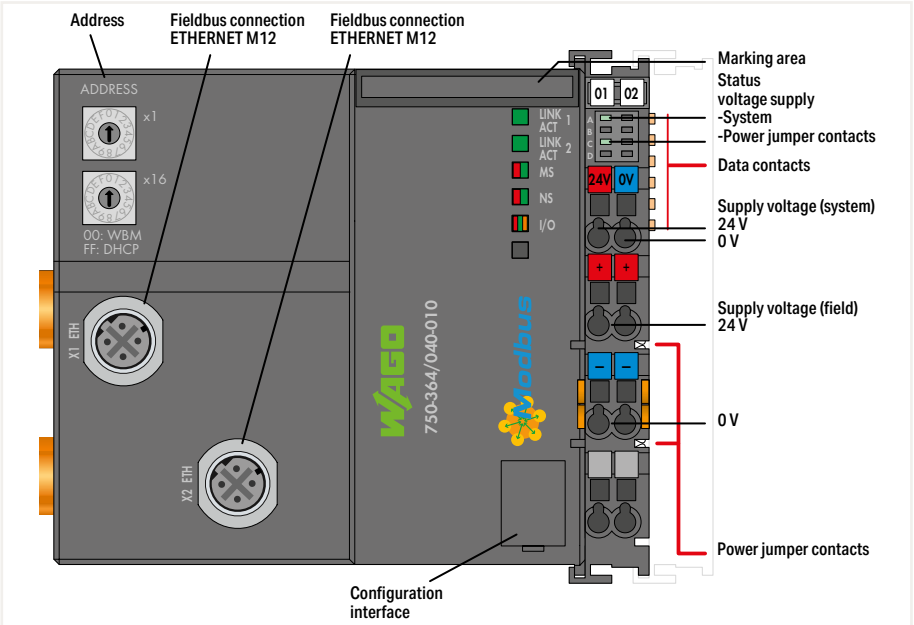


Version	**Extreme**
Item No.	**750-362/040-000**
Order Text	**FC Modbus TCP; G4; XTR**

Technical Data	
Communication	Modbus (TCP, UDP)
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; SNTP; FTP(S); SNMP
Connection technology: communication/fieldbus	Modbus TCP/UDP: 2 x RJ-45
Baud rate	10/100 Mbit/s
Transmission medium (communication/fieldbus)	Twisted Pair S-UTP; 100 Ω; Cat. 5; 100 m maximum cable length
Transmission performance	Class D per EN 50173
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	1020 words/1020 words
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	280 mA
Power consumption (5 V system supply)	350 mA
Total current (system supply)	700 mA
Rated surge voltage	1 kV
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-362/040-000

Fieldbus coupler ▶ Modbus TCP M12

750-364/040-010

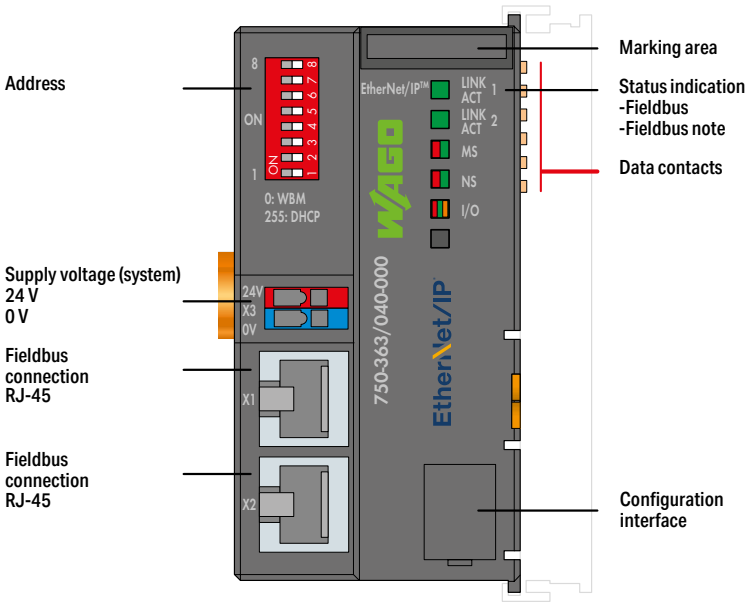


Version	**Extreme**
Item No.	**750-364/040-010**
Order Text	**FC Modbus TCP M12; G4; XTR**

Technical Data	
Communication	Modbus (TCP, UDP)
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; FTP(S); SNMP
Connection technology: communication/fieldbus	Modbus TCP/UDP: 2 x M12 socket; 4-pole; D-coded
Baud rate	10/100 Mbit/s
Transmission medium (communication/fieldbus)	Twisted pair S-UTP; 100 Ω; Cat. 5; M12 D-coded; 100 m maximum cable length
Transmission performance	Class D per EN 50173
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	1020 words/1020 words
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Supply voltage (field)	24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	350 mA
Total current (system supply)	1700 mA
Rated surge voltage	1 kV
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(112 x 100 x 71.9) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-364/040-010

Fieldbus coupler ▶ EtherNet/IP™; ECO

750-363/040-000



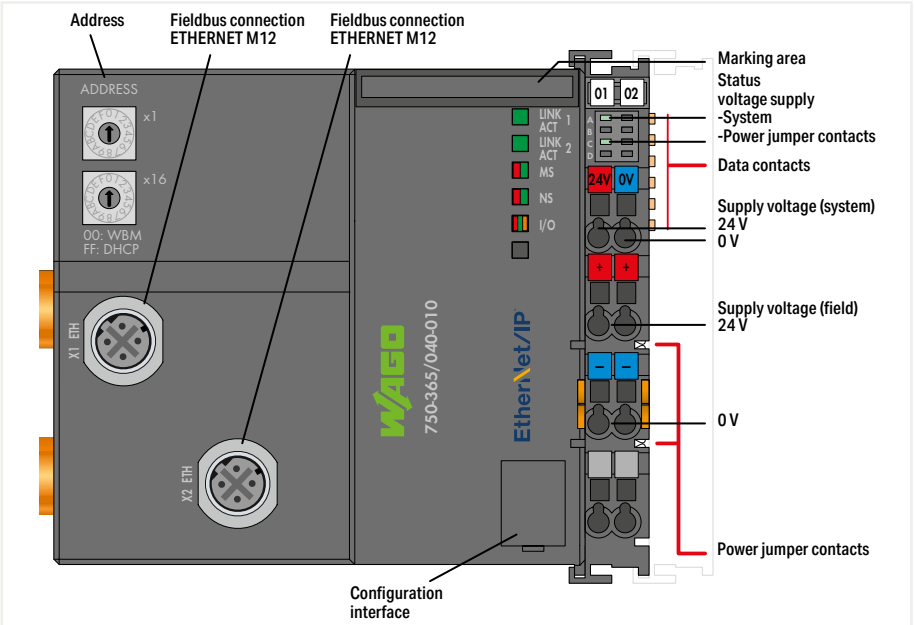
Version	**Extreme**
Item No.	**750-363/040-000**
Order Text	**FC EtherNet/IP™; G4; XTR**

Technical Data	
Communication	EtherNet/IP™
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; SNTP; FTP(S); SNMP
Connection technology: communication/fieldbus	EtherNet/IP™: 2 x RJ-45
Baud rate	10/100 Mbit/s
Transmission medium (communication/fieldbus)	Twisted Pair S-UTP; 100 Ω; Cat. 5; 100 m maximum cable length
Transmission performance	Class D per EN 50173
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	1020 words/1020 words
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	280 mA
Power consumption (5 V system supply)	350 mA
Total current (system supply)	700 mA
Rated surge voltage	1 kV
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(49.5 x 96.8 x 71.9) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-363/040-000

8

Fieldbus coupler ▶ EtherNet/IP™ M12

750-365/040-010

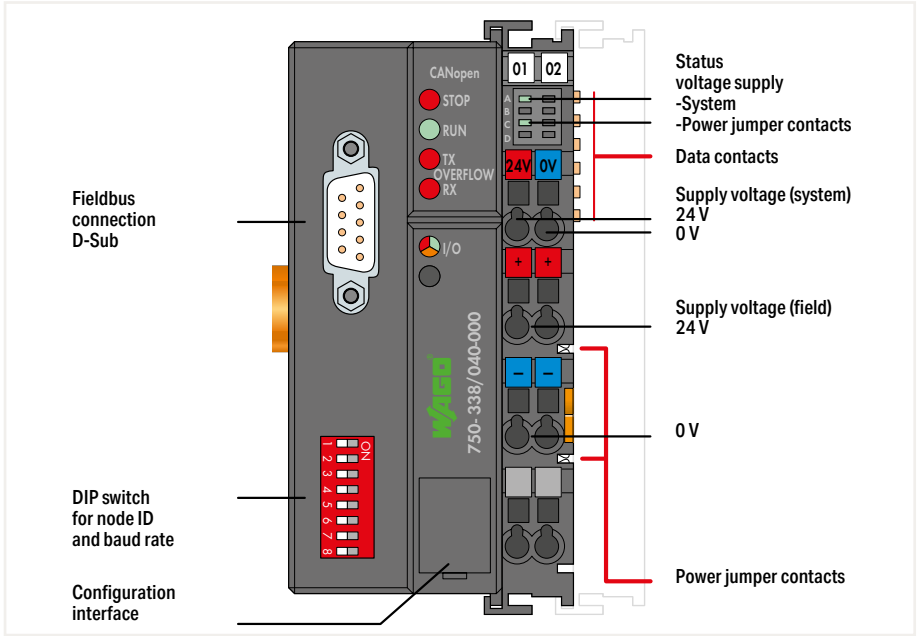


Version	**Extreme**
Item No.	**750-365/040-010**
Order Text	**FC EtherNet/IP™ M12; G4; XTR**

Technical Data	
Communication	EtherNet/IP™
ETHERNET protocols	HTTP(S); BootP; DHCP; DNS; FTP(S); SNMP
Connection technology: communication/fieldbus	EtherNet/IP™: 2 x M12 socket; 4-pole; D-coded
Baud rate	10/100 Mbit/s
Transmission medium (communication/fieldbus)	Twisted pair S-UTP; 100 Ω; Cat. 5; M12 D-coded; 100 m maximum cable length
Transmission performance	Class D per EN 50173
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	1020 words/1020 words
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Supply voltage (field)	24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	350 mA
Total current (system supply)	1700 mA
Rated surge voltage	1 kV
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(112 x 100 x 71.9) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-365/040-010

Fieldbus coupler ▸ CANopen

750-338/040-000



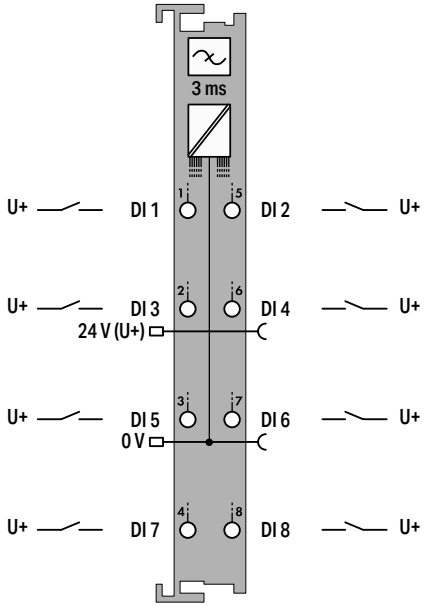
Version	**Extreme**
Item No.	**750-338/040-000**
Order Text	**FC CANopen; DSub; XTR**

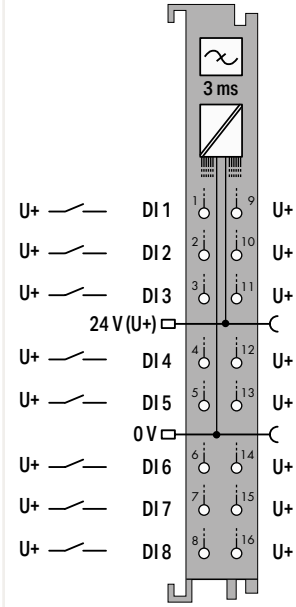
Technical Data	
Communication	CANopen
Connection technology: communication/fieldbus	CANopen: 1 x D-sub 9 plug
Number of fieldbus nodes on master (max.)	110
Baud rate	10 kBd … 1 MBd
Transmission medium (communication/fieldbus)	Shielded Cu cable 3 x 0.25 mm²
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	512 Byte/512 Byte
Number of PDOs	32 Tx / 32 Rx
Number of SDOs	2 SDO servers
Communication profile	DS-301 V4.1
Device profile	DS-401 V2.0; Limit value monitoring ; Edge-triggered PDOs; Configurable response in the event of an error
Supply voltage (system)	24 VDC; via pluggable connector (CAGE CLAMP® connection); Derating must be observed!
Supply voltage (field)	24 VDC; Power supply via pluggable connector (CAGE CLAMP® connection); Transmission via power jumper contacts; Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: –27.5 % (including 15 % residual ripple)
Input current (typ.) at nominal load (24 V)	500 mA
Power consumption (5 V system supply)	350 mA
Total current (system supply)	1650 mA
Rated surge voltage	1 kV
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(50.5 x 100 x 71.1) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-338/040-000

8

Digital input ▸ 24 VDC ▸ High-side switching ▸ 3 ms

750-430/040-000

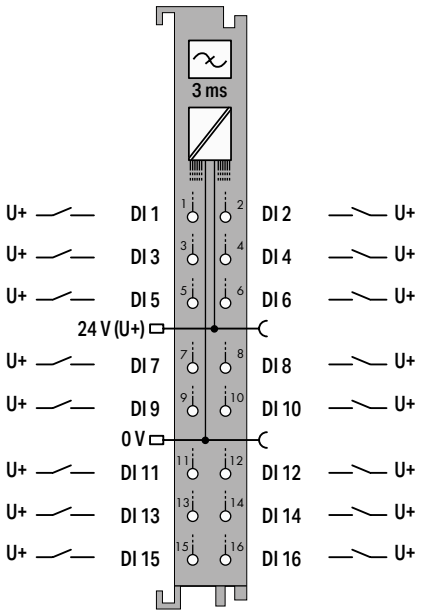




Item Description	8-Channel Digital Input; 24 VDC; 3 ms	8-Channel Digital Input; 24 VDC; 3 ms; 2-wire connection
Version	Extreme	Extreme with 16 connectors
Item No.	**750-430/040-000**	**750-1415/040-000**
Order Text	**8DI; 24 VDC; 3ms; XTR**	**8DI; 24 VDC; 3ms; 2-wire; XTR**
Technical Data		
Number of digital inputs	8	8
Signal type	Voltage	Voltage
Voltage signal type	24 VDC	24 VDC
Voltage range for signal (0)	−3 … +5 VDC	−3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC	11 … 30 VDC
Input characteristic		Type 3
Sensor connection	8 x (1-wire)	8 x (2-wire)
Input characteristic	High-side switching	High-side switching
Input filter (digital)	3 ms	3 ms
Input current per channel for signal (1) (typ.)	2.8 mA	4.5 mA
Input current per channel for signal (0) (typ.)		1.6 mA
Dielectric strength	510 VAC/775 VDC; per EN 60870-2-1	510 VAC/775 VDC; per EN 60870-2-1
Power consumption, field supply (module with no external load)		2 mA
Supply voltage (sensor)		24 VDC
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Power consumption (5 V system supply)	17 mA	6 mA
Rated surge voltage	1 kV	1 kV
Input data width (internal) (max.)	8 bits	8 bits
Surrounding air temperature (operation)	-40 … 70 °C	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 69) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-430/040-000	wago.com/750-1415/040-000

Digital input ▶ 24 VDC ▶ High-side switching ▶ 3 ms

750-1405/040-000



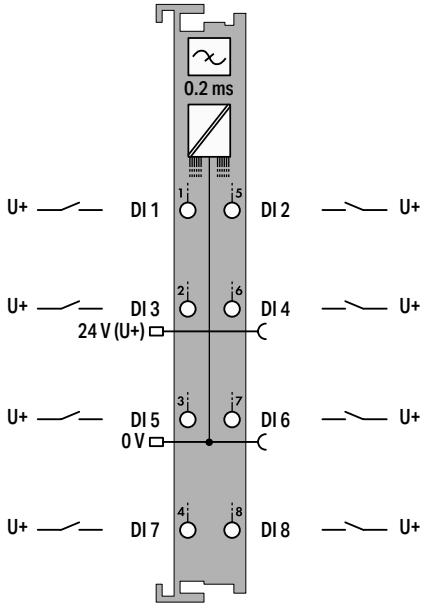
Item Description	**16-Channel Digital Input; 24 VDC; 3 ms**
Version	**Extreme with 16 connectors**
Item No.	**750-1405/040-000**
Order Text	**16DI; 24 VDC; 3ms; XTR**

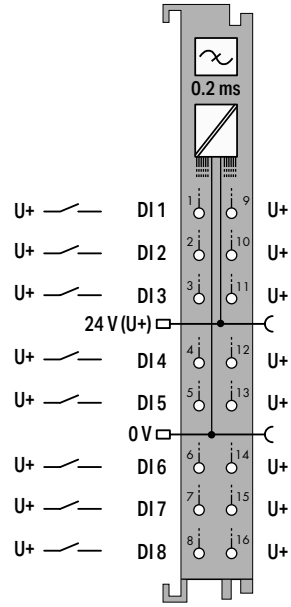
Technical Data	
Number of digital inputs	16
Signal type	Voltage
Voltage signal type	24 VDC
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Input characteristic	Type 1
Sensor connection	16 x (1-wire)
Input characteristic	High-side switching
Input filter (digital)	3 ms
Delay time T_off from 1 to 0	400 µs
Delay time T_on from 0 to 1	300 µs
Input current per channel for signal (1) (typ.)	2.3 mA
Input current per channel for signal (0) (typ.)	0.6 mA
Dielectric strength	510 VAC/775 VDC; per EN 60870-2-1
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Power consumption (5 V system supply)	25 mA
Rated surge voltage	1 kV
Input data width (internal) (max.)	16 bits
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1405/040-000

8

Digital input ▸ 24 VDC ▸ High-side switching ▸ 0.2 ms

750-431/040-000

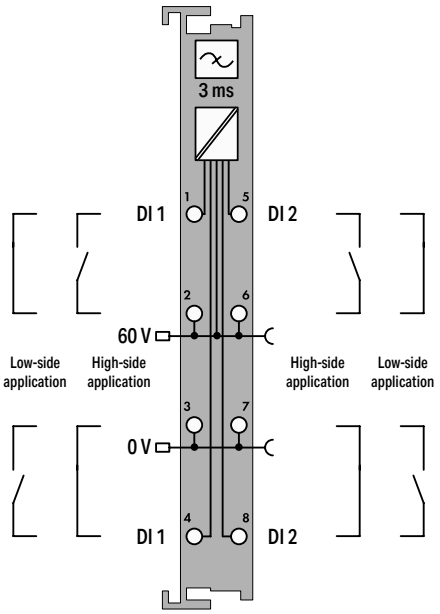




Item Description	8-Channel Digital Input; 24 VDC; 0.2 ms	8-Channel Digital Input; 24 VDC; 0.2 ms; 2-wire connection
Version	Extreme	Extreme with 16 connectors
Item No.	750-431/040-000	750-1416/040-000
Order Text	8DI; 24 VDC; 0.2ms; XTR	8DI; 24 VDC; 0.2ms; 2-wire; XTR
Technical Data		
Number of digital inputs	8	8
Signal type	Voltage	Voltage
Voltage signal type	24 VDC	24 VDC
Voltage range for signal (0)	−3 … +5 VDC	−3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC	11 … 30 VDC
Input characteristic		Type 3
Sensor connection	8 x (1-wire)	8 x (2-wire)
Input characteristic	High-side switching	High-side switching
Input filter (digital)	0.2 ms	0.2 ms
Input current per channel for signal (1) (typ.)	2.8 mA	4.5 mA
Input current per channel for signal (0) (typ.)		1.6 mA
Dielectric strength	510 VAC/775 VDC; per EN 60870-2-1	510 VAC/775 VDC; per EN 60870-2-1
Power consumption, field supply (module with no external load)		2 mA
Supply voltage (sensor)		24 VDC
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Power consumption (5 V system supply)	17 mA	6 mA
Rated surge voltage	1 kV	1 kV
Input data width (internal) (max.)	8 bits	8 bits
Surrounding air temperature (operation)	-40 … 70 °C	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm	(12 x 100 x 69) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-431/040-000	wago.com/750-1416/040-000

Digital input ▶ 60 VDC ▶ High-side/low-side switching, configurable ▶ 3 ms

750-429/040-001



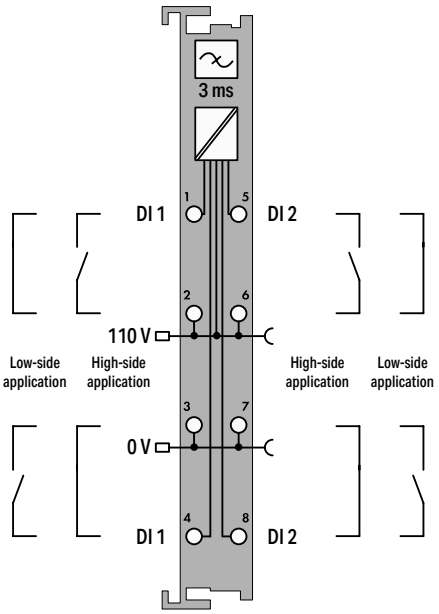
Item Description	**2-Channel Digital Input; 60 VDC; 3 ms**
Version	**Extreme**
Item No.	**750-429/040-001**
Order Text	**2DI; 60 VDC; 3ms; XTR**

Technical Data	
Number of digital inputs	2
Signal type	Voltage
Voltage signal type	60 VDC
Voltage range for signal (0)	−7.5 … +12 VDC
Voltage range for signal (1)	44 … 78 VDC
Sensor connection	2 x (2-wire)
Input characteristic	High-side/low-side switching, configurable
Input filter (digital)	3 ms
Input current per channel for signal (1) (typ.)	2.9 mA
Dielectric strength	2.5 kV (AC)/3.5 kV (DC); per EN 60870-2-1
Supply voltage (sensor)	60 VDC
Supply voltage (field)	60 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	2.5 mA
Rated surge voltage	5.0 kV (EN 60870-2-1 / Class VW3); 4.0 kV (UL 508); 4.0 kV (EN 61010-1 to 2000 m); 2.5 kV (EN 61010-1 to 5000 m)
Overvoltage category	Nominal voltage 110 V: III (EN 61010-1 / up to 2.000 m); II (EN 61010-1 / up to 5.000 m)
Input data width (internal) (max.)	2 bits
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-429/040-001

Notice: An additional supply module must be added for 60 VDC supply!

Digital input ▸ 110 VDC ▸ High-side/low-side switching, configurable ▸ 3 ms

750-427/040-000



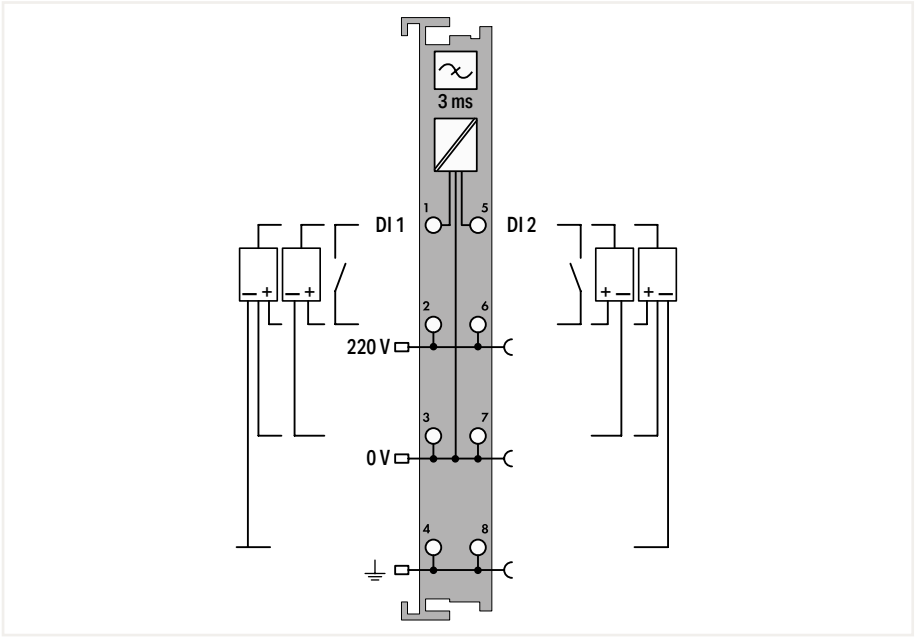
Item Description	**2-Channel Digital Input; 110 VDC; 3 ms**
Version	**Extreme**
Item No.	**750-427/040-000**
Order Text	**2DI; 110 VDC; 3ms; XTR**

Technical Data	
Number of digital inputs	2
Signal type	Voltage
Voltage signal type	110 VDC
Voltage range for signal (0)	−14 … +50 VDC
Voltage range for signal (1)	70 … 143 VDC
Sensor connection	2 x (2-wire)
Input characteristic	High-side/low-side switching, configurable
Input filter (digital)	3 ms
Input current per channel for signal (1) (typ.)	2.5 mA
Dielectric strength	2.5 kV (AC)/3.5 kV (DC); per EN 60870-2-1
Supply voltage (sensor)	110 VDC
Supply voltage (field)	110 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption (5 V system supply)	2.5 mA
Rated surge voltage	5.0 kV (EN 60870-2-1 / Class VW3); 4.0 kV (UL 508); 4.0 kV (EN 61010-1 to 2000 m); 2.5 kV (EN 61010-1 to 5000 m)
Overvoltage category	Nominal voltage 110 V: III (EN 61010-1 / up to 2.000 m); II (EN 61010-1 / up to 5.000 m)
Input data width (internal) (max.)	2 bits
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-427/040-000

Notice: An additional supply module must be added for 110 VDC supply!

Digital input ▶ 220 VDC ▶ High-side switching ▶ 3 ms

750-407/040-000

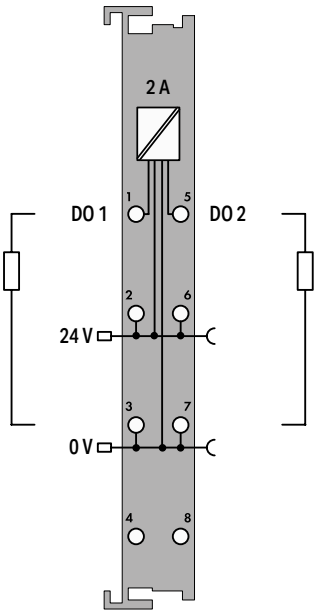


Item Description	**2-Channel Digital Input; 220 VDC; 3 ms**
Version	**Extreme**
Item No.	**750-407/040-000**
Order Text	**2DI; 220 VDC; 3ms; XTR**

Technical Data	
Number of digital inputs	2
Signal type	Voltage
Voltage signal type	220 VDC
Voltage range for signal (0)	−3 … +100 VDC
Voltage range for signal (1)	160 … 286 VDC
Sensor connection	2 x (2-wire, 3-wire, 4-wire)
Input characteristic	High-side switching
Input filter (digital)	3 ms
Input current per channel for signal (1) (typ.)	1.2 mA
Dielectric strength	2.5 kV (AC)/3.5 kV (DC); per EN 60870-2-1
Supply voltage (sensor)	220 VDC
Supply voltage (field)	220 VDC (-20 … +25 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Derating	Current via power jumper contacts (max.): 10 mA (surrounding air (operating) temperature < 60 °C); 8 A (surrounding air (operating) temperature: 60 … 70 °C)
Power consumption (5 V system supply)	5 mA
Rated surge voltage	5.0 kV (EN 60870-2-1 / Class VW3); 4.0 kV (UL 508); 4.0 kV (EN 60664-1 / to 4,000 m ASL); 2.5 kV (EN 60664-1 / > 4,000 m to 5,000 m ASL)
Overvoltage category	Nominal voltage 220 V: IV (EN 60664-1 / up to 5,000 m above sea level)
Input data width (internal) (max.)	2 bits
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-407/040-000
	Notice: An additional supply module must be added for 220 VDC supply!

Digital output ▶ 24 VDC

750-508/040-000



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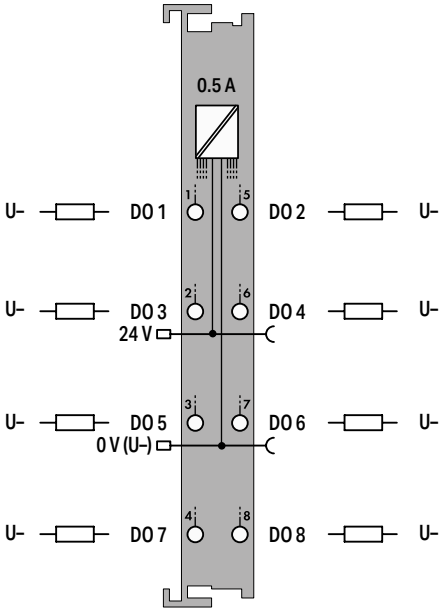
Item Description	**2-Channel Digital Output; 24 VDC; 2.0 A; Diagnostics**
Version	**Extreme**
Item No.	**750-508/040-000**
Order Text	**2DO; 24 VDC; 2A; Diagn; XTR**

Technical Data	
Interference-free with safety function	Yes
Number of digital outputs	2
Signal type	Voltage
Voltage signal type	24 VDC
Output characteristic	High-side switching
Output current per channel	2 A
Output current	Short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	2 x (2-wire, 3-wire)
Switching frequency (max.)	1 kHz
Diagnostics	Open circuit, overload and short circuit
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Power consumption, field supply (module with no external load)	7 mA
Power consumption (5 V system supply)	14 mA
Input data width (internal) (max.)	2 bits
Output (internal) data width (max.)	2 bits
Rated surge voltage	1 kV
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-508/040-000

Digital output ▶ 24 VDC

750-537/040-000

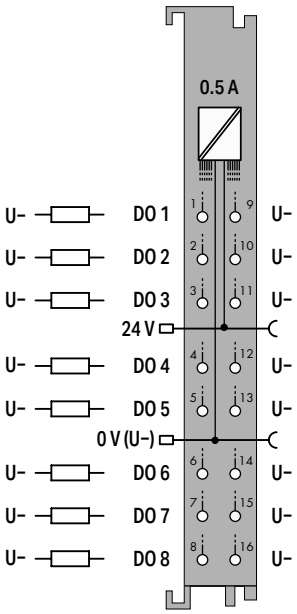


Item Description	**8-Channel Digital Output; 24 VDC; 0.5 A; Diagnostics**
Version	**Extreme**
Item No.	**750-537/040-000**
Order Text	**8DO; 24 VDC; 0.5A; Diagn; XTR**

Technical Data	
Interference-free with safety function	Yes
Number of digital outputs	8
Signal type	Voltage
Voltage signal type	24 VDC
Output characteristic	High-side switching
Output current per channel	0.5 A
Output current	Short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	8 x (1-wire)
Switching frequency (max.)	1 kHz
Diagnostics	Open circuit, overload and short circuit
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: –27.5 % (including 15 % residual ripple)
Power consumption, field supply (module with no external load)	16 mA
Power consumption (5 V system supply)	50 mA
Input data width (internal) (max.)	8 bits
Output (internal) data width (max.)	8 bits
Rated surge voltage	1 kV
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-537/040-000

Digital output ▶ 24 VDC

750-1515/040-000

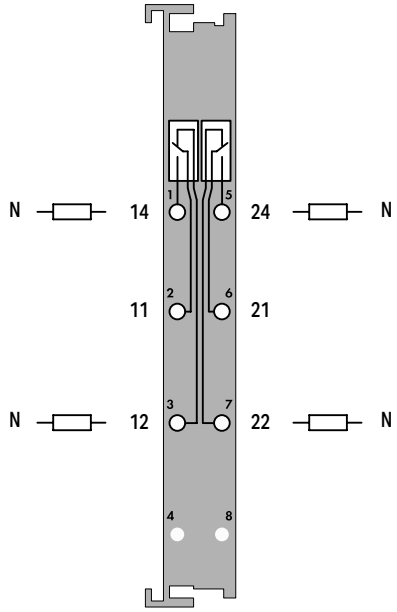


Item Description	**8-Channel Digital Output; 24 VDC; 0.5 A; 2-wire connection**
Version	**Extreme with 16 connectors**
Item No.	**750-1515/040-000**
Order Text	**8DO; 24 VDC; 0.5A; 2-wire; XTR**

Technical Data	
Interference-free with safety function	Yes
Number of digital outputs	8
Signal type	Voltage
Voltage signal type	24 VDC
Output characteristic	High-side switching
Output current per channel	0.5 A
Output current	Short-circuit-protected
Load type	Resistive, inductive, lamp load
Actuator connection	8 x (2-wire)
Switching frequency (max.)	1 kHz
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Power consumption, field supply (module with no external load)	15 mA
Power consumption (5 V system supply)	20 mA
Output (internal) data width (max.)	8 bits
Rated surge voltage	1 kV
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1515/040-000

Digital output ▸ Switching voltage: 250 VAC; 300 VDC

750-517/040-000

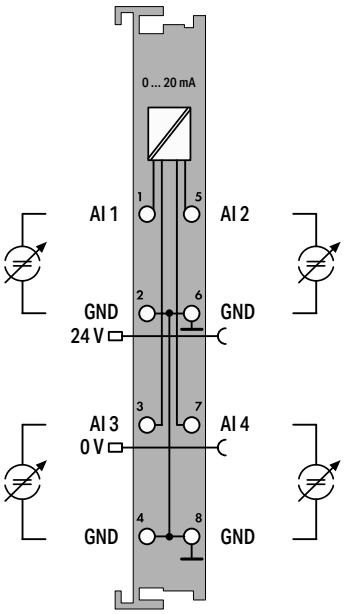


Item Description	**2-Channel Relay Output; 250 VAC; 1 A; Relay with 2 changeover contacts**
Version	**Extreme**
Item No.	**750-517/040-000**
Order Text	**2RO; 250 VAC; 1A; Relay2CO; XTR**

Technical Data	
Number of digital outputs	2
Switching voltage (max.)	250 VAC, 300 VDC
Output circuit design	2 changeover contacts; Relays
Output characteristic	Potential-free
Switching current (max.)	1 A
Switching current (note)	1 A at 250 VAC and 40 VDC; 0.15 A at 300 VDC
Switching current (min.)	100 mA
Actuator connection	2 x (1-wire)
Switching frequency (max.)	0.1 Hz; Nominal load
Mechanical switching operations (min.) (at max. resistive load)	5 x 10^6
Electrical switching operations (min.) (at max. resistive load)	10 x 10^5
Power consumption (5 V system supply)	90 mA
Output (internal) data width (max.)	2 bits
Rated surge voltage	5.0 kV (EN 60870-2-1 / Class VW3); 4.0 kV (UL 508); 6.4 kV (EN 61010-1 to 2000 m); 4.0 kV (EN 61010-1 to 5000 m)
Overvoltage category	Nominal voltage 230 V: III (EN 61010-1 / up to 2.000 m); II (EN 61010-1 / up to 5.000 m)
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-517/040-000

Analog input ▸ 0 … 20 mA ▸ Single-ended

750-453/040-000



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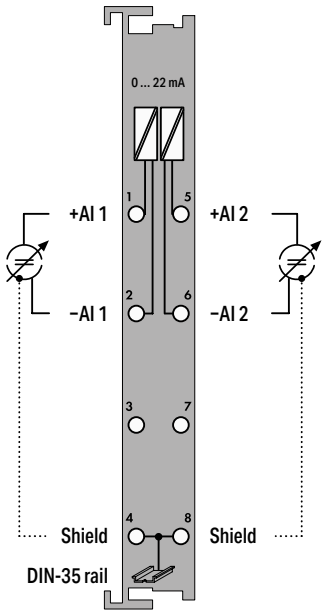
Item Description	**4-Channel Analog Input; 0 … 20 mA; Single-ended**
Version	**Extreme**
Item No.	**750-453/040-000**
Order Text	**4AI; 0-20mA; SE; XTR**

Technical Data	
Number of analog inputs	4
Signal type	Current
Signal type (current)	0 … 20 mADC
Signal characteristic	Single-ended
Sensor connection	4 x (2-wire)
Resolution [bit]	12 bits
Conversion time (typ.)	10 ms
Input resistance (max.)	100 Ω
Input voltage (max.)	32 V
Measurement error (reference temperature)	25 °C
Measurement error – deviation (max.) from the upper-range value	0.1 %
Temperature error (max.) of the upper-range value	0.01 %/K
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: –27.5 % (including 15 % residual ripple)
Power consumption (5 V system supply)	65 mA
Rated surge voltage	1 kV
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-453/040-000

Analog input ▶ 4 … 20 mA ▶ Differential



Item Description	**2-Channel Analog Input; 4 … 20 mA; Differential input; NAMUR NE 43**
Version	**Extreme**
Item No.	**750-492/040-001**
Order Text	**2AI; 4-20mA; Diff; NE43; XTR**

Technical Data	
Number of analog inputs	2
Signal type	Current
Signal type (current)	3.8 … 20.5 mADC
Signal characteristic	Differential
Sensor connection	2 x (2-wire)
Resolution [bit]	13 bits
Conversion time (typ.)	1 ms
Input resistance (max.)	270 Ω
Measurement error (reference temperature)	25 °C
Measurement error – deviation (max.) from the upper-range value	0.1 %
Temperature error (max.) of the upper-range value	0.01 %/K
Power consumption (5 V system supply)	80 mA
Rated surge voltage	1 kV
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-492/040-001

Sampling time of repetition: 1 ms
Sampling delay (module): 1 ms
Sampling delay (channel/channel): ≤ 1 µs
Sampling duration: ≤ 5 µs

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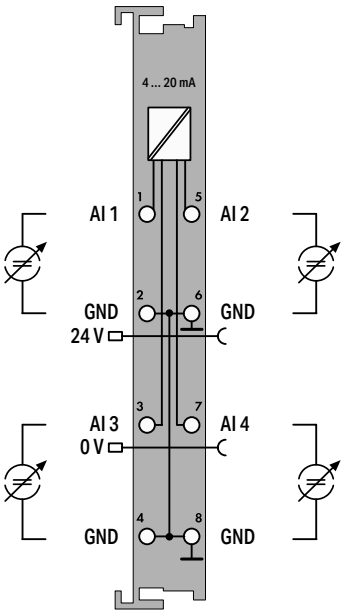
Analog input ▶ 4 … 20 mA ▶ Single-ended

750-455/040-000



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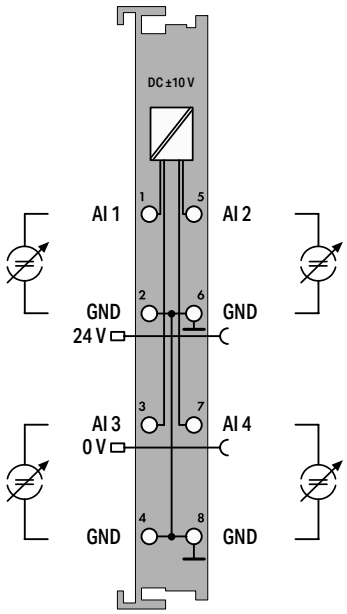
Item Description	**4-Channel Analog Input; 4 … 20 mA; Single-ended**
Version	**Extreme**
Item No.	**750-455/040-000**
Order Text	**4AI; 4-20mA; SE; XTR**

Technical Data	
Number of analog inputs	4
Signal type	Current
Signal type (current)	4 … 20 mADC
Signal characteristic	Single-ended
Sensor connection	4 x (2-wire)
Resolution [bit]	12 bits
Conversion time (typ.)	10 ms
Input resistance (max.)	100 Ω
Input voltage (max.)	32 V
Measurement error (reference temperature)	25 °C
Measurement error – deviation (max.) from the upper-range value	0.1 %
Temperature error (max.) of the upper-range value	0.01 %/K
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: –27.5 % (including 15 % residual ripple)
Power consumption (5 V system supply)	65 mA
Rated surge voltage	1 kV
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-455/040-000

Analog input ▶ ±10 V ▶ Single-ended

750-457/040-000

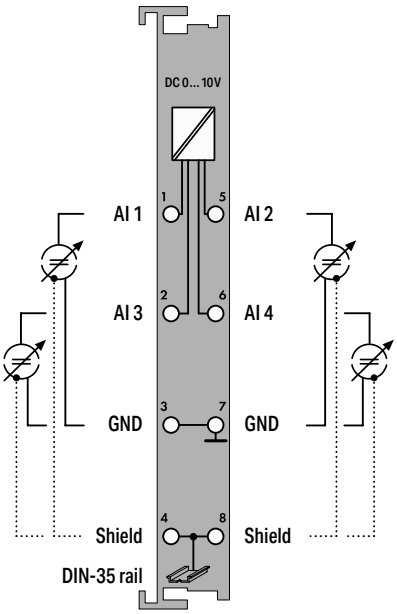


Item Description	**4-Channel Analog Input; ±10 VDC; Single-ended**
Version	**Extreme**
Item No.	**750-457/040-000**
Order Text	**4AI; ±10 VDC; SE; XTR**

Technical Data	
Number of analog inputs	4
Signal type	Voltage
Voltage signal type	-10 … +10 VDC
Signal characteristic	Single-ended
Sensor connection	4 x (2-wire)
Resolution [bit]	12 bits
Conversion time (typ.)	10 ms
Internal resistance	100 kΩ
Input voltage (max.)	±40 V
Measurement error (reference temperature)	25 °C
Measurement error – deviation (max.) from the upper-range value	0.1 %
Temperature error (max.) of the upper-range value	0.01 %/K
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: –27.5 % (including 15 % residual ripple)
Power consumption (5 V system supply)	65 mA
Rated surge voltage	1 kV
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-457/040-000

Analog input ▸ 0 … 10 V ▸ Single-ended

750-468/040-000

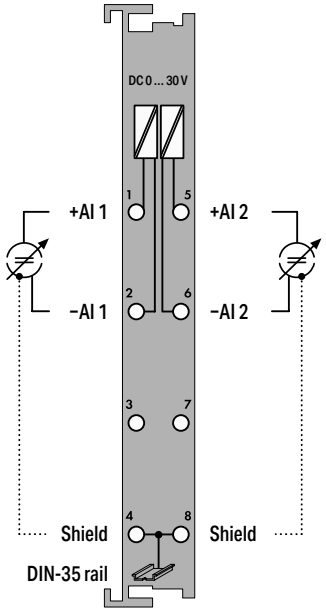


Item Description	4-Channel Analog Input; 0 … 10 VDC; single-ended
Version	Extreme
Item No.	750-468/040-000
Order Text	4AI; 0-10 VDC; SE; XTR

Technical Data	
Number of analog inputs	4
Signal type	Voltage
Voltage signal type	0 … 10 VDC
Signal characteristic	Single-ended
Sensor connection	4 x (2-wire)
Resolution [bit]	12 bits
Conversion time (typ.)	4 ms
Internal resistance	133 kΩ
Input voltage (max.)	35 V
Measurement error (reference temperature)	25 °C
Measurement error – deviation (max.) from the upper-range value	0.2 %
Temperature error (max.) of the upper-range value	0.01 %/K
Power consumption (5 V system supply)	60 mA
Rated surge voltage	1 kV
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-468/040-000

Analog input ▸ 0 … 30 V ▸ Differential

750-483/040-000

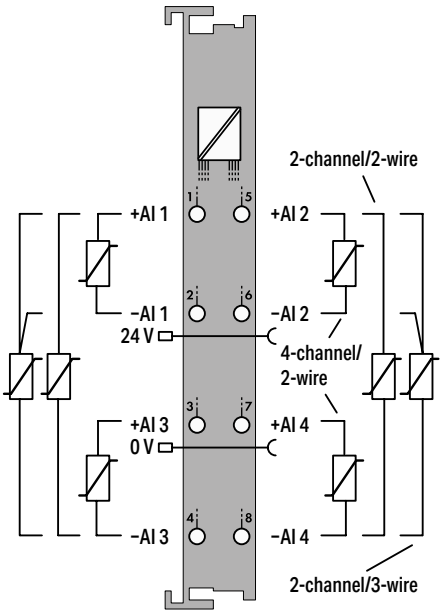


Item Description	**2-Channel Analog Input; 0 … 30 VDC; Differential input**
Version	**Extreme**
Item No.	**750-483/040-000**
Order Text	**2AI; 0-30 VDC; Diff; XTR**

Technical Data	
Extended functionality	Time-synchronized measured value acquisition within the module
Number of analog inputs	2
Signal type	Voltage
Voltage signal type	0 … 30 VDC
Signal characteristic	Differential
Sensor connection	2 x (2-wire)
Resolution [bit]	14 bits
Conversion time (typ.)	1 ms
Internal resistance	1000 kΩ
Admissible continuous overload	60 V
Measurement error (reference temperature)	25 °C
Measurement error – deviation (max.) from the upper-range value	0.1 %
Temperature error (max.) of the upper-range value	0.01 %/K
Power consumption (5 V system supply)	80 mA
Rated surge voltage	1 kV
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-483/040-000

Analog input ▸ Resistance Sensors

750-464/040-000



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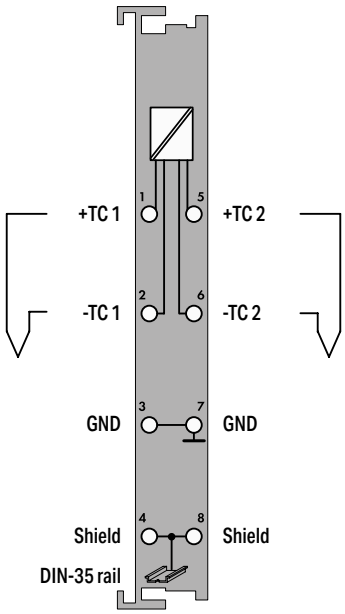
Item Description	**2/4-Channel Analog Input; Resistance measurement; Adjustable**
Version	**Extreme**
Item No.	**750-464/040-000**
Order Text	**2/4AI; RTD; Adjust; XTR**

Technical Data	
Number of analog inputs	4
Signal type	Resistance measurement; Potentiometer positions
Sensor types	Pt100; Configurable: Pt200, Pt500, Pt1000 (IEC 751), Ni100, Ni1000 (DIN 43760), Ni120 (Minco), Ni1000 (TK 5000), Potentiometer (2-channel operation only): 10R … 1k2, 10R … 5k0
Sensor connection	4 x (2-wire); 2 x (3-wire)
Temperature range	−200 … +850 °C (Pt), −60 … +300 °C (Ni 100, Ni 1000), −60 … +250 °C (Ni 1000 TK5000), −80 … +260 °C (Ni 120)
Resolution (over entire range)	0.1 °C
Conversion time (typ.)	320 ms
Measured current (typ.)	≤ 350 µA per measurement circuit
Measurement error (25 °C)	≤ 1 K over entire temperature range, ≤ 0.5 K over limited temperature range (−30 °C … +120 °C)
Temperature coefficient	≤ 20 ppm/K; typ. ≤ 15 ppm/K
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Power consumption (5 V system supply)	50 mA
Rated surge voltage	1 kV
Data width	4 (2) x 16-bit data; 4 (2) x 8-bit control/status (optional)
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-464/040-000

Analog input ▶ Thermocouple

750-469/040-000

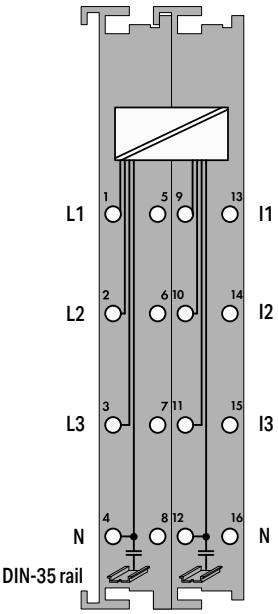


Item Description	**2-Channel Analog Input; Thermocouple; Adjustable**
Version	**Extreme**
Item No.	**750-469/040-000**
Order Text	**2AI; TC; Adjust; XTR**

Technical Data	
Number of analog inputs	2
Signal type	Thermocouple; Low voltages
Sensor types	Thermocouple K; Configurable: J, E, S, T, L, N, U, B, R; ±30 mV, ±60 mV, ±120 mV
Sensor connection	2 x (2-wire)
Temperature range	Sensor-specific
Resolution (over entire range)	0.1 °C
Conversion time (typ.)	320 ms
Internal resistance	1000 kΩ
Measurement error (25 °C)	< ±6 K (voltage input < ±2 K; cold junction compensation < ±4 K)
Temperature coefficient	< ±0.2 K/K
Cold junction compensation	At each pair of terminal blocks
Power consumption (5 V system supply)	65 mA
Rated surge voltage	1 kV
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-469/040-000

Analog input; Power measurement ▸ 3-Phase Power Measurement

750-495/040-010

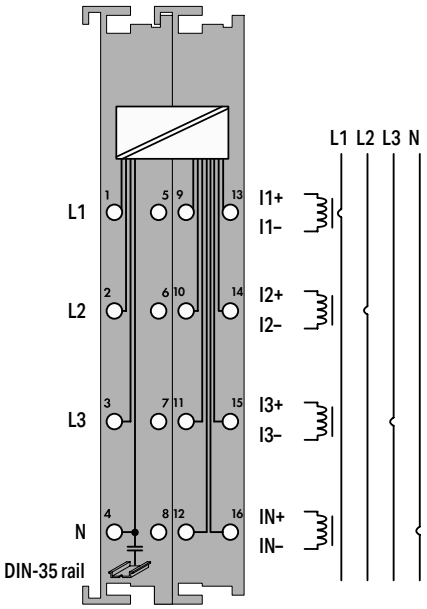


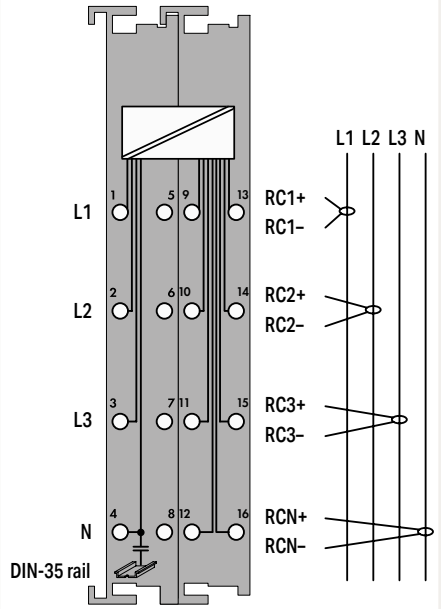
Item Description	**3-Phase Power Measurement; 20 kVAC 300 A**
Version	**20 kVAC; 300 A; extreme**
Item No.	**750-495/040-010**
Order Text	**3-PHASE POM; 20KV; 300A; XTR**

Technical Data	
Signal type	Power measurement
Calculated values	Line-to-line voltage, power output, energy, power factors, mains frequency, harmonic analysis (up to the 41st harmonic), THD
Number of measurement inputs	6 (3 input pairs for voltage and current measurement sensors)
Input voltage (max.)	With sensor: 20 kV / √3 (input module: 3.25 V / √3)
Input current (max.)	With sensor: 300 A AC; (input module: 225 mV)
Voltage path input resistance (typ.)	200.3 kΩ
Current path input resistance (typ.)	20.8 Ω
Resolution [bit]	24 bits
Measurement method	True RMS measurement
Reference for measurement error	AC current/voltage
Measurement error – deviation (max.) from the upper-range value	0.3 %
Frequency range (mains frequency)	45 … 65 Hz
Frequency range (harmonics analysis)	45 … 2665 Hz
Limit frequency	8.6 kHz
Signal form	Any periodic signals (considering the threshold frequencies)
Power consumption (5 V system supply)	100 mA
Rated surge voltage	4 kV
Overvoltage category	III (EN 61010)
Data width	2 x 128-bit data, 2 x 64-bit control/status
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Approvals	CE
Data sheet and further information, see:	wago.com/750-495/040-010

Analog input; Power measurement ▸ 3-Phase Power Measurement

750-495/040-000



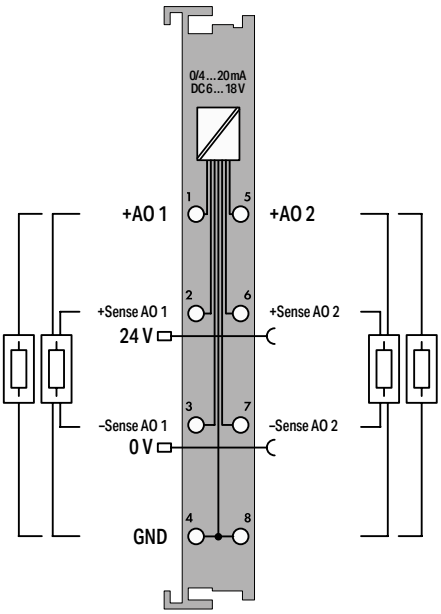


Item Description	3-Phase Power Measurement; 690 VAC 1 A		3-Phase Power Measurement; 690 VAC Rogowski coils
Version	Extreme	690 VAC 5 A; extreme	690 VAC Rogowski coils; extreme
Item No.	750-495/040-000	750-495/040-001	750-495/040-002
Order Text	3-PHASE POM; 690VAC 1A; XTR	3-PHASE POM; 690VAC 5A; XTR	3-PHASE POM; 690VAC R.C.; XTR

Technical Data			
Signal type	Power measurement		Power measurement
Calculated values	Line-to-line voltage, power output, energy, power factors, mains frequency, harmonic analysis (up to the 41st harmonic), THD		Line-to-line voltage, power output, energy, power factors, mains frequency, harmonic analysis (up to the 41st harmonic), THD
Number of measurement inputs	7 (3 voltage measurement inputs, 4 differential current measurement inputs)		7 (3 voltage measurement inputs, 4 differential current measurement inputs)
Rated voltage	U_{LN} = 400 VAC; U_{LL} = 690 VAC		U_{LN} = 400 VAC; U_{LL} = 690 VAC
Voltage path input resistance (typ.)	1429 kΩ		1429 kΩ
Measurement current (max.)	1 A	5 A	Rogowski coils RT500/RT2000
Current path input resistance (typ.)	0.022 Ω	0.005 Ω	44000 Ω
Resolution [bit]	24 bits		24 bits
Measurement method	True RMS measurement		True RMS measurement
Reference for measurement error	AC current/voltage		AC current/voltage
Measurement error (reference temperature)	25 °C		25 °C
Measurement error – deviation (max.) from the upper-range value	0.5 %		0.5 %
Frequency range (mains frequency)	45 … 65 Hz		45 … 65 Hz
Frequency range (harmonics analysis)	0 … 3300 Hz		0 … 3300 Hz
Limit frequency	15.9 kHz		15.9 kHz
Signal form	Any periodic signals (considering the threshold frequencies)		Any periodic signals (considering the threshold frequencies)
Power consumption (5 V system supply)	100 mA		100 mA
Rated surge voltage	5.0 kV (EN 60870-2-1 / Class VW3); 6.0 kV (UL 508); 6.0 kV (EN 60664-1 / to 4,000 m ASL); 4.0 kV (EN 60664-1 / > 4,000 m to 5,000 m ASL)		5.0 kV (EN 60870-2-1 / Class VW3); 6.0 kV (UL 508); 6.0 kV (EN 60664-1 / to 4,000 m ASL); 4.0 kV (EN 60664-1 / > 4,000 m to 5,000 m ASL)
Overvoltage category	Nominal voltage 400 V/690 V in a 3-phase system: III (EN 60664-1 / to 4,000 m ASL); II (EN 60664-1 / > 4,000 m up to 5,000 m ASL)		Nominal voltage 400 V/690 V in a 3-phase system: III (EN 60664-1 / to 4,000 m ASL); II (EN 60664-1 / > 4,000 m up to 5,000 m ASL)
Data width	2 x 128-bit data; 2 x 64-bit control/status		2 x 128-bit data; 2 x 64-bit control/status
Surrounding air temperature (operation)	-40 … 70 °C		-40 … 70 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm		(24 x 100 x 67.8) mm
Approvals	CE; KC; Marine; ATEX/IECEx		CE; KC; Marine; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-495/040-000		wago.com/750-495/040-000

Analog output ▸ Adjustable: Current/Voltage

750-563/040-000



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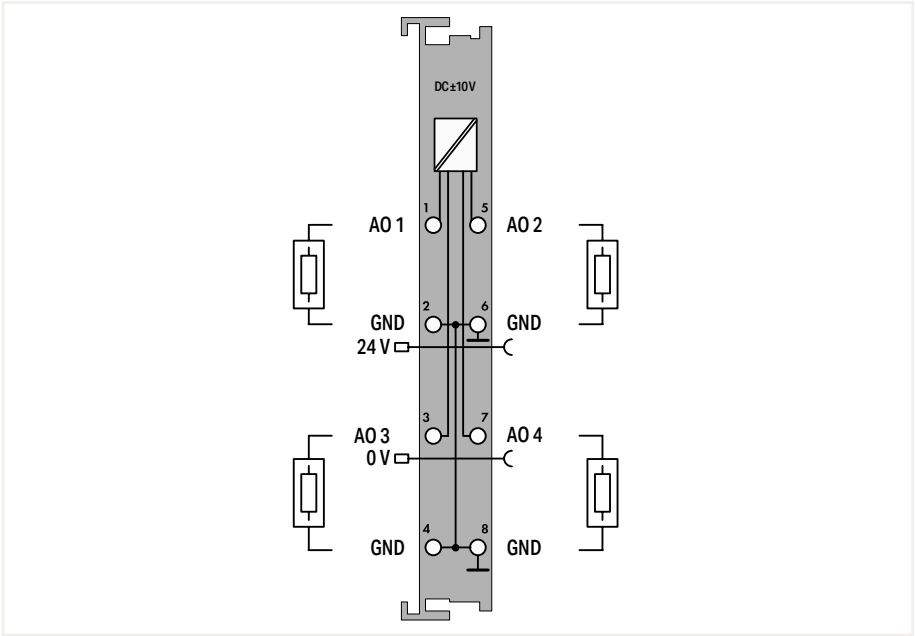
Item Description	**2-Channel Analog Output; 0/4 … 20 mA; 16 bits; 6 … 18 VDC**
Version	**Extreme**
Item No.	**750-563/040-000**
Order Text	**2AO; 0/4-20mA; 16bits; 6-18 VDC; XTR**

Technical Data	
Number of analog outputs	2
Signal type	Current; Voltage
Signal type (current)	0 … 20 mADC; 4 … 20 mADC
Voltage signal type	6 … 18 VDC
Actuator connection	2 x (2-wire, 4-wire)
Load impedance (current output)	≤ 500 Ω
Load impedance (voltage output)	≥ 1.8 kΩ
Resolution [bit]	16 bits
Conversion time (typ.)	5 ms
Output error, reference temperature	25 °C
Output error, deviation (max.) of the upper-range value	0.05 %
Temperature coefficient	< ±100 ppm
Supply voltage (field)	24 VDC (-15 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for −40 … +55 °C: 24 V (min. … +20 %); for +55 … +70 °C: 24 V (min. … +10 %); Voltage range (min.): 21,6 V; Current range (min.): 20,4 V; Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Power consumption (5 V system supply)	95 mA
Rated surge voltage	1 kV
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-563/040-000

Analog output ▶ ±10 V

750-557/040-000



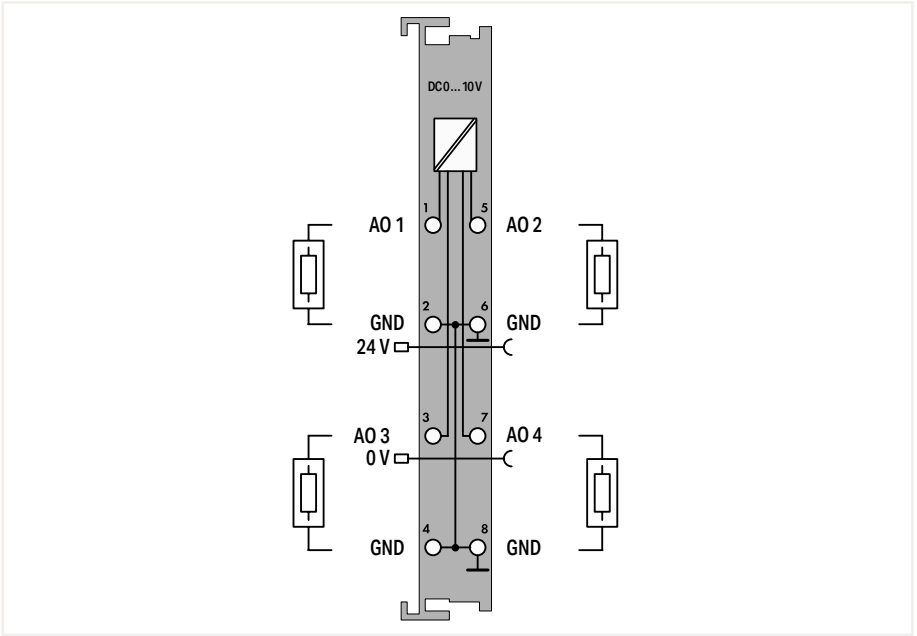
Item Description	**4-Channel Analog Output; ±10 VDC**
Version	**Extreme**
Item No.	**750-557/040-000**
Order Text	**4AO; ±10 VDC; XTR**

Technical Data	
Number of analog outputs	4
Signal type	Voltage
Voltage signal type	-10 … +10 VDC
Actuator connection	4 x (2-wire)
Load impedance (voltage output)	≥ 5 kΩ
Resolution [bit]	12 bits
Conversion time (typ.)	10 ms
Output error, reference temperature	25 °C
Output error, deviation (max.) of the upper-range value	0.1 %
Temperature error (max.) of the output range value	0.01 %/K
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: –27.5 % (including 15 % residual ripple)
Power consumption (5 V system supply)	125 mA
Rated surge voltage	1 kV
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-557/040-000

8

Analog output ▸ 0 … 10 V

750-559/040-000

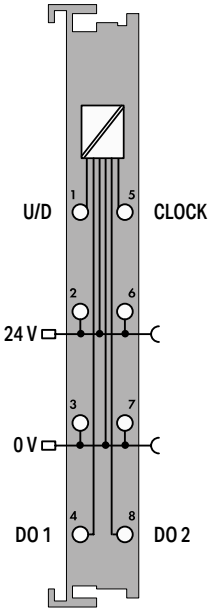


Item Description	**4-Channel Analog Output; 0 … 10 VDC**
Version	**Extreme**
Item No.	**750-559/040-000**
Order Text	**4AO; 0-10 VDC; XTR**

Technical Data	
Number of analog outputs	4
Signal type	Voltage
Voltage signal type	0 … 10 VDC
Actuator connection	4 x (2-wire)
Load impedance (voltage output)	≥ 5 kΩ
Resolution [bit]	12 bits
Conversion time (typ.)	10 ms
Output error, reference temperature	25 °C
Output error, deviation (max.) of the upper-range value	0.1 %
Temperature error (max.) of the output range value	0.01 %/K
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Power consumption (5 V system supply)	125 mA
Rated surge voltage	1 kV
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-559/040-000

Counter

750-404/040-003

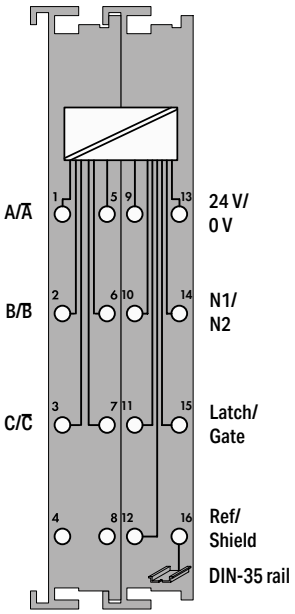


Item Description	**Counter; adjustable**
Version	**Extreme**
Item No.	**750-404/040-003**
Order Text	**Counter; Adjust; XTR**

Technical Data	
Number of digital outputs	2
Number of counters	1
Output current per channel	0.5 A
Output current	Short-circuit-protected
Voltage range for signal (0)	−3 … +5 VDC
Voltage range for signal (1)	15 … 30 VDC
Input current (typ.)	7 mA
Switching frequency (max.)	100 kHz
Counter depth	32 bits
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Power consumption (5 V system supply)	70 mA
Rated surge voltage	1 kV
Data width	32-bit data; 8-bit control/status
Operating mode	Up/down counter/100 kHz; Up counter/enable input; Peak-time counter; Frequency measurement: 0.1 Hz … 100 kHz (Default setting); Up/down counter/signal outputs (DO); Two up counters/16 bits/5 kHz
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; schiff Marine; cULus OrdLoc/HazLoc; Ex ATEX/IECEx
Data sheet and further information, see:	wago.com/750-404/040-003

Distance and angle measurement

750-637/040-001



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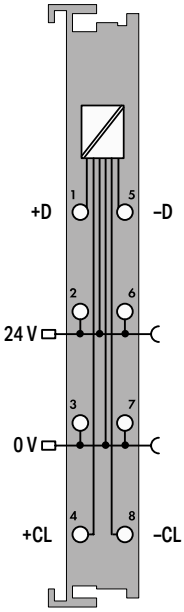
Item Description	**Incremental Encoder Interface; 24 VDC; Differential input; 32 bits**
Version	**Extreme**
Item No.	**750-637/040-001**
Order Text	**Inc. Encoder; 24 VDC; Diff; 32bits; XTR**

Technical Data	
Transmitter connection	A, A/, B, B/, C, C/
Counter depth	32 bits
Limit frequency	250 kHz
Quadrature decoder	4x evaluation
Zero impulse (latch)	32 bits
Commands	Reading, setting, activating
Supply voltage (transmitter)	24 VDC
Output voltage	24 VDC
Output current per channel	0.5 A
Output current	Short-circuit-protected
Voltage range for signal (0)	(U_{ABC} - $U_{ABC/}$): -30 … +15 VDC; Latch, gate, ref.: -3 … +5 VDC
Voltage range for signal (1)	(U_{ABC} - $U_{ABC/}$): 15 … 30 VDC; Latch, gate, ref.: 15 … 30 VDC
Input current (typ.)	Latch 7 mA, Gate 7 mA, Ref. 7 mA
Power consumption, field supply (module with no external load)	35 mA
Power consumption (5 V system supply)	110 mA
Rated surge voltage	1 kV
Data width	1 x 32-bit data 2 x 8-bit control/status
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-637/040-001

Distance and angle measurement

750-630/040-001



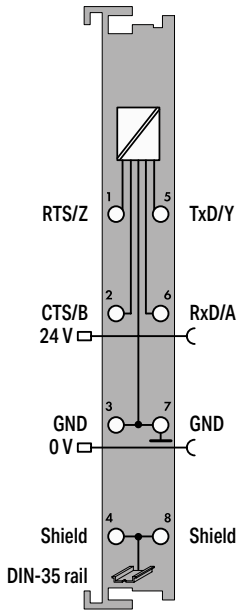
Item Description	**SSI Transmitter Interface; adjustable**
Version	**Extreme**
Item No.	**750-630/040-001**
Order Text	**SSI Interface; Adjust; XTR**

Technical Data	
Transmitter connection	On + D, -D / Off + Cl, - Cl
Supply voltage (transmitter)	24 VDC; via power jumper contacts
Data transmission rate	125 kHz
Serial input	Data width: 1 … 32 bits
Code	Gray code/binary code
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Power consumption (5 V system supply)	20 mA
Rated surge voltage	1 kV
Data width	1 x 32 bits; 1 x 8-bit control/status (optional) (24-bit data, 8 bits reserved)
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-630/040-001

8

Serial interface

750-652/040-000



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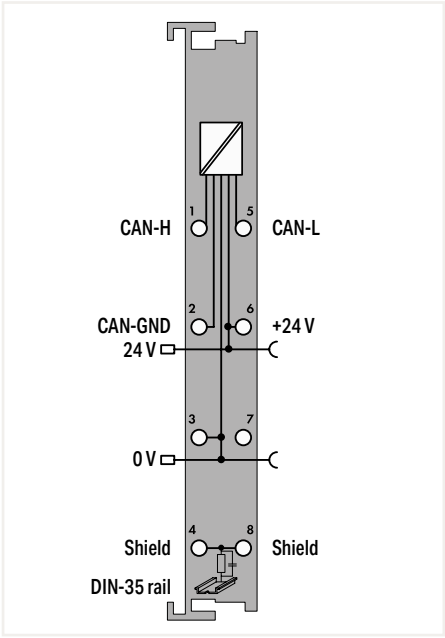
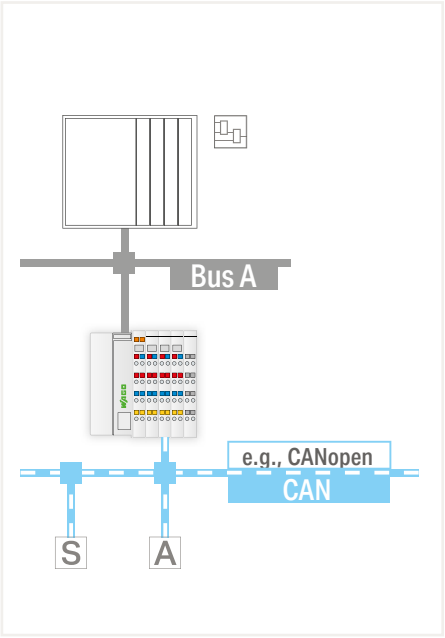
Item Description	**Serial Interface RS-232/485**
Version	**Extreme**
Item No.	**750-652/040-000**
Order Text	**RS232/485 Interface; XTR**

Technical Data	
Signal type	RS-232; RS-422 / RS-485
Transmission channels	1 TxD / 1 RxD, full duplex, half duplex, 7- or 8-bit data, 1 or 2 stop bits
Baud rate	300 Baud … 115.2 kBd
Number of data bits	7/8, adjustable
Number of stop bits	1/2, adjustable
Buffer	2560 bytes for reception / 512 bytes for transmission
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Power consumption (5 V system supply)	85 mA
Rated surge voltage	1 kV
Data width	8, 24 or 48 bytes (parameterizable)
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-652/040-000

CAN gateway

750-658/040-000





Item Description	**CAN Gateway**
Version	**Extreme**
Item No.	**750-658/040-000**
Order Text	**CAN Gateway; XTR**

Technical Data	
Device-specific	Operating modes: Sniffer mode, transparent mode, mapped mode
Number of inputs	1 (CAN interface)
Transmission modes	10 kbit/s; 20 kbit/s; 50 kbit/s; 125 kbit/s; 250 kbit/s; 500 kbit/s; 800 kbit/s (auto-baudrate); Data formats: per 2.0 A standard (11-bit ID); per 2.0 B extended (29-bit ID)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Power consumption (5 V system supply)	50 mA
Rated surge voltage	1 kV
Data width	Configurable to 8, 12, 16, 20, 24, 32, 40, 48 bytes; incl. control/status byte
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-658/040-000

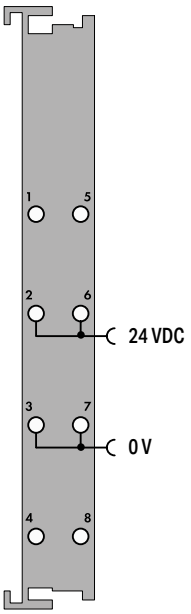
The CAN Gateway allows a CAN bus to be installed as a sub-bus beneath a fieldbus coupler or controller. It enables special sensors/actuators that are only available with the widely used CAN bus to also be integrated under other bus systems. Function blocks allow the gateway to read and write higher-protocol telegrams (e.g., CANopen).

The module offers three different operating modes:

- Sniffer mode: Detailed analysis of the CAN bus through passive “snooping”
- Transparent mode: Active CAN subscriber that can send and receive any type of CAN telegram
- Mapped mode: Enables direct generation of CAN telegrams from the process image, or selective copying of process values from received CAN telegrams into the input process image (cyclic or event-based)

Supply module ▶ 24 VDC

750-602/040-000



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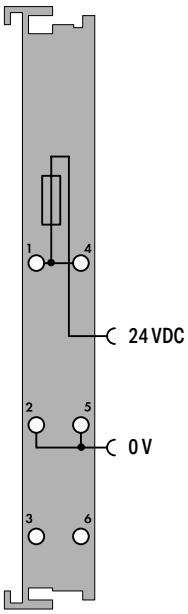
Item Description	**Power Supply; 24 VDC**
Version	**Extreme**
Item No.	**750-602/040-000**
Order Text	**Power Supply; 24 VDC; XTR**

Technical Data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current carrying capacity (power jumper contacts)	10 A
Rated surge voltage	1 kV
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-602/040-000

This I/O module provides the applied supply voltage to the field devices connected to downstream I/O modules.

Supply module ▶ 24 VDC; Fuse holder

750-601/040-000



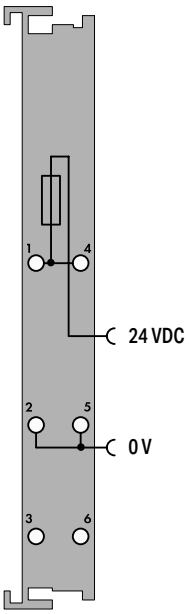
Item Description	**Power Supply; 24 VDC; Fuse holder**
Version	**Extreme**
Item No.	**750-601/040-000**
Order Text	**Power Supply; 24 VDC; Fuse; XTR**

Technical Data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current carrying capacity (power jumper contacts)	6.3 A
Rated surge voltage	1 kV
Fuse	5 x 20; T 6.3 A (not included)
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-601/040-000

This I/O module provides the applied supply voltage, protected by a fuse, to the field devices connected to downstream I/O modules. A blown fuse is indicated by an LED.

Supply module ▶ 24 VDC; Fuse holder; Diagnostics

750-610/040-000



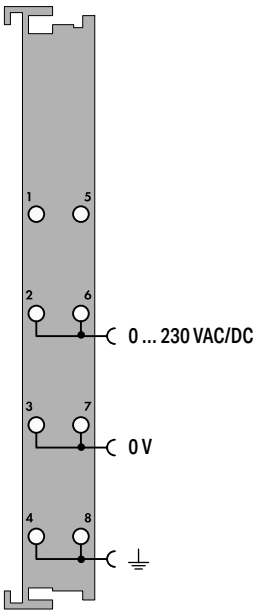
Item Description	**Power Supply; 24 VDC; Fuse holder; Diagnostics**
Version	**Extreme**
Item No.	**750-610/040-000**
Order Text	**Power Supply; 24 VDC; Fuse; Diagn; XTR**

Technical Data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Power consumption (5 V system supply)	5 mA
Current carrying capacity (power jumper contacts)	6.3 A
Rated surge voltage	1 kV
Fuse	5 x 20; T 6.3 A (not included)
Diagnostics	Supply voltage (field): Detection “on” at > 15 VDC; Detection “off” at < 5 VDC
Data width	2 bits (1 bit current monitoring, 1 bit fuse fault)
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-610/040-000

This I/O module provides the applied supply voltage, protected by a fuse, to the field devices connected to downstream I/O modules. A blown fuse is indicated by an LED. The fuse status can also be queried from the fieldbus coupler.

Supply module ▶ 0 … 230 VAC/DC

750-612/040-000



Item Description	**Power Supply; 0 … 230 VAC/DC**
Version	**Extreme**
Item No.	**750-612/040-000**
Order Text	**Power Supply; 0-230 VAC/VDC; XTR**

Technical Data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	230 VAC/DC (-20 … +25 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact)
Current carrying capacity (power jumper contacts)	6.3 A
Rated surge voltage	5.0 kV (EN 60870-2-1 / Class VW3); 4.0 kV (UL 508); 6.4 kV (EN 61010-1 to 2000 m); 4.0 kV (EN 61010-1 to 5000 m)
Overvoltage category	Nominal voltage 230 V: III (EN 61010-1 / up to 2.000 m); II (EN 61010-1 / up to 5.000 m)
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-612/040-000

This I/O module provides the applied supply voltage to the field devices connected to downstream I/O modules.

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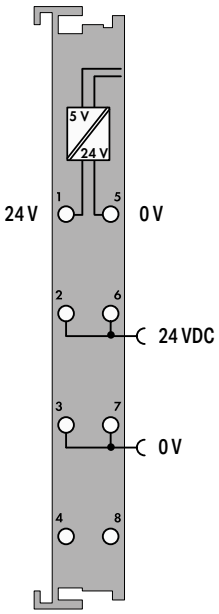
System power supply ▶ 24 VDC with Bus power supply

750-613/040-000



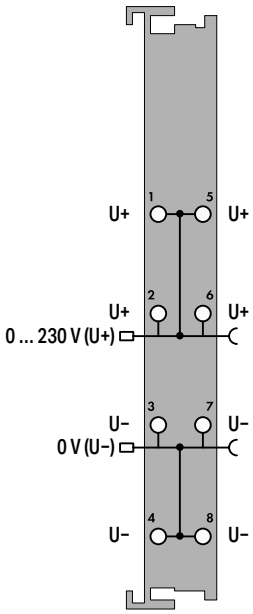
Item Description	**System Power Supply; 24 VDC**
Version	**Extreme**
Item No.	**750-613/040-000**
Order Text	**System Power Supply; 24 VDC; XTR**

Technical Data	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Input current (typ.) at nominal load (24 V)	500 mA
Power supply efficiency (typ.) at nominal load (24 V)	90 %
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Total current (system supply)	2000 mA
Current carrying capacity (power jumper contacts)	10 A
Rated surge voltage	1 kV
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-613/040-000

This I/O module provides the applied supply voltage to the field devices connected to downstream I/O modules. It also serves as an additional system supply for large nodes, covering the power demands of the I/O modules themselves.

Potential Multiplication ▶ 0 … 230 VAC/DC

750-614/040-000

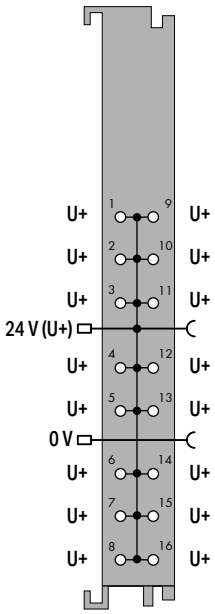


Item Description	**Potential Multiplication; 0 … 230 VAC/DC**
Version	**Extreme**
Item No.	**750-614/040-000**
Order Text	**Potential Multiplication; 0-230 VAC/VDC; XTR**

Technical Data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	230 VAC/DC; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current carrying capacity (power jumper contacts)	10 A
Rated surge voltage	5.0 kV (EN 60870-2-1 / Class VW3); 6.0 kV (UL 61010); 6.0 kV (EN 60664-1 / to 4.000 m ASL); 4.0 kV (EN 60664-1 / >4.000 m to 5.000 m ASL)
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-614/040-000

Potential Multiplication ▸ 16x 24 V

750-1605/040-000



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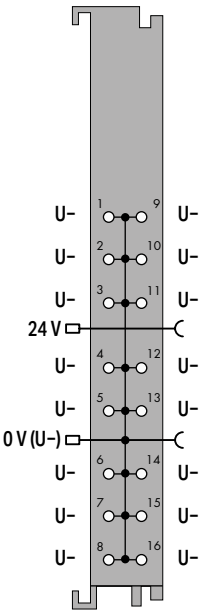
Item Description	**Potential Multiplication; 16x 24 V**
Version	**Extreme**
Item No.	**750-1605/040-000**
Order Text	**Potential Multiplication; 16*24V; XTR**

Technical Data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current carrying capacity (power jumper contacts)	10 A
Rated surge voltage	1 kV
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1605/040-000

Potential Multiplication ▶ 16x 0 V

750-1606/040-000



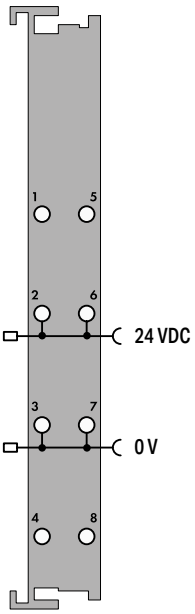
Item Description	**Potential Multiplication; 16x 0 V**
Version	**Extreme**
Item No.	**750-1606/040-000**
Order Text	**Potential Multiplication; 16*0V; XTR**

Technical Data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current carrying capacity (power jumper contacts)	10 A
Rated surge voltage	1 kV
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 69) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-1606/040-000

8

Filter module ▶ Field Supply Filter (Surge)

750-624/040-000

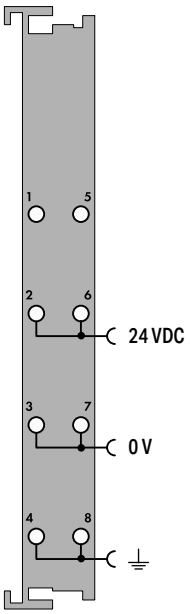


Item Description	**Field Supply Filter (Surge); 24 VDC; Higher isolation**
Version	**Extreme**
Item No.	**750-624/040-000**
Order Text	**Field Supply Filter; 24 VDC; HI; XTR**

Technical Data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current carrying capacity (power jumper contacts)	10 A
Rated surge voltage	1 kV
Application	In marine and onshore/offshore applications, as well as in telecontrol and rail technology
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-624/040-000

Filter module ▶ Field Supply Filter (Surge); without power jumper contacts

750-624/040-001



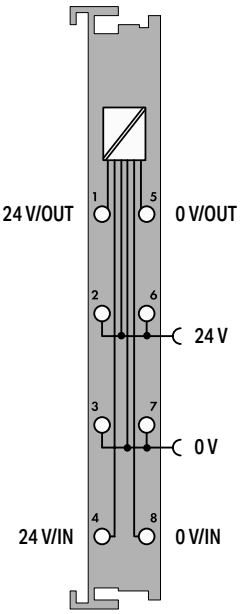
Item Description	**Field Supply Filter (Surge); 24 VDC; Higher isolation; without power jumper contacts**
Version	**Extreme**
Item No.	**750-624/040-001**
Order Text	**Field Supply Filter; 24 VDC; HI; NC; XTR**

Technical Data	
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current carrying capacity (power jumper contacts)	10 A
Rated surge voltage	1 kV
Application	In marine and onshore/offshore applications, as well as in telecontrol and rail technology
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-624/040-001

8

Filter module ▶ Supply Filter

750-626/040-000

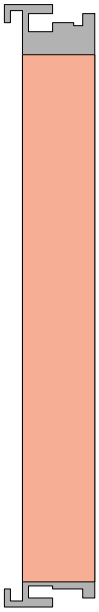


Item Description	**Supply Filter; 24 VDC; Higher isolation**
Version	**Extreme**
Item No.	**750-626/040-000**
Order Text	**Supply Filter; 24 VDC; HI; XTR**

Technical Data	
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current via system voltage (max.)	1.5 A
Current carrying capacity (power jumper contacts)	10 A
Rated surge voltage	1 kV
Application	In marine and onshore/offshore applications, as well as in telecontrol and rail technology
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; cULus OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-626/040-000

Distance module

750-616/040-000



Item Description	**Distance Module**
Version	**Extreme**
Item No.	**750-616/040-000**
Order Text	**Distance Module; XTR**

Technical Data	
Supply voltage (system)	5 VDC; via data contacts
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 69.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-616/040-000

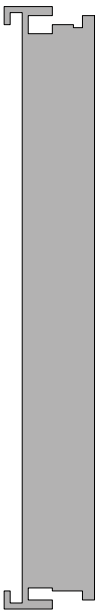
A distance module visually divides a fieldbus node into sections.

Notice:
Operation of the adjacent I/O modules requires a supply module.

8

Bus end module

750-600/040-000



Item Description	**End Module**
Version	**Extreme**
Item No.	**750-600/040-000**
Order Text	**End Module; XTR**

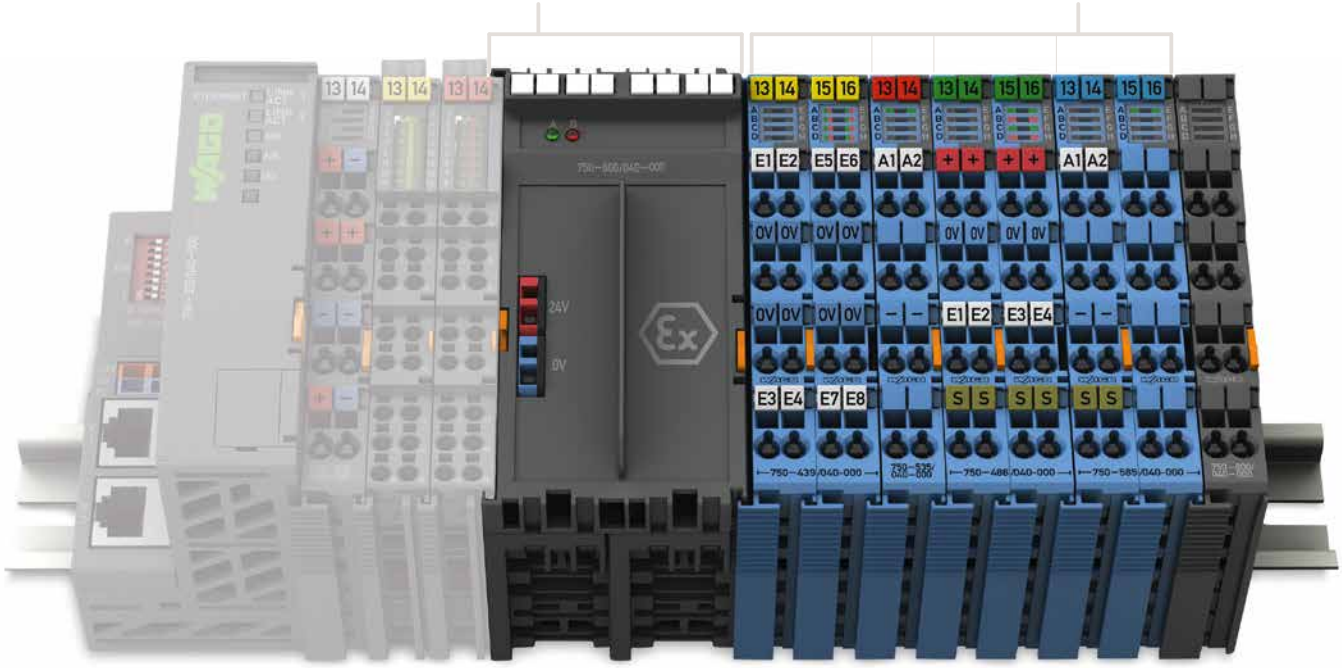
Technical Data	
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Approvals	CE; KC; Marine; OrdLoc/HazLoc; ATEX/IECEx
Data sheet and further information, see:	wago.com/750-600/040-000

An end module must be snapped onto the assembly at the end of a fieldbus node.
The end module completes the internal data bus, ensuring flawless data transmission.

Intrinsically Safe XTR Modules

Specialty Housing	
Dimensions W x H x D	48 x 100 x 70.9 mm
Depth from upper edge of DIN-rail	63.7 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.25 … 1.5 mm² / 24 … 14 AWG
Strip length	5 … 6 mm / 0.22 inch

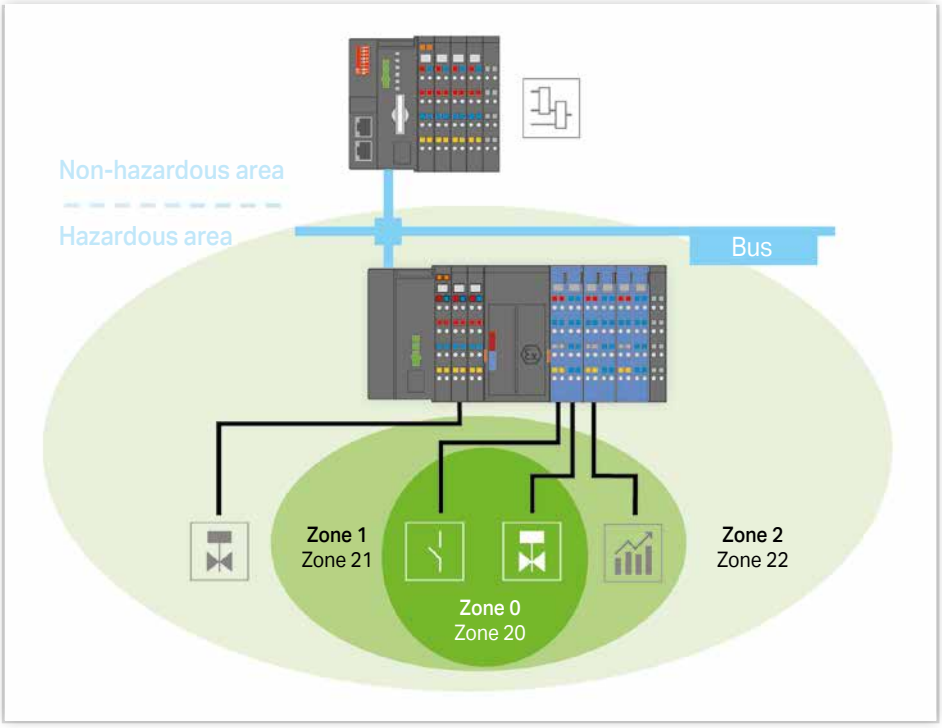
Housing Design (750 Series)	
Dimensions W x H x D	12 or 24 x 100 x 67.8 mm
Depth from upper edge of DIN-rail	60.6 mm
Connection technology	CAGE CLAMP®
Conductor cross-section	0.25 … 2.5 mm² / 24 … 14 AWG
Strip length	8 … 9 mm / 0.33 inch



8

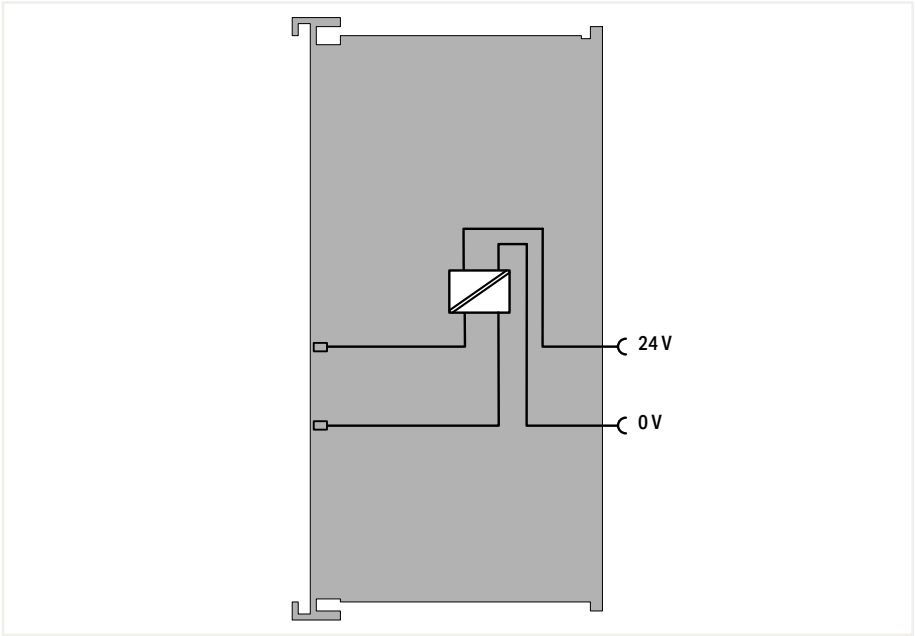
Use in Hazardous Locations in eXTReme Environments

In many plants across the oil and gas industry, along with those in the chemical and petrochemical industries and the process automation sector, installations are operated that process explosive gas- or dust-air mixtures under extreme conditions. This is why electrical equipment must be explosion-proof in order to avoid injuries to personnel and damage to facilities.
When used in hazardous areas of Zone 2/22, the I/O System 750 XTR offers a safe, easy and economical connection to the sensors/actuators of Zones 0/20 and 1/21. Surrounding air temperatures from −40 to +70°C are permissible, as well as increased vibration loads up to 5g. The "blue" Ex i XTR I/O Modules were specially developed for this purpose. They form an intrinsically safe section that can be integrated into a standard 750 XTR Series node, offering all the advantages of state-of-the-art fieldbus technology. The WAGO I/O System 750 XTR is also approved for mining applications.



Intrinsically safe modules (Ex i) ▶ Supply module

750-606/040-000



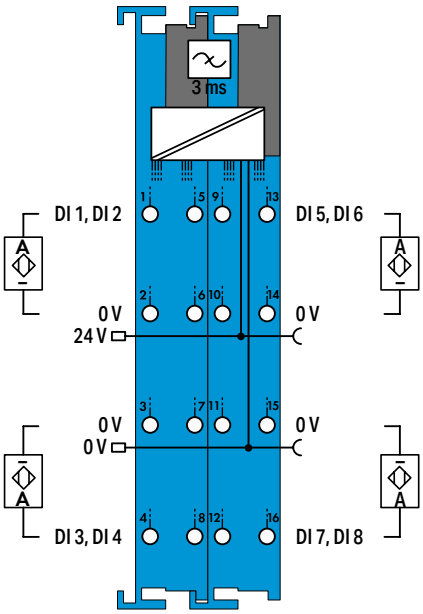
Item Description	**Power Supply; 24 VDC; Diagnostics; Intrinsically safe**
Version	**Extreme**
Item No.	**750-606/040-000**
Order Text	**Power Supply; 24 VDC; Ex i; XTR**

Technical Data	
Power consumption (5 V system supply)	7.5 mA
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via CAGE CLAMP® connection; transmission via spring contact); Derating must be observed!
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 … +30 %); for -40 … +55 °C: 24 V (-25 … +20 %); for +55 … +70 °C: 24 V (-25 … +10 %); Lower limit in all temperature ranges: −27.5 % (including 15 % residual ripple)
Current carrying capacity (power jumper contacts)	1 A
Fuse	Electronic
Data width	2 bits (input voltage failure, fuse triggered)
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(48 x 100 x 70.9) mm
Explosion Protection	
Power supply (input)	U_n = 24 VDC; $P_{max.}$ = 29 W; U_m = 253 V
Power supply (output)	U_o = 26.8 V (intrinsically safe output voltage per protection level ia); I_n = 1 A
Ex guideline	EN/IEC 60079-0, -7, -11
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Marking	ATEX/IECEx: II 3G Ex ec IIC T4 Gc
Data sheet and further information, see:	wago.com/750-606/040-000

This supply module monitors the power supply to the downstream Ex i segment and separates the intrinsically safe from the non-intrinsically safe section of the I/O system. Input and output sides are electrically isolated from each other.
Note: If, due to load conditions, more than one supply module is required per station, four distance modules (750-616/040-000) must be placed between the intrinsically safe sections.
General information (e.g., installation regulations) on explosion protection is available in the WAGO-I/O-SYSTEM 750 XTR manuals!

Intrinsically safe modules (Ex i) ▸ Digital input

750-439/040-000



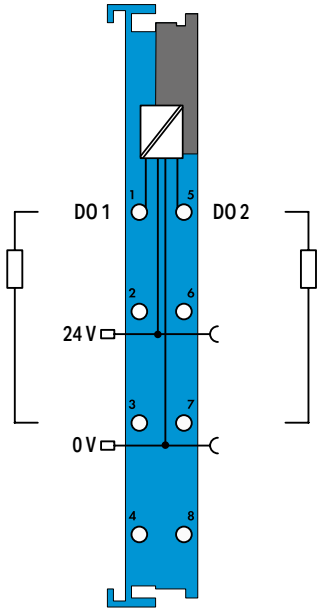
8

Item Description	**8-Channel Digital Input; NAMUR; Intrinsically safe**
Version	**Extreme**
Item No.	**750-439/040-000**
Order Text	**8DI; NAMUR; Ex i; XTR**

Technical Data	
Number of digital inputs	8
Signal type	NAMUR
Sensor connection	4 x (2-wire)
Input characteristic	High-side switching
Input filter (digital)	3 ms
Open-circuit voltage	8.2 V
Diagnostics	Short circuit, wire break
Supply voltage (sensor)	8.2 VDC; Short-circuit-protected, isolated channels
Supply voltage (field)	24 VDC; (Ex i XTR power supply: U_o = max. 26.8 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	11 mA
Power consumption (5 V system supply)	56 mA
Input data width (internal) (max.)	16 bits
Output (internal) data width (max.)	16 bits
Isolation	300 VAC system/field
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion Protection	
Safety-relevant data (circuit)	U_o = 11.76 V; I_o = 12.48 mA; P_o = 36.67 mW; Linear characteristic curve
Reactances Ex ia IIC	L_o = 100 mH; C_o = 1.5 µF
Reactances Ex ia IIB	L_o = 100 mH; C_o = 9.9 µF
Reactances Ex ia IIA	L_o = 100 mH; C_o = 39 µF
Reactances Ex ia I	L_o = 100 mH; C_o = 38 µF
Reactances (note)	Reactances without accounting for the concurrence of L and C
Ex guideline	EN/IEC 60079-0, -7, -11
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
Data sheet and further information, see:	wago.com/750-439/040-000

Intrinsically safe modules (Ex i) ▶ Digital output

750-535/040-000

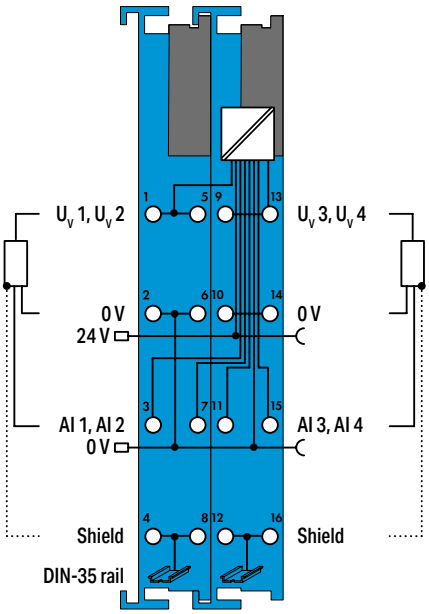


Item Description	**2-Channel Digital Output; 24 VDC; Intrinsically safe**
Version	**Extreme**
Item No.	**750-535/040-000**
Order Text	**2DO; 24 VDC; Ex i; XTR**

Technical Data	
Number of digital outputs	2
Signal type	Voltage
Voltage signal type	24 VDC
Output characteristic	High-side switching
Load type	Resistive, inductive, lamp load
Actuator connection	2 x (2-wire)
Switching frequency (max.)	1 kHz
Supply voltage (field)	24 VDC; (Ex i XTR power supply: U_o = max. 26.8 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	8.5 mA
Power consumption (5 V system supply)	7 mA
Output (internal) data width (max.)	2 bits
Isolation	300 VAC system/field
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(12 x 100 x 67.8) mm
Explosion Protection	
Safety-relevant data (circuit)	U_o = 26.8 V; I_o = 99.91 mA; P_o = 669.43 mW; Linear characteristic curve
Reactances Ex ia IIC	L_o = 1.1 mH; C_o = 0.092 µF
Reactances Ex ia IIB	L_o = 12 mH; C_o = 0.72 µF
Reactances Ex ia IIA	L_o = 21 mH; C_o = 2.37 µF
Reactances Ex ia I	L_o = 30 mH; C_o = 3.85 µF
Reactances (note)	Reactances without accounting for the concurrence of L and C
Ex guideline	EN/IEC 60079-0, -7, -11
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
Data sheet and further information, see:	wago.com/750-535/040-000

Intrinsically safe modules (Ex i) ▸ Analog input ▸ 0/4 … 20 mA; NAMUR NE43

750-486/040-000

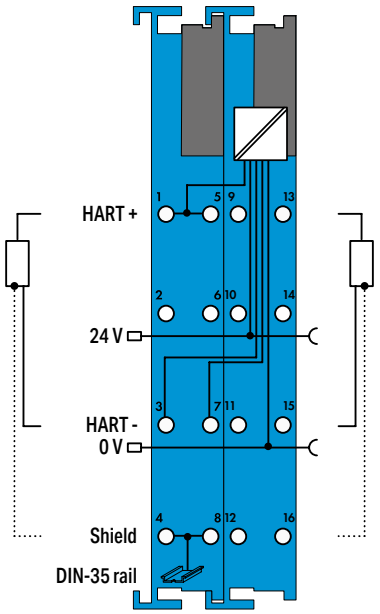


Item Description	**4-Channel Analog Input; 0/4 … 20 mA; NAMUR NE43; Intrinsically safe**
Version	**Extreme**
Item No.	**750-486/040-000**
Order Text	**4AI; 0/4-20mA; Ex i; XTR**

Technical Data	
Number of analog inputs	4
Signal type	Current
Signal type (current)	0 … 20 mADC; 4 … 20 mADC; 3.6 … 21 mADC
Sensor connection	2 x (3-wire)
Signal characteristic	Single-ended
Resolution [bit]	12 bits
Conversion time (typ.)	10 ms
Input resistance (max.)	200 Ω
Measurement error (reference temperature)	25 °C
Measurement error – deviation (max.) from the upper-range value	0.1 %
Temperature error (max.) of the upper-range value	0.01 %/K
Supply voltage (sensor)	15 VDC; Transmitter supply U_V at 20 mA
Supply voltage (field)	24 VDC; (Ex i XTR power supply: U_0 = max. 26.8 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	19 mA
Power consumption (5 V system supply)	45 mA
Data width	4 x 16-bit data; 4 x 8-bit control/status (optional)
Isolation	300 VAC system/field
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion Protection	
Safety-relevant data (circuit)	U_o = 26.8 V; I_o = 92.72 mA; P_o = 621.27 mW; Linear characteristic curve
Reactances Ex ia IIC	L_o = 1.6 mH; C_o = 0.082 µF
Reactances Ex ia IIB	L_o = 15 mH; C_o = 0.71 µF
Reactances Ex ia IIA	L_o = 25 mH; C_o = 2.36 µF
Reactances Ex ia I	L_o = 36 mH; C_o = 3.84 µF
Reactances (note)	Reactances without accounting for the concurrence of L and C
Ex guideline	EN/IEC 60079-0, -7, -11
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
Data sheet and further information, see:	wago.com/750-486/040-000

Intrinsically safe modules (Ex i) ▸ Analog input ▸ 4 … 20 mA HART

750-484/040-000



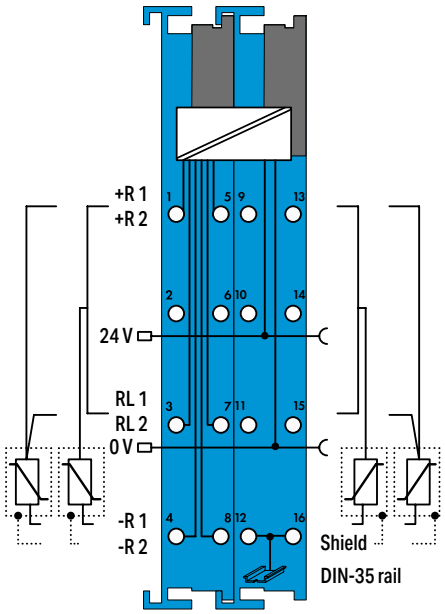
Item Description	**2-Channel Analog Input; 4 … 20 mA HART; Intrinsically safe**
Version	**Extreme**
Item No.	**750-484/040-000**
Order Text	**2AI; 4-20mA HART; Ex i; XTR**

Technical Data	
Number of analog inputs	2
Signal type	Current
Signal type (current)	4 … 20 mADC
Sensor connection	2 x (2-wire)
Input filter	Parameterizable
Signal characteristic	Single-ended
Resolution [bit]	12 bits
Conversion time (typ.)	10 ms
Measurement error (reference temperature)	25 °C
Measurement error – deviation (max.) from the upper-range value	0.2 %
Temperature error (max.) of the upper-range value	0.01 %/K
Overvoltage protection	30 V, reverse polarity protected
Diagnostics	Wire break, measurement range overflow
Supply voltage (sensor)	16.5 VDC; Transmitter supply U_V at 20 mA
Supply voltage (field)	24 VDC; (Ex i XTR power supply: U_O = max. 26.8 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	26 mA
Power consumption (5 V system supply)	25 mA
Data width	2 x 2-byte data; 2 x 2-byte data + 2n x 4-byte data (n = number of dynamic variables); 2 x 2-byte data + 6-byte mailbox
Isolation	300 VAC system/field
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion Protection	
Safety-relevant data (circuit)	U_o = 26.8 V; I_o = 90.07 mA; P_o = 603.5 mW; Linear characteristic curve
Reactances Ex ia IIC	L_o = 1.8 mH; C_o = 0.092 µF
Reactances Ex ia IIB	L_o = 16 mH; C_o = 0.72 µF
Reactances Ex ia IIA	L_o = 27 mH; C_o = 2.37 µF
Reactances Ex ia I	L_o = 38 mH; C_o = 3.85 µF
Reactances (note)	Reactances without accounting for the concurrence of L and C
Ex guideline	EN/IEC 60079-0, -7, -11
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
Data sheet and further information, see:	wago.com/750-484/040-000

In addition to analog signal processing, this module offers optional HART communication for parameterizing or recording dynamic variables.

Intrinsically safe modules (Ex i) ▸ Analog input ▸ Resistance Sensors

750-481/040-000

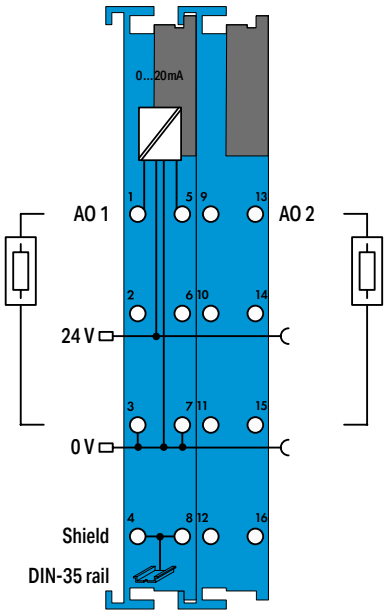


Item Description	**2-Channel Analog Input; RTD; Intrinsically safe**
Version	**Extreme**
Item No.	**750-481/040-000**
Order Text	**2AI; RTD; Ex i; XTR**

Technical Data	
Number of analog inputs	2
Signal type	Resistance measurement; Potentiometer positions
Temperature range	−200 … +850 °C (Pt), −60 … +250 °C (Ni), −80 … +320 °C (Ni120)
Sensor connection	2 x (2-wire, 3-wire)
Resolution (over entire range)	0.1 °C, 0.1 Ω, 0.0049 %
Conversion time (typ.)	325 ms
Conversion time	150 … 500 ms (per channel)
Measurement error (reference temperature)	25 °C
Measurement error – deviation (max.) from the upper-range value	0.2 %
Temperature error (max.) of the upper-range value	0.01 %/K
Supply voltage (field)	24 VDC; (Ex i XTR power supply: U_o = max. 26.8 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	12 mA
Power consumption (5 V system supply)	25 mA
Data width	2 x 16-bit data; 2 x 8-bit control/status (optional)
Isolation	300 VAC system/field
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion Protection	
Safety-relevant data (circuit)	U_o = 7.2 V; I_o = 5.8 mA; P_o = 10.5 mW; Linear characteristic curve
Reactances Ex ia IIC	L_o = 100 mH; C_o = 13.5 µF
Reactances Ex ia IIB	L_o = 100 mH; C_o = 240 µF
Reactances Ex ia IIA	L_o = 100 mH; C_o = 1000 µF
Reactances Ex ia I	L_o = 100 mH; C_o = 1000 µF
Reactances (note)	Reactances without accounting for the concurrence of L and C
Ex guideline	EN/IEC 60079-0, -7, -11
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
Data sheet and further information, see:	wago.com/750-481/040-000

Intrinsically safe modules (Ex i) ▶ Analog output

750-585/040-000

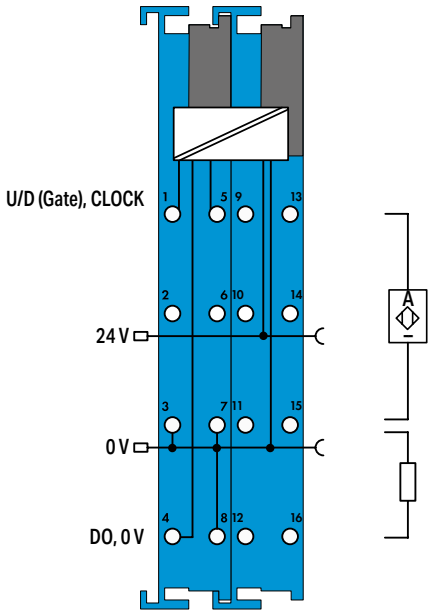


Item Description	**2-Channel Analog Output; 0 … 20 mA; Intrinsically safe**
Version	**Extreme**
Item No.	**750-585/040-000**
Order Text	**2AO; 0-20mA; Ex i; XTR**

Technical Data	
Number of analog outputs	2
Signal type	Current
Signal type (current)	0 … 20 mADC
Signal characteristic	Single-ended
Load impedance (current output) (max.)	500 Ω
Resolution [bit]	12 bits
Conversion time (typ.)	2 ms
Output error, reference temperature	25 °C
Output error, deviation (max.) of the upper-range value	0.2 %
Temperature error (max.) of the output range value	0.01 %/K
Actuator connection	2 x (2-wire)
Supply voltage (field)	24 VDC; (Ex i XTR power supply: U_o = max. 26.8 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	19 mA
Power consumption (5 V system supply)	21 mA
Data width	2 x 16-bit data
Isolation	300 VAC system/field
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion Protection	
Safety-relevant data (circuit)	U_o = 26.8 V; I_o = 56.4 mA; P_o = 378 mW; Linear characteristic curve
Reactances Ex ia IIC	L_o = 8.2 mH; C_o = 0.092 µF
Reactances Ex ia IIB	L_o = 46 mH; C_o = 0.72 µF
Reactances Ex ia IIA	L_o = 76 mH; C_o = 2.37 µF
Reactances Ex ia I	L_o = 100 mH; C_o = 3.85 µF
Reactances (note)	Reactances without accounting for the concurrence of L and C
Ex guideline	EN/IEC 60079-0, -7, -11
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
Data sheet and further information, see:	wago.com/750-585/040-000

Intrinsically safe modules (Ex i) ▸ Counter

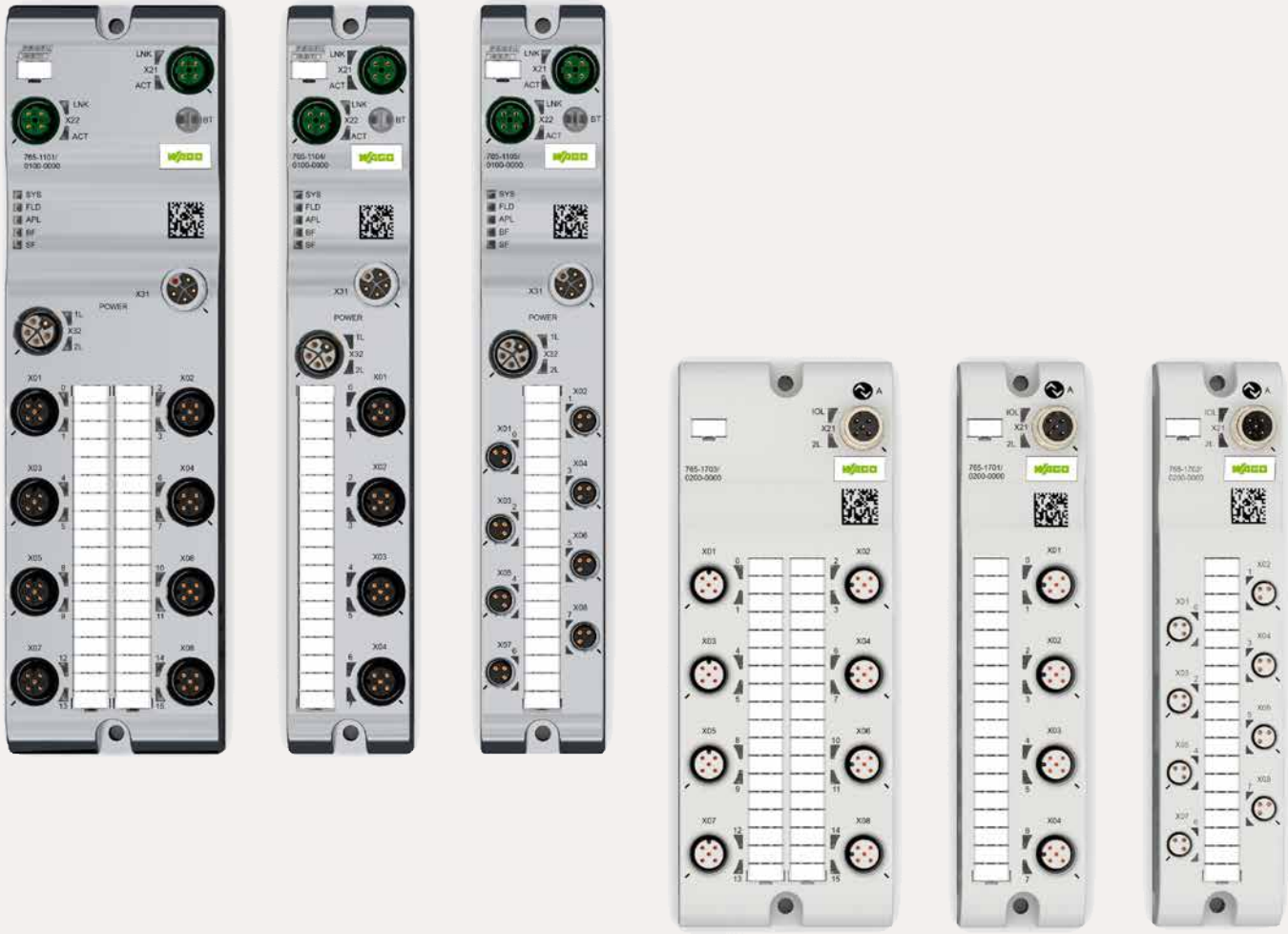
750-633/040-000



Item Description	**Up/Down Counter; Intrinsically safe**
Version	**Extreme**
Item No.	**750-633/040-000**
Order Text	**Up/Down Counter; Ex i; XTR**

Technical Data	
Number of counters	1
Number of digital outputs	1
Sensor supply U_V	8.2 V
Switching frequency	20 Hz … 50 kHz
Counter depth	32 bits
Output voltage	24 VDC
Input filter	10 µs
Input resistance (max.)	1000 Ω
Open-circuit voltage	8.2 V
Supply voltage (field)	24 VDC; (Ex i XTR power supply: U_o = max. 26.8 V); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power consumption, field supply (module with no external load)	31 mA
Power consumption (5 V system supply)	25 mA
Data width	1 x 32-bit data, 1 x 8-bit status/diagnostics
Isolation	300 VAC system/field
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(24 x 100 x 67.8) mm
Explosion Protection	
Safety data (input)	U_o = 12 V; I_o = 13.3 mA; P_o = 40.4 mW; Linear characteristic curve
Reactances of Ex ia IIC inputs	L_o = 100 mH; C_o = 1.41 µF
Reactances of Ex ia IIB inputs	L_o = 100 mH; C_o = 9 µF
Reactances of Ex ia IIA inputs	L_o = 100 mH; C_o = 36 µF
Reactances of Ex ia I inputs	L_o = 100 mH; C_o = 35 µF
Safety data (output)	U_o = 26.8 V; I_o = 96.69 mA; P_o = 674.83 mW; Linear characteristic curve
Reactances of Ex ia IIC output	L_o = 1.3 mH; C_o = 0.091 µF
Reactances of Ex ia IIB output	L_o = 13 mH; C_o = 0.719 µF
Reactances of Ex ia IIA output	L_o = 23 mH; C_o = 2.369 µF
Reactances of Ex ia I output	L_o = 33 mH; C_o = 3.849 µF
Reactances (note)	Reactances without accounting for the concurrence of L and C
Ex guideline	EN/IEC 60079-0, -7, -11
Approvals	CE; Marine; OrdLoc/HazLoc; ATEX/IECEx
Marking	ATEX/IECEx: II 3 (1) G Ex ec [ia Ga] IIC T4 Gc; II (1) D [Ex ia Da] IIIC; I (M1) [Ex ia Ma] I
Data sheet and further information, see:	wago.com/750-633/040-000

IP67



I/O System Field

I/O System Advanced

- Open, innovative and future-proof industrial automation
- Short reaction times and high signal transmission synchronicity
- Fast ETHERNET fieldbuses – EtherCAT®

◄◄◄ Section 6

I/O System – 750 and 753 Series

- Highly versatile
- More than 500 modules available
- Functional safety
- Ex i

◄◄ Section 7

I/O System – 750 XTR Series

For demanding applications in which the following are critical:

- Extreme temperature resistance
- Immunity to electromagnetic interference and impulse voltages
- Vibration and shock resistance

◄ Section 8

I/O System Field

Automate and Network Modular Machines for the Future

- Ethernet-based fieldbus standards (EtherCAT®, EtherNet/ IPTM, PROFINET)
- Integrated Bluetooth® interface (Android/iOS App), OPC UA Server, Webserver
- IO-Link Master and Devices

I/O System Field
Contents

	PROFINET	EtherCAT®	EtherNet/IP™	IO-Link Master	IO-Link Hub	Description	Item No.	
 Fieldbus Modules	x					16-Channel Digital Input; 24 VDC; 8 x M12 Connector	765-1101/100-000	550
		x					765-1201/100-000	
			x				765-1501/100-000	
	x					16-Channel Digital Output; 24 VDC; 8 × M12 Connector	765-1103/100-000	551
		x					765-1203/100-000	
			x				765-1503/100-000	
	x					16-Channel Digital Input/Output; 24 VDC; 8 x M12 Connector	765-1102/100-000	552
		x					765-1202/100-000	
			x				765-1502/100-000	
	x					8-Channel Digital Input/Output; 24 VDC; 4 x M12 Connector	765-1104/100-000	553
		x					765-1204/100-000	
			x				765-1504/100-000	
	x					8-Channel Digital Input/Output; 24 VDC; 8 x M8 Connector	765-1105/100-000	554
		x					765-1205/100-000	
			x				765-1505/100-000	
 IO-Link Masters	x			Class A		8-Port IO-Link Master; 24 VDC 2.0 A; 8 x M12 Connector	765-4101/100-000	556
		x					765-4201/100-000	
			x				765-4501/100-000	
	x			Class B			765-4102/100-000	557
		x					765-4202/100-000	
			x				765-4502/100-000	
	x			Class A		4-Port IO-Link Master; 24 VDC 2.0 A; 4 x M12 Connector	765-4103/100-000	558
		x					765-4203/100-000	
			x				765-4503/100-000	
	x			Class B			765-4104/100-000	559
		x					765-4204/100-000	
			x				765-4504/100-000	
 IO-Link Hubs					Class A	8-Channel Digital Input/Output; 24 VDC 2.0 A; 4 x M12 Connector	765-1701/200-000	560
					Class B		765-1704/200-000	561
					Class A	8-Channel Digital Input/Output; 24 VDC 2.0 A; 8 x M8 Connector	765-1702/200-000	562
					Class B		765-1705/200-000	563
					Class A	16-Channel Digital Input/Output; 24 VDC 2.0 A; 8 x M12 Connector	765-1703/200-000	564
					Class B		765-1706/200-000	565

9

I/O System Field
General Product Information

Automate and Network Modular Machines for the Future

High performance, designed for time-sensitive networking (TSN) and unshakeable even in the harshest environmental conditions: The WAGO I/O System Field for cabinet-free automation combines an impressive variety of functions with robust IP67 housings.

Extended Network Connectivity

Modern, decentralized production facilities require automation solutions that ensure the highest level of connectivity, while providing maximum performance outside of the control cabinet.

WAGO developed its upgradable I/O System Field with IP67 protection to meet these needs today and tomorrow: It combines fast ETHERNET-based fieldbuses (e.g., PROFINET), technologies such as OPC UA, *Bluetooth*® and Webserver, and MQTT for cloud connectivity.

Functionality and Aesthetics in One System

The IP67 I/O System Field offers no-compromise protection with pressure cast zinc housings for extremely harsh environments, or robust yet lightweight plastic housings for mobile applications. The modules operate reliably at temperatures from −25 to +70°C (−13 … +158°F) and, thanks to internal shielding, are immune to electromagnetic interference. Slim housing variants and lateral mounting options open up more space.

Industrial Ethernet and PROFINET on the field level provide the basis for digitalization with WAGO I/O System Field, which supports Ethernet-based standards (EtherNet/IP™ and EtherCAT®) and is #madeforTSN (Time-Sensitive Networking).

WAGO I/O System Field supports MQTT as an open message protocol for data transmission.

The system is equipped with an OPC UA server, allowing OPC UA clients to access the widest range of device data (e.g., parameter data, status information, identification/diagnostics data, containers).

Fieldbus modules equipped with IO-Link masters and IO-Link hubs as devices facilitate effective, versatile connection of intelligent sensors/actuators to the automation system.

An app for direct access to a WAGO Field Device via DMC (Data Matrix Code) identification and BLE (*Bluetooth*® Low Energy) communication is available for wireless access with a mobile device.

An integrated Webserver enables HTTP and HTTPS communication. With this capability, a wide range of system information can be accessed using standard browsers.

Integrated Load Management

Innovative load management ensures that the system's power is fully utilized via supply and output current load management. Current and voltage can be recorded and evaluated for each channel. Overload limits can be set for individual channels. As a result, errors can be detected faster and more clearly differentiated in the event of faults – it is also easier to predict errors, which is essential for future-oriented trends such as predictive maintenance.

All-in-One Solution via IO-Link

In combination with IO-Link, the I/O System Field fully demonstrates its strengths as a flexible "IO distributor" for both data collection and distribution. The prominent communication standard enables seamless data flow from the control to the sensor and actuator level. This considerably simplifies configuration and cabling. Furthermore, completely new possibilities arise for diagnostics, parameterization and device identification.

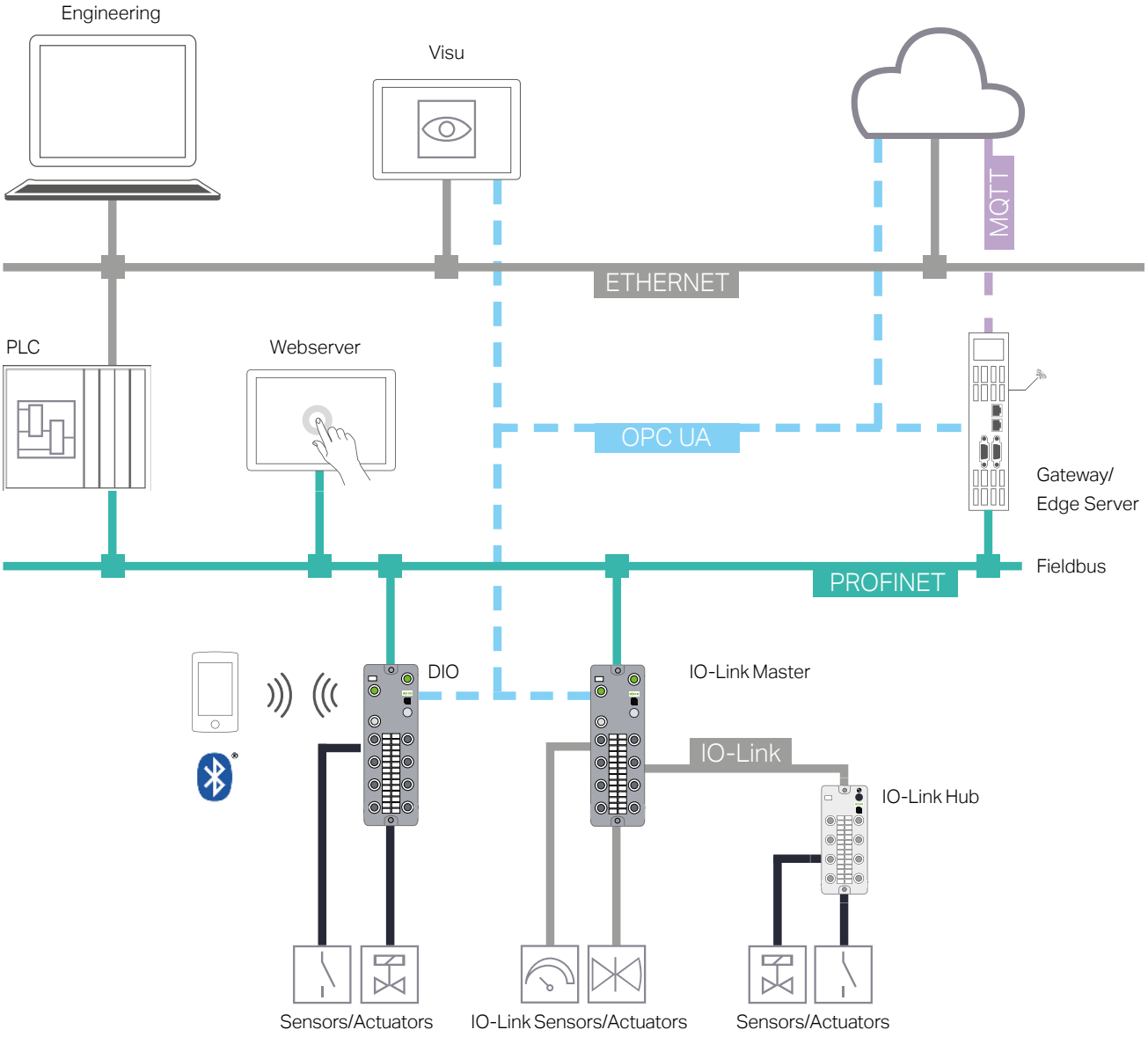
Advantages:

- Platform-independent data exchange through OPC UA
- System information provided via MQTT
- Fast on-site access to data through *Bluetooth*®
- Status information of the system via integrated Webserver
- Ready for future TSN implementation
- Fully encapsulated IP67 metal housings for extreme environments
- Non-encapsulated, lightweight IP67 plastic housings for mobile applications
- WAGO standard marking (WMB Inline markers and marking strips)

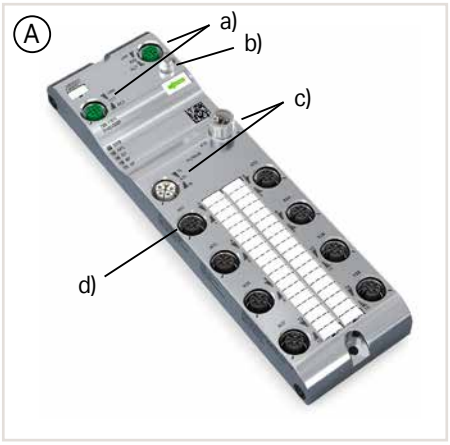
I/O System Field
Functional Variants

PROFINET
EtherNet/IP™
EtherCAT

Fieldbus Module and IO-Link Master as PROFINET, EtherCAT® or EtherNet/IP™ Slave



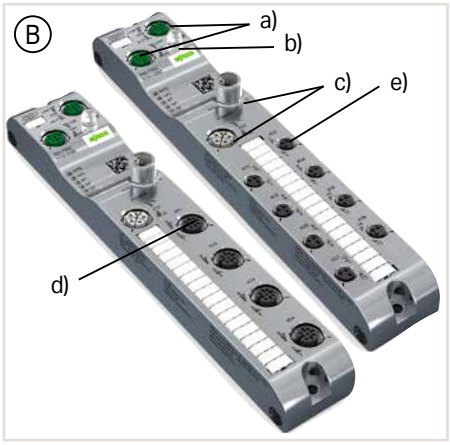
I/O System Field
Interfaces and Types

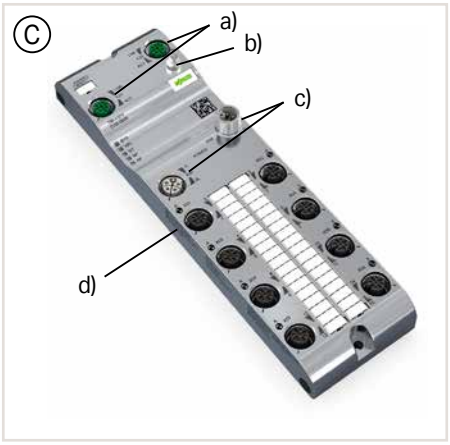


Fieldbus Module
- Fieldbus: 2 x D-coded M12; 5-pole (a)
- *Bluetooth*® (b)
- Supply: L-coded M12; 5-pole (c)

Housing Design (A): 16 DI, 16 DO or 16 DIO
- Inputs/Outputs: A-coded M12; 5-pole (d)
- W x H x D (mm): 60 x 30 x 210

Housing Design (B): 8 DIO
- Inputs/Outputs: A-coded M12; 5-pole (d) or M8; 3-pole (e)
- W x H x D (mm): 35 x 30 x 210

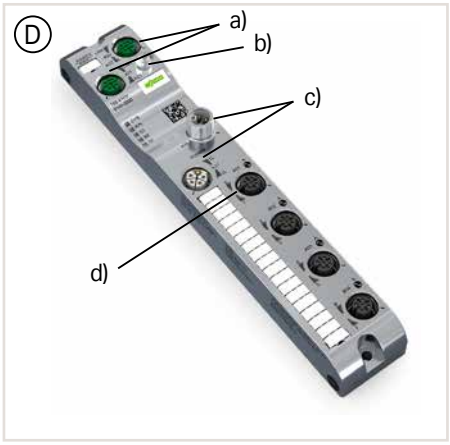


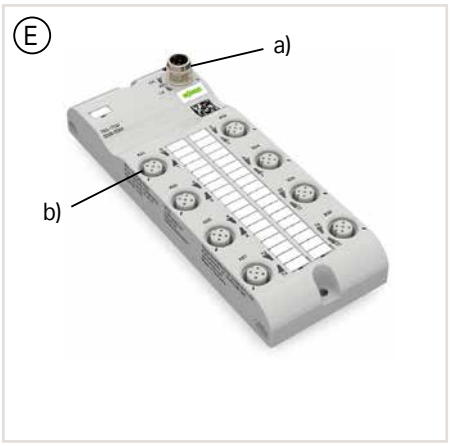


IO-Link Master
- Fieldbus: 2 x D-coded M12; 5-pole (a)
- *Bluetooth*® (b)
- Supply: L-coded M12; 5-pole (c)
- IO-Link Ports: A-coded M12; 5-pole (d)

Housing Design (C): 8 IO-Link ports, class A or B
- W x H x D (mm): 60 x 30 x 210

Housing Design (D): 4 IO-Link ports, class A or B
- W x H x D (mm): 35 x 30 x 210

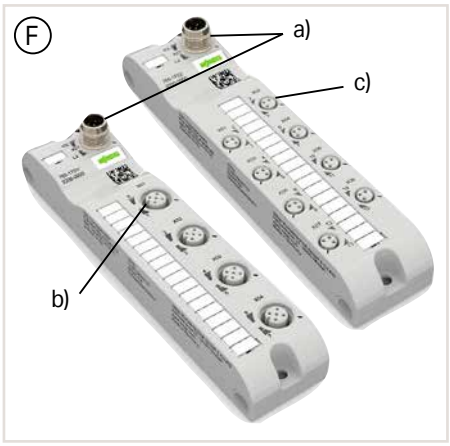




IO-Link Hub
- IO-Link Hub: A-coded M12; 5-pole (a)

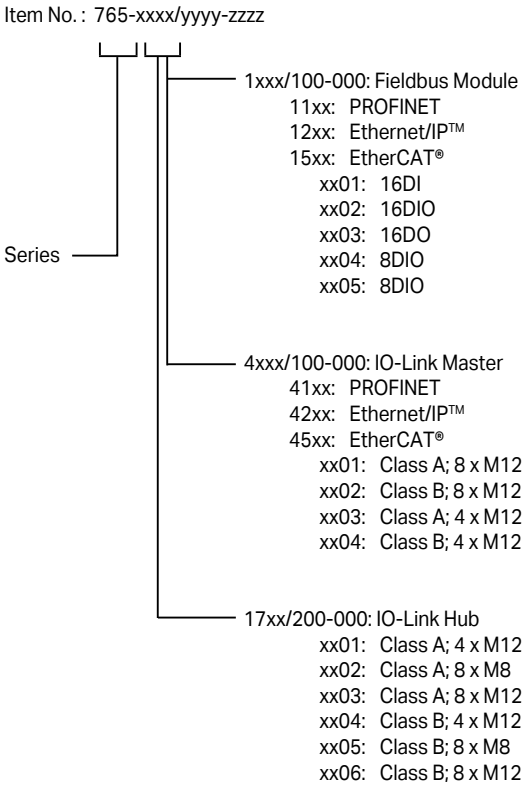
Housing Design (E): 16 DIO
- Inputs/Outputs: A-coded M12; 5-pole (b)
- W x H x D (mm): 60 x 30 x 158.5

Housing Design (F): 8 DIO
- Inputs/Outputs: A-coded M12; 5-pole (b) or M8; 3-pole (c)
- W x H x D (mm): 35 x 30 x 158.5



I/O System Field
Item Number Key

Explanation of an item number key's components



9

Standards and Rated Conditions

General Specifications	
Supply voltage (system)	24 VDC (−25 … +30 %)
Surrounding air temperature (operation)	−25 … +70 °C
Surrounding air temperature (storage)	−40 … +80 °C
Maximum temperature change	3 K/min
Relative humidity (operation)	5 … 95 % (with condensation)
Pollution degree	3 (EN 60664-1)
Operating altitude	0 … 2000 m / 0 … 6562 ft
Overvoltage category	II (EN 60664-1)
Protection type	IP67 (EN 60529)
Protection class	III (EN 61140)
Vibration resistance	5g (IEC 60068-2-6)
Shock resistance	50g (IEC 60068-2-27)
EMC immunity to interference	Per EN 61000-6-2
EMC emission of interference	Per EN 61000-6-4
Mounting type	Screw mount, 2xM4 (front and side)
Connection technology	M8 and M12 connectors
Housing material	Metal, plastic (PA, PBT)

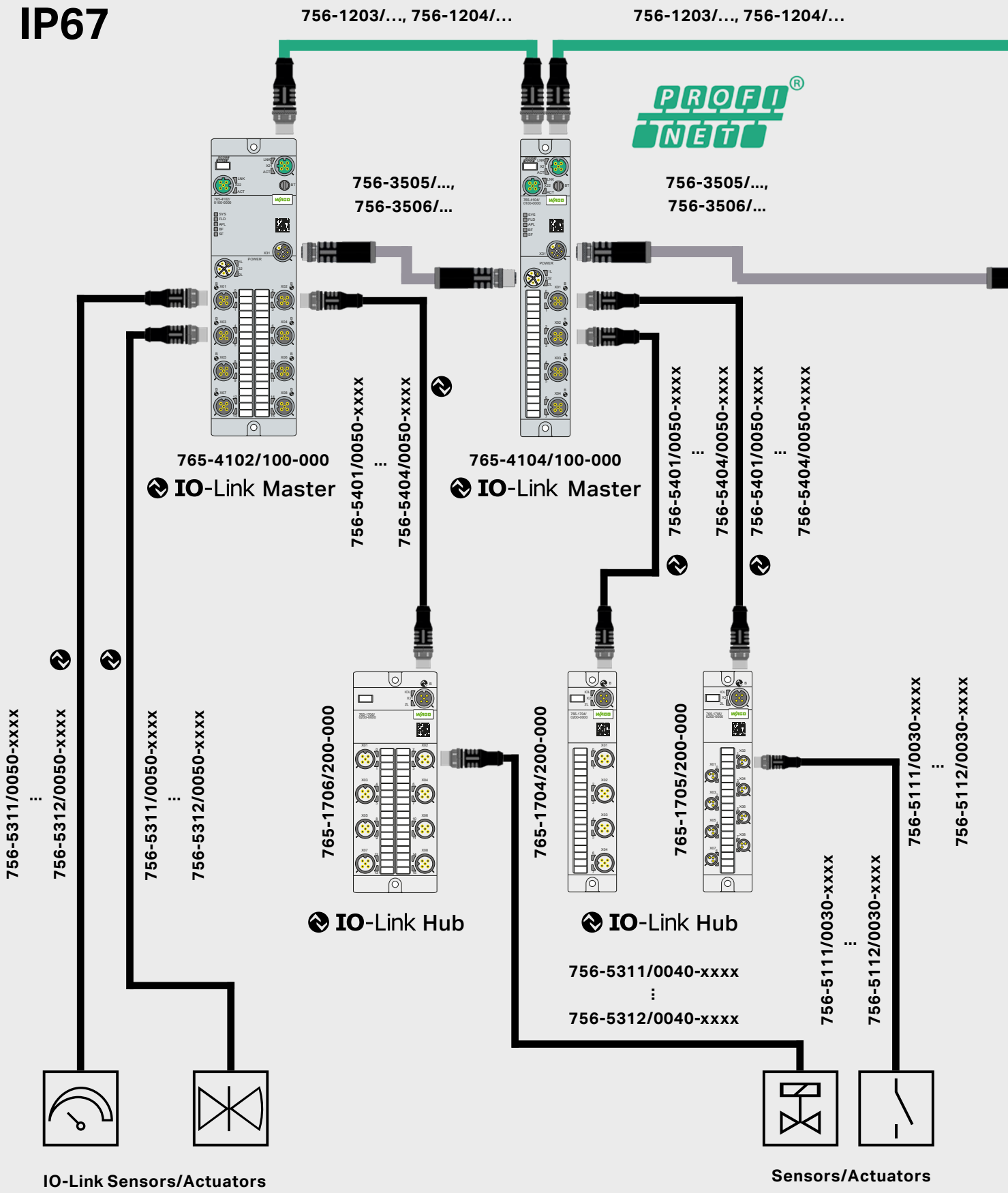
Approvals

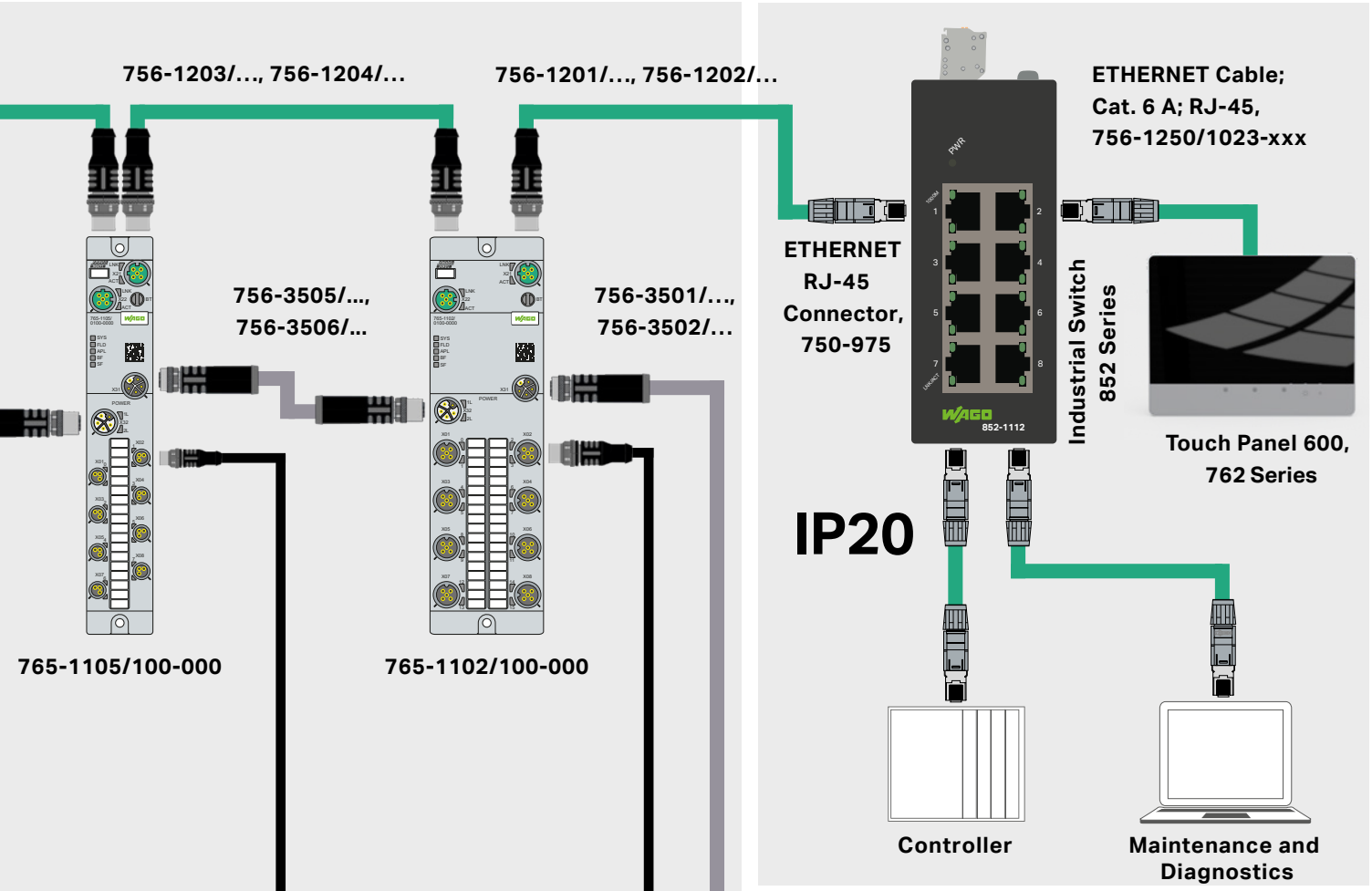
For approvals overview (item comparison), see Section 14 (Technical Section) or visit www.wago.com.

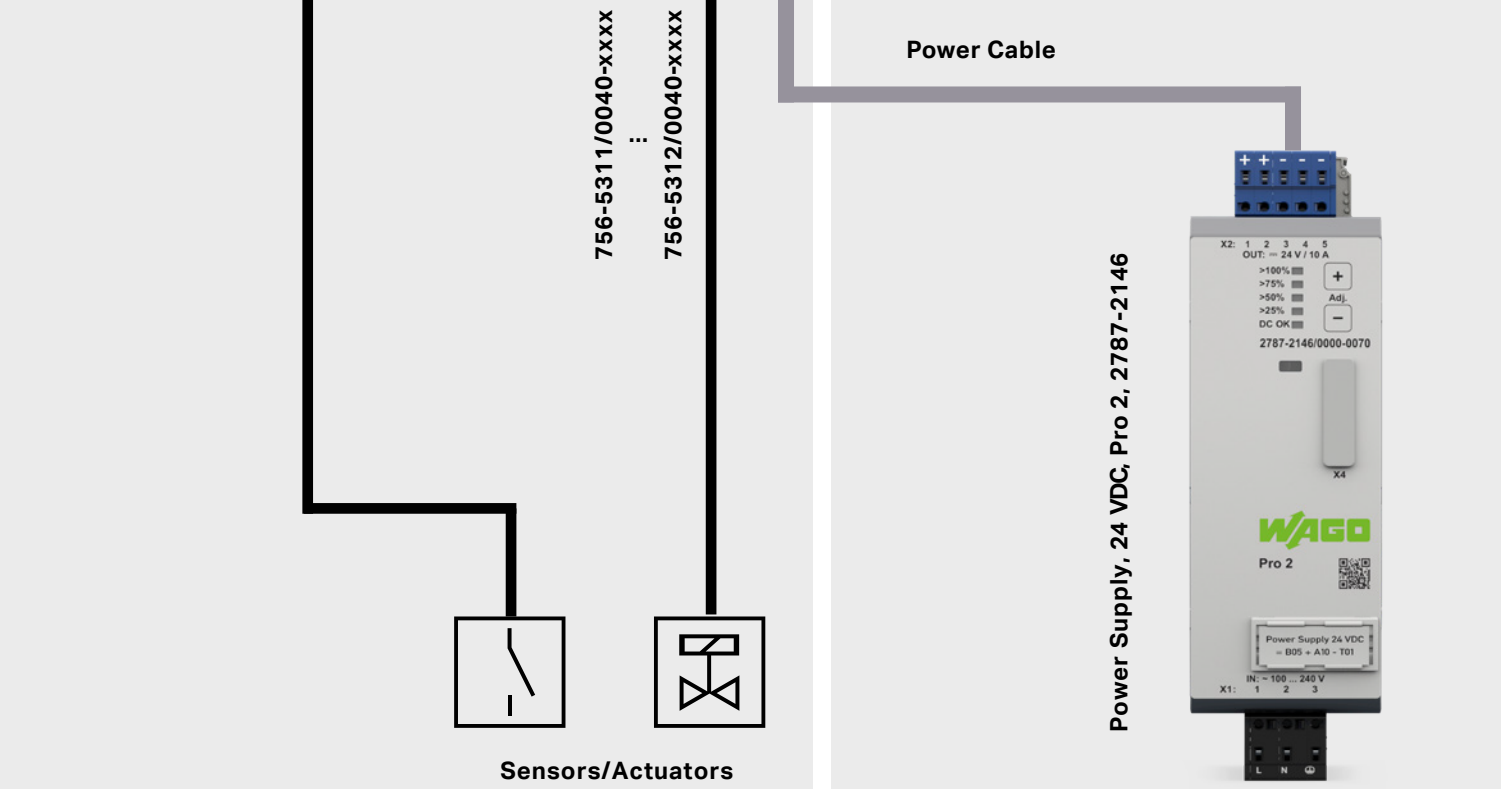
cULus Pending

FCC/ ISED

I/O System Field
Configuration Guide





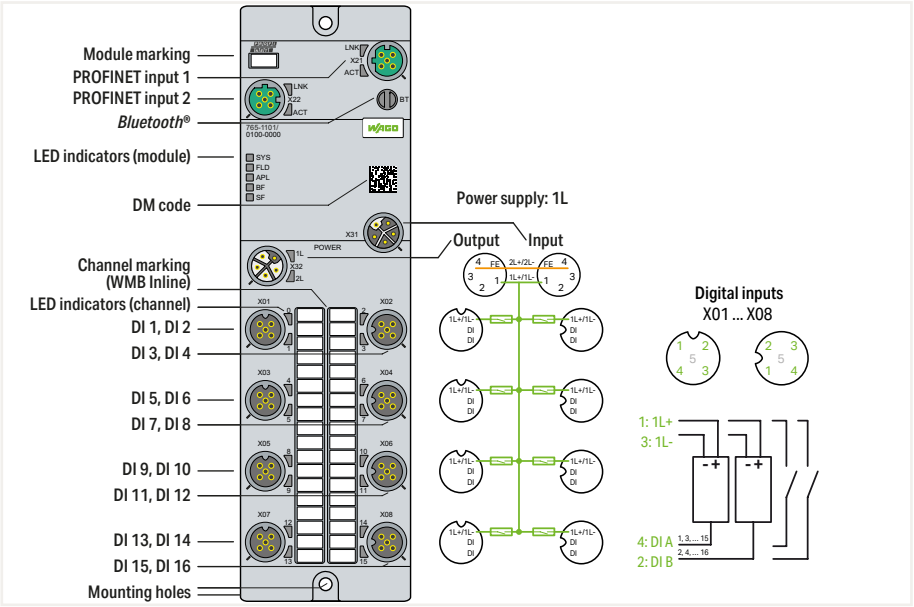


WAGO I/O System Field

IP20

Fieldbus module ▶ 16-Channel Digital Input; I/O System Field; 24 VDC; 8 x M12 connector

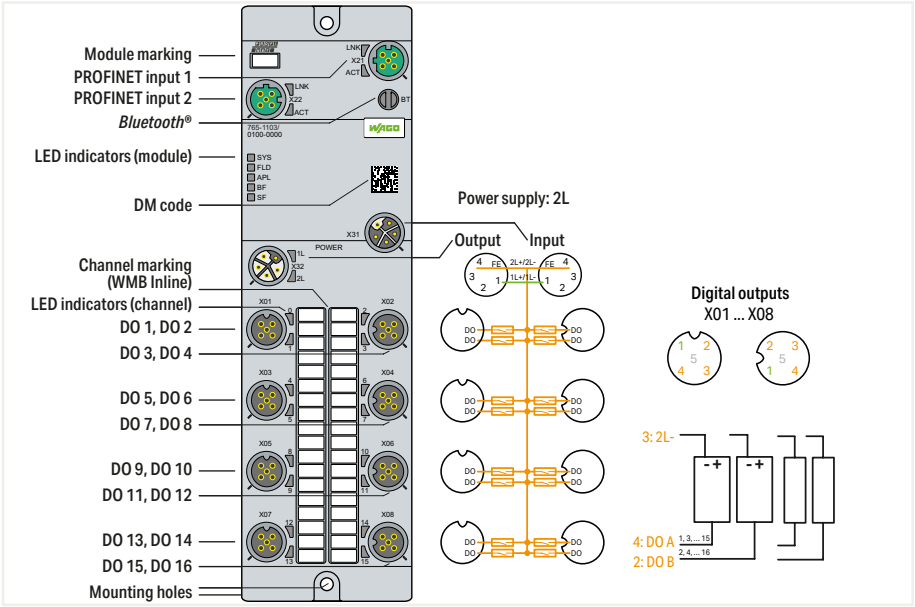
765-1101/100-000



Item Description	16-Channel Digital Input; I/O System Field; 24 VDC; 8 x M12 connector		
Version	PROFINET Slave	EtherCAT® Slave	EtherNet/IP™ Slave
Item No.	**765-1101/100-000**	**765-1201/100-000**	**765-1501/100-000**
Order Text	**16DI FLD PN DC 24V**	**16DI FLD EC DC 24V**	**16DI FLD EI DC 24V**
Technical Data			
Fieldbus			
Communication	PROFINET; PROFINET IO Device; 2-port switch, LLDP, MRP, SNMP	EtherCAT; AoE, EoE, FoE	EtherNet/IP™; BOOTP, DHCP, DLR
Connection technology: communication/fieldbus	2 x D-coded M12; 4-pole		
Interface standard	10BASE-T/100BASE-TX; potential-free		
Autonegotiation; autocrossover	Yes		
Device Functions			
Parameters	Input filter; Temperature		
Diagnostics	Undervoltage; overcurrent; overload; overtemperature		
Device functions	*Bluetooth*®; OPC UA Server		
Visualization	Android/iOS app; Webserver		
Digital Inputs/Outputs			
Number of digital inputs	16		
Connection technology: inputs/outputs	8 x A-coded M12; 5-pole		
Voltage signal type	24 VDC		
Sensor current (per channel) (max.)	2 A		
Input characteristic	High-side switching		
Input filter	0.2 ... 20 ms		
Input characteristic	Type 3, per IEC 61131-2		
Module Power Supply			
Connection technology: supply	2 x L-coded M12; 5-pole		
Supply voltage	24 VDC (18 ... 31.2 V); 1L/2L		
Power consumption (max.)	16000 mA		
Power consumption (note)	Per supply line; overload- and short-circuit-protected		
Reverse voltage protection	Yes		
Surrounding air temperature (operation)	-25 ... 70 °C		
Dimensions W x H x D	(60 x 30 x 210) mm		
Approvals	CE; FCC/ ISED		
Approvals (pending)	cULus OrdLoc		
Data sheet and further information, see:	wago.com/765-1101/100-000	wago.com/765-1201/100-000	wago.com/765-1501/100-000
Accessories	**Item No.**	**Item No.**	**Item No.**
Torque wrench M8 and M12; Assembly kit	206-701	206-701	206-701
M12 protective cap; for unused sockets	756-8102	756-8102	756-8102
M12 protective cap; for unused plugs	756-8103	756-8103	756-8103
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type	2009-110	2009-110	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115	2009-115	2009-115

Fieldbus module ▶ 16-Channel Digital Output; I/O System Field; 24 VDC; 8 x M12 connector

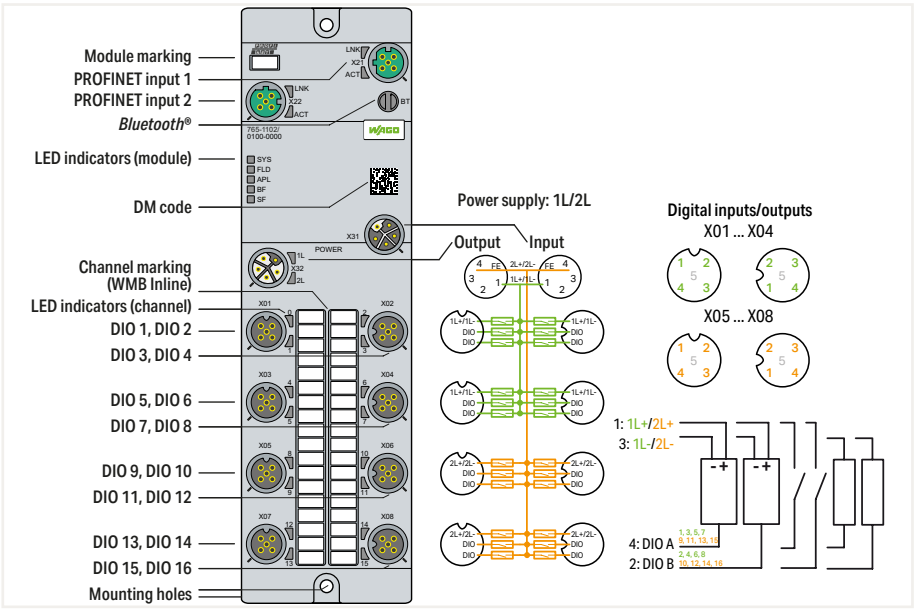
765-1103/100-000



Item Description	16-Channel Digital Output; I/O System Field; 24 VDC; 8 x M12 connector		
Version	PROFINET Slave	EtherCAT® Slave	EtherNet/IP™ Slave
Item No.	765-1103/100-000	765-1203/100-000	765-1503/100-000
Order Text	16DO FLD PN DC 24V	16DO FLD EC DC 24V	16DO FLD EI DC 24V
Technical Data			
Fieldbus			
Communication	PROFINET; PROFINET IO Device; 2-port switch, LLDP, MRP, SNMP	EtherCAT; AoE, EoE, FoE	EtherNet/IP™; BOOTP, DHCP, DLR
Connection technology: communication/fieldbus	2 x D-coded M12; 4-pole		
Interface standard	10BASE-T/100BASE-TX; potential-free		
Autonegotiation; autocrossover	Yes		
Device Functions			
Parameters	Output current; Temperature		
Diagnostics	Undervoltage; overcurrent; overload; overtemperature		
Device functions	*Bluetooth*®; OPC UA Server		
Visualization	Android/iOS app; Webserver		
Digital Inputs/Outputs			
Number of digital outputs	16		
Connection technology: inputs/outputs	8 x A-coded M12; 5-pole		
Voltage signal type	24 VDC		
Output current (per channel)	2 A (typ.) for DO		
Supply current per port	2L: 4 A (max.)	1L/2L: 4 A (max.)	
Module Power Supply			
Connection technology: supply	2 x L-coded M12; 5-pole		
Supply voltage	24 VDC (18 ... 31.2 V); 1L/2L		
Power consumption (max.)	16000 mA		
Power consumption (note)	Per supply line; overload- and short-circuit-protected		
Reverse voltage protection	Yes		
Surrounding air temperature (operation)	-25 ... 70 °C		
Dimensions W x H x D	(60 x 30 x 210) mm		
Approvals	CE; FCC/ ISED		
Approvals (pending)	cULus OrdLoc		
Data sheet and further information, see:	wago.com/765-1103/100-000	wago.com/765-1203/100-000	wago.com/765-1503/100-000
Accessories	**Item No.**	**Item No.**	**Item No.**
Torque wrench M8 and M12; Assembly kit	206-701	206-701	206-701
M12 protective cap; for unused sockets	756-8102	756-8102	756-8102
M12 protective cap; for unused plugs	756-8103	756-8103	756-8103
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type	2009-110	2009-110	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115	2009-115	2009-115

Fieldbus module ▶ 16-Channel Digital Input/Output; I/O System Field; 24 VDC; 8 x M12 connector

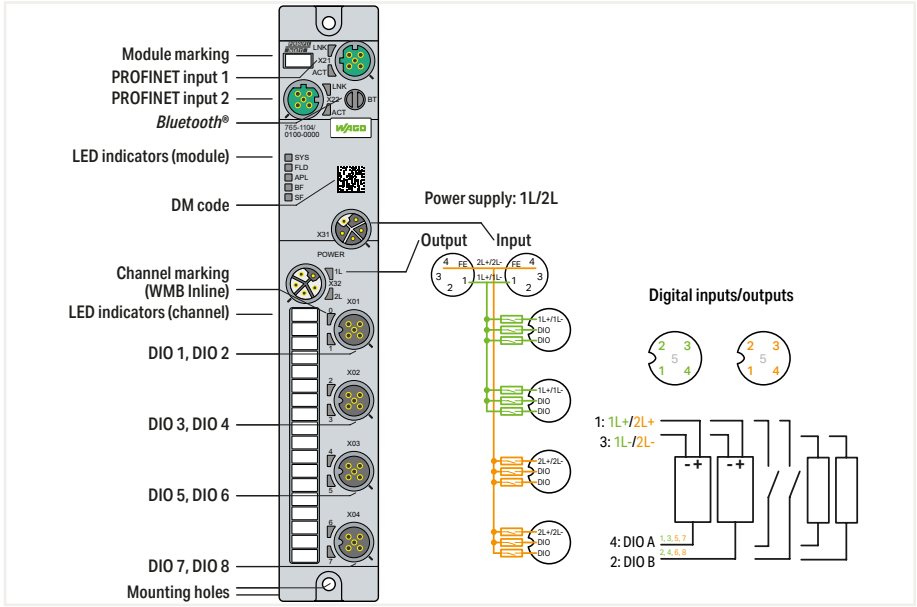
765-1102/100-000



Item Description	16-Channel Digital Input/Output; I/O System Field; 24 VDC; 8 x M12 connector		
Version	PROFINET Slave	EtherCAT® Slave	EtherNet/IP™ Slave
Item No.	**765-1102/100-000**	**765-1202/100-000**	**765-1502/100-000**
Order Text	**16DIO FLD PN DC 24V**	**16DIO FLD EC DC 24V**	**16DIO FLD EI DC 24V**
Technical Data			
Fieldbus			
Communication	PROFINET; PROFINET IO Device; 2-port switch, LLDP, MRP, SNMP	EtherCAT; AoE, EoE, FoE	EtherNet/IP™; BOOTP, DHCP, DLR
Connection technology: communication/fieldbus	2 x D-coded M12; 4-pole		
Interface standard	10BASE-T/100BASE-TX; potential-free		
Autonegotiation; autocrossover	Yes		
Device Functions			
Parameters	Input filter; Output current; Temperature		
Diagnostics	Undervoltage; overcurrent; overload; overtemperature		
Device functions	*Bluetooth*®; OPC UA Server		
Visualization	Android/iOS app; Webserver		
Digital Inputs/Outputs			
Number of digital inputs	16		
Number of digital outputs	16		
Connection technology: inputs/outputs	8 x A-coded M12; 5-pole		
Voltage signal type	24 VDC		
Input characteristic	High-side switching		
Input filter	0.2 ... 20 ms		
Input characteristic	Type 3, per IEC 61131-2		
Output current (per channel)	2 A (typ.) for DO		
Supply current per port	1L/2L: 4 A (max.)		
Module Power Supply			
Connection technology: supply	2 x L-coded M12; 5-pole		
Supply voltage	24 VDC (18 ... 31.2 V); 1L/2L		
Power consumption (max.)	16000 mA		
Power consumption (note)	Per supply line; overload- and short-circuit-protected		
Reverse voltage protection	Yes		
Surrounding air temperature (operation)	-25 ... 70 °C		
Dimensions W x H x D	(60 x 30 x 210) mm		
Approvals	CE; FCC/ ISED		
Approvals (pending)	cULus OrdLoc		
Data sheet and further information, see:	wago.com/765-1102/100-000	wago.com/765-1202/100-000	wago.com/765-1502/100-000
Accessories	**Item No.**	**Item No.**	**Item No.**
Torque wrench M8 and M12; Assembly kit	206-701	206-701	206-701
M12 protective cap; for unused sockets	756-8102	756-8102	756-8102
M12 protective cap; for unused plugs	756-8103	756-8103	756-8103
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type	2009-110	2009-110	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115	2009-115	2009-115

Fieldbus module ▶ 8-Channel Digital Input/Output; I/O System Field; 24 VDC; 4 x M12 connector

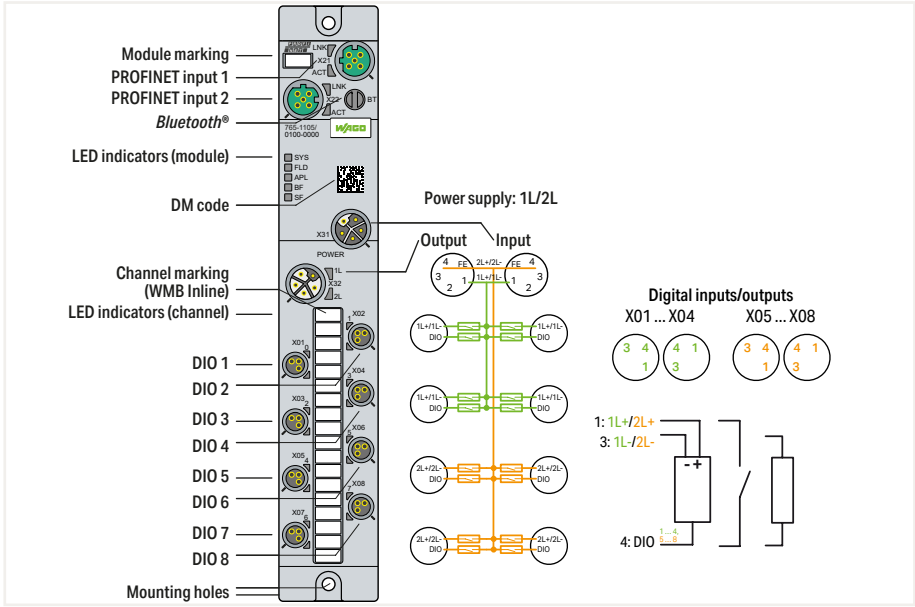
765-1104/100-000



Item Description	8-Channel Digital Input/Output; I/O System Field; 24 VDC; 4 x M12 connector		
Version	PROFINET Slave	EtherCAT® Slave	EtherNet/IP™ Slave
Item No.	765-1104/100-000	765-1204/100-000	765-1504/100-000
Order Text	8DIO FLD PN DC 24V	8DIO FLD EC DC 24V	8DIO FLD EI DC 24V
Technical Data			
Fieldbus			
Communication	PROFINET; PROFINET IO Device; 2-port switch, LLDP, MRP, SNMP	EtherCAT; AoE, EoE, FoE	EtherNet/IP™; BOOTP, DHCP, DLR
Connection technology: communication/fieldbus	2 x D-coded M12; 4-pole		
Interface standard	10BASE-T/100BASE-TX; potential-free		
Autonegotiation; autocrossover	Yes		
Device Functions			
Parameters	Input filter; Output current; Temperature		
Diagnostics	Undervoltage; overcurrent; overload; overtemperature		
Device functions	*Bluetooth*®; OPC UA Server		
Visualization	Android/iOS app; Webserver		
Digital Inputs/Outputs			
Number of digital inputs	8		
Number of digital outputs	8		
Connection technology: inputs/outputs	4 x A-coded M12; 5-pole		
Voltage signal type	24 VDC		
Input characteristic	High-side switching		
Input filter	0.2 … 20 ms		
Input characteristic	Type 3, per IEC 61131-2		
Output current (per channel)	2 A (typ.) for DO		
Supply current per port	1L/2L: 4 A (max.)		
Module Power Supply			
Connection technology: supply	2 x L-coded M12; 5-pole		
Supply voltage	24 VDC (18 … 31.2 V); 1L/2L		
Power consumption (max.)	16000 mA		
Power consumption (note)	Per supply line; overload- and short-circuit-protected		
Reverse voltage protection	Yes		
Surrounding air temperature (operation)	-25 … 70 °C		
Dimensions W x H x D	(35 x 30 x 210) mm		
Approvals	CE; FCC/ ISED		
Approvals (pending)	cULus OrdLoc		
Data sheet and further information, see:	wago.com/765-1104/100-000	wago.com/765-1204/100-000	wago.com/765-1504/100-000
Accessories	**Item No.**	**Item No.**	**Item No.**
Torque wrench M8 and M12; Assembly kit	206-701	206-701	206-701
M12 protective cap; for unused sockets	756-8102	756-8102	756-8102
M12 protective cap; for unused plugs	756-8103	756-8103	756-8103
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type	2009-110	2009-110	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115	2009-115	2009-115

Fieldbus module ▶ 8-Channel Digital Input/Output; I/O System Field; 24 VDC; 8 x M8 connector

765-1105/100-000



Item Description	8-Channel Digital Input/Output; I/O System Field; 24 VDC; 8 x M8 connector		
Version	PROFINET Slave	EtherCAT® Slave	EtherNet/IP™ Slave
Item No.	**765-1105/100-000**	**765-1205/100-000**	**765-1505/100-000**
Order Text	**8DIO FLD PN DC 24V**	**8DIO FLD EC DC 24V**	**8DIO FLD EI DC 24V**

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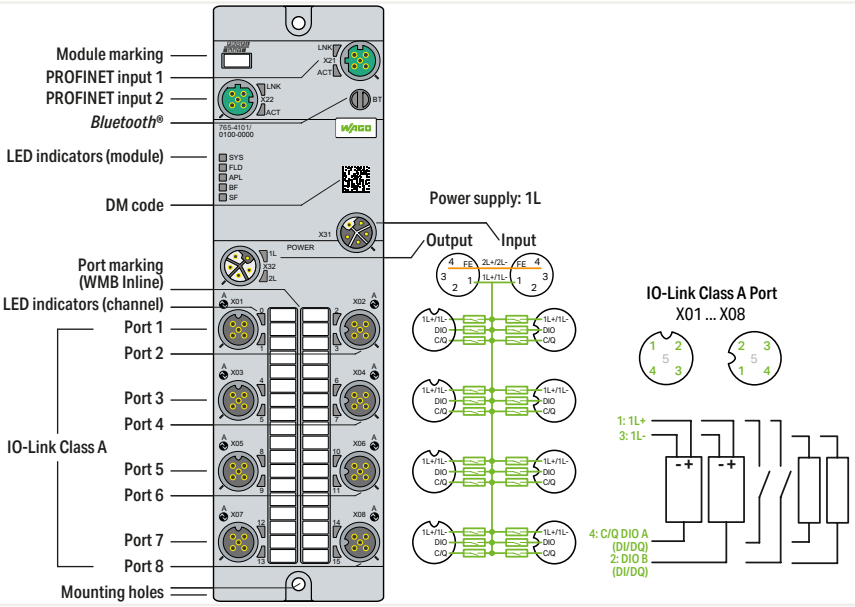
Technical Data			
Fieldbus			
Communication	PROFINET; PROFINET IO Device; 2-port switch, LLDP, MRP, SNMP	EtherCAT; AoE, EoE, FoE	EtherNet/IP™; BOOTP, DHCP, DLR
Connection technology: communication/fieldbus	2 x D-coded M12; 4-pole		
Interface standard	10BASE-T/100BASE-TX; potential-free		
Autonegotiation; autocrossover	Yes		
Device Functions			
Parameters	Input filter; Output current; Temperature		
Diagnostics	Undervoltage; overcurrent; overload; overtemperature		
Device functions	*Bluetooth*®; OPC UA Server		
Visualization	Android/iOS app; Webserver		
Digital Inputs/Outputs			
Number of digital inputs	8		
Number of digital outputs	8		
Connection technology: inputs/outputs	8 x M8; 3-pole		
Voltage signal type	24 VDC		
Input characteristic	High-side switching		
Input filter	0.2 ... 20 ms		
Input characteristic	Type 3, per IEC 61131-2		
Output current (per channel)	2 A (typ.) for DO		
Supply current per port	1L/2L: 4 A (max.)		
Module Power Supply			
Connection technology: supply	2 x L-coded M12; 5-pole		
Supply voltage	24 VDC (18 ... 31.2 V); 1L/2L		
Power consumption (max.)	16000 mA		
Power consumption (note)	Per supply line; overload- and short-circuit-protected		
Reverse voltage protection	Yes		
Surrounding air temperature (operation)	-25 ... 70 °C		
Dimensions W x H x D	(35 x 30 x 210) mm		
Approvals	CE; FCC/ ISED		
Approvals (pending)	cULus OrdLoc		
Data sheet and further information, see:	wago.com/765-1105/100-000	wago.com/765-1205/100-000	wago.com/765-1505/100-000

Accessories	**Item No.**	**Item No.**	**Item No.**
Torque wrench M8 and M12; Assembly kit	206-701	206-701	206-701
M8 protective cap; for unused sockets	756-8101	756-8101	756-8101
M12 protective cap; for unused sockets	756-8102	756-8102	756-8102
M12 protective cap; for unused plugs	756-8103	756-8103	756-8103
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type	2009-110	2009-110	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115	2009-115	2009-115

IO-Link Master ▸ 8-Port IO-Link Master Class A; I/O System Field; 24 VDC / 2.0 A; 8 x M12 Connector

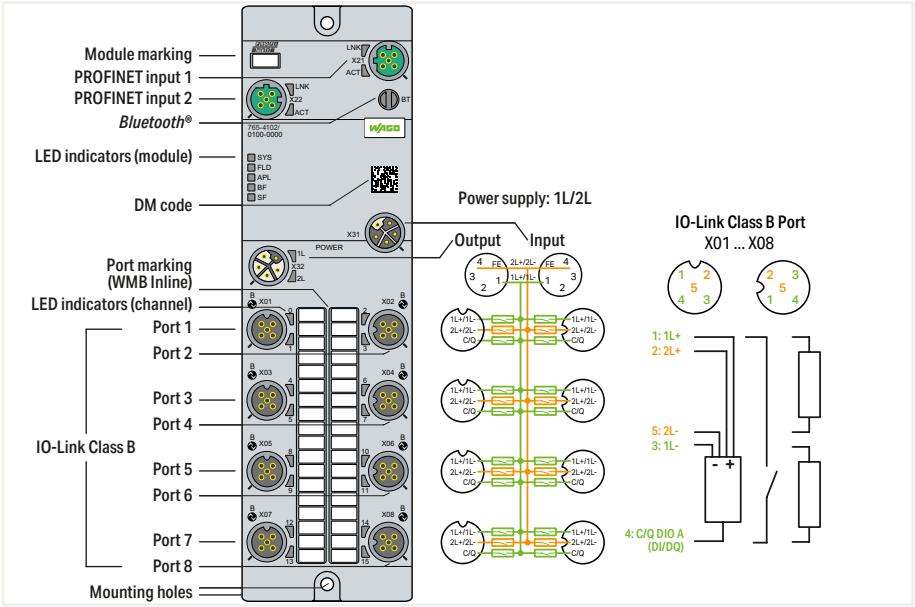
765-4101/100-000



Item Description	8-Port IO-Link Master Class A; I/O System Field; 24 VDC / 2.0 A; 8 x M12 Connector		
Version	PROFINET	EtherCAT®	EtherNet/IP™
Item No.	765-4101/100-000	765-4201/100-000	765-4501/100-000
Order Text	8PORT IOL-A FLD PN DC 24V 2.0A	8PORT IOL-A FLD EC DC 24V 2.0A	8PORT IOL-A FLD EI DC 24V 2.0A
Technical Data			
Fieldbus			
Communication	PROFINET; PROFINET IO Device; 2-port switch, LLDP, MRP, SNMP	EtherCAT; AoE, EoE, FoE	EtherNet/IP™; BOOTP, DHCP, DLR
Connection technology: communication/fieldbus	2 x D-coded M12; 4-pole		
Interface standard	10BASE-T/100BASE-TX; potential-free		
Autonegotiation; autocrossover	Yes		
Device Functions			
Parameters	Input filter; Output current; Temperature		
Diagnostics	Undervoltage; overcurrent; overload; overtemperature		
Device functions	*Bluetooth*®; OPC UA Server		
Visualization	Android/iOS app; Webserver		
IO-Link Master			
IO-Link Master classification	Class A; Specification V1.1		
Port mode	IO-Link: autoconfig, manual, tool-based; DI; DO		
Cycle time	400 µs (min.)		
Operating mode	IO-Link Master, DI or DO (adjustable for pin 4 per port); DI or DO (adjustable for pin 2 per port)		
IO-Link Ports			
Number of digital inputs	16		
Number of digital outputs	16		
Connection technology: inputs/outputs	8 x A-coded M12; 5-pole		
Voltage signal type	24 VDC		
Input characteristic	High-side switching		
Input filter	0.2 ... 20 ms		
Input characteristic	Type 3, per IEC 61131-2		
Output current (per channel)	2 A (typ.) for DO		
Supply current per port	1L: 1 A for IO-Link; 4 A (max.) for DIO		
Module Power Supply			
Connection technology: supply	2 x L-coded M12; 5-pole		
Supply voltage	24 VDC (18 ... 31.2 V); 1L		
Power consumption (max.)	16000 mA		
Power consumption (note)	Per supply line; overload- and short-circuit-protected		
Reverse voltage protection	Yes		
Surrounding air temperature (operation)	-25 ... 70 °C		
Dimensions W x H x D	(60 x 30 x 210) mm		
Approvals	CE; FCC/ ISED		
Approvals (pending)	cULus OrdLoc		
Data sheet and further information, see:	wago.com/765-4101/100-000	wago.com/765-4201/100-000	wago.com/765-4501/100-000
Accessories	**Item No.**	**Item No.**	**Item No.**
Torque wrench M8 and M12; Assembly kit	206-701	206-701	206-701
M12 protective cap; for unused sockets	756-8102	756-8102	756-8102
M12 protective cap; for unused plugs	756-8103	756-8103	756-8103
Marking strips; for Smart Printer; on reel	2009-110	2009-110	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll	2009-115	2009-115	2009-115

IO-Link Master ▸ 8-Port IO-Link Master Class B; I/O System Field; 24 VDC / 2.0 A; 8 x M12 Connector

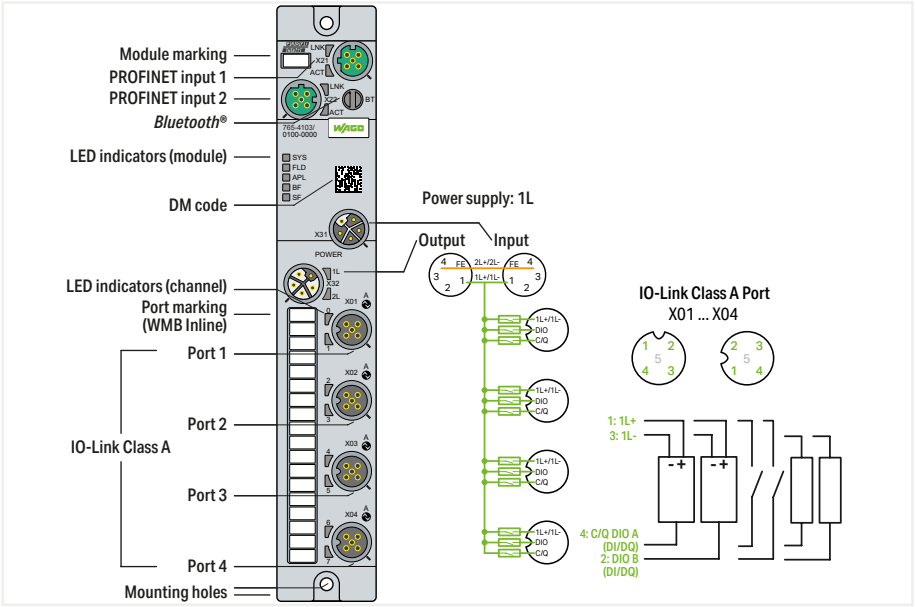
765-4102/100-000



Item Description	8-Port IO-Link Master Class B; I/O System Field; 24 VDC / 2.0 A; 8 x M12 Connector		
Version	PROFINET	EtherCAT®	EtherNet/IP™
Item No.	**765-4102/100-000**	**765-4202/100-000**	**765-4502/100-000**
Order Text	**8PORT IOL-B FLD PN DC 24V 2.0A**	**8PORT IOL-B FLD EC DC 24V 2.0A**	**8PORT IOL-B FLD EI DC 24V 2.0A**
Technical Data			
Fieldbus			
Communication	PROFINET; PROFINET IO Device; 2-port switch, LLDP, MRP, SNMP	EtherCAT; AoE, EoE, FoE	EtherNet/IP™; BOOTP, DHCP, DLR
Connection technology: communication/fieldbus	2 x D-coded M12; 4-pole		
Interface standard	10BASE-T/100BASE-TX; potential-free		
Autonegotiation; autocrossover	Yes		
Device Functions			
Parameters	Input filter; Output current; Temperature		
Diagnostics	Undervoltage; overcurrent; overload; overtemperature		
Device functions	*Bluetooth*®; OPC UA Server		
Visualization	Android/iOS app; Webserver		
IO-Link Master			
IO-Link Master classification	Class B; Specification V1.1		
Port mode	IO-Link: autoconfig, manual, tool-based; DI; DO		
Cycle time	400 µs (min.)		
Operating mode	IO-Link Master, DI or DO (adjustable for pin 4 per port); Supply voltage 2L (fixed for pin 2 per port)		
IO-Link Ports			
Number of digital inputs	16		
Number of digital outputs	16		
Connection technology: inputs/outputs	8 x A-coded M12; 5-pole		
Voltage signal type	24 VDC		
Input characteristic	High-side switching		
Input filter	0.2 … 20 ms		
Input characteristic	Type 3, per IEC 61131-2		
Output current (per channel)	2 A (typ.) for DO		
Supply current per port	1L (Pin 1): 1 A for IO-Link; 4 A (max.) for DIO; 2L (Pin 2): 4 A (max.)		
Module Power Supply			
Connection technology: supply	2 x L-coded M12; 5-pole		
Supply voltage	24 VDC (18 … 31.2 V); 1L/2L		
Power consumption (max.)	16000 mA		
Power consumption (note)	Per supply line; overload- and short-circuit-protected		
Reverse voltage protection	Yes		
Surrounding air temperature (operation)	-25 … 70 °C		
Dimensions W x H x D	(60 x 30 x 210) mm		
Approvals	CE; FCC/ ISED		
Approvals (pending)	cULus OrdLoc		
Data sheet and further information, see:	wago.com/765-4102/100-000	wago.com/765-4202/100-000	wago.com/765-4502/100-000
Accessories	**Item No.**	**Item No.**	**Item No.**
Torque wrench M8 and M12; Assembly kit	206-701	206-701	206-701
M12 protective cap; for unused sockets	756-8102	756-8102	756-8102
M12 protective cap; for unused plugs	756-8103	756-8103	756-8103
Marking strips; for Smart Printer; on reel	2009-110	2009-110	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll	2009-115	2009-115	2009-115

IO-Link Master ▸ 4-Port IO-Link Master Class A; I/O System Field; 24 VDC / 2.0 A; 4 x M12 Connector

765-4103/100-000



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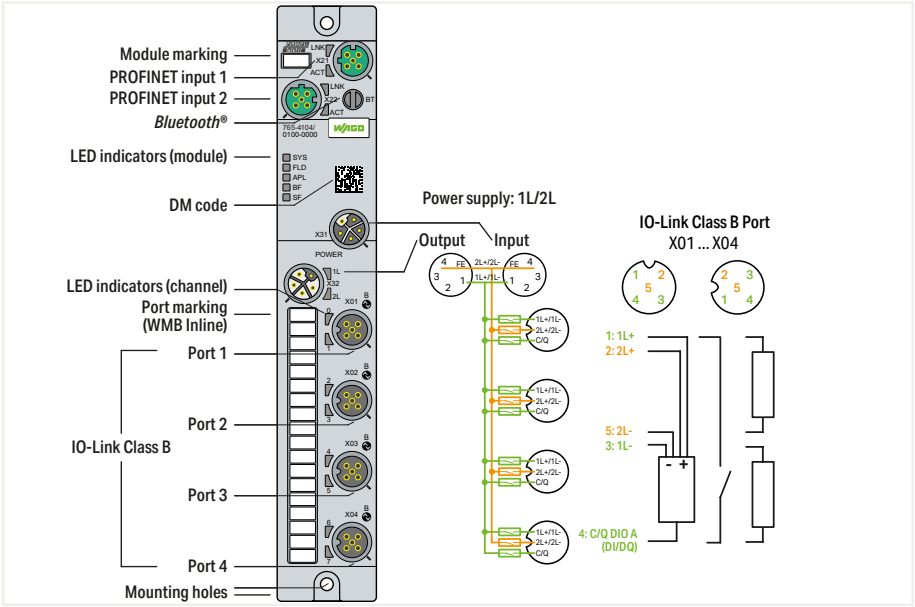
Item Description	4-Port IO-Link Master Class A; I/O System Field; 24 VDC / 2.0 A; 4 x M12 Connector		
Version	PROFINET	EtherCAT®	EtherNet/IP™
Item No.	765-4103/100-000	765-4203/100-000	765-4503/100-000
Order Text	4PORT IOL-A FLD PN DC 24V 2.0A	4PORT IOL-A FLD EC DC 24V 2.0A	4PORT IOL-A FLD EI DC 24V 2.0A
Technical Data			
Fieldbus			
Communication	PROFINET; PROFINET IO Device; 2-port switch, LLDP, MRP, SNMP	EtherCAT; AoE, EoE, FoE	EtherNet/IP™; BOOTP, DHCP, DLR
Connection technology: communication/fieldbus	2 x D-coded M12; 4-pole		
Interface standard	10BASE-T/100BASE-TX; potential-free		
Autonegotiation; autocrossover	Yes		
Device Functions			
Parameters	Input filter; Output current; Temperature		
Diagnostics	Undervoltage; overcurrent; overload; overtemperature		
Device functions	*Bluetooth*®; OPC UA Server		
Visualization	Android/iOS app; Webserver		
IO-Link Master			
IO-Link Master classification	Class A; Specification V1.1		
Port mode	IO-Link: autoconfig, manual, tool-based; DI; DO		
Cycle time	400 µs (min.)		
Operating mode	IO-Link Master, DI or DO (adjustable for pin 4 per port); DI or DO (adjustable for pin 2 per port)		
IO-Link Ports			
Number of digital inputs	8		
Number of digital outputs	8		
Connection technology: inputs/outputs	4 x A-coded M12; 5-pole		
Voltage signal type	24 VDC		
Input characteristic	High-side switching		
Input filter	0.2 ... 20 ms		
Input characteristic	Type 3, per IEC 61131-2		
Output current (per channel)	2 A (typ.) for DO		
Supply current per port	1L: 1 A for IO-Link; 4 A (max.) for DIO		
Module Power Supply			
Connection technology: supply	2 x L-coded M12; 5-pole		
Supply voltage	24 VDC (18 ... 31.2 V); 1L		
Power consumption (max.)	16000 mA		
Power consumption (note)	Per supply line; overload- and short-circuit-protected		
Reverse voltage protection	Yes		
Surrounding air temperature (operation)	-25 ... 70 °C		
Dimensions W x H x D	(35 x 30 x 210) mm		
Approvals	CE; FCC/ ISED		
Approvals (pending)	cULus OrdLoc		
Data sheet and further information, see:	wago.com/765-4103/100-000	wago.com/765-4203/100-000	wago.com/765-4503/100-000
Accessories	**Item No.**	**Item No.**	**Item No.**
Torque wrench M8 and M12; Assembly kit	206-701	206-701	206-701
M12 protective cap; for unused sockets	756-8102	756-8102	756-8102
M12 protective cap; for unused plugs	756-8103	756-8103	756-8103
Marking strips; for Smart Printer; on reel	2009-110	2009-110	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll	2009-115	2009-115	2009-115

IO-Link Master ▸ 4-Port IO-Link Master Class B; I/O System Field; 24 VDC / 2.0 A; 4 x M12 Connector

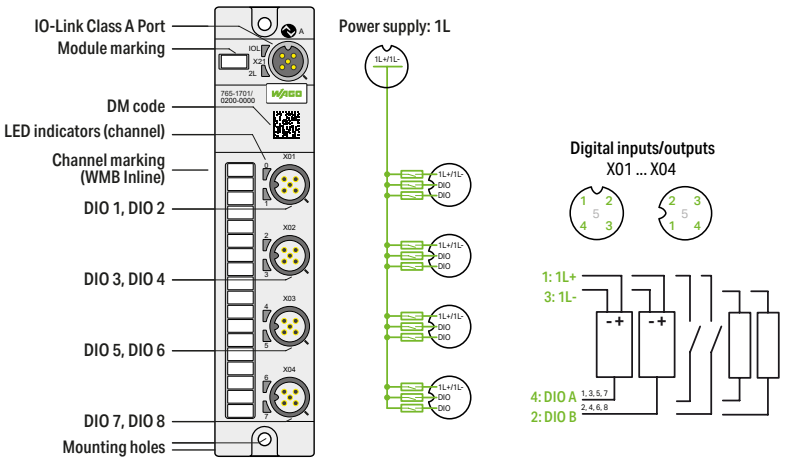
765-4104/100-000



Item Description	4-Port IO-Link Master Class B; I/O System Field; 24 VDC / 2.0 A; 4 x M12 Connector		
Version	PROFINET	EtherCAT®	EtherNet/IP™
Item No.	**765-4104/100-000**	**765-4204/100-000**	**765-4504/100-000**
Order Text	**4PORT IOL-B FLD PN DC 24V 2.0A**	**4PORT IOL-B FLD EC DC 24V 2.0A**	**4PORT IOL-B FLD EI DC 24V 2.0A**
Technical Data			
Fieldbus			
Communication	PROFINET; PROFINET IO Device; 2-port switch, LLDP, MRP, SNMP	EtherCAT; AoE, EoE, FoE	EtherNet/IP™; BOOTP, DHCP, DLR
Connection technology: communication/fieldbus	2 x D-coded M12; 4-pole		
Interface standard	10BASE-T/100BASE-TX; potential-free		
Autonegotiation; autocrossover	Yes		
Device Functions			
Parameters	Input filter; Output current; Temperature		
Diagnostics	Undervoltage; overcurrent; overload; overtemperature		
Device functions	*Bluetooth*®; OPC UA Server		
Visualization	Android/iOS app; Webserver		
IO-Link Master			
IO-Link Master classification	Class B; Specification V1.1		
Port mode	IO-Link: autoconfig, manual, tool-based; DI; DO		
Cycle time	400 µs (min.)		
Operating mode	IO-Link Master, DI or DO (adjustable for pin 4 per port); Supply voltage 2L (fixed for pin 2 per port)		
IO-Link Ports			
Number of digital inputs	8		
Number of digital outputs	8		
Connection technology: inputs/outputs	4 x A-coded M12; 5-pole		
Voltage signal type	24 VDC		
Input characteristic	High-side switching		
Input filter	0.2 ... 20 ms		
Input characteristic	Type 3, per IEC 61131-2		
Output current (per channel)	2 A (typ.) for DO		
Supply current per port	1L (Pin 1): 1 A for IO-Link; 4 A (max.) for DIO; 2L (Pin 2): 4 A (max.)		
Module Power Supply			
Connection technology: supply	2 x L-coded M12; 5-pole		
Supply voltage	24 VDC (18 ... 31.2 V); 1L/2L		
Power consumption (max.)	16000 mA		
Power consumption (note)	Per supply line; overload- and short-circuit-protected		
Reverse voltage protection	Yes		
Surrounding air temperature (operation)	-25 ... 70 °C		
Dimensions W x H x D	(35 x 30 x 210) mm		
Approvals	CE; FCC/ ISED		
Approvals (pending)	cULus OrdLoc		
Data sheet and further information, see:	wago.com/765-4104/100-000	wago.com/765-4204/100-000	wago.com/765-4504/100-000
Accessories	**Item No.**	**Item No.**	**Item No.**
Torque wrench M8 and M12; Assembly kit	206-701	206-701	206-701
M12 protective cap; for unused sockets	756-8102	756-8102	756-8102
M12 protective cap; for unused plugs	756-8103	756-8103	756-8103
Marking strips; for Smart Printer; on reel	2009-110	2009-110	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll	2009-115	2009-115	2009-115

IO-Link Hub ▸ 8-Channel Digital Input/Output; I/O System Field; IO-Link Class A Hub; 24 VDC 2.0 A; 4 x M12 Connector

765-1701/200-000



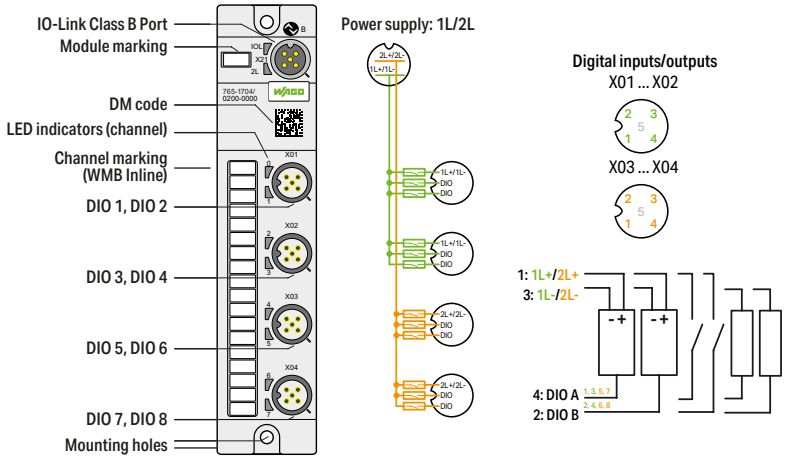
Item Description	8-Channel Digital Input/Output; I/O System Field; IO-Link Class A Hub; 24 VDC 2.0 A; 4 x M12 Connector
Version	IO-Link Class A Hub
Item No.	**765-1701/200-000**
Order Text	**8DIO FLD IOL-A HUB DC 24V 2.0A**

Technical Data	
IO-Link	
Communication	IO-Link Class A Slave
Connection technology: communication/fieldbus	1 x A-coded M12; 5-pole
Device Functions	
Parameters	Input filter; Output current; Temperature
Diagnostics	Undervoltage; overcurrent; overload; overtemperature
Digital Inputs/Outputs	
Number of digital inputs	8
Number of digital outputs	8
Connection technology: inputs/outputs	4 x A-coded M12; 5-pole
Voltage signal type	24 VDC
Input characteristic	High-side switching
Input filter	0.2 … 20 ms
Input characteristic	Type 3, per IEC 61131-2
Output current (per channel)	2 A
Power Supply	
Connection technology: supply	1 x A-coded M12; 5-pole; via IO-Link port (1L)
Supply voltage	24 VDC (18 … 31.2 V); 1L
Power consumption (max.)	4000 mA
Power consumption (note)	1L: 0.2 A + load current
Reverse voltage protection	Yes
Surrounding air temperature (operation)	-25 … 70 °C
Dimensions W x H x D	(35 x 30 x 158.5) mm
Approvals	CE; FCC/ ISED
Approvals (pending)	cULus OrdLoc
Data sheet and further information, see:	wago.com/765-1701/200-000

Accessories	**Item No.**
Torque wrench M8 and M12; Assembly kit	206-701
M12 protective cap; for unused sockets	756-8102
M12 protective cap; for unused plugs	756-8103
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115

IO-Link Hub ▶ 8-Channel Digital Input/Output; I/O System Field; IO-Link Class B Hub; 24 VDC 2.0 A; 4 x M12 Connector

765-1704/200-000



Item Description	8-Channel Digital Input/Output; I/O System Field; IO-Link Class B Hub; 24 VDC 2.0 A; 4 x M12 Connector
Version	IO-Link Class B Hub
Item No.	**765-1704/200-000**
Order Text	**8DIO FLD IOL-B HUB DC 24V 2.0A**

Technical Data	
IO-Link	
Communication	IO-Link Class B Slave
Connection technology: communication/fieldbus	1 x A-coded M12; 5-pole
Device Functions	
Parameters	Input filter; Output current; Temperature
Diagnostics	Undervoltage; overcurrent; overload; overtemperature
Digital Inputs/Outputs	
Number of digital inputs	8
Number of digital outputs	8
Connection technology: inputs/outputs	4 x A-coded M12; 5-pole
Voltage signal type	24 VDC
Input characteristic	High-side switching
Input filter	0.2 ... 20 ms
Input characteristic	Type 3, per IEC 61131-2
Output current (per channel)	2 A
Power Supply	
Connection technology: supply	1 x A-coded M12; 5-pole; via IO-Link port (1L/2L)
Supply voltage	24 VDC (18 ... 31.2 V); 1L/2L
Power consumption (max.)	4000 mA
Power consumption (note)	1L: 0.2 A; 2L: 0.1 A; + load current
Reverse voltage protection	Yes
Surrounding air temperature (operation)	-25 ... 70 °C
Dimensions W x H x D	(35 x 30 x 158.5) mm
Approvals	CE; FCC/ ISED
Approvals (pending)	cULus OrdLoc
Data sheet and further information, see:	wago.com/765-1704/200-000

Accessories	**Item No.**
Torque wrench M8 and M12; Assembly kit	206-701
M12 protective cap; for unused sockets	756-8102
M12 protective cap; for unused plugs	756-8103
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115

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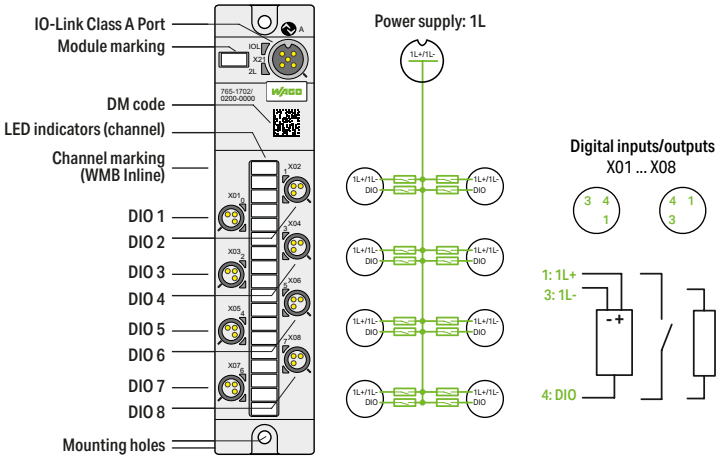
IO-Link Hub ▸ 8-Channel Digital Input/Output; I/O System Field; IO-Link Class A Hub; 24 VDC 2.0 A; 8 x M8 Connector

765-1702/200-000



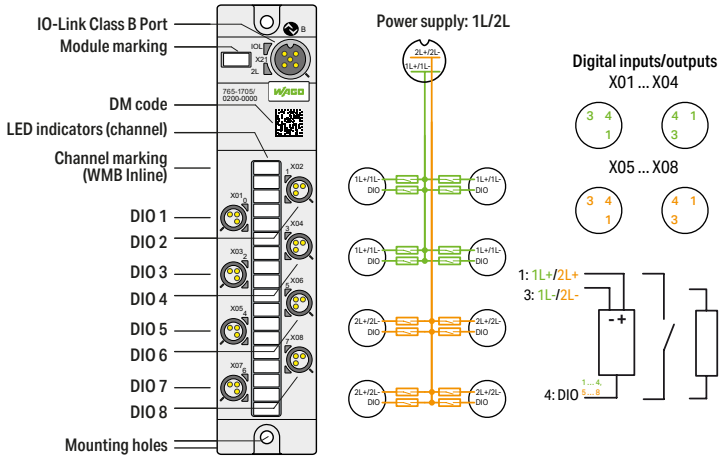
Item Description	8-Channel Digital Input/Output; I/O System Field; IO-Link Class A Hub; 24 VDC 2.0 A; 8 x M8 Connector
Version	IO-Link Class B Hub
Item No.	**765-1702/200-000**
Order Text	**8DIO FLD IOL-A HUB DC 24V 2.0A**

Technical Data	
IO-Link	
Communication	IO-Link Class A Slave
Connection technology: communication/fieldbus	1 x A-coded M12; 5-pole
Device Functions	
Parameters	Input filter; Output current; Temperature
Diagnostics	Undervoltage; overcurrent; overload; overtemperature
Digital Inputs/Outputs	
Number of digital inputs	8
Number of digital outputs	8
Connection technology: inputs/outputs	8 x M8; 3-pole
Voltage signal type	24 VDC
Input characteristic	High-side switching
Input filter	0.2 ... 20 ms
Input characteristic	Type 3, per IEC 61131-2
Output current (per channel)	2 A
Power Supply	
Connection technology: supply	1 x A-coded M12; 5-pole; via IO-Link port (1L)
Supply voltage	24 VDC (18 ... 31.2 V); 1L
Power consumption (max.)	4000 mA
Power consumption (note)	1L: 0.2 A + load current
Reverse voltage protection	Yes
Surrounding air temperature (operation)	-25 ... 70 °C
Dimensions W x H x D	(35 x 30 x 158.5) mm
Approvals	CE; FCC/ ISED
Approvals (pending)	cULus OrdLoc
Data sheet and further information, see:	wago.com/765-1702/200-000

Accessories	**Item No.**
Torque wrench M8 and M12; Assembly kit	206-701
M8 protective cap; for unused sockets	756-8101
M12 protective cap; for unused plugs	756-8103
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115

IO-Link Hub ▶ 8-Channel Digital Input/Output; I/O System Field; IO-Link Class B Hub; 24 VDC 2.0 A; 8 x M8 Connector

765-1705/200-000



Item Description	8-Channel Digital Input/Output; I/O System Field; IO-Link Class B Hub; 24 VDC 2.0 A; 8 x M8 Connector
Version	IO-Link Class A Hub
Item No.	**765-1705/200-000**
Order Text	**8DIO FLD IOL-B HUB DC 24V 2.0A**

Technical Data	
IO-Link	
Communication	IO-Link Class B Slave
Connection technology: communication/fieldbus	1 x A-coded M12; 5-pole
Device Functions	
Parameters	Input filter; Output current; Temperature
Diagnostics	Undervoltage; overcurrent; overload; overtemperature
Digital Inputs/Outputs	
Number of digital inputs	8
Number of digital outputs	8
Connection technology: inputs/outputs	8 x M8; 3-pole
Voltage signal type	24 VDC
Input characteristic	High-side switching
Input filter	0.2 ... 20 ms
Input characteristic	Type 3, per IEC 61131-2
Output current (per channel)	2 A
Power Supply	
Connection technology: supply	1 x A-coded M12; 5-pole; via IO-Link port (1L/2L)
Supply voltage	24 VDC (18 ... 31.2 V); 1L/2L
Power consumption (max.)	4000 mA
Power consumption (note)	1L: 0.2 A; 2L: 0.1 A; + load current
Reverse voltage protection	Yes
Surrounding air temperature (operation)	-25 ... 70 °C
Dimensions W x H x D	(35 x 30 x 158.5) mm
Approvals	CE; FCC/ ISED
Approvals (pending)	cULus OrdLoc
Data sheet and further information, see:	wago.com/765-1705/200-000

Accessories	**Item No.**
Torque wrench M8 and M12; Assembly kit	206-701
M8 protective cap; for unused sockets	756-8101
M12 protective cap; for unused plugs	756-8103
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115

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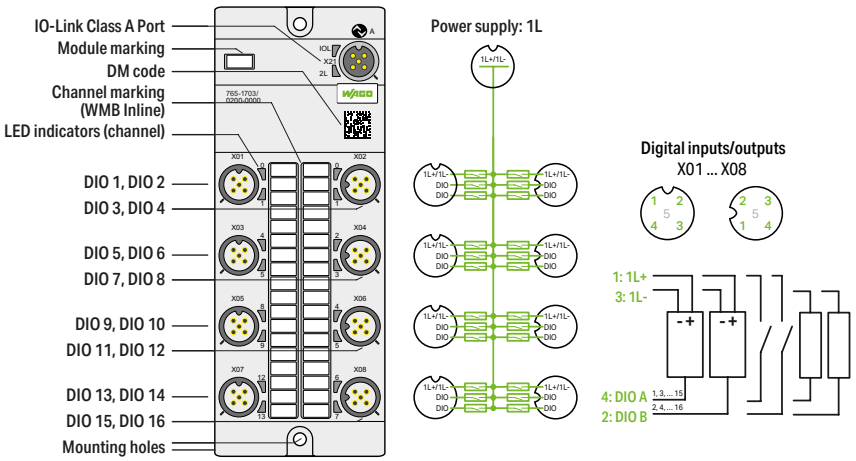
IO-Link Hub ▶ 16-Channel Digital Input/Output; I/O System Field; IO-Link Class A Hub; 24 VDC 2.0 A; 8 x M12 Connector

765-1703/200-000



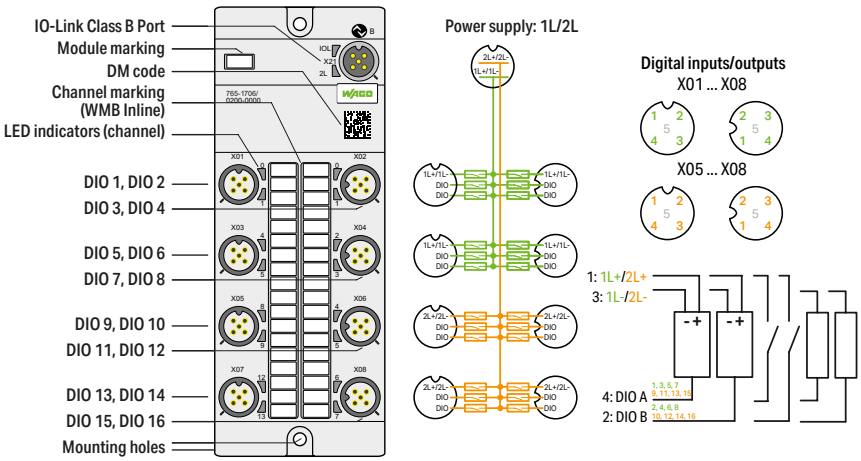
Item Description	16-Channel Digital Input/Output; I/O System Field; IO-Link Class A Hub; 24 VDC 2.0 A; 8 x M12 Connector
Version	IO-Link Class A Hub
Item No.	**765-1703/200-000**
Order Text	**16DIO FLD IOL-A HUB DC 24V 2.0A**

Technical Data	
IO-Link	
Communication	IO-Link Class A Slave
Connection technology: communication/fieldbus	1 x A-coded M12; 5-pole
Device Functions	
Parameters	Input filter; Output current; Temperature
Diagnostics	Undervoltage; overcurrent; overload; overtemperature
Digital Inputs/Outputs	
Number of digital inputs	16
Number of digital outputs	16
Connection technology: inputs/outputs	8 x A-coded M12; 5-pole
Voltage signal type	24 VDC
Input characteristic	High-side switching
Input filter	0.2 ... 20 ms
Input characteristic	Type 3, per IEC 61131-2
Output current (per channel)	2 A
Power Supply	
Connection technology: supply	1 x A-coded M12; 5-pole; via IO-Link port (1L)
Supply voltage	24 VDC (18 ... 31.2 V); 1L
Power consumption (max.)	4000 mA
Power consumption (note)	1L: 0.2 A + load current
Reverse voltage protection	Yes
Surrounding air temperature (operation)	-25 ... 70 °C
Dimensions W x H x D	(60 x 30 x 158.5) mm
Approvals	CE; FCC/ ISED
Approvals (pending)	cULus OrdLoc
Data sheet and further information, see:	wago.com/765-1703/200-000

Accessories	**Item No.**
Torque wrench M8 and M12; Assembly kit	206-701
M12 protective cap; for unused sockets	756-8102
M12 protective cap; for unused plugs	756-8103
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115

IO-Link Hub ▶ 16-Channel Digital Input/Output; I/O System Field; IO-Link Class B Hub; 24 VDC 2.0 A; 8 x M12 Connector

765-1706/200-000



Item Description	16-Channel Digital Input/Output; I/O System Field; IO-Link Class B Hub; 24 VDC 2.0 A; 8 x M12 Connector
Version	IO-Link Class B Hub
Item No.	**765-1706/200-000**
Order Text	**16DIO FLD IOL-B HUB DC 24V 2.0A**

Technical Data	
IO-Link	
Communication	IO-Link Class B Slave
Connection technology: communication/fieldbus	1 x A-coded M12; 5-pole
Device Functions	
Parameters	Input filter; Output current; Temperature
Diagnostics	Undervoltage; overcurrent; overload; overtemperature
Digital Inputs/Outputs	
Number of digital inputs	16
Number of digital outputs	16
Connection technology: inputs/outputs	8 x A-coded M12; 5-pole
Voltage signal type	24 VDC
Input characteristic	High-side switching
Input filter	0.2 ... 20 ms
Input characteristic	Type 3, per IEC 61131-2
Output current (per channel)	2 A
Power Supply	
Connection technology: supply	1 x A-coded M12; 5-pole; via IO-Link port (1L/2L)
Supply voltage	24 VDC (18 ... 31.2 V); 1L/2L
Power consumption (max.)	4000 mA
Power consumption (note)	1L: 0.2 A; 2L: 0.1 A; + load current
Reverse voltage protection	Yes
Surrounding air temperature (operation)	-25 ... 70 °C
Dimensions W x H x D	(60 x 30 x 158.5) mm
Approvals	CE; FCC/ ISED
Approvals (pending)	cULus OrdLoc
Data sheet and further information, see:	wago.com/765-1706/200-000

Accessories	**Item No.**
Torque wrench M8 and M12; Assembly kit	206-701
M12 protective cap; for unused sockets	756-8102
M12 protective cap; for unused plugs	756-8103
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type	2009-110
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115

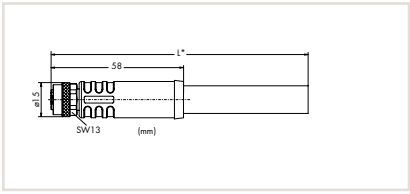
Power Cable; L-Coded; 5-Pole

M12 socket

M12 plug

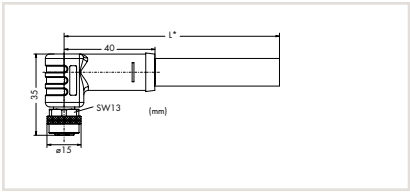
Pin 1 ... 4/FG: 1.5 mm²	
1	brown
2	white
3	blue
4	black
FG	gray

Operating voltage	60 VDC
Operating current	16 A / 40 °C (max.)
Surrounding air temperature (operation)	–30 ... +90 °C
Protection type	IP67
Cable diameter	9.9 mm ±0.3



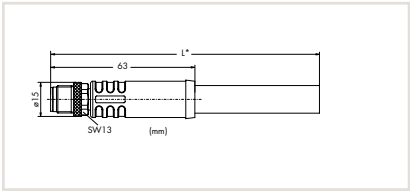
Power cable; pre-assembled on one end; M12 straight socket; L-coded

Cable length	Item No.	PU
2 m	756-3501/050-020	1
5 m	756-3501/050-050	1
7.5 m	756-3501/050-075	1
10 m	756-3501/050-100	1
15 m	756-3501/050-150	1



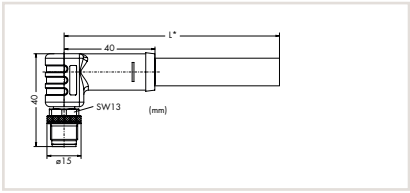
Power cable; pre-assembled on one end; M12 angled socket; L-coded

Cable length	Item No.	PU
2 m	756-3502/050-020	1
5 m	756-3502/050-050	1
7.5 m	756-3502/050-075	1
10 m	756-3502/050-100	1
15 m	756-3502/050-150	1



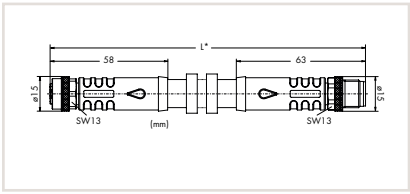
Power cable; pre-assembled on one end; M12 straight plug; L-coded

Cable length	Item No.	PU
2 m	756-3503/050-020	1
5 m	756-3503/050-050	1
7.5 m	756-3503/050-075	1
10 m	756-3503/050-100	1
15 m	756-3503/050-150	1



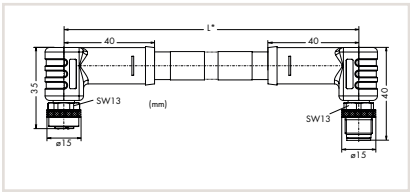
Power cable; pre-assembled on one end; M12 angled plug; L-coded

Cable length	Item No.	PU
2 m	756-3504/050-020	1
5 m	756-3504/050-050	1
7.5 m	756-3504/050-075	1
10 m	756-3504/050-100	1
15 m	756-3504/050-150	1



Power cable; pre-assembled on both ends; M12 straight socket/M12 straight plug; L-coded

Cable length	Item No.	PU
0.3 m	756-3505/050-003	1
0.5 m	756-3505/050-005	1
1 m	756-3505/050-010	1
2 m	756-3505/050-020	1
5 m	756-3505/050-050	1
7.5 m	756-3505/050-075	1
10 m	756-3505/050-100	1
15 m	756-3505/050-150	1

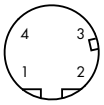


Power cable; pre-assembled on both ends; M12 angled socket/M12 angled plug; L-coded

Cable length	Item No.	PU
0.3 m	756-3506/050-003	1
0.5 m	756-3506/050-005	1
1 m	756-3506/050-010	1
2 m	756-3506/050-020	1
5 m	756-3506/050-050	1
7.5 m	756-3506/050-075	1
10 m	756-3506/050-100	1
15 m	756-3506/050-150	1

ETHERNET/PROFINET Cable; D-Coded; 4-Pole

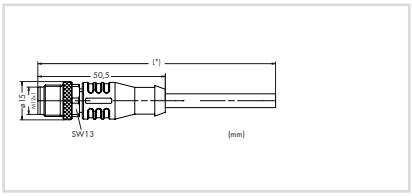
M12 plug

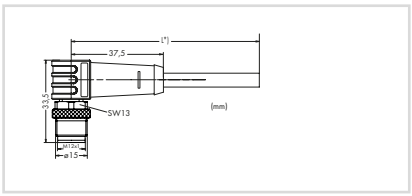


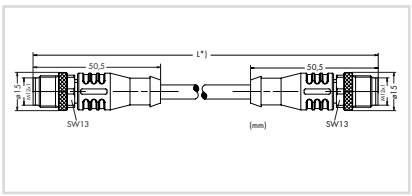
Pin 1 - 4: 0.34 mm²

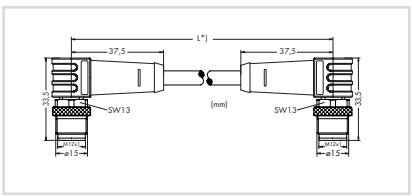
1	yellow
2	white
3	orange
4	blue

Operating voltage	250 V
Operating current	4 A
Rated surge voltage	2 kV
Drag chain suitability	≥ 3 million bending cycles
Surrounding air (operating) temperature (dynamic)	–40 … +70 °C
Protection type	IP67
Cable diameter	6.5 mm ±0.2









ETHERNET/PROFINET cable; pre-assembled on one end; M12 straight plug; D-coded

Cable length	Item No.	PU
2 m	756-1201/060-020	1
5 m	756-1201/060-050	1
10 m	756-1201/060-100	1
20 m	756-1201/060-200	1

ETHERNET/PROFINET cable; pre-assembled on one end; M12 angled plug; D-coded

Cable length	Item No.	PU
2 m	756-1202/060-020	1
5 m	756-1202/060-050	1
10 m	756-1202/060-100	1
15 m	756-1202/060-200	1

ETHERNET/PROFINET cable; pre-assembled on both ends; M12 plug – M12 plug; straight; D-coded

Cable length	Item No.	PU
2 m	756-1203/060-020	1
5 m	756-1203/060-050	1
10 m	756-1203/060-100	1
20 m	756-1203/060-200	1

ETHERNET/PROFINET cable; pre-assembled on both ends; M12 plug – M12 plug; angled; D-coded

Cable length	Item No.	PU
2 m	756-1204/060-020	1
5 m	756-1204/060-050	1
10 m	756-1204/060-100	1
20 m	756-1204/060-200	1

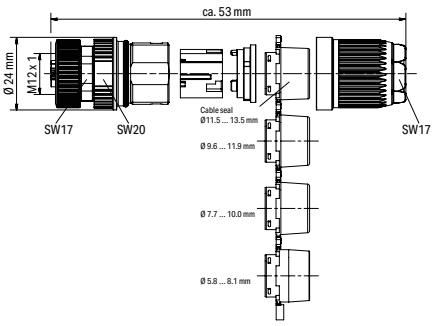
Configurable Connector; 5-Pole; IDC Technology

M12 socket, L-coded

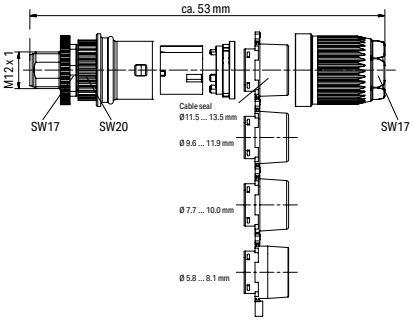
M12 plug, L-coded

Connectable cable:
Ø 5.8 … 13.5 mm
0.75 … 1.5 mm²

Rated current	12 A
Rated voltage	63 V
Rated surge voltage	1.5 kV
Surrounding air temperature (operation)	–40 … +85 °C
Protection type	IP65; IP67 when mated; per IEC 60529
Cable diameter	5.8 … 13.5 mm



Configurable connector; 5-pole; IDC technology		
	Item No.	PU
M12-L socket; straight	756-9711/050-000	1



Configurable connector; 5-pole; IDC technology		
	Item No.	PU
M12-L plug; straight	756-9701/050-000	1

9

Industrial Switches

Industrial Switches

- Copper cables
- Fiber optic cables
- Ring redundancy

Industrial Switches
Contents

	Number of Copper Ports		Number of SFP Ports				
	100BASE-TX	1000BASE-T	100BASE-FX	1000BASE-SX/LX/ZX	Number of PoE+ Ports	Item No.	
Industrial Unmanaged Switches							
 Eco Unmanaged	5					852-111	578
	8					852-112	579
	5					852-1111	580
	8					852-1112	581
	5				4	852-1411	582
	5				4	852-1411/000-001	582
	5			2	4	852-1417	583
 Standard Unmanaged	5					852-101	584
	8					852-102	585
	8		2			852-103	586
	8					852-1102	587
	16					852-1106	588
Industrial Managed Switches							
 Lean Managed	8					852-1812	590
	8		2			852-1813	591
	8		2		8	852-1813/000-001	592
	16					852-1816	593
 MAC Security	8					852-1322	594
	6		2			852-1328	595
 Fully Managed	8		2			852-303	596
	8			4		852-1305	597
	8			4		852-1305/000-001	598
	8			4	8	852-1505	599
	8			4	8	852-1505/000-001	600
 PROFINET® Managed	8					852-602	601
	8		2			852-603	602
	8			4		852-1605	603

Industrial Switches
General Product Information

Always the Right Solution

WAGO's range of switches ensures the scalability of your ETHERNET network infrastructure, while providing outstanding electrical and mechanical performance. These rugged switches are designed for industrial use and are fully compliant with IEEE 802.3, IEEE 802.3u and IEEE 802.3ab.

Combinable with Fiber Optic Cables

ETHERNET via fiber optic cables offers a multitude of advantages for industrial applications.
High immunity to interference, electrical isolation and long ranges up to 80 km are extremely beneficial characteristics – and these benefits are a perfect fit with the IT environment.

Scaled Selection

Unmanaged and managed switches in various designs are available for high-end applications. WAGO's Eco Switches are ideal for cost-sensitive applications that do not require technical features such as redundancy. They are ideal for small- to medium-sized networks.

Modular and Expandable

Exchangeable SPF modules adapt WAGO's switches to various fiber optic cables (FOC) and the associated required distances and fibers. These SFP modules are available for multimode and single-mode fiber optic cables for ranges up to 80 km. With the exact combination of copper and fiber optic cables, you are prepared for a multitude of requirements.

Web-Based Management

WAGO's fully managed switches have integrated Web-based management. Any Web browser can be used to configure the switch.

Integrated Function Monitoring

For monitoring and error reporting, WAGO's managed switch have configurable functions such as an email alarm and SNMP traps. Additionally, all switches (except for Eco versions) can monitor individual ports or the power supply via a potential-free alarm contact. A DIP switch configures this function.

Full Bandwidth on All Ports

The WAGO Switches' internal bandwidth is designed so that all ports can communicate simultaneously – in full duplex without restrictions.

Security

WAGO's managed switches have built-in security features, such as:
- Authentication
- Access control lists
- DHCP snooping
- Port security

Data Transmission

WAGO's managed switches provide configuration options for data transmission, such as:
- VLAN
- IGMP snooping
- IP-based VLAN
- MAC-based VLAN

Redundancy

Select industrial switches have several options for building redundant network structures and guarantee secure communication – even when connections are faulty:
- Rapid Spanning Tree per IEEE 802.1w – compatible with the IT standard
- Jet Ring – a simple ring protocol with switching time < 300 ms
- Xpress Ring – a fast ring protocol with switching time < 20 ms
- ERPSv2 per ITU-T standard, switching time < 50 ms
- Media Redundancy Protocol (MRP), switching time < 200 ms

In addition to communication link redundancy, a redundant power supply – which can also be monitored using an alarm relay – is integrated into the switches. If the power supply fails, communication is not interrupted.

Different Operating Modes

The unmanaged switches are ideal for direct plug-and-play use. Managed switches are available for applications where IP filtering or further interpretation of telegrams is required for the application.

Configurable Performance

WAGO's managed switches offer performance control features, such as:
- Storm control
- Bandwidth control
- Auto-provisioning
- Link aggregation

Configuration and Diagnostics

Modbus® can be used to diagnose managed switches. Configuration and diagnostics can also be performed with standardized protocols such as SNMP.
Select products also have the "PROFINET Conformance Class B" certificate, allowing simple diagnostics and configuration in PROFINET systems.

Advantages:

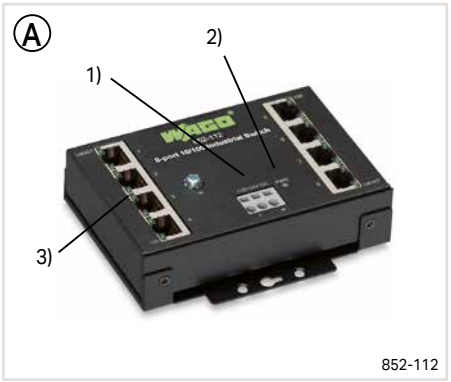
- Adaptable to different transmission media
- Automatically adapts to
  - Speed (auto-negotiation)
  - Wiring (auto-crossover, MDI/MDIX)
- Optional redundancy
- Wide supply voltage range

Industrial Switches
Functional Variants

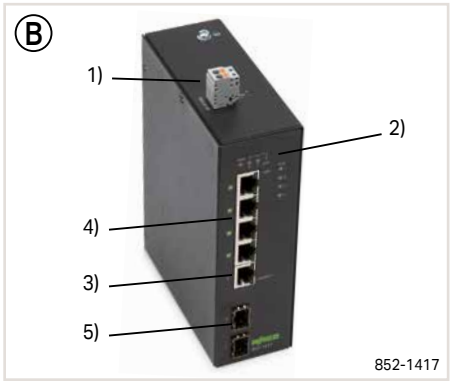
Eco Unmanaged (A, B)

- Plug & play operation (Auto MDI-X)
- Megabit and gigabit variants
- Vibration and shock resistance
- DIN-rail adapter

1) Power supply
2) Status LEDs
3) Copper ports
4) Power over Ethernet (PoE+) ports
5) SFP ports for SFP modules



852-112

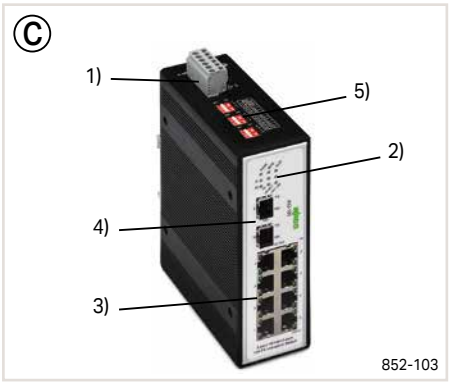


852-1417

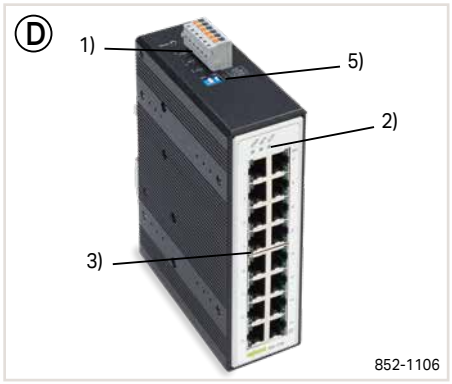
Standard Unmanaged (C, D)

- Up to 16-Gbit ports + SFP slots
- Diagnostics via LEDs and relay
- High temperature range (–40 … +70 °C)
- Redundant power supply

1) Redundant power supply
2) Status and diagnostic LEDs
3) Copper ports
4) SFP ports for SFP modules
5) DIP switches for configuration



852-103

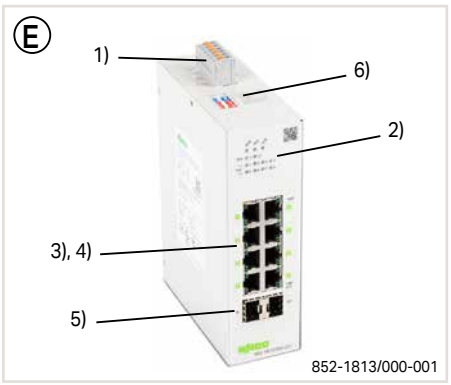


852-1106

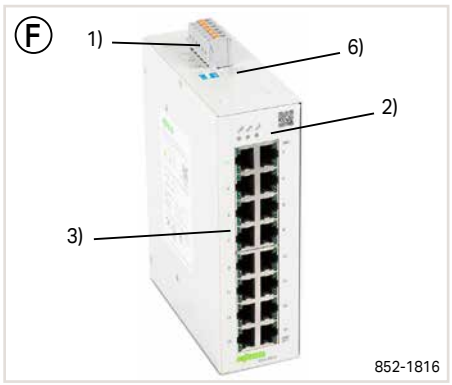
Lean Managed (E, F)

- Intuitive configuration for automation engineers
- Simple network diagnostics in the browser
- Media redundancy with RSTP/ERPS
- Network security basic functions

1) Redundant power supply
2) Status and diagnostic LEDs
3) Copper ports
4) Power over Ethernet (PoE+) ports
5) SFP ports for SFP modules
6) DIP switches for configuration



852-1813/000-001

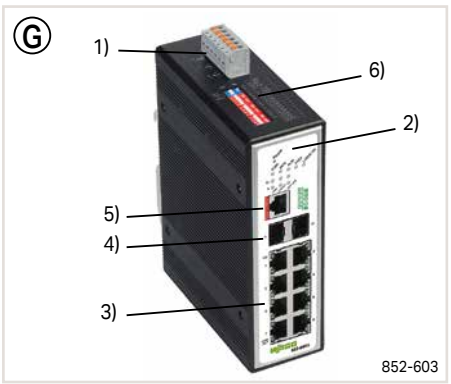


852-1816

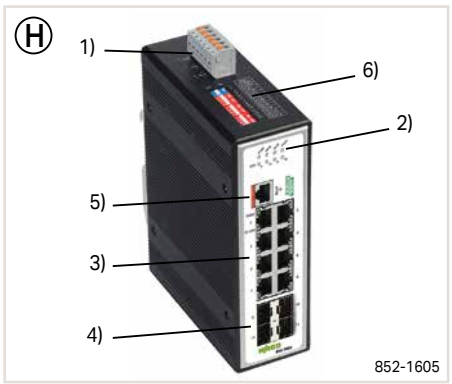
PROFINET® Managed (G, H)

- Configuration/diagnostics in the PROFINET® system
- PROFINET®-certified (CC-B)
- Cyclically readable process image
- Potential-free networking over 80 km

1) Redundant power supply
2) Status and diagnostic LEDs
3) Copper ports
4) SFP ports for SFP modules
5) RS-232 port
6) DIP switches for configuration



852-603

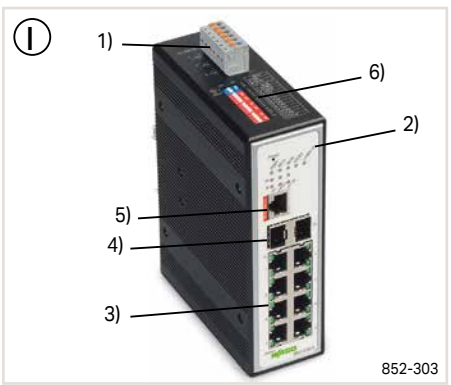


852-1605

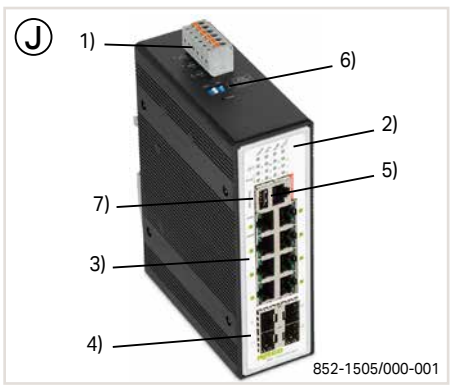
Fully Managed (I, J)

- Fast network redundancy (< 30 ms)
- Diagnostics (SNMPv3, Modbus®, Syslog, …)
- Security (SSH, VLAN, 802.1X, ACL, …)
- Extended network functions
- (Routing, IPv6, LACP, DHCP, …)

1) Redundant power supply
2) Status and diagnostic LEDs
3) Copper ports
4) SFP ports for SFP modules
5) RS-232 port
6) DIP switches for configuration
7) USB interface



852-303

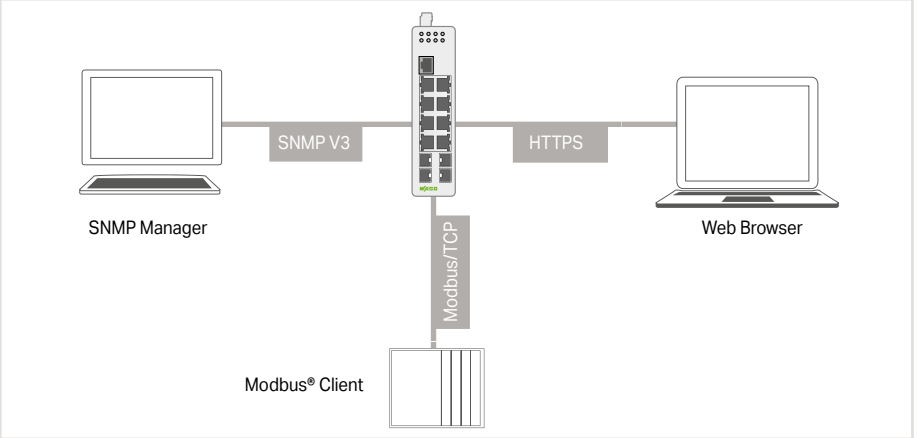


852-1505/000-001

Industrial Switches
Configuration, Diagnostics and Performance

Configuration and Diagnostics

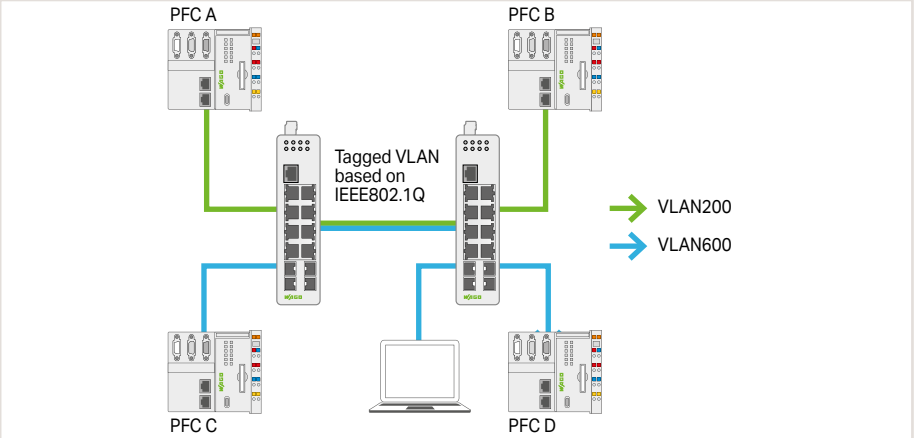
Several options:
- Configuration via Web-Based Management
- Configuration via command line (SSH, Telnet, RS-232)
- Network management via SNMP v1, v2c, v3
- Support of Management Information Base (MIB) standards
- PROFINET configuration via device description file (GSD file)
- Diagnostics via Modbus TCP: Comprehensive data available for easy diagnostics via Modbus®



Configuration interfaces

Logical Network Segmentation

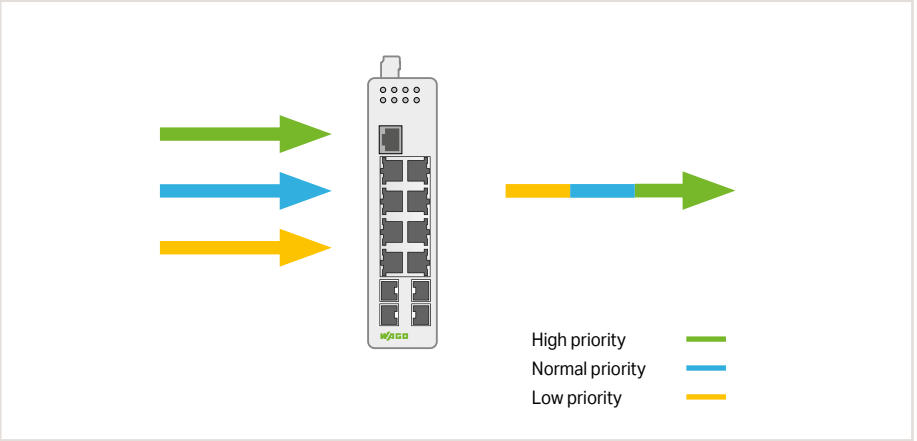
VLAN (e.g., per IEEE 802.1Q) and segmentation into virtual networks:
- Broadcast limitation
- Network security improvement
- Data flow prioritization
- Subdivision of machines and office networks



VLAN

Data Traffic Prioritization and Limitation

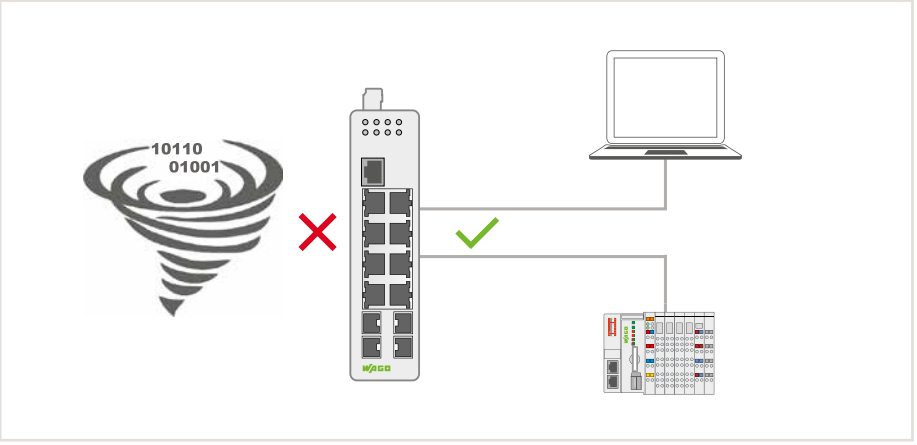
- Faster transfer of important data packets through the switch
- Prioritization of data packets per IEEE 802.1 Q
- Limitation of the bandwidth or number of packets per unit of time per port
- Increase in data transmission quality



QoS

Mastering Data Traffic

- Stopping broadcast storms
- Ensuring network availability
- Limiting broadcast and multicast data flows (packets/time)



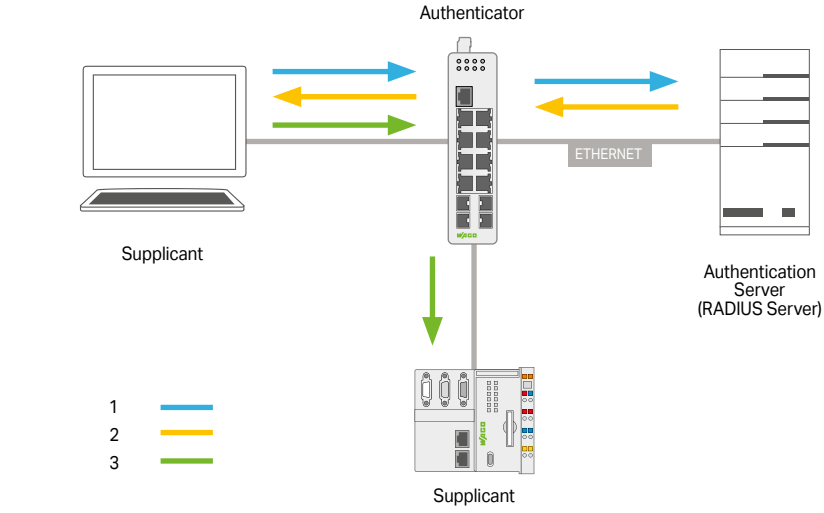
Storm Control

Industrial Switches
Security

Authentication (IEEE 802.1X)

Secure authentication and authorization in ETHERNET networks (locally on the switch or via RADIUS server)

Process:
- Authentication of a subscriber is performed by the authenticator.
- The authenticator checks the authentication information of the subscriber (supplicant) with an authentication server.

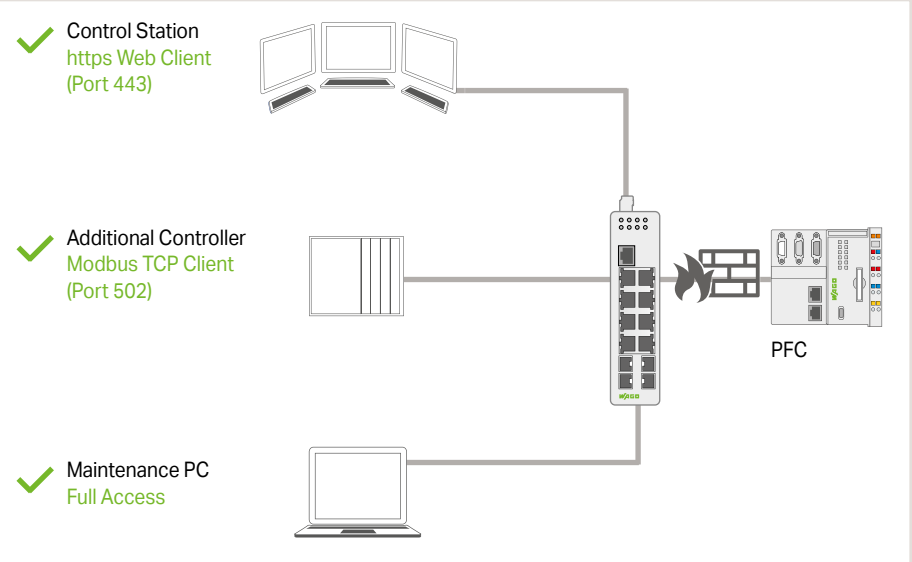


IEEE 802.1X

Firewall – Access Control List

Authorization Only for the Required Services

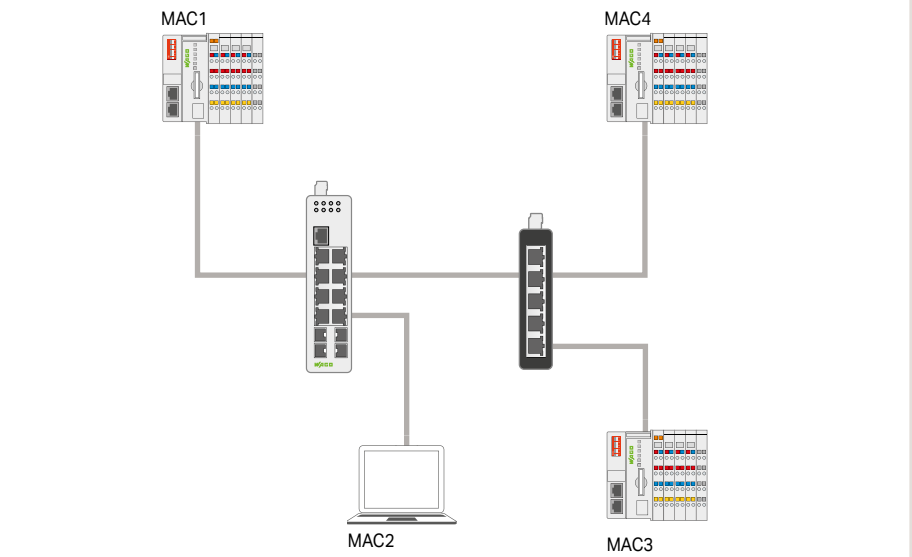
Filtering data packets via:
- Source MAC or source IP address
- Destination MAC or destination IP address
- Range of MAC or IP addresses
- UDP/TCP source or destination ports
- MAC-based white/black list for each port



Firewall

Port Security

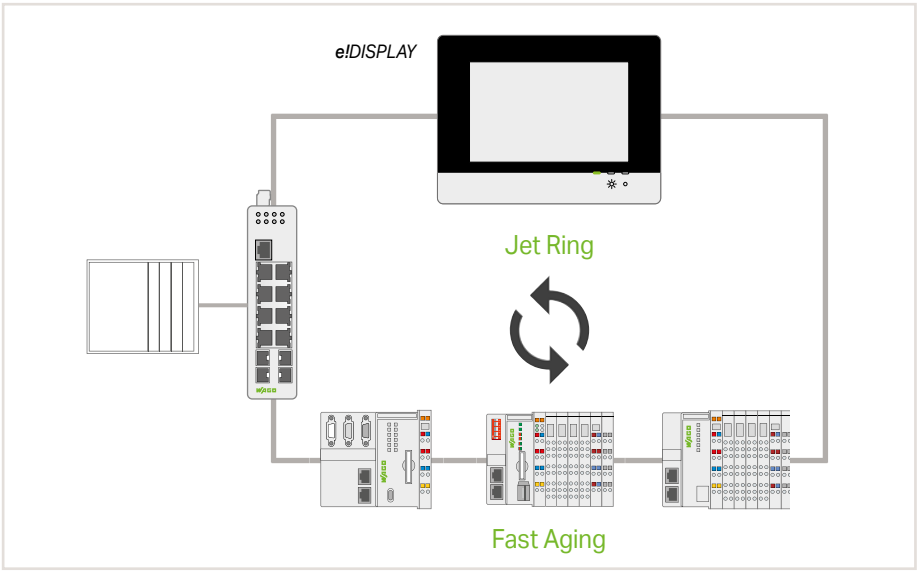
- Dynamically learns MAC addresses for each port
- Limitation of MAC addresses for each port
- MAC-based white/black list for each port



Industrial Switches
Redundancy

Jet Ring

- Typical switching time of 400 ms (depends on the application)
- Extremely easy configuration (on or off)
- Up to 20 switches in a Jet Ring
- WAGO ETHERNET devices (Fast Aging) can be used in the Jet Ring



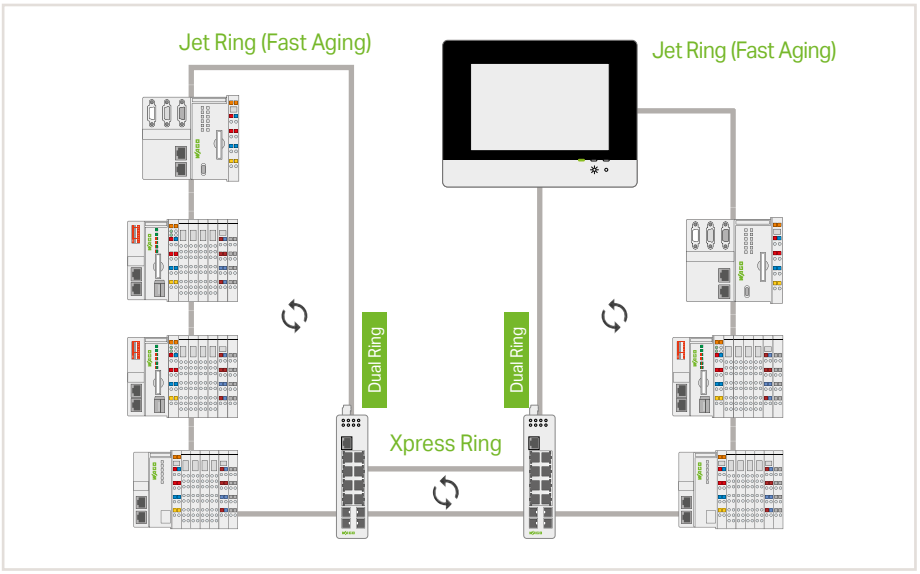
Jet Ring

Xpress Ring

- Switching time < 20 ms
- Easy configuration (3 parameters per switch)
- Up to 200 switches in one Xpress Ring
- 2 Xpress Rings per switch

Dual Ring

- Combination of both redundancy types
- 1 Jet Ring and 1 Xpress Ring per switch



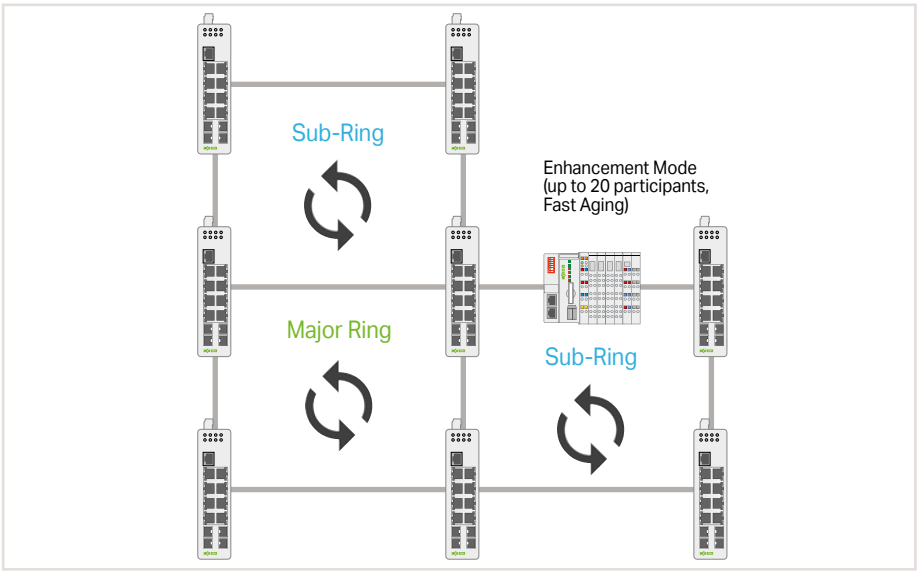
Xpress Ring and Dual Ring

ERPS: ETHERNET Ring Protection Switching

- Standardized and open technology
- Switching time < 50 ms
- Nested topologies with up to 6 rings per switch
- Implementation of one-fault tolerance (SPOF – Single Point of Failure)

ERPS – Enhancement Mode

- WAGO devices with an integrated switch and fast aging configuration
- Typical switching time of 400 ms (depends on the application)



ERPS V2

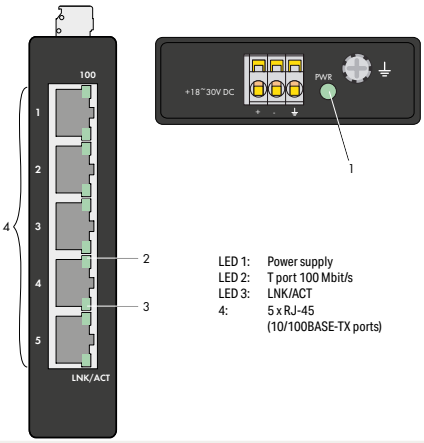
Industrial Switches
Product Overview

		Unmanaged											Managed												
		Eco							Standard					Lean Managed				MACsec		Fully Managed					PROFINET®		
		852-111	852-112	852-1111	852-1112	852-1411	852-1411/000-001	852-1417	852-101	852-102	852-103	852-1102	852-1106	852-1812	852-1813	852-1813/000-001	852-1816	852-1322	852-1328	852-303	852-1305	852-1305/000-001	852-1505	852-1505/000-001	852-602	852-603	852-1605
Hardware	Number of copper ports	5	8	5	8	5	5	5	5	8	8	8	16	8	8	8	16	8	6	8	8	8	8	8	8	8	8
	100 Mbit/s	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
	1 Gbit/s			□	□	□	□	□				□	□	□	□	□	□	□	□		□	□	□	□			□
	PoE+ ports among these (1 Gbit/s)	–	–	–	–	4	4	4	–	–	–	–	–	–	–	8	–	–	–	–	–	–	8	8	–	–	–
	Number of SFP ports	–	–	–	–	–	–	2	–	–	2	–	–	–	2	2	–	–	2	2	4	4	4	4	–	2	4
	100 Mbit/s										□				□	□			□	□						□	
	1 Gbit/s							□							□	□			□	□	□	□	□	□		□	□
	Alarm relay								□	□	□	□	□	□	□	□	□			□	□	□	□	□	□	□	□
Approvals, Standards, Certificates	CE	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
	DNV GL	□		□								□[1]	□[1]							□	□			□[1]			
	UL 61010	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□		□	□	□	□
	IEC 61850-3																					□		□			
	PROFINET® CC-B (certificate)																								□	□	□
Hardware Features	Status LEDs				□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
	Autonegotiation	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
	Auto-crossing	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
	PROFINET CC-A			□	□	□	□	□				□	□	□[2]	□[2]	□[2]	□[2]	□	□	□	□	□	□	□	□	□	□
Configuration	DIP switches (diagnostics)								□	□	□	□	□	□	□	□	□			□	□	□	□	□	□	□	□
	Web-Based Management (http, https)													□	□	□	□	□	□	□	□	□	□	□	□	□	□
	SNMP (MIB)													□	□	□	□	□	□	□	□	□	□	□	□	□	□
	CLI (SSH, Telnet)													□	□	□	□			□	□	□	□	□	□	□	□
	CLI with RS-232																			□	□	□	□	□	□	□	□
	PROFINET configurator (GSD file)																								□	□	□
	USB storage																					□		□			
Diagnostics	Status LED (LINK active)	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
	Status LED (LINK down)								□	□	□	□		□	□	□	□			□	□	□	□	□	□	□	□
	Status LED (alarm)								□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
	SNMP (MIB)													□	□	□	□	□	□	□	□	□	□	□	□	□	□
	SNMP traps													□	□	□	□	□	□	□	□	□	□	□	□	□	□
	Modbus® registers													□	□	□	□	□	□	□	□	□	□	□			
	Web-Based Management (http, https)													□	□	□	□	□	□	□	□	□	□	□	□	□	□
	Dashboard and topology map													□	□	□	□										
	PROFINET diagnostics (acyclic and cyclic)																								□	□	□
	Neighborhood detection (LLDP)													□	□	□	□			□	□	□	□	□	□	□	□
Redundancy	Redundant power supply								□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
	Jet Ring																			□	□	□	□	□			
	Xpress Ring																			□	□	□	□	□			
	ETHERNET Ring Protection Switching													□[3]	□[3]	□[3]	□[3]			□	□	□	□	□			
	Media Redundancy Protocol (MRP) (client/manager)																								□	□	□
	RSTP/STP													□	□	□	□	□[2]	□[2]	□	□	□	□	□	□	□	□
Network Security	Segmentation (VLAN)													□[4]	□[4]	□[4]	□[4]	□[2]	□[2]	□	□	□	□	□	□	□	□
	Authentication (IEEE 802.1X)													□	□	□	□	□	□	□	□	□	□	□			
	Access Control List (MAC, IP, Port)													□[5]	□[5]	□[5]	□[5]			□	□	□	□	□	□	□	□
	Port security													□	□	□	□	□[2]	□[2]	□	□	□	□	□			
	MAC security (IEEE 802.1AE)																	□	□								
Data Transmission and Performance	LACP link aggregation																			□	□	□	□	□			
	Prioritization (IEEE 802.1 p)			□	□	□	□	□				□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
	Quality of service (IEEE 802.1 Q)													□	□	□	□	□[2]	□[2]	□	□	□	□	□	□	□	□
	Bandwidth limitation																			□	□	□	□	□	□	□	□
	Broadcast limitation													□	□	□	□			□	□	□	□	□	□	□	□
	Routing within VLANs																			□	□	□	□	□	□	□	□
	Static route																			□	□	□	□	□			

[1] DNV GL and LR starting from hardware version 5 or 3
[2] Firmware 2 or higher
[3] Supports two ERPS rings with a switchover time of less than 800 ms
[4] Supports up to five VLANs
[5] Supports up to 32 entries (based on MAC and IP address)

Industrial ECO switch ▸ 5 Ports 100BASE-TX

852-111

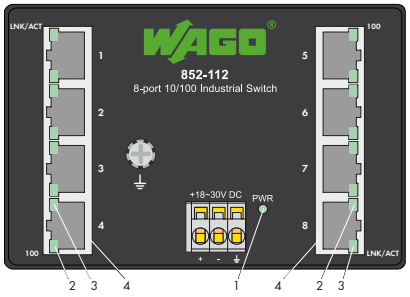


Item No.	**852-111**
Order Text	**Industrial-Eco-Switch; 5Port**

Technical Data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	5 x 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3x Flow Control
MAC table (size)	2000 addresses
Topology	Star
Jumbo frame size	1536 Byte
Supply voltage	18 … 30 VDC
Power consumption (max.)	3 W
ESD (contact/air discharge)	4 KV / 8 KV
Connection technology: communication/fieldbus	Copper cable: 5 x RJ-45
Surrounding air temperature (operation)	-40 … 70 °C (UL max. +60 °C)
Dimensions W x H x D	(23.4 x 109.2 x 73.8) mm
Approvals	CE; KC; DNV GL; cULus OrdLoc
Data sheet and further information, see:	wago.com/852-111

Industrial ECO switch ▶ 8 Ports 100BASE-TX

852-112



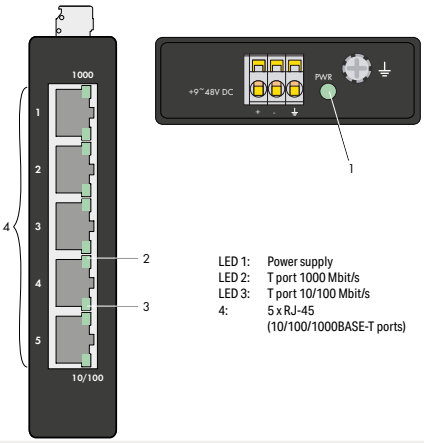
LED 1: Power supply
LED 2: T port 100 Mbit/s
LED 3: LNK/ACT
4: 8 x RJ-45 (10/100BASE-TX ports)

Item No.	**852-112**
Order Text	**Industrial-Eco-Switch; 8Port**

Technical Data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3x Flow Control
MAC table (size)	2000 addresses
Topology	Star
Jumbo frame size	1536 Byte
Supply voltage	18 … 30 VDC
Power consumption (max.)	3 W
ESD (contact/air discharge)	4 KV / 8 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45
Surrounding air temperature (operation)	-40 … 70 °C (UL max. +60 °C)
Dimensions W x H x D	(109.2 x 73.8 x 24) mm
Approvals	CE; KC; cULus OrdLoc
Data sheet and further information, see:	wago.com/852-112

Industrial ECO switch ▸ 5 Ports 1000BASE-T

852-1111



Item No.	**852-1111**
Order Text	**Industrial-Eco-Switch; 5-Port Gb**

Technical Data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	5 x 1000BASE-T or 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3x Flow Control; IEEE 802.1p Prioritization
MAC table (size)	8000 addresses
Topology	Star
Jumbo frame size	9000 Byte
Supply voltage	9 … 48 VDC
Power consumption (max.)	3 W
ESD (contact/air discharge)	4 KV / 8 KV
Connection technology: communication/fieldbus	Copper cable: 5 x RJ-45
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(23.4 x 109.2 x 73.8) mm
Approvals	CE; DNV GL; cULus OrdLoc
Data sheet and further information, see:	wago.com/852-1111

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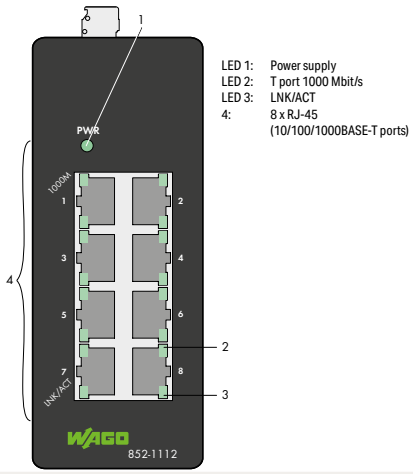
Industrial ECO switch ▸ 8 Ports 1000BASE-T

852-1112

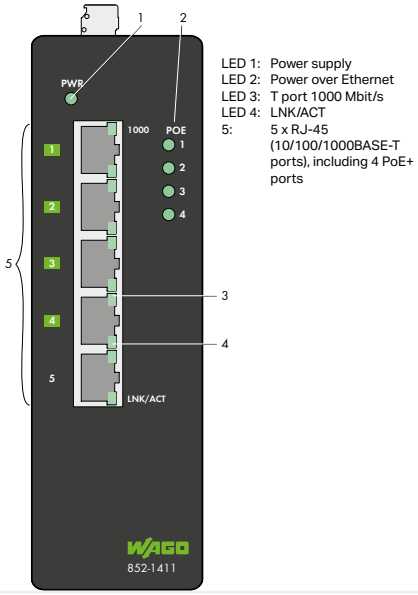


Item No.	**852-1112**
Order Text	**Industrial-Eco-Switch; 8-Port Gb**

Technical Data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 1000BASE-T or 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3x Flow Control; IEEE 802.3az Energy Efficient Ethernet; IEEE 802.1p Prioritization
MAC table (size)	8000 addresses
Topology	Star
Jumbo frame size	9000 Byte
Supply voltage	9 … 57 VDC
Power consumption (max.)	6 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45
Surrounding air temperature (operation)	0 … 60 °C
Dimensions W x H x D	(46 x 116 x 110) mm
Approvals	CE; cULus OrdLoc
Data sheet and further information, see:	wago.com/852-1112

Industrial ECO switch ▸ 5 Ports 1000BASE-T; 4 * Power over Ethernet

852-1411



LED 1: Power supply
LED 2: Power over Ethernet
LED 3: T port 1000 Mbit/s
LED 4: LNK/ACT
5: 5 x RJ-45 (10/100/1000BASE-T ports), including 4 PoE+ ports

		Modified housing design
Item No.	**852-1411**	**852-1411/000-001**
Order Text	**Industrial-Eco-Switch; 5Port Gb; 4PoE**	**Industrial-Eco-Switch; 5Port Gb; 4PoE**

Technical Data		
Number of copper ports	5 x 1000BASE-T or 100BASE-TX (RJ-45); 4 x PoE+ (Power over Ethernet)	
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3x Flow Control; IEEE 802.3af Power over Ethernet (PoE); IEEE 802.3at High Power over Ethernet (PoE+); IEEE 802.1p Prioritization	
MAC table (size)	8000 addresses	
Topology	Star	
Jumbo frame size	10000 Byte	
Supply voltage	24 … 57 VDC	
Power consumption (max.)	13 W	
Power consumption note	133 W with 4 PoE	
Connection technology: communication/fieldbus	Copper cable: 5 x RJ-45	
Surrounding air temperature (operation)	-40 … 70 °C	
Dimensions W x H x D	(50 x 160 x 120) mm	(50 x 104 x 115) mm
Approvals	CE; cULus OrdLoc	CE; cULus OrdLoc; FCC approval (This device complies with part 15 subport B, class A of the FCC rules)
Data sheet and further information, see:	wago.com/852-1411	

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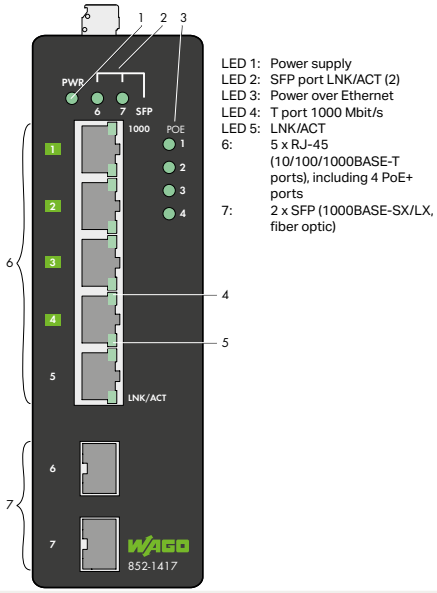
Industrial ECO switch ▶ 5 Ports 1000BASE-T; 2 Slots 1000BASE-SX/LX; 4 * Power over Ethernet

852-1417



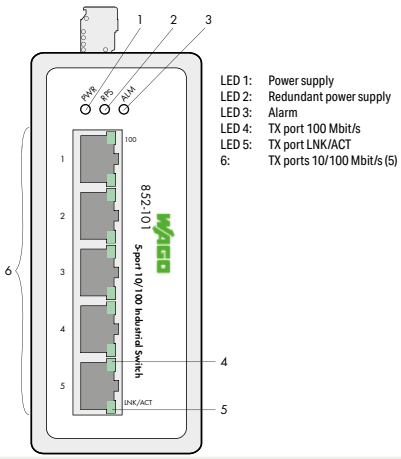
LED 1: Power supply
LED 2: SFP port LNK/ACT (2)
LED 3: Power over Ethernet
LED 4: T port 1000 Mbit/s
LED 5: LNK/ACT
6: 5 x RJ-45 (10/100/1000BASE-T ports), including 4 PoE+ ports
7: 2 x SFP (1000BASE-SX/LX, fiber optic)

Item No.	**852-1417**
Order Text	**Industrial-Eco-Switch; 5Port Gb; 2-Slot 1000BASE-SX/LX; 4PoE**

Technical Data	
Number of copper ports	5 x 1000BASE-T or 100BASE-TX (RJ-45); 4 x PoE+ (Power over Ethernet)
Number of optical fiber ports	2 x 1000BASE-SX/LX (SFP slot)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX/FX; IEEE 802.3ab 1000BASE-T; IEEE 802.3z 1000BASE-SX/LX; IEEE 802.3x Flow Control; IEEE 802.3af Power over Ethernet (PoE); IEEE 802.3at High Power over Ethernet (PoE+); IEEE 802.1p Prioritization
MAC table (size)	8000 addresses
Topology	Star
Jumbo frame size	10000 Byte
Supply voltage	24 … 57 VDC
Power consumption (max.)	14 W
Power consumption note	134 W with 4 PoE
Connection technology: communication/fieldbus	Copper cable: 5 x RJ-45; Fiber optic: 2 x SFP; LC fiber-optic connector
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(50 x 160 x 120) mm
Approvals	CE; cULus OrdLoc
Data sheet and further information, see:	wago.com/852-1417

Industrial switches ▸ 5 Ports 100BASE-TX

852-101



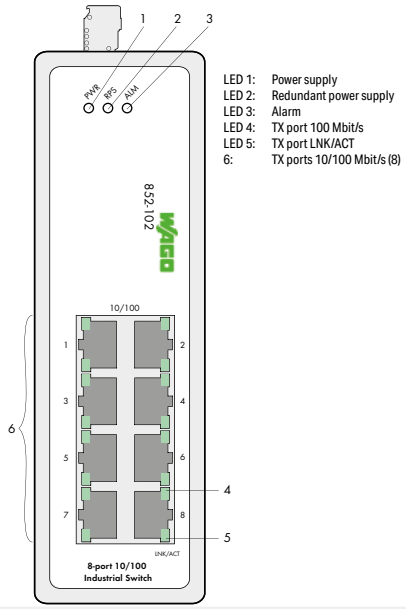
LED 1: Power supply
LED 2: Redundant power supply
LED 3: Alarm
LED 4: TX port 100 Mbit/s
LED 5: TX port LNK/ACT
6: TX ports 10/100 Mbit/s (5)

Item No.	**852-101**
Order Text	**Industrial-Switch; 5Port**

Technical Data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	5 x 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3x Flow Control
Redundancy function	Redundant DC power supply
Configuration options	DIP switch for signal contact
Diagnostics	Signal contact
MAC table (size)	2000 addresses
Jumbo frame size	1536 Byte
Supply voltage	9 … 48 VDC; Cable length:< 3 m
Power consumption (max.)	4 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 5 x RJ-45
Surrounding air temperature (operation)	-40 … 70 °C (UL max. +60 °C)
Dimensions W x H x D	(50 x 105 x 120) mm
Approvals	CE; KC; cULus OrdLoc
Data sheet and further information, see:	wago.com/852-101

Industrial switches ▸ 8 Ports 100BASE-TX

852-102

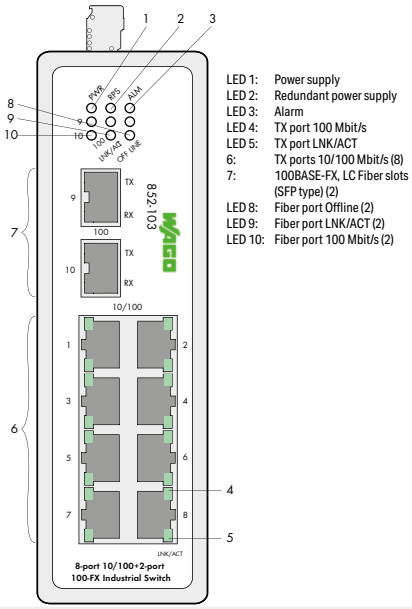


Item No.	**852-102**
Order Text	**Industrial-Switch; 8Port**

Technical Data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3x Flow Control
Redundancy function	Redundant DC power supply
Configuration options	DIP switch for signal contact
Diagnostics	Signal contact
MAC table (size)	2000 addresses
Jumbo frame size	1536 Byte
Supply voltage	9 … 48 VDC; Cable length:< 3 m
Power consumption (max.)	5.3 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45
Surrounding air temperature (operation)	-40 … 70 °C (UL max. +60 °C)
Dimensions W x H x D	(50 x 162 x 120) mm
Approvals	CE; KC; cULus OrdLoc
Data sheet and further information, see:	wago.com/852-102

Industrial switches ▸ 8 Ports 100BASE-TX; 2 Slots 100BASE-FX

852-103



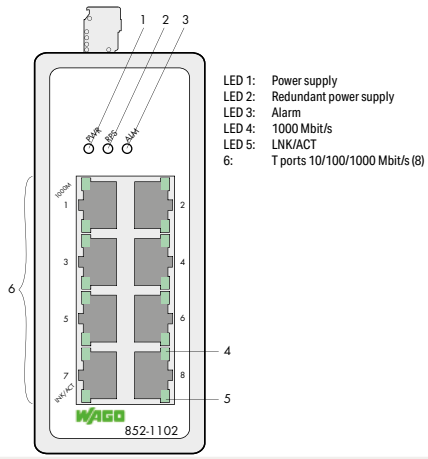
Item No.	**852-103**
Order Text	**Industrial-Switch; 8Port; 2-Slot 100BASE-FX**

Technical Data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 100BASE-TX (RJ-45)
Number of optical fiber ports	2 x 100BASE-FX (SFP slot)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX/FX; IEEE 802.3x Flow Control
Redundancy function	Redundant DC power supply
Configuration options	DIP switch for signal contact
Diagnostics	Signal contact
MAC table (size)	2000 addresses
Jumbo frame size	1536 Byte
Supply voltage	9 … 48 VDC; Cable length:< 3 m
Power consumption (max.)	6.1 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45; Fiber optic: 2 x SFP; LC fiber-optic connector
Surrounding air temperature (operation)	-40 … 70 °C (UL max. +60 °C)
Dimensions W x H x D	(50 x 162 x 120) mm
Approvals	CE; KC; cULus OrdLoc
Data sheet and further information, see:	wago.com/852-103

Accessories	Item No.
SFP module 2: 1310nm; 100Base-FX Multi-Mode LC; 2 km	852-201/107-002
SFP module 30: 1310nm; 100Base-FX Single-Mode LC; 30 km	852-201/107-030

Industrial switches ▸ 8 Ports 1000BASE-T

852-1102

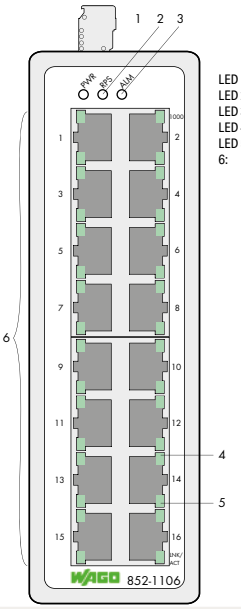


Item No.	**852-1102**
Order Text	**Industrial-Switch; 8-Port Gb**

Technical Data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 1000BASE-T or 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3x Flow Control; IEEE 802.3az Energy Efficient Ethernet; IEEE 802.1p Prioritization
Redundancy function	Redundant DC power supply
Configuration options	DIP switch for signal contact
Diagnostics	Signal contact
MAC table (size)	8000 addresses
Jumbo frame size	9000 Byte
Supply voltage	9 … 57 VDC
Power consumption (max.)	6 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(50 x 105 x 120) mm
Approvals	CE; DNV GL; cULus OrdLoc
Data sheet and further information, see:	wago.com/852-1102

Industrial switches ▸ 16 Ports 1000BASE-T

852-1106



LED 1: Power supply
LED 2: Redundant power supply
LED 3: Alarm
LED 4: 1000 Mbit/s
LED 5: LNK/ACT
6: T ports 10/100/1000 Mbit/s (16)

Item No.	**852-1106**
Order Text	**Industrial-Switch; 16-Port Gb**

Technical Data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	16 x 1000BASE-T or 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX/FX; IEEE 802.3ab 1000BASE-T; IEEE 802.3x Flow Control; IEEE 802.3az Energy Efficient Ethernet; IEEE 802.1p Prioritization
Redundancy function	Redundant DC power supply
Configuration options	DIP switch for signal contact
Diagnostics	Signal contact
MAC table (size)	8000 addresses
Jumbo frame size	10000 Byte
Supply voltage	12 … 60 VDC
Power consumption (max.)	12 W
Connection technology: communication/fieldbus	Copper cable: 16 x RJ-45
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(50 x 162 x 120) mm
Approvals	CE; DNV GL; cULus OrdLoc
Data sheet and further information, see:	wago.com/852-1106

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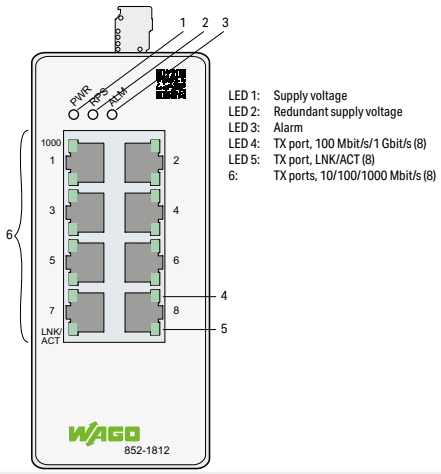
Lean managed switch ▸ 8 Ports 1000BASE-T

852-1812



LED 1: Supply voltage
LED 2: Redundant supply voltage
LED 3: Alarm
LED 4: TX port, 100 Mbit/s/1 Gbit/s (8)
LED 5: TX port, LNK/ACT (8)
6: TX ports, 10/100/1000 Mbit/s (8)

Item No.	**852-1812**
Order Text	**Lean-Managed-Switch; 8-Port 1000BASE-T**

Technical Data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 1000BASE-T or 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX/FX; IEEE 802.3ab 1000BASE-T; IEEE 802.3x Flow Control; IEEE 802.1d Spanning Tree Protocol (STP); IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1Q VLAN Tagging; IEEE 802.1p Prioritization; IEEE 802.1X Port Authentication; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); IEEE 802.3az Energy Efficient Ethernet; ITU-T G8032v1/v2 Ethernet Ring Protection Switching (ERPS)
Redundancy function	Redundant DC power supply; STP; RSTP; ERPSv1/v2 (max. 2 rings per switch, max. 16 switches per ring, switching time < 800 ms)
Configuration options	DIP switch for signal contact; Web-Based Management; Command Line Interface; SNMPv1/v2c/v3
Diagnostics	Signal contact; Modbus TCP; port status; port statistics; port load; traffic monitor; syslog; SNMP traps; loop detection; diagnostics dashboard; topology map
Security	Access-control list with max. 32 entries; IEEE 802.1X port security; authentication
MAC table (size)	8000 addresses
Jumbo frame size	10000 Byte
Supply voltage	24 … 48 VDC; (±15 %); 24 … 48 VDC (UL)
Power consumption (max.)	10 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45
Surrounding air temperature (operation)	-40 … 60 °C
Dimensions W x H x D	(50 x 116 x 100) mm
Approvals	CE; cULus OrdLoc
Data sheet and further information, see:	wago.com/852-1812

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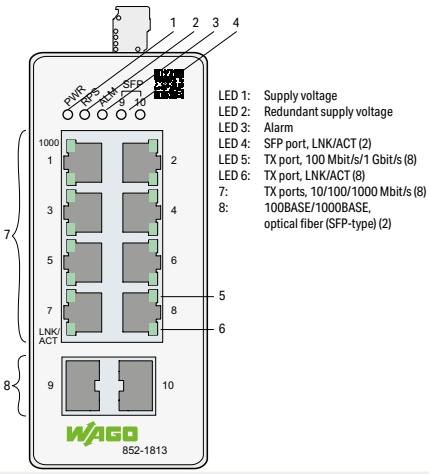
Lean managed switch ▶ 8 Ports 1000BASE-T; 2 Slots 1000BASE-FX/TX

852-1813



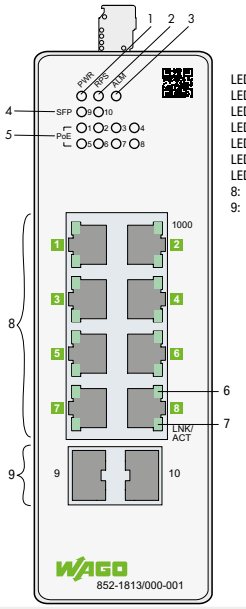
Item No.	**852-1813**
Order Text	**Lean-Managed-Switch; 8-Port 1000BASE-T; 2 Slots 1000BASE-SX/LX**

Technical Data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 1000BASE-T or 100BASE-TX (RJ-45)
Number of optical fiber ports	2 x 1000BASE-SX/LX/ZX or 100BASE-FX (SFP slot)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX/FX; IEEE 802.3ab 1000BASE-T; IEEE 802.3z 1000BASE-SX/LX; IEEE 802.3x Flow Control; IEEE 802.1d Spanning Tree Protocol (STP); IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1Q VLAN Tagging; IEEE 802.1p Prioritization; IEEE 802.1X Port Authentication; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); IEEE 802.3az Energy Efficient Ethernet; ITU-T G8032v1/v2 Ethernet Ring Protection Switching (ERPS)
Redundancy function	Redundant DC power supply; STP; RSTP; ERPSv1/v2 (max. 2 rings per switch, max. 16 switches per ring, switching time < 800 ms)
Configuration options	DIP switch for signal contact; Web-Based Management; Command Line Interface; SNMPv1/v2c/v3
Diagnostics	Signal contact; Modbus TCP; port status; port statistics; port load; traffic monitor; syslog; SNMP traps; loop detection; diagnostics dashboard; topology map
Security	Access-control list with max. 32 entries; IEEE 802.1X port security; authentication
MAC table (size)	8000 addresses
Jumbo frame size	10000 Byte
Supply voltage	24 … 48 VDC; (±15 %); 24 … 48 VDC (UL)
Power consumption (max.)	11 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45; Fiber optic: 2 x SFP; LC fiber-optic connector
Surrounding air temperature (operation)	-40 … 60 °C
Dimensions W x H x D	(50 x 116 x 100) mm
Approvals	CE; cULus OrdLoc
Data sheet and further information, see:	wago.com/852-1813

Accessories	Item No.
SFP module 2: 1310nm; 100Base-FX Multi-Mode LC; 2 km	852-201/107-002
SFP module 30: 1310nm; 100Base-FX Single-Mode LC; 30 km	852-201/107-030
SFP Module 1000BASE; ZX Single-Mode 1550 nm LC; 80 km; Extended temperature range; DDM	852-1280
SFP Module 1000BASE; SX Multi-Mode 850 nm LC; 0.55 km; Extended temperature range; DDM	852-1200
SFP Module 1000BASE; LX Single-Mode 1310 nm LC; 10 km; Extended temperature range; DDM	852-1210

Lean managed switch ▶ 8 Ports 1000BASE-T; 2 Slots 1000BASE-FX/TX; 8 * Power over Ethernet

852-1813/000-001



LED 1: Supply voltage
LED 2: Redundant supply voltage
LED 3: Alarm
LED 4: SFP port, LNK/ACT (2)
LED 5: Power over Ethernet (8)
LED 6: TX port, 100 Mbit/s/1 Gbit/s (8)
LED 7: TX port, LNK/ACT (8)
8: TX ports, 10/100/1000 Mbit/s (8)
9: 100BASE/1000BASE, optical fiber (SFP-type) (2)

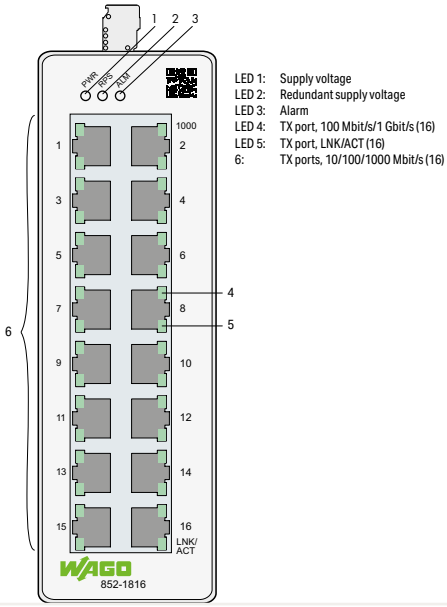
Item No.	**852-1813/000-001**
Order Text	**Lean-Managed-Switch; 8-Port 1000BASE-T; 2 Slots 1000BASE-SX/LX; +PoE**

Technical Data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 1000BASE-T or 100BASE-TX (RJ-45); 8 x PoE+ (Power over Ethernet)
Number of optical fiber ports	2 x 1000BASE-SX/LX/ZX or 100BASE-FX (SFP slot)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX/FX; IEEE 802.3ab 1000BASE-T; IEEE 802.3x Flow Control; IEEE 802.1d Spanning Tree Protocol (STP); IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1Q VLAN Tagging; IEEE 802.1p Prioritization; IEEE 802.1X Port Authentication; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); IEEE 802.3af Power over Ethernet (PoE); IEEE 802.3at High Power over Ethernet (PoE+); IEEE 802.3az Energy Efficient Ethernet; ITU-T G8032v1/v2 Ethernet Ring Protection Switching (ERPS)
Redundancy function	Redundant DC power supply; STP; RSTP; ERPSv1/v2 (max. 2 rings per switch, max. 16 switches per ring, switching time < 800 ms)
Configuration options	DIP switch for signal contact; Web-Based Management; Command Line Interface; SNMPv1/v2c/v3
Diagnostics	Signal contact; Modbus TCP; port status; port statistics; port load; traffic monitor; syslog; SNMP traps; loop detection; diagnostics dashboard; topology map
Security	Access-control list with max. 32 entries; IEEE 802.1X port security; authentication
MAC table (size)	8000 addresses
Jumbo frame size	10000 Byte
Supply voltage	24 … 57 VDC
Power consumption (max.)	13 W
Power consumption note	253 W with 8 PoE+; 30 W per port
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45; Fiber optic: 2 x SFP; LC fiber-optic connector
Surrounding air temperature (operation)	-40 … 60 °C
Dimensions W x H x D	(50 x 160 x 120) mm
Approvals	CE; cULus OrdLoc
Data sheet and further information, see:	wago.com/852-1813/000-001

Accessories	**Item No.**
SFP module 2: 1310nm; 100Base-FX Multi-Mode LC; 2 km	852-201/107-002
SFP module 30: 1310nm; 100Base-FX Single-Mode LC; 30 km	852-201/107-030
SFP Module 1000BASE; ZX Single-Mode 1550 nm LC; 80 km; Extended temperature range; DDM	852-1280
SFP Module 1000BASE; SX Multi-Mode 850 nm LC; 0.55 km; Extended temperature range; DDM	852-1200
SFP Module 1000BASE; LX Single-Mode 1310 nm LC; 10 km; Extended temperature range; DDM	852-1210

Lean managed switch ▶ 16 Ports 1000BASE-T

852-1816

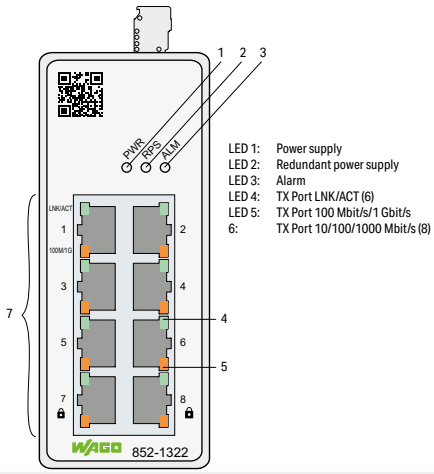


Item No.	**852-1816**
Order Text	**Lean-Managed-Switch; 16 Ports 1000BASE-T**

Technical Data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	16 x 1000BASE-T or 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX/FX; IEEE 802.3ab 1000BASE-T; IEEE 802.3x Flow Control; IEEE 802.1d Spanning Tree Protocol (STP); IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1Q VLAN Tagging; IEEE 802.1p Prioritization; IEEE 802.1X Port Authentication; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); IEEE 802.3az Energy Efficient Ethernet; ITU-T G8032v1/v2 Ethernet Ring Protection Switching (ERPS)
Redundancy function	Redundant DC power supply; STP; RSTP; ERPSv1/v2 (max. 2 rings per switch, max. 16 switches per ring, switching time < 800 ms)
Configuration options	DIP switch for signal contact; Web-Based Management; Command Line Interface; SNMPv1/v2c/v3
Diagnostics	Signal contact; Modbus TCP; port status; port statistics; port load; traffic monitor; syslog; SNMP traps; loop detection; diagnostics dashboard; topology map
Security	Access-control list with max. 32 entries; IEEE 802.1X port security; authentication
MAC table (size)	8000 addresses
Jumbo frame size	10000 Byte
Supply voltage	12 … 60 VDC
Power consumption (max.)	12 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 16 x RJ-45
Surrounding air temperature (operation)	-40 … 60 °C
Dimensions W x H x D	(50 x 160 x 120) mm
Approvals	CE; cULus OrdLoc
Data sheet and further information, see:	wago.com/852-1816

Industrial managed switches ▸ 8 Ports 1000BASE-T; MAC Security

852-1322

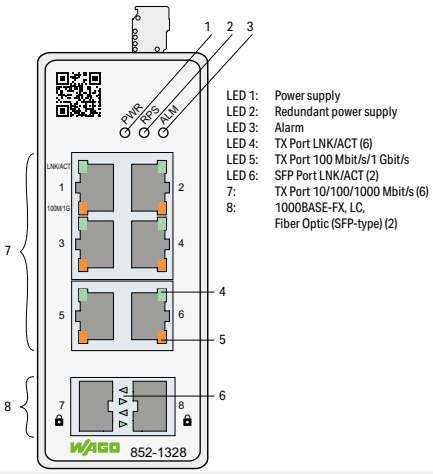


Item No.	**852-1322**
Order Text	**Managed Switch; 8Port Gb; MACsec**

Technical Data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 1000BASE-T or 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3x Flow Control; IEEE 802.1p Prioritization; IEEE 802.1X Port Authentication; IEEE 802.3az Energy Efficient Ethernet; IEEE 802.1AE MAC Security
Redundancy function	Redundant DC power supply
Configuration options	Web-based (HTTP(S)); SNMPv1/v2c/v3
Diagnostics	Modbus TCP; Port status; Syslog; SNMP traps
MAC table (size)	16000 addresses
Supply voltage	9 … 48 VDC
Power consumption (max.)	5.8 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45
Surrounding air temperature (operation)	-20 … 70 °C
Dimensions W x H x D	(45.3 x 110 x 92) mm
Approvals	CE; cULus OrdLoc (E482462)
Data sheet and further information, see:	wago.com/852-1322

Industrial managed switches ▶ 6 Ports 1000BASE-T; 2 Slots 1000BASE-SX/LX; MAC Security

852-1328



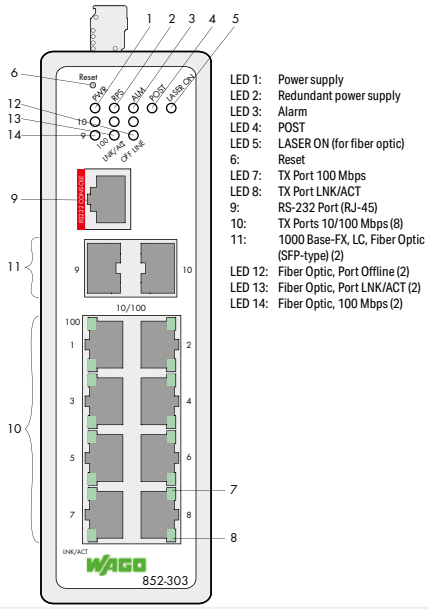
Item No.	**852-1328**
Order Text	**Managed Switch; 6Port Gb; 2FOC Gb; MACsec**

Technical Data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	6 x 1000BASE-T or 100BASE-TX (RJ-45)
Number of optical fiber ports	2 x 1000BASE-SX/LX or 100BASE-FX (SFP slot)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3z 1000BASE-SX/LX; IEEE 802.3x Flow Control; IEEE 802.1p Prioritization; IEEE 802.1X Port Authentication; IEEE 802.3az Energy Efficient Ethernet; IEEE 802.1AE MAC Security
Redundancy function	Redundant DC power supply
Configuration options	Web-based (HTTP(S)); SNMPv1/v2c/v3
Diagnostics	Modbus TCP; Port status; Syslog; SNMP traps
MAC table (size)	16000 addresses
Supply voltage	9 … 48 VDC
Power consumption (max.)	5.8 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 6 x RJ-45; Fiber optic: 2 x SFP; LC fiber-optic connector
Surrounding air temperature (operation)	-20 … 70 °C
Dimensions W x H x D	(45.3 x 110 x 92) mm
Approvals	CE; cULus OrdLoc (E482462)
Data sheet and further information, see:	wago.com/852-1328

Accessories	**Item No.**
SFP module 2: 1310nm; 100Base-FX Multi-Mode LC; 2 km	852-201/107-002
SFP module 30: 1310nm; 100Base-FX Single-Mode LC; 30 km	852-201/107-030
SFP Module 1000BASE; ZX Single-Mode 1550 nm LC; 80 km; Extended temperature range; DDM	852-1280
SFP Module 1000BASE; SX Multi-Mode 850 nm LC; 0.55 km; Extended temperature range; DDM	852-1200
SFP Module 1000BASE; LX Single-Mode 1310 nm LC; 10 km; Extended temperature range; DDM	852-1210

Industrial managed switches ▸ 8 Ports 100BASE-TX; 2-Slot 1000BASE-SX/LX

852-303



LED 1: Power supply
LED 2: Redundant power supply
LED 3: Alarm
LED 4: POST
LED 5: LASER ON (for fiber optic)
6: Reset
LED 7: TX Port 100 Mbps
LED 8: TX Port LNK/ACT
9: RS-232 Port (RJ-45)
10: TX Ports 10/100 Mbps (8)
11: 1000 Base-FX, LC, Fiber Optic (SFP-type) (2)
LED 12: Fiber Optic, Port Offline (2)
LED 13: Fiber Optic, Port LNK/ACT (2)
LED 14: Fiber Optic, 100 Mbps (2)

Item No.	**852-303**
Order Text	**Managed-Switch; 8Port; 2-Slot 1000BASE-SX/LX**

Technical Data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 100BASE-TX (RJ-45)
Number of optical fiber ports	2 x 1000BASE-SX/LX or 100BASE-FX (SFP slot)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX/FX; IEEE 802.3z 1000BASE-SX/LX; IEEE 802.3x Flow Control; IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1Q VLAN Tagging; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); IEEE 802.1p Prioritization; IEEE 802.1X Port Authentication
Redundancy function	Redundant DC power supply; STP; RSTP; MSTP; Jet Ring < 300 ms; Xpress Ring < 20 ms; Dual Homing < 20 ms; Dual Ring; ERPSv2 < 50 ms; LCAP
Configuration options	DIP switch for signal contact; Command Line Interface; SNMPv1/v2c/v3
Diagnostics	Signal contact, Modbus/TCP, port status, port statistics, port load, traffic monitor, SFP information, syslog, mail alarm, SNMP traps
MAC table (size)	16000 addresses
Jumbo frame size	10000 Byte
Supply voltage	12 … 60 VDC; Cable length:< 3 m
Power consumption (max.)	12 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45; Fiber optic: 2 x SFP; LC fiber-optic connector
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(50 x 162 x 120) mm
Approvals	CE; DNV GL; cULus OrdLoc
Data sheet and further information, see:	wago.com/852-303

Accessories	**Item No.**
SFP module 2: 1310nm; 100Base-FX Multi-Mode LC; 2 km	852-201/107-002
SFP module 30: 1310nm; 100Base-FX Single-Mode LC; 30 km	852-201/107-030
SFP Module 1000BASE; ZX Single-Mode 1550 nm LC; 80 km; Extended temperature range; DDM	852-1280
SFP Module 1000BASE; SX Multi-Mode 850 nm LC; 0.55 km; Extended temperature range; DDM	852-1200
SFP Module 1000BASE; LX Single-Mode 1310 nm LC; 10 km; Extended temperature range; DDM	852-1210

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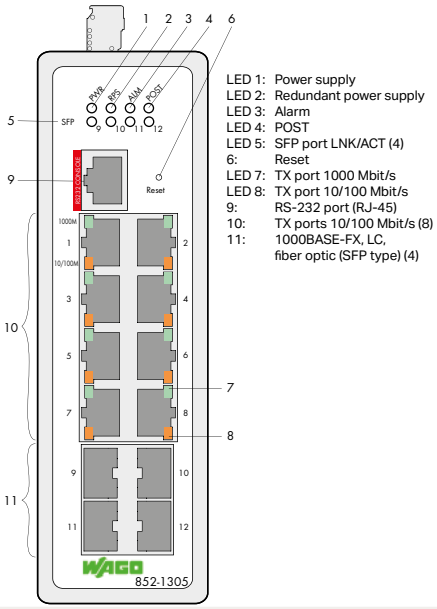
Industrial managed switches ▶ 8 Ports 1000BASE-T; 4-Slot 1000BASE-SX/LX

852-1305



LED 1: Power supply
LED 2: Redundant power supply
LED 3: Alarm
LED 4: POST
LED 5: SFP port LNK/ACT (4)
6: Reset
LED 7: TX port 1000 Mbit/s
LED 8: TX port 10/100 Mbit/s
9: RS-232 port (RJ-45)
10: TX ports 10/100 Mbit/s (8)
11: 1000BASE-FX, LC, fiber optic (SFP type) (4)

Item No.	**852-1305**
Order Text	**Managed-Switch; 8-Port Gb; 4-Slot 1000BASE-SX/LX**
Technical Data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 1000BASE-T or 100BASE-TX (RJ-45)
Number of optical fiber ports	4 x 1000BASE-SX/LX (SFP slot)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3z 1000BASE-SX/LX; IEEE 802.3x Flow Control; IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1Q VLAN Tagging; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); IEEE 802.1p Prioritization; IEEE 802.1X Port Authentication; ITU-T G8032v1/v2 Ethernet Ring Protection Switching (ERPS)
Redundancy function	Redundant DC power supply; STP; RSTP; MSTP; Jet Ring < 300 ms; Xpress Ring < 20 ms; Dual Homing < 20 ms; Dual Ring; ERPSv2 < 50 ms; LCAP
Configuration options	DIP switch for signal contact; Command Line Interface; SNMPv1/v2c/v3
Diagnostics	Signal contact, Modbus/TCP, port status, port statistics, port load, traffic monitor, SFP information, syslog, mail alarm, SNMP traps
MAC table (size)	16000 addresses
Jumbo frame size	10000 Byte
Supply voltage	12 … 60 VDC; Cable length:< 3 m
Power consumption (max.)	18 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45; Fiber optic: 4 x SFP; LC fiber-optic connector
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(50 x 162 x 120) mm
Approvals	CE; DNV GL; cULus OrdLoc
Data sheet and further information, see:	wago.com/852-1305

Accessories	**Item No.**
SFP Module 1000BASE; ZX Single-Mode 1550 nm LC; 80 km; Extended temperature range; DDM	852-1280
SFP Module 1000BASE; SX Multi-Mode 850 nm LC; 0.55 km; Extended temperature range; DDM	852-1200
SFP Module 1000BASE; LX Single-Mode 1310 nm LC; 10 km; Extended temperature range; DDM	852-1210

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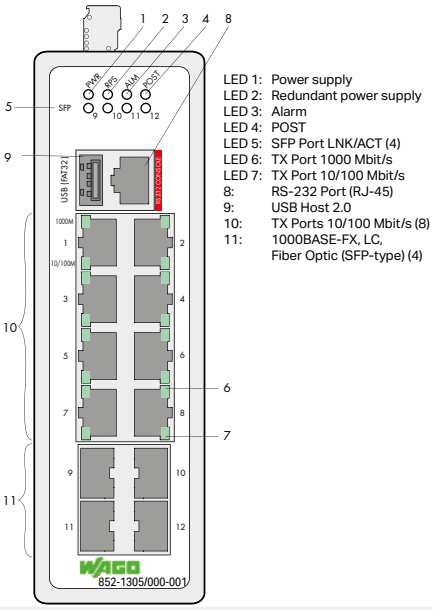
Industrial managed switches ▶ 8 Ports 1000BASE-T; 4 Slots 1000BASESX/LX; USB

852-1305/000-001



LED 1: Power supply
LED 2: Redundant power supply
LED 3: Alarm
LED 4: POST
LED 5: SFP Port LNK/ACT (4)
LED 6: TX Port 1000 Mbit/s
LED 7: TX Port 10/100 Mbit/s
8: RS-232 Port (RJ-45)
9: USB Host 2.0
10: TX Ports 10/100 Mbit/s (8)
11: 1000BASE-FX, LC, Fiber Optic (SFP-type) (4)

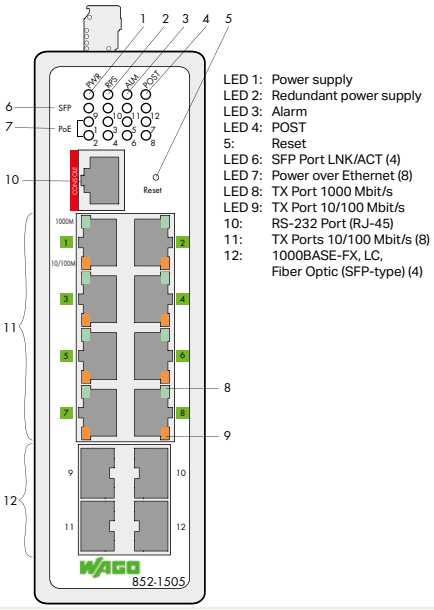
Item No.	**852-1305/000-001**
Order Text	**Managed-Switch; 8Port 1000BASE-T; 4Slot 1000BASE-SX/LX; USB**

Technical Data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 1000BASE-T or 100BASE-TX (RJ-45)
Number of optical fiber ports	4 x 1000BASE-SX/LX (SFP slot)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3z 1000BASE-SX/LX; IEEE 802.3x Flow Control; IEEE 802.1d Spanning Tree Protocol (STP); IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1s Multiple Spanning Tree Protocol (MSTP); IEEE 802.1Q VLAN Tagging; IEEE 802.1p Prioritization; IEEE 802.1X Port Authentication; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); IEEE 802.3ad Link Aggregation; IEEE 1588v2 Precision Time Protocol (PTP); ITU-T G8032v1/v2 Ethernet Ring Protection Switching (ERPS)
Redundancy function	Redundant DC power supply; STP; RSTP; MSTP; Jet Ring < 300 ms; Xpress Ring < 20 ms; Dual Homing < 20 ms; Dual Ring; ERPSv2 < 50 ms; LCAP
Configuration options	DIP switch for signal contact; Web-Based Management; Command Line Interface; SNMPv1/v2c/v3; USB storage medium
Diagnostics	Signal contact; Modbus TCP; Port status; Port statistics; Port load; Traffic monitor; SFP information; Syslog; Mail alarm; SNMP traps; Loop detection; ...
MAC table (size)	16000 addresses
Jumbo frame size	10000 Byte
Supply voltage	12 ... 48 VDC
Power consumption (max.)	18 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45; Fiber optic: 4 x SFP; LC fiber-optic connector
Surrounding air temperature (operation)	-40 ... 70 °C
Dimensions W x H x D	(50 x 162 x 120) mm
Approvals	CE; cULus OrdLoc
Data sheet and further information, see:	wago.com/852-1305/000-001

Accessories	**Item No.**
SFP Module 1000BASE; ZX Single-Mode 1550 nm LC; 80 km; Extended temperature range; DDM	852-1280
SFP Module 1000BASE; SX Multi-Mode 850 nm LC; 0.55 km; Extended temperature range; DDM	852-1200
SFP Module 1000BASE; LX Single-Mode 1310 nm LC; 10 km; Extended temperature range; DDM	852-1210

Industrial managed switches ▶ 8 Ports 1000BASE-T; 4-Slot 1000BASE-SX/LX; 8 * Power over Ethernet

852-1505



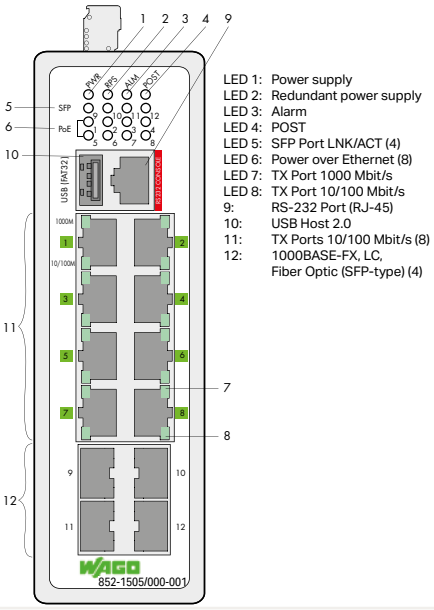
Item No.	**852-1505**
Order Text	**Managed-Switch; 8-Port Gb; 4-Slot 1000BASE-SX/LX; 8PoE**

Technical Data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 1000BASE-T or 100BASE-TX (RJ-45); 8 x PoE+ (Power over Ethernet)
Number of optical fiber ports	4 x 1000BASE-SX/LX (SFP slot)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3z 1000BASE-SX/LX; IEEE 802.3ad Port Trunk with LACP; IEEE 802.3x Flow Control; IEEE 802.1d Spanning Tree Protocol (STP); IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1s Multiple Spanning Tree Protocol (MSTP); IEEE 802.1Q VLAN Tagging; IEEE 802.1p Prioritization; IEEE 802.1X Port Authentication; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); IEEE 1588v2 Precision Time Protocol (PTP); IEEE 802.3af Power over Ethernet (PoE); IEEE 802.3at High Power over Ethernet (PoE+); ITU-T G8032v1/v2 Ethernet Ring Protection Switching (ERPS)
Redundancy function	Redundant DC power supply; STP; RSTP; MSTP; Jet Ring < 300 ms; Xpress Ring < 20 ms; Dual Homing < 20 ms; Dual Ring; ERPSv2 < 50 ms; LCAP
Configuration options	DIP switch for signal contact; Command Line Interface; SNMPv1/v2c/v3
Diagnostics	Signal contact, Modbus/TCP, port status, port statistics, port load, traffic monitor, SFP information, syslog, mail alarm, SNMP traps
MAC table (size)	16000 addresses
Jumbo frame size	10000 Byte
Supply voltage	48 … 57 VDC
Power consumption (max.)	18 W
Power consumption note	258 W with 8 PoE+
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45; Fiber optic: 4 x SFP; LC fiber-optic connector
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(50 x 162 x 120) mm
Approvals	CE
Data sheet and further information, see:	wago.com/852-1505

Accessories	**Item No.**
SFP Module 1000BASE; ZX Single-Mode 1550 nm LC; 80 km; Extended temperature range; DDM	852-1280
SFP Module 1000BASE; SX Multi-Mode 850 nm LC; 0.55 km; Extended temperature range; DDM	852-1200
SFP Module 1000BASE; LX Single-Mode 1310 nm LC; 10 km; Extended temperature range; DDM	852-1210

Industrial managed switches ▶ 8 Ports 1000BASE-T; 4 Slots 1000BASESX/LX; 8 * Power over Ethernet; USB

852-1505/000-001



LED 1: Power supply
LED 2: Redundant power supply
LED 3: Alarm
LED 4: POST
LED 5: SFP Port LNK/ACT (4)
LED 6: Power over Ethernet (8)
LED 7: TX Port 1000 Mbit/s
LED 8: TX Port 10/100 Mbit/s
9: RS-232 Port (RJ-45)
10: USB Host 2.0
11: TX Ports 10/100 Mbit/s (8)
12: 1000BASE-FX, LC, Fiber Optic (SFP-type) (4)

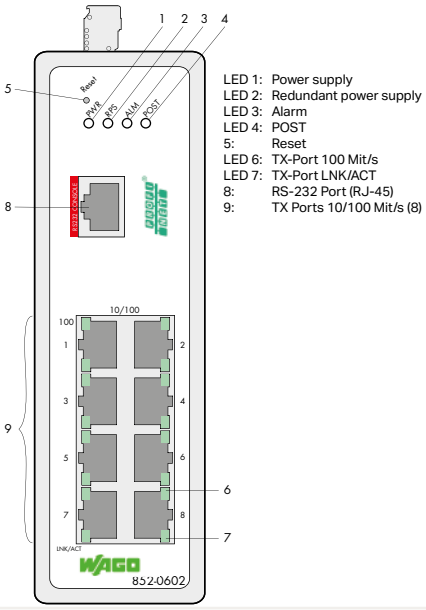
Item No.	**852-1505/000-001**
Order Text	**Managed-Switch; 8Port 1000BASE-T; 4Slot 1000BASE-SX/LX; EXT; 8PoE; USB**

Technical Data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 1000BASE-T or 100BASE-TX (RJ-45); 8 x PoE+ (Power over Ethernet)
Number of optical fiber ports	4 x 1000BASE-SX/LX (SFP slot)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3z 1000BASE-SX/LX; IEEE 802.3x Flow Control; IEEE 802.1d Spanning Tree Protocol (STP); IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1s Multiple Spanning Tree Protocol (MSTP); IEEE 802.1Q VLAN Tagging; IEEE 802.1p Prioritization; IEEE 802.1X Port Authentication; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); IEEE 802.3ad Link Aggregation; IEEE 1588v2 Precision Time Protocol (PTP); IEEE 802.3af Power over Ethernet (PoE); IEEE 802.3at High Power over Ethernet (PoE+); ITU-T G8032v1/v2 Ethernet Ring Protection Switching (ERPS)
Redundancy function	Redundant DC power supply; STP; RSTP; MSTP; Jet Ring < 300 ms; Xpress Ring < 20 ms; Dual Homing < 20 ms; Dual Ring; ERPSv2 < 50 ms; LCAP
Configuration options	DIP switch for signal contact; Web-Based Management; Command Line Interface; SNMPv1/v2c/v3; USB storage medium
Diagnostics	Signal contact; Modbus TCP; Port status; Port statistics; Port load; Traffic monitor; SFP information; Syslog; Mail alarm; SNMP traps; Loop detection; …
MAC table (size)	16000 addresses
Jumbo frame size	10000 Byte
Supply voltage	24 … 57 VDC
Power consumption (max.)	18 W
Power consumption note	258 W with 8 PoE+
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45; Fiber optic: 4 x SFP; LC fiber-optic connector
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(50 x 162 x 120) mm
Approvals	CE; DNV GL; cULus OrdLoc
Data sheet and further information, see:	wago.com/852-1505/000-001

Accessories	**Item No.**
SFP Module 1000BASE; ZX Single-Mode 1550 nm LC; 80 km; Extended temperature range; DDM	852-1280
SFP Module 1000BASE; SX Multi-Mode 850 nm LC; 0.55 km; Extended temperature range; DDM	852-1200
SFP Module 1000BASE; LX Single-Mode 1310 nm LC; 10 km; Extended temperature range; DDM	852-1210

Industrial managed switches ▸ 8 Ports 100BASE-TX; PROFINET

852-602

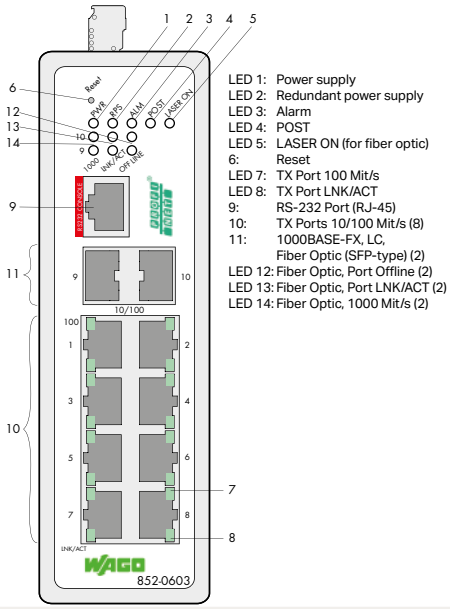


Item No.	**852-602**
Order Text	**Managed-Switch; 8Port 100BASE-TX; PROFINET; T**

Technical Data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 100BASE-TX (RJ-45)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3x Flow Control; IEEE 802.1d Spanning Tree Protocol (STP); IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1s Multiple Spanning Tree Protocol (MSTP); IEEE 802.1Q VLAN Tagging; IEEE 802.1p Class of Service; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); PROFINET Conformance Class B
Redundancy function	Redundant DC power supply; STP; RSTP; MSTP; Media redundancy protocol as manager or client
Configuration options	DIP switch for signal contact; Web-Based Management; Command Line Interface; SNMPv1/v2c/v3
Diagnostics	Signal contact; Port status; Port statistics; Port load; Traffic monitor; SFP information; Syslog; SNMP traps; PN diagnostics (cyclic and acyclic)
MAC table (size)	16000 addresses
Jumbo frame size	10000 Byte
Supply voltage	12 … 60 VDC
Power consumption (max.)	12 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(50 x 162 x 120) mm
Approvals	CE; cULus OrdLoc
Data sheet and further information, see:	wago.com/852-602

Industrial managed switches ▶ 8 Ports 100BASE-TX; 2 Slots 1000BASE-SX/LX; PROFINET

852-603



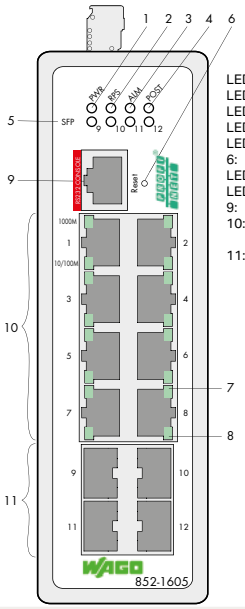
Item No.	852-603
Order Text	**Managed-Switch; 8Port 100BASE-TX; 2Slot 1000BASE-SX/LX; PROFINET; T**

Technical Data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 100BASE-TX (RJ-45)
Number of optical fiber ports	2 x 1000BASE-SX/LX/ZX or 100BASE-FX (SFP slot)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3z 1000BASE-SX/LX; IEEE 802.3x Flow Control; IEEE 802.1d Spanning Tree Protocol (STP); IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1s Multiple Spanning Tree Protocol (MSTP); IEEE 802.1Q VLAN Tagging; IEEE 802.1p Class of Service; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); PROFINET Conformance Class B
Redundancy function	Redundant DC power supply; STP; RSTP; MSTP; Media redundancy protocol as manager or client
Configuration options	DIP switch for signal contact; Web-Based Management; Command Line Interface; SNMPv1/v2c/v3
Diagnostics	Signal contact; Port status; Port statistics; Port load; Traffic monitor; SFP information; Syslog; SNMP traps; PN diagnostics (cyclic and acyclic)
MAC table (size)	16000 addresses
Jumbo frame size	10000 Byte
Supply voltage	12 … 60 VDC
Power consumption (max.)	12 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45; Fiber optic: 2 x SFP; LC fiber-optic connector
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(50 x 162 x 120) mm
Approvals	CE; cULus OrdLoc
Data sheet and further information, see:	wago.com/852-603

Accessories	Item No.
SFP module 2: 1310nm; 100Base-FX Multi-Mode LC; 2 km	852-201/107-002
SFP module 30: 1310nm; 100Base-FX Single-Mode LC; 30 km	852-201/107-030
SFP Module 1000BASE; ZX Single-Mode 1550 nm LC; 80 km; Extended temperature range; DDM	852-1280
SFP Module 1000BASE; SX Multi-Mode 850 nm LC; 0.55 km; Extended temperature range; DDM	852-1200
SFP Module 1000BASE; LX Single-Mode 1310 nm LC; 10 km; Extended temperature range; DDM	852-1210

Industrial managed switches ▶ 8 Ports 1000BASE-T; 4 Slots 1000BASE-SX/LX; PROFINET

852-1605

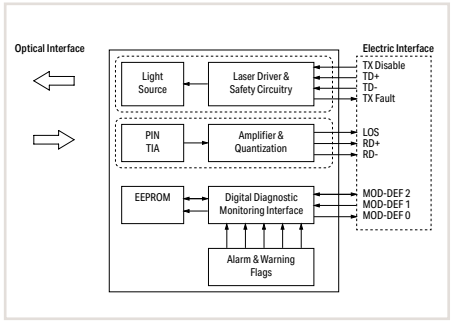


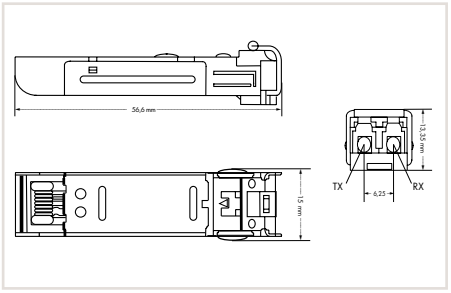
LED 1: Power supply
LED 2: Redundant power supply
LED 3: Alarm
LED 4: POST
LED 5: SFP Port LNK/ACT (4)
6: Reset
LED 7: TX Port 1000 Mbit/s
LED 8: TX Port 10/100 Mbit/s
9: RS-232 Port (RJ-45)
10: T Ports 10/100/1000 Mbit/s (8)
11: 1000BASE-FX, LC, Fiber Optic (SFP-type) (4)

Item No.	**852-1605**
Order Text	**Managed-Switch; 8Port 1000BASE-T; 4Slot 1000BASE-SX/LX; PROFINET; T**
Technical Data	
Switching mode	Store-and-forward; non-blocking
Number of copper ports	8 x 1000BASE-T or 100BASE-TX (RJ-45)
Number of optical fiber ports	4 x 1000BASE-SX/LX (SFP slot)
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3z 1000BASE-SX/LX; IEEE 802.3x Flow Control; IEEE 802.1d Spanning Tree Protocol (STP); IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1s Multiple Spanning Tree Protocol (MSTP); IEEE 802.1Q VLAN Tagging; IEEE 802.1p Class of Service; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); PROFINET Conformance Class B
Redundancy function	Redundant DC power supply; STP; RSTP; MSTP; Media redundancy protocol as manager or client
Configuration options	DIP switch for signal contact; Web-Based Management; Command Line Interface; SNMPv1/v2c/v3
Diagnostics	Signal contact; Port status; Port statistics; Port load; Traffic monitor; SFP information; Syslog; SNMP traps; PN diagnostics (cyclic and acyclic)
MAC table (size)	16000 addresses
Jumbo frame size	10000 Byte
Supply voltage	12 … 60 VDC
Power consumption (max.)	12 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology: communication/fieldbus	Copper cable: 8 x RJ-45; Fiber optic: 4 x SFP; LC fiber-optic connector
Surrounding air temperature (operation)	-40 … 70 °C
Dimensions W x H x D	(50 x 162 x 120) mm
Approvals	CE; cULus OrdLoc
Data sheet and further information, see:	wago.com/852-1605
Accessories	**Item No.**
SFP Module 1000BASE; ZX Single-Mode 1550 nm LC; 80 km; Extended temperature range; DDM	852-1280
SFP Module 1000BASE; SX Multi-Mode 850 nm LC; 0.55 km; Extended temperature range; DDM	852-1200
SFP Module 1000BASE; LX Single-Mode 1310 nm LC; 10 km; Extended temperature range; DDM	852-1210

10

Industrial Switches – Accessories
SFP Modules

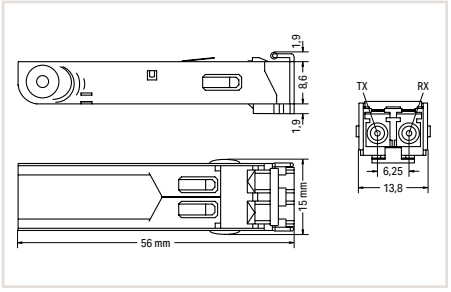




Features:
- Duplex LC optical connector
- Small Form-Factor Pluggable (SFP) industry-standard design
- Compliant with Fast ETHERNET and Gigabit ETHERNET (IEEE802.3z) standards
- Differential LVPECL inputs and outputs
- Supply voltage: 3.3 V
- TTL signal detect indicator
- Hot-pluggable capability

Item Description	SFP Module 1000BASE; SX Multi-Mode 850 nm LC; 0.55 km; Extended Temperature Range; DDM	SFP Module 1000BASE; LX Single-Mode 1310 nm LC; 10 km; Extended Temperature Range; DDM	SFP Module 1000BASE; ZX Single-Mode 1550 nm LC; 80 km; Extended Temperature Range; DDM
Item No.	852-1200	852-1210	852-1280
Technical Data			
Optical fiber type	Multi-mode	Single-mode	
Cable length (max.)	300 m; 550 m	10 km	80 km
Cable type	62.5/125 µm, 50/125 µm	9/125 µm	
Wavelength	850 nm	1310 nm	1550 nm
Surrounding air temperature (operation)	–40 … +85 °C	–40 … +85 °C	

Item Description	SFP Module 2: 1310 nm; 100BASE-FX Multi-Mode LC; 2 km	SFP Module 30: 1310 nm; 100BASE-FX Single-Mode LC; 30 km
Item No.	852-201/107-002	852-201/107-030
Technical Data		
Optical fiber type	Multi-mode	Single-mode
Cable length (max.)	2 km	30 km
Cable type	62.5/125 µm, 50/125 µm	9/125 µm
Wavelength	1310 nm	1310 nm
Surrounding air temperature (operation)	–40 … +70 °C	0 … +60 °C

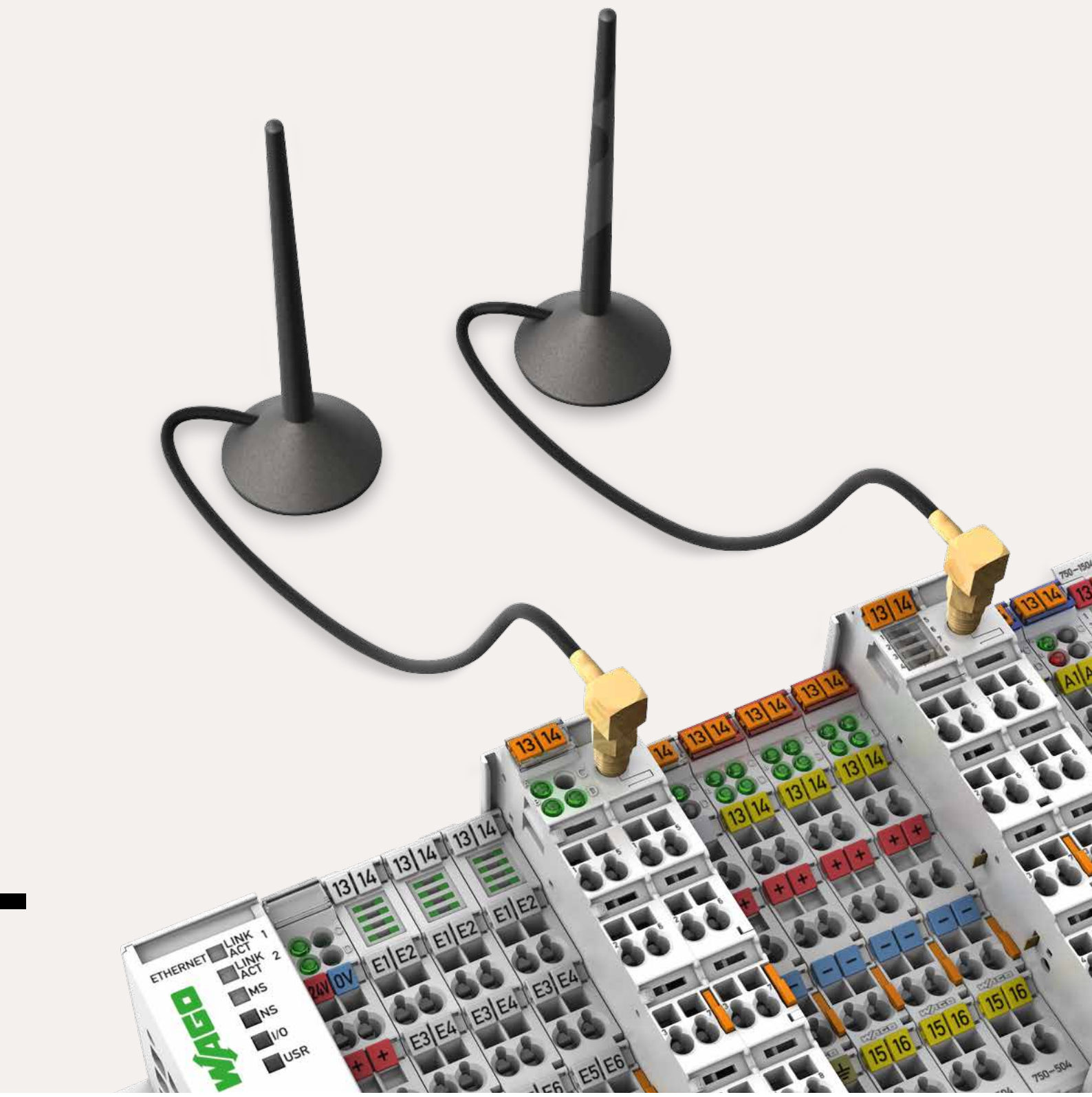


Features:
- Low Power
- Coated PCB
- Extended surrounding air temperature: -40 …100 °C
- High impulse withstand voltage: 1.2 kVDC
- Duplex LC optical connector
- Small Form-Factor Pluggable (SFP) industry-standard design
- 125 Mbps IEEE802.3u 100BASE-FX
- Compliant with the Fast ETHERNET standard
- Differential LVPECL inputs and outputs
- Supply voltage: 3.3 V
- TTL signal detect indicator
- Hot-pluggable capability

Item Description	SFP Module 100BASE; FX Multi-Mode 1310 nm LC; 2 km; DDM; Extended Temperature Range; DDM
Item No.	852-202
Technical Data	
Optical fiber type	Multi-mode
Cable length (max.)	2 km
Cable type	62.5/125 µm, 50/125 µm
Wavelength	1310 nm
Surrounding air temperature (operation)	–40 … +100 °C

Industrial Switches – Accessories
DNV Mounting Adapter with Marine Approval

Item Description	DNV Mounting Adapter; for 852-111/852-1111 Industrial Switches; Marine Approval
Item No.	**852-9101**
Technical Data	
Dimensions W x H x D	20 x 9.6 x 102.2 mm
Weight	32.8 g
For data sheet and additional information, see:	wago.com/852-9101



Radio Technology

Radio Technology

- *Bluetooth*®
- WLAN
- EnOcean®

Wireless Technology – *Bluetooth*®, WLAN and EnOcean® Components
Contents

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Radio Technology
General Product Information

Wireless Technology in the Industrial Environment

Wireless technology can support wired applications or enable completely new applications.

In mobile or movable systems, wireless technology is the first choice when greater distances or obstacles must be overcome. It is an alternative for applications in which wired solutions are not economical or technically feasible.

Various wireless technologies can be used depending on the application.

Bluetooth® – Robust, Flexible, High-Performance

Well-known in consumer electronics, *Bluetooth*® technology is also well-suited to industrial use with its internationally approved frequency range, a very robust transmission technology (frequency hopping), real-time response and a range of up to 400 m. It makes wireless process data communication between two stations possible (point-to-point communication), and also enables the setup of a piconet in which a *Bluetooth*® master can communicate with up to seven slaves, e.g., decentralized mobile sensors.
In addition, *Bluetooth*® can be used as the radio system for commissioning.
Features:
- Secure transmission (encrypted)
- AFH (Adaptive Frequency Hopping)
- Adaptive transmission power
- Uses the license-free 2.4 GHz frequency band

WLAN – Full IT Integration

WLAN makes it easy to set up a wireless transmission link for ETHERNET protocols. This can be standard ETHERNET protocols, e.g., for communication between a smartphone and automation components. Industrial fieldbus protocols such as PROFINET, Modbus TCP or Ethernet/IP can also be used to link mobile equipment with stationary equipment. Ranges up to 400 m are possible depending on the transmission technology used.

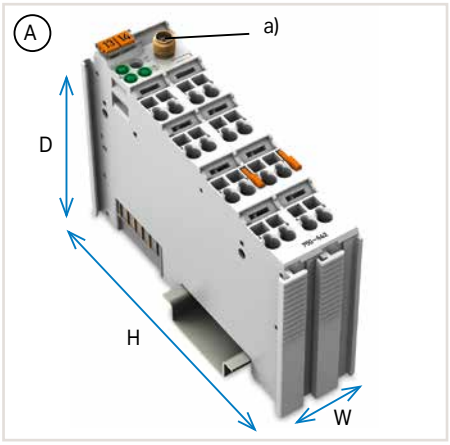
EnOcean® – The Radio Standard in Building Automation

Wireless switches and sensors based on EnOcean® technology harvest available energy to power themselves, e.g., kinetic energy from actuating a switch or sensors powered by ambient light. This energy harvesting completely eliminates maintenance of the radio transmitter at a range of up to 300 m in open air (30 m in buildings).

Advantages:

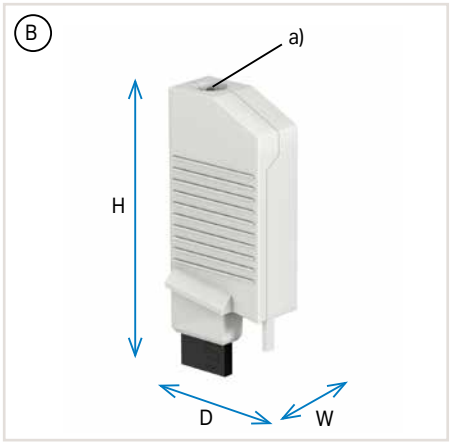
- Branch and application-specific – always the right radio system
- Industrial design – high-performance, rugged and safe
- Tightly integrated into WAGO automation technology

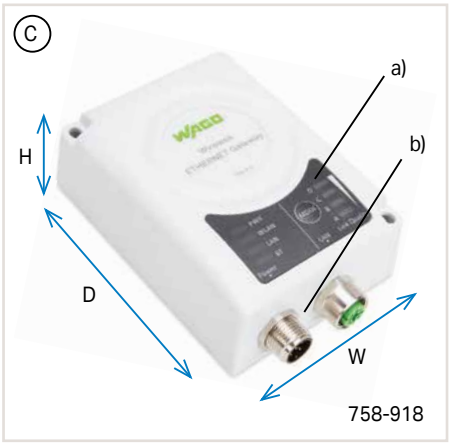
Radio Technology
Interfaces and Types



Communication Module for I/O System (A)
- For use with:
  - Controllers (PFC)
  - Fieldbus Couplers (FC) I/O System 750
- Antenna connection (a)
- W x H x D (mm) 24 x 100 x 72, plus approx. 6.5 mm of excess length with antenna socket

Radio Adapter (B)
- For use with:
  - PFC, 750 XTR Series PFC
  - FC, 750 XTR Series FC
  - Signal Conditioners (2857 and 857 Series)
- Integrated antenna
- Diagnostic LED (a)
- W x H x D (mm) 15 x 50 x 19





758-918

ETHERNET Gateway (C)
- Wireless transmission via WLAN (IEEE802.11a/b/g/d/n/r), *Bluetooth*® or *Bluetooth*® Low Energy
- Works as an access point, client or gateway
- Two internal 2.4 GHz and 5 GHz dual-band antennas and an integrated 2.4 GHz MIMO antenna
- Status and diagnostic LEDs (a)
- M12 connectors for both network connection and power supply (b)
- Protection type: IP65
- W x H x D (mm): 66 x 36.2 x 91

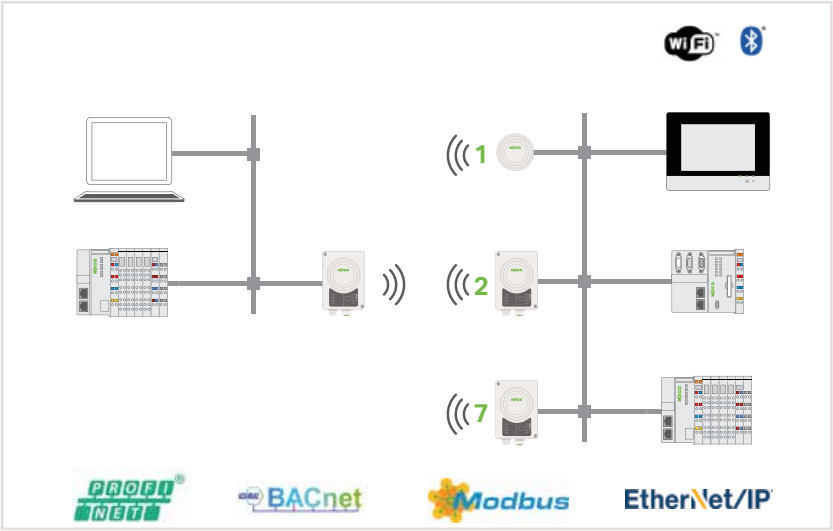
758-919

Wireless Access Point (D)
- Wireless transmission via WLAN (IEEE802.11a/b/g/d/n/r), *Bluetooth*® or *Bluetooth*® Low Energy
- Internal 2.4 GHz and 5 GHz dual-band antenna
- Protection type (top): IP66/IP67 (outside of unit)
- M50 through-panel installation (cut-out: 50.5 mm)

Switch Inserts (E)
- Universal switch inserts for standard switch series in building automation
- Compatible with manufacturer programs from BERKER, GIRA, JUNG, MERTEN

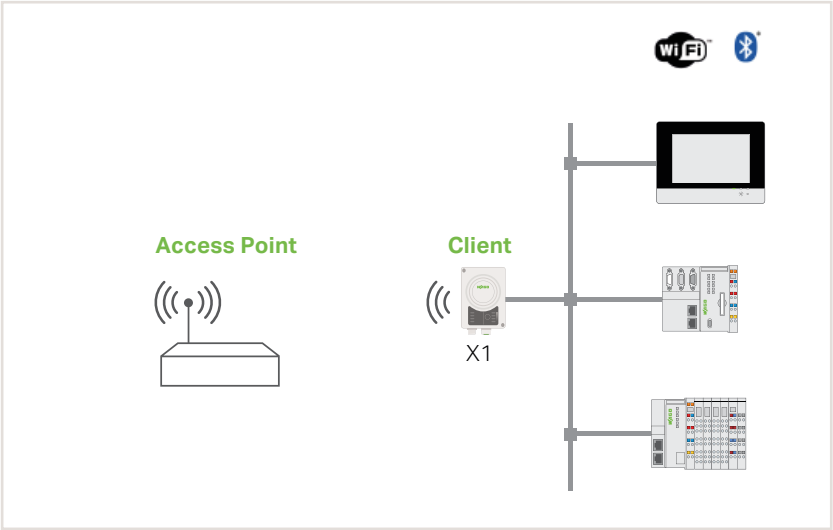
Radio Technology
Application and Installation Instructions

ETHERNET Bridge
- Transmission of each TCP/IP protocol along with prioritized PROFINET RT and EtherNet/IP™ frames
- Pairing via device's push-button (758-918 only)
- Up to 7 clients
- Use of Wi-Fi or *Bluetooth*®



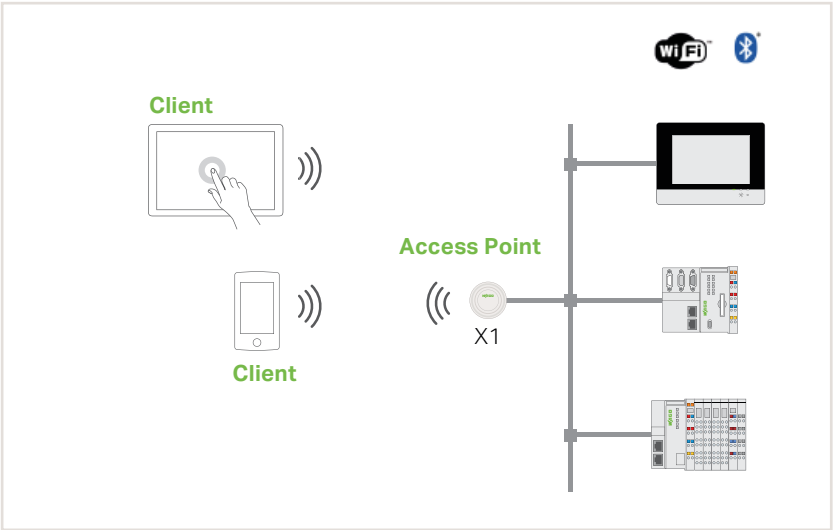
Client for Existing Access Point
- Connection to a Wi-Fi 802.11a/b/g/n/d/r network
- Protocols like Modbus TCP, EtherNet/IP™, BACnet/IP ...
- Possibility of connecting multiple devices after the client

Note X1: 758-918 or 758-919



Access Point
- Setup of a Wi-Fi 802.11a/b/g/n/d/r or *Bluetooth*® network
- Connection of tablets, smartphones ...
- Up to 7 clients simultaneously

Note X1: 758-918 or 758-919



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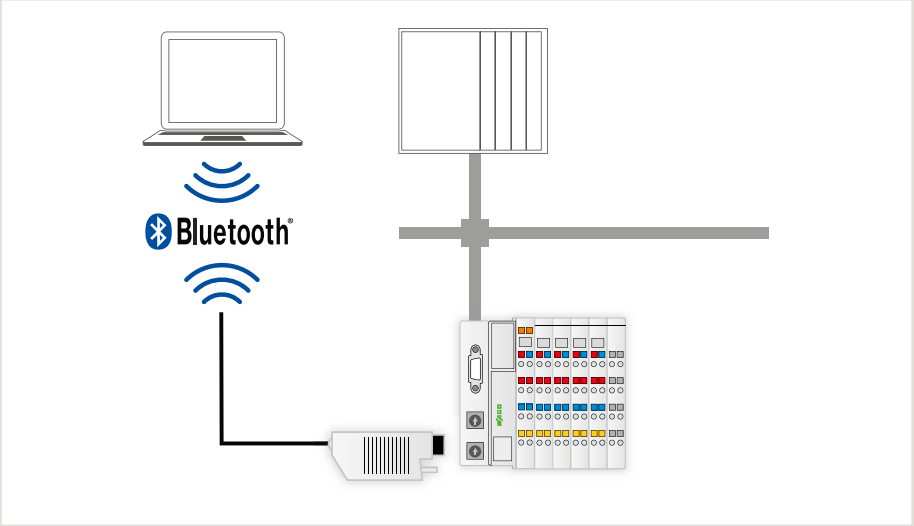
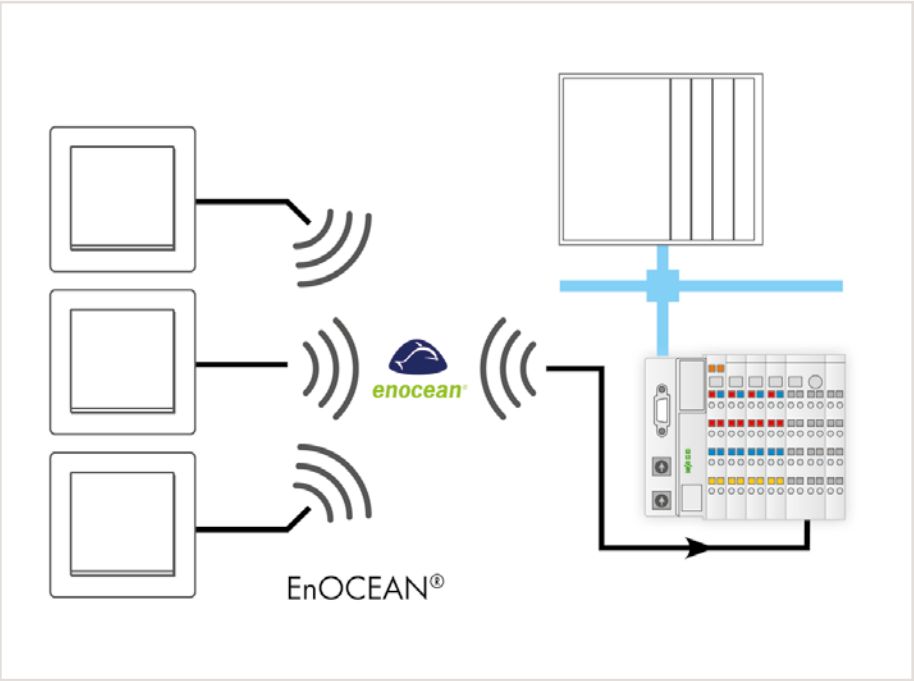
Radio Technology
Application and Installation Instructions

Wireless Engineering
- Commissioning, maintenance
- Connect WAGO software on a PC/notebook to a product's service interface
- Controllers
- Controllers XTR
- Fieldbus Couplers I/O System 750
- Fieldbus Couplers I/O System 750 XTR
- Temporary install via compact *Bluetooth®* Adapter



Integration into the WAGO I/O System via EnOcean® Radio Technology
- Radio receiver in the I/O module
- Operation on:
  - Controllers
  - Fieldbus couplers
- Range: up to 300 m in open air, approx. 30 m in buildings



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WLAN ETHERNET Gateway

Power connector:
M12 plug, A-coded

1: Vin + (9 … 30 VDC)
2: Digital input GND
3: Vin GND (0 V)
4: Digital input + (9 … 30 VDC)
5: Functional ground

ETHERNET connector:
M12 socket, D-coded

1: Transmit +
2: Receive +
3: Transmit -
4: Receive -

Item Description	Wireless ETHERNET Gateway	
Version		**External Antenna**
Item No.	**758-918**	**758-918/000-001**
Order Text	Wireless ETHERNET Gateway	Wireless ETHERNET Gateway; External Antenna
Technical Data		
Wireless technology	*Bluetooth*®: 4.0; WLAN: 802.11a/b/g/d/e/i/h	
Topology	Peer-to-peer connection	
Security authentication	WLAN: WPA/WPA2 PSK; LEAP; PEAP	
Security encryption	WLAN: none; WEP64; WEP128; TKIP; AES/CCMP	
Frequency band	ISM band; 2.4 GHz (*Bluetooth*®, WLAN); ISM band; 5 GHz (WLAN)	
Transmission range	Up to 400 m*	
Antenna	Internal directional antenna	External dipole antenna (3dBi); included in delivery
Supply voltage	24 VDC (9 … 30 V)	
Connectors	ETHERNET connection: M12 connector, D-coded Power connection: M12 connector, A-coded; RP-SMA socket for external antenna	
Configuration	Simple push-button operation and Web-Based Management	
Number of inputs	1 (trigger input: 9 … 30 VDC)	
Surrounding air temperature (operation)	–30 … +65 °C	
Dimensions W x H x D	67.8 × 33.2 x 92.7	
Protection type	IP65	
Approvals	CE	
For data sheet and additional information, see:	wago.com/758-918	

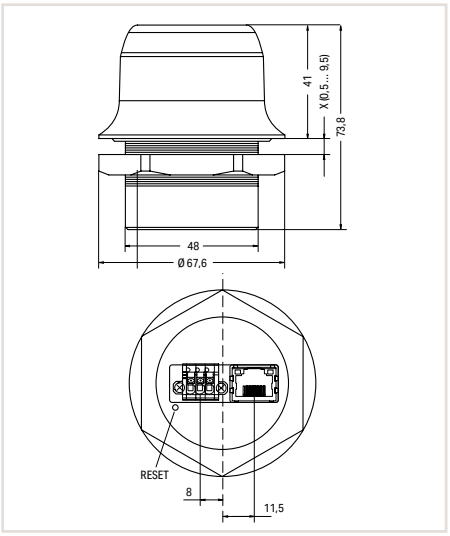
Accessories	Item No.
ETHERNET/PROFINET Cable; M12 plug; straight; D-coded; 2 m	**756-1201/060-020**
Power Cable; M12 socket; straight; A coded; 2 m	**756-3102/040-020**
PROFINET RJ-45 Plug; IP20	**750-976**

*The maximum range in the field decreases within buildings and varies depending on building materials and spatial geometry. Therefore, range specifications within buildings can only represent a typical value that can normally be achieved. More detailed information is available in the manual.

WAGO's Wireless ETHERNET Gateway simplifies the creation of a wireless transmission link for ETHERNET protocols (e.g., PROFINET, Modbus/TCP, EtherNet/IP™). The gateway works as a cable substitute to create a robust, industry-proven *Bluetooth*® or WLAN link between two automation devices.
This gateway supports various configurations and can therefore also be operated as an access point.
IP65 protection type and an external antenna allow installation of the Wireless ETHERNET Gateway within a conductive housing. The external antenna must be mounted on the outside of the housing. Simple push-button operation rapidly connects two Wireless ETHERNET Gateways.
Additional settings can be made via Web-Based Management.

Note:
Two Wireless ETHERNET Gateways of the same type are required to establish a peer-to-peer connection.

Wireless Access Point



Item Description	Wireless Access Point
Item No.	758-919
Order Text	Wireless Access Point

Technical Data	
Wireless technology	*Bluetooth*® 2.1; *Bluetooth*® 4.0 (Low Energy); WLAN: IEEE 802.11 a, b, g, n, d, r
Frequency band	ISM band, 2.4 GHz (*Bluetooth*®, WLAN); ISM band, 5 GHz (WLAN)
ETHERNET protocols	IP; TCP; UDP; HTTP; LLDP; ARP; DHCP client/server; DNS support; transparent transmission of PROFINET IO; EtherNet/IP™; Modbus-TCP or another TCP/UDP-based protocol
Antenna	Internal 2.4 GHz and 5 GHz broadband antenna
Transmission range	Up to 200 m in open air*
Supply voltage	19 … 36 VDC
Power consumption (max.)	1.7 W
Configuration	Web-Based Management
Maximum number of clients	7
WLAN	
Transmitter power	15 dBm EIRP
Operating modes	Wireless access point, wireless client or gateway mode
Communication standards	IEEE 802.11 a, b, g, n, d, r
Data rate (net) (max.)	65 Mbit/s
Security	WEP 64/128; WPA; WPA-PSK and WPA2; TKIP and AES/CCMP; LEAP; PEAP including MS-CHAP
Bluetooth® 2.1	
Transmitter power	11 dBm EIRP
Supported profiles	PAN (PANU & NAP)
Operating modes	Access point, client or gateway mode
Data rate (net)	1 Mbit/s
Security	NIST-compliant; FIPS-approved (authentication and authorization, encryption and data security, privacy and discretion)
Bluetooth® 4.0 (Low Energy)	
Transmitter power	7 dBm EIRP
Supported profiles	GATT
Operating modes	Central device
Data rate (net)	200 Kbit/s
Security	AES-CCM encryption
Connector	RJ-45; 10/100BASE-T (Auto MDI/MDIX & cross-over detection); PoE supply: 44 … 57 VDC; DTE type 1 per IEEE 802.3af
Dimensions	Height: 75 mm (91 mm with connector); Outside height: 41 mm; Diameter: 68 mm
Weight	84 g
Surrounding air temperature (operation)	−40 … +65 °C
Protection type	Top (outside of unit): IP66/IP67/UL NEMA 4X ; Base (inside of unit): IP21
Mounting	M50 through-panel installation (cut-out = 50.5 mm)
Approvals	CE; UL 61010 E198726; FCC; IC: 5325A-0965, for indoor use only (5 GHz)
For data sheet and additional information, see:	wago.com/758-919

*The maximum range in the field decreases within buildings and varies depending on building materials and spatial geometry. Therefore, range specifications within buildings can only represent a typical value that can normally be achieved. More detailed information is available in the manual.

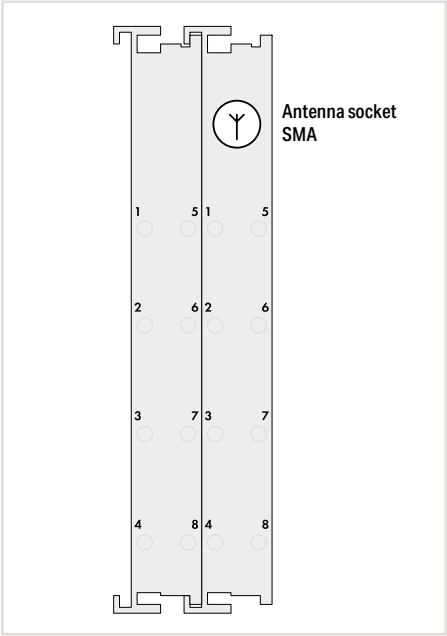
Bluetooth® Adapter

Item Description	*Bluetooth*® Adapter
Item No.	750-921
Order Text	*Bluetooth*® Adapter
Technical Data	
Transmission range	20 m in open air (Class 2)*
Data transmission rate	9600 … 115000 bit/s
Frequency range	ISM band; 2402 … 2483 MHz
Communication type	Peer-to-peer connection
Supported profile	Serial Port Profile (SPP)
Wireless technology	*Bluetooth*® 2.1
Antenna	Integrated
Connectors	4-pole service connectors
Configuration	AT commands (e.g., via HyperTerminal)
Function	Master or slave
LED	Operating mode
Security encryption	128-bit encryption
Surrounding air temperature (operation)	–20 … +60 °C
Dimensions W x H x D	15 x 50 x 19 mm
Approvals	*Bluetooth*® approval; CE
For data sheet and additional information, see:	wago.com/750-921

*The maximum range in the field decreases within buildings and varies depending on building materials and spatial geometry. Therefore, range specifications within buildings can only represent a typical value that can normally be achieved. More detailed information is available in the manual.

WAGO's *Bluetooth*® Adapter wirelessly connects a notebook computer with *Bluetooth*® functionality to the service interface of the fieldbus coupler/controller. It also provides an active connection to a controller.
As a cable substitute, the *Bluetooth*® Adapter allows communication between two controllers, as well as between fieldbus couplers/controllers via WAGO Software Tools.
The adapter is supplied via both service interface and power supply of the coupler/controller.

EnOcean® Radio Receiver



Item Description	EnOcean® Radio Receiver
Version	**Standard**
Item No.	**750-642**
Order Text	EnOcean® Radio Receiver

Technical Data	
Antenna	External via SMA socket
Frequency band	868.3 MHz
Transmission range	Up to 300 m in open field (typ. 30 m in buildings, see manual)*
Transmission protocol (radio telegram)	EnOcean®
Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	80 mA
Data width (internal)	1 x 24-bit input/output (3-byte user data); 1 x 8-bit control/status
Surrounding air temperature (operation)	0 … +55 °C
Dimensions W x H x D	24 x 72 x 100 mm
Approvals	CE; KC; cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-642

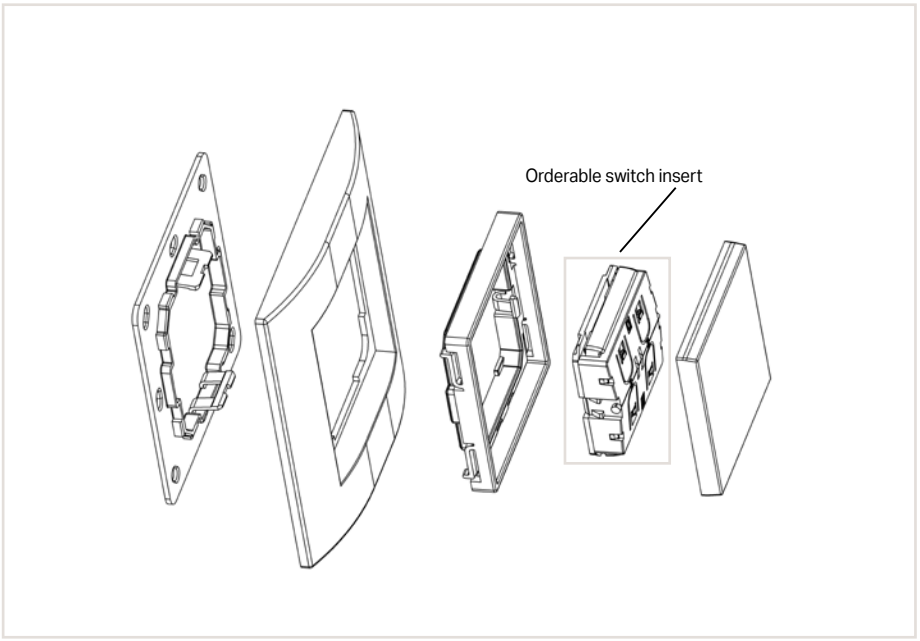
Accessories	Item No.
External Antenna	**758-910**

*The maximum range in the field decreases with use in buildings and changes depending on the building materials used and the spatial geometry. Therefore, range specifications within buildings can only represent a typical value that can normally be achieved. More detailed information is available in the manual.

WAGO's EnOcean® Radio Receiver captures radio telegrams from maintenance-free, self-powered and wireless switches/sensors based on EnOcean® radio technology.
The energy required for switch or sensor operation is produced by converting one type of energy (heat, solar or mechanical energy) into usable electrical energy.
To assess the transmission path, the LED (RSSI) indicates a sufficient input level.

Preprogrammed function blocks for WAGO Controllers make integration easy.

Radio Transmitter, EnOcean® easyfit PTM 250



Item Description	Radio Transmitter, EnOcean® easyfit PTM 250			
Version	**2-Channel Lighting Control**	**4-Channel Lighting Control**	**2-Channel Sunblind Control**	**4-Channel Sunblind Control**
Item No.	**758-940/001-000**	**758-940/003-000**	**758-940/002-000**	**758-940/004-000**
Order Text	Radio Transmitter; EnOcean® easyfit PTM 250; 2-Channel Light	Radio Transmitter; EnOcean® easyfit PTM 250; 4-Channel Light	Radio Transmitter; EnOcean® easyfit PTM 250; 2-Channel Sunblind	Radio Transmitter; EnOcean® easyfit PTM 250; 4-Channel Sunblind
Technical Data				
Integrated radio transmitter module	EnOcean® PTM 200			
Wireless technology	EnOcean® 868 MHz; RPS type 2			
Range	300 m in open air; 30 m (typ.) within buildings*			
Antenna	Integrated			
Total installation height	14 mm (frame lies directly on flat surface)			
Dimensions of rocker/frame cut-out/center plate	50 x 50 mm / 55 x 55 mm / 71 x 71 m			
Mounting	Flat surface; glued (double-sided mounting film enclosed) or screwed			
Color	Pure white			
Rocker switch variant	Rocker switch with neutral middle position	Series rocker switch	Rocker switch with neutral middle position	Series rocker switch
Relative humidity	95 % (non condensing)			
Surrounding air temperature (operation)	−25 … +65 °C			
Compatibility	BERKER, GIRA, JUNG, MERTEN			
Approvals	R&TTE, CE			
For data sheet and additional information, see:	wago.com/758-940			

WAGO's EnOcean® easyfit PTM 250 Radio Transmitter is a universal, extremely flat wireless switch insert with a maintenance-free energy generator. This universal switch insert fits in numerous frame types from various installation material suppliers. The base plate can be glued or screwed into position for easy attachment to glass as well as plaster. Integration into the frame is similar to universal inserts for antenna sockets.

The switch insert is delivered without frame. Frames must be ordered separately from the desired manufacturer!

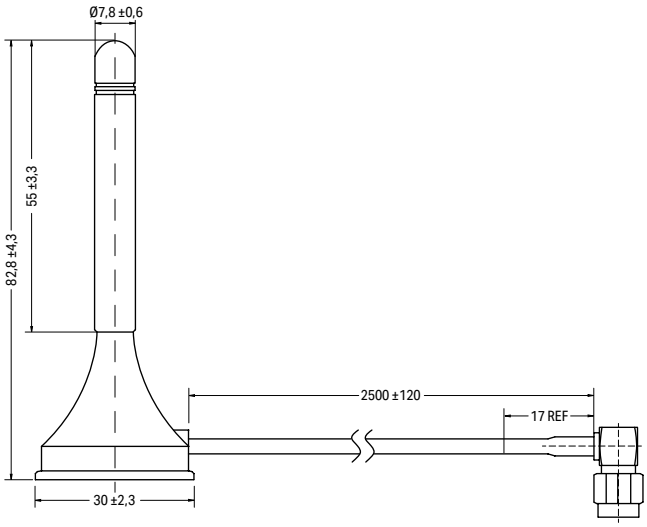
*The maximum range in the field decreases with use in buildings and changes depending on the building materials used and the spatial geometry. Therefore, range specifications within buildings can only represent a typical value that can normally be achieved. More detailed information is available in the manual.

External Antenna

Item Description	Magnetic-Mount Antenna; GSM 900/1800; External Antenna	Magnetic-Mount Antenna, WLAN/*Bluetooth*® 2.4 GHz; External Antenna
Item No.	**758-910**	**758-912**
Order Text	Magnetic-Mount Antenna; GSM 900/1800; External Antenna	Magnetic-Mount Antenna, WLAN/*Bluethooth*®; External Antenna
Technical Data		
Wireless technology	Mobile communications	*Bluetooth*®; WLAN
Frequency band	870 … 960 MHz; 1710 … 1880 MHz	2400 … 2485 MHz
VSWR	< 1.5	
Gain	0 dB	2 dBi
Power (max.)	20 W	
Mechanical Data		
Connectors	SMA angled plug + ferrite bead	SMA angled plug
Connection cable length	250 cm	250 cm
Mounting type	Magnetic stand	Magnetic stand

Notes on operating the antenna with WAGO's EnOcean® Radio Receivers:
- The antenna is to be mounted on a plate measuring at least 25 x 25 cm.
- The distance of interfering sources to the antenna and antenna line must be at least 30 cm.
- The free space between the antenna and the next wall must be at least 35 cm.
- The antenna cable must under no circumstances be bent sharply, or the antenna line may be irreversibly damaged (RG174 bending radius > 15 mm).

Magnetic-Mount Antenna; GSM/UMTS/LTE/*Bluetooth*®/WLAN



Item Description	Magnetic-Mount Antenna; with 2.5 m cable and SMA angled plug; GSM/UMTS/LTE/*Bluetooth*®/WLAN; 698-960, 1400-1518, 1710-2700 MHz
Item No.	**758-975**
Technical Data	
Wireless technology	GSM; UMTS; LTE; *Bluetooth*®; WLAN
Frequency band	B1 … B23; B25 … B30; B32 … B42; B48; B66; B74 … 76; B78 Frequency range: 698 … 960 MHz; 1400 … 1518 MHz; 1710 … 2700 MHz
Gain	3 dBi
Mechanical Data	
Connector	SMA angled plug
Connection cable length	2.5 m
Mounting type	Magnetic stand
Cable type	RG-174
Weight	44 g
Surrounding air temperature (operation)	−40 … +85 °C

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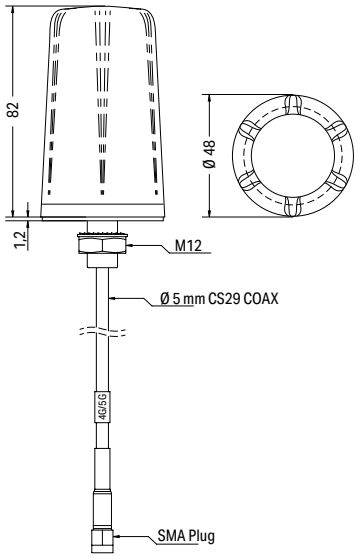
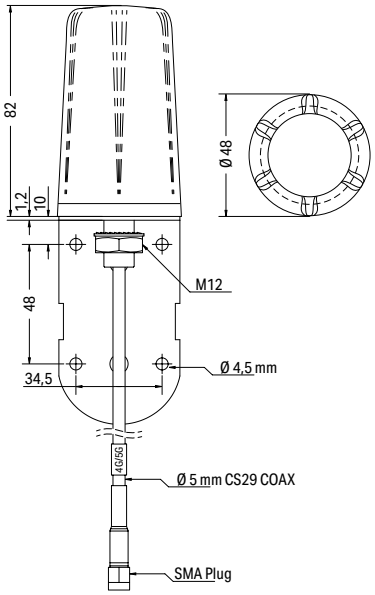
RF Antenna; GSM; UMTS; LTE; *Bluetooth*®; WLAN; 5G

758-974

758-974/000-001





Item Description	RF Antenna; with 2.5 m cable and SMA plug; GSM/ UMTS/LTE/*Bluetooth*®/WLAN; 698-960, 1710-6000 MHz; 2G/ 3G/ 4G/ 5G	RF Antenna; with 2.5 m cable and SMA plug; GSM/ UMTS/LTE/*Bluetooth*®/WLAN; 698-960, 1710-6000 MHz; 2G/ 3G/ 4G/ 5G
Item No.	**758-974**	**758-974/000-001**
Technical Data		
Wireless technology	GSM; UMTS; LTE; *Bluetooth*®; WLAN; 5G	GSM; UMTS; LTE; *Bluetooth*®; WLAN; 5G
Frequency band	617 … 960 MHz; 1710 … 6000 MHz	617 … 960 MHz; 1710 … 6000 MHz
Gain	617 … 960 MHz: 1dBi; 1710 … 2700 MHz: 4dBi; 3400 … 3800 MHz: 8dBi; 4900 … 6000 MHz: 9dBi	617 … 960 MHz: 1dBi; 1710 … 2700 MHz: 4dBi; 3400 … 3800 MHz: 8dBi; 4900 … 6000 MHz: 9dBi
Mechanical Data		
Connectors	SMA plug	SMA plug
Connection cable length	2 m	2 m
Mounting type	Enclosure installation; adhesive strips	Wall-mount
Cable type	CS29	CS29
Weight	185 g	252 g
Protection type	IP66	IP66

- The antenna must be mounted on a conductive base plate measuring at least 40 x 40 cm.
- The distance of interfering sources to the antenna and antenna line must be at least 30 cm.
- The free space between the antenna and the next wall must be at least 35 cm.
- The antenna cable must not, under any circumstances, be bent sharply, or the antenna line may be irreversibly damaged.

- The distance of interfering sources to the antenna and antenna line must be at least 30 cm.
- The free space between the antenna and the next wall must be at least 35 cm.
- The antenna cable must not, under any circumstances, be bent sharply, or the antenna line may be irreversibly damaged.

Sensor/Actuator Boxes

Sensor/Actuator Boxes

- M8 and M12 Sensor/Actuator Boxes
- Passive signal acquisition and output at the machine level
- Fully encapsulated

Sensor/Actuator Boxes
Contents

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Sensor/Actuator Boxes
General Product Information

For Signal Acquisition at the Machine Level

WAGO's passive M8/M12 Sensor/Actuator Boxes are placed close to the process and acquire signals at the machine level. They can be used under very harsh environmental conditions and establish the connection between sensors/actuators and the controller via molded or detachable cables. Use of standardized pluggable connections supports plug-and-play installation of sensors and actuators, while trunk cables replace the individual wiring of I/O signals to automation components in the control cabinet. Cabling is well-organized and minimized.

Signal Acquisition in Exceptionally Harsh Conditions

WAGO's Sensor/Actuator Boxes with molded cables have an extremely robust design and meet both IP67 and IP68 protection standards (72 hours at 1 m water depth). This design makes them ideal for applications where signals must be recorded in extreme environments (temperature, shock, vibration) without a control cabinet. They're also excellent alternatives when using an active IP67 I/O system would not be cost-effective due to a low signal count or the simple signal conditions (only digital signal acquisition/output).

Plug-&-Play Connection Technology

The IP67 Sensor/Actuator Boxes with a removable connection cable (M16 or M23 pluggable connector) are ideal for areas where frequent easy disconnection and reconnection are required (e.g., transport, modification, service).

Fixed Trunk Cable

The IP68 Sensor/Actuator Boxes with molded cables are preferred when challenging cable paths do not allow the installation of M16/M23 cable assemblies.

Extreme Mechanical Performance

A system/machine is exposed to severe mechanical and thermal influences. It is important to process its signals despite severe vibrations and shocks. WAGO's Sensor/Actuator Boxes are used at the machine level. Full encapsulation safeguards system operation, so even extreme vibration and temperature loads do not degrade signal acquisition and power supply via the connection cable to the controller or other automation components located in the non-critical control cabinet area.

Flexible Installation

WAGO's Sensor/Actuator Boxes can be directly mounted on machines. Extensive engineering ensures compliance with standardized specifications from CNOMO guidelines regarding the spacing of assembly drill holes that are often used in passive distribution boxes or sensor/actuator boxes. An optional adapter is available for seamlessly mounting two modules side by side. This has the advantage of maintaining a specified distance for properly routing the sensor/actuator cables and avoiding contamination points.

Advantages:
- Rugged, simple and compact extension for IP20 automation components
  - for stricter requirements on environmental conditions
  - for plug-and-play connector technology when needed
  - for simpler cable installation in the form of trunk cables
- High-quality PUR connection cables (drag chain compatible, halogen-free)
- Fully encapsulated (resistance and leak-proof)
- Flange sockets (metal design)
- Surrounding air temperature (operation): −25 … +80 °C
- Status LEDs

Sensor/Actuator Boxes
Item Number Key

Explanation of an item number key's components:

Series

Item No. : 757-abc/x00-0yy

a: Design
- 1: M12 sensor/actuator box with M23 connector
- 2: M12 sensor/actuator box with cable connector
- 3: M8 sensor/actuator box with M16 connector
- 4: M8 sensor/actuator box with cable connector

b: Number of M8/M12 connectors
- 4: 4 ea.
- 6: 6 ea.
- 8: 8 ea.
- 0: 10 ea.

c: Pole number
- 3: 3-pole
- 4: 4-pole
- 5: 5-pole

x00: Status LEDs
- 100: without status LEDs

0yy: Length of connection cable
- 002: 2 m
- 005: 5 m
- 010: 10 m
- 025: 25 m

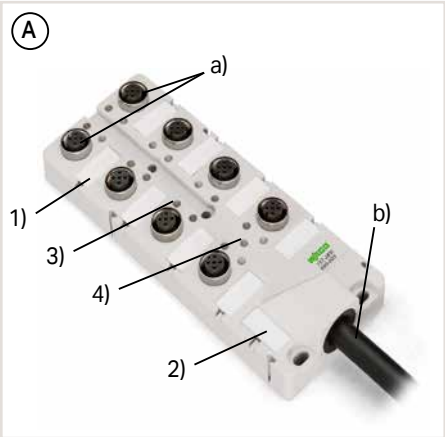
Standards and Rated Conditions

General Specifications	
Electrical Data	
Contact resistance (max.)	10 mΩ
Supply voltage	10 … 30 VDC
Current carrying capacity (signal connections)	2 A
Current carrying capacity (supply connections)	9 A (M12) or 6 A (M8)
Signal characteristics	PNP
Mechanical Data	
Protection type	
Sensor/actuator boxes with cable connection	IP68 (72 hours at 1 m water depth)
Sensor/actuator boxes with M16/M23 connection	IP67
Surrounding air temperature (operation)	–25 … +80 °C
Mounting	Screw mount
Mounting position	Any
Vibration resistance	5g per IEC 60068-2-6
Shock resistance	49g per IEC 60068-2-27
Material Data	
Housing material	PA 66 (UL 94 V0); RAL 7035; silicon and halogen free
Encapsulation	Fully encapsulated with conformal coating (UL 94 V0)
Connection cable	Drag chain compatible

Approvals

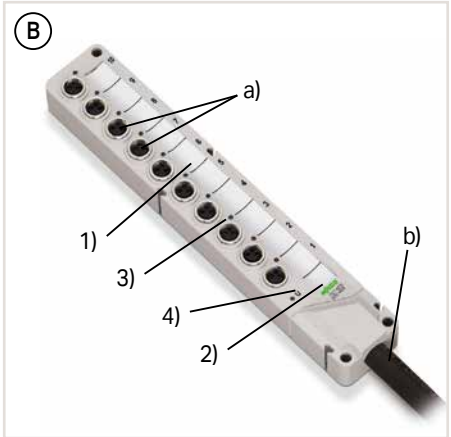
Overview of the approvals in the item comparison in Section 14, Technical Section, or online at www.wago.com

Sensor/Actuator Boxes
Interfaces and Types

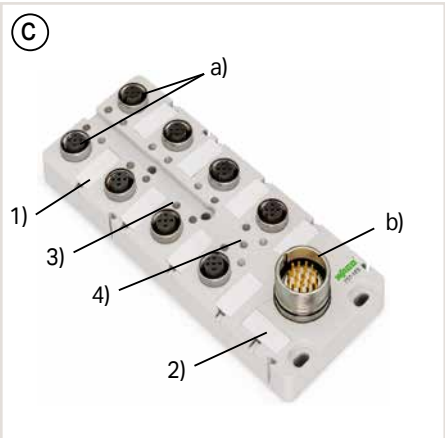


(1) Sensor/actuator marking
(2) Module marking
(3) Yellow status LED (for each channel)
(4) Green operating status LED (module)

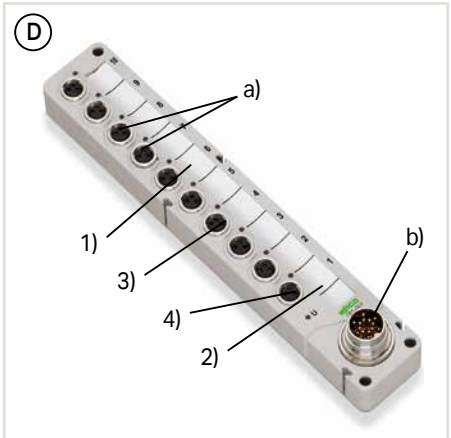
Housing Design (A)
- M12 sensor/actuator box with cable connection
- Sensor/actuator M12 sockets (a)
- Connection technology (trunk cable): fixed connection cable (b)



Housing Design (B)
- M8 sensor/actuator box with cable connection
- Sensor/actuator M8 sockets (a)
- Connection technology (trunk cable): fixed connection cable (b)

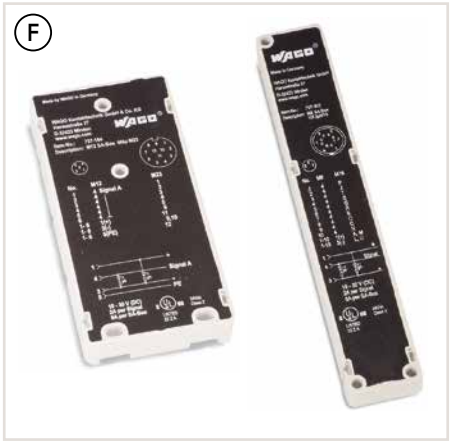


Housing Design (C)
- M12 sensor/actuator box with M23 plug
- Sensor/actuator M12 sockets (a)
- Connection technology (trunk cable): M23 plug (b)



Housing Design (D)
- M8 sensor/actuator box with M16 plug
- Sensor/actuator M8 sockets (a)
- Connection technology (trunk cable): M16 plug (b)

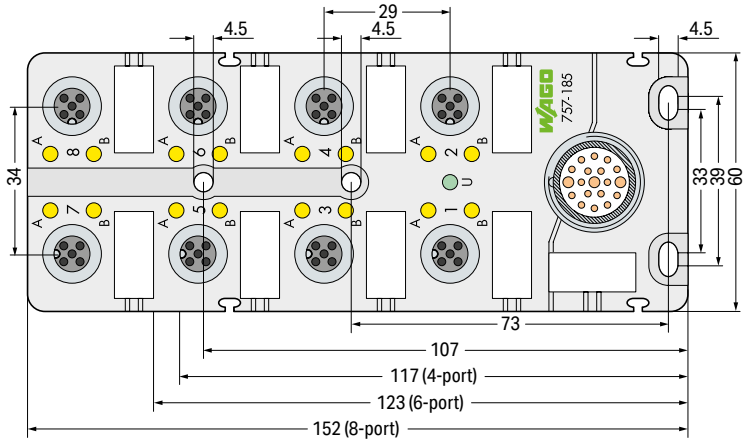
Spacer Module (E)
- Optional accessory
- For seamless assembly of two side-by-side sensor/actuator boxes
- Specified distance for proper cable connection
- Covers contamination points
- W x H x D (mm):
  10-port: 20 x 16 x 175
  8-port: 20 x 16 x 152
  6-port: 20 x 16 x 123
  4-port: 20 x 16 x 117



Protection Type (F)
- Fully encapsulated modules
- IP67/68 protection type
- Back-side printing details pin assignment

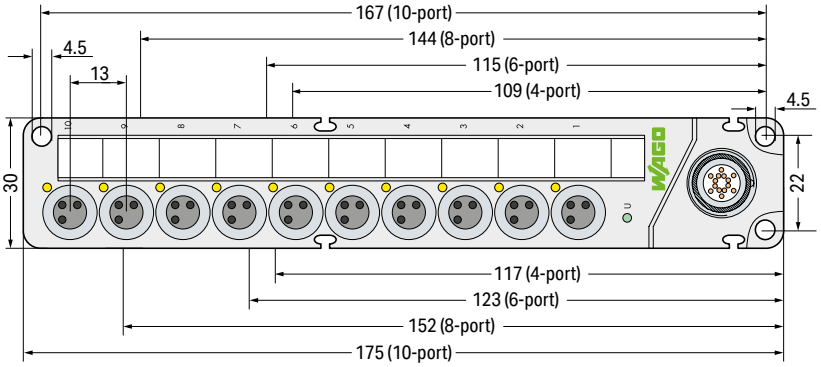
Sensor/Actuator Boxes
Interfaces and Types

Dimensions and Mounting Dimensions
of M12 Sensor/Actuator Boxes
The dimensions also apply to M12 sensor/actuator boxes with cable connection.



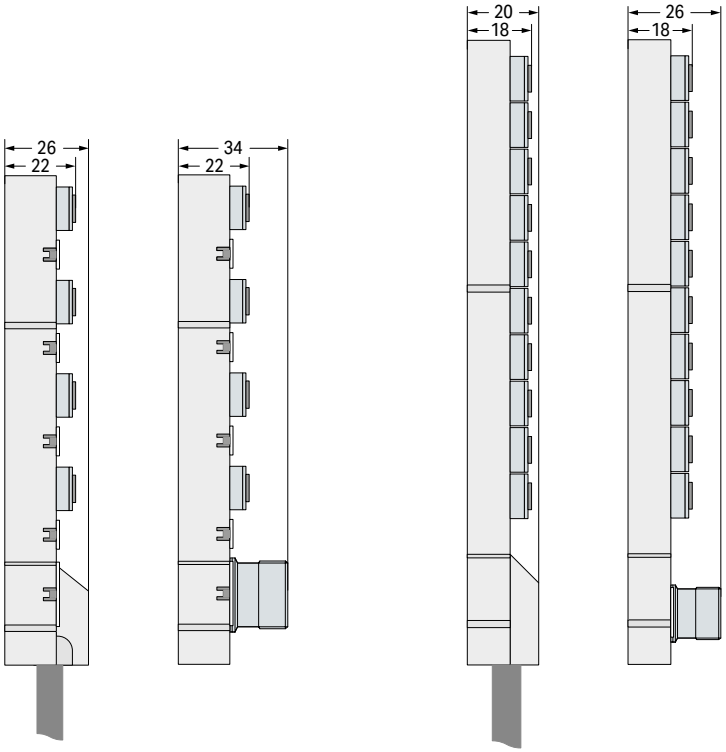
Dimensions in mm

Dimensions and Mounting Dimensions
of M8 Sensor/Actuator Boxes
The dimensions also apply to M8 sensor/actuator boxes with cable connection.



Dimensions in mm

Dimensions:
Depth of M12 sensor/actuator boxes
or M8 sensor/actuator boxes



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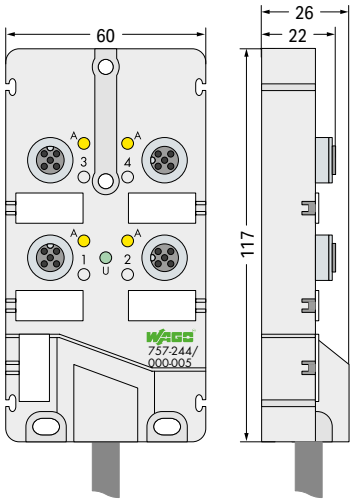
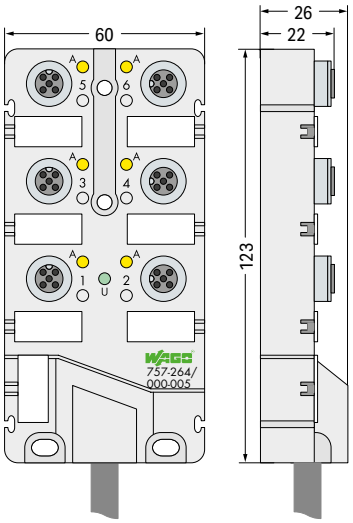
Sensor/actuator boxes ▸ M12 socket; 4-pole; incl. ground





Item Description	M12 Sensor/Actuator Box; 4-port; 4-pole		M12 Sensor/Actuator Box; 6-port, 4-pole	
Version	5 m connecting cable	10 m connecting cable	5 m connecting cable	10 m connecting cable
Item No.	**757-244/000-005**	**757-244/000-010**	**757-264/000-005**	**757-264/000-010**
Order Text	**M12 S/A-Box; 4port; 4pole; 5m**	**M12 S/A-Box; 4port; 4pole; 10m**	**M12 S/A-Box; 6port; 4pole; 5m**	**M12 S/A-Box; 6port; 4pole; 10m**

Technical Data				
Connection technology: inputs/outputs	4 x M12 socket; 4-pole; incl. ground		6 x M12 socket; 4-pole; incl. ground	
Pole number	4		4	
Connection technology: trunk cable	1 x Fixed connecting cable		1 x Fixed connecting cable	
Length of connecting cable	5 m	10 m	5 m	10 m
Dimensions W x H x D	(60 x 26 x 117) mm		(60 x 26 x 123) mm	
Approvals	E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.		E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.	
Data sheet and further information, see:	wago.com/757-244/000-005		wago.com/757-264/000-005	

Accessories	**Item No.**	**Item No.**	**Item No.**	**Item No.**
Fiber-tip pen	210-110	210-110	210-110	210-110
M12 protective cap; for unused sockets	756-8102	756-8102	756-8102	756-8102
Marker card; not stretchable; snap-on type	757-011	757-011	757-011	757-011
Spacer module for sensor/actuator box; 4-way	757-040	757-040		
Spacer module for sensor/actuator box; 6-way			757-060	757-060
Spacer module for sensor/actuator box; 8-way				

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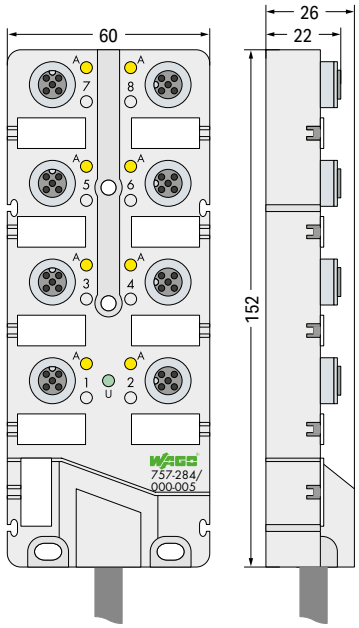
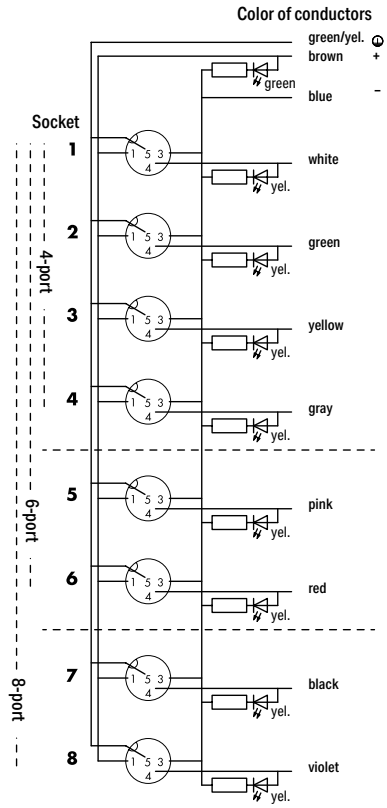




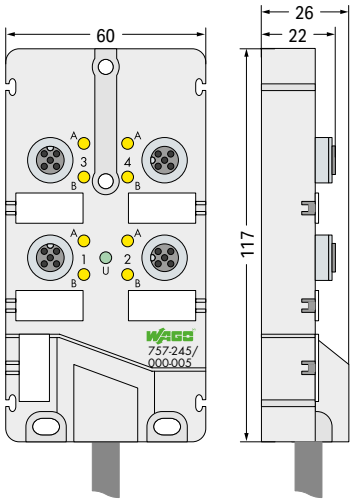
M12 Sensor/Actuator Box; 8-port, 4-pole		
5 m connecting cable	10 m connecting cable	25 m connecting cable
757-284/000-005	757-284/000-010	757-284/000-025
M12 S/A-Box; 8port; 4pole; 5m	M12 S/A-Box; 8port; 4pole; 10m	M12 S/A-Box; 8port; 4pole; 25m

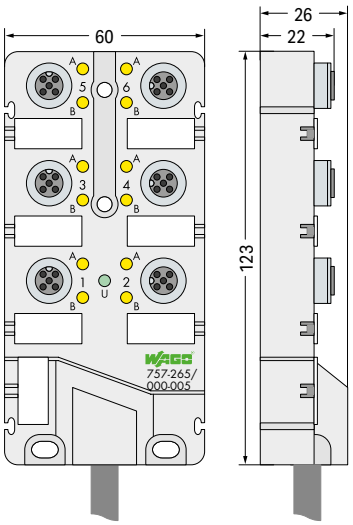
8 x M12 socket; 4-pole; incl. ground		
4		
1 x Fixed connecting cable		
5 m	10 m	25 m
(60 x 26 x 152) mm		

E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.

wago.com/757-284/000-005		
Item No.	Item No.	Item No.
210-110	210-110	210-110
756-8102	756-8102	756-8102
757-011	757-011	757-011
757-080	757-080	757-080

Sensor/actuator boxes ▸ M12 socket; 5-pole; incl. ground





Item Description	M12 Sensor/Actuator Box; 4-port, 5-pole		M12 Sensor/Actuator Box; 6-port, 5-pole	
Version	5 m connecting cable	10 m connecting cable	5 m connecting cable	10 m connecting cable
Item No.	**757-245/000-005**	**757-245/000-010**	**757-265/000-005**	**757-265/000-010**
Order Text	**M12 S/A-Box; 4port; 5pole; 5m**	**M12 S/A-Box; 4port; 5pole; 10m**	**M12 S/A-Box; 6port; 5pole; 5m**	**M12 S/A-Box; 6port; 5pole; 10m**
Technical Data				
Connection technology: inputs/outputs	4 x M12 socket; 5-pole; incl. ground		6 x M12 socket; 5-pole; incl. ground	
Pole number	5		5	
Connection technology: trunk cable	1 x Fixed connecting cable		1 x Fixed connecting cable	
Length of connecting cable	5 m	10 m	5 m	10 m
Dimensions W x H x D	(60 x 26 x 117) mm		(60 x 26 x 123) mm	
Approvals	E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.		E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.	
Data sheet and further information, see:	wago.com/757-245/000-005		wago.com/757-265/000-005	
Accessories	**Item No.**	**Item No.**	**Item No.**	**Item No.**
Fiber-tip pen	210-110	210-110	210-110	210-110
M12 protective cap; for unused sockets	756-8102	756-8102	756-8102	756-8102
Marker card; not stretchable; snap-on type	757-011	757-011	757-011	757-011
Spacer module for sensor/actuator box; 4-way	757-040	757-040		
Spacer module for sensor/actuator box; 6-way			757-060	757-060
Spacer module for sensor/actuator box; 8-way				

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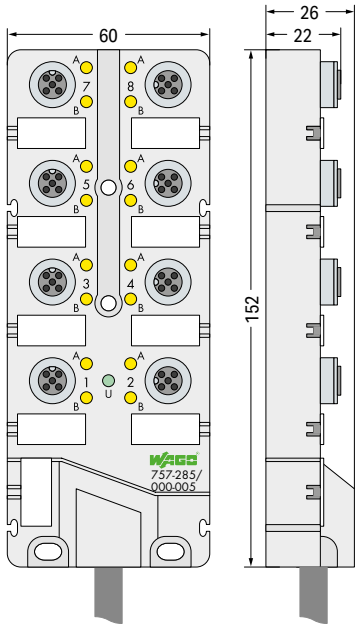
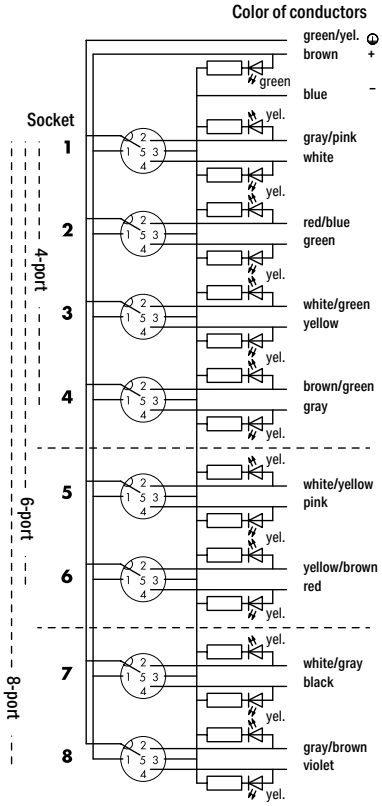




M12 Sensor/Actuator Box; 8-port, 5-pole		
5 m connecting cable	10 m connecting cable	25 m connecting cable
757-285/000-005	757-285/000-010	757-285/000-025
M12 S/A-Box; 8port; 5pole; 5m	M12 S/A-Box; 8port; 5pole; 10m	M12 S/A-Box; 8port; 5pole; 25m

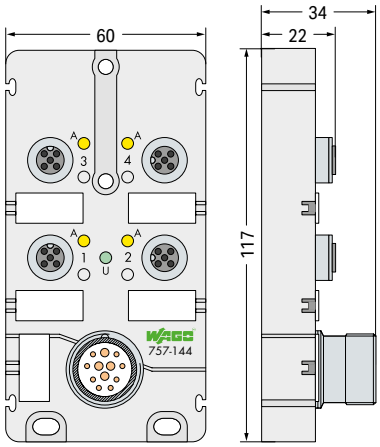
8 x M12 socket; 5-pole; incl. ground		
5		
1 x Fixed connecting cable		
5 m	10 m	25 m
(60 x 26 x 152) mm		

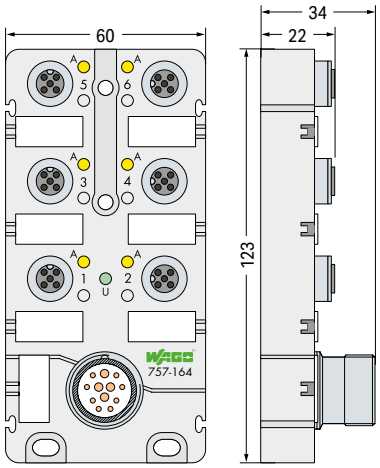
E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.

wago.com/757-285/000-005		
Item No.	Item No.	Item No.
210-110	210-110	210-110
756-8102	756-8102	756-8102
757-011	757-011	757-011
757-080	757-080	757-080

Sensor/actuator boxes ▸ M12 socket; 4-pole; incl. ground

757-185





Item Description	M12 Sensor/Actuator Box; 4-port; 4-pole; M23 connector	M12 Sensor/Actuator Box; 6-port; 4-pole; M23 connector
Item No.	**757-144**	**757-164**
Order Text	**M12 S/A-Box; 4port; 4pole; M23**	**M12 S/A-Box; 6port; 4pole; M23**

Technical Data		
Connection technology: inputs/outputs	4 x M12 socket; 4-pole; incl. ground	6 x M12 socket; 4-pole; incl. ground
Pole number	4	4
Connection technology: trunk cable	1 x M23 plug; 12-pole	1 x M23 plug; 12-pole
Dimensions W x H x D	(60 x 34 x 117) mm	(60 x 34 x 123) mm
Approvals	E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.	E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.
Data sheet and further information, see:	wago.com/757-144	wago.com/757-164

Accessories	**Item No.**	**Item No.**
Fiber-tip pen	210-110	210-110
M12 protective cap; for unused sockets	756-8102	756-8102
Marker card; not stretchable; snap-on type	757-011	757-011
Spacer module for sensor/actuator box; 4-way	757-040	
Spacer module for sensor/actuator box; 6-way		757-060
Spacer module for sensor/actuator box; 8-way		

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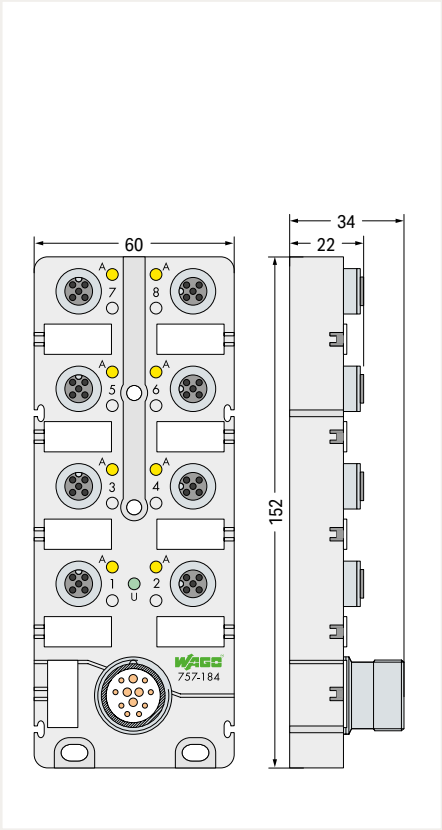
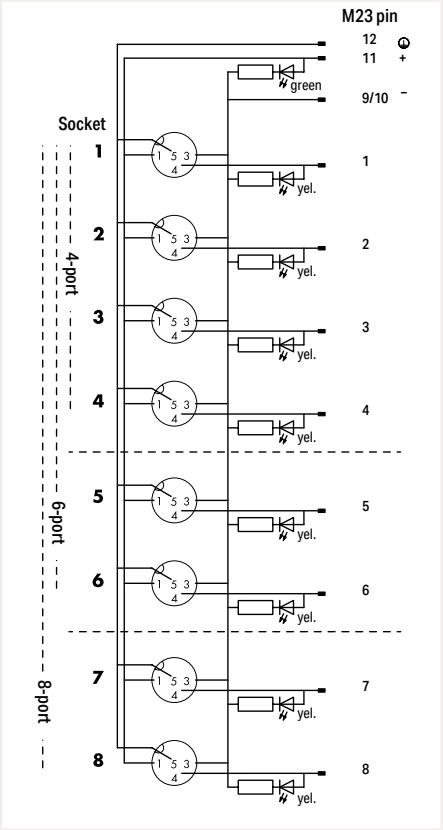


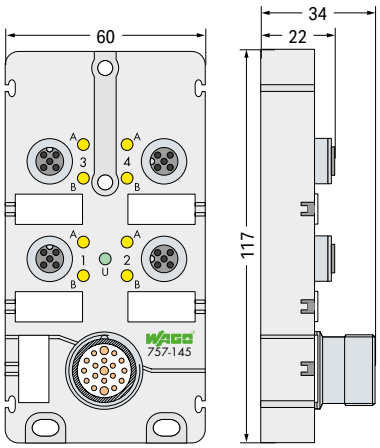


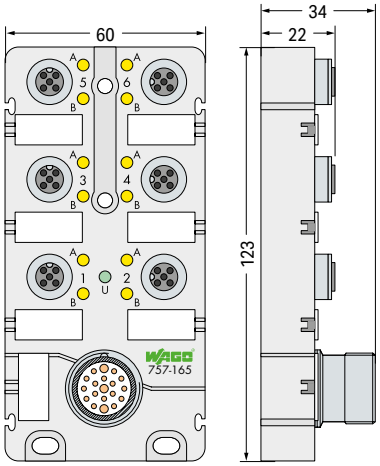
M12 Sensor/Actuator Box; 8-port; 4-pole; M23 connector
757-184
M12 S/A-Box; 8port; 4pole; M23

8 x M12 socket; 4-pole; incl. ground
4
1 x M23 plug; 12-pole
(60 x 34 x 152) mm
E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.
wago.com/757-184
Item No.
210-110
756-8102
757-011
757-080

Sensor/actuator boxes ▸ M12 socket; 5-pole; incl. ground

757-185





Item Description	M12 Sensor/Actuator Box; 4-port; 5-pole; M23 connector	M12 Sensor/Actuator Box; 6-port; 5-pole; M23 connector
Item No.	**757-145**	**757-165**
Order Text	**M12 S/A-Box; 4port; 5pole; M23**	**M12 S/A-Box; 6port; 5pole; M23**

Technical Data		
Connection technology: inputs/outputs	4 x M12 socket; 5-pole; incl. ground	6 x M12 socket; 5-pole; incl. ground
Pole number	5	5
Connection technology: trunk cable	1 x M23 plug; 19-pole	1 x M23 plug; 19-pole
Dimensions W x H x D	(60 x 34 x 117) mm	(60 x 34 x 123) mm
Approvals	E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.	E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.
Data sheet and further information, see:	wago.com/757-145	wago.com/757-165
Accessories	**Item No.**	**Item No.**
Fiber-tip pen	210-110	210-110
M12 protective cap; for unused sockets	756-8102	756-8102
Marker card; not stretchable; snap-on type	757-011	757-011
Spacer module for sensor/actuator box; 4-way	757-040	
Spacer module for sensor/actuator box; 6-way		757-060
Spacer module for sensor/actuator box; 8-way		

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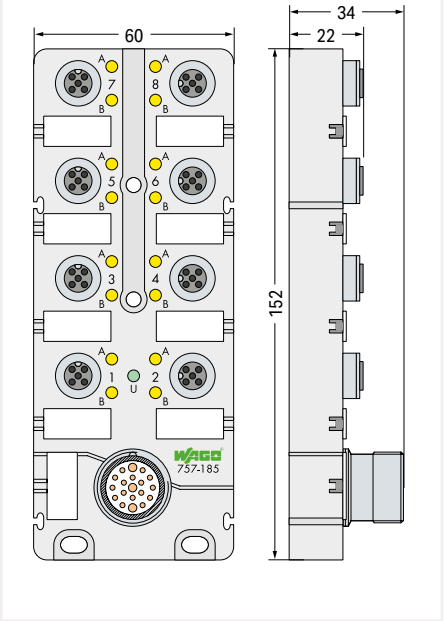

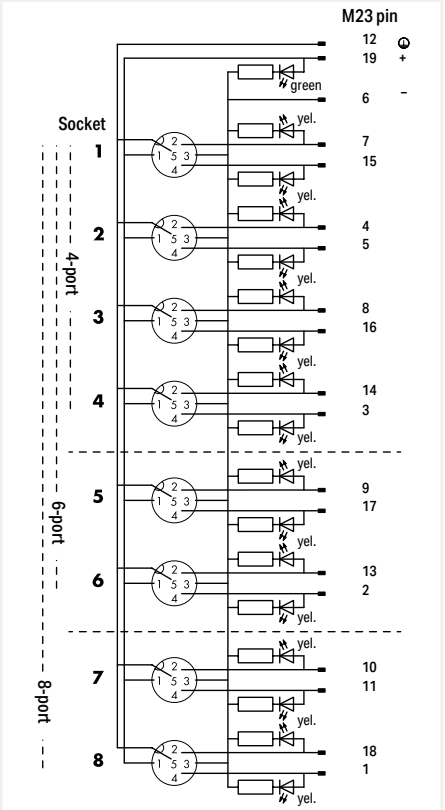

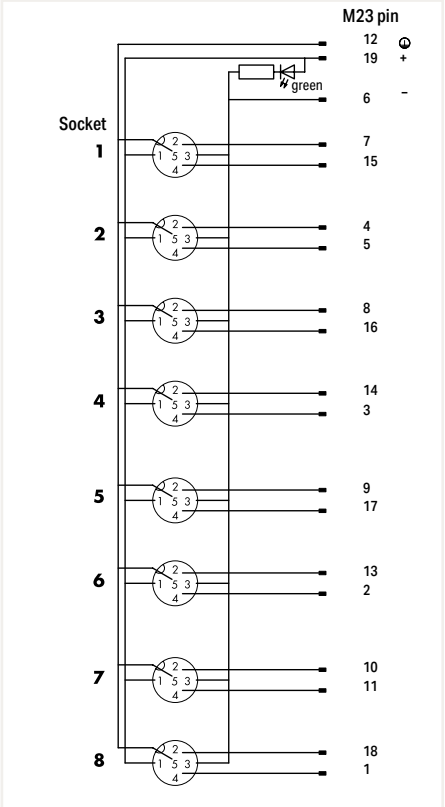

M12 Sensor/Actuator Box; 8-port; 5-pole; M23 connector	
	Without LED
757-185	757-185/100-000
M12 S/A-Box; 8port; 5pole; M23	M12 S/A-Box; 8port; 5pole; M23; NL

8 x M12 socket; 5-pole; incl. ground
5
1 x M23 plug; 19-pole
(60 x 34 x 152) mm
E 175199; OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.
wago.com/757-185

Item No.	Item No.
210-110	210-110
756-8102	756-8102
757-011	757-011
757-080	757-080

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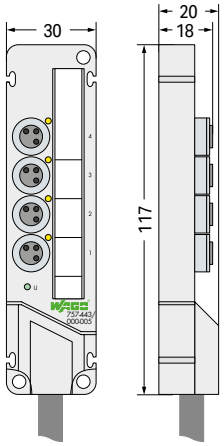
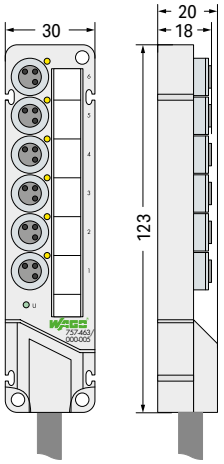
Sensor/actuator boxes ▸ M8 socket; 3-pole





Item Description	M8 Sensor/Actuator Box; 4-port, 3-pole		M8 Sensor/Actuator Box; 6-port, 3-pole	
Version	5 m connecting cable	10 m connecting cable	5 m connecting cable	10 m connecting cable
Item No.	**757-443/000-005**	**757-443/000-010**	**757-463/000-005**	**757-463/000-010**
Order Text	**M8 S/A-Box; 4port; 3pole; 5m**	**M8 S/A-Box; 4port; 3pole; 10m**	**M8 S/A-Box; 6port; 3pole; 5m**	**M8 S/A-Box; 6port; 3pole; 10m**
Technical Data				
Connection technology: inputs/outputs	4 x M8 socket; 3-pole		6 x M8 socket; 3-pole	
Pole number	3		3	
Connection technology: trunk cable	1 x Fixed connecting cable		1 x Fixed connecting cable	
Length of connecting cable	5 m	10 m	5 m	10 m
Dimensions W x H x D	(30 x 20 x 117) mm		(30 x 20 x 123) mm	
Approvals	E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.		E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.	
Data sheet and further information, see:	wago.com/757-443/000-005		wago.com/757-463/000-005	
Accessories	**Item No.**	**Item No.**	**Item No.**	**Item No.**
Fiber-tip pen	210-110	210-110	210-110	210-110
M8 protective cap; for unused sockets	756-8101	756-8101	756-8101	756-8101
Spacer module for sensor/actuator box; 4-way	757-040	757-040		
Marking strips; cut to a defined length; not stretchable; plain; snap-on type	757-041	757-041		
Spacer module for sensor/actuator box; 6-way			757-060	757-060
Marking strips; cut to a defined length; not stretchable; plain; snap-on type			757-061	757-061
Spacer module for sensor/actuator box; 8-way				
Marking strips; cut to a defined length; not stretchable; plain; snap-on type				
Spacer module for sensor/actuator box; 10-way				
Marking strips; not stretchable; snap-on type				

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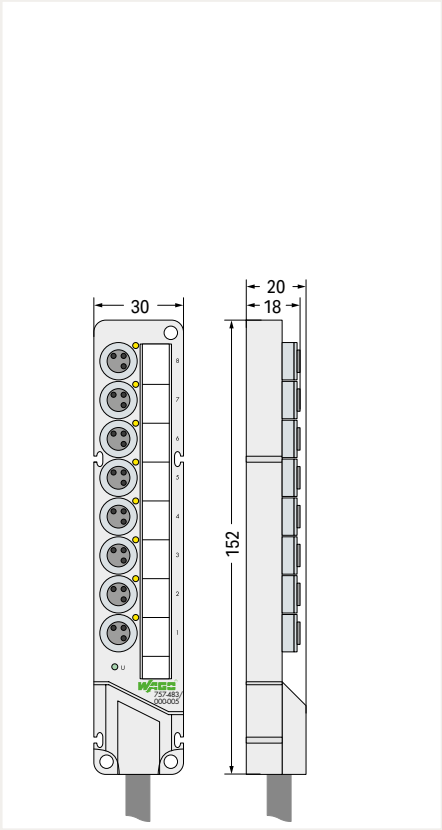

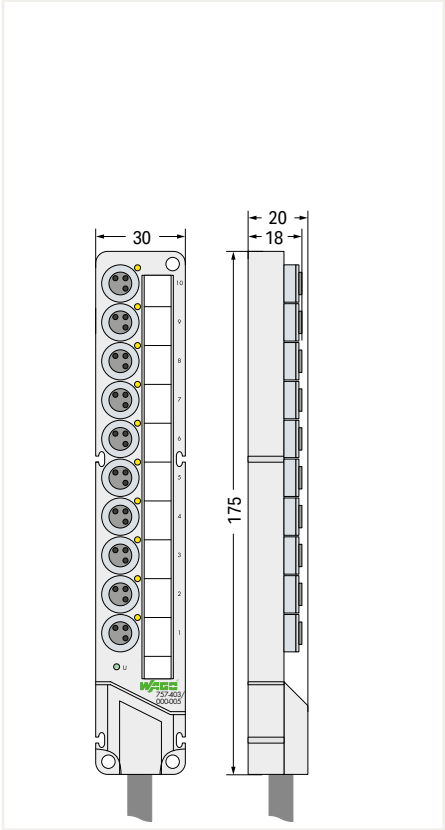

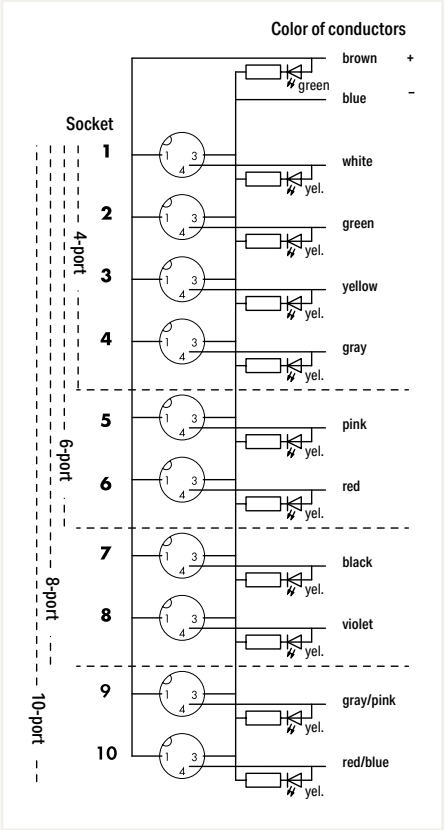

M8 Sensor/Actuator Box; 8-port, 3-pole	
5 m connecting cable	10 m connecting cable
757-483/000-005	757-483/000-010
M8 S/A-Box; 8port; 3pole; 5m	M8 S/A-Box; 8port; 3pole; 10m

M8 Sensor/Actuator Box; 10-port, 3-pole	
5 m connecting cable	10 m connecting cable
757-403/000-005	757-403/000-010
M8 S/A-Box; 10port; 3pole; 5m	M8 S/A-Box; 10port; 3pole; 10m

8 x M8 socket; 3-pole	
3	
1 x Fixed connecting cable	
5 m	10 m
(30 x 20 x 152) mm	
E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.	
wago.com/757-483/000-005	
Item No.	Item No.
210-110	210-110
756-8101	756-8101
757-080	757-080
757-081	757-081

10 x M8 socket; 3-pole	
3	
1 x Fixed connecting cable	
5 m	10 m
(30 x 20 x 175) mm	
E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.	
wago.com/757-403/000-005	
Item No.	Item No.
210-110	210-110
756-8101	756-8101
757-000	757-000
757-001	757-001

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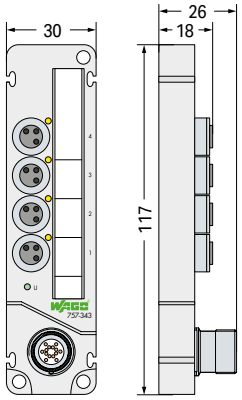
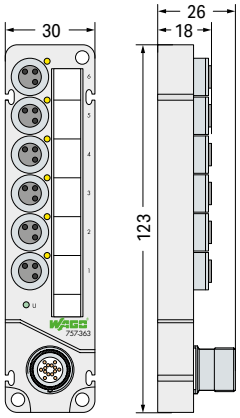
Sensor/actuator boxes ▸ M8 socket; 3-pole

757-303

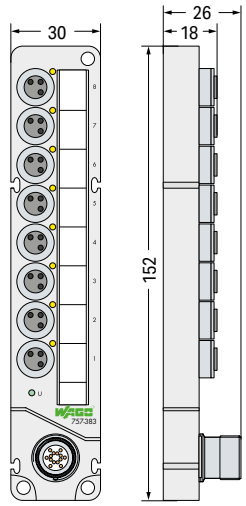


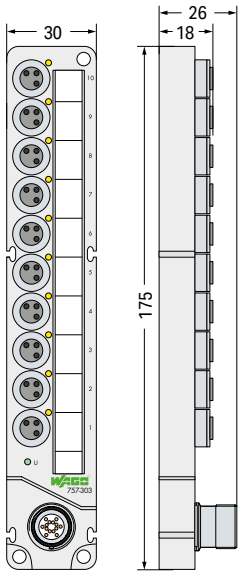


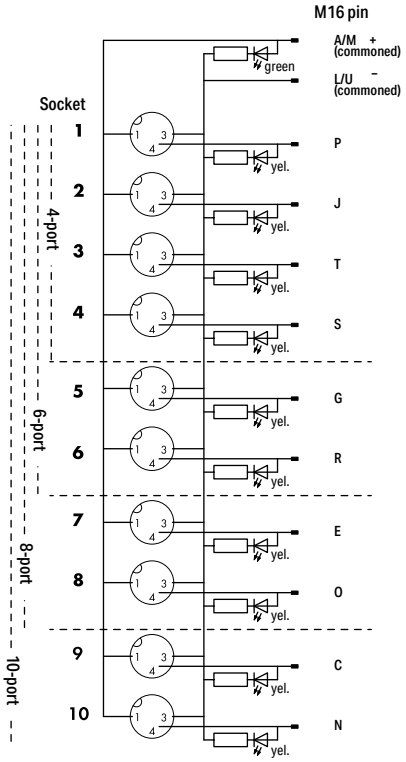
Item Description	M8 Sensor/Actuator Box; 4-port; 3-pole; M16 connector	M8 Sensor/Actuator Box; 6-port; 3-pole; M16 connector
Item No.	**757-343**	**757-363**
Order Text	**M8 S/A-Box; 4port; 3pole; M16**	**M8 S/A-Box; 6port; 3pole; M16**

Technical Data		
Connection technology: inputs/outputs	4 x M8 socket; 3-pole	6 x M8 socket; 3-pole
Pole number	3	3
Connection technology: trunk cable	1 x M16 plug; 14-pole	1 x M16 plug; 14-pole
Dimensions W x H x D	(30 x 26 x 117) mm	(30 x 26 x 123) mm
Approvals	E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.	E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.
Data sheet and further information, see:	wago.com/757-343	wago.com/757-363

Accessories	Item No.	Item No.
Fiber-tip pen	210-110	210-110
M8 protective cap; for unused sockets	756-8101	756-8101
Spacer module for sensor/actuator box; 4-way	757-040	
Marking strips; cut to a defined length; not stretchable; plain; snap-on type	757-041	
Spacer module for sensor/actuator box; 6-way		757-060
Marking strips; cut to a defined length; not stretchable; plain; snap-on type		757-061
Spacer module for sensor/actuator box; 8-way		
Marking strips; cut to a defined length; not stretchable; plain; snap-on type		
Spacer module for sensor/actuator box; 10-way		
Marking strips; not stretchable; snap-on type		







M8 Sensor/Actuator Box; 8-port; 3-pole; M16 connector	M8 Sensor/Actuator Box; 10-port; 3-pole; M16 connector
757-383	757-303
M8 S/A-Box; 8port; 3pole; M16	M8 S/A-Box; 10port; 3pole; M16
8 x M8 socket; 3-pole	10 x M8 socket; 3-pole
3	3
1 x M16 plug; 14-pole	1 x M16 plug; 14-pole
(30 x 26 x 152) mm	(30 x 26 x 175) mm
E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.	E 175199; cULus OrdLoc; Class 2 Equipment; These components are designed to be supplied through Class 2 power supplies per UL 1310 or Class 2 transformers per UL 1585.
wago.com/757-383	wago.com/757-303
Item No.	**Item No.**
210-110	210-110
756-8101	756-8101
757-080	
757-081	
	757-000
	757-001

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Sensor/Actuator Boxes; Accessories

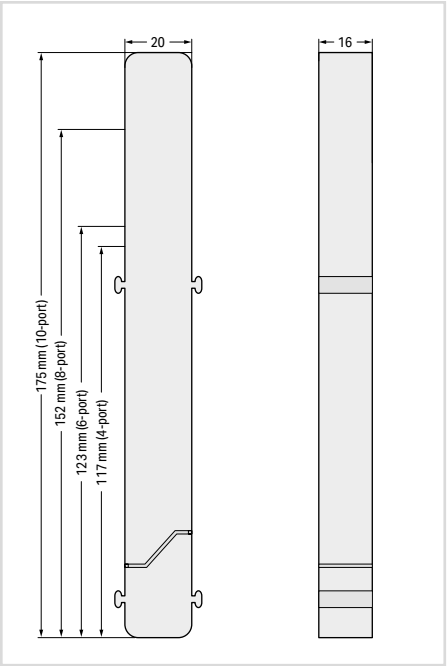
Marker Card; not stretchable; snap-on type		
	Item No.	PU
for M12 Sensor/Actuator Box	757-011	1

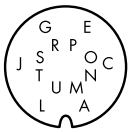
Marking Strip; cut to specified length; not stretchable; plain; snap-on type		
for M8 Sensor/Actuator Box	Item No.	PU
4-port	757-041	100
6-port	757-061	100
8-port	757-081	100
10-port	757-001	100

Felt-Tip Pen		
	Item No.	PU
for permanent marking	210-110	1

Protective Caps (for covering unused sensor/actuator ports)		
	Item No.	PU
M8 Protective Cap	756-8101	10
M12 Protective Cap	756-8102	10

Spacer Module for Sensor/Actuator Box		
	Item No.	PU
4-port	757-040	10
6-port	757-060	10
8-port	757-080	10
10-port	757-000	10



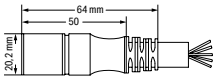


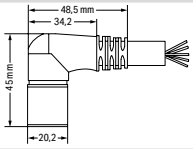
14-pole

Pin A, L: 0.75 mm²
Pin C … J, N … T: 0.34 mm²

A	brown	N	pink-brown
C	white-pink	O	violet
E	black	P	white
G	rose	R	red
J	green	S	gray
L	blue	T	yellow
M bridged with A		U bridged with L	

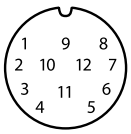
Operating voltage	150 V
Operating current	6 A (0.75 mm²); 4 A (0.34 mm²)
Rated surge voltage	1.2 kV
Drag chain suitability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	–30 … +90 °C
Protection type	IP67
Cable diameter	9.1 mm ±0.2





Interconnection Cable; 14-pole; M16 socket (straight)		
Cable Length	**Item No.**	**PU**
5 m	756-3205/140-050	1
10 m	756-3205/140-100	1
15 m	756-3205/140-150	1

Interconnection Cable; 14-pole; M16 socket (angled)		
Cable Length	**Item No.**	**PU**
5 m	756-3206/140-050	1
10 m	756-3206/140-100	1
15 m	756-3206/140-150	1

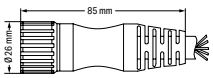


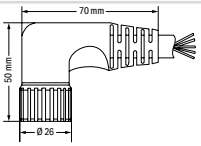
12-pole

Pin 9, 11, 12: 1.00 mm²;
Pin 1 … 8: 0.34 mm²

1	white	9	blue
2	green	10	bridged with 9
3	yellow	11	brown
4	gray	12	green-yellow
5	rose		
6	red		
7	black		
8	violet		

Operating voltage (max.)	300 V
Operating current	8 A
Rated surge voltage	≥ 2.0 kV rms
Drag chain suitability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	–25 … +80 °C
Protection type	IP67
Cable diameter	9.3 mm ±0.3





Interconnection Cable; 12-pole; M23 socket (straight)		
Cable Length	**Item No.**	**PU**
5 m	756-3201/120-050	1
10 m	756-3201/120-100	1
15 m	756-3201/120-150	1

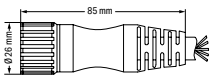
Interconnection Cable; 12-pole; M23 socket (angled)		
Cable Length	**Item No.**	**PU**
5 m	756-3202/120-050	1
10 m	756-3202/120-100	1
15 m	756-3202/120-150	1

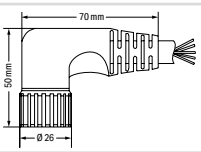
19-pole

Pin 6, 12, 19: 1.00 mm²;
Pin 1 … 5, 7 … 11, 13 … 19: 0.34 mm²

1	violet	11	black
2	red	12	green-yellow
3	gray	13	yellow-brown
4	red-blue	14	brown-green
5	green	15	white
6	blue	16	yellow
7	gray-pink	17	rose
8	white-green	18	gray-brown
9	white-yellow	19	brown
10	white-gray		

Operating voltage (max.)	300 V
Operating current	10 A (contacts 6, 12, 19); 8 A (remaining contacts)
Rated surge voltage	≥ 2.0 kV rms
Drag chain suitability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	–25 … +80 °C
Protection type	IP67
Cable diameter	11.6 mm ±0.3





Interconnection Cable; 19-pole; M23 socket (straight)		
Cable Length	**Item No.**	**PU**
5 m	756-3203/190-050	1
10 m	756-3203/190-100	1
15 m	756-3203/190-150	1

Interconnection Cable; 19-pole; M23 socket (angled)		
Cable Length	**Item No.**	**PU**
5 m	756-3204/190-050	1
10 m	756-3204/190-100	1
15 m	756-3204/190-150	1

Accessories and Tools

Accessories and Tools
Contents

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WAGO Power Supplies Pro 2 – 2787 / 2789 Series

Illustration	Nominal Input Voltage	Output Current	Efficiency	Derating (> +55 °C and Ue < 230 VAC)	PowerBoost	MTBF (per IEC 61709)	Dimensions (W x H x D in mm)	Item No.
1-phase; TopBoost + PowerBoost; DI/DO; communication interface; 12 VDC output voltage								
	100 … 240 VAC	10 A	≥ 93.8 %	–3 %/K	15 ADC (5 s)	> 1,200,000 h	35 x 130 x 130	2787-2134
	100 … 240 VAC	15 A	≥ 95.3 %	–3 %/K	22.5 ADC (5 s)	> 1,200,000 h	70 x 130 x 130	2787-2135
1-phase; TopBoost + PowerBoost; DI/DO; communication interface; 24 VDC output voltage								
	100 … 240 VAC	5 A	≥ 93.8 %	–3 %/K	7.5 ADC (5 s)	> 1,200,000 h	35 x 130 x 130	2787-2144
	100 … 240 VAC	10 A	≥ 95.3 %	–3 %/K	15 ADC (5 s)	> 1,200,000 h	50 x 130 x 130	2787-2146
	100 … 240 VAC	20 A	≥ 95.4 %	–3 %/K	30 ADC (5 s)	> 900,000 h	70 x 130 x 130	2787-2147
	200 … 240 VAC	40 A	≥ 96.1 %	–3 %/K	60 ADC (5 s)	> 900,000 h	120 x 130 x 130	2787-2448
1-phase; TopBoost + PowerBoost; DI/DO; communication interface; 48 VDC output voltage								
	100 … 240 VAC	5 A	≥ 95.3 %	–3 %/K	7.5 ADC (5 s)	> 900,000 h	50 x 130 x 130	2787-2154
	100 … 240 VAC	10 A	≥ 95.3 %	–3 %/K	15 ADC (5 s)	> 800,000 h	70 x 130 x 130	2787-2157
3-phase; TopBoost + PowerBoost; DI/DO; communication interface; 24 VDC output voltage								
	(2/3) x 400 … 500 VAC	10 A	≥ 93 %	–3 %/K	15 ADC (5 s)	> 1,200,000 h	50 x 130 x 130	2787-2346
	(2/3) x 400 … 500 VAC	20 A	≥ 95.9 %	–3 %/K	30 ADC (5 s)	> 900,000 h	70 x 130 x 130	2787-2347
	(2/3) x 400 … 500 VAC	40 A	≥ 96.3 %	–3 %/K	60 ADC (5 s)	> 800,000 h	120 x 130 x 130	2787-2348
3-phase; TopBoost + PowerBoost; DI/DO; communication interface; 48 VDC output voltage								
	(2/3) x 400 … 500 VAC	10 A	≥ 95 %	–3 %/K	15 ADC (5 s)	> 900,000 h	70 x 130 x 130	2787-2357
	(2/3) x 400 … 500 VAC	20 A	≥ 96 %	–3 %/K	30 ADC (5 s)	> 800,000 h	120 x 130 x 130	2787-2358

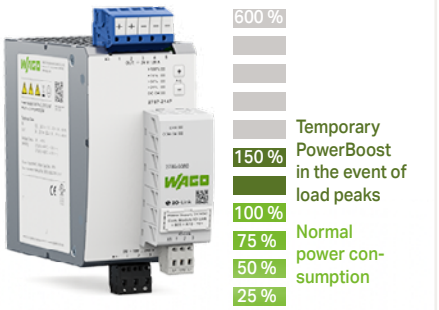
Accessories

Illustration	Description	Item No.
	IO-Link Communication Module	2789-9080
	Modbus RTU Communication Module	2789-9015
	Ethernet/Modbus® TCP/Modbus® UDP/MQTT Communication Module	2789-9052

WAGO Power Supplies Pro 2
This new generation of professional power supplies is for applications requiring high performance, efficiency and reliability. These devices also offer tremendous added value thanks to flexible configuration and comprehensive monitoring via optional communication interface – can be used with the WAGO USB Communication Cable and IO-Link Communication Module.

Communication
The pluggable IO-Link communication modules allow continuous fieldbus communication, provide data (such as the current output current and voltage), and can also be configured or put in standby mode remotely.

Configuration
WAGO's new Interface Configuration Software offers both local/remote configuration and parameter setting, allowing the power supplies to be quickly and easily tailored to the system requirements. The configuration function can be used to parameterize the power supply as an ECB.



Load Management
Rapidly switching capacitive loads and high start-up currents are no problem, thanks to 150 % output power (PowerBoost) for five seconds. Output current up to 600 % for 15 ms provides reserves for rapidly and reliably tripping miniature circuit breakers. The ability to allow a specified output current to be exceeded for a configurable amount of time allows the Pro 2 Power Supply to work like a single-channel ECB.

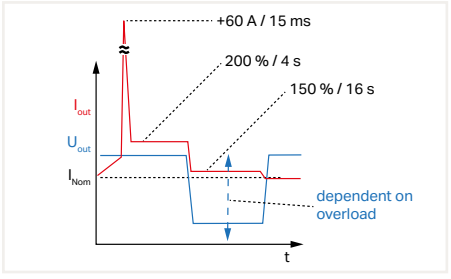
Efficiency
Up to 96 % efficiency within a wide load range is the key to energy cost savings, reduced power losses and lower demand for control cabinet cooling. The CO2 footprint is also dramatically reduced. WAGO's Pro 2 Power Supply can be permanently connected to the PLC via the communication module or a digital signal, allowing the power supply output to be switched off via a signal and standby mode to be used to save energy.

Robust Design
WAGO's Pro 2 Power Supplies can be started and operated from –40 °C to +70 °C, allowing significant cost savings by reducing the need for control cabinet air conditioning. Featuring low derating capability above 60 °C, the Pro 2 units are also highly robust, providing reliable operation in high-vibration and shock-prone applications. The power supplies can be operated at altitudes up to 5000 m, requiring no derating below 2000 m ASL.

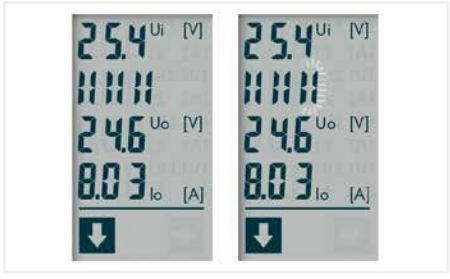
WAGO Power Supplies Pro – 787 Series

Illustration	Nominal Input Voltage	Output Current	Efficiency	Derating	PowerBoost	MTBF (per IEC 61709)	Dimensions (W x H x D in mm)	Item No.
1-phase; TopBoost + PowerBoost; DC OK contact; 12 VDC output voltage								
	100 … 240 VAC	6 A	≥ 83 %	–3 %/K (> +50 °C)	12 ADC (4 s); 9 ADC (8 s)	> 500,000 h	40 x 163 x 163	787-819
	100 … 240 VAC	10 A	≥ 87.8 %	–3 %/K (> +50 °C)	20 ADC (4 s); 15 ADC (8 s)	> 500,000 h	57 x 163 x 163	787-821
	100 … 240 VAC	15 A	≥ 87 %	–3 %/K (> +50 °C)	30 ADC (4 s); 22.5 ADC (8 s)	> 500,000 h	57 x 163 x 179	787-831
1-phase; TopBoost + PowerBoost; DC OK contact; 24 VDC output voltage								
	100 … 240 VAC	3 A	≥ 87.8 %	–3 %/K (> +50 °C)	6 ADC (4 s); 4.5 ADC (8 s)	> 500,000 h	40 x 163 x 163	787-818
	100 … 240 VAC	5 A	≥ 87.8 %	–3 %/K (> +50 °C)	10 ADC (4 s); 7.5 ADC (8 s)	> 500,000 h	57 x 163 x 163	787-822
	100 … 240 VAC	10 A	≥ 90 %	–3 %/K (> +50 °C)	20 ADC (4 s); 15 ADC (8 s)	> 500,000 h	57 x 163 x 179	787-832
	100 … 240 VAC	20 A	≥ 91 %	–3 %/K (> +50 °C)	30 ADC (4 s); 55 ADC (8 s)	> 500,000 h	97 x 171 x 187	787-834
1-phase; TopBoost + PowerBoost; DC OK contact; output voltage: 48 VDC								
	100 … 240 VAC	5 A	≥ 91 %	–3 %/K (> +50 °C)	10 ADC (4 s); 7.5 ADC (8 s)	> 500,000 h	57 x 163 x 179	787-833
	100 … 240 VAC	10 A	≥ 91 %	–3 %/K (> +50 °C)	17.5 ADC (4 s); 15 ADC (8 s)	> 500,000 h	97 x 171 x 187	787-835
3-phase; TopBoost + PowerBoost; DC OK contact; 24 VDC output voltage								
	(2/3) x 400 … 500 VAC	10 A	≥ 91.7 %	–3 %/K (> +50 °C)	20 ADC (4 s); 15 ADC (16 s)	> 500,000 h	57 x 163 x 179	787-840
	(2/3) x 400 … 500 VAC	20 A	≥ 92.9 %	–3 %/K (> +50 °C)	40 ADC (4 s); 30 ADC (16 s)	> 500,000 h	77 x 171 x 179	787-842
	(2/3) x 400 … 500 VAC	40 A	≥ 93.6 %	–5 %/K (> +45 °C)	60 ADC (4 s); 50 ADC (16 s)	> 500,000 h	128 x 171 x 205	787-844
3-phase; TopBoost + PowerBoost; DC OK contact; 24 VDC output voltage; LineMonitor								
	(2/3) x 400 … 500 VAC	10 A	≥ 91.7 %	–3 %/K (> +50 °C)	20 ADC (4 s); 15 ADC (16 s)	> 500,000 h	57 x 163 x 179	787-850
	(2/3) x 400 … 500 VAC	20 A	≥ 92.9 %	–3 %/K (> +50 °C)	40 ADC (4 s); 30 ADC (16 s)	> 500,000 h	77 x 171 x 179	787-852
	(2/3) x 400 … 500 VAC	40 A	≥ 93.6 %	–5 %/K (> +45 °C)	60 ADC (4 s); 50 ADC (16 s)	> 500,000 h	128 x 171 x 205	787-854
3-phase; TopBoost + PowerBoost; DC OK contact; output voltage: 48 VDC								
	(2/3) x 400 … 500 VAC	10 A	≥ 93 %	–3 %/K (> +50 °C)	15 ADC (4 s); 12.5 ADC (16 s)	> 500,000 h	77 x 171 x 179	787-845
	(2/3) x 400 … 500 VAC	20 A	≥ 94.4 %	–3 %/K (> +50 °C)	30 ADC (4 s); 25 ADC (16 s)	> 500,000 h	128 x 171 x 205	787-847

TopBoost
- Multiplies the nominal current for up to 50 ms
- Fast and reliable triggering of the secondary-side fusing via miniature circuit breakers or melting fuses in the event of a short circuit or overload

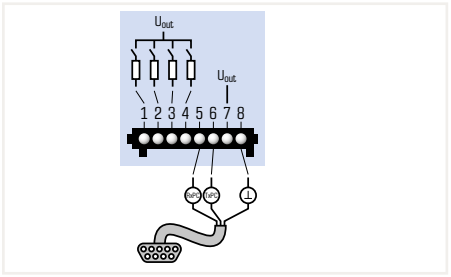


PowerBoost
- Provides 200 % of output power for 4 seconds
- Provides 150 % of output power for up to 16 seconds
- Ideal during start-up or switching of capacitive loads, valve clusters, motors etc.
- Power reserve eliminates expensive oversizing



Innovative Communication
- LineMonitor with display and function keys
- Variable monitoring, e.g., current, voltage, phase position, operating hours and more
- Output voltage and overload behavior can be parameterized
- Integrated fault memory

RS-232 Serial Interface
- Front-side integrated interface communicates with a PC or PLC
- Free 759-850 Configuration Software and 759-851 Visualization Software can be downloaded at www.wago.com
- Free function blocks are available for various PLC systems
- 787-890 Serial Communication Cable is available as an accessory



Active Signal Contacts
- Four active signal outputs for watchdog functions
- Each unit features a separate collective message for warning/fault
- Features two individually configurable signal outputs
- Free configuration software (Item No. 759-850) at www.wago.com

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WAGO Power Supplies Classic – 787 Series

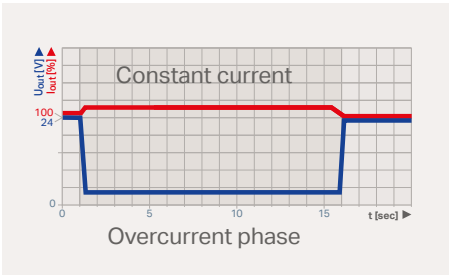
Illustration	Nominal Input Voltage	Output Current	Efficiency	Signal	Features	MTBF (per IEC 61709)	Dimensions (W x H x D in mm)	Item No.
1-phase; 12 VDC output voltage								
	100 … 240 VAC	2 A	≥ 82 %	DC OK signal	NEC class 2	> 500,000 h	22.5 x 90 x 107.5	787-1601
	100 … 240 VAC	4 A	≥ 86 %	DC OK signal	NEC class 2	> 500,000 h	45 x 90 x 107.5	787-1611
	100 … 240 VAC	7 A	≥ 86 %	DC OK signal		> 500,000 h	52 x 90 x 119	787-1621
	100 … 240 VAC	15 A	≥ 90 %	DC OK contact	TopBoost	> 500,000 h	55 x 27 x 172	787-1631
1-phase; 24 VDC output voltage								
	100 … 240 VAC	1 A	≥ 86 %	DC OK signal	NEC class 2	> 500,000 h	22.5 x 90 x 107.5	787-1602
	100 … 240 VAC	2 A	≥ 89 %	DC OK signal	NEC class 2	> 500,000 h	45 x 90 x 107.5	787-1606
	100 … 240 VAC	4 A	≥ 89 %	DC OK signal		> 500,000 h	52 x 90 x 119.5	787-1616
	100 … 240 VAC	3.8 A	≥ 87 %	DC OK signal	NEC class 2	> 500,000 h	52 x 90 x 119	787-1616/000-1000
	100 … 240 VAC	5 A	≥ 89 %	DC OK contact	TopBoost	> 500,000 h	42 x 127 x 137.5	787-1622
	100 … 240 VAC	10 A	≥ 91 %	DC OK contact	TopBoost	> 500,000 h	55 x 127 x 172	787-1632
	100 … 240 VAC	20 A	≥ 92 %	DC OK contact	TopBoost	> 500,000 h	95 x 127 x 170	787-1634
1-phase; 48 VDC output voltage								
	100 … 240 VAC	2 A	≥ 86 %	DC OK contact		> 500,000 h	52 x 90 x 119	787-1623
	100 … 240 VAC	5 A	≥ 92 %	DC OK contact	TopBoost	> 500,000 h	55 x 127 x 172	787-1633
	100 … 240 VAC	10 A	≥ 93 %	DC OK contact	TopBoost	> 500,000 h	95 x 127 x 170	787-1635
1-phase/2-phase; 24 VDC output voltage								
	(1 / 2) x 200 … 500 VAC	5 A	≥ 89 %	DC OK contact	TopBoost	> 500,000 h	42 x 127 x 143.5	787-1628
	(1 / 2) x 200 … 500 VAC	10 A	≥ 92.5 %	DC OK contact	TopBoost	> 500,000 h	55 x 127 x 146.5	787-1638
3-phase; 24 VDC output voltage								
	(2/3) x 400 … 500 VAC	10 A	≥ 90 %	DC OK contact	TopBoost	> 500,000 h	55 x 127 x 171	787-1640
	(2/3) x 400 … 500 VAC	20 A	≥ 92 %	DC OK contact	TopBoost	> 500,000 h	80 x 127 x 180	787-1642
	(2/3) x 400 … 500 VAC	40 A	≥ 92 %	DC OK contact	TopBoost	> 500,000 h	126 x 127 x 198	787-1644

Communicative
- Green LED indicates output voltage availability
- Remote monitoring via DC OK signal or potential-free DC OK contact
- Easy commissioning and maintenance
- Quickly provide system information or machine status

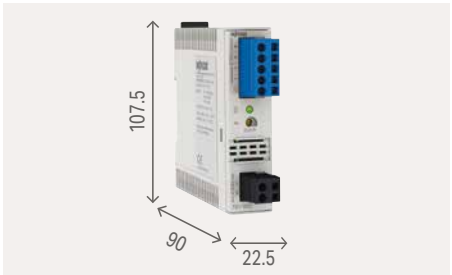
Integrated TopBoost*
- Multiplies the nominal current
- Fast and reliable triggering of the secondary-side fusing via circuit breakers or melting fuses in the event of a short circuit and overload

* Only for 787-1622 … -1628, -1631 … -1638, -1640 … -1644

Device Marking
- Marking field for fast and securely attached device identification
- Supports WAGO's WMB Multi Marking System (5 mm pin spacing)
- Supports WAGO Marking Strips, 11 mm wide



High Load-Carrying Capacity
- Constant current characteristic under overload conditions
- 110 % of output current with a lowered output voltage – even during a short circuit
- High capacitive loads can be reliably started



Slim Design
- Enclosure width has been reduced by up to 45 % compared to previous Classic Power Supplies
- Saves valuable cabinet space

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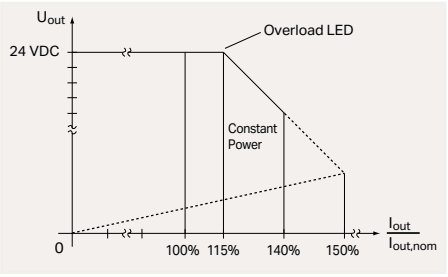
WAGO Power Supplies Eco 2 – 2687 Series / Eco – 787 Series

Illustration	Nominal Input Voltage	Output Current	Efficiency	Derating	Signal	MTBF (per IEC 61709)	Dimensions (W x H x D in mm)	Item No.
1-phase; 24 VDC output voltage; Eco 2								
	100 … 240 VAC	1.25 A	≥ 88 %	−3 %/K (> +50 °C)		> 600,000 h	25 x 90 x 100	2687-2142
	100 … 240 VAC	5 A	≥ 89 %	−3 %/K (> +50 °C)	DC OK contact	> 600,000 h	38 x 130 x 130	2687-2144
1-phase; 12 VDC output voltage; several mounting options								
	100 … 240 VAC	2 A	≥ 86 %	−4 %/K (> +45 °C)		> 300,000 h	30 x 90 x 99	787-1701
	100 … 240 VAC	4 A	≥ 86 %	−4 %/K (> +45 °C)		> 300,000 h	40 x 90 x 99	787-1711
	100 … 240 VAC	8 A	≥ 86 %	−3 %/K (> +40 °C)		> 300,000 h	60 x 130 x 99	787-1721
1-phase; 24 VDC output voltage								
	110 … 240 VAC	2.5 A	≥ 86 %	−3.3 %/K (> 50 °C)		480,000 h	50 x 92 x 136	787-712
	110 … 240 VAC	5 A	≥ 86 %	−5.3 %/K (> 45 °C)		480,000 h	75 x 92 x 136	787-722
	110 … 240 VAC	10 A	≥ 86 %	−2.3 %/K (> 40 °C)		480,000 h	110 x 92 x 136	787-732
	110 … 240 VAC	20 A	≥ 90 %	−2.7 %/K (> 55 °C)	DC OK signal	> 250,000 h	115 x 136 x 144	787-734
	110 … 240 VAC	40 A	≥ 90 %	−2.7 %/K (> 55 °C)	DC OK signal	> 250,000 h	170 x 136 x 150	787-736
1-phase; 24 VDC output voltage; several mounting options								
	100 … 240 VAC	1.25 A	≥ 87 %	−4 %/K (> +45 °C)		> 300,000 h	30 x 90 x 99	787-1702
	100 … 240 VAC	2.5 A	≥ 88 %	−4 %/K (> +45 °C)		> 300,000 h	40 x 90 x 99	787-1712
	100 … 240 VAC	5 A	≥ 88 %	−3 %/K (> +45 °C)		> 300,000 h	60 x 130 x 99	787-1722
	100 … 240 VAC	10 A	≥ 91 %	−4 %/K (> +45 °C)		> 300,000 h	70 x 165 x 99	787-1732
3-phase; 24 VDC output voltage								
	(2/3) x 400 … 500 VAC	6.25 A	≥ 87 %	−2.5 %/K (> 50 °C)	DC OK contact	> 250,000 h	50 x 130 x 92	787-738
	(2/3) x 400 … 500 VAC	10 A	≥ 89 %	−1.3 %/K (> 50 °C)	DC OK contact	> 250,000 h	65 x 130 x 130	787-740
	(2 / 3) x 400 … 480 VAC	20 A	≥ 90.5 %	−2 %/K (> 45 °C)	DC OK contact	> 1,800,000 h	80 x 130 x 170	787-2742
	(2 / 3) x 400 … 480 VAC	40 A	≥ 91.5 %	−2 %/K (> 45 °C)	DC OK contact	> 1,300,000 h	140 x 130 x 170	787-2744

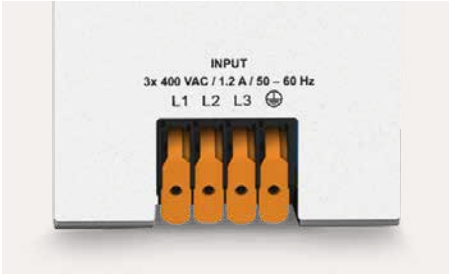


High Load-Carrying Capacity
- Overload warning from 1.15 times the nominal output current*
- Overload of up to 1.4 times the nominal current with a lowered output voltage (constant power)*
- Output shutdown in case of a low-resistance short circuit; also includes automatic restart

* Except for 787-17xx

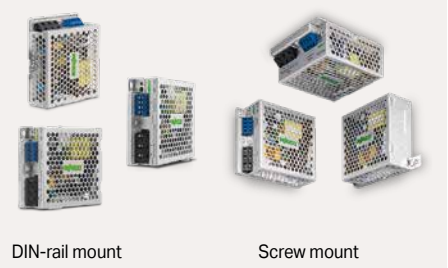
Status Monitoring
- Potential-isolated make contact signal, via bounce-free optocoupler* or PhotoMOS**
- Indicates whether an output voltage or an overload is present
- Ideal for remote monitoring

* Only for 787-734 … -740
** Only for 787-2742, -2744



Fast Wiring
- Convenient, tool-free wiring thanks to lever-actuated terminal strips*
- Integrated test slot simplifies testing by eliminating conductor removal

* Only for 787-734 … -740, -2742, -2744



Various Mounting Options
- Flexible mounting via DIN-rail adapter*
- Flexible installation via screw-mount clips*

* Only for 787-17xx

Highly Economical
- Triple the savings thanks to low purchase costs, easy installation and maintenance-free operation
- Budget-friendly for basic applications

EN 60335-1 Household Appliances Standard
- Power supplies with item numbers having the 787-17xx format meet the requirements of the household appliances standard

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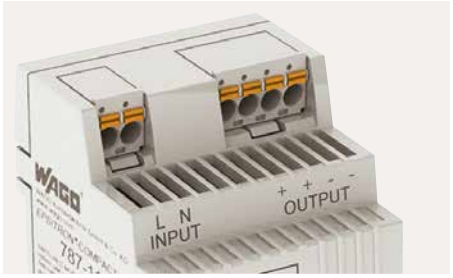
WAGO Power Supplies Compact – 787 Series

Illustration	Nominal Input Voltage	Output Current	Efficiency	Signal	MTBF (per IEC 61709)	Special Mounting Features	Dimensions (W x H x D in mm)	Item No.
1-phase; 5 VDC output voltage								
	100 … 240 VAC	5.5 A	≥ 75 %		> 500,000 h	Overhead mounting	72 x 89 x 55	787-1020
1-phase; 12 VDC output voltage								
	100 … 240 VAC	2 A	≥ 80 %		> 500,000 h	Overhead mounting	54 x 89 x 55	787-1001
	100 … 240 VAC	4 A	≥ 85 %		> 500,000 h	Overhead mounting	72 x 89 x 55	787-1011
	100 … 240 VAC	6 A	≥ 87 %		> 500,000 h	Overhead mounting	90 x 89 x 55	787-1021
1-phase; 12 VDC output voltage; with picoMAX connection technology (tool-free)								
	100 … 240 VAC	2.5 A	≥ 88 %		> 500,000 h	Removable front panel	54 x 90 x 52.5	787-1201
	100 … 240 VAC	5 A	≥ 88.5 %		> 500,000 h	Removable front panel	72 x 90 x 52.5	787-1211
	100 … 240 VAC	8 A	≥ 91.5 %		> 500,000 h		108 x 90 x 52.5	787-1221
1-phase; 18 VDC output voltage								
	100 … 240 VAC	2.4 A	≥ 84 %		> 500,000 h	Overhead mounting	72 x 89 x 55	787-1017
1-phase; 24 VDC output voltage								
	100 … 240 VAC	1.3 A	82 %		> 500,000 h	Overhead mounting	54 x 89 x 55	787-1002
	100 … 240 VAC	2.5 A	88 %		> 500,000 h	Overhead mounting	72 x 89 x 55	787-1012
	100 … 240 VAC	4 A	88 %		> 500,000 h	Overhead mounting	90 x 89 x 55	787-1022
1-phase; 24 VDC output voltage; with picoMAX connection technology (tool-free)								
	100 … 240 VAC	0.5 A	83 %		> 700,000 h		18 x 90 x 52.5	787-1200
	110 … 240 VAC	1.25 A	88 %		> 500,000 h		36 x 90 x 55	787-2850
	100 … 240 VAC	1.3 A	82 %	DC OK signal	> 500,000 h		54 x 89 x 55	787-1102
	100 … 240 VAC	1.3 A	87 %	DC OK signal	> 700,000 h	Removable front panel	54 x 90 x 52.5	787-1202
	100 … 240 VAC	2.5 A	88 %	DC OK signal	> 500,000 h		72 x 89 x 55	787-1112
	100 … 240 VAC	2.5 A	89 %	DC OK signal	> 500,000 h	Removable front panel	72 x 90 x 52.5	787-1212
	100 … 240 VAC	4 A	88 %	DC OK signal	> 500,000 h		90 x 89 x 55	787-1122
	100 … 240 VAC	4.2 A	90 %	DC OK signal	> 500,000 h	Removable front panel	108 x 90 x 52.5	787-1216
	100 … 240 VAC	6 A	90 %	DC OK signal	> 500,000 h	Removable front panel	144 x 90 x 52.5	787-1226



Easy to Connect
- Vibration-proof, fast and maintenance-free CAGE CLAMP® connections
- Pre-assembly via pluggable picoMAX® connection technology*

* Only for 787-11xx, 787-12xx

DIN-Rail Built-In Installation
- Housing design per EN 43880, for installation in small distribution boards or meter panels

Various Mounting Options
- Easy mounting on DIN-rail
- Flexible installation via screw-mount clips also possible*

* Only for 787-12xx

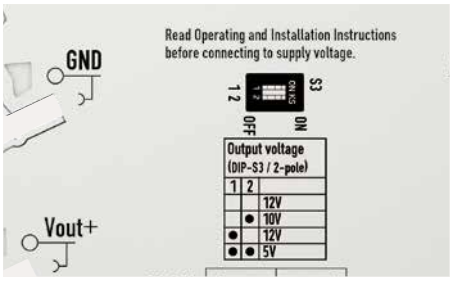
Overhead Mounting
- Any type of mounting position is possible at reduced output power.
- Units can even be mounted overhead, e.g., in ceiling-mounted distribution boxes

Highly Economical
- Triple the savings thanks to low purchase costs, easy installation and maintenance-free operation
- Budget-friendly for basic applications

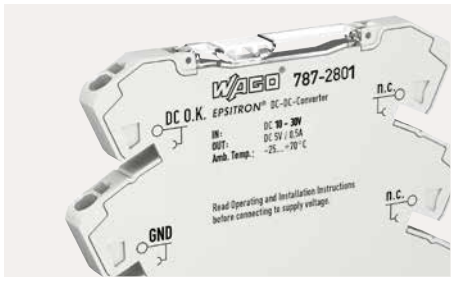
EN 60335-1 Household Appliances Standard
- Power supplies with item numbers having the 787-12xx format meet the requirements of the household appliances standard

WAGO DC/DC Converters – 787 / 288 Series

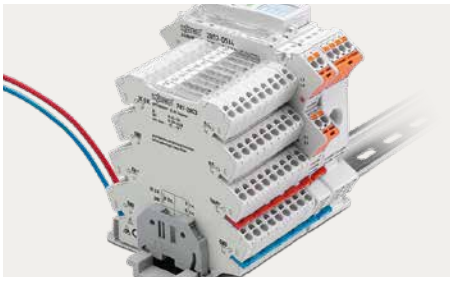
Illustration	Nominal Input Voltage	Nominal Output Voltage	Input Current	Output Current	Efficiency	Dimensions (W x H x D in mm)	Item No.
DC OK contact; in a compact 6 mm housing							
	24 VDC	5 VDC	≤ 0.34 A	0.5 A	≥ 82.5 %	6 x 97.8 x 94	787-2801
	24 VDC	10 VDC	≤ 0.42 A	0.5 A	≥ 89 %	6 x 97.8 x 94	787-2802
	24 VDC	12 VDC	≤ 0.5 A	0.5 A	≥ 90 %	6 x 97.8 x 94	787-2805
	48 VDC	24 VDC	≤ 0.34 A	0.5 A	≥ 91 %	6 x 97.8 x 94	787-2803
	24 VDC	5/10/12 VDC	≤ 0.5 A	0.5 A	≥ 82.5 %	6 x 97.8 x 94	787-2810
Output voltage: 12 VDC							
	24 VDC	12 VDC	≤ 3.39 A	4 A	≥ 84 %	45 x 90 x 107.5	787-1650
	72 VDC	12 VDC	≤ 0.79 A	4 A	≥ 85 %	72 x 89 x 55	787-1015/072-000
Output voltage: 18 VDC							
	24 VDC	18 VDC	≤ 0.37 A	0.4 A	82 %	50 x 25 x 85	288-895
Output voltage: 24 VDC							
	72 VDC	24 VDC	≤ 0.79 A	2 A	≥ 84 %	72 x 89 x 55	787-1014/072-000
	110 VDC	24 VDC	≤ 0.77 A	2 A	≥ 85 %	72 x 89 x 55	787-1014



One Device for Many Applications
- Output voltage of the DC/DC Converter (787-2810) set via built-in DIP switch



Communicative
- Green LED indicates output voltage availability
- Remote monitoring via DC OK signal
- Easy commissioning and maintenance



Can Be Commoned with 857/2857 Series
- Full commoning of the supply voltage thanks to shared profile between the 787-28xx DC/DC Converters and the 857/2857 Series Relays and Signal Conditioners

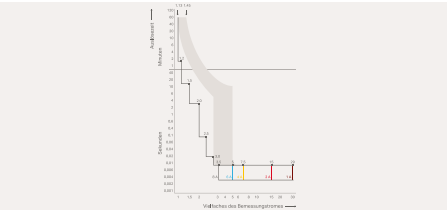
The Industry's Most Compact
- "True" 6.0 mm (0.23 inch) width maximizes panel space

Suitable for Railway Applications per EN 50155
- Wide DC input voltage range
- Wide temperature range
- Protective coating

* Only 787-1014 & 787-101x/072-000

WAGO Electronic Circuit Breakers – 787 Series

Illustration	Output Current	Signaling	Features	Dimensions (W x H x D in mm)	Item No.
1 channel; 24 VDC input voltage					
	1 x 0.5 A (fixed setting)	1 x status LED (green/yellow/red/blue)	Communication capability	6 x 97.8 x 94	787-2861/050-000
	1 x 1 A (fixed setting)	1 x status LED (green/yellow/red/blue)	Communication capability	6 x 97.8 x 94	787-2861/100-000
	1 x 2 A (fixed setting)	1 x status LED (green/yellow/red/blue)	Communication capability	6 x 97.8 x 94	787-2861/200-000
	1 x 4 A (fixed setting)	1 x status LED (green/yellow/red/blue)	Communication capability	6 x 97.8 x 94	787-2861/400-000
	1 x 6 A (fixed setting)	1 x status LED (green/yellow/red/blue)	Communication capability	6 x 97.8 x 94	787-2861/600-000
	1 x 8 A (fixed setting)	1 x status LED (green/yellow/red/blue)	Communication capability	6 x 97.8 x 94	787-2861/800-000
	1 x 1 / 2 / 3 / 4 / 5 / 6 / 8 A	1 x status LED (green/yellow/red/blue)	Communication capability	6 x 97.8 x 94	787-2861/108-020
2 channels; 24 VDC input voltage					
	2 x 0.5 / 1 / 2 / 3 / 4 / 6 A	2 x LED status (green/red/orange)	Active current limitation; communication capability	45 x 90 x 115.5	787-1662/006-1000
	2 x 3.8 A	2 x LED status (green/red/orange)	Active current limitation; NEC class 2; communication capability	45 x 90 x 115.5	787-1662/004-1000
	2 x 2 / 3 / 4 / 6 / 8 / 10 A	2 x LED status (green/red/orange)	Communication capability	45 x 90 x 115.5	787-1662
	2 x 1 / 2 / 3 / 4 / 5 / 6 A	2 x LED status (green/red/orange)	Communication capability	45 x 90 x 115.5	787-1662/106-000
	2 x 2 / 3 / 4 / 6 / 8 / 10 A	2 x LED status (green/red/orange)	Signal contact; special configuration	45 x 90 x 115.5	787-1662/000-054
2 channels; 48 VDC input voltage					
	2 x 2 / 3 / 4 / 6 / 8 / 10 A	2 x LED status (green/red/orange)	Signal contact	45 x 90 x 115.5	787-1662/000-250
4 channels; 12 VDC input voltage					
	4 x 2 / 3 / 4 / 6 / 8 / 10 A	4 x LED status (green/red/orange)	Communication capability	45 x 90 x 115.5	787-1664/000-100
4 channels; 24 VDC input voltage					
	4 x 0.5 / 1 / 2 / 3 / 4 / 6 A	4 x LED status (green/red/orange)	Active current limitation; communication capability	45 x 90 x 115.5	787-1664/006-1000
	4 x 3.8 A	4 x LED status (green/red/orange)	Active current limitation; NEC class 2; communication capability	45 x 90 x 115.5	787-1664/004-1000
	4 x 2 / 4 / 6 / 8 / 10 / 12 A	4 x LED status (green/red/orange)	Active current limitation; communication capability	45 x 90 x 115.5	787-1664/212-1000
	4 x 0.5 / 1 / 2 / 3 / 4 / 6 A	4 x LED status (green/red/orange)	Active current limitation; signal contact; special configuration	45 x 90 x 115.5	787-1664/006-1054
	4 x 1 / 2 / 3 / 4 / 6 / 8 / 10 A	4 x LED status (green/red/orange)	IO-Link	45 x 90 x 115.5	787-1664/000-080
	4 x 2 / 3 / 4 / 6 / 8 / 10 A	4 x LED status (green/red/orange)	Communication capability	45 x 90 x 115.5	787-1664
	4 x 1 / 2 / 3 / 4 / 5 / 6 A	4 x LED status (green/red/orange)	Communication capability	45 x 90 x 115.5	787-1664/106-000
	4 x 1 / 2 / 3 / 4 / 5 / 6 A	4 x LED status (green/red/orange)	Communication capability; NPN signaling	45 x 90 x 115.5	787-1664/106-011
	4 x 2 / 3 / 4 / 6 / 8 / 10 A	4 x LED status (green/red/orange)	Communication capability; special configuration	45 x 90 x 115.5	787-1664/000-004
	4 x 2 / 3 / 4 / 6 / 8 / 10 A	4 x LED status (green/red/orange)	Signal contact; special configuration	45 x 90 x 115.5	787-1664/000-054
	4 x 2 / 3 / 4 / 6 / 8 / 10 A	4 x LED status (green/red/orange)	Communication capability; NPN signaling	45 x 90 x 115.5	787-1664/000-011
4 channels; 48 VDC input voltage					
	4 x 2 / 3 / 4 / 6 / 8 / 10 A	4 x LED status (green/red/orange)	Communication capability	45 x 90 x 115.5	787-1664/000-200
	4 x 2 / 3 / 4 / 6 / 8 / 10 A	4 x LED status (green/red/orange)	Signal contact	45 x 90 x 115.5	787-1664/000-250
8 channels; 24 VDC input voltage					
	8 x 0.5 / 1 / 2 / 3 / 4 / 6 A	8 x LED status (green/red/orange)	Active current limitation; communication capability	42 x 127 x 142.5	787-1668/006-1000
	8 x 0.5 / 1 / 2 / 3 / 4 / 6 A	8 x LED status (green/red/orange)	Active current limitation; signal contact; special configuration	42 x 127 x 142.5	787-1668/006-1054
	8 x 1 / 2 / 3 / 4 / 5 / 6 A	8 x LED status (green/red/orange)	Communication capability	42 x 127 x 142.5	787-1668/106-000
	8 x 2 / 3 / 4 / 6 / 8 / 10 A	8 x LED status (green/red/orange)	Communication capability	42 x 127 x 142.5	787-1668
	8 x 2 / 3 / 4 / 6 / 8 / 10 A	8 x LED status (green/red/orange)	Communication capability; special configuration	42 x 127 x 142.5	787-1668/000-004
	8 x 2 / 3 / 4 / 6 / 8 / 10 A	8 x LED status (green/red/orange)	Signal contact; special configuration	42 x 127 x 142.5	787-1668/000-054
	8 x 1 / 2 / 3 / 4 / 5 / 6 A	8 x LED status (green/red/orange)	Signal contact	42 x 127 x 142.5	787-1668/106-054
	8 x 1 / 2 / 3 / 4 / 6 / 8 / 10 A	8 x LED status (green/red/orange)	IO-Link	42 x 127 x 142.5	787-1668/000-080
8 channels; 48 VDC input voltage					
	8 x 2 / 3 / 4 / 6 / 8 / 10 A	8 x LED status (green/red/orange)	Communication capability	42 x 127 x 142.5	787-1668/000-200
	8 x 2 / 3 / 4 / 6 / 8 / 10 A	8 x LED status (green/red/orange)	Signal contact	42 x 127 x 142.5	787-1668/000-250



Trip Characteristics

- Reliable and precise disconnection in case of overcurrent or short circuit
- Nominal currents can be set separately for each channel
- No voltage drop on other current paths thanks to optional active short circuit limitation to 1.5 times the nominal current

Intuitive Operation

- Each output channel has backlit buttons for switching on/off, as well as status acknowledgement
- Integrated, multi-color LEDs indicate the operating status of each channel
- Transparent cover can be sealed and marked
- Nominal current can be individually adjusted for each channel
- The setting is visible – even when no voltage is applied

Communication

- Remote digital input S1 resets all tripped channels
- Digital output S3 transmits a simple group message indicating whether one of the channels was tripped by an overcurrent
- Optional isolated signal contact as a group signal (instead of S2 and S3 digital outputs), IO-Link or Manchester protocol

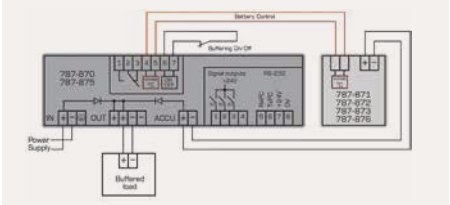
Uninterruptible Power Supplies (UPS); Battery Modules; Capacitive Buffer Modules; Redundancy Modules – 787 Series

Illustration	Nominal Input Voltage	Output Current	Efficiency	Buffer Time	Features	Dimensions (W x H x D in mm)	Item No.
Power Supply with Integrated Charger and Controller; 1-phase; 24 VDC output voltage							
	100 … 240 VAC	5 A	≥ 88 %	1 s … 20 min	Communication capability; Charging current ≤ 1 A	60 x 127 x 135.5	787-1675
UPS Charger and Controller; 24 VDC output voltage							
	24 VDC	10 A	≥ 95 %	10 … 600 s	LineMonitor; communication capability	40 x 163 x 163	787-870
	24 VDC	20 A	≥ 95 %	10 … 600 s	LineMonitor; communication capability	57 x 171 x 163	787-875
	24 VDC	40 A	≥ 97 %	Load-dependent	Charging current ≤ 4 A	68 x 181 x 162	787-915

Illustration	Nominal Input Voltage	Output Current	Capacitance	Charging Current	Features	Dimensions (W x H x D in mm)	Item No.
Pure Lead Battery Module; 24 VDC output voltage							
	24 VDC	20 A	2.5 Ah	≤ 5 A	Battery control –40 … +60 °C	36 x 90 x 55	787-878/000-2500
	24 VDC	40 A	13 Ah	≤ 5 A	Battery control –40 … +60 °C	217 x 186 x 199.5	787-878/001-3000
Lead Fleece Battery Module; 24 VDC output voltage							
	24 VDC	7.5 A	1.2 Ah	≤ 0.3 A	Battery control –10 … +40 °C	55 x 153 x 126.6	787-876
	24 VDC	20 A	3.2 Ah	≤ 0.8 A	Battery control	76.2 x 168 x 175.5	787-871
	24 VDC	40 A	7 Ah	≤ 1.8 A	Battery control	86 x 239 x 217.5	787-872
	24 VDC	40 A	12 Ah	≤ 3 A	Battery control	120.5 x 239 x 217.5	787-873
	24 VDC	5 A	0.8 Ah	0.2 A	Battery control –10 … +40 °C	72 x 97 x 124	787-1671

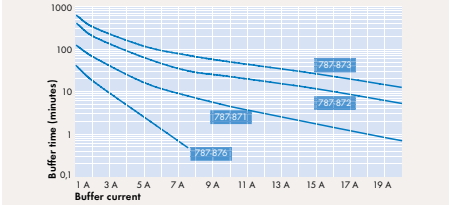
Illustration	Nominal Input Voltage	Output Current	Buffer Time	Charging Time (typ.)	Features	Dimensions (W x H x D in mm)	Item No.
Capacitive Buffer Module; 24 VDC output voltage							
	24 VDC	10 A	0.06 … 7.2 s	5 min	Communication capability	57 x 163 x 179	787-880
	24 VDC	20 A	0.17 … 16.5 s	5 min	Communication capability	57 x 181 x 179	787-881
	24 VDC	40 A	0.3 … 6.6 s	2.5 min		68 x 181 x 162	787-916

Illustration	Nominal Input Voltage	Output Current	Efficiency	Signaling	Features	Dimensions (W x H x D in mm)	Item No.
Redundancy Module; 24 VDC output voltage							
	2 x 24 VDC	25 A	≥ 96 %	Diode		50 x 130 x 92	787-783
	2 x 24 VDC	25 A	≥ 96 %	Diode	Ex approval	50 x 130 x 92	787-783/000-040
	2 x 24 VDC	40 A	≥ 99.5 %	MOSFET	Communication capability	42 x 127 x 139.5	787-1685
	2 x 24 VDC	40 A	≥ 97 %	Diode	Communication capability	40 x 181 x 163	787-885
	2 x 24 VDC	76 A	≥ 97 %	Diode		83 x 130 x 153	787-785
	2 x 24 VDC	76 A	≥ 97 %	Diode	Ex approval	83 x 130 x 153	787-785/000-040
Redundancy Module; 48 VDC output voltage							
	2 x 48 VDC	40 A	≥ 97 %		Communication capability	40 x 181 x 163	787-886



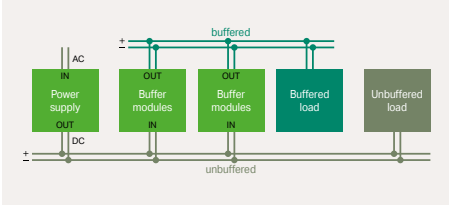
Battery Control Technology

- Allows continuous data exchange between intelligent Battery Modules (787-87x) and a UPS Charger/Controller
- Automatically detects a connected Battery Module (787-87x)
- Maximized battery life via temperature-controlled battery management



Buffer Time vs. Load Current

Different buffer times/currents can be achieved depending on the battery module selected. The example above shows a 7 A load current provided for approximately 30 seconds by a 787-870 UPS Charger/Controller (10 A) and 787-876 Battery Module.

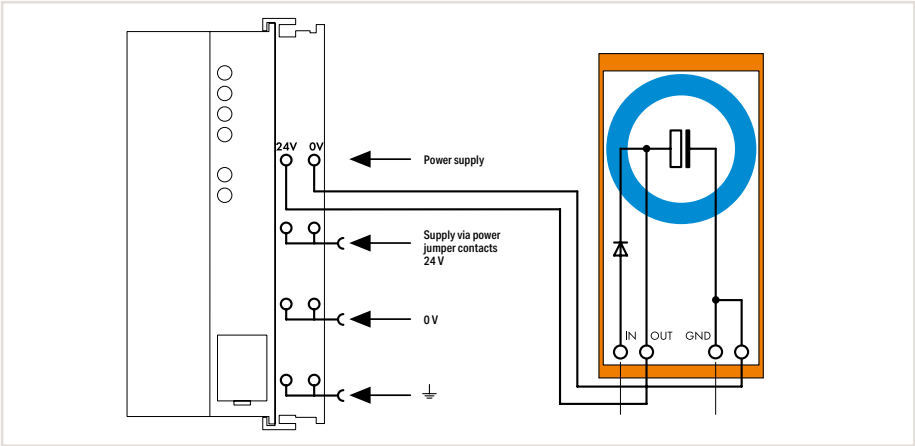


Parallel Connection Possible

- Multiple buffer modules can be connected in parallel to increase buffer time or load current

13

Backup Capacitor Module and DC/DC Converter



Item Description	Component module with capacitor; 1 module; Capacity: 10 mF; Nominal voltage: 24 VDC
Item No.	288-824

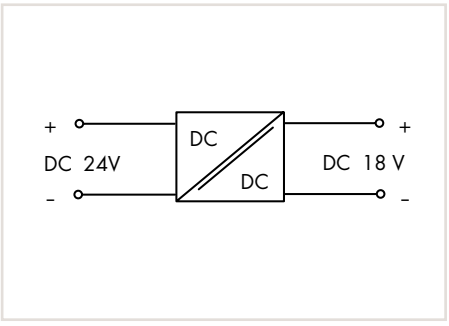
Technical Data

Nominal input voltage (DC) max.	24 VDC (+25 %)
Input current Ii (max.)	1 A
Nominal capacity	10 mF
Weight	104.4 g
Dimensions W x H x D	38 x 81 x 85 mm; height from upper-edge of DIN-rail
Conductor connection	CAGE CLAMP® (236 Series)
Conductor cross-sections	0.08 … 2.5 mm² / 28 … 12 AWG
Strip length	5 … 6 mm / 0.24 inch
For data sheet and additional information, see:	wago.com/288-824

This back-up capacitor module smoothes unstable 24 VDC power supplies for electronic modules in case the voltage tolerances mentioned in our data sheets cannot be ensured.

Reasons for voltage transients could be:
- Power interruptions (switching transients) on primary side
- Overloads on secondary side
- Switching of inductive or capacitive loads
- The back-up capacitor module is connected between the 24 V power supply and the electronic device to be protected.

Notice:
Using insufficiently smoothed and unregulated single-phase power supplies may lead to voltage increases by the back-up capacitor module.



Item Description	DC/DC Converter; 24 VDC input voltage; 18 VDC output voltage; 0.4 A output current
Item No.	288-895

Technical Data

Nominal input voltage (DC) max.	24 VDC
Input voltage range	18 … 36 VDC
Nominal output voltage (DC)	18 VDC (±2 %)
Nominal output current	0.4 A
Efficiency	82 %
Short-circuit-protected	Yes
Surrounding air temperature (operation)	–25 … +70 °C
Weight	76 g
Dimensions W x H x D	50 x 25 x 85 mm; height from upper-edge of DIN-rail
Conductor connection	CAGE CLAMP® (256 Series)
Conductor cross-sections	0.08 … 2.5 mm² / 28 … 12 AWG (THHN, THWN)
Strip length	5 … 6 mm / 0.24 inch
For data sheet and additional information, see:	wago.com/288-895

WAGO System Wiring – 706 / 289 / 704 Series
Interface Modules and Interface Cables

PLC WAGO I/O System 750

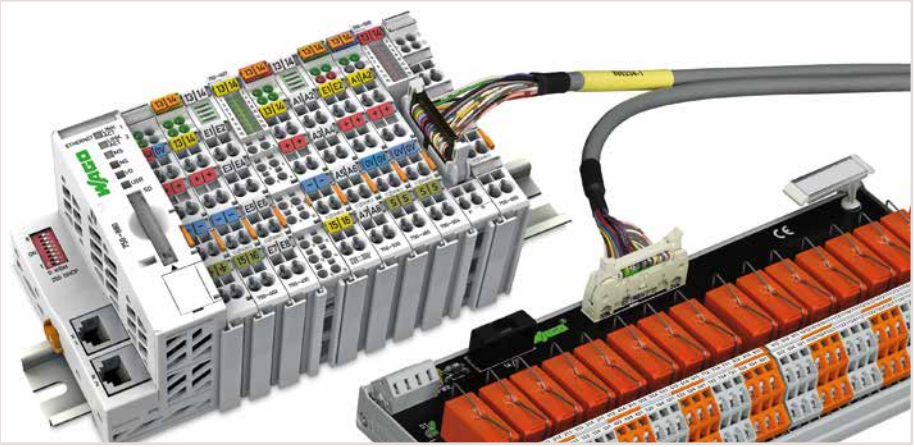
	PLC			WAGO Interface Cable		WAGO Interface Modules	
	PLC I/O Assembly			Item No.	Qty.	Type	Qty.
DI	750-1400	16	DI	706-3057/300-XXXX	1	T16ES	1
DO	750-1500	16	DO	706-3057/300-XXXX	1	T16(E)S	1
DI/DO	750-1502	8	DI	706-7753/302-XXXX	1	T8ES	1
		8	DO			T8(E)S	1
	750-1502	8	DI	706-3057/300-XXXX	1	T16ES	1
		8	DO				

PLC WAGO I/O System 753

	PLC			WAGO Interface Cable		WAGO Interface Modules	
	PLC I/O Assembly			Item No.	Qty.	Type	Qty.
DI	753-430 (x1)	8	DI	706-7753/300-XXXX	1	T8ES	1
	753-430 (x2)	16	DI	706-7753/301-XXXX	1	T16ES	1
	753-431 (x1)	8	DI	706-7753/300-XXXX	1	T8ES	1
	753-431 (x2)	16	DI	706-7753/301-XXXX	1	T16ES	1
DO	753-530 (x1)	8	DO	706-7753/300-XXXX	1	T8(E)S	1
	753-530 (x2)	16	DO	706-7753/301-XXXX	1	T16(E)S	1
AI	753-453 (x1)	4	AI	706-7753/602-XXXX	1	A4ES	1
	753-453 (x2)	8	AI	706-7753/601-XXXX	1	A8ES	1
	753-455 (x1)	4	AI	706-7753/602-XXXX	1	A4ES	1
	753-455 (x2)	8	AI	706-7753/601-XXXX	1	A8ES	1
	753-457 (x1)	4	AI	706-7753/602-XXXX	1	A4ES	1
	753-457 (x2)	8	AI	706-7753/601-XXXX	1	A8ES	1
	753-459 (x1)	4	AI	706-7753/602-XXXX	1	A4ES	1
	753-459 (x2)	8	AI	706-7753/601-XXXX	1	A8ES	1
AO	753-553 (x1)	4	AO	706-7753/602-XXXX	1	A4ES	1
	753-553 (x2)	8	AO	706-7753/601-XXXX	1	A8ES	1
	753-555 (x1)	4	AO	706-7753/602-XXXX	1	A4ES	1
	753-555 (x2)	8	AO	706-7753/601-XXXX	1	A8ES	1
	753-557 (x1)	4	AO	706-7753/602-XXXX	1	A4ES	1
	753-557 (x2)	8	AO	706-7753/601-XXXX	1	A8ES	1
	753-559 (x1)	4	AO	706-7753/602-XXXX	1	A4ES	1
	753-559 (x2)	8	AO	706-7753/601-XXXX	1	A8ES	1

WAGO Interface Modules

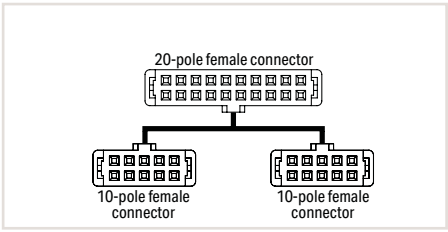
	Type	Description	Item No.
DI/DO	T8ES	10-pole; without supply	289-611
		10-pole; with LED; 3-wire	704-2003
	T8ESHT	12-pole (MCS); without LED; 2-wire; up to 250 V	704-3003
	T8S	10-pole; with LED; electrical isolation: 5 A relay	704-5003
		10-pole; with LED; electrical isolation: 5 A relay; manual operation	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
AI/AO	A4ES	15-pole D-sub; 2- and 4-wire	704-8002
		15-pole D-sub; 2- and 4-wire; isolation	704-8012
	A8ES	25-pole D-sub; 2- and 4-wire	704-8003
		25-pole D-sub; 2- and 4-wire; isolation	704-8013
	A8TSX	25-pole D-sub; current and voltage signal	704-8023



I/O modules equipped with a ribbon cable connector provide easy and fast connection of WAGO Interface Modules to the WAGO I/O System. WAGO's pre-assembled system cables eliminate discrete wiring, while reducing costs for system wiring applications. Additionally, modules can be pre-wired, allowing the connection level to be relocated.

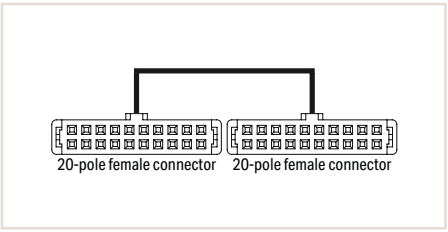
System Cables; for 750 Series WAGO I/O System
706 Series

When using more than 10 wires, the maximum current per wire must be reduced to 0.7 A.



System Cable; for 750 Series WAGO I/O System; 8 digital inputs and 8 digital outputs; Conductor cross-section: 0.14 mm²

Length	Item No.	PU
1 m	706-7753/302-100	1
2 m	706-7753/302-200	1
3 m	706-7753/302-300	1



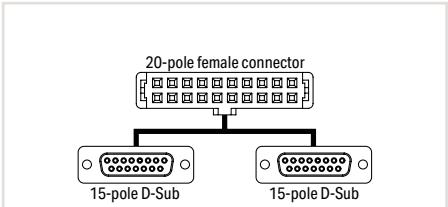
System Cable; for Schneider TSX; 16 digital inputs or outputs; Conductor cross-section: 0.14 mm²

Length	Item No.	PU
1 m	706-3057/300-100	1
2 m	706-3057/300-200	1
3 m	706-3057/300-300	1

Technical Data

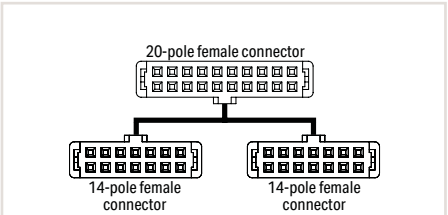
Connectors (side 1)	20-pole DIN 41651 connector; female connector / 2 x 10-pole DIN 41651 connector; female connector	20-pole DIN 41651 connector; female connector / 20-pole DIN 41651 connector; female connector
Wire cross-section	0.14 mm2 LiYY	0.14 mm2 LiYY
Color code	Per DIN VDE 47100	Per DIN VDE 47100
Current per wire (max.)	1 A	1 A
Operating voltage	≤ 35 VAC/DC	≤ 35 VAC/DC
Surrounding air temperature (operation)	–20 … +50 °C	–20 … +50 °C

When using more than 10 wires, the maximum current per wire must be reduced to 0.7 A.



System Cable; for 750 Series WAGO I/O System; 2 x 8 digital inputs or outputs; Conductor cross-section: 0.14 mm²

Length	Item No.	PU
1 m	706-7753/306-100	1
2 m	706-7753/306-200	1
3 m	706-7753/306-300	1



System Cable; for 750 Series WAGO I/O System; 2 x 8 analog inputs or outputs; Conductor cross-section: 0.14 mm²

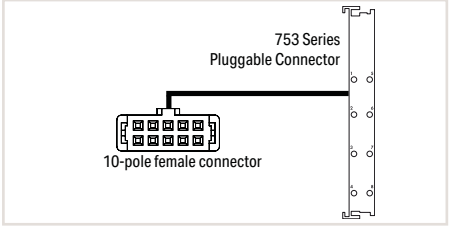
Length	Item No.	PU
1 m	706-7753/304-100	1
2 m	706-7753/304-200	1
3 m	706-7753/304-300	1

Technical Data

Connectors	20-pole DIN 41651 connector; female connector / 2 x 15-pole D-sub; socket	20-pole DIN 41651 connector; female connector / 2 x 14-pole DIN 41651 connector; female connector
Wire cross-section	0.14 mm2 LiYY	0.14 mm2 LiYY
Color code	Per DIN VDE 47100	Per DIN VDE 47100
Current per wire (max.)	1 A	1 A
Operating voltage	≤ 35 VAC/DC	≤ 35 VAC/DC
Surrounding air temperature (operation)	–20 … +50 °C	–20 … +50 °C

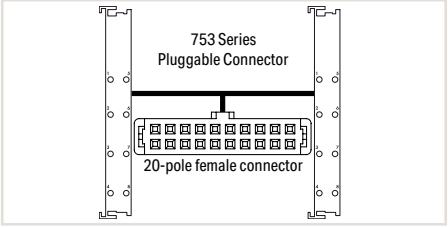
System Cables; for 753 Series WAGO I/O System
706 Series

When using more than 10 wires, the maximum current per wire must be reduced to 0.7 A.



System Cable; for 753 Series WAGO I/O System; 8 digital inputs or outputs; Conductor cross-section: 0.14 mm²

Length	Item No.	PU
1 m	706-7753/300-100	1
2 m	706-7753/300-200	1
3 m	706-7753/300-300	1

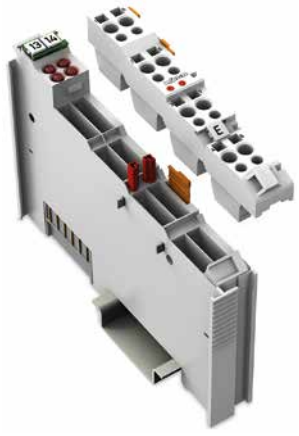


System Cable; for 753 Series WAGO I/O System; 2 x 8 digital inputs or outputs; Conductor cross-section: 0.14 mm²

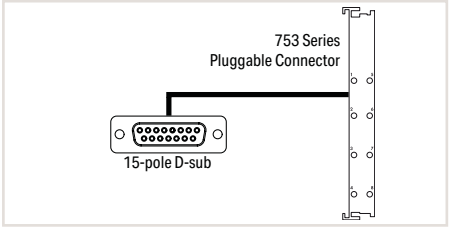
Length	Item No.	PU
1 m	706-7753/301-100	1
2 m	706-7753/301-200	1
3 m	706-7753/301-300	1

Technical Data

Connectors (side 1)	8-pole male connector (753 Series) / 10-pole DIN 41651 connector; female connector	2 x 8-pole male connector (753 Series) / 20-pole DIN 41651 connector; female connector
Wire cross-section	0.14 mm2 LiYY	0.14 mm2 LiYY
Color code	Per DIN VDE 47100	Per DIN VDE 47100
Current per wire (max.)	1 A	1 A
Operating voltage	≤ 35 VAC/DC	≤ 35 VAC/DC
Surrounding air temperature (operation)	–20 … +50 °C	–20 … +50 °C

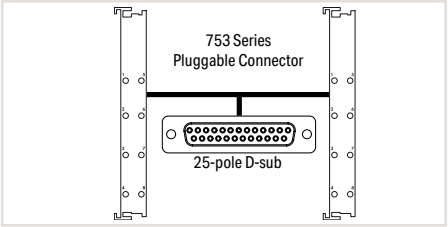


When using more than 10 wires, the maximum current per wire must be reduced to 1 A.



System Cable; for 753 Series WAGO I/O System; 4 analog inputs or outputs; Conductor cross-section: 0.25 mm²

Length	Item No.	PU
1 m	706-7753/602-100	1
2 m	706-7753/602-200	1
3 m	706-7753/602-300	1



System Cable; for 753 Series WAGO I/O System; 8 analog inputs or outputs; Conductor cross-section: 0.25 mm²

Length	Item No.	PU
1 m	706-7753/601-100	1
2 m	706-7753/601-200	1
3 m	706-7753/601-300	1

Technical Data

Connectors	8-pole male connector (753 Series) / 15-pole Mini D-sub; female connector	2 x 8-pole male connector (753 Series) / 25-pole Mini D-sub; female connector
Wire cross-section	0.25 mm2 LiYCY	0.25 mm2 LiYCY
Color code	Per DIN VDE 47100	Per DIN VDE 47100
Current per wire (max.)	2 A	2 A
Operating voltage	≤ 35 VAC/DC	≤ 35 VAC/DC
Surrounding air temperature (operation)	–20 … +50 °C	–20 … +50 °C

IP67 Cables and Connectors

WAGO's 756 Series offers a wide range of accessories for connecting inductive or capacitive proximity switches, photoelectric sensors, flow monitors, limit switches, pressure switches and more devices.
The cables not only protect against the ingress of dust and water, but also protect against self-loosening due to vibration by working as a constructive "brake" thanks to the design of their coupling nuts. Injected cable entries also offer bend protection.
A distinction is made between cables assembled on one or both ends.

Cables assembled on one end are often used where an exact cable length can not be determined or the installation of cables with connectors proves to be very difficult. These free-end cables can adapt to suit the installation's requirements. In contrast, cables assembled on both sides reduce assembly and installation times, cutting overall project costs.

Sensor/Actuator Cable; Fitted on One End

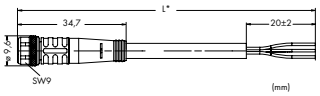
M8 Socket

3-pole

Pin 1 ... 4: 0.34 mm²

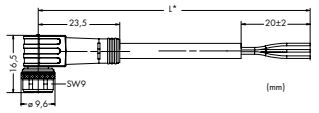
1	brown (+)
3	blue (-)
4	black (S)

Operating voltage	60 VAC/DC
Operating current	4 A (max.)
Rated surge voltage	1.5 kV
Drag chain capability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	−25 ... +90 °C
Protection type	IP67
Cable diameter	4.1 mm ±0.2



Sensor/Actuator Cable; M8 socket (straight)

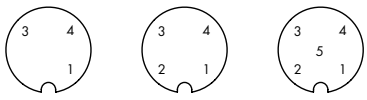
Pole No.	Cable Length	Item No.	PU
3-pole	1.5 m	756-5101/030-015	10
3-pole	5 m	756-5101/030-050	10
3-pole	10 m	756-5101/030-100	10



Sensor/Actuator Cable; M8 socket (angled)

Pole No.	Cable Length	Item No.	PU
3-pole	1.5 m	756-5102/030-015	10
3-pole	5 m	756-5102/030-050	10
3-pole	10 m	756-5102/030-100	10

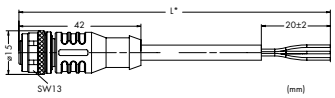
M12 Socket



Pin 1 ... 5: 0.34 mm²

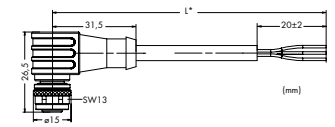
1	brown (+)
2	white (Ö)
3	blue (-)
4	black (S)
5	gray

Operating voltage	250 VAC/DC
Operating current	4 A (max.)
Rated surge voltage	2.5 kV (3- and 4-pole); 1.5 kV (5-pole)
Drag chain capability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	−25 ... +90 °C
Protection type	IP67
Cable diameter	4.3 mm ±0.2 (3-pole); 4.7 mm ±0.2 (4-pole); 5.0 mm ±0.2 (5-pole); 6.5 mm ±0.2 (5-pole; shielded)



Sensor/Actuator Cable; M12 socket (straight)

Pole No.	Cable Length	Item No.	PU
3-pole	1.5 m	756-5301/030-015	10
3-pole	5 m	756-5301/030-050	10
3-pole	10 m	756-5301/030-100	10
4-pole	1.5 m	756-5301/040-015	10
4-pole	5 m	756-5301/040-050	10
4-pole	10 m	756-5301/040-100	10
5-pole	1.5 m	756-5301/050-015	10
5-pole	5 m	756-5301/050-050	10
5-pole	10 m	756-5301/050-100	10
5-pole; shielded	1.5 m	756-5301/060-015	10
5-pole; shielded	5 m	756-5301/060-050	10
5-pole; shielded	10 m	756-5301/060-100	10



Sensor/Actuator Cable; M12 socket (angled)

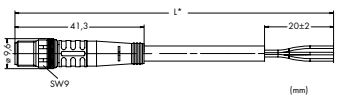
Pole No.	Cable Length	Item No.	PU
3-pole	1.5 m	756-5302/030-015	10
3-pole	5 m	756-5302/030-050	10
3-pole	10 m	756-5302/030-100	10
4-pole	1.5 m	756-5302/040-015	10
4-pole	5 m	756-5302/040-050	10
4-pole	10 m	756-5302/040-100	10
5-pole	1.5 m	756-5302/050-015	10
5-pole	5 m	756-5302/050-050	10
5-pole	10 m	756-5302/050-100	10
5-pole; shielded	1.5 m	756-5302/060-015	10
5-pole; shielded	5 m	756-5302/060-050	10
5-pole; shielded	10 m	756-5302/060-100	10

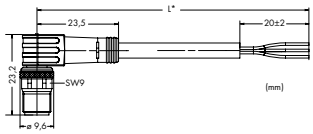
Sensor/Actuator Cable; Fitted on One End

M8 Plug

3-pole

Pin 1 ... 4: 0.34 mm²
1 brown (+)
3 blue (-)
4 black (S)





Operating voltage	60 VAC/DC
Operating current	4 A (max.)
Rated surge voltage	1.5 kV
Drag chain capability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	–25 … +90 °C
Protection type	IP67
Cable diameter	4.1 mm ±0.2

Sensor/Actuator Cable; M8 plug (straight)

Pole No.	Cable Length	Item No.	PU
3-pole	1.5 m	756-5111/030-015	10
3-pole	5 m	756-5111/030-050	10
3-pole	10 m	756-5111/030-100	10

Sensor/Actuator Cable; M8 plug (angled)

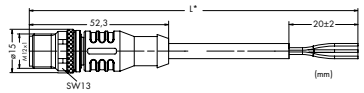
Pole No.	Cable Length	Item No.	PU
3-pole	1.5 m	756-5112/030-015	10
3-pole	5 m	756-5112/030-050	10
3-pole	10 m	756-5112/030-100	10

M12 Plug

3-pole (Pin 2: n.c.)
4-pole

5-pole

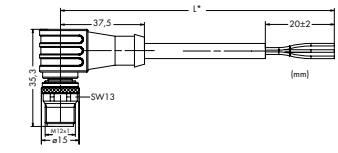
Pin 1 ... 5: 0.34 mm²
1 brown (+)
2 white (Ö)
3 blue (-)
4 black (S)
5 gray



Operating voltage	250 VAC/DC
Operating current	4 A (max.)
Rated surge voltage	2.5 kV (3- and 4-pole); 1.5 kV (5-pole)
Drag chain capability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	–25 … +90 °C
Protection type	IP67
Cable diameter	4.3 mm ±0.2 (3-pole); 4.7 mm ±0.2 (4-pole); 5.0 mm ±0.2 (5-pole); 6.5 mm ±0.2 (5-pole; shielded)

Sensor/Actuator Cable; M12 plug (straight)

Pole No.	Cable Length	Item No.	PU
3-pole	1.5 m	756-5311/030-015	10
3-pole	5 m	756-5311/030-050	10
3-pole	10 m	756-5311/030-100	10
4-pole	1.5 m	756-5311/040-015	10
4-pole	5 m	756-5311/040-050	10
4-pole	10 m	756-5311/040-100	10
5-pole	1.5 m	756-5311/050-015	10
5-pole	5 m	756-5311/050-050	10
5-pole	10 m	756-5311/050-100	10
5-pole; shielded	1.5 m	756-5311/060-015	10
5-pole; shielded	5 m	756-5311/060-050	10
5-pole; shielded	10 m	756-5311/060-100	10



Sensor/Actuator Cable; M12 plug (angled)

Pole No.	Cable Length	Item No.	PU
3-pole	1.5 m	756-5312/030-015	10
3-pole	5 m	756-5312/030-050	10
3-pole	10 m	756-5312/030-100	10
4-pole	1.5 m	756-5312/040-015	10
4-pole	5 m	756-5312/040-050	10
4-pole	10 m	756-5312/040-100	10
5-pole	1.5 m	756-5312/050-015	10
5-pole	5 m	756-5312/050-050	10
5-pole	10 m	756-5312/050-100	10
5-pole; shielded	1.5 m	756-5312/060-015	10
5-pole; shielded	5 m	756-5312/060-050	10
5-pole; shielded	10 m	756-5312/060-100	10

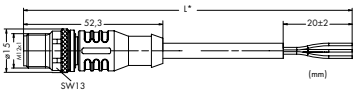
Sensor/Actuator Cable; Fitted on One End

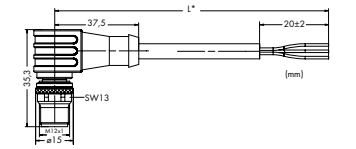
M12 Plug

8-pole, shielded

Pin 1 ... 8: 0.25 mm²

1	white
2	brown
3	green
4	yellow
5	gray
6	rose
7	blue
8	red
Shield	





Operating voltage	250 VAC/DC
Operating current	4 A (max.)
Rated surge voltage	1.5 kV
Drag chain capability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	−25 … +90 °C
Protection type	IP67
Cable diameter	6.3 mm ±0.2

Sensor/Actuator Cable; M12 plug (straight)

Pole No.	Cable Length	Item No.	PU
8-pole; shielded	1.5 m	756-5311/090-015	10
8-pole; shielded	5 m	756-5311/090-050	10
8-pole; shielded	10 m	756-5311/090-100	10

Sensor/Actuator Cable; M12 plug (angled)

Pole No.	Cable Length	Item No.	PU
8-pole; shielded	1.5 m	756-5312/090-015	10
8-pole; shielded	5 m	756-5312/090-050	10
8-pole; shielded	10 m	756-5312/090-100	10

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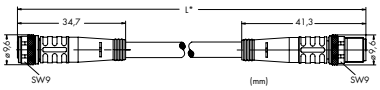
Sensor/Actuator Cable; Fitted on Both Ends

M8 Socket	M8 Plug
	
3-pole	3-pole

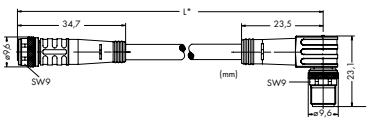
Pin 1 ... 4: 0.34 mm²
1 brown (+)
3 blue (-)
4 black (S)

Operating voltage	60 VAC/DC
Operating current	4 A (max.)
Rated surge voltage	1.5 kV
Drag chain capability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	−25 ... +90 °C
Protection type	IP67
Cable diameter	4.1 mm ±0.2



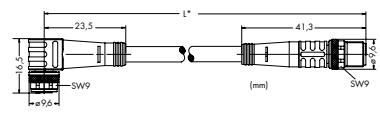
Sensor/Actuator Cable; M8 socket (straight) – M8 plug (straight)

Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5201/030-010	10
3-pole	2 m	756-5201/030-020	10



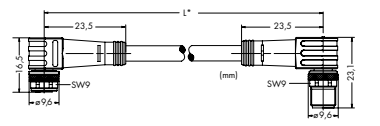
Sensor/Actuator Cable; M8 socket (straight) – M8 plug (angled)

Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5202/030-010	10
3-pole	2 m	756-5202/030-020	10



Sensor/Actuator Cable; M8 socket (angled) – M8 plug (straight)

Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5203/030-010	10
3-pole	2 m	756-5203/030-020	10



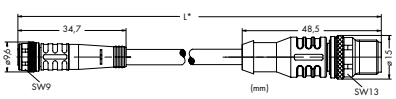
Sensor/Actuator Cable; M8 socket (angled) – M8 plug (angled)

Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5204/030-010	10
3-pole	2 m	756-5204/030-020	10

M8 Socket	M12 Plug
	
3-pole	3-pole (Pin 2: n.c.)
	
4-pole	4-pole

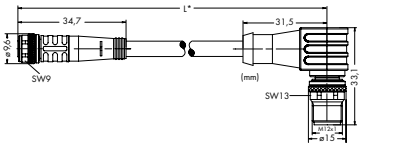
Pin 1 ... 4: 0.34 mm²
1 brown (+)
2 white (Ö)
3 blue (-)
4 black (S)

Operating voltage	60 VAC/DC
Operating current	4 A (max.)
Rated surge voltage	1.5 kV
Drag chain capability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	−25 ... +90 °C
Protection type	IP67
Cable diameter	4.1 mm ±0.2



Sensor/Actuator Cable; M8 socket (straight) – M12 plug (straight)

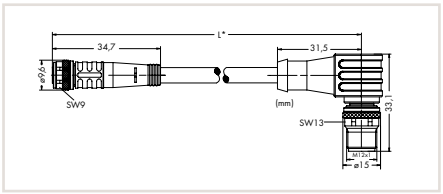
Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5507/030-010	10
3-pole	2 m	756-5507/030-020	10
4-pole	1 m	756-5507/040-010	10
4-pole	2 m	756-5507/040-020	10

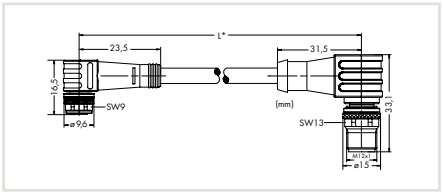


Sensor/Actuator Cable; M8 socket (straight) – M12 plug (angled)

Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5508/030-010	10
3-pole	2 m	756-5508/030-020	10
4-pole	1 m	756-5508/040-010	10
4-pole	2 m	756-5508/040-020	10

Sensor/Actuator Cable; Fitted on Both Ends





Sensor/Actuator Cable; M8 socket (angled) – M12 plug (straight)			
Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5509/030-010	10
3-pole	2 m	756-5509/030-020	10
4-pole	1 m	756-5509/040-010	10
4-pole	2 m	756-5509/040-020	10

Sensor/Actuator Cable; M8 socket (angled) – M12 plug (angled)			
Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5510/030-010	10
3-pole	2 m	756-5510/030-020	10
4-pole	1 m	756-5510/040-010	10
4-pole	2 m	756-5510/040-020	10

M12 Socket

3-pole

M8 Plug

3-pole

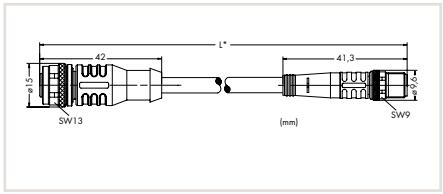
Pin 1 ... 4: 0.34 mm²

1 brown (+)

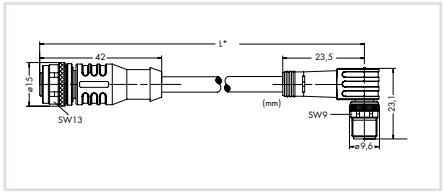
3 blue (-)

4 black (S)

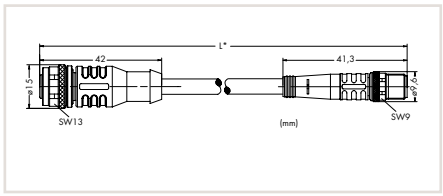
Operating voltage	60 VAC/DC
Operating current	4 A (max.)
Rated surge voltage	1.5 kV
Drag chain capability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	−25 ... +90 °C
Protection type	IP67
Cable diameter	4.1 mm ±0.2



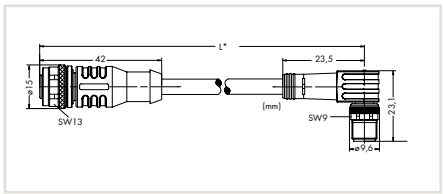
Sensor/Actuator Cable; M12 socket (straight) – M8 plug (straight)			
Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5501/030-010	10
3-pole	2 m	756-5501/030-020	10



Sensor/Actuator Cable; M12 socket (straight) – M8 plug (angled)			
Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5502/030-010	10
3-pole	2 m	756-5502/030-020	10



Sensor/Actuator Cable; M12 socket (angled) – M8 plug (straight)			
Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5503/030-010	10
3-pole	2 m	756-5503/030-020	10



Sensor/Actuator Cable; M12 socket (angled) – M8 plug (angled)			
Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5504/030-010	10
3-pole	2 m	756-5504/030-020	10

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Sensor/Actuator Cable; Fitted on Both Ends

M12 Socket

3-pole (Pin 2: n.c.)
4-pole

5-pole

M12 Plug

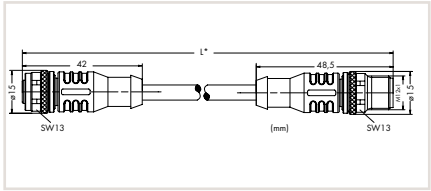
3-pole (Pin 2: n.c.)
4-pole

5-pole

Pin 1 ... 5: 0.34 mm²

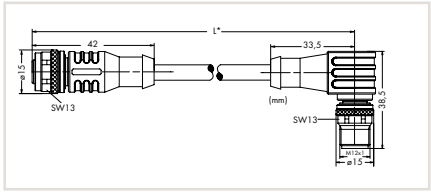
1	brown (+)
2	white (Ö)
3	blue (-)
4	black (S)
5	gray

Operating voltage	250 VAC/DC
Operating current	4 A (max.)
Rated surge voltage	2.5 kV (3- and 4-pole); 1.5 kV (5-pole)
Drag chain capability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	–25 ... +90 °C
Protection type	IP67
Cable diameter	4.3 mm ±0.2 (3-pole); 4.7 mm ±0.2 (4-pole); 5.0 mm ±0.2 (5-pole); 6.5 mm ±0.2 (5-pole; shielded)



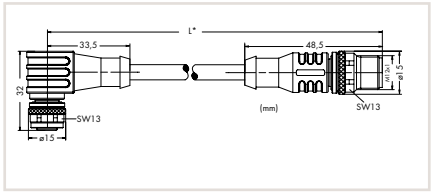
Sensor/Actuator Cable; M12 socket (straight) – M12 plug (straight)

Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5401/030-010	10
3-pole	2 m	756-5401/030-020	10
4-pole	1 m	756-5401/040-010	10
4-pole	2 m	756-5401/040-020	10
5-pole	1 m	756-5401/050-010	10
5-pole	2 m	756-5401/050-020	10
5-pole; shielded	1 m	756-5401/060-010	10
5-pole; shielded	2 m	756-5401/060-020	10



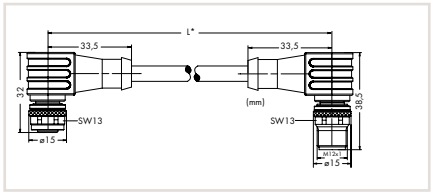
Sensor/Actuator Cable; M12 socket (straight) – M12 plug (angled)

Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5402/030-010	10
3-pole	2 m	756-5402/030-020	10
4-pole	1 m	756-5402/040-010	10
4-pole	2 m	756-5402/040-020	10
5-pole	1 m	756-5402/050-010	10
5-pole	2 m	756-5402/050-020	10
5-pole; shielded	1 m	756-5402/060-010	10
5-pole; shielded	2 m	756-5402/060-020	10



Sensor/Actuator Cable; M12 socket (angled) – M12 plug (straight)

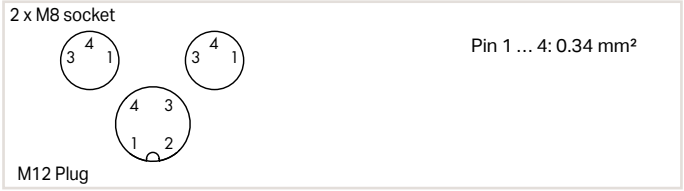
Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5403/030-010	10
3-pole	2 m	756-5403/030-020	10
4-pole	1 m	756-5403/040-010	10
4-pole	2 m	756-5403/040-020	10
5-pole	1 m	756-5403/050-010	10
5-pole	2 m	756-5403/050-020	10
5-pole; shielded	1 m	756-5403/060-010	10
5-pole; shielded	2 m	756-5403/060-020	10

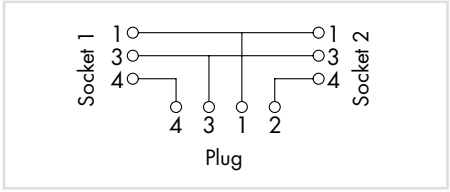


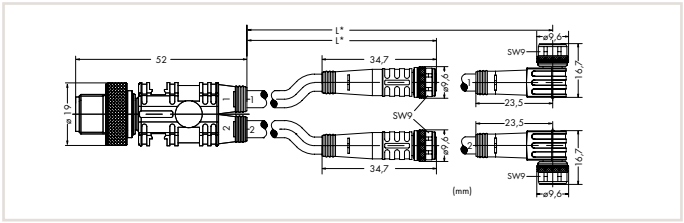
Sensor/Actuator Cable; M12 socket (angled) – M12 plug (angled)

Pole No.	Cable Length	Item No.	PU
3-pole	1 m	756-5404/030-010	10
3-pole	2 m	756-5404/030-020	10
4-pole	1 m	756-5404/040-010	10
4-pole	2 m	756-5404/040-020	10
5-pole	1 m	756-5404/050-010	10
5-pole	2 m	756-5404/050-020	10
5-pole; shielded	1 m	756-5404/060-010	10
5-pole; shielded	2 m	756-5404/060-020	10

Sensor/Actuator Cable; Fitted on Both Ends; Distribution Connector







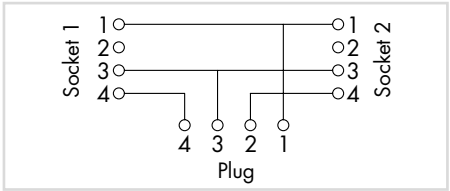
Operating voltage	60 VAC/DC
Operating current	4 A (max.)
Rated surge voltage	1.5 kV
Drag chain capability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	−25 … +90 °C
Protection type	IP67
Cable diameter	4.1 mm ±0.2

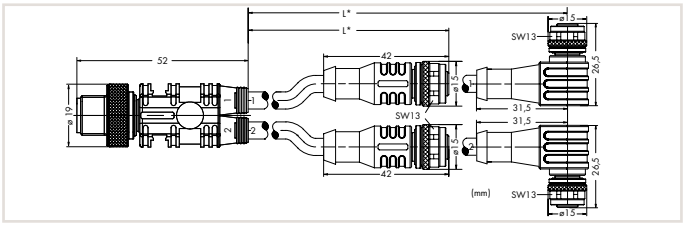
Sensor/Actuator Cable; 2 x M8 socket (straight) – M12 plug (straight)

Pole No.	Cable Length	Item No.	PU
4-pole	1 m	756-5513/040-010	10
4-pole	2 m	756-5513/040-020	10

Sensor/Actuator Cable; 2 x M8 socket (angled) – M12 plug (straight)

Pole No.	Cable Length	Item No.	PU
4-pole	1 m	756-5514/040-010	10
4-pole	2 m	756-5514/040-020	10





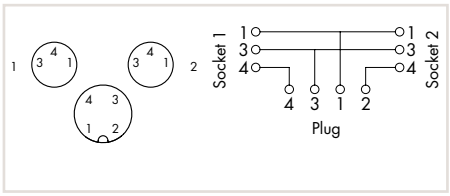
Operating voltage	250 VAC/DC
Operating current	4 A (max.)
Rated surge voltage	2.5 kV
Drag chain capability	≥ 2 million bending cycles
Surrounding air (operating) temperature (dynamic)	−25 … +90 °C
Protection type	IP67
Cable diameter	4.7 mm ±0.2

Sensor/Actuator Cable; 2 x M12 socket (straight) – M12 plug (straight)

Pole No.	Cable Length	Item No.	PU
4-pole	1 m	756-5516/040-010	10
4-pole	2 m	756-5516/040-020	10

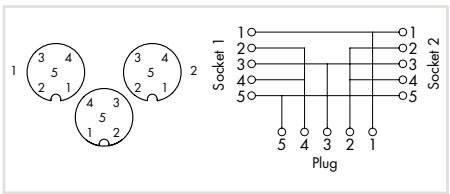
Sensor/Actuator Cable; 2 x M12 socket (angled) – M12 plug (straight)

Pole No.	Cable Length	Item No.	PU
4-pole	1 m	756-5517/040-010	10
4-pole	2 m	756-5517/040-020	10



Distribution Connector M8/M12

	Item No.	PU
Accessories; M12/M8 Distribution Connector	756-9301/040-000	1



Distribution Connector M12/M12

	Item No.	PU
Accessories; M12/M12 Distribution Connector	756-9301/050-000	1

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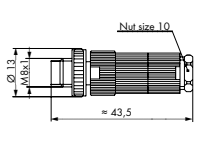
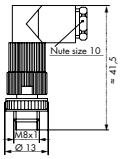
Configurable Connector



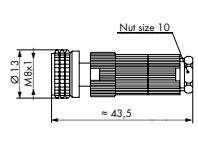


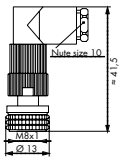
3-pole

Connectable cable:
Ø 4 … 5 mm
0.14 … 0.34 mm²

M8 Plug, Straight and Angled

	Item No.	PU
Configurable Connector; 3-pole; M8 plug (straight); IDC technology	756-9102/030-000	5
Configurable Connector; 3-pole; M8 plug (angled); IDC technology	756-9105/030-000	5



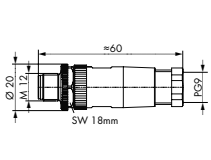


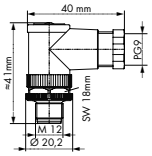
3-pole

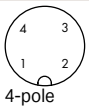
Connectable cable:
Ø 4 … 5 mm
0.14 … 0.34 mm²

M8 Socket, Straight and Angled

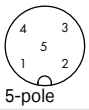
	Item No.	PU
Configurable Connector; 3-pole; M8 socket (straight); IDC technology	756-9112/030-000	5
Configurable Connector; 3-pole; M8 socket (angled); IDC technology	756-9115/030-000	5







4-pole

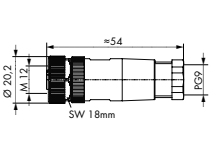


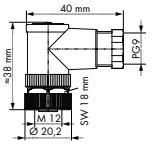
5-pole

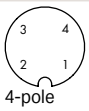
Connectable cable:
Ø 4 … 6 mm/0.25 … 0.75 mm² (Screw clamp technology)
Ø 4 … 6 mm/0.14 … 0.50 mm² (Spring clamp technology)

M12 Plug, Straight and Angled

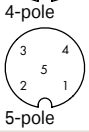
	Item No.	PU
Configurable Connector; 4-pole; M12 plug (straight); Screw connection technology	756-9201/040-000	5
Configurable Connector; 4-pole; M12 plug (angled); Screw connection technology	756-9204/040-000	5
Configurable Connector; 4-pole; M12 plug (straight); Spring clamp technology	756-9202/040-000	5
Configurable Connector; 4-pole; M12 plug (angled); Spring clamp technology	756-9205/040-000	5
Configurable Connector; 5-pole; M12 plug (straight); Screw connection technology	756-9201/050-000	5
Configurable Connector; 5-pole; M12 plug (angled); Screw connection technology	756-9204/050-000	5
Configurable Connector; 5-pole; M12 plug (straight); Spring clamp technology	756-9202/050-000	5
Configurable Connector; 5-pole; M12 plug (angled); Spring clamp technology	756-9205/050-000	5







4-pole



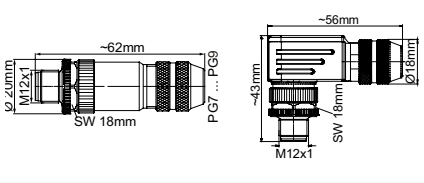
5-pole

Connectable cable:
Ø 4 … 6 mm/0.25 … 0.75 mm² (Screw clamp technology)
Ø 4 … 6 mm/0.14 … 0.50 mm² (Spring clamp technology)

M12 Socket, Straight and Angled

	Item No.	PU
Configurable Connector; 4-pole; M12 socket (straight); Screw connection technology	756-9211/040-000	5
Configurable Connector; 4-pole; M12 socket (angled); Screw connection technology	756-9214/040-000	5
Configurable Connector; 4-pole; M12 socket (straight); Spring clamp technology	756-9212/040-000	5
Configurable Connector; 4-pole; M12 socket (angled); Spring clamp technology	756-9215/040-000	5
Configurable Connector; 5-pole; M12 socket (straight); Spring clamp technology	756-9212/050-000	5
Configurable Connector; 5-pole; M12 socket (angled); Spring clamp technology	756-9215/050-000	5

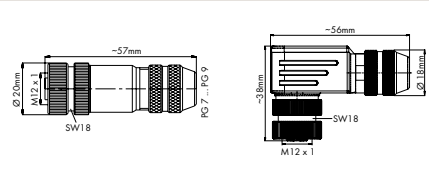
Configurable Shielded Connector; ETHERNET, PROFINET Accessories



Connectable cable:
Ø 6 ... 8 mm
0.14 ... 0.5 mm²

M12 Plug, Straight and Angled

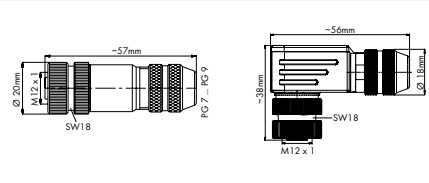
	Item No.	PU
Configurable Connector; 5-pole; shielded; M12 plug (straight); A-coded; Spring clamp technology	756-9207/060-000	1
Configurable Connector; 4-pole; shielded; M12 plug (straight); D-coded; Spring clamp technology	756-9501/060-000	1
Configurable Connector; 5-pole; shielded; M12 plug (angled); A-coded; Spring clamp technology	756-9211/060-000	1
Configurable Connector; 4-pole; shielded; M12 plug (angled); D-coded; Spring clamp technology	756-9501/040-000	1



Connectable cable:
Ø 6 ... 8 mm
0.14 ... 0.5 mm²

M12 Socket, Straight and Angled

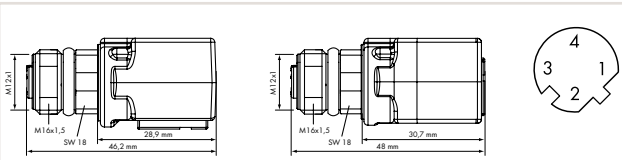
	Item No.	PU
Configurable Connector; 5-pole; shielded; M12 socket (straight); Spring clamp technology	756-9208/060-000	1
Configurable Connector; 5-pole; shielded; M12 socket (angled); Spring clamp technology	756-9210/060-000	1



Connectable cable:
Ø 6 ... 8 mm
0.14 ... 0.75 mm²

M12 Socket, Straight and Angled

	Item No.	PU
Configurable Connector; 8-pole; shielded; M12 socket (straight); Screw connection technology	756-9211/090-000	1
Configurable Connector; 8-pole; shielded; M12 socket (angled); Screw connection technology	756-9214/090-000	1



M12 Socket, Straight – RJ-45 Socket

	Item No.	PU
Socket; 4-pole, M12-socket (straight); D-coded; RJ-45 socket (angled)	756-9503/040-000	1
Socket; 4-pole, M12-socket (straight); D-coded; RJ-45 socket (straight)	756-9504/040-000	1

M12 Panel Feed-Through Connector

	Item No.	PU
M12 Panel Feed-Through Connector; 4-pole; M12 socket (straight); A-coded	756-9217/050-000	1
M12 Panel Feed-Through Connector; 5-pole; M12 socket (straight); B-coded	756-9406/050-000	1

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Torque Wrench M8 and M12; Assembly Kit

Assembly kit for pre-assembled IP67 cables and hex nut connectors (756 Series) consists of:

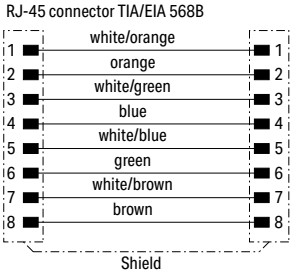
- Tool kit
- Torque screwdriver with adjustable torque (window scale)
- Adjustment tool for changing the torque
- Socket wrench SW9 (for M8 cable assemblies)
- Socket wrench SW13 (for M12 cable assemblies)

A torque specification of 0.6 Nm for M8 connectors and 1.0 Nm for M12 connectors is required for both 756 Series Cables and Connectors.

Torque Wrench M8 and M12; Assembly Kit		
	Item No.	PU
	206-701	1

Torque range	0,4 … 1 Nm ±6 %
Material	
Handle	Polypropylene (PP) for hard zone; thermoplastic elastomers (TPE) for soft zone
Allen key	Polyamide (PA), glass-fiber-reinforced; chrome-vanadium-molybdenum steel (CrMoV) (1.2381)
Adjustment tool	Cellulose acetate; chrome-vanadium-molybdenum steel (CrMoV) (1.2381)
Color	Black
Standards/specifications	EN ISO 6789; BS EN 26789; ASME B107.14.M

ETHERNET Cable; Cat. 6A S/FTP



Item Description	ETHERNET Cable; Cat. 6A; RJ-45; RJ-45		ETHERNET Cable; Cat. 6A; RJ-45; RJ-45		
Version			Axial unlocking		
	Cable Length	Item No.	PU	Cable Length	Item No.	PU
	0.5 m	756-1250/1013-005	1	0.5 m	756-1250/1023-005	1
	1 m	756-1250/1013-010	1	1 m	756-1250/1023-010	1
	2 m	756-1250/1013-020	1	2 m	756-1250/1023-020	1
	3 m	756-1250/1013-030	1	3 m	756-1250/1023-030	1
	5 m	756-1250/1013-050	1	5 m	756-1250/1023-050	1
	7.5 m	756-1250/1013-075	1	7.5 m	756-1250/1023-075	1
	10 m	756-1250/1013-100	1	10 m	756-1250/1023-100	1

Technical Data	
Transmission	10 Gbit/s (500 MHz)
Operating voltage	80 V
Operating current	720 mA
Rated surge voltage	500 V (wire/wire/shield rms 50 Hz 1 min)
Insulation resistance	≥ 1x108 Ωxkm
Resistance of conductor	< 142 Ω/km
Surrounding air temperature (operation)	–40 … +80 °C (static and moving)
Bending radius	10 mm (min.)
Bending cycles	≥ 8500
Cable	S/FTP 4x2xAWG26/7
Overall shield	Overlapped aluminum-laminated foil and tinned copper braid (PiMF)
Conductor	Bare copper wire (7 x 0.16 mm)
Conductor insulation	Halogen-free PE
Outer jacket	LSOH TPE; halogen-free per IEC 60754-2; flame-retardant per IEC 60332-1; low-smoke per IEC 61034
Color	Green (RAL 6018)
Cable diameter	Ø 6.2 mm ±0.2
Plug	2 x Cat. 6A RJ-45
Contact material	CuZn
Contact plating	CuNi/Au; 50 µin gold plating
Mech. service life	> 1200 mating cycles
For data sheet and additional information, see:	wago.com/756-1250

Short description:
- Halogen-free TPE
- Cat. 6A S/FTP
- Highly flexible
- 50 µin gold plating in the contact area
- Mechanically/electrically tested
- 4C Channel Link Test
- Wrap-around label for clear traceability
- Easy plug unlocking (756-1250/1023-xxx)

Bluetooth® Adapter

Item Description	*Bluetooth*® Adapter
Item No.	750-921
Order Text	*Bluetooth*® Adapter
Technical Data	
Transmission range	20 m in open air (Class 2)*
Data transmission rate	9600 … 115000 bit/s
Frequency range	ISM band; 2402 … 2483 MHz
Communication type	Peer-to-peer connection
Supported profiles	Serial Port Profile (SPP)
Radio technology	*Bluetooth*® 2.1
Antenna	Integrated
Connectors	4-pole service connector
Configuration	AT commands (e.g., via HyperTerminal)
Function	Master or slave
LED	Operating mode
Security encryption	128-bit encryption
Surrounding air temperature (operation)	-20 … +60 °C
Dimensions W x H x D	15 x 50 x 19 mm
Approvals	*Bluetooth*® approval; CE
For data sheet and additional information, see:	wago.com/750-921

*The maximum range in the field decreases within buildings and varies depending on building materials and spatial geometry. Therefore, range specifications within buildings can only represent a typical value that can normally be achieved. More detailed information is available in the manual.

WAGO's *Bluetooth*® Adapter wirelessly connects a notebook computer with *Bluetooth*® functionality to the service interface of the fieldbus coupler/controller. It also provides an active connection to a controller.
As a cable substitute, the *Bluetooth*® Adapter allows communication between two controllers, as well as between fieldbus couplers/controllers via WAGO Software Tools.
The adapter is supplied via both service interface and power supply of the coupler/controller.

WAGO Communication Cables

Item Description	RS-232 Communication Cable; RS-232 (D-Sub; 9-pole); I/O System 750 Service Interface
Item No.	750-920
Order Text	Communication Cable
Technical Data	
Connectors	4-pole service connector
Cable length	2.5 m
Surrounding air temperature (operation)	0 … +55 °C
Protection type	IP20
For data sheet and additional information, see:	wago.com/750-920

This communication cable connects the engineering software to the controller or fieldbus coupler.

Notice: The communication cable must not be connected or removed when energized.

Item Description	USB Communication Cable; USB-A; I/O System 750 Service Interface	
Version	2.5 m	5 m
Item No.	750-923	750-923/000-001
Order Text	CONF-CABLE; USB; 2.5m	CONF-CABLE; USB; 5m
Technical Data		
USB specification	2.0 compatible/full-speed device	
Operating system	Microsoft® Windows® 2000; Microsoft® Windows® XP Professional; Microsoft® Windows® Vista®; Microsoft® Windows® 7	
USB interface	Type A/m	
Cable length	2.5 m	5 m
Surrounding air temperature (operation)	−25 … +70 °C	
Approvals	CE	
For data sheet and additional information, see:	wago.com/750-923	

This USB communication cable connects the engineering software to the controller or fieldbus coupler.

Notice: A specific firmware version is required to connect the 759-923 USB Communication Cable to some particular controllers.

Memory Cards

Item Description	microSD Memory Card; Temperature range: −40 … +90 °C	microSD Memory Card; Temperature range: −40 … +90 °C
Version	SLC-NAND; 2 GB	pSLC-NAND; 8 GB
Item No.	758-879/000-3102	758-879/000-3108
Technical Data		
Memory	2 GB (SLC)	8 GB (pSLC)
Read/write cycles (max.)	20 MB/s / 17 MB/s	48 MB/s / 45 MB/s
MTBF	4,000,000 h	2,000,000 h
Service life	100,000 write cycles (per cell)	20,000 write cycles (per cell)
Data storage	10 years	10 years
Surrounding air temperature (operation)	−40 … +90 °C	−40 … +90 °C
Surrounding air temperature (storage)	−40 … +90 °C	−40 … +90 °C
Relative humidity	95 %; non condensing	95 %; non condensing
Dimensions W x H x D	15 x 11 x 1 mm	15 x 11 x 1 mm
Vibration resistance	15g	15g
Shock resistance	50g	50g

Item Description	SD Memory Card; Temperature range: −40 … +90 °C	SD Memory Card; Temperature range: −40 … +90 °C
Version	SLC-NAND; 2 GB	pSLC-NAND; 8 GB
Item No.	758-879/000-001	758-879/000-2108
Technical Data		
Memory	2 GB (SLC)	8 GB (pSLC)
Read/write cycles (max.)	22 MB/s / 16 MB/s	50 MB/s / 45 MB/s
MTBF	4,000,000 h	2,000,000 h
Service life	100,000 write cycles (per cell)	20,000 write cycles (per cell)
Data storage	10 years	10 years
Surrounding air temperature (operation)	−40 … +90 °C	−40 … +90 °C
Surrounding air temperature (storage)	−40 … +90 °C	−40 … +90 °C
Relative humidity	95 %; non condensing	95 %; non condensing
Dimensions W x H x D	24 x 32 x 2.1 mm	24 x 32 x 2.1 mm
Vibration resistance	15g	15g
Shock resistance	50g	50g

Antennas

Self-Adhesive Antenna; with 2.5 m cable and SMA straight plug; GSM/UMTS/LTE/Bluetooth®/WLAN; 699-960, 1710-2690 MHz	
Item No.	758-961
Technical Data	
Frequency band	699 … 960 MHz 1710 … 2690 MHz
Dimensions W x H	117 x 12 mm
Connection cable length	2.5 m
Cable type	RG174
Gain	2.15 dBi
VSWR	< 1.5
Connector	SMA straight plug

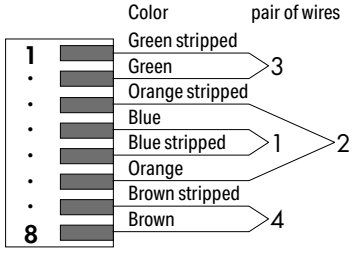
Theft-Proof Combination Antenna; with 2.5 m cable and SMA straight plug; GSM UMTS; 850/900/1800/1900/2100 MHz	
Item No.	758-966
Technical Data	
Frequency band	850 / 900 / 1800 / 1900 / 2100 MHz
Dimensions W x H	29 x 52 mm
Connection cable length	2.5 m
Cable type	RG174
Gain	2 dBi
VSWR	< 2
Connector	SMA straight plug

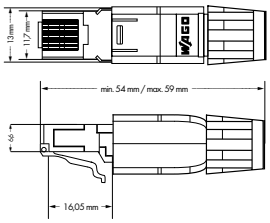
Magnetic-Mount Antenna; with 2.5 m cable and SMA angled plug; GSM/UMTS/LTE/Bluetooth®/WLAN; 698-960, 1400-1518, 1710-2700 MHz	
Item No.	758-975
Technical Data	
Frequency band	698 … 960 MHz; 1400 … 1518 MHz; 1710 … 2700 MHz
Connection cable length	2.5 m
Mounting type	Magnetic stand
Cable type	RG-174
Connector	SMA angled plug

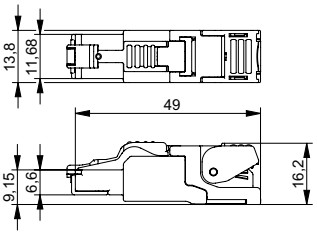
RF Antenna; with 2.5 m cable and SMA plug; GSM/UMTS/LTE/Bluetooth®/WLAN; 698-960, 1710-6000 MHz; 2G/ 3G/ 4G/ 5G	
Item No.	758-974
Technical Data	
Frequency band	617 … 960 MHz; 1710 … 6000 MHz
Connection cable length	2.5 m
Mounting type	Enclosure installation; Adhesive strips
Cable type	CS29
Connector	SMA plug

RF Antenna; with 2.5 m cable and SMA plug; GSM/UMTS/LTE/Bluetooth®/WLAN; 698-960, 1710-6000 MHz; 2G/ 3G/ 4G/ 5G	
Item No.	758-974/000-001
Technical Data	
Frequency band	617 … 960 MHz; 1710 … 6000 MHz
Connection cable length	2.5 m
Mounting type	Wall-mount
Cable type	CS29
Connector	SMA plug

ETHERNET Connectors; Code T568A







Item Description	ETHERNET Connector; RJ-45; Cat. 5; Straight; Code T568A	ETHERNET Connector; RJ-45; Cat. 6A; Straight; Code T568A	
Version	**AWG 22**	**AWG 22**	**AWG 24**
Item No.	**750-975**	**750-977/000-011**	**750-977/000-021**
Order Text	Connector ETHERNET; RJ-45; Cat.5; 180°; T568A; AWG22	Connector ETHERNET; RJ-45; Cat.6A; 180°; T568A; AWG22	Connector ETHERNET; RJ-45; Cat.6A; 180°; T568A; AWG24
Technical Data			
Cable category	Cat. 5e	Cat. 6A	
Data transmission rate (max.)	1 GBit/s	10 GBit/s	
Code	TiA-568A	TiA-568A	
Cable exit	180°	180°	
Pole number	8	8	
Housing material	Plastic	Zinc die-cast	
Mating cycles	> 1000	> 750	
Conductor connection	IDC contact	IDC contact	
Conductor cross-sections	Solid: 0.13 … 0.24 mm² / AWG 26/1 … 23/1; Stranded: 0.14 … 0.36 mm² / AWG 26/7 … 22/7	Solid: 0.21 … 0.32 mm² / AWG 24/1 … 22/1; Stranded: 0.11 … 0.36 mm² / AWG 27/7 … 22/7	Solid: 0.13 … 0.21 mm² / AWG 26/1 … 24/1; Stranded: 0.11 … 0.23 mm² / AWG 27/7 … 24/7
Cable jacket diameter	4.5 … 8 mm	5.5 … 9 mm	
Cable strain relief	Screw clamp connection		
Shield connection	> 180°	360°	
Surrounding air temperature (operation)	–20 … +70 °C	–40 … +85 °C	
Surrounding air temperature (storage)	–40 … +70 °C	–40 … +85 °C	
Relative humidity	95 %; non condensing	95 %; non condensing	
Protection type	IP20	IP20	
Standards/specifications	Basic standard: IEC 60603-7 RJ-45 Category 5; CD ISO/IEC 11801: 2002; - EN 50173: 2002; EIA/TIA 568A: 2002; UL 1863	IEC60603-7-51; ISO/IEC 11801; IEEE 802.3an; EIA/TIA 568-C.2; DIN EN 50173-1; UL 1863; UL 2043	
Approvals	Marine		
For data sheet and additional information, see:	wago.com/750-975	wago.com/750-977/000-011	wago.com/750-977/000-021

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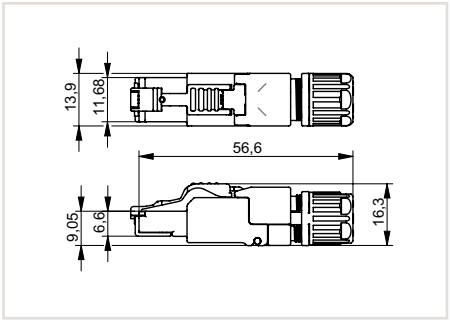

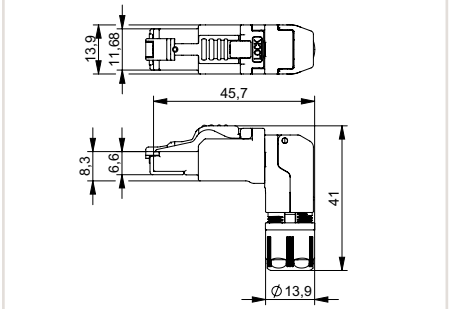

ETHERNET Connector; RJ-45; Cat. 6A; Straight; Code T568A; Strain relief	
AWG 22	**AWG 24**
750-978/000-011	**750-978/000-021**
Connector ETHERNET; RJ-45; Cat.6A; 180°; T568A; AWG22; Strain relief	Connector ETHERNET; RJ-45; Cat.6A; 180°; T568A; AWG24; Strain relief

ETHERNET Connector; RJ-45; Cat. 6A; Angled; Code T568A; Strain relief	
AWG 22	**AWG 24**
750-979/000-011	**750-979/000-021**
Connector ETHERNET; RJ-45; Cat.6A; 90°; T568A; AWG22; Strain relief	Connector ETHERNET; RJ-45; Cat.6A; 90°; T568A; AWG24; Strain relief

Cat. 6A	
10 GBit/s	
TiA-568A	
180°	
8	
Zinc die-cast	
> 750	
IDC contact	
Solid: 0.21 … 0.32 mm² / AWG 24/1 … 22/1; Stranded: 0.11 … 0.36 mm² / AWG 27/7 … 22/7	Solid: 0.13 … 0.21 mm² / AWG 26/1 … 24/1; Stranded: 0.11 … 0.23 mm² / AWG 27/7 … 24/7
5.5 … 10 mm	
Screw clamp connection	
360°	
–40 … +85 °C	
–40 … +85 °C	
95 %; non condensing	
IP20	
IEC60603-7-51; ISO/IEC 11801; IEEE 802.3an; EIA/TIA 568-C.2; DIN EN 50173-1; UL 1863; UL 2043	

Cat. 6A	
10 GBit/s	
TiA-568A	
90°; selectable position	
8	
Zinc die-cast	
> 750	
IDC contact	
Solid: 0.21 … 0.32 mm² / AWG 24/1 … 22/1; Stranded: 0.11 … 0.36 mm² / AWG 27/7 … 22/7	Solid: 0.13 … 0.21 mm² / AWG 26/1 … 24/1; Stranded: 0.11 … 0.23 mm² / AWG 27/7 … 24/7
5.5 … 10 mm	
Screw clamp connection	
360°	
–40 … +85 °C	
–40 … +85 °C	
95 %; non condensing	
IP20	
IEC60603-7-51; ISO/IEC 11801; IEEE 802.3an; EIA/TIA 568-C.2; DIN EN 50173-1; UL 1863; UL 2043	

wago.com/ 750-978/000-011	wago.com/ 750-978/000-021

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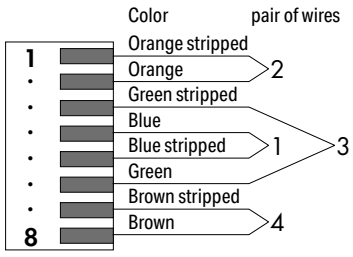
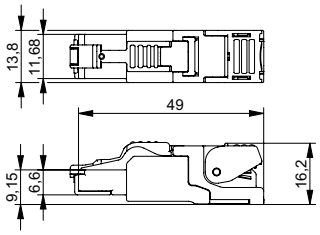
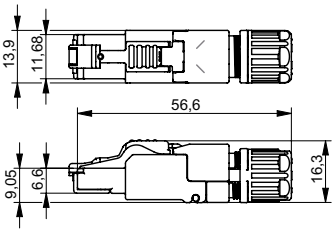
ETHERNET Connectors; Code T568B







Item Description	ETHERNET Connector; RJ-45; Cat. 6A; Straight; Code T568B		ETHERNET Connector; RJ-45; Cat. 6A; Straight; Code T568B; Strain relief	
Version	AWG 22	AWG 24	AWG 22	AWG 24
Item No.	750-977/000-012	750-977/000-022	750-978/000-012	750-978/000-022
Order Text	Connector ETHERNET; RJ-45; Cat.6A; 180°; T568B; AWG22	Connector ETHERNET; RJ-45; Cat.6A; 180°; T568B; AWG24	Connector ETHERNET; RJ-45; Cat.6A; 180°; T568B; AWG22; Strain relief	Connector ETHERNET; RJ-45; Cat.6A; 180°; T568B; AWG24; Strain relief
Technical Data				
Cable category	Cat. 6A		Cat. 6A	
Data transmission rate (max.)	10 GBit/s		10 GBit/s	
Code	TiA-568B		TiA-568B	
Cable exit	180°		180°	
Pole number	8		8	
Housing material	Zinc die-cast		Zinc die-cast	
Mating cycles	> 750		> 750	
Conductor connection	IDC contact		IDC contact	
Conductor cross-sections	Solid: 0.21 … 0.32 mm² / AWG 24/1 … 22/1; Stranded: 0.11 … 0.36 mm² / AWG 27/7 … 22/7	Solid: 0.13 … 0.21 mm² / AWG 26/1 … 24/1; Stranded: 0.11 … 0.23 mm² / AWG 27/7 … 24/7	Solid: 0.21 … 0.32 mm² / AWG 24/1 … 22/1; Stranded: 0.11 … 0.36 mm² / AWG 27/7 … 22/7	Solid: 0.13 … 0.21 mm² / AWG 26/1 … 24/1; Stranded: 0.11 … 0.23 mm² / AWG 27/7 … 24/7
Cable jacket diameter	5.5 … 9 mm		5.5 … 10 mm	
Cable strain relief			Screw clamp connection	
Shield connection	360°		360°	
Surrounding air temperature (operation)	–40 … +85 °C		–40 … +85 °C	
Surrounding air temperature (storage)	–40 … +85 °C		–40 … +85 °C	
Relative humidity	95 %; non condensing		95 %; non condensing	
Protection type	IP20		IP20	
Standards/specifications	IEC60603-7-51; ISO/IEC 11801; IEEE 802.3an; EIA/TIA 568-C.2; DIN EN 50173-1; UL 1863; UL 2043		IEC60603-7-51; ISO/IEC 11801; IEEE 802.3an; EIA/TIA 568-C.2; DIN EN 50173-1; UL 1863; UL 2043	
Approvals				
For data sheet and additional information, see:	wago.com/ 750-977/000-012	wago.com/ 750-977/000-022	wago.com/ 750-978/000-012	wago.com/ 750-978/000-022

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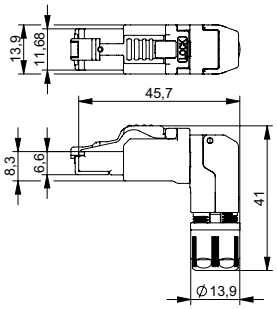
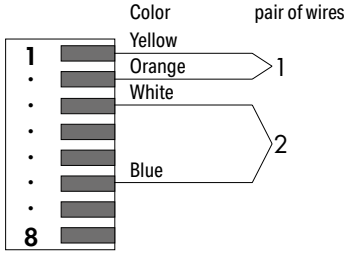


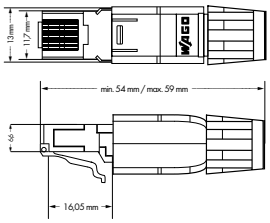
ETHERNET Connector; RJ-45; Cat. 6A; Angled; Code T568B; Strain relief	
AWG 22	**AWG 24**
750-979/000-012	**750-979/000-022**
Connector ETHERNET; RJ-45; Cat.6A; 90°; T568B; AWG22; Strain relief	Connector ETHERNET; RJ-45; Cat.6A; 90°; T568B; AWG24; Strain relief

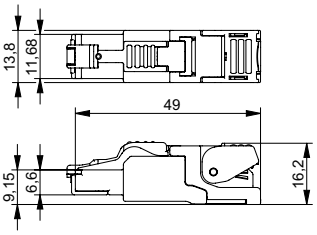
Cat. 6A	
10 GBit/s	
TiA-568B	
90°; selectable position	
8	
Zinc die-cast	
> 750	
IDC contact	
Solid: 0.21 … 0.32 mm² / AWG 24/1 … 22/1; Stranded: 0.11 … 0.36 mm² / AWG 27/7 … 22/7	Solid: 0.13 … 0.21 mm² / AWG 26/1 … 24/1; Stranded: 0.11 … 0.23 mm² / AWG 27/7 … 24/7
5.5 … 10 mm	
Screw clamp connection	
360°	
–40 … +85 °C	
–40 … +85 °C	
95 %; non condensing	
IP20	
IEC60603-7-51; ISO/IEC 11801; IEEE 802.3an; EIA/TIA 568-C.2; DIN EN 50173-1; UL 1863; UL 2043	

wago.com/ 750-979/000-012	wago.com/ 750-979/000-022

PROFINET Connectors







Item Description	PROFINET Connector; RJ-45; Cat. 5; Straight	PROFINET Connector; RJ-45; Cat. 6A; Straight
Version	**AWG 22**	**AWG 22**
Item No.	**750-976**	**750-977/000-013**
Order Text	Connector PROFINET; RJ-45; Cat.5; 180°; AWG22	Connector PROFINET; RJ-45; Cat.6A; 180°; AWG22
Technical Data		
Cable category	Cat. 5e	Cat. 6A
Data transmission rate (max.)	100 MBit/s	100 MBit/s
Code	PROFINET	PROFINET
Cable exit	180°	180°
Pole number	8	8
Housing material	Plastic	Zinc die-cast
Mating cycles	> 1000	> 750
Conductor connection	IDC contact	IDC contact
Conductor cross-sections	Solid: 0.13 … 0.24 mm² / AWG 26/1 … 23/1; Stranded: 0.14 … 0.36 mm² / AWG 26/7 … 22/7	Solid: 0.21 … 0.32 mm² / AWG 24/1 … 22/1; Stranded: 0.11 … 0.36 mm² / AWG 27/7 … 22/7
Cable jacket diameter	4.5 … 8 mm	5.5 … 9 mm
Cable strain relief	Screw clamp connection	
Shield connection	>180°	360°
Surrounding air temperature (operation)	–20 … +70 °C	–40 … +85 °C
Surrounding air temperature (storage)	–40 … +70 °C	–40 … +85 °C
Relative humidity	95 %; non condensing	95 %; non condensing
Protection type	IP20	IP20
Standards/specifications	Basic standard: IEC 60603-7 RJ-45 Category 5; CD ISO/IEC 11801: 2002; - EN 50173: 2002; EIA/TIA 568A: 2002; UL 1863	IEC60603-7-51; ISO/IEC 11801; IEEE 802.3an; EIA/TIA 568-C.2; DIN EN 50173-1; UL 1863; UL 2043
Approvals	Marine	
For data sheet and additional information, see:	wago.com/750-976	wago.com/750-977/000-013

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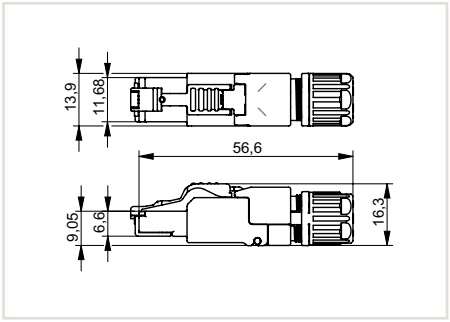
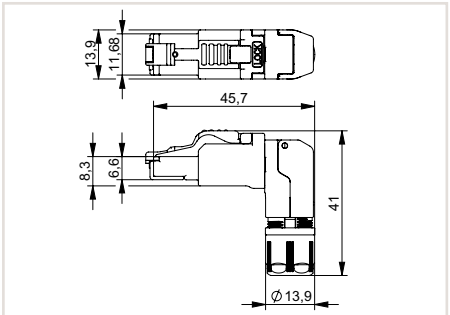




PROFINET Connector; RJ-45; Cat. 6A; Straight; Strain relief
AWG 22
750-978/000-013
Connector PROFINET; RJ-45; Cat.6A; 180°; AWG22; Strain relief

Cat. 6A
100 MBit/s
PROFINET
180°
8
Zinc die-cast
> 750
IDC contact
Solid: 0.21 … 0.32 mm² / AWG 24/1 … 22/1; Stranded: 0.11 … 0.36 mm² / AWG 27/7 … 22/7
5.5 … 10 mm
Screw clamp connection
360°
–40 … +85 °C
–40 … +85 °C
95 %; non condensing
IP20
IEC60603-7-51; ISO/IEC 11801; IEEE 802.3an; EIA/TIA 568-C.2; DIN EN 50173-1; UL 1863; UL 2043

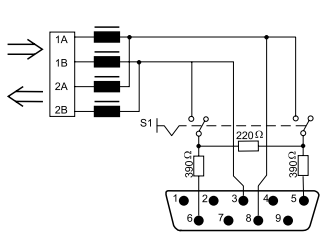
wago.com/750-978/000-013

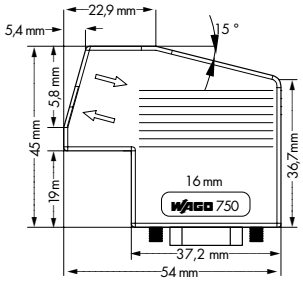
PROFINET Connector; RJ-45; Cat. 6A; Angled; Strain relief
AWG 22
750-979/000-013
Connector PROFINET; RJ-45; Cat.6A; 90°; AWG22; Strain relief

Cat. 6A
100 MBit/s
PROFINET
90°; selectable position
8
Zinc die-cast
> 750
IDC contact
Solid: 0.21 … 0.32 mm² / AWG 24/1 … 22/1; Stranded: 0.11 … 0.36 mm² / AWG 27/7 … 22/7
5.5 … 10 mm
Screw clamp connection
360°
–40 … +85 °C
–40 … +85 °C
95 %; non condensing
IP20
IEC60603-7-51; ISO/IEC 11801; IEEE 802.3an; EIA/TIA 568-C.2; DIN EN 50173-1; UL 1863; UL 2043

wago.com/750-979/000-013

PROFIBUS Fieldbus Connector





Item Description	PROFIBUS Fieldbus Connector; with D-sub plug; 9-pole
Item No.	750-960
Order Text	Connector PROFIBUS; DSub-M; 9P

Technical Data	
Double cable entry point	4.5 mm Ø (min.)/ 9.5 mm Ø (max.)
Data transmission rate (max.)	12 Mbit/s
Terminating resistor	Integrated switch
Housing color	Light gray
Protection type	IP20
Surrounding air temperature (operation)	0 … +60 °C
Surrounding air temperature (storage)	–25 … +85 °C
Relative humidity	95 %; non condensing
Conductor connection	CAGE CLAMP® terminal strip with locking slides (218 Series)
Conductor cross-sections	0.08 … 0.5 mm² / 28 … 20 AWG; limited connection 0.75 mm² / 18 AWG possible
Approvals	Marine; OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-960

Accessories	Item No.
Operating tool with a partially insulated shaft; Type 1; Blade (2.5 x 0.4) mm	210-719
Operating tool with a partially insulated shaft; Type 2; Blade (3.5 x 0.5) mm	210-720

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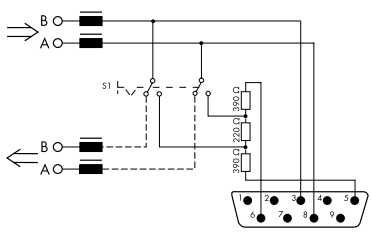
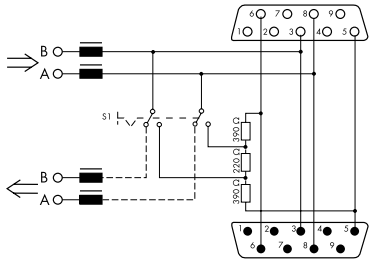
PROFIBUS Fieldbus Connectors



Male connector

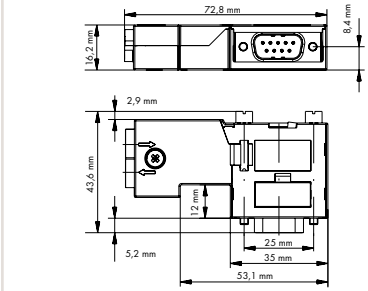
Figure: 750-971

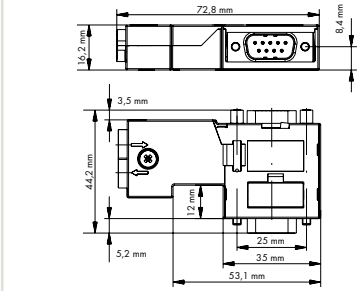
Female connector



Male connector

Figure: 750-972



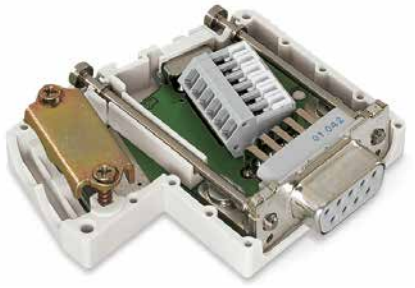


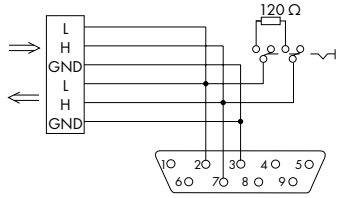
Item Description	PROFIBUS Fieldbus Connector; with D-sub plug; 9-pole	PROFIBUS Fieldbus Connector; with D-sub plug and socket; 9-pole
Item No.	**750-971**	**750-972**
Order Text	Connector PROFIBUS; DSub-M; 9P	Connector PROFIBUS; DSub-M; 9P; PG-Int
Technical Data		
Double cable entry point	Ø 8.5 mm	Ø 8.5 mm
Data transmission rate (max.)	12 Mbit/s	12 Mbit/s
Terminating resistor	Integrated switch	Integrated switch
Housing color	Light gray	Light gray
Protection type	IP20	IP20
Surrounding air temperature (operation)	−25 … +70 °C	−25 … +70 °C
Surrounding air temperature (storage)	−25 … +85 °C	−25 … +85 °C
Relative humidity	95 %; non condensing	95 %; non condensing
Conductor connection	CAGE CLAMP® terminal strip with locking slides (218 Series)	CAGE CLAMP® terminal strip with locking slides (218 Series)
Conductor cross-sections	0.08 … 0.5 mm² / 28 … 20 AWG; limited connection 0.75 mm² / 18 AWG possible	0.08 … 0.5 mm² / 28 … 20 AWG; limited connection 0.75 mm² / 18 AWG possible
For data sheet and additional information, see:	wago.com/750-971	wago.com/750-972

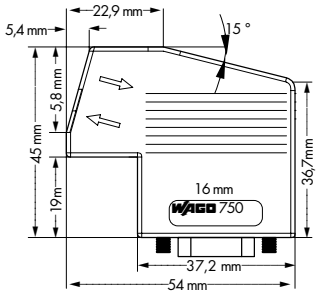
Accessories	Item No.	Item No.
Operating tool with a partially insulated shaft; Type 1; Blade (2.5 x 0.4) mm	210-719	210-719

This fieldbus connector can be connected to a programming tool without interrupting the connection to the PROFIBUS device.

CANopen Fieldbus Connector







Item Description	CANopen Fieldbus Connector; with D-sub socket; 9-pole
Item No.	750-963
Order Text	Connector CANopen; DSub-F; 9P

Technical Data	
Double cable entry point	4.5 mm Ø (min.)/ 9.5 mm Ø (max.)
Data transmission rate (max.)	1 Mbd
Terminating resistor	Integrated switch
Housing color	Light gray
Protection type	IP20
Surrounding air temperature (operation)	0 … +60 °C
Surrounding air temperature (storage)	–25 … +85 °C
Relative humidity	95 %; non condensing
Conductor connection	CAGE CLAMP® terminal strip with locking slides (218 Series)
Conductor cross-sections	0.08 … 0.5 mm² / 28 … 20 AWG; limited connection 0.75 mm² / 18 AWG possible
Approvals	Marine; OrdLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-963

Accessories	Item No.
Operating tool with a partially insulated shaft; Type 1; Blade (2.5 x 0.4) mm	210-719
Operating tool with a partially insulated shaft; Type 2; Blade (3.5 x 0.5) mm	210-720

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INTERBUS Fieldbus Connectors

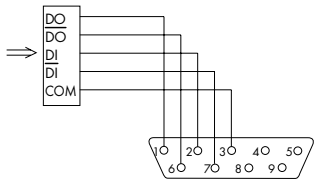


Figure: 750-961

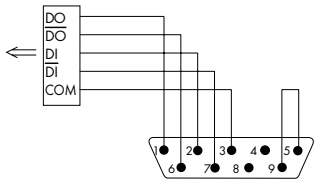
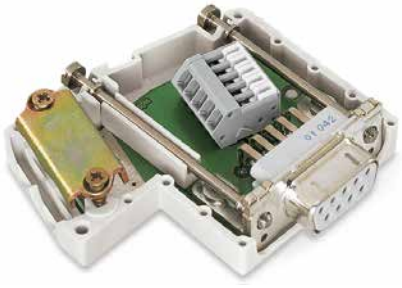
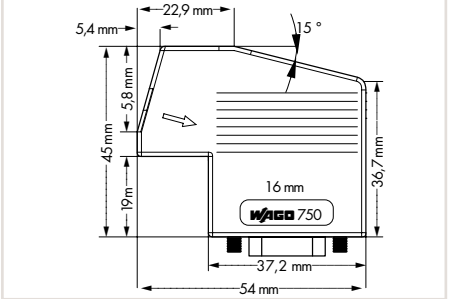
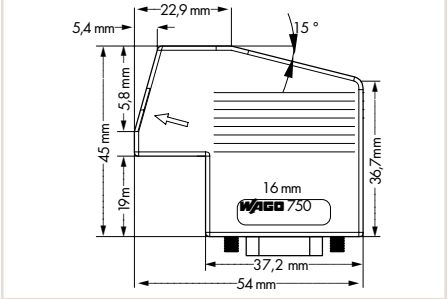


Figure: 750-962



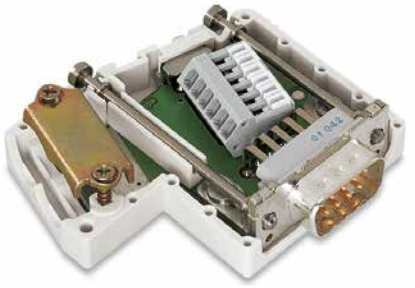


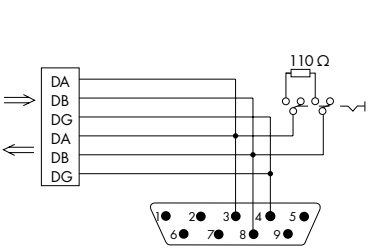


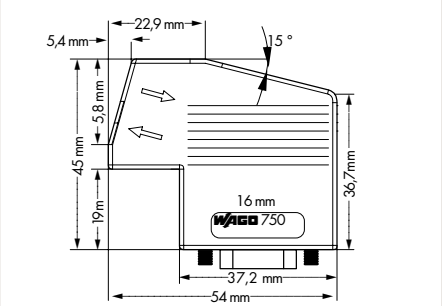
Item Description	INTERBUS Fieldbus Connector (IN); with D-sub socket; 9-pole	INTERBUS Fieldbus Connector (OUT); with D-sub plug; 9-pole
Item No.	**750-961**	**750-962**
Order Text	Connector INTERBUS; DSub-F; 9P	Connector INTERBUS; DSub-M; 9P
Technical Data		
Double cable entry point	4.5 mm Ø (min.)/ 9.5 mm Ø (max.)	4.5 mm Ø (min.)/ 9.5 mm Ø (max.)
Data transmission rate (max.)	2 Mbd	2 Mbd
Housing color	Light gray	Light gray
Protection type	IP20	IP20
Surrounding air temperature (operation)	0 … +60 °C	0 … +60 °C
Surrounding air temperature (storage)	−25 … +85 °C	−25 … +85 °C
Relative humidity	95 %; non condensing	95 %; non condensing
Conductor connection	CAGE CLAMP® terminal strip with locking slides (218 Series)	CAGE CLAMP® terminal strip with locking slides (218 Series)
Conductor cross-sections	0.08 … 0.5 mm² / 28 … 20 AWG; limited connection 0.75 mm² / 18 AWG possible	0.08 … 0.5 mm² / 28 … 20 AWG; limited connection 0.75 mm² / 18 AWG possible
Approvals	cULus OrdLoc/HazLoc; ATEX/IECEx	cULus OrdLoc/HazLoc; ATEX/IECEx
For data sheet and additional information, see:	wago.com/750-961	wago.com/750-962

Accessories	Item No.	Item No.
Operating tool with a partially insulated shaft; Type 1; Blade (2.5 x 0.4) mm	**210-719**	**210-719**
Operating tool with a partially insulated shaft; Type 2; Blade (3.5 x 0.5) mm	**210-720**	**210-720**

CC-Link Fieldbus Connector







Item Description	CC-Link Fieldbus Connector; with D-sub plug; 9-pole
Item No.	750-965
Order Text	Connector CC-Link; DSub-M; 9P

Technical Data	
Double cable entry point	4.5 mm Ø (min.)/ 9.5 mm Ø (max.)
Terminating resistor	Integrated switch
Housing color	Light gray
Protection type	IP20
Surrounding air temperature (operation)	0 … +60 °C
Surrounding air temperature (storage)	–25 … +85 °C
Relative humidity	95 %; non condensing
Conductor connection	CAGE CLAMP® terminal strip with locking slides (218 Series)
Conductor cross-sections	0.08 … 0.5 mm² / 28 … 20 AWG; limited connection 0.75 mm² / 18 AWG possible
Approvals	OrdLoc
For data sheet and additional information, see:	wago.com/750-965

Accessories	Item No.
Operating tool with a partially insulated shaft; Type 1; Blade (2.5 x 0.4) mm	210-719
Operating tool with a partially insulated shaft; Type 2; Blade (3.5 x 0.5) mm	210-720

System Enclosures

1 Sheet steel
2 Cast aluminum
3 Polyester
4 Sheet steel with cable entry plates

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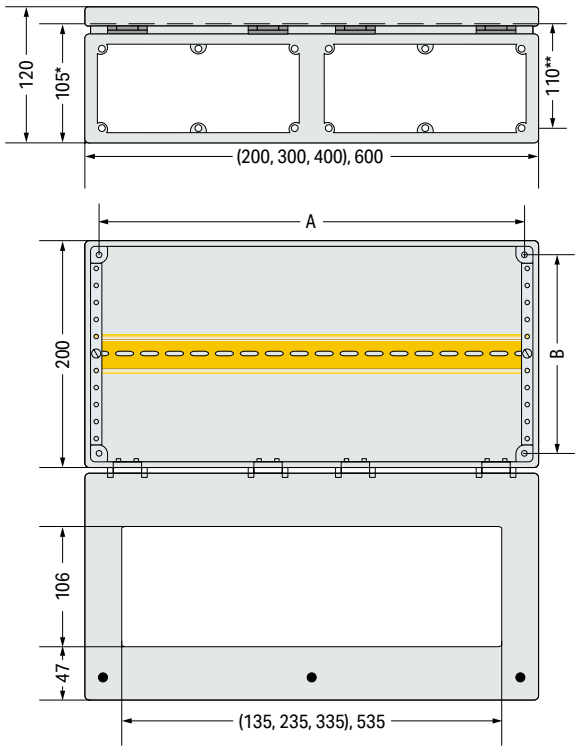
The increasing importance of the application within industrial fieldbus systems in various process engineering areas, such as the chemical and food industry, calls for enclosures that protect both the system technology used and the goods being produced.

This is why WAGO offers system enclosures that allow the use of the WAGO I/O System 750/753 in systems exposed to severe environmental conditions. Each enclosure version is available in four different sizes and features the appropriate number of cable grips with metric thread or cable entry plates.

Sheet-Steel System Enclosures



Dimensions in mm
* internal dimension
** from upper-edge of DIN 35 rail

Item Description	IP65 System Enclosure; Sheet steel (RAL 7035); without flange plate			
Version	WxHxD (200x120x200 mm)	WxHxD (300x120x200 mm)	WxHxD (400x120x200 mm)	WxHxD (600x120x200 mm)
Item No.	850-814/002-000	850-815/002-000	850-816/002-000	850-817/002-000
Order Text	STE Enclosure; RAL7035 200mm	STE Enclosure; RAL7035 300mm	STE Enclosure; RAL7035 400mm	STE Enclosure; RAL7035 600mm
Technical Data				
Recommended assembly dimension (A x B)	160 x 160	260 x 160	360 x 160	560 x 160
Dimensions W x H x D	200 x 120 x 200 mm	300 x 120 x 200 mm	400 x 120 x 200 mm	600 x 120 x 200 mm
Number of I/O modules	≤ 8*	≤ 16*	≤ 24*	≤ 40*
For data sheet and additional information, see:	wago.com/ 850-814/002-000	wago.com/ 850-815/002-000	wago.com/ 850-816/002-000	wago.com/ 850-817/002-000

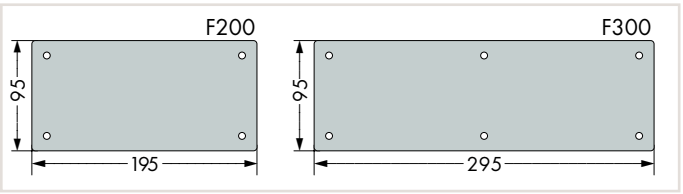
Accessories: Flange Plates	Number of flange plates that can be fitted			
Size 195 x 95 mm: F200; F200-1; F200-2; F204	1	-	2	-
Size 295 x 95 mm: F300; F300-1; F300-2; F304	-	1	-	2

Accessories	Item No.
Wall Mount	850-904

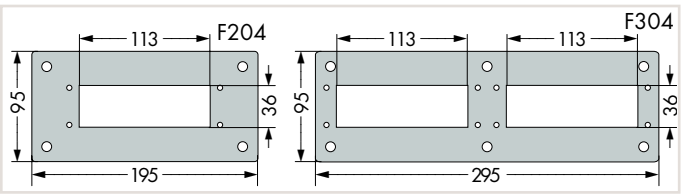
*Both fieldbus coupler and end module are part of the system. This applies to 12 mm wide I/O modules. I/O modules with a width of 24 mm count as two I/O modules.

Included:
- Powder-coated, sheet steel enclosure
- Box with narrow beveled edge, sturdy gutter profile
- Hinged cover 180° (PA), with foam PU seal and 2–3 quick disconnects
- Quick-release fasteners in plastic bushes
- Mounting holes (incl. sealing plugs)
- Large Makrolon inspection glass
- Removable, yellow-tinted chrome interior profiles
- Galvanized DIN-35/7.5 rail (contact with enclosure), adjustable in 12.5 mm spacing
- Grounding lug for cover and flanges with quick-release ribbon cable connectors
- Light gray (RAL 7035)

Flange Plates and Cable Entry Plates



Flange Plate; RAL7035; without cut-out		
	Width x Height	Item No.
F200 Flange Plate RAL7035 WCO	195 x 95 mm	850-818/002-000
F300 Flange Plate RAL7035 WCO	295 x 95 mm	850-819/002-000

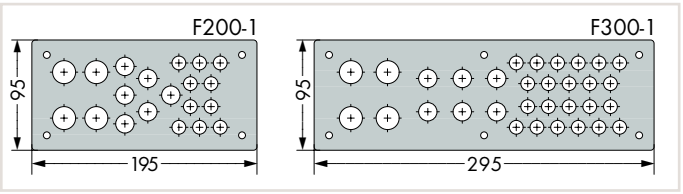


Flange Plate; RAL7035; with cut-out		
	Width x Height	Item No.
F204 Flange Plate RAL7035 1CO	195 x 95 mm	850-818/002-005
F304 Flange Plate RAL7035 2CO	295 x 95 mm	850-819/002-005

Illustration: Flange Plate F204 with Cable Entry Plate KDP 22

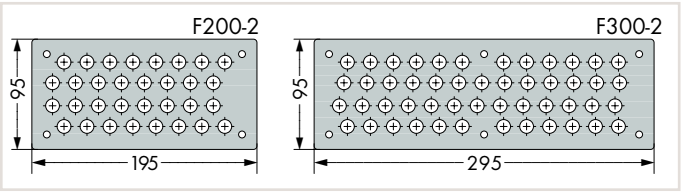
Cable Entry Plate	
	Item No.
KDP 22 Cable Entry Plate; 16 x Size 1, 4 x Size 2, 2 x Size 3	850-820/000-001
KDP 29 Cable Entry Plate; 29 x Size 1	850-820/000-002

Cable entry plate, polyamide
Size 1: Cable diameter 3.0 … 6.5 mm
Size 2: Cable diameter 5.0 … 9.2 mm
Size 3: Cable diameter 8.0 … 12.5 mm



Flange Plate; RAL7035; M20, M16, M12 bore holes		
	Width x Height	Item No.
F200-1 Flange Plate RAL7035 HO1; 4 x M20, 6 x M16, 10 x M12	195 x 95 mm	850-818/002-001
F300-1 Flange Plate RAL7035 HO5; 4 x M20, 6 x M16, 22 x M12	295 x 95 mm	850-819/002-001

Flange Plate; RAL7035; M20, M16, M12 cable grips		
	Width x Height	Item No.
F200-1 Flange Plate RAL7035 CG8; 4 x M20, 6 x M16, 10 x M12	195 x 95 mm	850-818/002-002
F300-1 Flange Plate RAL7035 CG9; 4 x M20, 6 x M16, 22 x M12	295 x 95 mm	850-819/002-002

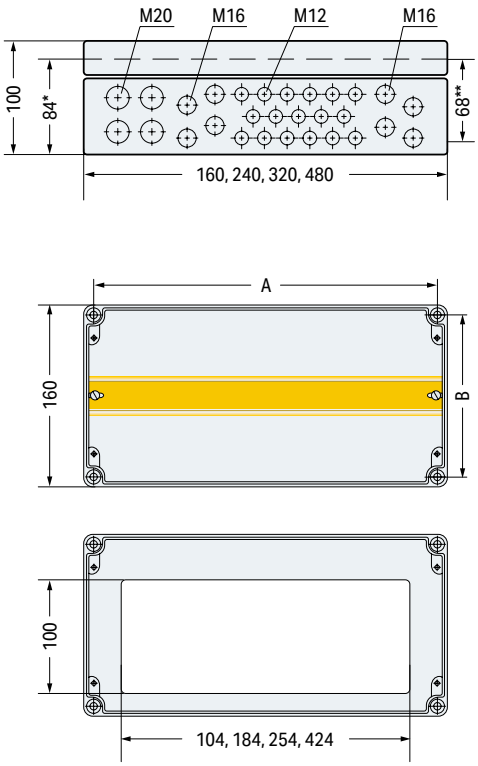


Flange Plate; RAL7035; M12 bore holes		
	Width x Height	Item No.
F200-2 Flange Plate RAL7035 HO4; 32 x M12	195 x 95 mm	850-818/002-003
F300-2 Flange Plate RAL7035 HO6; 50 x M12	295 x 95 mm	850-819/002-003

Similar to illustration

Flange Plate; RAL7035; M12 cable grips		
	Width x Height	Item No.
F200-2 Flange Plate RAL7035 HO2; 32 x M12	195 x 95 mm	850-818/002-004
F300-2 Flange Plate RAL7035 CG12; 50 x M12	295 x 95 mm	850-819/002-004

Aluminum System Enclosures



Dimensions in mm
* internal dimension
** from upper-edge of DIN 35 rail

Item Description	IP65 System Enclosure; Aluminum			
Version	**Enclosure type in RAL 7032**			
Item No.	**850-825**	**850-826**	**850-827**	**850-828**
Order Text	ALU Enclosure; RAL7032 160mm CG11	ALU Enclosure; RAL7032 240mm CG7	ALU Enclosure; RAL7032 320mm CG10	ALU Enclosure; RAL7032 480mm CG4
Version	**Enclosure type in RAL 7035**			
Item No.		**850-826/002-000**	**850-827/002-000**	**850-828/002-000**
Order Text		ALU Enclosure; RAL7035 240mm CG7	ALU Enclosure; RAL7035 320mm CG10	ALU Enclosure; RAL7035 480mm CG4

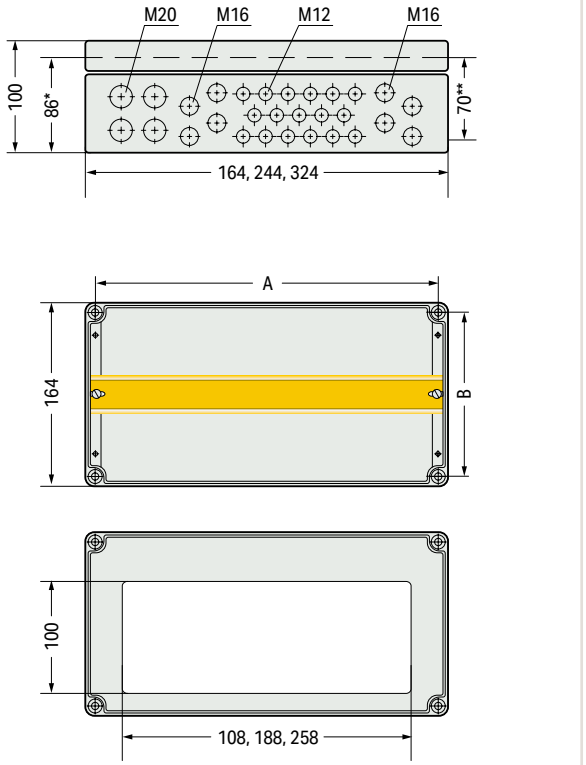
Technical Data				
Number of M12 cable grips	9	14	17	35
Number of M16 cable grips	-	4	8	10
Number of M20 cable grips	4			
Recommended assembly dimension (A x B)	142 x 142 mm	222 x 142 mm	302 x 142 mm	462 x 142 mm
Dimensions W x H x D	160 x 100 x 160 mm	240 x 100 x 160 mm	320 x 100 x 160 mm	480 x 100 x 160 mm
Number of I/O modules	≤ 4*	≤ 11*	≤ 18*	≤ 31*
For data sheet and additional information, see:	wago.com/850-825	wago.com/850-826	wago.com/850-827	wago.com/850-828

Accessories	Item No.
Pole Mount	850-903

*Both fieldbus coupler and end module are part of the system. This applies to 12 mm wide I/O modules. I/O modules with a width of 24 mm count as two I/O modules.

Included:
- Aluminum enclosure, G AL Si 12 alloy / DIN 1725
- Stainless steel cover screws, captive
- Inspection glass, incl. attachment panel for customer marking (marking not included in scope of supply)
- Mounting holes (4 mounting channels located outside the sealed enclosure)
- Metric cable glands (brass, nickel-plated), incl. blind plugs
- M12 cable grip, cable diameter 3 … 6 mm
- M16 cable grip, cable diameter 5 … 9 mm
- M20 cable grip, cable diameter 9 … 13 mm
- 1x DIN-35/7.5 rail
- Tongue and groove system, seal with groove in enclosure cover
- Oil and petroleum-resistant neoprene round chord seal
- Grounding link in enclosure
- Pebble gray RAL 7032 or light gray RAL 7035

Polyester System Enclosures



Dimensions in mm
* internal dimension
** from upper-edge of DIN 35 rail

Item Description	IP65 System Enclosure; Polyester (RAL 7032)		
Version	WxHxD (164x100x164 mm); 9 x M12, 4 x M20	WxHxD (244x100x164 mm); 4 x M20, 4 x M16, 14 x M12 cable grip	WxHxD (324x100x164 mm); 4 x M20, 8 x M16, 17 x M12 cable grip
Item No.	850-834	850-835	850-836
Order Text	POL Enclosure; RAL7032 164mm CG11	POL Enclosure; RAL7032 244mm CG7	POL Enclosure; RAL7032 324mm CG10

Technical Data			
Number of M12 cable grips	9	14	17
Number of M16 cable grips	-	4	8
Number of M20 cable grips	4		
Recommended assembly dimension (A x B)	142 x 142 mm	222 x 142 mm	302 x 142 mm
Dimensions W x H x D	164 x 100 x 164 mm	244 x 100 x 164 mm	324 x 100 x 164 mm
Number of I/O modules	≤ 4*	≤ 11*	≤ 18*
For data sheet and additional information, see:	wago.com/850-834	wago.com/850-835	wago.com/850-836

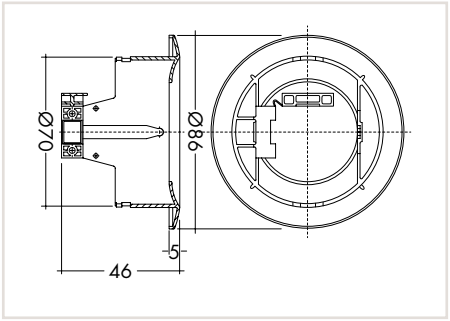
Accessories	Item No.
Pole Mount	850-903

*Both fieldbus coupler and end module are part of the system. This applies to 12 mm wide I/O modules. I/O modules with a width of 24 mm count as two I/O modules.

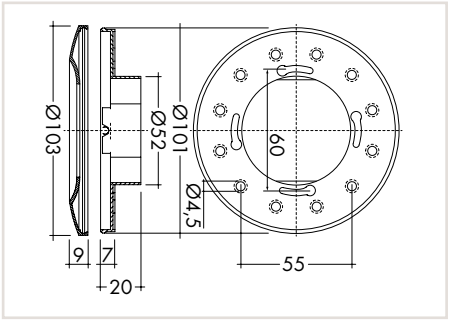
Included:
- Polyester enclosure, glass-fiber-reinforced, halogen-free, as V0 version (self-extinguishing)
- Polyamide cover screws, captive
- Inspection glass, incl. attachment panel for customer marking (marking not included in scope of supply)
- Mounting holes (4 mounting channels located outside the sealed enclosure)
- Metric cable grips (polyamide PA 6), incl. blind plugs
- M12 cable grip, cable diameter 3 ... 6 mm
- M16 cable grip, cable diameter 5 ... 9 mm
- M20 cable grip, cable diameter 9 ... 13 mm
- 1x DIN-35/7.5 rail
- Oil and petroleum-resistant neoprene round chord seal
- Pebble gray, RAL 7032

DALI Multi-Sensors

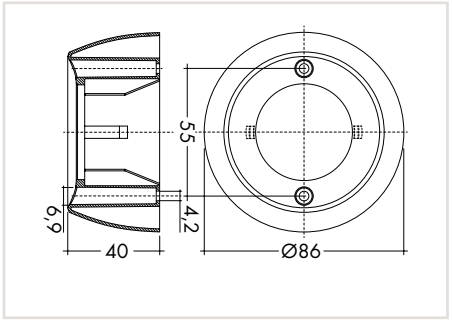
Ceiling Installation



Wall Box Mounting



Surface Mounting



The WAGO DALI MSensor 02 is paired with DALI Master I/O modules (753-647 or 750-641) and has been designed for the following key applications:

- Individual offices
- Open-plan offices
- Training/presentation rooms
- Corridors, passageways and garages

WAGO's Multi-Sensor features both a motion/presence detector and a light sensor. It may also be operated with an optional remote control from Tridonic. The sensor enables both motion/presence detection and daylight-dependent lighting control, both of which can also be deactivated.

Addressing is performed via rotary switch or WAGO DALI Configurator. Parameters can be adjusted individually using the configurator.
Power supply is provided via the DALI line.
The number of sensors, which can be operated on a DALI line, depends on the total power consumption of the specific devices and the address range for the actuators and sensors. Due to the capacity of the DALI bus, a maximum of 16 DALI sensor couplers may be operated on a DALI Multi-Master Module (753-647).

- The DALI MSensor 02 is supplied directly via DALI line.
- DALI is not SELV (Safety Extra Low Voltage). The installation instructions for mains voltage therefore apply.
- The detection range of the sensor must be within the lighting area of the controlled luminaires.
- The detection ranges of the sensors must not overlap as this may impair the lighting control.
- When installed at a height other than the recommended installation height (2.5 m), the presence and light sensor might show different characteristics. If installed at a greater height, the sensitivity is reduced; the range is also reduced when installed at a lower height.
- Heaters, fans, printers and copiers located in the detection range may cause incorrect presence detection.

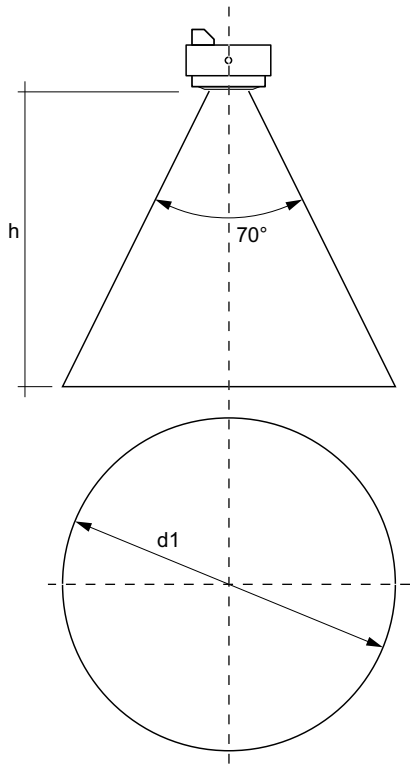
Installation notes:

Item Description	DALI MSensor 02 5DPI 41rc (Recessed Ceiling Installation)	DALI MSensor 02 5DPI 41w (Wall Box Mounting)	DALI MSensor 02 5DPI 41rs (Surface Mounting)
Item No.	**2851-8301**	**2851-8302**	**2851-8303**
Technical Data			
Diameter of detection range when installed at a height of 2.5 m	5 m		
Extension of the detection range	2 m (if mounted at a height of 2.5 m and swiveled through 15°)		-
Swivel design	Yes		No
Swivel range	± 15°		-
Detection angle	360°		
Light measurement at the sensor head	10 … 650 lx (The measured value at the sensor head corresponds to approx. 15 to 2,000 lux on the surface measured.)		
Remote control range	5 m		
For data sheet and additional information, see:	wago.com/2851-8301	wago.com/2851-8302	wago.com/2851-8303

Technical Data	
Power supply	Via DALI line
Power consumption	6 mA from DALI line
Surrounding air temperature (operation)	0 … +50 °C
Surrounding air temperature (storage)	–25 … +55 °C
Protection type	IP20
Wire type and cross-section	Solid or fine-stranded wires ranging from 0.5 to 1.5 mm² (20 … 16 AWG)

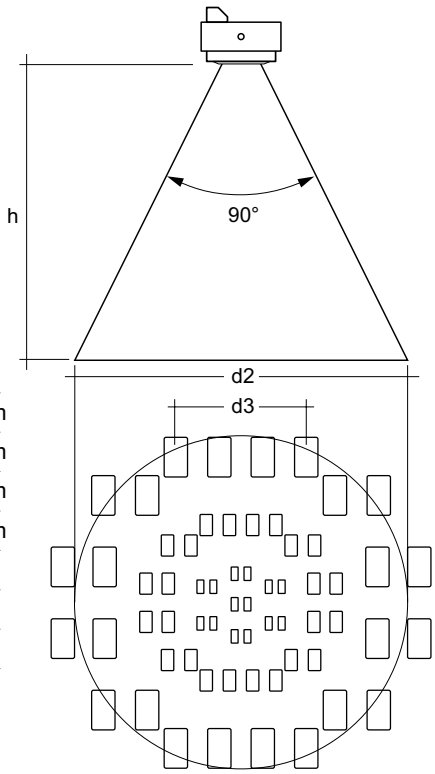
Technical Data	
General Settings	
Motion detector	Switching, on/off
Lighting control	Switching
Setpoint (lighting control)	150 lx
Power-on setting	No action
Bright-out timeout	10 min
Bright-out threshold	150 %
Control speed	4
Switch-on value	Automatic (calculated)
Rotary switch	0, broadcast
Motion Detector Settings	
Fade-in time	< 0.7 s
Presence value	Regulated
Run-on time	20 min
Fade time	5.6 s
Absence value	3 %
Switch-off delay	10 min
Fade-off time	5.6 s
Manual-off	10 min

Light Detection



h *	d1	d2	d3
1,7 m	2,4 m	3,4 m	1,36 m
2,0 m	2,8 m	4,0 m	1,60 m
2,3 m	3,2 m	4,6 m	1,84 m
2,5 m	3,5 m	5,0 m	2,00 m
2,7 m	3,8 m	5,4 m	-
3,0 m	4,2 m	6,0 m	-
3,5 m	4,9 m	7,0 m	-
4,0 m	5,6 m	8,0 m	-

Motion Detection (d2) and Presence Detection (d3)



*The recommended maximum room height for office applications is 3 m and for corridor applications 4 m, for example.

Calculation of the diameter:
d = 2 x tan (0.5 x α) x h

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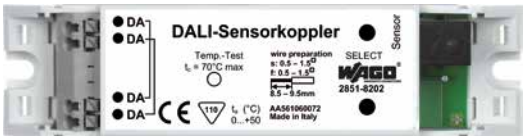
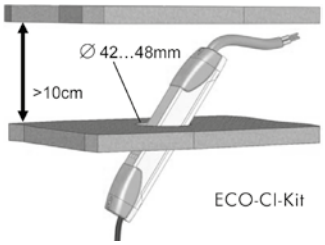
WAGO DALI Multi-Sensor Kit

DALI Sensor Coupler



MULTI-3-CI Sensor

Eco-CI Kit



The WAGO DALI Multi-Sensor Kit is paired with the WAGO 753-647 DALI Multi-Master Module and includes the following three components:

- DALI Sensor Coupler (also available individually)
- Eco-CI Kit
- MULTI-3-CI Sensor

The DALI Sensor Coupler connects the MULTI-3-CI Sensor to a DALI bus system. For this, the MULTI-3-CI Sensor is connected to the DALI Sensor Coupler via RJ-10 socket. DALI terminals connect the DALI Sensor Coupler to both the DALI network and WAGO DALI Module.
The Eco-CI Kit contains two covers, which can be used as touch guards and strain relief for cables within the ceiling installation of the DALI Sensor Coupler.
The MULTI-3-CI Sensor has a motion and light sensor, enabling both motion detection and daylight-dependent lighting control. Power supply to the DALI Sensor Coupler is provided via DALI line. The DALI Sensor Coupler transmits measured values from the connected sensor channels as telegrams to the WAGO DALI Module via DALI line. Parameters can be adjusted individually via WAGO DALI Configurator.

The number of sensors, which can be operated on a DALI line, depends on the total power consumption of the specific devices and the address range for the actuators and sensors. Due to the capacity of the DALI bus, a maximum of 16 DALI Sensor Couplers may be operated on a DALI Multi-Master Module (753-647).

Installation
Sensor Connection
The MULTI-3-CI Sensor is connected to a 4-pole RJ-10 socket (4P4C), which is marked as "Sensor" on the housing cover.
For easy connection, the sensor plug is equipped with a quick-connect latch. Only one MULTI-3-CI Sensor must be connected to sensor coupler.

Ceiling Installation
For installation outside of a lighting fixture (e.g., suspended ceiling), the Eco-CI Kit must also be attached to both sides of the unit to ensure strain relief and touch protection.
The DALI Sensor Coupler can also be installed in lighting fixtures. The installation spaces available in lighting fixtures can be used, as the dimensions correspond to those of an electronic ballast.

Note:
The DALI Sensor Coupler is also available individually, allowing the unit to be combined with other multi-sensor models from OSRAM.

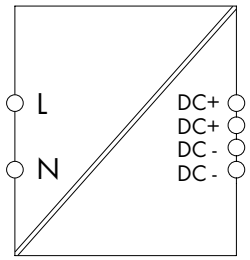
WAGO DALI Multi-Sensor Kit	
Delivery type	Item No.
Set includes: DALI Sensor Coupler, MULTI-3-CI Sensor, Eco-CI Kit	2851-8201
DALI Sensor Coupler	2851-8202

DALI Sensor Coupler	
Power supply	Via DALI line
Power consumption	5 mA (from the DALI line)
Input signal voltage/current	According to MULTI 3 CI Sensor
Conductor connection	Inputs: for MULTI-3-CI Sensor's modular plug 4p4c (RJ-10); Sensor cable length (max.): 5 m; DALI connection: Push-wire connectors; Strip length: 8.5 … 9.5 mm
Conductor cross-sections	0.5 … 1.5 mm² (s + f-st)
Dimensions W x H x D	118 x 21 x 30 mm
Weight	35 g
Surrounding air temperature (operation)	0 … +50 °C
Surrounding air temperature (storage)	−25 … +70 °C
Relative humidity	5 … 93 %; non-condensing
Protection type	IP20
Approvals	CE

Eco-CI Kit	
Installation opening diameter	42 … 48 mm
Minimum suspended ceiling clearance	25 mm

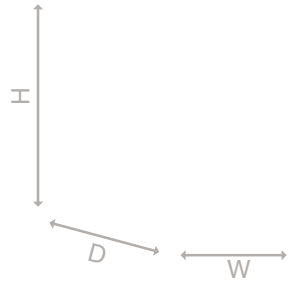
MULTI-3-CI Sensor	
Maximum total length of signal line (incl. all connections to the control units)	100 m
Dimensions (diameter x H)	50 x 25 mm
Light sensor detection range	20 … 600 lx (measured at sensor), beam angle approx. 90°
Recommended installation height	2 … 4 m
Motion detection range	Cone-shaped, beam angle approx. 80°, depending on installation level 4 … 8 m

Switched-Mode Power Supply; for DALI Module; Compact; 1-Phase
787 Series



Switched-Mode Power Supply; for DALI Module (753-647); 1-phase; Output voltage: 18 VDC; Output current: 1.1 A

Item No.	PU
787-1007	1



Short description:
The 787-1007 Switched-Mode Power Supply is specially designed to supply the 753-647 DALI Multi-Master. The 787-1007 features a 54 mm wide DIN-rail-mount enclosure with input voltage range of 85 to 264 VAC (120 to 373 VDC). The power supply provides an output voltage of 18 VDC and a maximum output current of 1100 mA. This allows several DALI Multi-Masters to be supplied in parallel. The maximum current per DALI line is limited to 200 mA in each DALI Multi-Master.

Features:
- Supplies up to five 753-647 DALI Multi-Masters*
- Suitable for protection class II equipment
- Natural convection cooling when horizontally mounted
- Stepped profile, ideal for distribution boards/boxes

*Note:
The 787-1007 Power Supply must be operated in a DALI network with an interconnected 753-647 DALI Multi-Master. Otherwise the connected DALI devices will be destroyed.

Input	
Phases	1
Nominal input voltage Ui nom	100 … 240 VAC
Input voltage range	85 … 264 VAC; 120 … 373 VDC
Nominal mains frequency range	44 … 66 Hz; 0 Hz
Input current Ii	≤ 0.4 A (230 VAC); ≤ 0.6 A (110 VAC)
Inrush current	≤ 30 A (NTC)
Mains failure hold-up time	≥ 80 ms (230 VAC); > 10 ms (110 VAC)
Output	
Nominal output voltage Uo nom	18 VDC
Default setting	18 VDC
Nominal output current Io nom	1.1 A (18 VDC); max. 0.8 A (18 VDC) in any mounting position
Adjustment accuracy	≤ 2 %
Residual ripple	≤ 100 mV (peak-to-peak)
Current limitation	1.1 x Io nom (typ.)
Overload behavior	Constant current
Signaling and Communication	
Status indication	Green LED (Uo)
Efficiency/Power Losses	
Power loss Pl	≤ 3 W (230 VAC; no load); ≤ 6 W (230 VAC; nominal load)
Efficiency	≥ 80 %
Fuse Protection	
Internal fuse	2 AT
Required backup fusing	An external DC fuse is required for the DC input voltage.
Recommended backup fusing	Circuit breaker: 10 A (C characteristic), 16 A (B characteristic) or higher
Safety and Protection	
Isolation voltage (pri.-sec.)	4.242 kVDC
Protection class	II
Protection type	IP20 (per EN 60529)
Feedback voltage	≤ 20 VDC
Short-circuit-protected	Yes
Open-circuit-proof	Yes
MTBF	> 500,000 h (per IEC 61709)
Connection Data	
Connection type	Input/output
Connection technology	CAGE CLAMP®
WAGO Connector	WAGO 740 Series
Solid conductor	0.08 … 2.5 mm² / 28 … 12 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 12 AWG
Strip length	6 … 7 mm / 0.24 … 0.28 inch
Physical Data	
Width	54 mm / 2.126 inch
Height	89 mm / 3.504 inch
Depth	59 mm / 2.323 inch
Depth from upper-edge of DIN-rail	55 mm / 2.165 inch
Mechanical Data	
Mounting type	DIN-35 rail (EN 60715)
Material Data	
Weight	170 g
Environmental Requirements	
Surrounding air temperature (operation)	–25 … +60 °C
Surrounding air temperature (storage)	–25 … +80 °C
Relative humidity	5 … 96 % (no condensation permissible)
Pollution degree	2
Climatic category	3K3 (per EN 60721)
Standards and Specifications	
Standards/specifications	EN 60950-1; EN 61204-3; UL 508; DNV GL

DALI Sensors

2852-7214

DALI Sensor		
	Item No.	PU
DALI Sensor; PD11-BMS-FLAT	2852-7210	1
DALI Sensor; PD4-BMS-GH	2852-7213	1
DALI Sensor; PD4N-BMS	2852-7214	1
Adapter; AP Assembly Kit IP54; Accessories for 2852-7214	2852-7215	1
DALI Sensor; MSensor G3 SRC 30 PIR 5DPI WH	2852-7220	1
DALI Sensor; IR Quattro HD DALI-2	2852-7230	1
DALI Sensor; IR Quattro SLIM XS DALI-2	2852-7231	1
DALI Sensor; IS3360 MX HIGH BAY DALI-2	2852-7232	1
DALI Sensor; IS345 MX HIGH BAY DALI-2	2852-7233	1

2852-7221

DALI Sensor		
	Item No.	PU
DALI Sensor; MSensor G3 SSM 30 10DPI WH	2852-7221	1
DALI XC Control Module with 4 Freely Programmable Inputs	2852-7225	1

2852-7225

2852-7601/000-001

Room Control Unit		
	Item No.	PU
Room Control Unit; Modbus®; RBG1; Display; Glass front; Aluminum frame; Black	2852-7601/000-001	1
Room Control Unit; Modbus®; RBG1; Display; Glass front; Aluminum frame; White	2852-7601/000-002	1

Room Control Units

2852-7110

Room Control Unit		
	Item No.	PU
WRF04-P Room Control Unit; Passive; Wall-Mount; Pt1000; 5 kOhm	2852-7110	1
WRF07-P Room Control Unit; Passive; Flush-Mount; Pt1000; 5 kOhm	2852-7111	1
SR04-P Room Control Unit; Radio; Wall-Mount; EnOcean	2852-7112	1
SR06-LCD Room Control Unit; Radio; Flush-Mount; EnOcean®; 2 Push-Buttons	2852-7113	1
WRF04-P-RS-485 Room Control Unit; Modbus®; Wall-Mount; Temperature; Set Point Value	2852-7114	1
WRF07-P-RS-485 Room Control Unit; Modbus®; Flush-Mount; Temperature; Set Point Value	2852-7115	1

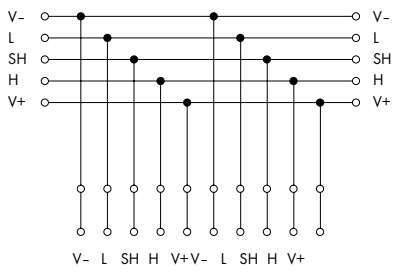
2852-7510

Manually Operated Module		
	Item No.	PU
RBT10 Signaling Module; 12 LEDs	2852-7510	1
RBT20 Output Module; 4 Switches; 8 LEDs	2852-7511	1
RBT30 Output Module; 4 Push-Buttons; 4 LEDs + 12 LEDs	2852-7512	1
RBT40 Analog Module; 4 Rotary Encoders; 4 Bar Displays	2852-7513	1
RBT50 Operating Module; 2 Analog; 2 Digital	2852-7514	1

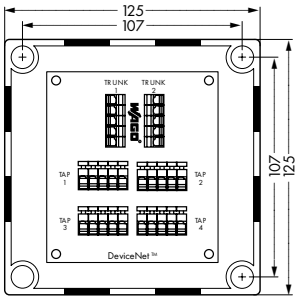
Connection Board		
	Item No.	PU
RBT-AK Connection Board for Robutec Series	2852-7515	1

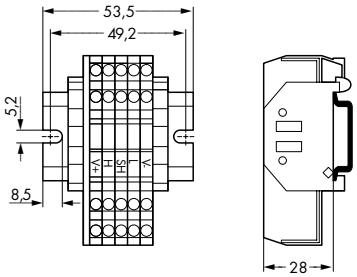
Rack		
	Item No.	PU
RTR4050S Rack 4 HE, 50TE	2852-7516	1

Multi Port Device Taps for DeviceNet



For DeviceNet, a terminating resistor must be connected to each end of the trunk cable. A metal film resistor with the following values must be used: 121 Ohm ± 1 %, ¼ W. Do not connect terminating resistors to the end of a drop cable, only connect to the ends of the trunk cable.





Item Description	Multi Port Device Tap; 2 trunk cables (input, output); 4 drop cables; Housing (IP65/NEMA 4)	Multi Port Device Tap; 2 trunk cables (input, output); 2 drop cables; Open style
Item No.	810-900/000-001	810-901/000-001
Technical Data		
Wire connection for trunk cables	2 x 256-405 (PCB terminal blocks)	
Wire connection for drop cables	4 x 255-405 (PCB terminal blocks)	
Housing	With cable entry holes	
Terminal block		5 x 280-633
End terminal block		2 x 249-116
DIN-rail		DIN 35, slotted
Conductor cross-sections	0.08 … 2.5 mm² / 28 … 12 AWG	0.08 … 2.5 mm² / 28 … 12 AWG
Cable diameter (trunk cable)*	10 … 14 mm Ø	
Cable diameter (drop cable)	6 … 12 mm Ø	
Protection type (housing)	IP65/NEMA 4	
For data sheet and additional information, see:	wago.com/810-900/000-001	wago.com/810-901/000-001

Accessories	Item No.	PU	Item No.	PU
Cable grip for trunk cable 10 …14 mm Ø	810-900/001-000	1		
Cable grip for drop cable 6 … 12 mm	810-900/002-000	1		
Terminating resistor	810-900/003-000	200	810-900/003-000	200
Test adapter for miniature banana plug	810-900/004-000	1	810-901/001-000	1

*when using the cable grip (available as accessories)

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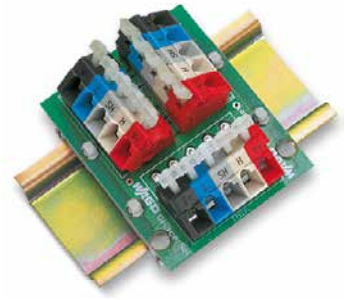
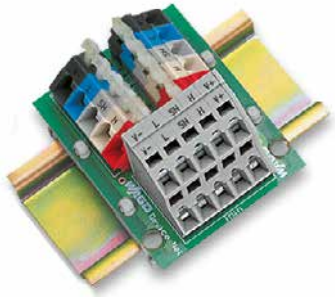
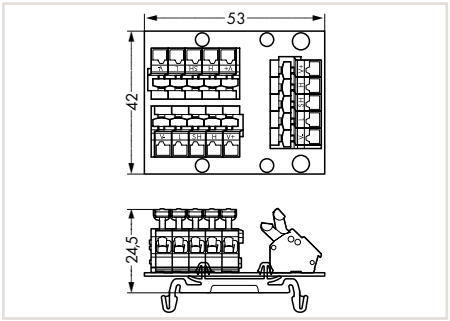
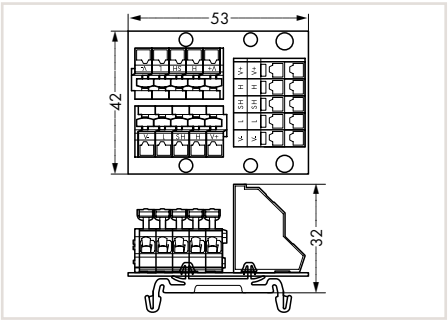
Multi Port Device Taps for DeviceNet





For DeviceNet, a terminating resistor must be connected to each end of the trunk cable. A metal film resistor with the following values must be used: 121 Ohm ± 1 %, ¼ W. Do not connect terminating resistors to the end of a drop cable, only connect to the ends of the trunk cable.





Item Description	Multi Port Device Tap with Mounting Foot; 2 trunk cables (input, output); 1 drop cable; Open style	Multi Port Device Tap with Mounting Foot; 2 trunk cables (input, output); 2 drop cables; Open style
Item No.	810-902/000-001	810-902/000-002
Technical Data		
Wire connection for trunk cables	2 x 5 x 256 Series (PCB terminal blocks)	2 x 5 x 256 Series (PCB terminal blocks)
Wire connection for drop cables	1 x 5 x 256 Series (PCB terminal blocks)	1 x 5 x 736 Series (PCB terminal blocks)
Conductor cross-sections	0.08 … 2.5 mm² / 28 … 12 AWG	0.08 … 2.5 mm² / 28 … 12 AWG
For data sheet and additional information, see:	wago.com/810-902/000-001	wago.com/810-902/000-002

Accessories	Item No.	PU	Item No.	PU
Terminating resistor	810-900/003-000	200	810-900/003-000	200
Test adapter for miniature banana plug	810-901/001-000	1	810-901/001-000	1

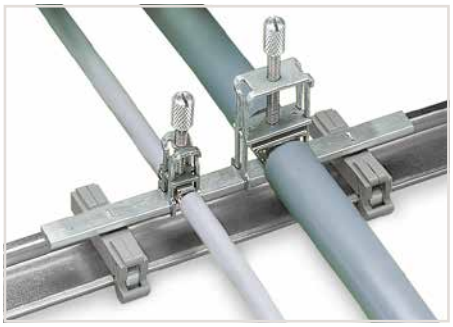
Shield Connection System, 790 Series
Application and Installation Instructions

Carrier with grounding foot* (790-113),
45 mm long, busbar 90° to the DIN-rail

*for all shield clamping saddle sizes

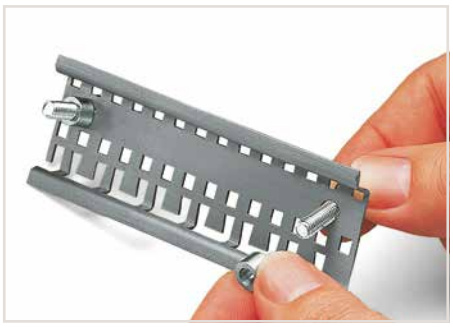
Carrier with grounding foot* (790-114),
45 mm long, busbar parallel to the DIN-rail

*for all shield clamping saddle sizes

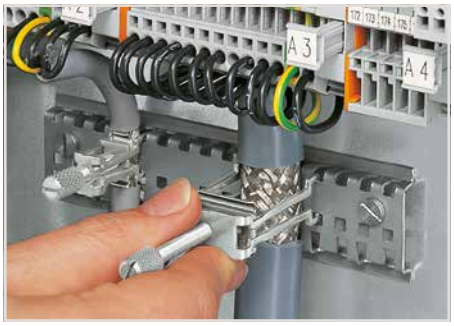


Carrier with grounding foot* (790-115),
125 mm long, busbar parallel to the DIN-rail

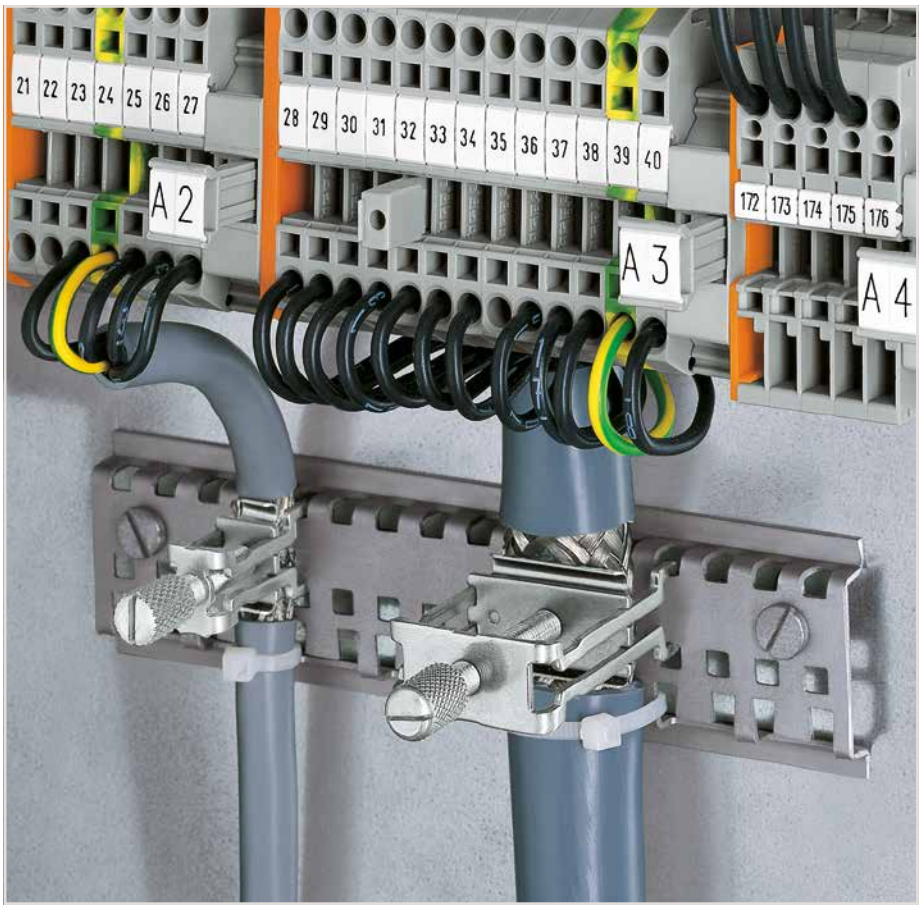
*for all shield clamping saddle sizes



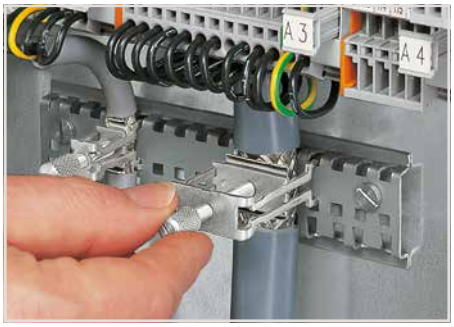
Securing a spacer sleeve to a specialty slotted DIN-rail.



Securing an additional shield clamping saddle.



13

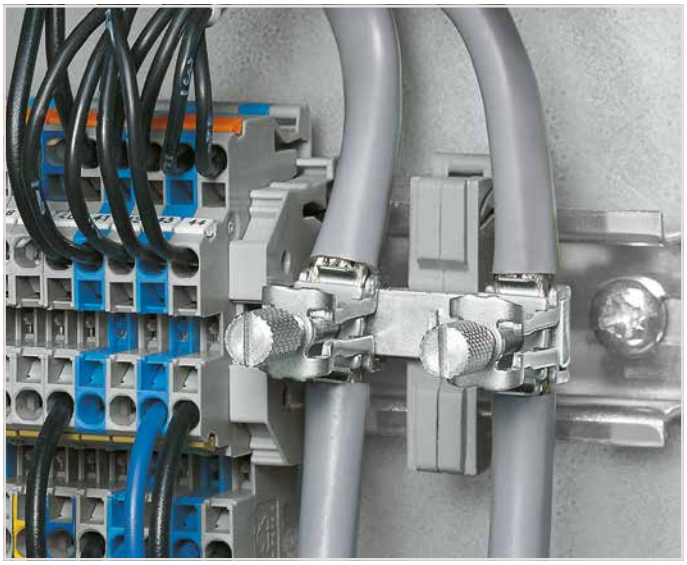


Tightening/removing a shield clamping saddle.

After connection, tighten the knurled screw to complete the installation. Recommended tightening torque: 0.5 Nm

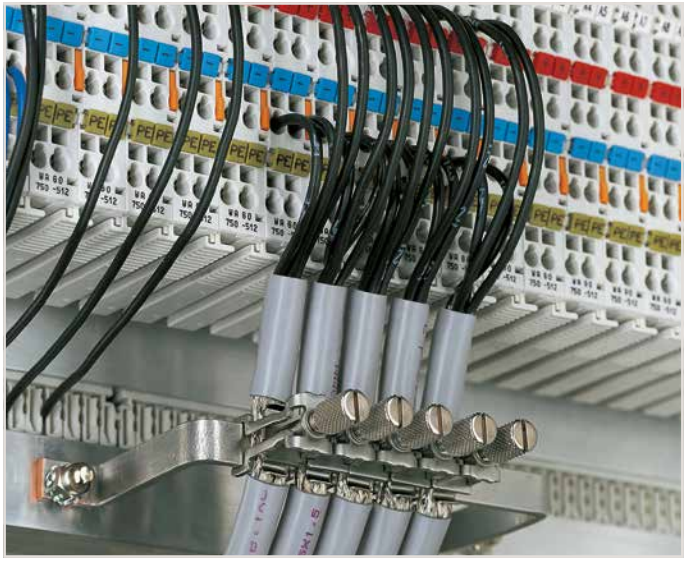
To remove the clamping saddle, unscrew until ratcheted mechanism is released, then slightly tip saddle and remove the clamping saddle.

Shield Connection System, 790 Series
Application and Installation Instructions

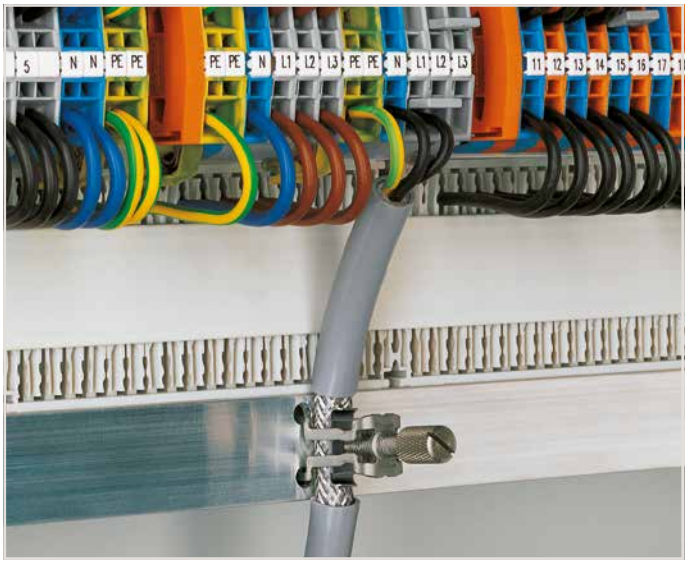


Carrier with grounding foot – busbar parallel to the DIN-rail

Insulated mounting carriers for a common shield reference potential, independent of housing potential

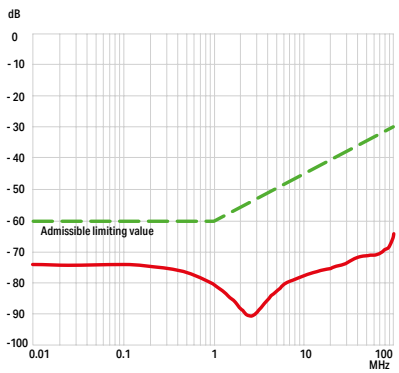


U-shaped (10 x 3) mm copper busbar



Snap shield clamping saddles into any metal plate (max. thickness: 3 mm).

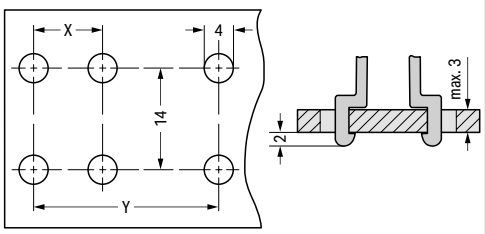
Negative Shield Attenuation



WAGO's shield connection system is highly effective because the clamping unit can be brought very close to the unshielded part of the cable.

Hole Dimensions for Panel Mounting

Shield clamping saddle size	
Distance	X
11 mm	9.5 mm
Distance	Y
19 mm	17.5 mm
27 mm	25.5 mm
43 mm	41.5 mm



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.

13

Shield Clamping Saddles
790 Series

Shield clamping saddle; 11 mm wide; max. shield diameter of 8 mm		
	Item No.	PU
	790-108	50 (10)

Shield clamping saddle; 19 mm wide; 7 … 16 mm shield diameter		
	Item No.	PU
	790-116	50 (10)

Shield clamping saddle; 27 mm wide; 6 … 24 mm shield diameter		
	Item No.	PU
	790-124	50 (10)

Shield clamping saddle, 43 mm wide, 22 … 40 mm shield diameter		
	Item No.	PU
	790-140	50 (10)

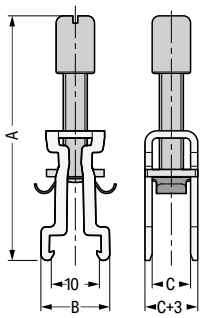
Installation

The shield clamping saddle is shipped ready for direct connection to the (10 x 3) mm busbar or to a drilled mounting plate. After connection, tighten the knurled screw to complete the installation.
Maximum tightening torque: 0.5 Nm

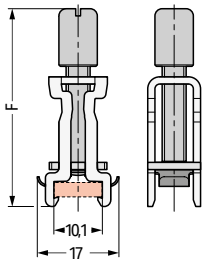
Removal

To remove the clamping saddle, unscrew until ratcheted mechanism is released, then slightly tip saddle and remove the clamping saddle.

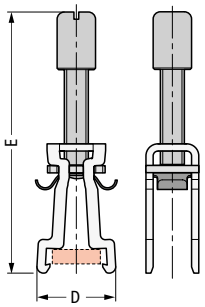
Delivery position
for direct snapping



Snapping position
closed



Release position



Dimensions in mm

Item No.	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

13

Spring-Equipped Shield Clamping Saddles
790 Series

Shield clamping saddle; 3 … 8 mm diameter; 12.4 mm wide		
	Item No.	PU
	790-208	50

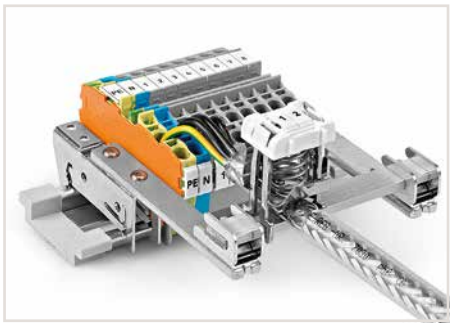
Shield clamping saddle; 6 … 16 mm diameter; 21.8 mm wide		
	Item No.	PU
	790-216	25

Shield clamping saddle; 6 … 20 mm diameter; 30 mm wide		
	Item No.	PU
	790-220	25

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).

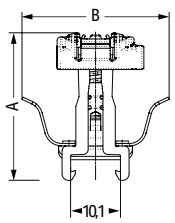


Application example

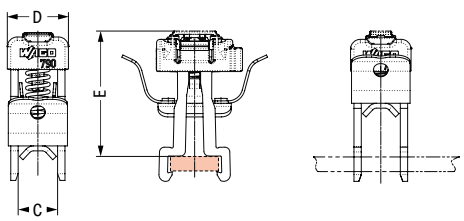
Labeling using a marking strip.

Labelling using WMB markers.

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 Clamps and Shield Terminations
791 and 709 Series

Shield clamp; 1.5 … 6.5 mm shield diameter; max. 40 mm high; 10 mm wide		
	Item No.	PU
	791-107	50

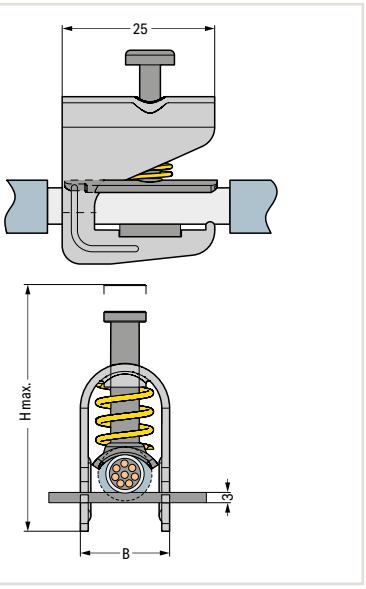
Shield clamp; 5 … 11 mm shield diameter; max. 47 mm high; 17 mm wide		
	Item No.	PU
	791-111	50

Shield clamp; 10 … 17 mm shield diameter; max. 63 mm high; 23 mm wide		
	Item No.	PU
	791-117	50

Shield clamp; 16 … 24 mm shield diameter; max. 78 mm high; 30 mm wide		
	Item No.	PU
	791-124	50

Shield termination; includes cable ties for 5 … 10 mm shield diameter; 60 mm long		
	Item No.	PU
	709-350	100 (25)

Shield termination; includes cable ties for 5 … 10 mm shield diameter; 150 mm long		
	Item No.	PU
	709-352	100 (25)



Dimensions in mm

Insert the shield termination into the female plug using the operating tool.

Fit the shield termination to the shield cable.

Secure both shield cable and shield termination to the strain relief plate using cable ties.

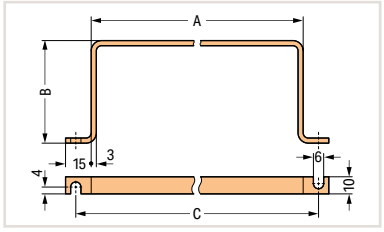
Shield termination connected to an X-COM® Female Plug

13

Accessories for Shield Connection Systems

Item Description					
Carrier with Grounding Foot				**Item No.**	**PU**
Carrier with grounding foot; busbar parallel to the rail; 15 mm long; copper (10 x 3) mm; suitable 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; suitable 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; suitable 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; suitable for shield clamping saddles (790 Series) and shield clamps (791 Series)				790-114	25
Carrier with 2 Grounding Feet				**Item No.**	**PU**
Carrier with 2 grounding feet; busbar parallel to the DIN-rail; 125 mm long; copper (10 x 3) mm				790-115	25
Busbar				**Item No.**	**PU**
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
DIN-Rail; Specialty Slotted				**Item No.**	**PU**
DIN-rail; specialty slotted; 1000 mm long; tin-plated				790-145	1
Spacer sleeve; for DIN-rail; suitable for M5-size screw; specialty slotted				790-144	200 (100)
Insulated Mounting Foot				**Item No.**	**PU**
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)
U-Shaped Busbar; suitable for 750 Series I/O Modules	**A**	**B**	**C**	**Item No.**	**PU**
U-shaped busbar; copper (10 x 3) mm; for 5 I/O	63	60	83	790-190	25 (5)
U-shaped busbar; copper (10 x 3) mm; for 8 I/O	100	60	118	790-191	25
U-shaped busbar; copper (10 x 3) mm; for 5 I/O	63	35	83	790-192	25
U-shaped busbar; copper (10 x 3) mm; for 8 I/O	100	35	118	790-193	25

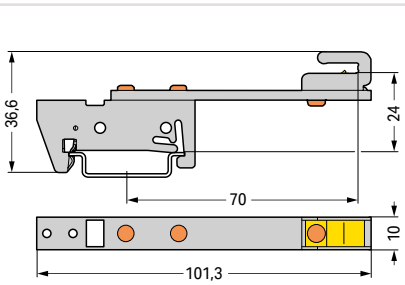
Dimensions in mm



13

Busbar Carriers
790 Series

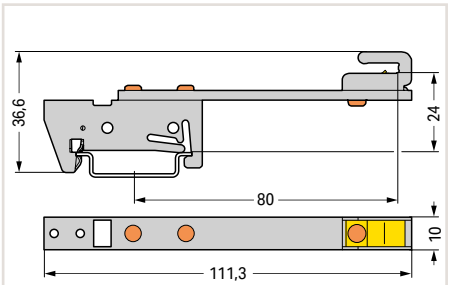
Dimensions in mm



Busbar carrier; for (10 x 3) mm copper busbars; single side; straight; snaps onto DIN-35 rail

Item No.	PU
790-300	10

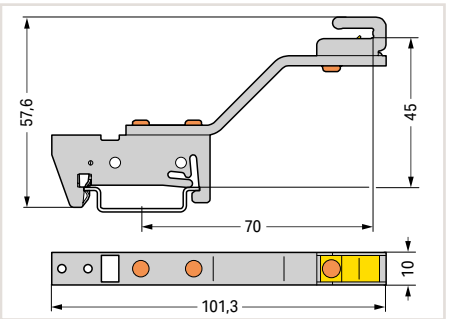
Dimensions in mm



Busbar carrier; for (10 x 3) mm copper busbars; single side; straight; snaps onto DIN-35 rail

Item No.	PU
790-302	10

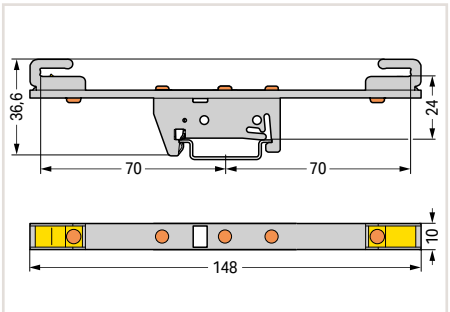
Dimensions in mm



Busbar carrier; for (10 x 3) mm copper busbars; single side; angled; snaps onto DIN-35 rail

Item No.	PU
790-301	10

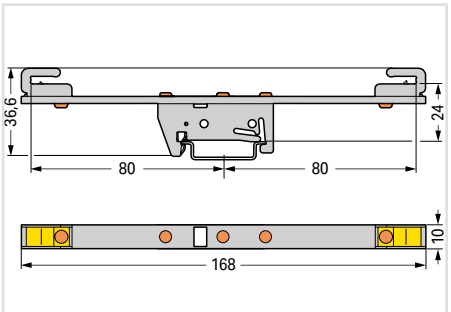
Dimensions in mm



Busbar carrier; for (10 x 3) mm copper busbars; both sides; straight; snaps onto DIN-35 rail

Item No.	PU
790-310	10

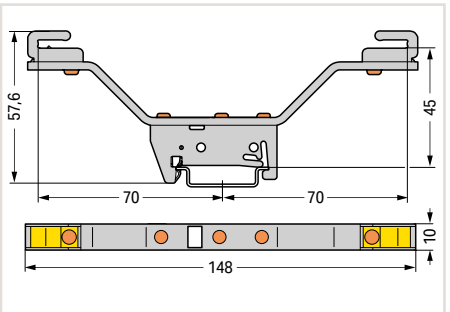
Dimensions in mm



Busbar carrier; for (10 x 3) mm copper busbars; both sides; straight; snaps onto DIN-35 rail

Item No.	PU
790-312	10

Dimensions in mm

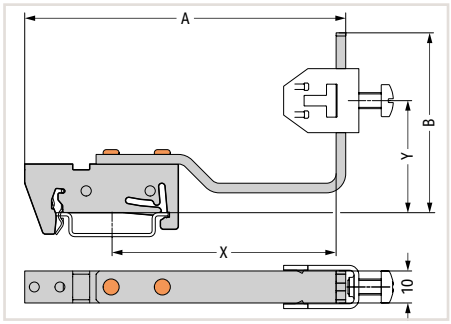


Busbar carrier; for (10 x 3) mm copper busbars; both sides; angled; snaps onto DIN-35 rail

Item No.	PU
790-311	10

Busbar Carriers
790 Series

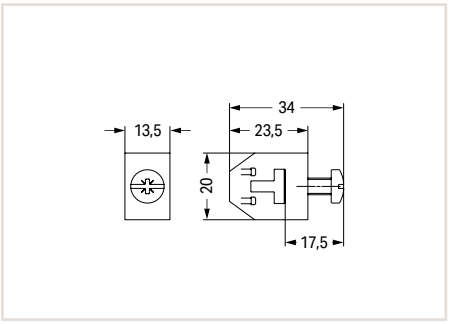
Dimensions in mm



Busbar carrier; for (10 x 3) mm copper busbars; flexible; snaps onto DIN-35 rail

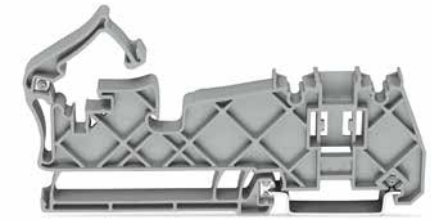
	Item No.	PU
	790-350/790-398	12
	790-352/790-398	12
	790-360/790-398	12
	790-362/790-398	25

Dimensions in mm

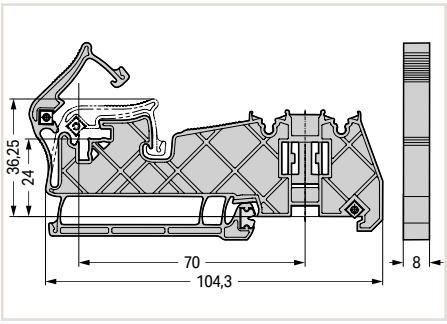


T-connector; for (10 x 3) mm copper busbars

	Item No.	PU
	790-398	10



Dimensions in mm

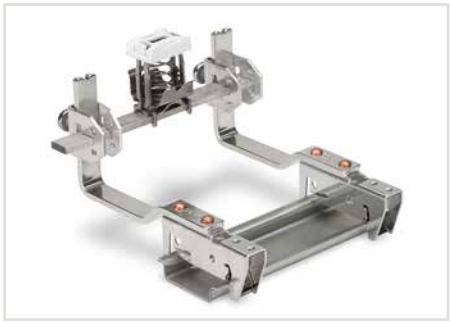


Busbar carrier; for (10 x 3) mm copper busbars; no contact to DIN-rail; insulated

Color	Item No.	PU
gray	790-400	20

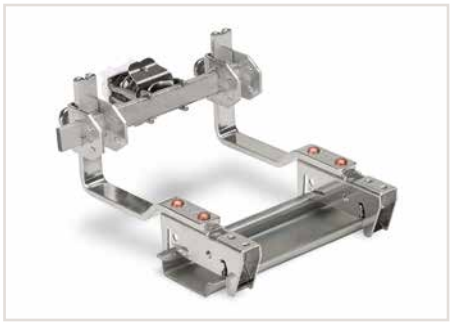
Dimensions in mm

Item No.	A	B	X	Y
790-350/790-398	100	56	70	15 ... 52
790-352/790-398	100	99	70	15 ... 92
790-360/790-398	115	56	85	15 ... 52
790-362/790-398	115	99	85	15 ... 92



Horizontal mounting position of the busbar

Horizontal mounting position of the busbar



Vertical mounting position of the busbar

Vertical mounting position of the busbar

13

Mini-WSB Marker Card; as Card and Mini-WSB Inline; for Smart Printer; on Reel

Mini-WSB Marker Card; as card; not stretchable; plain; snap-on type		
Color	Item No.	PU
white	248-501	5
yellow	248-501/000-002	5
red	248-501/000-005	5
blue	248-501/000-006	5
gray	248-501/000-007	5
orange	248-501/000-012	5
light green	248-501/000-017	5
green	248-501/000-023	5
violet	248-501/000-024	5

Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 … 5.2 mm; plain; snap-on type		
Color	Item No.	PU
white	2009-145	1

Mini-WSB Marker Card; as card; with marking; not stretchable; horizontal marking; snap-on type				
Marking	No. of Markings	Color	Item No.	PU
0 V	100x	blue	247-506/000-006	5
0 V	100x	white	247-506	5
-	100x	blue	247-507/000-006	5
-	100x	white	247-507	5
24 V	100x	red	247-508/000-005	5
24 V	100x	white	247-508	5
+	100x	red	247-509/000-005	5
+	100x	white	247-509	5
⏚	100x	light green	247-552/000-017	5
⏚	100x	white	247-552	5
GND	100x	light green	248-578/000-017	5
GND	100x	white	248-578	5
A0 A1 … A8 A9	10x	white	247-510	5
E0 E1 … E8 E9	10x	white	247-511	5
X0 X1 … X8 X9	10x	white	247-512	5
00 … 09	10x	white	247-513	5
10 … 19	10x	white	247-514	5
20 … 29	10x	white	247-515	5
30 … 39	10x	white	247-516	5
40 … 49	10x	white	247-517	5
50 … 59	10x	white	247-518	5
60 … 69	10x	white	247-519	5
70 … 79	10x	white	247-520	5
80 … 89	10x	white	247-521	5
90 … 99	10x	white	247-522	5
00 … 49	2x	white	247-523	5
50 … 99	2x	white	247-524	5
100 … 149	2x	white	247-525	5
150 … 199	2x	white	247-526	5
200 … 249	2x	white	247-527	5
250 … 299	2x	white	247-528	5
300 … 349	2x	white	247-529	5
350 … 399	2x	white	247-530	5
400 … 449	2x	white	247-531	5
450 … 499	2x	white	247-532	5
500 … 549	2x	white	247-533	5
550 … 599	2x	white	247-534	5
600 … 649	2x	white	247-535	5
650 … 699	2x	white	247-536	5
700 … 749	2x	white	247-537	5
750 … 799	2x	white	247-538	5
800 … 849	2x	white	247-539	5
850 … 899	2x	white	247-540	5
900 … 949	2x	white	247-541	5
950 … 999	2x	white	247-542	5
.0 … .7 / free	10x/20x	white	247-543	5
.0 … .7 /-	10x/20x	white	247-544	5
.0 … .7 /-	10x/20x	blue	247-544/000-006	5
.0 … .7 /+	10x/20x	white	247-545	5
.0 … .7 /+	10x/20x	red	247-545/000-005	5
.0 … .7 /N	10x/20x	white	247-546	5
.0 … .7 /N	10x/20x	blue	247-546/000-006	5
.0 … .7 /L	10x/20x	white	247-547	5

Marker Card and Group Marker Carrier

Marker Card; as DIN A4 sheet; plain		
	Item No.	PU
	750-100	1

Figure: 750-103

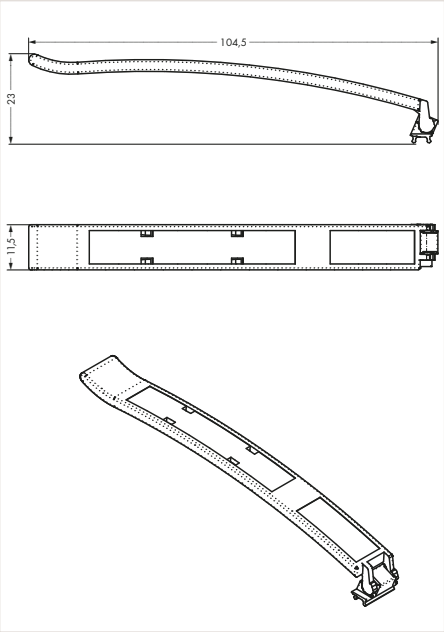
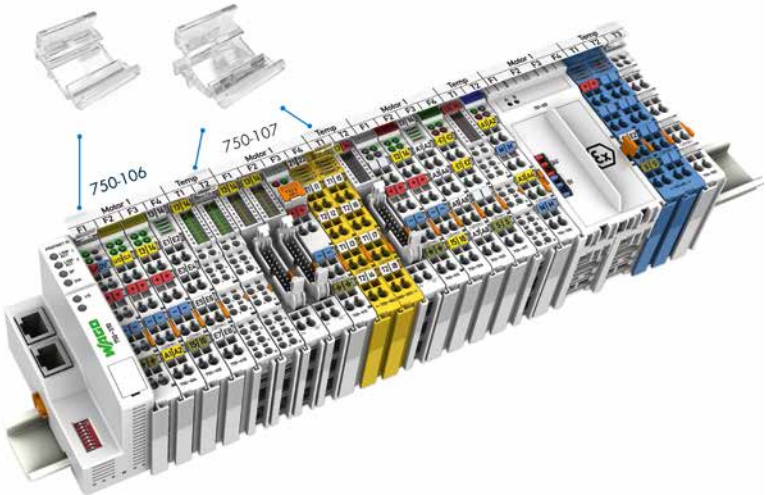


Figure: 750-106

Figure: 750-107

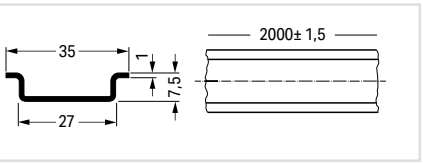
Item Description	Group Marker Carrier	Group Marker Carrier	
		4 LEDs (max.)	8/16 LEDs (max.)
Item No.	750-103	750-106	750-107
Technical Data			
Dimensions W x D	11.5 x 104.5 mm		
Material	Polycarbonate	Polycarbonate	
Weight	2.84 g	0.4 g	
For data sheet and additional information, see:	wago.com/750-103	wago.com/750-106	wago.com/750-107

Accessories	Item No.	Item No.
Marking strip; on reel; 7.5 mm wide; not stretchable; plain, snap-on type	709-178	
Marker Card; as DIN A4 sheet; plain	750-105	
Marking strip; on reel; not stretchable; plain; snap-on type		2009-110
WMB Inline; for Smart Printer; on reel; stretchable 5 … 5.2 mm; plain; snap-on type		2009-115



Steel DIN-Rails
210 Series

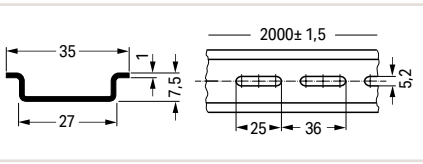
Dimensions in mm



Steel DIN-rail; unslotted;
IN 76 A (based on 1 m length);
35 x 7.5 mm; 1 mm thick, 2 m long

	Item No.	PU
Per EN 60715	**210-113**	10
Continuously galvanized; per EN 60715	**210-505**	1

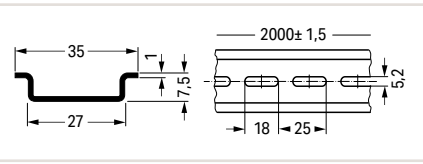
Dimensions in mm



Steel DIN-rail; slotted;
IN 76 A (based on 1 m length);
35 x 7.5 mm; 1 mm thick; 2 m long;
25 mm hole width; 36 mm hole spacing

	Item No.	PU
Per EN 60715	**210-112**	10 (1)
Continuously galvanized; per EN 60715	**210-504**	1

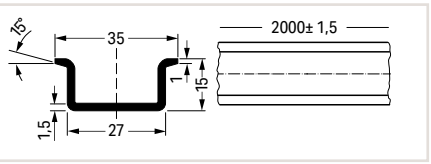
Dimensions in mm



Steel DIN-rail; slotted;
IN 76 A (based on 1 m length);
35 x 7.5 mm; 1 mm thick; 2 m long;
18 mm hole width; 25 mm hole spacing

	Item No.	PU
Per EN 60715	**210-115**	1

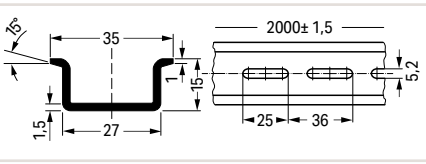
Dimensions in mm



Steel DIN-rail; unslotted;
IN 125 A (based on 1 m length);
35 x 15 mm; 1.5 mm thick; 2 m long

	Item No.	PU
Similar to EN 60715	**210-114**	10
Continuously galvanized; similar to EN 60715	**210-506**	1

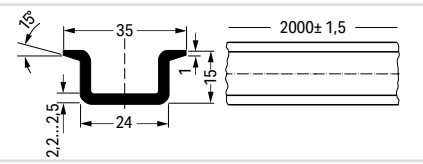
Dimensions in mm



Steel DIN-rail; slotted;
IN 125 A (based on 1 m length);
35 x 15 mm; 1.5 mm thick; 2 m long;
25 mm hole width; 36 mm hole spacing

	Item No.	PU
Similar to EN 60715	**210-197**	10
Continuously galvanized; similar to EN 60715	**210-508**	1

Dimensions in mm



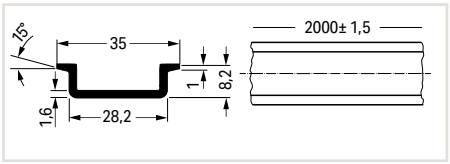
Steel DIN-rail; unslotted;
IN 125 A (based on 1 m length);
35 x 15 mm; 2.3 mm thick; 2 m long

	Item No.	PU
Per EN 60715	**210-118**	10

13

Aluminum DIN-Rail; Copper DIN-Rail; Angled Support Bracket; Rail End Cap
210 Series

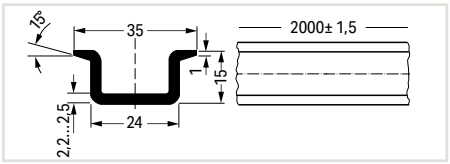
Dimensions in mm



Aluminum DIN-rail; unslotted;
IN 76 A (based on 1 m length);
35 x 8.2 mm; 1.6 mm thick; 2 m long

	Item No.	PU
Similar to EN 60715	210-196	10

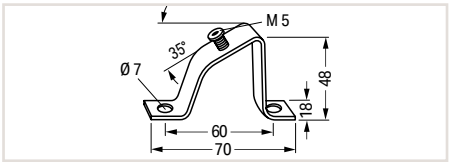
Dimensions in mm



Copper DIN-rail; unslotted;
IN 309 A (based on 1 m length);
35 x 15 mm; 2.3 mm thick; 2 m long

	Item No.	PU
Per EN 60715	210-198	10

Dimensions in mm



Angled support bracket

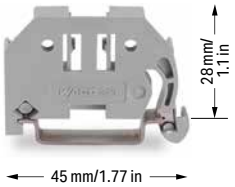
	Item No.	PU
Without screw	**210-148**	10
Screw M5 x 8	**210-149**	100 (20)

Rail end cap;
for DIN-35 rail (7.5 mm high)

Color	Item No.	PU
gray	**209-109**	50 (25)

13

Screwless End Stops
249 Series



Screwless end stop; 6 mm wide		
Color	Item No.	PU
gray	249-116	100 (25)

Screwless end stop; 14 mm wide		
Color	Item No.	PU
gray	249-197	10

Screwless end stop; 10 mm wide		
Color	Item No.	PU
gray	249-117	50 (25)

Snap on – that's it! Assembling the new WAGO Screwless End Stop is as simple and quick as snapping a WAGO Rail-Mount Terminal Block onto the DIN-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 50022 (35 x 7.5 mm; 35 x 15 mm).

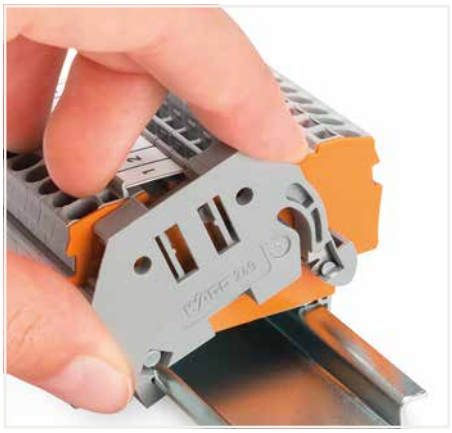
Screwless!

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.


Snapping an end stop onto the DIN-rail.


Removing an end stop from the DIN-rail.

13

Operating Tools and Cable Cutter
210 and 206 Series

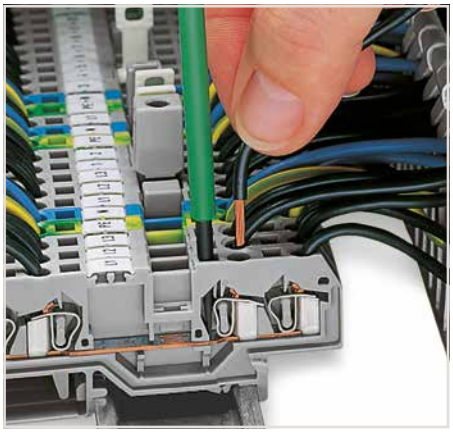
Operating tool with a partially insulated shaft; Type 1; (2.5 x 0.4) mm blade		
	Item No.	PU
	210-719	50 (1)

Operating tool with a partially insulated shaft; Type 2; (3.5 x 0.5) mm blade		
	Item No.	PU
	210-720	50 (1)

Operating tool with a partially insulated shaft; Type 3; (5.5 x 0.8) mm blade		
	Item No.	PU
	210-721	25 (1)

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		
	Item No.	PU
	210-722	1

Cable cutter; for copper and aluminum cables up to 35 mm2		
	Item No.	PU
	206-118	1



The blade dimensions of the above-listed operating tools with a partially insulated shaft are ideal for easy operation of front-entry terminal blocks.

Cutting a cable.

Cable Knife
206 Series

Cable knife; for Ø 8 … 28 mm / 0.31 … 1.10 inch; with a unique, changeable cable bracket system; including cable bracket

	Item No.	PU
	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.	PU
	206-1400	1

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.

Item-Specific Accessories

Cable bracket; for Ø 4 … 16 mm / 0.16 … 0.63 inch

206-1411 1

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

Cable bracket; for Ø 50 … 70 mm / 1.97 … 2.75 inch

206-1415 1

The cutting depth of the hook blade can be adjusted with the slider.

Accessories

Spare inside blade

206-1418 1

Spare hook blade

206-1419 1

The cutting depth of the inner knife can be adjusted with the screw.

Strip large cross sections with the hook blade.

Release the fuse before using the hook blade.

13

Cable Strippers
206 Series

In-socket cable stripper; for Ø 8 … 13 mm / 5/16 … 1/2 inch

	Item No.	PU
	206-1441	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

Universal cable stripper; for Ø 8 … 13 mm / 5/16 … 1/2 inch

	Item No.	PU
	206-1442	1

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

Stripping a cable sheath.

Built-in handy knife

Stripping the conductor insulation

Data cable stripper; for Ø 4.5 … 10 mm / 3/16 … 3/8 inch

	Item No.	PU
	206-1451	1

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 Pliers
206 Series

Stripping pliers; for sensor cables; for Ø 3.2 … 4.4 mm / 0.13 … 0.17 inch		
	Item No.	PU
	206-1481	1

Item-Specific Accessories		
Replacement blade set; for Ø 3.2 … 4.4 mm / 0.13 … 0.17 inch		
	206-1491	1

Stripping pliers; for control cables; for Ø 4.4 … 7 mm / 0.17 … 0.27 inch		
	Item No.	PU
	206-1482	1

Item-Specific Accessories		
Replacement blade set; for Ø 4.4 … 7 mm / 0.17 … 0.27 inch		
	206-1492	1

Never use this tool on or near live electrical circuits!

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.

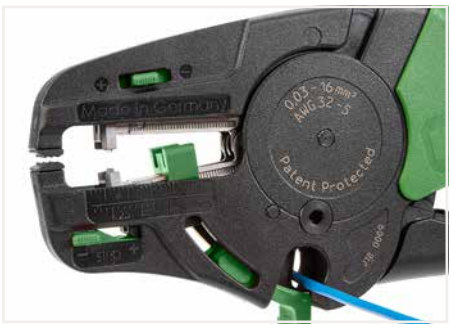
Suitable for:
- Halogen-free PUR sensor/actuator cables
- Highly flexible TPE-U cables
- Control cables
- PUR cables
- PUR/PVC cables
- PVC cables
- Multi-core cables
- Shielded and unshielded cables

13

Wire Stripper
206 Series

Wire stripper "Quickstrip Vario"; 0.03 … 16 mm² / 34 … 6 AWG; with wire cutter		
	Item No.	PU
	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 Tools
206 Series

"Variocrimp 4" crimping tool; for insulated and uninsulated ferrules; crimping range: 0.25 … 4 mm² (24 … 12 AWG)

Item No.	PU
206-1204	1

Item-Specific Accessories

Spring clamp; large

206-1205 1

Spring clamp; small

206-1206 1

"Variocrimp 16" crimping tool; for insulated and uninsulated ferrules; crimping range: 6 mm² (10 AWG), 10 mm² (8 AWG) and 16 mm² (6 AWG)

Item No.	PU
206-1216	1

Item-Specific Accessories

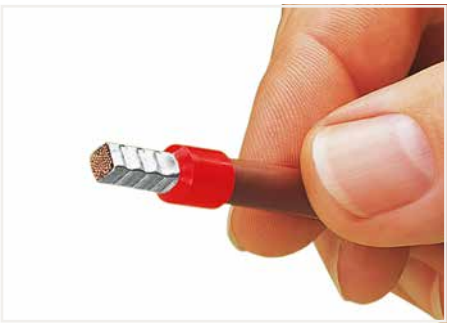
Spring clamp; small

206-1206 1

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.

13

Crimping Tools
206 Series

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.	PU
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.	PU
206-1250	1

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.

Insert the ferruled conductor into the crimping station.

Squeeze handles until ratchet mechanism is released.

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.

Test and Measurement Devices
206 Series

Profi-LCD+; 2-pole voltage tester with LCD display; removable 4 mm Ø test probes

Item No.	PU
206-707	1

Profi-LED+; 2-pole voltage tester with LED display; removable 4 mm Ø test probes

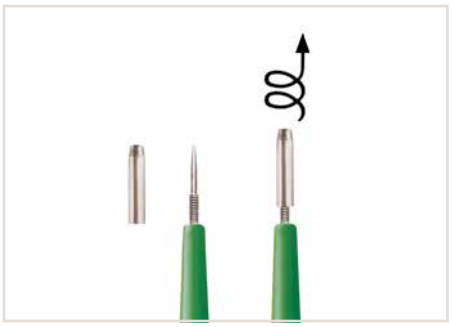
Item No.	PU
206-706	1

Spare test probes; 4 mm Ø (2 pieces)

Item No.	PU
206-808	25

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)

Test and Measurement Devices
206 Series

Testboy; with integrated flashlight, non-contact voltage tester		
	Item No.	PU
	206-804	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

Technical Section

Technical Section
Contents

Approvals Overview

Controllers – PFC100/200, PFC200 XTR, Controllers 750

Versions with an extended temperature range (item no. with suffix /025-…), see following pages

	cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
	ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
	BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
	DNV (Det Norske Veritas) GL (Germanischer Lloyd)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS
	KR (Korean Register of Shipping)	HMB05880-AC001
	LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
	NK (Nippon Kaiji Kyokai)	TA17255M
	Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18
	RINA (Registro Italiano Navale)	ELE343217XG
	cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
	INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
	TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	Ex			Marine Approvals								UL	See Page
		ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV GL	BV	ABS	OrdLoc	
PFC100/PFC200 [1]														
750-8100	PFC100; 2ETH; Eco	■		■		■				■			■	110
750-8101	PFC100; 2ETH	■		■		■				■			■	111
750-8102	PFC100; 2ETH RS	■		■		■				■			■	112
750-8208	PFC200; 2ETH RS CAN DPM	■				■				■			■	122
750-8210	PFC200; G2; 4ETH									■			■	113
750-8211	PFC200; G2; 2ETH 2SFP									■			■	114
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750-8213	PFC200; G2; 2ETH CAN	■		■						■			■	117
750-8214	PFC200; G2; 2ETH RS CAN	■		■						■			■	118
750-8215	PFC200; G2; 4ETH CAN USB	■		■						■			■	119
750-8216	PFC200; G2; 2ETH RS CAN DPS	■		■						■			■	120
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750-8202/040-000	PFC200; 2ETH RS; XTR	■		■		■		■		■		■	■	132
750-8202/040-001	PFC200; 2ETH RS; Tele; XTR	■		■		■		■		■		■	■	132
750-8206/040-000	PFC200; 2ETH RS CAN DPS; XTR	■		■		■		■		■		■	■	135
750-8206/040-001	PFC200; 2ETH RS CAN DPS; Tele; XTR	■		■		■		■		■		■	■	135
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750-815/300-000	Controller Modbus®; RS485; 115.2kBd	■		■	■	■	■	■	■	■	■		■	154
750-816/300-000	Controller Modbus®; RS232; 115.2kBd	■		■	■	■	■	■	■	■	■		■	155
750-823	Controller EtherNet/IP; Eco	■		■					■				■	146
750-829	Controller BACnet MS/TP			■									■	152
750-832	Controller BACnet/IP; G4; 2xETH; SD	■		■					■				■	151
750-833	Controller PROFIBUS Slave	■	■	■	■	■	■	■	■	■	■	■	■	156
750-837	Controller CANopen; M1; MCS	■	■	■	■	■	■	■	■	■	■	■	■	158
750-838	Controller CANopen; M1; DSub	■	■	■	■	■	■	■		■	■		■	159
750-842	Controller ETHERNET; G1	■	■	■	■	■	■	■	■	■	■	■	■	149
750-843	Controller ETHERNET; G1; Eco	■	■	■	■	■	■	■	■	■	■	■	■	150
750-862	Controller Modbus TCP; G4; Eco	■		■						■			■	144
750-882	Controller ETHERNET; G3; MR	■	■	■	■	■	■	■	■	■	■	■	■	148
750-885	Controller ETHERNET; G3; SD; MR	■	■	■						■			■	147
750-889	Controller KNX/IP			■						■			■	153
750-890	Controller Modbus TCP; G4; SD	■		■						■			■	142
750-891	Controller Modbus TCP; G4	■		■						■			■	143
750-893	Controller EtherNet/IP; SD	■		■						■			■	145

[1] Notice: WAGO's 750-626 Filter Module is mandatory for marine approval (observe power supply instructions)!

■ Approval is available. □ Approval is pending.

Approvals Overview

Controllers 750 XTR; Fieldbus Couplers – I/O System 750; Fieldbus Connectors

Versions with an extended temperature range (item no. with suffix /025-…), see following pages

cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
DNV (Det Norske Veritas) GL (Germanischer Lloyd)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS
KR (Korean Register of Shipping)	HMB05880-AC001
LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
NK (Nippon Kaiji Kyokai)	TA17255M
Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18
RINA (Registro Italiano Navale)	ELE343217XG
cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	Ex			Marine Approvals								UL	See Page
		ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV GL	BV	ABS	OrdLoc	
Controllers 750 XTR [1]														
750-838/040-000	Controller CANopen; M3 DSub XTR	■		■	■	■	■	■	■	■	■	■	■	168
750-880/040-001	Controller ETHERNET; G3; SD; Tele; XTR	■		■	■	■	■	■	■	■	■	■	■	167
750-890/040-000	Controller Modbus TCP; G4; SD; XTR	■		■	■	■	■	■	■	■	■	■	■	166
Fieldbus Couplers I/O System 750 [1]														
750-303	FC PROFIBUS; G1; 12MBd	■	■	■	■	■	■	■	■	■	■	■	■	202
750-304	FC INTERBUS	■	■	■									■	222
750-306	FC DeviceNet	■	■	■	■	■	■	■	■	■	■	■	■	215
750-307	FC CANopen	■	■	■									■	217
750-310	FC CC-Link	■	■	■									■	224
750-315/300-000	FC Modbus®; RS485; 115.2kBd	■		■	■	■	■		■	■	■		■	213
750-316/300-000	FC Modbus®; RS232; 115.2kBd	■		■	■	■	■		■	■	■		■	214
750-325	FC CC-Link	■		■									■	225
750-331	FC PROFIBUS; FOC; 1.5MBd												■	205
750-332	FC BACnet/IP	■		■						■			■	210
750-333	FC PROFIBUS; G2; 12MBd	■	■	■	■	■	■	■	■	■	■	■	■	203
750-337	FC CANopen; MCS	■	■	■	■	■	■	■	■	■	■	■	■	218
750-338	FC CANopen; DSub	■	■	■	■	■	■			■	■		■	219
750-342	FC ETHERNET; G1	■	■	■	■	■	■	■	■	■	■	■	■	209
750-343	FC PROFIBUS; 12MBd; Eco	■	■	■	■	■	■	■	■	■	■	■	■	204
750-344	FC INTERBUS; 500kbit/s; Eco	■	■	■									■	223
750-346	FC DeviceNet; Eco	■	■	■									■	216
750-347	FC CANopen; MCS; Eco	■	■	■	■	■	■	■	■	■	■	■	■	220
750-348	FC CANopen; DSub; Eco	■	■	■	■	■	■	■	■	■	■	■	■	221
750-354	FC EtherCAT®	■	■	■									■	211
750-362	FC Modbus TCP; G4	■		■						■			■	206
750-363	FC EtherNet/IP™	■		■						■			■	208
750-366	FC EtherNet/IP™; G4; DLR			■						■			■	207
750-375	FC PROFINET; G3; Adv	■		■		■				■			■	200
750-377	FC PROFINET; G3; Eco; Adv	■		■		■				■			■	201
Fieldbus Connectors														
750-960	Fieldbus Connector PROFIBUS; D-Sub; 9 Poles	■	■	■	■	■	■	■	■	■	■	■	■	674
750-961	Fieldbus Connector INTERBUS (IN); D-Sub; 9 Poles	■	■	■									■	679
750-962	Fieldbus Connector INTERBUS (OUT); D-Sub; 9 Poles	■	■	■									■	679
750-963	Fieldbus Connector CANopen; D-Sub; 9 Poles	■	■		■	■	■	■	■	■	■	■	■	678
750-965	Fieldbus Connector CC-Link; D-Sub; 9 Poles												■	680
750-975	ETHERNET Connector; RJ-45; Cat. 5; Straight; T568A				■	■	■	■	■	■	■	■		671
750-976	PROFINET Connector; RJ-45; Cat. 5; Straight					■				■				673

[1] Notice: WAGO's 750-626 Filter Module is mandatory for marine approval (observe power supply instructions)!

■ Approval is available. □ Approval is pending.

Approvals Overview

Digital Input Modules – I/O System 750/753

Versions with an extended temperature range (item no. with suffix /025-…), see following pages

cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
DNV (Det Norske Veritas) GL (Germanischer Lloyd)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS
KR (Korean Register of Shipping)	HMB05880-AC001
LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
NK (Nippon Kaiji Kyokai)	TA17255M
Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18
RINA (Registro Italiano Navale)	ELE343217XG
cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	Ex		Marine Approvals								UL	See Page
Digital Input Modules		ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV GL	BV	ABS	OrdLoc	
750-400	2DI; 24 VDC; 3ms	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■	231
750-401	2DI; 24 VDC; 0.2ms	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■	241
750-402	4DI; 24 VDC; 3ms	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■	232
750-403	4DI; 24 VDC; 0.2ms	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■	242
750-405	2DI; 230 VAC	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■	271
750-406	2DI; 120 VAC	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■	270
750-407	2DI; 220 VDC												■	269
750-408	4DI; 24 VDC; 3ms; LSS	■*	■*	■*	■*	■*	■*	■*		■*	■*		■	248
750-409	4DI; 24 VDC; 0.2ms; LSS	■*	■*	■*									■	254
750-410	2DI; 24 VDC; 3ms; Proxi Sensor	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■	258
750-411	2DI; 24 VDC; 0.2ms; Proxi Sensor	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■	259
750-412	2DI; 48 VDC; 3ms	■*	■*	■*									■	266
750-414	4DI; 5 VDC; 0.2ms			■									■	228
750-415	4DI; 24 VAC/VDC; 20ms	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■	264
750-418	2DI; 24 VDC; 3ms; Acknol; Diagn	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■	230
750-421	2DI; 24 VDC; 3ms; Diagn	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■	230
750-422	4DI; 24 VDC; Pulse Extention	■*	■*	■*									■	262
750-423	4DI; 24 VAC/VDC; 50ms	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■	263
750-424	2DI; Intruder Detection	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■	261
750-425	2DI; NAMUR	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■	260
750-427	2DI; 110 VDC	■*	■*	■*									■	268
750-428	4DI; 42 VAC/VDC; 20ms	■*	■*	■*									■	265
750-430	8DI; 24 VDC; 3ms	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■	235
750-431	8DI; 24 VDC; 0.2ms	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■	245
750-432	4DI; 24 VDC; 3ms; 2-wire	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■	233
750-433	4DI; 24 VDC; 0.2ms	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■	243
750-435 [2]	1DI; NAMUR; Ex i	■	■	■	■	■	■	■	■	■	■	■	■	431
750-436	8DI; 24 VDC; 3ms; LSS	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■	250
750-437	8DI; 24 VDC; 0.2ms; LSS	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■	256
750-438 [2]	2DI; NAMUR; Ex i	■	■	■	■	■	■	■	■	■	■	■	■	432
750-439 [2]	8DI; NAMUR; Ex i	■	■	■	■	■	■	■	■	■	■	■	■	433
750-1400	16DI; 24 VDC; 3ms; Ribbon Cable	■	■	■	■	■	■	■	■	■	■	■	■	238
750-1402	16DI; 24 VDC; 3ms; LSS; Ribbon Cable	■	■	■	■	■	■	■	■	■	■	■	■	253
750-1405	16DI; 24 VDC; 3ms	■	■	■	■	■	■	■	■	■	■	■	■	237
750-1406	16DI; 24 VDC; 0.2ms	■	■	■	■	■	■	■	■	■	■	■	■	247
750-1407	16DI; 24 VDC; 3ms; LSS	■	■	■	■	■	■	■	■	■	■	■	■	252
750-1415	8DI; 24 VDC; 3ms; 2-wire	■	■	■	■	■	■	■	■	■	■	■	■	236
750-1416	8DI; 24 VDC; 0.2ms; 2-wire	■	■	■	■	■	■	■	■	■	■	■	■	246
750-1417	8DI; 24 VDC; 3ms; LSS; 2-wire	■	■	■	■	■	■	■	■	■	■	■	■	251
750-1418	8DI; 24 VDC; 0.2ms; LSS; 2-wire	■	■	■	■	■	■	■	■	■	■	■	■	257
750-1420	4DI; 24 VDC; 3ms; 3-wire	■	■	■	■	■	■	■	■	■	■	■	■	234
750-1421	4DI; 24 VDC; 0.2ms; 3-wire	■	■	■	■	■	■	■	■	■	■	■	■	244
750-1422	4DI; 24 VDC; 3ms; LSS; 3-wire	■	■	■	■	■	■	■	■	■	■	■	■	249
750-1423	4DI; 24 VDC; 0.2ms; LSS; 3-wire	■	■	■	■	■	■	■	■	■	■	■	■	255
750-1425	8DI; PTC	■		■		■				■			■	273
753-429	2DI; 60 VDC; 3ms	■	■	■									■	267
753-434	8DI; 5/12 VDC; 0.2ms	■	■	■		■				■			■	229
753-440	4DI; 120/230 VAC	■	■	■									■	272

*Approval also applies to WAGO's I/O module variant equipped with 753 Series Pluggable Connector.
[2] This I/O module shall only be used in connection with the 24 VDC Ex i supply module (observe power supply instructions)!
■ Approval is available. □ Approval is pending.

Approvals Overview
Digital Output Modules – I/O System 750/753
Versions with an extended temperature range (item no. with suffix /025-…), see following pages

	cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
	ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
	BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
	DNV (Det Norske Veritas) GL (Germanischer Lloyd)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS
	KR (Korean Register of Shipping)	HMB05880-AC001
	LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
	NK (Nippon Kaiji Kyokai)	TA17255M
	Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18
	RINA (Registro Italiano Navale)	ELE343217XG
	cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
	INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
	TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	Ex			Marine Approvals								UL	See Page
		ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV GL	BV	ABS	OrdLoc	
Digital Output Modules														
750-501	2DO; 24 VDC; 0.5A	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	278
750-502	2DO; 24 VDC; 2A	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	280
750-504	4DO; 24 VDC; 0.5A	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	282
750-506	2DO; 24 VDC; 0.5A; Diagn	■*	■*	■*									■*	279
750-508	2DO; 24 VDC; 2A; Diagn	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	281
750-509	2DO; 230 VAC; 0.3A; SSR	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	300
750-512	2RO; 250 VAC; 2A; Relay2NO	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	303
750-513	2RO; 250 VAC; 2A; Potfree; Relay2NO	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	304
750-514	2RO; 125 VAC; 0.5A; Pot-free; Relay2CO				■*	■*	■*	■*	■*	■*	■*	■*	■*	301
750-515	4RO; 250 VAC; 2A; Pot-free; Relay4NO	■								■				306
750-516	4DO; 24 VDC; 0.5A; LSS	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	285
750-517	2RO; 250 VAC; 1A; Potfree; Relay2CO	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	302
750-519	4DO; 5 VDC; 20mA		■	■									■	276
750-523	1RO; 230 VAC; 16A; Pot-free; Relay1NO				■	■	■	■	■	■	■	■	■	307
750-527	4DO; 30V AC/DC; 2.0A; SSR													297
750-528	4DO; 30V AC/DC; 2.0A; SSR; Isolated													298
750-530	8DO; 24 VDC; 0.5A	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	286
750-531	4DO; 24 VDC; 0.5A; 2-wire	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	283
750-532	4DO; 24 VDC; 0.5A; Diagn	■	■	■	■	■	■	■	■	■	■	■	■	284
750-534	8DO; 12 VDC; 1A	■*	■*	■*		■*				■			■*	277
750-535 [2)]	2DO; 24 VDC; Ex i	■	■	■	■	■	■	■	■	■	■	■	■	434
750-536	8DO; 24 VDC; 0.5A; LSS	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	289
750-537	8DO; 24 VDC; 0.5A; Diagn	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	287
750-538 [2)]	2RO; 100 VAC/ 30 VDC; Pot-free; Relay2CO; Ex i	■	■	■		■				■			■	436
750-539 [2)]	4DO; 24 VDC; Valve; Ex i	■								■				435
750-1500	16DO; 24 VDC; 0.5A; Ribbon Cable	■	■	■	■	■	■	■	■	■	■	■	■	292
750-1501	16DO; 24 VDC; 0.5A; LSS; Ribbon Cable	■	■	■	■	■	■	■	■	■	■	■	■	296
750-1502	8DIO; 24 VDC; 0.5A; Ribbon Cable	■	■	■	■	■	■	■	■	■	■	■	■	294
750-1504	16DO; 24 VDC; 0.5A	■	■	■	■	■	■	■	■	■	■	■	■	291
750-1505	16DO; 24 VDC; 0.5A; LSS	■	■	■	■	■	■	■	■	■	■	■	■	295
750-1506	8DIO; 24 VDC; 0.5A	■	■	■	■	■	■	■	■	■	■	■	■	293
750-1515	8DO; 24 VDC; 0.5A; 2-wire	■	■	■	■	■	■	■	■	■	■	■	■	288
750-1516	8DO; 24 VDC; 0.5A; LSS; 2-wire	■	■	■	■	■	■	■	■	■	■	■	■	290
753-540	4DO; 230 VAC; 0.25A; SSR	■	■	■									■	299

*Approval also applies to WAGO's I/O module variant equipped with 753 Series Pluggable Connector.
[2)] This I/O module shall only be used in connection with the 24 VDC Ex i supply module (observe power supply instructions)!
■ Approval is available. □ Approval is pending.

Approvals Overview

Analog Input Modules – I/O System 750/753

Versions with an extended temperature range (item no. with suffix /025-…), see following pages

	cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
	ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
	BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
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	LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
	NK (Nippon Kaiji Kyokai)	TA17255M
	Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18
	RINA (Registro Italiano Navale)	ELE343217XG
	cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
	INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
	TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	Ex		Marine Approvals								UL	See Page
		ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV GL	BV	ABS	OrdLoc	
Analog Input Modules														
750-450	4AI; RTD; Adjust	■	■	■	■	■	■	■	■	■	■	■	■	346
750-451	8AI; RTD; Adjust	■	■	■	■	■	■	■	■	■	■	■	■	347
750-452	2AI; 0-20mA; Diff	■*	■	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	310
750-453	4AI; 0-20mA; SE	■*	■	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	315
750-454	2AI; 4-20mA; Diff	■*	■	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	316
750-455	4AI; 4-20mA; SE	■*	■	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	324
750-456	2AI; ±10 VDC; Diff	■*	■	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	329
750-457	4AI; ±10 VDC; SE	■*	■	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	332
750-458	8AI; TC; Adjust	■		■		■				■			■	350
750-459	4AI; 0-10 VDC; SE	■*	■	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	336
750-461	2AI; Pt100/RTD	■*	■	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	343
750-463	4AI; RTD;-30°C…+150°C	■	■	■									■	344
750-464	2/4AI; RTD; Adjust	■	■	■	■	■	■	■	■	■	■	■	■	344
750-465	2AI; 0-20mA; SE	■*	■	■*									■*	312
750-466	2AI; 4-20mA; SE	■*	■	■*									■*	319
750-467	2AI; 0-10 VDC; SE	■*	■	■*									■*	333
750-468	4AI; 0-10 VDC; SE	■	■	■	■	■		■	■	■	■	■	■	335
750-469	2AI; TC K; Diagn	■*	■	■*	■*	■*		■*	■*	■*	■*	■*	■*	348
750-470	2AI; 0-20mA; SE	■	■	■	■	■	■	■	■	■	■	■	■	313
750-471	4AI; U/I; Diff; Galv	■	■	■	■	■				■			■	340
750-472	2AI; 0-20mA; SE; 16bits	■*	■	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	314
750-473	2AI; 4-20mA; SE	■	■	■	■	■	■	■	■	■	■	■	■	320
750-474	2AI; 4-20mA; SE; 16bits	■*	■	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	323
750-475	2AI; 0-1A AC/DC; Diff	■*	■	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	327
750-476	2AI; ±10 VDC; SE; 16bits	■*	■	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	331
750-477	2AI; 0-10 VAC/VDC; Diff	■*	■	■*									■*	338
750-478	2AI; 0-10 VDC; SE; 16bits	■*	■	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	334
750-479	2AI; ±10 VDC; Diff	■*	■	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	330
750-480	2AI; 0-20mA; Diff	■*	■	■*									■*	311
750-482	2AI; 4-20mA HART	■*	■	■*									■*	321
750-483	2AI; 0-30 VDC; Diff	■*	■	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	339
750-484 [2]	2AI; 4-20mA HART; Ex i	■	■	■	■	■	■	■	■	■	■	■	■	439
750-484/000-001 [2]	2AI 4-20mA HART NAMUR NE43 Ex i													440
750-485 [2]	4AI; 4-20mA; Ex i	■	■	■	■	■	■	■	■	■	■	■	■	437
750-486 [2]	4AI; 0/4-20mA; NE43; Ex i	■				■				■				438
750-489 [2]	4AI; RTD/TC; Ex i	■		■						■			■	441
750-491	1AI; DMS													352
750-492	2AI; 4-20mA; Diff	■*	■	■*									■*	318
750-493	3-PHASE POM; 480VAC 1A	■	■	■									■	354
750-494	3-PHASE POM; 480VAC 1A	■	■	■		■				■			■	356
750-495	3-PHASE POM; 690VAC 1A					■				■				357
750-496	8AI; 0/4-20mA; SE	■		■		■				■			■	326
750-497	8AI; 0-10 V/±10 VDC; SE			■		■				■			■	337
750-498	8AI; TC; Adjust	■		■						■			■	351
750-1491	2AI Resistor Bridge (Strain Gauge)			■									■	353

*Approval also applies to WAGO's I/O module variant equipped with 753 Series Pluggable Connector.

[2] This I/O module shall only be used in connection with the 24 VDC Ex i supply module (observe power supply instructions)!

■ Approval is available. □ Approval is pending.

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Approvals Overview

Analog Output Modules – I/O System 750/753

Versions with an extended temperature range (item no. with suffix /025-…), see following pages

	cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
	ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
	BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
	DNV (Det Norske Veritas) GL (Germanischer Lloyd)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS
	KR (Korean Register of Shipping)	HMB05880-AC001
	LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
	NK (Nippon Kaiji Kyokai)	TA17255M
	Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18
	RINA (Registro Italiano Navale)	ELE343217XG
	cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
	INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
	TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	Ex			Marine Approvals								UL	See Page
		ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV GL	BV	ABS	OrdLoc	
Analog Output Modules														
750-550	2AO; 0-10 VDC	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	368
750-552	2AO; 0-20mA	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	360
750-553	4AO; 0-20mA	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	361
750-554	2AO; 4-20mA	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	362
750-555	4AO; 4-20mA	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	363
750-556	2AO; ±10 VDC	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	365
750-557	4AO; ±10 VDC	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	366
750-559	4AO; 0-10 VDC	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	369
750-560	2AO; 0-10 VDC; 10Bit; 100mW/ 24V	■	■	■									■	367
750-562	2AO; 0-10 V/±10 VDC; 16bits	■	■	■									■	370
750-563	2AO; 0/4-20mA; 16bits; 6-18 VDC	■	■	■		■				■			■	364
750-564	4AO U/I	■		■						■			■	372
750-585 [2]	2AO; 0-20mA; Ex i	■	■	■	■	■	■	■	■	■	■	■	■	442
750-586 [2]	2AO; 4-20mA; Ex i	■	■	■		■				■			■	443
750-597	8AO; 0-10 V/±10 VDC	■		■									■	371

*Approval also applies to WAGO's I/O module variant equipped with 753 Series Pluggable Connector.

[2] This I/O module shall only be used in connection with the 24 VDC Ex i supply module (observe power supply instructions)!

■ Approval is available. □ Approval is pending.

Approvals Overview

Function, Technology and Communication Modules – I/O System 750/753

Versions with an extended temperature range (item no. with suffix /025-…), see following pages

	cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
	ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
	BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
	DNV (Det Norske Veritas) GL (Germanischer Lloyd)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS
	KR (Korean Register of Shipping)	HMB05880-AC001
	LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
	NK (Nippon Kaiji Kyokai)	TA17255M
	Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18
	RINA (Registro Italiano Navale)	ELE343217XG
	cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
	INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
	TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	Ex			Marine Approvals								UL	See Page
		ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV GL	BV	ABS	OrdLoc	
Function, Technology and Communication Modules														
750-404	Up/Down Counter	*	*	*	*	*	*	*	*	*	*	*	*	376
750-511	2PWM; 24 VDC; 0.1A; 250Hz	■	■	■									■	380
750-630	SSI Interface; 24bits; 125kHz; Gray	■	■	■		■				■			■	382
750-631/000-004	Inc. Encoder; RS422; 16bits			■									■	385
750-632	Proportional Valve Module	■		■		■				■			■	394
750-633 [2)]	Up/Down Counter; Ex i	■	■	■		■				■	■		■	444
750-635	Digital Impulse Interface	*	■	*									*	386
750-637	Inc. Encoder; RS422; 32bits	■	■	■	■	■	■	■	■	■	■	■	■	385
750-638	2Up/Down Counter; 16bits; 500Hz	*	■	*									*	379
750-640	RTC Module	■	■	■									■	387
750-642	Radio Receiver EnOcean	■	■	■									■	404
750-643	MP-Bus Master	■	■	■									■	408
750-645	2VIB VRMS/SPM Multi	■	■	■									■	388
750-650	RS232 C Interface; 9600Bd	*	■	*	*	*	*	*	*	*	*	*	*	398
750-651	TTY Interface; 9600Bd; N; 8/1			■	■	■	■	■	■	■	■	■	■	403
750-652	RS232/485 Interface	*	■	*	*	*	*	*	*	*	*	*	*	402
750-653	RS485 Interface	*	■	*	*	*	*	*	*	*	*	*	*	400
750-655	AS-Interface Master	*	■	*	*	*	*	*	*	*	*	*	*	411
750-657	IO-Link Master	■		■									■	412
750-658	CAN Gateway	■		■		■				■	■		■	413
750-661/000-003	4FDI; 24 VDC; PROFIsafe V2 iPar	*	■	*		*				*			*	420
750-662/000-003	8FDI; 24 VDC; PROFIsafe V2 iPar	*	■	*		*				*			*	421
750-663/000-003	4F-Ex i DI; 24 VDC; PROFIsafe V2 iPar	■	■	■		■				■			■	425
750-666/000-003	4FDI/2FDO; 24 VDC; 10A; PROFIsafe V2 iPar	*	■	*		*				*			*	422
750-667/000-003	4FDI/4FDO; 24 VDC; 2A; PROFIsafe V2 iPar	*	■	*		*				*			*	423
750-668/000-004	4FAI 0/4-20 mA Diff PROFIsafe	*		*						*			*	426
750-669/000-003	4FDI/4FRO; 48VAC/ 60VDC; 6A; PROFIsafe V2 iPar	■		■									■	424
750-670	Stepper Controller; RS422/24 VDC; 20mA	■	■	■									■	389
750-671	Stepper Controller; 24 VDC; 1.5A	■	■											390
753-646	KNX/EIB/TP1 Interface				■	■	■	■	■	■	■	■	■	405
753-647	DALI Multi-Master					■				■			■	406
753-648	LON® FTT Interface			■									■	407
753-649	M-Bus Master			■									■	409

*Approval also applies to WAGO's I/O module variant equipped with 753 Series Pluggable Connector.

[2)] This I/O module shall only be used in connection with the 24 VDC Ex i supply module (observe power supply instructions)!

■ Approval is available. □ Approval is pending.

Approvals Overview

Supply and Segment Modules – I/O System 750/753

Versions with an extended temperature range (item no. with suffix /025-…), see following pages

cULus	cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
ABS	ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
BV	BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
DNV GL	DNV (Det Norske Veritas) GL (Germanischer Lloyd)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS
KR	KR (Korean Register of Shipping)	HMB05880-AC001
LR	LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
NK	NK (Nippon Kaiji Kyokai)	TA17255M
PRS	Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18
RINA	RINA (Registro Italiano Navale)	ELE343217XG
HazLoc	cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
BRA-Ex	INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
ATEX/IECEx	TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV GL	BV	ABS	OrdLoc	See Page
Supply and Segment Modules		**Ex**					**Marine Approvals**						**UL**	
750-600	End Module	■	■	■	■	■	■	■	■	■	■	■	■	474
750-601 [3]	Power Supply; 24 VDC; Fuse	■	■	■	■	■	■	■	■	■	■	■	■	450
750-602 [3]	Power Supply; 24 VDC	■*	■	■*	■*	■*	■*	■	■*	■*	■	■*	■*	448
750-603	Potential Distribution; 8*24V	■*	■	■*	■*	■*		■	■*	■*	■*	■*	■*	459
750-604	Potential Distribution; 8*0V	■*	■	■*	■*	■*		■	■*	■*	■*	■*	■*	460
750-606	Power Supply; 24 VDC; Diagn; Ex i	■	■	■	■	■	■	■	■	■	■	■	■	430
750-609	Power Supply; 230 VAC; Fuse	■	■	■	■	■	■	■	■	■	■	■	■	455
750-610 [3]	Power Supply; 24 VDC; Fuse; Diagn	■	■	■	■	■	■	■	■	■	■	■	■	451
750-611	Power Supply; 230 VAC; Fuse; Diagn	■	■	■	■	■	■	■	■	■	■	■	■	455
750-612 [4]	Power Supply; 0-230 VAC/VDC	■*	■	■*	■*	■*	■*	■	■*	■*	■	■*	■*	452
750-613 [1]	System Power Supply; 24 VDC	■	■	■	■	■	■	■	■	■	■	■	■	456
750-614	Potential Distribution	■*	■	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	458
750-615	Power Supply; 120 VAC; Fuse	■	■	■									■	454
750-616	Distance Module	■	■	■	■	■	■	■	■	■	■	■	■	472
750-617	Power Supply; 24 VAC; Fuse												■	453
750-621	Distance Module	■	■	■									■	473
750-622	Binary Spacer Module	■	■	■									■	469
750-623	Power Supply; 24/5-15 VDC	■	■	■	■	■	■	■	■	■	■		■	449
750-624	Field Supply Filter; 24 VDC	■	■	■	■	■	■	■	■	■	■	■	■	464
750-625/000-001	Power Supply; 24 VDC; Ex i	■	■	■	■	■	■	■	■	■	■	■	■	430
750-626	Supply Filter; 24 VDC	■	■	■	■	■	■	■	■	■	■	■	■	466
750-627	Bus Extension End Module				■					□	■		■	467
750-628	Bus Extension Coupler Module				■					□	■		■	468
750-1605	Potential Distribution; 16*24V	■	■	■	■	■	■	■	■	■	■	■	■	461
750-1606	Potential Distribution; 16*0V	■	■	■	■	■	■	■	■	■	■	■	■	462
750-1607	Potential Distribution; 8*24V/8*0V	■	■	■	■	■	■	■	■	■	■	■	■	463
753-620	DALI Multi-Master DC/DC Converter					■				■			■	457
753-629/020-000	Spacer Module; Passive												■	471
753-1629	Spacer Module; Active												■	470

*Approval also applies to WAGO's I/O module variant equipped with 753 Series Pluggable Connector.

[1] Notice: WAGO's 750-626 Filter Module is mandatory for marine approval (observe power supply instructions)!

[3] Notice: WAGO's 750-624 Filter Module is mandatory for marine approval (observe power supply instructions)!

[4] Notice: WAGO's 750-626 Filter Module is mandatory for marine approval at 24 VDC power supply (observe power supply instructions)!

■ Approval is available. □ Approval is pending.

Approvals Overview

I/O System 750; Versions with an Extended Temperature Range

Surrounding Air Temperature (Operation): −20 … +60 °C

	cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
	ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
	BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
	DNV (Det Norske Veritas) GL (Germanischer Lloyd)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS
	KR (Korean Register of Shipping)	HMB05880-AC001
	LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
	NK (Nippon Kaiji Kyokai)	TA17255M
	Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18
	RINA (Registro Italiano Navale)	ELE343217XG
	cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
	INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
	TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	Ex			Marine Approvals							UL	See Page
		ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV GL	BV	ABS	OrdLoc	
Controllers PFC100/PFC200 [1]														
750-8101/025-000	PFC100; 2ETH; T	■		■		■				■			■	111
750-8102/025-000	PFC100; 2ETH RS; T	■		■		■				■			■	112
750-8208/025-000	PFC200; 2ETH RS CAN DPM	■				■				■			■	122
750-8208/025-001	PFC200; 2ETH RS CAN DPM	■				■				■			■	122
750-8210/025-000	PFC200; G2; 4ETH; T									■			■	113
750-8212/025-000	PFC200; G2; 2ETH RS; T	■		■						■			■	115
750-8212/025-001	PFC200; G2; 2ETH RS; Tele; T	■		■						■			■	115
750-8212/025-002	PFC200; G2; 2ETH RS; Tele; T; Eco	■		■						■			■	115
750-8216/025-000	PFC200; G2; 2ETH RS CAN DPS; T	■		■						■			■	120
750-8216/025-001	PFC200; G2; 2ETH RS CAN DPS; Tele; T	■		■						■			■	120
750-8217/025-000	PFC200; G2; 2ETH RS; 4G; T									■				121
Controllers 750 [1]														
750-815/325-000	Controller Modbus®; RS485; 115.2kBd; T	■		■	■	■	■	■	■	■	■		■	154
750-833/025-000	Controller PROFIBUS Slave; T	■	■	■	■	■	■	■	■	■	■	■	■	156
750-885/025-000	Controller ETHERNET; G3; SD; MR; T	■	■	■						■			■	147
750-890/025-000	Controller Modbus TCP; G4; SD; T	■		■						■			■	142
750-890/025-001	Controller Modbus TCP; G4; SD; Tele; T	■		■						■			■	142
750-890/025-002	Controller Modbus TCP; G4; SD; Tele; T; Eco	■		■						■			■	142
Fieldbus Couplers														
750-333/025-000	FC PROFIBUS; G2; 12MBd; T	■	■	■	■	■	■	■	■	■	■	■	■	203
750-337/025-000	FC CANopen; MCS; T	■	■	■	■	■	■	■	■	■	■	■	■	218
750-375/025-000	FC PROFINET; G3; Adv; T	■		■		■				■			■	200
750-377/025-000	FC PROFINET; G3; Eco; Adv; T	■		■		■				■			■	201
Digital Input Modules														
750-400/025-000	2DI; 24 VDC; 3ms; T	■	■	■	■	■	■	■	■	■	■	■	■	231
750-402/025-000	4DI; 24 VDC; 3ms; T	■	■	■	■	■	■	■	■	■	■	■	■	232
750-408/025-000	4DI; 24 VDC; 3ms; LSS; T	■	■	■	■	■	■	■		■	■	■	■	248
750-430/025-000	8DI; 24 VDC; 3ms; T	■	■	■	■	■	■	■	■	■	■	■	■	235
Digital Output Modules														
750-504/025-000	4DO; 24 VDC; 0.5A; T	■	■	■	■	■	■	■	■	■	■	■	■	282
750-504/025-800	4DO; 24 VDC; 0.5A; IF; T	■	■	■	■	■	■	■	■	■	■	■	■	282
750-530/025-000	8DO; 24 VDC; 0.5A; T	■	■	■	■	■	■	■	■	■	■	■	■	286

[1] Notice: WAGO's Filter Module (750-626/…-…) is mandatory for marine approval (observe power supply instructions)!

■ Approval is available. □ Approval is pending.

Approvals Overview

I/O System 750; Versions with an Extended Temperature Range

Surrounding Air Temperature (Operation): −20 … +60 °C

cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
DNV (Det Norske Veritas) GL (Germanischer Lloyd)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS
KR (Korean Register of Shipping)	HMB05880-AC001
LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
NK (Nippon Kaiji Kyokai)	TA17255M
Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18
RINA (Registro Italiano Navale)	ELE343217XG
cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	Ex			Marine Approvals							UL	See Page
		ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV GL	BV	ABS	OrdLoc	
Analog Input Modules														
750-451/025-000	8AI; RTD; Adjust; T	■	■	■	■	■	■	■	■	■	■	■	■	347
750-454/025-000	2AI; 4-20mA; Diff; T	■	■	■	■	■	■	■	■	■	■	■	■	316
750-454/025-003	2AI; 4-20mA; Diff; T; EM	■	■	■	■	■	■	■	■	■	■	■	■	316
750-455/025-000	4AI; 4-20mA; SE; T	■	■	■	■	■	■	■	■	■	■	■	■	324
750-457/025-000	4AI; ±10 VDC; SE; T	■	■	■	■	■	■	■	■	■	■	■	■	332
750-461/025-000	2AI; Pt100/RTD; T	■	■	■	■	■	■	■	■	■	■	■	■	343
750-465/025-000	2AI; 0-20mA; SE; T	■	■	■									■	312
750-466/025-000	2AI; 4-20mA; SE; T	■	■	■									■	319
750-468/025-000	4AI; 0-10 VDC; SE; T	■	■	■	■	■		■	■	■	■	■	■	335
750-482/025-000	2AI; 4-20mA HART; T	■	■	■									■	321
750-493/025-000	3-PHASE POM; 480VAC 1A; T	■	■	■									■	354
750-494/025-000	3-PHASE POM; 480VAC 1A; T	■	■	■		■				■			■	356
750-494/025-001	3-PHASE POM; 480VAC 5A; T	■	■	■		■				■			■	356
Analog Output Modules														
750-552/025-000	2AO; 0-20mA; T	■	■	■	■	■	■	■	■	■	■	■	■	360
750-554/025-000	2AO; 4-20mA; T	■	■	■	■	■	■	■	■	■	■	■	■	362
750-559/025-000	4AO; 0-10 VDC; T	■	■	■	■	■	■	■	■	■	■	■	■	369
Function, Technology and Communication Modules														
750-638/025-000	2Up/Down Counter; 16bits; 500Hz; T	■	■	■									■	379
750-652/025-000	RS232/485 Interface; T	■	■	■	■	■	■	■	■	■	■	■	■	402
750-653/025-000	RS485 Interface; T	■	■	■	■	■	■	■	■	■	■	■	■	400
750-653/025-018	RS485 Interface; 9600Bd; N; 8/1	■	■	■	■	■	■	■	■	■	■	■	■	400
Supply and Segment Modules														
750-600/025-000	End Module; T	■	■	■	■	■	■	■	■	■	■	■	■	474
750-602/025-000 [3]	Power Supply; 24 VDC; T	■	■	■	■	■	■	■	■	■	■	■	■	448
750-626/025-000	Supply Filter; 24 VDC; T	■	■	■	■	■	■	■	■	■	■	■	■	466
750-626/025-001	Supply Filter; 24 VDC; HI; T	■	■	■	■	■	■	■	■	■	■	■	■	466

[3] Notice: WAGO's 750-624 Filter Module is mandatory for marine approval (observe power supply instructions)!

■ Approval is available. □ Approval is pending.

Approvals Overview
I/O System 750 XTR
Surrounding Air Temperature (Operation): −40 … +70 °C

	cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
	ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
	BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
	DNV (Det Norske Veritas) GL (Germanischer Lloyd)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS
	KR (Korean Register of Shipping)	HMB05880-AC001
	LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
	NK (Nippon Kaiji Kyokai)	TA17255M
	Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18
	RINA (Registro Italiano Navale)	ELE343217XG
	cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
	INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
	TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	Ex			Marine Approvals					UL	See Page
		ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV GL	BV	ABS	OrdLoc	
Fieldbus Couplers I/O System 750 XTR [1]														
750-333/040-000	FC PROFIBUS; G2; 12 MBd; XTR	■	■	■	■	■	■	■	■	■	■	■	■	484
750-338/040-000	FC CANopen; DSub; XTR	■	■	■	■	■	■	■	■	■	■	■	■	489
750-362/040-000	FC Modbus TCP; G4; XTR	■	■	■	■	■	■	■	■	■	■	■	■	485
750-363/040-000	FC EtherNet/IP; G4; XTR	■	■	■	■	■	■	■	■	■	■	■	■	487
750-364/040-000	FC Modbus TCP M12; G4; XTR	□	■	■	■	■	■	■	■	■	■	■	■	486
750-365/040-000	FC EtherNet/IP M12; G4; XTR	□	■	■	■	■	■	■	■	■	■	■	■	488
Digital Input Modules XTR														
750-407/040-000	2DI; 220 VDC; XTR	■	■	■	■	■	■	■	■	■	■	■	■	495
750-427/040-000	2DI; 110 VDC; XTR	■	■	■	■	■	■	■	■	■	■	■	■	494
750-429/040-001	2DI; 60 VDC; 3ms; XTR	■	■	■	■	■	■	■	■	■	■	■	■	493
750-430/040-000	8DI; 24 VDC; 3ms; XTR	■	■	■	■	■	■	■	■	■	■	■	■	490
750-431/040-000	8DI; 24 VDC; 0.2ms; XTR	■	■	■	■	■	■	■	■	■	■	■	■	492
750-439/040-000 [2]	8DI; NAMUR; Ex i; XTR	■	■	■	■	■	■	■	■	■	■	■	■	534
750-1405/040-000	16DI; 24 VDC; 3ms; XTR	■	■	■	■	■	■	■	■	■	■	■	■	491
750-1415/040-000	8DI; 24 VDC; 3ms; 2-wire; XTR	■	■	■	■	■	■	■	■	■	■	■	■	490
750-1416/040-000	8DI; 24 VDC; 0.2ms; 2-wire; XTR	■	■	■	■	■	■	■	■	■	■	■	■	492
Digital Output Modules XTR														
750-508/040-000	2DO; 24 VDC; 2A; Diagn; XTR	■	■	■	■	■	■	■	■	■	■	■	■	496
750-517/040-000	2RO; 250 VAC; 1A; Relay2CO; XTR	■	■	■	■	■	■	■	■	■	■	■	■	499
750-535/040-000 [2]	2DO; 24 VDC; Ex i; XTR	■	■	■	■	■	■	■	■	■	■	■	■	535
750-537/040-000	8DO; 24 VDC; 0.5A; Diagn; XTR	■	■	■	■	■	■	■	■	■	■	■	■	497
750-1515/040-000	8DO; 24 VDC; 0.5A; 2-wire; XTR	■	■	■	■	■	■	■	■	■	■	■	■	498
Analog Input Modules XTR														
750-453/040-000	4AI; 0-20mA; SE; XTR	■	■	■	■	■	■	■	■	■	■	■	■	500
750-455/040-000	4AI; 4-20mA; SE; XTR	■	■	■	■	■	■	■	■	■	■	■	■	501
750-457/040-000	4AI; ±10 VDC; SE; XTR	■	■	■	■	■	■	■	■	■	■	■	■	503
750-464/040-000	2/4AI; RTD; Adjust; XTR	■	■	■	■	■	■	■	■	■	■	■	■	506
750-468/040-000	4AI; 0-10 VDC; SE; XTR	■	■	■	■	■	■	■	■	■	■	■	■	504
750-469/040-000	2AI; TC; Adjust; XTR	■	■	■	■	■	■	■	■	■	■	■	■	507
750-481/040-000 [2]	2AI; RTD; Ex i; XTR	■	■	■	■	■	■	■	■	■	■	■	■	538
750-483/040-000	2AI; 0-30 VDC; Diff; XTR	■	■	■	■	■	■	■	■	■	■	■	■	505
750-484/040-000 [2]	2AI; 4-20mA HART; Ex i; XTR	■	■	■	■	■	■	■	■	■	■	■	■	537
750-486/040-000 [2]	4AI; 0/4-20mA; Ex i; XTR	■	■	■	■	■	■	■	■	■	■	■	■	536
750-492/040-001	2AI; 4-20mA; Diff; NE43; XTR	■	■	■	■	■	■	■	■	■	■	■	■	502
750-495/040-000	3-PHASE POM; 690VAC 1A; XTR	■	■	■	■	■	■	■	■	■	■	■	■	508
750-495/040-001	3-PHASE POM; 690VAC 5A; XTR	■	■	■	■	■	■	■	■	■	■	■	■	508
750-495/040-002	3-PHASE POM; 690VAC R.C.; XTR	■	■	■	■	■	■	■	■	■	■	■	■	508
750-495/040-010	3-PHASE POM; 20KV; 300A; XTR	■	■	■	■	■	■	■	■	■	■	■	■	509

[1] Notice: WAGO's 750-626/040-000 Filter Module is mandatory for marine approval (observe power supply instructions)!
[2] This I/O module shall only be used in connection with the 24 VDC Ex i XTR supply module (observe power supply instructions)!
■ Approval is available. □ Approval is pending.

Approvals Overview
I/O System 750 XTR
Surrounding Air Temperature (Operation): −40 … +70 °C

	cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
	ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
	BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
	DNV (Det Norske Veritas) GL (Germanischer Lloyd)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS
	KR (Korean Register of Shipping)	HMB05880-AC001
	LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
	NK (Nippon Kaiji Kyokai)	TA17255M
	Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18
	RINA (Registro Italiano Navale)	ELE343217XG
	cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
	INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
	TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	Ex		Marine Approvals					UL	See Page
		ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV GL	BV	ABS	OrdLoc	
Analog Output Modules XTR														
750-557/040-000	4AO; ±10V DC; XTR	■		■				■		■		■	■	511
750-559/040-000	4AO; 0-10V DC; XTR	■		■				■		■		■	■	512
750-563/040-000	2AO; 0/4-20mA; 16Bit; 6-18 VDC; XTR	■		■				■		■		■	■	510
750-585/040-000 [2]	2AO; 0-20mA; Ex i; XTR	■		■				■		■		■	■	539
Function/Technology Modules XTR														
750-404/040-003	Counter; Adjust; XTR	■		■		■		■		■		■	■	513
750-630/040-001	SSI Interface; Adjust; XTR	■		■		■		■		■		■	■	515
750-633/040-000 [2]	Up/Down Counter; Ex i; XTR	■		■		■		■		■		■	■	540
750-637/040-001	Inc. Encoder; 24 VDC; Diff; 32Bit; XTR	■		■		■		■		■		■	■	514
Communication Modules XTR														
750-652/040-000	RS232/485 Interface; XTR	■		■		■		■		■		■	■	516
750-658/040-000	CAN Gateway; XTR	■		■		■		■		■		■	■	517
Supply and Segment Modules XTR														
750-600/040-000	End Module; XTR	■		■		■		■		■		■	■	530
750-601/040-000	Power Supply; 24 VDC; Fuse; XTR	■		■		■		■		■		■	■	519
750-602/040-000	Power Supply; 24 VDC; XTR	■		■		■		■		■		■	■	518
750-606/040-000	Power supply; 24 VDC; Ex i; XTR	■		■		■		■		■		■	■	533
750-610/040-000	Power Supply; 24 VDC; Fuse Diagn; XTR	■		■		■		■		■		■	■	520
750-612/040-000	Power Supply; 0-230 VAC/VDC; XTR	■		■		■		■		■		■	■	521
750-613/040-000	System Power Supply; 24 VDC; XTR	■		■		■		■		■		■	■	522
750-614/040-000	Potential Distribution; XTR	■		■		■		■		■		■	■	523
750-616/040-000	Distance Module; XTR	■		■		■		■		■		■	■	529
750-624/040-000	Field Supply Filter; 24 VDC; HI; XTR	■		■		■		■		■		■	■	526
750-624/040-001	Field Supply Filter; 24 VDC; HI; NC; XTR	■		■		■		■		■		■	■	527
750-626/040-000	Supply Filter; 24 VDC; HI; XTR	■		■		■		■		■		■	■	528
750-1605/040-000	Potential Distribution; 16*24V; XTR	■		■		■		■		■		■	■	524
750-1606/040-000	Potential Distribution; 16*0V; XTR	■		■		■		■		■		■	■	525

[1] Notice: WAGO's 750-626/040-000 Filter Module is mandatory for marine approval (observe power supply instructions)!
[2] This I/O module shall only be used in connection with the 24 VDC Ex i XTR supply module (observe power supply instructions)!
■ Approval is available. □ Approval is pending.

Approvals Overview
I/O System Advanced

	cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
	ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
	BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
	DNV (Det Norske Veritas) GL (Germanischer Lloyd)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS
	KR (Korean Register of Shipping)	HMB05880-AC001
	LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
	NK (Nippon Kaiji Kyokai)	TA17255M
	Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18; TE/2190/880590/18
	RINA (Registro Italiano Navale)	ELE343217XG
	cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
	INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
	TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	Ex			Marine Approvals							UL	See Page
		ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV GL	BV	ABS	OrdLoc	
Fieldbus Couplers														
768-2201	FC ADV ETHERCAT			■									■	180
Digital Input Modules														
763-1108	8DI ADV 24V DC HS			■									■	181
763-1116	16DI ADV 24V DC			■									■	181
Digital Output Modules														
763-1508	8DO ADV 24V DC 0.5A HS			■									■	182
763-1516	16DO ADV 24V DC 0.5A			■									■	182
Supply and Segment Modules														
763-5101	PS ADV 24V DC FUSE			■									■	183
763-5120	PS SYSTEM ADV 24V DC			■									■	184
763-5600	End Module			■									■	185

■ Approval is available. □ Approval is pending.

Approvals Overview
I/O System Field

	cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
	ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
	BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
	DNV (Det Norske Veritas) GL (Germanischer Lloyd)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS
	KR (Korean Register of Shipping)	HMB05880-AC001
	LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
	NK (Nippon Kaiji Kyokai)	TA17255M
	Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18; TE/2190/880590/18
	RINA (Registro Italiano Navale)	ELE343217XG
	cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
	INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
	TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	Ex			Marine Approvals								UL	See Page
		ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV GL	BV	ABS	OrdLoc	
Fieldbus Modules														
765-1101/100-000	16DI FLD PN DC 24V												□	550
765-1102/100-000	16DIO FLD PN DC 24V												□	552
765-1103/100-000	16DO FLD PN DC 24V												□	551
765-1104/100-000	8DIO FLD PN DC 24V												□	553
765-1105/100-000	8DIO FLD PN DC 24V												□	554
765-1201/100-000	16DI FLD EC DC 24V												□	550
765-1202/100-000	16DIO FLD EC DC 24V												□	552
765-1203/100-000	16DO FLD EC DC 24V												□	551
765-1204/100-000	8DIO FLD EC DC 24V												□	553
765-1205/100-000	8DIO FLD EC DC 24V												□	554
765-1501/100-000	16DI FLD EI DC 24V												□	550
765-1502/100-000	16DIO FLD EI DC 24V												□	552
765-1503/100-000	16DO FLD EI DC 24V												□	551
765-1504/100-000	8DIO FLD EI DC 24V												□	553
765-1505/100-000	8DIO FLD EI DC 24V												□	554
IO-Link Masters														
765-4101/100-000	8PORT IOL-A FLD PN DC 24V 2.0A												□	556
765-4102/100-000	8PORT IOL-B FLD PN DC 24V 2.0A												□	557
765-4103/100-000	4PORT IOL-A FLD PN DC 24V 2.0A												□	558
765-4104/100-000	4PORT IOL-B FLD PN DC 24V 2.0A												□	559
765-4201/100-000	8PORT IOL-A FLD EC DC 24V 2.0A												□	556
765-4202/100-000	8PORT IOL-B FLD EC DC 24V 2.0A												□	557
765-4203/100-000	4PORT IOL-A FLD EC DC 24V 2.0A												□	558
765-4204/100-000	4PORT IOL-B FLD EC DC 24V 2.0A												□	559
765-4501/100-000	8PORT IOL-A FLD EI DC 24V 2.0A												□	556
765-4502/100-000	8PORT IOL-B FLD EI DC 24V 2.0A												□	557
765-4503/100-000	4PORT IOL-A FLD EI DC 24V 2.0A												□	558
765-4504/100-000	4PORT IOL-B FLD EI DC 24V 2.0A												□	559
IO-Link Hubs														
765-1701/200-000	8DIO FLD IOL-A HUB DC 24V 2.0A												□	560
765-1702/200-000	8DIO FLD IOL-A HUB DC 24V 2.0A												□	562
765-1703/200-000	16DIO FLD IOL-A HUB DC 24V 2.0A												□	564
765-1704/200-000	8DIO FLD IOL-B HUB DC 24V 2.0A												□	561
765-1705/200-000	8DIO FLD IOL-B HUB DC 24V 2.0A												□	563
765-1706/200-000	16DIO FLD IOL-B HUB DC 24V 2.0A												□	565

■ Approval is available. □ Approval is pending.

Approvals Overview
Operation and Monitoring – Touch Panels

cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
DNV (Det Norske Veritas) GL (Germanischer Lloyd)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS
KR (Korean Register of Shipping)	HMB05880-AC001
LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
NK (Nippon Kaiji Kyokai)	TA17255M
Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18; TE/2190/880590/18
RINA (Registro Italiano Navale)	ELE343217XG
cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV GL	BV	ABS	OrdLoc	See Page
		Ex			Marine Approvals								UL	
Touch Panels; *e!DISPLAY 7300T*														
762-3000	Web Panel; WP; 4.3; 480x272; PIO1					■				■			■	90
762-3001	Web Panel; WP; 5.7; 640x480; PIO1					■				■			■	91
762-3002	Web Panel; WP; 7.0; 800x480; PIO1					■				■			■	92
762-3003	Web Panel; WP 10.1 1280x800 PIO1					■				■			■	93
Touch Panels; 600 Standard Line														
762-4101	Web Panel; TP600; 4.3; 480x272; PIO1; WP									■			■	76
762-4102	Web Panel; TP600; 5.7; 640x480; PIO1; WP									■			■	77
762-4103	Web Panel; TP600; 7.0; 800x480; PIO1; WP									■			■	78
762-4104	Web Panel; TP600; 10.1; 1280x800; PIO1; WP									■			■	79
762-4201/8000-001	Visu Panel; TP600; 4.3; 480x272; PIO2; VP									■			■	76
762-4202/8000-001	Visu Panel; TP600; 5.7; 640x480; PIO2; VP									■			■	77
762-4203/8000-001	Visu Panel; TP600; 7.0; 800x480; PIO2; VP									■			■	78
762-4204/8000-001	Visu Panel; TP600; 10.1; 1280x800; PIO2; VP									■			■	79
762-4205/8000-001	Visu Panel; TP600; 15.6; 1920x1080; PIO2; VP												■	80
762-4206/8000-001	Visu Panel; TP600; 21.5; 1920x1080; PIO2; VP												■	81
762-4301/8000-002	Control Panel; TP600; 4.3; 480x272; PIO3; CP									■			■	76
762-4302/8000-002	Control Panel; TP600; 5.7; 640x480; PIO3; CP									■			■	77
762-4303/8000-002	Control Panel; TP600; 7.0; 800x480; PIO3; CP									■			■	78
762-4304/8000-002	Control Panel; TP600; 10.1; 1280x800; PIO3; CP									■			■	79
762-4305/8000-002	Control Panel; TP600; 15.6; 1920x1080; PIO3; CP												■	80
762-4306/8000-002	Control Panel; TP600; 21.5; 1920x1080; PIO3; CP												■	81
Touch Panels; 600 Advanced Line														
762-5203/8000-001	Visu Panel; TP600; 7.0; 800x480; PIO2; VP									■			■	82
762-5204/8000-001	Visu Panel; TP600; 10.1; 1280x800; PIO2; VP									■			■	83
762-5205/8000-001	Visu Panel; TP600; 15.6; 1920x1080; PIO2; VP												■	84
762-5206/8000-001	Visu Panel; TP600; 21.5; 1920x1080; PIO2; VP												■	85
762-5303/8000-002	Control Panel; TP600; 7.0; 800x480; PIO3; CP									■			■	82
762-5304/8000-002	Control Panel; TP600; 10.1; 1280x800; PIO3; CP									■			■	83
762-5305/8000-002	Control Panel; TP600; 15.6; 1920x1080; PIO3; CP												■	84
762-5306/8000-002	Control Panel; TP600; 21.5; 1920x1080; PIO3; CP												■	85
Touch Panels; 600 Marine Line														
762-6201/8000-001	Visu Panel; TP600; 4.3; 480x272; PIO2; VP									■			■	86
762-6202/8000-001	Visu Panel; TP600; 5.7; 640x480; PIO2; VP									■			■	87
762-6203/8000-001	Visu Panel; TP600; 7.0; 800x480; PIO2; VP									■			■	88
762-6204/8000-001	Visu Panel; TP600; 10.1; 1280x800; PIO2; VP									■			■	89
762-6301/8000-002	Control Panel; TP600; 4.3; 480x272; PIO3; CP									■			■	86
762-6302/8000-002	Control Panel; TP600; 5.7; 640x480; PIO3; CP									■			■	87
762-6303/8000-002	Control Panel; TP600; 7.0; 800x480; PIO3; CP									■			■	88
762-6304/8000-002	Control Panel; TP600; 10.1; 1280x800; PIO3; CP									■			■	89

■ Approval is available. □ Approval is pending.

Approvals Overview
Infrastructure – Industrial Switches

	cULus OrdLoc	E175199 Sec. 1, UL 508, UL 61010
	ABS (American Bureau of Shipping)	19-HG1821926-PDA; 18-HG1778162-PDA; 19-HG1821812-PDA
	BV (Bureau Veritas)	13453/D0 BV, 30389/B0 BV
	DNV (Det Norske Veritas) GL (Germanischer Lloyd)	TAA0000194; TAA00000Y7; TAA00001J4; TAA00001FS; A-14050
	KR (Korean Register of Shipping)	HMB05880-AC001
	LR (Lloyd's Register)	02/20026 (E5); 17/20073 (E2)
	NK (Nippon Kaiji Kyokai)	TA17255M
	Polski Rejestr Statkow	TE/2210/880590/18; TE/2215/880590/18; TE/2214/880590/18
	RINA (Registro Italiano Navale)	ELE343217XG
	cULus HazLoc	E198726 Sec. 1, ANSI/ISA 12.12.01 E480271 Sec. 1, AEx UL60079
	INMETRO	TÜV 12.1297 X; TÜV 14.1911 X
	TÜV	07ATEX554086 X; IECEx TUN 09.0001 X 12ATEX106032 X; IECEx TUN 12.0039 X 14ATEX148929 X; IECEx TUN 14.0035 X 17ATEX193969 X; IECEx TUN 16.0046 X 17ATEX196484 X; IECEx TUN 17.0005 X DEKRA 11ATEX0203 X

Item No.	Item Description	Ex			Marine Approvals							UL	See Page
		ATEX/IECEx	BRA-Ex	HazLoc	RINA	PRS	NK	LR	KR	DNV GL	BV	ABS	OrdLoc	
Industrial Switches														
852-101	Industrial Switch; 5Port												■	584
852-102	Industrial Switch; 8Port												■	585
852-103	Industrial Switch; 8Port; 2-Slot 100BASE-FX												■	586
852-111	Industrial Eco Switch; 5Port									■			■	578
852-112	Industrial Eco Switch; 8Port												■	579
852-303	Managed Switch; 8Port; 2-Slot 1000BASE-SX/LX									■			■	596
852-602	Managed Switch; 8Port 100BASE-TX; PROFINET; T												■	601
852-603	Managed Switch; 8Port 100BASE-TX; 2Slot 1000BASE-SX/LX; PROFINET; T												■	602
852-1102	Industrial Switch; 8-Port Gb									■			■	587
852-1106	Industrial Switch; 16-Port Gb									■			■	588
852-1111	Industrial Eco Switch; 5-Port Gb									■			■	580
852-1112	Industrial Eco Switch; 8-Port Gb												■	581
852-1305	Managed Switch; 8-Port Gb; 4-Slot 1000BASE-SX/LX									■			■	597
852-1305/000-001	Managed Switch; 8Port 1000BASE-T; 4Slot 1000BASE-SX/LX; USB												■	598
852-1322	Managed Switch; 8Port Gb; MACsec												■	594
852-1328	Managed Switch; 6Port Gb; 2FOC Gb; MACsec												■	595
852-1411	Industrial-Eco-Switch; 5Port Gb; 4PoE												■	582
852-1411/000-001	Industrial-Eco-Switch; 5Port Gb; 4PoE												■	582
852-1417	Industrial Eco Switch; 5Port Gb; 2-Slot 1000BASE-SX/LX; 4PoE												■	583
852-1505	Managed Switch; 8-Port Gb; 4-Slot 1000BASE-SX/LX; 8PoE													599
852-1505/000-001	Managed Switch; 8Port 1000BASE-T; 4Slot 1000BASE-SX/LX; EXT; 8PoE; USB									■			■	600
852-1605	Managed Switch; 8Port 1000BASE-T; 4Slot 1000BASE-SX/LX; PROFINET; T												■	603
852-1812	Lean Managed Switch; 8 Ports 1000BASE-T												■	590
852-1813	Lean Managed Switch; 8 Ports 1000BASE-T; 2 Slots 1000BASE-SX/LX												■	591
852-1813/000-001	Lean Managed Switch; 8 Ports 1000BASE-T; 2 Slots 1000BASE-SX/LX; +PoE												■	592
852-1816	Lean Managed Switch; 16 Ports 1000BASE-T												■	593

■ Approval is available. □ Approval is pending.

Operating WAGO Connection Technologies

Please follow the applicable product-specific termination instructions.

PUSH-IN CAGE CLAMP®

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!

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

stranded

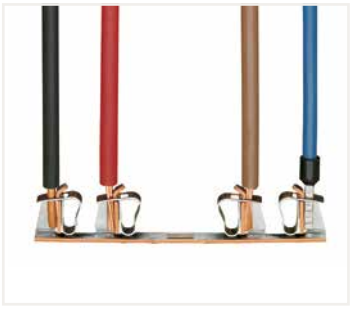
fine-stranded, also with tinned single strands

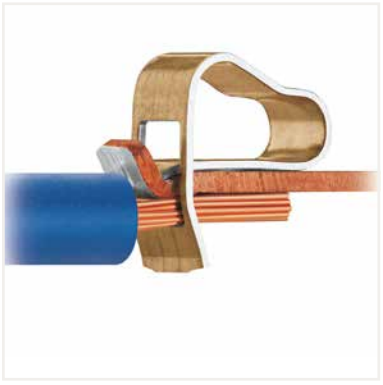
fine-stranded, tip-bonded

fine-stranded, with ferrule (gastight crimped)

fine-stranded, with pin terminal (gastight crimped)

CAGE CLAMP®





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

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

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)

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

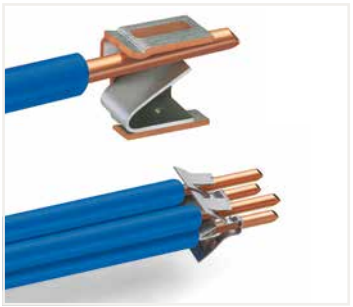
fine-stranded, with ferrule (gastight crimped)

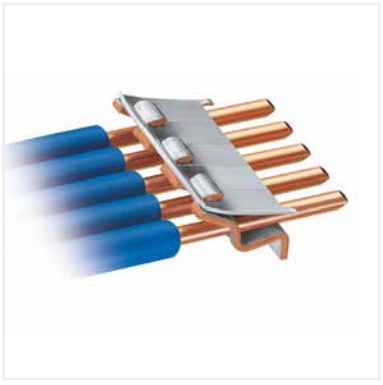
The universal connection for conductors larger than 35 mm² (2 AWG)

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

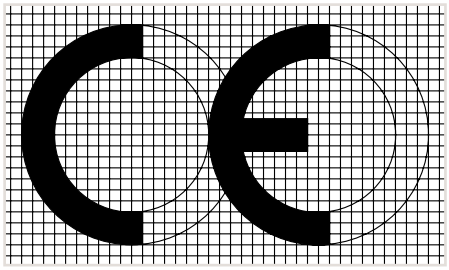
PUSH WIRE® connection for solid and stranded conductors (depending on the model used)

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

CE Marking and EU 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 packaging unit. With this marking, manufacturers attest conformity of their products to relevant directives.

In addition to the CE marking, manufacturers provide an EU "Declaration of Conformity" for their products. This declaration of conformity must be retained and submitted to a national surveillance authority upon request.

EU 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 (LVD). The LVD covers all electrical equipment operating with a voltage between 50 and 1000 V and between 75 V and 1500 V. 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 dependant 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 stipulates that a product must meet the limits on radiated electromagnetic disturbance and also requires that a product must be immune to electromagnetic interference. Electromagnetic passive components or components with no direct function, such as 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

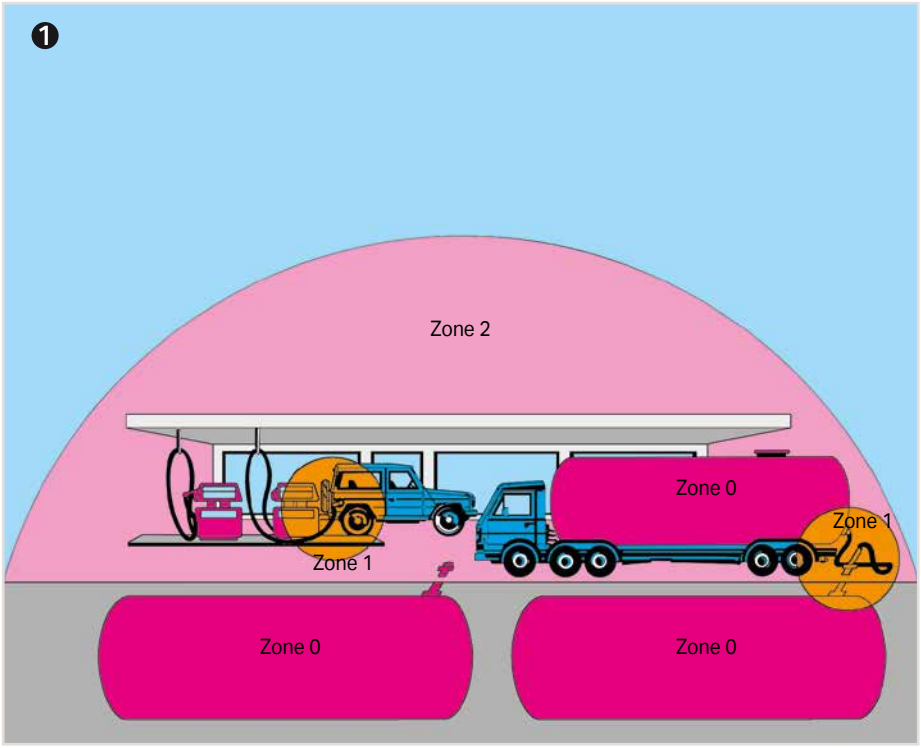
A device or relevant component thereof, capable of communication by emitting and/or receiving radio waves utilizing the spectrum allocated to terrestrial/space radio communication, falls within the scope of the Radio Equipment Directive. As such, these devices and components are tested and labeled accordingly. 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 areas are zones 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 well-known standards rank 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

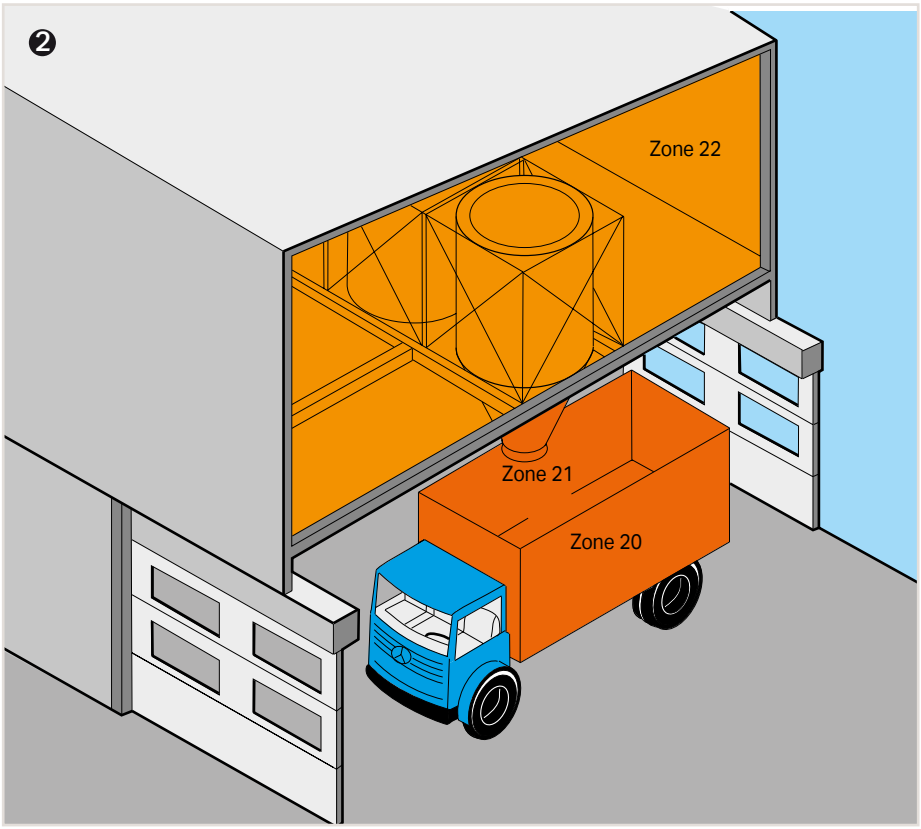
Areas in which an explosive atmosphere is present continuously, for long periods or frequently.

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.

Please refer to the manuals for more information on explosion protection.

Electromagnetic Compatibility and Mechanical Strength (Industrial and Residential Environments)

Immunity for Industrial Environments per EN 61000-6-2

Test Specification		Test Value	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 interference	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 Standard for Residential Environments per EN 61000-6-3

Test Specification		Limits (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 lines	79 dB(µV)	150 ... 500 kHz	
	Conducted	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/	84 ... 74 dB(µV)	150 ... 500 kHz	
	Mains connection, conducted	74 dB(µV)	500 kHz ... 30 MHz	

Emission Standard for Industrial Environments per EN 61000-6-4

Test Specification		Limits (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/	97 ... 87 dB(µV)	150 ... 500 kHz	
	Mains connection, conducted	87 dB(µV)	500 kHz ... 30 MHz	

Mechanical Strength per EN 61131-2

Test Specification		Frequency Range	Limits
IEC 60068-2-6	Vibration	5 Hz ≤ f < 9 Hz	1.75 mm amplitude (permanent)
			3.5 mm amplitude (short term)
		9 Hz ≤ f < 150 Hz	0.5g (permanent)
			1g (short term)
		Note on vibration test:	
		a) Frequency change: max. 1 octave/minute	
		b) Vibration direction: 3 axes	
IEC 60068-2-27	Shock		15g
		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 Environments)

Immunity Standard for Marine Environments per Class Guideline DNVGL-CG-0339 (Harmonized with IACS E10)

Test Specification	EMC Class [1]	Designation	Test Value	Performance Criterion 2)
IEC 61000-4-2	A+B	ESD	6 kV (contact) 8 kV (air)	B
IEC 61000-4-3	A+B	Electromagnetic fields	10 V/m; 80 MHz ... 2 GHz	A
IEC 61000-4-4	A+B	Burst	1 kV (data ports) 2 kV (power supply/ground ports)	B
IEC 61000-4-5	A+B	Surge	0.5 kV; line-to-line 1.0 kV; line-to-ground	B
IEC 61000-4-6	A B	RF interference	3 V r.m.s.; 150 kHz ... 80 MHz; 80 % AM at 1000 Hz 10 V r.m.s.; 2/3/4/6.2/8.2/12.6/16.5/18.8/22/25 MHz (spot frequencies)	A
Performance test	A+B	AF disturbances (harmonics)	3 V r.m.s.; 2 W; 50 Hz ... 10 kHz	A
Performance test	-	High voltage	775 VDC 1500 VAC	-
1)	EMC Class A: All locations except bridge and open deck EMC Class B: All locations including bridge and open deck			
2)	Performance criteria A: The device must work in accordance with the regulations during and after the test. Performance criteria B: The device must work in accordance with the regulations after the test.			

Emission Standard for Marine Environments per Class Guideline DNVGL-CG-0339 (Harmonized with IACS E10)

Test Specification	EMC Class [1]	Emission	Frequency Range	Limits (Quasi-Peak)	Distance
Performance test	A	Radiated	0.15 ... 30 MHz	80 ... 50 dBµV/m	3 m
			30 ... 100 MHz	60 ... 54 dBµV/m	3 m
			100 ... 2000 MHz (except 156 ... 165 MHz)	54 dBµV/m 24 dBµV/m	3 m
Performance test	A	Conducted	10 ... 150 kHz	120 ... 69 dBµV	
			150 ... 500 kHz	79 dBµV	
			0.50 ... 30 MHz	73 dBµV	
Performance test	B	Radiated	150 ... 300 kHz	80 ... 52 dBµV/m	3 m
			0.30 ... 30 MHz	52 ... 34 dBµV/m	3 m
			30 ... 2000 MHz (except 156 ... 165 MHz)	54 dBµV/m 24 dBµV/m	3 m
Performance test	B	Conducted	10 ... 150 kHz	96 ... 50 dBµV	
			150 ... 350 kHz	60 ... 50 dBµV	
			0.35 ... 30 MHz	50 dBµV	
1)	EMC Class A: All locations except bridge and open deck EMC Class B: All locations including bridge and open deck				

Mechanical Strength per Class Guideline DNVGL-CG-0339 (Harmonized with IACS E10)

Test Specification	Vibration Class	Frequency Range	Amplitude	Location
IEC 60068-2-6	A	2 Hz (+3/-0) ≤ f < 13.2 Hz 13.2 Hz ≤ f < 100 Hz	1.0 mm (peak value) 0.7g (acceleration)	On bulkheads, beams, deck, bridge
IEC 60068-2-6	B	2 Hz (+3/-0) ≤ f < 25 Hz 25 Hz ≤ f < 100 Hz	1.6 mm (peak value) 4.0g (acceleration)	On machinery such as internal combustion engines, compressors, pumps, including piping on such machinery
		40 Hz ≤ f < 2000 Hz	10g (acceleration)	Only for equipment installed on the exhaust gas pipes of diesel engines
IEC 60068-2-6	C	2 Hz (+3/-0) ≤ f < 15 Hz 15 Hz ≤ f < 50 Hz	2.6 mm (peak value) 2.3g (acceleration)	Masts

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

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EN 60999-1
VDE 0609-1
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IEC 60617-2
EN 60617-2
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IEC 60669-2-1
EN 60669-2-1
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VDE 0611-1
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IEC 60439-1
EN 60439-1
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IEC 60555-1
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IEC 61508-1
EN 61508-1
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VDE 0113-50
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EN 50325-1
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EN 61158-6-x
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IEC 60079-0
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VDE 0170-1
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EN 60068-2-27
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IEC 60068-2-43
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IEC 61000-6-1
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VDE 0839-6-1
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IEC 61000-6-2
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IEC 61000-6-3
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VDE 0411-500
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– Part 2: Equipment requirements and tests

IEC 61131-3
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IEC 61810-1
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VDE 0435-201
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– Part 1: General requirements

IEC 61810-2
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IEC 61810-5
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IEC 60255-5
EN 60255-5
VDE 0435-130
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– Part 5: Insulation coordination for measuring relays and protection equipment – Requirements and tests

UL Directives

UL 1059; ANSI 1059
Rail-Mount 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 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 (German 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 Number 1

RINA (Registro Italiano Navale)
Rules for the classification of ships
Part C – Machinery, systems and fire protection Ch. 3, Sect. 6, Table 1

BSH (Federal Maritime and Hydrographic Agency)
Certificate measuring the 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 Approved Equipment; Pt. 6, Ch. 1, Sec. 3 of the Rules for Classification of 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
Enviromental 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.

WAGO Test Lab

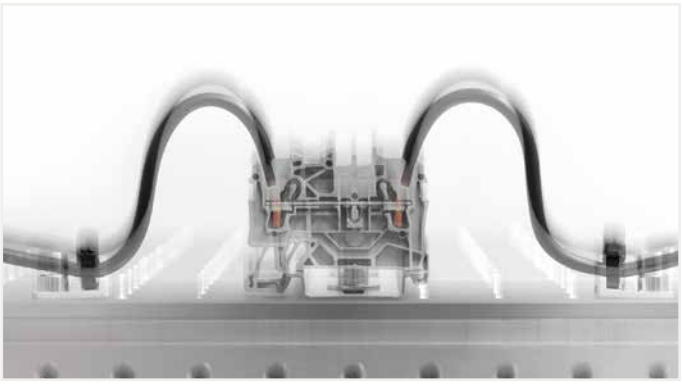
This means that WAGO's products can be used safely and reliably both in Europe and anywhere globally for a wide variety of applications. We heavily emphasize the importance of global acceptance during development. As a result, we can present documentation that verifies our high levels of product safety 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.

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.

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.

DAkkS
Deutsche
Akkreditierungsstelle

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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 Prüflaboratiorium WAGO Kontakttechnik GmbH & Co. KG
Hansastraße 27, 32423 Minden

die Kompetenz nach DIN EN ISO/IEC 17025:2018 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 24.05.2019 mit der Akkreditierungsnummer D-PL-19704-01. Sie besteht aus diesem Deckblatt, der Rückseite des Deckblatts und der folgenden Anlage mit insgesamt 08 Seiten.

Registrierungsnummer der Urkunde: D-PL-19704-01-00

Frankfurt am Main, 24.05.2019

Im Auftrag Dipl.-Ing. (FH) Ralf Egner
Abteilungsleiter

Die Urkunde samt Urkundenanlage gibt den Stand zum Zeitpunkt des Ausstellungsdatums wieder. Der jeweils aktuelle Stand des Geltungsbereiches der Akkreditierung ist der Datenbank akkreditierter Stellen der Deutschen Akkreditierungsstelle GmbH (DAkkS) zu entnehmen. https://www.dakks.de/content/datenbank-akkreditierter-stellen

Siehe Hinweise auf der Rückseite

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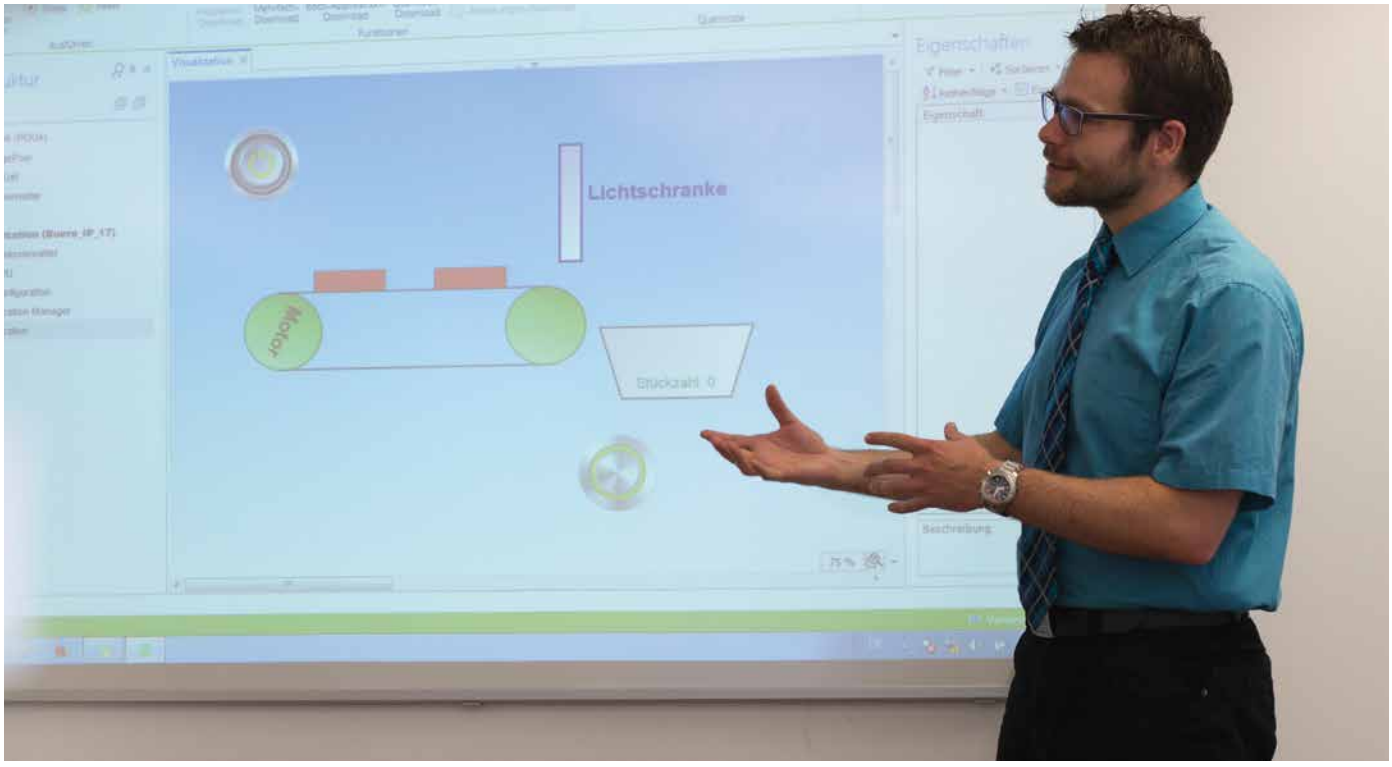

Setting the Bar with Your Goals

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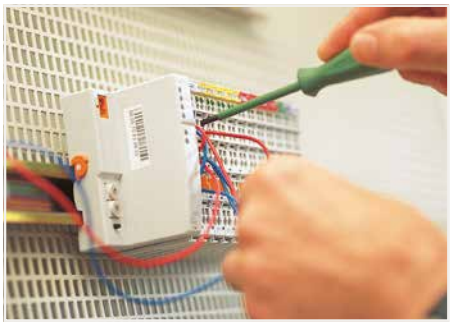
Small Groups

The small class sizes of WAGO training seminars ensures that no question goes unanswered and no one is overlooked.

Teamwork

Learning as a group is very effective. Ideas can be discussed and exchanged while experiences can be shared – all for the benefit of the participants.



Practical Topics

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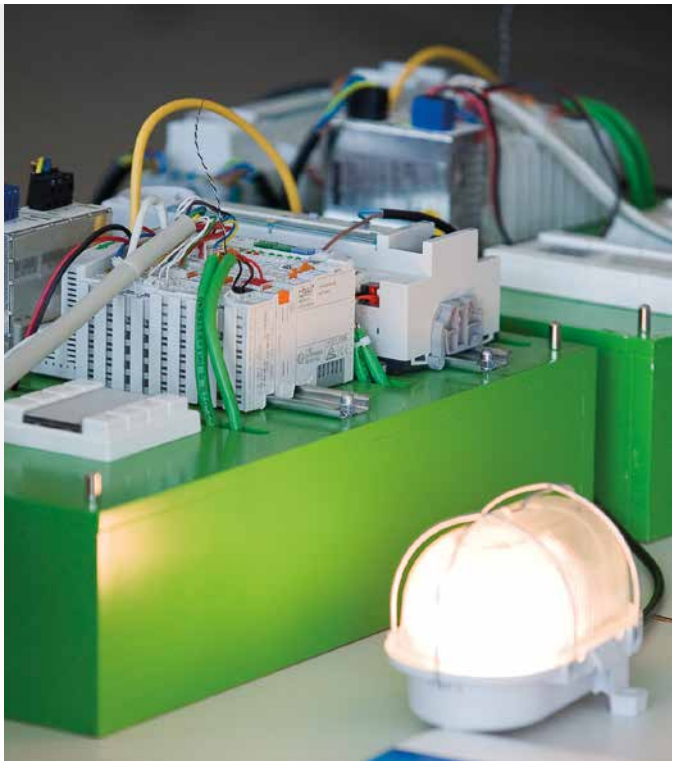

Product-Related Seminars

We regularly offer product-related seminars on the following topics:

- Building and industrial automation
- Programming of automation components
- Fieldbus systems

Current Seminars at: www.wago.com

Customer-Specific Training Seminars

In addition to these "open" seminars, we also offer seminars specially tailored to your organization and its particular needs.

Upon request, we can also conduct these courses at your location.

Special Corporate Seminars

Indexes and Addresses

Indexes and Addresses
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