

**Rittal – The System.**

Faster – better – everywhere.

# VX25 Ri4Power

The switchgear and power distribution system  
for the VX25



ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

IT INFRASTRUCTURE

SOFTWARE & SERVICES

FRIEDHELM LOH GROUP





# VX25. **SYSTEM PERFECTION.**

## **System perfection. Solutions from Rittal.**

The future is shaped by innovative companies with the ability to supply smart solutions to their partners in industry, mechanical & plant engineering and IT. Rittal are global market and innovation leaders, and expert problem-solvers. Based on our performance promise “faster – better – everywhere”, we provide our customers with comprehensive support along the entire value chain, to gain a crucial competitive edge.

Best proof: the VX25. A large enclosure built to Industry 4.0 standards for world-class, digitally networked technology.

The perfect solution to accommodate demands for increased productivity and assembly speed, and further proof that our passion and inventiveness create sustainable solutions that take our customers to the cutting-edge of technology.

Now we have upped our innovation game once more, with a comprehensive overhaul of the entire VX25 Ri4Power modular system. Now more efficient, even faster and stronger than ever before, it is the ultimate future-proof solution.

VX25 Ri4Power – ready for your challenges.



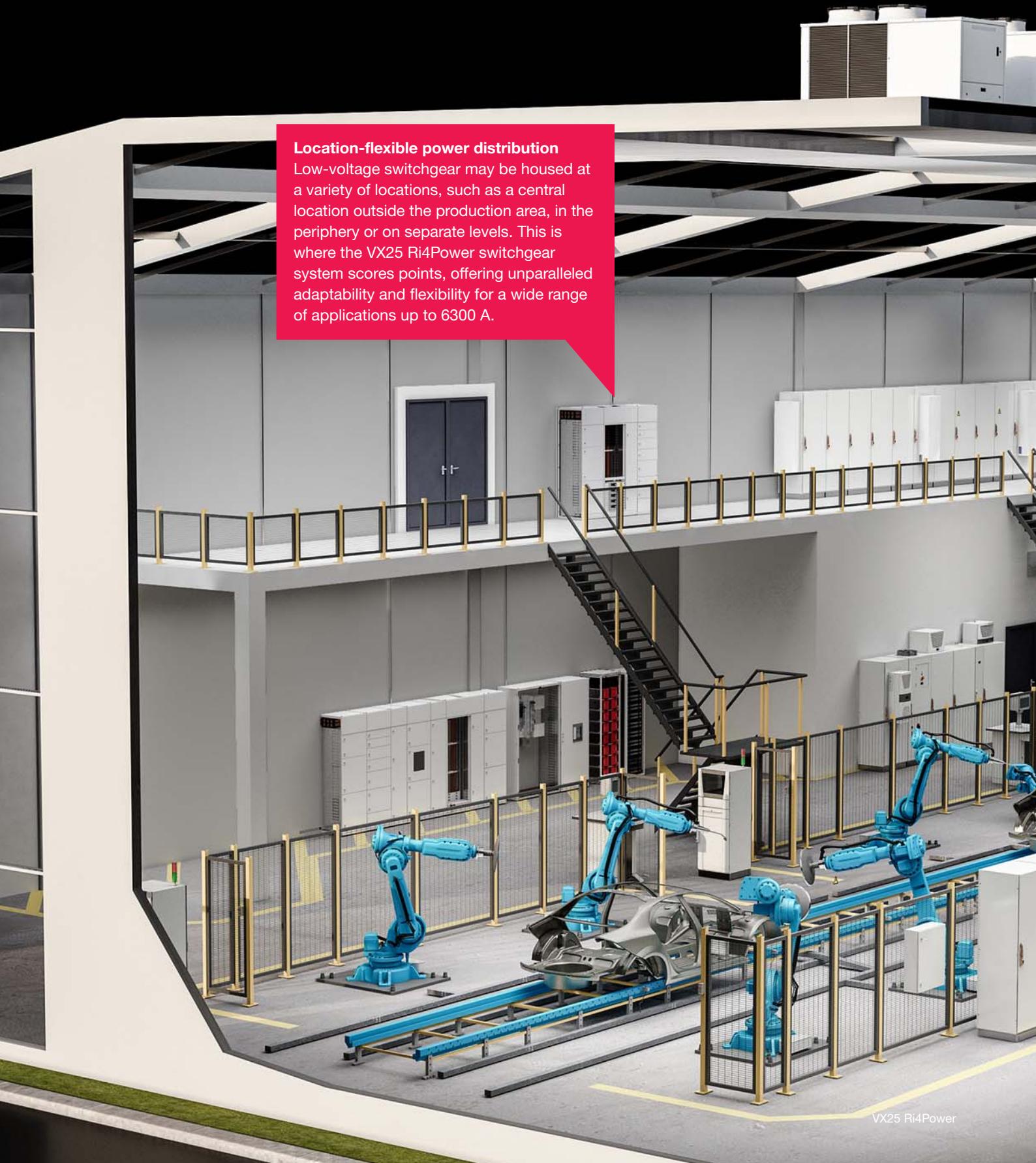
# VX25. SYSTEM PERFECTION.

## VX25 Ri4Power

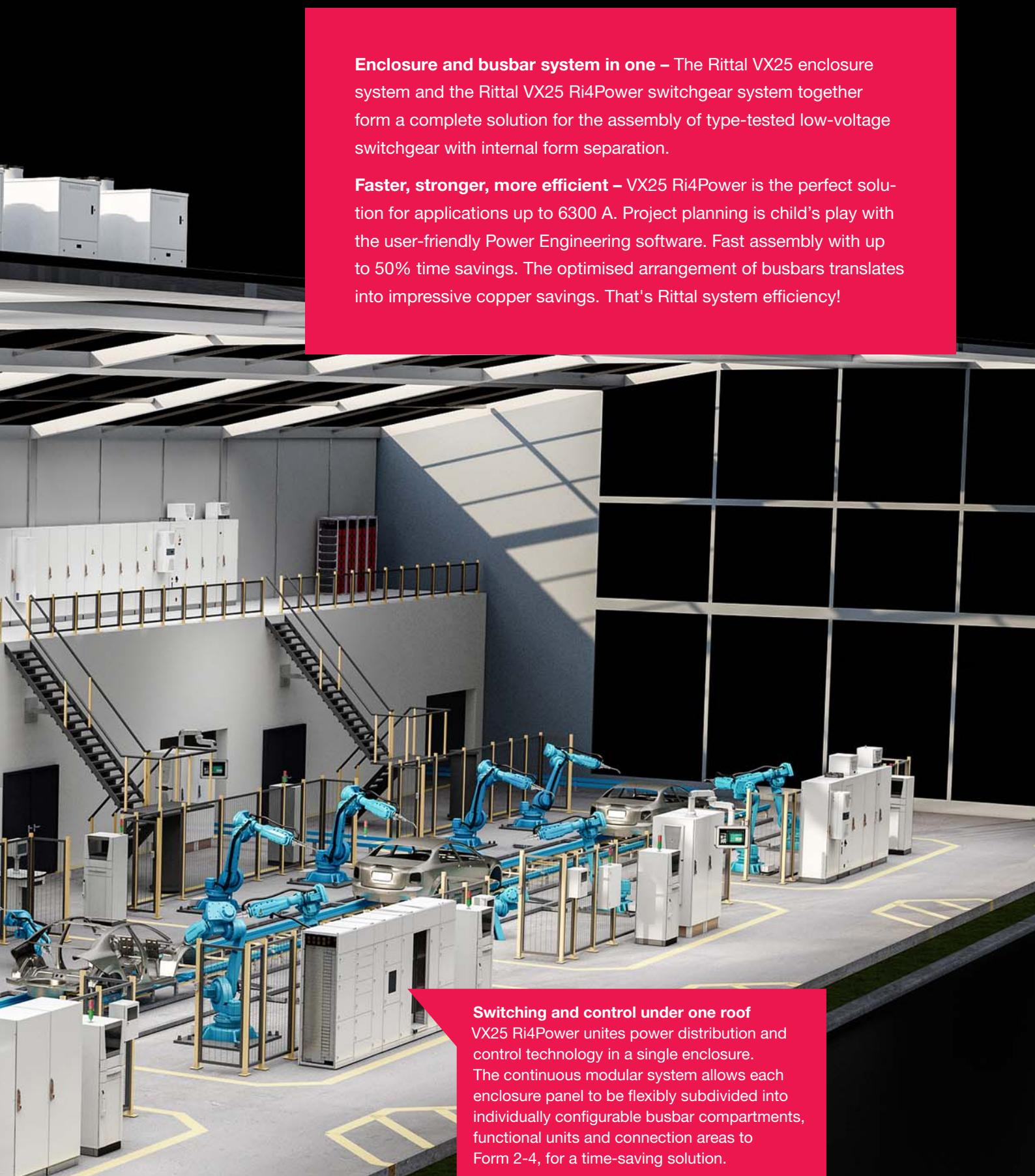
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### **Location-flexible power distribution**

Low-voltage switchgear may be housed at a variety of locations, such as a central location outside the production area, in the periphery or on separate levels. This is where the VX25 Ri4Power switchgear system scores points, offering unparalleled adaptability and flexibility for a wide range of applications up to 6300 A.



# THE COMPLETE SOLUTION



**Enclosure and busbar system in one** – The Rittal VX25 enclosure system and the Rittal VX25 Ri4Power switchgear system together form a complete solution for the assembly of type-tested low-voltage switchgear with internal form separation.

**Faster, stronger, more efficient** – VX25 Ri4Power is the perfect solution for applications up to 6300 A. Project planning is child's play with the user-friendly Power Engineering software. Fast assembly with up to 50% time savings. The optimised arrangement of busbars translates into impressive copper savings. That's Rittal system efficiency!

**Switching and control under one roof**  
VX25 Ri4Power unites power distribution and control technology in a single enclosure. The continuous modular system allows each enclosure panel to be flexibly subdivided into individually configurable busbar compartments, functional units and connection areas to Form 2-4, for a time-saving solution.



# VX25. SYSTEM PERFECTION.



## THE SECTION TYPES

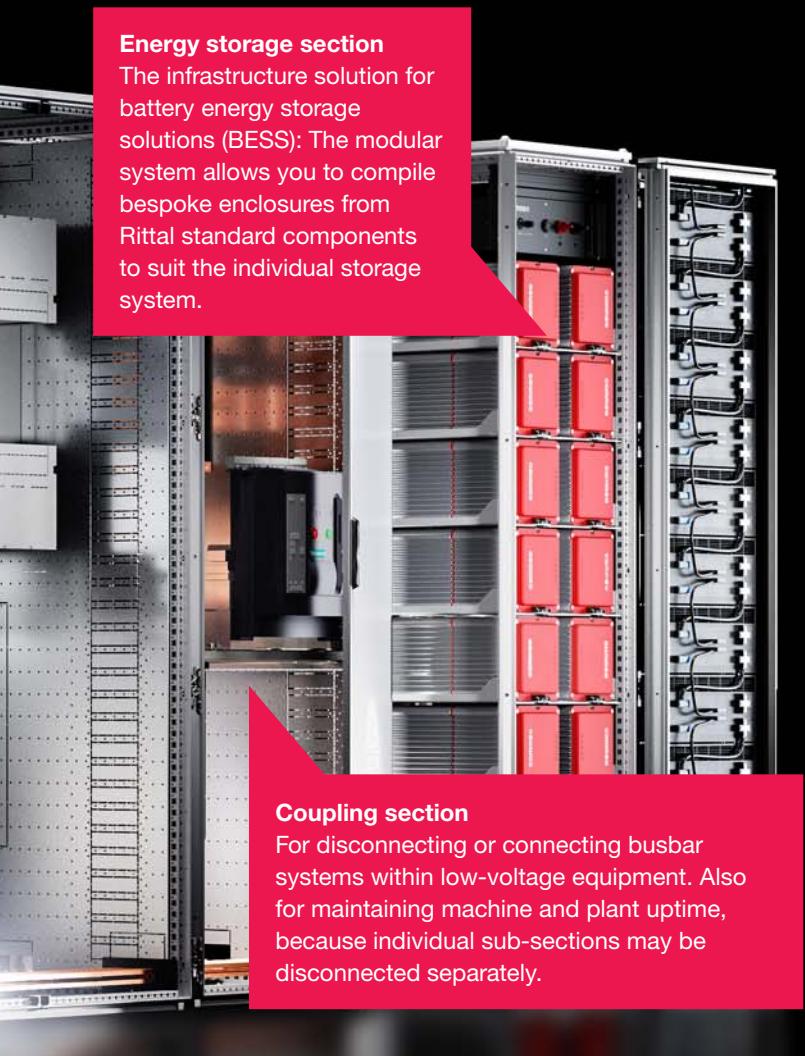
### Modular section system

The VX25 Ri4Power allows you to create different sections within a switchgear or power distribution system to perform these tasks.



#### Form 2b

As effective protection against accidental contact with the busbar. Designed as an internal sub-division of the busbar compartment into functional space and adjacent compartment.



#### Energy storage section

The infrastructure solution for battery energy storage solutions (BESS): The modular system allows you to compile bespoke enclosures from Rittal standard components to suit the individual storage system.

#### Coupling section

For disconnecting or connecting busbar systems within low-voltage equipment. Also for maintaining machine and plant uptime, because individual sub-sections may be disconnected separately.

### Tested safety

- The VX25 Ri4Power switchgear system is continuously type-tested to international standard IEC 61 439-1
- Tests with ASTA certification
- Protection category up to IP54
- Tested accidental arcing protection to IEC 61 641
- Additional accidental arcing protection as a preventive measure

**Complete partitioning**

Compartment side panels matching the enclosure height instantly shield all the functional spaces below. This replaces individual vertical partitions from section to section and reduces the number of components and assembly time required.

**Flexibility**

The 25 mm enclosure section pitch pattern and side panel perforations allow fast, height-flexible assembly of the horizontal compartment dividers with minimal parts. They simply slide into position like a baking tray in an oven.

**Adjustment**

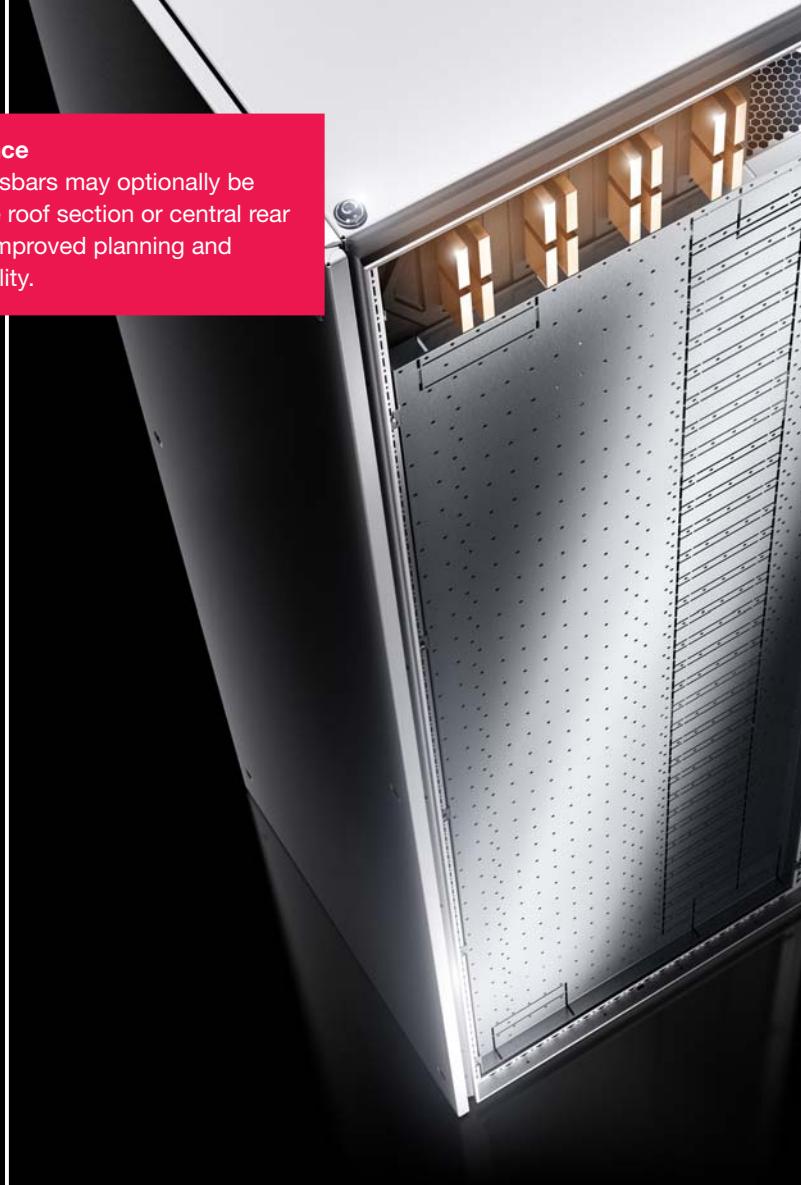
The pre-punched knock-outs in the compartment dividers may be removed without burrs, for flexible subdivision of the openings depending on the planned cable routing. This supports a continuous, direct power supply to the control and wiring sections.





#### Independence

The main busbars may optionally be routed in the roof section or central rear section for improved planning and space flexibility.



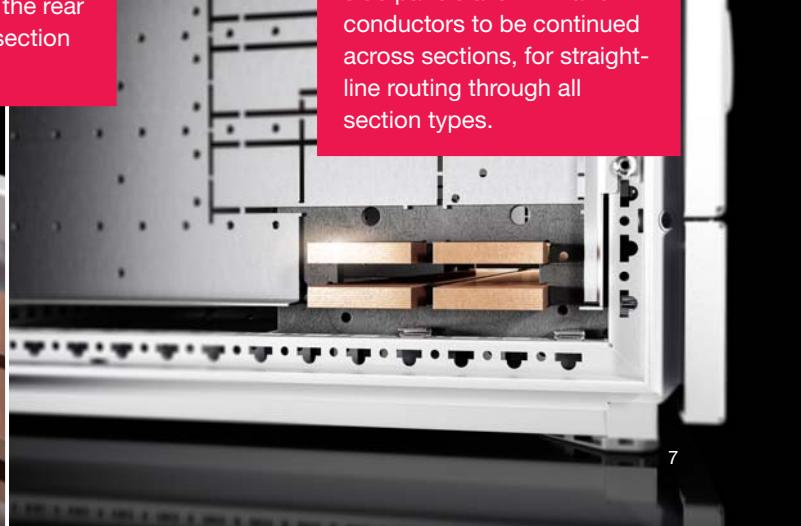
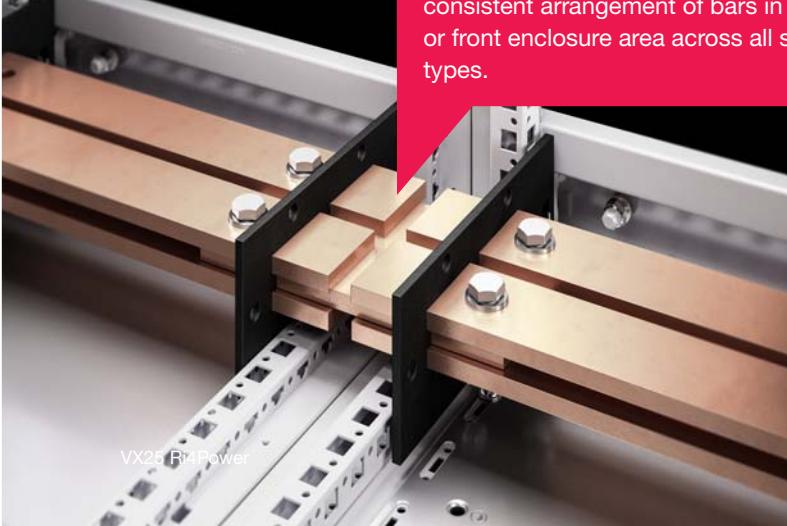
#### Continuity

Connecting PE or N conductors by directly screw-fastening the bar supports to the frame section ensures an identical, consistent arrangement of bars in the rear or front enclosure area across all section types.



#### Straight lines

The pre-punched knock-outs in the compartment side panels allow PE and N conductors to be continued across sections, for straight-line routing through all section types.



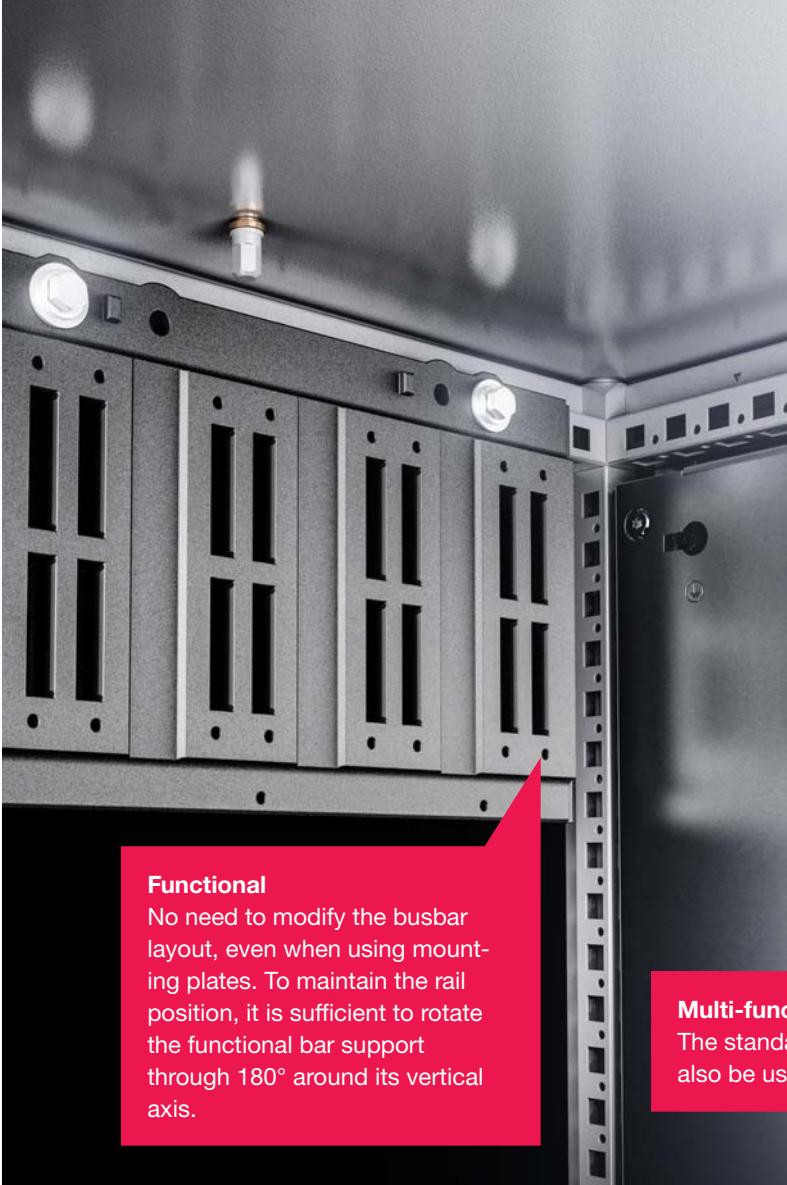
**Reduced number of parts**

The 25 mm pitch pattern allows top busbar supports to be mounted directly onto the enclosure section. Just three screws is all you need. No further components are required.

**Copper savings**

Standard bars are available in 30 x 10 mm and 50 x 10 mm. The stable enclosure busbar system and the arrangement of the bars support a higher current-carrying capacity with an identical copper bar cross-section.





#### Functional

No need to modify the busbar layout, even when using mounting plates. To maintain the rail position, it is sufficient to rotate the functional bar support through 180° around its vertical axis.

#### Immediate machining

The standard 50 x 10 mm copper bars are already pre-punched and cut to the required length to match the enclosure widths. They may be fitted directly without machining.



#### Multi-functionality

The standard 50 x 10 mm copper bars may also be used as a neutral conductor.



#### Fast attachment

The open busbar support can additionally accommodate the quick-release fastener for simple, fast connection to the next section.



#### Bar termination

The solid bar support is used as a termination.

**Health and safety at work**

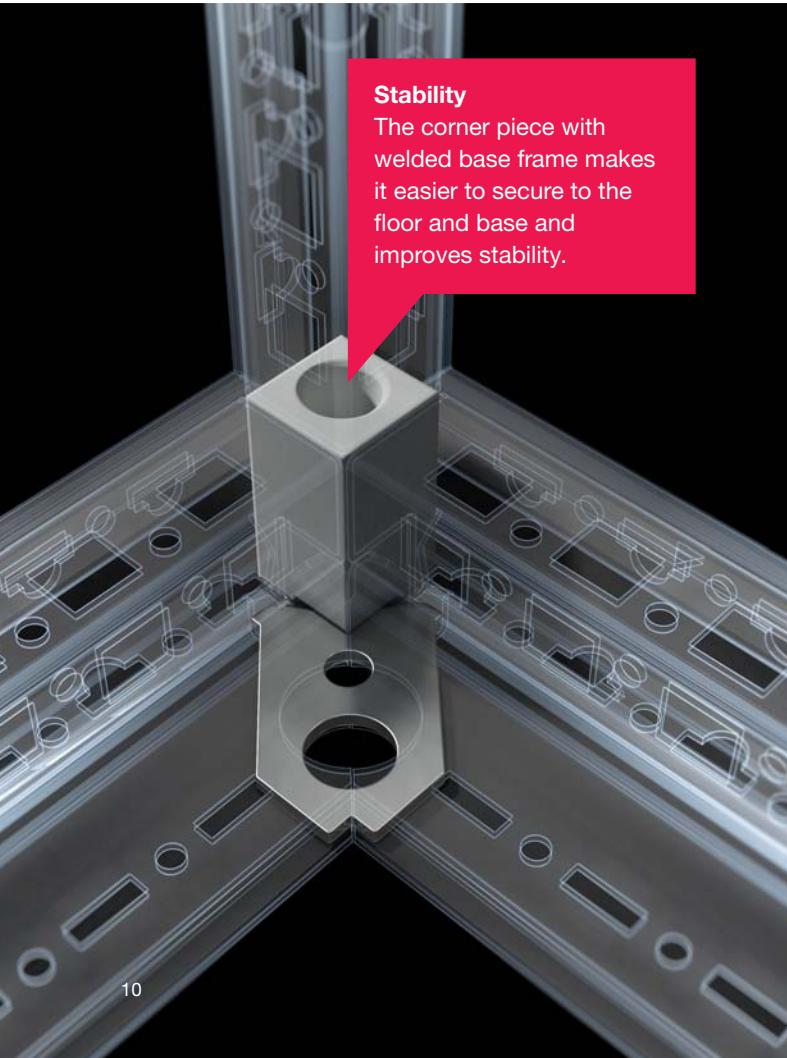
Rounded edges ensure optimum work safety standards when populating the enclosure.

**Stability**

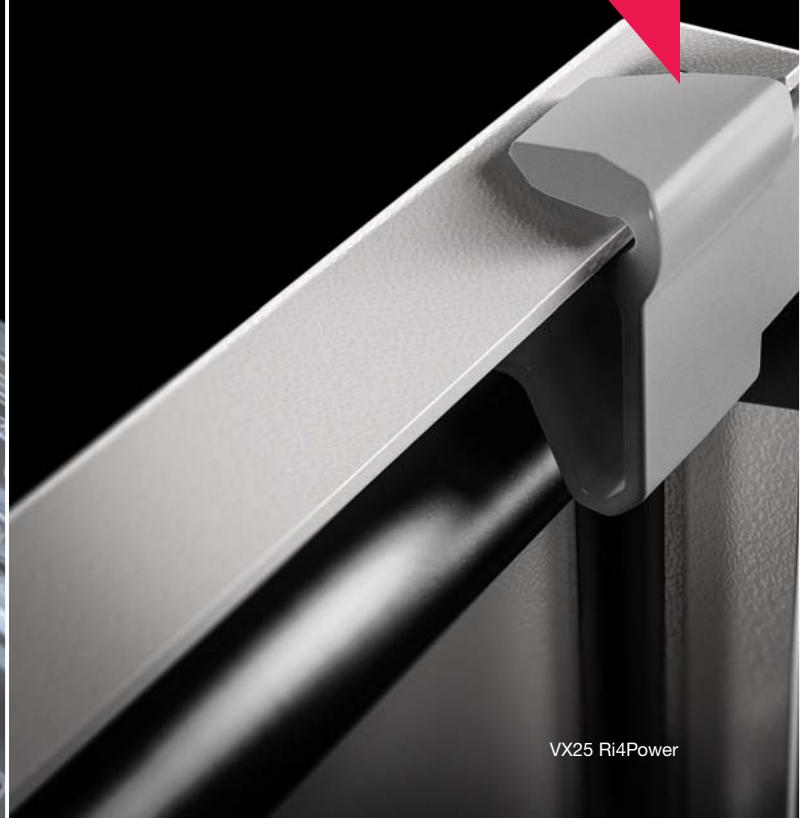
The seamlessly laser-welded, rolled enclosure profile ensures optimum force transmission on installed equipment.

**Stability**

The corner piece with welded base frame makes it easier to secure to the floor and base and improves stability.

**Labour-saving**

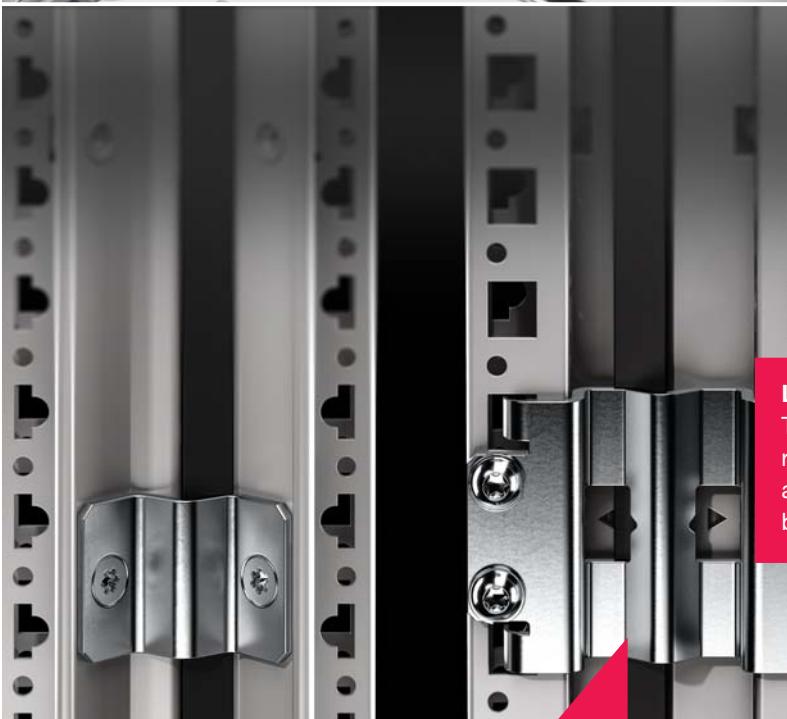
With one-person assembly, the positioning aid for the side and rear panels is an ideal, user-friendly preliminary fixing, leaving both hands free to screw-fasten the panels into position.





#### Installation options

The continuous pattern of square punching supports the use of M6/M8 cage nuts and thus creates more mounting options at all profile levels.



#### Clamping force

The bayonet connectors are screwed into place in the direction of baying to bring the enclosures safely into position.

#### Labour-saving

The new hinge allows doors to be fitted and removed incredibly easily without any tools, and separately locking and unlocking the hinge bolts is a thing of the past.



## ACB SECTION



# VX25. SYSTEM PERFECTION.

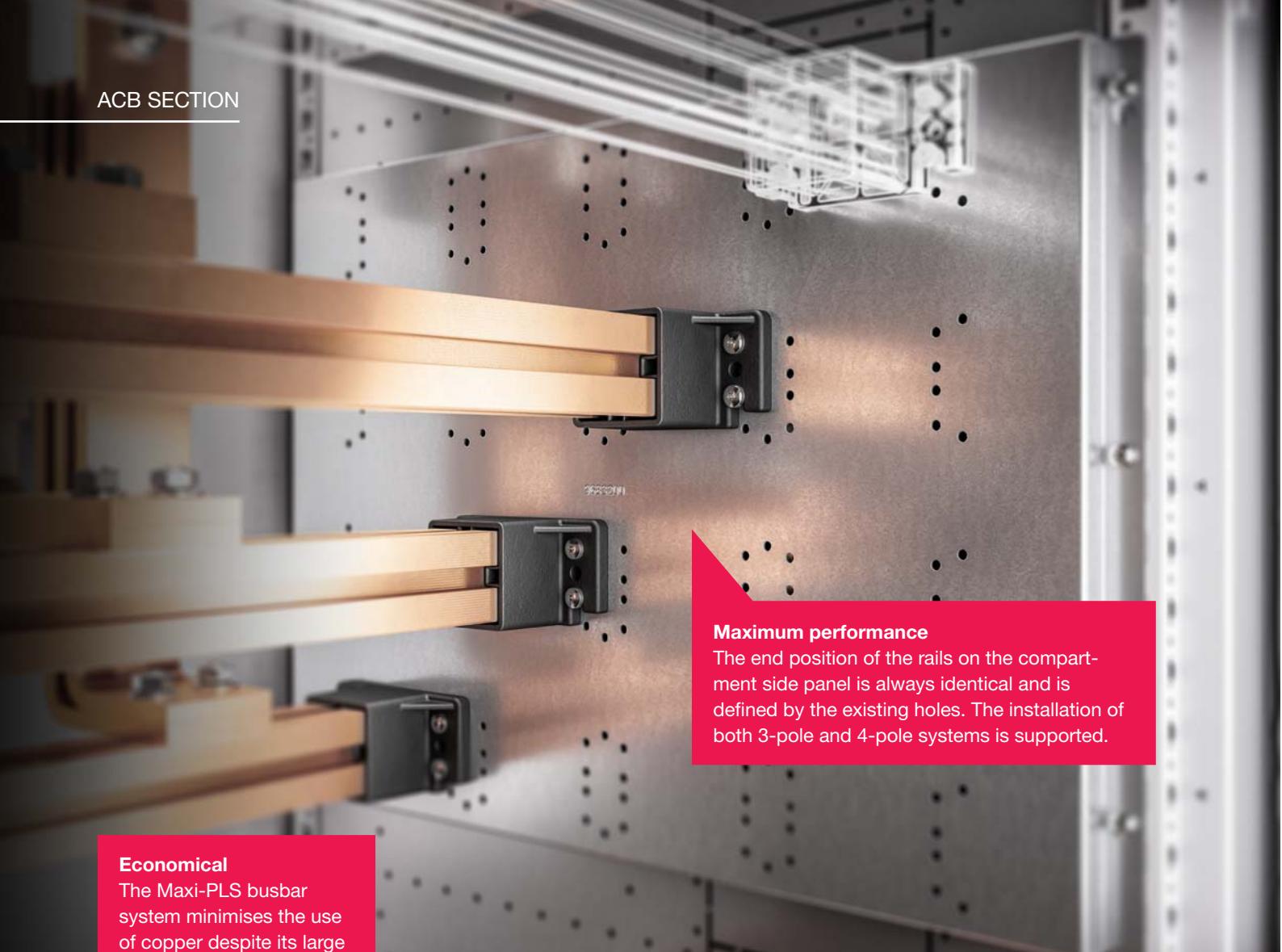


## THE ACB SECTION

### **For protecting machinery and equipment**

Air circuit-breakers protect machines, plant and people from damage and injury associated with short-circuits, earth faults and overloads.

- The VX25 Ri4Power is suitable for use with open and compact circuit-breakers from all well-known manufacturers, including ABB, Eaton, General Electric, Mitsubishi, Schneider Electric, Siemens, LSIS and Terasaki.
- Modular continuity and a high manufacturing quality guarantee exceptionally time-saving assembly.
- Up to 6300 A, the busbar systems are dimensioned to your specific requirements with standard copper bars and individually configured.
- All drawings of connector kits and connection brackets for connecting air circuit-breakers may be generated and printed with the Rittal Power Engineering software so that all copper parts can be prepared for installation early in the process.



#### Economical

The Maxi-PLS busbar system minimises the use of copper despite its large dimensions. The underside of the bar was deliberately designed to save material. Maxi-PLS supports connected loads of up to 6300 A.



#### Maximum performance

The end position of the rails on the compartment side panel is always identical and is defined by the existing holes. The installation of both 3-pole and 4-pole systems is supported.

#### Continuity

Connecting PE or N conductors by directly screw-fastening the bar supports to the frame section ensures an identical, consistent arrangement of bars in the rear or front enclosure area across all section types.



The screenshot shows the Ri4Power Low Voltage Switchgear Selector software. At the top, it says "Ri4Power Low Voltage Switchgear Selector" and "Easily select tested low-voltage switchgears with Ri4Power systems". Below this are three tabs: "Create system", "Select a cubicle to add to your system" (which is highlighted in red), and "Summary". The main area is titled "Select cubicle type to add to your system" and shows a grid of icons for different cubicle types: ACB, Coupling, Modular, Cable-Distributor, NH cabinet, Busbar mixer, Distribution, Corner, MCCB-Hin, Empty, and Generator. Below the grid, there is a "Count:" input field with a dropdown menu. Underneath, there are sections for "ACB configuration:", "Rated current of ACB (A) acc. IEC 60947:", "Poles of device:", "Cubicle width (mm):", and "Max. operating current inc. device (A)". The "ACB configuration:" dropdown shows "3200", "Poles of device:" shows "3 poles", "Cubicle width (mm):" shows "800 mm", and "Max. operating current inc. device (A)" shows "2300". There is also a section for "Accessories:" with a "Number of mounting plates:" dropdown set to "1". At the bottom, it says "System: 'Neue Anlage'".

### User-friendly planning

The Rittal Power Engineering planning software makes it much easier to configure section types and equipment. When using the Rittal Power Engineering software to project-plan the plant (design verification), the connector kits are automatically generated and documented.



### Fast connection

The connection brackets, which are planned using Rittal software for a precise fit, enable circuit-breakers to be connected to the main busbar system.

### Stability

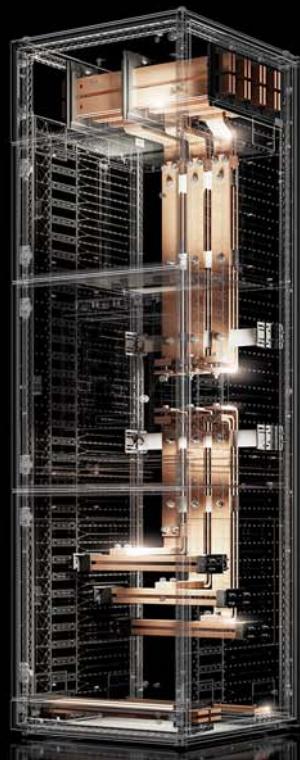
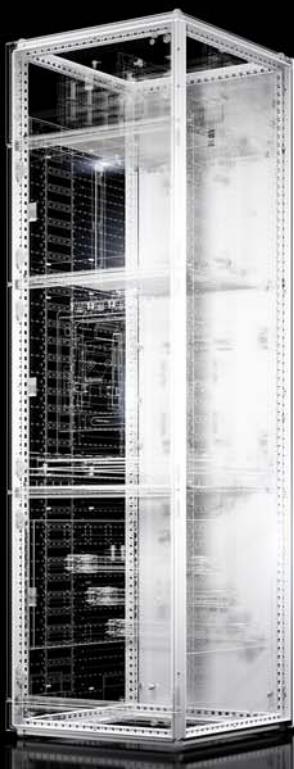
The stabilisers mounted between the horizontal rails of the air circuit-breaker significantly improve short-circuit resistance.



### Fast installation

The mounting bracket for the air circuit-breaker support rail is attached directly to the enclosure frame section. A fast, simple and stable solution which is very easy to assemble.





### Basic framework

- Modular enclosure, 2000 mm high, from the VX25 baying enclosure system
- Base/plinth, 100 or 200 mm high, from the VX base/plinth system
- Base/plinth trim panel, side
- Side panel(s)
- Baying with bracket, block or connector
- Partial doors and front trim panels for modular front design
- Door lock(s) from the fastener system
- Roof plate depending on the protection category and function
- Cable entries

### Compartment

- Compartment side panel
- Compartment dividers
- Partial mounting plates and accessories (depending on the Form separation type)
- Air circuit-breaker mounting bracket and support rail

### Busbar system

- Flat copper busbars (Flat-PLS) for main busbar system and N/PE conductors
- Busbar supports for busbar system in roof or rear area, for busbar entry or baying
- End cover Flat-PLS
- Longitudinal connector for Flat-PLS
- Connection system for Flat-PLS
- Connection components for air circuit-breakers on bar systems or infeeds
- Infeed designed as compact infeed for Maxi-PLS
- Connection system for Maxi-PLS for cable connection on the infeed
- Accessories for busbar system, such as stabiliser, angle bracket, screws
- Busbar support, N conductor
- PE/PEN angle bracket
- Perforated cover plate with mounting bracket



## OUTGOING SECTION





## THE OUTGOING SECTION

### To combine switching and control functions

In the outgoing section, many different components may be connected under one roof, such as power distributors with control units. To achieve this, individual compartments, shielded from one another, are created within the section.

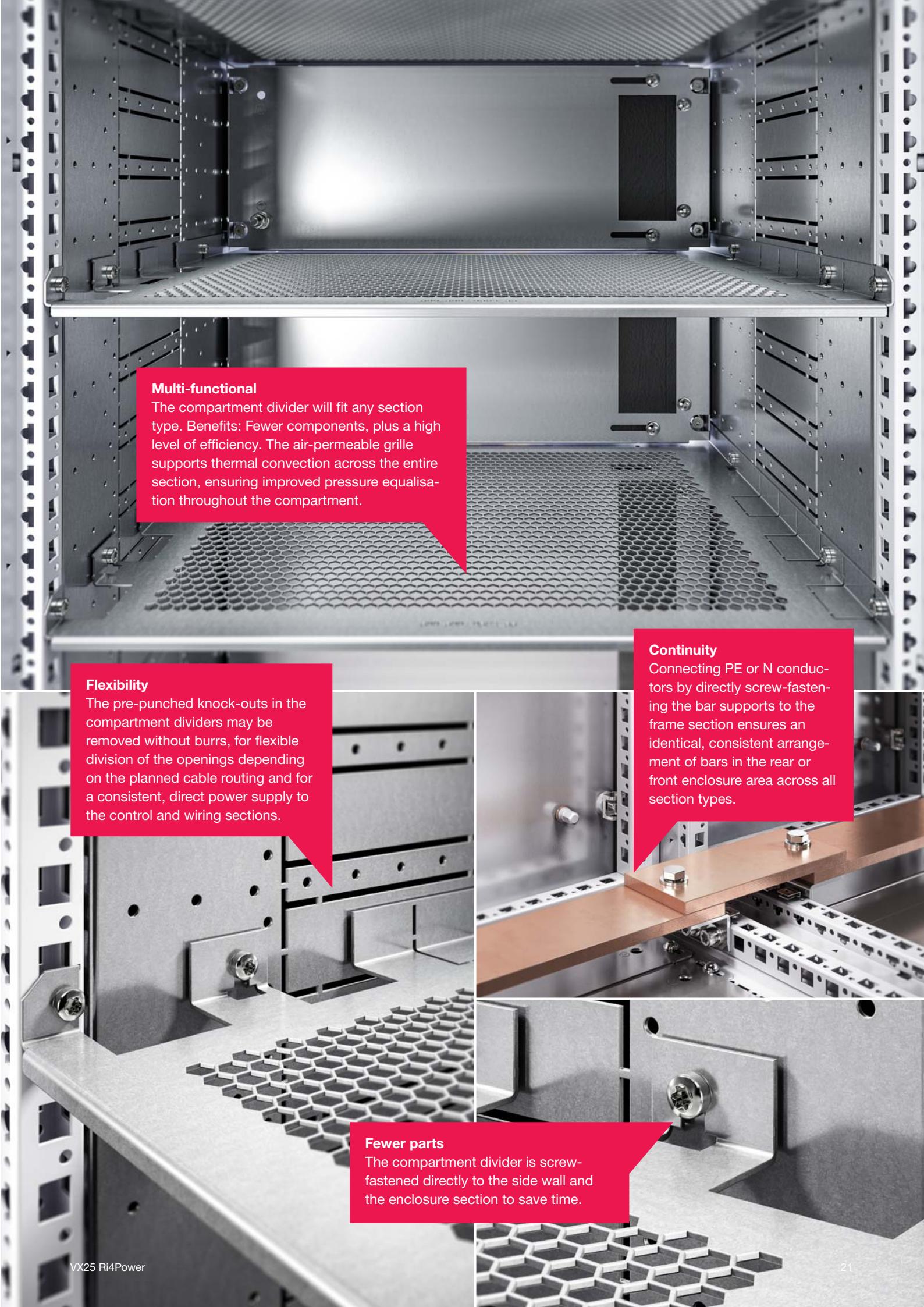
- Each compartment is configured to suit your requirements with VX25 Ri4Power system components and then individually populated e.g. with switchgear, power supply outgoing feeders or control units.
- The busbar distribution system may be positioned adjacent to or behind the compartments and is easily and safely connected to the main busbar systems using system components.
- The fully modular busbar system can be used across all sections and compartments and is exceptionally straightforward to plan and install. It also offers extensive individualisation options with uncompromising consistency.

## OUTGOING SECTION



### Utilisation of the section

The modular partial door concept is quickly achieved. Compartment side panels matching the enclosure height simultaneously shield multiple compartments. The 25 mm pitch pattern of the frame section supports variable compartment heights to maximise use of the section.



#### Multi-functional

The compartment divider will fit any section type. Benefits: Fewer components, plus a high level of efficiency. The air-permeable grille supports thermal convection across the entire section, ensuring improved pressure equalisation throughout the compartment.

#### Flexibility

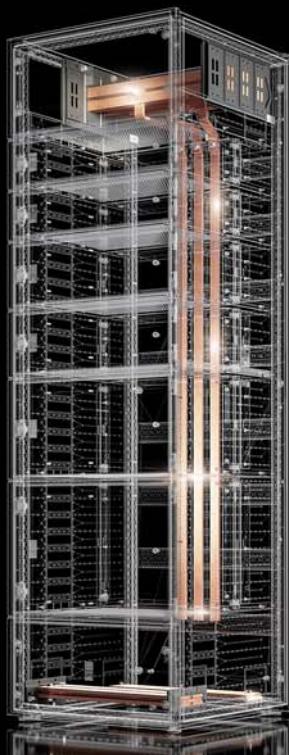
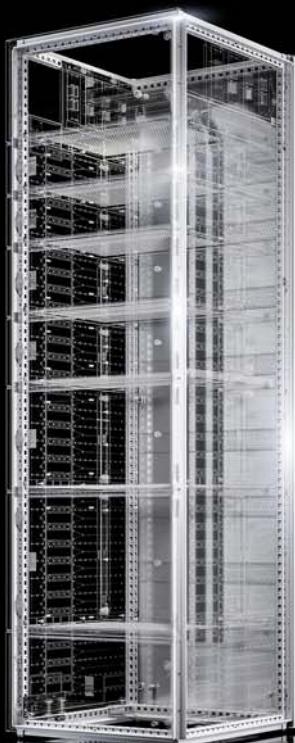
The pre-punched knock-outs in the compartment dividers may be removed without burrs, for flexible division of the openings depending on the planned cable routing and for a consistent, direct power supply to the control and wiring sections.

#### Continuity

Connecting PE or N conductors by directly screw-fastening the bar supports to the frame section ensures an identical, consistent arrangement of bars in the rear or front enclosure area across all section types.

#### Fewer parts

The compartment divider is screw-fastened directly to the side wall and the enclosure section to save time.



### Basic framework

- Modular enclosure, 2000 mm high, from the VX25 baying enclosure system
- Base/plinth, 100 or 200 mm high, from the VX base/plinth system
- Base/plinth trim panel, side
- Side panel(s)
- Baying with bracket, block or connector
- Partial doors and front trim panels for modular front design
- Door lock(s) from the fastener system
- Roof plate depending on the protection category and function

### Compartment

- Compartment side panel
- Compartment dividers
- Partial mounting plates and accessories (depending on the Form separation type)
- Plastic gland plates

### Busbar system

- Flat copper busbars (Flat-PLS) for main and distributor busbar system and N/PE conductors
- Busbar supports for busbar system in the roof section, for busbar entry or baying
- End cover Flat-PLS
- Longitudinal connector for Flat-PLS
- Connection system for Flat-PLS
- Busbar supports for distribution busbar system
- Connection components for the T-connection
- Accessories for busbar system, such as stabiliser, mounting bracket, screws
- Busbar support, N conductor
- PE/PEN angle bracket
- Perforated cover plate with mounting bracket





# VX25. SYSTEM PERFECTION.



## FORM 2B

### **To ensure optimum contact hazard protection**

The Form 2b designed as internal separation shields the busbar compartment from the functional space and the connection space.

- All active parts are safe from finger-contact in line with IP2X.
- When working in the functional space or connection space, the modular, width-flexible cover provides effective protection from contact with the busbars.
- Shielding to Form 2b also protects the equipment, by preventing the unwanted ingress of foreign bodies into the busbar compartment.
- Convenient plug-in and clip-in technology enables simple assembly of all components with no drilling required.



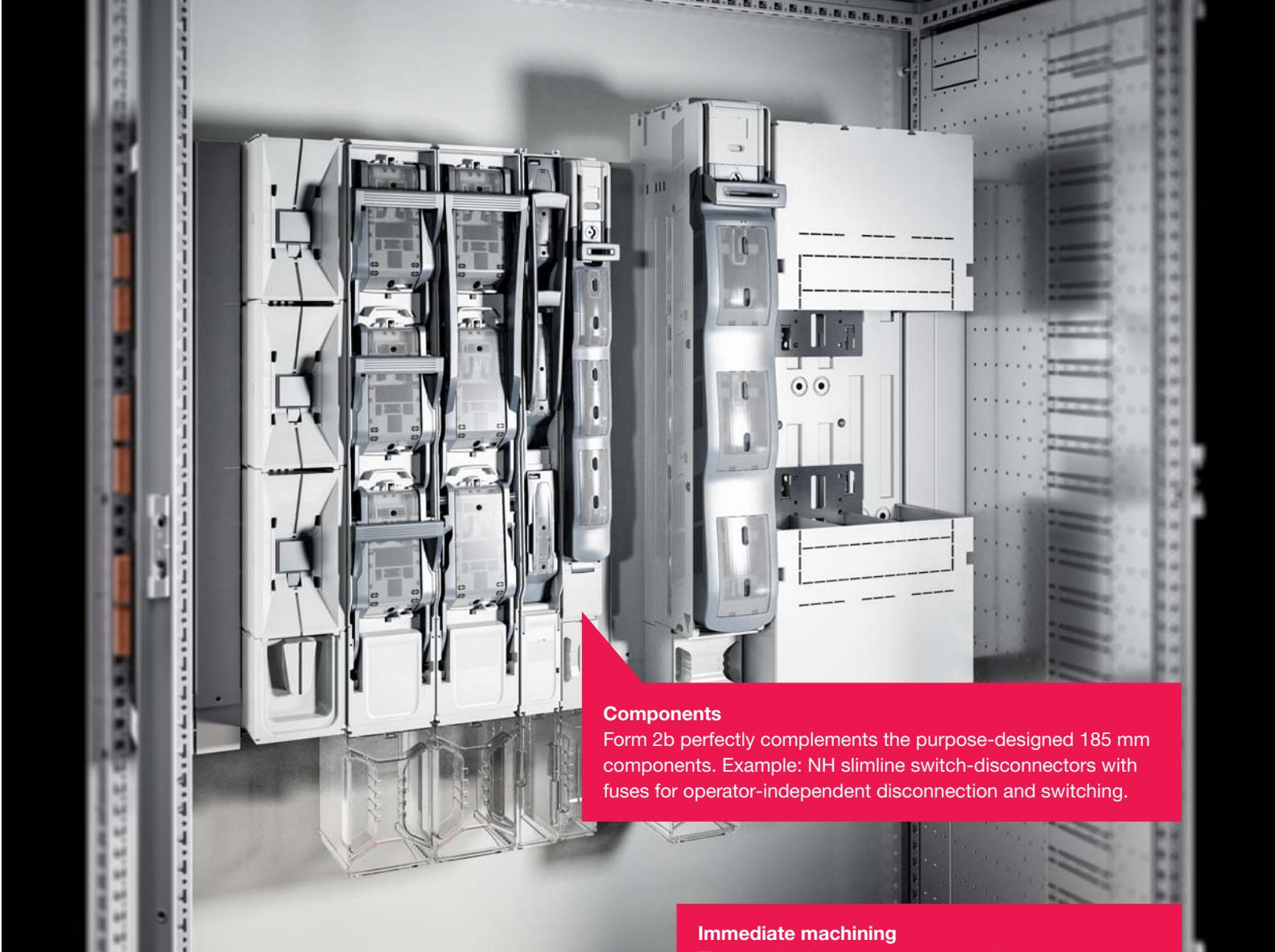
**Fast installation**

Component installation and finger-proof shielding is achieved by simply screw-fastening; no drilling required.



**Modular benefits**

The width of the contact hazard protection cover is easily adjusted thanks to its 50 mm subdivision and is always flush with the compartment side panel, in line with the Rittal system dimensions.



#### Components

Form 2b perfectly complements the purpose-designed 185 mm components. Example: NH slimline switch-disconnectors with fuses for operator-independent disconnection and switching.



#### Fast attachment

The busbar support is secured to the enclosure section using just two screws. A pre-punched knock-out is provided so that a matching cut-out can be made quickly in the compartment side panel.

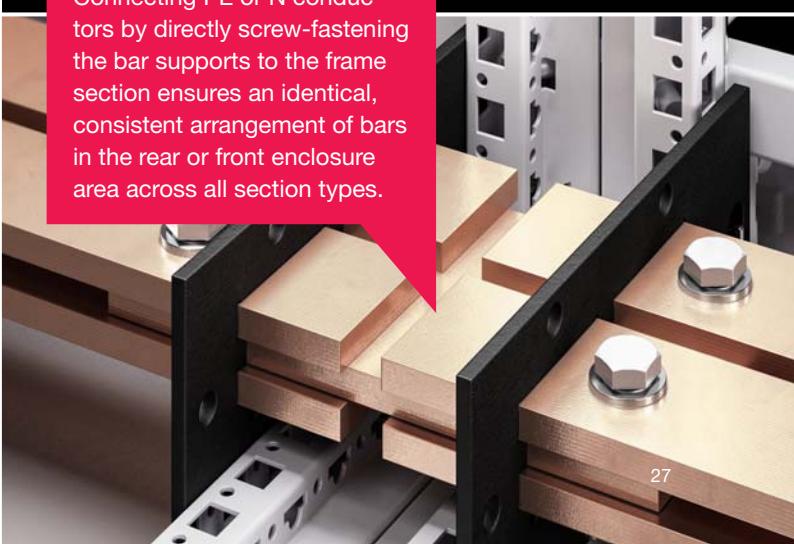
#### Immediate machining

The standard 50 x 10 mm copper bars are already pre-punched and cut to the required length to match the enclosure widths. They may be fitted directly without machining.



#### Continuity

Connecting PE or N conductors by directly screw-fastening the bar supports to the frame section ensures an identical, consistent arrangement of bars in the rear or front enclosure area across all section types.





### Basic framework

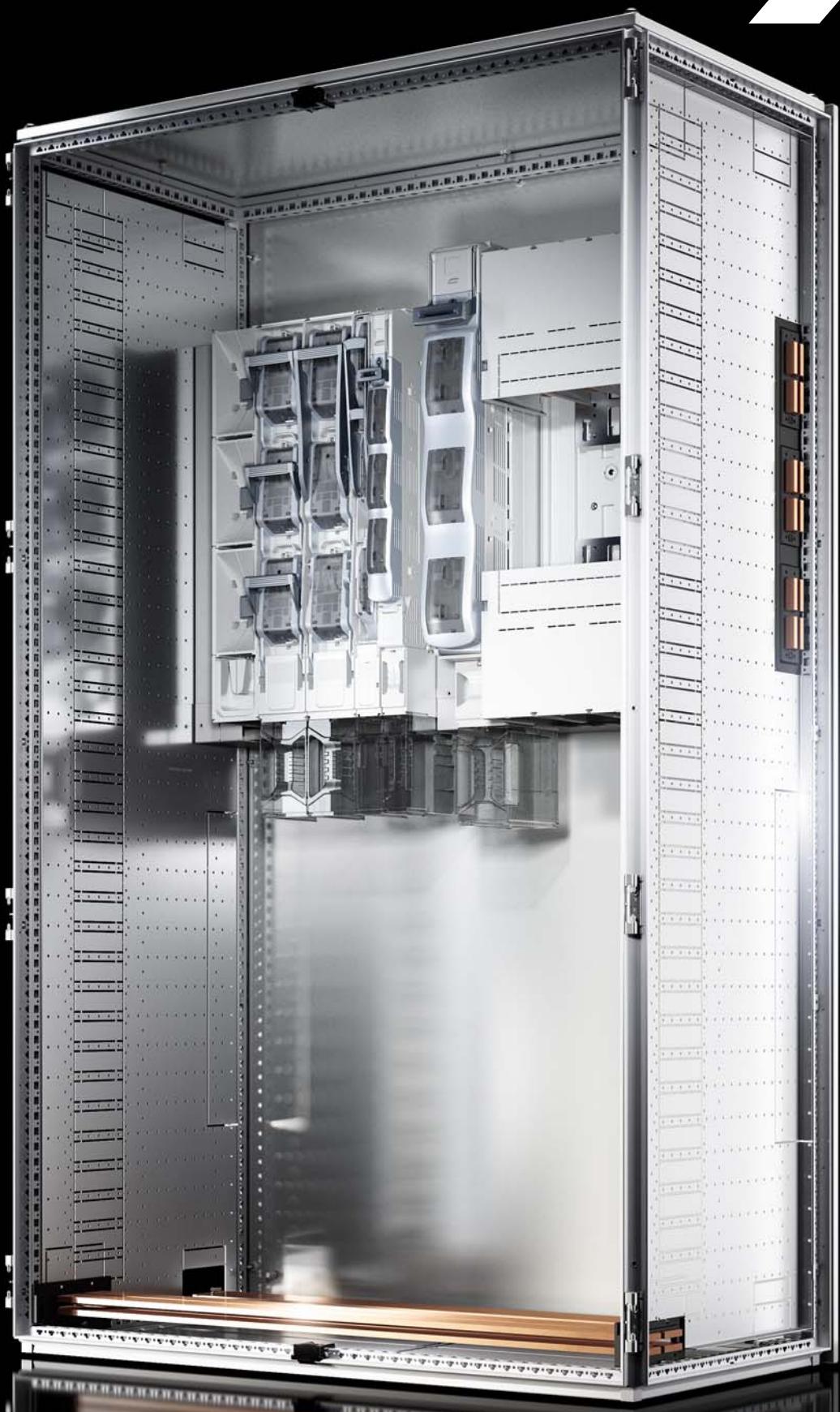
- Modular enclosure, 2000 mm high, from the VX25 baying enclosure system
- Base/plinth, 100 or 200 mm high, from the VX base/plinth system
- Base/plinth trim panel, side
- Side panel(s)
- Baying with bracket, block or connector
- Partial doors and front trim panels for modular front design
- Door lock(s) from the fastener system
- Roof plate depending on the protection category and function

### Compartment

- Compartment side panel
- Contact hazard protection cover for Form 2b
- Blanking cover for contact hazard protection cover

### Busbar system

- Flat copper busbars (Flat-PLS) for main busbar system and N/PE conductors
- Busbar supports for busbar system in the rear section, for busbar entry or baying
- End cover Flat-PLS
- Longitudinal connector for Flat-PLS
- Accessories for busbar system, such as stabiliser, mounting bracket, screws
- Busbar support, N conductor
- PE/PEN angle bracket
- Perforated cover plate with mounting bracket



## COUPLING SECTION





## THE COUPLING SECTION

### For maintaining fail-safe operation

The coupling section is a combination of an air circuit-breaker section with a busbar riser positioned optionally on the left or right.

- This allows individual busbar sections to be de-energised without switching off the entire system. This avoids total system failures during malfunctions or maintenance work, and maintains system availability, especially for systems with multiple power supplies.
- With the VX25 Ri4Power, comprehensive, stable partitioning allows busbar sections to be safely disconnected. The high safety standards of the coupling section permit less stringent requirements for overall short-circuit resistance.
- The parts, accessories and required work steps are largely the same as when assembling the circuit-breaker section. The system synergies mean that assembly time is significantly reduced, while also offering major cost-saving potential.

## COUPLING SECTION



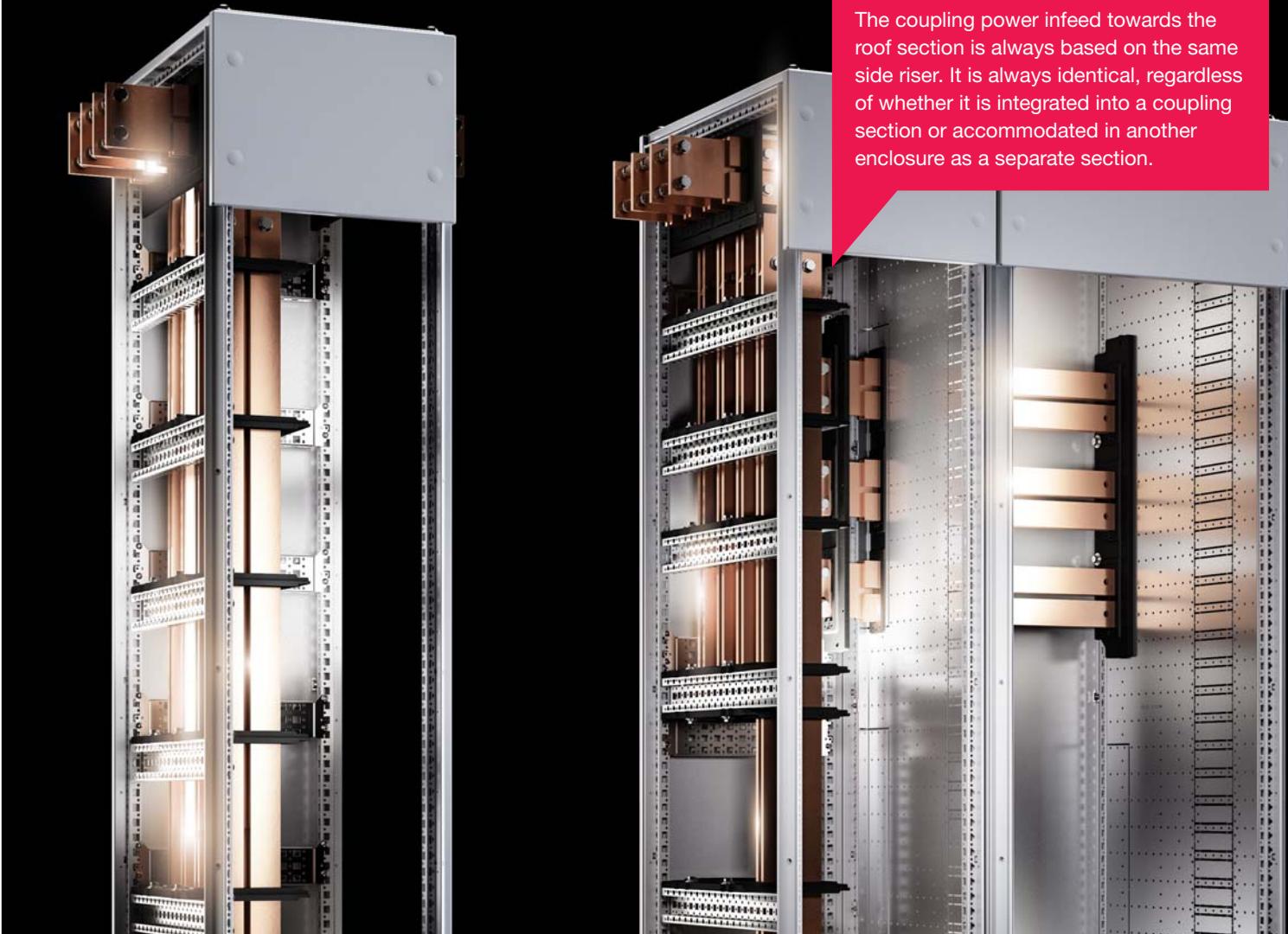
### Independence

The main busbars may optionally be routed in the roof section or central rear section.



### Modular benefits

The coupling power infeed towards the roof section is always based on the same side riser. It is always identical, regardless of whether it is integrated into a coupling section or accommodated in another enclosure as a separate section.



### Continuity

Connecting PE or N conductors by directly screw-fastening the bar supports to the frame section ensures an identical, consistent arrangement of bars in the rear or front enclosure area across all section types.





### Basic framework

- Modular enclosure 2000 mm high, from the VX25 baying enclosure system (for coupling section and additional riser section)
- Base/plinth, 100 or 200 mm high, from the VX base/plinth system
- Base/plinth trim panel, side
- Side panel(s)
- Baying with bracket, block or connector
- Partial doors and front trim panels for modular front design
- Door lock(s) from the fastener system
- Roof plate depending on the protection category and function
- Cable entries

### Compartment

- Compartment side panel
- Compartment dividers
- Partial mounting plates and accessories (depending on the Form separation type)
- Air circuit-breaker mounting bracket and support rail

### Busbar system

- Flat copper busbars (Flat-PLS) for main and riser busbar system and N/PE conductors
- Busbar supports for busbar system in roof or rear area, or for busbar extension
- Punched section without mounting flange for busbar supports in the riser section
- End cover Flat-PLS
- Longitudinal connector for Flat-PLS
- Connection system for Flat-PLS
- Connection components for air circuit-breakers on the busbar system or for T-connection
- Accessories for busbar system, e.g. stabiliser, mounting bracket, screws
- Busbar support, N conductor
- PE/PEN angle bracket
- Perforated cover plate with mounting bracket



FUSE-SWITCH DISCONNECTOR SECTION & CABLE CHAMBER





## THE FUSE-SWITCH DISCONNECTOR SECTION

### For a reliable power supply

Distributing electrical energy as compactly as possible with maximum variability using fused switchgear – that is the task of the fuse-switch disconnector section.

- The VX25 Ri4Power modular switchgear system is fully prepared for fast, safe installation of fuse-switch disconnectors, sizes 00 to 3, from Jean Müller or ABB/Siemens.
- The distribution busbars are economically dimensioned to meet the individual requirements. The main and distribution busbar systems can be configured for a short-circuit rating of up to 100 kA for 1 sec.
- Form 1 to Form 4b internal sub-division in the fuse-switch disconnector section, depending on customer requirements, is achieved via the optional selection of components.

## THE CABLE CHAMBER

### For distributing cables and lines

The cable chamber is used for routing cables and lines to the compartments.

- The extensive range of VX25 Ri4Power system accessories ensures exceptionally time-saving and flexible configuration.
- Depending on the main busbar system chosen, cable entry may be either from below, above, or below and above.
- Choose from a range of cable entry glands for the roof plate.

## FUSE-SWITCH DISCONNECTOR SECTION & CABLE CHAMBER



### Universal benefit

One single section type is sufficient for all horizontal fuse-switch-disconnector types.





#### Planning confidence

The positioning of the vertical section is identical for all fuse-switch-disconnector types. This means the system is fully planned and implemented independently of the fuse-switch-disconnector manufacturer that is subsequently chosen.



#### Combination benefits

The fuse-switch disconnector section is available with integral cable chamber, fully pre-configured, including partitioning. No additional accessories are required. Benefits: Space-efficient and time-saving.



#### Continuity

Connecting PE or N conductors by directly screw-fastening the bar supports to the frame section ensures an identical, consistent arrangement of bars in the rear or front enclosure area across all section types.





### Basic framework

- Fuse-switch-disconnector enclosure, 2000 mm high, from the VX25 baying enclosure system
- Base/plinth, 100 or 200 mm high, from the VX base/plinth system
- Base/plinth trim panel, side
- Side panel(s)
- Baying with bracket, block or connector
- Door lock(s) from the fastener system
- Cable entries

### Compartment

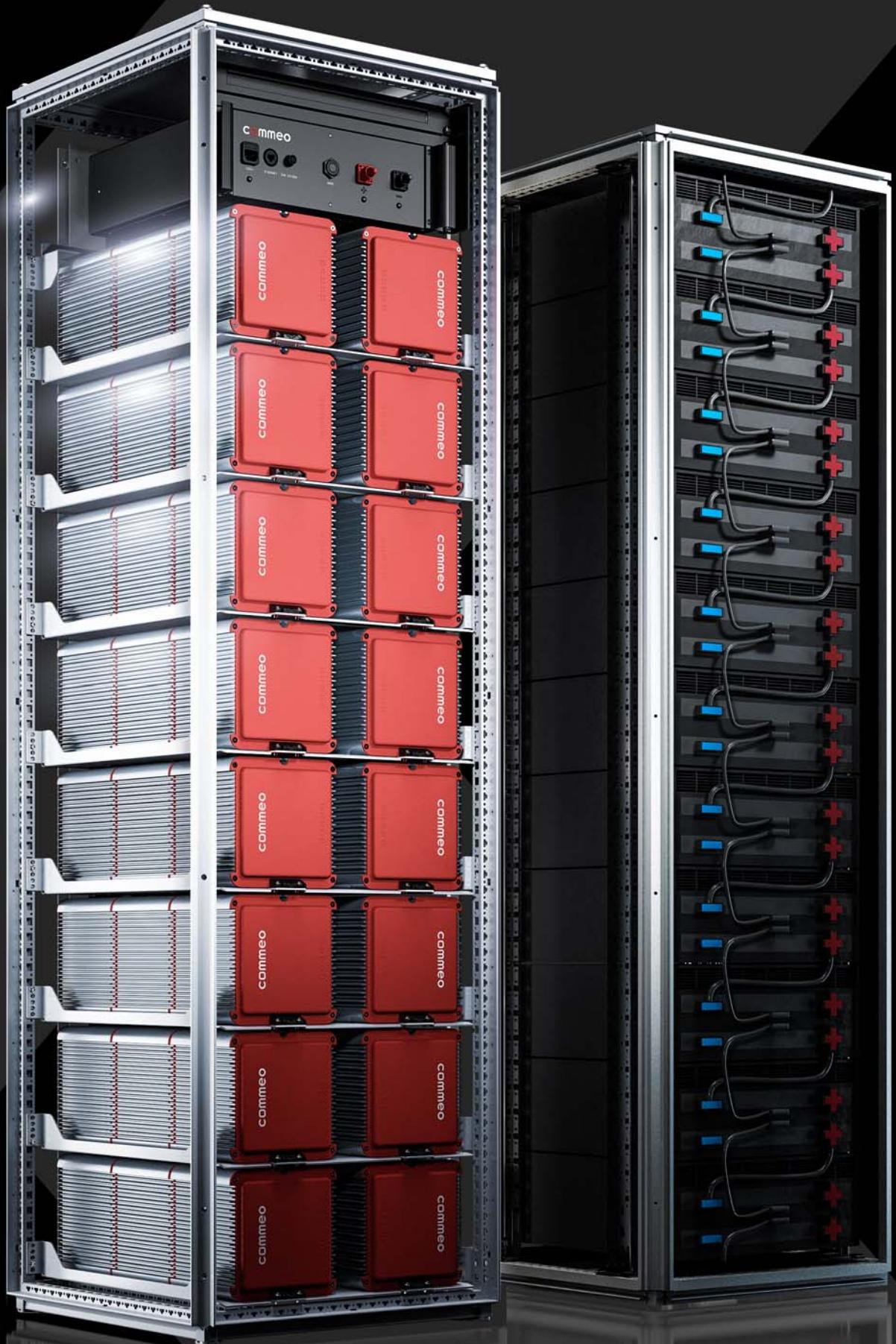
- Supplied already populated

### Busbar system

- Flat copper busbars (Flat-PLS) for main and distributor busbar system and N/PE conductors
- Busbar supports for busbar system in roof or rear section
- Busbar support, end bracket and cover for fuse-switch disconnector section
- End cover Flat-PLS
- Longitudinal connector for Flat-PLS
- Connection components for T-connector
- Busbar support, N conductor
- PE/PEN angle bracket
- Perforated cover plate with mounting bracket



## ENERGY STORAGE SYSTEM ESS



# VX25. SYSTEM PERFECTION.



## THE ENERGY STORAGE SYSTEM ESS

### For the supply of power reserves

ESS is a modular infrastructure solution for battery energy storage solutions (BESS).

- Together, Rittal standard components form a modular system which is used to configure bespoke enclosures tailored to your requirements.
- Depending on the manufacturer and design of the storage modules, the enclosure layout may be flexibly modified, for example with individual connection options.
- This very assembly-friendly solution allows easier rack scaling, power distribution, cooling and system configuration, thus helping to safeguard system availability.
- ESS is easily bayed and incorporated into existing systems.
- For seamless monitoring of performance and potential failures, ESS may be combined with CMC and RiZone for the monitoring system.
- Web connectivity is provided via the Rittal IoT module.



#### Modular

The battery rack with heavy-duty shelves can support a load of 100 kg per shelf, up to a maximum overall load of 1,500 kg. The design allows the flexible integration of different battery types into the rack. They may be contacted directly onto the busbar system. There is plenty of space in the roof section for battery management. Baying is straightforward and achievable at any time, for scalable storage capacity.



#### 482.6 mm (19") enclosure

The battery rack with 482.6 mm (19") installation likewise supports loads of up to 1,500 kg. Depending on the rack height, up to 42 U are available for the use of 482.6 mm (19") modules. They may be contacted directly onto the busbar system. There is plenty of space in the roof section for battery management. Baying is straightforward and achievable at any time, for scalable storage capacity.

# Rittal – The System.

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ENCLOSURES

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# VX25. SYSTEM PERFECTION.



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IT INFRASTRUCTURE

SOFTWARE & SERVICES



# Baying enclosure system VX25



**System accessories** Page 52 **Modular front design** Page 55 **Compartment configuration** Page 80

**Material and surface finish:**

- Enclosure frame: Sheet steel, 1.5 mm, dipcoat-primed
- Rear panel: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Gland plates: Sheet steel, 1.5 mm, zinc-plated

**Colour:**

- RAL 7035

**Basis of test:**

- IEC 61 439-1/-2
- IEC 61 641

**Protection category IP to IEC 60 529:**

- Up to IP54, depending on the panels

**Supply includes:**

- Enclosure frame
- Rear panel
- Gland plates

## Modular enclosure, height 2000 mm

Width mm	Packs of	400	600	800	400	600	800	Page
<b>Height mm</b>		2000	2000	2000	2000	2000	2000	
<b>Depth mm</b>		600	600	600	800	800	800	
<b>Model No.</b>	1 pc(s.)	<b>9680.406</b>	<b>9680.606</b>	<b>9680.806</b>	<b>9680.408</b>	<b>9680.608</b>	<b>9680.808</b>	
Weight kg		43.8	51.0	61.0	46.0	53.7	64.2	
<b>Accessories</b>								
Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm	2 pc(s.)	8620.001	8620.002	8620.003	8620.001	8620.002	8620.003	52
Base/plinth trim panels, side, 100 mm	2 pc(s.)	8620.033	8620.033	8620.033	–	8620.034	8620.034	53
Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm	2 pc(s.)	8620.021	8620.022	8620.023	8620.021	8620.022	8620.023	52
Base/plinth trim panels, side, 200 mm	2 pc(s.)	8620.043	8620.043	8620.043	–	8620.044	8620.044	53
Side panels, screw-fastened, sheet steel	2 pc(s.)	8106.245	8106.245	8106.245	–	8108.245	8108.245	53
Baying bracket, internal	6 pc(s.)	8617.500	8617.500	8617.500	8617.500	8617.500	8617.500	54
Baying block, internal	6 pc(s.)	8617.501	8617.501	8617.501	8617.501	8617.501	8617.501	54
Baying connector, external	6 pc(s.)	8617.502	8617.502	8617.502	8617.502	8617.502	8617.502	54
Partial door		see page	55					
Front trim panel, top, solid		see page	57					
Front trim panel, bottom, vented	1 pc(s.)	9682.354	9682.356	9682.358	9682.354	9682.356	9682.358	58
Front trim panel, bottom, solid		see page	57					
Roof plate IP55, solid	1 pc(s.)	9681.646	9681.666	9681.686	9681.648	9681.668	9681.688	61
Roof plate IP2X with ventilation hole	1 pc(s.)	9681.846	9681.866	9681.886	9681.848	9681.868	9681.888	61
Roof plate for cable entry glands	1 pc(s.)	9681.546	9681.566	9681.586	9681.548	9681.568	9681.588	61

# Baying enclosure system VX25

Modular enclosure, height 2200 mm

Width mm	Packs of	400	600	800	400	600	800	Page
Height mm		2200	2200	2200	2200	2200	2200	
Depth mm		600	600	600	800	800	800	
Model No.	1 pc(s).	<b>9680.426</b>	<b>9680.626</b>	<b>9680.826</b>	<b>9680.428</b>	<b>9680.628</b>	<b>9680.828</b>	
Weight kg		43.2	54.0	59.4	46.1	55.8	66.0	

## Accessories

Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm	2 pc(s).	8620.001	8620.002	528620.003	8620.001	8620.002	8620.003	52
Base/plinth trim panels, side, 100 mm	2 pc(s).	8620.033	8620.033	8620.033	8620.034	8620.034	8620.034	53
Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm	2 pc(s).	8620.021	8620.022	8620.023	8620.021	8620.022	8620.023	52
Base/plinth trim panels, side, 200 mm	2 pc(s).	8620.043	8620.043	8620.043	8620.044	8620.044	8620.044	53
Side panels, screw-fastened, sheet steel	2 pc(s).	8126.245	8126.245	8126.245	8128.245	8128.245	8128.245	53
Baying bracket, internal	6 pc(s).	8617.500	8617.500	8617.500	8617.500	8617.500	8617.500	54
Baying block, internal	6 pc(s).	8617.501	8617.501	8617.501	8617.501	8617.501	8617.501	54
Baying connector, external	6 pc(s).	8617.502	8617.502	8617.502	8617.502	8617.502	8617.502	54
Partial door		see page	see page	see page	see page	see page	see page	55
Front trim panel, top, solid		see page	see page	see page	see page	see page	see page	57
Front trim panel, bottom, vented	1 pc(s).	9682.354	9682.356	9682.358	9682.354	9682.356	9682.358	58
Front trim panel, bottom, solid		see page	see page	see page	see page	see page	see page	57
Roof plate IP55, solid	1 pc(s).	9681.646	9681.666	9681.686	9681.648	9681.668	9681.688	61
Roof plate IP2X with ventilation hole	1 pc(s).	9681.846	9681.866	9681.886	9681.848	9681.868	9681.888	61
Roof plate for cable entry glands	1 pc(s).	9681.546	9681.566	9681.586	9681.548	9681.568	9681.588	61

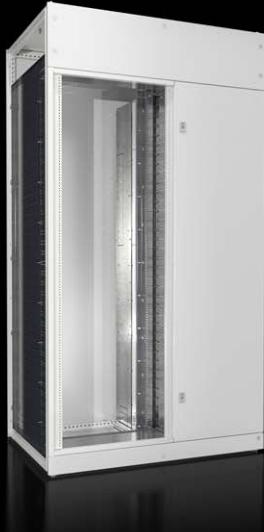
Rittal – The System.



**VX25 Power Engineering**

See page 106

# Baying enclosure system VX25



**System accessories** Page 52 **Compartment configuration** Page 80 **Fuse-switch disconnector section** Page 85

## Material and surface finish:

- Enclosure frame: Sheet steel, 1.5 mm, dipcoat-primed
- Roof: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Door: Sheet steel, 2 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Rear panel: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Gland plates: Sheet steel, 1.5 mm, zinc-plated

- Front panel: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Compartment side panel: Sheet steel, 1.5 mm, zinc-plated

## Colour:

- RAL 7035

## Basis of test:

- IEC 61 439-1/-2
- IEC 61 641

## Protection category IP to IEC 60 529:

- Up to IP3X, depending on the panels

## Supply includes:

- Enclosure frame
- Door
- Roof plate
- Rear panel
- Gland plates
- Front trim panels
- Lock: 3 mm double-bit
- Compartment side panels
- Locating frame for disconnectors with fuses (brands ABB SlimLine/Jean Müller SASIL)

## Fuse-switch disconnector enclosure, height 2000 – 2200 mm

Width mm	Packs of	1000	1200	1000	1200	Page
<b>Height mm</b>		2000	2000	2200	2200	
<b>Depth mm</b>		600	800	600	800	
<b>Model No.</b>	1 pc(s.)	<b>9680.005</b>	<b>9680.207</b>	<b>9680.025</b>	<b>9680.227</b>	
Weight kg		125.3	149.6	135.2	158.9	

## Accessories

Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm	2 pc(s.)	8620.005	8620.007	8620.005	8620.007	52
Base/plinth trim panels, side, 100 mm	2 pc(s.)	8620.033	8620.034	8620.033	8620.034	53
Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm	2 pc(s.)	8620.024	8620.025	8620.024	8620.025	52
Base/plinth trim panels, side, 200 mm	2 pc(s.)	8620.043	8620.044	8620.043	8620.044	53
Side panels, screw-fastened, sheet steel	2 pc(s.)	8106.245	8108.245	8126.245	8128.245	53
Baying bracket, internal	6 pc(s.)	8617.500	8617.500	8617.500	8617.500	54
Baying block, internal	6 pc(s.)	8617.501	8617.501	8617.501	8617.501	54
Baying connector, external	6 pc(s.)	8617.502	8617.502	8617.502	8617.502	54
Roof plate IP2X with ventilation hole	1 pc(s.)	9681.806	9681.828	9681.806	9681.828	61

# System accessories VX

## Base/plinth system VX

### Modular base/plinth diversity

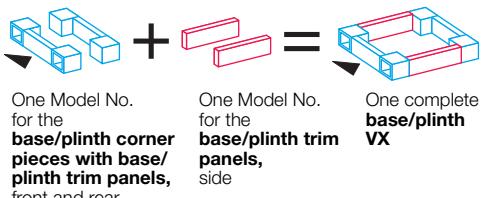
The new, innovative base/plinth system VX offers an unprecedented diversity of functions and applications. It combines all existing base/plinth functions in a single solution, as well as opening up many new applications. As if that isn't enough, it is also compatible with existing enclosure solutions VX IT, VX SE, TX, PC, TopConsole, one-piece consoles and IW. In short, it is a base/plinth system.

The base/plinth system VX comprises the following components:

- Base/plinth corner pieces with base/plinth trim panels, front and rear
- Base/plinth trim panels, sides

Thanks to fully symmetrical corner pieces, and by using the same base/plinth trim panels in the width and depth, the system opens up many new applications. For example, the vented trim panels and trim panels with brush strips available as accessories may now optionally be attached at the sides, or exchanged for the front/rear trim panels.

All trim panels may optionally be clipped into the corner piece, or securely screw-fastened. Depending on the application, for example, users can dispense with the trim panels between bayed enclosures suites, or a 100 mm high trim panel may be used to stabilise the base/plinth corner pieces. In combination with its extensive range of accessories, and thanks to its compatibility with enclosure accessories, the base/plinth system VX offers almost infinite possibilities in terms of siting, transportation, cable routing, cable attachment and base/plinth configuration.



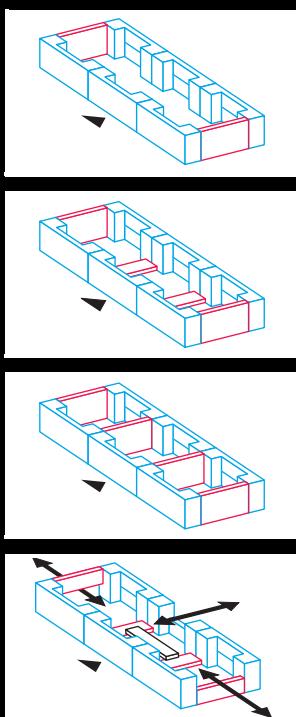
Base/ plinth	Basic form	Cable entry options			Stabilisation of bayed base/plinths
100 mm					
200 mm					

### Configuration examples

Order includes	Functional benefits
3 packs Base/plinth corner pieces with base/plinth trim panels 1 pack Base/plinth trim panels, sides, 200 mm high	Continuous cable chamber
3 packs Base/plinth corner pieces with base/plinth trim panels 1 pack Base/plinth trim panels, sides, 200 mm high 1 pack Base/plinth trim panels, sides, 100 mm high 1 pack Baying brackets, internal (8617.500, packs of 6) 4 pieces are required for this solution	Additional stability during transportation with base/plinth trim panels rotated through 90°
3 packs Base/plinth corner pieces with base/plinth trim panels 2 packs Base/plinth trim panels, sides, 200 mm high	Shielding of the base/plinths from one another

#### Other options:

- Cable entry at the side by fitting a 100 mm base/plinth trim panel with brush strip
- Cable entry from the rear by dismantling one or more trim panels from the base/plinth corner pieces and replacing them with trim panels with brush strips
- Cable routing in the base/plinth by using punched sections with mounting flanges on the base/plinth trim panels



# System accessories VX

## Base/plinth / walls



### Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm

Heavy-duty base/plinth corner pieces with moulded self-positioning to the bayed enclosure system, for use with or without trim panels depending on the application. Large openings in the corner piece for optimum access to the screw-fastening point, may be concealed with a corner and baying cover.

#### Material:

- Base/plinth corner piece: Sheet steel
- Base/plinth trim panel front/rear: Sheet steel
- Corner and baying cover: Plastic

#### Colour:

- RAL 9005

#### Supply includes:

- 4 base/plinth corner pieces, 100 mm high
- 4 corner covers
- 1 baying cover
- 2 base/plinth trim panels, front/rear, 100 mm high
- Assembly parts

#### Note:

- Base/plinth trim panels, sides to finish off a unit, for additional stabilisation between base/plinths, or for interior configuration

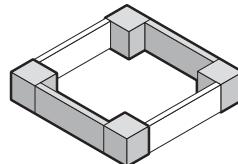
Height mm	For enclosure width mm	Packs of	Model No.
100	400	2 pc(s).	<b>8640.001</b>
100	600	2 pc(s).	<b>8640.002</b>
100	800	2 pc(s).	<b>8640.003</b>
100	1000	2 pc(s).	<b>8640.005</b>
100	1200	2 pc(s).	<b>8640.007</b>

#### ! Also required:

- Base/plinth trim panels, sides, 100 mm, see page 53

#### + Accessories:

- Baying bracket, internal, see page 54



### Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm

Heavy-duty base/plinth corner pieces with moulded self-positioning to the bayed enclosure system, for use with or without trim panels depending on the application. Large openings in the corner piece for optimum access to the screw-fastening point, may be concealed with a corner and baying cover.

#### Material:

- Base/plinth corner piece: Sheet steel
- Base/plinth trim panel front/rear: Sheet steel
- Corner and baying cover: Plastic

#### Colour:

- RAL 9005

#### Supply includes:

- 4 base/plinth corner pieces, 200 mm high
- 4 corner covers
- 1 baying cover
- 1 base/plinth trim panel, front/rear, 200 mm high
- 2 base/plinth trim panels, front/rear, 100 mm high
- Assembly parts

#### Note:

- Base/plinth trim panels, sides to finish off a unit, for additional stabilisation between base/plinths, or for interior configuration

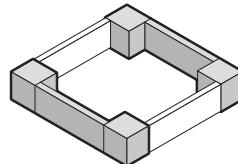
Height mm	For enclosure width mm	Packs of	Model No.
200	400	2 pc(s).	<b>8640.021</b>
200	600	2 pc(s).	<b>8640.022</b>
200	800	2 pc(s).	<b>8640.023</b>
200	1000	2 pc(s).	<b>8640.024</b>
200	1200	2 pc(s).	<b>8640.025</b>

#### ! Also required:

- Base/plinth trim panels, sides, 200 mm, see page 53

#### + Accessories:

- Baying bracket, internal, see page 54



# System accessories VX

## Base/plinth / walls

### Base/plinth trim panels, sides, 100 mm

#### Sheet steel

To finish off a base/plinth unit at the sides and for additional stability or interior configuration of bayed base/plinths. One 200 mm high or two 100 mm high trim panels may optionally be fitted on 200 mm high base/plinths.

#### Material:

- Sheet steel

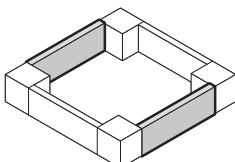
#### Colour:

- RAL 9005

#### Supply includes:

- Assembly parts

Height mm	For enclosure depth mm	Packs of	Model No.
100	600	2 pc(s).	<b>8640.033</b>
100	800	2 pc(s).	<b>8640.034</b>



### Base/plinth trim panels, sides, 200 mm

#### Sheet steel

To finish off a base/plinth unit at the sides and for additional stability or interior configuration of bayed base/plinths. One 200 mm high or two 100 mm high trim panels may optionally be fitted on 200 mm high base/plinths.

#### Material:

- Sheet steel

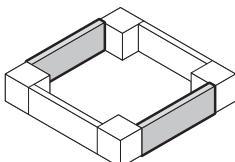
#### Colour:

- RAL 9005

#### Supply includes:

- Assembly parts

Height mm	For enclosure depth mm	Packs of	Model No.
200	600	2 pc(s).	<b>8640.043</b>
200	800	2 pc(s).	<b>8640.044</b>



### Side panel, screw-fastened, sheet steel

#### Benefits:

- Time-saving assembly thanks to clip-in side panel holders
- Automatic potential equalisation and higher EMC protection, thanks to enclosure panel holders with earthing inserts located on the inside
- Easy positioning in the height and depth with the location aid
- One-person assembly
- Earthing bolts with large, paint-free contact surface for optimum contact

#### Material:

- Sheet steel, 1.5 mm

#### Surface finish:

- Dipcoat-primed, powder-coated on the outside

#### Colour:

- RAL 7035

#### Protection category IP to IEC 60 529:

- IP55 (in conjunction with enclosures from the VX series)

#### Supply includes:

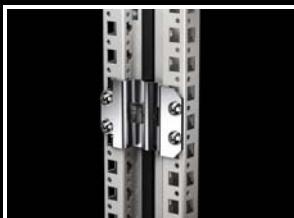
- Assembly parts

For enclosure height mm	For enclosure depth mm	Packs of	Model No.
2000	600	2 pc(s).	<b>8106.245</b>
2000	800	2 pc(s).	<b>8108.245</b>
2200	600	2 pc(s).	<b>8126.245</b>
2200	800	2 pc(s).	<b>8128.245</b>



# System accessories VX

## Baying



### Baying bracket, internal

**Benefits:**

- Fast, secure installation either from the front or from the side.
- For all-round installation on the baying point
- May be flexibly positioned to avoid collisions with installed equipment
- Also suitable for baying base/plinth components

**Material:**

- Sheet steel

**Surface finish:**

- Zinc-plated

**Supply includes:**

- Baying bracket, internal
- Baying seal
- Assembly parts

**Note:**

- 1 pack is sufficient for one baying joint

Packs of	Model No.
6 pc(s).	<b>8617.500</b>

**Possible alternative:**

- Baying block, internal, see page 54
- Baying connector, external, see page 54

### Baying block, internal

**Benefits:**

- Side mounting creates a flush surface to the extrusion, suitable for top mounting, thus avoiding collisions with installed equipment
- For all-round installation on the baying point

**Material:**

- Die-cast zinc

**Supply includes:**

- Baying block, internal
- Baying seal
- Assembly parts

**Note:**

- 1 pack is sufficient for one baying joint

Packs of	Model No.
6 pc(s).	<b>8617.501</b>

**Possible alternative:**

- Baying bracket, internal, see page 54
- Baying connector, external, see page 54

### Baying connector, external

For mounting on the vertical enclosure sections from the outside.

**Supply includes:**

- Baying connector, external
- Baying seal
- Assembly parts

**Note:**

- 1 pack is sufficient for one baying joint

Material	Packs of	Model No.
Sheet steel, zinc-plated	6 pc(s).	<b>8617.502</b>
Stainless steel 1.4301 (AISI 304)	6 pc(s).	<b>8617.503</b>

**Possible alternative:**

- Baying bracket, internal, see page 54
- Baying block, internal, see page 54

# System accessories VX

## Modular front design

### Partial door

Suitable for VX enclosures instead of a door or rear panel. The partial doors may be combined with one another as required. A trim panel is required at the top and bottom in each case. Door may be optionally hinged on the right or left. Standard double-bit lock insert may be exchanged for lock inserts, type A.

#### Material:

- Sheet steel, 2 mm

#### Surface finish:

- Textured paint

#### Colour:

- RAL 7035

#### Supply includes:

- Partial door
- Cross member
- Hinges
- Lock components
- Assembly parts

#### Note:

- Opening angle of partial doors max. 130°



#### Also required:

- Front trim panel, bottom, vented, see page 58
- Front trim panel, top, solid, see page 57
- Front trim panel, bottom, solid, see page 57



#### Accessories:

- Perforated mounting strip, see page 56
- Trim panel, hinged at the top, see page 58
- Mini comfort handle AX, see page 59
- Lock insert, see page 60



#### For enclosure width 400 mm

Width mm	Height mm	Protection category IP to IEC 60 529	Viewing window	Number of locks	Material	Packs of	Model No.
400	200	IP54	-	1	-	1 pc(s).	<b>9682.142</b>
400	300	IP54	-	1	-	1 pc(s).	<b>9682.143</b>
400	400	IP54	-	2	-	1 pc(s).	<b>9682.144</b>
400	600	IP54	-	2	-	1 pc(s).	<b>9682.146</b>
400	800	IP54	-	2	-	1 pc(s).	<b>9682.148</b>
400	1000	IP54	-	3	-	1 pc(s).	<b>9682.140</b>
400	1200	IP54	-	3	-	1 pc(s).	<b>9682.152</b>
400	1400	IP54	-	3	-	1 pc(s).	<b>9682.154</b>
400	1600	IP54	-	4	-	1 pc(s).	<b>9682.156</b>
400	1800	IP54	-	4	-	1 pc(s).	<b>9682.158</b>
400	2000	IP54	-	4	-	1 pc(s).	<b>9682.150</b>

#### For enclosure width 600 mm

Width mm	Height mm	Protection category IP to IEC 60 529	Viewing window	Number of locks	Material	Packs of	Model No.
600	150	IP54	-	1	-	1 pc(s).	<b>9682.161</b>
600	200	IP54	-	1	-	1 pc(s).	<b>9682.162</b>
600	300	IP54	-	1	-	1 pc(s).	<b>9682.163</b>
600	400	IP54	-	2	-	1 pc(s).	<b>9682.164</b>
600	600	IP54	-	2	-	1 pc(s).	<b>9682.166</b>
600	600	IP54	■	2	Viewing window: Single-pane safety glass, 3 mm	1 pc(s).	<b>9682.167</b>
600	800	IP54	-	2	-	1 pc(s).	<b>9682.168</b>
600	800	IP54	■	2	Viewing window: Single-pane safety glass, 3 mm	1 pc(s).	<b>9682.169</b>
600	1000	IP54	-	3	-	1 pc(s).	<b>9682.160</b>
600	1200	IP54	-	3	-	1 pc(s).	<b>9682.172</b>
600	1400	IP54	-	3	-	1 pc(s).	<b>9682.174</b>
600	1600	IP54	-	4	-	1 pc(s).	<b>9682.176</b>
600	1800	IP54	-	4	-	1 pc(s).	<b>9682.178</b>
600	2000	IP54	-	4	-	1 pc(s).	<b>9682.170</b>

# System accessories VX

## Modular front design



### For enclosure width 800 mm

Width mm	Height mm	Protection category IP to IEC 60 529	Viewing window	Number of locks	Material	Packs of	Model No.
800	150	IP54	–	1	–	1 pc(s).	<b>9682.181</b>
800	200	IP54	–	1	–	1 pc(s).	<b>9682.182</b>
800	300	IP54	–	1	–	1 pc(s).	<b>9682.183</b>
800	400	IP54	–	2	–	1 pc(s).	<b>9682.184</b>
800	600	IP54	–	2	–	1 pc(s).	<b>9682.186</b>
800	600	IP54	■	2	Viewing window: Single-pane safety glass, 3 mm	1 pc(s).	<b>9682.187</b>
800	800	IP54	–	2	–	1 pc(s).	<b>9682.188</b>
800	1000	IP54	–	3	–	1 pc(s).	<b>9682.180</b>
800	1200	IP54	–	3	–	1 pc(s).	<b>9682.192</b>
800	1400	IP54	–	3	–	1 pc(s).	<b>9682.194</b>
800	1600	IP54	–	4	–	1 pc(s).	<b>9682.196</b>
800	1800	IP54	–	4	–	1 pc(s).	<b>9682.198</b>
800	2000	IP54	–	4	–	1 pc(s).	<b>9682.190</b>

### For enclosure width 1000 mm

Width mm	Height mm	Protection category IP to IEC 60 529	Viewing window	Number of locks	Material	Packs of	Model No.
1000	400	–	–	2	–	1 pc(s).	<b>9682.104</b>
1000	600	–	–	2	–	1 pc(s).	<b>9682.106</b>
1000	800	–	–	2	–	1 pc(s).	<b>9682.108</b>

### For enclosure width 1200 mm

Width mm	Height mm	Protection category IP to IEC 60 529	Viewing window	Number of locks	Material	Packs of	Model No.
1200	400	–	–	2	–	1 pc(s).	<b>9682.124</b>
1200	600	–	–	2	–	1 pc(s).	<b>9682.126</b>
1200	800	–	–	2	–	1 pc(s).	<b>9682.128</b>



## Perforated mounting strip for partial door

For retrospective external mounting on partial doors. The perforated mounting strips have a 25 mm pitch pattern of holes and may be used for mounting individual accessories such as cable ducts, hose holders etc. on the rear of the door. Hole diameter of perforated mounting strip: 4.5 mm.

### Material:

- Sheet steel, 1 mm

### Surface finish:

- Zinc-plated

### Supply includes:

- Assembly parts

For enclosure width mm	Length mm	For partial door height mm	Packs of	Model No.
400	198	200 - 800	10 pc(s).	<b>9681.204</b>
600	398	150 - 800	10 pc(s).	<b>9681.206</b>
800	598	150 - 800	10 pc(s).	<b>9681.208</b>

### Assembly instruction:

- For enclosure width 1000 mm:  
1 x 9681.204 and 1 x 9681.206
- For enclosure width 1200 mm:  
2 x 9681.206

# System accessories VX

## Modular front design

### Front trim panel, top, solid

To finish off the modular front design at the top when using partial doors. The front trim panels may be removed from the outside by unscrewing. The cross member required for mounting is included with the supply of the mounted partial doors.

**Design:**

- Solid

**Material:**

- Sheet steel, 1.5 mm

**Surface finish:**

- Textured paint

**Colour:**

- RAL 7035

**Protection category IP to IEC 60 529:**

- IP54

**Supply includes:**

- Assembly parts

Height mm	For enclosure width mm	Packs of	Model No.
100	400	1 pc(s).	<b>9682.314</b>
300	400	1 pc(s).	<b>9682.324</b>
100	600	1 pc(s).	<b>9682.316</b>
300	600	1 pc(s).	<b>9682.326</b>
100	800	1 pc(s).	<b>9682.318</b>
300	800	1 pc(s).	<b>9682.328</b>
300	1000	1 pc(s).	<b>9682.320</b>
300	1200	1 pc(s).	<b>9682.322</b>



### Front trim panel, bottom, solid

To finish off the modular front design at the bottom when using partial doors. The front trim panels may be removed from the outside by unscrewing.

**Design:**

- Solid

**Material:**

- Sheet steel, 1.5 mm

**Surface finish:**

- Textured paint

**Colour:**

- RAL 7035

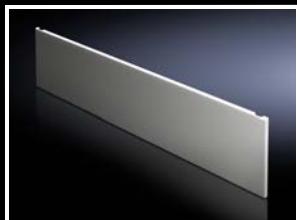
**Protection category IP to IEC 60 529:**

- IP54

**Supply includes:**

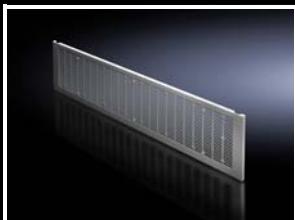
- Cross member
- Assembly parts

Height mm	For enclosure width mm	Packs of	Model No.
100	400	1 pc(s).	<b>9682.334</b>
300	400	1 pc(s).	<b>9682.344</b>
100	600	1 pc(s).	<b>9682.336</b>
300	600	1 pc(s).	<b>9682.346</b>
100	800	1 pc(s).	<b>9682.338</b>
300	800	1 pc(s).	<b>9682.348</b>
100	1000	1 pc(s).	<b>9682.330</b>
300	1000	1 pc(s).	<b>9682.340</b>
100	1200	1 pc(s).	<b>9682.332</b>
300	1200	1 pc(s).	<b>9682.342</b>



# System accessories VX

## Modular front design



### Front trim panel, bottom, vented

To finish off the modular front design at the bottom when using partial doors. The front trim panels may be removed from the outside by unscrewing.

**Design:**

- With louvres

**Material:**

- Sheet steel, 1.5 mm

**Surface finish:**

- Textured paint

**Colour:**

- RAL 7035

**Protection category IP to IEC 60 529:**

- IP2X

**Supply includes:**

- Cross member
- Assembly parts

**Note:**

- When using front trim panels IP2X, select a roof plate with protection category IP2X for the top ventilation.

Height mm	For enclosure width mm	Packs of	Model No.
300	400	1 pc(s).	9682.354
300	600	1 pc(s).	9682.356
300	800	1 pc(s).	9682.358
300	1000	1 pc(s).	9682.350
300	1200	1 pc(s).	9682.352

**Also required:**

- Roof plate IP2X with ventilation hole, see page 61



### Trim panel, hinged at the top

For the installation of control and display components, in conjunction with a modular front design and protective bar.

**Material:**

- Sheet steel, 2 mm

**Surface finish:**

- Textured paint

**Colour:**

- RAL 7035

**Protection category IP to IEC 60 529:**

- IP54

**Supply includes:**

- Hinges
- Cam lock with 3 mm double-bit insert
- Assembly parts

Height mm	For enclosure width mm	Packs of	Model No.
300	600	1 pc(s).	8620.500
300	800	1 pc(s).	8620.501
300	1200	1 pc(s).	8620.502

**Accessories:**

- Stay, see page 58
- Lock insert, see page 60



### Support stay

**for trim panel, hinged at the top**

5 pitch pattern positions up to a maximum opening angle of approx. 85°.

**Material:**

- Sheet steel

**Surface finish:**

- Zinc-plated

Packs of	Model No.
2 pc(s).	8801.260

# System accessories VX

## Lock system

### Mini-comfort handle AX

#### for partial doors with cam lock

The lock is opened by swivelling the unlocked handle. Prepared for the installation of lock inserts or for the installation of standard commercially available 40 or 45 mm profile half-cylinders, as well as lock and push-button inserts.

Other variants prepared for ASSA oval profile half-cylinder up to a maximum overall length of 26.9 mm and KESO/KABA profile half-cylinder up to a maximum overall length of 42.5 mm and a Ø of 22 mm.

<b>Model No.</b>				
Die-cast zinc RAL 7035	<b>2537.100</b>	<b>2537.300</b>	<b>2537.400</b>	<b>2537.500</b>
<b>Lock inserts, type A</b>				
7 mm square	2460.000	2460.000	–	–
8 mm square	2461.000	2461.000	–	–
7 mm triangular	2462.000	2462.000	–	–
8 mm triangular	2463.000	2463.000	–	–
Screwdriver	2464.000	2464.000	–	–
Daimler insert	2465.000	2465.000	–	–
3 mm double-bit	2466.000	2466.000	–	–
Fiat	2307.000	2307.000	–	–
6.5 mm triangular	2460.650	2460.650	–	–
<b>Lock and push-button inserts</b>				
Lock insert, lock no. 3524 E <sup>1)</sup>	2467.000	2467.000	–	–
Push-button insert	2468.000	2468.000	–	–
Push-button and lock insert <sup>1)</sup>	2469.000 <sup>2)</sup>	2469.000 <sup>2)</sup>	–	–
<b>Profile half-cylinders</b>				
to DIN 18 252 <sup>3)</sup>	9785.040 <sup>5)</sup>	9785.040 <sup>5)</sup>	–	–
	9785.042 <sup>4)</sup>	9785.042 <sup>4)</sup>	–	–

<sup>1)</sup> With two keys

<sup>2)</sup> Lock no. 2123; no other lock is possible

<sup>3)</sup> With 3 keys for each lock insert

<sup>4)</sup> Packs of two, simultaneous locking within the same pack, no simultaneous locking for different packs

<sup>5)</sup> Different closures



# System accessories VX

## Lock system



### Lock inserts

for mini-comfort handle AX

			Model No.
Lock insert, lock no. 3524 E <sup>1)</sup>	<b>2467.000</b>	—	—
Push-button insert	<b>2468.000</b>	—	—
Push-button and lock insert <sup>1)</sup>	<b>2469.000<sup>2)</sup></b>	—	—
Profile half-cylinders to DIN 18 252 <sup>3)</sup>	—	<b>9785.040<sup>5)</sup></b>	—
	—	<b>9785.042<sup>4)</sup></b>	—

<sup>1)</sup> With two keys

<sup>2)</sup> Lock no. 2123; no other lock is possible

<sup>3)</sup> With 3 keys for each lock insert

<sup>4)</sup> Packs of two, simultaneous locking within the same pack, no simultaneous locking for different packs

<sup>5)</sup> Different closures



### Enclosure key

For lock inserts. Enclosure, case and lock systems are supplied as standard with matching keys.

					Model No.
	—	—	<b>2549.000</b>	<b>2549.500<sup>2)</sup></b>	
Double-bit no. 5	<b>2531.000</b>	—	■	■	
Security lock no. 3524 E	—	<b>2532.000<sup>1)</sup></b>	—	—	
7 mm triangular	<b>2545.000</b>	—	—	■	
8 mm triangular	<b>2546.000</b>	—	■	■	
7 mm square	<b>2547.000</b>	—	—	■	
8 mm square	<b>2548.000</b>	—	■	■	
for Daimler	<b>2521.000</b>	—	—	—	
for Fiat	<b>2308.000</b>	—	—	—	

<sup>1)</sup> Packs of 2

<sup>2)</sup> With bit adaptor and reversible bit for:  
multi-tooth size 25 and Phillips-head (Ph 2)

# System accessories VX

## Roof

### Roof plate IP55, solid

For enclosures without roof plate and in exchange for the standard roof.

**Material:**

- Sheet steel, 1.5 mm

**Surface finish:**

- Textured paint

**Colour:**

- RAL 7035

**Protection category IP to IEC 60 529:**

- IP55

**Supply includes:**

- Assembly parts

For width mm	For depth mm	Packs of	Model No.
400	600	1 pc(s).	<b>9681.646</b>
400	800	1 pc(s).	<b>9681.648</b>
600	600	1 pc(s).	<b>9681.666</b>
600	800	1 pc(s).	<b>9681.668</b>
600	1000	1 pc(s).	<b>9681.660</b>
600	1200	1 pc(s).	<b>9681.662</b>
800	600	1 pc(s).	<b>9681.686</b>
800	800	1 pc(s).	<b>9681.688</b>
800	1000	1 pc(s).	<b>9681.680</b>
800	1200	1 pc(s).	<b>9681.682</b>



### +

**Accessories:**

- Pressure stoppers, see page 62
- Arc flash kit, class A, see page 63
- Arc flash kit, class B, see page 63

### Roof plate IP2X with ventilation hole

For enclosures without roof plate and in exchange for the standard roof.

**Material:**

- Sheet steel, 1.5 mm

**Surface finish:**

- Textured paint

**Colour:**

- RAL 7035

**Protection category IP to IEC 60 529:**

- IP2X

**Supply includes:**

- Assembly parts

For width mm	For depth mm	Build height mm	Packs of	Model No.
400	600	72	1 pc(s).	<b>9681.846</b>
400	800	72	1 pc(s).	<b>9681.848</b>
600	600	72	1 pc(s).	<b>9681.866</b>
600	800	72	1 pc(s).	<b>9681.868</b>
800	600	72	1 pc(s).	<b>9681.886</b>
800	800	72	1 pc(s).	<b>9681.888</b>
1000	600	72	1 pc(s).	<b>9681.806</b>
1000	800	72	1 pc(s).	<b>9681.808</b>
1200	600	72	1 pc(s).	<b>9681.826</b>
1200	800	72	1 pc(s).	<b>9681.828</b>



### Roof plate for cable entry glands

For enclosures without roof plate and in exchange for the standard roof.

**Material:**

- Sheet steel, 1.5 mm

**Surface finish:**

- Textured paint

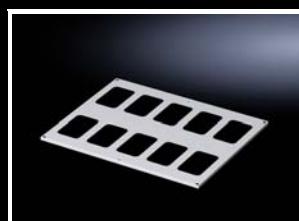
**Colour:**

- RAL 7035

**Supply includes:**

- Assembly parts

For width mm	For depth mm	Required no. of glands	Packs of	Model No.
400	600	3	1 pc(s).	<b>9681.546</b>
400	800	4	1 pc(s).	<b>9681.548</b>
600	400	2	1 pc(s).	<b>9681.564</b>
600	600	4	1 pc(s).	<b>9681.566</b>
600	800	8	1 pc(s).	<b>9681.568</b>
800	600	8	1 pc(s).	<b>9681.586</b>
800	800	8	1 pc(s).	<b>9681.588</b>
850	400	3	1 pc(s).	<b>9681.594</b>
850	600	6	1 pc(s).	<b>9681.596</b>
1100	400	4	1 pc(s).	<b>9681.514</b>
1100	600	8	1 pc(s).	<b>9681.516</b>



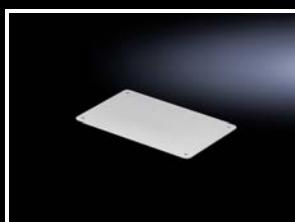
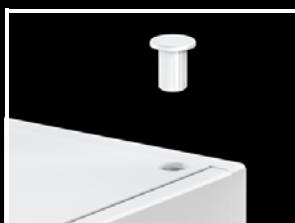
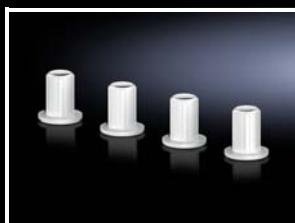
### !

**Also required:**

- Cable entry gland, see page 62

# System accessories VX

## Roof



### Pressure stoppers for roof plate

For converting the IP55 roof plate into a roof plate with pressure relief function. The pressure relief function is essential for compliance with health and safety regulations for arc-proofing to IEC/TR 61 641. After fitting the pressure stopper, a protection category of IP54 is achieved.

#### Material:

- Polyamide

#### Supply includes:

- 4 warning stickers

#### Note:

- 2 pressure stoppers and 1 warning sticker are required for one roof plate
- The arc-proofing compliance limits are dependent on the busbar system used

Packs of	Model No.
4 pc(s).	9674.790

### Cable entry gland for roof plate

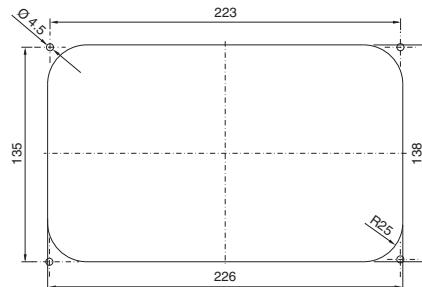
For simple, secure cable entry in the roof zone.  
Colour:  
- RAL 7035

#### Protection category IP to IEC 60 529:

- IP55

#### Supply includes:

- Seal



Cut-out dimensions for 9665.750 to 9665.785

Design	Material	Width mm	Depth mm	Packs of	Model No.
14 x M25/32	Insulating material	250	160	1 pc(s).	9665.750
2 x M25/32/40, 1 x M32/40/50, 2 x M40/50/63	Insulating material	250	160	1 pc(s).	9665.760
With sealing membranes 32 x Ø 7 – 16 mm, 4 x Ø 10 – 20 mm, 3 x Ø 14 – 26 mm	Insulating material	250	160	1 pc(s).	9665.770
With entry fittings up to Ø 66 mm	Insulating material	250	160	1 pc(s).	9665.780
Solid	Sheet steel, spray-finished	250	160	4 pc(s).	9665.785

# System accessories VX

## Roof

### Arc flash kit, class A

To achieve arc flash class A (human safety) to IEC/TR 61 641. Suitable for two enclosure panels.

#### Material:

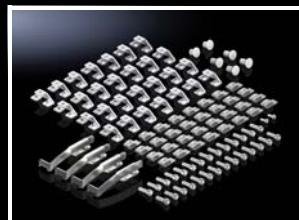
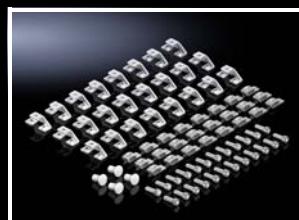
- Steel
- Plastic

#### Supply includes:

- 4 plugs for roof plate
- 4 warning stickers
- Certificate
- Assembly parts

#### Note:

- A pressure relief function for the roof plate is essential for compliance with health and safety regulations for accidental arcing protection to IEC/TR 61 641. The IP55 roof plate may be converted by fitting the pressure stopper, which achieves a protection category of IP54.
- 2 pressure stoppers and 1 warning sticker are required for one roof plate
- The arc-proofing compliance limits are dependent on the busbar system used
- The enclosure panel holders for the side and rear panel already attached to the enclosure section should be replaced with the enclosure panel holders from the accidental arcing kit.



For enclosure width mm	For enclosure depth mm	Design	Product-specific scope of supply	Packs of	<b>Model No.</b>
600 800 1000 1200	600 800	For single-door VX	24 enclosure panel holders	1 pc(s).	<b>9686.400</b>
600 800 1000 1200	600 800	For two-door VX	28 enclosure panel holders 2 plugs for roof plate 4 reinforcements for door locking bar	1 pc(s).	<b>9686.410</b>

### Arc flash kit, class B

To achieve arc flash class B (human safety and protection of equipment) to IEC/TR 61 641. Suitable for one enclosure panel.

#### Material:

- Steel
- Plastic
- Silicone

#### Supply includes:

- 2 metal covers
- 2 roof mounting brackets for sacrificial anodes
- Certificate
- Assembly parts

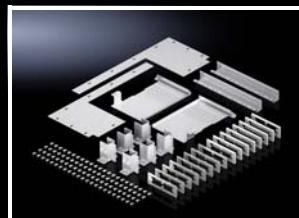
#### Note:

- To achieve arc flash class B in single-door enclosures, the accidental arcing kit 9640.400 is additionally required and for two-door enclosures, kit 9640.410.



#### Also required:

- Arc flash kit, class A, see page 63



For enclosure width mm	For enclosure depth mm	Design	Product-specific scope of supply	Packs of	<b>Model No.</b>
600 800 1000 1200	600 800	For busbar system assembly in the roof section	2 metal partitions 6 sacrificial anodes 8 seals 8 plastic covers	1 pc(s).	<b>9686.420</b>
600 800 1000 1200	600 800	For busbar system assembly in the rear section	8 sacrificial anodes 6 seals 6 plastic covers	1 pc(s).	<b>9686.430</b>

# Busbar system

## Flat-PLS



### Busbar support

#### for distribution busbar system

For assembling vertical distribution busbar systems (2 x 30 x 10mm, 3-/4-pole, 70 mm centre-to-centre spacing) or busbar systems (30 x 5/10 mm, 3-/4-pole, 60 mm centre-to-centre spacing) with RiLine components in modular outgoing sections.

#### Material:

- Duroplastic
- Fire protection corresponding to UL 94

#### Colour:

- Similar to RAL 9005

#### Supply includes:

- Assembly parts

For busbar mm	Bar centre distance mm	Packs of	Model No.
30 x 5/10 30 x 10	60 70	2 pc(s),	<b>9686.100</b>

#### ! Also required:

- Busbars E-Cu, see page 91

#### + Accessories:

- End cover, see page 66



### Busbar support

#### for busbar entry (roof section)

For inserting 3- or 4-pole flat copper busbar systems into the roof section.

#### Material:

- Duroplastic
- Fire protection corresponding to UL 94

#### Colour:

- Similar to RAL 9005

#### Supply includes:

- Assembly parts

#### ! Also required:

- Busbars E-Cu, see page 91
- Cage nuts, see page 90

#### + Assembly instruction:

- For the installation of max. 4 busbars (sub-conductors) per phase
- Cage nut (M8) 4165.500 is required to attach the busbar support to the enclosure section

#### + Accessories:

- End cover, see page 66



For busbar mm	Bar centre distance mm	Approvals	Packs of	Model No.
30 x 10	80	-	2 pc(s),	<b>9686.010</b>
50 x 10	80	UL	2 pc(s),	<b>9686.040</b>

# Busbar system

## Flat-PLS

### Busbar support

#### for busbar baying (roof section)

For baying 3- or 4-pole flat copper busbar systems from enclosure to enclosure in the roof section.

##### Material:

- Duroplastic
- Fire protection corresponding to UL 94

##### Colour:

- Similar to RAL 9005

##### Supply includes:

- Assembly parts

#### ! Also required:

- Busbars E-Cu, see page 91
- Longitudinal connector E-Cu, see page 67
- Cage nuts, see page 90

#### ! Assembly instruction:

- For the installation of max. 4 busbars (sub-conductors) per phase
- Cage nut (M8) 4165.500 is required to attach the busbar support to the enclosure section

#### ! Accessories:

- End cover, see page 66

#### ! Possible alternative:

- Busbar E-Cu, slotted, see page 66



For busbar mm	Bar centre distance mm	Approvals	Packs of	Model No.
30 x 10	80	-	2 pc(s).	<b>9686.000</b>
50 x 10	80	UL	2 pc(s).	<b>9686.030</b>

### Busbar support

#### for busbar entry (rear section)

For inserting 3-pole flat copper busbar systems into the rear section of the enclosure.

##### Material:

- Duroplastic
- Fire protection corresponding to UL 94

##### Colour:

- Similar to RAL 9005

##### Supply includes:

- Assembly parts

For busbar mm	Bar centre distance mm	Packs of	Model No.
50 x 10	185	2 pc(s).	<b>9686.070</b>

#### ! Also required:

- Busbars E-Cu, see page 91
- Cage nuts, see page 90

#### ! Assembly instruction:

- For the installation of max. 4 busbars (sub-conductors) per phase
- Cage nut (M8) 4165.500 is required to attach the busbar support to the enclosure section

#### ! Accessories:

- End cover, see page 66



# Busbar system

## Flat-PLS



### Busbar support

#### for busbar baying (rear section)

For baying 3-pole flat copper busbar systems in the rear section from enclosure to enclosure.

##### Material:

- Duroplastic
- Fire protection corresponding to UL 94

##### Colour:

- Similar to RAL 9005

##### Supply includes:

- Assembly parts

For busbar mm	Bar centre distance mm	Packs of	Model No.
50 x 10	185	2 pc(s).	<b>9686.060</b>



#### Also required:

- Busbars E-Cu, see page 91
- Longitudinal connector E-Cu, see page 67
- Cage nuts, see page 90



#### Assembly instruction:

- For the installation of max. 4 busbars (sub-conductors) per phase
- Cage nut (M8) 4165.500 is required to attach the busbar support to the enclosure section



#### Accessories:

- End cover, see page 66



#### Possible alternative:

- Busbar E-Cu, slotted, see page 66



### End cover

#### for busbar supports

For shock-hazard-protected covering of the busbar ends on the busbar holder.

Width mm	Height mm	Packs of	Model No.
50	147	3 pc(s).	<b>9686.080</b>

##### Material:

- Polyamide
- Fire protection corresponding to UL 94

##### Colour:

- Similar to RAL 9005

##### Supply includes:

- Assembly parts



### Busbar E-Cu, slotted

Busbars with integral punchings.



#### Accessories:

- Longitudinal connector E-Cu, see page 67

##### Material:

- E-Cu F30

##### Standards:

- DIN EN 13 601

Dimensions mm	Length mm	Hole diameter mm	Approvals	Packs of	Model No.
50 x 10	385	11.5	-	1 pc(s).	<b>9684.004</b>
50 x 10	585	11.5	UL	1 pc(s).	<b>9684.006</b>
50 x 10	785	11.5	UL	1 pc(s).	<b>9684.008</b>
50 x 10	985	11.5	UL	1 pc(s).	<b>9684.010</b>
50 x 10	1185	11.5	UL	1 pc(s).	<b>9684.012</b>

# Busbar system

## Flat-PLS

### Longitudinal connector E-Cu

#### for busbars

For connecting the main busbar system from enclosure to enclosure.

#### Material:

- E-Cu

#### Supply includes:

- Assembly parts



#### Design for main busbar 30 x 10 mm

Dimensions mm	Length mm	No. of sub-conductors per phase	Packs of	Model No.
35 x 10	195	1	1 pc(s).	<b>9686.210</b>
60 x 10	195	2 4	1 pc(s).	<b>9686.200</b>

#### Design for main busbar 50 x 10 mm

Dimensions mm	Length mm	No. of sub-conductors per phase	Approvals	Packs of	Model No.
55 x 10	195	1	UL	1 pc(s).	<b>9686.260</b>
100 x 10	195	2 4	UL	1 pc(s).	<b>9686.250</b>

# Busbar system

## Connection system Flat-PLS



### Busbar claw

#### for flat copper busbars

For mechanical stabilisation of busbar stacks.  
Suitable for 10 mm bar thickness.

#### Material:

- Stainless steel

For no. of busbars	Mounting dimensions mm	Packs of	Model No.
2	20	1 pc(s).	<b>9676.017</b>
4	20	1 pc(s).	<b>9676.019</b>

#### ! Also required:

- M10 screw, see page 70

#### Assembly instruction:

- The required screw length must be selected in line with the busbar width W, i.e. length = W + fastening measurement.  
Screws are not included with the supply.
- Busbar claw with threaded insert M10



### Busbar claw

#### for connection components

For mechanical connection of connection components such as connection brackets. Suitable for 10 mm bar thickness.

#### Material:

- Stainless steel

For no. of busbars	Mounting dimensions mm	Packs of	Model No.
2	40	8 pc(s).	<b>9676.832</b>

#### ! Also required:

- M10 screw, see page 70

#### Assembly instruction:

- The required screw length must be selected in line with the busbar width W, i.e. length = W + fastening measurement.  
Screws are not included with the supply.
- Busbar claw with threaded insert M10



### Direct connection terminal

#### for round conductors

For connecting round conductors to a busbar distributor system made from flat copper. Suitable for 10 mm bar thickness.

#### Material:

- Connection clamp: Brass, tin-plated
- Busbar claw: Stainless steel

#### Supply includes:

- Assembly parts (excluding screws)

No. of sub-conductors per phase	Connection of round conductors mm <sup>2</sup>	Mounting dimension mm	Packs of	Model No.
2	95 - 300	60	1 pc(s).	<b>9676.730</b>

#### ! Also required:

- M10 screw, see page 70

#### Assembly instruction:

- The required screw length must be selected in line with the busbar width W, i.e. length = W + fastening measurement.  
Screws are not included with the supply.
- Busbar claw with threaded insert M10



# Busbar system

## Connection system Flat-PLS

### Connection plate

#### for laminated copper bars

For connecting laminated copper bars to a busbar distributor system made from flat copper. Suitable for 10 mm bar thickness.

#### Material:

- Connection plate: E-Cu
- Thrust piece: Stainless steel
- Busbar claw: Stainless steel

#### Supply includes:

- Assembly parts (excluding screws)

No. of sub-conductors per phase	Clamping area for laminated copper bars (W x H) mm	Mounting dimension mm	Packs of	Model No.
2	32 x 20	50	1 pc(s).	<b>9676.747</b>
2	63 x 20	50	1 pc(s.).	<b>9676.748</b>
2	100 x 20	50	1 pc(s.).	<b>9676.749</b>



**!** **Also required:**

- M10 screw, see page 70

**!** **Assembly instruction:**

- The required screw length must be selected in line with the busbar width W, i.e. length = W + fastening measurement. Screws are not included with the supply.
- Busbar claw with threaded insert M10

**+** **Accessories:**

- Laminated copper bar, see page 91

### Connection plate

#### for ring terminals

For connecting ring terminals to a busbar distributor system made from flat copper. Suitable for 10 mm bar thickness.

#### Material:

- Connection plate: E-Cu, plated
- Busbar claw: Stainless steel

#### Supply includes:

- Assembly parts (excluding screws)

Thread	No. of sub-conductors per phase	Mounting dimensions mm	Product-specific scope of supply	Packs of	Model No.
M10	2	40	-	1 pc(s.).	<b>9676.710</b>
M12	2	20	Grub screw	1 pc(s.).	<b>9676.700</b>



**!** **Also required:**

- M10 screw, see page 70

**!** **Assembly instruction:**

- The required screw length must be selected in line with the busbar width W, i.e. length = W + fastening measurement. Screws are not included with the supply.
- Busbar claw with threaded insert M10



# Busbar system

## Connection system Flat-PLS



### Connection set

#### for Flat-PLS

For attaching NH slimline fuse-switch disconnectors and NH slimline switch-disconnectors (185 mm) or for connecting busbars. Suitable for busbar system with flat copper 50 x 10 mm

#### Material:

- Sheet steel, zinc-plated

#### Note:

- Screws are not included with the supply

Thread	For no. of busbars	Packs of	Model No.
M8	2 4	3 pc(s).	<b>9686.800</b>
M10	2 4	3 pc(s).	<b>9686.810</b>

### Assembly instruction:

- The connection set may only be used with top-mounting components with screw fastening
- NH slimline fuse-switch disconnectors:  
The required screw length when using busbars is  $2 \times 50 \times 10 \text{ mm} = 35 \text{ mm}$  and  
 $4 \times 50 \times 10 \text{ mm} = 55 \text{ mm}$
- NH slimline switch-disconnectors:  
Only suitable for attaching to busbars  
 $2 \times 50 \times 10 \text{ mm}$
- When using 4 busbars per phase, a filler piece is additionally required

### Accessories:

- M10 screw, see page 70
- Filler piece, see page 70



### Filler piece

#### for connection set

When using top-mounting components on a busbar system with 4 busbars per phase, a filler piece is additionally required between the bars.

#### Material:

- E-Cu

Dimensions mm	Length mm	Packs of	Model No.
25 x 10	110	3 pc(s).	<b>9686.820</b>



### M10 screw

For attaching the busbar claw or connection components to a flat copper busbar system.

#### Material:

- Stainless steel

Screw design mm	Packs of	Model No.
M10 x 60	8 pc(s).	<b>9676.806</b>
M10 x 70	8 pc(s).	<b>9676.807</b>
M10 x 80	8 pc(s).	<b>9676.808</b>
M10 x 90	8 pc(s).	<b>9676.809</b>
M10 x 100	8 pc(s).	<b>9676.810</b>
M10 x 110	8 pc(s).	<b>9676.811</b>
M10 x 120	8 pc(s).	<b>9676.812</b>
M10 x 130	8 pc(s).	<b>9676.813</b>
M10 x 140	8 pc(s).	<b>9676.814</b>
M10 x 150	8 pc(s).	<b>9676.815</b>
M10 x 160	8 pc(s).	<b>9676.816</b>
M10 x 170	8 pc(s).	<b>9676.817</b>
M10 x 190	8 pc(s).	<b>9676.819</b>

# Busbar system

## Maxi-PLS

### End support

#### for Maxi-PLS busbars

For attaching Maxi-PLS busbars when used as a cable connection system. The stepped configuration ensures simple cable installation.

#### Material:

- Polyamide
- Fire protection corresponding to UL 94

#### Colour:

- Similar to RAL 9011

#### Supply includes:

- Assembly parts

#### Approvals:

- UL

For system	Packs of	Model No.
Maxi-PLS 45 S	2 pc(s).	<b>9649.010</b>
Maxi-PLS 45	2 pc(s).	<b>9659.010</b>



#### Also required:

- Maxi-PLS busbar, E-Cu  
for Maxi-PLS 45 S system, see page 71
- Maxi-PLS busbar, E-Cu  
for Maxi-PLS 45 system, see page 71
- Maxi-PLS busbar, E-Cu  
for Maxi-PLS 60 system, see page 72



### Maxi-PLS busbar E-Cu

#### for Maxi-PLS 45 S system

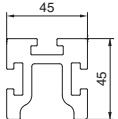
For assembling cable connection systems.

#### Material:

- E-Cu

#### Note:

- May be cut individually to required length



Maxi-PLS 45 S

#### Cross-section 974 mm<sup>2</sup>

For enclosure width mm	Length mm	Approvals	Packs of	Model No.
600	451	UL	1 pc(s).	<b>9640.207</b>
800	651	UL	1 pc(s).	<b>9640.237</b>
1000	851	UL	1 pc(s).	<b>9640.267</b>
1200	1051	UL	1 pc(s).	<b>9640.297</b>
-	2400	-	3 pc(s).	<b>9640.365</b>

### Maxi-PLS busbar E-Cu

#### for Maxi-PLS 45 system

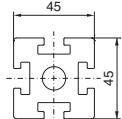
For assembling cable connection systems.

#### Material:

- E-Cu

#### Note:

- May be cut individually to required length



Maxi-PLS 4



#### Cross-section 1354 mm<sup>2</sup>

For enclosure width mm	Length mm	Approvals	Packs of	Model No.
600	451	UL	1 pc(s).	<b>9640.202</b>
800	651	UL	1 pc(s).	<b>9640.232</b>
1000	851	UL	1 pc(s).	<b>9640.262</b>
1200	1051	UL	1 pc(s).	<b>9640.292</b>
-	2400	-	3 pc(s).	<b>9640.360</b>
-	2400	-	4 pc(s).	<b>9649.360</b>

# Busbar system

## Maxi-PLS



### Maxi-PLS busbar E-Cu

for Maxi-PLS 60 system

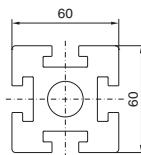
For assembling cable connection systems.

**Material:**

- E-Cu

**Note:**

- May be cut individually to required length



Maxi-PLS 60

### Cross-section 2323 mm<sup>2</sup>

For enclosure width mm	Length mm	Approvals	Packs of	Model No.
600	451	UL	1 pc(s).	<b>9650.202</b>
800	651	UL	1 pc(s).	<b>9650.232</b>
1000	851	UL	1 pc(s).	<b>9650.262</b>
1200	1051	UL	1 pc(s).	<b>9650.292</b>
-	2400	-	3 pc(s).	<b>9650.360</b>
-	2400	-	4 pc(s).	<b>9659.360</b>



# Busbar system

## Connection system Maxi-PLS

### Connection clamp

#### for round conductors

For the connection of round conductors.

#### Material:

- Connection clamp: Brass, tin-plated
- Terminal stud: Steel, zinc-plated
- Sliding block: Copper alloy

#### Supply includes:

- Connection clamp
- Terminal studs
- Sliding block
- Assembly parts

For system	Connection of round conductors mm <sup>2</sup>	Packs of	Model No.
Maxi-PLS 45 S/45	95 - 300	1 pc(s).	<b>9640.325</b>
Maxi-PLS 60	95 - 300	1 pc(s).	<b>9650.325</b>



### Connection plate

#### for laminated copper bars

For the connection of laminated flat copper bars.

#### Material:

- Connection plate: E-Cu, silver-plated
- Thrust piece: Stainless steel

#### Supply includes:

- Assembly parts

#### Approvals:

- UL

For system	Clamping area for laminated copper bars (W x H) mm	Packs of	Model No.
Maxi-PLS 45 S/45	32 x 20	3 pc(s).	<b>9640.330</b>
Maxi-PLS 45 S/45	63 x 20	3 pc(s).	<b>9640.340</b>
Maxi-PLS 45 S/45	100 x 20	3 pc(s).	<b>9640.350</b>
Maxi-PLS 60	32 x 20	3 pc(s).	<b>9650.330</b>
Maxi-PLS 60	63 x 20	3 pc(s).	<b>9650.340</b>



### Terminal studs

#### for Maxi-PLS

For connecting cables with ring terminals

#### Material:

- Terminal stud: Steel, zinc-plated
- Sliding block: Copper alloy

#### Supply includes:

- Terminal studs
- Sliding blocks
- Assembly parts

#### Approvals:

- UL

For system	Thread	Thread length mm	Packs of	Model No.
Maxi-PLS 45 S/45	M12	30	3 pc(s).	<b>9640.370</b>
Maxi-PLS 45 S/45	M16	30	3 pc(s).	<b>9640.380</b>
Maxi-PLS 60	M12	32	3 pc(s).	<b>9650.370</b>
Maxi-PLS 60	M16	32	3 pc(s).	<b>9650.380</b>



### Sliding block

#### for maxi-PLS busbars

For attaching flat copper bars and connection components to Maxi-PLS busbars. For sliding into the busbar section at the side and tightening the threaded bolts.

#### Material:

- Copper alloy

#### Approvals:

- UL

For system	Length mm	Thread	Packs of	Model No.
Maxi-PLS 45 S/45	20	M8	15 pc(s).	<b>9640.970</b>
Maxi-PLS 45 S/45	25	M10	15 pc(s).	<b>9640.980</b>
Maxi-PLS 60	25	M10	15 pc(s).	<b>9650.980</b>
Maxi-PLS 60	35	M12	15 pc(s).	<b>9650.990</b>



# Busbar system

## Connection system Maxi-PLS



### Sliding nut

#### for maxi-PLS busbars

For attaching flat copper bars and connection components to Maxi-PLS busbars. For sliding into the busbar section retrospectively and tightening the threaded bolts.

#### Material:

- E-Cu



#### Also required:

- Threaded bolts, see page 74

For system	Thread	Approvals	Packs of	Model No.
Maxi-PLS 45 S/45	M6	UL	15 pc(s).	9640.900
Maxi-PLS 45 S/45	M8	UL	15 pc(s).	9640.910
Maxi-PLS 45 S/45	M10	UL	15 pc(s).	9640.920
Maxi-PLS 60	M6	UL	15 pc(s).	9650.900
Maxi-PLS 60	M8	-	3 pc(s).	9650.905
Maxi-PLS 60	M10	UL	15 pc(s).	9650.910
Maxi-PLS 60	M12	UL	15 pc(s).	9650.920



### Threaded bolts

#### for sliding blocks and sliding nuts

For individual connection options

#### Material:

- Steel

#### Supply includes:

- Assembly parts

#### Approvals:

- UL



#### Also required:

- Sliding block, see page 73
- Sliding nut, see page 74

For system	Thread	Thread length mm	Packs of	Model No.
Maxi-PLS 45 S/45 Maxi-PLS 60	M6	35	6 pc(s).	9640.930
Maxi-PLS 45 S/45 Maxi-PLS 60	M8	35	6 pc(s).	9640.940
Maxi-PLS 45 S/45 Maxi-PLS 60	M10	35	8 pc(s).	9676.971
Maxi-PLS 45 S/45 Maxi-PLS 60	M10	45	8 pc(s).	9676.972
Maxi-PLS 45 S/45 Maxi-PLS 60	M10	55	8 pc(s).	9676.973
Maxi-PLS 45 S/45 Maxi-PLS 60	M10	70	8 pc(s).	9676.976
Maxi-PLS 45 S/45 Maxi-PLS 60	M10	80	8 pc(s).	9676.977
Maxi-PLS 60	M12	40	8 pc(s).	9676.981
Maxi-PLS 60	M12	50	8 pc(s).	9676.982
Maxi-PLS 60	M12	60	8 pc(s).	9676.983
Maxi-PLS 60	M12	70	8 pc(s).	9676.986
Maxi-PLS 60	M12	80	8 pc(s).	9676.987



### Compact infeed

#### for Maxi-PLS

For individual use as a 3-pole cable connection bar system. Direct mounting on the mounting plate or punched section without mounting flange.

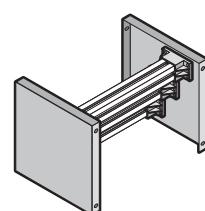
#### Material:

- End support: Polyamide
- Retaining plate: Sheet steel, zinc-plated
- Punched rail: Sheet steel, zinc-plated

#### Supply includes:

- 6 end supports
- 2 support plates for end supports
- 1 punched rail 23 x 23 mm (length 495 mm)
- Assembly parts

For system	Packs of	Model No.
Maxi-PLS 45 S/45	1 pc(s).	9660.980



# Busbar system

## Accessories for connection components

### Screw

#### for connection components

For connecting components such as connection brackets and connection kits.

#### Material:

- Steel, zinc-plated

#### Supply includes:

- 8 nuts and 16 washers

Screw design mm	Packs of	Model No.
M10 x 40	8 pc(s).	<b>9676.966</b>
M10 x 45	8 pc(s).	<b>9686.845</b>
M10 x 55	8 pc(s).	<b>9686.865</b>
M10 x 60	8 pc(s).	<b>9676.967</b>
M10 x 80	8 pc(s).	<b>9676.968</b>



### Support set (stabiliser)

#### for connector kit

To support connector kits, top or bottom, for air circuit-breakers (ACB).

#### Material:

- Stabiliser: Fibreglass-reinforced polyester
- Angle bracket: Sheet steel

#### Supply includes:

- 4 plastic stabilisers (length per stabiliser 1100 mm)
- 2 angle brackets
- Assembly parts

#### Approvals:

- UL

#### Note:

- The angle brackets included with the supply are only suitable for use in TS enclosures
- When using the support set in VX enclosures, angle bracket 9686.495 is additionally required

Packs of	Model No.
1 pc(s).	<b>9660.205</b>



### Angle bracket

#### for support set (stabiliser)

For positioning and securing the holder set (stabiliser) to the enclosure section.

#### Material:

- Sheet steel, zinc-plated

#### Supply includes:

- Assembly parts

#### Note:

- An angle bracket consists of one bracket to be fastened to the enclosure section or the compartment side panel, and one bracket for mounting plastic stabilisers

Packs of	Model No.
4 pc(s).	<b>9686.495</b>



# Busbar system

## Connection components

### Connection components for air circuit-breakers and busbar connections

For connecting air circuit-breakers (ACB) or for connecting horizontal and vertical busbar systems (T-connectors).

#### Material:

- E-Cu

#### Note:

- The design code required for the configuration code is generated by the VX25 Rittal Power Engineering software ([www.rittal.com/rpevx25/](http://www.rittal.com/rpevx25/))
- Please quote the complete configuration code on all enquiries and orders (see example)

Configuration code = order number + design code	Description	Section types
Model No. <b>9686.912</b> + design code	Connector kit for top/bottom	Air circuit-breakers (ACB), coupling section, cable transition section
Model No. <b>9686.924</b> + design code	T-connector kit for top/bottom	Modular outgoing feeder section, fuse-switch disconnector section horizontal/vertical, multi-terminal busbar section, riser section, corner section

### Example of creating the configuration code

1. Select section type "air circuit-breaker"



# Busbar system

## Connection components

2. Select switch and manufacturer and enter other technical parameters, such as busbar position, number of poles, rated current etc.

R4Power Niederspannungsschaltanlagen Konfigurator  
Einfache Auswahl und Konfiguration von geprüften Niederspannungsschaltanlagen mit Ri4Power Systemen

ACB 01 - Dachtechnik - 400V - 1000A - 3P+N

Feldname: ACB 01  
Lage der Summschaltern: Dachtechnik  
Formatertyp: 40

Schalterkonfiguration:  
Schaltungsprinzip des ACB (A) gemäß IEC 60947-4-1:  
Schaltzeit: 0,05s  
Schaltstrom: 1000A  
Schaltart: Einhebelschalter  
Funktionsweise: V/T - im Traubenschluss  
Max. Dimensionierung I<sub>n</sub> des Gerätes (A): 1000

Feldausführung:  
Ausführung der Führer: Führer mit Steckern  
Verriegelung: Druckknopfverriegelung  
Position des Fachdeckels: Draußen IP24  
Mit Montageteile: Ja

Kabelanschluss:  
Kabelanschluss-System: Dimensionierung Kabelanschluss-Sys für 2000 A (maxPLC 400)  
Kabelanschluss-Höhe: 600 mm

Zählerdr:

Anzahl Direktanschlüsse:	0	Anzahl Anschlussstellen M12:	0	Anzahl Anschlussstellen M16:	0
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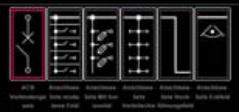
Anschluss-Ausführung: 8068A1A4H3V661O4-70



3. The connector kit data is output using the "Determine prices and weights" function.  
Design code and associated drawings (.dwg, .pdf) are available via the "Download" function.  
The configuration code for the enquiry or order will then look like this:  
Air circuit-breaker (ACB) Model No. 9686.912 + 8068A1A4H3V661O4-70

R4Power Niederspannungsschaltanlagen Konfigurator  
Einfache Auswahl und Konfiguration von geprüften Niederspannungsschaltanlagen mit Ri4Power Systemen

ACB 01 - Dachtechnik - 400V - 1000A - 3P+N



Design Code: 8068A1A4H3V661O4-70

Abmessungen:  
Schrankbreite: 2000 mm  
Schrankhöhe: 600 mm  
Schranktiefe [mm]: 600 mm

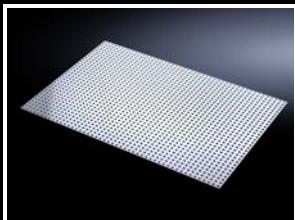
Zählerschaltungssystem oben:  
Zählerschaltung: Draußen  
Position des Zählerschalters: Draußen

Schalterkonfiguration:  
ACB-Hersteller: ABB  
Schaltzeit: 0,05s  
Schaltart: Einhebelschalter  
Position des Gerätes (A): Schalt E 5 3200  
Funktionsweise: V/T - im Traubenschluss  
Höhe des Kabelanschlussraums: 600 mm



# Cover systems

## Form 1



### Cover plate

#### Slotted

To cover live parts and comply with the internal protection category IP2X and IPXXB within low-voltage switchgear and controlgear. Integral vent holes allow convection inside a system.

#### Material:

- PVC

Width mm	Height mm	Packs of	Model No.
1200	800	1 pc(s).	<b>9674.990</b>



#### Accessories:

- Mounting bracket, see page 78



### Mounting bracket

#### for contact hazard protection cover

For the attachment of contact hazard protection covers. Tapped hole M6. The mounting bracket is fitted to the enclosure frame.

#### Material:

- Sheet steel

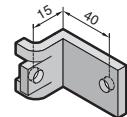
#### Surface finish:

- Zinc-plated

#### Supply includes:

- Assembly screws

Packs of	Model No.
24 pc(s).	<b>9660.090</b>



# Cover systems

## Form 2b

### Contact hazard protection cover plate

#### for enclosures with NH slimline fuse-switch disconnectors

To cover outgoing sections with NH slimline fuse-switch disconnectors and busbar system in the rear enclosure section so that they are safe from finger contact (IP2X).

##### Material:

- Sheet steel, 1.5 mm

##### Surface finish:

- Zinc-plated

##### Supply includes:

- 2 side panels (left/right side)
- 2 side panels (top/bottom)
- Assembly parts

##### Note:

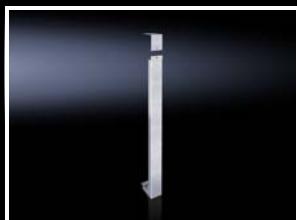
- The specified installation width when using the contact hazard protection cover only applies when using busbar support 9686.060/9686.070

For enclosure width mm	Free installation width when using Flat-PLS mm	Packs of	Model No.
600	400	1 pc(s).	<b>9684.960</b>
800	600	1 pc(s).	<b>9684.980</b>
1000	800	1 pc(s).	<b>9684.900</b>
1200	1000	1 pc(s).	<b>9684.920</b>



### Accessories:

- Blanking cover, see page 79



### Blanking cover

#### for contact hazard protection cover

To cover free NH slimline fuse-switch disconnector slots.

##### Material:

- Sheet steel, 1.5 mm

##### Surface finish:

- Zinc-plated

##### Supply includes:

- 2 covers
- 2 cover brackets
- Assembly parts

Width mm	Packs of	Model No.
50	2 pc(s).	<b>9684.990</b>

### Cover

#### for form separation in the roof section

To achieve form separation for main busbar systems in the roof section with compartment dividers without compartment side panels.

##### Material:

- Sheet steel

##### Supply includes:

- Assembly parts

For enclosure depth mm	Packs of	Model No.
600/800	2 pc(s).	<b>9683.720</b>



# Compartment configuration

## Form 1-4



### Compartment side panel

Side divider panel for attaching partial mounting plates and compartment dividers.

**Material:**

- Sheet steel, 1.5 mm

**Surface finish:**

- Zinc-plated

**Supply includes:**

- Assembly parts

#### For busbar system assembly in the rear section

For enclosure height mm	For enclosure depth mm	Height mm	Depth mm	Packs of	Model No.
2000	600	1881	538	2 pc(s).	<b>9683.006</b>
2000	800	1881	738	2 pc(s).	<b>9683.008</b>

#### For busbar system assembly in the roof section

For enclosure height mm	For enclosure depth mm	Height mm	Depth mm	Packs of	Model No.
2000	600	1731	538	2 pc(s).	<b>9683.016</b>
2000	800	1731	738	2 pc(s).	<b>9683.018</b>
2200	600	1931	538	2 pc(s).	<b>9683.036</b>
2200	800	1931	738	2 pc(s).	<b>9683.038</b>

#### Accessories:

- Plastic gland plate, see page 80
- Compartment divider, see page 81
- Partial mounting plate, see page 83
- Cross member cutter, see page 92



### Plastic gland plate

**for compartment side panel**

For closing cable entry openings.

**Material:**

- PVC, 3 mm

**Colour:**

- Similar to RAL 7045

**Supply includes:**

- Assembly parts

Width mm	Height mm	Packs of	Model No.
152	48	10 pc(s).	<b>9683.040</b>



### Retaining plate

**for cable connection space**

For mounting Maxi-PLS busbars including end supports in the cable connection area.

**Material:**

- Sheet steel, 1.5 mm

**Surface finish:**

- Zinc-plated

**Supply includes:**

- Assembly parts

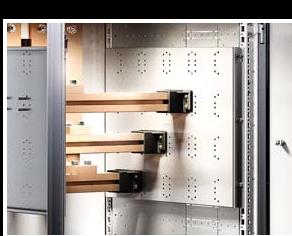
**Approvals:**

- UL

For enclosure depth mm	Height mm	Depth mm	Packs of	Model No.
600	375	543	2 pc(s).	<b>9683.200</b>
800	375	743	2 pc(s).	<b>9683.210</b>

#### Also required:

- End support, see page 71



# Compartment configuration

## Form 1-4

### Compartment divider

For the horizontal separation of compartments. In combination with the side panels, this creates Form separation to Form 1 to 4. For attachment to the compartment side panel or the enclosure section. The integral cut-outs with pre-punched knock-out option are used for the vertical routing of control lines or cable ducts and for the routing of distribution busbars or connection kits.

#### Design:

- With louvres

#### Material:

- Sheet steel, 1.5 mm

#### Surface finish:

- Zinc-plated

#### Supply includes:

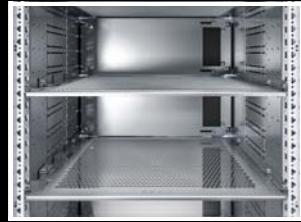
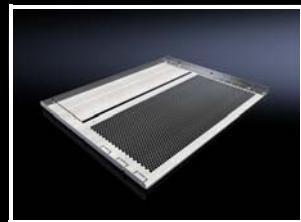
- Assembly parts

#### Assembly instruction:

- For assembling compartments as internal Form separation, compartment side panels are required

#### Accessories:

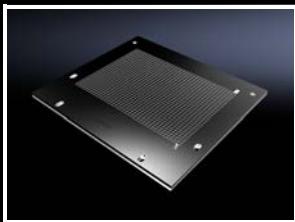
- Plastic gland plate, see page 82
- Compartment side panel, see page 80
- Cross member cutter, see page 92



For enclosure width mm	For enclosure depth mm	Width mm	Depth mm	Packs of	Model No.
400	400	311	380	2 pc(s).	<b>9683.444</b>
400	600	311	580	2 pc(s).	<b>9683.446</b>
400	800	311	780	2 pc(s).	<b>9683.448</b>
600	400	511	380	2 pc(s).	<b>9683.464</b>
600	600	511	580	2 pc(s).	<b>9683.466</b>
600	800	511	780	2 pc(s).	<b>9683.468</b>
800	400	711	380	2 pc(s).	<b>9683.484</b>
800	600	711	580	2 pc(s).	<b>9683.486</b>
800	800	711	780	2 pc(s).	<b>9683.488</b>
1000	600	911	580	2 pc(s).	<b>9683.406</b>
1000	800	911	780	2 pc(s).	<b>9683.408</b>
1200	600	1111	580	2 pc(s).	<b>9683.426</b>
1200	800	1111	780	2 pc(s).	<b>9683.428</b>

# Compartment configuration

## Form 1-4



### Plastic gland plate

#### for compartment divider

To cover the compartment divider with gland.

#### Material:

- ABS

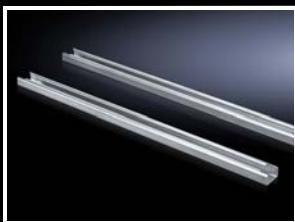
#### Colour:

- Similar to RAL 9005

#### Supply includes:

- Assembly parts

Width mm	Height mm	Packs of	Model No.
250	251	2 pc(s).	9683.504
450	251	2 pc(s).	9683.506
650	251	2 pc(s).	9683.508
850	251	2 pc(s).	9683.500



### Air circuit-breaker support bar

For the configuration of air circuit-breakers (ACB) in compartments.

#### Material:

- Sheet steel, 2.5 mm

#### Surface finish:

- Zinc-plated

#### Supply includes:

- Assembly parts

For enclosure width mm	Length mm	Packs of	Model No.
400	296	2 pc(s).	9683.304
600	496	2 pc(s).	9683.306
800	696	2 pc(s).	9683.308
1000	896	2 pc(s).	9683.310
1200	1096	2 pc(s).	9683.312



#### Also required:

- Mounting bracket, see page 82



### Mounting bracket

#### for air circuit-breaker support rail

For attaching the air circuit-breaker support rail to the enclosure section or compartment side panel.

#### Material:

- Sheet steel, 2.5 mm

#### Surface finish:

- Zinc-plated

#### Supply includes:

- Assembly parts

For enclosure depth mm	Packs of	Model No.
600	2 pc(s).	9683.326
800	2 pc(s).	9683.328

# Compartment configuration

## Form 1-4

### Partial mounting plate

#### for compartment side panel

For direct attachment to the compartment side panel for internal compartmentalisation. Universal interior installation with switchgear and controlgear. Creation of additional mounting levels. In combination with compartment dividers and side panel, internal compartmentalisation in accordance with Form 1 to 4 is possible.

#### Material:

- Sheet steel, 2 mm

#### Surface finish:

- Zinc-plated

#### Supply includes:

- Angle brackets and assembly parts



#### Solid design

For enclosure width mm	For compartment height mm	Width mm	Height mm	Packs of	Model No.
400	200	302	193	1 pc(s).	<b>9683.642</b>
400	300	302	293	1 pc(s).	<b>9683.643</b>
400	400	302	393	1 pc(s).	<b>9683.644</b>
400	600	302	593	1 pc(s).	<b>9683.646</b>
400	800	302	793	1 pc(s).	<b>9683.648</b>
600	1000	502	993	1 pc(s).	<b>9683.660</b>
600	150	502	143	1 pc(s).	<b>9683.661</b>
600	200	502	193	1 pc(s).	<b>9683.662</b>
600	300	502	293	1 pc(s).	<b>9683.663</b>
600	400	502	393	1 pc(s).	<b>9683.664</b>
600	600	502	593	1 pc(s).	<b>9683.666</b>
600	800	502	793	1 pc(s).	<b>9683.668</b>
800	1000	702	993	1 pc(s).	<b>9683.680</b>
800	150	702	143	1 pc(s).	<b>9683.681</b>
800	200	702	193	1 pc(s).	<b>9683.682</b>
800	300	702	293	1 pc(s).	<b>9683.683</b>
800	400	702	393	1 pc(s).	<b>9683.684</b>
800	600	702	593	1 pc(s).	<b>9683.686</b>
800	800	702	793	1 pc(s).	<b>9683.688</b>
1000	400	902	393	1 pc(s).	<b>9683.604</b>
1000	600	902	593	1 pc(s).	<b>9683.606</b>
1000	800	902	793	1 pc(s).	<b>9683.608</b>
1200	400	1102	393	1 pc(s).	<b>9683.624</b>
1200	600	1102	593	1 pc(s).	<b>9683.626</b>
1200	800	1102	793	1 pc(s).	<b>9683.628</b>

#### Design with gland made from insulating material

For enclosure width mm	For compartment height mm	Width mm	Height mm	Packs of	Model No.
600	150	502	143	1 pc(s).	<b>9683.561</b>
600	200	502	193	1 pc(s).	<b>9683.562</b>
600	300	502	293	1 pc(s).	<b>9683.563</b>
600	400	502	393	1 pc(s).	<b>9683.564</b>

# Compartment configuration

## Form 1-4



### Support frame

#### for DIN rail-mounted devices

Support frame set for accepting DIN rail-mounted devices (e.g. MCBs). The support rails are fastened with two mounting brackets to the compartment side panel. The cover is fastened to the support frame with knurled screws. In combination with functional space dividers, partial mounting plates and side panel modules, internal compartmentalisation in accordance with Form 2, 3 or 4 is possible.

#### Material:

- Support frame: Sheet steel, zinc-plated, passivated, 1.5 mm
- Cover: Sheet steel, spray finished, 1.5 mm

#### Supply includes:

- Support rails
- 2 mounting brackets
- 1 cover with cut-out
- Assembly parts

For enclosure width mm	For compartment height mm	Number of pitch units 17.5 mm	Packs of	Model No.
600	300	2 x 24	1 pc(s).	<b>9683.763</b>
800	300	2 x 36	1 pc(s).	<b>9683.783</b>

# Fuse-switch disconnector section

## Busbar support

### for fuse-switch disconnector section

Busbar support for the distribution busbar system of the fuse-switch disconnector section.

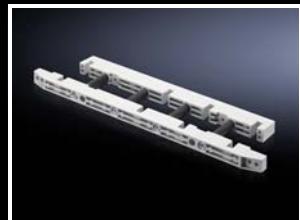
#### Material:

- Duoplastic polyester

#### Supply includes:

- Mounting bracket and screws

For busbars mm	Number of poles	Packs of	Model No.
60 x 10	3-pole 4-pole	1 pc(s).	<b>9674.416</b>
80 x 10	3-pole 4-pole	1 pc(s).	<b>9674.418</b>
100 x 10	3-pole 4-pole	1 pc(s).	<b>9674.410</b>



**!** **Also required:**

- Busbars E-Cu, see page 91
- End support, see page 85



## End support

### for fuse-switch disconnector section

End support for the distribution busbar system of the switch-disconnector-fuse section, for vertical support of the distribution busbar system with infeed from above.

#### Material:

- Duoplastic polyester

#### Supply includes:

- Mounting bracket and screws

For busbars mm	Number of poles	Packs of	Model No.
60 x 10	3-pole 4-pole	1 pc(s).	<b>9674.436</b>
80 x 10	3-pole 4-pole	1 pc(s).	<b>9674.438</b>
100 x 10	3-pole 4-pole	1 pc(s).	<b>9674.430</b>



**!** **Also required:**

- Busbars E-Cu, see page 91



## Cover

### Set for distribution busbar

#### (Jean Müller fuse-switch disconnector section)

To cover the distribution busbar system of a fuse-switch disconnector section, designed to accommodate Jean Müller devices. The 150 mm high busbar and cable connection space covers shield the busbar compartment from the functional space so that it is safe from finger contact, with a protection category of IP20.

#### Material:

- PVC, black

#### Supply includes:

- Set consisting of 12 busbar covers and cable connection space covers

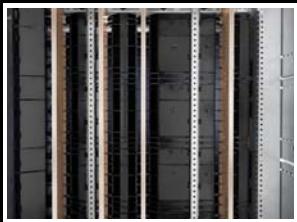
For enclosure height mm	Packs of	Model No.
2000		
2200	1 pc(s).	<b>9674.380</b>

**!** **Also required:**

- Punched rail, see page 86



# Fuse-switch disconnector section



## Punched rail

**Set for cover of distribution busbar  
(Jean Müller fuse-switch disconnector section)**  
Required for mounting the distribution busbar cover.

For enclosure height mm	Packs of	Model No.
2000	1 pc(s.)	9674.381
2200		

### Material:

- Sheet steel, zinc-plated

### Supply includes:

- Set consisting of 2 punched rails
- Assembly parts

### Note:

- For 1 fuse-switch disconnector section,  
1 pack of punched rails is required.

## Cover

### for distribution busbar (ABB/Siemens fuse-switch-disconnector section)

To cover the distribution busbar system of a fuse-switch-disconnector section, designed to accommodate ABB (SlimLine) or Siemens (3NJ62) devices. The 200 mm high busbar compartment covers shield the busbar compartment from the functional space so that it is safe from finger contact, with a protection category of IP20.

### Note:

- The cover may be ordered from ABB under model number NHP 407062R000X
- For enclosure height 2000 mm, a height of 1500 mm should be covered, and for enclosure height 2200 mm, a height of 1700 mm should be covered.

### Material:

- PVC, black

# Interior installation

## Earthing

### Busbar support

#### N conductor

For assembling 1-pole neutral or PEN conductors. The busbar holder is mounted onto the enclosure section.

#### Material:

- Polyamide
- Fire protection corresponding to UL 94

#### Colour:

- Similar to RAL 9005

#### Supply includes:

- Assembly parts

For busbar mm	Packs of	Model No.
50 x 10	2 pc(s).	<b>9686.300</b>

#### ! Also required:

- Busbars E-Cu, see page 91

#### Assembly instruction:

- For the installation of max. 4 busbars (sub-conductors) per phase

#### + Accessories:

- Longitudinal connector E-Cu, see page 67



### PE/PEN busbar E-Cu

With integral punchings.

#### Material:

- E-Cu

#### Standards:

- DIN EN 13601

#### + Accessories:

- PE/PEN angle bracket, see page 88
- PE/PEN baying bracket E-Cu, see page 88



#### Dimension 30 x 5 mm

For enclosure width mm	Length mm	Hole Ø mm	Approvals	Packs of	Model No.
400	300	11.5	–	2 pc(s).	<b>9686.524</b>
600	500	11.5	UL	2 pc(s).	<b>9686.526</b>
800	700	11.5	UL	2 pc(s).	<b>9686.528</b>
1000	900	11.5	UL	2 pc(s).	<b>9686.520</b>
1200	1100	11.5	UL	2 pc(s).	<b>9686.522</b>



#### Dimension 30 x 10 mm

For enclosure width mm	Length mm	Hole Ø mm	Approvals	Packs of	Model No.
400	300	11.5	–	2 pc(s).	<b>9686.534</b>
600	500	11.5	UL	2 pc(s).	<b>9686.536</b>
800	700	11.5	UL	2 pc(s).	<b>9686.538</b>
1000	900	11.5	UL	2 pc(s).	<b>9686.530</b>
1200	1100	11.5	UL	2 pc(s).	<b>9686.532</b>

#### Dimension 40 x 10 mm

For enclosure width mm	Length mm	Hole Ø mm	Approvals	Packs of	Model No.
400	300	11.5	–	2 pc(s).	<b>9686.544</b>
600	500	11.5	UL	2 pc(s).	<b>9686.546</b>
800	700	11.5	UL	2 pc(s).	<b>9686.548</b>
1000	900	11.5	UL	2 pc(s).	<b>9686.540</b>
1200	1100	11.5	UL	2 pc(s).	<b>9686.542</b>

#### Dimension 80 x 10 mm

For enclosure width mm	Length mm	Hole Ø mm	Approvals	Packs of	Model No.
400	300	11.5	–	2 pc(s).	<b>9686.584</b>
600	500	11.5	UL	2 pc(s).	<b>9686.586</b>
800	700	11.5	UL	2 pc(s).	<b>9686.588</b>
1000	900	11.5	UL	2 pc(s).	<b>9686.580</b>
1200	1100	11.5	UL	2 pc(s).	<b>9686.582</b>

# Interior installation

## Earthing



### PE/PEN angle bracket

For attaching the PE/PEN busbar to the enclosure section.

**Material:**

- Sheet steel, 3.0 mm

**Supply includes:**

- Assembly parts

For busbar mm	Packs of	Model No.
30 x 5		
30 x 10		
40 x 10	2 pc(s).	<b>9686.350</b>
80 x 10		



### PE/PEN baying bracket E-Cu

For connecting the busbars from enclosure to enclosure.

**Material:**

- E-Cu

**Approvals:**

- UL

**Standards:**

- DIN EN 13601

Dimensions mm	Length mm	Packs of	Model No.
30 x 5	180	2 pc(s).	<b>9686.529</b>
30 x 10	180	2 pc(s).	<b>9686.539</b>
40 x 10	180	2 pc(s).	<b>9686.549</b>
80 x 10	180	2 pc(s).	<b>9686.589</b>



# Interior installation

## Rail systems/assembly components

### Punched section without mounting flange, 23 x 64 mm

For variable, individual interior installation of the enclosure frame on the inner mounting level.

#### Benefits:

- Easily attached to the enclosure section, even with the mounting panel in the rearmost position
- With slots at the top and bottom for cage nuts, for attaching your own components via metric screws
- System punchings on all four sides

#### Installation options:

- On the inner mounting level, on the enclosure section
- Upright or flat between two punched sections on the inner mounting level
- Between two punched sections on the inner mounting level

#### Material:

- Sheet steel

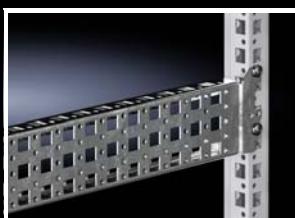
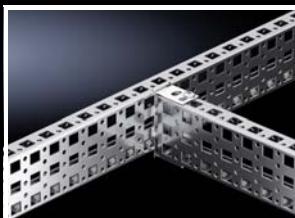
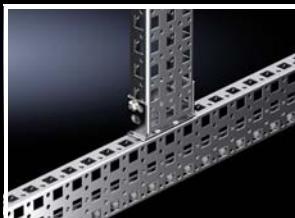
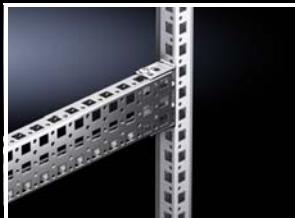
#### Surface finish:

- Zinc-plated

#### Supply includes:

- 2 punched sections without mounting flanges
- 4 mounting brackets
- Assembly parts

For enclosure width/height/depth mm	Packs of	Model No.
400	2 pc(s).	<b>8100.740</b>
600	2 pc(s).	<b>8100.742</b>
800	2 pc(s).	<b>8100.743</b>



### Punched section with mounting flange, 23 x 64 mm

For variable, individual interior installation of the enclosure frame on the inner mounting level.

#### Benefits:

- Simply locate into the system punchings and screw-fasten
- System punchings on all four sides
- With slots at the top and bottom for cage nuts, for attaching your own components via metric screws

#### Installation options:

- On the inner mounting level, on the enclosure section
- In the base/plinth system VX, in the width and depth, combined with a base/plinth installation bracket
- On identical punched sections with mounting flanges

#### Material:

- Sheet steel

#### Surface finish:

- Zinc-plated

#### Supply includes:

- Assembly parts

For enclosure width/height/depth mm	Packs of	Model No.
600	4 pc(s).	<b>8617.130</b>
800	4 pc(s).	<b>8617.140</b>
2000	4 pc(s).	<b>8617.200</b>

#### Accessories:

- Cage nuts, see page 90

# Interior installation

## Rail systems/assembly components/wiring system



### Cage nut

For all-round metric mounting on the enclosure section.

Thread	Packs of	Model No.
M8	20 pc(s).	4165.500

#### Benefits:

- For all-round mounting on the enclosure section
- The compression spring, designed as an insertion aid, ensures reliable mechanical and electrical connection in the system punchings.
- Simply slides in from the side
- Safely and easily released with a screwdriver

#### Installation options:

- on the horizontal and vertical VX enclosure section
- On punched sections with mounting flanges, 23 x 64 mm
- On punched sections with mounting flanges, 23 x 89 mm, stainless steel



### Copper spacer roll

#### for Maxi-PLS busbars and flat copper bars

For use as a universal spacer.

#### Material:

- E-Cu

Height mm	Diameter mm	Hole Ø mm	Packs of	Model No.
20	30	13	4 pc(s).	9676.503
20	40	13	4 pc(s).	9676.504
20	50	13	4 pc(s).	9676.505



### Wiring trim panel

Inner front cover of the main busbar system with the option of mounting a 40 x 20 mm (WxD) wiring channel. Suitable for use in Ri4Power switchgear with 300 mm high front trim panels. Horizontal cable routing behind the front trim panels. Also supports the installation of support rails with DIN rail mounted devices.

For enclosure width mm	Packs of	Model No.
600	1 pc(s).	9683.736
800	1 pc(s).	9683.736
1000	1 pc(s).	9683.738
1200	1 pc(s).	9683.738

#### Material:

- Sheet steel

#### Surface finish:

- Zinc-plated

#### Supply includes:

- 1 wiring trim panel, 3-part
- Assembly parts

#### Note:

- For vertical cable routing, compartment dividers enable the installation of a wiring channel, thanks to pre-punched cut-outs

# Busbars

## Busbars and laminated copper bars

### Busbars E-Cu

To DIN EN 13 601

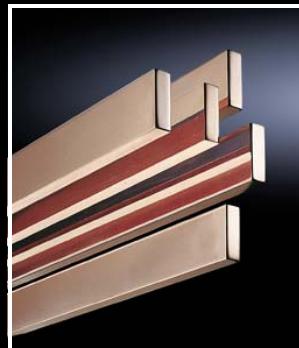
Length: 2400 mm/bar

**Material:**

- E-Cu F30

Dimensions mm	Length mm	Approvals	Packs of	Model No.
30 x 5	2400	UL	6 pc(s).	<b>3584.000</b>
30 x 10	2400	UL	3 pc(s).	<b>3586.005</b>
50 x 10	2400	-	2 pc(s).	<b>3588.005</b>
50 x 10	385	-	1 pc(s).	<b>9684.004<sup>1)</sup></b>
50 x 10	585	UL	1 pc(s).	<b>9684.006<sup>1)</sup></b>
50 x 10	785	UL	1 pc(s).	<b>9684.008<sup>1)</sup></b>
50 x 10	985	UL	1 pc(s).	<b>9684.010<sup>1)</sup></b>
50 x 10	1185	UL	1 pc(s).	<b>9684.012<sup>1)</sup></b>
60 x 10	2400	-	1 pc(s).	<b>3589.005</b>
80 x 10	2400	-	1 pc(s).	<b>3590.005</b>
100 x 10	2400	-	1 pc(s).	<b>3590.015</b>

<sup>1)</sup> With integral holes



### Laminated copper bars

Length: 2000 mm/bar

**Material:**

**Cu membranes**

- High-purity electrolyte copper F20

**Insulation**

- High-strength vinyl compound
- Expansion 370%
- Temperature range: -30 °C...+105 °C
- Fire protection corresponding to UL 94
- Dielectric strength: 20 kV/mm

Construction <sup>1)</sup> mm	I <sub>n</sub> at 70 K <sup>2)</sup> A	I <sub>n</sub> at 50 K <sup>2)</sup> A	I <sub>n</sub> at 30 K <sup>2)</sup> A	Packs of	Model No.
6 x 9 x 0.8	285	240	180	1 pc(s).	<b>3565.005</b>
6 x 15.5 x 0.8	415	350	265	1 pc(s).	<b>3568.005</b>
10 x 15.5 x 0.8	575	480	365	1 pc(s).	<b>3569.005</b>
5 x 20 x 1	525	435	330	1 pc(s).	<b>3570.005</b>
5 x 24 x 1	605	510	385	1 pc(s).	<b>3571.005</b>
10 x 24 x 1	920	770	585	1 pc(s).	<b>3572.005</b>
5 x 32 x 1	770	645	485	1 pc(s).	<b>3573.005</b>
10 x 32 x 1	1155	965	730	1 pc(s).	<b>3574.005</b>
5 x 40 x 1	930	780	590	1 pc(s).	<b>3575.005</b>
10 x 40 x 1	1370	1145	865	1 pc(s).	<b>3576.005</b>
5 x 50 x 1	1125	940	710	1 pc(s).	<b>3577.005</b>
10 x 50 x 1	1635	1365	1030	1 pc(s).	<b>3578.005</b>
10 x 63 x 1	1950	1610	1230	1 pc(s).	<b>3579.005</b>

<sup>1)</sup> Number of membranes x membrane width x membrane thickness

<sup>2)</sup> The conductor temperature of the laminated copper bar is derived by adding the ambient temperature and the temperature increase together.

**Example:**

3565.005 carrying 180 A, i.e. the temperature increases by 30 K. At an ambient temperature of 35 °C, this produces a resultant conductor temperature of 35 °C + 30 K = 65 °C.



# Cutting tool



## Cross member cutter

For cutting through micro webs or sheet steel cross members on Ri4Power interior installation components (for example, compartment dividers) or for cutting thin sheets of sheet steel, aluminium or copper up to 1.2 mm thick.

**Benefits:**

- Cutting of materials without deformation
- Clean edge cuts, no reworking of the cut section required
- Easy to use
- Ergonomically styled handles for fatigue-free, non-slip working

**Material:**

- Tool body: Special tool steel, rolled, oil-hardened

**Supply includes:**

- Cross member cutter including swarf deflector

To fit Model No.	Length mm	Design	Packs of	Model No.
9680.005				
9680.025				
9680.207				
9680.227				
9683.006				
9683.008				
9683.016				
9683.018				
9683.036				
9683.038				
9683.406				
9683.408				
9683.426				
9683.428				
9683.444				
9683.446				
9683.448				
9683.464				
9683.466				
9683.468				
9683.484				
9683.486				
9683.488				

# Connection adaptor



**Busbar system** Page 65/66 **Component adaptors** Page 94 **NH slimline switch-disconnectors** Page 95

## Material:

- Chassis: Fibreglass-reinforced polyester
- Fire protection corresponding to UL 94

## Colour:

- RAL 7035

## Rated current max. 800 – 1400 A

Rated current max. A	Packs of	800	1400	Page
Rated operating voltage V, ~		690, 3~	690, 3~	
Number of poles		3-pole	3-pole	
Cable outlet		Top/bottom	Top/bottom	
Connection type		Screw M12	Screw M12	
Connection of round conductors mm <sup>2</sup>		6 - 240	6 - 300	
Width mm		100	100	
Height mm		665	960	
For bar systems with centre-to-centre spacing mm		185	185	
For bar thickness mm		10	10	
<b>Model No.</b>	1 pc(s).	<b>9677.900</b>	<b>9677.905</b>	
<b>Product-specific scope of supply</b>				
Contact hazard protection cover plate		-	■	

# Component adaptor



**Busbar system** Page 65/66 **Connection adaptors** Page 93 **NH slimline switch-disconnectors** Page 95

**Material:**

- Polyamide
- Fire protection corresponding to UL 94

**Colour:**

- RAL 7035

**Note:**

- Cable outlet: Switch outlet or as outgoing cable from the switchgear
- Suitable for the use of switchgear with front screw terminal
- For attaching to busbars with holes. Please ensure that there is no cover section installed in the vicinity of the device.

## Rated current max. 630 – 1600 A, clamping attachment

Rated max. current A	Packs of	630	1000	1600	Page
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	
Installation type		Screw attachment	Screw attachment	Screw attachment	
Cable outlet		Bottom	Bottom	Bottom	
For switchgear make (model)		ABB (Tmax XT5) Eaton (NZM3) Schneider Electric (NSX630) Siemens (3VA23, 3VA24, 3VL4)	ABB (Tmax XT7 - 800 A/1000 A) Eaton (NZM4 - 800 A/1000 A) Schneider Electric (NS - 800 A/1000 A) Siemens (3VA27 - 1000 A, VL1250/3VL7 - 1000 A)	ABB (Tmax XT7 - 1250 A/1600 A) Eaton (NZM4 - 1250 A/1600 A) Schneider Electric (NS - 1250 A/1600 A) Siemens (3VA27 - 1600 A, VL1250/3VL7 - 1250 A, VL1600/3VL8 - 1600 A)	
Width mm		150	300	300	
Height mm		585	652	652	
For bar systems with centre-to-centre spacing mm		185	185	185	
For bar thickness mm		10	10	10	
<b>Model No.</b>	1 pc(s).	<b>9677.780</b>	<b>9677.705</b>	<b>9677.715</b>	
<b>Product-specific scope of supply</b>					
Connection straps		■	–	–	
<b>Also required</b>					
Connector kit		–	see page	see page	101
Contact hazard protection cover plate		–	see page	see page	101

# NH slimline fuse-switch disconnector



**Busbar system** Page 65/66 **Connection adaptors** Page 93 **Component adaptors** Page 94

**Material:**

- Polyamide
- Fire protection corresponding to UL 94
- Contact tracks: Partially silver-plated hard copper

**Colour:**

- Chassis: RAL 7035
- Cover: RAL 7001
- Handle: RAL 7016

**Basis of test:**

- IEC/DIN EN 60 947-3
- DIN EN 60 269-2 (fuse inserts)

## Size 00 – 3, design single-pole, switchable

Size	Packs of	00	1	2	3	Page
Rated operating current max. A		160	250	400	630	
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	
Cable outlet		Top/bottom	Top/bottom	Top/bottom	Top/bottom	
Connection type		Screw M8	Bolt M12	Bolt M12	Bolt M12	
Connection of round conductors mm <sup>2</sup>		1.5 - 95	6 - 240	6 - 240	6 - 240	
Width mm		50	100	100	100	
Height mm		670	670	670	670	
For converter installation		■	■	■	■	
For bar systems with centre-to-centre spacing mm		185	185	185	185	
For bar thickness mm		10	10	10	10	
<b>Model No.</b>	1 pc(s).	<b>9677.010</b>	<b>9677.110</b>	<b>9677.210</b>	<b>9677.310</b>	
<b>Accessories</b>						
Connection space cover	1 pc(s.)	see page	9677.410	9677.410	9677.410	102
Prism terminal	3 pc(s.)	9677.420	–	–	–	102
V connection terminal	3 pc(s.)	–	9677.430	9677.430	9677.440	102
Micro-switch	5 pc(s.)	3071.000	3071.000	3071.000	3071.000	105
Current converter	1 pc(s.)	9677.810	see page	see page	see page	103
Cover	5 pc(s.)	–	9677.415	9677.415	9677.415	104
Trim strip	2 pc(s.)	9677.407	9677.407	9677.407	9677.407	104

# NH slimline fuse-switch disconnector

## Size 00 – 1, design 3-pole, switchable

Size	Packs of	00	00	1	Page
Rated operating current max. A		160	160	250	
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	
Cable outlet		Top/bottom	Top/bottom	Top/bottom	
Connection type		Screw M8	Box terminal	Bolt M12	
Connection of round conductors mm <sup>2</sup>		1.5 - 95	1.5 - 95	6 - 240	
Width mm		50	50	100	
Height mm		670	670	670	
For converter installation		■	■	■	
For bar systems with centre-to-centre spacing mm		185	185	185	
For bar thickness mm		10	10	10	
<b>Model No.</b>	1 pc(s).	<b>9677.000</b>	<b>9677.025</b>	<b>9677.100</b>	

### Accessories

Connection space cover	1 pc(s.)	see page	see page	9677.410	102
Prism terminal	3 pc(s.)	9677.420	–	–	102
V connection terminal	3 pc(s.)	–	–	9677.430	102
Micro-switch	5 pc(s.)	3071.000	3071.000	3071.000	105
Current converter	1 pc(s.)	9677.810	9677.810	see page	103
Cover	5 pc(s.)	–	–	9677.415	104
Trim strip	2 pc(s.)	9677.407	9677.407	9677.407	104

## Size 2 – 3, design 3-pole, switchable

Size	Packs of	2	3	3 (twin track)	Page
Rated operating current max. A		400	630	1250	
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	
Cable outlet		Top/bottom	Top/bottom	Bottom	
Connection type		Bolt M12	Bolt M12	Bolt M12	
Connection of round conductors mm <sup>2</sup>		6 - 240	6 - 240	6 - 240	
Width mm		100	100	200	
Height mm		670	670	670	
For converter installation		■	■	■	
For bar systems with centre-to-centre spacing mm		185	185	185	
For bar thickness mm		10	10	10	
<b>Model No.</b>	1 pc(s.)	<b>9677.200</b>	<b>9677.300</b>	<b>9677.340</b>	

### Accessories

Connection space cover	1 pc(s.)	9677.410	9677.410	–	102
Prism terminal		–	–	–	
V connection terminal	3 pc(s.)	9677.430	9677.440	–	102
Micro-switch	5 pc(s.)	3071.000	3071.000	3071.000	105
Current converter		see page	see page	see page	103
Cover	5 pc(s.)	9677.415	9677.415	–	104
Trim strip	2 pc(s.)	9677.407	9677.407	9677.407	104

# NH slimline fuse-switch disconnector



**Busbar system** Page 65/66 **Connection adaptors** Page 93 **Component adaptors** Page 94

**Material:**

- Polyamide
- Fire protection corresponding to UL 94
- Contact tracks: Partially silver-plated hard copper

**Colour:**

- Chassis: RAL 7035
- Cover: RAL 7001
- Handle: RAL 7016

**Basis of test:**

- IEC/DIN EN 60 947-3
- DIN EN 60 269-2 (fuse inserts)

## Size 00 – 3, with electronic fuse monitoring

Design	Packs of	3-pole, switchable	3-pole, switchable	3-pole, switchable	3-pole, switchable	Page
Size		00	1	2	3	
Rated operating current max. A		160	250	400	630	
Rated operating voltage V, ~		400, 3~	400, 3~	400, 3~	400, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	
Cable outlet		Top/bottom	Top/bottom	Top/bottom	Top/bottom	
Connection type		Screw M8	Bolt M12	Bolt M12	Bolt M12	
Connection of round conductors mm <sup>2</sup>		1.5 - 95	6 - 240	6 - 240	6 - 240	
Width mm		50	100	100	100	
Height mm		830	830	830	830	
For converter installation		■	■	■	■	
For bar systems with centre-to-centre spacing mm		185	185	185	185	
For bar thickness mm		10	10	10	10	
<b>Model No.</b>	1 pc(s).	<b>9677.015</b>	<b>9677.115</b>	<b>9677.215</b>	<b>9677.315</b>	

**Accessories**

Connection space cover	1 pc(s.)	see page	9677.410	9677.410	9677.410	102
Prism terminal	3 pc(s.)	9677.420	–	–	–	102
V connection terminal	3 pc(s.)	–	9677.430	9677.430	9677.440	102
Micro-switch	5 pc(s.)	3071.000	3071.000	3071.000	3071.000	105
Current converter	1 pc(s.)	9677.810	see page	see page	see page	103
Cover	5 pc(s.)	–	9677.415	9677.415	9677.415	104
Trim strip	2 pc(s.)	9677.407	9677.407	9677.407	9677.407	104

# NH slimline switch-disconnector



**Busbar system** Page 65/66 **Connection adaptors** Page 93 **Component adaptors** Page 94

## Functions:

- Automatic quick-break contact allows operator-independent switching
- Double-break for reliable disconnection of the contacts

## Material:

- Polyamide
- Fire protection corresponding to UL 94
- Contact tracks: Partially silver-plated hard copper

## Colour:

- Chassis: RAL 7035
- Cover: RAL 7001
- Handle: RAL 7016

## Basis of test:

- IEC/DIN EN 60 947-3
- DIN EN 60 269-2 (fuse inserts)

## Size 00 – 1, design 3-pole, switchable

Size	Packs of	00	00	1	1	Page
Rated operating current max. A		160	160	250	250	
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	
Installation type		Screw attachment	Screw attachment	Screw attachment	Screw attachment	
Cable outlet		Bottom	Top	Bottom	Top	
Connection type		Screw M8	Screw M8	Screw M12	Screw M12	
Connection of round conductors mm <sup>2</sup>		1.5 - 95	1.5 - 95	6 - 240	6 - 240	
Width mm		50	50	100	100	
Height mm		676	676	772	772	
For converter installation		■	■	–	–	
For bar systems with centre-to-centre spacing mm		185	185	185	185	
For bar thickness mm		10	10	10	10	
<b>Model No.</b>	1 pc(s).	<b>9677.065</b>	<b>9677.075</b>	<b>9677.160</b>	<b>9677.165</b>	

## Accessories

Connection space cover	1 pc(s.)	9677.400	9677.400	9677.410	9677.410	102
Connection space cover, rear	1 pc(s.)	9677.402	9677.402	9677.412	9677.412	104
Box terminal		–	–	see page	see page	105
Micro-switch	1 pc(s.)	9677.418	9677.418	9677.418	9677.418	105
Current converter	1 pc(s.)	9677.810	9677.810	–	–	103
Trim strip	2 pc(s.)	9677.407	9677.407	9677.407	9677.407	104

# NH slimline switch-disconnector

## Size 2 – 3, design 3-pole, switchable

Size	Packs of	2	2	3	3	Page
Rated operating current max. A		400	400	630	500	
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	
Installation type		Screw attachment	Screw attachment	Screw attachment	Screw attachment	
Cable outlet		Bottom	Top	Bottom	Top	
Connection type		Screw M12	Screw M12	Screw M12	Screw M12	
Connection of round conductors mm <sup>2</sup>		6 - 240	6 - 240	6 - 240	6 - 240	
Width mm		100	100	100	100	
Height mm		772	772	772	772	
For converter installation		–	–	–	–	
For bar systems with centre-to-centre spacing mm		185	185	185	185	
For bar thickness mm		10	10	10	10	
<b>Model No.</b>	1 pc(s).	<b>9677.260</b>	<b>9677.265</b>	<b>9677.360</b>	<b>9677.365</b>	
<b>Accessories</b>						
Connection space cover	1 pc(s.)	9677.410	9677.410	9677.410	9677.410	102
Connection space cover, rear	1 pc(s.)	9677.412	9677.412	9677.412	9677.412	104
Box terminal		see page	see page	see page	see page	105
Micro-switch	1 pc(s.)	9677.418	9677.418	9677.418	9677.418	105
Current converter		–	–	–	–	
Trim strip	2 pc(s.)	9677.407	9677.407	9677.407	9677.407	104

Rittal – The System.



**VX25 Power Engineering**

See page 106

# NH slimline switch-disconnector



**Busbar system** Page 65/66 **Connection adaptors** Page 93 **Component adaptors** Page 94

## Functions:

- Automatic quick-break contact allows operator-independent switching
- Double-break for reliable disconnection of the contacts

## Material:

- Polyamide
- Fire protection corresponding to UL 94
- Contact tracks: Partially silver-plated hard copper

## Colour:

- Chassis: RAL 7035
- Cover: RAL 7001
- Handle: RAL 7016

## Basis of test:

- IEC/DIN EN 60 947-3
- DIN EN 60 269-2 (fuse inserts)

## Size 00 – 3, with electronic fuse monitoring

Design	Packs of	3-pole, switchable	3-pole, switchable	3-pole, switchable	3-pole, switchable	Page
Size		00	1	2	3	
Rated operating current max. A		160	250	400	630	
Rated operating voltage V, ~		400, 3~	400, 3~	400, 3~	400, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	
Installation type		Screw attachment	Screw attachment	Screw attachment	Screw attachment	
Cable outlet		Bottom	Bottom	Bottom	Bottom	
Connection type		Screw M8	Screw M12	Screw M12	Screw M12	
Connection of round conductors mm <sup>2</sup>		1.5 - 95	6 - 240	6 - 240	6 - 240	
Width mm		50	100	100	100	
Height mm		860	941	941	941	
For converter installation		■	-	-	-	
For bar systems with centre-to-centre spacing mm		185	185	185	185	
For bar thickness mm		10	10	10	10	
<b>Model No.</b>	1 pc(s).	<b>9677.085</b>	<b>9677.180</b>	<b>9677.280</b>	<b>9677.380</b>	

## Accessories

Connection space cover	1 pc(s.)	9677.400	9677.410	9677.410	9677.410	102
Connection space cover, rear	1 pc(s.)	9677.402	9677.412	9677.412	9677.412	104
Box terminal		-	see page	see page	see page	105
Micro-switch	1 pc(s.)	9677.418	9677.418	9677.418	9677.418	105
Current converter	1 pc(s.)	9677.810	-	-	-	103
Trim strip	2 pc(s.)	9677.407	9677.407	9677.407	9677.407	104

# Accessories for assembly components

## 185 mm bar centre distance

### Connector kit

#### for component adaptors

Preassembled connector kit for common brands of moulded-case circuit-breaker (MCCB). For electrical connection between the switch and the component adaptor (3-pole).

#### Material:

- E-Cu

#### Supply includes:

- Assembly parts



For switchgear make (model)	To fit Model No.	Packs of	Model No.
ABB (Tmax XT7 - 800 A/1000 A) Schneider Electric (NS - 800 A/1000 A) Siemens (3VA27 - 800 A/1000 A)	9677.700/9677.705	1 pc(s).	<b>9677.730</b>
Eaton (NZM4 - 800 A/1000 A) Siemens (VL1250/3VL7 - 1000 A)	9677.700/9677.705	1 pc(s).	<b>9677.740</b>
ABB (Tmax XT7 - 1250 A/1600 A) Schneider Electric (NS - 1250 A/1600 A) Siemens (3VA27 - 1250 A/1600 A)	9677.710/9677.715	1 pc(s).	<b>9677.750</b>
Eaton (NZM4 - 1250 A/1600 A) Siemens (VL1250/3VL7 - 1250 A, VL1600/VL8 - 1600 A)	9677.710/9677.715	1 pc(s).	<b>9677.760</b>

### Contact hazard protection cover plate

#### for component adaptors

To cover the connector kit at the front. The cover may also optionally be used for the switchgear cable connection. Open cable accesses in the contact hazard protection cover may be sealed using the side panels.

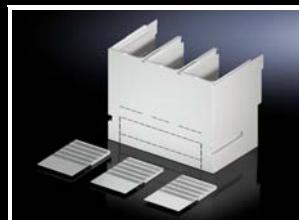
#### Material:

- Polyamide
- Fire protection corresponding to UL 94

#### Supply includes:

- Side panels

For switchgear make (model)	Packs of	Model No.
-	1 pc(s).	<b>9677.790</b>
ABB (Tmax T7)	1 pc(s).	<b>9677.792</b>
Eaton (NZM 4)	1 pc(s).	<b>9677.794</b>
Siemens (3VL7/3VL8)	1 pc(s).	<b>9677.796</b>
Schneider Electric (NS1600)	1 pc(s).	<b>9677.798</b>



# Accessories for assembly components

## 185 mm bar centre distance



### Connection space cover

**for NH slimline fuse-switch-disconnectors/  
NH slimline switch-disconnectors**

Cascadable connection space cover to guarantee contact hazard protection in the cable connection zone when using ring terminals with a long collar.

**Material:**

- Polycarbonate
- Fire protection corresponding to UL 94

**Note:**

- When using NH slimline fuse-switch disconnectors with top cable outlet, use of the connection space cover is mandatory

For size	To fit Model No.	Cable outlet	Note on Model No.	Packs of	Model No.
00	9677.0X0/ 9677.0X5	Bottom	Also suitable for use with NH slimline switch-disconnectors with top cable outlet	1 pc(s).	<b>9677.400</b>
00	9677.000/ 9677.010/ 9677.015/ 9677.025	Top	-	1 pc(s).	<b>9677.405</b>
1 - 3	9677.1X0/ 9677.1X5/ 9677.2X0/ 9677.2X5/ 9677.300/ 9677.310/ 9677.3X5	Top/bottom	-	1 pc(s).	<b>9677.410</b>



### Prism terminal

**for NH slimline fuse-switch disconnectors**  
For the direct connection of round conductors.

**Material:**

- Brass

**Surface finish:**

- Tin-plated

For size	To fit Model No.	Connection of round conductors mm <sup>2</sup>	Packs of	Model No.
00	9677.000/ 9677.010/ 9677.015	10 - 95	3 pc(s).	<b>9677.420</b>



### V connection terminal

**for NH slimline fuse-switch disconnectors**  
For the direct connection of round conductors.

**Material:**

- Brass

**Surface finish:**

- Tin-plated

For size	To fit Model No.	Connection of round conductors mm <sup>2</sup>	Packs of	Model No.
1/2	9677.100/ 9677.110/ 9677.115/ 9677.200/ 9677.210/ 9677.215	70 - 240	3 pc(s).	<b>9677.430</b>
3	9677.300/ 9677.310/ 9677.315	120 - 300	3 pc(s).	<b>9677.440</b>

# Accessories for assembly components

## 185 mm bar centre distance

### Current converter

for NH slimline fuse-switch-disconnectors/

NH slimline switch-disconnectors

Compact design without altering the installation depth via mechanical integration into the NH slimline switch-disconnector (185 mm centre-to-centre spacing); this allows space-saving assembly.

#### Material:

- Polyamide

#### Basis of test:

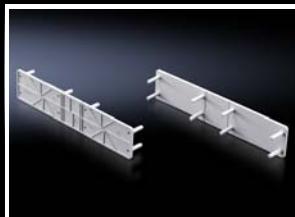
- IEC 60 044-1
- EN 60 715
- DIN VDE 0414
- DIN 42 600-2



For size	00	1 - 3	1 - 3	1 - 3	1 - 3
A good fit for Model No.	9677.000/ 9677.010/ 9677.015/ 9677.025/ 9677.060/ 9677.065/ 9677.070/ 9677.075/ 9677.080/ 9677.085	9677.100/ 9677.110/ 9677.115/ 9677.200/ 9677.210/ 9677.215/ 9677.300/ 9677.310/ 9677.315/ 9677.340	9677.100/ 9677.110/ 9677.115/ 9677.200/ 9677.210/ 9677.215/ 9677.300/ 9677.310/ 9677.315/ 9677.340	9677.100/ 9677.110/ 9677.115/ 9677.200/ 9677.210/ 9677.215/ 9677.300/ 9677.310/ 9677.315/ 9677.340	9677.100/ 9677.110/ 9677.115/ 9677.200/ 9677.210/ 9677.215/ 9677.300/ 9677.310/ 9677.315/ 9677.340
Primary current A	150	200	250	400	600
Secondary current A	5	5	5	5	5
Accuracy class	1	1	1	1	1
Rated frequency Hz	50 - 60	50 - 60	50 - 60	50 - 60	50 - 60
Insulation voltage kV	3	3	3	3	3
Insulating material category	E	W	W	W	W
Connection of round conductors mm <sup>2</sup>	2.5 - 4	-	-	-	-
Connection type	Screw terminals	Round conductor 2.5 mm <sup>2</sup> (length 1.5 m)	Round conductor 2.5 mm <sup>2</sup> (length 1.5 m)	Round conductor 2.5 mm <sup>2</sup> (length 1.5 m)	Round conductor 2.5 mm <sup>2</sup> (length 1.5 m)
Rated power input VA	2.5	1.5	2.5	2.5	2.5
Packs of	1 pc(s).				
<b>Model No.</b>	<b>9677.810</b>	<b>9677.840</b>	<b>9677.860</b>	<b>9677.870</b>	<b>9677.880</b>

# Accessories for assembly components

## 185 mm bar centre distance



### Cover

#### for NH slimline fuse-switch disconnectors

To increase rear contact hazard protection of the NH slimline fuse-switch-disconnector in the top section when mounting on a 185 mm bar system with contact hazard protection.

For size	Packs of	Model No.
1 - 3	5 pc(s).	9677.415



### Material:

- Polyamide

### Colour:

- RAL 7035



### Trim strip

#### for NH slimline fuse-switch-disconnectors/ NH slimline switch-disconnectors

To create a contact surface for individual use of a front contact hazard protection cover plate. Mounted on the side of the NH strip enclosure.

For size	Packs of	Model No.
00 - 3	2 pc(s).	9677.407



### Connection space cover, rear

#### for NH slimline switch-disconnectors

To guarantee contact hazard protection in the rear cable connection zone when using ring terminals with long press sleeves. In conjunction with the front connection space cover (9677.400/.410), this achieves all-round contact hazard protection of the connection space.

For size	Packs of	Model No.
00	1 pc(s).	9677.402
1 - 3	1 pc(s).	9677.412



### Material:

- Polyamide

### Colour:

- RAL 7035

# Accessories for assembly components

## 185 mm bar centre distance

### Box terminal

#### for NH slimline switch-disconnectors

For converting NH slimline switch-disconnectors to box terminal connection for round conductors.

##### Material:

- Aluminium
- E-Cu, silver-plated

##### Supply includes:

- Connection space cover, rear

For size	Connection of round conductors mm <sup>2</sup>	Packs of	Model No.
1 - 3	70 - 240	3 pc(s).	<b>9677.435</b>
1 - 3	185 - 300	3 pc(s).	<b>9677.445</b>



### Micro-switch

#### for NH fuse-switch disconnectors/NH slimline fuse-switch disconnectors (185 mm)

To indicate the switch position of the NH unit (cover).

For size	NH slimline fuse-switch disconnector size 00 - 3 (185 mm)
Rated operating current max. A	5
Rated operating voltage V	250
Packs of	5 pc(s).
Model No.	<b>3071.000</b>



### Micro-switch

#### for NH slimline switch-disconnectors

To indicate the switch position of the NH unit (cover).

##### Supply includes:

- Bracket

For size	Rated operating current max. A	Rated operating voltage V	Packs of	Model No.
00 - 3	5	250	1 pc(s).	<b>9677.418</b>



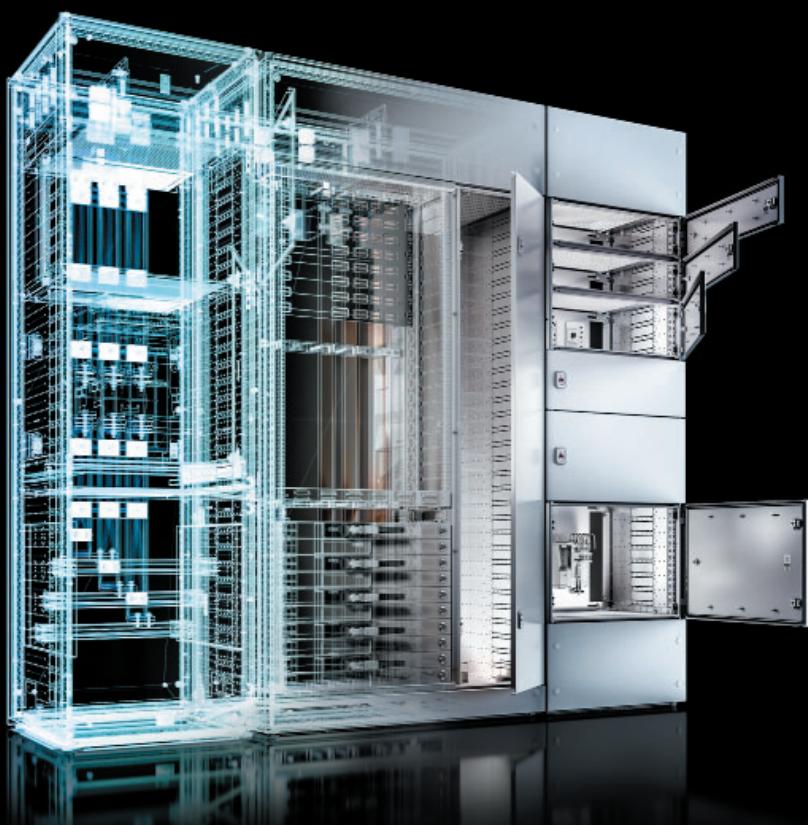
# VX25 POWER ENGINEERING

## The ultimate in user-friendly planning

Our Power Engineering planning tool heralds a new era. Just like the underlying VX25, our VX25 Power Engineering planning software sets new standards when planning low-voltage switchgear. The Web-based tool guides users quickly and efficiently through the entire planning process in simple, logical steps.

## The benefits to you:

- The web-based application ensures that planning data is always up-to-date
- System configuration in either a simplified or detailed version
- Parts list and assembly based on a specific set of rules
- Automatic calculation and documentation of the copper busbars
- Generation of a design verification to IEC 61 439
- System documentation including assembly instructions
- Order immediately via a direct link to the online webshop
- Technical service support, including free assistance with project planning and quote preparation
- All planning data stored locally on your computer



Please specify your system

**System**

System name: new System

System type: up to 4000A / roof / rear

Protection category: IP2X

Form separation acc. IEC: 0

Main busbar system:

- Rated current of assembly I<sub>nc</sub> (A): 2100
- Forced ventilation: without
- Position of busbar system: Roof section
- Maximum operating current I<sub>oc</sub> (A): 2088
- Number of poles busbar system: 3 poles
- Dimension busbar: 4xHxW 10
- Short circuit capacity of the system bus: 100 kA

Measurements:

- Height of system: 2000 mm
- Depth of system: 900 mm
- Height of poles: without

PE system:

- Net height: 186 C-S Net
- PE protective conductor dimension: without
- N-protective conductor dimension: without

Copper calculation:

- With main busbar
- With vertical busbar
- With connection kits

### System definition

- Define system parameters to IEC 61 439
- Configure the main busbar system
- Input the key dimensions and planned PE system

Create system > Select cubicle to add to your system > Summary

Select cubicle type to add to your system

Available cubicle types

System: 'new System'

Width total = 1000 mm

+ Detailed cubicle configuration

### Section selection and configuration

- Compile tested sections into a complete switchgear
- Select certified components from brand-name manufacturers and Rittal power distribution products
- Individually configure sections with selected modules

Create system > Select cubicle to add to your system > Summary

- Module configuration

Module configuration

- Define the rated current of the circuits

Please enter the rated currents of the modules. This information will be needed for creation of the design verification.

Outgoing circuit	Device type	I <sub>nc</sub> (A) device acc. IEC 60947	I <sub>nc</sub> (A) device / fuse insert	I <sub>nc</sub> (A) admissible rated current	RDF rated diversity factor	I <sub>oc</sub> /RDF (A) admissible rated current	Planned I <sub>nc</sub> (A)	Device is feeder
+2F1	NH00	100	100A	100	1.00	100	100	no
+2F2	NH00	100	100A	100	1.00	100	100	no
+2F3	NH1	250	250A	250	1.00	250	250	no
+2F4	NH1	250	250A	250	1.00	250	250	no
+2F5	NH2	400	400A	375	0.9600	360	360	no
+2F6	NH2	400	400A	375	0.9600	360	360	no

State of power distribution

OK! The sum of the currents of the outgoing circuits/devices with 2517A are in range of the admissible load of the busbar system. The maximum rated current if the busbar is 2088A.

Does the sum of current of the outgoing circuits exceed the max. rated current of the chosen busbar system, then the manufacturer has to define groups of outgoing circuits, which will work at the same time, to fulfill the design verification of heat res.

### Circuit calculation

- Determine device-specific properties
- Calculate admissible rated currents I<sub>nc</sub> (A)
- Calculate the specific rated diversity factor (RDF)

Create system > Select cubicle to add to your system > Summary

new System

Download

Please select the content of your download file

Part list   
Design verification   
Assembly plan   
Configurations parameter   
Connection sets

Request offer  Download drawing

Download Close

### Output

- Automated generation of system documentation including design verification to IEC 61 439
- Documentation of copper bars including free drawings
- Order directly via the webshop link





# VX25. SYSTEM PERFECTION.



## RITTAL AUTOMATION SYSTEMS

### **Boost productivity at every process stage**

Automating and optimising manual working processes in panel building and switchgear manufacturing helps enhance quality and increase productivity. This approach relies on digital integration and digital continuity throughout the entire value chain.

### **Work efficiently and ergonomically with busbars**

With the aid of digitalisation we achieve the ideal workflow – from engineering right through to production.

- Cut busbars to the required length
- Bend busbars as per the design
- Precisely punch busbars



Find out more.

Busbar machining, static  
CW 120-S



**Speed**

The integral precision laser speeds up the process of cutting copper bars to the exact required length



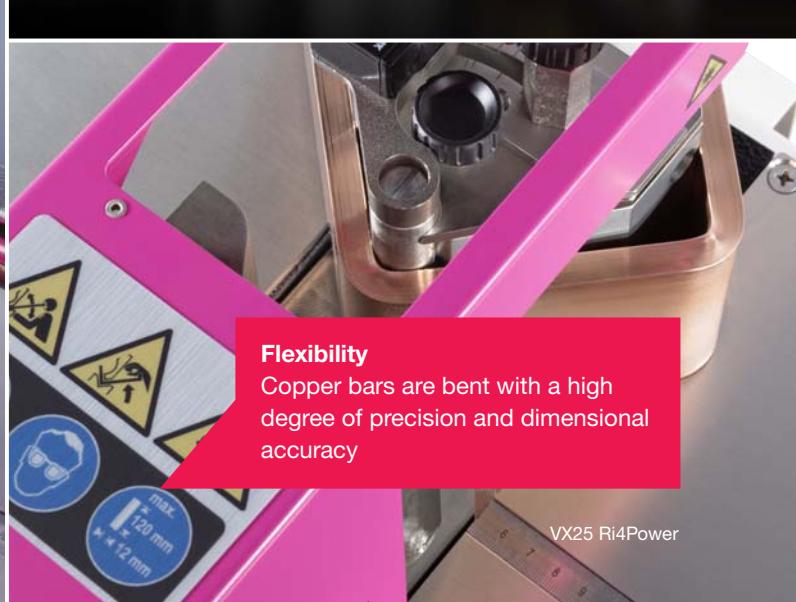
**Precision**

Perfect-fit holes for screw-fastening copper rails may be punched precisely with a simple tool change



**Flexibility**

Copper bars are bent with a high degree of precision and dimensional accuracy





**Busbar machining,  
mobile CW 120-M**



**User-friendly**

The integral measuring system and folding end stop allows all functions to be conveniently used



**Integrated**

With the help of the electric protractor, cutting and bending operations are facilitated



# List of model numbers

Model No.	Page						
2307.000	59	8640.002	52	9674.381	86	9677.300	96
2308.000	60	8640.003	52	9674.410	85	9677.310	95
2460.000	59	8640.005	52	9674.416	85	9677.315	97
2460.650	59	8640.007	52	9674.418	85	9677.340	96
2461.000	59	8640.021	52	9674.430	85	9677.360	99
2462.000	59	8640.022	52	9674.436	85	9677.365	99
2463.000	59	8640.023	52	9674.438	85	9677.380	100
2464.000	59	8640.024	52	9674.790	62	9677.400	102
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2468.000	60	8640.043	53	9676.503	90	9677.410	102
2469.000	60	8640.044	53	9676.504	90	9677.412	104
2521.000	60	8801.260	58	9676.505	90	9677.415	104
2531.000	60	9640.202	71	9676.700	69	9677.418	105
2532.000	60	9640.207	71	9676.710	69	9677.420	102
2537.100	59	9640.232	71	9676.730	68	9677.430	102
2537.300	59	9640.237	71	9676.747	69	9677.435	105
2537.400	59	9640.262	71	9676.748	69	9677.440	102
2537.500	59	9640.267	71	9676.749	69	9677.445	105
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2547.000	60	9640.325	73	9676.808	70	9677.730	101
2548.000	60	9640.330	73	9676.809	70	9677.740	101
2549.000	60	9640.340	73	9676.810	70	9677.750	101
2549.500	60	9640.350	73	9676.811	70	9677.760	101
3071.000	105	9640.360	71	9676.812	70	9677.780	94
3565.005	91	9640.365	71	9676.813	70	9677.790	101
3568.005	91	9640.370	73	9676.814	70	9677.792	101
3569.005	91	9640.380	73	9676.815	70	9677.794	101
3570.005	91	9640.900	74	9676.816	70	9677.796	101
3571.005	91	9640.910	74	9676.817	70	9677.798	101
3572.005	91	9640.920	74	9676.819	70	9677.810	103
3573.005	91	9640.930	74	9676.832	68	9677.840	103
3574.005	91	9640.940	74	9676.966	75	9677.860	103
3575.005	91	9640.970	73	9676.967	75	9677.870	103
3576.005	91	9640.980	73	9676.968	75	9677.880	103
3577.005	91	9649.010	71	9676.971	74	9677.900	93
3578.005	91	9649.360	71	9676.972	74	9677.905	93
3579.005	91	9650.202	72	9676.973	74	9680.005	50
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3586.005	91	9650.262	72	9676.977	74	9680.207	50
3588.005	91	9650.292	72	9676.981	74	9680.227	50
3589.005	91	9650.325	73	9676.982	74	9680.406	48
3590.005	91	9650.330	73	9676.983	74	9680.408	48
3590.015	91	9650.340	73	9676.986	74	9680.426	49
4054.870	92	9650.360	72	9676.987	74	9680.428	49
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8617.501	54	9660.980	74	9677.180	100	9681.516	61
8617.502	54	9665.750	62	9677.200	96	9681.546	61
8617.503	54	9665.760	62	9677.210	95	9681.548	61
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