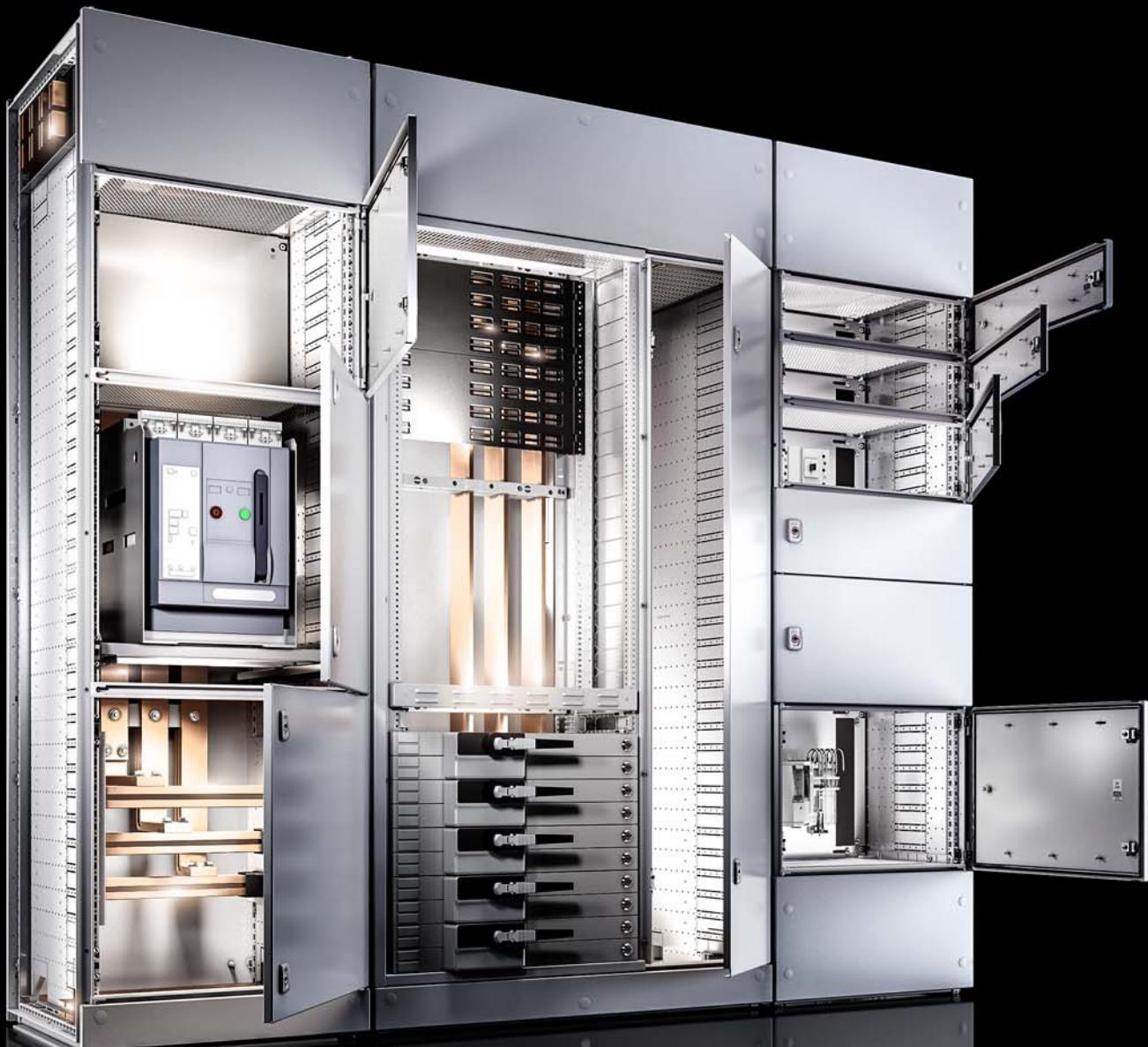


Rittal – The System.

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.



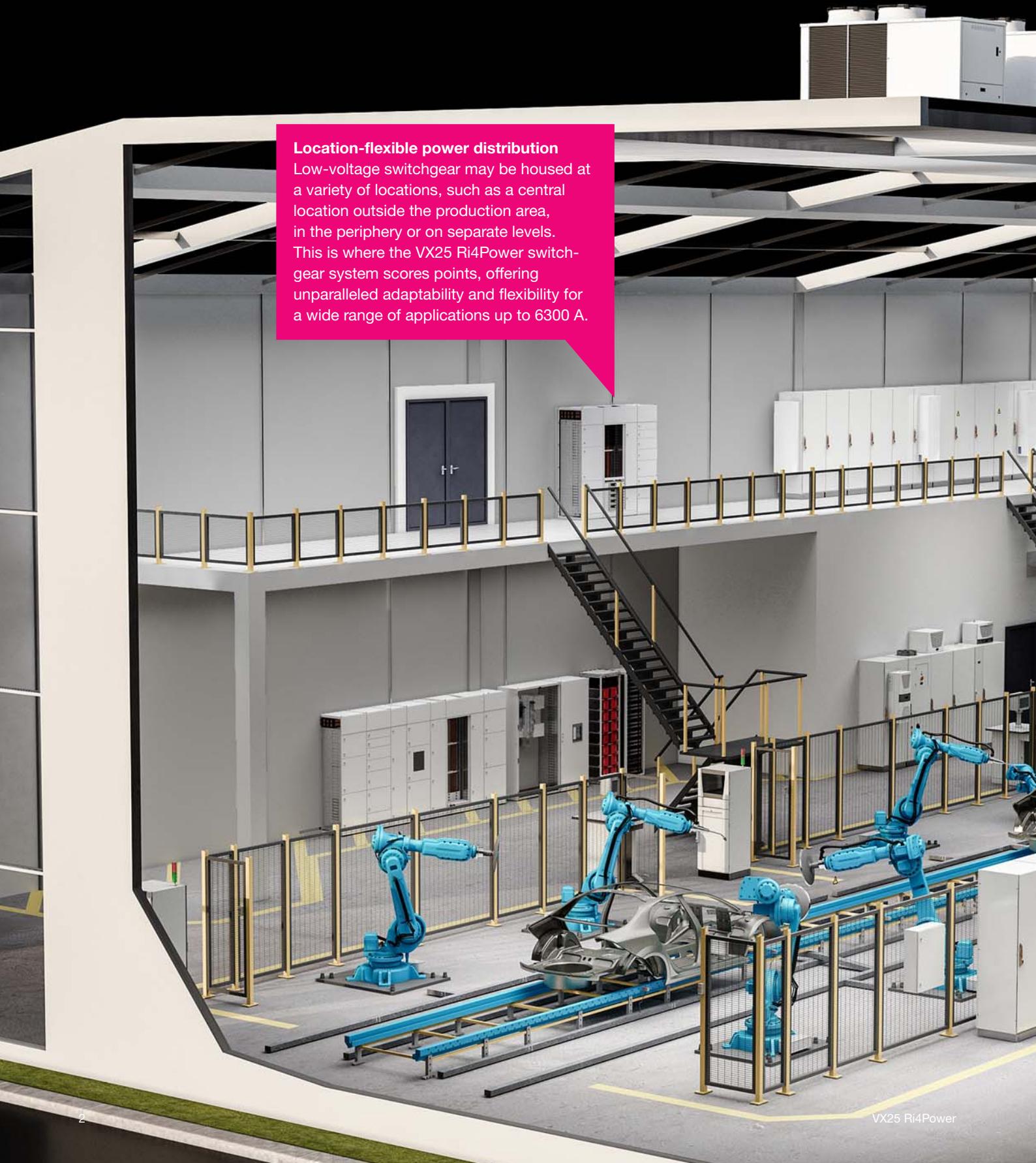
VX25. SYSTEM PERFECTION.

VX25 Ri4Power

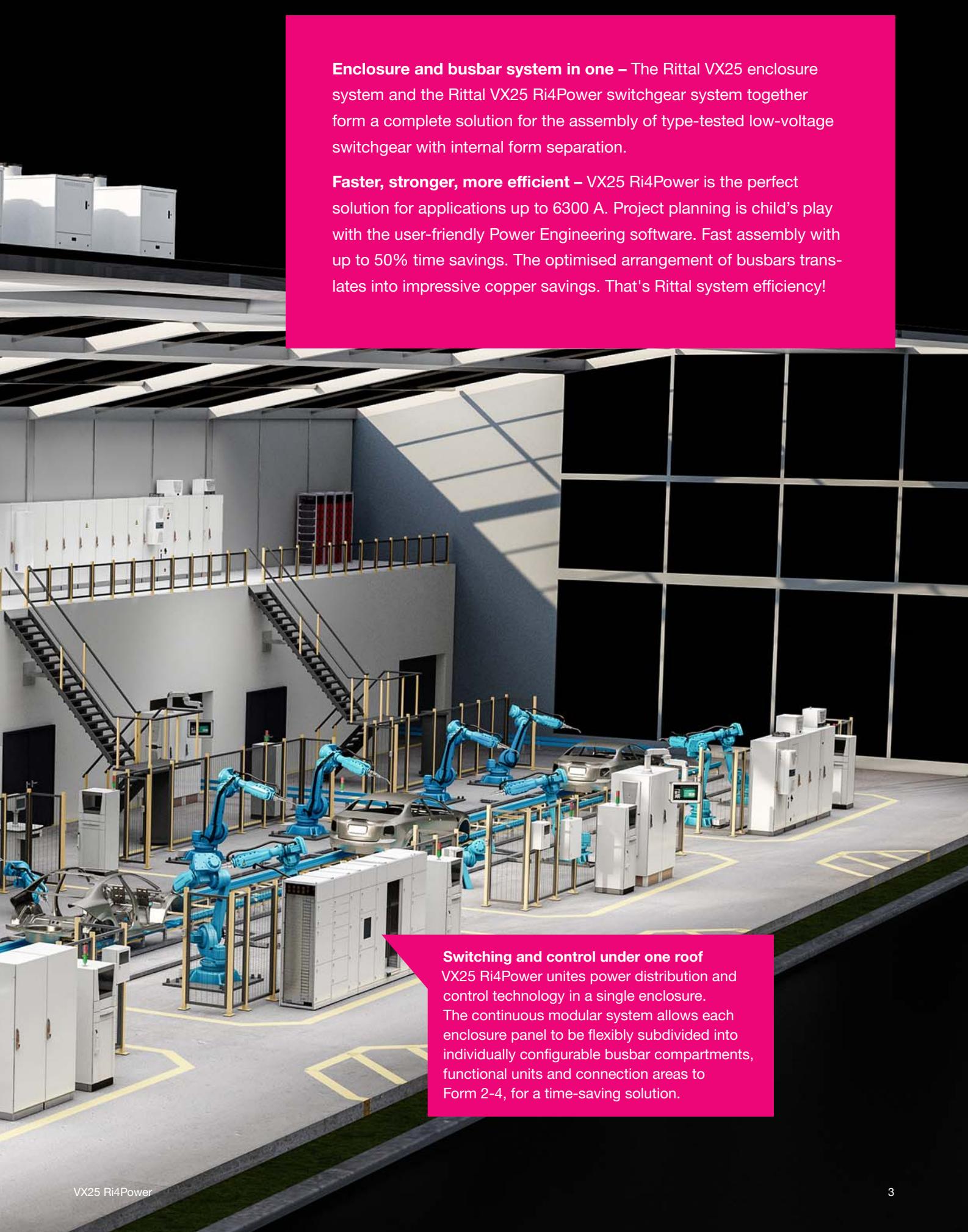
	Section types	page 4/5
	ACB section	from page 12
	Outgoing section	from page 18
	Form 2b	from page 24
	Coupling section	from page 30
	Fuse-switch disconnector section, cable chamber	from page 36
	Energy storage system ESS	from page 42
	Baying enclosure system VX25	from page 48
	Modular enclosure	from page 48
	Fuse-switch-disconnector enclosure	from page 50
	System accessories	from page 51
	Assembly components	from page 91
	Connection adaptor	from page 91
	Component adaptor	from page 92
	NH slimline fuse-switch disconnector	from page 93
	NH slimline switch-disconnector	from page 96
	Accessories	from page 99
	Software and machining	from page 104
	Rittal Power Engineering	from page 104
	Rittal Automation Systems	from page 106

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





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.



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 IP 54
- 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

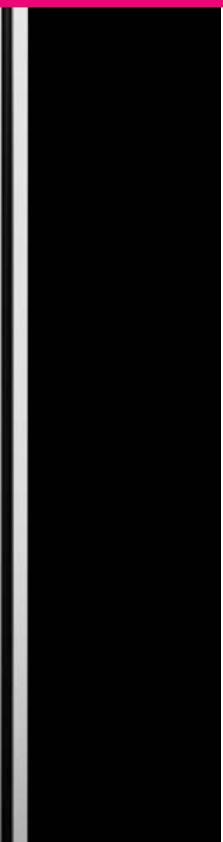
The pre-punched knock-outs in the compartment dividers may be removed without burrs, for flexible subdivision of the openings depending on the planned cable routing. This supports a continuous, direct power supply to the control and wiring sections.





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 busbar 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.



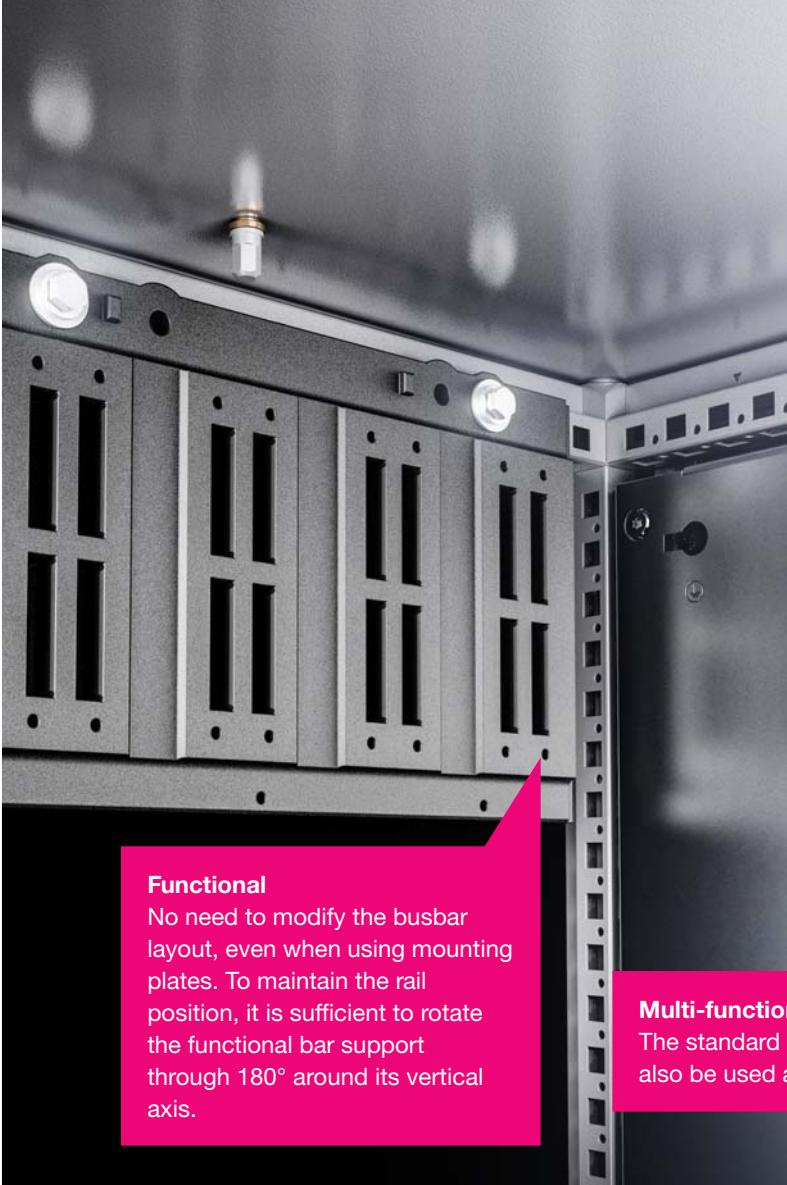
Reduced number of parts

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 supports 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 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

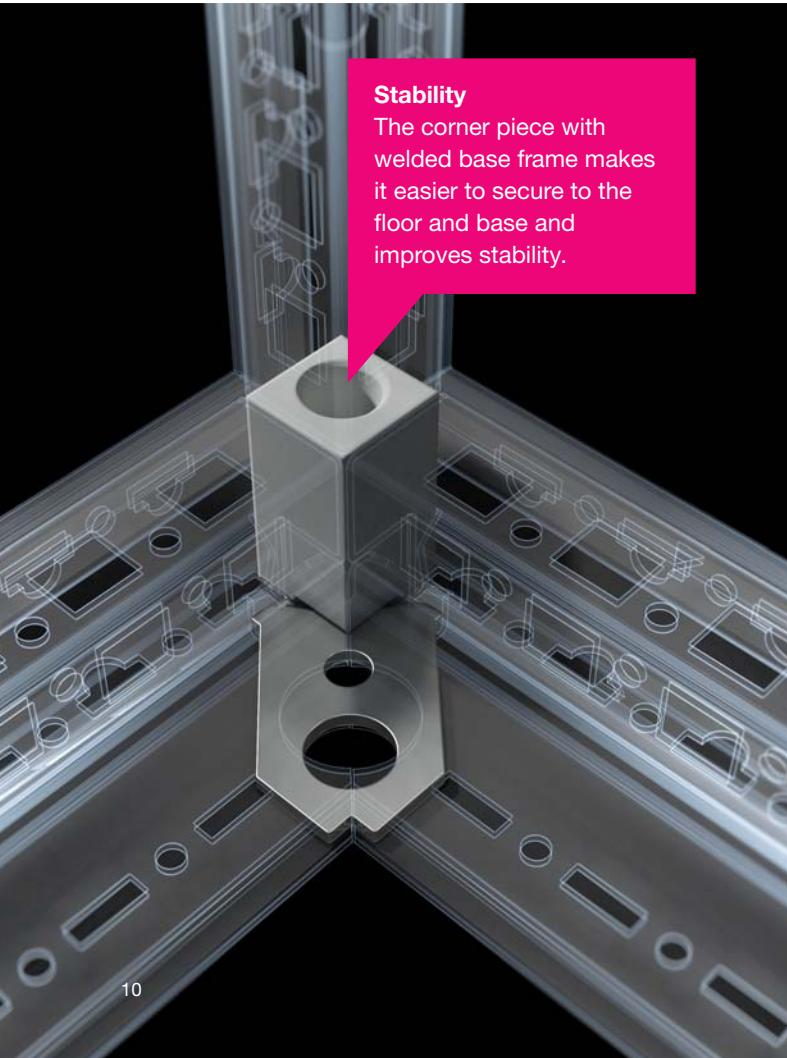
Rounded edges ensure optimum work safety standards when populating the enclosure.

**Stability**

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

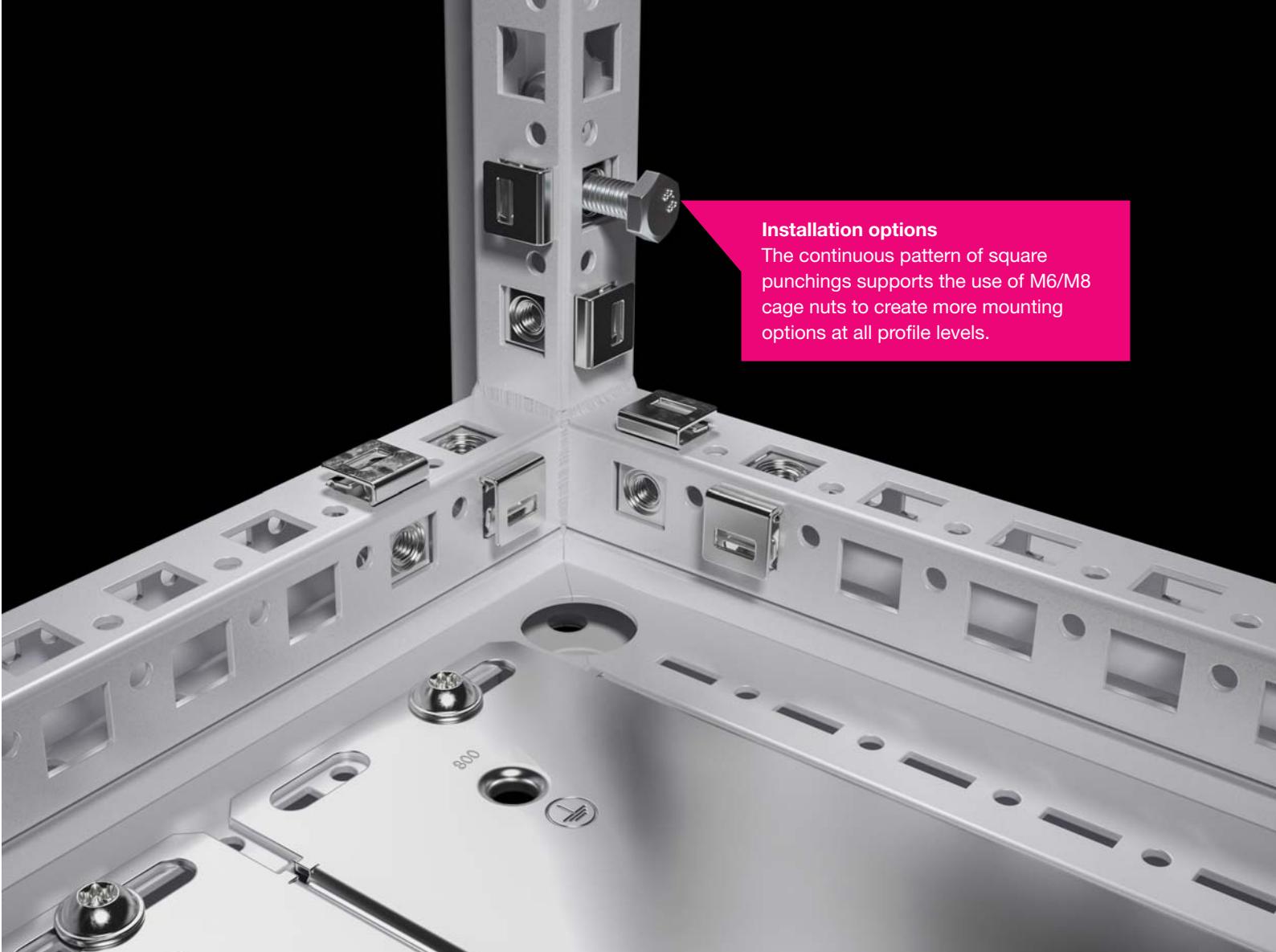
Stability

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

**Making life easier**

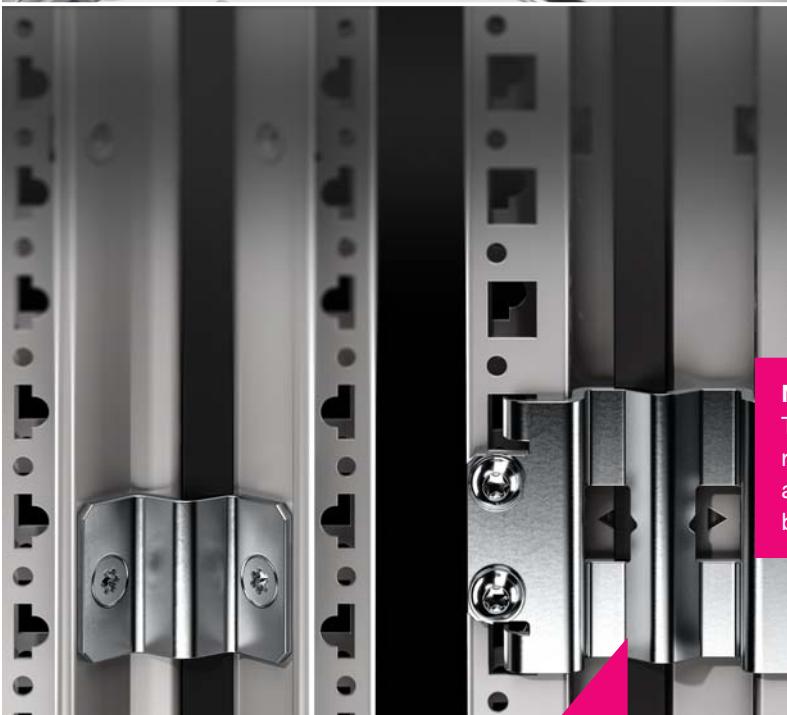
With one-person assembly, the positioning aid for the side and rear panels is an ideal, user-friendly preliminary fixing, leaving both hands free to screw-fasten the panels into position.





Installation options

The continuous pattern of square punchings supports the use of M6/M8 cage nuts to create 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.

Making life easier

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.

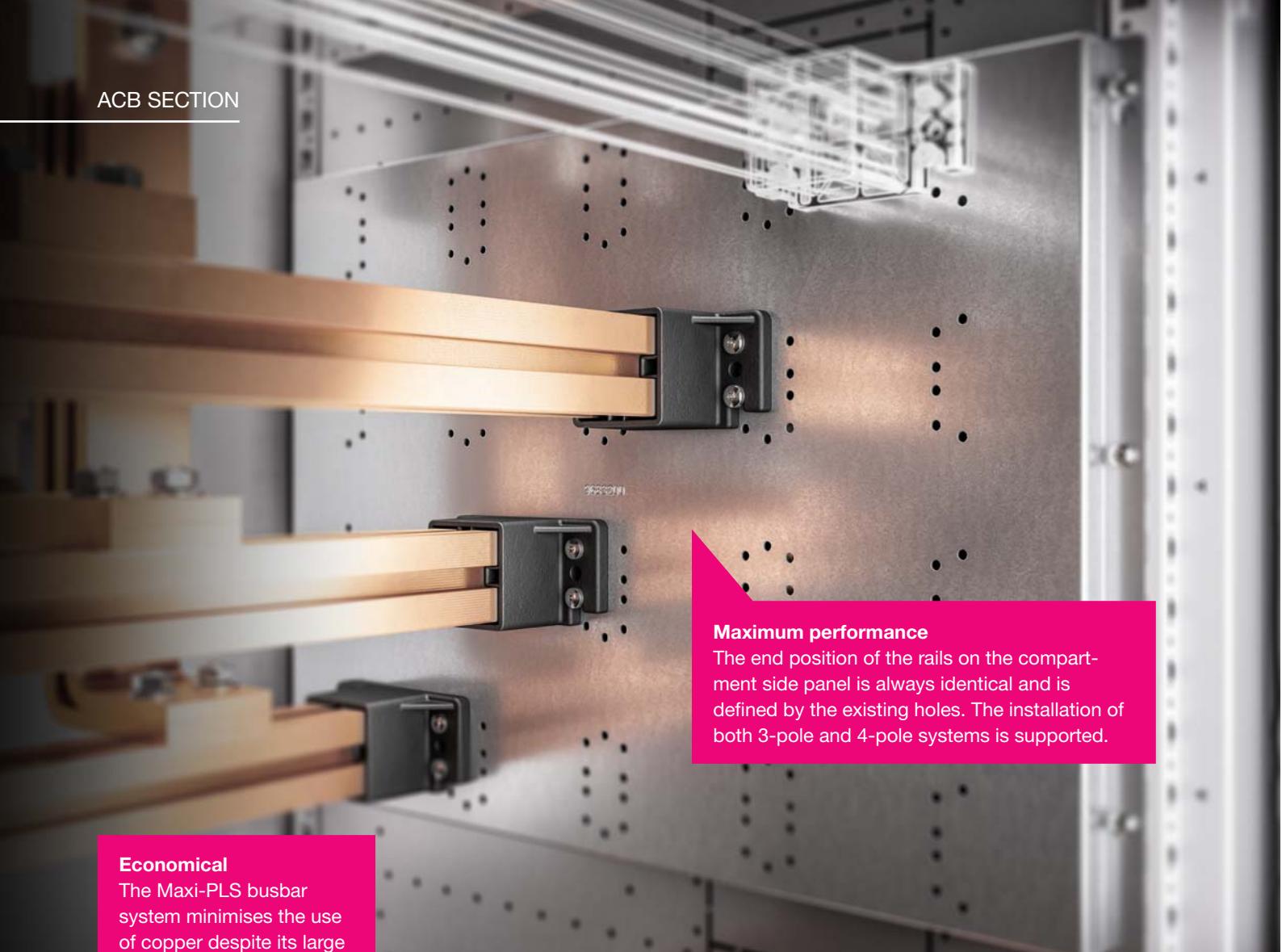


THE ACB SECTION

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.



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.

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.



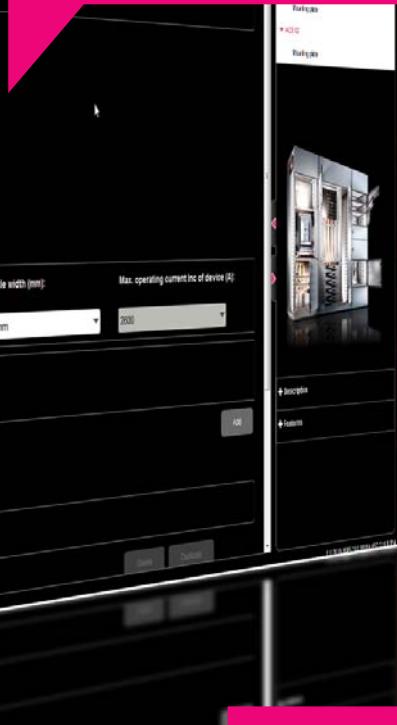
Continuity

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.



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.



Stability

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

Fast connection

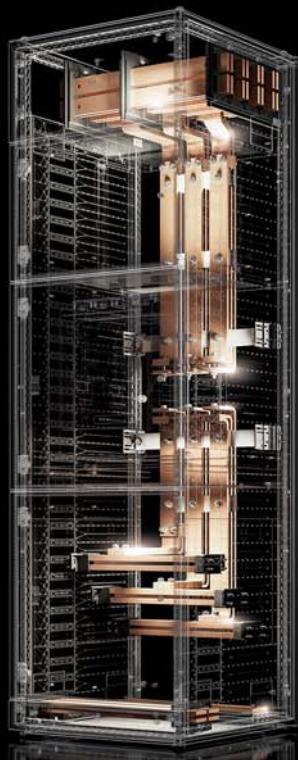
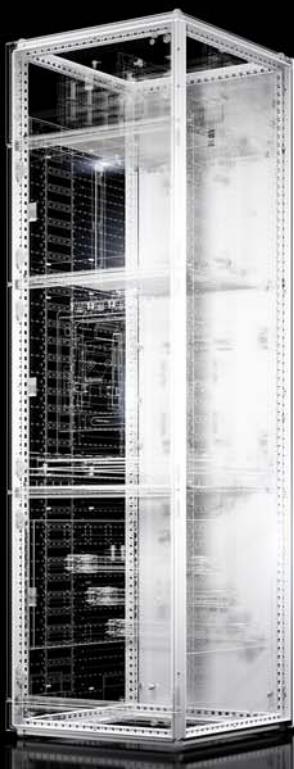
The connection brackets, which are planned using Rittal software for a precise fit, enable circuit-breakers to be connected to the main busbar system.



Fast assembly

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 or 2200 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
- Pressure stoppers for accidental arc protection requirements
- Cable entries

Compartment

- Compartment side panel
- Compartment dividers
- Partial mounting plates and accessories (depending on the type of form separation)
- 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

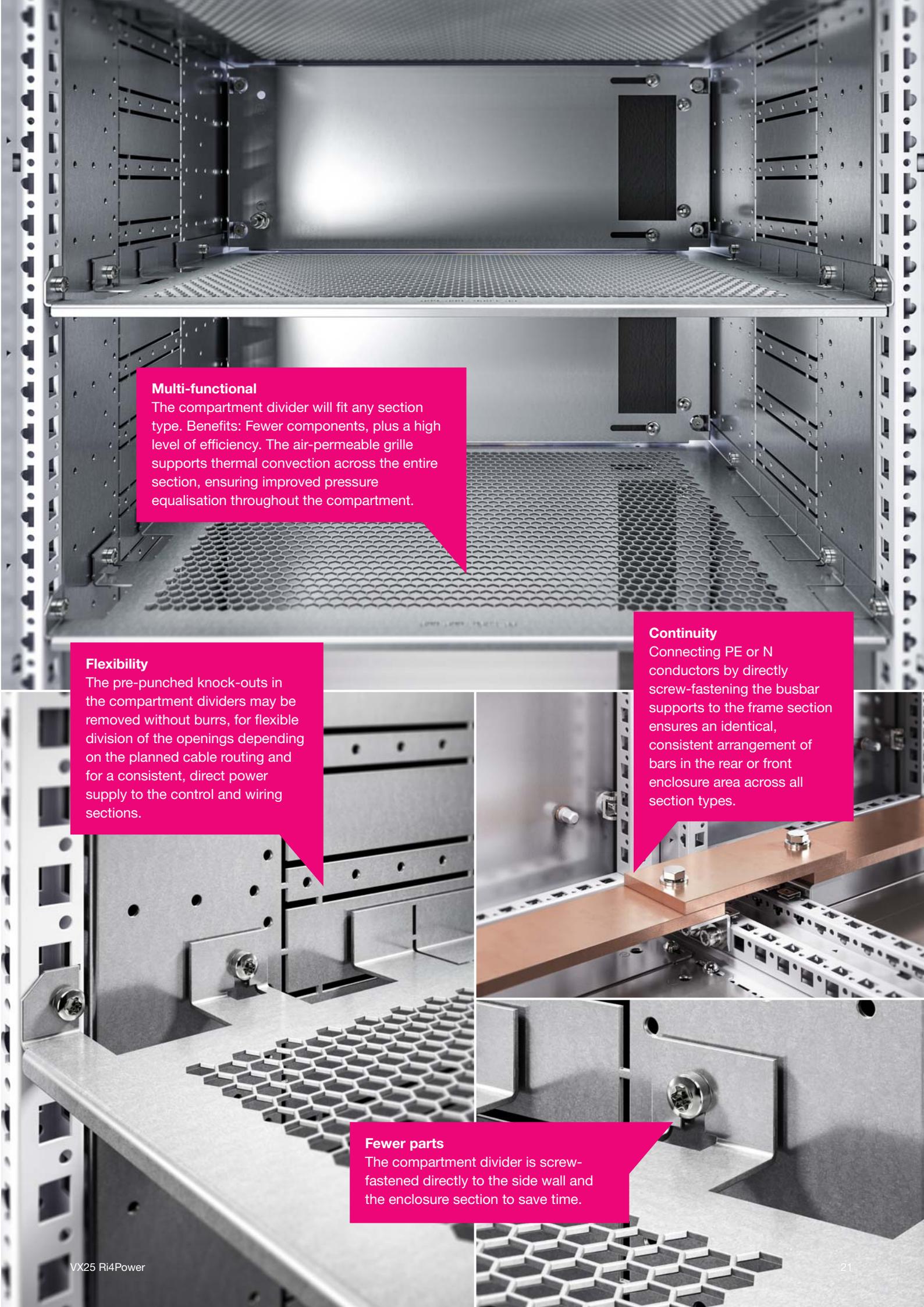
To combine switching and control functions

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





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

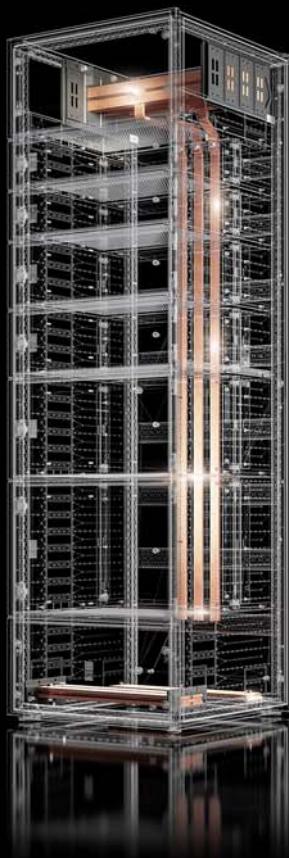
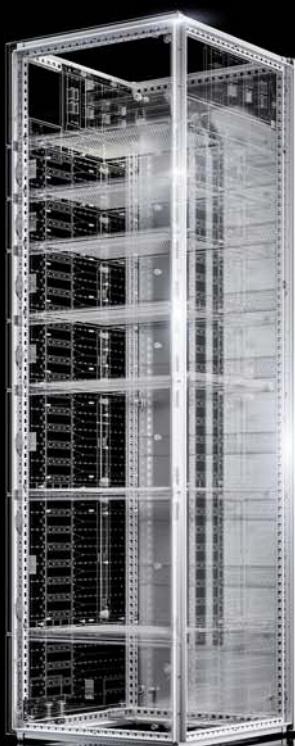
The pre-punched knock-outs in the compartment dividers may be removed without burrs, for flexible division of the openings depending on the planned cable routing and for a consistent, direct power supply to the control and wiring sections.

Continuity

Connecting PE or N conductors by directly screw-fastening the busbar 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 or 2200 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
- Pressure stoppers for accidental arc protection requirements

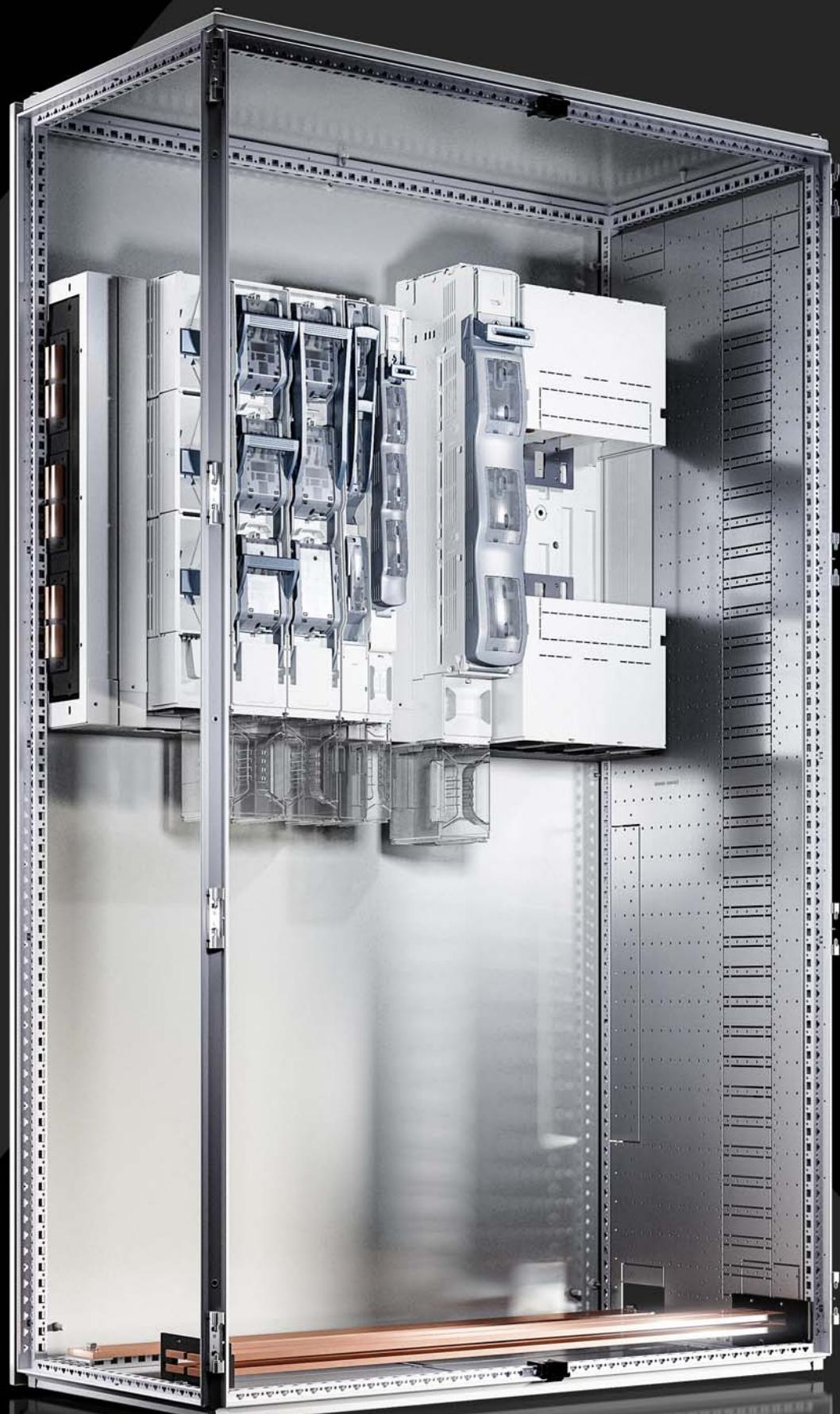
Compartment

- Compartment side panel
- Compartment dividers
- Partial mounting plates and accessories (depending on the type of form separation)
- Plastic gland plates
- Terminal box for Form 4b (depending on the type of Form separation)

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 area, 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 IP 2X.
- 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.



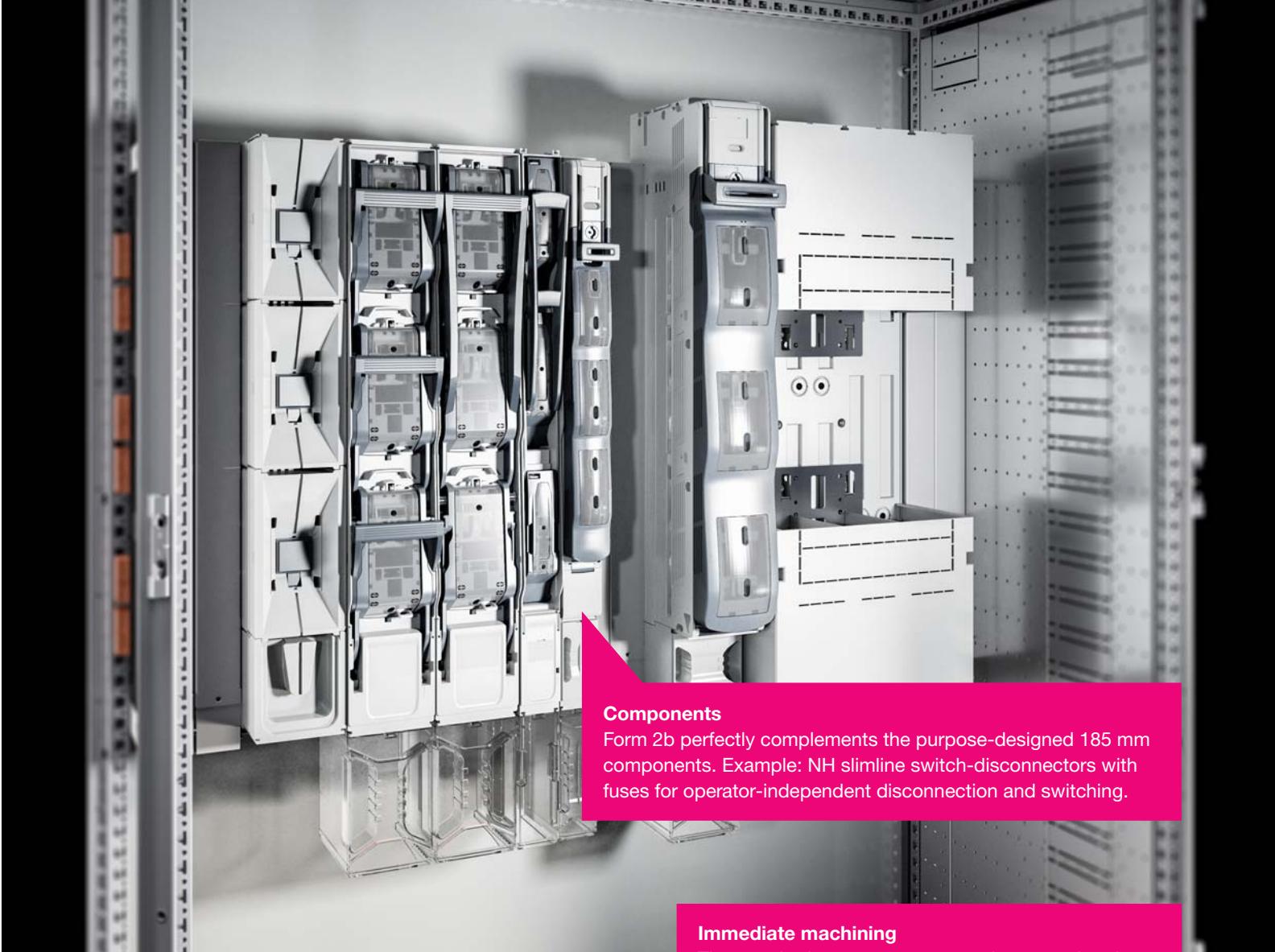
Fast assembly

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 busbar 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

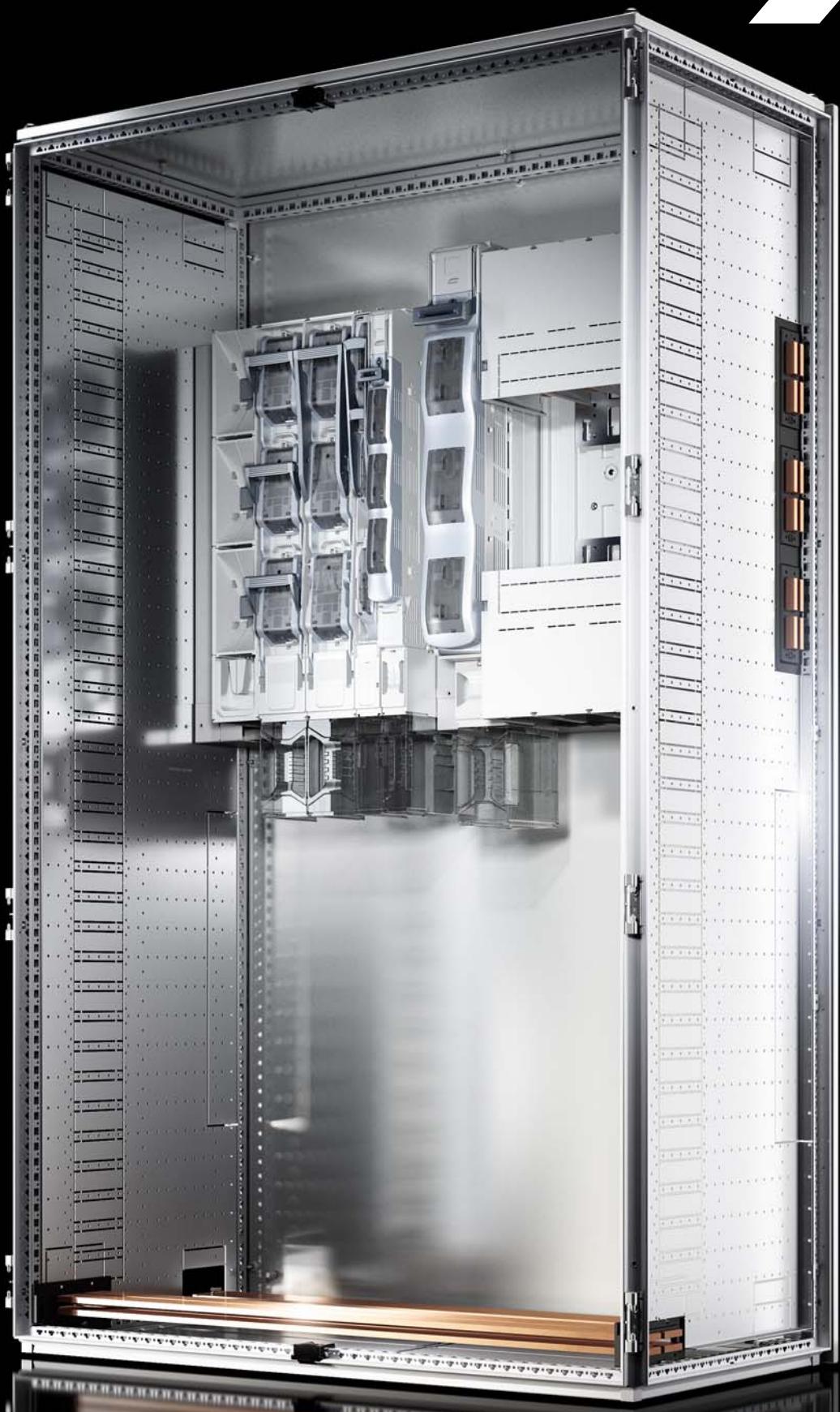
- Modular enclosure, 2000 or 2200 mm high, from the VX25 baying enclosure system
- Base/plinth, 100 or 200 mm high, from the VX base/plinth system
- Base/plinth trim panel, side
- Side panel(s)
- Baying with bracket, block or connector
- Partial doors and front trim panels for modular front design
- Door lock(s) from the fastener system
- Roof plate depending on the protection category and function
- Pressure stoppers for accidental arc protection requirements

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.

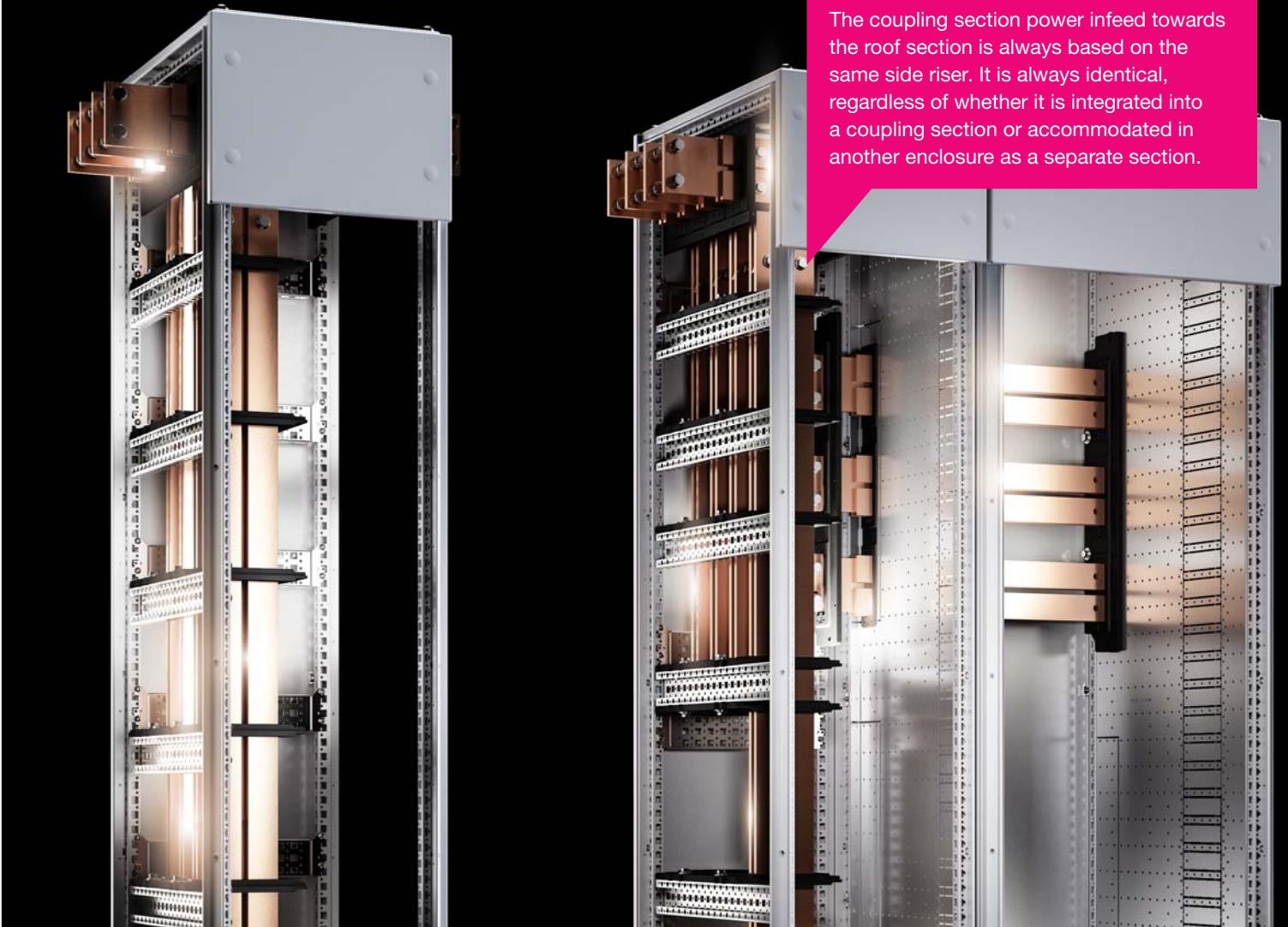
COUPLING SECTION



Independence

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





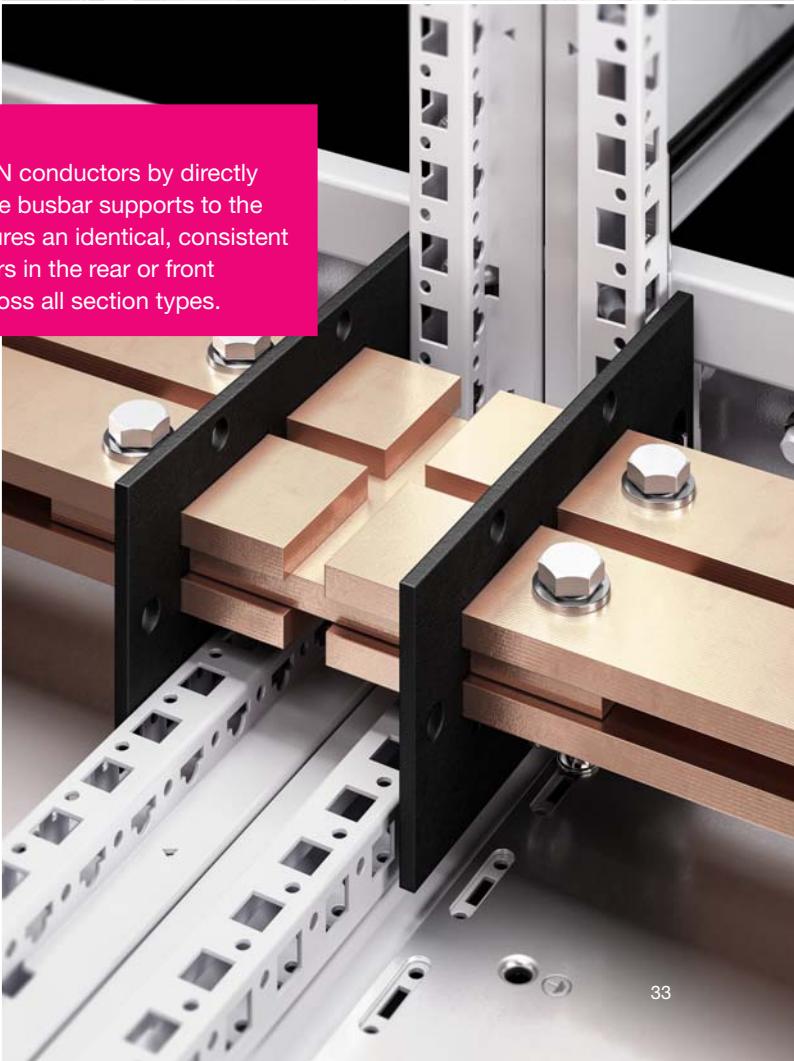
Modular benefits

The coupling section 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 busbar 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 or 2200 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
- Pressure stoppers where there are accidental arcing protection requirements
- 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 busbar 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 or 2200 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

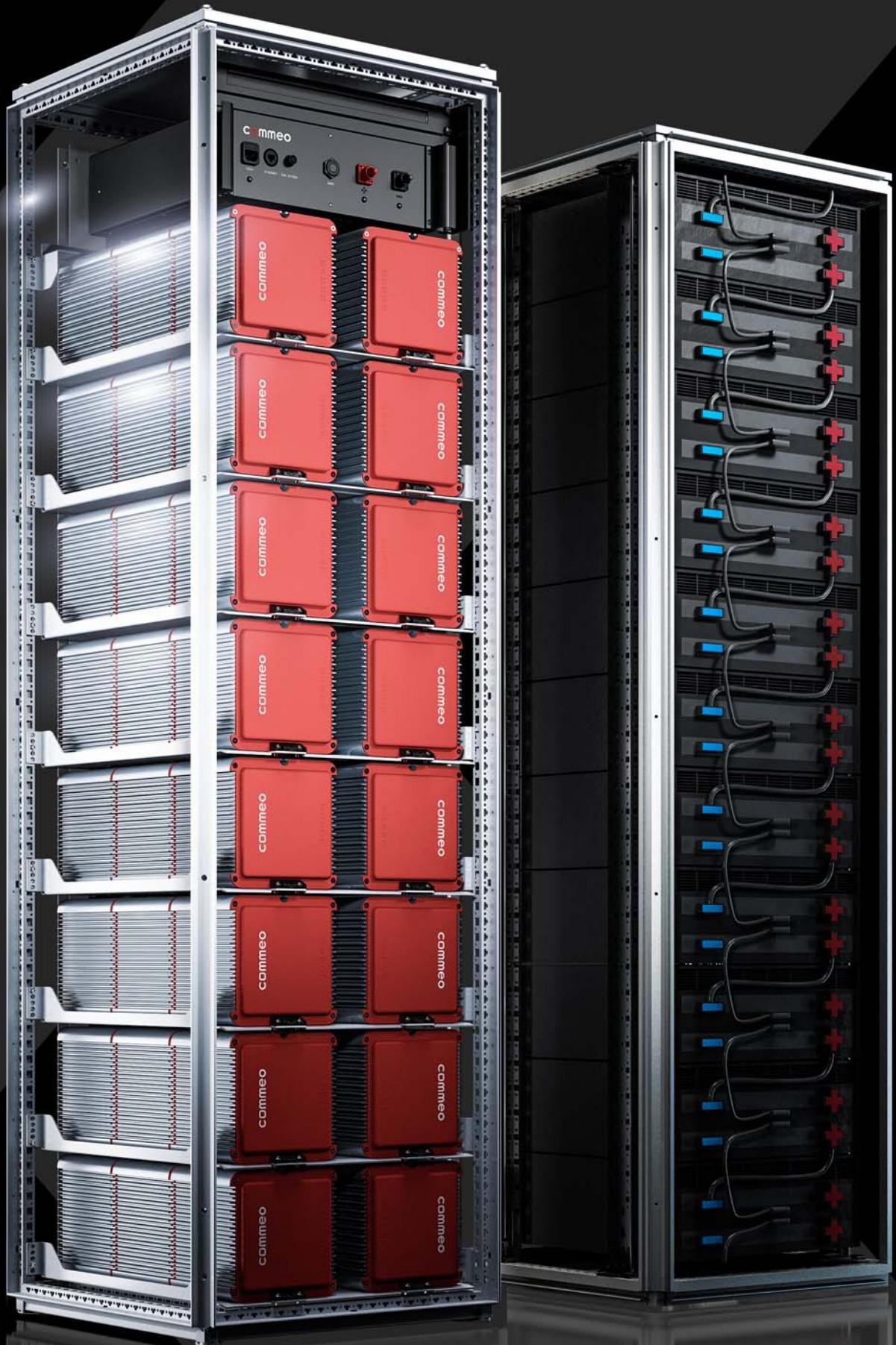
- Supplied already populated

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





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.

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ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

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VX25. SYSTEM PERFECTION.



Ordering information

- Baying enclosure system VX25 from page 48
- System accessories VX from page 51
- Busbar system from page 64
- Cover systems from page 78
- Compartment configuration from page 80
- Fuse-switch disconnector section from page 85
- Interior installation from page 87
- Connection adaptor from page 91
- Component adaptor from page 92
- NH slimline fuse-switch-disconnector from page 93
- NH slimline switch-disconnector from page 96
- Accessories for assembly components from page 99

Software and machining

- Rittal Power Engineering from page 104
- Rittal Automation Systems from page 106

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 IP 54, depending on the panels

Supply includes:

- Enclosure frame
- Rear panel
- Gland plates

Height 2000 mm, modular enclosure

Width mm	Packs of	400	600	800	400	600	800	Page
Height mm		2000	2000	2000	2000	2000	2000	
Depth mm		600	600	600	800	800	800	
Model No.	1 pc(s.)	9680.406	9680.606	9680.806	9680.408	9680.608	9680.808	
Accessories								
Base/plinth corner piece 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 piece 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 IP 55, solid	1 pc(s.)	9681.646	9681.666	9681.686	9681.648	9681.668	9681.688	62
Roof plate IP 2X with ventilation hole	1 pc(s.)	9681.846	9681.866	9681.886	9681.848	9681.868	9681.888	62
Roof plate for cable entry glands	1 pc(s.)	9681.546	9681.566	9681.586	9681.548	9681.568	9681.588	62

Baying enclosure system VX25

Height 2200 mm, modular enclosure

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).	9680.426	9680.626	9680.826	9680.428	9680.628	9680.828	

Accessories

Base/plinth corner piece 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	8620.034	53
Base/plinth corner piece 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	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 IP 55, solid	1 pc(s).	9681.646	9681.666	9681.686	9681.648	9681.668	9681.688	62
Roof plate IP 2X with ventilation hole	1 pc(s).	9681.846	9681.866	9681.886	9681.848	9681.868	9681.888	62
Roof plate for cable entry glands	1 pc(s).	9681.546	9681.566	9681.586	9681.548	9681.568	9681.588	62

New



VX25 Power Engineering

See page 104

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 plate: Sheet steel, 1.5 mm, zinc-plated

- Front trim 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 IP 3X, 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)

Height 2000 – 2200 mm, fuse-switch-disconnector enclosure

Width mm	Packs of	1000	1200	1000	1200	Page
Height mm		2000	2000	2200	2200	
Depth mm		600	800	600	800	
Model No.	1 pc(s).	9680.005	9680.207	9680.025	9680.227	
Accessories						
Base/plinth corner piece 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 piece 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 IP 2X with ventilation hole	1 pc(s).	9681.806	9681.828	9681.806	9681.828	62

System accessories VX

Base/plinth system VX

Modular base/plinth diversity

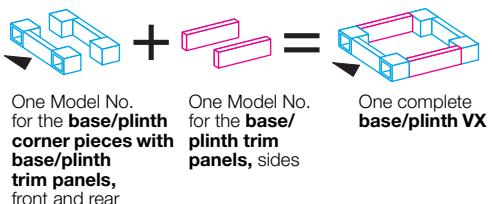
The new, innovative base/plinth system VX offers an unprecedented diversity of functions and applications. It combines all existing base/plinth functions in a single solution, as well as opening up many new applications. As if that weren't enough, it is also backward-compatible with existing enclosure solutions TS, TS IT, SE, PC 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 screw-fastened. Depending on the application, for example, users can dispense with the trim panels between bayed enclosure 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.



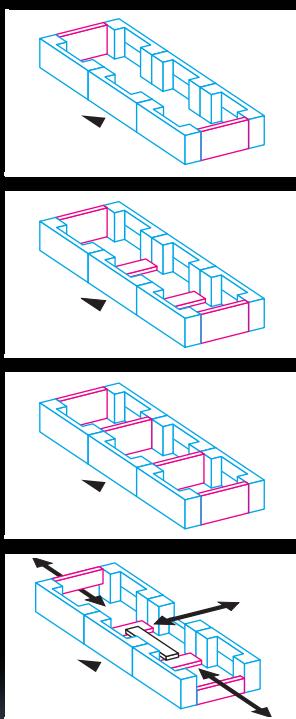
Base/ plinth	Basic form	Cable entry options				Stabilisation of bayed base/ plinths
100 mm						
200 mm						

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 pc(s). 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

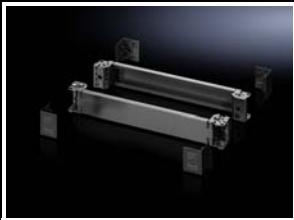
Other options:

- 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 / side panels



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

for **VX, TS, TS IT, SE, CM, TP, PC, IW, TE**

High-load capacity base/plinth corner pieces with moulded self-positioning to the baying enclosure system, may be used 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

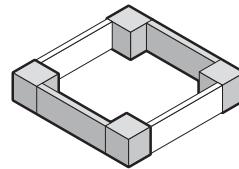
Height mm	For enclosure width mm	Packs of	Model No.
100	400	2 pc(s).	8620.001
100	600	2 pc(s).	8620.002
100	800	2 pc(s).	8620.003
100	1000	2 pc(s).	8620.005
100	1200	2 pc(s).	8620.007

! Also required:

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

+ Accessories:

- Baying bracket, internal, see page 54



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

for **VX, TS, TS IT, SE, CM, TP, PC, IW, TE**

High-load capacity base/plinth corner pieces with moulded self-positioning to the baying enclosure system, may be used 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

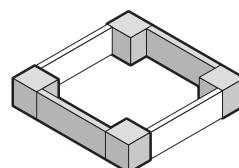
Height mm	For enclosure width mm	Packs of	Model No.
200	400	2 pc(s).	8620.021
200	600	2 pc(s).	8620.022
200	800	2 pc(s).	8620.023
200	1000	2 pc(s).	8620.024
200	1200	2 pc(s).	8620.025

! Also required:

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

+ Accessories:

- Baying bracket, internal, see page 54



System accessories VX

Base/plinth / side panels

Base/plinth trim panels, side, 100 mm

for base/plinth system VX, sheet steel

To finish off a base/plinth unit at the sides and for additional stabilisation or for the 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

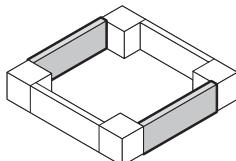
Supply includes:

- Assembly parts

Height mm	For enclosure depth mm	Packs of	Model No.
100	600	2 pc(s.)	8620.033
100	800	2 pc(s.)	8620.034

➡ Possible alternative:

- Base/plinth trim panels, vented, see VX25 brochure, page 87
- Base/plinth trim panels with brush strip, see VX25 brochure, page 86



Base/plinth trim panels, side, 200 mm

for base/plinth system VX, sheet steel

To finish off a base/plinth unit at the sides and for additional stabilisation or for the 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

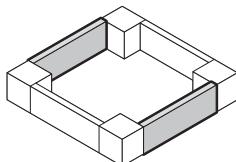
Supply includes:

- Assembly parts

Height mm	For enclosure depth mm	Packs of	Model No.
200	600	2 pc(s.)	8620.043
200	800	2 pc(s.)	8620.044

➡ Possible alternative:

- Base/plinth trim panels, vented, see VX25 brochure, page 87
- Base/plinth trim panels with brush strip, see VX25 brochure, page 86



Side panels, screw-fastened, sheet steel

for VX

Benefits:

- Time-saving assembly thanks to clip-in side panel holder
- 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:

- IP 55

Supply includes:

- Assembly parts

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



System accessories VX

Baying



Baying bracket, internal for VX

Benefits:

- Fast, secure installation either from the front or from the side
- For all-round installation on the baying joint
- 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).	8617.500

➡ Possible alternative:

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



Baying block, internal for VX

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 joint

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).	8617.501

➡ Possible alternative:

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



Baying connector, external

for VX

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).	8617.502
Stainless steel 1.4301 (AISI 304)	6 pc(s).	8617.503

➡ Possible alternative:

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



System accessories VX

Modular front design

Partial door

for VX

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. In the case of doors without viewing panel (height 600 – 1000 mm), monitor frame 2305.000 may be installed. 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
- Monitor frame, see page 59
- Mini-comfort handle AX, see page 60
- Lock insert, see page 60



For enclosure width 400 mm

Height mm	Protection category IP to IEC 60 529	Viewing window: Single-pane safety glass, 3 mm	Packs of	Model No.
200	IP 54	–	1 pc(s).	9682.142
300	IP 54	–	1 pc(s).	9682.143
400	IP 54	–	1 pc(s).	9682.144
600	IP 54	–	1 pc(s).	9682.146
800	IP 54	–	1 pc(s).	9682.148
1000	IP 54	–	1 pc(s).	9682.140
1200	IP 54	–	1 pc(s).	9682.152
1400	IP 54	–	1 pc(s).	9682.154
1600	IP 54	–	1 pc(s).	9682.156
1800	IP 54	–	1 pc(s).	9682.158
2000	IP 54	–	1 pc(s).	9682.150

For enclosure width 600 mm

Height mm	Protection category IP to IEC 60 529	Viewing window: Single-pane safety glass, 3 mm	Packs of	Model No.
150	IP 54	–	1 pc(s).	9682.161
200	IP 54	–	1 pc(s).	9682.162
300	IP 54	–	1 pc(s).	9682.163
400	IP 54	–	1 pc(s).	9682.164
600	IP 54	–	1 pc(s).	9682.166
600	IP 54	■	1 pc(s).	9682.167
800	IP 54	–	1 pc(s).	9682.168
800	IP 54	■	1 pc(s).	9682.169
1000	IP 54	–	1 pc(s).	9682.160
1200	IP 54	–	1 pc(s).	9682.172
1400	IP 54	–	1 pc(s).	9682.174
1600	IP 54	–	1 pc(s).	9682.176
1800	IP 54	–	1 pc(s).	9682.178
2000	IP 54	–	1 pc(s).	9682.170

System accessories VX

Modular front design



For enclosure width 800 mm

Height mm	Protection category IP to IEC 60 529	Viewing window: Single-pane safety glass, 3 mm	Packs of	Model No.
150	IP 54	–	1 pc(s).	9682.181
200	IP 54	–	1 pc(s).	9682.182
300	IP 54	–	1 pc(s).	9682.183
400	IP 54	–	1 pc(s).	9682.184
600	IP 54	–	1 pc(s).	9682.186
600	IP 54	■	1 pc(s).	9682.187
800	IP 54	–	1 pc(s).	9682.188
1000	IP 54	–	1 pc(s).	9682.180
1200	IP 54	–	1 pc(s).	9682.192
1400	IP 54	–	1 pc(s).	9682.194
1600	IP 54	–	1 pc(s).	9682.196
1800	IP 54	–	1 pc(s).	9682.198
2000	IP 54	–	1 pc(s).	9682.190

For enclosure width 1000 mm

Height mm	Protection category IP to IEC 60 529	Viewing window: Single-pane safety glass, 3 mm	Packs of	Model No.
400	–	–	1 pc(s).	9682.104
600	–	–	1 pc(s).	9682.106
800	–	–	1 pc(s).	9682.108

For enclosure width 1200 mm

Height mm	Protection category IP to IEC 60 529	Viewing window: Single-pane safety glass, 3 mm	Packs of	Model No.
400	–	–	1 pc(s).	9682.124
600	–	–	1 pc(s).	9682.126
800	–	–	1 pc(s).	9682.128



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, cable conduit 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).	9681.204
600	398	150 - 800	10 pc(s).	9681.206
800	598	150 - 800	10 pc(s).	9681.208

Assembly instruction:

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

System accessories VX

Modular front design

Front trim panel, top, solid

for VX

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:

- IP 54

Supply includes:

- Assembly parts

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



Front trim panel, bottom, solid

for VX

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

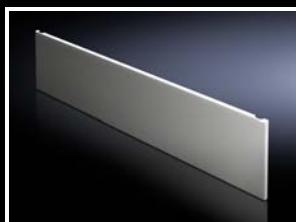
Protection category IP to IEC 60 529:

- IP 54

Supply includes:

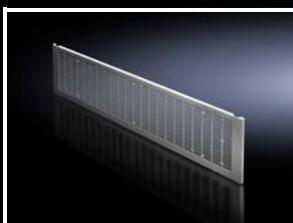
- Front trim panel
- Cross member
- Assembly parts

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



System accessories VX

Modular front design



Front trim panel, bottom, vented

for VX

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:

- IP 2X

Supply includes:

- Front trim panel
- Cross member
- Assembly parts

Note:

- When using front trim panels IP 2X, select a roof plate with protection category IP 2X 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 IP 2X with ventilation hole, see page 62



Trim panel, hinged at the top

for VX

For the installation of control and display components, in conjunction with 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:

- IP 54

Supply includes:

- Trim panel
- 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



Stay

for trim panel, hinged at the top

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

Material:

- Sheet steel

Surface finish:

- Zinc-plated

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

System accessories VX

Modular front design

Monitor frame

for door width 600 and 800 mm

For covering a door cut-out, for all standard monitors up to 482.6 mm (19").

Protection category IP to IEC 60 529:

- IP 54

Supply includes:

- Security glass panel

Width mm	470
Height mm	430
Viewing area, width mm	375
Viewing area, height mm	325
Cut-out width mm	415
Cut-out height mm	375
Packs of	1 pc(s).
Model No.	2305.000



System accessories VX

Lock system



Mini-comfort handle AX

for doors with cam lock

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

	For lock inserts or semi-cylinders	With security lock insert E1 ¹⁾	For padlocks and lock inserts or semi-cylinders
	Model No.		
	2537.100	2537.200	2537.300
Lock inserts, type A			
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
Lock and push-button inserts			
Lock insert, lock no. 3524 E ²⁾	2467.000	—	2467.000
Push-button insert	2468.000	—	2468.000
Push-button and lock insert ²⁾	2469.000 ³⁾	—	2469.000 ³⁾
Semi-cylinders			
To DIN 18 252 ⁴⁾	9785.040	—	9785.040
	9785.042 ⁵⁾	—	9785.042 ⁵⁾

¹⁾ Only for use with VW, Audi, SEAT, Skoda Auto, supplied without key

²⁾ With two keys

³⁾ Lock no. 2123; no other lock is possible

⁴⁾ With 3 keys for each lock insert

⁵⁾ Packs of two, simultaneous locking within the same pack, no simultaneous locking for different packs



Lock inserts

for mini-comfort handle AX

	Model No.	
Lock insert, lock no. 3524 E ¹⁾	2467.000	—
Push-button insert	2468.000	—
Push-button and lock insert ¹⁾	2469.000 ²⁾	—
Semi-cylinder to DIN 18 252 ³⁾	—	9785.040
	—	9785.042 ⁴⁾

¹⁾ With two keys

²⁾ Lock no. 2123; no other lock is possible

³⁾ With 3 keys for each lock insert

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

System accessories VX

Lock system

Enclosure key

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

					Model No.	
	-	-	2549.000	2549.500 ²⁾		
Double-bit no. 5	2531.000	-	-	-	■	■
Security lock no. 3524 E	-	2532.000¹⁾	-	-	-	-
7 mm triangular	2545.000	-	-	-	■	■
8 mm triangular	2546.000	-	-	■	■	■
7 mm square	2547.000	-	-	-	■	■
8 mm square	2548.000	-	-	■	■	■
for Daimler	2521.000	-	-	-	-	-
for Fiat	2308.000	-	-	-	-	-

¹⁾ Packs of 2

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



System accessories VX

Roof



Roof plate IP 55, solid

for VX

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:

- IP 55

Supply includes:

- Assembly parts

For width mm	For depth mm	Packs of	Model No.
400	600	1 pc(s).	9681.646
400	800	1 pc(s).	9681.648
600	600	1 pc(s).	9681.666
600	800	1 pc(s).	9681.668
800	600	1 pc(s).	9681.686
800	800	1 pc(s).	9681.688



Roof plate IP 2X with ventilation hole

for VX

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

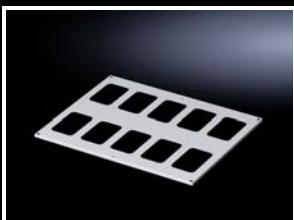
Protection category IP to IEC 60 529:

- IP 2X

Supply includes:

- Assembly parts

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



Roof plate for cable entry glands

for VX

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 number of glands	Packs of	Model No.
400	600	3	1 pc(s).	9681.546
400	800	4	1 pc(s).	9681.548
600	400	2	1 pc(s).	9681.564
600	600	4	1 pc(s).	9681.566
600	800	8	1 pc(s).	9681.568
800	600	8	1 pc(s).	9681.586
800	800	8	1 pc(s).	9681.588
850	400	3	1 pc(s).	9681.594
850	600	6	1 pc(s).	9681.596
1100	400	4	1 pc(s).	9681.514
1100	600	8	1 pc(s).	9681.516



Also required:

- Cable entry gland, see page 63

System accessories VX

Roof

Pressure stoppers

for roof plate

For converting the IP 55 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 IP 54 is achieved.

Material:

- Polyamide

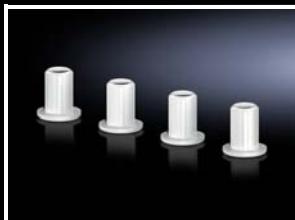
Supply includes:

- 2 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:

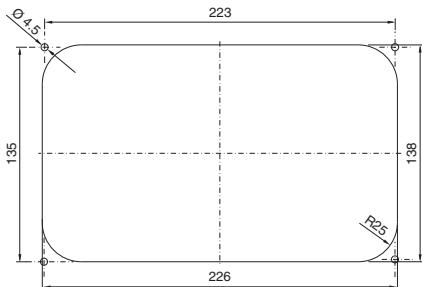
- RAL 7035

Protection category IP to IEC 60 529:

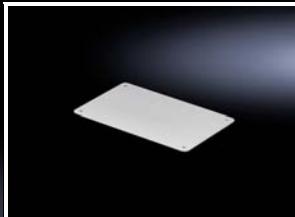
- IP 55

Supply includes:

- Seal included



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

Busbar system

Flat-PLS



Busbar support

for distribution busbar system

For assembling vertical distribution busbar systems (2 x 30 x 10 mm, 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-V0

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.)	9686.100

! Also required:

- Busbars E-Cu, see page 77

+ Accessories:

- End cover, see page 65



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-V0

Colour:

- Similar to RAL 9005

Supply includes:

- Assembly parts

For busbar mm	Bar centre distance mm	Packs of	Model No.
30 x 10	80	2 pc(s.)	9686.010
50 x 10	80	2 pc(s.)	9686.040

! Also required:

- Busbars E-Cu, see page 77
- Captive nuts, see page 90

Assembly instruction:

- For the installation of max. 4 busbars per phase

+ Accessories:

- End cover, see page 65



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-V0

Colour:

- Similar to RAL 9005

Supply includes:

- Assembly parts

For busbar mm	Bar centre distance mm	Packs of	Model No.
30 x 10	80	2 pc(s.)	9686.000
50 x 10	80	2 pc(s.)	9686.030

! Also required:

- Busbars E-Cu, see page 77
- Longitudinal connector E-Cu, see page 66
- Captive nuts, see page 90

Assembly instruction:

- For the installation of max. 4 busbars per phase

+ Accessories:

- End cover, see page 65



Busbar system

Flat-PLS

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-V0

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).	9686.070

! Also required:

- Busbars E-Cu, see page 77
- Captive nuts, see page 90

Assembly instruction:

- For the installation of max. 4 busbars per phase

Accessories:

- End cover, see page 65



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-V0

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).	9686.060

! Also required:

- Busbars E-Cu, see page 77
- Longitudinal connector E-Cu, see page 66
- Captive nuts, see page 90

Assembly instruction:

- For the installation of max. 4 busbars per phase

Accessories:

- End cover, see page 65



End cover

for busbar supports

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

Material:

- Polyamide
- Fire protection corresponding to UL 94-HB

Colour:

- Similar to RAL 9005

Supply includes:

- Assembly parts

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



Busbar system

Flat-PLS



Longitudinal connector E-Cu

for busbars

For connecting the main busbar system with 1, 2 or 4 sub-conductors per phase 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 bars per phase	Packs of	Model No.
35 x 10	195	1	1 pc(s).	9686.210
60 x 10	195	2 4	1 pc(s).	9686.200

Design for main busbar 50 x 10 mm

Dimensions mm	Length mm	No. of bars per phase	Packs of	Model No.
55 x 10	195	1	1 pc(s).	9686.260
100 x 10	195	2 4	1 pc(s).	9686.250

Busbar system

Connection system Flat-PLS

Busbar claw

for Flat-PLS

For the assembly of flat copper busbar systems with increased short-circuit resistance or for the mechanical stabilisation of busbar stacks.

Material:

- Stainless steel

For bar thickness mm	No. of bars per phase	Mounting dimensions mm	Packs of	Model No.
10	2	20	1 pc(s).	9676.017
10	4	20	1 pc(s).	9676.019

! Also required:

- Screw, see page 68

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.



Connection set

for Flat-PLS

For assembling top-mounting components with 185 mm bar centre distance, such as NH slimline fuse-switch disconnectors or for connecting busbars.

Material:

- Sheet steel, zinc-plated

Thread	Packs of	Model No.
M8	3 pc(s).	9686.800
M10	3 pc(s).	9686.810

! Also required:

- Screw, see page 68

Assembly instruction:

- The connection set may only be used with top-mounting components with screw fastening.
- When using 4 busbars per phase, a filler piece is additionally required.

+ Accessories:

- Filler piece, see page 67



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).	9686.820



Busbar system

Connection system Flat-PLS



Screw

for busbar claw

For attaching the busbar claw to busbar systems with flat copper busbars.

Material:

- Stainless steel

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

Busbar system

Maxi-PLS

End supports

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-V0

Colour:

- Similar to RAL 9011

Supply includes:

- Assembly parts

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



Maxi-PLS busbar, E-Cu

Maxi-PLS 45 S system

For assembling cable connection systems.

Material:

- E-Cu

Note:

- May be cut individually to required length

Cross-section 974 mm²

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



Maxi-PLS busbar, E-Cu

Maxi-PLS 45 system

For assembling cable connection systems.

Material:

- E-Cu

Note:

- May be cut individually to required length

Cross-section 1354 mm²

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



Busbar system

Maxi-PLS



Maxi-PLS busbar, E-Cu

Maxi-PLS 60 system

For assembling cable connection systems.

Material:

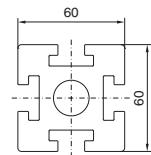
- E-Cu

Note:

- May be cut individually to required length

Cross-section 2323 mm²

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



Busbar system

Connection system Maxi-PLS

Connection clamp

for Maxi-PLS

For the connection of round conductors.

Material:

- Connection clamp: Brass, tin-plated
- Terminal stud: Steel, zinc-plated
- Sliding block: E-Cu

Supply includes:

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

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



Connection plate

for Maxi-PLS

For the connection of laminated flat copper bars.

Material:

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

Supply includes:

- Assembly parts

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



+

Accessories:

- Laminated copper bars, see page 77

Terminal studs

for Maxi-PLS

For connecting cables with ring terminals.

Material:

- Terminal stud: Steel, zinc-plated
- Sliding block: E-Cu

Supply includes:

- Terminal studs
- Sliding blocks
- Assembly parts

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



Busbar system

Connection system Maxi-PLS



Sliding block

for Maxi-PLS

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:

- E-Cu

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



Also required:

- Threaded bolts, see page 73



Sliding nut

for Maxi-PLS

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

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



Also required:

- Threaded bolts, see page 73

Busbar system

Connection system Maxi-PLS

Threaded bolts

for Maxi-PLS

For individual connection options.

Material:

- Steel

Supply includes:

- Assembly parts

! Also required:

- Sliding block, see page 72
- Sliding nut, see page 72



For system	Thread	Thread length mm	Packs of	Model No.
Maxi-PLS 45 S Maxi-PLS 45 Maxi-PLS 60	M6	35	6 pc(s).	9640.930
Maxi-PLS 45 S Maxi-PLS 45 Maxi-PLS 60	M8	35	6 pc(s).	9640.940
Maxi-PLS 45 S Maxi-PLS 45 Maxi-PLS 60	M10	35	8 pc(s).	9676.971
Maxi-PLS 45 S Maxi-PLS 45 Maxi-PLS 60	M10	45	8 pc(s).	9676.972
Maxi-PLS 45 S Maxi-PLS 45 Maxi-PLS 60	M10	55	8 pc(s).	9676.973
Maxi-PLS 45 S Maxi-PLS 45 Maxi-PLS 60	M10	70	8 pc(s).	9676.976
Maxi-PLS 45 S Maxi-PLS 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.

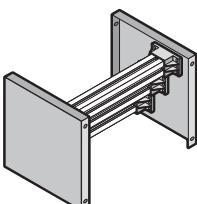
Material:

- End support: Polyamide (PA 6)
- Retaining plate: Sheet steel, zinc-plated
- Punched rail: Sheet steel, zinc-plated

Supply includes:

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

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



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

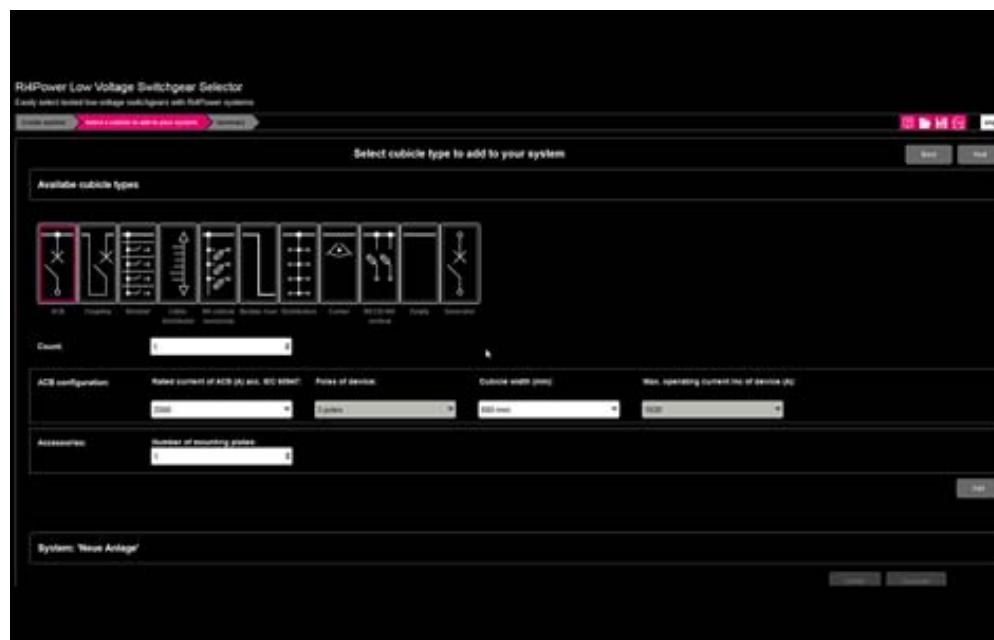
Note:

- The design code required for the configuration code is generated by the VX25 Rittal Power Engineering software (www.ittal.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. 9686.912 + design code	Connector kit for top/bottom	Air circuit-breakers (ACB), coupling section, cable transition section
Model No. 9686.924 + 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.

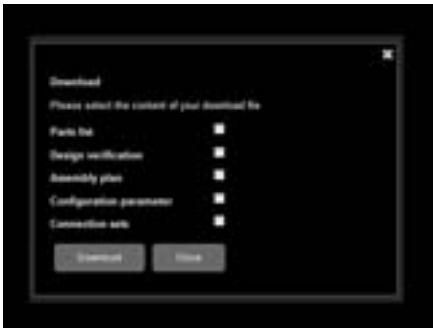
The screenshot shows the Ri4Power Low Voltage Switchgear Selector software interface. At the top, there's a navigation bar with tabs like 'Create system', 'Search component in catalog and database', and 'Download'. Below the navigation bar is a diagram of a busbar system with various components labeled. The main area contains several input fields and dropdown menus:

- Design Code:** 90000000000000000000000000000000
- Measurements:** Height of system: 2000 mm; Depth of system: 600 mm; Distance width (mm): 800 mm.
- Busbar system top:** Busbar position: Roof section; Busbar poles: 2 poles; Dimension height: 400x10.
- ACB configuration:** ACB manufacturer: ABB; Max. operating current I_{NO} (A): 630; Poles of device: 3 poles; Breaker size: 1-breaker; Breaker model: Gorenje E 1 900. Mounting of device: Position of device: Busbar nose height of excess (mm): 600 mm; Height cable connection compartment: 600 mm.
- Busbar System bottom:** Busbar position: Cable connection bottom; Busbar poles: 2 poles; Dimension height: Main-PLC (H5).

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



Busbar system

Accessories for Flat-PLS/Maxi-PLS



Screw

For connecting components such as connection brackets and connection kits.

Material:

- Sheet steel, zinc-plated

Supply includes:

- 8 nuts and 16 washers.

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



Support set (stabiliser)

for connector kit

To support the connector kits top/bottom for air circuit-breakers (ACB).

Material:

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

Supply includes:

- 4 plastic stabilisers
- 2 angle brackets
- Assembly parts

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).	9660.205



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).	9686.495

Busbars

Busbars and laminated copper bars

E-Cu busbars

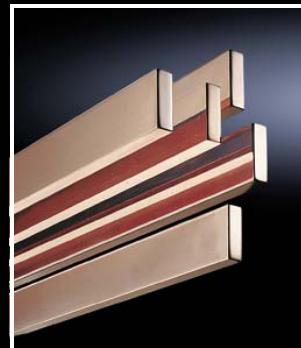
To DIN EN 13 601

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).	3584.000
30 x 10	2400	UL	3 pc(s).	3586.005
50 x 10	2400	—	2 pc(s).	3588.005
50 x 10	385	—	1 pc(s).	9684.004¹⁾
50 x 10	585	—	1 pc(s).	9684.006¹⁾
50 x 10	785	—	1 pc(s).	9684.008¹⁾
50 x 10	985	—	1 pc(s).	9684.010¹⁾
50 x 10	1185	—	1 pc(s).	9684.012¹⁾
60 x 10	2400	—	1 pc(s).	3589.005
80 x 10	2400	—	1 pc(s).	3590.005
100 x 10	2400	—	1 pc(s).	3590.015

¹⁾ 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-V0
- Dielectric strength: 20 kV/mm

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

¹⁾ Number of membranes x membrane width x membrane thickness

²⁾ The conductor temperature of the laminated flat copper bar is derived by adding the ambient temperature and the temperature increase together

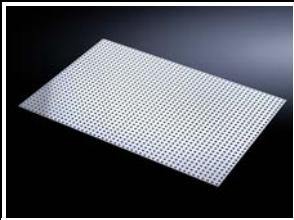
Example:

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



Cover systems

Form 1



Cover plate

Slotted

To cover live parts and comply with the internal protection category IP 2X and IP XXB 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).	9674.990



Accessories:

- Mounting bracket, see page 78



Mounting bracket

for contact hazard protection cover

For the attachment of contact hazard protection covers. Tapped hole M6.

Material:

- Sheet steel

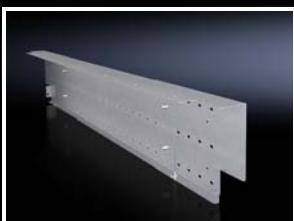
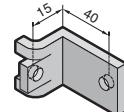
Surface finish:

- Zinc-plated

Supply includes:

- Assembly screws

Packs of	Model No.
24 pc(s).	9660.090



Wiring trim panel

for VX

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.

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.

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

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 (IP 2X).

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).	9684.960
800	600	1 pc(s).	9684.980
1000	800	1 pc(s).	9684.900
1200	1000	1 pc(s).	9684.920



+

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).	9684.990



Compartment configuration

Form 1-4



Compartment side panel

for VX

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).	9683.006
2000	800	1881	738	2 pc(s).	9683.008

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).	9683.016
2000	800	1731	738	2 pc(s).	9683.018
2200	600	1931	538	2 pc(s).	9683.036
2200	800	1931	738	2 pc(s).	9683.038

Accessories:

- Plastic gland plate, see page 80
- Compartment divider, see page 81
- Partial mounting plate, see page 83



Plastic gland plate

for compartment side panel

For closing cable entry openings.

Material:

- PVC, 3 mm
- Fire protection corresponding to UL 94-V0

Colour:

- Similar to RAL 7045

Supply includes:

- Assembly parts

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



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

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

Also required:

- End supports, see page 69

Compartment configuration

Form 1-4

Terminal box

for modular outgoing section

For shielding the connections (terminals) of the compartment, busbar space and cable chamber in accordance with Form 4b to IEC 61 439-2.

Material:

- Lid and cover: Sheet steel, 1.5 mm
- Cable retainer: Sheet steel

Surface finish:

- Lid and cover: Zinc-plated

Supply includes:

- 2 lids (top/bottom)
- 2 covers (front/rear)
- 2 cable retainers
- Assembly parts

For enclosure depth mm	For compartment height mm	Packs of	Model No.
600	150	1 pc(s).	9683.701
800			
600	200	1 pc(s).	9683.702
800			
600	300	1 pc(s).	9683.703
800			
600	400	1 pc(s).	9683.704
800			
600	600	1 pc(s).	9683.706
800			



! **Also required:**

- Compartment side panel, see page 80

+ **Assembly instruction:**

- The terminal boxes are externally mounted on the compartment side panel in the cable chamber, to match the heights of the compartments.
- If necessary, a clamping strip may be mounted on the cable retainer included with the supply.

Compartment divider

for VX

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 gland and vent hole

Material:

- Sheet steel, 1.5 mm

Surface finish:

- Zinc-plated

Supply includes:

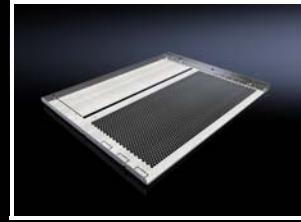
- Assembly parts

+ **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



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

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:

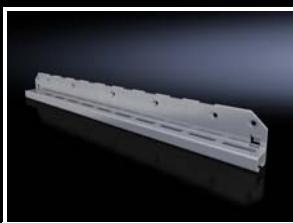
- Assembly parts

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



Design solid

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

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).	9683.561
600	200	502	193	1 pc(s).	9683.562
600	300	502	293	1 pc(s).	9683.563
600	400	502	393	1 pc(s).	9683.564

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	No. of pitch units 17.5 mm	Packs of	Model No.
600	300	2 x 24	1 pc(s).	9683.763
800	300	2 x 36	1 pc(s).	9683.783

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:

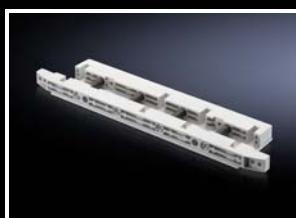
- Mounting bracket and screws

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



Also required:

- Busbars E-Cu, see page 77
- End support, see page 85



End support

for fuse-switch disconnector section

End support for the distribution busbar system of the fuse-switch disconnector 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).	9674.436
80 x 10	3-pole 4-pole	1 pc(s).	9674.438
100 x 10	3-pole 4-pole	1 pc(s).	9674.430



Also required:

- Busbars E-Cu, see page 77

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 IP 20.

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	1 pc(s).	
2200	1 pc(s).	9674.380

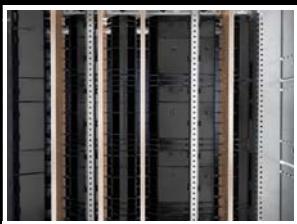


Also required:

- Punched rail, see page 86



Fuse-switch disconnector section



Punched rail

Set for cover, 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 IP 20.

Note:

- The cover may be ordered from ABB under order 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 the assembly of 1-pole neutral or PEN conductors. The busbar holder is mounted onto the enclosure section.

Material:

- Polyamide
- Fire protection corresponding to UL 94-HB

Colour:

- Similar to RAL 9005

Supply includes:

- Assembly parts

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



Also required:

- Busbars E-Cu, see page 77



Assembly instruction:

- For the installation of max. 4 busbars per phase



Accessories:

- Longitudinal connector E-Cu, see page 66



PE/PEN busbar E-Cu

for VX

With integral holes.

Material:

- E-Cu



Accessories:

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



Dimensions 30 x 5 mm

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

Dimensions 30 x 10 mm

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

Dimensions 40 x 10 mm

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

Dimensions 80 x 10 mm

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

Interior installation

Earthing



PE/PEN angle bracket

for VX

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).	
80 x 10		9686.350



PE/PEN baying bracket E-Cu

For connecting the busbars from enclosure to enclosure.

Material:

- E-Cu

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

Interior installation

Rail systems / assembly components

Punched section without mounting flange, 23 x 64 mm

for VX

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 captive 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

Material:

- Sheet steel

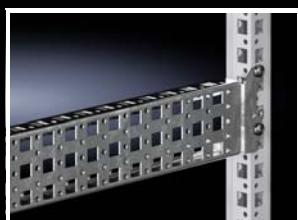
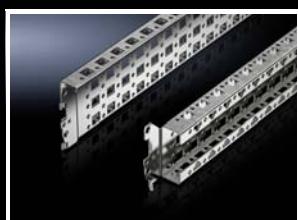
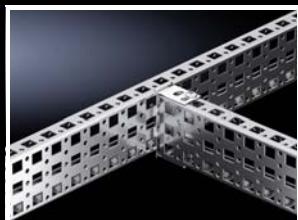
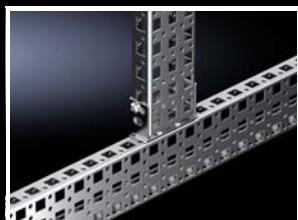
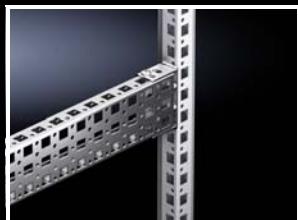
Surface finish:

- 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).	8100.740
600	2 pc(s).	8100.742
800	2 pc(s).	8100.743



Punched section with mounting flange, 23 x 64 mm

for VX

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 captive nuts, for attaching your own components via metric screws

Installation options:

- On the inner mounting level, on the enclosure section
- Base/plinth VX in the width and depth, combined with an 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).	8617.130
800	4 pc(s).	8617.140
2000	4 pc(s).	8617.200

Accessories:

- Captive nuts, see page 90

Interior installation

Rail systems / assembly components



Captive nuts

for VX

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
- Punched section with mounting flange, 23 x 64 mm, for VX
- Punched section with mounting flange, 23 x 89 mm, stainless steel

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

Connection adaptor



Busbar system Page 65 **Component adaptor** Page 92 **NH slimline switch-disconnectors** Page 93

Material:

- Chassis: Fibreglass-reinforced polyester
- Fire protection corresponding to UL 94-V0

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	
Type of connection		Screw M12	Screw M12	
Connection of round conductors mm ²		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	
Model No.	1 pc(s).	9677.900	9677.905	
Product-specific scope of supply				
Contact hazard protection cover plate		-	■	

Component adaptor



Busbar system Page 65 **Connection adaptor** Page 91 **NH slimline switch-disconnectors** Page 93

Material:

- Polyamide
- Fire protection corresponding to UL 94-V0

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, screw attachment

Rated current max. 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	
To fit manufacturer		ABB Eaton Schneider Electric Siemens	ABB Eaton Schneider Electric Siemens	ABB Eaton Schneider Electric Siemens	
For switchgear make (model)		ABB (Tmax T5) Eaton (NZM3) Schneider Electric (NSX630) Siemens (3VA23, 3VA24, 3VL4)	ABB (Tmax T7 - 800 A/ 1000 A) Eaton (NZM4 - 800 A/ 1000 A) Schneider Electric (NS - 800 A/1000 A) Siemens (VL1250/3VL7 - 1000 A)	ABB (Tmax T7 - 1250 A/ 1600 A) Eaton (NZM4 - 1250 A/ 1600 A) Schneider Electric (NS - 1250 A/1600 A) Siemens (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	
Model No.	1 pc(s).	9677.780	9677.705	9677.715	
Product-specific scope of supply					
Connection straps		■	-	-	
Also required					
Connector kit		-	see page	see page	99
Contact hazard protection cover plate		-	see page	see page	99

NH slimline fuse-switch disconnector



Busbar system Page 65 **Connection adaptor** Page 91 **Component adaptor** Page 92

Material:

- Polyamide
- Fire protection corresponding to UL 94-V0
- 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	
Type of connection		Screw M8	Bolt M12	Bolt M12	Bolt M12	
Connection of round conductors mm ²		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	
Model No.	1 pc(s).	9677.010	9677.110	9677.210	9677.310	
Accessories						
Connection space cover	1 pc(s.)	see page	9677.410	9677.410	9677.410	100
Prism terminal	3 pc(s.)	9677.420	–	–	–	100
V connection terminal	3 pc(s.)	–	9677.430	9677.430	9677.440	100
Micro-switch	5 pc(s.)	3071.000	3071.000	3071.000	3071.000	103
Current converter	1 pc(s.)	9677.810	see page	see page	see page	101
Cover	5 pc(s.)	–	9677.415	9677.415	9677.415	102

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	
Type of connection		Screw M8	Box terminal	Bolt M12	
Connection of round conductors mm ²		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	
Model No.	1 pc(s).	9677.000	9677.025	9677.100	

Accessories

Connection space cover	1 pc(s.)	see page	see page	9677.410	100
Prism terminal	3 pc(s.)	9677.420	–	–	100
V connection terminal	3 pc(s.)	–	–	9677.430	100
Micro-switch	5 pc(s.)	3071.000	3071.000	3071.000	103
Current converter	1 pc(s.)	9677.810	9677.810	see page	101
Cover	5 pc(s.)	–	–	9677.415	102

Size 2 – 3, design 3-pole, switchable

Size	Packs of	2	3	3	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	
Type of connection		Bolt M12	Bolt M12	Bolt M12	
Connection of round conductors mm ²		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	
Model No.	1 pc(s.)	9677.200	9677.300	9677.340	

Accessories

Connection space cover	1 pc(s.)	9677.410	9677.410	–	100
Prism terminal		–	–	–	100
V connection terminal	3 pc(s.)	9677.430	9677.440	–	100
Micro-switch	5 pc(s.)	3071.000	3071.000	3071.000	103
Current converter		see page	see page	see page	101
Cover	5 pc(s.)	9677.415	9677.415	–	102

NH slimline fuse-switch disconnector



Busbar system Page 65 **Connection adaptor** Page 91 **Component adaptor** Page 92

Material:

- Polyamide
- Fire protection corresponding to UL 94-V0
- 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	
Type of connection		Screw M8	Bolt M12	Bolt M12	Bolt M12	
Connection of round conductors mm ²		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	
Model No.	1 pc(s).	9677.015	9677.115	9677.215	9677.315	
Accessories						
Connection space cover	1 pc(s.)	see page	9677.410	9677.410	9677.410	100
Prism terminal	3 pc(s.)	9677.420	–	–	–	100
V connection terminal	3 pc(s.)	–	9677.430	9677.430	9677.440	100
Micro-switch	5 pc(s.)	3071.000	3071.000	3071.000	3071.000	103
Current converter	1 pc(s.)	9677.810	see page	see page	see page	101
Cover	5 pc(s.)	–	9677.415	9677.415	9677.415	102

NH slimline switch-disconnector



Busbar system Page 65 **Connection adaptor** Page 91 **Component adaptor** Page 92

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-V0
- 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	
Type of connection		Screw M8	Screw M8	Screw M12	Screw M12	
Connection of round conductors mm ²		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	
Model No.	1 pc(s).	9677.065	9677.075	9677.160	9677.165	

Accessories

Connection space cover	1 pc(s.)	9677.400	9677.400	9677.410	9677.410	100
Connection space cover, rear	1 pc(s.)	9677.402	9677.402	9677.412	9677.412	102
Clamp-type terminal	3 pc(s.)	9677.425	9677.425	–	–	103
Box terminal		–	–	see page	see page	103
Micro-switch	1 pc(s.)	9677.418	9677.418	9677.418	9677.418	103
Current converter	1 pc(s.)	9677.810	9677.810	–	–	101

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	
Type of connection		Screw M12	Screw M12	Screw M12	Screw M12	
Connection of round conductors mm ²		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	
Model No.	1 pc(s.)	9677.260	9677.265	9677.360	9677.365	
Accessories						
Connection space cover	1 pc(s.)	9677.410	9677.410	9677.410	9677.410	100
Connection space cover, rear	1 pc(s.)	9677.412	9677.412	9677.412	9677.412	102
Clamp-type terminal		–	–	–	–	103
Box terminal		see page	see page	see page	see page	103
Micro-switch	1 pc(s.)	9677.418	9677.418	9677.418	9677.418	103
Current converter		–	–	–	–	101

New



VX25 Power Engineering

See page 104

NH slimline switch-disconnector



Busbar system Page 65 **Connection adaptor** Page 91 **Component adaptor** Page 92

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-V0
- 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	
Type of connection		Screw M8	Screw M12	Screw M12	Screw M12	
Connection of round conductors mm ²		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	
Model No.	1 pc(s).	9677.085	9677.180	9677.280	9677.380	

Accessories

Connection space cover	1 pc(s.)	9677.400	9677.410	9677.410	9677.410	100
Connection space cover, rear	1 pc(s.)	9677.402	9677.412	9677.412	9677.412	102
Clamp-type terminal	3 pc(s.)	9677.425	–	–	–	103
Box terminal		–	see page	see page	see page	103
Micro-switch	1 pc(s.)	9677.418	9677.418	9677.418	9677.418	103
Current converter	1 pc(s.)	9677.810	–	–	–	101

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 T7 - 800 A/1000 A) Schneider Electric (NS - 800 A/1000 A)	9677.700/9677.705	1 pc(s).	9677.730
Eaton (NZM4 - 800 A/1000 A) Siemens (VL1250/3VL7 - 1000 A)	9677.700/9677.705	1 pc(s).	9677.740
ABB (Tmax T7 - 1250 A/1600 A) Schneider Electric (NS - 1250 A/1600 A)	9677.710/9677.715	1 pc(s).	9677.750
Eaton (NZM4 - 1250 A/1600 A) Siemens (VL1250/3VL7 - 1250 A, VL1600/VL8 - 1600 A)	9677.710/9677.715	1 pc(s).	9677.760

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.

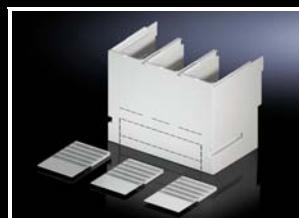
Material:

- Polyamide
- Fire protection corresponding to UL 94-V0

Supply includes:

- Side panels

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



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-V0

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).	9677.400
00	9677.000/ 9677.010/ 9677.015/ 9677.025	Top	-	1 pc(s).	9677.405
1 - 3	9677.1X0/ 9677.1X5/ 9677.2X0/ 9677.2X5/ 9677.300/ 9677.310/ 9677.3X5	Top/bottom	-	1 pc(s).	9677.410



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 ²	Packs of	Model No.
00	9677.000/ 9677.010/ 9677.015	10 - 95	3 pc(s).	9677.420



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 ²	Packs of	Model No.
1/2	9677.100/ 9677.110/ 9677.115/ 9677.200/ 9677.210/ 9677.215	70 - 240	3 pc(s).	9677.430
3	9677.300/ 9677.310/ 9677.315	120 - 300	3 pc(s).	9677.440

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:

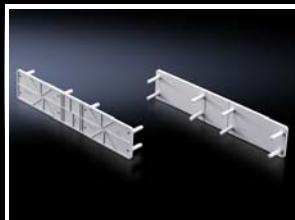
- IEC 60 044-1
- EN 60 715
- DIN VDE 0414
- DIN 42 600-2



For size	00	1 - 3	1 - 3	1 - 3	1 - 3
To fit 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
	Secondary current A	5	5	5	5
	Accuracy class	1	1	1	1
	Rated frequency Hz	50 - 60	50 - 60	50 - 60	50 - 60
	Insulation voltage kV	3	3	3	3
	Insulating material category	E	B	B	B
	Connection of round conductors mm ²	2.5 - 4	-	-	-
Type of connection	Screw terminals	Round conductor 2.5 mm ² (length 1.5 m)	Round conductor 2.5 mm ² (length 1.5 m)	Round conductor 2.5 mm ² (length 1.5 m)	Round conductor 2.5 mm ² (length 1.5 m)
Rated power input VA	2.5	1.5	2.5	2.5	2.5
Packs of	1 pc(s).				

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.

Material:

- Polyamide

Colour:

- RAL 7035

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



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

Clamp-type terminal

for NH slimline switch-disconnectors

For the connection of round conductors.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

For size	Connection of round conductors mm ²	Packs of	Model No.
00	16 - 70	3 pc(s.)	9677.425



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 ²	Packs of	Model No.
1 - 3	70 - 240	3 pc(s.)	9677.435
1 - 3	185 - 300	3 pc(s.)	9677.445



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 fuse-switch disconnectors, size 000/00 NH slimline fuse-switch disconnecter, size 00 - 3 (185 mm)
Rated operating current max. A	5
Rated operating voltage V	250
Packs of	5 pc(s.)
Model No.	3071.000



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.)	9677.418



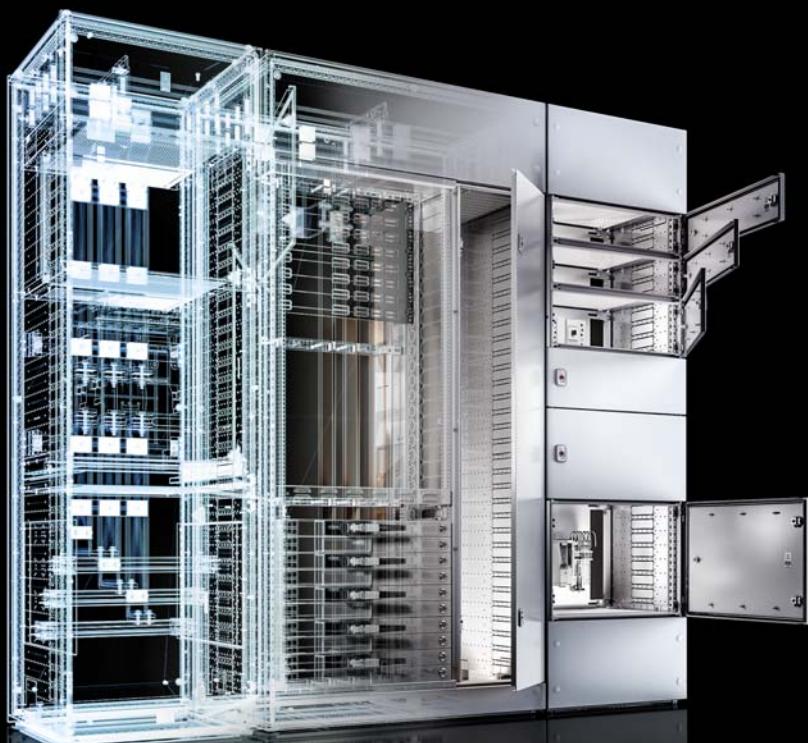
VX25 POWER ENGINEERING

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 up-to-the-minute planning data
- 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



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

Please specify your system

System

System name: new System

System type: up to 4000A | roof / rear

Protection category: IP2X

Form separation acc IEC: G

Main busbar system:

Rated current of assembly I _{RA} [A]:	Forced ventilation:	Position of busbar system:	Maximum operating current I _{nc} [A]:
2100	without	Coil section	3088
Number of poles busbar system:	Dimension busbar:	Short circuit capacity of the system I _{SC} :	
3 poles	4x60x10	100 kA	

Measurements:

Height of system:	Depth of system:	Height of poles:
2000 mm	600 mm	without

PE system:

Net form:	PE protective conductor dimension:	NE protective conductor dimension:
TN-C-S-Net	without	without

Copper calculation:

With main busbar	With vertical busbar	With connection kits:
yes	yes	yes

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 a cubicle to add to your system > Summary

Select cubicle type to add to your system

Available cubicle types

System: "new System"

+ 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 a cubicle to add to your system > Summary

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	In [A] device acc IEC 60947	In [A] device / fuse insert	I _{nc} [A] admissible rated current	RDF rated diversity factor	I _{nc} /RDF [A] admissible rated current	Planned I _{nc} [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	300	300	no
#2F6	NH2	400	400A	375	0.9600	300	300	no

State of power distribution

OK! The sum of the currents of the outgoing circuits/devices with 2517A is in range of the admissible load of the busbar system. The maximum rated current if the busbar is 3088A.

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

Circuit calculation

- Determine device-specific properties
- Calculate admissible rated currents I_{nc} (A)
- Calculate the specific rated diversity factor (RDF)

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

Download

Please select the content of your download file

Parts list

Design verification

Assembly plan

Configuration parameter

Commissioning info

Accept offer > Download (using)

new System

+ Detailed cubicle configuration

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.



25

RITTAL AUTOMATION SYSTEMS

Boost your productivity at every process stage

With seamless optimisation of all process stages – In panel building and switchgear manufacturing, efficiency relies on the quality of productivity, and on all automated and manual work stages. With the aid of digitalization we achieve the ideal workflow, from engineering right through to production.

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



Static
busbar machining



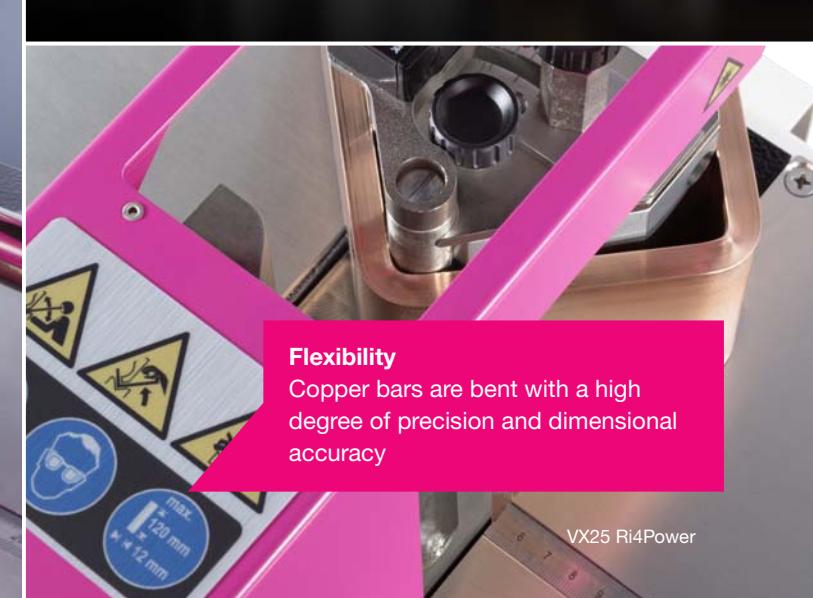
Speed

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



User-friendly

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



Integrated

With the integral measuring system, all operations are executed precisely according to plan



List of model numbers

Model No.	Page	Model No.	Page	Model No.	Page
2305.000	59	8100.742	89	9640.910	72
2307.000	60	8100.743	89	9640.920	72
2308.000	61	8106.245	53	9640.930	73
2460.000	60	8108.245	53	9640.940	73
2460.650	60	8126.245	53	9640.970	72
2461.000	60	8128.245	53	9640.980	72
2462.000	60	8617.130	89	9649.010	69
2463.000	60	8617.140	89	9649.360	69
2464.000	60	8617.200	89	9650.202	70
2465.000	60	8617.500	54	9650.232	70
2466.000	60	8617.501	54	9650.262	70
2467.000	60	8617.502	54	9650.292	70
2468.000	60	8617.503	54	9650.325	71
2469.000	60	8620.001	52	9650.330	71
2521.000	61	8620.002	52	9650.340	71
2531.000	61	8620.003	52	9650.360	70
2532.000	61	8620.005	52	9650.370	71
2537.100	60	8620.007	52	9650.380	71
2537.200	60	8620.021	52	9650.900	72
2537.300	60	8620.022	52	9650.905	72
2545.000	61	8620.023	52	9650.910	72
2546.000	61	8620.024	52	9650.920	72
2547.000	61	8620.025	52	9650.980	72
2548.000	61	8620.033	53	9650.990	72
2549.000	61	8620.034	53	9659.010	69
2549.500	61	8620.043	53	9659.360	70
3071.000	103	8620.044	53	9660.090	78
3565.005	77	8620.500	58	9660.205	76
3568.005	77	8620.501	58	9660.980	73
3569.005	77	8620.502	58	9665.750	63
3570.005	77	8801.260	58	9665.760	63
3571.005	77	9640.202	69	9665.770	63
3572.005	77	9640.207	69	9665.780	63
3573.005	77	9640.232	69	9665.785	63
3574.005	77	9640.237	69	9674.380	85
3575.005	77	9640.262	69	9674.381	86
3576.005	77	9640.267	69	9674.410	85
3577.005	77	9640.292	69	9674.416	85
3578.005	77	9640.297	69	9674.418	85
3579.005	77	9640.325	71	9674.430	85
3584.000	77	9640.330	71	9674.436	85
3586.005	77	9640.340	71	9674.438	85
3588.005	77	9640.350	71	9674.790	63
3589.005	77	9640.360	69	9674.990	78
3590.005	77	9640.365	69	9676.017	67
3590.015	77	9640.370	71	9676.019	67
4165.500	90	9640.380	71	9676.806	68
8100.740	89	9640.900	72	9676.807	68

List of model numbers

Model No.	Page	Model No.	Page	Model No.	Page
9676.808	68	9677.365	97	9680.808	48
9676.809	68	9677.380	98	9680.826	49
9676.810	68	9677.400	100	9680.828	49
9676.811	68	9677.402	102	9681.204	56
9676.812	68	9677.405	100	9681.206	56
9676.813	68	9677.407	102	9681.208	56
9676.814	68	9677.410	100	9681.514	62
9676.815	68	9677.412	102	9681.516	62
9676.816	68	9677.415	102	9681.546	62
9676.817	68	9677.418	103	9681.548	62
9676.819	68	9677.420	100	9681.564	62
9676.966	76	9677.425	103	9681.566	62
9676.967	76	9677.430	100	9681.568	62
9676.968	76	9677.435	103	9681.586	62
9676.971	73	9677.440	100	9681.588	62
9676.972	73	9677.445	103	9681.594	62
9676.973	73	9677.705	92	9681.596	62
9676.976	73	9677.715	92	9681.646	62
9676.977	73	9677.730	99	9681.648	62
9676.981	73	9677.740	99	9681.666	62
9676.982	73	9677.750	99	9681.668	62
9676.983	73	9677.760	99	9681.686	62
9676.986	73	9677.780	92	9681.688	62
9676.987	73	9677.790	99	9681.806	62
9677.000	94	9677.792	99	9681.808	62
9677.010	93	9677.794	99	9681.826	62
9677.015	95	9677.796	99	9681.828	62
9677.025	94	9677.798	99	9681.846	62
9677.065	96	9677.810	101	9681.848	62
9677.075	96	9677.840	101	9681.866	62
9677.085	98	9677.860	101	9681.868	62
9677.100	94	9677.870	101	9681.886	62
9677.110	93	9677.880	101	9681.888	62
9677.115	95	9677.900	91	9682.104	56
9677.160	96	9677.905	91	9682.106	56
9677.165	96	9680.005	50	9682.108	56
9677.180	98	9680.025	50	9682.124	56
9677.200	94	9680.207	50	9682.126	56
9677.210	93	9680.227	50	9682.128	56
9677.215	95	9680.406	48	9682.140	55
9677.260	97	9680.408	48	9682.142	55
9677.265	97	9680.426	49	9682.143	55
9677.280	98	9680.428	49	9682.144	55
9677.300	94	9680.606	48	9682.146	55
9677.310	93	9680.608	48	9682.148	55
9677.315	95	9680.626	49	9682.150	55
9677.340	94	9680.628	49	9682.152	55
9677.360	97	9680.806	48	9682.154	55

List of model numbers

Model No.	Page	Model No.	Page	Model No.	Page
9682.156	55	9682.352	58	9683.643	83
9682.158	55	9682.354	58	9683.644	83
9682.160	55	9682.356	58	9683.646	83
9682.161	55	9682.358	58	9683.648	83
9682.162	55	9683.006	80	9683.660	83
9682.163	55	9683.008	80	9683.661	83
9682.164	55	9683.016	80	9683.662	83
9682.166	55	9683.018	80	9683.663	83
9682.167	55	9683.036	80	9683.664	83
9682.168	55	9683.038	80	9683.666	83
9682.169	55	9683.040	80	9683.668	83
9682.170	55	9683.200	80	9683.680	83
9682.172	55	9683.210	80	9683.681	83
9682.174	55	9683.304	82	9683.682	83
9682.176	55	9683.306	82	9683.683	83
9682.178	55	9683.308	82	9683.684	83
9682.180	56	9683.310	82	9683.686	83
9682.181	56	9683.312	82	9683.688	83
9682.182	56	9683.326	82	9683.701	81
9682.183	56	9683.328	82	9683.702	81
9682.184	56	9683.406	81	9683.703	81
9682.186	56	9683.408	81	9683.704	81
9682.187	56	9683.426	81	9683.706	81
9682.188	56	9683.428	81	9683.736	78
9682.190	56	9683.444	81	9683.738	78
9682.192	56	9683.446	81	9683.763	84
9682.194	56	9683.448	81	9683.783	84
9682.196	56	9683.464	81	9684.004	77
9682.198	56	9683.466	81	9684.006	77
9682.314	57	9683.468	81	9684.008	77
9682.316	57	9683.484	81	9684.010	77
9682.318	57	9683.486	81	9684.012	77
9682.320	57	9683.488	81	9684.900	79
9682.322	57	9683.500	82	9684.920	79
9682.324	57	9683.504	82	9684.960	79
9682.326	57	9683.506	82	9684.980	79
9682.328	57	9683.508	82	9684.990	79
9682.330	57	9683.561	83	9686.000	64
9682.332	57	9683.562	83	9686.010	64
9682.334	57	9683.563	83	9686.030	64
9682.336	57	9683.564	83	9686.040	64
9682.338	57	9683.604	83	9686.060	65
9682.340	57	9683.606	83	9686.070	65
9682.342	57	9683.608	83	9686.080	65
9682.344	57	9683.624	83	9686.100	64
9682.346	57	9683.626	83	9686.200	66
9682.348	57	9683.628	83	9686.210	66
9682.350	58	9683.642	83	9686.250	66

List of model numbers

Model No.	Page
9686.260	66
9686.300	87
9686.350	88
9686.495	76
9686.520	87
9686.522	87
9686.524	87
9686.526	87
9686.528	87
9686.529	88
9686.530	87
9686.532	87
9686.534	87
9686.536	87
9686.538	87
9686.539	88
9686.540	87
9686.542	87
9686.544	87
9686.546	87
9686.548	87
9686.549	88
9686.580	87
9686.582	87
9686.584	87
9686.586	87
9686.588	87
9686.589	88
9686.800	67
9686.810	67
9686.820	67
9686.845	76
9686.865	76
9785.040	60
9785.042	60



Index

A

ACB section	12
Adaptor	
– 3-pole (185 mm)	92
Air circuit-breaker support bar	82
Angle bracket	76
– PE/PEN busbar system	88
Assembly components 185 mm	91 – 98
– Accessories	99 – 103

B

Base/plinth corner piece with base/ plinth trim panels, front and rear, 100 mm	
– Sheet steel	52
Base/plinth corner piece with base/ plinth trim panels, front and rear, 200 mm	
– Sheet steel	52
Base/plinth system VX	52
– Base/plinth corner pieces, 100 mm	52
– Base/plinth corner pieces, 200 mm	52
Baying block, internal	
– for VX	54
Baying bracket E-Cu	88
Baying bracket, internal	
– for VX	54
Baying connector, external	
– for VX	54
Baying system	
– Baying block, internal	54
– Baying bracket, internal	54
– Baying connector, external	54
Baying systems VX25	
– Fuse-switch-disconnector enclosure	50
– Modular enclosure	48
Blanking cover	
– Form 2b	79
Bolts	
– for Maxi-PLS	71, 73
Box	
– for modular outgoing section	81
Box terminal	
– for NH slimline switch-disconnectors	103
Busbar claw	67
Busbar support	
– Distribution busbar system	64
– for busbar baying (rear section)	65
– for busbar baying (roof section)	64
– for busbar entry (rear section)	65
– for busbar entry (roof section)	64
– for fuse-switch disconnector section	85
– for Maxi-PLS	69
– N conductor	87
Busbar system	67, 71
– Connection components	74, 75
– Flat-PLS	64 – 68
– Maxi-PLS	69 – 73
Busbars	
– E-Cu	77
– Maxi-PLS	69, 70
– with integral holes	87

C

Cable chamber	36
Cable entry gland	
– for roof plates	63
Captive nuts	90
Clamp-type terminal	
– for NH slimline switch-disconnectors	103
Claws	
– for busbars	67
Compact infeed	
– for Maxi-PLS	73
Compartment divider	
– for VX	81
Compartment side panel	
– for VX	80
Complete solution	2
Component adaptor	
– 3-pole (185 mm)	92
Connection adaptor	
– 3-pole (185 mm)	91
Connection clamp	
– for Maxi-PLS	71
– for NH slimline fuse-switch disconnectors	100
– for NH slimline switch-disconnectors	103
Connection components	
– for air circuit-breakers and busbar connections	74, 75
Connection plate	
– for Maxi-PLS	71
Connection set	
– for Flat-PLS	67
Connection space cover	
– for NH slimline fuse-switch disconnectors	100
– for NH slimline switch-disconnectors	100
Connection space cover, rear	
– for NH slimline switch-disconnectors	102
Connector	
– E-Cu	66
Connector kit	
– for component adaptors	99
– for Flat-PLS/ Maxi-PLS	74, 75
Contact hazard protection cover plate	
– for component adaptors	99
– Form 2b	79
Copper bars	
– Laminated	77
Copper busbars	
– E-Cu	77
– with integral holes	87
Coupling section	
Cover	
– for busbar supports	65
– for component adaptors	99
– for distribution busbar	86
– for NH slimline fuse-switch disconnectors	102
– for NH slimline switch-disconnectors	102
– Form 1	78
– Form 2b	79
Cover plates	
– Slotted	78
Current converter	
– for NH slimline fuse-switch disconnectors	101
– for NH slimline switch-disconnectors	101

D

Distribution busbar cover	
– for fuse-switch disconnector section	85
Doors	
– for VX	55
Enclosure	
– Fuse-switch-disconnector enclosure	50
– Key	61
– Modular enclosure	48
Enclosure systems	
– Fuse-switch-disconnector enclosure	50
– Modular enclosure	48
End cover	
– for busbar supports	65
End supports	
– for fuse-switch disconnector section	85
– for Maxi-PLS	69
energy storage system ESS	42

F

Filler piece	
– for connection set	67
Flat-PLS	8
Form 2b	24
Front trim panels	
– for VX	57, 58
Fuse-switch disconnector section	36, 85, 86
Fuse-switch disconnectors	
– Sizes 00 to 3, 185 mm	93, 95, 96
– with fuse monitoring, 185 mm	95
Fuse-switch-disconnector enclosure	50

G

Gland plate	
– for compartment side panel	80
Gland plates	
– for cable entry	63
– for compartment divider	82

H

Handle	
– Mini-comfort handle AX	60
Holder	
– Distribution busbar system	64
– for busbar baying (rear section)	65
– for busbar baying (roof section)	64
– for busbar entry (rear section)	65
– for busbar entry (roof section)	64
– for fuse-switch disconnector section	85
– for Maxi-PLS	69
– N conductor	87

L

- Laminated copper bars
- Lock inserts
 - for mini-comfort handle AX
- Longitudinal connector E-Cu

M

- Maxi-PLS
 - Busbars 69, 70
- Micro-switch
 - for NH fuse-switch disconnectors 103
 - for NH slimline fuse-switch disconnectors 103
 - for NH slimline switch-disconnectors 103
- Mini-comfort handle AX 60
- Modular enclosure 48
- Modular front design 55 – 59
- Monitor frame 59
- Mounting bracket
 - for air circuit-breaker support rail 82
 - for contact hazard protection cover 78
- Mounting plate
 - for compartment side panel 83

N

- NH slimline fuse-switch disconnectors
 - Sizes 00 to 3, 185 mm 93
 - with fuse monitoring, 185 mm 95
- NH slimline switch-disconnectors
 - Sizes 00 to 3, 185 mm 96
 - with fuse monitoring, 185 mm 98
- Nuts 90

O

- Outgoing section 18

P

- Partial doors
 - for VX 55
- Partial mounting plates
 - for compartment side panel 83
- PE/PEN angle bracket 88
- PE/PEN baying bracket E-Cu 88
- PE/PEN busbar E-Cu 87
- Perforated mounting strip
 - for partial door 56
- Perforated strip
 - for partial door 56
- Plastic gland plate
 - for compartment side panel 80
- Plate
 - for cable connection space 80
- Power Engineering software 104
- Pressure stoppers
 - for roof plates, for pressure relief 63

- Prism terminal
 - for NH slimline fuse-switch disconnectors 100
- Punched rail
 - Cover, distribution busbar 86
 - Punched section with mounting flange, 23 x 64 mm
 - for the inner mounting level 89
 - Punched section without mounting flange, 23 x 64 mm
 - for VX 89

R

- Rail systems
 - Punched section with mounting flange, 23 x 64 mm 89
 - Punched section without mounting flange, 23 x 64 mm 89
- Retaining plate
 - for cable connection space 80
- Rittal Automation Systems 106
- Roof plates
 - for VX 62

S

- Screw connections 68
- Screws 68
 - for connection brackets 76
 - for connector kit 76
 - M10 76
- Section types 4
- Side panel
 - Compartment 80
 - Side panels, screw-fastened, sheet steel
 - for VX 53
- Sliding block 72
- Sliding nut 72
 - for Maxi-PLS
- Slimline switch-disconnectors
 - Sizes 00 to 3, 185 mm 96
 - with fuse monitoring, 185 mm 98
- Software 104
 - VX25 Power Engineering
- Spare key 61
- Stabiliser
 - for connector kit 76
- Stay for trim panel, hinged at the top 58
- Support frame
 - for DIN rail-mounted devices 84
- Support rails
 - for circuit-breakers 82
- Support set (stabiliser)
 - for connector kit 76

T

- T-connector kit 74
- Terminal box 81
 - for modular outgoing section
- Terminal studs 71
 - for Maxi-PLS
- Terminals
 - for Maxi-PLS 71
 - for NH slimline fuse-switch disconnectors 100
 - for NH slimline switch-disconnectors 103
- Threaded bolts 73
 - for Maxi-PLS
- Transformer 101
 - for NH slimline fuse-switch disconnectors 101
 - for NH slimline switch-disconnectors 101
- Trim panel 57, 58
 - for VX 58
- Trim panel, hinged at the top 58
- Trim strip 102
 - for NH slimline fuse-switch disconnectors 102
 - for NH slimline switch-disconnectors 102

V

- V connection terminal 100
 - for NH slimline fuse-switch disconnectors
- VX 53
 - Side panels, screw-fastened, sheet steel 53
- VX25 Power Engineering 104
 - Software 104
- VX25 enclosure system 10

W

- Wiring trim panel 78

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