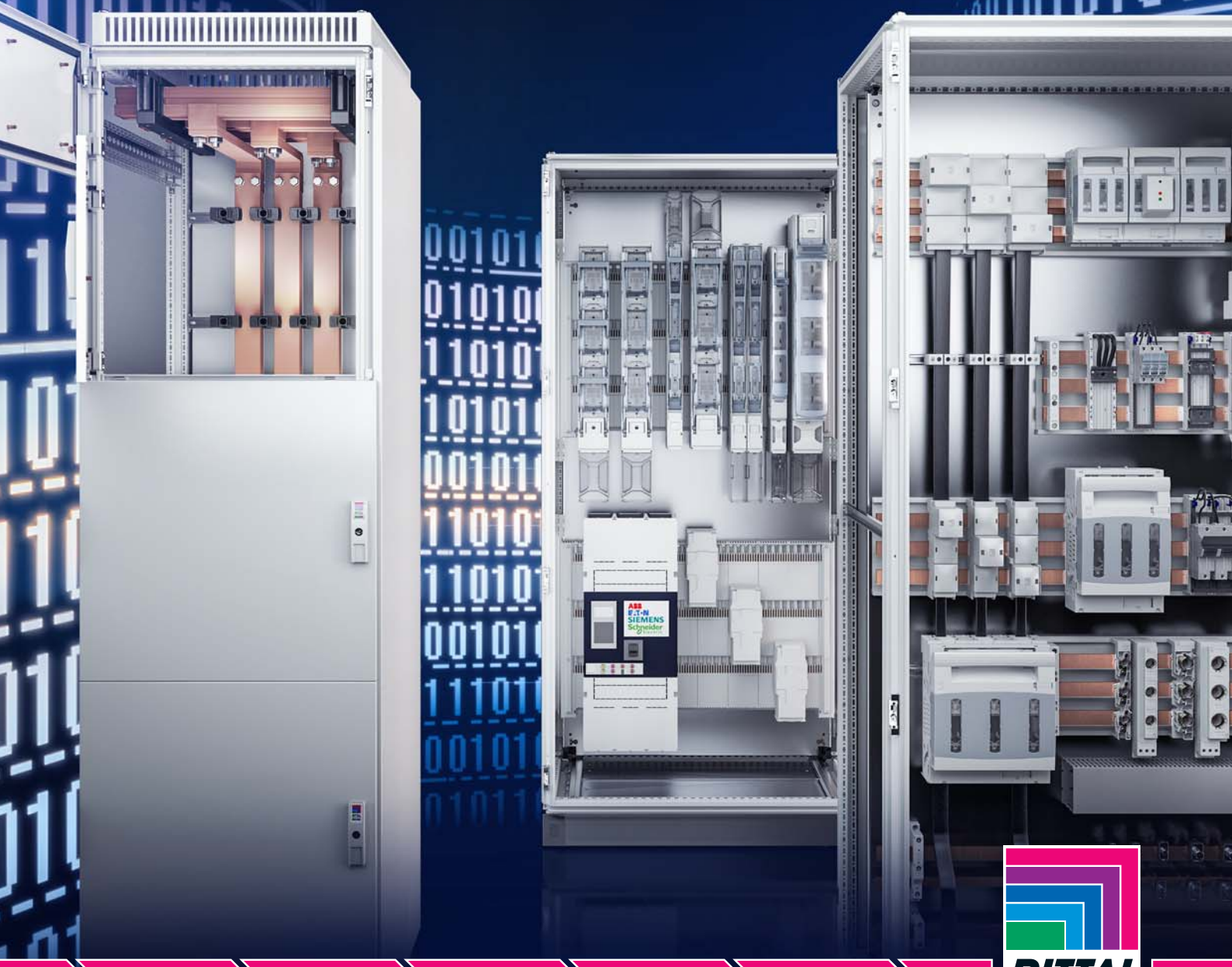
Rittal – The System.

Faster – better – everywhere.

System solutions for your energy requirements



ENCLOSURES | POWER DISTRIBUTION | CLIMATE CONTROL | IT INFRASTRUCTURE | SOFTWARE & SERVICES

FRIEDHELM LOH GROUP

Rittal – The System.

Faster – better – everywhere.

Power distribution from the smallest to the largest

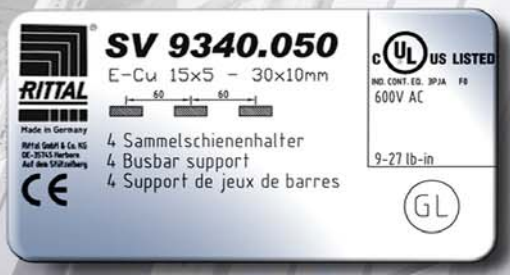
The tried-and-tested, highly flexible power distribution system for individual requirements. From small power distributors and customised switchgear and control systems right through to high-current power distribution for infrastructure and industrial applications.

Our expertise – your benefit.

- Decades of experience in producing enclosures
- Complete solution – from enclosures and power distribution right through to climate control, software and services
- Modular system platform
- For direct and alternating current applications

Standards and approvals

- IEC 61439, IEC 61641
- UL 508
- Lloyds Register (LR)
- Det Norske Veritas – Germanischer Lloyd (DNV GL)
- American Bureau of Shipping (ABS)



IT INFRASTRUCTURE

SOFTWARE & SERVICES

RITTAL


SIEMENS
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TEST

RiLine Compact

Power distribution for compact space requirements.

The new RiLine Compact is the tried-and-tested system solution for compact power distribution in enclosures and small control cabinets. Full top-mounting ensures precious space is not lost to busbar supports or other components.

If a range of different equipment is used, conventional wiring may be required. With RiLine Compact, different models can be used safely without wasting space – in a standardised and fully standard-compliant solution.

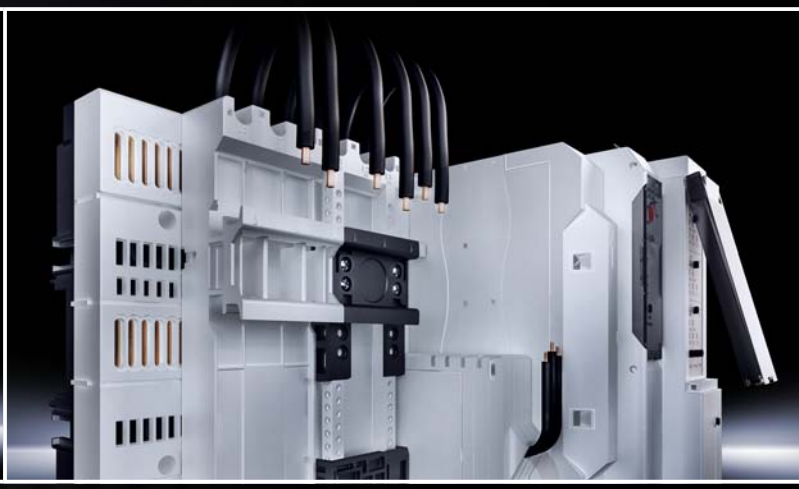
What we offer

- A modular compact system for power distribution close to machinery and plant
- For direct integration into machines and plant
- Standardised design with modular plug-in assemblies
- For centralised or decentralised power distribution (including DC) up to 125 A
- Rated voltage up to 690 V AC; 600 V DC
- Rated current up to 125 A
- Short-circuit resistance up to I_{pk} 25 kA
- Fire protection to UL 94-V0
- IEC and UL (cULus) approval

How you benefit

- Power distribution in the tightest of spaces – minimises cost and space requirements
- Full contact hazard protection ensures high level of safety
- Simple, tool-free assembly
- Secure adaptor connection
- Compatible with all standard switchgear and protective gear
- Space-saving assembly of function modules
- Standard-compliant solution for worldwide use

Further information:
www.rittal.com/sps-riline-compact



The RiLine Compact System is based on a contact hazard protective compact board with integrated circuit board conductors and end-to-end contact spacing. The board and all other components are secured using simple, tool-free plug-in mounting.

Securing the components simultaneously ensures a reliable electrical connection to the board, which has all-round contact hazard protection.

The function modules save a considerable amount of space over conventional equipment technology.

PLS profiles: The special shape of the RiLine PLS busbars and the design of the busbar support allow for unrestricted top-mounting of the support with assembly components. Free positioning of the support makes planning easier, offers greater stability where necessary, and optimises the use of space.

RiLine busbar system 60 mm

The standard on the global market.

Greater reliability alongside reduced planning costs and space requirements – the RiLine busbar system from Rittal delivers a comprehensive system package with components for customised power distribution needs in switchgear and control systems. Thanks to extensive tests, design verifications and its high approval status, RiLine is already in use in over 50 countries around the world.

Simple project planning, quick assembly and optimised contact hazard protection are included as a matter of course. Support systems and bars in conjunction with connection technology, component adaptors and fusible elements come together to form compact units that perfectly meet your requirements.

What we offer

- Busbar system for centralised or decentralised switchgear and power distribution in mechanical and plant engineering up to 1600 A
- Busbar system for flat copper and PLS 800/1600 A profiles
- Flexible arrangement of the main busbar (3-pole and 4-pole)
- Bar centre distance 60 mm
- High rated voltage up to 690 V AC or 1500 V DC and rated currents up to 1600 A
- High short-circuit resistance, tested up to 50 kA
- The first fully tested DC busbar system worldwide
- Design verification to IEC 61439/approval for North America cULus listed
- Tested for copper and CUPONAL (CuAl) busbars

How you benefit

- Significant space savings thanks to direct mounting of switchgear onto busbar system
- Extensive system portfolio ensures easy assembly and fast contacting
- Optimum contact hazard protection thanks to all-round encapsulation
- PLS design optimised for Rittal enclosure system so that bars do not need to be cut to length
- Compatible with all standard switchgear and protective gear
- Tested and approved for use by all relevant organisations and institutes worldwide
- Suitable for use in maritime applications, including on ships
- User-friendly project planning with Rittal Power Engineering configuration software

Further information

www.rittal.com/sps-riline

Flat copper busbars: The Rittal busbar system for standard flat copper busbars. The busbar support offers flexible adjustment and is thus suitable for a wide range of busbar sizes.

RiLine is the first fully tested busbar system for AC and DC applications worldwide. This opens up many new areas of use, including drive technology, photovoltaic systems, electroplating and data centres.

NH fuse-switch disconnectors and Smart Monitoring System

Smart Monitoring included

Enjoy the benefits of continuous logging, storage, monitoring and analysis of electrical energy consumption and network data in machinery and plant automation and data centres.

The Rittal Smart Monitoring System works in combination with NH fuse-switch disconnectors to calculate energy consumption precisely, highlight potential savings, boost energy efficiency and support energy management as per ISO 50001.

What we offer

- Continuous logging and monitoring of energy consumption
- Standardised interfaces
- Visualisation of data on a display or via a web interface
- Logging and communication of measurement data

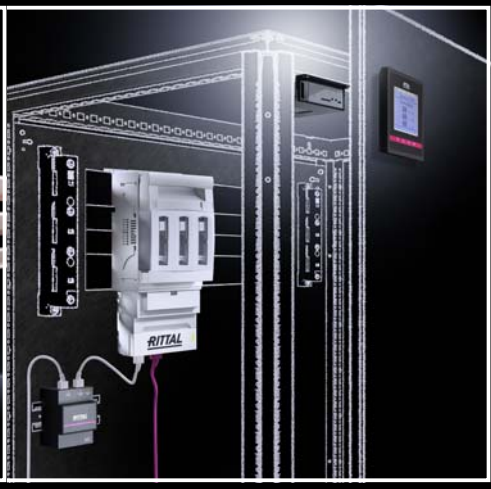
How you benefit

- Identify potential savings
- Boost energy efficiency
- Increase competitiveness

Further information

www.rittal.com/sps-smart-monitoring

Fuse-switch disconnector with integrated logging for measurement data – an easily mounted module suitable for NH fuse-switch disconnectors in size 00 – 3



The Smart Monitoring System features several interfaces for communicating and transferring measurement data.

Mini-PLS busbar system 40 mm

Unbeatable yet compact

The Rittal Mini-PLS busbar system with 40 mm bar centre distance is ideal for use where space-saving busbar systems in a current range up to 250 A are fitted with consumer outlets.

Unrestricted top-mounting of the busbar supports and busbar connectors results in a particularly compact design. The characteristic T-shape of the bar profile ensures quick, easy assembly of all system components from the front, while also delivering high static and thermal load capacity.

What we offer

- Busbar system for centralised or decentralised power distribution up to 250 A
- Ideal for installation close to machinery and plant
- Suitable for combined power and control cabinets
- Compatible with all standard protective gear

How you benefit

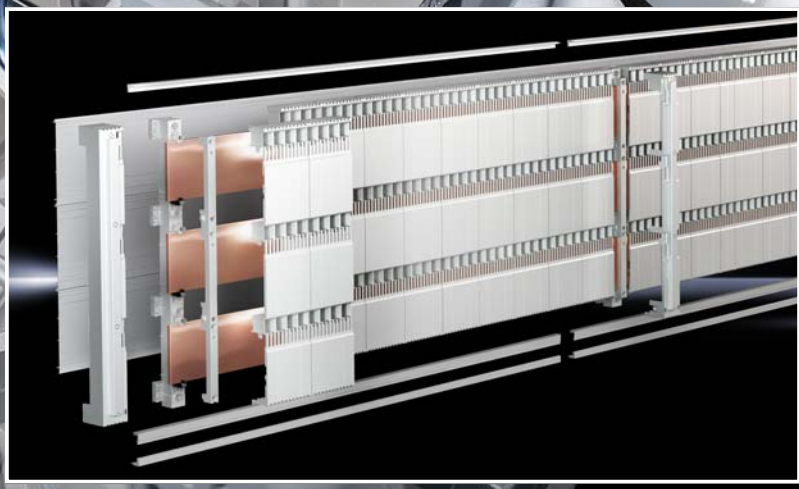
- Optimised for compact space requirements
- Tool-free adaptor mounting
- Full contact hazard protection thanks to all-round encapsulation

Further information

www.rittal.com/sps-mini-pls

Save space with unrestricted top-mounting of the busbar supports and busbar connectors

Quick, easy installation of system components such as connection adaptors, component adaptors and bus-mounting fuse bases via plug and lock action from the front



The 185 mm system has been engineered for quick, reliable installation with standardised components and assembly steps. Many of the items are available in sets for any enclosure width, and include all the necessary components for configuring the enclosure, including contact hazard protection.

Ri4Power system 185 mm

The system for maximum security.

As a cost-effective solution compliant with the requirements of the current IEC 61439 standard, the new Ri4Power busbar system with 185 mm bar centre distance is ideal for configuring a compact, reliable power distributor system.

Mutual interference between electrical equipment in low-voltage switchgear systems has already been tested to IEC 61439 and confirmed with a design verification. Following planning with Rittal Power Engineering, the design verification can be generated with a single click.

What we offer

- Complete solution for centralised, compact power distribution
- Rated voltage up to 690 V
- Rated current up to 2100 A
- Short circuit resistance up to 50 kA
- Bar centre distance 185 mm
- Complete contact hazard protection up to IP 2XB (safe from finger contact) from system portfolio
- Specially designed connection and component adaptors for tested, reliable connection at high currents
- Fusible elements to suit every application

How you benefit

- System configuration, mounting and retrofitting possible without drilling or removing the cover
- Busbar contacting – variable, drill-free, with contact hazard protection from the outset
- Suitable for all standard switchgear and protection equipment
- Busbar shielding integrated into cover section to prevent accidental arcing
- User-friendly project planning and generation of design verification using Rittal Power Engineering configuration software

Further information

www.rittal.com/sps-ri4power-185

The sophisticated busbar contacting system revolutionises power transmission and delivers the best possible protection from the outset. Simply snap into position for reliable, low-loss contact – no measuring or drilling required.

NEW – disconnect and switch with one device: the new NH slimline switch-disconnectors with fuses support operator-independent disconnection and switching. They can also be combined with component adaptors and NH fuse-switch disconnectors.

Maxi-PLS – the assembly-friendly Ri4Power System: exceptionally compact design for centralised power distribution up to 4000 A – easy and infinitely variable attachment on 4 mounting levels – groove technology allows drill-free contacting for cable and component connections

Ri4Power

The modular system – so simple.

Rittal Ri4Power, the customised system for configuring design-tested low-voltage switchgear with inner form separation, delivers a wide range of modules and fields for any area of use. The flexible combination of Ri4Power field types supports optimum configuration for a diverse spectrum of applications.

Ri4Power ensures an exceptionally high level of operator protection – even covering internal faults involving accidental arcing. In accordance with the latest version of IEC 61641, Rittal fulfils the requirements for protection classes A, B and C.

What we offer

- Modular system
- Busbar systems up to 5500 A and short circuit resistance up to 100 kA
- Optimum contact hazard protection through all-round encapsulation
- Extensive system accessories ensure easy assembly and fast contacting
- Also suitable for DC and maritime applications
- Standardised system packages for connection technology
- Design verification to IEC 61439-1/-2
- Accidental arc protection to IEC 61641

How you benefit

- Perfect system technology in a compact design
- The Maxi-PLS design is optimised for the Rittal enclosure system so that bars do not need to be cut to length
- Suitable for all standard circuit-breakers
- User-friendly project planning and generation of design verification using Rittal Power Engineering
- Drawings for preparing copper components can easily be generated using Rittal Power Engineering configuration software

Further information

www.rittal.com/sps-ri4power

Flat-PLS for a wide range of system assemblies with standard flat copper busbars for centralised power distribution up to 5500 A – high flexibility and easy installation

Form separation – modular, standardised components ensure flexible options for interior installation and compartment configuration

Ri4Power ISV – the distribution enclosure

Standard-compliant power supply

Distribution enclosures are key components in electrical infrastructure for buildings, data centres and industrial systems. Rittal ISV distribution enclosures from the Ri4Power modular system for floor and wall-mounted distributors deliver exceptionally flexible assembly options with practical modules.

For stainless steel models, Rittal also offers a distribution enclosure solution for harsh environmental conditions from stock.

What we offer

- Floor or wall-mounted distribution enclosures for standard-compliant power supply in buildings and industrial applications
- Modular system for distribution enclosures up to 1250 A
- Flexible assembly options with practical modules
- Tested to IEC 61439

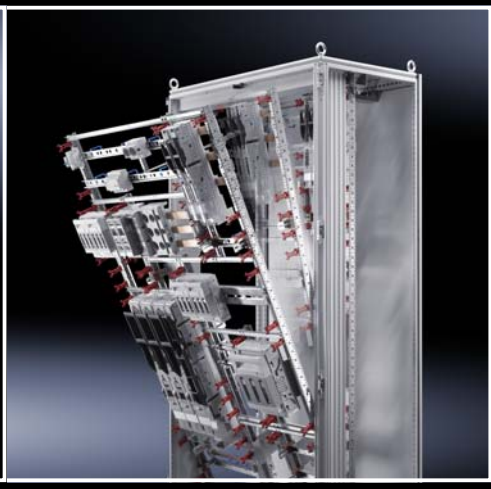
How you benefit

- Quick, ergonomic installation
- Suitable for all standard switchgear and installation equipment
- Can be fully integrated into Rittal enclosure systems

Further information

www.rittal.com/sps-ri4power-isv

ISV modules are integrated into different enclosure systems using installation kits.



The support frames can be removed for user-friendly, ergonomic assembly of the entire installation and wiring outside the enclosure.

Rittal Power Engineering

Easy switchgear planning

Rittal Power Engineering is the ideal software solution for planning and configuring Ri4Power low-voltage switchgear and RiLine busbar systems with design verifications.

The multilingual software provides access to the entire Rittal product range and supports users through every stage of project management, from enquiry right through to order.

What we offer

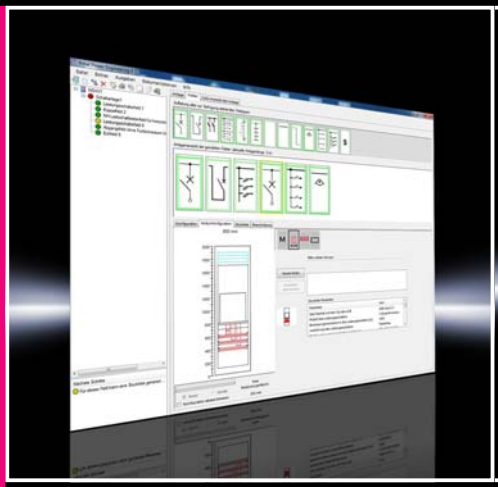
- Easy-to-use configurator for RiLine, Ri4Power, Ri4Power 185 mm, ISV
- Extensive import and export functions
- CAD generation
- Parts lists and assembly plans generated automatically
- Support with generating design and component verification
- IEC 61439 design verification

How you benefit

- Complete project management with a single tool
- Support with pre-production and assembly

Further information

www.rittal.com/sps-rpe



Workflow on a graphical interface – easy selection and graphic positioning of assemblies

Support with generating design and component verification

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- Enclosures
- Power Distribution
- Climate Control
- IT Infrastructure
- Software & Services

You can find the contact details of all
Rittal companies throughout the world here.

www.rittal.com/contact

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