

HIGHLIGHTS 2015

Innovations for your success



HIGHLIGHTS 2015 – innovations for your success

Our mission is to create progress with innovative and inspiring solutions.

In order to achieve this, a company needs to have expertise in a wide range of technological fields. Our experts carry out fundamental research and develop products to a high-quality series-production status. The result is solutions for greater safety and availability in the industry – today and in the future.

An example of this: the unique 6 mm safety relay. This innovative elementary relay combines force-guided contacts with an extremely high level of performance and a minimum overall width. It is therefore possible that these safety relay modules are virtually as narrow as the connected conductors.

Read on to discover more about relay technology from Phoenix Contact and many other innovative solutions.

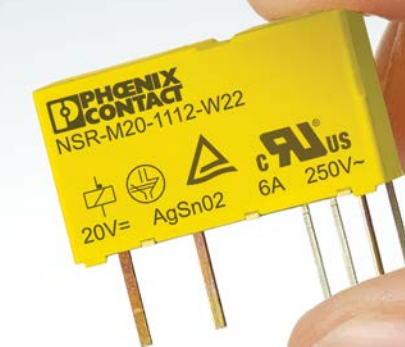
Happy reading!

Gain further information on the Highlights 2015 online. To do so, simply enter the web codes, which can be found in this brochure, into the search field on the Phoenix Contact website.

Or discover the Highlights 2015 interactively on your tablet in the PHOENIX CONTACT Magazines app.



“Innovations are created by challenging, testing, daring to do the seemingly impossible – and through real attention to detail.”

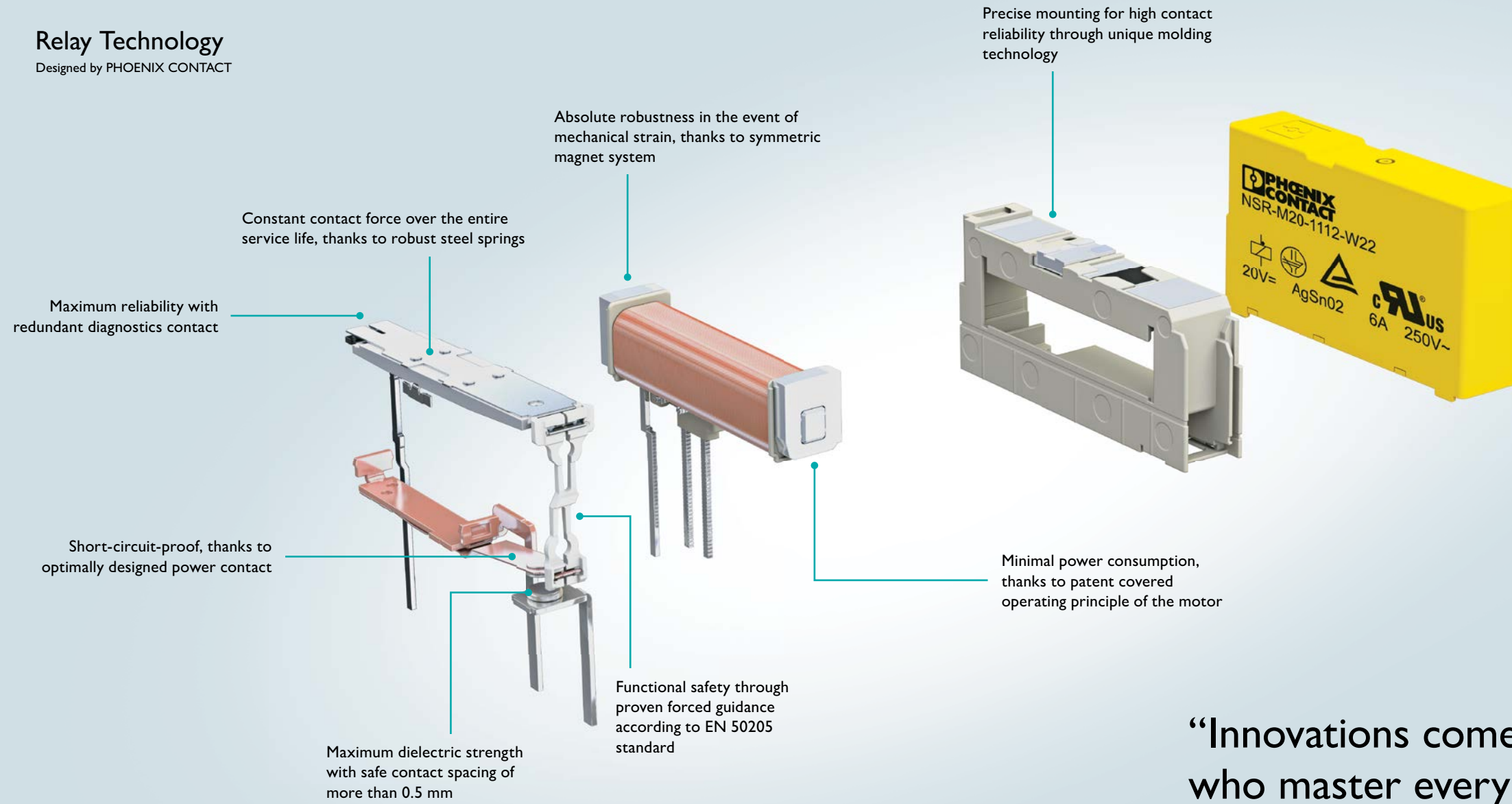


Previous success needs to be
measured on this innovation.

Our team has managed to achieve the seemingly impossible: low space requirements, low energy consumption, and superior system availability in an extremely narrow, high-performance elementary relay with force-guided contacts.

Relay Technology

Designed by PHOENIX CONTACT



new

Precision in 6 mm

The new elementary relay with force-guided contacts impresses with its numerous technological details and is as reliable as safety technology should be.

“Innovations come from those who master every detail.”



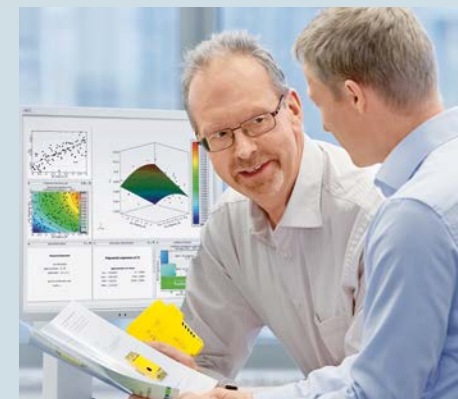
Development of safety relay modules paves the way for the optimum solution for customer applications



Fundamental research in physics and electrical engineering as a solid basis for high-quality products



Design and engineering create products for optimum handling and easiest installation



Simulation technology and tolerance analysis form the basis for maximum reliability



Tool engineering, injection molding, and metal processing enable maximum precision in the product



Production technology and machine building are the core components for maximum availability

Narrow safety relays – full performance on 6 mm

PSRmini are the narrowest safety relays on the market: In a width of 6 and 12 mm, they offer proven safety thanks to the use of force-guided contacts. The safety relays can be used in applications where they previously couldn't fit. Create your precise safety solution from our wide range of products, with your application in mind.



High-performance element relays with force-guided contacts

new

Advanced relay technology in 6 mm

At the heart of the new safety relays is our new elementary relay with force-guided contacts:

- Switching capacity of up to 6 A
- Superior availability thanks to the double diagnostics contact
- Installation up to the hazardous area



6 A

Relay Technology

Designed by PHOENIX CONTACT



SIL
IEC 61508

Safe coupling relays for process industries

- Safety-related switching on and off
- Compatible with numerous process control systems
- Quick and easy diagnostics

Web code: #0507



PL
EN ISO 13849

Safety relays for machine building

- For all common safety functions up to PL e
- Compatibility with all safety sensors
- Single- and two-channel design

Web code: #0495



Comprehensive product range

- 28 products in narrow 6.8 and 12.5 mm housings
- Push-in spring connection and screw connection
- One to three enabling current paths

Surge protection has been reinvented – for failsafe operation of your systems

Lightning and surge protection for the power supply is now extremely powerful and offers outstanding durability. This is made possible through the use of the new Safe Energy Control technology with spark gap without line follow current. The new SEC range is low-maintenance and easy to install, thanks to its plug-in, compact design.

Web code: #0496

Safe Energy Control technology

Safe Energy Control technology, or SEC for short, is the basis for durable and powerful lightning and surge protection. The spark gap prevents line follow currents. This protects the system, including fuses and, in particular, the arresters. A separate arrester backup fuse is therefore no longer needed in all common applications.

The compact arresters, which all feature a plug-in design, simplify maintenance work.

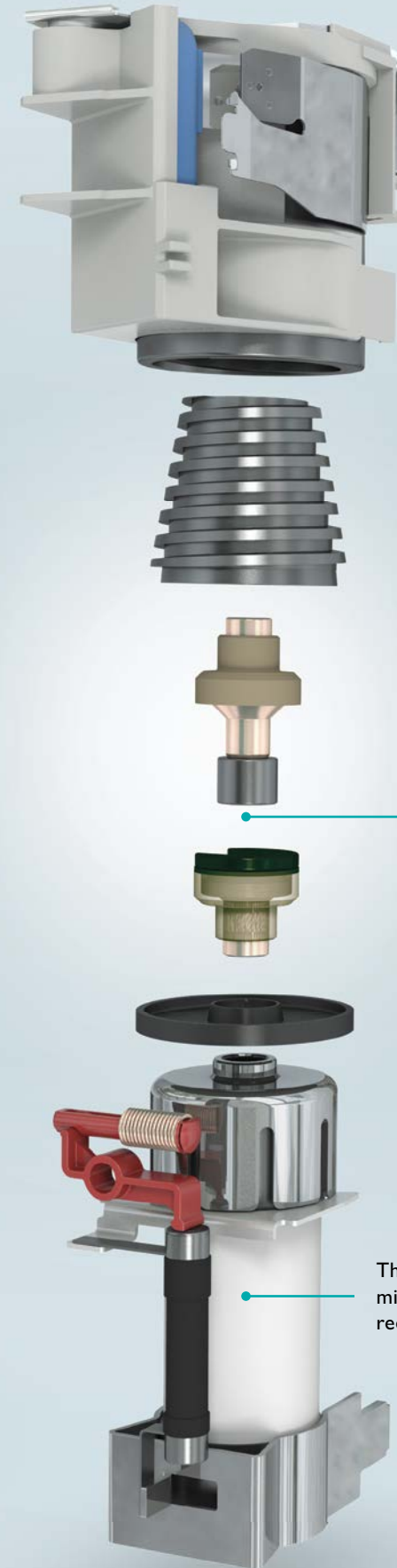
Designed by PHOENIX CONTACT



new

Type 1 lightning arrester with backup fuse

The first plug-in arrester with integrated backup fuse and powerful spark gap.



new

Spark gap without line follow current

The spark gap is at the heart of SEC technology. This revolutionary technology protects arresters and considerably increases their durability.

The integrated backup fuse minimizes installation time and reduces costs.

new

The right solution for every application:

Type 1 lightning arrester

For system voltages up to 690 V, with spark gap without line follow current.



Type 1 + 2 lightning and surge arrester

The unique arrester combination with spark gap without line follow current.



Type 2 surge protective device

High short-circuit withstand capability up to 50 kA in a very narrow design.



Type 3 device protection

Suitable for AC/DC applications, with integrated surge-proof backup fuse.

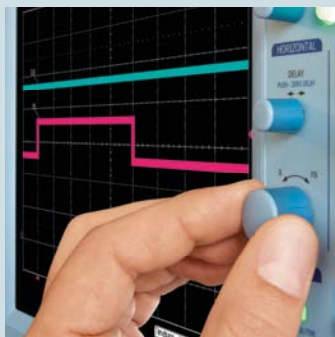


Robust power supplies – perfect for machine building

The new generation of the TRIO POWER range of power supplies is perfect for use in machine building. All functions and the space-saving design are tailored to the high requirements in this field. The power supply units, which feature an extremely robust electrical and mechanical design, ensure the reliable supply of all loads even under harsh ambient conditions.

Web code: #0497

new



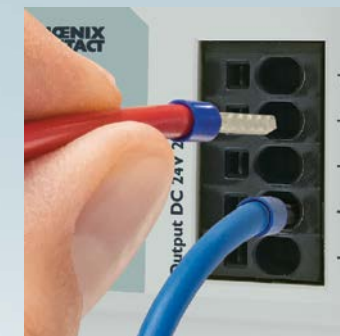
Superior system availability

- Dynamic boost starts heavy loads and to do so provides up to 150% of the nominal current for five seconds
- Robust design for high shock and vibration resistance and for high electric strength
- High MTBF (Mean Time Between Failure) values of more than 1 million hours
- Active function monitoring with DC OK LED and floating signal contact



Maximum flexibility

- Wide temperature range from -25°C to +70°C and reliable device startup at -40°C
- Wide input voltage range for all common AC and DC networks
- Comprehensive approval package
- Compensation of voltage drops by means of adjustable output voltage of 24 to 28 V DC



High cost-effectiveness

- Space savings in the control cabinet thanks to the narrow design
- Time savings thanks to quick and easy installation with push-in connection

new

Device circuit breakers for even greater system availability

Maximum function, minimum overall width, high level of safety: protect your circuits in the event of overload and short-circuit current with the multi-channel electronic device circuit breakers.

The four- and eight-channel devices can be quickly installed without any tools and can be easily set.

Web code: #0498

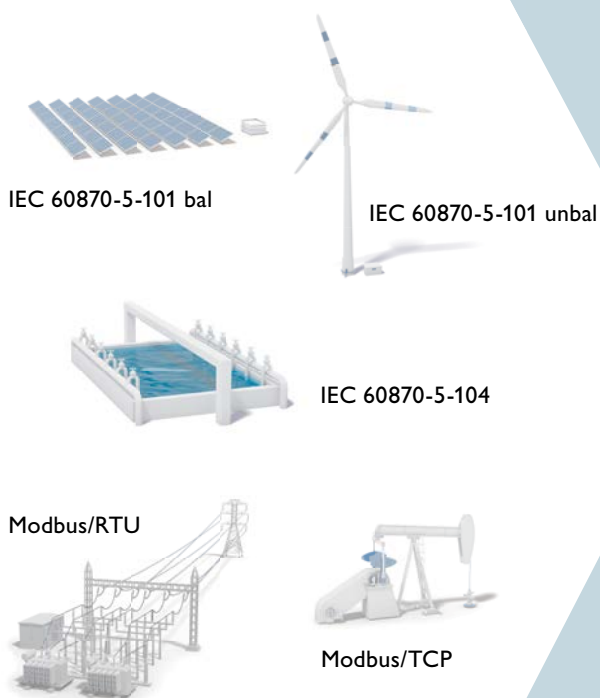


- Nominal current assistance facilitates setting the nominal currents and ensures optimum system protection.
- Undervoltages and surge voltages are detected, loads are safely shut down.
- Electronic locking prevents inadvertent changes of the current values
- Active current limitation to improve the capacity of the upstream power supply

Protocol converters for remote control technology – cost-effective communication

Phoenix Contact remote control technology allows you to monitor distributed stations, for example in water management or energy supply. The powerful Resygate protocol converters convert and bundle various communication protocols. You can now benefit from significant cost savings in your control system thanks to the reduced number of interfaces.

Web code: #0499



Connect various remote control protocols...

One device for various stations

Use Resygate to combine various distributed stations and modernize your network. In addition, you can create subnetworks and use IP address areas more effectively.



How can you configure numerous distributed stations quickly and easily?

Resygate has a pre-installed software tool which can be used to configure all distributed stations in one location. This is carried out quickly and easily by means of guided parameterization, which includes an immediate plausibility check. The advantage: significant time and cost savings for startup and operation.

... easily to the control room



- IEC 60870-5-101 bal
- IEC 60870-5-104

new

Suitable for any system size

Choose the ideal solution from two device classes to suit your volume of data: Resygate 1000 for up to 500 process variables and Resygate 3000 for up to 4000 process variables.

Save costs in the control room

Achieve significant cost savings with Resygate, as fewer interfaces need to be integrated into the control system. You can keep an eye on your systems via serial or TCP/IP-based communication according to IEC 60870-5-101/-104.

I/O system for IEC 61850 – the extremely easy solution

The robust Axioline F I/O system for the control cabinet is the ideal solution for applications in the energy industry. With the new bus coupler and the new I/O modules, you can now also use Axioline F for IEC 61850. Benefit in particular from the easy handling.

What is expected of I/O systems in IEC 61850 applications?

Standard IEC 61850 places special requirements on I/O systems. They must transmit time-critical signals, satisfy very stringent environmental requirements, and support the interoperability required by the standard. The Axioline F I/O system for IEC 61850 has been specifically developed for these demanding tasks.



Web code: #0500

new

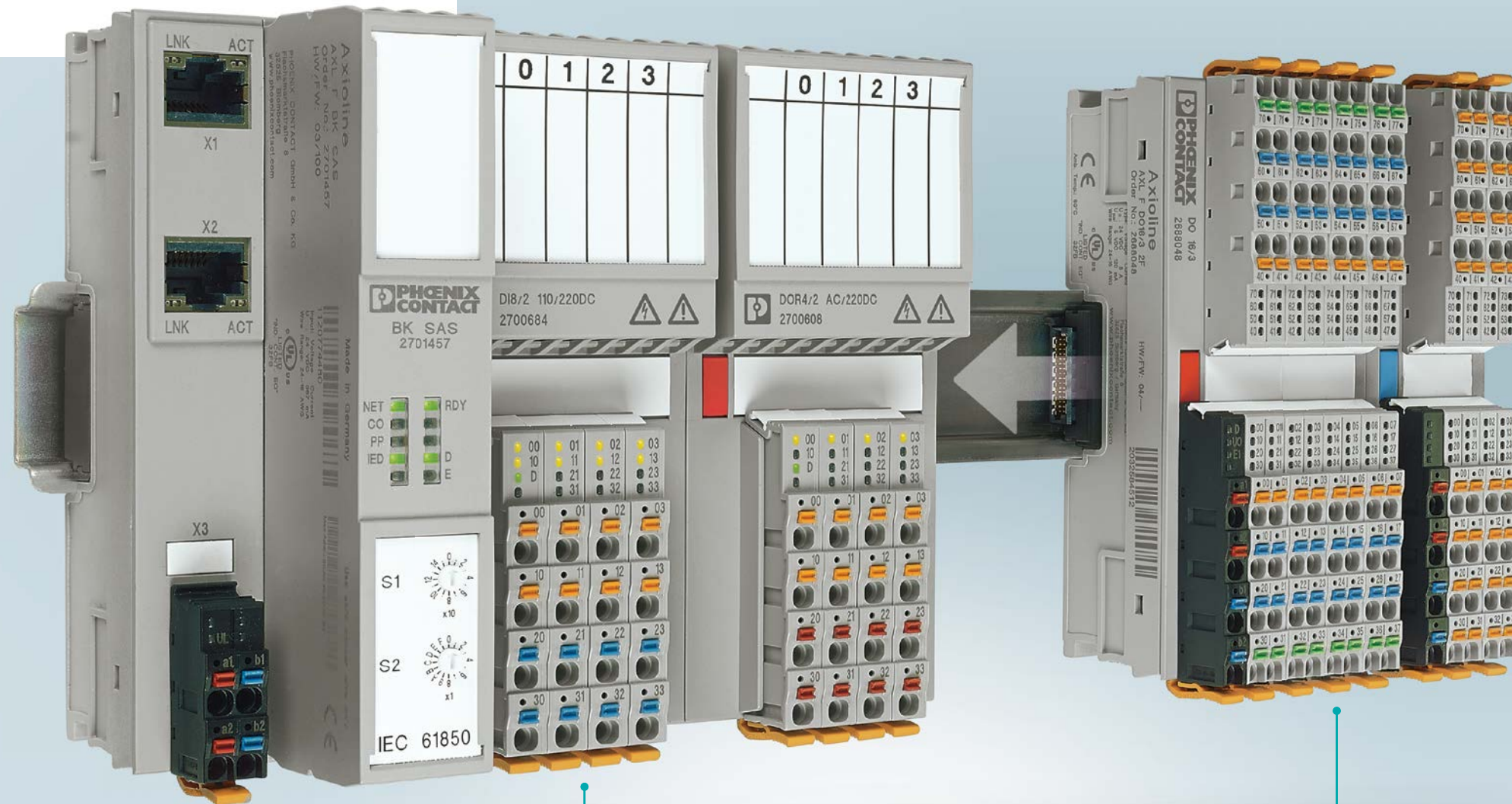
Axioline F bus coupler for IEC 61850

The new Axioline F bus coupler can be used to acquire and output I/O data in energy applications. The bus coupler communicates using both the MMS and the fast GOOSE protocol.



Easy parameterization via web interface

The web interface provides easy online access to the product. In addition, you can save time during startup thanks to user-friendly parameterization.



new

I/O modules for the special requirements in energy applications

- Impulse withstand voltage of 5 kV
- Nominal voltages up to 220 V DC or 230 V AC

Push-in Technology

Designed by PHOENIX CONTACT

Comprehensive Axioline F product portfolio

Combine flexible extra-low and low-voltage modules without insulation plates for a station structure that is even more compact.

Programmable charging controller – the high-end complete solution

EV Charge Control Professional is the control solution for your sophisticated charging infrastructure and supports AC or fast DC charging. You can integrate all the necessary functions in the charging station thanks to the versatile communication interfaces and flexible programming capability.

Web code: #0501



Intelligent communication and network integration

- Consistent communication from the vehicle and charging station to the IT systems of energy suppliers and infrastructure and network operators
- Open Charge Point Protocol (OCPP) for efficient authorization and billing processes



Complete control of the AC or DC charging station

The functions of EV Charge Control Professional support more sophisticated charging stations:

- Ethernet and mobile communication
- Serial communication
- Digital IOs
- Temperature monitoring
- AC and DC charging points
- Programming in PC WORX



Communication with the vehicle

- Powerline communication between vehicle and charging station according to ISO/IEC 15118
- DC fast charging in line with the Combined Charging System (CCS) according to DIN SPEC 70121

new

Programmable controller for E-Mobility

The charging controller is optimized for the functional requirements of E-Mobility. It is also as robust and reliable as an industrial PLC.

Additional charging controllers for E-Mobility

new

EV Charge Control Basic

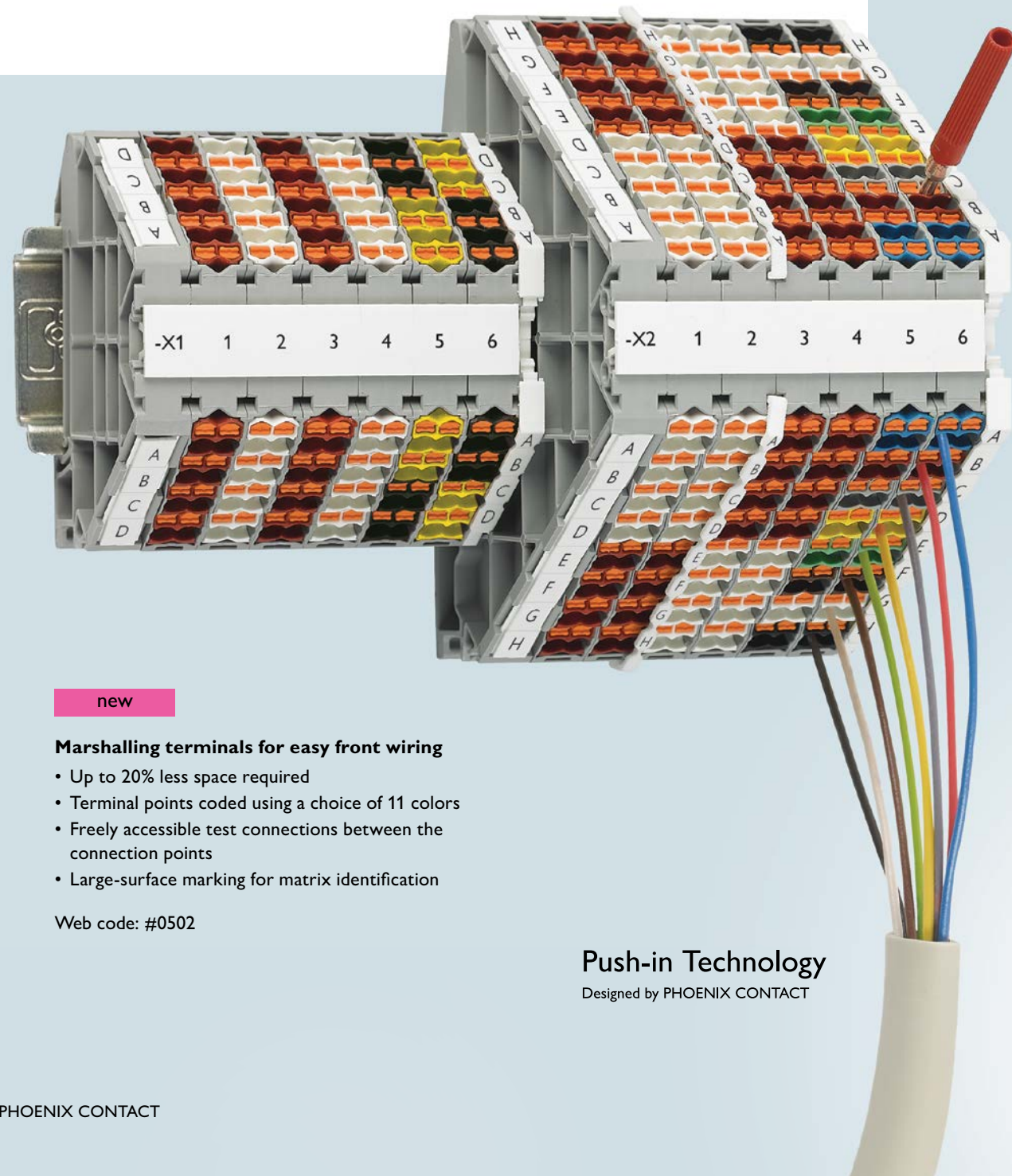
As a PCB or DIN rail device, features the basic functions of a charging station.

EV Charge Control Advanced

Features additional functions such as load and energy management for trade and industry.

Marshalling systems with push-in connection – easy, clear, and color-coded

Phoenix Contact offers compact marshalling terminals and marshalling patchboards with an innovative color control system. The color of the connection points can be freely selected, ensuring quick and reliable orientation when wiring signals.



new

Marshalling terminals for easy front wiring

- Up to 20% less space required
- Terminal points coded using a choice of 11 colors
- Freely accessible test connections between the connection points
- Large-surface marking for matrix identification

Web code: #0502

Push-in Technology

Designed by PHOENIX CONTACT



DIN rail mounting

Adapters are available for DIN rail mounting as an alternative to direct mounting in racks.



new

Marshalling patchboards for a modular structure

- Up to 20% higher signal density
- Application-specific structure with the exact number of positions
- Terminal points coded using a choice of 11 colors
- Convenient testing with standard test accessories

Web code: #0503

Push-in Technology

Designed by PHOENIX CONTACT

High-current spring-cage terminal blocks – power wiring made easy

The new Power-Turn high-current terminal blocks provide the fastest and most user-friendly connection method currently available for conductors up to 150 mm². To connect the conductor, simply press the lever on the terminal block using a screwdriver.

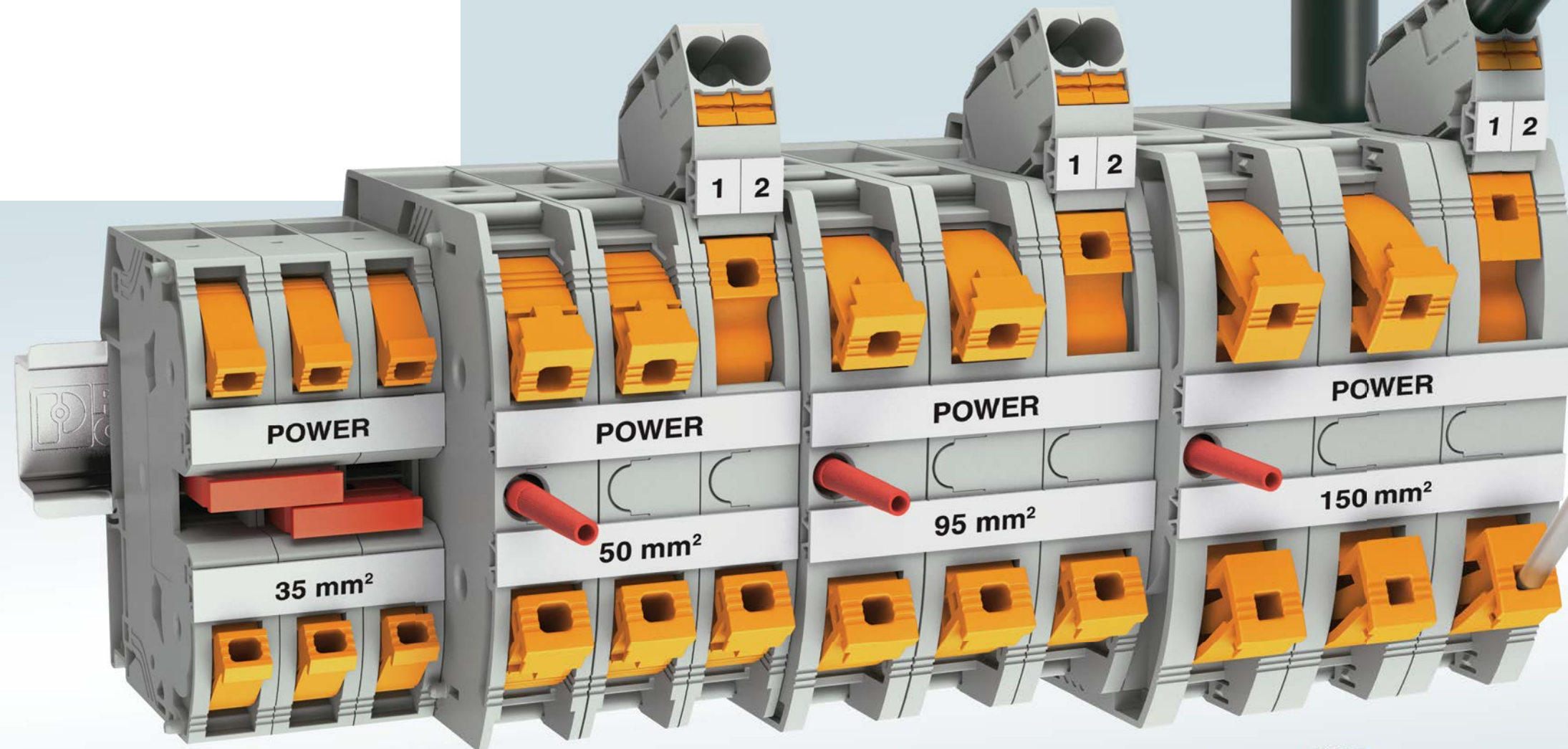
Web code: #0504

new

High-current spring-cage terminal blocks

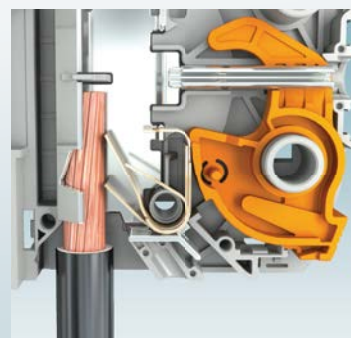
The series for cross sections from 35 to 150 mm² can be mounted on a DIN rail or directly on the mounting surface.

The terminal points, which are open when supplied, simplify conductor connection.



Tap-off terminal blocks

For additional voltage tap with conductor cross sections up to 16 mm².



Power-Turn Technology

The new high-current spring cage terminal blocks are equipped with patented Power-Turn Technology for easy conductor connection. Large conductors are contacted by simply moving the lever using a standard screwdriver. Special pressure springs and a prism-shaped clamping part ensure the vibration-proof contact of conductors.

Designed by PHOENIX CONTACT



Easy bridging

Use insertion bridges for potential distribution. Thanks to their special design, they snap into the terminal space securely and can be easily identified following conductor connection.

309 A
UL 1,000 V

Device connection for high currents – easy and powerful

Transmit 232 A through the housing panel to the PCB. Thanks to the new T-LOX fast connection technology you can connect conductor cross sections from 16 to 95 mm² conveniently and reliably with a standard screwdriver.

Web code: #0505



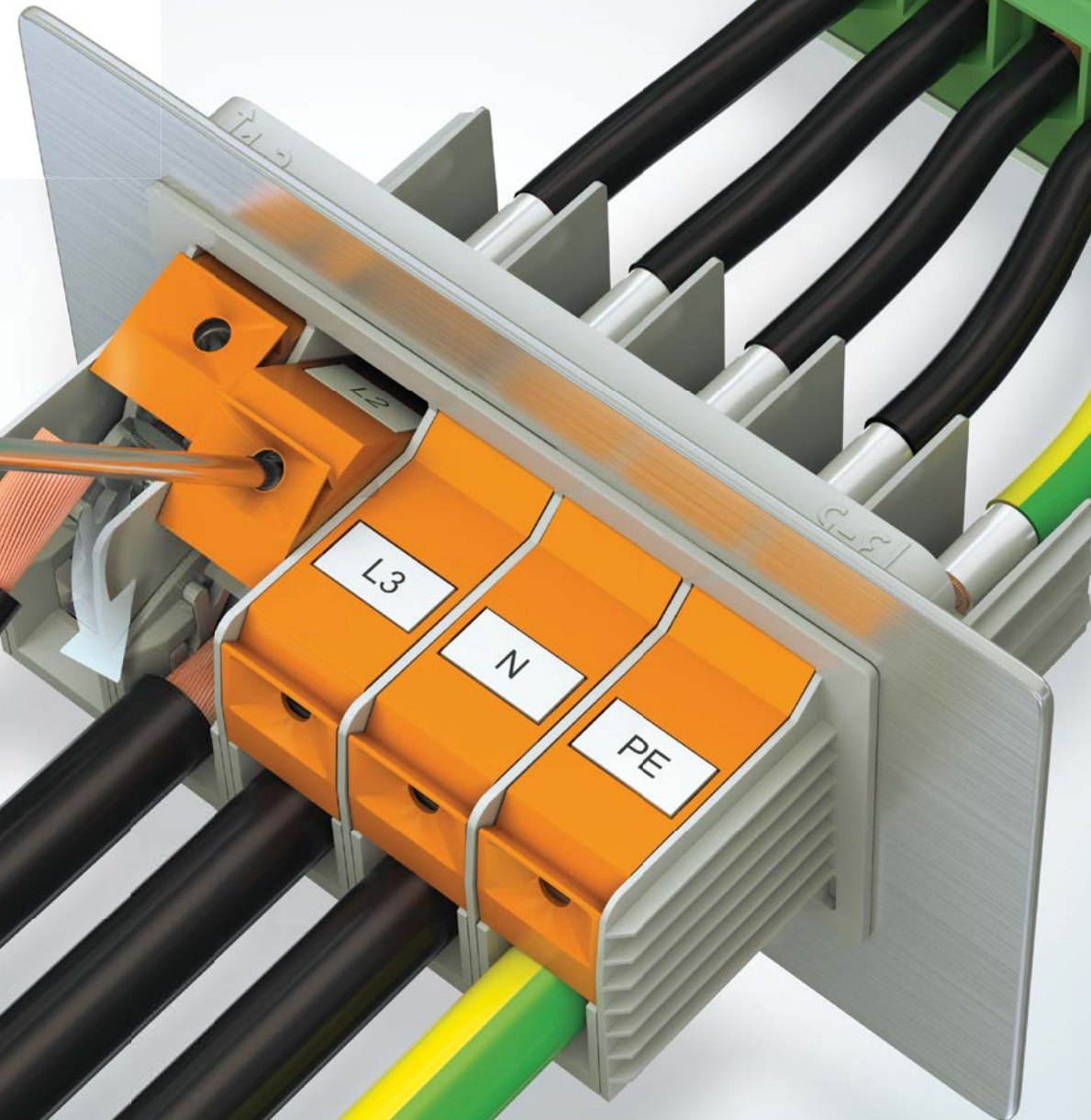
new

TW 50 and TW 95 high-current feed-through terminal blocks

- Swivel the conductor, close the terminal block, and you're done – thanks to new T-LOX fast connection technology
- Conductor cross sections up to 95 mm²
- Currents up to 232 A

232 A

95 mm²



new

MKDSP 50 and MKDSP 95 high-current PCB terminal blocks

- Conductor cross sections up to 95 mm²
- Currents up to 232 A
- Less mounting effort thanks to wave soldering capabilities

You have the choice when it comes to wiring your device



Conductor connection for conventional ring cable lugs.

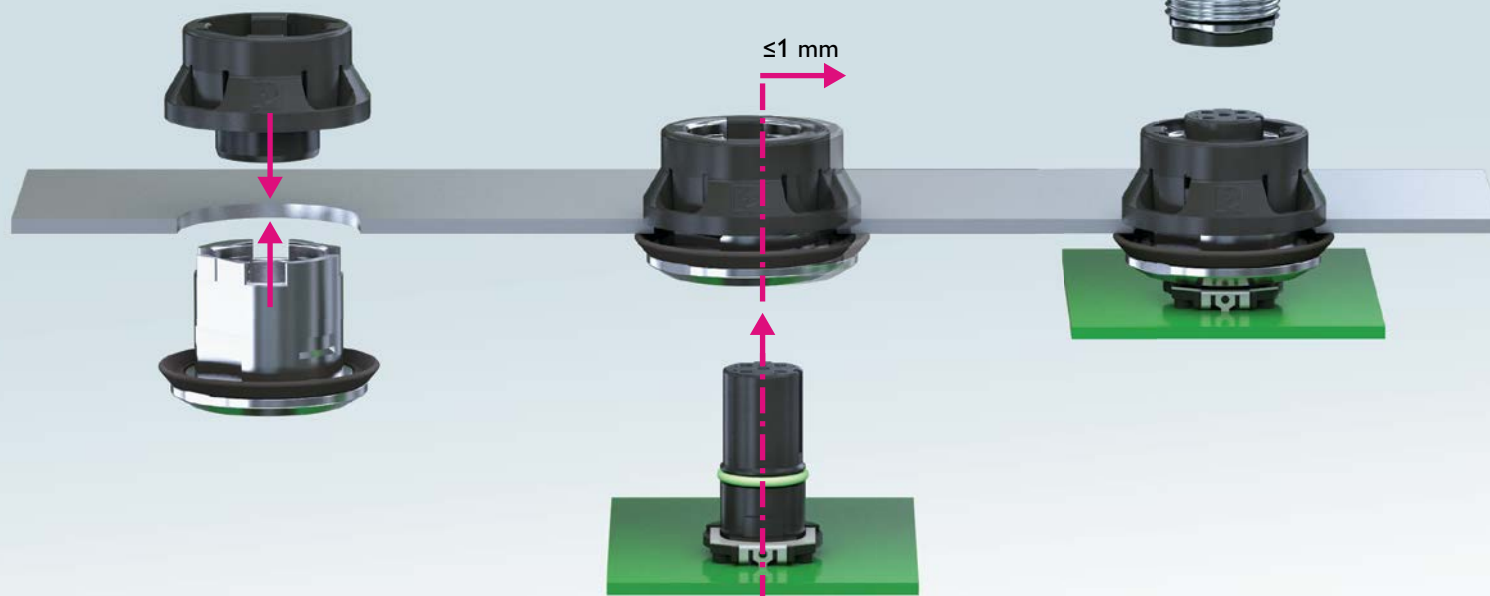


Space- and cost-optimized connection via the existing busbars in the device.

Tolerance-compensating M12 screw connection – safe, fast, and unique

Mount M12 connections quickly and safely: the new IP67 housing screw connections automatically compensate production tolerances up to 1 mm. 4- to 17-pos. connectors to fit the M12 screw connections are available in all popular codings for transmitting signals, data, and power.

Web code: #0506



It could not be simpler:

1. Mount the M12 screw connection
Snap the two separate parts together quickly and easily by hand or by automated means.

2. Assemble the M12 contact carrier and screw connection
The housing screw connection compensates for production tolerances during automatic assembly.

3. Lock the M12 device connection – done!
The connection meets protection class IP67 even when not plugged in.



Signals
A-coded 5-pos.



Signals
A-coded 8-pos.



Signals
A-coded 12-pos.



Signals
A-coded 17-pos.



Data
D-coded 4-pos.



Data
B-coded 5-pos.



Data
X-coded 8-pos.



Data
Y-coded 8-pos.



Power
S-coded 3+PE



Power
T-coded 4-pos.



new


M12 tolerance-compensating housing screw connection

- Tolerance compensation up to 1 mm
- IP67 protection even when not plugged in
- Color coding
- For panel thickness of 1 to 4 mm

Discover the 90 smaller and larger new products for connection and automation technology.



Also discover the new products 2015 online or interactively on your tablet with the PHOENIX CONTACT Magazines app.

 Web code: #0319



Discover the 40 smaller and larger new products for connectors and housing systems.



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 Web code: #0320





Find out more with the web code

Use the web code to access detailed information on the website. Simply enter # and the four-digit number in the search field.



Product range

- Lighting and signaling
- Electronics housings
- Electronic switching devices and motor control
- Fieldbus components and systems
- Functional Safety
- HMIs and industrial PCs
- I/O systems
- Industrial Ethernet
- Industrial communication technology
- Installation and mounting material
- Cables and lines
- PCB terminal blocks and PCB connectors
- Marking and labeling
- Measurement and control technology
- Monitoring
- Terminal blocks
- Relay modules
- Protective devices
- Sensor/actuator cabling
- Software
- Connectors
- Controllers
- Power supplies and UPS
- System cabling for controllers
- Surge protection and interference suppression filters
- Tools
- Wireless data communication

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