HIGHLIGHTS 2023

100 years of passion for
technology and innovation

PHOENIX CONTACT

100 years of passion for technology and innovation

Phoenix Contact is celebrating its centenary in 2023. Since time began, it is connections that make us strong – both on a technological and human level. With these connections, we are creating the conditions for the sustainable world of tomorrow.
For more exciting insights, visit **phoenixcontact.com/100years**

Success through listening, improving, and forward-thinking

Dear customers,
Making optimum use of energy has been Phoenix Contact's mission since 1923.

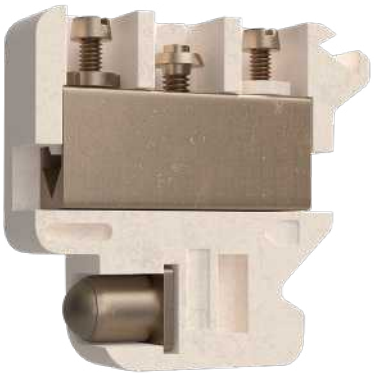
1923

Through electrification, networking, and automation, we are helping to open up new technical and economic opportunities that make people's lives easier and better. We will continue to pursue this aim in the future.

Why? Because our values, especially our close relationships with our customers, our engineering expertise, and our passion for technology, are our strongest driving force. And that has remained unchanged for one hundred years.

With this in mind, I would not only like to invite you to take a look back, but I also look forward to embarking on our second century together with you.

Klaus Eisert,
Shareholder of Phoenix Contact



1928

TERMINAL BLOCK

The first terminal block in ceramic housing had a solid clamping part. On the base, there was a snap lock for the asymmetrical DIN rail. The whole thing was available as a “switchable terminal block” with bridging to the adjacent terminal blocks.

1977

INTERFACE

The “right terminal block at the right time”. Our answer to the demands at the time: a disconnect terminal block with attached relay housing enabled signal transmission between two disconnect levels with different potentials.

The move to the PCB connection terminal block was a successful one. A concept was needed where the electronics could be replaced at any time. An ever-growing product portfolio emerged ranging from 2- to 24-pos., with screw or spring connection technology including various cross-sections.

COMBICON

1972

Contents

1987

INTERBUS

With INTERBUS, data was distributed on a serial basis instead of in parallel. At the time, this was a big gamble because it reduced the number of terminal points in the control cabinet. But it became a huge success and was a major step in the world of digital control functions.

2013

E-MOBILITY

A completely new field: charging connectors for e-mobility. Together with leading automobile manufacturers, we developed and standardized the Combined Charging System (CCS) – now the global charging standard.

TRABTECH

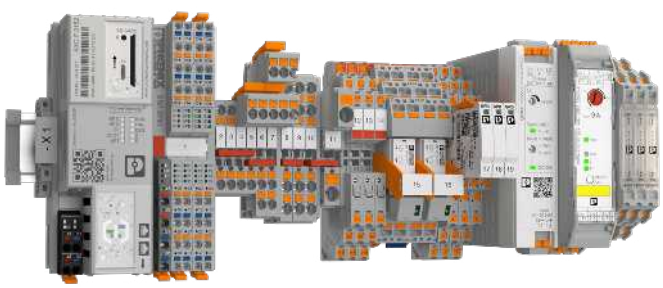
1983

More and more electronic devices are used that need to be protected against surge voltages. Surge protective devices that can be tested impact-free during system operation are particularly innovative.

2017

COMPLETE line

A complete product range – from terminal blocks to digital twins. A consistent system and uniform accessories triumphantly paved the way for efficient control cabinet building.



100 years of passion for technology and innovation

2023

Let's continue as we have thus far.
The direction is clear.

With the All Electric Society, we have a well-founded vision of the future for a sustainable world worth living in. We are excited about this concept – and we want to inspire you as well.

With our highlights for electrification, networking, and automation, we are helping to tackle the major challenges of our time.

phoenixcontact.com/highlights

With the open automation system, we are able to meet the new demands of industrial automation. It consists of open hardware, modular engineering software, a global community, and a digital software marketplace.

PLCnext TECHNOLOGY

2019

PHOENIX CONTACT

Electrification

Efficient setup of charging infrastructure Attractive AC charging technology

A key to achieving the All Electric Society is the transformation of the mobility sector to e-mobility. With our forward-thinking e-mobility products, we are making a crucial contribution to this.

The CHARX connect modular charging sockets meet your requirements for simple design-in. In addition, our AC portfolio now includes the compact CHARX connect eco charging cables.

new

Modular AC charging sockets – adaptable to your needs

CHARX connect modular can be customized based on the modular system principle: Choose between round and square protective covers. Add optional LED status indicator, temperature sensors, and shutter. Plug-in connecting cables, graded according to power and length, round off the package.

Web code: #2100

new

Compact AC charging cables – reduced to the essentials

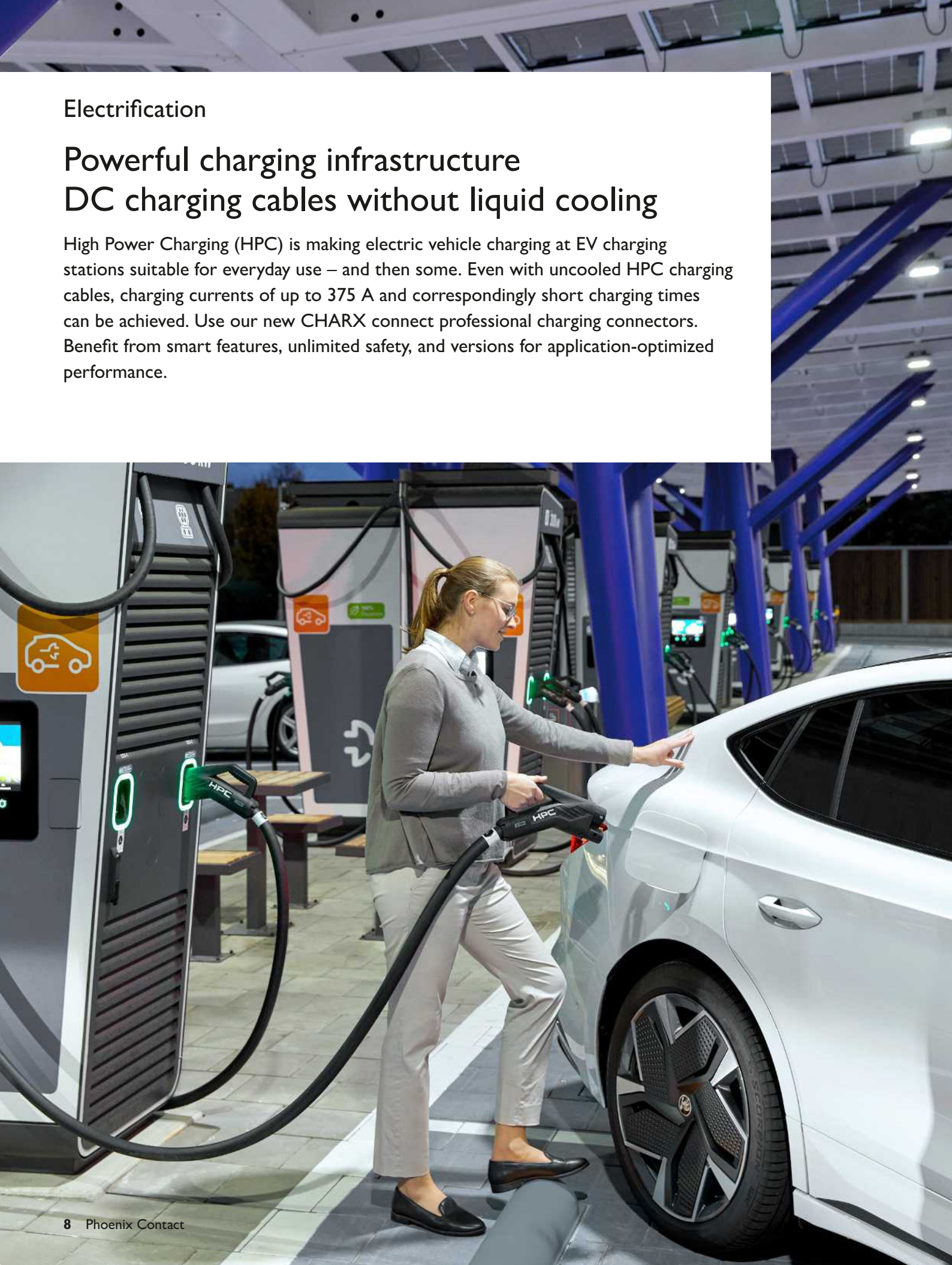
CHARX connect eco focuses on the safe charging of your electric vehicle. The particularly compact mode 3 charging cables impress with their proven Phoenix Contact quality, solid feel, and attractive price. They are available in the usual four performance classes from 3.7 kW to 22 kW.

Web code: #1021

Electrification

Powerful charging infrastructure
DC charging cables without liquid cooling

High Power Charging (HPC) is making electric vehicle charging at EV charging stations suitable for everyday use – and then some. Even with uncooled HPC charging cables, charging currents of up to 375 A and correspondingly short charging times can be achieved. Use our new CHARX connect professional charging connectors. Benefit from smart features, unlimited safety, and versions for application-optimized performance.



new

Uncooled CCS charging cables for sustained charging currents up to 375 A

CHARX connect professional does not use liquid cooling and instead uses a conductor cross-section of 4 x 50 mm². This allows you to operate your HPC charging station at 375 A continuously and safely without cooling at temperatures of up to 40°C – and with even higher charging currents for short periods in Boost Mode.

Web code: #2099

CHARX connect

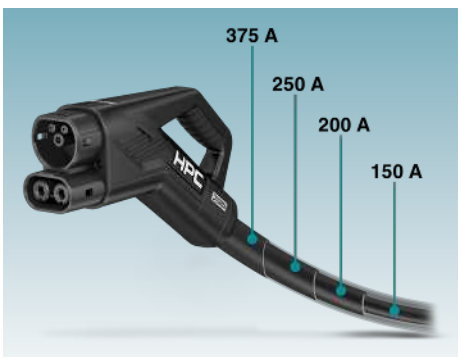
E-Mobility empowered by Phoenix Contact

Billing compliant with calibration laws

Four-conductor measurement technology makes it possible to record the power dissipation in the charging cable. The power transmitted to the customer's electric vehicle can thus be determined precisely – for reliable billing of your charging processes.

Unlimited safety

The charging connector's clever two-chamber sealing system prevents possible short circuits by physically separating DC+ and DC-. This ensures the high availability of your public charging infrastructure and maximum safety for users, even under harsh conditions.



High-performance versions

The power transmission requirements vary depending on the installation location and the application. That's why our CHARX connect professional portfolio covers nominal currents ranging from 150 A to 375 A, so you can set up the optimum charging infrastructure for your application.

Electrification

Modular DC charging infrastructure 19" racks for fast charging

Carbon-neutral charging is only made possible by coupling the different sectors. The coordinated power electronics enable efficient conversion, distribution, and storage. This allows electric vehicles to be charged intelligently and quickly. Our solution enables you to implement a simple, economical, and full-coverage fast charging infrastructure.

CHARX control

E-Mobility empowered by Phoenix Contact

CHARX power

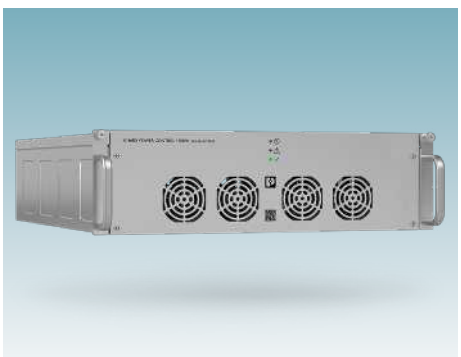
E-Mobility empowered by Phoenix Contact

new

19" modules for economical fast charging

With CHARX modules, you can optimize the planning, installation, and operation of your charging station. All the components of your charging station are supplied and protected via the AC distribution. Together with the space-saving control module, space is created for further scalable AC/DC fast charging modules.

Web code: #2529

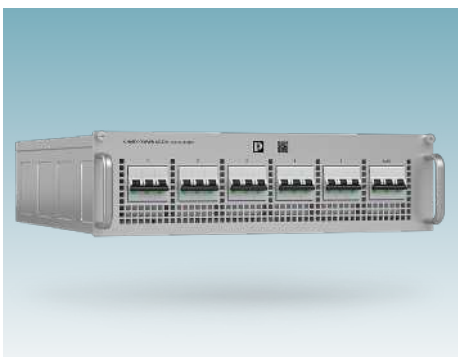


Compact power control module

The control module combines all the necessary components for smooth operation of your charging station. Configuration, installation, and maintenance effort is minimized.

Efficient fast charging module

The modules enable economical operation of your charging infrastructure. They can be installed directly in the charging station and interconnected in accordance with power requirements.



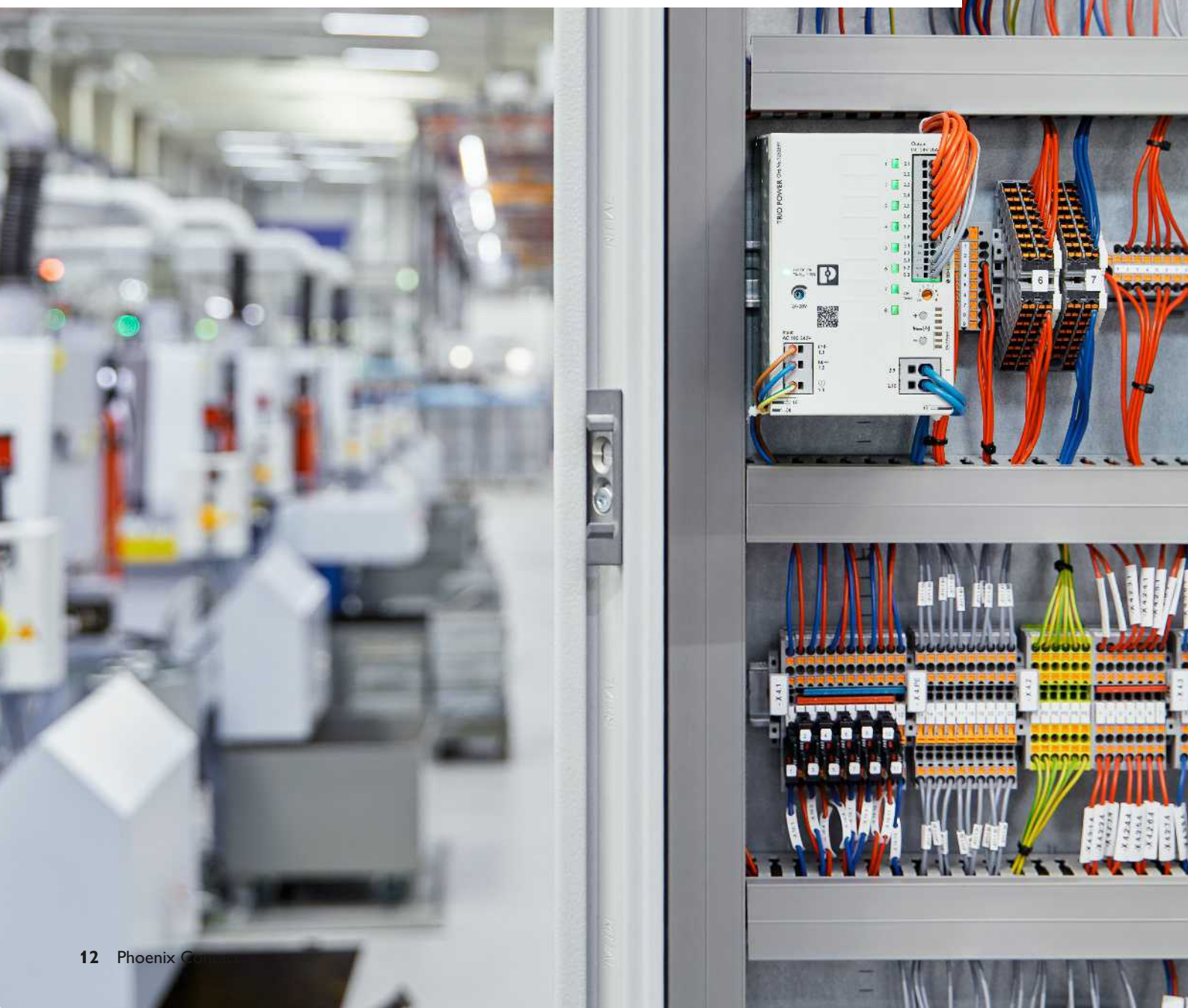
Convenient AC distribution module

The module distributes the AC mains voltage to up to five fast charging modules. Downstream modules are protected by the integrated surge protection and miniature circuit breakers.

Electrification

Reliable supply in machine building
Power supply with circuit breaker

Power supplies enable the efficient and reliable supply of your applications. The new TRIO POWER power supplies feature a compact design, easy handling, and smart diagnostic functions. An optionally integrated circuit breaker makes TRIO POWER an all-rounder for machine building and systems manufacturing and ensures high system availability.



new

TRIO POWER power supplies

Compact, robust, and always reliable: the TRIO POWER 24 V power supply sets the new standard in machine building. The plug-and-play solution for the control cabinet: simply unpack, connect, and you're done! Available with integrated multi-channel device protection as an option.

Web code: #0497

Space-saving

The narrow overall width and option of direct side by side mounting save space. The low overall depth enables installation in 210 mm small housings.

Easy handling

Thanks to Push-in connection technology, integrated marking fields, and an intuitive commissioning concept, the devices are quickly ready for use.

Smart diagnostics

The multicolor LEDs and the collective relay contact are used to signal all relevant states. An optional IO-Link interface is available for diagnostics and parameterization.

Electrification

Ex i and SIL 3 in an overall width of just 6.2 mm
Highly compact Ex i signal conditioners

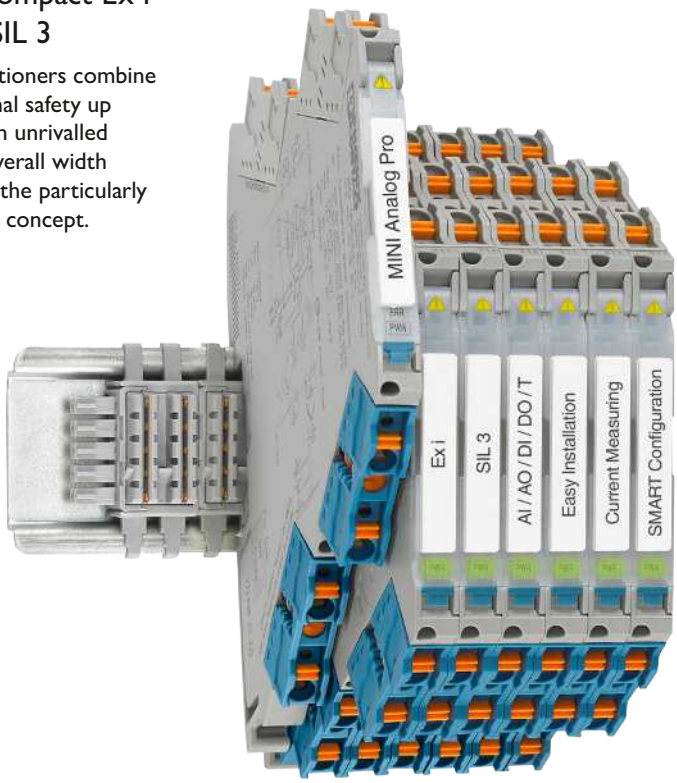
Distributed energy generation requires space-saving and safe solutions. The intrinsically safe versions of the MINI Analog Pro signal conditioners and measuring transducers provide explosion protection and functional safety in an unrivalled compact design. Cover all tasks for interference-free signal transmission, save space, and ensure the safety of your system at the same time.

new

MINI Analog Pro highly compact Ex i signal conditioners with SIL 3

MINI Analog Pro Ex i signal conditioners combine explosion protection and functional safety up to SIL 3 in just 6.2 mm, offering an unrivalled compact design in terms of the overall width and installed height. Benefit from the particularly user-friendly design and operating concept.

Web code: #0492



Ex i

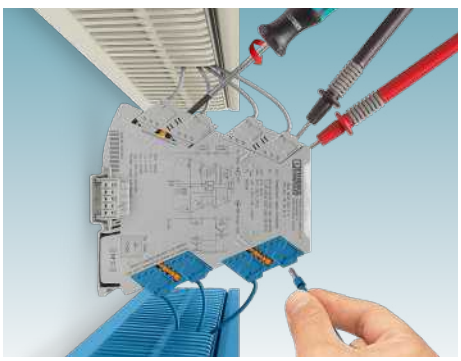
SIL3
IEC 61508

Comprehensive explosion protection in just 6.2 mm

Explosion protection guaranteed by international Ex approvals, an operating temperature range of -40°C to +70°C, and a documented altitude operating range of up to 5,000 m.

Safety for every signal type and direction

With universal suitability for SIL 3 applications, the MINI Analog Pro Ex i portfolio provides versatile solutions for signal directions AI/AO/DI/DO/T.



User-friendly operating concept

Future-proofing is ensured by plug-in connection technology, current measurement during operation, configuration and monitoring app, communication gateways, digital tagging, and a digital nameplate.

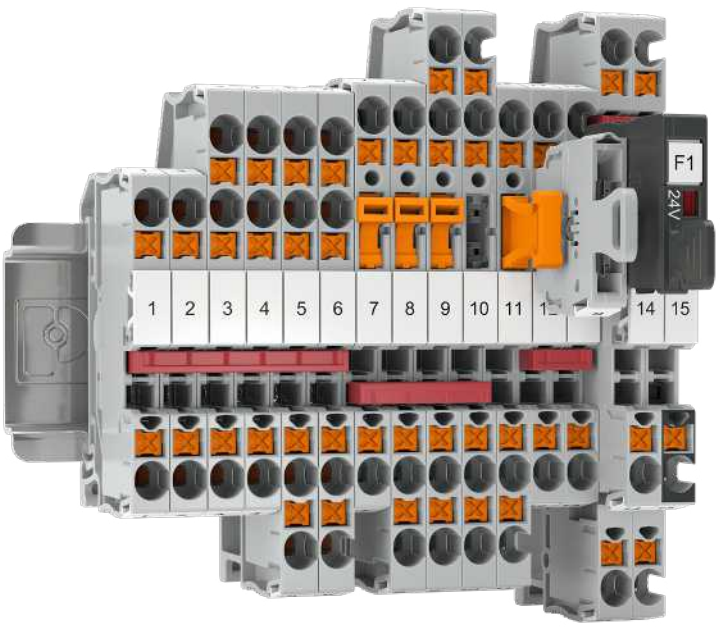
Electrification

Fast and flexible wiring
Terminal blocks with Push-X technology

Due to increasing electrification, many additional electrical connections are needed. To increase the efficiency of your control cabinet wiring, we offer one of the fastest connection technologies on the market with Push-X technology in our terminal blocks. Connect all types of conductors manually or automatically without the need for force or tools.

Push-X Technology

Designed by Phoenix Contact

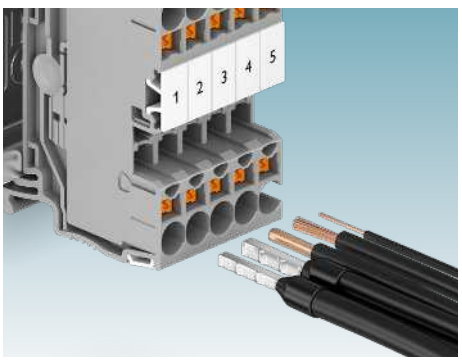


new

Push-X in 2.5 mm² cross-section

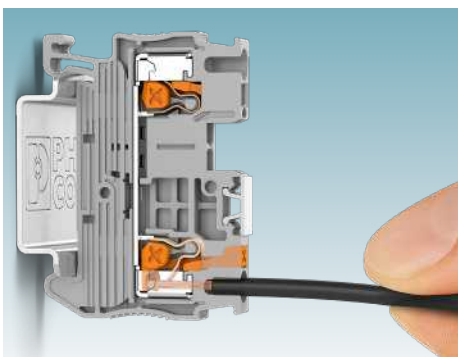
The XT 2,5... terminal blocks are the first terminal blocks with front Push-X connection. The portfolio consists of feed-through and multi-conductor terminal blocks as well as function versions for the use of disconnect knives, plug-in fuses, and components.

Web code: #3091



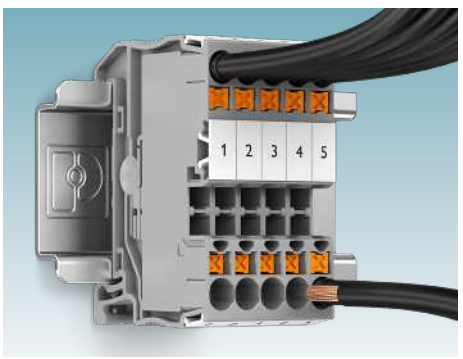
Easy installation

The clamping chamber design enables direct and almost effortless conductor connection for all types of conductors with and without ferrules. This makes it very easy to wire conductor cross-sections from 0.5 to 4 mm².



Significant time savings

In the delivery state, the clamping chambers are always open. This saves valuable time during manual wiring and provides the best conditions for automated wiring solutions.



Intelligent push buttons

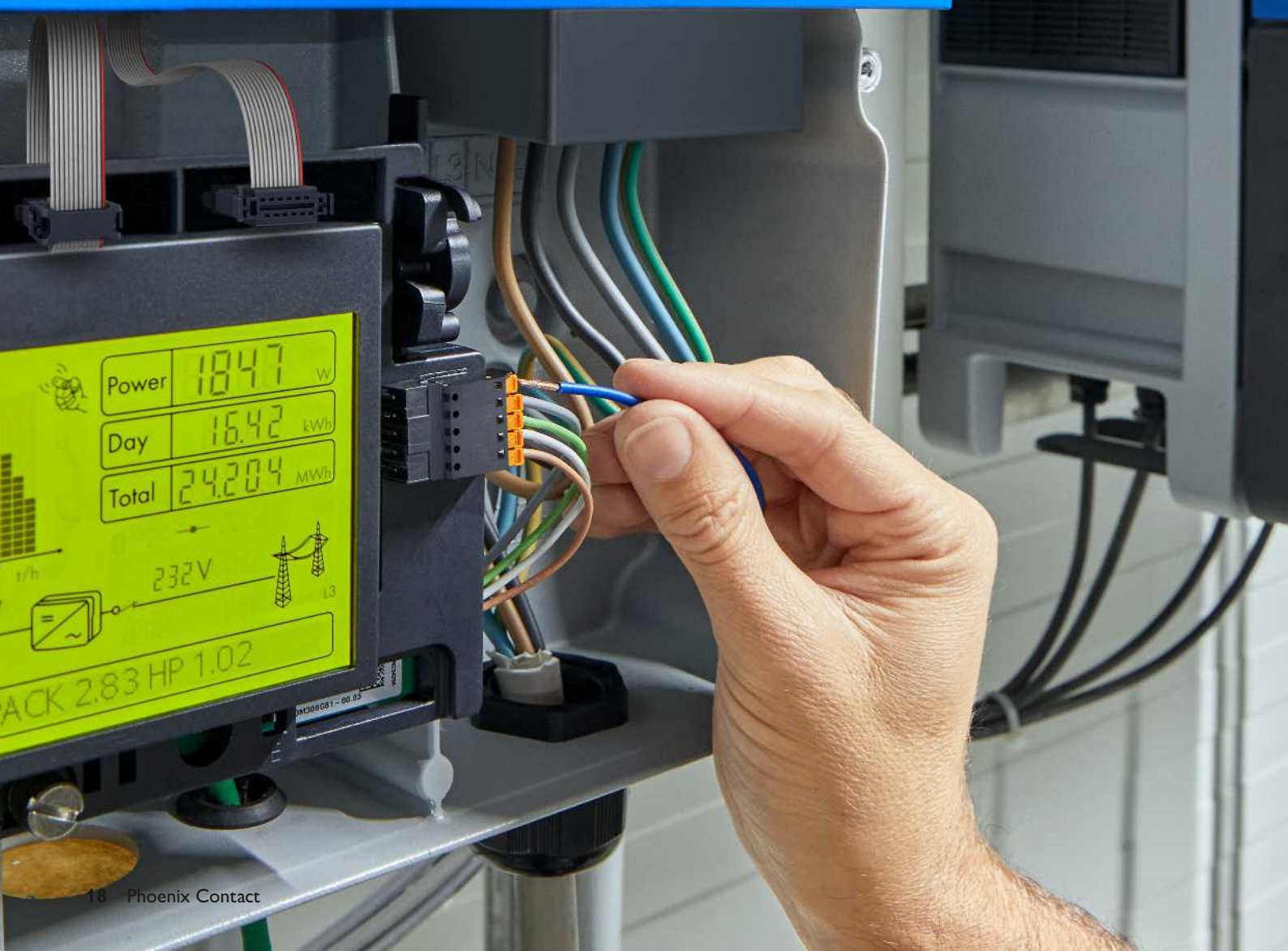
The spring-loaded push buttons allow the contact chamber to be opened and pretensioned. They also signal the status of the clamping chamber to the user.

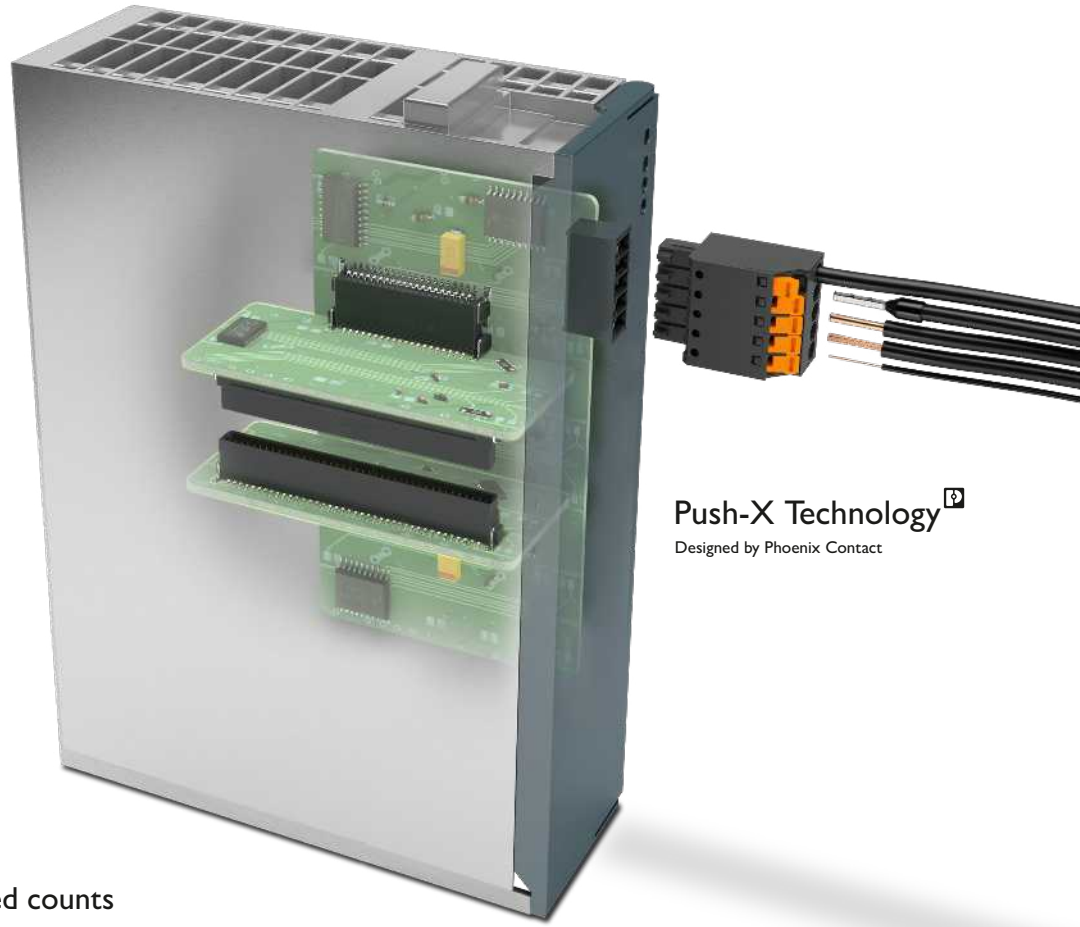
Electrification

Fast connection, fast transmission
Connectors for more speed

Benefit from Push-X technology in PCB connection technology as well. Contact all types of conductors without the need for force or tools – including flexible conductors without ferrules.

The new board-to-board connector is available with a pitch of 1.27 mm and offers full compatibility. The FR 1,27 series features impressive data rates of up to 28 Gbps and currents of up to 2.3 A to satisfy your future device design requirements.





Push-X Technology

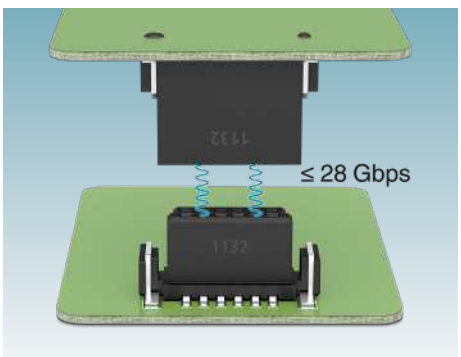
Designed by Phoenix Contact

new

In tomorrow's world, speed counts

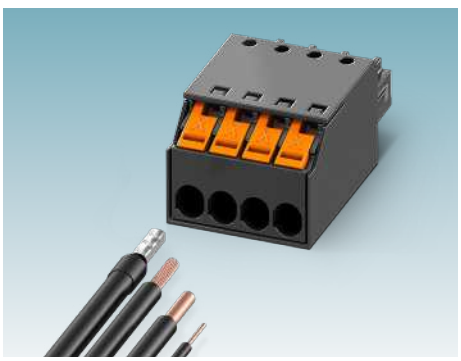
Customer-specific data integrity simulations save time in the design-in process of the FR 1,27 series.
Push-X connection technology provides ease of use with low conductor insertion forces for all conductor types.

Web code: #2492 **Web code:** #0425



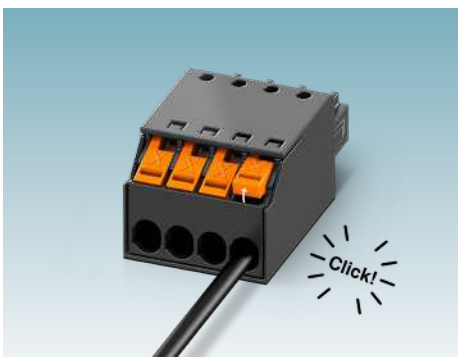
High-speed data

High-speed data transmission at up to 28 Gbps and currents up to 2.3 A per contact for future-proof devices.



More innovative conductor connection

Push-X technology enables very fast, direct, and almost effortless conductor connection for all types of conductors.



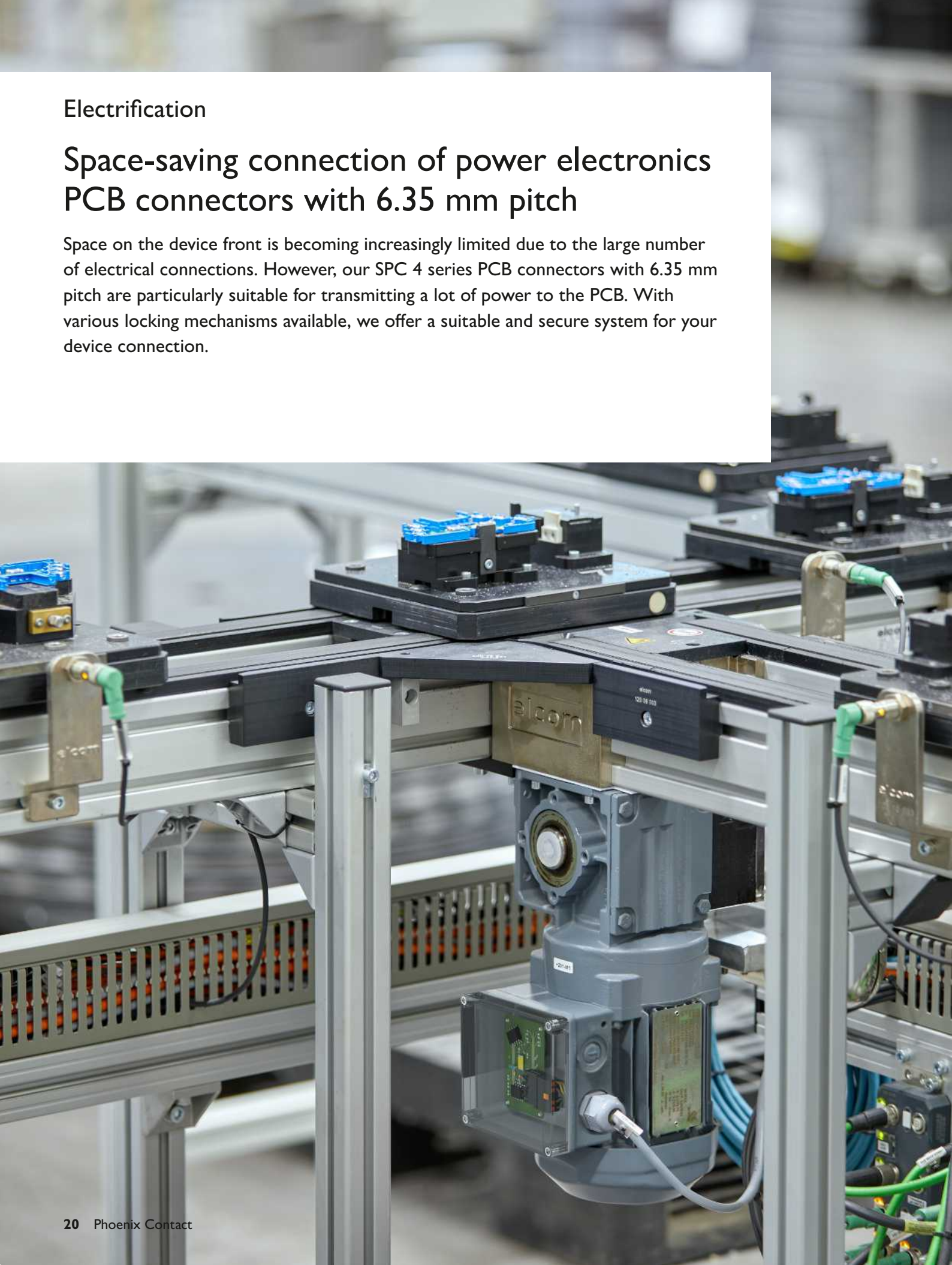
Fast and user-friendly

The stripped conductor is inserted directly into the open terminal point. An audible click and the position of the orange actuator indicate that the clamping space is closed.

Electrification

Space-saving connection of power electronics PCB connectors with 6.35 mm pitch

Space on the device front is becoming increasingly limited due to the large number of electrical connections. However, our SPC 4 series PCB connectors with 6.35 mm pitch are particularly suitable for transmitting a lot of power to the PCB. With various locking mechanisms available, we offer a suitable and secure system for your device connection.



new

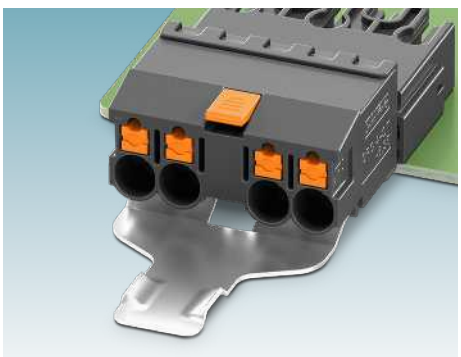
Compact SPC 4 series PCB connectors

With a pitch of 6.35 mm, the SPC 4 series saves a great deal of space on the device. The enhanced touch protection of this all-round solution offers extra safety. THR headers allow for automated assembly and help reduce production costs.

Web code: #3222

More space for the device design

Due to their innovative design, the SPC 4 series PCB connectors with a pitch of 6.35 mm can accommodate conductors of up to 4 mm².



Innovative shield contacting

The new SPC 4 series power connectors feature an innovative shield connection directly on the printed circuit board. Thus, they offer greater flexibility in their use.

Always the right locking type

Choose between three versions for a secure and reliable connection: standard version, center flange with shield connection, and version with top lock.

Electrification

Optimized for automated production Connectors for assembled cables

Whether in production, logistics, or the service sector, processes can be flexibly designed with automated guided vehicles systems (AGVS). We offer coordinated components for complete electrification and automation. Crimp-based connectors can be used to implement device connections and flying leads. In addition, we offer a service where various items and cable lengths can be preassembled.

From electrification to automation – everything you need for automated guided vehicle systems from a single source.

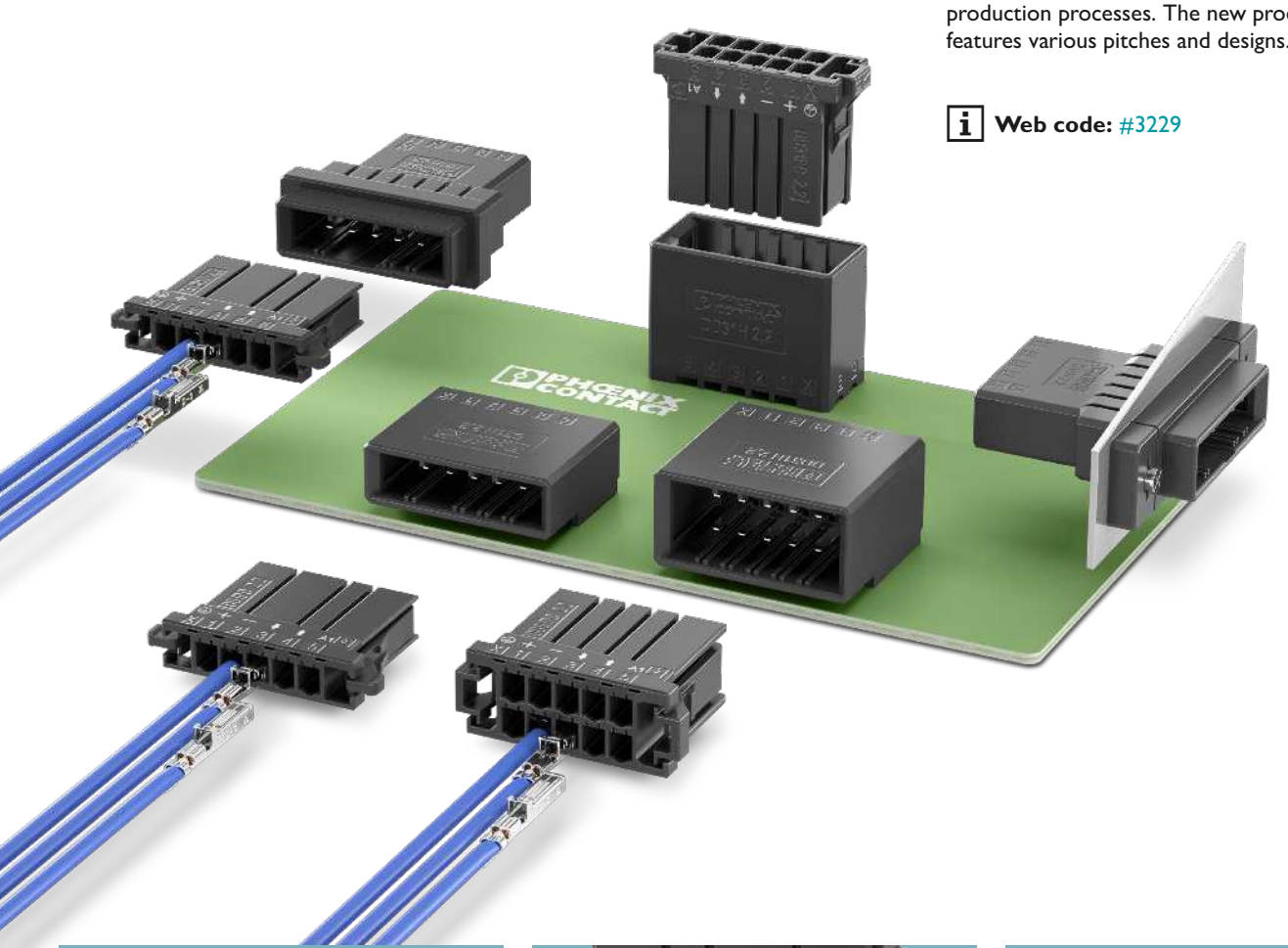
www.phoenixcontact.com/AGV

new

CONNEXIS optimized for cable assemblies

Phoenix Contact's new PCB connectors for cable assemblies simplify and accelerate automated production processes. The new product series features various pitches and designs.

Web code: #3229

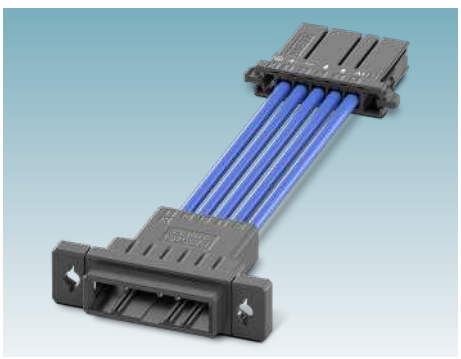


Custom printing

Keep a clear view in your production or during assembly with clear visible markings on the connector featuring numbers, letters, and characters.

Integrated coding

The permanently integrated coding of the connector and pin strip prevents mismatching. There are three versions of the mechanical contour to choose from.



Preassembled connector

The fast track to your individual solution: you can assemble cables and connectors to suit your needs and save time in your own production operations.

Electrification

Active protection against electric arcs Safe DC connector

As a member of the Open Direct Current Alliance (ODCA), we champion the use of direct current for indoor and outdoor applications. By using direct current for energy flow in your system, you can reduce your energy costs by approximately 10%. With the ArcZero series connector, it is now possible to disconnect and connect under load without the threat of dangerous electric arcs.

new

ArcZero series DC connectors

The innovative ArcZero series DC connector from Phoenix Contact provides the user with a safe working environment. The sophisticated inner workings reliably protect the operator against dangerous electric arcs when connecting and disconnecting under load.

Web code: #3258

Active protection against electric arcs

The DC connector can be disconnected and connected under load. This is made possible by an innovative piece of electronics built directly into the connector.

Fast device replacement under load

Less downtime and therefore high system availability with fast device replacement during maintenance, even when under load.

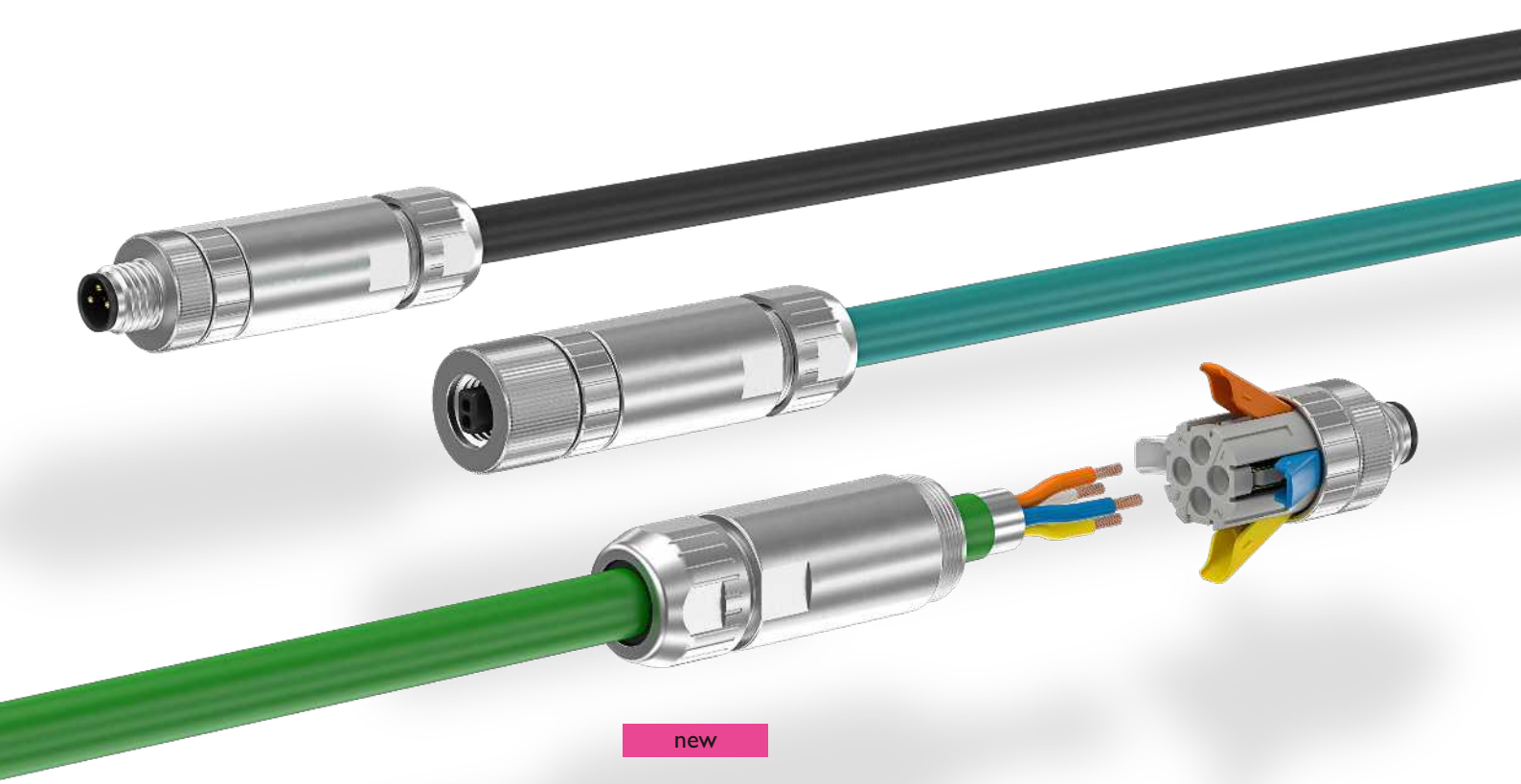
Robust materials

The connector easily tolerates UV exposure, is dustproof, and prevents water ingress thanks to IP69 and IK08 degree of protection.

Electrification

Tool-free and space-saving cabling M8 connectors with Push-Lock connection

In increasingly networked systems, functions are decentralized and intelligent devices and sensors are miniaturized. Flexible and space-saving cabling is achieved with M8 connectors designed for assembly. The Push-Lock connection enables convenient wiring without tools. You can thus benefit from significant time savings and safe installation.

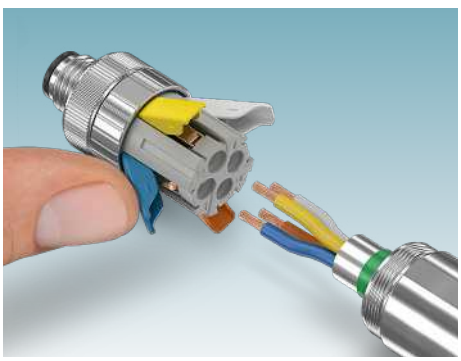


new

Push-Lock connection in M8 design

Forget about the time-consuming and tedious assembly of M8 connectors. With the new compact M8 Push-Lock connectors, all types of copper conductors can now be connected easily and tool-free. Whether for signal cabling or data communication via PROFINET or SPE.

Web code: #3259



User-friendly, intuitive connection

Tool-free connection of rigid and flexible conductors with and without ferrules thanks to Push-Lock technology. The color and numerical coding of the contact holders prevents connection errors.

Space-saving installation

One third smaller than the M12 connector, the M8 Push-Lock connector offers significant space savings and reliable industrial features.

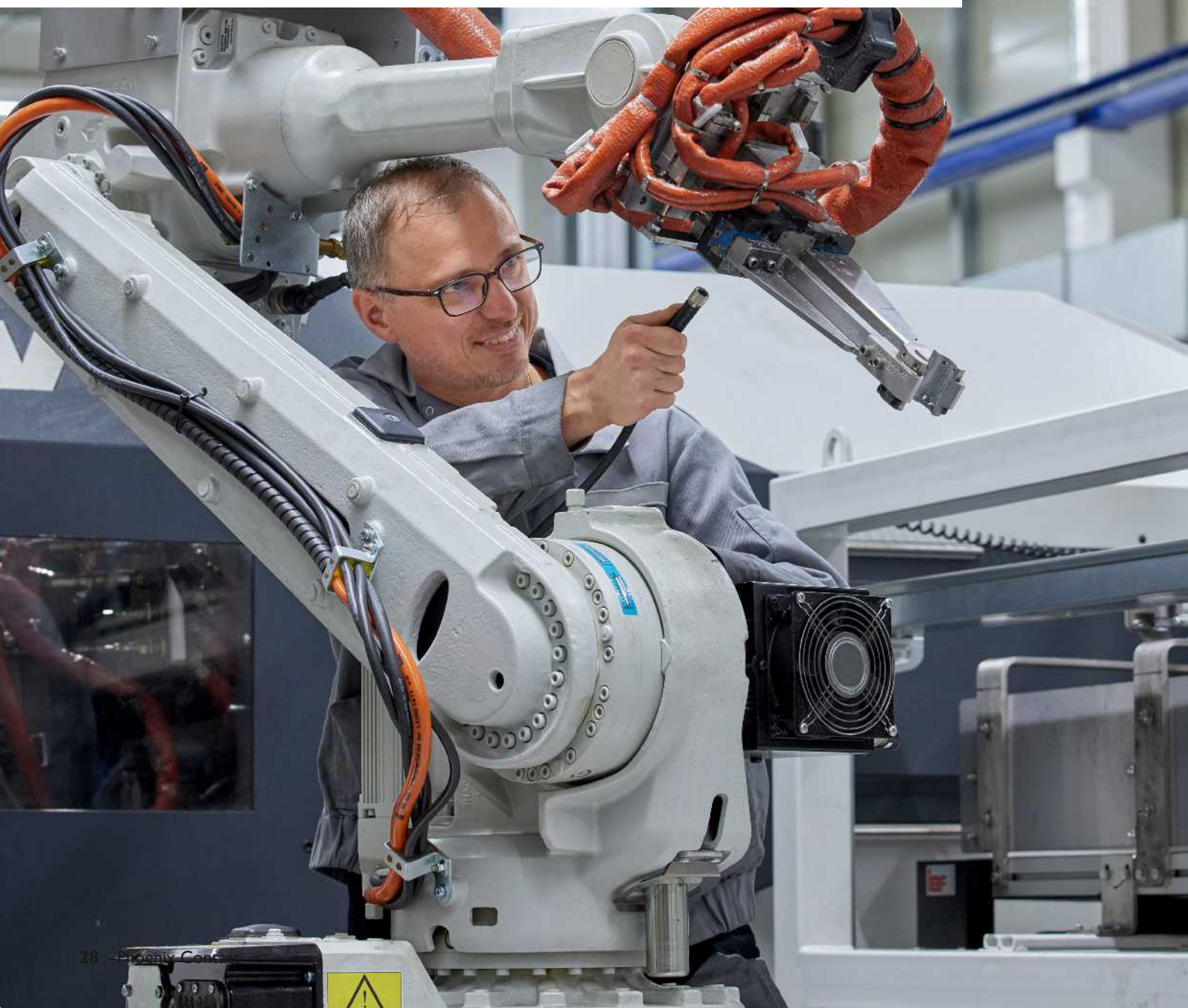
Future-proof cabling

Whether for data transmission with Single Pair Ethernet (SPE) or PROFINET, the cable lengths can be produced flexibly using the M8 Push-Lock connectors.

Networking

Combined data and power transmission SPE M12 hybrid connectors

Ethernet is the leading communication standard for data networks at the corporate and operational level. With the advent of Single Pair Ethernet (SPE), this established technology is now also moving down to the field level. In the field of drives, machine building, or robotics, you can combine data and power for sophisticated IIoT devices in one connector.



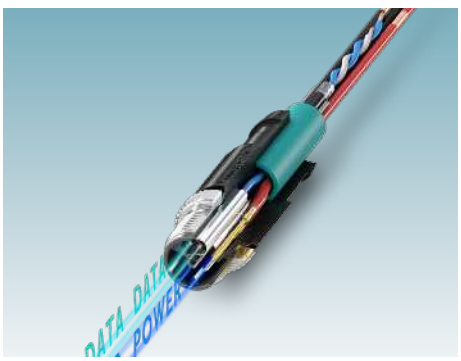
new

Single Pair Ethernet finally goes the distance

More power in one connector: the SPE M12 hybrid connector combines data and power for Single Pair Ethernet. With two circuits of 2 x 8 A and up to 63 V, transmission speeds into the Gigabit range are possible.

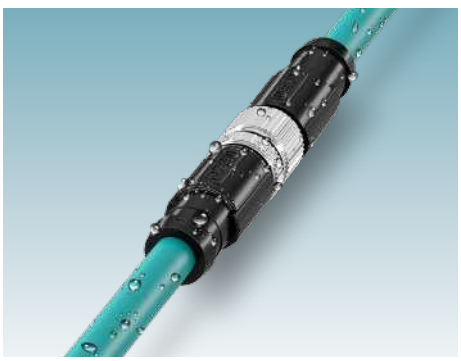
BEST OF INDUSTRY AWARD

Web code: #2240



Greater convenience and space savings

There is now a connector for Single Pair Ethernet that combines data and power transmission.



Particularly robust

This connector is ideal for industrial applications as well as for use in harsh environments.

International standard

Future-proof design-in of the M12 Hybrid portfolio with the cross-manufacturer international standard.

Automation

Protect industrial networks mGuard security routers

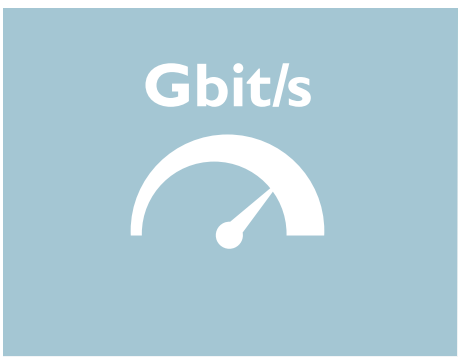
The creation of intelligent, networked systems is the key to a sustainable future. The mGuard products protect against unauthorized access and help you ensure secure data transmission – in industrial production and in the infrastructure sector.

new

mGuard security routers

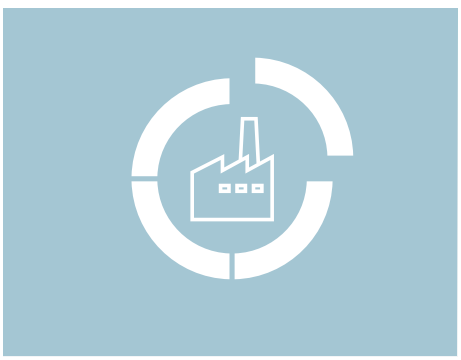
Thanks to comprehensive security functions, mGuard security routers protect your production network against unauthorized access by people or malware. Proven mGuard security technology provides the basis for this.

Web code: #2984



High data throughput

Due to the high processing speed, the mGuard security router achieves a data throughput of almost 1,000 Mbps.



Secure network segmentation

Network segmentation is used to control and manage communication. This protects against unwanted access and network overload.

Intelligent firewall

The firewall filters data traffic in the network. Unwanted communication and accidental access to network devices are blocked.

Automation

Safe communication from start to finish IO-Link Safety: The new standard

With IO-Link Safety, you can benefit from all the familiar advantages of IO-Link. Now that IO-Link technology has been extended to include safety, you can connect safety technology and automation via a universal interface. This enables you to introduce new, manufacturer-independent machine and system concepts with safety-related sensors and actuators.

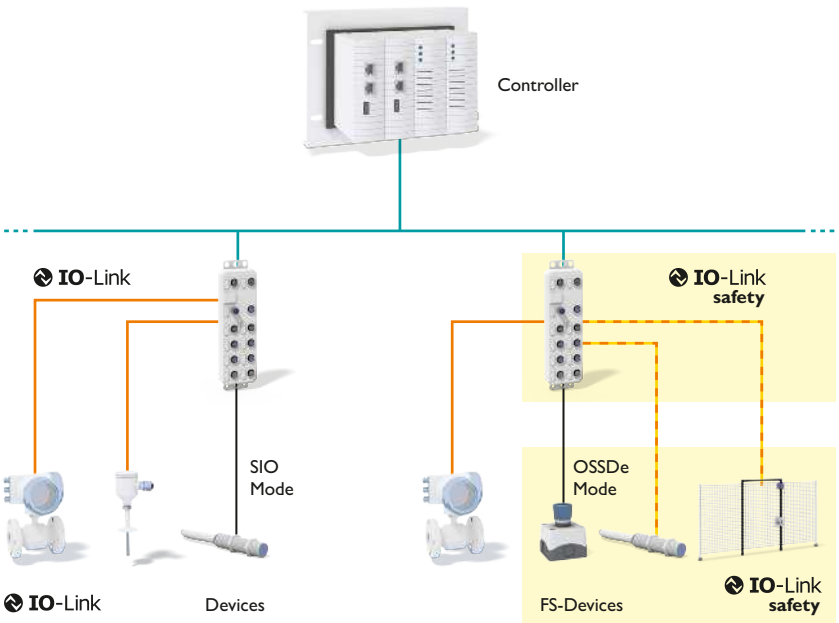
new

Maximum flexibility with IO-Link Safety

The IO-Link Safety I/O box enables the integration of safe sensors and actuators into IO-Link Safety systems. There are 8 safe digital inputs and 4 safe digital outputs available for this purpose. They allow easy connection of sensors and actuators in the field and provide access to extended diagnostic data.

Web code: #3256

IO-Link safety



End-to-end safety from the sensor to the controller

The IO-Link Safety technology enables consistent communication from the control level right through to the connection of safe sensors and actuators.
The safety-related system expansion is based on the use of IO-Link Safety masters and IO-Link Safety devices.
You and your safety components can now also benefit from all the valued IO-Link advantages, such as the network independence of sensors and actuators, standardized connection technology, the use of an IODD for parameterization, or the simple replacement of devices.

Automation

All devices kept up to date
Device and Update Management with OPC UA

Due to the growing complexity of automation, it is becoming increasingly difficult to keep software and firmware up to date. Security updates must be distributed throughout the network in a timely manner. Device and Update Management allows you to continuously update the automation network and fix security vulnerabilities. With OPC UA, devices from other manufacturers are also kept up to date.

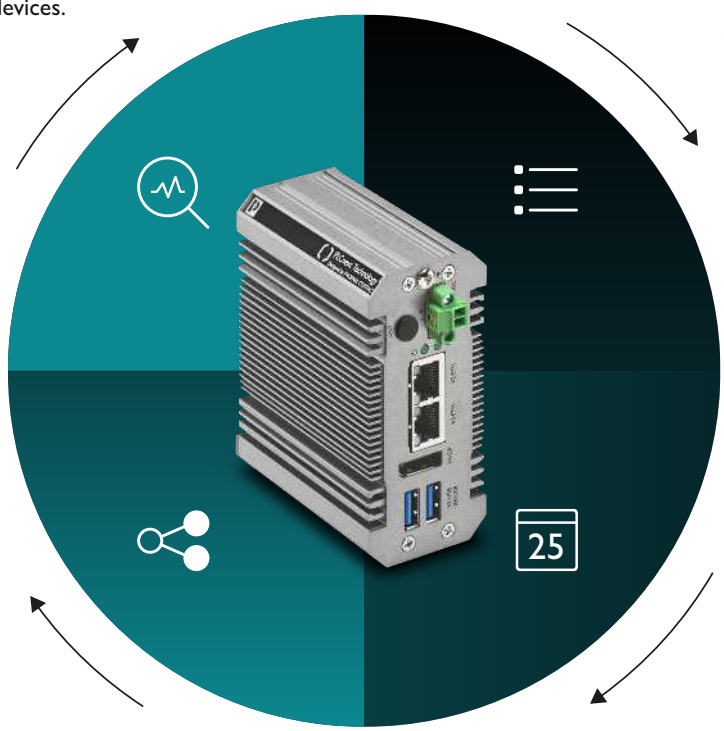
new

Carry out inventory

Record the status and parameterization of your devices. Create an inventory list and add or remove new devices.

Identify tasks

Determine update and patch cycles. Identify current security vulnerabilities or device issues.



Provide information

Get information about installing updates or reports for the rollout process. Perform evaluations and error analyses for process optimization.

Carry out evaluation and planning

Perform risk analyses and establish update priorities. Control the planning of the complete rollout process.

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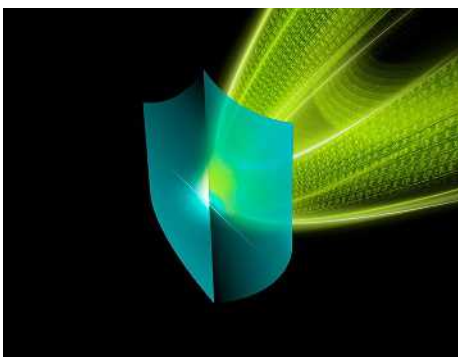
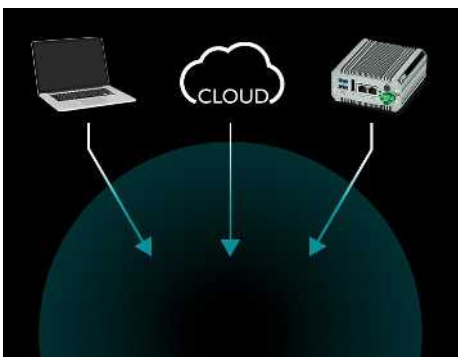
Manufacturer-independent updates

By using OPC UA, Device and Update Management can provide firmware and software updates independent of the manufacturer.



Cybersecurity ensured

High level of protection against cyberattacks thanks to firmware and software versions that are always up to date. All automation components in your system are reliably kept up to date via Device and Update Management.



Customized integration

Whether as an app for a PLCnext Control, as software on a PC, or as an IT container – whatever the application, a service with identical functionality can be adapted to your infrastructure.

Open communication with customers and partners worldwide

Phoenix Contact is a global market leader based in Germany. We are known for producing future-oriented products and solutions for the electrification, networking, and automation of all sectors of the economy and infrastructure. With a global network reaching across more than 100 countries with over 22,000 employees, we maintain close relationships with our customers, something we believe is essential for our common success.

Our wide range of innovative products makes it easy for our customers to implement the latest technology in a variety of applications and industries. This especially applies to the target markets of energy, infrastructure, industry, and mobility.

You can find your local partner at

phoenixcontact.com

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