Build with Confidence

Your trusted partner for the control cabinet
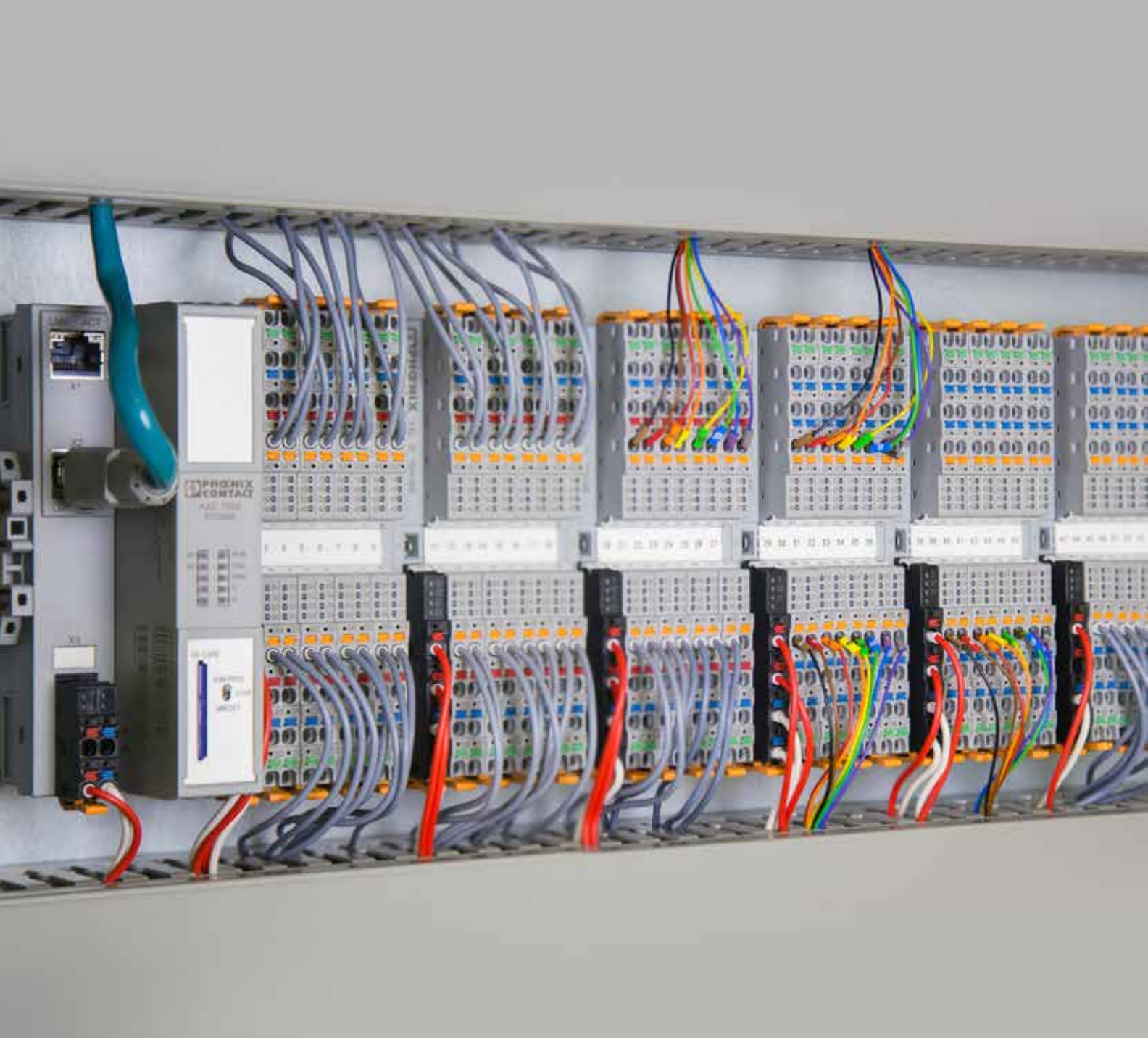
Build with confidence

Phoenix Contact is a global market leader in industrial electronics and automation technologies. Phoenix Contact's expertise and commitment to innovation across a wide range of industries enables you to build your control cabinet with confidence. With a focus on cost-effectiveness, quality, flexibility, and performance, Phoenix Contact delivers.

Control

Control

The heart of your control cabinet is the logic platform. For OEMs and control engineers alike, it has never been easier to build smaller, smarter machines faster – and free themselves from using controllers and equipment based solely on prior familiarity or specification. Industrial PCs/HMIs and scalable controllers can streamline functionality, reduce equipment and costs, and usher in the next generation of intelligent machine control.

Remote I/O

Let Phoenix Contact help you monitor and control I/O via common industrial protocols like Modbus, PROFINET, PROFIBUS, EtherCAT, and EtherNet/IP. Whether in the cabinet (IP20) or in the field (IP67), Phoenix Contact offers several I/O variants to meet all your application requirements, including standard digital and analog I/O, as well as safety, intrinsically safe, and special-function applications.

Programmable controllers

Programmable Logic Controllers (PLCs) from Phoenix Contact are scalable from a simple RTU or data logger to bumpless, redundant, high-performance automation packages for the most demanding applications. The control systems are programmed using the IEC 61131 PC WORX engineering environment. Diagnostic tools, such as Diag+ in PC WORX, give users and technicians an unprecedented level of insight into the running system.

Industrial PC/HMI

Industrial-class PCs from Phoenix Contact are available in a variety of screen sizes, performance classes, and blind-node configurations. Their powerful CPUs and non-rotating, solid-state drive options make them rugged and reliable for the most demanding applications. To help visualize it all, we offer HMI operator panels that provide easy connection to third-party PLCs and programming, allowing users to display vital machine information and operate simple tasks.

Programmable relays

Phoenix Contact's programmable relay system offers a unique alternative to traditional micro controllers. In our approach, an adapter that contains logic is added to eight terminal block relays. The result: a block of 16 I/O points that is expandable up to 48 points, all with access to replaceable relays. So if a relay fails, replace the relay, not the entire controller. This programmable relay system is perfect for automation tasks.

Power reliability

Power reliability

Don't overlook the basics. No matter how sophisticated your control system, a "line down" situation is only one power disturbance away. Logic platforms are dependent on being properly powered and protected. Surge and circuit protection, UPS backup, and redundant power solutions are the foundation on which reliable control systems should be built.

Protection from transient overvoltages

Power systems are vulnerable to transient events. Though these events are unavoidable, taking the initiative to utilize surge protection will ensure the best chances for reliable power. With a variety of options, we provide high feature-set products that provide maximum system protection and reduce maintenance time and long-term cost of ownership. We also recognize the need for basic protection for applications that have only minimal features.

DIN rail power supplies

Phoenix Contact has a wide range of power supply families with attributes and price points to fit any design. Starting with a feature set that is second to none, our premium brand offers high functionality, with advanced diagnostics and rugged design. Additionally, we offer power supplies with the same high quality and standard and basic feature sets.

Protection from circuit over-currents

Removing a troubled load from a system quickly is critical to maintaining the integrity of your power system. Phoenix Contact offers a wide variety of circuit protection products for both short circuits and thermal overloads. Circuit breakers and fuses easily integrate protection into your control system to improve overall operational efficiency and system reliability.

Power distribution

Whether it is a simple terminal block and bridging approach, or if your application is better served by a power distribution module, a solution from Phoenix Contact can save you time and money. When it comes to powering devices outside of the cabinet, we also have multiple ways of efficiently powering sensor/actuator configurations to simplify wiring to distributed devices.

Monitoring and metering

Energy meters allow customers to spot problems before they turn into critical situations, maximizing uptime. Meters also allow customers to gain insight into their energy usage, empowering them to eliminate costly inefficiencies. Of course, this information stems from current and voltage measurements taken within the system. For this we offer current transducers, transformers, and Rogowski coils.

Connectivity

Connectivity

Never take a good connection for granted. Every wire in your control cabinet is there for a reason. The connections of those wires – via spring, screw, IDC, or crimp – are only as reliable as the quality of the terminations. For nearly a century, Phoenix Contact has been a trusted partner for reliable connections.

Terminal blocks

We invented the first modular terminal block nearly 100 years ago and have continued to innovate ever since. Today we offer terminal blocks for every industrial application, utilizing multiple connection technologies like screw, spring, and push-in just to name a few. Innovation also created a variety of accessories like jumpers, bridges, and markers that simplify terminal block installation. Expanding our terminal block family to manage I/O signals via our plug-and-play approach allows you to connect to most PLCs, DCSs, and motion controllers-saving time by eliminating tedious point-to-point wiring.

Relay switching

Whether it's discrete signals or high-power switching, Phoenix Contact has a complete portfolio of relays, contactors, and motor starters to meet the demands of your application. Choose from hundreds of electromechanical and solid-state relay options in a variety of packages. For higher current demands we offer a unique alternative to traditional contactors and motor starters that last up to ten times longer than those traditional versions.

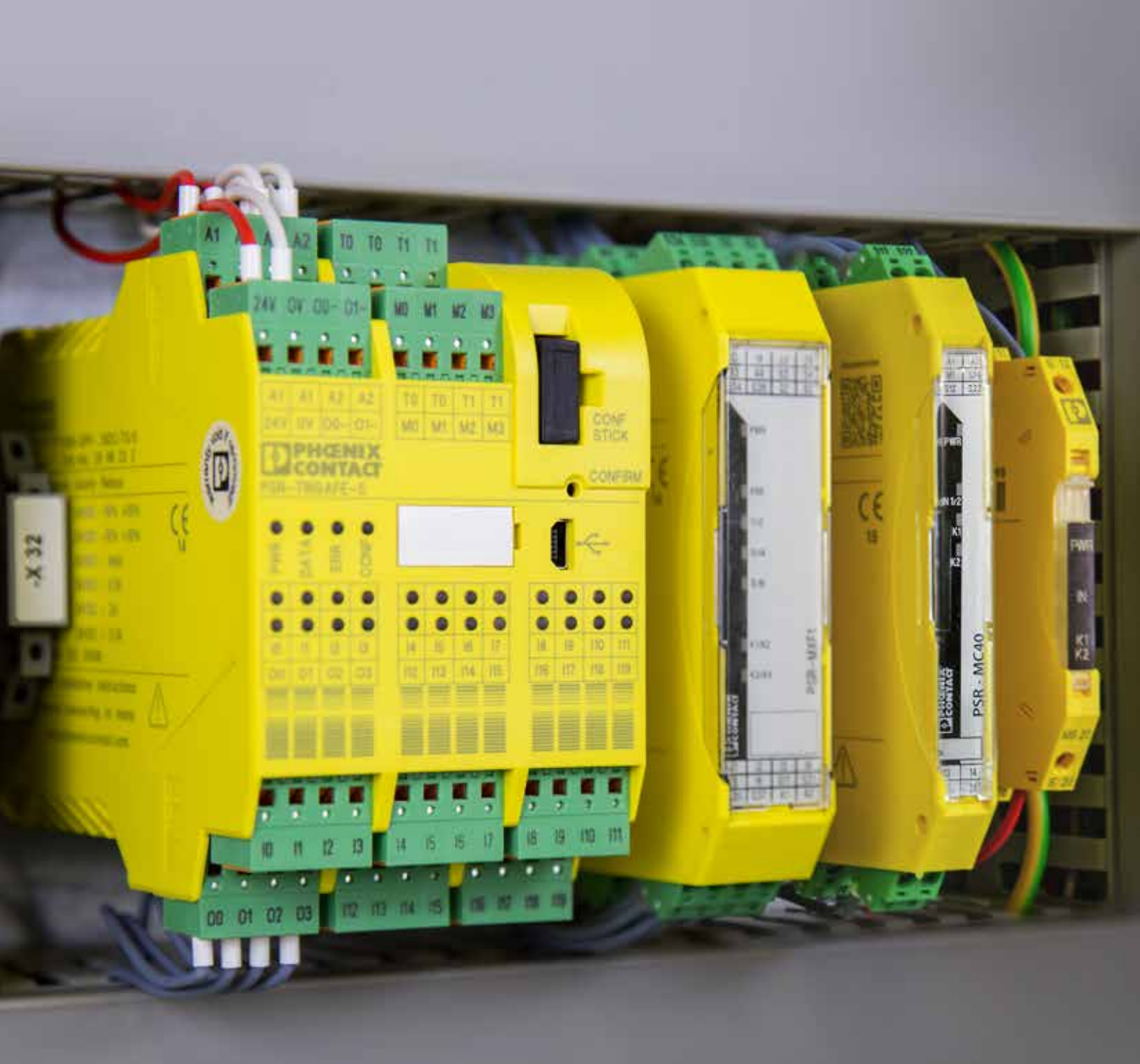**Analog signal isolation and conversion**

Safely isolate and/or convert analog field signals in applications commonly found in temperature or level-sensing applications with our industry-leading signal conditioners. Analog signal conditioners are offered in narrow, feature-rich versions for standard applications, as well as versions for installation in hazardous and explosive environments.

Managing I/O signals

Passing signals through the cabinet wall can be especially challenging; Phoenix Contact has a full offering of heavy-duty connectors designed for flexibility and durability even in the most demanding environments. On the field side, control, data, or power signals can be quickly combined using a sensor actuator box, supporting industry-standard M8 or M12 cables or connectors.
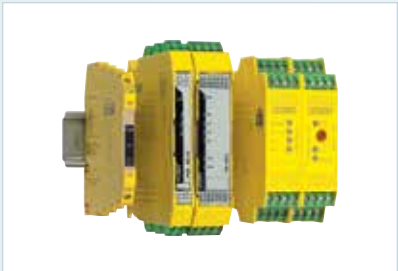
Safety

Safety relays
Phoenix Contact offers safety relays for every safety application: from traditional safety relays with a variety of coil voltage ranges and contact counts to multifunction safety relays that allow for independent connection of one, two, or three safety sensors, including e-stops, gates, and light curtains. When you need safe switching of safety circuits you need Phoenix Contact.
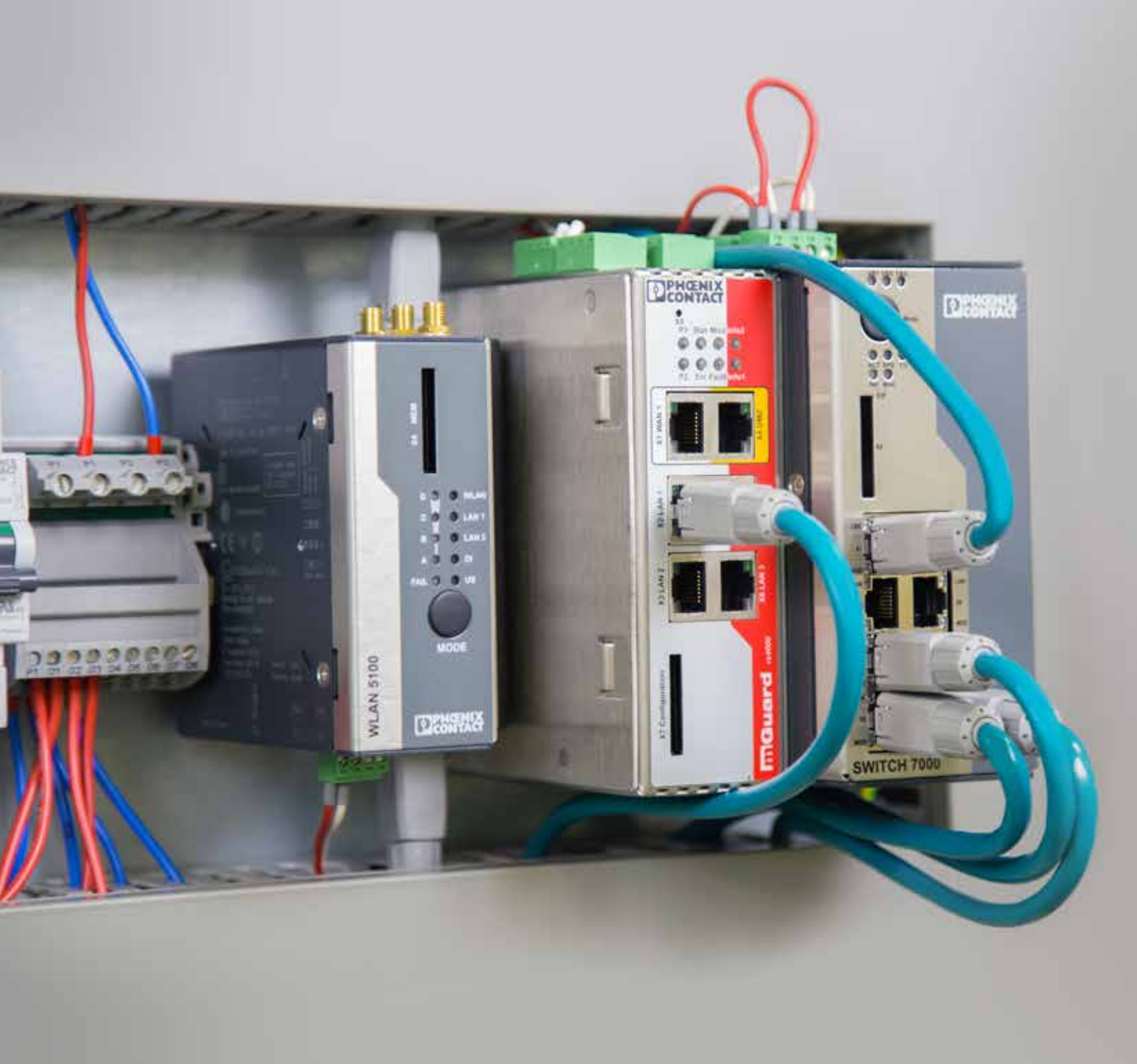
Basic safety controllers
Safety controllers are ideal for applications using multiple standard safety sensors, as well as applications that need advanced or unique safety functionality. Using simple, drag-and-drop, preconfigured function blocks, configuring safety logic is easy with Phoenix Contact's completely free software. Finally, view safety online by connecting a network gateway module to get status bits back via Modbus TCP, EtherNet/IP, PROFINET, and PROFIBUS protocols.

Distributed safety networks
Instead of adding safe control and redundant processors to the most expensive part of the control system, your PLC, Phoenix Contact puts the safety processing power into narrow slice of I/O. Not only does this remove an immense cost barrier, but now safety can be added to standard PLC networks and distributed as needed on standard controllers via EtherNet/IP, PROFINET, PROFIBUS, and Modbus TCP protocols.

Safety

Machine safety means more than OSHA regulations. Proper implementation means increased productivity, uptime, and profitability. Enact safety measures without limiting production flexibility of machines or production cells. Adaptable cabinet configurations, with integrated safety, give you the freedom to add or reorganize machines dynamically.

Networking and remote connectivity

Routing and remote access

Supporting your customers and industrial equipment can be a costly, complicated, and time-consuming task. Sending technicians on-site is expensive and inefficient, dial-up modems are way too slow for today's needs, and dealing with your customer's IT department can be frustrating. Phoenix Contact solves this problem with an easy, cost-effective, and reliable solution allowing you to talk securely over the Internet to equipment, such as PLCs and HMIs, from anywhere in the world.

Network security

Protect your systems against unauthorized access by people or malware. Industrial routers from Phoenix Contact protect your network with a powerful, flexible, and fast firewall. Packed with advanced networking features, these routers allow your industrial network to securely and easily connect to the enterprise network without IT intervention.

Ethernet infrastructure

Phoenix Contact offers unmanaged Ethernet switches with high and low port counts, fiber capability, and Power over Ethernet (PoE) for devices like cameras and RFID readers. Additionally, managed Ethernet switches are available to provide management of data traffic across networks, as well as providing redundancy and diagnostics of the network.

Wireless Ethernet

WLAN technology from Phoenix Contact uses 802.11n technology, providing up to 300 Mbps, perfect for most common industrial applications including remote access of an HMI, uploading or downloading of new PLC code, and video surveillance. Two form factors are available: a robust IP 20 DIN option and an IP65 option, designed to be mounted on an enclosure or an Automated Guided Vehicle.

Networking and remote connectivity

Smarter factories and convergences with enterprise IT are increasing the demand for remote access and collection of real-time data. With this power comes responsibility. In a single network, everything is vulnerable. Intelligent network infrastructure starts with the selection of switches, routers, wireless, and security components to harness opportunity and minimize risk.

EtherNet/IP and PROFINET solutions

Remote I/O

Extend PLC logic from the central control cabinet via EtherNet/IP to I/O stations spread throughout a facility with remote I/O from Phoenix Contact. IP20 options are mounted in cabinets where the IP67 option can be mounted directly to machines using water-tight M12 connectors. Supporting the EtherNet/IP protocol is a freeware tool that simplifies the integration of remote I/O into an RS Logix environment.

System visualization

Phoenix Contact offers EtherNet/IP-enabled HMI operator panels for simplified connection to PLCs and PACs. Free programming software allows for the design of user-friendly screens and supports advanced features such as alarming, trending, logging, and recipe handling. Importing asset tags can be done with just a few mouse clicks utilizing the native RS Logix file format.

Basic managed and CIP-enabled Ethernet

Phoenix Contact offers multiple levels of infrastructure for EtherNet/IP networks. Entry-level managed Ethernet switches provide basic levels of network redundancy, traffic handling, and device information to the network. More advanced Ethernet switches incorporate a Common Industrial Protocol (CIP) profile, providing network diagnostics and configuration information directly to an EtherNet/IP control system. This diagnostic and configuration information provides a simple platform to define network problems and take action quickly without being an "IT expert."

EtherNet/IP and PROFINET solutions

Liberate your EtherNet/IP or PROFINET application from dependence on a single vendor. Phoenix Contact offers remote I/O, Ethernet switches, and wireless components for EtherNet/IP and PROFINET protocols to make cost-effective and open solutions a reality.

Shop floor productivity

Planning and marking software
Increasing productivity starts with a good cabinet design. Phoenix Contact's DIN rail design and marking software package works on all our printers. This allows you to easily design a DIN rail assembly, add accessories to components, and run auto correction to ensure you have a correct layout with all the necessary end covers and end clamps.
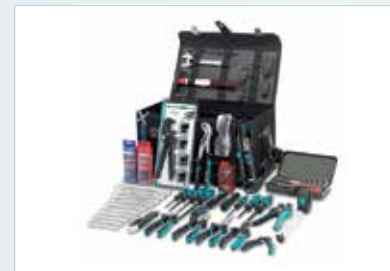

Identification systems
When it comes to printing we offer a full line of identification printers to handle desktop or mobile applications for marking terminal blocks, wire, and equipment in high or low volume. Our desktop line includes versions using laser, ultraviolet, and thermal transfer technology. From your office to the field, we have all your printing needs covered.

Cable management and installation
Building a cabinet requires accessories to help you organize, reduce components, and improve lighting. We have a variety of DIN rail consisting of stainless steel, aluminum, copper, chromate, and zinc plating. For wire runs, wire duct with a narrow finger channel and cover are available as a single part-number for convenient ordering. Our LED cabinet lighting provides enhanced visibility, even in poorly lit areas, which aids maintenance.

Industrial tools
Phoenix Contact offers a variety of tools to help all facets of control cabinet assembly, including the painstaking task of wire termination. Choose from a variety of manual and semi-automatic wire cutting, stripping, and ferrule crimping tools. Selecting our electric bench-style devices can not only save your hands but possibly your bottom line. Trust Phoenix Contact tools to bring everything in your cabinet together.

Shop floor productivity

Time is money. Efficiently building a quality control cabinet starts with what you use to build it. Quick, flexible marking systems, automated tools and hand tools, cable/wire management, and cabinet accessories are often overlooked methods to reduce errors and cut commissioning time. Thoughtful selection of these "secret weapons" translates directly to the bottom-line profitability of any shop floor.

Notes

Always up to date, always available. Everything you'll need to know about our products, our solutions, and our service is right here:

www.phoenixcontact.com

Product range

- Cables and wires
- Connectors
- Controllers
- Electronics housings
- Electronic switchgear and
  motor control
- Fieldbus components and systems
- Functional safety
- HMIs and industrial PCs
- I/O systems

- Industrial communication technology
- Industrial Ethernet
- Installation and mounting material
- Lighting and signaling
- Marking and labeling
- Measurement and control technology
- Modular terminal blocks
- Monitoring
- PCB terminal blocks and
  PCB connectors

- Power supply units and UPS
- Protective devices
- Relay modules
- Sensor/actuator cabling
- Software
- Surge protection and interference filters
- System cabling for controllers
- Tools
- Wireless data communication

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INSPIRING INNOVATIONS

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