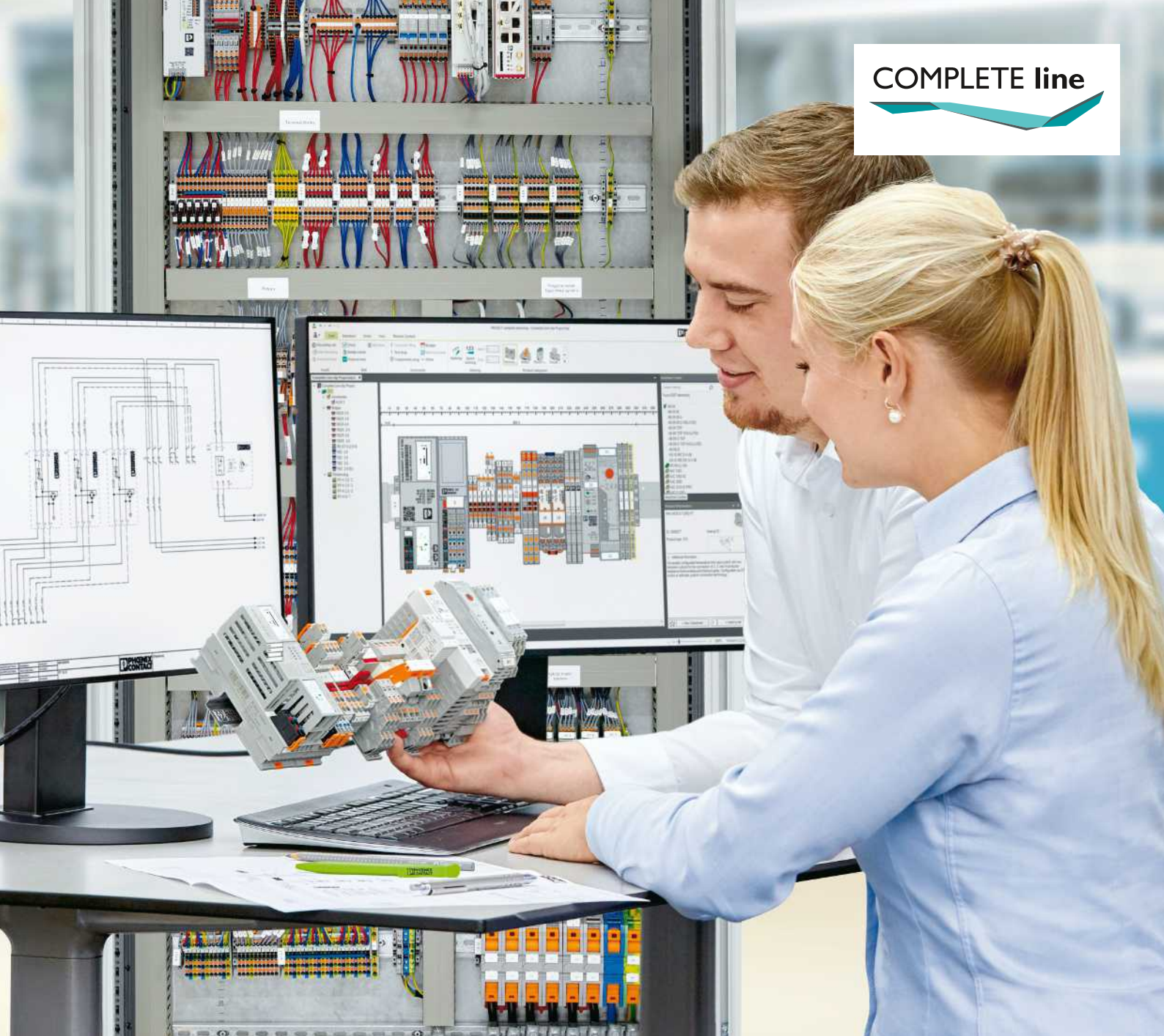


COMPLETE line



COMPLETE line

The comprehensive solution for the control cabinet

COMPLETE line

The comprehensive solution for the control cabinet

Control cabinet manufacturers must rethink their processes in order to remain competitive. As part of a collaborative partnership, we provide comprehensive solutions to enable consistent use of digital data, optimization of processes, and time savings. The perfectly coordinated interaction between hardware and software components in the COMPLETE line system enables you to optimize your processes – from the project idea to implementation, through to the running of your applications.



Your advantages

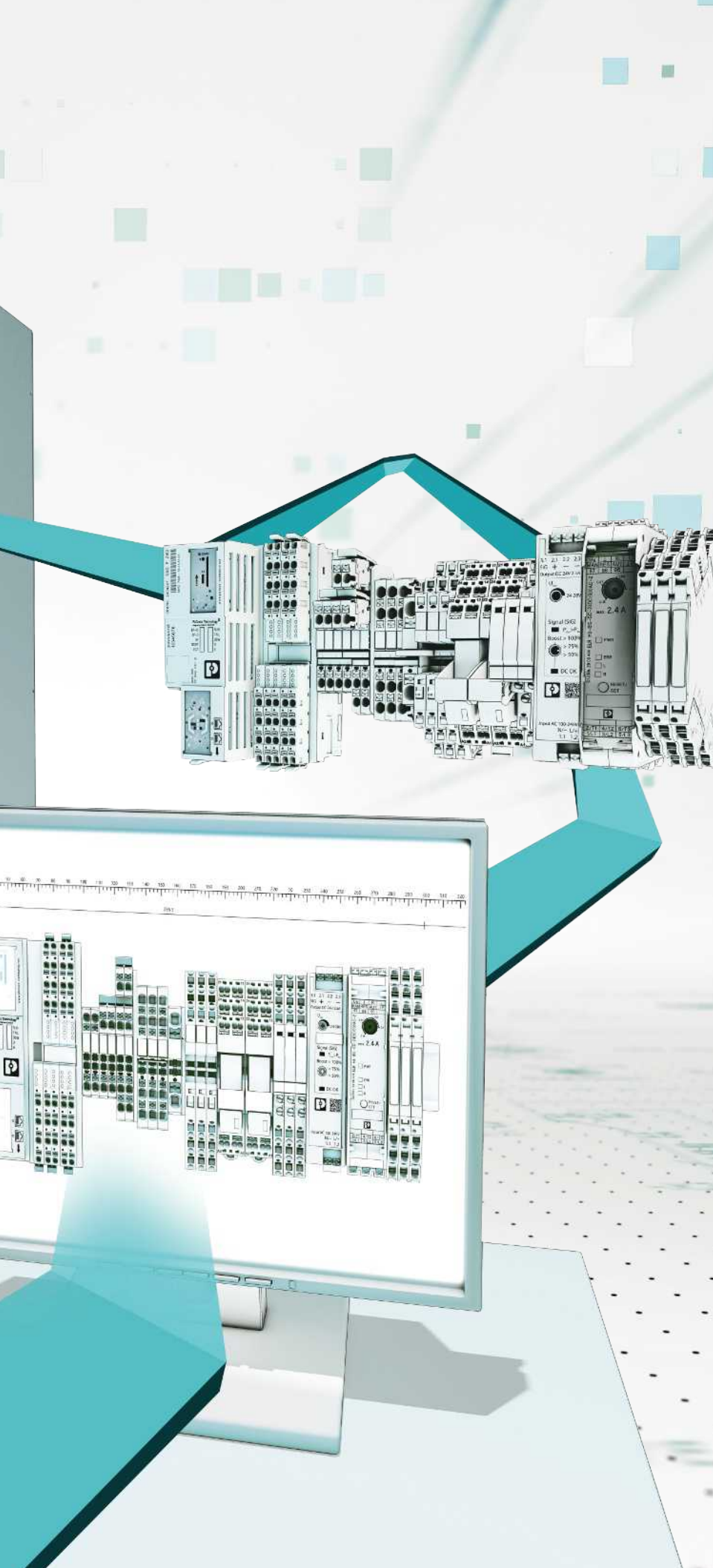
- ✓ Consistent planning and documentation with complete digital data for all products
- ✓ Simple handling and reduced diversity of parts with systematically designed products
- ✓ Scalable manufacturing solutions for customized processes

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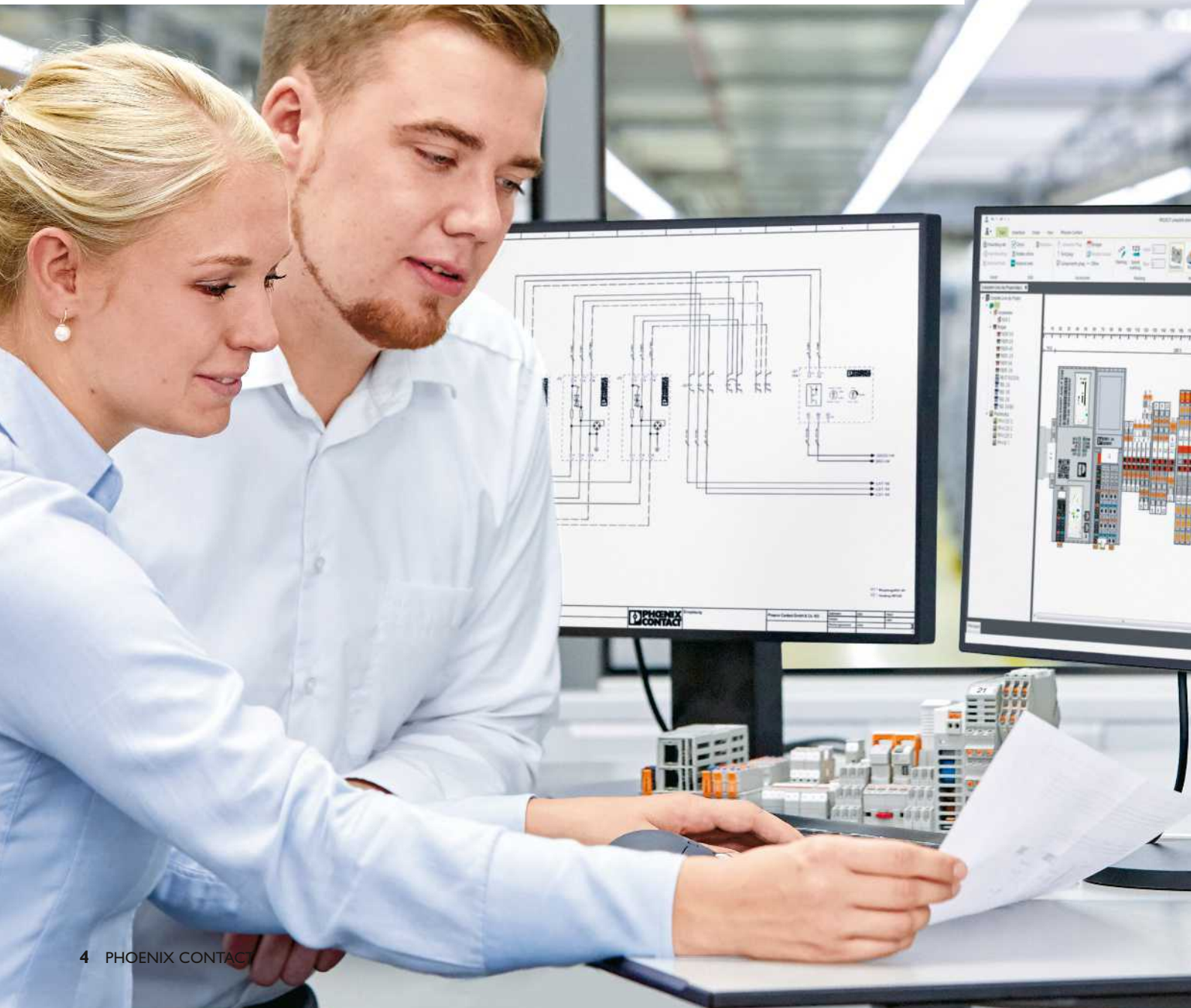
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Efficient Engineering

Intuitive configuration, intelligent functions, and a customizable user interface: the PROJECT complete planning and marking software is the innovative solution for easy planning of your terminal strips and straightforward creation of the corresponding markings. From the transfer of data from the electrical plans right through to delivery of your finished product, the software offers customized and convenient process support.





Perfect CAE integration

PROJECT complete comes equipped with optimized interfaces to all common CAE programs. With just one click, the software imports the electronics planning data and automatically configures the corresponding terminal strip.

Intuitive software control

PROJECT complete offers you a new user interface with a configurable search function and dynamic task bars. Intelligent functions automate many planning steps and ensure significant time savings.

Ordering in real time

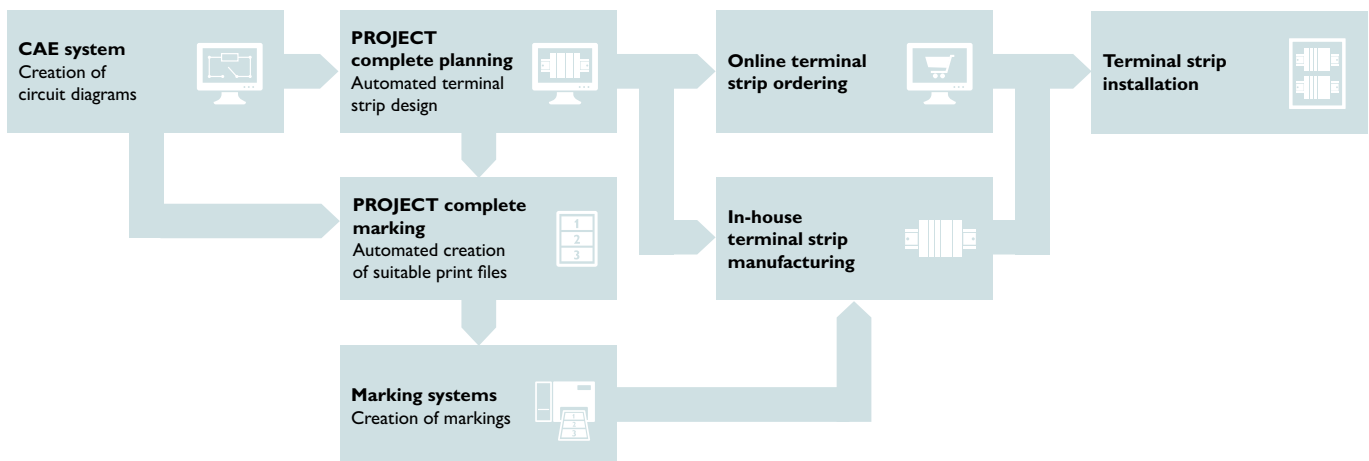
Place the order for your projects directly via PROJECT complete. Bills of material are transmitted to Phoenix Contact online. You will then immediately receive a price calculation as well as information on the availability of the products.

Consistent use of data throughout the entire process

The PROJECT complete software exchanges the planning data with the CAE system via a bi-directional interface. Once the terminal strip has been configured, PROJECT complete automatically generates a bill of materials, 3D visualization, production documentation,

and files for creating suitable markings. These documents are the basis for all further production steps. In addition, PROJECT complete offers the option to directly order planned projects online. Transmit the digital data that was created to the Phoenix Contact homepage with

just one click and you will immediately receive information on the price and availability of your terminal strip.



Technologically leading products

Quick, systematic installation

Set up control cabinets quickly and easily with the comprehensive, coordinated COMPLETE line product range. The COMPLETE line products have a uniform design and haptics, which makes them very easy to install. This will save you time during installation, commissioning, and maintenance. All COMPLETE line products feature Push-in connection technology, enabling you to wire entire applications quickly and tool-free.

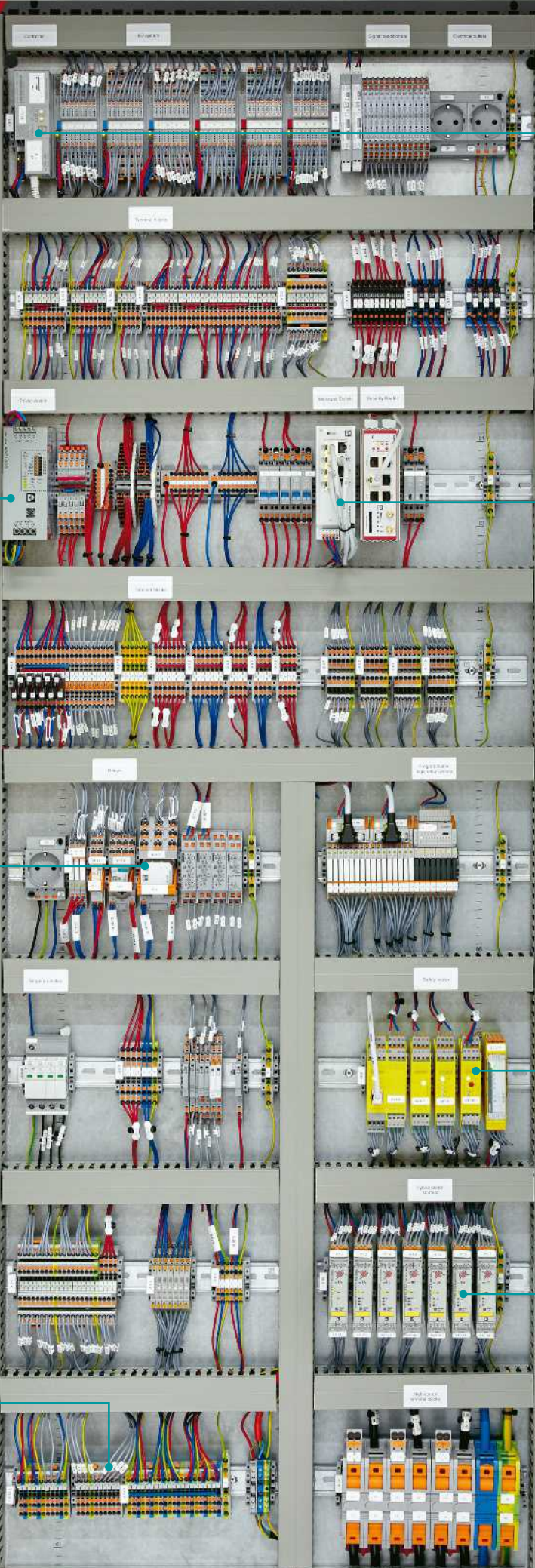
Power reliability

Signal conditioning

Your advantages

- ✓ Simple handling and high-quality appearance due to consistent functionality and design
- ✓ Quick, tool-free installation with Push-in connection technology
- ✓ Reduced production and logistics outlay with standardized accessories for bridges, markings, and testing
- ✓ The complete control cabinet from a single source with the technologically-leading COMPLETE line products

Connectivity



Control

Industrial networking
and Security

Functional
safety

Load
switching

Control

The world of automation is changing. Due to the digitalization, networking, and globalization of business and technical systems, new market requirements are emerging. Manufacturers of future-oriented automation systems must be ready to provide their customers with the ability to meet the standards of modern IoT applications. Phoenix Contact therefore offers you future-oriented PLCs, I/O systems, and PLC software.



PLCnext Technology

PLCnext Technology from Phoenix Contact is the unique, open ecosystem for modern automation which is capable of meeting all demands of the IoT world. The combination of open control platform, modular engineering software, and systemic cloud integration enables easy adaptation to changing demands and the efficient utilization of existing and future software services.

Designed by PHOENIX CONTACT

Control

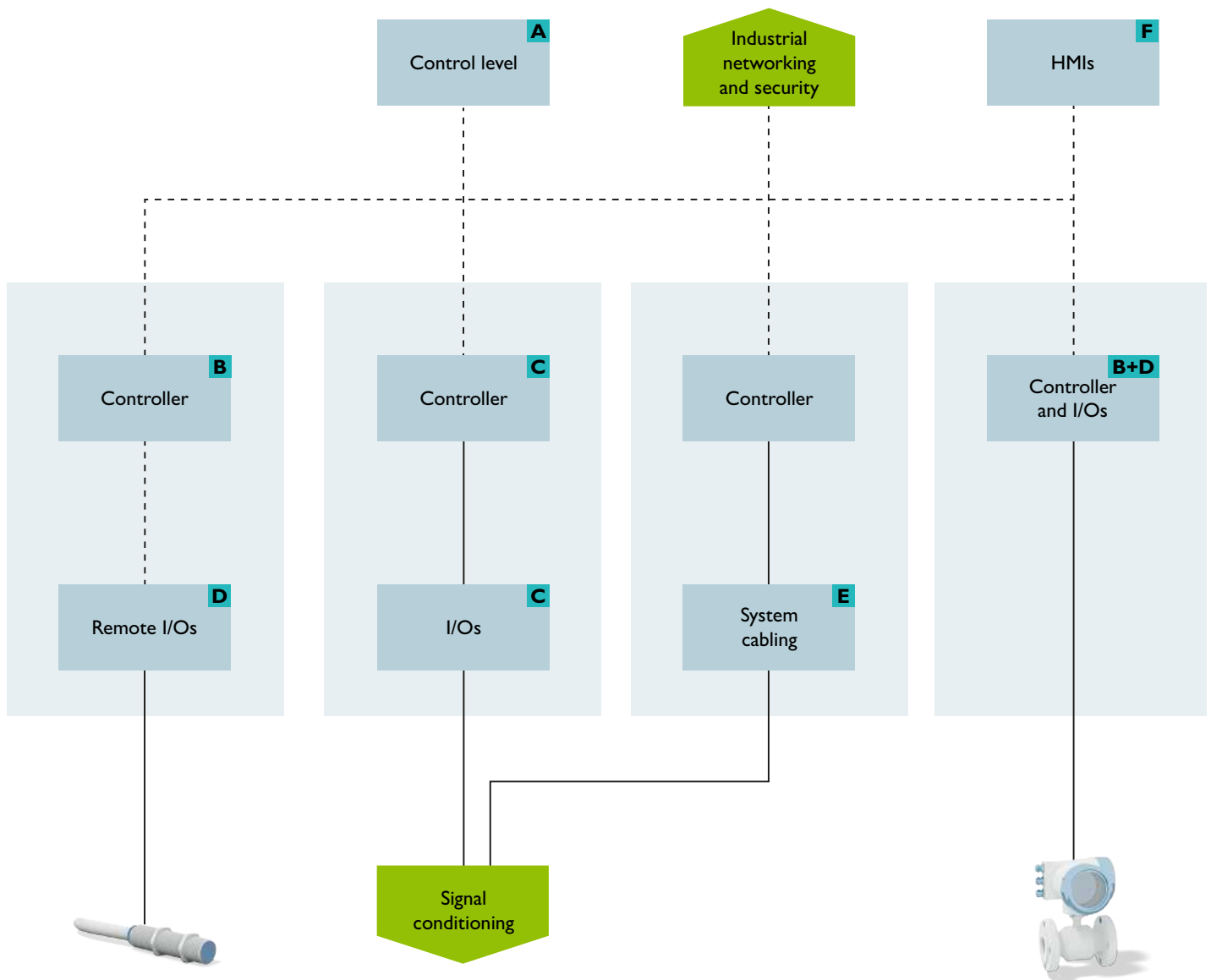
With the products of the COMPLETE line system, you can realize the widest variety of control concepts, tailored to the demands of various applications and the surrounding conditions.

Distributed control concepts can be realized with the comprehensive Axioline range (Example 1).

Operation and visualization tasks can be compactly handled by an industrial PC or outsourced to an HMI. For less complex applications, PLC logic plug-in I/Os and a controller can be combined in the tightest of spaces (Example 2).

Minimize your wiring effort between the controller and the field by using compact system cabling (Example 3).

For central control concepts, the controller and I/Os can be arranged side-by-side directly in the control cabinet (Example 4).



■ Part of this functional area

— One-to-one connection

■ Other functional area

- - - Network connection



A

Control level

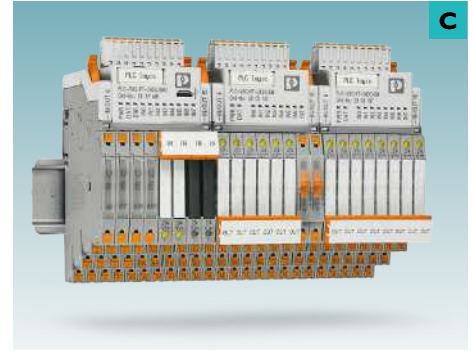
High-performance controllers (Remote Field Controllers) enable you to realize automation applications with special safety or availability requirements. For applications with PLCnext Technology with stringent safety requirements, you should use our safety controller up to SIL 3 to be on the safe side. Redundant control systems help you to reduce downtimes, work cost-effectively, and avoid potential dangers.



B

Controller for modular extension

PLCnext Control devices are the first PLCs to be available for the open PLCnext Technology automation platform. They enable automation projects to be implemented without the limitations of proprietary systems. You can connect directly to the Proficloud and integrate customized cloud services and future technologies.



C

Programmable logic relay system

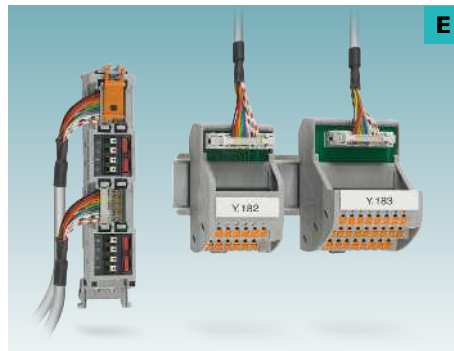
On the logic module market, the PLC logic relay system is the first to combine logic, interface, and field connection levels in a single solution. You can use it to switch and control I/O signals in one compact system. You can combine the new PLC logic module with the corresponding plug-in relays as required. The modular structure enables a wide range of possible applications.



D

Modular automation system

Controllers, bus couplers, and I/O modules – Phoenix Contact has an automation system with a modular design for every requirement. Benefit from the advantages of PLCnext Technology, conventional controllers, or a remote I/O solution for various networks. Implement simple to complex solutions using the diverse portfolio of I/Os.



E

System cabling

As machinery and systems become increasingly complex, so is the wiring effort for the individual components in an automation system. Phoenix Contact system cabling provides compact solutions that enable easy planning, mounting, and commissioning. This reduces the wiring effort to a minimum, regardless of which controller you use in your application.



F

HMIs

HMIs are the keys to efficiently operating and monitoring your systems and machines. From the mobile tablet PC for field operation to complex visualization concepts for extensive automation systems – COMPLETE line provides you with the right solution for your application.

Power reliability

A reliable, stable power supply prevents damage to machinery and systems that could result in serious production losses and downtimes. COMPLETE line offers a broad product range that covers all of the functionalities of a secure and consistent power infrastructure: from appropriate surge protection to efficient power supply and monitoring, and appropriate device protection, through to compact solutions for power distribution.





SEC Technology

Safe Energy Control Technology, or SEC for short, is the basis for durable and powerful lightning and surge protection. The core is the revolutionary spark gap which safely prevents any line follow current. This protects your system, including fuses and arresters. A separate arrester backup fuse is therefore no longer needed in common applications.

Designed by PHOENIX CONTACT

Power reliability

Prevent unplanned downtimes: the COMPLETE line system features all components for a comprehensive supply concept.

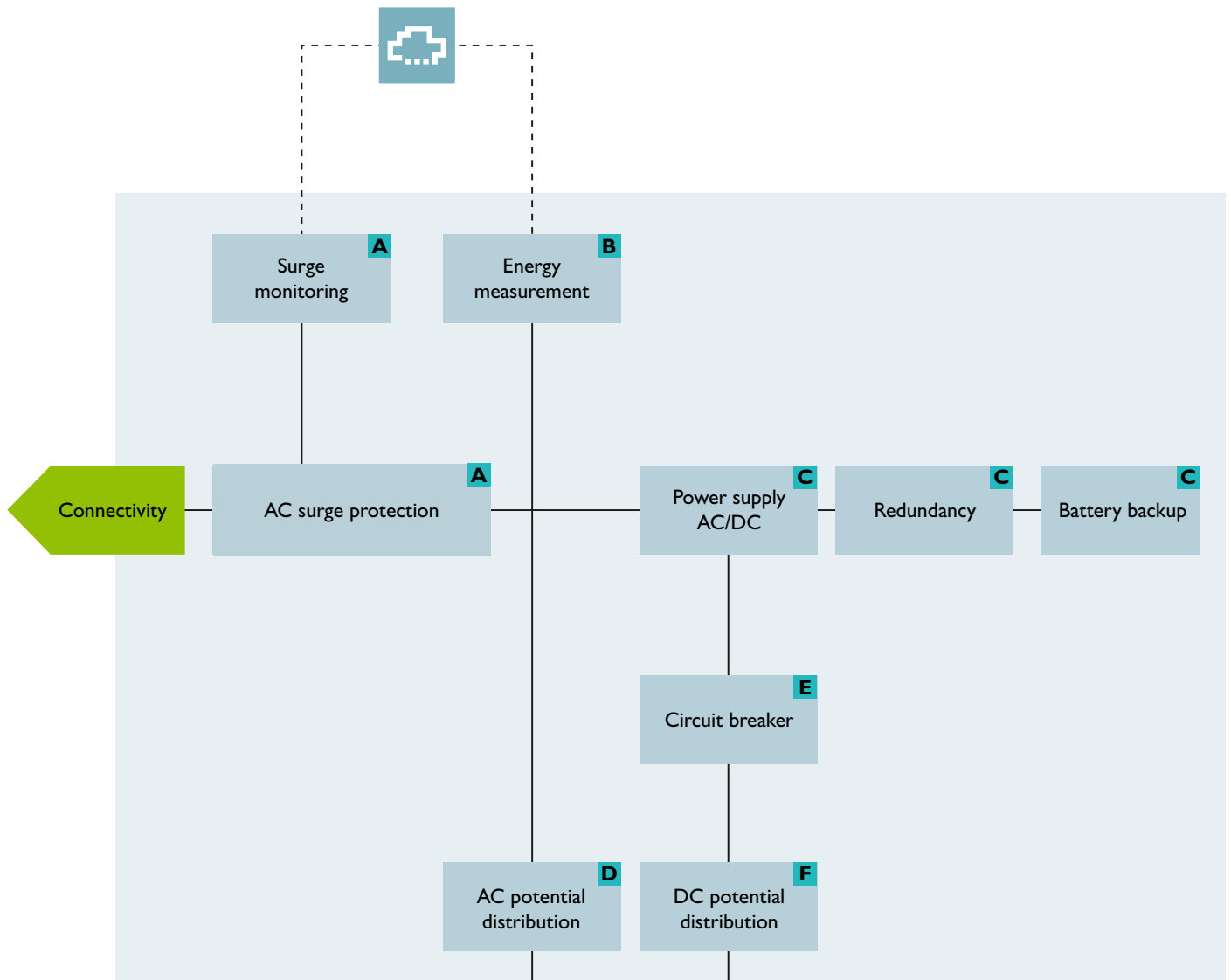
A high-performance surge protection system safely discharges all transient overvoltages on the AC side, without causing system downtimes. Transmission of any overvoltage events to the cloud enables preventive maintenance.

Innovative solutions for AC or DC potential distribution reduce space requirements and installation times in the control cabinet.

Redundant solutions or batteries supplement the DC power supply when needed, thus safeguarding the 24 V supply even in critical situations.

Device circuit breakers prevent negative effects on the overall system caused by malfunctions in the field.

In addition to Power reliability, future-proof monitoring systems help to save energy in the overall system.



■ Part of this functional area

■ Other functional area

— One-to-one connection

- - - Network connection



Surge protection for power supply systems

Overvoltages can cause significant damage. SEC Technology reliably protects systems and devices against overvoltage events, thus preventing production downtimes. ImpulseCheck is the world's first intelligent assistance system for surge protection in the field of mains protection. The module enables you to measure the state of health of every single protective device via cloud connection.



Energy monitoring

EMpro energy measuring devices record your energy data and communicate it to higher-level control and management systems. Configure and integrate the devices in just a few steps using the web-based, user-guided installation wizards. Digital services and global access through cloud access provide you with high availability and transparency.



24 V power supply

Superior system availability with the high-performance QUINT complete range. You can also opt for our QUINT POWER power supply units from 1 to 40 A, or you can combine these for maximum availability. For your custom solution, we provide DC/DC converters for all voltage levels, active and passive redundancy modules, and UPSs with an Ethernet interface. Whether alone or in combination – QUINT complete delivers non-stop power.



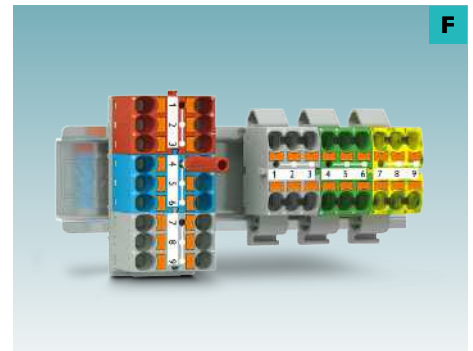
AC potential distribution

Time is money – this is particularly true in the construction of machines and systems. With the CrossPowerSystem power distribution board, you can now mount energy distribution and switching devices quickly and easily. The integrated reverse-polarity protection, tool-free mounting, and automatic contacting via simple snap-on connections enable easy commissioning.



Device protection

Selective device protection with the widest range of tripping mechanisms provides maximum safety for all loads. This means that only the areas that are actually affected by an overload or short circuit current are shut down. Depending on the field of application and the task, different demands exist. You will find the right device circuit breaker for every application in the COMPLETE line product range.



DC potential distribution

To ensure that machines and systems function perfectly, various system components must be supplied with power and signals. The PTFIX distribution block concept has the right solution for every application. The ready-to-connect distribution blocks are available with different numbers of positions, mounting types, and colors. They can be used straight away and extended as needed. PTFIX blocks thus ensure flexible and cost-effective current distribution.

Industrial networking and Security

The increasing digitalization of industry requires the networking of ever more devices inside control cabinets. At the same time, a secure network infrastructure is becoming increasingly important. Comprehensive product solutions for industrial communication ensure reliable access and protect all relevant data.

Communication

Industrial
Ethernet

Cybersecurity in accordance with IEC 62443

The international IEC 62443 series of standards specifies rules for designing suitable security concepts for component manufacturers, system integrators, and operators. It includes determining the level of security required and the appropriate product selection. However, the standards do not provide general solutions – solutions have to be designed in accordance with the individual circumstances. Phoenix Contact already has multiple certifications for implementing IEC 62443. We would be happy to train you and your employees and provide advice on what your tailored IEC 62443 solution should include.

Cyber
Security

Com

**Remote
Communication**

Networking

PoE

**Communication
Infrastructure**

**Device
Communication**

Industrial networking and Security

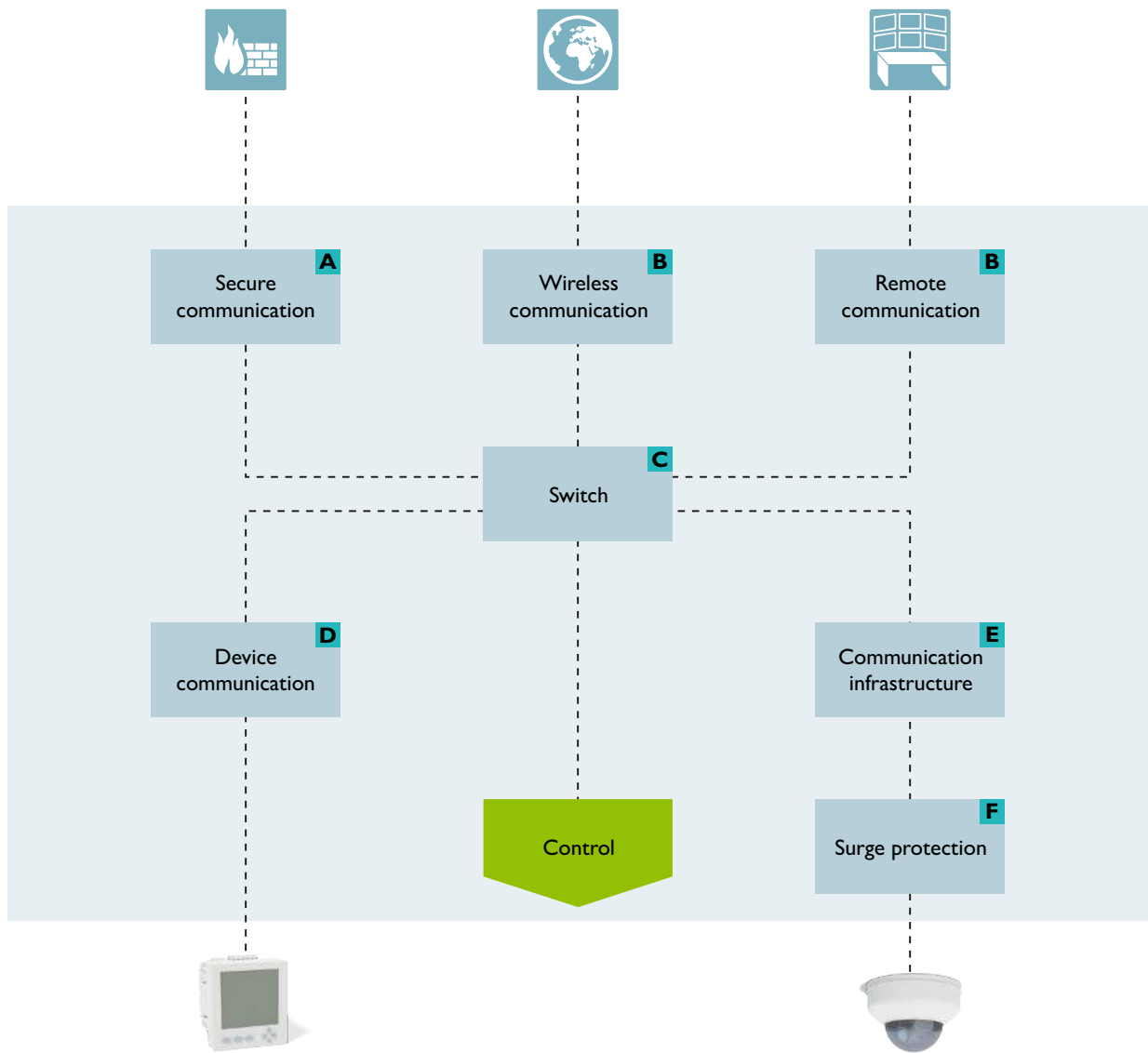
With the products of the COMPLETE line range, you can configure reliable and secure communication systems.

The mGuard product range protects automation solutions against external attacks.

The Ethernet infrastructure components guarantee reliable communication in the industrial environment. Gateways enable the integration of devices without a built-in Ethernet interface into the network.

Solutions for reliable communication over long distances via existing line networks or the Internet complete the range.

In addition, the optimized surge protection devices protect the communication technology to ensure maximum availability of your network.



■ Part of this functional area

■ Other functional area

— One-to-one connection

- - - Network connection



A

Secure communication

Protect your network against unauthorized access by persons or malware with the mGuard security routers. The robust and industrial security appliances include firewall, routing, and VPN functionalities to protect against malicious cyber attacks and inadvertent malfunctions.



B

Remote communication

The TC MOBILE I/O signaling system monitors sensors via the cellular network and switches relays remotely. The TC ROUTER cellular router enables high-speed data connections via the 4G LTE networks. With Ethernet extenders, you can connect networks over distances up to 20 kilometers using simple two-wire lines. Easy commissioning with Plug and Play enables cost-effective networking and diagnostics of all devices and paths via IP.



C

Switches

Ethernet switches ensure reliable, efficient data exchange. Unmanaged Switches feature compact designs with Gigabit transmission speeds and flexible installation options. Managed Switches offer you additional optimum real-time properties, redundancy mechanisms for high network availability, prioritization of your data traffic, and various network diagnostics options.



D

Device communication

Serial device servers and gateways allow the simple integration of legacy serial devices and field buses into modern Ethernet networks. You can also integrate sub-segments or older systems without Ethernet into your network to facilitate consistent, transparent communication. The gateways support the data transmission protocols used most frequently in industrial applications, including Modbus, EtherNet/IP, PROFINET, HART, and OPC UA.



E

Communication infrastructure

Eliminate the need for a separate power supply when installing devices in difficult to access or remote system parts. With industrial Power over Ethernet (PoE) devices from Phoenix Contact, power supply and data transfer are combined in the same Ethernet cable.



F

Surge protection for information technology

Reliably protect sensitive signal interfaces with high-performance surge protection and achieve low attenuation, also with high bandwidths. The DATATRAB DT product family provides protection for a large number of applications, such as high-speed networks up to 10-Gigabit Ethernet, networks with RS-485 interfaces, as well as analog and digital telecommunications interfaces, including DSL.

Signal conditioning

Whether your application requires switching, isolating, monitoring, amplification, or multiplying, our broad product range for signal conditioning satisfies all demands. COMPLETE line provides everything from universal relay systems for standard applications to highly compact relay modules as interfaces for control, through to signal conditioners with or without network connection. Moreover, the range includes solutions in the field of functional safety and explosion protection for interference-free signal transmission.

Programmable logic relays for every application

The PLC logic relay system is the first to combine logic, interface, and field connection levels in a single solution. Switch and control I/O signals with just one compact system and combine the logic module with the corresponding relay and analog modules. The PLC-INTERFACE relay system is the high-performance interface between the controller and system I/O devices. The PLC-INTERFACE system features a comprehensive range of ultra-narrow, plug-in relays and solid-state relays, as well as sensor/actuator versions, switch modules, and filter series for special applications. The PLC-INTERFACE plus system cabling enables fast plug-in connection of the controllers and peripherals.



Signal conditioning

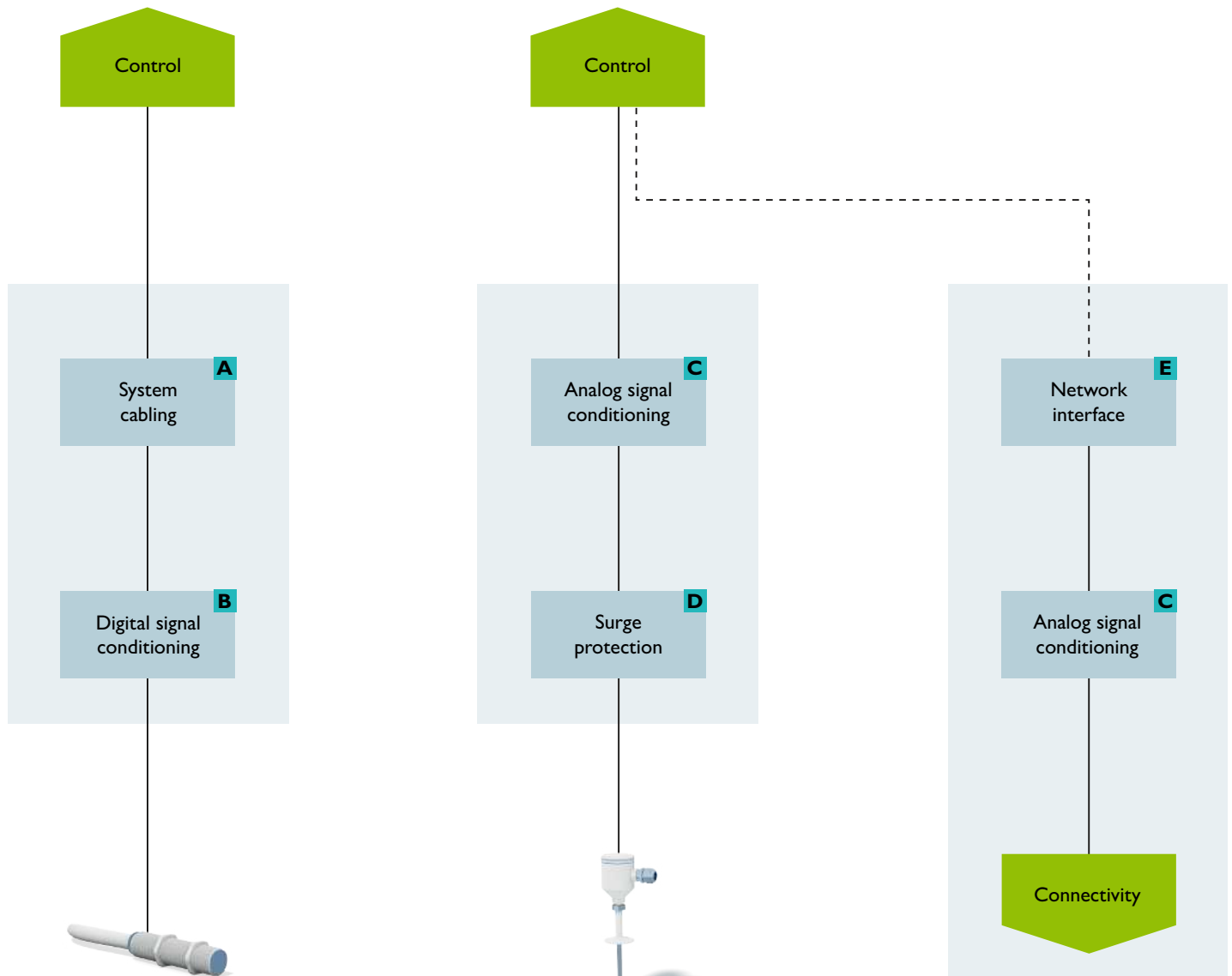
COMPLETE line features secure and reliable solutions for connecting the controller to the field.

System cabling minimizes the wiring effort between the controller and the field, with preassembled and tested cables. The 6 mm wide relay plates perform the role of digital I/O signal conditioning (Example 1).

A comprehensive range of converters and signal conditioners is available for the error-free transmission of analog signals (Example 2).

Surge protection modules specially developed for MCR applications guarantee availability, even in harsh conditions. Signal conditioners with bus and network connection transmit

field signals securely in industrial networks (Example 3).

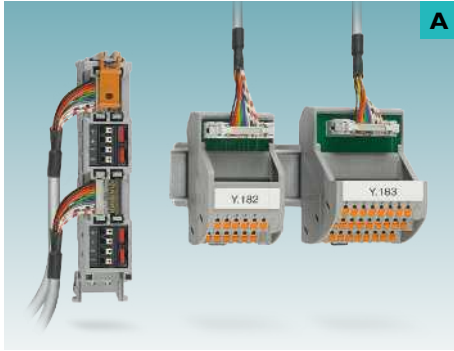


Part of this functional area

— One-to-one connection

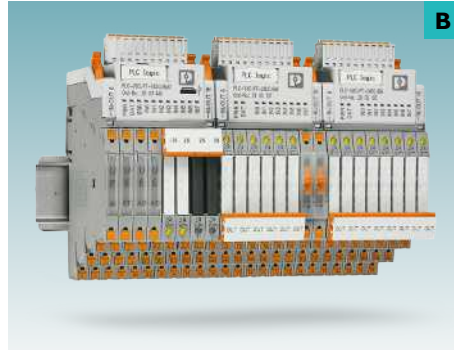
Other functional area

- - - Network connection



System cabling

Today, machines and systems are becoming more and more complex. The wiring effort for the individual components in an automation system is increasing as a result. Phoenix Contact system cabling offers a compact solution that enables easy planning, mounting, and commissioning. This means that you save considerable wiring time and costs.



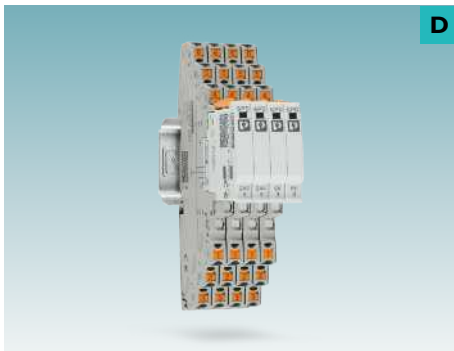
Highly compact relay modules

The PLC-INTERFACE relay system is the high-performance interface between the controller and system I/O devices. The PLC-INTERFACE system features a comprehensive range of extremely narrow, plug-in relays and solid-state relays, plus a complete range of accessories. In addition, PLC-INTERFACE sensor/actuator versions, switch modules, and filter series always provide the right interface for special applications.



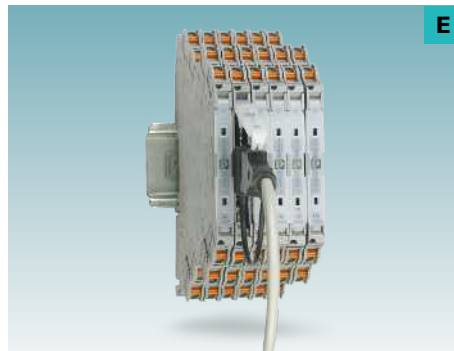
Signal conditioners with functional safety and explosion protection

MACX Analog signal conditioners offer comprehensive solutions for secure, interference-free analog and digital signal processing. In addition to the explosion protection for all zones and material groups, MACX Analog features functional safety in accordance with SIL IEC/EN 61508 and PL EN ISO 13849.



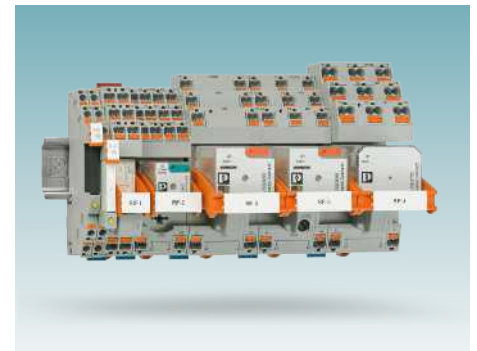
Surge protection for MCR technology

With an overall width starting from 3.5 mm, TERMITRAB complete is the world's narrowest surge protection solution for MCR technology. This enables space savings of up to 50% compared to installations with a 7 mm overall width. The product family features a complete system of simple, single-stage surge protection through to multi-stage, pluggable versions with knife disconnection, signaling, and remote signaling options.



Signal conditioners with bus and network connection

Signal conditioners ensure interference-free signal transmission. MINI Analog Pro is the first 6 mm signal conditioner range with plug-in connection technology. Easily visible, accessible terminal points, and current measurement during operation make work easier. Use the new, configurable 3-way signal conditioners to electrically isolate, convert, amplify, and filter standard signals.



Universal industrial relay system

You can implement all standard relay applications with the RIFLINE complete industrial relay system. Whether you want to isolate, multiply or amplify signals, it makes no difference. The relay system with universal plug-in design ensures high machine and system availability. The field of application ranges from coupling and timer relays through to miniature power contactor replacement.

Functional safety

The networking of all units in a digital factory also includes functional safety. Here, safety solutions from the COMPLETE line range provide the ideal protection for personnel and systems. With cloud-based data acquisition, you can analyze your operative processes, optimize machine engineering in terms of ergonomics, and monitor wearing components in real time. All safety products have SIL certification and are characterized by their easy configuration and installation.

SafetyBridge Technology

Realize decentral safety solutions with SafetyBridge Technology. No safety controller whatsoever is required and it does not depend on the network used. The technology is integrated into the Inline and Axioline F I/O systems and is compatible with all bus couplers of these systems. The safe I/Os are installed with the standard I/Os distributed within the equipment. The system consists of safe input and output modules and a logic module. The latter captures and issues safe signals. It generates and monitors the safety-relevant SafetyBridge transmission protocol and processes the logical connections of the parameterized safety logic. The logic module therefore assumes the task of a safe controller.



Functional safety

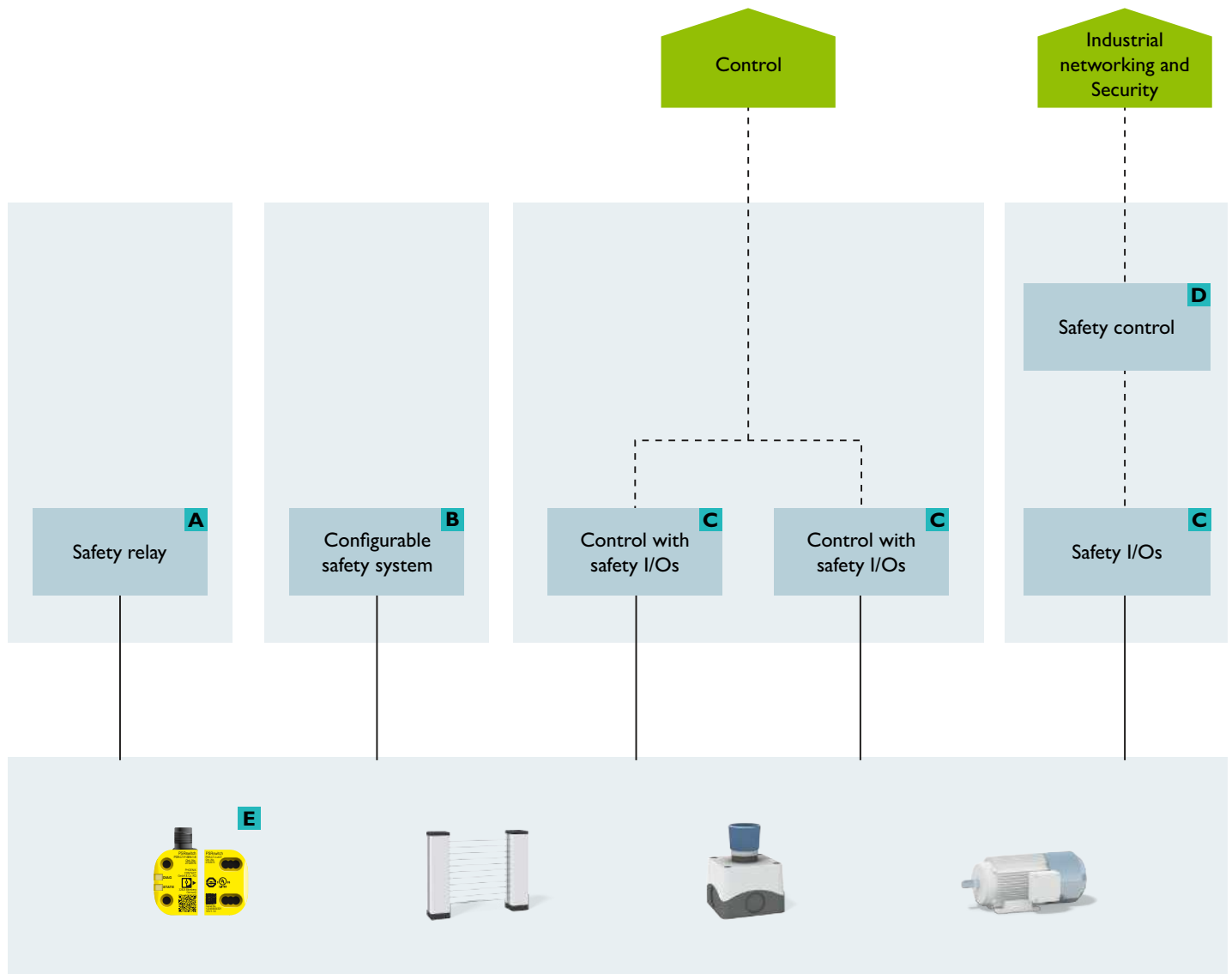
The COMPLETE line system includes a scalable range of innovative safety components.

Simple safety relays connect the sensors directly to the actuators (Example 1).

Configurable safety relays replace classic hardware wiring with an intuitive software solution (Example 2).

SafetyBridge Technology enables the transmission of safety-related data across standard communication networks (Example 3).

Safety controllers for complex tasks and the highest safety demands with a high number of I/Os round out the COMPLETE line range (Example 4).





A

Highly compact coupling relays

Thanks to the relay technology developed in-house, PSRmini are the world's narrowest coupling relays for safe startup and shutdown. The force-guided contacts enable easy, quick diagnostics. Thanks to visual LED diagnostics, SIL 3-qualified inspection is possible directly at the module. Furthermore, active error messaging to the controller ensures short downtimes during planned maintenance phases.



A

Multifunction safety relays

PSRmultifunction provides you with one superordinate sensor circuit and two local sensor circuits in one safety relay. You can implement common applications with up to three safety functions such as emergency stop, safety door, and light grid monitoring using just one device. The compatibility with all important signal generators and safety-relevant systems enables a wide range of applications.



B

Configurable safety system

PSRmodular is a configurable safety system for monitoring your machines and process applications up to PL e or SIL 3. It makes it possible to economically implement small applications with three safety functions and applications with up to 160 I/Os. You can monitor emergency stop signals, safety door locking systems, light grids, and magnetic switches. You can also implement safety functions such as speed, standstill, direction of rotation, and safe analog value monitoring.



C

Safe I/Os

Integrate functional safety into your network without a safety controller – with the Inline and Axioline F I/O systems. You can still use your preferred standard network and standard controller. The logic module with SafetyBridge Technology monitors the safety-relevant communication between the safe I/O modules distributed throughout the network. The I/O extension modules acquire the safety signals and output them wherever they are required.



D

Safe control technology

Our RFC 470S safety controller provides solutions for complex safety applications and standard applications. Thanks to the integrated PROFINET interface, the controller communicates directly with the PROFIsafe Inline or Axioline F I/O modules. The transmission of control and security protocols via an Ethernet cable reduces your wiring effort. The PROFIsafe gateway allows two PROFINET systems to be securely combined.



E

Non-contact safety switches

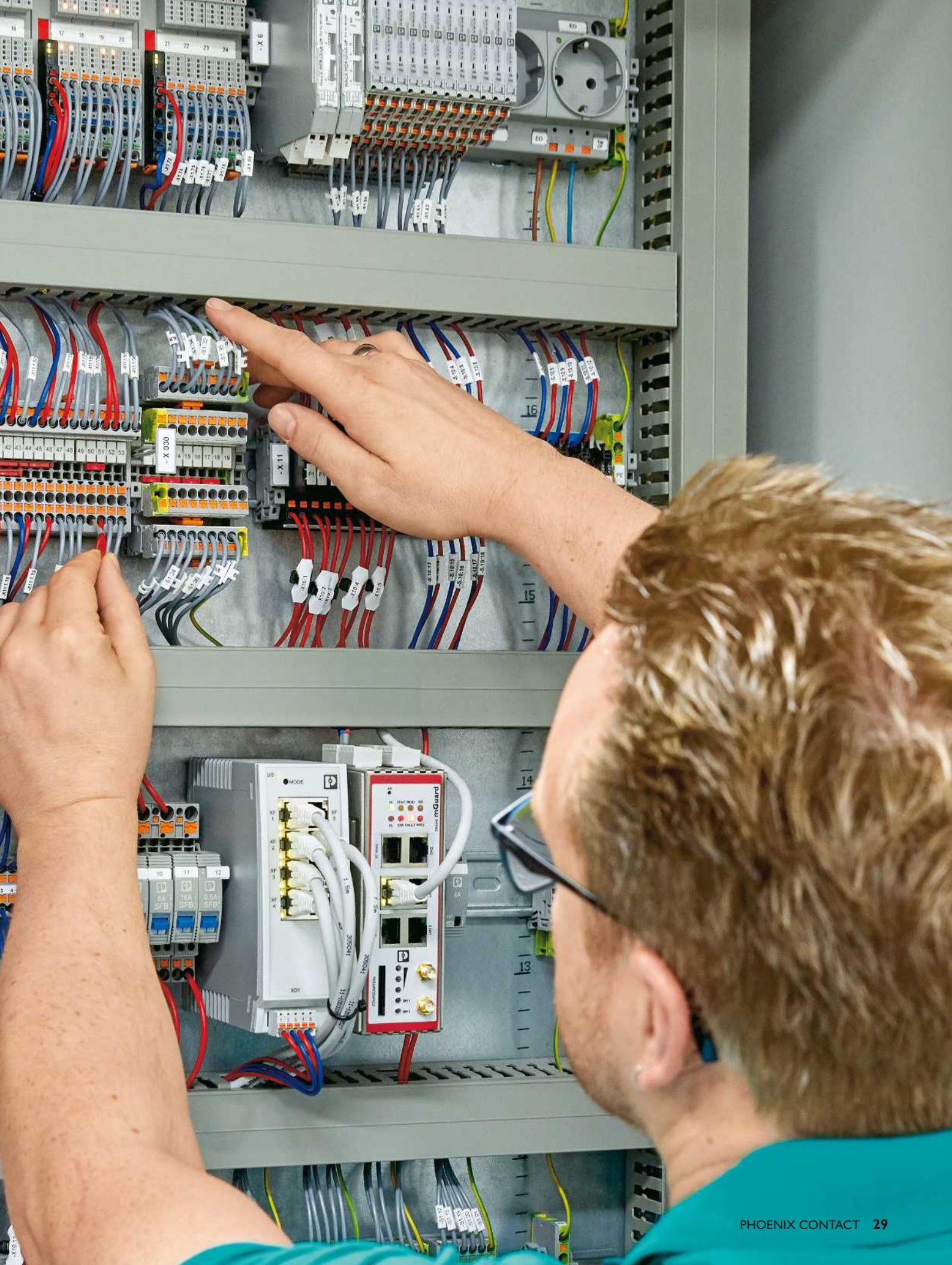
The compact PSRswitch is an electronic, coded safety switch for flexible safety door and position monitoring. It features integrated RFID technology and intelligence which provides maximum protection against manipulation and the highest level of safety in accordance with EN ISO 13849 and EN ISO 14119. You receive a cost-effective complete solution with compatible evaluation units and sensor/actuator cabling.

Connectivity

Connections are the neural system of our control cabinets. You can provide ideal support for the various functions in your system with specialized products for the connection of different components and devices. COMPLETE line provides a large selection of different terminal blocks for connecting a wide range of applications in the control cabinet. All products are easy to install, have standardized accessories and a consistent design.

Push-in Technology

Create solutions for fast wiring of maintenance-free connections in the control cabinet. Push-in Technology enables quick and easy wiring, thanks to easy insertion. Even small conductors from 0.25 mm² can be connected reliably and without using tools. Simply press the push button to release the conductor.



Connectivity

Products from the COMPLETE line portfolio guarantee reliable electrical connections for all devices in the control cabinet.

High-performance high-current terminal blocks are ideal for the supply of power (Example 1).

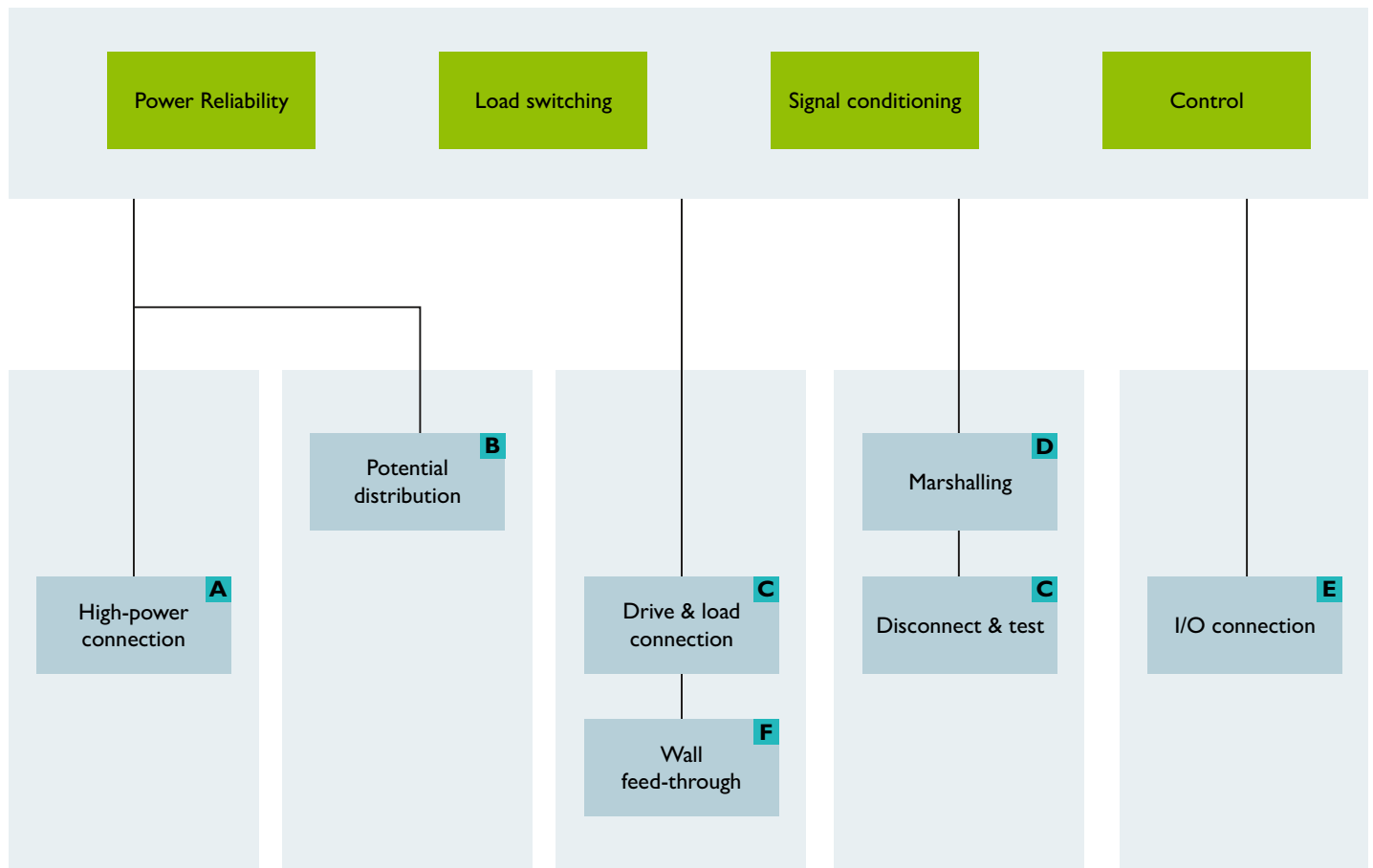
From versatile distribution blocks through to compact feed-through terminal blocks,

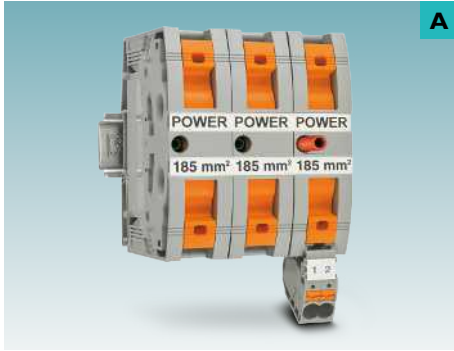
COMPLETE line has the right potential distribution solution for every application (Example 2).

Make compact connections to your consumers in the field with space-saving motor terminals. Moreover, customizable panel feed-throughs create a flexible external interface (Example 3).

Marshalling terminals are primarily used in the field of signal transmission. Here, suitable disconnect terminal blocks and knife disconnect terminal blocks ensure the necessary safety (Example 4).

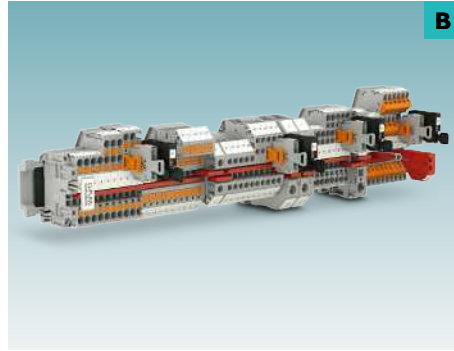
Special sensor/actuator terminal blocks are ideal for particularly space-saving sensor and actuator wiring (Example 5).





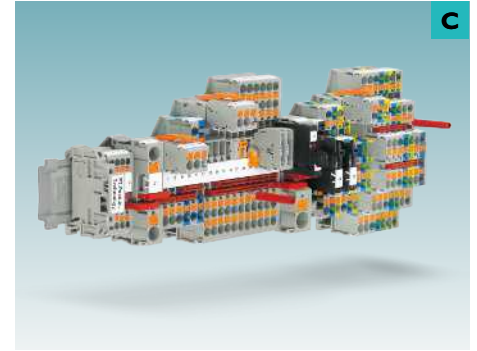
High-current terminal blocks

PTPOWER high-current terminal blocks with Power-Turn connection technology provide you with a quick, user-friendly connection option for wiring large conductors. You can contact conductors up to 185 mm² and 1500 V IEC/1000 V UL simply by pivoting the operating lever. The pre-assembled terminal blocks help you to reduce mounting and logistics costs.



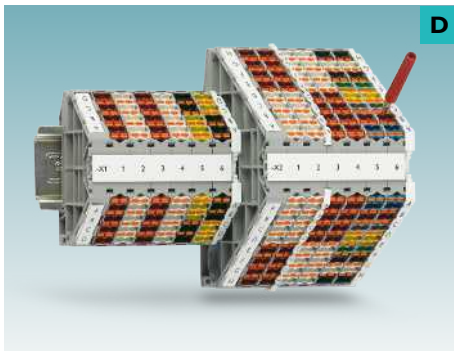
Terminal blocks for all connection technologies

With the unique terminal block system from Phoenix Contact, you are free to choose the connection technology. This versatility enables you to respond flexibly to the different demands and requirements anywhere in the world. All connection technologies can be freely combined with one another using the same accessories.



Function terminals

The COMPLETE line portfolio includes a large range of different function terminals for many different applications: from disconnect and knife disconnect terminal blocks to test disconnect terminal blocks, through to motor terminals. All products are characterized by the consistent use of Push-in connection technology and compact design.



Marshalling terminals and potential distributors

The compact PTRV marshalling terminals are used to marshal signals in automation applications in a clearly arranged manner. The wiring of a large number of conductors is simplified through levels, which can be designed individually based on color. Together with the front wiring, this helps prevent connection errors.



Sensor/actuator terminal blocks

In modern machinery and system control systems, the number of sensors and actuators is increasing as automation becomes increasingly common. The compact PTIO terminal blocks therefore offer you the advantage of being able to wire your sensors and actuators easily and clearly. Even bipolar sensors can be connected quickly and easily to a terminal width of just 3.5 mm.



Heavy-duty connectors

HEAVYCON heavy-duty connectors ensure the secure transmission of signals, data, and power even in the harshest conditions. Different housing variants, modular contact inserts, and contact inserts with a fixed number of positions offer the right connection for all requirements. Push-in Technology guarantees simple and time-saving cable connection.

Load switching

Electric motors are used in a variety of industrial applications for controlling movements. Motors are often started and reversed using classic, mechanical protective circuits. However, these require a great deal of space as well as a lot of wiring effort, and have a limited service life. Costly sensor technology is often required to collect important motor and process data. COMPLETE line provides innovative and intelligent products for your application.



CONTACTRON hybrid technology

CONTACTRON hybrid technology is a microprocessor-controlled combination of wear-free solid-state technology and robust relay technology. The semiconductors execute the wear-prone on and off switching procedures, while the relays only conduct low-loss current. This enables soft switching and considerably reduces the load on the relay contacts.



Load switching

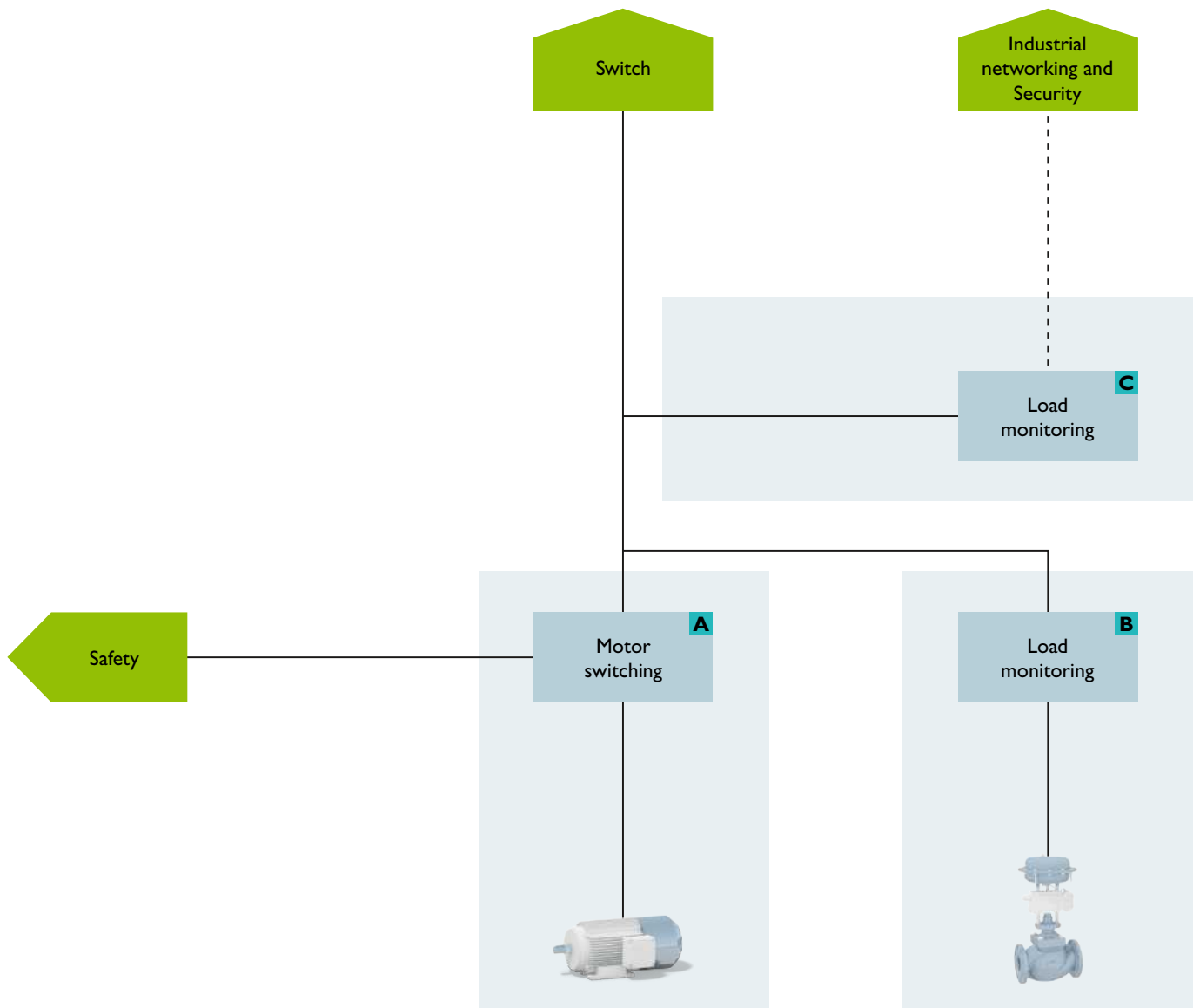
The COMPLETE line system provides high-quality solutions for load switching and monitoring.

Compact and practically wear-free motor starters can switch loads over a much longer service life than electromechanical versions. Moreover, they can be integrated into safety concepts and communication networks.

They switch motors and other loads reliably and safely (Example 1).

This advanced technology also enables the acquisition of performance data. Here, the ability to detect over- and underload states enables preventive maintenance and the avoidance of mechanical damage to the loads (Example 2).

The machine manager also reliably monitors high-performance consumers and transmits key parameters to higher-level networks (Example 3).





Stand-alone motor starters

You can switch motors safely and reliably with compact hybrid motor starters. The devices can be used wherever three-phase asynchronous motors, from 50 W to 3 kW, need to be reversed and protected. The product range of hybrid motor starters consists of direct and reversing starters available with various functions such as emergency stop and motor protection.



Modular motor starters

CONTACTRON pro is the new version of the CONTACTRON product range offering simple safety integration and modular extension options. All based on hybrid technology – for greater simplicity in functional safety, high levels of system availability and handling without complication.



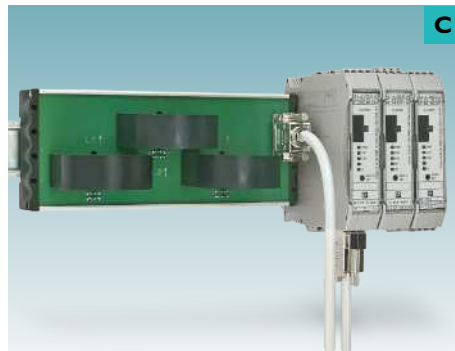
Network-capable motor starters

Integrate your motor starters into fieldbus systems via the interface system connection. Transfer your process data easily and network your devices quickly with the interface system (IFS) and also the available IO-Link versions. You benefit from space and wiring savings, and you can also make use of the benefits of diagnostic functions.



Motor manager

With the motor manager, you can detect all the critical load states throughout the system and benefit from the advantages of modern active power monitoring. If required, the motor manager switches the drive off to protect the motor and the system. The motor manager is configured using the intuitive IFS-CONF software from Phoenix Contact.



Machine manager

Monitor your motors and machines: electronic motor and machine management combines precise energy measurement with the display and monitoring of important parameters of motors, machines, and other 3-phase consumers. As an option, it can be networked with all common fieldbus systems using a gateway.

Shaping control cabinet building together

Control cabinet manufacturing is characterized by a high proportion of process costs. Precisely for this reason, COMPLETE line provides a wide range of approaches for consistently optimizing cost-effectiveness in production. Benefit from our solutions and services for efficiently structuring all processes and sequences. We will work together to develop suitable concepts for your success, individually tailored to your goals and needs.





HERMOMARK PRIME

Shaping control cabinet building together

From engineering to production, COMPLETE line and our experts will help you structure your control cabinet production as efficiently as possible. In this way, you create a customized concept for optimizing your processes. Thanks to our terminal strip production system, you can manage peak order times flexibly and supply your control cabinet production with terminal strips just-in-time. This simplifies engineering, purchasing, installation, and operation significantly.





Efficient wiring

Reduce your wiring effort significantly. Push-in Technology enables quick and tool-free wiring with easy insertion. COMPLETE line features product solutions with Push-in connection for every application. Moreover, a large range of products have uniform function shafts for fast and tailored potential distribution. These enable the consistent use of FBD plug-in bridges, which replace conventional wiring.



Digital production documents

The PROJECT complete planning and marking software supplies all the information you require for terminal strip production: either as a digital production document for manually mounting the terminal strip or as an export in the AutomationML format – for controlling the fully automated production systems of your terminal strip production process.



Professional tools

Preparing conductors and wiring are two of the most time-consuming processes in control cabinet manufacturing. To enable these processes to be perfectly organized, COMPLETE line provides high-quality tools that are perfectly tailored to the individual requirements of the user. From ergonomic hand tools through to high-performance automatic devices for processing large-scale material quantities, the TOOL fox range of tools covers all requirements.



Flexible marking

Consistent industrial identification ensures structure and orientation in the control cabinet. COMPLETE line provides a scalable system comprising printers, marking materials, and software. The uniform marking grooves on the COMPLETE line products enable more than 3,200 different products to be marked using standard marking materials. Benefit from the reduced variety of parts and uniform handling.



Global terminal strip service

Our terminal strip production service provides help in flexibly managing order peaks and enables terminal strips to be delivered just in time for series production. The fully mounted and marked terminal strips, ready-assembled with accessories, just need to be installed and connected.



Scalable manufacturing solutions

With the ClipX operator assistant systems, you can design tailored installation processes. The program provides assistance systems for partially automated, software-supported conductor preparation and a pick-by-light mounting system for assembling DIN rails with components fitted. Automate the marking of assembled DIN rails with the MARK master marking system.

