Factory automation solutions

Technology for automotive manufacturing

PHOENIX CONTACT
INSPIRING INNOVATIONS

Automotive overview

Phoenix Contact factory automation solutions offer superior quality and advanced functionality to meet the demands of powertrain, body shop, paint, and interior assembly applications. The automotive industry requires unique capabilities and economical designs that take advantage of the Industrial Internet of Things (IIoT) and Industry 4.0, covering operations from building infrastructure to the factory floor. Backed by an industry-leading Limited Lifetime Warranty and nearly 100 years of manufacturing expertise, Phoenix Contact is ready to listen to your needs, develop a solution for your problems, and become your long-term partner on your journey to factory digitalization.

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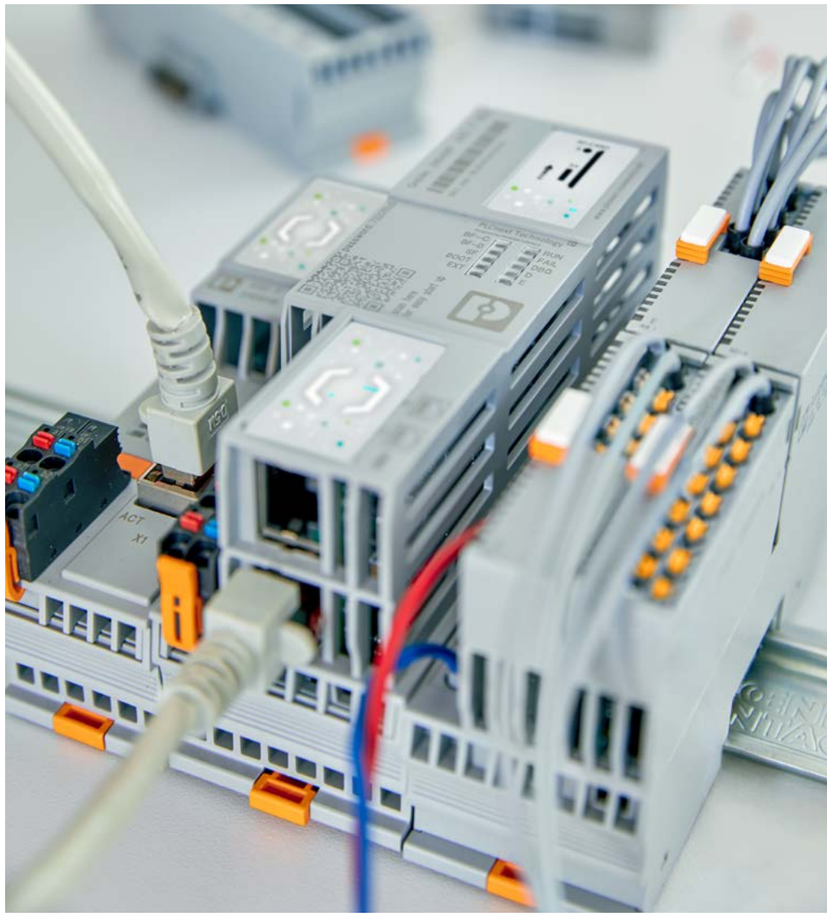


Phoenix Contact engineered solutions

Phoenix Contact is a global leader in automation technology. We can take your manufacturing facilities to the next level with the latest IIoT, Factory 4.0, cybersecurity, and wireless solutions. We assist in improving productivity and plant efficiencies by integrating facility infrastructure and manufacturing systems with an open architecture and communication structure that allows you to keep the pace as technologies change. Implemented on a small or large scale, legacy equipment and machinery can be integrated along with updated control and monitoring systems.

Customized solutions

Phoenix Contact solutions are designed and engineered by a highly skilled team with a vast range of expertise in creating customized products that meet unique needs.

Engineering services expertise

Network infrastructure

- Conduit for IIoT and cybersecurity
- End-to-end network solutions
- Extensive offering of industrial protocols
- Secure remote access and cloud computing

Facilities automation

- Industrial-hardened controllers for buildings, infrastructures, and data centers
- Lighting, HVAC, chillers, compressors, and energy management monitoring and control
- Niagara framework in a PLC-based controller
- Modular I/O for a wide range of applications

Power reliability

- Surge and overvoltage protection systems
- Intelligent power supply, redundancy, and backup systems
- Power, control, and monitoring through industrial networks

IIoT gateway/edge computing

- Bridge from legacy systems into IIoT
- Extensive offering of industrial protocols
- Open source coding combined with standard IEC 61131 programming language
- Flexible and scalable IIoT solution platform

Automotive metal forming and bonding

The automotive industry is changing. Increased demand for lightweight materials is driving new forming and bonding techniques in a combination of advanced processes. This fast-paced changing market requires an open, future-proof, scalable, and connected control and automation platform. Combining Phoenix Contact's advanced network, control, and automation technology with close collaboration and communication, we offer tailor-made industrial control solutions for connected plant operation that provide the right data at the right time.

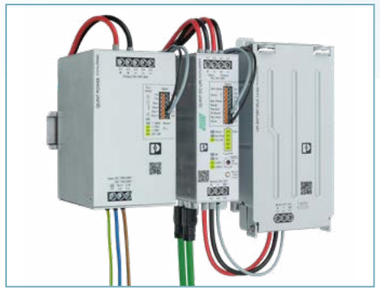
Your advantages

- ☑ **Communication-agnostic** – Phoenix Contact products support a wide range of communication protocols, making us the perfect fit for brownfield and greenfield projects
- ☑ **Scalable platform** – From small to large operations, we offer scalable solutions to meet your needs and budget
- ☑ **Global support** – As a global partner, Phoenix Contact has resources in place to support your operation around the globe
- ☑ **Limited Lifetime Warranty** – Phoenix Contact offers the best warranty program in the industry

LIMITED LIFETIME WARRANTY
BUILD WITH CONFIDENCE

HMI and plant floor visualization

- Large portfolio of high-performance touch-screen PCs
- Thin clients
- Web terminals
- Industrial monitors



Smart DC power solutions

- Reliable power in a packaged solution
- NFPA79/UL compliant
- Power data driven through common bus systems
- High-performance DC power supply, buffer, and UPS options

PROFINET EtherNet/IP IO-Link

Wireless connectivity

- Extensive portfolio of wireless options
- Applications ranging from M2M, robot end effectors, and turntables
- Flexible mount options and connection mediums
- Multiple layers of security

Bluetooth WLAN TRUSTED WIRELESS™

Edge/gateway solution

- IIoT and cloud gateway
- Data collection
- Cybersecurity
- SCADA and cloud connectivity

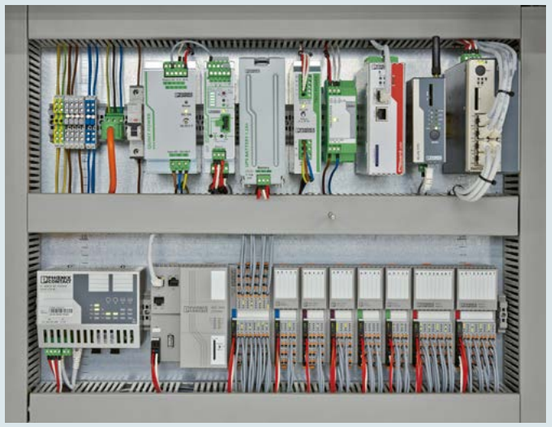
aws Microsoft Azure

Powertrain

The powertrain industry is at a crossroads, but there are more than two roads to venture. From traditional gasoline/diesel to next-generation battery/electric and hybrid-style engines, each variation brings its own set of challenges. Manufacturers need to understand their businesses better than ever, with data collection and analytics changing the dynamics of how they can streamline distributed parts and components to final assembly. Reducing costs while improving product efficiency is critical to this mature and highly competitive market segment.

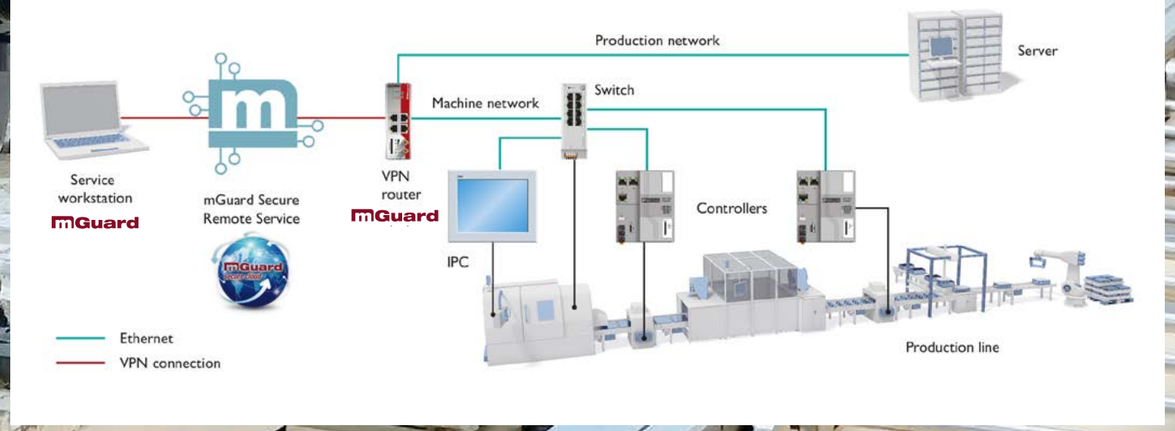
Your advantages

- ☑ Secure SCADA – supervisory control and data acquisition with first-rate visualization
- ☑ Bridging the IT/OT gap with IP and control networks for seamless integration
- ☑ Phoenix Contact Secure Cloud and PROFICLOUD provide effective use of company data
- ☑ Robust, industrially hardened, standards-based solutions
- ☑ IIoT-in-a-box provides a flexible, simple gateway to connect devices



Assembly function

- ☑ Secure remote access
- ☑ NAT
- ☑ VPN
- ☑ CIFS
- ☑ Industrial Ethernet
- ☑ Wireless
- ☑ Firewall
- ☑ Secure cloud
- ☑ Data analytics

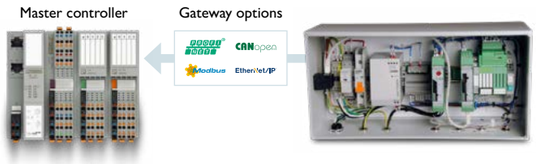


Automotive interiors

Automotive interior suppliers face a rapidly changing market with tighter margins, shorter life cycles, and increased demands on quality. Phoenix Contact is a partner who understands these demands. We offer future-proof, flexible controls architectures that can protect, communicate, scale, and adapt to this rapidly changing environment. You will experience increased manufacturing productivity and efficiency while reducing cost and gaining access to data you never imagined. Please allow us the opportunity to listen to your needs and create a solution for them.

Your advantages

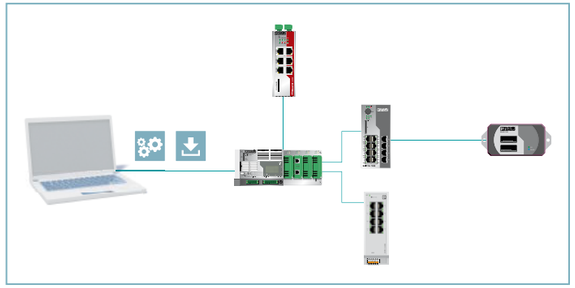
- ☑ **Digital ecosystem** – Linux environment for edge computing with access to data via IIoT systems
- ☑ **Engineering services** – From small to large, we offer scalable solutions to meet your needs and budget
- ☑ **Global support** – As a global partner, Phoenix Contact has resources in place to support your operation around the globe
- ☑ **Limited Lifetime Warranty** – Phoenix Contact's warranty program is the best in the industry



Data concentration

- Linux environment
- IEC-61131
- High-level languages
- IIoT-ready: AWS/Azure/Google IoT
- Functional safety
- Web-based visualization

OPC FOUNDATION · Java



Network integrity and security

- Firewall and VPN
- Remote access
- NAT 1:1 / DLR
- Masquerading
- WLAN, Bluetooth, and POE

Bluetooth · PROFINET · dnp Distributed Network Protocol · EtherNet/IP · DSL 16.000

Machine safety

- Safety relays
- Configurable safety controllers
- Distributed safety networks
- Intrinsically safe isolators
- Transmit safe data via wireless technology

SILCL IEC 62061 · PL EN ISO 13849 · SIL IEC 61508 · PROFIsafe

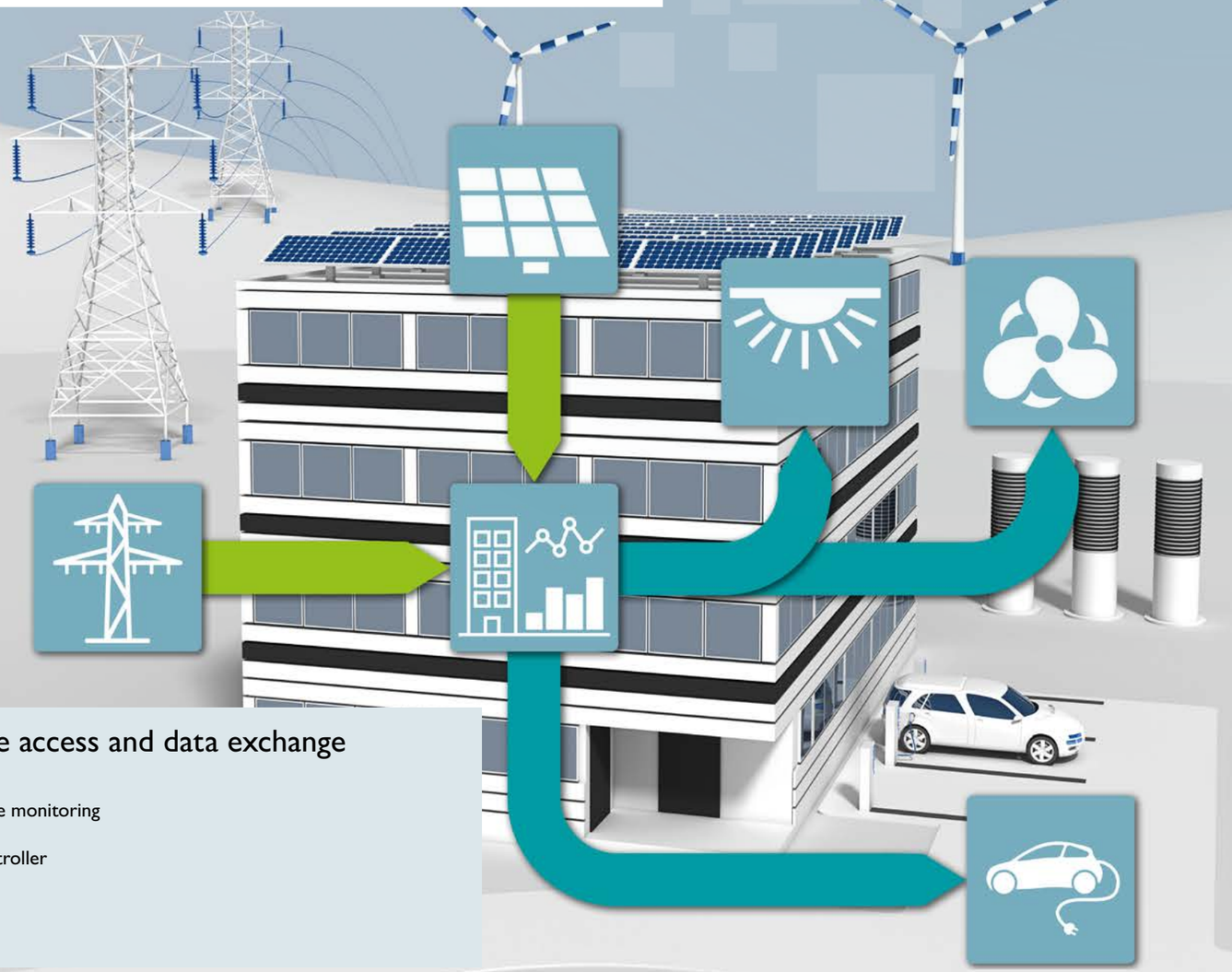
Connectivity

- Terminal blocks and connection technologies
- Heavy-duty field cabling and connections
- Relay switching and isolation
- Signal conditioning
- Buss agnostic – EtherNet/IP, IO-Link

PROFINET · sercos the automation bus · EtherNet/IP · IO-Link · CANopen · EtherCAT · Modbus

Facilities automation

Phoenix Contact is the leading technology partner to integrate the flexible automation of your facilities for the new Industrial Internet of Things. Meet the demands of the current industrial revolution with the ability to connect disparate processes, making legacy devices “speak the language” of modern control systems and Industry 4.0 with Phoenix Contact expertise.



Wireless secure access and data exchange

- Radio communication
- HVAC systems remote monitoring
- Data collection
- ILC 2050 Niagara controller

powered by niagara framework

PROFINET

EnOcean Self-powered IoT

Modbus

KNX ISO/IEC 14543

ASHRAE BACnet

LonMark

C# | C/C++ | MATLAB Simulink | Microsoft Visual Studio

Building automation controllers allow monitoring and programming of HVAC, lighting, and energy infrastructures. The ability to control these systems allows users to maximize tracking of OEE (Overall Equipment Effectiveness) and enables peak performance while improving energy efficiency. Phoenix Contact offers industrialized solutions that are open, scalable, and able to network with diverse IP-based systems for single, centralized facilities management.

E-mobility technology

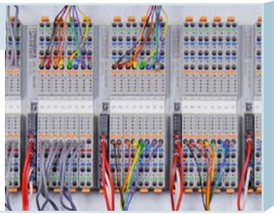
- A complete range of charging technology products for all regions from a single source
- Broad, scalable portfolio of coordinated components including software
- Interfaces for feeding renewable energy into the grid for environmentally friendly charging
- Support in the realization of your charging solution or application through consulting, development, conception, programming, and customization

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 enable you to build your control cabinet with confidence. With a focus on cost-effectiveness, quality, flexibility, and performance, Phoenix Contact delivers.

LIMITED LIFETIME WARRANTY
BUILD WITH CONFIDENCE

Control



- Industrial PCs and HMIs*
- Scalable controllers and remote I/O

www.phoenixcontact.com/confidence_control

Power reliability

- Power supplies and UPS
- Surge and circuit protection
- Power distribution
- Monitoring and metering

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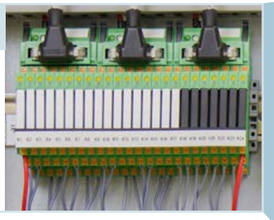
Connectivity



- Relay switching and isolation*
- Terminal blocks and connection technologies
- Heavy-duty field cabling and connectors

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Shop floor productivity

- Planning and marking software
- Printing solutions*
- Industrial tools
- Cable management and installation

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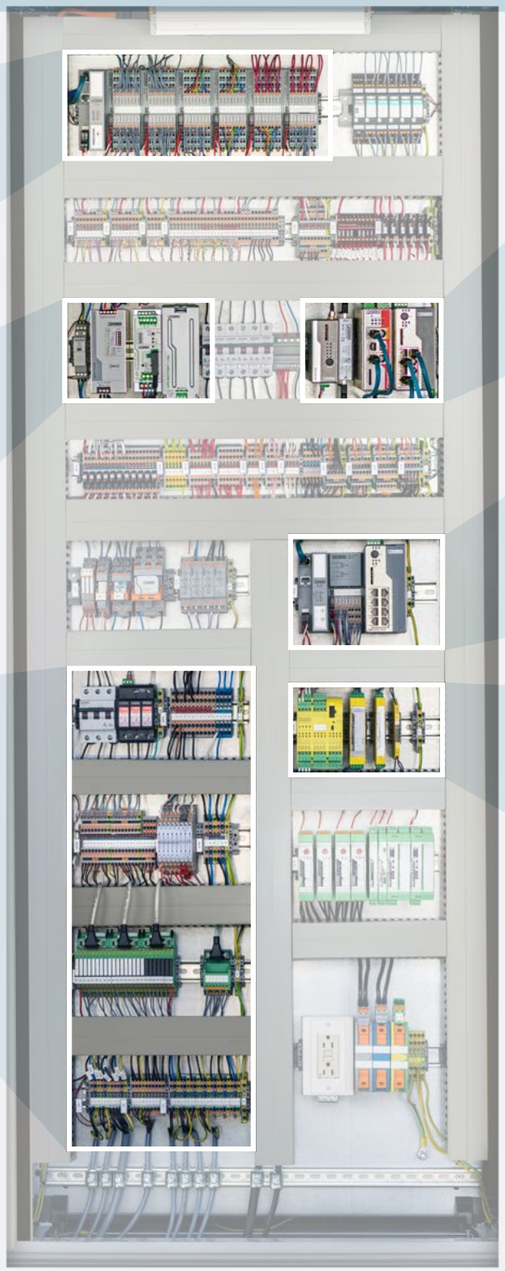

Networking and remote connectivity

- Wired and wireless Ethernet infrastructure
- Routers and cellular solutions for secure remote access

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EtherNet/IP and PROFINET solutions

- Ethernet switches and I/O designed for seamless integration into EtherNet/IP and PROFINET solutions

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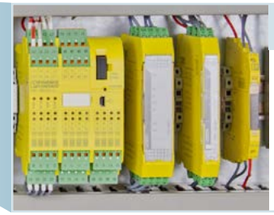
Safety



- Safety relays
- Configurable safety controllers
- Distributed safety networks
- Intrinsically safe isolators

www.phoenixcontact.com/confidence_safety

Tour our virtual cabinet at: **www.phoenixcontact.com/confidence**

* Certain restrictions apply. Go to **www.phoenixcontact.com/LLW** to review the terms and conditions.

Ongoing communication with customers and partners worldwide

Phoenix Contact is a global market leader based in Germany. We are known for our future-oriented components, systems, and solutions in the fields of electrical engineering, electronics, and automation. With a global network reaching across more than 100 countries with over 17,400 employees, we stay in close contact with our customers, something we believe is essential for success.

Our wide variety of innovative products makes it easy for our customers to find future-oriented solutions for multiple applications and industries. We focus predominantly on the fields of energy, infrastructure, process, and factory automation.

You can find your local partner at

www.phoenixcontact.com

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