# Chemicals and pharmaceuticals

Solutions for industrial parks and production plants

PHŒNIX CONTACT

Pioneering solutions
for superior system availability

With groundbreaking solutions in connection and automation technology, Phoenix Contact is your key partner for superior availability in the process industry. We will provide you with confidential support from a network of specialists with a wealth of industry- and country-specific experience. With industry-wide expertise gathered over many years in the process industry, we develop technologies and concepts based on open standards in hardware and software for your applications. Our tailor-made and certified solutions ensure reliable system operation and increased efficiency.
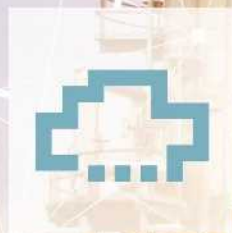
Find out more
with the web code

For detailed information, use the web codes provided in this brochure. Simply enter # and the four-digit number in the search field on our website.

[i] **Web code:** #1234 (example)

Or use the direct link:
phoenixcontact.net/webcode/#1234

"System availability, modularization, and digitalization are becoming ever more important in the chemical and pharmaceutical industry. Phoenix Contact provides you with comprehensive solutions, products, and services. From control and network technology that can be integrated easily to space-saving safety and Ex i components. Our innovative migration and marshalling solutions as well as modular fieldbus systems reduce your running costs and increase your system availability."

Wilfried Grote, Global Industry Manager

Contents

Enhanced connectivity

These days, steadily growing demands for increased security, availability, reliability, and greater efficiency require more technology that is difficult to integrate into the traditional automation pyramid. Digitalization is therefore opening the door to new technologies and approaches. "Enhanced connectivity" from Phoenix Contact is more than a physical connection – it provides a connection that combines the logic as well as comprehensive, open, secure, and digital communication. It lays the foundation for new approaches, such as NAMUR Open Architecture (NOA) and Open Process Automation (OPA), to become a reality.

Digital transformation

The NAMUR Open Architecture (NOA) describes how the traditional automation pyramid comprising fast-moving IT components from field level up to corporate management level can be easily integrated without affecting the availability and security of a plant. Open Process Automation (OPA) goes a step further: in striving for completely open automation, this approach does away with the traditional process automation pyramid. With the technological approach of an open, secure, and scalable ecosystem, Phoenix Contact shows how the concept of openness, flexibility, and agile solutions can be combined with the core aspects of the process industry – namely robustness, security, and reliability.

Your advantages
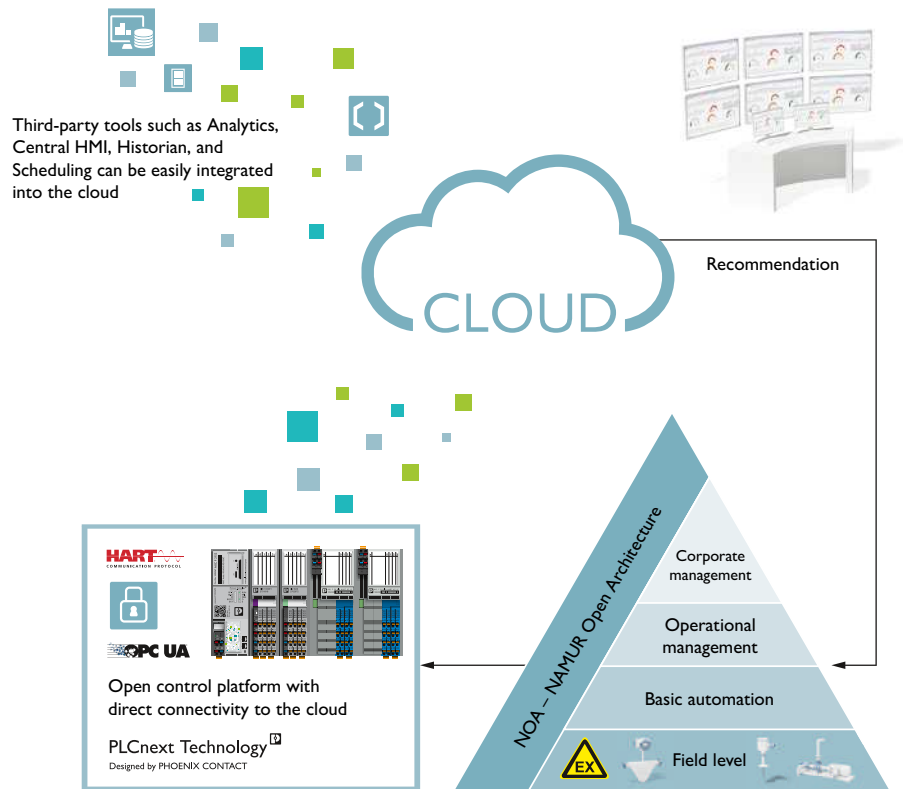
☑ Future-proof systems based on many years of industry expertise and helping to shape future-oriented trends such as NOA and OPA

☑ Tailor-made solution from data acquisition through to the target system with system-independent automation technology

☑ Prevention of unplanned system downtime by networking existing and additional diagnostic data for predictive maintenance

Standards for open automation systems

NAMUR Open Architecture

The open, Linux-based PLCnext Technology control platform enables HART data and other protocols to be read in parallel without impacting the process control system. This data can be transferred to a cloud solution (such as PROFICLOUD from Phoenix Contact, Azure from Microsoft, etc.) as raw data or preprocessed by the controller via the OPC UA server. Due to the openness of the control platform, apps from third-party providers, such as sensor and actuator manufacturers, can also be integrated into the system. Intelligent algorithms evaluate the acquired data and derive appropriate maintenance concepts. With the PLCnext Technology ecosystem, monitoring and optimization tasks, and even predictive maintenance, can be easily implemented without impacting the core process.

Web code: #2266

Third-party tools such as Analytics, Central HMI, Historian, and Scheduling can be easily integrated into the cloud

CLOUD

Recommendation

HART
COMMUNICATION PROTOCOL

OPC UA

Open control platform with direct connectivity to the cloud

PLCnext Technology
Designed by PHOENIX CONTACT

NOA – NAMUR Open Architecture

Corporate management

Operational management
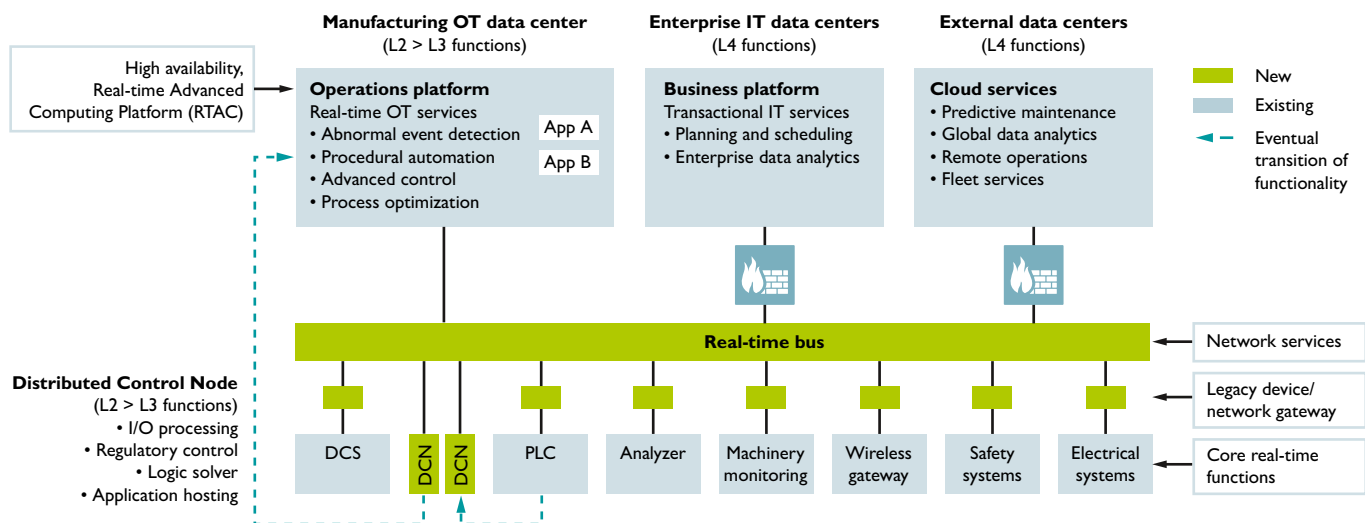
Basic automation

Field level

EX

Open Process Automation

The aim of Open Process Automation is to reduce the complexity of control system migration by taking an open and standard-based approach.
The PLCnext Technology ecosystem supports this open approach by assuming

the role of the DCN (Distributed Control Node) with secure and redundant connections to the new real-time service bus and connection to existing and new field devices (I/Os).

In addition, PLCnext Technology enables external software to be hosted and for it to be run on the same hardware, thereby satisfying the main requirement of OPA.

High availability, Real-time Advanced Computing Platform (RTAC)

Manufacturing OT data center
(L2 > L3 functions)

Operations platform
Real-time OT services
• Abnormal event detection
• Procedural automation
• Advanced control
• Process optimization

App A
App B

Enterprise IT data centers
(L4 functions)

Business platform
Transactional IT services
• Planning and scheduling
• Enterprise data analytics

External data centers
(L4 functions)

Cloud services
• Predictive maintenance
• Global data analytics
• Remote operations
• Fleet services

New
Existing
Eventual transition of functionality

Real-time bus

Distributed Control Node
(L2 > L3 functions)
• I/O processing
• Regulatory control
• Logic solver
• Application hosting

DCS
DCN
DCN
PLC
Analyzer
Machinery monitoring
Wireless gateway
Safety systems
Electrical systems

Network services

Legacy device/ network gateway

Core real-time functions

A standard of The Open Group, a global technology consortium from the USA, developed in the Open Process Automation™ Forum (OPAF). Source: O-PAS™

Industrial parks

To ensure the availability of production-critical supplies in industrial parks, Phoenix Contact provides you with a comprehensive range of concepts based on over 60,000 products and services.

Production plants

To ensure the efficient and reliable operation of production plants, systems are increasingly being intelligently networked together. Learn more about our easy migration solutions and failsafe redundancy concepts.

Modular plants

The flexibility of production plants can be increased significantly through modularization. We will be happy to advise you and support you in the implementation of NAMUR recommendation NE 148 through to the startup of your plant modules.

Solutions for industrial parks

Industrial parks provide companies in the chemical and pharmaceutical industry with optimum economical framework conditions and cost-reducing synergies. The availability and security of supply of energy sources as well as a powerful infrastructure are crucial factors for success when competing on an international level. Phoenix Contact has a comprehensive portfolio with over 60,000 products. We develop tailor-made concepts with you to meet the diverse and demanding challenges of an industrial park. This is complemented by consultation, engineering, and startup – providing you with failsafe and efficient solutions from a single source.

Overview: Industrial parks
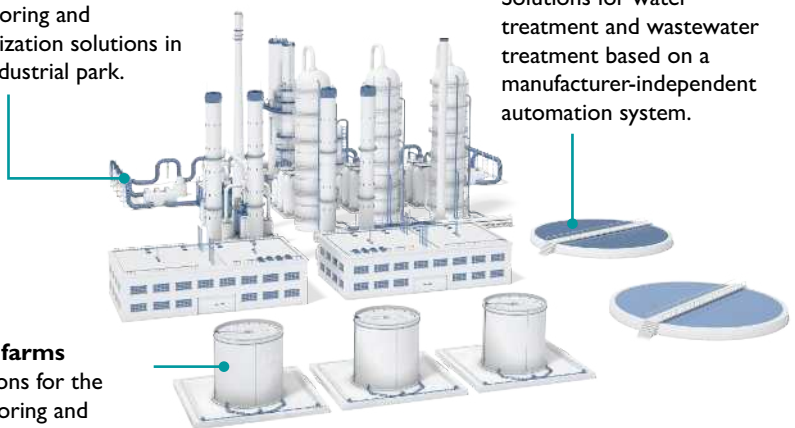
Infrastructure
Monitoring and optimization solutions in the industrial park.

Water/wastewater
Solutions for water treatment and wastewater treatment based on a manufacturer-independent automation system.

Tank farms
Solutions for the monitoring and control of tank systems of any size.

Solutions for industrial parks

Infrastructure

The long-term preservation and development of the transport and communication infrastructure is of great importance because end customers must rely on its performance. Phoenix Contact provides you with reliable solutions in the fields of energy data acquisition, WLAN wireless broadcast, trace heating monitoring, emergency showers, as well as the impact-free integration of additional signals for an asset management system. You thus achieve superior system availability, enabling you to safely focus on your core business.

Your advantages

- ☑ Communication solutions for any infrastructure from a single source with a comprehensive portfolio, plus solution and industry expertise
- ☑ Easy energy measurement with suitable communication solutions
- ☑ Comprehensive approvals enable a high degree of flexibility, right through to potentially explosive areas

Leakage monitoring

To be able to detect leaks, the pressure, temperature, and flow must be determined along the entire pipeline. Wireless systems such as our Radioline solution can be used when the distances between the measuring stations and control center are not too great. For longer distances, transmission systems such as SHDSL modem or an mGuard security router are ideal. The router establishes a secure VPN connection via the Internet.

ℹ **Web code:** #2029

Trace heating monitoring

In many cases, trace heating is controlled autonomously and is not monitored. With the solution from Phoenix Contact, you have a precise overview of the status of your medium at all times, e.g., simply via current measurement or additional temperature monitoring. Failsafe and economic utilization of the invested energy is thus achieved.

ℹ **Web code:** #2033

Energy management

By using an appropriate energy management system, you can identify significant potential savings for the cost-effective and environmentally friendly operation of your machines and systems. A prerequisite here is the identification of the energy flows. Phoenix Contact provides monitoring solutions for energy and power measurement which can be scaled in line with requirements and which enable integration into existing systems.

Communication solutions for any infrastructure

Regardless of the overriding on-site conditions, you will find the right communication solution with Phoenix Contact. Depending on the type of signal and amount of data, together we will implement a reliable connection from the measuring point through to the control room.

Cellular 3G/4G

Radioline

868 MHz
900 MHz
2.4 GHz

SHDSL

Flow meter with data transmission
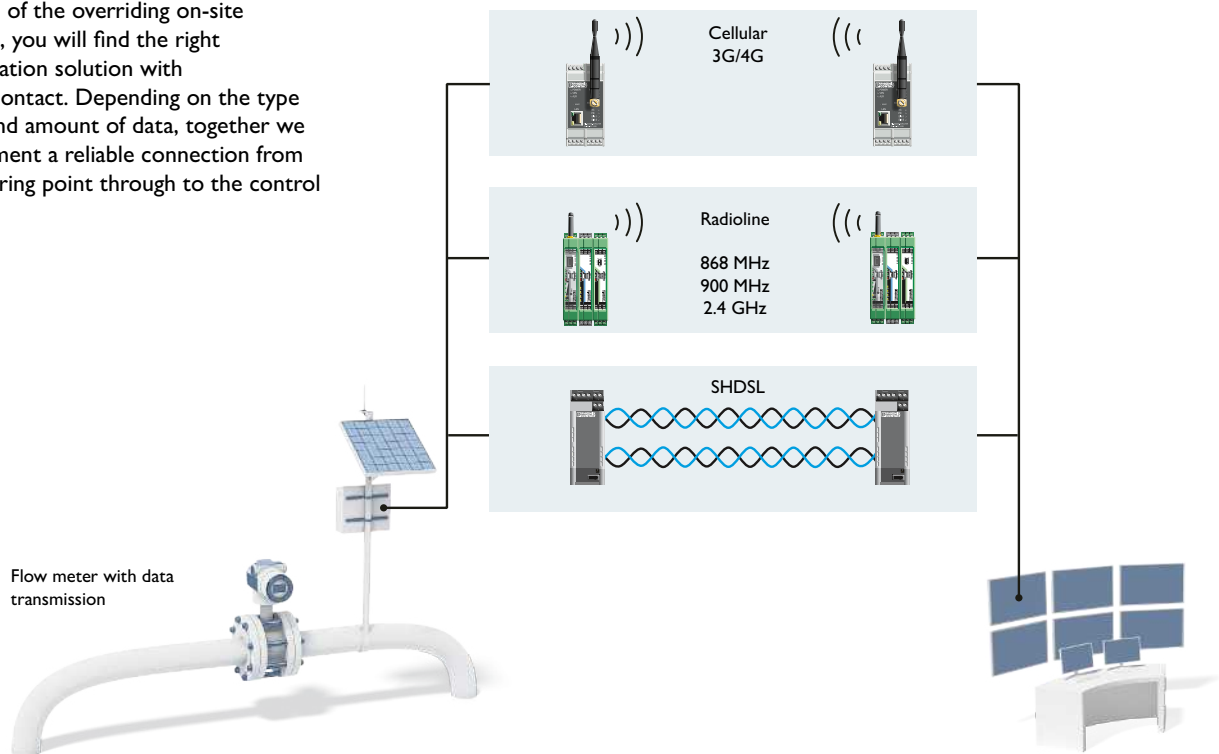
Tank farms

Tank farms often consist of different sized tanks, sometimes with a storage capacity of more than 30,000 m^3. The continual filling and draining of tanks has to be monitored and reliable overflow protection must be installed. Automated valve position monitoring is essential here.

With reliable modular control and I/O systems, remote control and remote maintenance technology, as well as signal conditioners for the Ex area, Phoenix Contact provides a broad basis for the consistent automation of your storage tank systems.

Your advantages

- ☑ Tested safety with SIL-certified technology for overflow protection
- ☑ Standardized sensor communication with I/O technology in accordance with NAMUR
- ☑ With our broad portfolio and expertise in solutions and the industry, only one point of contact is needed for tank and valve monitoring
- ☑ Tested components with international Ex approvals
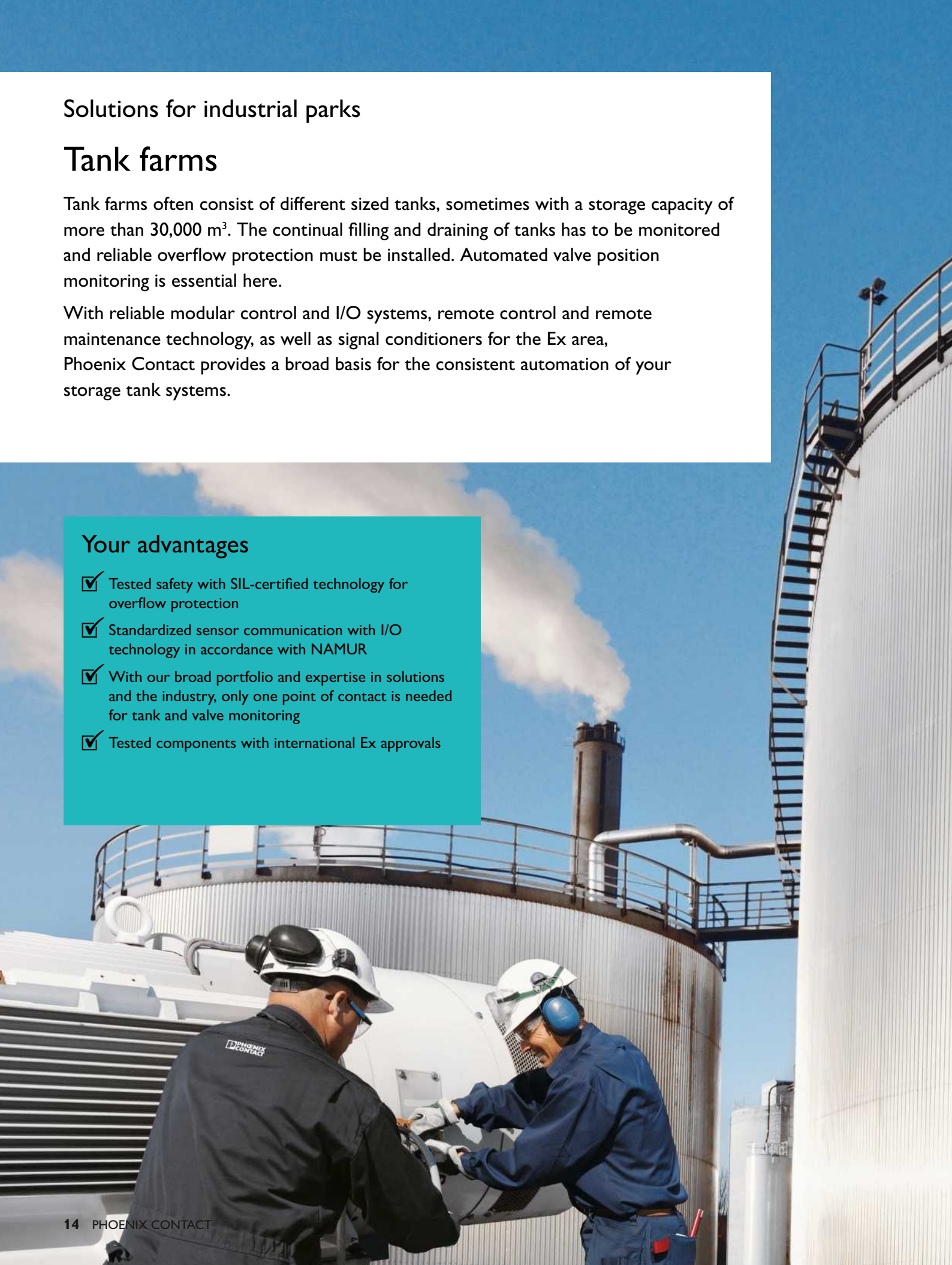
Fill-level monitoring

For efficient tank farm management, you must have an overview of the fill levels, the temperature, and pressure at all times. A system of various sensors, some of which are in the Ex area, records the relevant measured values. To ensure that you can transmit, process, and respond to these signals quickly, we provide you with the appropriate control and communication technology package.

ℹ️ **Web code:** #2030

Valve position monitoring

A valve position monitoring system based on NAMUR sensors provides an overview of your plant at all times. You can also retrofit existing mechanical valves into this system. The respective valve position is transmitted to your control room reliably via a wireless system.

ℹ️ **Web code:** #2035

Overflow protection

Automatic tank filling provides numerous advantages. For absolutely reliable overflow protection, however, an independent safety system in accordance with functional safety (SIL) must be installed. You can thus ensure that the inflow valves are reliably switched in the event of an emergency. Phoenix Contact provides the ideal solution, with redundant control technology and safety components.

Scalable automation modules for tank monitoring

With our broad portfolio of SIL-certified technology for functional safety, Ex i input modules, and modular control systems, you can create an efficient solution for fill-level control.

In addition to fill-level control, overfill protection equipment is installed that controls the safety valve in the event of an emergency and reliably stops the tank being filled.


Fill-level control

Overflow protection

Regulating valve

Safety valve

Tank farm

Junction box
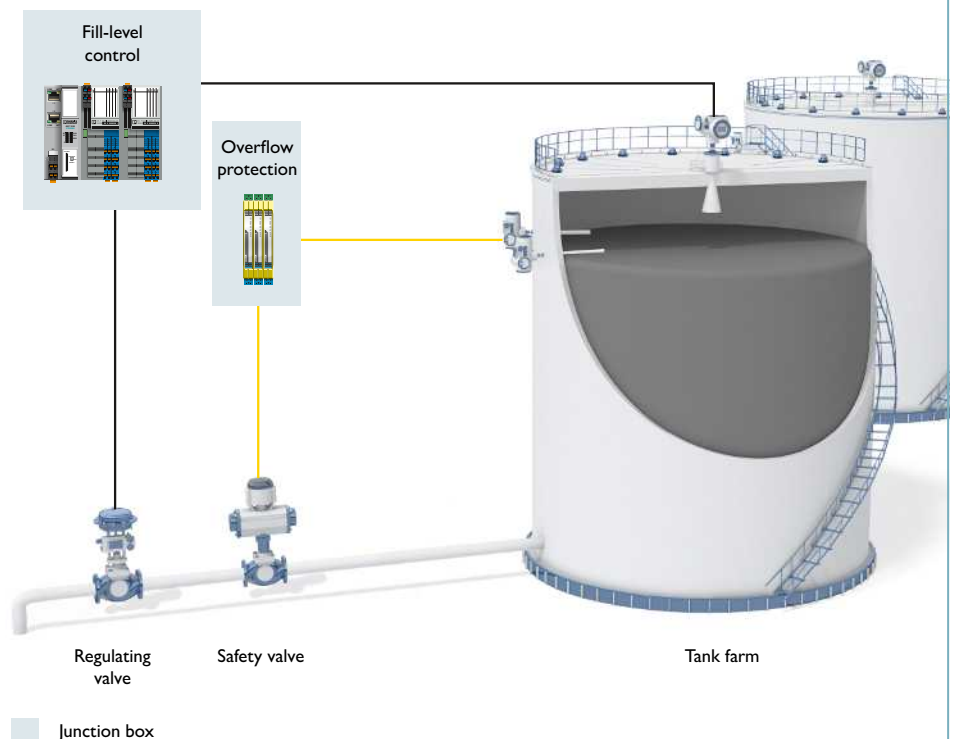
Solutions for industrial parks

Water and wastewater treatment plants

New process engineering technologies, IT security, and changes in maintenance present new challenges for the operators of water and wastewater treatment plants.

Benefit from our cutting-edge technology where we rely on open interfaces from the control room right through to field level. With a globally networked team and collaborations with industry-specific partners, Phoenix Contact is your reliable partner for future-proof solutions.
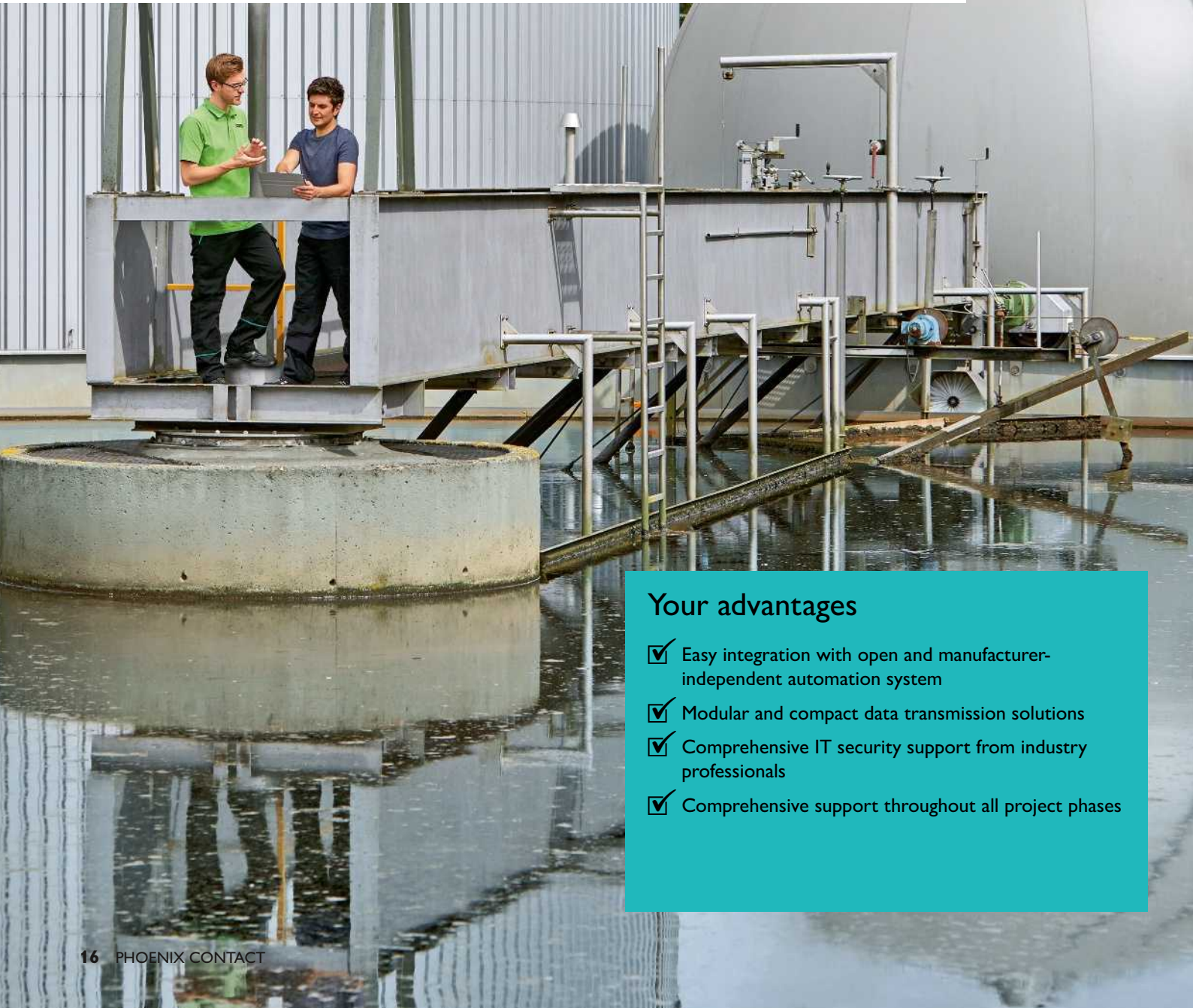
Your advantages

- ☑ Easy integration with open and manufacturer-independent automation system
- ☑ Modular and compact data transmission solutions
- ☑ Comprehensive IT security support from industry professionals
- ☑ Comprehensive support throughout all project phases

Well and inspection shaft monitoring

With retrospective well and inspection shaft monitoring, the unauthorized opening of a shaft cover can be signaled, as can the groundwater level, pH value or function of a pump. All data is automatically transmitted to the control center, thereby reducing the amount of work involved and, for example, providing proof of compliance with environmental regulations.

i **Web code:** #2032

Wastewater treatment

A modern wastewater treatment concept is essential for sustainable water conservation and to protect drinking water for the future. Our technologies and solutions help you reduce costs, increase energy efficiency, and support the latest approaches to maintenance and repair.

Pump and motor monitoring

Unplanned failures can often be traced back to machinery or rotating equipment. When maintenance is performed, it is carried out too soon or too late, thereby resulting in production stoppages. With permanent monitoring of critical pumps and motors, we enable you to perform maintenance at precisely the right time. Depending on the size and type of machine, hydraulic, mechanical or electrical monitoring may be useful.

i **Web code:** #2036

Secure data communication through to the control room and beyond

PROFINET enables the easy integration of all distributed areas, such as the grit chamber and grease trap, into the system network. Signals from potentially explosive areas, such as the screening building, are acquired with the help of intrinsically safe input and output modules and then transmitted reliably to the control center. The resources of your plant can be utilized efficiently via remote system access. Protected access via security router also provides a secure connection.
The PumpMonitor solution enables predictive maintenance and optimization of your plant.
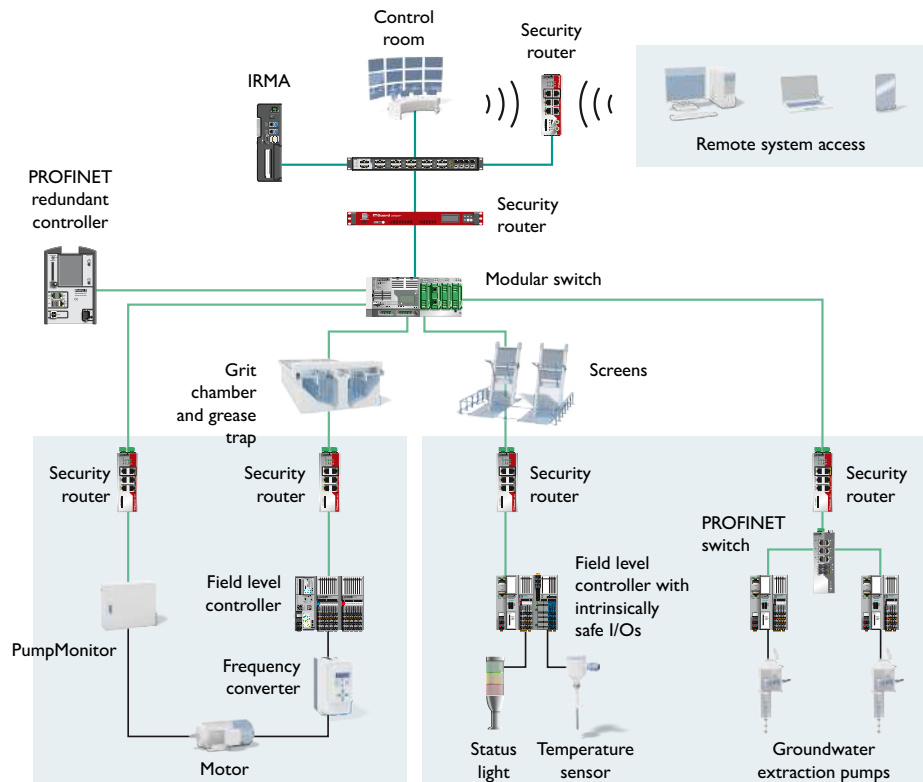
Solutions for production plants

To ensure the security and availability of complex systems in the chemical and pharmaceutical industry, operators must plan and develop their systems in accordance with state-of-the-art technology and the currently applicable standards. Superior, impact-free system availability and efficiency in the control system are achieved through the utilization of digital technologies and data. For cost-effective system operation, Phoenix Contact offers space-saving and customer-specific migration solutions with short setup times, as well as failsafe redundancy concepts.

Overview: Production plants

Communication solutions
Solutions for marshalling analog
signals and boxes for field
connection via PROFIBUS PA
and FOUNDATION Fieldbus.

Modernization and digitalization
Solutions for a three-step plan for a
state-of-the-art digital plant.

**Networks in process
engineering**
Failsafe solutions for
system networks, also
based on SIL and ATEX
components.

Solutions for production plants

Modernization and digitalization

In many production facilities, control systems from different manufacturers and different generations are in use due to their long runtimes. Accordingly, the modernization of process plants is inevitable.

Phoenix Contact will accompany you on the journey to a state-of-the-art digital plant. The aim is to bring communication right up to date in order to optimize maintenance processes, reduce unplanned failures, and make inspection rounds paperless.

Web code: #2260

Your advantages

☑ Reduction in marshalling costs with control cabinets reduced by up to 20%

☑ Entire signal marshalling concept from a single source

☑ Easy integration of existing and additional process data in the cloud

Modernizing control engineering

Analyzing the current status of your systems is recommended in order to determine the right time for migration. Our automation technology experts will help you make the conversion from old to new. We take careful stock and consult with you to keep downtimes to a minimum.

Paperless documentation

Once the control engineering and MCR technology has been brought right up to date, the next step for system fitness takes place in the field. This is where the combination of smart plant marking and industrial WLAN coverage forms the foundation for efficient maintenance processes. These can be introduced gradually.

Combining measured data with artificial intelligence

By collecting measured data, you can detect potential malfunctions at an early stage, and can therefore schedule troubleshooting and the associated downtime in good time. You can even postpone these until later, if necessary. Incorporating web services is an easy and secure way to generate added value.

Modernizing process plants

Additional measuring points
You can integrate additional measuring points into your plant system via our Radioline system, for example. The secure wireless connection eliminates the need for expensive cable connections to remote measuring points.
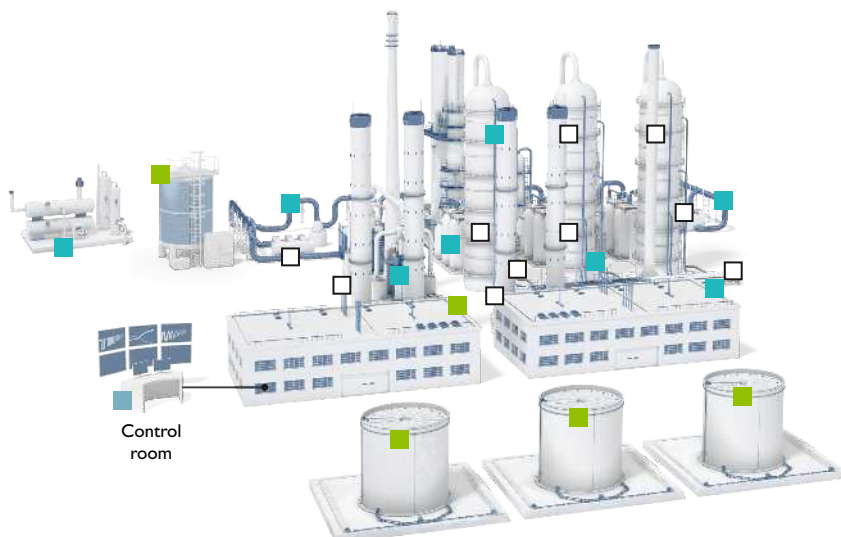
System expansion
In order to lay the foundations for future expansions, the space available in the control cabinet must be utilized more efficiently. With our expertise, we will be happy to develop the right marshalling concept for your switch room.

Monitoring
The new trend towards NAMUR Open Architecture in process technology enables measured values to be fed easily and securely to secondary systems for analysis. One way of implementing this is with HART gateways in conjunction with PROFICLOUD.

Retrofitting/migration
Along with device and connection technology, as well as components for control cabinet and field installation, we offer consulting and engineering services for the right overall concept when retrofitting and migrating brownfield plants.

Control room

☐ Additional measuring points

🟩 System expansion

🟦 Monitoring

🟦 Retrofitting/migration

Solutions for production plants

Signal connection to control systems

System availability is the key factor when integrating analog field signals and fieldbus systems for automation in distributed control systems. As your expert industry partner, Phoenix Contact provides scalable solutions: increase your system availability by minimizing the consequences of an error in the segment. For example, you can replace or extend signal conditioners while the process is running without affecting communication to the fieldbus node.

Your advantages

☑ Superior availability in the event of an error with hot swappable components

☑ Quick installation with ready-to-mount, prewired field connection boxes

☑ Space-saving marshalling of many signals with compact wiring solutions such as Termination Carriers
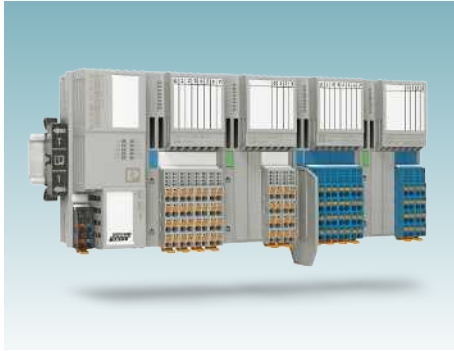
Superior availability with hot swappable I/Os

Axioline P is the I/O system for high requirements in the process industry. The system is characterized by its very high degree of reliability and failsafe performance. This is ensured by mechanisms such as the hot-swap capability in the local bus and support for PROFINET system redundancy. For example, you can connect intrinsically safe Ex i I/O modules to Ex-approved NAMUR and HART sensors.

Solutions for PROFIBUS PA and FOUNDATION Fieldbus

Phoenix Contact provides ready-wired solutions for reliable and seamless communication via FOUNDATION Fieldbus and PROFIBUS PA. This saves you time during installation and ensures the availability of your system, thanks to the hot-swap capability of the components. Versions with 24 V DC distribution are also available for 4-conductor fieldbus devices.
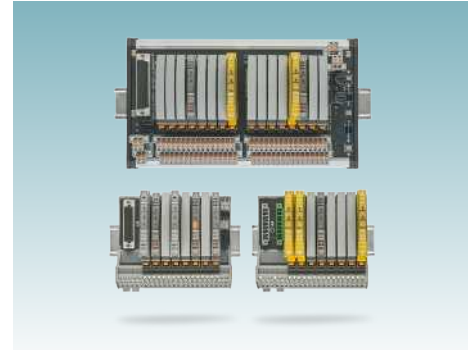
Flexible I/O marshalling system

VIP I/O marshalling is the flexible I/O marshalling system that makes Universal I/Os on the interface and marshalling level truly "universal". It combines a standardized base module and replaceable input/output accessories (IOAs) with different electrical functions. This therefore offers brand new possibilities, both for new plants and retrofits.

[i] **Web code:** #2321

## Marshalling setup for intrinsically safe signals

Reduce the number of control cabinets by increasing the signal and packing density. With our solutions for signal marshalling, everything remains manageable and you save space – from the Ex area and cross-marshalling with interface modules to the I/O cards of the DCS. Innovative marking solutions, including for the Ex area, round off the package.
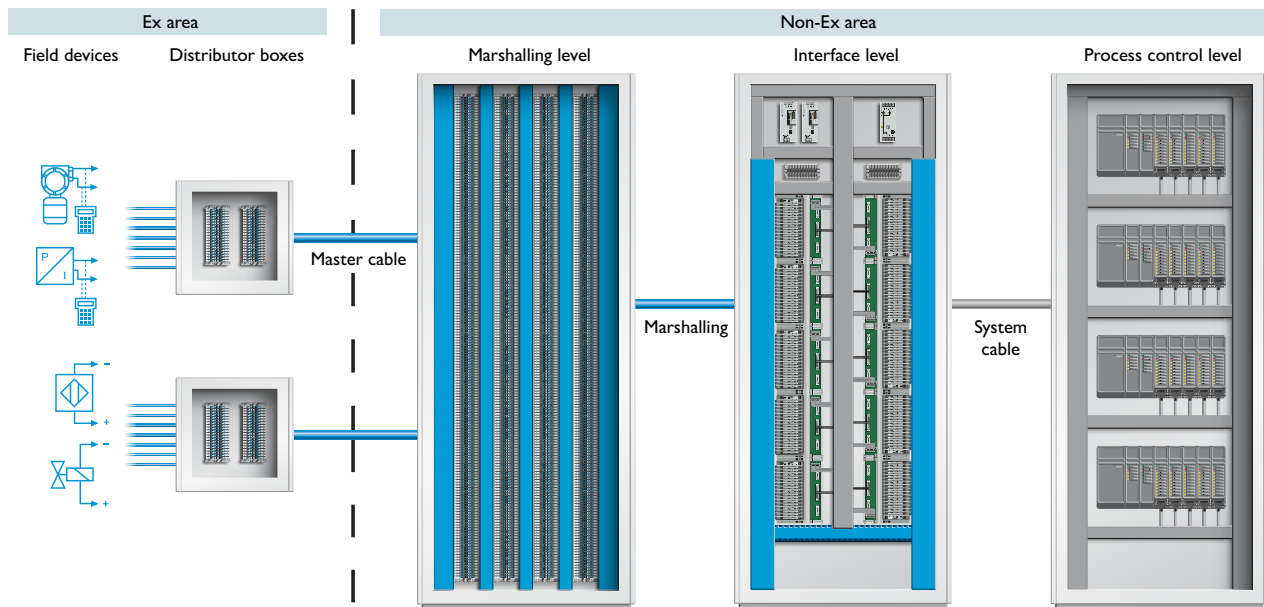
Solutions for production plants

Networks in process engineering

In process engineering plants, the result depends on a continually controlled process.
It is important to monitor every part of the process precisely and to ensure seamless
and failsafe data transmission from the sensor through to the control center.
Phoenix Contact is synonymous with quality between the control level and the field.
This means acquiring, transmitting, converting, connecting, isolating, amplifying, and
switching analog, binary, and digital signals reliably. Redundant network solutions ensure
that this information is always available at the right place.

Your advantages

☑ Redundant and therefore failsafe communication
networks from the sensor to the control center

☑ One point of contact for solutions with SIL and
ATEX-certified components

☑ Uninterruptible power supply with redundant power
supply units

Redundant networks

Irrespective of which transmission medium you use in your process, we have the right network components to allow you to set up a failsafe communication solution, e.g., with RSTP (Rapid Spanning Tree Protocol) or MRP (Media Redundancy Protocol). The basis for this includes high-performance Gigabit switches, security routers, interface converters, and controllers from Phoenix Contact.

Redundant power supplies

If the energy supply to plant sections or individual components is briefly interrupted, this can lead to long and therefore costly production losses as a result of long process shutdown and startup times.
Phoenix Contact offers consistently redundant auxiliary voltage supplies from the mains to every consumer.

Cybersecurity

The mGuard firewall routers securely protect your network against the many dangers associated with increased networking. Reliably protect your system against unauthorized access by using secure VPN connections with an integrated firewall. Deep Packet Inspection (DPI) also inspects the contents of data packets and increases the security level in the case of OPC Classic and Modbus/TCP communication.

High-availability system network

Security

In large-scale networked process plants, it is essential to securely protect the network against unauthorized access by people or malware. We provide products and solutions for secure system networks in accordance with IEC 62443 and ISA-99, secure access solutions for external service engineers as well as Deep Packet Inspection for the highest possible security level.

Network redundancy

Process networks require a particularly high level of failsafe performance. Redundant network structures ensure that communication is maintained even in the event of an error.
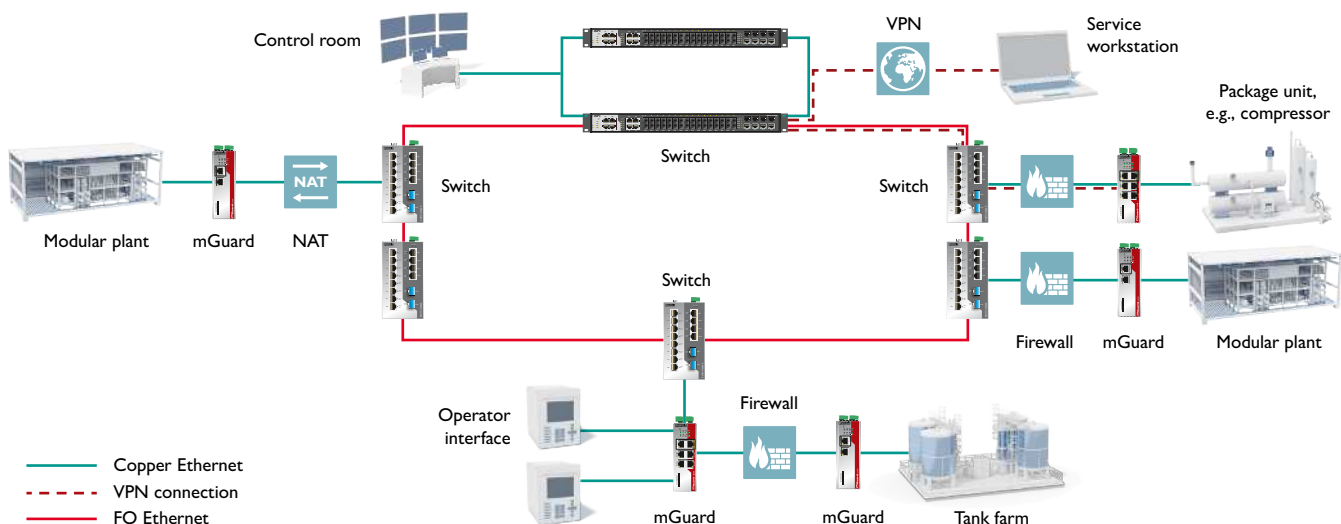
Solutions for modular production

Modular automation plays a vital role in the chemical and pharmaceutical industry, enabling the capacity of production plants to be adapted to market conditions. In addition, consistent modularization and the use of standards reduce automation effort considerably. This results in significant time savings in engineering. Phoenix Contact will be happy to advise you regarding the implementation of NAMUR recommendation NE 148 and support you in the startup of your plant modules. We also offer the MTP Designer, a tool that enables you to plan modules very quickly and easily.

Module Type Package (MTP) in automation

Cross-manufacturer standards are required for the modularization of automation systems. MTP is one such standard that has become established. It provides a functional description of process modules and makes it easier to integrate them into higher-level automation platforms in the overall plant. With this in mind, standard VDE 2658 was developed jointly by the chemical industry and automation manufacturers.

i Web code: #2265

Overview: Modular production
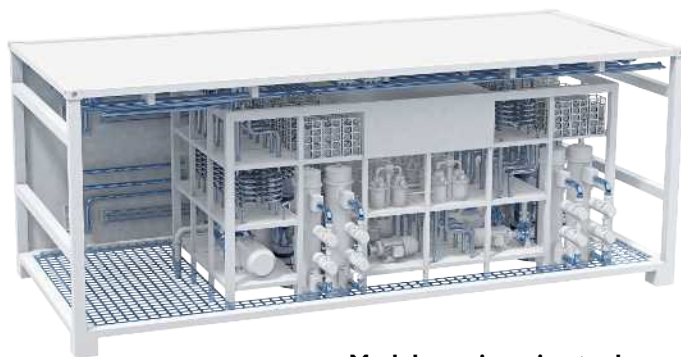
Module engineering tool
The flexible MTP Designer software solution from Phoenix Contact makes your module planning quick and easy.

Solutions for modular production

Software solution for module planning

In order to strengthen your competitive position, it is important that the automation-related integration of machinery into the overall plant is as straightforward as possible. MTPs make this a much simpler process.

Phoenix Contact offers a module engineering tool that enables you to automatically create the MTP description file from a piping and instrumentation diagram. You can also save time by performing the module engineering and plant engineering in parallel. In addition, the programming effort is reduced significantly.

Your advantages

- ☑ Easy startup and configuration, as the program body is automatically created based on piping and instrumentation diagrams
- ☑ Easy handling, as the HMI is generated automatically
- ☑ Convenient parameterization, as services and their parameters are easy to create and manage
- ☑ Automatic creation of the MTP file for connection to the control system
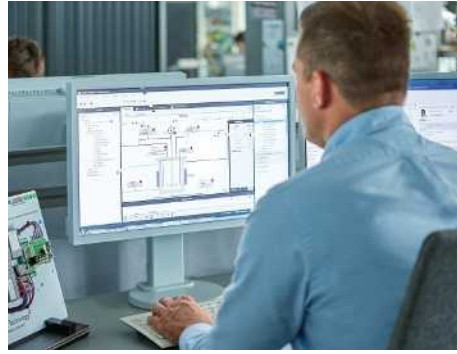
Module engineering

The module engineering describes parts of a process plant and is divided into smaller function units. In a fully automated process, the MTP Designer module engineering tool creates the program body for your module automation. All services and all automation objects are created in accordance with VDI/VDE/NAMUR 2658.

Modeling with a click of the mouse

In addition to module engineering and plant engineering, the local visualization is automatically created on the controller based on the piping and instrumentation diagram. Parallel to the generation of the visualization, all interfaces (OPC UA tags) are defined for subsequent data transmission.

Integration into the control system

The description file created by the MTP Designer also contains formal descriptions of the interfaces in accordance with VDI/VDE/NAMUR 2658 Part 3. This means that the programmer of the distributed control system already has all the necessary information at an early stage: a presentation of this visualization as a derivation of the piping and instrumentation diagram, plus all the interfaces required to transfer the necessary data.

Module engineering tool

Based on existing process engineering flow charts, the MTP Designer tool is used to create a simple engineering option. Local visualizations, standard-compliant program bodies, and the connection to the control system can all be created easily.

CAD — Process engineering flow chart

MTP — MTP Designer software

MTP file

IEC 61131-3 — Program

Visualization
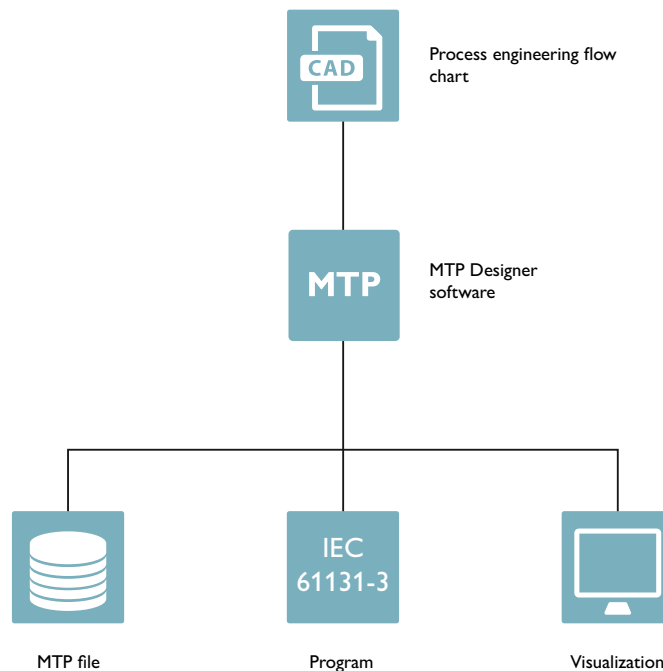
Quality is no coincidence

It is only when you keep sight of every little detail that you can be sure of the quality of the entire product. For this reason, we not only manufacture our screws ourselves, but also develop tailor-made software and offer engineering services from industry professionals.

This allows us to secure our commercial and technological independence and gives us the freedom to develop new industrial solutions. You benefit from this because, for example, we are able to offer you pre-assembled control cabinet solutions. These are specifically tailored to your industry and have all the necessary certifications and approvals. "Made by Phoenix Contact". For us, this means the best quality in every product, in every discussion, for the entire solution.
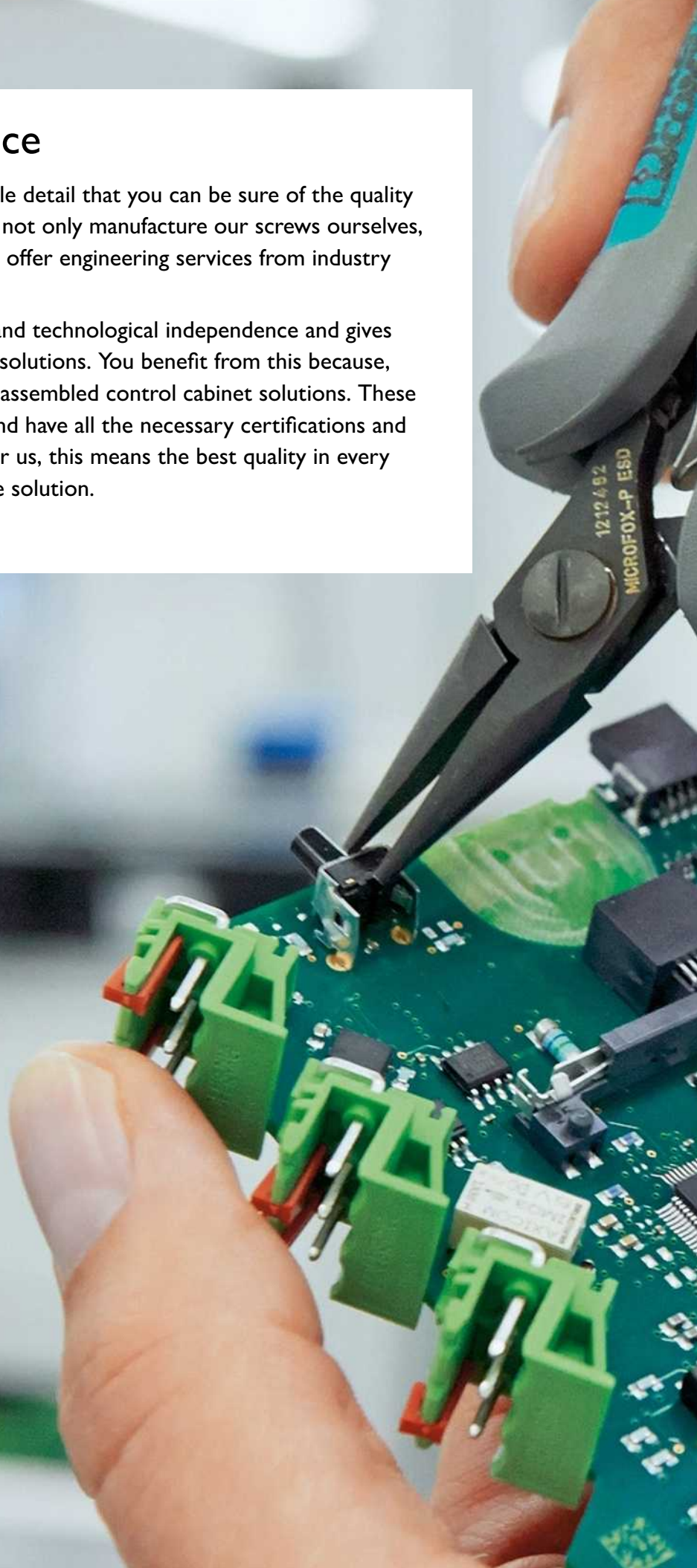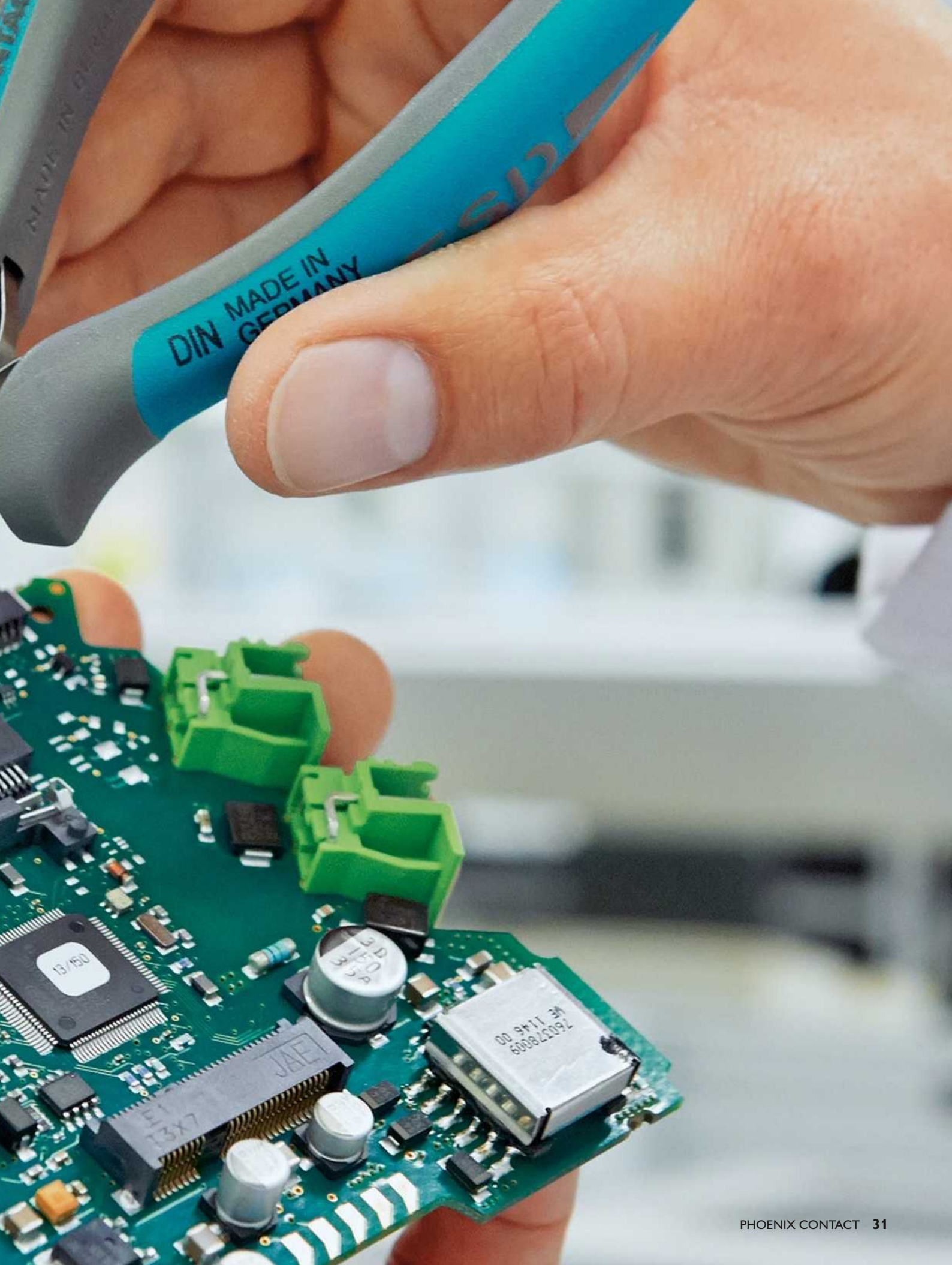
Quality is no coincidence

Engineering and control cabinet solutions

We set the highest standards for your industry solution: everything is tested and certified, from the pre-wired and pre-programmed control cabinet solution to the engineering service. Our industry experts advise you during every phase of your project cycle and, if required, handle the engineering of your system.

All Phoenix Contact components undergo intensive testing in the independent and accredited Phoenix Testlab. Control cabinet solutions are designed and engineered in accordance with the required standards and directives. You can therefore be sure that our finished solution products satisfy the most stringent requirements.
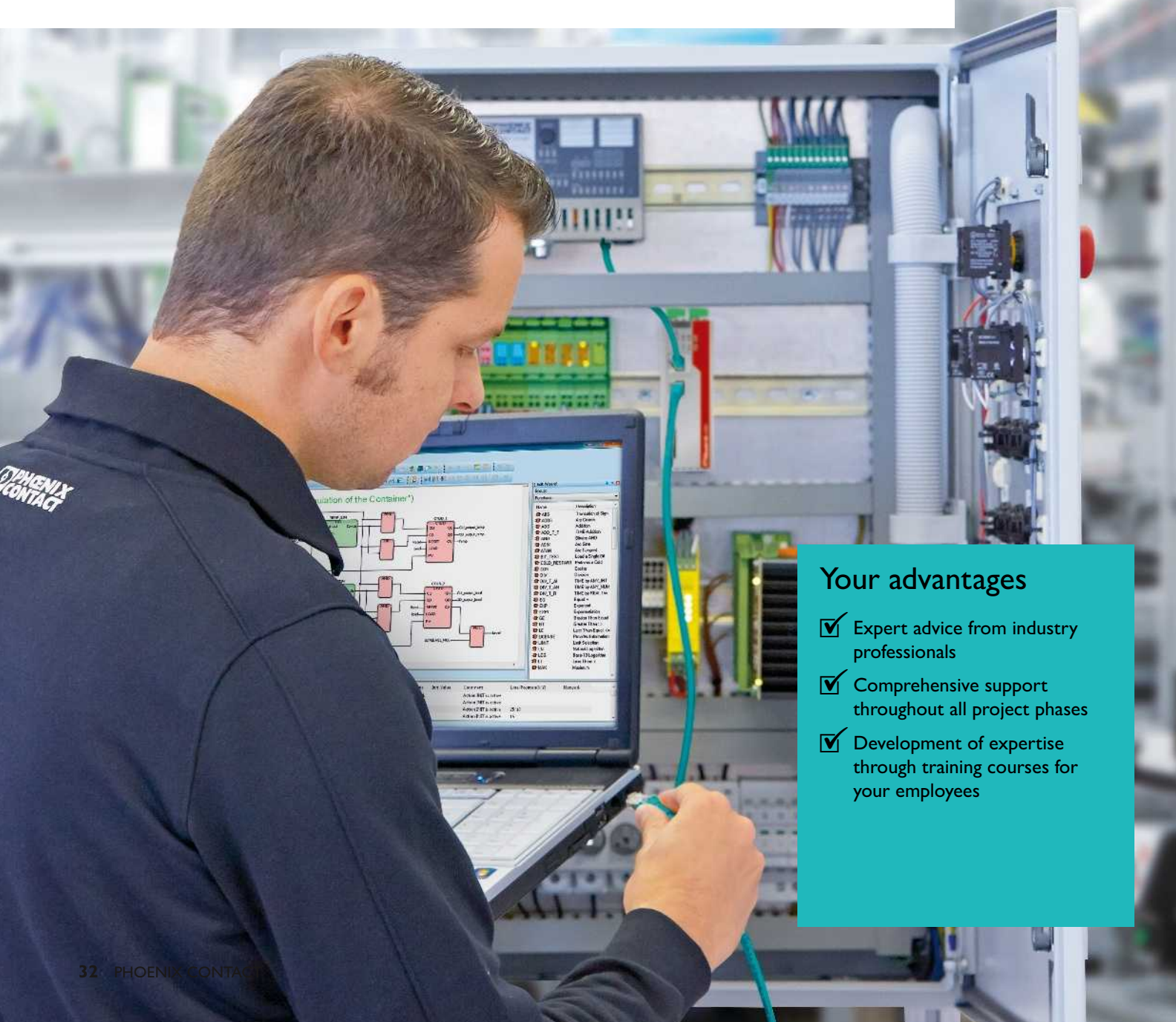
Your advantages

- ☑ Expert advice from industry professionals
- ☑ Comprehensive support throughout all project phases
- ☑ Development of expertise through training courses for your employees

Engineering

Based on the typical phases of a chemical and pharmaceutical project, we provide support by working with you at each stage. Simply provide us with an outline of the application you would like to implement. We will then provide you with a technical concept that includes suitable hardware and software:

• Configuration
• Programming
• Visualization
• Coaching

Control cabinet solutions

Working together with our customers, we develop control cabinet solutions which, depending on the requirements, are ready to use or are already pre-wired so that you can carry out final installation.

With a network of partners made up of proven control cabinet manufacturers, we can create specific industry solutions that satisfy the most stringent requirements.

This means that high quality is ensured in every step of the development process. A process-oriented, integrated management system based on international standards DIN EN ISO 9001 and 14001 ensures that legislation and standards such as EU directives 2012/19/EU (WEEE) and 2011/65/EU (RoHS) as well as customer specifications are taken into consideration during product manufacturing.

Quality from planning through to production

During preliminary development clarification, all departments work closely with the customer. Following preliminary clarification and the design phase, a prototype undergoes specific tests. The knowledge gained is integrated into product optimization.

As part of the project process, we provide support for the development of solutions: from initial planning and configuration through layout and design to assessing and verifying the specified standards, as well as providing documentation and EPLAN-based circuit diagrams. Production planning and control then follow and, where appropriate, series production.
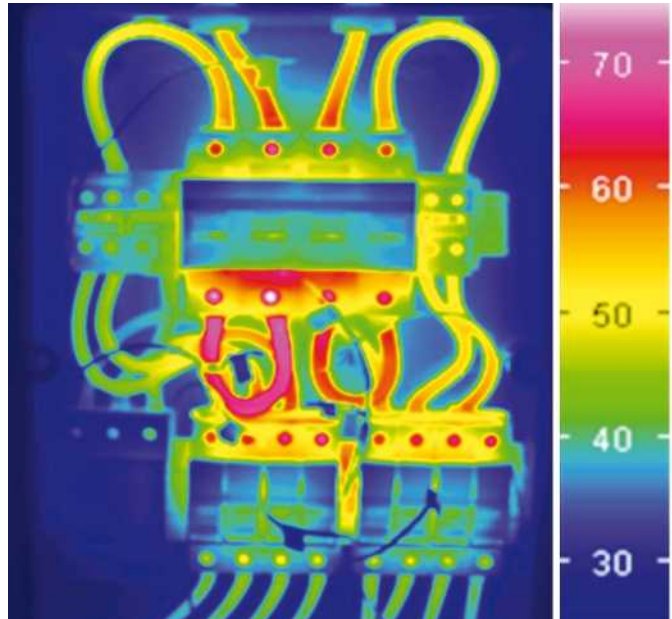
Quality is no coincidence

Our expertise for your safety and security

Phoenix Contact offers a comprehensive portfolio of services in the area of functional safety, ICS security, and industrial communication technology. We know and understand the expectations and demands placed on automation and network technology in your chemical and pharmaceutical projects. We will therefore provide you with advice, evaluate and plan on the basis of your application, and implement the necessary measures.

Learn more about our services

We will provide you with flexible support so that you can concentrate on your core expertise. Feel free to call us or send us a message with your inquiry.
Hotline: +49 5281 946-5555
E-mail: services@phoenixcontact.com

Our range of services

Functional safety

Consultation
We provide advice regarding the planning and implementation of your system.
- Design of the safety lifecycle: standards and their implementation
- Machinery Directive
- Changes to machinery and systems

Engineering
To assess the safety integrity, we determine the SIL of the safety functions with the help of your technical documentation. These must be sufficiently robust to withstand random errors. In the case of Machinery Directive requirements, we implement the entire safety lifecycle process.

Seminars
Functional safety in the process industry in accordance with EN 61511:
- Risk analysis
- Safety lifecycle
- Creation of PCE safety functions

We will accompany you through the entire safety lifecycle for your applications

Safety application software:
- Requirements for safety-related software
- Specification of safety requirements and software
- Implementation of safety functions
- Development of function blocks

Our experts are on hand to assist you and share their extensive technological expertise

Product support
We provide support in the event of any questions you may have regarding Phoenix Contact safety hardware and software. You can contact our support team about anything – from a preliminary clarification of the technical aspects through planning and implementation to operation.

24-hour safety hotline: +49 5281 946-2777
E-mail: safety-service@phoenixcontact.com

ICS security and industrial communication technology

Evaluation and planning
We offer you more than just a one-size-fits-all solution. To achieve your protection objectives, we analyze your requirements and adapt them in accordance with relevant standards and directives. We will analyze your network and present optimization options to ensure high availability.

Implementation
We will identify vulnerabilities in your security and your network for greater transparency in your process plant. We will support and advise you with regard to technical restructuring or new requirements for your system – from field level to company level.

Maintenance and support
Stable and reliable processes are essential for productivity, quality, and delivery reliability. With our support in the areas of security and Industrial Ethernet, we safeguard your production and thus minimize downtimes.

Seminars
Due to attack dynamics, awareness is becoming increasingly important. With our cybersecurity competence center in Berlin, we also have in-depth expertise in the area of industrial cybersecurity. We would be happy to share this knowledge with you in our seminars:

- Ethernet basics
- Security principles and awareness
- Product training
- Customized workshops

We will support you in the creation of your customized protection level

Quality is no coincidence

Service and support

Implement your chemical and pharmaceutical projects more quickly and efficiently. Whether you operate, plan, produce or maintain systems – Phoenix Contact provides support via its telephone and online service as well as industry experts on site. Numerous seminars are available for training your employees, either at Phoenix Contact headquarters or on site at your company. As part of our after-sales service, we provide expert advice regarding any aspect of your products and solutions.

Your advantages

- ☑ Expert advice from industry professionals
- ☑ Comprehensive support throughout all project phases
- ☑ Development of expertise through training courses for your employees

Customer-specific solutions

From minor adaptations to completely new product developments – the Phoenix Contact service team will focus on your specific requirements. With many years of experience in the chemical and pharmaceutical industry, we will support you step-by-step in creating an individual solution.

Knowledge and information

Phoenix Contact provides the training programs that you need, including short evening seminars, expert seminars over several days, webinars, and e-learning courses. Classification into Basic, Advanced, and Individual simplifies assignment to a course.

After-sales service

Our service network is always on hand to assist you during installation, startup, and operation. Contact us on the free hotline for 24-hour product support.

Hotline: +49 5281 946-2888

Local expertise

Phoenix Contact supports you worldwide with professional service and support for all aspects of products, services, and solutions. Depending on the requirements, we ensure the fast replacement of products or support you in the event of problems by patching into your system.
Our experts are familiar with the regional conditions and specific challenges of your industry. We will be happy to provide support all over the world with our close network of automation experts. Contact us for more information.

Quality is no coincidence

Inspiring industry solutions with excellent products

Phoenix Contact provides you with innovative solutions for all industrial park, production plant, and package unit applications. These solutions are based on a wide range of connection and automation technology. Intelligently combined, these products become systems for a variety of functions such as control, remote monitoring or measured value acquisition. Inspiring industry solutions are created based on industry expertise, many years of experience, and consideration of special requirements.

Excellent products

Innovative systems

Excellent products

Signal conditioners

Isolate, convert, filter, and amplify: our signal conditioners ensure interference-free transmission of your signals, including for intrinsically safe circuits in the Ex area.

Surge protection

Increase your system availability with intelligent surge protection for all applications, from the power supply through to measurement, control, and communication technology.

PLCnext Technology

With its integrated gateway, our PLCnext AXC F 2152 open control platform enables easy cloud connection of process data from the field.

System cabling

Bring old control systems in line with state-of-the-art technology using refit adapters from Phoenix Contact.

Power supplies

We provide uninterruptible power supplies and redundancy modules for the maximum availability of your systems in the chemical and pharmaceutical industry.

Fieldbus components

Find appropriate components such as gateways, field device couplers or wireless solutions right through to ready-wired control cabinets for PROFIBUS PA, FOUNDATION Fieldbus or HART.

Safe coupling relays

Reliable signal coupling must be ensured in the event of an emergency. Phoenix Contact offers coupling relays with force-guided contacts for this.

Terminal blocks

Save time and space: our terminal block portfolio offers quick and easy-to-operate connection technology tailored for use in your process application.

Industrial Ethernet and cybersecurity

WLAN routers, switches, cellular routers, etc. enable efficient remote maintenance and continuous data acquisition. Furthermore, security routers protect your system against unauthorized access and tampering.

Inspiring
industry solutions

Open communication with customers and partners worldwide

Phoenix Contact is a global market leader based in Germany. We are known for producing forward-thinking products and solutions for the comprehensive electrification, networking, and automation of all sectors of the economy and infrastructure. With a global network, we maintain close relationships with our customers, something we believe is essential for our common success.

You can find your local partner at

phoenixcontact.com

PHŒNIX CONTACT