Customer references

Industrial identification solutions

MARKING system
Your identification solution

Phoenix Contact develops holistic identification solutions that are tailored ideally to the requirements of the customer. Partnership-based cooperation and an intensive examination of the individual requirements are always the focus of our work. This is how we develop the exact solution that suits your company.

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

MARKING system
Simply easy!

We simplify your daily work – this is the promise backing every industrial marking and identification solution from Phoenix Contact. The MARKING system portfolio offers intuitive and user-friendly solutions for every application, from planning right through to the finished marking.

Printers

Whether laser markers, high-speed UV LED printers, or thermal transfer printers: all of these systems operate using a uniform user-friendly operating menu that provides you with intuitive support as you create your marking.

Your advantages

- ☑ Everything from a single source, from planning right through to the finished marking
- ☑ High-quality results in no time, thanks to perfectly coordinated components
- ☑ Time savings, thanks to the rapid integration of our software and devices into existing structures

Services

Expert support for every issue – by e-mail, phone, or directly on site. We stand ready to assist you at any time with services tailored to your individual needs.

Software

Easily plan your terminal strips using the PROJECT complete software, and create the corresponding markings in one work operation.

Material

The MARKING system covers every application with a wide variety of marking materials. Numerous versions are available for marking terminals, conductors and cables, devices, and systems for any demand.

Full speed ahead
Marking for shipbuilding

The renowned shipbuilder Kongsberg Maritime AS set itself ambitious targets for reducing costs and shortening the delivery times of its products. The company found the ideal solution for realizing these targets in the THERMOMARK ROLL and WMS-2 HF products from the Phoenix Contact MARKING system product range.

i | Web code: #1234

The company

Kongsberg Maritime is the market leader for dynamic positioning systems, automation and monitoring systems, satellite navigation, and hydro-acoustics. With its head office in Kongsberg, Norway, the company is part of the Kongsberg Gruppen group and operates in over 20 countries, delivering solutions for complex applications under extreme conditions to customers all over the world.

KONGSBERG

The products

The THERMOMARK ROLL printer prints labels and shrink sleeves in roll and continuous formats. The printer utilizes tried-and-tested thermal transfer printing technology. In combination with the CLIP PROJECT planning and marking software, the system produces accurately printed labels, markings, and shrink sleeves for marking terminal blocks, conductors, and devices quickly and easily.

The halogen-free WMS-2 HF shrink sleeves from Phoenix Contact enable the permanent and captive marking of conductors and cables up to a diameter of 38.1 mm and a shrink rate of 2:1.

WMS-2 HF sleeves can be used in both unshrunk and shrunk states. The shrink sleeve is supplied as pre-perforated continuous carrier material, and can therefore be processed quickly.

The THERMOMARK ROLL is the thermal transfer printer for materials supplied in rolls

The application

As a part of their range of complete solutions, Kongsberg Maritime AS produces signal distribution cabinets for applications in both Ex and non-Ex areas.

In order to decrease the overall costs and delivery time to their end customers, the company thoroughly evaluated the entire production chain. As a part of this evaluation, the cable marking operation within the cabinet assembly process was identified by the inspectors as being a time-consuming procedure, with great potential for optimization.

In a typical distribution cabinet, there are approximately 350 cables that need marking. One of the main requirements on the material is that the labels used must be able to be positioned without difficulty,

while at the same time providing good and permanent adhesion. Furthermore, the marked cables need to be bundled in a specific order to enable fast assembly. To save time, it is imperative that the labels can be mounted onto a cable with ferrules quickly and easily.

In close cooperation with Kongsberg Maritime AS, Phoenix Contact developed a product solution tailored exactly to these requirements.

By using the WMS-2 HF shrink sleeve product range, printed with the user-friendly THERMOMARK ROLL thermal transfer printer, Kongsberg Maritime AS optimized its production plan with a well-thought-out and efficient system. In total, the measures introduced reduced the processing time for

marking cables by more than 30 percent.

This time saving was primarily thanks to the easy-to-open shrink sleeves, which enable faster processing of the ferrule-terminated conductors. The CLIP PROJECT planning and marking software also supported Kongsberg Maritime AS. In just one program, it integrates the data from the electronics planning system and creates the files for marking.

With this new marking solution, Kongsberg Maritime AS was able to gain a clear competitive advantage, thanks to the shortened production times and reduced costs.

Huge variety, high flexibility
Marking for control cabinet manufacturing

In order to decrease production lead times and increase productivity, control cabinet manufacturers around the world are increasingly in need of marking and identification products. The renowned control cabinet manufacturer P&V Elektrotechniek, the largest provider of this type of product in the Benelux countries, satisfies this requirement with the wide range of solutions from Phoenix Contact.

i Web code: #2002

The company

P&V Elektrotechniek, with its headquarters in Heusden-Zolder, Belgium, provides a wide range of different control cabinets. The company manufactures its products with a high level of customer orientation and innovations: from small terminal boxes right through to the largest distribution cabinet and from universal control cabinets right through to distributed low-voltage cabinets.

The products

The THERMOMARK ROLL and THERMOMARK ROLL X1 thermal transfer printer systems do not need any maintenance, and enable high-quality marking. With a resolution of 300 dpi, they also print the smallest font sizes in sharp detail, down to a height of 1.6 mm. The THERMOMARK ROLL X1 processes material off the roll up to a diameter of 200 mm, and is therefore ideally suited for the marking of large material quantities.

The magnetic PMM labels supplied on rolls enable individual and flexible marking for a variety of applications, e.g., for storage equipment marking. The magnetic tape also adheres perfectly to round objects with a radius of 12 mm and above. The high adhesive strength of 38 g/m² provides reliable and long-lasting marking of objects, even in harsh ambient conditions.

The high-performance THERMOMARK ROLL and THERMOMARK ROLL X1 roll printers

The application

entirely different areas of application within the company. The marking material from Phoenix Contact is not just used in control cabinets. Barcode printing is also used for automatic registration and data acquisition in the warehouse logistics chain.

For P&V Elektrotechniek, professional marking is an essential process in the production of high-quality control and distribution cabinets. In particular, the clear marking of conductors and cables inside a control cabinet is of the utmost importance. In the past, the company used pre-printed labels for marking conductors. However, pre-printed materials come with a downside in terms of availability and flexibility. Growing demand and the increasing complexity of the products led P&V Elektrotechniek to quickly realize that they needed to create more flexibility by printing their labels on site.

With the support of Phoenix Contact, P&V Elektrotechniek therefore developed an extension to its existing marking room. There are now more than 10 printers with corresponding marking materials in this room. With this system solution, P&V Elektrotechniek was able to reduce its direct marking costs by more than 40 percent, thus increasing the productivity of the process.

Thanks to the versatility of the THERMOMARK ROLL and THERMOMARK ROLL X1 printing systems, P&V Elektrotechniek is now able to create all necessary markings in-house. The requirement for a new marking material can arise from one day to the next, especially in complex OEM projects. The comprehensive Phoenix Contact product range includes more than 6,000 marking materials. With these, P&V Elektrotechniek can respond flexibly to the demands of its customers at any time.

The marking systems enable a high level of flexibility. As a result, P&V Elektrotechniek now also has an ideal solution for two

Small footprints, big impact
Marking for the mining industry

Shaw Controls, with the head office based in Johannesburg, South Africa, has over 30 years' experience as a manufacturer of quality motor control centers (MCCs), distribution boards, control desks, PLC and instrumentation enclosures, portable containerized substations and various other electrical enclosures. the increasing demand for those products also caused growing need for professional marking and identification solutions.

[i] **Web code:** #2002

The company

Focused on providing world-class electrical solutions, Shaw Controls has the expertise to make electrical and control panels for all types of applications in the switchgear industry. Including industries like mining, petrochemicals and manufacturing.

SHAW CONTROLS

The product

THERMOMARK CARD prints on card formats for terminal, conductor, cable and device marking applications. The printer utilizes the tried-and-tested technology of thermal transfer printing. In combination with the planning and marking software CLIP PROJECT, high-quality, fast labeling. printing times of: just 8 seconds for one UniCard are possible.

With over 200 different variations available, the UCT-TM material range offers you a wide marking selection for all major terminal block manufactures. The multi-section marking strips are simple to mount and can be easily separated if required.

In combination with the conductor marking solution PATG and UCT-WMT, THERMOMARK CARD offers you an unique, flexible and inexpensive labeling solution for labeling industrial applications.

The THERMOMARK CARD operates compatible with CLIP PROJECT

The application

Over the past few years Shaw Controls has successfully extended its product offering to encompass low voltage (LV) and medium voltage (MV) applications. In their manufacturing facility in Johannesburg, Shaw Controls now produces switchboard panels and control systems from 24 V up to 36 000 V (36 kV) for the industrial, mining and infrastructure sectors. Shaw Controls production workload increased accordingly, resulting in a higher demand for industrial marking and identification products. However, one tough challenge that they needed to solve was the reduction of the related increasing printing costs as well as lack of flexibility associated with their existing inkjet printing systems. Last but not least, the expansion of their product offering also implied the need to purchase printing systems that exhibit a smaller dimensions.

In order to adequately satisfy their needs, Shaw Controls printing system of choice was THERMOMARK CARD with UCT-TM, PATG and UCT-WMT material. Due to its fast printing speed, the absence of heat-based consumables and broad material selection, Shaw Control found a way to not only reduce their printing costs but also increase their shop floor flexibility.

During training sessions offered by PHOENIX CONTACT South Africa, Shaw Controls staff members were impressed by the speed and simplicity of THERMOMARK CARD. The printer exhibited no delayed warming up periods and expired cartridge warnings. In addition, the ease of installation of CLIP PROJECT marking and the fact that printing is easily accomplished via the network was also seen to be very useful.

Another advantage for Shaw Controls was the huge cost savings when comparing THERMOMARK CARDs' ribbon system to the previously used heat-based consumables. Finally, since printing space was limited, THERMOMARK CARDs' small footprint was ideally suited to solve this situation.

Subsequently a second THERMOMARK CARD was installed to assist with the growing workload.

Shaw Controls found the right solution to optimize their marking process in costs, space and quality according to their needs.

On the Road
Marking for well service applications

CS&P Technologies, LP is a global leader in well service pressure pumping equipment. Their complete line of equipment includes nitrogen pumping units, fracturing equipment, and cryogenic transports for land and offshore applications. For more than 35 years, CS&P has provided their customers with a competitive advantage by offering custom engineered equipment designed to meet their exact requirements. CS&P's control system is no exception and is founded on the belief that there is a better way to optimize equipment performance and reliability.

i Web code: #2003

The company

Headquartered in Cypress, TX, USA CS&P's production facilities comprise a total of 300,000 square feet. This includes a foundry, CNC and manual machine shop, fabrication and welding facilities and assembly space for well service pumping equipment. Further manufacturing locations include Canada, Mexico and Del Rio, TX, USA.

The product

THERMOMARK LINE is a user-friendly complete marking system comprised of the two printing devices THERMOMARK CARD and THERMOMARK ROLL. The unique combination of these two devices allow users to print labels, plastic labels, and shrink sleeves quickly and easily. Furthermore, a large touch panel and easily understandable text messages provide the highest convenience in operation.

BLUEMARK CLED provides lightning fast: wipe- and scratch-proof markings which can be used immediately, thanks to UV LED technology. Thanks to the high speed and the large storage magazine, the UV

LED printing system is ideally equipped for printing large quantities. Furthermore the zero-emission printing technology is particularly eco-friendly.

THERMOMARK CARD, BLUEMARK CLED and THERMOMARK ROLL (left to right)

The application

CS&P Technologies realized they needed a fully integrated system for identifying products inside and outside the control cabinet. In the past, some components were not labeled or ones that were, did not stand up to the harsh environments in the field. Safety and ease of identifying terminal blocks, wires, and devices were crucial to providing top quality products, so they looked for a suitable solution. In addition, as their projects start with the engineering, CS&P Technologies were looking for a user-friendly planning and marking software, capable to control and run diverse printing systems at once. For that reason, CS&P Technologies chose PHOENIX CONTACT's industrial marking and identification solutions

CLIP PROJECT sends print jobs directly to any of the four different printers. In terms of printing devices, THERMOMARK

CARD, THERMOMARK ROLL, BLUEMARK CLED and THERMOMARK X1.2 were chosen, because they not only work with just one software package but also a variety of specialized materials to meet CS&P Technologies specific requirements.

Additionally, BLUEMARK CLED provided two cabinet solutions CS&P Technologies was looking for: Labeling terminal blocks and providing device name tags that could withstand the outside elements. This requirement was essential since Pressure Nitrogen Pumping Units can be deployed around the world and will hence be exposed to very aggressive and harsh environmental conditions over a long period of time. For that reason, CS&P selected PHOENIX CONTACT aluminum labels printed with BLUEMARK CLED because of their high UV-, weather, chemical and oil resistance.

Last but not least, for quickly identifying devices, cables, electrical equipment such as circuit breakers and relays inside

the control cabinet, CS&P Technologies selected the THERMOMARK CARD and the THERMOMARK ROLL printer. In combination with the high-quality ink ribbons, all the labeling solutions applied are now resistant to solvents and any other harsh industrial condition.

This labeling concept using four different printer technologies driven by one comprehensive software provided CS&P a fast and flexible solution, saving them time and money. "Using components and wire marking cuts production time by over half" says Michael Scalf, CS&P Electrical Controls Department Supervisor. "No matter what our designers come up with, I know PHOENIX CONTACT will have what we need to clearly and precisely label our components for easy installation and service."

Globally consistent marking
Marking for machine building

Elettronica Sammarinese specializes in electromechanical engineering and is part of the SCM Group S.p.A., a leading provider in the fields of machine building and industrial components. Since it was founded in 1975, Elettronica Sammarinese has been configuring, assembling, and approving control boxes for automated equipment. Consistent marking of the products represents a key quality characteristic.

Web code: #1234

The company

Elettronica Sammarinese serves domestic and international customers from a wide range of industries. The Italian company advises its customers on the creation of prototypes, accompanies them through the subsequent production planning phase, and provides support in the conversion of existing production processes. Its customers thus gain optimum competitiveness with innovative technologies.

scm group

The products

Various subcontractors are involved in the Elettronica Sammarinese production process and their requirements when creating markings are not always the same. The use of different printing systems allows for individual solutions: the BLUEMARK CLED prints marking materials at high speeds with high-quality UV LED technology. Various thermal transfer printers process the materials reliably and efficiently. For example, the THERMOMARK X1.2 marks large quantities of roll and continuous material. The THERMOMARK CARD, on the other hand, prints materials in card and sheet format.

The CLIP PROJECT planning and marking software is the connecting element of the marking system, in that it interlinks all process steps and components. The software combines the configuration of the terminal strips with an efficient marking tool. Furthermore, CLIP PROJECT has an interface for all standard CAE programs and transfers planning data directly. The software manages the entire process chain, from the transfer of data, through product selection, right through to the complete documentation of each project.

The BLUEMARK CLED UV LED printer processes files from the CLIP PROJECT software

The application

Today's efficient design of modern production chains increasingly requires certain work steps to be outsourced to external service providers. This situation means that companies face the huge challenge of ensuring their products meet a uniform standard even when collaborating with subcontractors. In order to achieve high-quality results, it is essential to manage these outsourced processes efficiently.

Elettronica Sammarinese decided to change their marking processes because the existing procedure did not satisfy the quality standards of the company. The aim was to achieve a uniform standard for markings, even in decentral operations. To achieve this, the entire process needed to be optimized. After carefully analyzing all of the systems available on the market, the company decided on the

products of the MARKING system range from Phoenix Contact.

In order to find the ideal system for the company requirements, Phoenix Contact analyzed the processing sequences for the marking of components together with Elettronica Sammarinese. They then developed an integrated, customer-specific solution. This solution enabled the automation and coordination of the marking process at both company headquarters and on the premises of all the subcontractors involved. The installed marking system from Phoenix Contact satisfies the Elettronica Sammarinese requirement of integrating all processes of the company into a consistent complete solution.

The MARKING system consists of a perfectly tailored portfolio that not only provides the hardware for marking, rather a complete solution consisting of software, printers, and consumables. All components are seamlessly interlinked, and are designed to deliver maximum functionality and quality. As a result, the company receives optimum support in standardizing its markings. The MARKING system facilitates a consistent standard for all markings, even in decentral operations. In order to meet the specific requirements of the individual production steps, however, the company uses different printing technologies and marking materials.

With the MARKING system, Elettronica Sammarinese has an intelligent and flexible system tool kit available for the integrated implementation of all marking requirements. The system is suitable for marking terminal blocks and electric cables, right through to entire equipment.

Mobile, practical, and user-friendly
Marking for building technology

The Swiss company Alpiq InTec is the market leader for building technology and management. It plans, realizes, and manages turnkey complete solutions for building automation. When making adjustments or carrying out modernization work, new markings in the corresponding control cabinets are necessary among other things. Mobile THERMOMARK PRIME printers from Phoenix Contact are ideal here.

Web code: #1234

The company

As specialists in smart building, Alpiq InTec provides all services for building technology and management. These include the planning and realization of holistic solutions for electricity, heating, ventilation, air conditioning, sanitation, ICT services, as well as security and automation. They also include complex control cabinet installations that are regularly maintained and extended.

ALPIQ

The products

THERMOMARK PRIME is the unique combination of proven, reliable thermal transfer printing technology, a complete, integrated marking software, and a durable, independent energy supply. These properties mean that the printer is a transportable, mobile marking center for marking directly on site.

The integrated marking software enables easy data entry via the touch display, while the powerful battery ensures up to seven hours of operation without a mains connection. The materials and ink ribbons can be changed easily, in under 10 seconds. A wide range of materials, with more than

600 marker types, provides markings for the widest range of applications. At the same time, automatic ink ribbon, magazine, and material detection prevents printing errors.

Suitable accessories, such as the special backpack, ensure the comfortable transport of the compact printer and all materials. The THERMOMARK PRIME is therefore ready for the next job anywhere and at all times.

THERMOMARK PRIME mobile thermal transfer printer

The application

In the switching device and controller construction division of Alpiq InTec, highly qualified specialists create and maintain the complex control cabinet compositions that supply, control, and monitor buildings and systems, along with all their installations. Achieving long-term stable and captive marking on the countless terminals, switches and other components is extremely important here. Error-free identification is essential for both the initial installation work and in the event of service actions or troubleshooting. For this, Alpiq has been placing its trust in the robust and reliable THERMOMARK ROLL and BLUEMARK LED printers from Phoenix Contact for years. These printers are connected to the CAE systems used

by the designers via the CLIP PROJECT planning and marking software. They thus deliver the widest range of marking versions and labels quickly and reliably for both control cabinet assembly and installation work on site.

On the other hand, the creation of markings after changes or extensions to existing installations on site used to be much more complicated. However, rapid technical progress makes this increasingly necessary. In many cases there was no way to anticipate the likely needs before the event. Therefore, service employees had to write a list of the necessary markings by hand on site during the conversion. These markings could only be created once the employee returned to the office, before making the journey back to the site again in order to attach them. Due to distances of up to 100 km being involved, this procedure caused significant effort in terms of man hours and costs.

The Alpiq InTec team was therefore incredibly impressed with the mobile THERMOMARK PRIME printer from Phoenix Contact. The small, compact device fits comfortably into a backpack along with a wide range of label and marking types, and can be used directly at the control cabinet. A powerful rechargeable battery negates the need for a mains connection. The THERMOMARK PRIME printer prints the
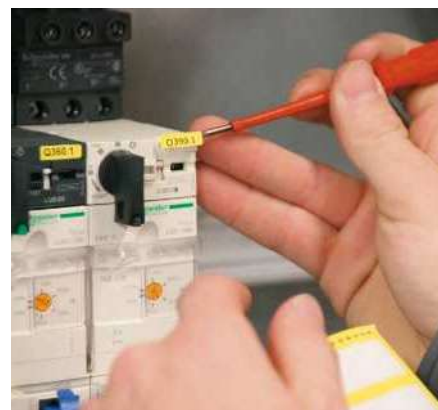
Clear and durable marking, thanks to thermal transfer printing

markings in the highest quality, thus ensuring the control cabinet will look professional even after it has been converted, without limitation. The employees are particularly pleased with the incredible user-friendliness of the software, and the huge time savings. The latter provide crucial competitive advantages in this highly competitive market and have a significant impact on the success of the company.
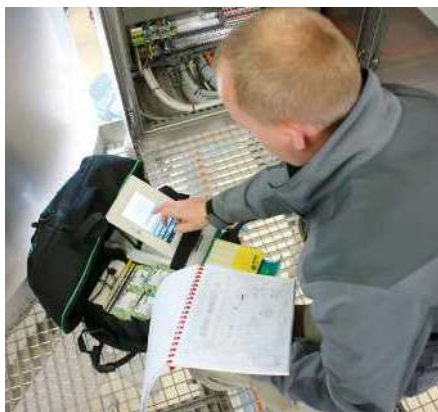
THERMOMARK PRIME in use at the control cabinet of a system of the potato chip manufacturer, ZWEIFEL

A great deal of power station in a small space
Power station identification system in use

K+S operates the Sigmundshall potash works in Wunstorf near Hanover, Germany. The KKS marking system has been introduced into the in-house power station that has been repeatedly expanded and modernized – using system expertise from Gabo IDM mbH and marking labels from Phoenix Contact.

ℹ Web code: #2004

The company

K+S is an international raw materials company and has been extracting and processing mineral resources for more than 125 years. In 2016, the listed mining company, with more than 14,000 employees, generated sales of approximately €3.5 billion. The extracted minerals are used in agriculture, nutrition, road safety, as well as in numerous industrial processes around the world.

k+s
Wachstum erleben.

The situation

In order to ensure the energy-sensitive processing of crude salt into high-quality products, the Sigmundshall mine operation has its own combined cycle power station – a gas and steam combined cycle power station. This has been extended successively over the decades and adapted to production capacities. Until the KKS power station identification system was introduced, system parts, units, and equipment were marked and documented in very different ways. Over the decades, and with changing system installers, this led to a complex hybrid system. Plant identification and documentation were not from a single source, and thus difficult to follow.

There were many reasons for introducing a comprehensive and standard-compliant marking and documentation system for all system parts and equipment – based on the standardized power station identification system (KKS). The primary aim was to increase operational safety, and to improve occupational health and safety. In addition, maintenance and servicing were also to be made easier, and the power station operation was to be made safer in accordance with the prevention strategy "Vision Zero. Zero accidents – work healthily!" of the BG RCI, the German employer's liability insurance association for raw materials and the chemical industry.

The K+S group Sigmundshall potash plant is the oldest active potash producing mine worldwide

The application

Before the introduction of the KKS power station identification system, all of the services required were defined based on the extensive existing documentation in order to tender the project. Following an in-depth technical and commercial evaluation, K+S awarded the contract to Gabo IDM mbH. The company from Erlangen, Germany, specializes in the technical documentation of plant management in energy generation. It creates – mainly via automated processes – the required information for organizing the operating processes in compliance with the law.

To prepare for implementation of the KKS system, Gabo IDM mbH first coordinated the transfer of all the existing system documentation and data structures into the AVIS management system, developed

in-house. During this procedure, a new data structure was developed. Using an actual state analysis of the technical documentation of the existing system, Gabo IDM then checked which standards and regulations were already complied with. With a view to achieving the required level of conformity, the necessary directives were drafted. The definition and implementation of all process steps was carried out in coordination with the responsible K+S contact partners. At the same time, the comprehensive system processes were to be prepared for future documentation.

Following the intensive preparatory work, all inventory plans were digitalized, and the old markings were transferred to the new identification system in accordance with KKS. An additional database ensured the transparent conversion from the old to the new system. Phoenix Contact then produced a total of more than 4,800 system marking labels. The TOPMARK LASER marking system was used for this. Thanks to a special laser marking procedure, the system guarantees good legibility and a high level of durability. Supplemented with the appropriate medium colors, the marking labels were installed at the Sigmundshall plant via a mounting carrier.

In order to increase clarity, special markers also mark the pipelines with medium and flow direction.

The digitalization of the system documentation also improved its availability. While previously, the documents had to be searched for in various files, the entire documentation for all system parts can now be called up via QR code.

The 25 power station employees have also familiarized themselves quickly with the new identification system and now find their way through the system easily. The documentation system forms a solid foundation for further system modifications as well as for future inspections – for example by the German TÜV institute.

Pipeline marking in accordance with DIN 2403 in combination with marked marking labels in accordance with KKS

In dialog with customers and partners worldwide

Phoenix Contact is a globally present, Germany-based market leader. Our group is synonym for future-oriented components, systems, and solutions in the fields of electrical engineering, electronics, and automation. A global network across more than 100 countries, and 16,500 employees ensure a close proximity to our customers, which we believe is particularly important.

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

You will find our complete product range at:

phoenixcontact.com

PHŒNIX CONTACT

INSPIRING INNOVATIONS