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The Customer Magazine from Phoenix Contact | September 2010



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Phoenix Contact components
Safe and Easy to Operate



Oliver Kirsch, Head of Global Industry Management Traffic, Phoenix Contact GmbH & Co. KG

Innovation in the rail industry

Dear reader,

In the coming decades, transporting people and goods will be one of the greatest challenges facing our cities and metropolitan areas. Safe and environmentally friendly rail solutions are one way of preventing the gridlocks that lie ahead. This is why the rail industry was hardly affected by last year's economic downturn.

Innotrans, the world's leading trade fair for rail transportation technology, is also reflecting the positive mood in the industry: More exhibitors than ever are scheduled to attend this year's event in Berlin in September.

In the run-up to the fair, we'd like to invite you to Phoenix Contact to discuss the latest developments and issues in the industry at our 4th Traffic Engineering Day.

A hot topic at this event will be the question of component reliability, which often comes up when deciding between COTS (components off the shelf) and custom products.

We offer you the best of both worlds: industry-proven electrical connection technology and automation technology for global use. Our products comply with all the rail industry's standards on shock resistance, vibration resistance, fire prevention and exhaust toxicity. Phoenix Contact has also been holding IRIS certification (International Railway Industry Standard) since 2008.

Let's talk about your needs! We look forward to seeing you at the upcoming Innotrans trade fair or at our Traffic Engineering Day!

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Cover Image: Quick-connection technologies help save time and money

Simple and Tool-free

The Sunclix DC plug system makes life easier for installers

SMA Solar Technology AG has partnered with Phoenix Contact to develop a new standard plug for power inverters that will save time and money for installers of solar energy systems. To learn about the advantages of the new plug system, UPDATE talked to Detlev Tschimpke, Head of Operational Product Management for Solar Power Inverters at SMA.

UPDATE: Mr. Tschimpke, customers can already choose from a wide variety of DC plug systems for connecting solar power inverters to a PV generator. Why offer yet another system?

D. Tschimpke: For us, Sunclix is more than just another system; it's an alternative with many new advantages. Until recently, installers needed a special tool for each type of connector system.



SMA power inverters can be connected to the Sunclix DC plug system without the need for a special tool

With Sunclix, they no longer need any tool. Now they can install the plug connector in just a few seconds, even under difficult conditions. This also saves the installer time and money and makes stock keeping easier.

UPDATE: But how do you ensure compatibility with all the other DC plug systems?

D. Tschimpke: It's very simple: We also supply the plug for our connector! For no extra charge. It doesn't matter which type of plug system is used on the solar module because installers have always had to prepare the end of the cable to connect it to the power inverter. With Sunclix, it's now even easier: Insert the stripped cable into the plug, snap it into place, tighten the screw and you're done. The system is suitable for cables of any standard gauge.

UPDATE: Do you think this partnership was successful and are you planning any more projects for the future?

D. Tschimpke: Definitely. As a market leader, we view innovation as a matter of principle. Sunclix is an excellent example of how we're continually striving to make life as easy as possible for installers. Ultimately, saving time also helps lower system costs.

We're also going to continue pooling our experience and expertise. The collaboration between our two companies shows how impressive the results of such partnerships can be.

UPDATE: Mr. Tschimpke, thank you for this interview.



Detlev Tschimpke, Head of Operational Management for Solar Power Inverters at SMA



“For us, Sunclix is more than just another system; it's an alternative with many new advantages.”

“Faster Installation for a Competitive Edge”

Minimal installation times thanks to reliable quick-connection technologies for device cabling and field cabling systems

In today's competitive global market, saving time and money is crucial, even when it comes to electrical installations. Insulation displacement technology, push-in spring-cage technology and pierce technology are three trend-setting alternatives to conventional screw systems that enable fast and secure cable connections.

Reliable quick-connection technologies can save huge amounts of time and money when wiring devices, control cabinets, machines, systems and buildings. As a result, there has been a clear trend toward quick-connection technologies in the field of industrial connection technology. These connection technologies are just as safe as screw and crimp connectors, which have been used successfully for decades. Quick-connection technology is especially effective in applications exposed to extreme vibrations.

and presses the conductor against the current bar of the contact. As a result, push-in spring-cage connectors make connecting conductors fast, safe and tool-free. A screwdriver is all that is needed to remove conductors.

This connection technology is used in products such as PCB plug connectors, M12 round plug connectors and contact inserts for Heavycon plug connectors.



Insulation displacement connectors

With Quickon insulation displacement connectors, flexible multi-pin conductors can be connected in just a few easy steps without any prior treatment. To establish a contact, the stripped conductors are simply inserted into the cable route, pushed into place and trimmed off.

When the nut is tightened on a round plug or the cable route is closed on a slip-on plug, the metal blades cut through the insulation and a reliable connection is established. This technology is quick and easy to use and reduces connection times by 80 percent when compared to conventional screw connectors. It is already used with round plug connectors, PCB plug connectors and modern RJ45 plug connectors for 10 gigabit connections (see page 8 for more information).



Pierce connectors

Pierce connectors make it easier to establish contacts with multi-pin flexible conductors. This is how it works: Without prior stripping, the conductors are inserted into the wire holder in parallel and trimmed off.

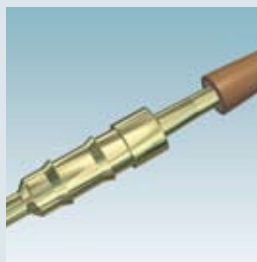
When the two components are screwed together, the rods enter the conductor axially to establish electrical contact between the



Push-in spring-cage connector



Quickon insulation displacement connector



Piercecon pierce connector

Push-in spring-cage connectors

With push-in spring-cage connectors, you simply insert flexible conductors with end sleeves or stripped conductors into the terminal points. There is no need for tools. As soon as the conductor is inserted, the contact spring opens



individual conductors. With this contact, the individual wires form an aligned contact zone. Since the wires are inserted in parallel in a compact space, pierce technology is especially suitable for plug connectors with high pin counts and compact plug connectors.

Examples include customizable M12 plug connectors with 17 pins or the smallest PCB plug connectors in the Combicon high density range (see page 7).

Quick-locking systems

Quick-connection technologies enable much easier and faster assembly of connector plugs. However, they save the most time and money when used with innovative quick-locking systems.

Instead of using time-consuming screw connections to connect plugs to devices or control cabinets, you can use quick-locking systems to make a secure connection in just seconds.

Simply by turning two bayonet locking mechanisms, heavy-duty Heavycon connector plugs can be sealed in accordance with IP69K, the highest protection category. And with just a half turn, M12 round plug connectors can be securely locked with the Speedcon quick-locking system.

PC 5 PCB plug connectors can be easily protected against vibrations using the Click-and-Lock system. In this way, users benefit significantly thanks to a combination of quick-connection technology for fast conductor

connections and quick-locking systems for fast connection of plugs and devices.

Saving time and money through fast connections

Whether you're developing electrical equipment, wiring machines, systems or buildings or transmitting signals, data or services, Phoenix Contact's quick-connection and quick-locking systems can save you huge amounts of time and money. ■

Reliable quick connection technologies offer huge potential for saving time and money

Benefits at a glance

- Significant time and cost savings through quick and easy assembly of plug connectors without the need for tools
- Highly reliable thanks to proven connector contacts and rugged housings
- Secure, fast assembly of plug connectors through use of quick-locking systems

FL MGuard security appliances can be installed in a control cabinet on the DIN rail or as PCI card directly on an industrial PC. Either way, the security appliances enable machines and systems to be securely connected to the mGuard Remote Services Portal.

Remote Services Made Simple

Secure remote maintenance with the mGuard Remote Services Portal

Implementing and operating an Internet-based remote service solution using internal resources is a challenging task. With the new mGuard Remote Services Portal, machine and plant manufacturers can offer their customers additional online services at little extra expense.

In the fourth quarter of 2010, Phoenix Contact customers will have access to the mGuard Remote Services Portal. The portal features a complete infrastructure for service technicians and machines using Internet connections that are protected by virtual private network technology (VPN). The portal is professionally operated from a data center, eliminating the need for companies to invest in and operate their own remote service center. Customers can also call an expert hotline if they need help implementing or using the portal. The service will be based on a contract that can be renewed annually for each machine or technician connected to the portal. For most customers, operating a comparable solution on their own would be much costlier, especially for those who connect moderate numbers of new machines each year.

Voucher along with some connection-specific data. This is similar to how prepaid cell phone customers update their service. The portal service then sends connection-specific configuration data for your existing Security Router mGuard, and then you simply download this data to your machines.

Easy to use

With the next generation of mGuard products, this process will become even simpler: all that will be needed is a formatted SD card configuration memory.

Alternatively, customers can send their newly purchased mGuard Security Appliances directly to the portal service, where they will be preconfigured and returned ready for use. In addition, the portal services supports VPN client software that allows mobile service technicians to establish secure connections to the remote maintenance portal from the field.

Free evaluations

Those who want to run their remote maintenance solution completely on their own can also benefit from the portal service: Customers can access the portal for a free test that enables easy evaluation of the mGuard remote maintenance solution under realistic conditions. ■



The new mGuard Remote Services Portal

Configuration on demand

Here's how it works: As a customer, when you decide to set up a new technician/machine connection to the portal, you go online and enter the code of your mGuard Secure Connect



Extremely Small

Miniaturizing automation technology

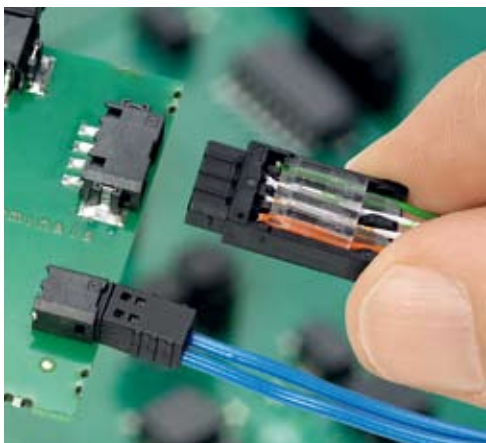
Today, many products are available in miniature formats because small devices and super-flat LEDs are modern, intelligent and energy efficient. In order to manufacture these products, small components that allow for SMT assembly are required. With these requirements in mind, Phoenix Contact developed the new Combicon high density product range.

The PTSM mini plug connector is one product in this new line. It features spring-cage technology and uses a push-in spiral spring terminal to save space. Stripped rigid and flexible conductors can be quickly connected to the PTSM.

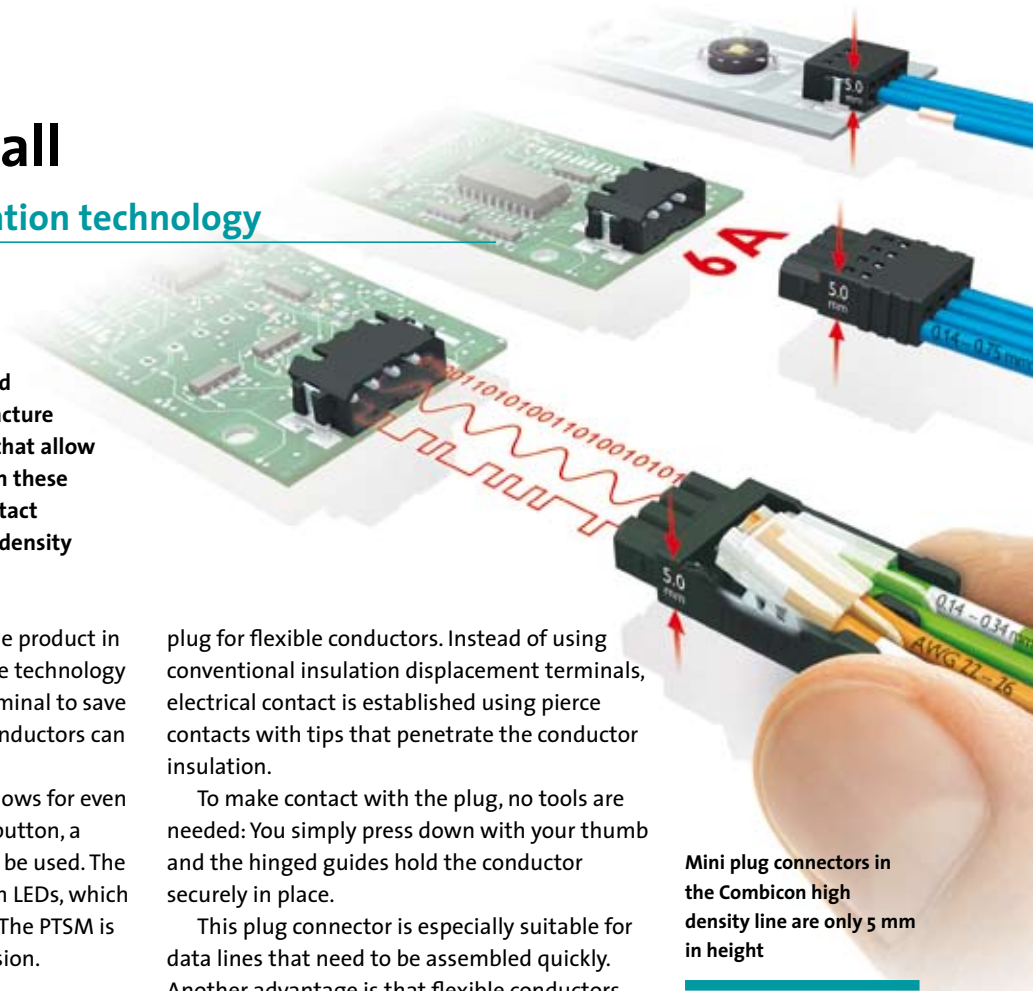
Its terminal block mechanism allows for even more miniaturization. Instead of a button, a conventional 2 mm screwdriver can be used. The PTSM is especially suitable for use in LEDs, which are becoming increasingly popular. The PTSM is also available in a PCB terminal version.

Piercing for fast data lines

Phoenix Contact is also embarking in new directions with the new PTPM mini pconnector



Combicon high density is perfect for small SMT components



plug for flexible conductors. Instead of using conventional insulation displacement terminals, electrical contact is established using pierce contacts with tips that penetrate the conductor insulation.

To make contact with the plug, no tools are needed: You simply press down with your thumb and the hinged guides hold the conductor securely in place.

This plug connector is especially suitable for data lines that need to be assembled quickly. Another advantage is that flexible conductors, which are common in Ethernet lines, can be connected in pairs.

Mini plug connectors in the Combicon high density line are only 5 mm in height

For automated processes

Basic terminal blocks and PCB terminal blocks are made of high temperature-resistant LCP (liquid crystal polymer) and are fully compatible with SMT processes. In this way, terminal blocks can be processed at the same time as other SMT components such as ICs, resistors, inductors and LEDs. ■

Combicon high density: a new line of mini plug connectors

- Height: only 5 mm, pitch: 2.5 mm
- Current loading capacity up to 6 A / pin
- Voltages up to 160 V
- Solutions for rigid and flexible conductors up to 0.75 mm²
- With push-in spring-cage or pierce connector
- Basic/PCB terminal blocks made of LCP in a tape-feeder pack (for SMT processes)



Fast Networks, Fast Installation

10 Gigabit Ethernet for industrial automation

Nowadays, the demand for 10 Gigabit Ethernet cables based on the Cat6_A standard is constantly increasing, even in the industrial sector. Phoenix Contact offers a full range of customizable plug connectors, patch cables and female sockets that are compliant with Cat. 6a and enable smooth data transmission in tough industrial environments.

Today's automation solutions are requiring network connections with higher and higher transfer rates that are not possible with the generic cables in a building's infrastructure. Cameras for quality monitoring, servers for documenting quality data and scanners for identifying components require higher bit rates. In addition, plant control systems and automation cells need to communicate with each other. Data transfer rates of 1 Gbps are standard for these applications, and other more bandwidth-hungry applications require transfer rates closer to 10 Gbps.

Such data transfer rates are not possible with common Ethernet-based field buses in use today. Network cables for office applications allow for

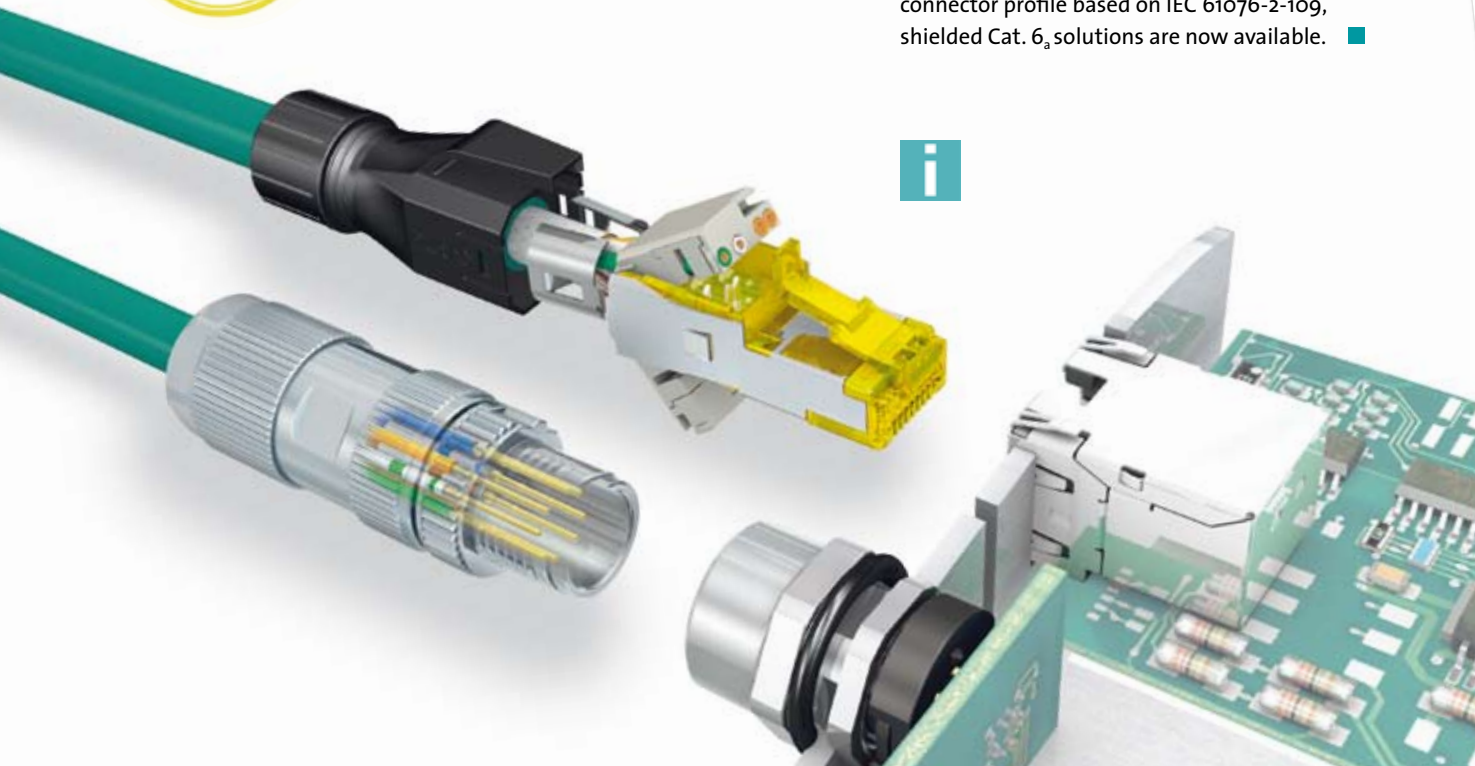
high data transfer rates, but they don't meet the requirements of automation technology with regard to flexibility, topology and ruggedness. As a result, customers require powerful, easy-to-assemble plug connectors and cables that can ensure high data transfer rates of 10 Gbps for industrial applications.

Not all Cat. 6a components are the same

Cat. 6a components based on ISO/IEC 11801 are used for 10 Gigabit Ethernet applications. However, Cat. 6a components based on TIA 568B.2-10 or 568C.2 do not perform as well and are not suitable for heavy-duty industrial environments.

Our Quickon and Piercecon quick-connection technologies allow for high-quality wiring without the need for special tools and automatically comply with the Cat. 6_a standard. This means that the common industrial practice of assembling plug connectors in the field is now possible for 10 gigabit Ethernet as well. With the RJ45 connector profile and the new M12 connector profile based on IEC 61076-2-109, shielded Cat. 6_a solutions are now available. ■

Phoenix Contact offers a full range of products that comply with the Cat. 6_a Ethernet standard





The Quint Power power supply features a power reserve that allows flexible switching of piezo valves at Achenbach Buschhütten GmbH's aluminum foil plants

DC Still OK

Maximum system availability thanks to Quint Power 40 A power supplies

To ensure efficient operations, crucial machine and plant components require an uninterrupted power supply. Thanks to selective fuse breaking (SFB) technology, Quint Power systems deliver powerful short circuit currents to ensure that circuit breakers are tripped in mere milliseconds. This contains the fault and ensures high system availability.

In most cases, other loads such as sensors and actuators are connected to the power supply in addition to the control system. To minimize downtimes, each circuit features its own short circuit protection. For cost reasons, circuit breakers with electromagnetic or thermal actuators are usually used. To ensure that the integrated electromagnet is always tripped within a few milliseconds, the actuator requires a much higher current than the rated current of the circuit breaker. However, many conventional switch-mode power supplies do not provide such a powerful tripping current.

By contrast, the new single-phase 24 V/40A Quint Power power supply delivers 215 A for 12 ms and can trip circuit breakers up to B 25 or C 13 in the magnetic range of the fuse characteristic curve. Other connected loads will continue running despite the short circuit.

Early visualization of critical situations

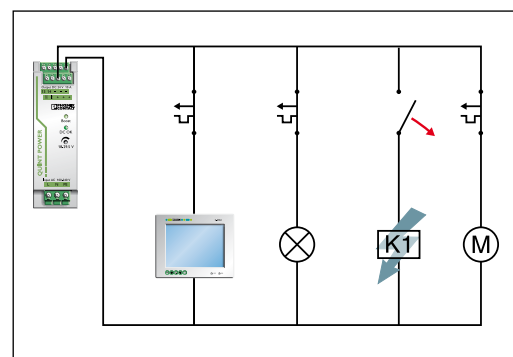
Preventive function monitoring capabilities for remote diagnosis of the power supply ensure high system availability. By permanently monitoring the output voltage and output

current, critical situations can be visualized using LEDs, floating relay contacts, and active signal outputs and then signaled to the control system before a problem actually occurs.

With the Power Boost power reserve, the new Quint Power delivers 45 A and adjustable output voltage from 18 to 29.5 V DC. This power reserve is always available at ambient temperatures up to +40 °C and is available for approximately 10 minutes at higher temperatures. In this way, high start-up currents of capacitive loads are intercepted without a drop in voltage.

If the load increases beyond the specified rated current, the power supply switches to power boost mode and runs normally at 24 V DC, as do the other connected loads. If the load were to increase even further in power boost mode, the 24 V power supply would fail.

Preventive signaling allows the operator to respond before errors actually occur. For example, the operator can localize a sluggish conveyor belt and repair it before the power supply to other loads is interrupted. ■



The loads connected to a power supply are not affected by a short circuit when the circuit breaker is tripped magnetically using SFB technology



The C-Quester 3 can hold three people and reaches depths of 100 meters. Phoenix Contact control systems ensure safety and ease of use



100 Meters under the Sea

Mini submarine features Phoenix Contact components

U-Boat Worx, a company based in the Dutch city of Breda, is building the world's first commercial mini submarines. These compact submersibles are safe and easy to operate, thanks in part to Phoenix Contact's ILC 150 ETH compact controllers and VMT industrial PCs.

Since 2005, Bert Houtman, CEO and founder of U-Boat Worx, and his team of 18 employees have been developing and manufacturing mini underwater crafts for commercial use. The company's largest C-Quester model runs on lithium-ion batteries, can hold up to five people and dive to a depth of 100 meters.

High standards of safety

Each one of the company's submarines is approved by Germanischer Lloyd AG to ensure the highest safety standards. For example, the submersibles are equipped with several independent depth control systems. Sensors constantly measure oxygen and carbon dioxide levels in the cabin.

In the unlikely event of a breakdown, there is enough oxygen and filtration materials on board to last 96 hours. Other safety devices include an emergency buoy for satellite positioning, ballast tanks, a pinger system and an underwater communication system. U-Boat

Worx manufactures many of the parts for the mini submarines on its own. This means building the shells for the underwater crafts, developing the software and integrating a wide range of electrical devices. One special challenge was integrating components and systems, which primarily featured CAN interfaces, into the control system. These included sensors, drives, pressure tanks and battery charging units.

Communicative and cost-effective control systems

A Phoenix Contact ILC 150 ETH small function module is responsible for collecting and monitoring the data from these devices. According to Houtman, this module offers the functionality of a high-end controller but is easy to use and cost-effective.

The ILC 150 ETH also features a compact design and is approved for use in marine applications. It has a total of eight direct inputs and four direct outputs. Important operating data is displayed on a compact VMT industrial PC from Phoenix Contact. In addition, the submarine's Sonar software runs on this PC, which also displays images of the underwater environment captured by the on-board camera. ■



A VMT industrial PC displays important data for the pilot of the submarine



Reliable and Permanent

Bluemark printer ensures reliable plant labeling

R. Stahl is a provider of components and systems for hazardous areas. For the company, the proper manufacturing and labeling of electrical systems has top priority. Bluemark printers ensure that terminal blocks, plug connectors and devices are labeled reliably and permanently.

R. Stahl from Waldenburg, Germany, uses Phoenix Contact Bluemark printers to label system parts and components. The necessary label data is imported from the design data and individually processed by the Clip Project labeling software via preconfigured interfaces. The data is then sent to the Bluemark printer for printing.

The Waldenburg-based company wanted the labeling system to be not only flexible, but also an integral part of the production process. This would be the only way to ensure fast delivery times.

130 control cabinets for Algeria

One large-scale project that required especially fast turnaround times involved a plant that



Bluemark label printers are used in production of plant components at R. Stahl in Waldenburg

manufactures urea and ammonia in Algeria.

R. Stahl supplied 130 control cabinets and separator stages for this project.

In addition to R. Stahl's own products, many Phoenix Contact components were used in the control cabinets, including Cliqueline complete screw terminal blocks, switch-mode power supplies and labeling components. "We only had a few weeks to manufacture the first control cabinets," says Klaus Walter, Head of Systems Technology at R. Stahl. "We had to constantly coordinate with the customer and the system suppliers." The biggest challenge for R. Stahl was not just the large scope of the project, but a combination of time constraints and changing requirements, not to mention the high safety standards for hazardous areas.

Data goes right from engineering to production

"To be really fast, our organized team has to be flexible during the production process," says Walter. "At the press of a button, the raw data for labels from the engineering department is sent to our labeling center, where it is printed on the Bluemark printer. This saves a lot of time and helps prevent manual entry errors."

"We not only had to be fast for Algeria," Walter continues, "the plant also had to meet strict requirements with regard to electrostatic charges, labeling and documentation. From complete control cabinets to decentralized plant components, every single part, no matter how minor, had to be labeled and recorded in the documentation." ■



Klaus Walter, Head of Systems Technology at R. Stahl: "Bluemark printers helped us save time and avoid manual entry errors."





More on the Screen

Touch panels with a 16:9 aspect ratio

The new Süttron touch panels with WVGA resolution (Wide Video Graphics Adapter) are perfect for combined data display, dialog screens and sophisticated graphics or videos. The panels feature a 16:9 aspect ratio, a TFT display and are available with 4.3 inch screens (480 x 272 pixels) or seven, nine and 12 inch screens (800 x 480 pixels). The TP43AT is also available with LED backlighting. The ability to display user-specific key pads, soft keyboards or live images allow for completely new operating concepts that make teach-in functions or machine servicing easier and more convenient. ■



Connecting M8 Plugs Faster

Quickon system for compact plug connectors

With the two-part Quickon system, cable gland, strain relief, seal and wire guide are combined into one component: the Quickon nut. The cable is snapped into place, trimmed off and the housing is screwed into place. When connected, a specially shaped contact cuts through the conductor insulation and contacts the wire so that it is vibration proof and gas tight. The M8 plug connector comes in three-pin and four-pin models and is now available for wires with cross-sections from 0.08 to 0.5 mm² in protection class IP67. This connector complements our M12 line of plug connectors, which are available in four-pin models for cross-sections of 0.14 to 0.75 mm². ■



PIT Keeps Growing

Product range expanded to 6 mm² cross-sections

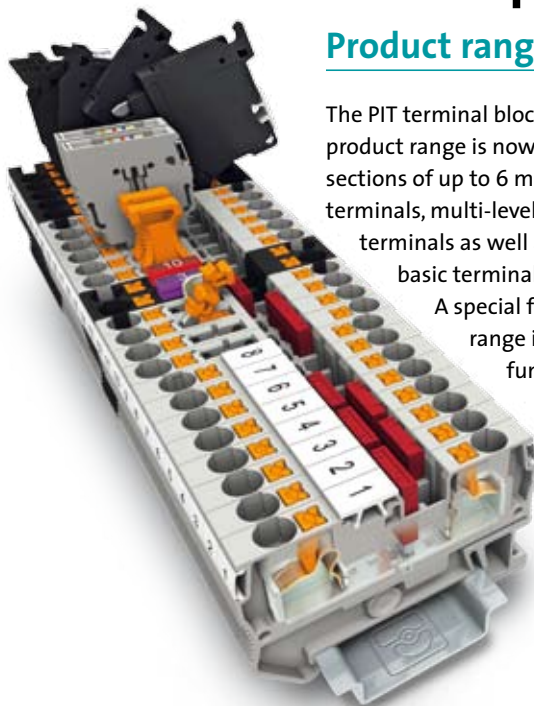
The PIT terminal block (push-in technology) product range is now available for larger cross-sections of up to 6 mm². This includes universal terminals, multi-level terminals, multi-conductor terminals as well as component terminals, basic terminals and disconnect terminals.

A special feature of the expanded range is that fuse terminals and functional terminals are the same size as the standard universal terminals.

With PIT terminal blocks, conductors can be wired directly and without the need for tools. As soon as the conductor is inserted,

the contact springs open automatically. With plugging forces up to 50 percent lower than before, it has never been easier to plug in wires and establish contacts. The high contacting forces exceed those stipulated by the relevant standards and ensure that the contacts between conductors are both reliable and high in quality.

A conductor can be removed by simply pressing one of the new buttons with a suitable tool. This pressure is transmitted to the interior contact springs, which open the terminal as wide as possible. The orange color of the button marks it as an actuating element that prevents mistakes from being made. ■





Plug-in Protection

New VAL-MS-T1/T2 varistor-based lightning protectors

The VAL-MS-T1/T2 varistor-based lightning protector was specially designed to meet the requirements of lightning protection classes III and IV. All of its channels, including the N-PE residual current spark gap, are testable and pluggable and feature a thermal isolation device as well as a dedicated status display. Its integrated telecommunications contact allows for continuous function monitoring.

The lightning protectors are designed so that they can be used in 230/400 V AC power supplies, even if voltage fluctuations are

expected. Different models are available for all standard applications.

A new latch holds the plugs securely in the base element so they stay in place even when exposed to strong electrodynamic effects from powerful lightning surge currents and strong vibrations at the installation site. The latch can be easily removed for insulation measurements or tests. ■



More Speed for Copper Cables

Faster bit rates with the new SHDSL modem

In the past, if you wanted to integrate remote Ethernet users into a single high-bandwidth network, costly fiber optic cables were the only option.

Now there is a cost-effective alternative: the new SHDSL/ETH PSI modem, which allows you to continue using copper cables. Its SHDSL technology enables bit rates of up to 30 Mbps.

If a slower data rate is selected, transfer distances of up to 10 km are possible.

With this new modem, you can establish point-to-point connections, redundant lines and linear or star topologies, quickly, easily and cost-effectively.

Usability is key factor in its design: the SHDSL bit rate between the devices is automatically determined, eliminating the

need for configuration using a DIP switch. The modems are transparent in the network, and there is no need for IP address assignment or client/server configuration. In addition, the modem supports IPv4 and IPv6 data packets.

An integrated log book and alarm outputs facilitate on-site servicing. ■



Focusing on Green Technologies

'contact¹⁰' Technology Day 2010 in Herrenberg

Experts engage in intensive discussions at the 'contact¹⁰' in Herrenberg



On 8 July, Phoenix Contact Deutschland held its 8th Technology Day in Herrenberg. This year's event focused on green technologies.

The event was organized in cooperation with the competence network Mechatronic Baden-Württemberg e.V. and brought together over 100 specialists from the fields of research,

technology, software development and mechanical engineering.

Despite hot summer temperatures of 35 degrees Celsius in the shade, visitors showed great interest in the presentations at the 'contact¹⁰' on e-mobility, wind energy and solar energy system monitoring, not to mention the exhibit on new Phoenix Contact products.

In his opening presentation, Ulrich Leidecker, Managing Director of Phoenix Contact Deutschland GmbH, stated his belief that "automation and environmental technology will merge and become inseparable." He said the efficient automation technology will be essential in order to save energy. For example, German industry could reduce energy consumption by 25% just by using controlled drives. This would be equivalent to the capacity of seven conventional coal-burning power plants. On a global level, 60 power plants could be eliminated. ■



Automating More Efficiently

15th Industrial Communication Congress in Bad Pyrmont



Intuitive and energy-efficient solutions will be the focus of the 15th Industrial Communication Congress (ICC), which Phoenix Contact will hold on 21 and 22 September 2010 at the Innovation Center Electronics in Bad Pyrmont.

In the spirit of green technologies, a current megatrend, users will discuss energy-efficient applications for modern automation devices and systems. For example, numerous presentations will focus on how easily automation requirements can be implemented using

the Easy Automation compact controller system.

Users, manufacturers, and academics will take to the podium to talk about how energy, a scarce resource, can be used more effectively through automation technology. This discussion will be

moderated by Roland Heinze, Editor in Chief at the VDE Verlag publishing house.

A trend-setting e-mobility solution will also be presented at the event: a battery-charging station for electric vehicles developed by the Spanish company Temper. This system uses RFID cards so that only authorized persons can access the station. In this system, the card reader is connected to the ILC 150 GSM/GPRS compact controller, which verifies the data by comparing it to a central database via radio communication or Ethernet connection.

In addition to the presentations, there will also be an extensive exhibit and an attractive evening program on 21 September 2010.

For more information and an online registration form, go to www.phoenixcontact.de/icc2010 ■

Expanded Capacity

Competence Center for Punched and Bent Components opens

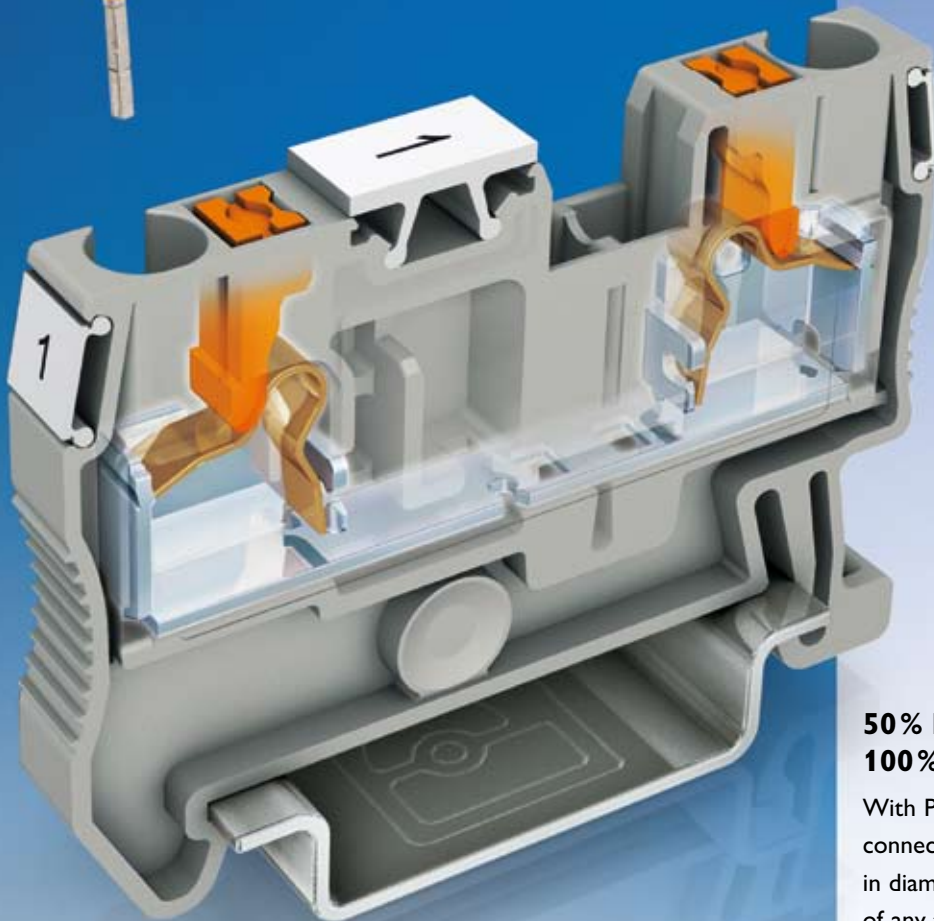
Phoenix Feinbau GmbH & Co. KG in Lüdenscheid, a member of the Phoenix Contact Group, celebrated the opening of its new Competence Center for Punched and Bent Components early last July. The new 13,000-square-meter building has expanded its capacities for metal parts production. The new building also includes a modern high rack warehouse, which reduces delivery times. Punched and bent parts from Lüdenscheid are used in many Phoenix Contact products.

The new building houses both production facilities and offices, which makes it easier to plan individual processes. The result is more efficient production with faster delivery times. There are also plans for a new electroplating system that will allow punched parts to be manufactured with even higher quality. ■



**The Competence Center for Punched and Bent Components at
Phoenix Feinbau GmbH & Co. KG in Lüdenscheid**

The new Push-In Experience!



**50% less insertion force,
100% contact quality**

With PIT terminal blocks you can connect all wires of up to 0.34 mm² in diameter easily and without the use of any tools. An integrated button enables easy release of the connected wire with any tool – without touching any conductive parts.

**For additional information call
+495235 3-00 or visit
www.phoenixcontact.com**