

UPDATE

1|11

The Customer Magazine from Phoenix Contact | April 2011

04 Value-Added in the Control Cabinet
Quality in the Process



06 Plug Connectors for LED Lights
Modular Highlight



09 Efficient Cable Assembly
Productive Automatic Devices



10 Quint UPS-IQ Power Supply
UPS Becomes Smart!





Stefanie Berg,
Head of Marketing and Sales
Industrial Components

A Cabinet Full of Potential

Dear readers,

As a general rule of thumb, approximately 40% of the total costs of a machine or system can be influenced in the design and production process. This represents a lot of potential for optimizing costs while still maintaining a high standard of quality. This also applies to the manufacture of switchgear panels.

True to our motto “Inspiring innovations,” you are justified in expecting products, services, and solutions that help you to fully leverage this cost potential – during the complete design and manufacturing process of the control cabinet. This is because we know that we must excel in various disciplines so that we can offer you concrete advantages in your day-to-day business.

We at Phoenix Contact can provide you with the tools and materials that will allow you to manufacture control cabinets more simply and at a more favorable price. From us, you obtain components that can be simply engineered, installed, wired, labeled, and tested. This means you equip your control cabinet with leading-edge technology of the highest quality – and with the option of implementing modular concepts.

We see all this as just delivering the basics. What really sets us apart are the services and solutions we can offer. We support you from engineering and manufacture up to commissioning. As a user, you profit from our value added in the form of software and services ranging from documentation, terminal strip configuration, right up to programming the system.

Contact us and you may be surprised at just how much potential really is in your control cabinets!

Stefanie Berg

Editorial

02 Stefanie Berg

Interview with

03 Timo Amels, CEO of ATR Industrie-Elektronik GmbH, Krefeld, Germany

Cover Story

04 **Control Cabinet with Value Added**
Products and Solutions for
Control Cabinet Building

On Site

06 **Connection Technology**
Connector Solution for
LED Streetlights

07 **Interface Technology**
PLC Coupling Relays for the
Emergency Power Supply of the
Charité University Hospital in Berlin

Technology

08 **Line Quality**
Surge Voltage Protection for Machinery
and Plant Construction

09 **Connection Technology**
Automatic Devices for More Productive
Cutting, Stripping, and Crimping

10 **Interface Technology**
First Intelligent UPS for Industrial
Applications

11 **Connection Technology**
Heavycon Advance
Heavy-Duty Connectors

New Products

12 Wireless Elements for Signal Towers

12 Lightning Monitoring System

13 PIT Terminal Block with Conductor Cross
Section of 1.5 mm²

13 Sensor/Actuator Box with
Rear Connection

13 Quint Oring Redundancy Modules

Latest News

14 Eaton and Phoenix Contact Sign a
Cooperation Agreement

14 Phoenix Contact Takes First Place
for “Top Job”

15 Top Employer for Engineers

Cover image: Phoenix Contact offers products and systems for control cabinet building that address the complete design and manufacturing process.

Exemplary Partnership

Optimized Control Cabinet Manufacture with Phoenix Contact

ATR Industrie-Elektronik, a Siempelkamp Group company, is specialized in the production of switchgear panels and the development and production of industrial electronics. The company depends on its close partnership with Phoenix Contact when it comes to equipping its switchgear assemblies. The UPDATE editorial staff interviewed Timo Amels, CEO of ATR, about this partnership.

UPDATE: Mr. Amels, what do you see as the most important trends in building switchgear assemblies?

Timo Amels: We are evolving from being a pure supplier of separate system components to becoming a problem solver and system vendor



ATR depends on Phoenix Contact when equipping its control cabinets, as is the case here with the Quint Power power supplies.

that supplies its customers with an integrated and seamless process chain. We are integrated in the value-added chain of machine and plant construction companies far more than before. This means that we offer a complete range of services, from the pre-planning phase, through construction up to complete testing. What's more, we live up to the expectations of our customers by continuously optimizing our processes, reducing costs, and meeting deadlines.

UPDATE: Phoenix Contact is your preferred supplier of products and solutions for control cabinets. Why did you select Phoenix Contact, and what has been your experience up until now?

Timo Amels: An important reason is the quality of the products Phoenix Contact delivers. Clipline complete terminal technology with the corresponding planning tools, the power supplies, and the Marking System labelling technology offers a high degree of functionality. Phoenix Contact provides us with technically sophisticated solutions, which are independent of the automation system being used. And all of this with a price-performance ratio that allows us to remain competitive over the long term.

UPDATE: Beyond the products and solutions it provides ATR, can Phoenix Contact play a role in making your overall process more efficient?

Timo Amels: Absolutely! Phoenix Contact is involved in our complete value-added chain. For instance, for our CAE, we import the macros and CAD files of your devices, which makes the design far more efficient. In turn, Clip Project and PC Worx can import data from our CAE so that we save time during assembly and marking, for example. And not to mention the standard terminal system from Clipline complete. The standard range of accessories simplifies our ordering procedures and logistics.

UPDATE: How do you evaluate the collaboration and support you receive for projects?

Timo Amels: In Phoenix Contact we have found a supplier for equipping our switchgear assemblies with whom we can communicate as an equal partner. The support we receive on site and from the headquarters in Blomberg are excellent, as is the on-time delivery. Selecting a specific supplier is always a sign of confidence, and the experience that we have gained so far clearly indicates that we made the right choice.



Dipl.-Kaufmann (FH)
Timo Amels is CEO of ATR Industrie-Elektronik GmbH, Krefeld, Germany.

“Phoenix Contact is involved in our complete value-added chain.”



Control Cabinet with Value Added

Products and Systems for Control Cabinet Building

Today, more than ever before, control cabinet building must fulfill demands relating to high flexibility and optimized costs. Fast implementation from the design up to commissioning is critical when it comes to being awarded an order. For building control cabinets, Phoenix Contact has products and systems that offer decisive advantages relating to costs, time, and flexibility covering the entire manufacturing process.

When engineering switchgear panels, the Clip Project software can be used to configure terminal strips and create labels for terminals, cables, conductors, and devices. At a mouse click, the program configures complete terminal strips from technical data provided by electrical design systems.

Auto correction functions add the necessary accessories and avoid engineering errors. Product data can be inserted into the circuit diagrams via bidirectional interfaces. This guarantees consistent data and allows the automatic generation of up-to-date parts lists. Engineering is significantly simplified and sped up using 2D, 3D, and list views.

When required, Clip Project not only provides the full documentation but also the appropriate labeling for the terminal strips. Phoenix Contact

can supply completely assembled and pre-labeled terminal strips on request.

Components in the Control Cabinet

The Cliqueline complete modular terminal block system provides a high degree of flexibility by permitting a free choice of connection technology. Screw, push-in, spring-loaded, fast and bolt connections, as well as Combi pluggable connection solutions, mean that users can offer the preferred connection systems or those specified by the customer. Further, the system sets itself apart through the standard bridging, labeling, and testing accessories. As a consequence, logistics, stocking, and ordering costs are slashed by 30% as identical parts can be used.

PIT Push-In Technology allows especially fast and simple wiring. This connection system is not only used in modular terminal blocks, but also in control systems such as Axioline and in the PLC relay system. More and more products are leveraging the benefits of wiring without tools: the connection is made by just inserting the conductor. Simply press the unlock button to release the conductor.

Marking

The Bluemark and Thermomark marking systems allow terminals, devices, cables, and



When required, Phoenix Contact also supplies pre-assembled terminal strips.



Products, systems, and solutions from Phoenix Contact make cabinet building more efficient.

coded plug connectors, these modules can be safely and reliably connected up. Clear labeling on modules, connectors, and cables simplifies commissioning and avoids time-consuming installation. ■

Marc Niehage

conductors to be quickly and flexibly marked. This applies to products from Phoenix Contact as well as from other manufacturers. Labeling is a straightforward process when using the Clip Project planning and marking software. All of the marking materials are stored in the software. They can be simply selected, adapted, and labeled.

Options to transfer and simply import data ensure that existing labeling data can be used and further processed. Once generated, markings can be simply output using various printing systems. All of the components – comprising software, printing systems, and marking materials – are ideally harmonized with one another. This saves time and avoids mistakes.

Wiring and Assembly

Manual and automatic devices are available for assembling cables and conductors as well as for installation and wiring work. These tools are used for cutting, stripping, crimping, and screwing. The ergonomically designed manual tools guarantee high-quality results with the lowest possible effort. Automatic tools allow large unit quantities to be manufactured quickly at a favorable price with consistently good results.

Modular switchgear panels can be simply and quickly installed on site using pre-assembled cables and the Combi connector system. Using

Quality in the Process

ATR Industrie-Elektronik GmbH Builds its Switchgear Assemblies with Phoenix Contact



ATR Industrie-Elektronik GmbH, based in Krefeld, Germany, and a subsidiary of the Siempelkamp Group, has specialized in the manufacture of switchgear panels for over 40 years. Switchgear panels for the German and international markets, as either individual products or series production, are manufactured in a production area extending over 2500 m². These control cabinets are used around the world, so quality, high reliability, and low maintenance are a must.

For ATR, optimized processes and on-time delivery are key to achieving the high switchgear panel quality demanded. And here, Phoenix Contact is a preferred partner: “We use products from Phoenix Contact across the board – from the initial design up to commissioning,” explains Timo Amels, ATR’s CEO. For its control cabinets, ATR prefers spring-loaded terminal strips from the Clipline complete series and installation terminals that are labeled using the Bluemark marking system. This control cabinet specialist based in Krefeld, Germany, also sources Toolfox tools, Trabtech surge voltage protection, Interface devices to adapt signals, Quint Power power supplies, as well as Inline I/O from the Blomberg-based company.



Installing the LED module in the “Square” model streetlight, with the central connector at the rear.



Modular Highlight

Connector Solution for LED Streetlights

Although connectors are available today in a wide range of versions, manufacturers of new products frequently require customized solutions. This was the situation for the Hella company, which was looking for a connector solution with matching cabling for its LED streetlights. Phoenix Contact developed the connection system for these energy-saving LED lights.

Hella KGaA Hueck & Co. is predominantly known as a manufacturer of components and systems for lighting technology and electronics for the automotive industry. “However, because it was becoming quite clear that street lighting was going in the direction of LED technology, Hella decided to enter this market back in mid-2008,” explains Hendrik Kleinemeier, Technical Project Manager for LED street lighting at Hella. “And we are able to leverage our LED competence in the automotive sector.”

LED-based streetlights are characterized by high energy efficiency and low maintenance costs. Energy consumption can be slashed by up to 70% as compared to conventional technology.

Cabling for a Modular LED System

For its Eco Streetline range of streetlights, Hella developed a modular LED system, which can be simply installed and replaced so that it is not necessary to install individual diodes. Hella turned to Phoenix Contact for the matching cabling with plug connectors. “Used outdoors, the connector system must be able to withstand all adverse weather conditions such as humidity, frequent temperature changes, and exposure

to harmful gases for at least 20 years,” explains Kleinemeier. The gastight connector system with IP65 protection should also be able to be rotated through 180 degrees and replaced under load as well as permit blind installation. The solution comprises a three-core cable assembly with four slots to establish contact to the LED modules. The round connectors of the LED module have three contact pins with corrosion-resistant surfaces to transfer the 10 W of power for each module.

The biggest challenge for both project partners was to collaborate in a short period of time to develop and implement a customized connector system. The first streetlights were installed in Lippstadt just five months after the project was kicked off. In the meantime, the Eco Streetline is being used in many cities and by many companies in Germany – including Phoenix Contact itself – and is being exported around the globe.

Eco Streetline is Just the Beginning

Both the LED modules as well as the connector system can be used for other streetlight versions. “The project is at an early stage,” explains Roland Dörner, Head of Hella Industries, who indicates that other developments are in the pipeline: “We are working on intelligent streetlight concepts, featuring a lighting level control that depends on the requirement and situation.” ■

Berni Lörwald/Christoph Manegold



The new Hella LED streetlights are also being used by Phoenix Contact at their headquarters in Blomberg, Germany.

Serving Healthcare

PLC Coupling Relays for the Emergency Power Supply of the Charité University Hospital in Berlin

Berlin's Charité university hospital (Campus Charité Mitte) has replaced one of its power ring feeders and associated emergency power supply. Approximately 2000 PLC coupling relays, analog transducers, and power supplies from Phoenix Contact play a decisive role when it comes to reliably switching in and switching out all of the loads for emergency operation.

The Campus Charité Mitte (CCM) requires an average of 6 MVA of electrical power for its research facilities and clinical operations. This can increase up to 7.5 MVA at peak times. The electrical systems must also meet the highest demands to provide the best possible support and service for more than 500,000 inpatients and over one million outpatients per year.

This became quite clear when renewing the switchgear, instrumentation, and control technology of the north feeder ring. This feeder ring is used to centrally feed in 10 kV and to connect two emergency power generators, each with a 850 kVA rating.

A Multitude of Signals in the Tightest Space

The hospital uses 220 V DC signals in the field where the DC voltage is supplied from a battery



Coupling relays and analog transducers from Phoenix Contact guarantee reliable hospital operations.

bank. In the control cabinets, over 2000 of these 220 V DC signals must be converted to 24 V DC – generally used for control applications – using relay modules. In addition, for open-loop and closed-control applications, numerous analog signals (0–100 V AC, 0–400 V AC, 0–1 A) are converted to the 4–20 mA standard signal using transducers.

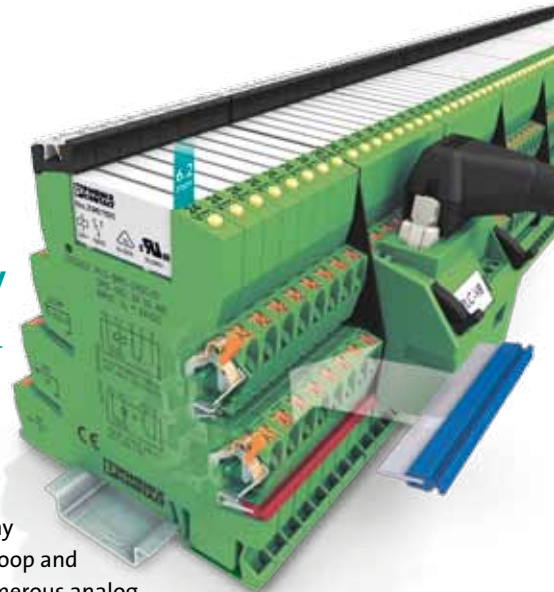
The installation space available posed a challenge and the distance between the control system and the coupling level had to be short, to achieve the best possible interference immunity. Further, the system had to quickly resume operation if an electromechanical relay needed to be replaced.

Low Profile and Powerful: PLC Coupling Relays

The PLC relays from Phoenix Contact fully comply with all of these demands. The 6 mm wide coupling relays, which can switch up to 6 A, have a changeover contact at their output. A 14 mm wide relay with the same contour can be used to provide additional contacts, higher continuous or inrush currents.

The significant feature of the module is that the switching element itself is inserted in a socket with pre-assembled wiring. Once an electromechanical relay reaches the end of its service life, it takes just a few seconds to plug in a new switching element. Wear-free solid-state relays are the optimum choice for especially high switching frequencies. A multitude of 24 V DC Quint Power power supplies with a high peak load capability are used to reliably supply power to the PLC, the transducers, and various relays. ■

Frank Döllner

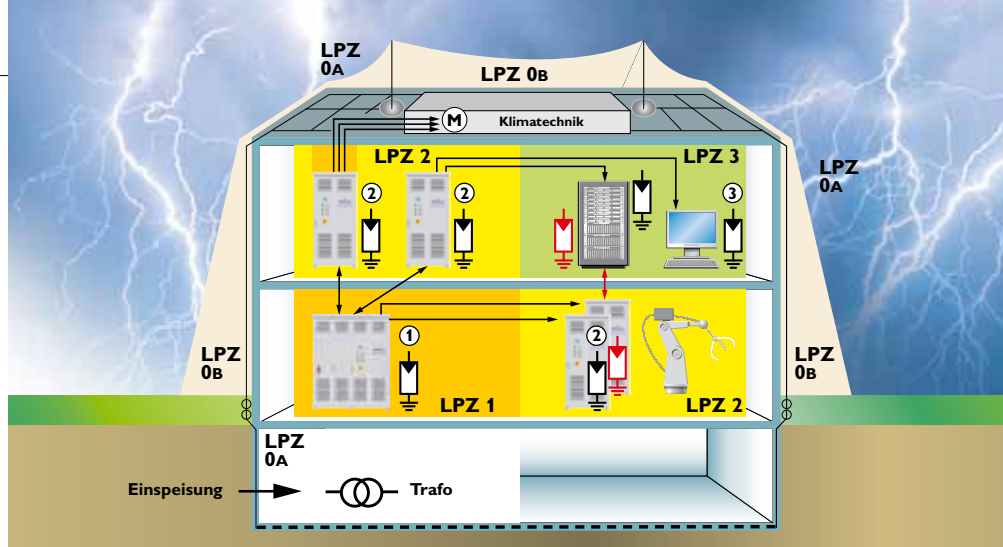


Small but powerful: the 6.2 mm wide PLC relays pack a lot of power into small dimensions. They are now available in PIT push-in technology.



Historic buildings packed with high technology: the Campus Charité Mitte (CCM)

The surge voltage protection concept is determined by classifying according to lightning protection zones (LPZ) in compliance with DIN EN 62305.



Protection Specialists in the Control Cabinet

Surge Voltage Protection for Machinery and Plant Construction

A well-conceived protective concept is indispensable for electrical systems in order to avoid damage caused by surge voltages. To achieve this, Phoenix Contact offers comprehensive solutions to secure a high line and signal quality in control cabinets.

Surge voltage protection in machine and plant construction is becoming increasingly more important. This is not just a result of directives laid down in standards. Reliable technology is also demanded in the production environment and supply chain for consumer and capital investment goods. Downtimes and service times as a result of technical defects must be reduced to an absolute minimum. Also when it comes to electromagnetic compatibility (EMC), it makes sense to apply measures to protect electronic components against faults caused by surge voltages. The costs can quickly

run into several thousands of euros if a warehouse is out of operation for several hours.

Type 2 surge voltage protection is the most important component for protecting the power supply of control cabinets against surge voltages. It combines a high discharge capacity with a low protection level, long service life, and compact size. The protection level is low enough to effectively protect electronic equipment such as frequency converters, control systems, and switched-mode power supplies. This is why a

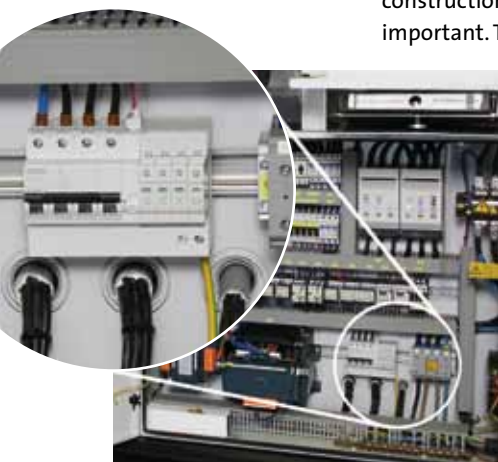
Type 3 device protection is not required directly next to a Type 2 surge voltage protection device.

For 60 mm Rail Systems

Device assemblies that combine surge voltage protection with RCD residual current circuit breakers or with backup fuses have been developed for this specific purpose. Both of these combinations simplify installation. The VAL-CP-Moso surge voltage protection device from Phoenix Contact was designed for the usual 60 mm rail system. This device significantly shortens installation times: it is simply mounted onto the rail system and then only the neutral and PE conductors have to be connected to the device.

The combination surge arrester VAL-CP-MCB (Miniature Circuit Breaker) is the ideal device for control cabinets without a rail system, or also when there is no space for l.v.h.b.c. disconnectors. Upstream protective elements in the form of MCBs, which are specifically designed for surge voltage protection, are integrated in the device. This is also in line with the requirements for fuseless control cabinets. Defective surge voltage protection is signaled using the direct optical display as well as the integrated remote indication contact. However, this hardly ever occurs in the field. Surge voltage protection devices are rugged and have a long service life. ■

Bernd Fritzscheimer



As a result of its especially small size, the Type 2 VAL-CP-MCB surge voltage protection module is also suitable for applications where there is a restricted amount of space in the control cabinet.

Higher Productivity Using Automatic Devices

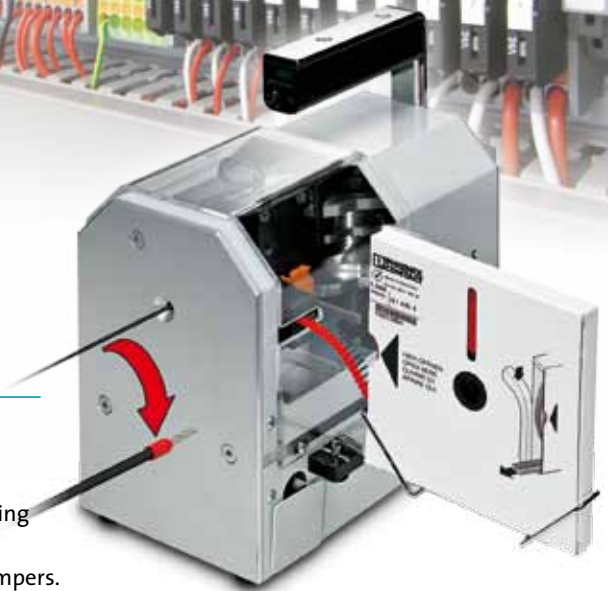
More Cost-Effective Cutting, Stripping, and Crimping

Low to medium numbers of cable harnesses, pre-assembled conductors, and cables are often manually processed. Even for these batch quantities, it pays to use automatic devices. Depending on the production conditions and degree of automation, cable assembly costs can be slashed by up to 70%.

Phoenix Contact offers a line of automatic tools for quickly and flexibly assembling conductors and cables. The functions range from stripping,

cutting, and crimping conductors up to the combination of stripping and crimping – also known as stripper-crimpers. In addition to the increased processing rate and the consistent quality, automatic devices from Phoenix Contact provide a good price–performance ratio. They frequently have a payback time of just a few months. ■

Jens Frischeimer



Cutting



Using the **Cutfox 10 automatic cutting device**, the required length and the number are entered on a user-friendly display. Electronic wiring lists with length data from CAE/ECAD systems can be converted with the software supplied and transferred to the automatic devices.

Stripping



The **WF 1000 automatic stripping device** operates with precisely ground V-shaped knife elements. Special hardened steel is used, which guarantees a long lifetime. Employing a radial cut in the insulation, the knife geometry improves the stripping operation.

Crimping



There are many different dies for the compact **CF 500 electric crimper**. All of the usual requirements are addressed when it comes to assembling cables – from ferrules through flat connectors up to barrel lugs.

Stripper-crimper



The **CF 1000** crimps loose insulated taped ferrules according to DIN 46228-4. Up to 1200 conductors can be processed per hour using these automatic devices. The conductor is stripped and a ferrule crimped in just one operation.



The **CF 3000-2.5** crimps insulated, taped ferrules provided in feeder-type packaging according to DIN 46228-4. The conductor is stripped and the ferrule crimped in one operation. The automatic devices can be changed over to different cross-section ranges in one minute or less.



The new IQ technology sports intelligent battery management.

Smart Continuous Power

The First Intelligent UPS for Industrial Applications

For the first time, IQ-Technology allows intelligent battery monitoring for uninterruptible power supplies (UPS). As a consequence they ensure the necessary transparency to always guarantee the supply and to optimally utilize the battery.

Users select the appropriate battery depending on the load current and buffer time required. Up until now, not knowing the actual performance of the battery posed a problem. This is because the battery's capacity decreases with increasing age or at high ambient temperatures, which means that the battery cannot supply the energy required for the selected buffer time. Supply voltage failures are the consequence.

Continuous Power Diagnostics

The intelligent Quint UPS-IQ is the first device of its class that determines all of the relevant battery states – for example, voltage or

temperature – and calculates the remaining operating time.

To do this, the UPS automatically identifies the connected energy storage device, and calculates the optimum charge current depending on the particular type and ambient conditions. As a consequence, it significantly extends the battery service life. To calculate the charge current, the UPS communicates with the battery as well as the power supply. This means that the batteries are charged twice as fast as for conventional UPS systems. Further, the power unit output current is controlled so that sufficient energy is always available for the loads and the battery is charged as quickly as possible.

Maintenance Becomes Predictive

With Quint UPS-IQ, the remaining life expectancy of the battery is known. Supply interruptions and premature rundown of industrial PCs are completely avoided. What is more, service can be better planned and the energy storage device changed at the optimum time.

The Quint UPS-IQ with output currents from 5, 10, 20, and 40 A is used for 24 V applications. The Quint UPS-IQ, with an output power of 500 V A, is used for AC applications with 85 to 264 V AC. All of the modules can be optionally combined with energy storage devices employing VRLA technology with 1.3 to 38 Ah or, for high ambient temperatures, with especially powerful Li-Ion batteries. The buffer time is 8 hours for a 5 A load current – or 30 minutes for a 40 A load current. ■

Anja Moldehn

Quint UPS-IQ – the most important functions at a glance

- **SOC (State Of Charge)**
Signals the remaining buffer time and the charge condition of the battery.
- **SOH (State Of Health)**
Provides information about the remaining lifetime.
- **SOF (State Of Function)**
Signals the performance capability of the battery.
- **Automatic battery identification**
Automatically identifies the battery type and continually adapts.
- **Communication interface**
Monitoring and configuring using a PC or memory stick.
- **Intelligent charging**
Ensures the fastest possible recharging and availability.



Heavycon Advance is especially suitable for use in aggressive environments and harsh environmental conditions, for instance in offshore applications.

Direct Contact!

Heavycon Advance Heavy-Duty Connectors

The heavy-duty Heavycon Advance connector housing allows the particularly cost-effective wiring of control cabinets in the field. This is because it has eliminated the conventionally used panel mounting base and flat gasket. Nevertheless, the connectors have a high degree of protection up to IP68/IP69K and offer a high level of electromagnetic compatibility.

Conventional heavy-duty connectors generally comprise two sections – the panel mounting base and the sleeve housing. The Heavycon Advance, on the other hand, has a one-piece connector housing. The sleeves seal directly against the control cabinet panel so that the panel mounting base can be eliminated. As this has been eliminated, the housing attenuates interference with over 55 dB – this is more than the shielding effect of many double-shielded cables. Signals protected in this fashion are not even influenced by high electromagnetic interference fields.

For Harsh Conditions and EMC Compliant

Housings of the Advance series, equipped either with bayonet or screw locking, are suitable to handle tough requirements such as especially aggressive environments and sensitive interfaces. A fixed number of pins or modular contact inserts can be used, for instance to transfer signals, data, and power in one connector.

The standard housing can withstand the harshest conditions – for instance, in machine and plant construction – and can be identified by its gray color. The black housing signifies that the connector can handle even harsher

environmental conditions involving chemical substances and thermal effects. The aluminum alloy is especially resistant to corrosion. Stainless steel locking screws are always employed.

EMC housings can be identified by their light gray surface. The high shield attenuation effect against electromagnetic interference is achieved as the connector housing is directly mounted onto the mounting panel. Contact is established across the complete surface area using the inner, conductive seal. IP68/IP69K protection is achieved for housings with screw locking and IP67 for bayonet locking. All of the housings have a rugged design with screw locking.

As a result of its special profile, the approximately 5 mm high seal can compensate for uneven mounting panels significantly better than conventional industrial plug connectors. ■

Jens Andresen



The inside of the Heavycon Advance connector with screw locking: M25 to M40 cable gland, sleeve housing with shaped seal for IP67 protection, sleeve contact insert, mounting contact insert, and mounting flange.

Wireless Connectivity

Wireless Elements for Signal Towers

Phoenix Contact extends the PSD (Phoenix Contact Signaling Devices) product family by the WIN (Wireless Information Network) wireless system. This allows the states of up to 50 signal towers to be transferred by wireless.

The wireless elements (slaves) integrated in the towers transfer the signal states of the particular device to a receiver unit (master), which is connected to the USB port of a PC. The signal states are displayed and evaluated using software, which also allows fault messages to be sent by e-mail.

Ideally, the distance between the slave and master is 300 meters. Depending on the ambient conditions, networks with at least three slaves can be radially expanded up to 900 meters using the routing function integrated in the slaves. The bayonet connection



means that slaves can be quickly installed without tools.

In addition to establishing a complete wireless system, the PSD-S Mux Set wireless multiplexer can mirror the state of a signal tower by wireless to another signal tower that is in visual range. ■

Informed as Fast as Lightning

Lightning Monitoring System LM-S

The Lightning Monitoring System LM-S from Phoenix Contact provides online information about lightning strikes in plants or systems, allowing service calls to be optimally planned. The new system identifies and analyzes all important parameters of the lightning surge currents based on the Faraday effect. An optical signal is used as measuring medium. Information about the type and size of the lightning strike is obtained from how this optical signal is influenced.

On the basis of this information, users can decide whether it is necessary to make a service call. This is especially advantageous for systems in exposed locations, as is the case of wind turbines.

The system comprises an evaluation unit with up to three sensors. The sensors are mounted on the lightning rods that conduct the lightning current. Fiber-optic cables connect the sensors to the evaluation unit. Communication is established with existing supervisory control or management systems via an Ethernet interface.

The most important data of all of the monitored systems can be accessed 24/7 through the system's own network using the integrated Web interface. ■



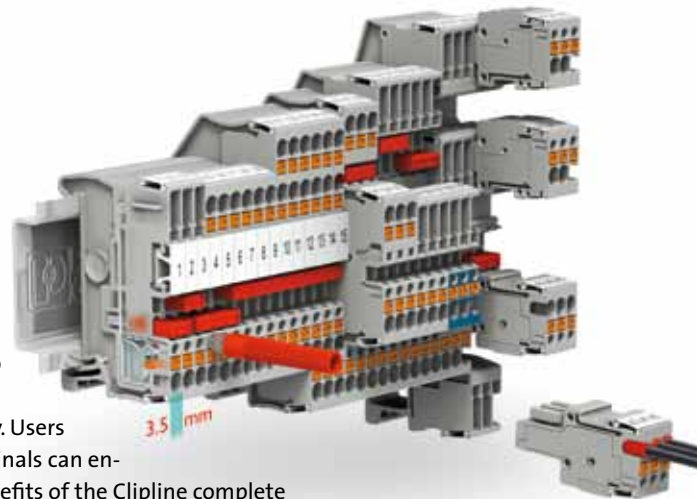
The Lowest Profile Ever

PIT Modular Terminal Blocks with a Conductor Cross Section of 1.5 mm²

The modular PIT push-in terminal blocks has now been expanded to accept cross sections of 1.5 mm². The terminals are just 3.5 mm wide, which makes them especially low profile and admirably suitable for applications where space is at a premium.

The PIT 1.5 product line includes standard feed-through terminals, multiconductor and multi-level terminals, as well as pluggable versions. Compatibility to the Clipline complete

system opens up an unlimited degree of flexibility. Users of the new terminals can enjoy all of the benefits of the Clipline complete system: two bridge shafts, large surface area for labeling, and system accessories. ■



An Elegant Feed-Through Solution

Sensor/Actuator Box with Rear Connection

For sensor/actuator cabling from the control cabinet into the field, panel feed-throughs are usually implemented using cable glands or flush-type connectors.

Phoenix Contact is now offering sensor/actuator boxes with rear connection, which allow eight M12 flush-type connectors with one mounting cutout. These boxes are mounted directly onto the control cabinet panel and are sealed with respect to the housing using a rear seal. To connect the sensor/actuator box to the control system, users can select between ribbon cables, pluggable spring-loaded terminals, or permanently connected leads. ■



Longer Service Life

Quint Oring Redundancy Modules

Users can double the service life of redundantly configured power supplies using the Quint Oring redundancy modules.

This is made possible using the new ACB (Auto Current Balancing) technology, which symmetrically distributes the load current to the connected power supplies. Maximum plant availability is guaranteed by permanently monitoring the system from the input voltage up to the load current.

The devices with 2 x 10 A (1 x 20 A) and 2 x 20 A (1 x 40 A) are suitable for voltages from 18 to 30 V DC. The low-profile modules just 32 and 38 mm wide are simply snapped onto the mounting rail and operate at ambient temperatures extending from -25 up to +70 °C. At ambient temperatures up to +40 °C, continuous currents of 2 x 15 A or 2 x 26 A can be supplied. Instead of using conventional Schottky or silicon diodes, Quint Oring uses MOSFETs for decoupling, therefore saving up to 70 % energy. ■





Roland Bent and Tom Gross (right) signing the agreement at the Hanover Fair.

Together as Team to “Lean Connectivity”

Eaton and Phoenix Contact Sign a Cooperation Agreement

At the Hanover Fair 2011, the Bonn-based switchgear manufacturer Eaton (previously Möller) and Phoenix Contact signed a cooperation agreement for the Contactron electronic motor starter with SmartWire-DT. On the first day of the fair, Roland Bent, Executive Vice President of Phoenix Contact, and Tom Gross, Vice Chairman of Eaton Corporation and Chief Operating Officer of Eaton’s Electrical Sector, signed an agreement to develop and market industrial electronic switching devices and communication systems.

The objective of the cooperation is to develop and implement a joint strategy for Contactron electronic motor starters as well as establishing SmartWire-DT as a new standard for communication between

intelligent switching devices. It is planned that the joint line of products will be expanded by additional Contactron products and SmartWire-DT technology. “The combination with the innovative SmartWire-DT technology from Eaton now also replaces the complex parallel cabling at the control and signal level of the switching devices with a real ‘Lean Connectivity’ system,” explained Roland Bent.

Richard Boulter, Senior Vice President for the Industrial Control Division at Eaton Industries, explained: “Adding Contactron electronic motor starters with SmartWire-DT to our product line is a logical step for us in order to make our strategy ‘From Lean Connectivity to Lean Automation’ even more attractive for our customers.”

Outstanding Company Culture

Employer of the Year 2011

Phoenix Contact was awarded by Top Job as the best employer among German small and medium-sized companies for 2011. This means that the manufacturer of industrial electronics has not only been top employer a second time since 2008, but also received four awards in the last eight years. “It’s not the multitude of individual measures that counts,” explained

Executive Vice President Prof. Gunther Olesch. “Our work is based on our company culture, where appreciation of a person’s performance plays a key role. Employees who feel that their work is appreciated reward the company in the form of trust and loyalty.” The jury – made up of personnel from the University of St. Gallen – were impressed with how Phoenix Contact, even in difficult times, took the initiative to develop the company to be equipped for the future. With selected projects for students who have completed tertiary education, the industrial electronics manufacturer focused on recruiting trainees even during the economic crisis.

Phoenix Contact Electronics, which produces automation technology and electronic interfaces in Bad Pyrmont, was awarded third place in its first try. In addition to comprehensive and regular information to all employees regarding how the company is performing, the team from the University of St. Gallen highlighted the concept of trust-building measures.



In Duisburg, mentor Wolfgang Clement (right) handed over the award for exemplary and future-oriented HR work to Executive Vice President Gunther Olesch.

Top Employer for Engineers

Phoenix Contact Came in Second in the Overall Ranking



In the current study “Top employer for engineers 2011,” carried out by the independent research company CRF, Phoenix Contact came in second in the overall ranking. Especially in the categories of work–life balance and training & development, the family-run company received top rankings. CRF issues this award for outstanding employer qualities. An extensive HR questionnaire forms the basis for interviews with employees and HR managers.

Thirty-seven companies were able to qualify for the study, performed by CRF in collaboration with the consulting company A.T. Kearney, TU München (Technical University Munich), and independent business journalists.

On the basis of detailed company profiles, the study analyzed family-run, small and medium-sized companies, as well as those operating on a global scale that employ an above-average number of engineers.

The study provides interested university graduates as well as engineers looking for a new position with a comparison of companies regarding important factors such as innovation management, career possibilities, work–life balance, primary benefits, training and development, as well as company culture.

Editors

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