

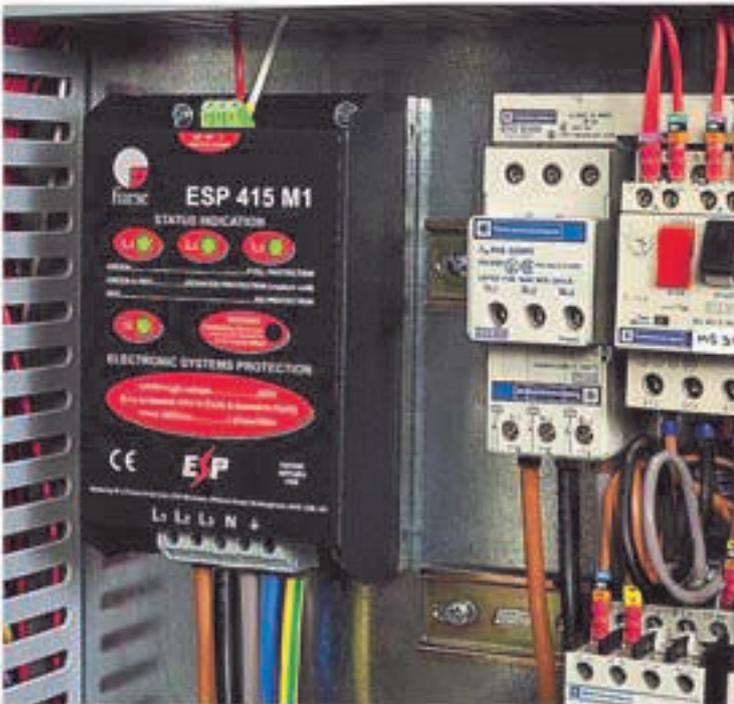
The Panel Builder



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- New Product Update: Allen Bradley
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Latest BS 7671 Wiring Regulations & Surge Protection



Amendment 1 of BS 7671:2008 17th Edition Wiring Regulations now includes a key new section (534) for protection against transient overvoltages using surge protection devices (SPD's).

Overvoltages from atmospheric origin (lightning) or electrical switching events can severely effect electrical installations and connected equipment.

The risks to life, buildings and electronics due to overvoltages are detailed within BS EN 62305 'Protection against lightning' and can be reduced through the correct selection and installation of SPD's in accordance with Section 534.

The new regulations were published on the 1 July 2011 and will come into effect on the 1 January 2012. This means installations designed after **1 January 2012 will need to comply with amendment 1.**

Help is at hand

Furse, a world leader in Earthing & Lightning Protection, provides unmatched technical support to guide you through these changes saving you time and money, including free of charge site surveys and onsite seminars.

[CLICK HERE](#) to request further information on 'Free of Charge' Site Surveys

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New Controller Family & Software for Machine Builders

Machine builders and end users who need a cost-effective control solution for their small applications will benefit from our new family of Allen-Bradley Micro800 component-class micro programmable controllers and Connected Components Workbench software. As part of the Connected Components solution the controllers and software are easy to configure, install and maintain. Designed to be used with other Allen-Bradley component class products, such as drives, motion control and operator interface products, the controllers are part of a solution bundle that offers machine builders easy selection, installation and commissioning of their low-cost, standalone machines.

“Machine builders need economical, convenient control solutions they can customise to suit their customers’ specific application needs,” said Steve Pethick – Director Components and Safety Business EMEA. “With this new line, Rockwell Automation is delivering the functionality and flexibility of a micro programmable logic controller for the price of a smart relay. Yet, the greatest value of the new Micro800 family is the simplicity and convenience it offers users – namely, that it provides just enough control, so customers are only paying for what they need.”

Ideally suited for standalone machine applications with fewer than 48 I/O, the initial launch consists of two controllers – the Allen-Bradley Micro810 and Micro830 controllers – and Connected Components Workbench software. Leveraging the controller’s embedded USB and serial ports, machine builders can quickly program the controllers and link them to human-machine interfaces (HMI) and other serial devices – ultimately helping minimise selection and installation time for themselves, and the total cost of ownership for end users.

The Micro800 controllers offer a wide-range of plug-in modules for analog/digital I/O, communications and expanded memory. The plug-in modules enable machine builders to personalise the controllers to increase functionality without expanding the product footprint. The new controller family also offers removable terminal blocks (most models) and simplified communication via point-to-point data exchange.

Complementing the new line of controllers, the new Connected Components Workbench software follows established IEC-61131 standards. A single package that is easy to acquire, install and update, the software makes it convenient and cost-effective for machine builders and end users to leverage one platform for their programming and configuration needs. It allows machine builders to program Micro800 controllers and configure other devices in the system, including PowerFlex drives and PanelView Component HMI products.

Based on proven Rockwell Automation and Microsoft Visual Studio technology, the new software provides controller programming, device configuration and data sharing with the HMI editor for PanelView Component operator products. In addition, the software supports three standard IEC programming languages: ladder diagram, function block diagram and structured text. In addition, the programming software features run-time download, which enables live program adjustments.

Allen-Bradley Micro810 programmable logic controller – As the smallest of the Micro800 family, the Micro810 controller features embedded smart relay function blocks that can be configured from a 1.5-inch LCD and keypad. The function blocks include Delay OFF/ON Timer, Time of Day, Time of Week and Time of Year for applications requiring a programmable timer and lighting control.

Allen-Bradley Micro830 programmable logic controller – The Micro830 controller provides flexible communications and up to six, high-speed counter inputs. It also provides easy incorporation of as many as five plug-in modules on the 48pt models. These off-the-shelf, fully customisable controllers carry global certifications and support.

“Machine builders seek the best of all worlds: They want solutions that are priced to provide not only the essential capabilities that they require, but also feature convenient, easy-to-use programming and configuration tools that minimise set-up and start-up times to maximise their profitability,” said Craig Resnick, research director, ARC Advisory Group. “The Allen-Bradley Micro800 PLCs and Connected Components Workbench software from Rockwell Automation appear to meet this machine builder demand for a customisable, cost-effective solution suited to standalone applications that require simple, time-efficient installation, configuration, programming and updating tools.”

Allen-Bradley Connect Components Workbench software comes in two versions:

- Standard, which can be downloaded for free and
- Developer, which features run-time download, user-defined function blocks and controller simulation and is available for order through local Allen-Bradley distributors around the world.

Rockwell Automation/Allen Bradley

New White Paper “Containerized Power and Cooling Modules for Data Centers”

Containerised data centre infrastructure, also called Facility Modules, can be 60% faster and 20-30% cheaper to deploy than traditional counterparts. A new White Paper considers their advantages and disadvantages as well as which environments can best benefit from their use.

When data centre stakeholders are faced with the challenge of deploying new power and cooling infrastructure (e.g., chillers, pumps, CRACS, CRAHS, UPS, PDUs, switchgear, transformers etc.), is it better for them to convert an existing room within the building or to construct an extension to house additional power and cooling equipment? Or could it be more cost effective and technically feasible to source the power and cooling using a series of facility modules?

Traditional 40 ft by 20 ft (12 m by 6 m) ISO shipping containers are probably the most recognisable form of containerised solutions; however the term does not fully capture the extent of portable, modular solutions available today. For this reason APC prefers the term “facility module” which not only embraces containers, but also includes other modules that are built on a skid or delivered as multiple form factor modular buildings.

To overcome issues of custom engineering as well as maximise the benefits of economies of scale and standardisation, facility modules are pre-engineered, pre-assembled and integrated, and pre-tested data centre physical infrastructure systems (i.e., power and cooling) that are delivered as “plug-in” modules to a data centre site. This means the elimination of much of the integration work done on-site in traditional data centre builds.

The deployment of facility modules can result in savings of 60% in deployment speed, 22% in first cost, as well as 18% in Total Cost of Ownership (TCO) when compared to a traditional build out of the same infrastructure. However, facility modules can also present implementation challenges in some data centres and may not be an effective solution for every application.

In addition to considering the savings which can be made through the use of pre-engineered and right-sized infrastructure solutions, the new white paper also therefore charts some of the drawbacks of integration, environmental and other physical risks to facility modules, as well as the limitations of the form factor especially as far as human ergonomics are concerned.

Designing Effective Human Machine Interface Systems White Paper

As technology systems grow more complex, issues of end-product equipment safety, ease of operation and reducing the risk of human error are becoming extremely important.

Designers today know that the operational performance, efficiency, and safety of a wide range of systems — from semiconductor fabrication equipment to mass transit vehicles — are closely related to the interaction between humans and machines, the human machine interface (HMI).

The selection and seamless integration of HMI components, such as switch controls, actuators and indicators, are critical to the success of equipment designed for human operation. Doing it right provides the “human touch” so desirable in modern controls. Design engineers who develop HMI solutions with this in mind will deliver applications with additional market advantage and greater sales potential.

[Download EAO White Paper](#)

TE Connectivity is showcasing its Hybrid Connectivity Solutions at SPS/IPC/DRIVES

Both the Power4Net and the Motorman hybrid connectors integrate several functions into a single compactly designed connector.

The flexible Power4Net hybrid connector has space for up to eight power and four Ethernet contacts – or even for twelve power contacts by changing the insert – and has been designed for machine automation applications that require high data transmission security and power of up to 10 Amps. The Motorman hybrid connector goes even further and features two fast Ethernet interfaces, five power sockets (three AC and two DC), five signal sockets and one protection earth-contact. Both connectors provide reliable connection technology and meet the demanding durability, safety and quality requirements of real-time Ethernet applications in industrial automation.

Combining power supply connectivity, plus Ethernet and/or signal into a single cable and connector significantly reduces cabling complexity and costs while providing flexibility in machine architecture. The Power4Net and Motorman hybrid connectors from TE also reduce installation time, as only one cable providing multiple functions needs to be installed per motor.

Designed with the Customer in Mind

The Power4Net hybrid connector complies with the VARAN -bus standard, a real-time Industrial Ethernet protocol used in industrial automation. It is especially suitable for use in the moulding industry, as it enables quicker change-over time for moulds, reducing installation time by up to 50 per cent as fewer cables and connectors have to be installed. It also helps to increase safety with real-time communication and data repeat in the event of data loss via the VARAN standard. In addition, it creates a flexible network by combining star, line or tree network and modular machine structures.

The Motorman hybrid connector is designed for applications that use decentralized servo motors connected via a deterministic system. Applications include I/O connector on decentralized servo motors or AC servo motors with PCB and drives (amplifiers) for use in industries such as packaging, assembly or food processing machines. Motorman is particularly suitable for use in consumer-goods industries as it allows the production line operator to decentralize the production process easily. Machine architectures can be more flexibly arranged, resulting in cost and electricity savings.

TE Connectivity

New Industrial Ethernet 10 GB M12 Connector System from TE Connectivity

To support industry requirements for high-speed cabling and interconnect systems, TE Connectivity has developed a new generation of its Industrial Ethernet M12 connector system for industrial applications, allowing data rates up to 10 Gb/s.

The connector system consists of various cable assembly and PBC header types in a standard industrial circular format. Its eight contact system makes it suitable for both high-speed data applications and powerplus-Ethernet applications. The Industrial Ethernet 10 Gb M12 connector system provides users with a future-proof interface, allowing them a smooth transition to higher bandwidth transmission to meet the requirements of today's 100 Mb/s and 1 Gb/s systems and the expected 10 Gb/s needed in the future. This means that the product will not need requalification or exchange for approximately the next five years.

Applications requiring greater bandwidth and higher data transmission speeds continue to proliferate throughout the industrial environment. High speed uplinks for Ethernet switches, distributed, real-time motion control systems with demanding jitter and timing requirements, as well as machine vision applications based on standard IEEE 802.3 Gigabit Ethernet all require cabling and interconnect systems that support higher speed requirements.

"In the industrial and harsh commercial space, customer choices for copper-based solutions include encapsulated RJ45 connectors and M12 systems. Some M12 systems limit customer choice to 4-circuit, 2-pair cabling solutions, or 8-circuit solutions in a 4-pair shielded twisted pair only solution. TE's new Industrial Ethernet 10 Gb M12 connector system enables our customers to future-proof their applications, supporting bandwidths of up to 10Gb over a single interconnect. In addition, the system supports a variety of cabling choices with performance categories from Cat5e through Cat6A utilizing shielded, and also unshielded twisted pair varieties, if a more cost-efficient solution is required," says Kevin McGonigle, Industry Manager for Industrial Data Communications at TE.

Typical applications for the Industrial Ethernet 10 Gb M12 connector include:

- Industrial automation - bandwidth needs are increasing because of real-time machine control.
- Machine vision - industrial production processes require the analysis of thousands of data points and related high-speed file transmission supporting complex quality control, requiring high data transmission rates.
- Industrial control applications - the rapid spread of Ethernet-enabled field devices, coupled with the decentralization of more complex machine control systems require systems that can support the greater bandwidth and faster backhaul needed to quickly and efficiently process critical data.

Latest News:

Omron's new G9SP Safety Controller and the chance to win an iPod Touch

Omron's G9SP programmable safety controller offers a cost effective, yet simple to deploy solution for controlling safety functions on compact machines.

Programmable safety controllers can save time and effort, by reducing wiring and complex circuit design common with conventional safety relay based solutions. Programmable safety controllers also provide flexible operation, allowing changes or additions to the safety functionality of the machine to be quickly and easily accommodated.

To celebrate the launch of the G9SP, Omron are pleased to offer a G9SP starter-kit* at the special price of £390, saving you over £570. The kit allows users to cost effectively evaluate the benefits of a programmable safety controller and provides everything you need to get started. Starter-Kit includes:

Controller, 20 safety inputs ,
8 safety outputs - G9SP-N20S
Memory Cassette - CP1W-ME05M
Power supply, 24VDC, 30W - S8VM-03024CD
USB cable for programming 1.8m - CP1W-CN221
Configuration software - WS02-G9SP01-V1

In addition to the G9SP starter-kit offer, Omron is celebrating the introduction of the G9SP safety controller by holding a free prize draw to win one of 3 iPod Touch media players. Why not find out more about the G9SP starter-kit and enter our free prize draw by clicking the link below.

*The G9SP starter-kit offer is limited to one starter-kit per company and is valid until 31st March 2012.

[Learn more & enter our free prize draw!](#)

Generator Power Calculator for the Industry Available Now, FREE Download!

PowerContinuity Systems is pleased to announce the launch of our online power calculator. This will allow our customers and fellow electrical engineers in the power industry to calculate their power protection requirements accurately and includes:

- Power Requirement Calculator
- Converting kVA to kW
- Converting kW to kVA
- Converting kW to HP
- Amperes when kVA is known
- kVA Required to run motors

The power calculator adds to our existing technical resources and guidance on our website. It is available for everyone and aimed at fully informing the customer of the services, provided they can make an educated assessment, of their own power protection requirements.

This new powerful tool is especially useful for calculating the size of their diesel generators and the power requirements for uninterruptible power solutions.

PowerContinuity Systems are industry leaders in the Power Protection sector. We currently support operations which power protect over 16% of UK end users with our bespoke power protection solutions including:

- Diesel generator installations
- UPS installations
- UPS maintenance and standby generator maintenance
- 24/7 emergency call out service
- Battery builds and battery replacement
- UPS Hire and Generator Hire
- Comms & IT Room works

This FREE download app is available to help everyone in the power protection industry and is another free service provided by PowerContinuity Systems.

[Download Now from the App Store](#)

Fortress Ensures Machine Safety with new Extracted Key Adaptor

Safety Interlocking company Fortress Interlocks has added its new E1, Extracted Key Adaptor, to the amGard range of modular safety gate switch interlocks. The E1 has been designed to ensure that the door to the machine/process cannot be opened without removing the Safety Key, as well as ensuring that the machine/process cannot be restarted without returning the key(s). It can furthermore prevent personnel being accidentally locked inside a guarded area.

This is achieved by means of the mechanism between the E1 and the head operating so that the Actuator remains trapped in the head, until the key is removed, allowing the "Gate" to swing over the keyhole. While the Actuator is out of the head the Gate remains over the keyhole, and thus prevents key entry into the lock.

- Ensures a specific sequence of operation
- Can be stacked or combined with other adaptors
- Provides unique link to mGard range
- Up to 5 key adaptors (E1 & S4) in one configuration

[Fortress Interlocks](#)

Latest News:

Wieland Announces New Safety Partners

Wieland Electric has selected a small number of specialist distributors to become partners in selling the company's safety products. The new Authorised Safety Partners will reap the benefits of working closely with the company on all aspects of safety products, including their markets and applications.

In addition to receiving full technical back up from Wieland safety experts and comprehensive literature, the Safety Partners will also be offered training and free seminars.

Wieland's Safety Partners are:

TLA Electrical Distributors (Northampton and Nottingham)
Park Electrical Services (Wrexham and West Bromwich)
Parmley Graham (Middlesex and Southampton)
BPX Wakefield
Control Components Anglia
WGA Industrial Control Equipment

All Safety Partners will carry excellent stocks of Wieland safety products on their shelves and their representatives will have the opportunity to utilise the Wieland safety engineers on customer visits when requested. This will mean a better service for customers in terms of product availability and advice on product specification.

www.wielandsafety.net

Flexicon Extends Liquid Tight Flexible Conduit Range

Flexicon has extended its range of liquid tight flexible conduit systems to include two new ranges that offer Electromagnetic Compatibility (EMC) screening.

Both ranges, LTBRDP and LTBRDLFH, offer an IP rating of IP68 and IP69k, which, like the other liquid tight conduit systems in the Flexicon range, are the highest rated in the UK. This rating allows equipment to be steam cleaned by a high pressure, high temperature jet wash.

Other features include, a high mechanical strength, a smooth wipe clean outer cover that is resistant to oils and greases, and high UV resistance so they can be used outdoors.

An additional feature of the LTBRDLFH system is that it can be used in applications that require a low fire hazard specification. This means that it is self extinguishing, has low smoke and low toxicity and is halogen free.

Typical applications for the new liquid tight flexible conduit ranges are for machinery, outdoor applications including those where EMC screening is a requirement or in washdown applications.

Both ranges can be used with Flexicon's standard range of liquid tight compression fittings. Available in nickel-plated brass and stainless steel options these fittings are available with metric, PG or NPT threads.

Flexicon



FDB Addresses Plan Filing Systems

Despite the overarching presence of computer storage there is still a powerful need for hard copy plan drawings. As recognised by the people at FDB Panel Fittings, storage and easy visibility of flat plans in A2, A1 and A0 sizes can be a significant problem - a problem however readily addressed by the new offerings from FDB of the PRO Plan Filing System single end mounted pockets and the ECO system double end mounted units.

Explains Terry Cattle, M.D. of FDB Panel Fittings: "We have seen a demand for tidy storage of printed plan documents and found that the PRO and ECO products provide an excellent solution."

Both ranges include wall mounting options with capabilities of 500 to 1000 sheets, while the PRO Clear-Desk System provides a way to co-locate a flat screen monitor adjacent to A1 and A2 hard copies on a desk based workstation." FDB additionally offer mobile stands for up to 2400 sheets and a Combi Mobile unit with suspended plan holders back to back with shelves for books or lever arch file boxes.

FDB

Touch Panel with 12,1" Widescreen LED Display for Hazardous Areas

BARTEC has extended its product range of POLARIS touch panel PCs for hazardous areas by a new 12.1" device with widescreen LED display. With a high resolution of 1280 x 800 pixel and a 16:10 display format, it provides more space for the visualization and control of automation tasks.

Due to the large display surface, complex processes can be represented more clearly and in more detail. High-resolution displays with LED background illumination and touch-screen allow an intuitive and comfortable handling. Even with large viewing angles or under unfavourable light conditions, the latest LED display technology guarantees an optimal contrast.

The touch panel is equipped as standard with a processor of the latest generation, the Intel® Atom with 1.6 GHz. The pre-installed operating system is Windows® XP Professional, Windows® 7 is optional. Connection to the control unit or to the process control system via Ethernet, Profibus DP or via a variety of serial COM interfaces.

Due to the integrated keyboard adjustment for Windows, WinCC flexible, RS View or the BMS Graf pro version 7, which has been especially developed for the POLARIS series, the panel PCs are suitable for all visualization tasks. The BARTEC software enables the user to transmit projects via Ethernet, to use graphic lists or to handle an integrated user management.

POLARIS touch panel PCs can be applied for the comfortable handling of devices such as mixers or dryers but also for the control and monitoring of complex machines such as reactors or centrifuges. All devices are admitted for application in zone 1 + 2 as well as in zone 21 + 22 and guarantee the habitual PC comfort even in hazardous areas. They are especially suitable for use in the chemical, petrochemical and pharmaceutical industry.

Advantages:

- LED technology
- high screen resolution
- control via touch-screen
- processor capacity 1.6 GHz
- direct coupling in explosive areas
- optional Windows® 7
- integrated keyboard adjustment

Bartec

PEGASUS Mobile Phone and Online Tracking System with New Features



PEGASUS, the new mobile phone and online tracking system developed by BARTEC, was especially designed for industrial applications.

With its rugged design and high protection class IP 65, it is ideally suited for use at operating temperatures of -20°C to 60°C in the chemical and pharmaceutical industries as well as in the oil and gas sectors. Certified according to ATEX, IECEx, UL and INMETRO, this innovative further development is especially suitable for potentially explosive atmospheres in the IIC Gas Group.

PEGASUS ensures protection in extreme operating areas: GPS receivers and special software make PEGASUS an efficient online tracking system, facilitating new options for personal security, hazardous materials transporters and other logistical tasks.

PEGASUS data can be stored and evaluated on an in-house server, or a dedicated BARTEC server. The man down function reacts to the absence of movement and triggers an alarm after a defined period of time. The device is located using GPS. The alarm including the GPS position data can be forwarded as a text message, link to the position or via GPRS to a server.

For lone workers, this function is particularly valuable. A freely programmable emergency call button provides added safety in case of an emergency. Workplace safety is the keyword where simultaneous working and phoning are concerned. With a suitable Bluetooth headset, talking on the phone becomes possible even while doing activities that require two hands. PEGASUS also features a hands-free function and vibrator alert.

The keyboard is generously dimensioned and offers enough space for steady operation, even with gloves. To prevent operating errors, all keys give tactile feedback in the form of a click. The straightforward and clearly structured menu design makes operation simple for the user.

The mobile phone is available in several versions to offer the optimum device for all applications and operational areas. With a Quad Band GSM module (850/900/1800/1900 MHz), the device is ideally equipped for utilisation on all continents.

European Automation set to offer ANAX drive technology components beyond 2011

European Automation has announced that it will continue to support components from the Bosch Rexroth ANAX drives, servomotors and accessories range after December 2011.

On this date the OEM's maintenance and direct replacement service will be replaced with a suite of innovative modernisation and retrofit services. Customers seeking replacements, spares or other support for the former Indramat components will be offered repairs as well as the sourcing of obsolete parts by European Automation.

The ANAX range was designed for high-accuracy servo applications such as NC machine tools for metal machining and wood working, transfer lines, automation systems, packaging and thermoforming machines and production machines in the automotive industry.

European Automation regards the sourcing of obsolete and phased out industrial automation components as a speciality. The company stocks a wide range of parts including drives, motors, PLC's and HMIs from leading industrial automation manufacturers including ABB, Bosch Rexroth, SIEMENS and Mitsubishi.

"Bosch is offering some excellent retrofit and modernisation options for Indramat ANAX users, as you would expect from a company of its calibre" explained Jon Wilkins, European Automation's marketing manager. "However, these options might not be suited to everyone; especially smaller companies or ones who are looking for a very quick solution to get them up and running again. We hope to be able to continue to offer repairs on the product range as well as sourcing spare parts through our massive network of partners and our own stock."

The ANAX range include the TDM, TDA, KDA, KDS, RAC, TFM, KDF drives, the MAC servomotor and the TBM, TCM, CZ accessories.

European Automation

DC drives from Siemens now also available as ready-to-use cabinet units

Sinamics DC Master drives from Siemens are now also available as ready-to-use drive cabinets. The Sinamics DC Master cabinets can be directly connected to three-phase systems up to 3 AC-950 V, and in the basic version they cover a power range between 6 and 2500 kW.

Outputs up to a total of approximately 30 MW, and applications such as 12-pulse series and parallel connection are also possible. The drive cabinets can be adapted to the requirements of the plant by means of numerous options. For example, different degrees of protection can be selected, as well as monitoring and protective functions.

Thanks to their space-saving design, the power supply for the external fan of the DC motor, and the flexible auxiliary voltage supply, they can be integrated easily and quickly into the plant. In the basic version, the type-tested drive cabinets contain all components that are required for the power supply of a DC motor from the three-phase system.

Furthermore, they can be commissioned via the advanced operator panel AOP 30, or with PC support using the "Starter" tool. This reduces configuration and commissioning time. The Sinamics DC Master cabinets can be integrated into higher-level automation solutions via Profibus, Profinet or digital and analog interfaces.

Thanks to their compact and rugged design, the new drive cabinets are particularly suitable for use in the plastics, metals, cement and paper industries, as well as in conveyor systems and hoisting equipment. The monitoring and protective functions also enable safe operation.

Siemens

New from Rittal – Catalogue 33



Rittal has released their latest main catalogue with over 800 pages of easy to read information on the extensive range of enclosures (both indoor and outdoor), power distribution, climate control systems, IT infrastructure systems, service packages and design and calculation software.

The catalogue explains how the various products can be combined to form a 'system' approach to specification and installation. Published in hardback with a 'fast find' thumb index the catalogue is available free of charge, just email catalogue33@rittal.co.uk or phone 01709 704105 for your copy.

ESCON 36/2 DC the New DC Servo Motor Controller from Maxon Motors

Despite measuring just 55 x 40 mm, the versatile new ESCON offers extremely dynamic, 4-quadrant control of brushed DC motors to around 72 W, at speeds from 1 to 150,000 rpm.

A variety of operating modes includes open or closed loop speed control, as well as current control, with an array of useful bonus functions, such as speed-ramping capability and the option to enable or disable the power stage depending on the direction of rotation.

Importantly, inputs and outputs can be digitally configured, quickly and easily, simply by plugging in to a PC's USB port and following on-screen instructions. The emphasis on compactness and usability extends to hardware: no external filters or motor chokes are required, and even pre-assembled startup cables are available.

In-built protective circuits safeguard the controller against overcurrent, excess temperature, under and over-voltage, voltage transients and short-circuits in the motor cable. Similarly, adjustable current limitation protects the motor and load from accidental damage.

maxon motor believes the ESCON's energy efficiency of 95% makes it an ideal choice for mobile, battery-powered and other consumption-optimised applications, alongside the obvious uses in automation, small machine manufacturing and mechatronics. Naturally, the controller is designed to be a perfect match for maxon's world-leading, permanent magnet DC motors.

maxon motor UK senior sales engineer Paul Williams said: "The ESCON 36/2 really does push the envelope for miniaturisation - and the USB configuration for input and output is simply child's play." "In fact, with that much performance and versatility in such a compact package, the only thing easier than the ESCON's setup is making the decision to use one."

[maxon](#)

New AS-i master connects Simatic S7-1200 with the lowest field level

The Siemens AS-i master CM1243-2 communication module connects AS-Interface networks to the Simatic S7-1200 controller.

The AS-i master CM1243-2 of the Siemens Industry Automation Division offers exceptionally easy and effective connection of the lowest field level to a higher-level controller and thus to the process level and MES level.

The new AS-i master automatically organizes the data traffic on the connected line, handles not only signal scanning but also performs parameter setting, monitoring and diagnostic functions. CM1243-2 also offers additional integrated functions, such as the configuration of Sirius M200D AS-i motor starters without additional function blocks and access via a web interface.

A total of 62 AS-i slaves or 992 inputs and outputs to an A-imaster can be connected. A standard power supply can be connected via the optional DCM 1271 data coupling module, enabling the realization of a low-cost AS-i Power24V network.

Configuration and commissioning of the AS-i master is especially easy to perform due to the integration of the new device in the TIA Portal. AS-i engineering is performed directly in the TIA Portal and is similar to configuration with Profibus and Profinet. No additional software is required. The TIA Portal shows the topology of the connected AS-i network with a click of the mouse. The user can conveniently adapt the parameters of the slaves on screen.

The module significantly expands the application area of the controller. The AS-i master enables sensors and actuators to be easily and quickly integrated at the lowest field level both in the Simatic S7-1200 and in the TIA Portal. Configuration via the TIA Portal is comparably fast and user-friendly, similar to Profinet or Profibus networks.

[Siemens](#)

Cube20 - New Module, More Flexibility from Murrelektronik

Murrelektronik has expanded its Cube20 family with the addition of the new Cube20 DI32 NPN module, a UL approved input module with 32 digital inputs for universal applications. The module can be universally used for NPN or PNP switching sensors. Thanks to a simple jumper on the connection terminals, the module can be switched between NPN or PNP mode:

If the "MOD" terminal is connected to the "US" terminal, the module functions in the NPN mode.

If the "MOD" terminal is connected to the "0V" terminal, the module functions in the PNP mode.

The Cube20 is a fieldbus I/O station with modular expandability, which can be integrated along with the Cube67 I/O system. Cube20 is designed for the requirements of modern wiring in control cabinets. High costs from dealing with many individual components are reduced when you use Cube20 thanks to the compact design and a high channel density of 32 channels per I/O module. With 488 channels on 90 cm Cube20 you can easily save space and get more flexibility. Cube20 features maintenance-free plug terminals for single-wire connectivity that is standard in control cabinets.

[Murrelektronik](#)

Mitsubishi's Inverter Energy Saving Tool is Free To Download

This program estimates electrical energy consumption for fan and pump applications when using an AC motor in combination with an Variable Speed Drive. The software compares the use of an Adjustable Speed Drive against conventional control methods such as outlet dampers, inlet vanes, throttling valves, etc.

The Energy Savings Estimator software consists of a user friendly interface that allows the user to estimate energy consumption of a new or existing system in a quick and easy way.

The software also calculates the amount of carbon that can be saved by using VSD technology. This data can then be printed to produce professional reports.

The software is free to [download here](#)

Buy a new Greenlee hydraulic punch driver – and receive up to £100 off!

From the 1st November 2011 until 29th February 2012 Greenlee is running a special promotion whereby they will accept your old hydraulic punch driver as a trade-in against a new Greenlee model.

Any hydraulic punch driver can be traded-in at a participating distributor during the special promotional period in exchange for the following discounts:-

£50 off a new Greenlee Quickdraw hand held hydraulic punch driver.

£65 off a new Greenlee hand or foot pump hydraulic driver.

£100 off a new Greenlee LS50L-flex or LS60L battery operated punch driver.

Please see the attached promotional [poster here](#).

The new LS50L-flex is the worlds lightest, most powerful and most versatile punch driver and can be used with the full range of punches for mild and stainless applications.

Amplicon hosts Free WLAN Seminar at the new Amex Stadium

Amplicon are inviting all engineers, system integrators and OEMs to their latest Wireless LAN Technology Seminar 2011. The seminar aims to offer a real insight into wireless communications applied in automation and transport.

The event is to be held at the new home of Brighton & Hove Albion the AMEX stadium on 30th November 2011, and is guaranteed to provide innovative new ideas and excellent core knowledge on how WLAN technology can provide secure, reliable, mobile communication of systems and devices in demanding environments. Amplicon will be accompanied by Daconi Wireless Ltd who will be providing invaluable advice on wireless site surveys for larger scale and more challenging deployments.

There are two sessions to choose from, the morning session will be aimed at attendees who have an interest in various areas of automation; whilst the afternoon is tailored towards the transport industries such as road and rail.

[Amplicon](#)

Compact switch connects logic module to Ethernet network

With the Logo! CSM 230 and CMS 12/24 compact switch modules from the Siemens Industry Automation Division, logic modules in the Logo! product range can be enhanced by additional Ethernet interfaces and connected flexibly to Ethernet networks.

The design of the new switch modules has been adapted perfectly to the Logo! series, enabling seamless and space-saving installation. The CSM 230 is suitable for operation at 110 and 230 volts AC, while the CSM 12/24 version operates at 12 and 24 volts DC. The power is supplied to both versions via terminal strip connections.

Logo! CMS 230 and Logo! CMS 12/24 each have four RJ45 ports. Three ports are located on the underside, and another port is set into the front panel for fast connection of programming and diagnostics devices.

The unmanaged switches can either connect two logic modules to each other, or they can offer connections for additional components such as human machine interface devices, displays, or programming devices (PG). Like the Logo! logic modules, the new switch modules are suitable for a host of applications in different sectors, and can also be used in stand-alone mode for connecting up any Ethernet devices.

[Siemens](#)

How to manage your electrical cabinets and components with identification

The complexity of components in electrical cabinet requires various forms of ID control for, Initial installation, in operation management and modification maintenance and repair.

Identification solutions:

1. LabelMark™ Labelling Software

LabelMark™ has many incorporated features specifically designed for panel building and electrical market:

- Import AutoCAD files
- Import MS Excel files
- Import logos and standard range of barcodes
- Terminal block pitch control settings
- Alphanumeric basic or advanced serialisation

2. Self-Laminating Labels & PermaSleeve™ Heat Shrinkable Wire Marker Sleeves

- Quick to print and easy to apply
- Professional unified image
- Easy to identify from a distance
- Available in standard range of sizes and ability to produce a custom range too. For unusual customer requests Brady can provide custom solutions for Self-Laminating Labels and custom slitting for PermaSleeve™ Heat Shrinkable Wire Marker Sleeves.
- Use Self-Laminating Labels on both pre-terminated and terminated wire and cable and PermaSleeve™ Heat Shrinkable Wire Marker Sleeves only on pre-terminated.

3. EPREP Labels - Engraved Plate Replacement Labels

- Promote your work and inform your customer by showing your company logo and full panel details by applying Brady EPREP ID inside the electrical cabinet.
- Standard and custom options are available.

4. Electrical Risk Lockout

Promote safety either applying yourself or handing over the practice to customers

- Miniature Circuit Breaker Lockout will fit most existing types of European Circuit Breakers, requires no tools to install. Use with the New Compact Safety Padlock range or Safety Padlock with Plastic Shackle range.
- Compact Safety Padlock is smaller and lighter than the standard non-conductive and spark resistant Safety Padlock. It is specifically designed to eliminate unnecessary stresses and strains on the switching mechanisms.
- Safety Padlock with Plastic Shackle has the added advantage of being fully resistant to electricity as the plastic shackle cuts off the electrical current from the shackle to the key.

BRADY

Eaton Extends DS7 Softstart Range to 200A

Following the success of its innovative DS7 soft starters, which combine smooth starting with freedom from vibration, Eaton's Electrical Sector has now extended the range to include versions with ratings of up to 200A. With these new additions, the Eaton DS7 soft starter range now comprehensively covers all requirements from 4 A to 200A, for supply systems from 200V to 480V.

DS7 soft starters can be supplied for use with control voltages of either 24V ac/dc or 110 to 230V ac, and all types fully meet the requirements of the IEC/EN 60947-4-2 soft starter product standard. Versions with an integrated interface for SmartWire-DT, the innovative Eaton technology that virtually eliminates the need for conventional control wiring in panels, will be introduced in the near future.

All Eaton DS7 soft starters, including the new high power versions, incorporate the company's patented asymmetrical trigger control technology, which eliminates the dc components in the motor current that are produced by conventional two-phase controlled soft starters. This means that the motor starts more smoothly and with less vibration, and that the start-up times can be minimised. The performance of DS7 soft starters is therefore fully comparable to that of bulkier and more costly three-phase controlled soft starters.

Eaton's space-saving DS7 soft starters are an attractive and beneficial alternative to conventional star-delta starters in a wide range of applications, such as pumps, where their ability to eliminate water hammer reduces wear on the whole installation; fans, where they reduce wear on drive systems; and conveyors, where smooth starting and vibration-free operation not only minimises equipment wear but also the risk of product damage.

Electronic soft starters meet the growing need among end users for the elimination of mechanical shock and the reduction of supply current surges during motor starting. They control the supply voltage to the motor during starting so that the motor torque is optimally matched to the requirements of the application. The use of soft starters reduces the load on mechanical components, thereby extending their lives and minimising maintenance requirements, leading to big savings in lifetime costs.

Eaton Electric

EAO—Your Expert Partner for
Human Machine Interfaces

STOP IT

Superior quality E-Stops and
stop switches

Wide choice of sizes and
accessories

Protective shrouds and
enclosures

Foolproof to EN 60947-5;
compliant to ROHS, UL, CE



[Download our E-Stops guide](#)

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EAO Provides Help with Designing HMI Systems



EAO, the expert partner for Human Machine Interfaces, designs and manufactures innovative control panels and input devices for demanding industrial applications.

From factory floor environments to the rigours of public use equipment, EAO's human machine interface (HMI) systems are used by some of the world's leading companies including Siemens and Audi.

Virtually any type of HMI system or input device can be produced, from simple membrane keypads and primary on-off controls, to handheld remote controls and high-complexity interfaces that feature discreet switches, touch screens, electronics, serial bus

connectivity, rugged enclosures and mounting arms.

Each one is developed in very close partnership with the customer. EAO's technical advisers act like an extension of the customer's design department. They solve complex HMI problems and help customers realise their visions. The custom-build process is highly valued by our clients and ensures the HMIS system meets the exact requirements of the end equipment.

All electromechanical HMI components and assemblies are produced by EAO in a strictly-controlled Swiss manufacturing environment. With long established supply chains and partnerships, EAO guarantees that all aspects of the overall system will satisfy European and international standards. In business for more than 60 years, EAO has become a market-leading supplier to machinery and automation, public transportation, specialist vehicles and automotive industries. It manufactures and supplies in accordance to ISO 9001, ISO 14001, and VDE automotive standards.

EAO

Fully Compliant Emergency Switches From One HMI Supplier

EAO, the expert for Human Machine Interfaces, supplies the world's most comprehensive range of safety-compliant emergency switches and accessories. E-stops from EAO feature twist-to-release actuators and foolproof design in compliance with ISO 13850 (former EN418), EN IEC 60947-5-1, and EN IEC 60947-5-5. They provide immediate shutdown in critical situations through safe/positive break contacts, plus a long service life*.

There's a wide choice of 16 and 22.5mm products including single-piece E-stops with built-in switch elements, or those with separate actuators and elements to facilitate different production techniques - plug-in or solder, screw, ribbon cable or PCB terminals. There are options for illuminated actuators, twist-to-release or key-to-release actuators. All products are protected against oil and water to a minimum IP 65.

A full range of E-stop accessories are available to complete the switch including shrouds (83mm for compliance to SEMI S2-93/12.4c) switch guards, palm guards and labels.

EAO also supplies several sizes of stop switch, including the world's first with a mounting depth of less than 19mm – the Series 51.

This extensive choice will accommodate virtually any use within factory automation, semiconductor and electronic production, food processing, lifting and moving, public transportation and special vehicles.

Service life varies with product. Please refer to current technical data for each Series.

[Download Series 51 datasheet](#)

[Download E-Stop White paper](#)

EAO

Sponsor Review: Hyundai Electric

Hyundai Electric UK Bring Competitively Priced Quality Products to the UK Market

Hyundai In The UK:

We are an independent approved importer of Hyundai Heavy Industries and passionate about Hyundai and its products. Our objective is relatively straight forward and that is to introduce Hyundai circuit breakers: miniature circuit breakers (MCB), moulded case circuit breakers (MCCB) and air circuit breakers (ACB) and distribution/panelboards into the UK market.



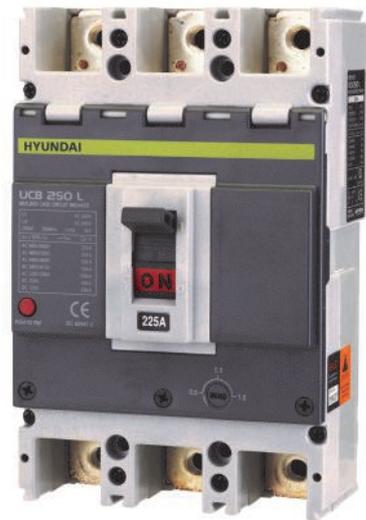
HiAS and HiAN Air Circuit Breakers

Designed for both industrial and marine applications, Hyundai Air Circuit Breakers.

Features:

- 3 pole & 4 poles from 800A - 3200A Fixed and Draw-out
- Various protective relays
- Maximum fault interruption performance and short time withstand capacity
- Compact and light weight
- 50kA, 65kA, 70kA and 85kA Breaking Capacity

[View products](#)



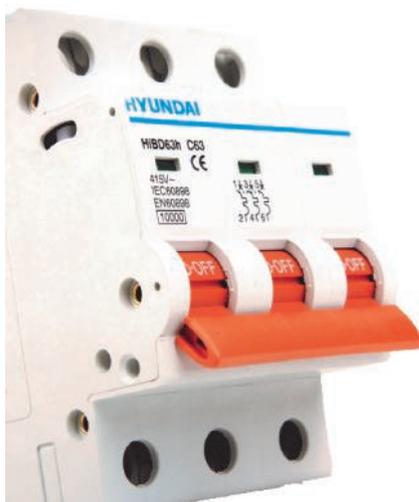
UCB and UPB Moulded Case Circuit Breakers

Optimum design provides easy-to-use customer installation, while offering versatility and high performance to match today's demand for a reliable and cost effective product, which is easy to maintain.

Features:

- 3 pole & 4 poles from 32A - 1250A
- Thermal Magnetic and Electronic Protection Options
- 50kA, 85kA and 100kA Breaking Capacity

[View products](#)



HiBD63H and HiBD125 Miniature Circuit Breakers

Hyundai HiBD type miniature circuit breakers are used for the protection against overload and short-circuit for 50/60Hz, rated voltage 240Vac or 415Vac and with rated current 1A to 125A.

All products comply with IEC/EN standard, and can be applied to industry, commercial, residential and other similar installations

[View products](#)

Sponsor Review: Rittal

Rittal Data Centre Container



Rittal introduces the 12 m long XL version of its turnkey Data Centre Container (DCC) especially designed for IT applications and targeted at medium-sized companies with a very high demand for computing power, as well as at large corporations or hosting providers.

Equipped with Rittal IT infrastructure components, benefits include an uninterruptible power supply (UPS), an automatic fire alarm and extinguisher system, power supply and distribution, raised floors, as well as access control and monitoring functions. Rittal's DCC also has a reinforced exterior shell, burglary protection features to protect against external threats and energy-efficient climate control.

As many as sixteen TS 8 server racks with 752 height units can be accommodated within a Rittal DCC XL and with an outer width of 3 m and height of 3.25 m it is approximately 60 cm wider and 65 cm taller than the ISO standard.

These generous dimensions provide technicians and administrators with enough free space for installation and maintenance.

Its' design allows a separation into hot and cold aisles to allow targeted cooling of the servers. The use of direct free cooling is also possible, depending on the geographical location, where this filtered outside air is guided directly into the container. A switch-over to a conventional climate control unit is then only made at high external temperatures. This way, a very good PUE (Power Usage Effectiveness) of less than 1.2 can be achieved.

A Rittal DCC can be standardised, to meet the specific requirements of server farms, which are composed of dozens of containers and serve entire regions or continents via software services.

Due to the possibility of physically separating server racks and technology, the Rittal DCC XL is especially suited for "private clouds". A high level of physical security is guaranteed therefore air conditioning technicians can maintain the climate control system, without having to obtain real access to the servers themselves.

Rittal – The System.

Faster – better – worldwide.

We are inventing the future.

Benefit from "Rittal – The System." with its system solutions tailored precisely to the needs of your industry. Experience a whole new dimension in customer benefits with our globally available product diversity, now summarised for you in the latest edition of our Catalogue 33. **Order your copy of the Catalogue now, either from www.rittal.com/HB33 or by using the adjacent QR code.**



ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

FRIEDHELM LOH GROUP

Sponsor Review: Rittal

New Generation 'Blue e' Enclosure Cooling Units



Rittal are converting their entire range of cooling units with Comfort controller to the new Generation 'Blue e'. The intelligent, targeted use of energy using the innovative eco-mode control system from Rittal, together with the use of energy efficient EC fan technology, provide increased energy savings, reduced costs and help to conserve the environment.

The changeover from existing units with Comfort controller to the new Generation 'Blue e' enclosure cooling units requires no technical modification as the cooling outputs, mounting cut-outs and unit dimensions are maintained across the range.

Cost effective, as the unit prices are identical, the new Generation 'Blue e' cooling units from Rittal will save money, benefit the environment and meet future energy efficiency requirements for industry.

Rittal Innovations

With innovative power to stay one decisive step ahead!

Enclosure systems which satisfy even the highest demands in practical use are one of Rittal's hallmarks. For every application the ideal enclosure, the ultimate IT housing or the most appropriate electronic-packaging concept.

High-performance power distribution components, perfectly tuned climate control units and robust outdoor solutions round off the unique all-embracing enclosure range from a global player in the business of innovation. With well over 6000 standard products immediately available, Rittal is the world's leading supplier of future-oriented enclosure technologies with all relevant national and international [approval certificates](#).

Sophisticated design, perfection in ergonomics and handling, and the ability to offer Rittal partners solutions precisely tailored to their individual needs - those are Rittal's invincible strengths. Strengths which Rittal partners can rely and build upon at all times.

Rittal



IT INFRASTRUCTURE

SOFTWARE & SERVICES

www.rittal.co.uk

