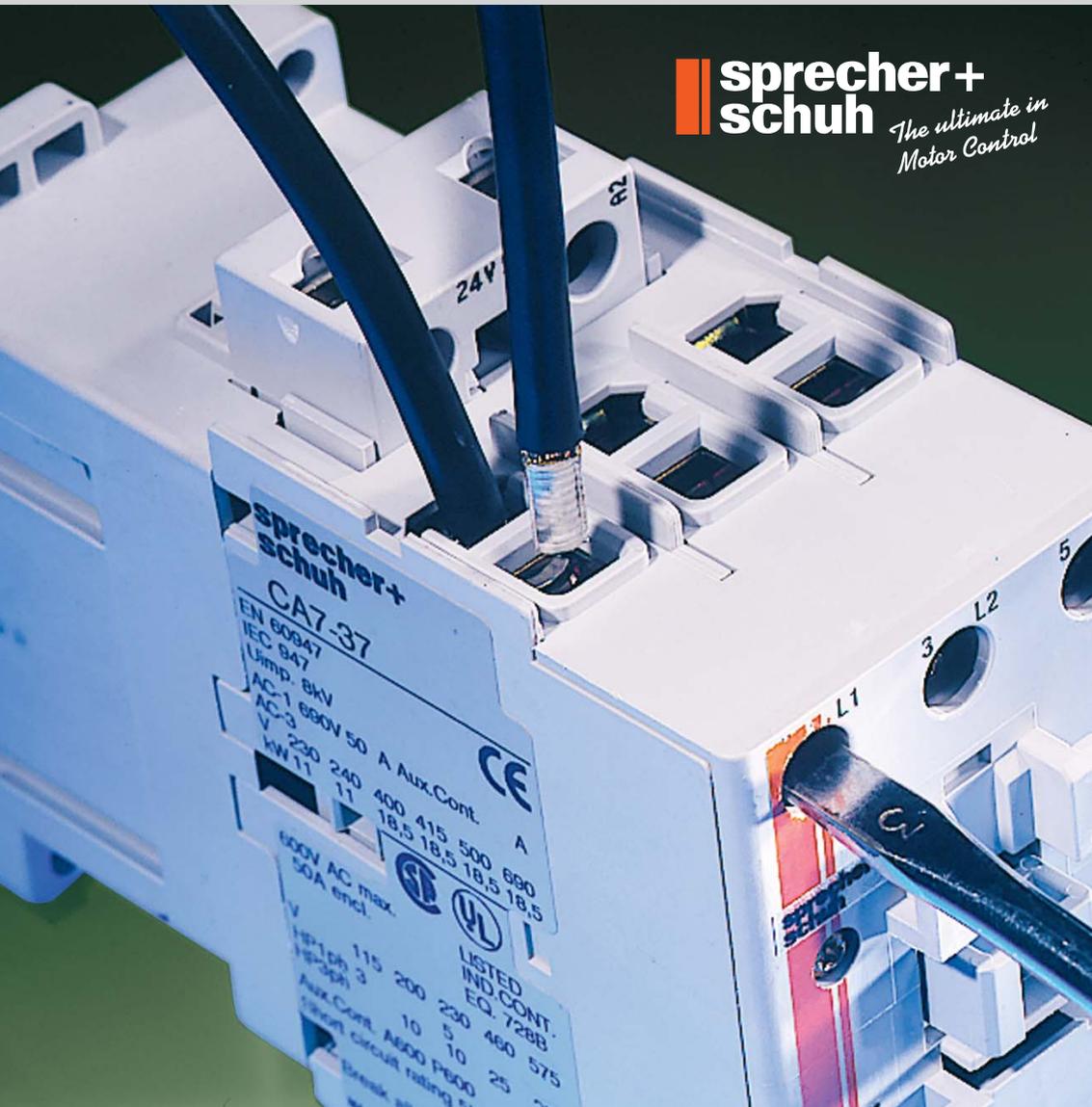


[ISSUE 1] NOVEMBER 06

NEWSROOM

INDUSTRIAL SWITCHGEAR & AUTOMATION SPECIALISTS

NHP



sprecher+schuh
The ultimate in Motor Control

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EDITORIAL



Welcome

Welcome to the first edition of NHP's New Zealand Newsroom, an electrical industry publication bringing you the latest product innovations and interesting application articles. Newsroom will be produced three times per year and aims to provide you, our customers with a regular update on our products, systems and solutions.

2007 is set to be a big year for NHP New Zealand. We will reintroduce the Sprecher + Schuh brand to the market early in the year and will hold a major product launch in Auckland showcasing Sprecher + Schuh alongside the entire NHP product range. Our team has been bolstered recently with the addition of experienced sales and technical people to support all of our products. This and the addition of several new brands to the range including Grasslin, Carlo Gavazzi, Elettronica Santerno and Wago point to an exciting year ahead.

Led by Craig Vallance the NHP team is committed to providing New Zealand industry with the best products, systems and solutions the world has to offer.

We do this by selecting our supply partners carefully ensuring they share our values, offering technically and commercially competitive products and by being easy to do business with. This means having products in stock when our customers need them.

We know that supporting our customers by ensuring all of our Sales Team is well trained to provide application and product selection advice is critical to our success.

I trust you will enjoy this, our first edition of Newsroom.



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More on the ground in "Long white cloud"

NHP New Zealand has virtually doubled its numbers, now fielding 28 staff members to service growing customer needs, coast-to-coast and end-to-end on both North and South Islands. This rapid expansion of its operations signifies a heightened awareness and interest in NHP's scope of supply and level of expertise and service. The increased peoplepower also comes on the eve of the NZ launches of new product ranges from Sprecher + Schuh and Terasaki, which are creating industry-wide anticipation.

"We have always had a two-island presence, but with a perceived focus on Auckland and Christchurch," said NHP NZ Manager, Craig Vallance. "Now we have local people, on the ground, operating out of Napier, Dunedin, Hamilton and the Wellington areas, as well.

"And these new recruits are far from 'green'; they all come from within the industrial electrotechnology sector and bring with them many years of hands-on experience in process, control, drives and protection products."

As part of their training, the new team members spent a working week in Melbourne, undergoing an intensive induction into the NZ product offerings and immersion into NHP's 'customer-first' corporate culture.

For Sid Appleby (Napier), Martin Pattle (Auckland) and Chris Brandon (Christchurch), it was a worthwhile introduction to NHP's optimal mix of world-class technologies, refined systems, and end-to-end solutions approach to its business.

"Even though most of us were familiar with at least some of the product ranges, it was great to have the opportunity to learn or, in some cases, re-familiarise

ourselves with specific product capabilities and unique features and benefits," said Chris. "Even over dinner, the table talk inevitably kept coming back to electrotechnology and automation. Enthusiasm was definitely running high!"

One of three NHP representatives now operating out of Christchurch, Chris says that his focus will be on relationship building. "With three of us out on the road, we have the time to really get to know the business environment in which our clients are operating. I am relishing the opportunity to develop genuine partnerships and build wholesaler channels," he said.

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NHP re-introduces a reliable name to NZ

While NHP may still be a relatively new name here in New Zealand, one of its flagship product ranges is a familiar and trusted friend: Sprecher + Schuh.

First introduced onto the local market in the 1970s, Sprecher + Schuh product solutions have been highly regarded across the country, with a proven track record in virtually every industry. NHP is proud to be 're-introducing' the Sprecher + Schuh name—and a truly comprehensive solution set—to the NZ market.

"With NHP's extensive infrastructure covering both islands, we are fully supporting these products across the New Zealand market—technically, with stock, and with distribution," says NHP NZ Manager, Craig Vallance. "We are in an excellent position to again provide the New Zealand market with these outstanding products."

Contactor of choice

According to NHP Business Manager – Motor Control, Harry Fletcher, Sprecher + Schuh really founded its reputation on the success and innovation of its world-beating CA 1 range of contactors. "But the company has never rested on its laurels," Harry says. "Since the early days of CA 1 there has been continuous development resulting in the current CA 7 range of contactors. The CA 7 range is designed and manufactured to the most advanced specifications: cadmium-free and recyclable materials; new plastics; new ratings; and more sophisticated accessories."

Sprecher + Schuh also has the largest range of contactors on the market today, including its advanced CA 6 range. The CA 6 is unique in the market—being the only range from 55 kW through to 500 kW with an internal electronically controlled mechanism. This 1000 V contactor system delivers significant advantages in terms of reduced power consumption and reliability, particularly where supply voltages are weak.

CA 6 electronic contactors have performance benefits in terms of applications and usage. With a built-in PLC interface as standard, CA 6 contactors can be integrated easily into modern control networks, interfacing with a 24 V, low-current signal from a PLC, or an electronic control system.

"The Sprecher + Schuh low-voltage contactor range goes right through to 700kW, with the well-known CA 5 high-current contactor handling 500 kW to 700 kW applications. A proven performer, this range goes all the way up to 1200 amps—a size that many of our competitors simply don't offer," says Harry.

Power to protect

Sprecher + Schuh has been a true pioneer in the development of electronic motor protection systems. It was the first to develop a solid-state overload relay that presented as a direct replacement for the traditional bi-metallic thermal overload. Today, NHP offer both technologies at essentially similar price-points. The ground-breaking solid-state overload delivers distinct benefits in terms of alternative tripping curves, superior turn-down ratios and low heat dissipation.

"The progress of the Sprecher + Schuh electronic overload is evident today in the newly released enhanced CEP 7—the so-called CEP 7-E series. This series boast DIP-switch selectable trip classes and a suite of side-mount accessory modules. Although we still offer bi-metal thermals, at such a competitive price we're finding that these latest electronic versions are hugely popular," says Harry.

Yet another area in which Sprecher + Schuh has led the way is in the development of stand-alone electronic motor protection relays with full thermal modelling facilities. The earliest of these was the ever-popular Sprecher + Schuh CET 1. The CET 5 is its 2006 equivalent—a microprocessor-based electronic motor protection and motor management system. The CET 5 uses an advanced, microprocessor-based thermal model to closely monitor motor performance during start, running and cooling modes. Its advanced protection routines protect motors against thermal overload, earth fault, jam or stall conditions, underload, current asymmetry and phase loss, phase reversal and thermistor over-temperature. In addition, it provides a host

of additional connectivity features, such as current transformer-free installation and serial communications.

At a lower-cost entry level is the Sprecher + Schuh CEP 7C networkable electronic overload relay. The CEP 7C (a member of the CEP 7 family) affords the introduction of smart motor control systems into plants, using network control to communicate with the motor starter via the overload. These fully DeviceNet-enabled multifunction devices can be directly fitted to CA 7 contactors and can support full-load currents from 0.4 to 860 A.

Sprecher + Schuh has an equally long history in the sphere of time-delay relays, with its latest offering being the RZ7 range. Complementing this is a raft of multi-function and simple function timers, which cleverly combine economy with quality and reliability. This innovative product set also includes a timing relay with a control voltage up to 440 V AC.

In the general control panel arena, the Sprecher + Schuh brand can be found on premium quality ancillaries such as pushbuttons and terminals. The D7 range is low-profile and encompasses a host of accessories: low signal compatibility contacts, emergency-stop pushbuttons, as well as a full range of long-life LED indicator lights at full voltage. "This is an exhaustive range with something for every New Zealand application," Harry says.

NHP NZ also maintains stocks of Sprecher + Schuh DIN-rail mount terminals, highlighted by the screw-terminal V7 range. This exceptionally wide range supports termination of conductors ranging in size from 2.5 to 195 square millimetres.

Advanced Control System (ACS)

Bringing all of these elements together is the Sprecher + Schuh Advanced Control System (ACS) of busbar mounting modules—a specially coordinated system of motor control components that provides a truly simple, modular and demountable approach to system development," says Harry.

The ACS system encompasses the Sprecher + Schuh KT 7 motor circuit breakers, CA 7 contactors, CEP 7 family of electronic overloads, CCA communicating auxiliary modules, CT 7 bi-metallic overloads, PCS/PDS compact soft starters and the KA 7 busbar connection and mounting system.

"The foundation of this advanced motor control system is the KA 7 busbar system (which provides the power distribution), and the Sprecher + Schuh KT 7 motor protection circuit breakers that link directly to the busbar. The KT 7 range covers an array of full-load currents, and support fault levels above 50 kA, in some cases," says Harry.

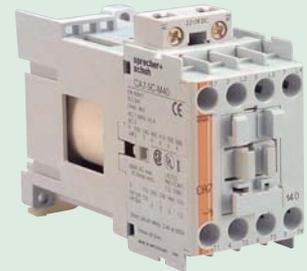
A feature of the KT 7 range of circuit breakers is that, when combined with Sprecher + Schuh contactors (the CA 7 in particular), what we call 'automatic Type 2 coordination' is achieved. "The advantage is that users need not worry about special component selection to achieve Type 2 coordination. The breaker is simply selected according to the current rating, and the contactor according to the motor rating. It's a huge plus that the whole process of achieving a Type 2 coordinated device really straight-forward," he says.

Good news for New Zealand

"While the Sprecher + Schuh range may have been difficult to access up until NHP's arrival in NZ, we know that many in the electrical industry value the brand for its reliability, quality, longevity, innovation and technological advances," Craig Vallance concludes. "The good news for the NZ electrical industry is that Sprecher + Schuh is now here under NHP. It is now fully supported—the entire range—across both islands, with reliable stock levels and rock-solid technical support. The range will continue to evolve, keeping pace with NZ users' needs now—and in the future."

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CA 7 contactor



CEP 7 overload



ACS system

sprecher+
schuh *The ultimate in Motor Control*



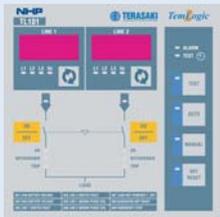
POWER DISTRIBUTION



250 A Frame MCCBs: 12 A - 250 A on a Common Chassis

250 AF MCCB's are now available ranging from:

- 12 A – 250 A @ 25, 30 kA
- 32 A – 250 A @ 36, 65 kA



Increased Transfer Switch Controller Options

- Timer / Relays controller TLP2 – offers a simple system of logic control from easy to obtain NHP components
- PLC / Relay controller – offers the functions of a PLC along with load shedding, and building management system communication options.
- TemLogic 2 controller for transfer switches.



TemPower

One of the world's largest and busiest airports, London's Heathrow airport, chose Terasaki TemPower 2 Air Circuit Breakers for its new high-tech terminal. 500 Terasaki TemPower 2 ACBs will be used in the new terminal "T5", and now TemPower 2 has been recognised for its excellence by winning the -

"Power Product of the Year - 2006" award.

Terasaki TemBreak 2 - The Australasian Launch

300 people attended the Australasian launch of NHP's new "Beyond the Standard"™, Terasaki TemBreak 2 range of MCCBs.

The TemBreak 2 launch attracted industry representatives from around New Zealand and Australia, including VIP guests from Terasaki - Japan and Europe. A series of feature presentations began with an official welcome from Mr Yasuhiko Terasaki, Chairman & CEO Terasaki Electric.

The gala night began with the "arrival" of the new Terasaki TemBreak 2 MCCB by being walked in by Terasaki's Ms Kodera who was wearing a ceremonial Kimono.

The MCCB was handed to, NHP's Director of Business Development, Alan Brown, who in conjunction with Mr Vaughan Turner, Managing Director of Terasaki Electric Europe, introduced and presented the Terasaki TemBreak 2 range of MCCBs. Vaughan and Alan highlighted the safety circuit breaker's range of superior features, making TemBreak 2, one of the most advanced, yet simplest MCCBs to use in the world. New features, which truly make the Terasaki TemBreak 2 "Beyond the Standard", include an innovative approach to internal accessory installation, reducing the need for tools, higher kA ratings in smaller size MCCBs, increased OCR functionality, through to a wide range of superior external accessories.



Field installable accessories

All in all it was an outstanding night which had a series of industry highlights. All attendees were left with the clear knowledge that NHP was here to not only provide customer service but caring service backed by outstanding innovative quality product selections from around the world, such as the Terasaki TemBreak 2 MCCB.

Reasons to buy TemBreak 2

- Field fittable internal and external accessories
- Higher kA ratings in smaller frame sizes to 200 kA
- 160/250 Amp frame MCCBs have trip units ranging 12 A to 250 A
- 400 A / 630 A MCCBs are a common frame size
- IP 65 handles are now standard
- Thermal & Magnetic adjustment dials now standard on all 125 A – 400 A Thermal Magnetic MCCBs
- 250 Amp Frame Electronic MCCB @ 70 kA, 125 kA
- Visual safety: MCCB toggle indicates direct driven contact status
- Toggles offer clear colour indication of main contact status
- Symmetrical door cut-out patterns for handle mounting
- New 65 kA TemWay XT chassis
- New 65 kA TemBreak 2 CHC chassis
- New compact transfer switches which can be assembled by NHP or can be field assembled

- Cable or hard "Link" mechanical interlocking option for Transfer Switches
- Transfer switch controller options: TemLogic 2 electronic controller (NEW), PLC or Relay logic

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TemBreak

"Beyond the Standard"™

Higher kA ratings in small frame sizes

125 A frame models now feature versions to 65 kA, while 250 A frame models go to 200 kA.



Modular and common sizes

All current ratings up to 630 A can be supplied in 2 sizes: the 250 A and 630 A sizes.

400 A and 630 A MCCB are now a common size. (400 AF).

The compact 125 A size offers the same features and performance but with reduced dimensions and cost.



IP 65 variable depth handles

Superior all new handles now available – IP 65 on all TemBreak 2 MCCBs up to 630 A, and TemBreak 1 630 A to 1600 A.



Electronic protection in a 250 A frame

The adjustability of an electronic MCCB is now available in a 250 A frame MCCB. Ratings up to 125 kA.



Grasslin range of trusted timers now available from NHP

NHP has announced that its well-established relationship with Grasslin—the global leader in time and energy control solutions—is now extended to New Zealand. NHP will now provide exclusive NZ distributorship and support of the complete Grasslin range of precision time switches. Suitable for agricultural, industrial, commercial, institutional and domestic applications, Grasslin time switches are depended upon by OEMs, contractors, wholesalers and end-users in more than 50 countries.

According to NHP Sales Representative, George Janiszewski, the exciting NZ alliance with Grasslin will afford the Kiwi market unprecedented access to the complete inventory of this innovative time controller range.

“With NHP’s island-to-island network of service centres and field representatives, we can ensure continued supply, when a product is needed and where it is needed,” said George. “No need to go anywhere else for time control solutions; they can be purchased from the same place as all your other industrial electrical needs.

“The major advantages of these time switches is they are easy to use, easy to change and easy to program. In many situations, a PLC or BMS is simply overkill. This range will ‘do the job’ in applications where more complex solutions—and the additional cost and time involved with extensive wiring and technical support—are unnecessary.”

From extremely compact electromechanical 24-hour and seven-day time switches and defrost controls to advanced 365-day multi-channel programmable controls, Grasslin products meet the need for control in heating, cooling and refrigeration systems; interior, outdoor or display lighting; machinery and appliances; and a myriad of other applications.

More specifically, Grasslin units can be found in water control—in tandem with circulation pumps, drainage equipment, irrigation and water treatment, fountains and pool chlorinators. For illumination and security applications, these timers are ideal for activating and de-activating office illumination, sports area lighting, escalators, automatic gates, sign and showcase lighting. They can also be used to control furnaces, air conditioners, fans and ventilation equipment.

Grasslin timers and control solutions are encompassed within four key product series:

UNI45 series—All models in this economy range feature 24-hour synchronous operation; six pin riders (three on/three off); and a choice of mounting options (surface, flush or DIN rail). The smallest packaged time switch available on the market, its compact design makes it the ideal choice in tight spaces. Units in the UNI45 series are so easy-to-program that no instructions are necessary—just pull out the tappets and relocate to the desired time.

TALENTO series—The DIN rail-mounted TALENTO series includes both analogue and digital time switches, to suit the requirements of the user and application. Some units are both daily and weekly timers in the one unit. Top-of-the-range are the TALENTO yearly digital timers, for ‘set-and-forget’ convenience. Covering a wider range of applications than ever before, TALENTO units are available in a choice of one-, two-, and four-channels. For security shut-down systems, bells, beacon control and similar situations, yearly digital models also feature pulse switching commands from one second to 99 minutes.

TACTIC series—This range is popular with contractors because of the flexibility and choice of operation and accuracy it offers: synchronous (for non-critical loads), quartz precision with reserve, or digital. The Tactic series also includes one-channel or two-channel models, and units with the inbuilt flexibility for day and week programming.

FMI series—Tailored to meet the needs of OEMs—predominantly in the chlorinator market—FM1 units are offered in a range of colours for a customised finish. This range offers synchronous or quartz operation, with running reserve, and 24-hour or weekly programming capability.

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TACTIC series



TALENTO series

GRASSLIN

SINUS PENTA roadshow powers ahead

The Australia-wide launch of the Elettronica Santerno SINUS PENTA variable frequency drive series continues to gather momentum—and orders—as it motors at full speed from state-to-state. Taking in regional offices as well as capital cities, these special industry presentations are generating enthusiastic responses from NHP’s broad customer base. To date, well-attended presentations have been held throughout Queensland, in South Australia, Western Australia, Melbourne and regional Victoria; in regional NSW; and in Tasmania.

According to Chris Brandon, NHP Sales Representative, the launch was especially successful, with a mining industry client placing orders for four 1.1 megawatt active front end drives for its head/tail conveyor. In Townsville, NHP gained such an enthusiastic response from an end user, the company is assured that “wherever a drive goes in, it will be a Sinus Penta”.

The reason behind the drives’ extraordinary success? In a word—flexibility.

“The SINUS PENTA variable speed drives are industrially tough, yet offer ease-of-application not seen previously in the local, or global, drives market,” said Chris. “With its broad range of ratings, input voltages, overload selections, control algorithms, functions, and I/O, the SINUS PENTA can be quickly and easily adapted for use in just about any application. It could legitimately be called the universal drive.”

The SINUS PENTA range is provided in 49 power ratings over 12 frame sizes in its IP20/00 enclosure rating format, and 22 power ratings over five frame sizes in its IP 54 format.

Its superior flexibility is further exemplified in control functionality, networking and communications, field connectivity, and I/O and operator interface application. Put simply, the SINUS PENTA can be adapted and applied more quickly and cost-efficiently to a broader range of Australian industrial applications than any other drive.

That’s not surprising, as in many respects, SINUS PENTA was purpose-designed for Australian applications and conditions.

“We first came across the SINUS PENTA on a visit to the Hannover Fair,” said Chris. “While we were immediately impressed, our own market knowledge told us that some improvements could be made. After considerable evaluation and ‘knowledge exchanges’ between NHP and Elettronica Santerno, several adjustments and modifications were incorporated, and special features installed, to ensure that the range would deliver unrivalled functionality to the Australian and New Zealand markets.”

In fact, although the range will not be officially launched in New Zealand until early 2007, an order for two 900 kW drives has already been received from a local New Zealand company.

“This is one range of drives that definitely has people all ‘revved up!’” said Chris.

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ELETRONICA
SANTERNO

PRODUCT REVIEW

**MODERN, EFFICIENT AND COMPACT-
SPRECHER + SCHUH D7 RANGE**

Striking, modern and compact—that's the all-new Sprecher + Schuh D7 22.5 mm control and signalling range. From pushbuttons and pilot lights to mushroom-head emergency stop operators and rotary switches—the range's new, ergonomic forms exemplify 'form follows function'. The reliable D7 operators ensure protection against water and dust ingress in the most arduous conditions. The enhanced operational feel of the D7 range provides a defined positive response to every application. In addition, the D7 rotary switches now incorporate rigid operating teeth—these provide a detent that securely defines each operation position and avoids annoying 'in between' hang-ups. From the efficiency of one of the best-designed 'snap-on/twist-to-reset' contact couplings on the market, to optional screwless technology contact blocks, the D7 range incorporates all the features for which Sprecher + Schuh is famous.



MAKE THE CONNECTION WITH WAGO

For more than 25 years, WAGO CAGE CLAMP® technology has been ensuring trouble-free wiring terminations in trams and trains, power generation and distribution plants, car manufacturing lines, in shipbuilding, on and offshore installations and in production and process automation. Based on the vibration-proof, maintenance-free CAGE CLAMP® technology, WAGO terminals and connectors guarantee a faster and easier connection. WAGO products also offer higher safety levels and increased reliability, since the contact quality is largely independent of the experience of the installer.



THINK SAFETY-THINK SCHMERSAL

The Schmersal family of machine safety products has been carefully designed to address the diverse needs of today's industry, particularly in applications where safety is paramount. Schmersal is a renowned pioneer in the design and development of a broad range of safety interlocking, switching and sensing products. The diverse Schmersal machine safety range includes: safety light curtains; safe operation devices (trapped key systems, two hand control/enable switches and safety monitoring controllers); safety position switches and sensors; pull-wire switches and safety pressure mats; safety interlock and solenoid interlock switches; and AS-i interface safety products. When you think safety, think Schmersal.



CQ POWER FACTOR CORRECTION- SAVE SPACE, TIME AND COST

NHP's CQ series power factor correction assemblies take on the challenges of panel space, servicing time and cost-head-to-head. In one, two and three-tier configurations, the CQ series offers power factor correction solutions up to 800 kVA. The heart of the unit—the compact and thermally efficient CQ functional tray assembly—simply slides in and out to offer full modularity. The tray combines the low-loss and self-healing capacitors, low heat-rise harmonic reactors, fuse protection and contactor. Regulation is addressed using the renowned Beluk regulator—a quality regulator that is user-friendly and reliable. Thermal efficiency, unrivalled 'mean-time between component failure' figures, and Alpes' patented 'under-vacuum' capacitor coil coating process—it all adds up to world-class CQ reliability and performance.



CA 7: INNOVATIVE COMPACT, MODULAR CONTACTOR

With its extensive array of functional accessories and options, the Sprecher + Schuh CA7 contactor range can be applied to a range general load switching or motor starting applications.

When fully fitted out it becomes an integral part of the ACS (Advanced Control System) solution. A simple Snap, click or twist and the contactor is easily fitted with auxiliary contacts, timers or motor protection relays. Being part of the ACS system, connection accessories easily adapt the CA7 range to motor circuit breakers and mounting modules of the ACS system.



The CA7 range consists of four frame sizes with ten power ratings from four to 45kW. When combined with KTA7 circuit breakers, type 2 co-ordination is automatically achieved without the need for de-rating, ensuring safe application in the most demanding applications.



Featuring high electrical and mechanical life, reversible coils and availability with AC or DC coils, the CA7 range gives total flexibility for application in a wide range of industrial and commercial switch applications.

SOCOMEK: THE SWITCHING INNOVATOR

Socomec is the innovator of the switching world, with a comprehensive offering spanning load-break, changeover, automatic-transfer and switch-fuse functionality. With ratings from 20 to 4000 amps, the Socomec load-break switch family is offered in three ranges: standard load-break switches for general needs; visible load-break switches for safety isolation; and remote load-break switches for remote trip applications. Similarly, the Socomec changeover switch family—which supports currents from 125 to 3150 amps—also spans three ranges: standard changeover for general applications; visible changeover switches for safety applications; and bypass changeover switches for UPS applications.

The new released ATyS transfer switch range lifts the standard in transfer switching with an inbuilt control logic relay with advanced monitoring features. The switch-fuse has ratings from 20-1250 amps. The family boasts two ranges; standard switch-fuses for general applications and remote switch-fuse for remote trip applications.



All Socomec switching solutions are compact in design, are provided with a choice of external (IP 65) or direct-mount handle, and are complemented by a comprehensive range of accessories. Make the switch-switch to Socomec.

BLOWING HOT AND COLD WITH STEGO AND COSMOTEC

As thermal conditions play a major role in the life expectancy and availability of switchgear and control electronics, effective in-panel thermal management is critical. Stego heaters and thermostats, plus Cosmotec fans and air conditioners can help optimise the thermal conditions in any switchboard or enclosure. Ranging from 5 to 1200 W, the high-performance Stego heater range is available in compact, slim-line and fan-assisted options. Cosmotec fans and air conditioners provide cost-effective in-panel cooling solutions and are available in either roof- or side-mount models. Cosmotec's long-life ball-bearing fans provide 35 to 2365 cubic metres per hour of cooling air flow, while Cosmotec air conditioners efficiently provide 330 to 5200 W of cooling energy.



Socomec—world-best switchgear from NHP

Demonstrating an unrivalled commitment to product development, Socomec has been a global leader in switchgear for over 80 years. In New Zealand, NHP provides the expertise and superior engineering design required to fully support the comprehensive range of Socomec load-break, changeover and switch-fuse switching solutions.

Standard load-break switches (SLB): Offering solutions with full-load current ratings, these switches are available in two distinctive models: 20-100 amps DIN/surface mount COMO M switch, and 125-4000 amps surface-mount SIRCO switch. Both models are proven for the harshest environments and are available with either direct-mount or external-mount handles.

'Visible break' load-break switches (VLB): These switches feature 'truly visible' breaking contacts that are easily identified in either 'ON' or 'OFF' position—extremely important in applications where clear identification of switch position is paramount. The VLB switches are also available in two distinctive models: 32-200 amps DIN/surface-mount SIRCO VM switch and 250-1600 amps surface-mount SIDER switches.

Remote 'shunt-trip' load-break switches (RLB): These switches are available standard with a 240 V shunt-trip coil, with other coil voltage ratings available as an option. The perfect solution where isolation by remote control is required, such as emergency stops.

Enclosed load-break switches (ELB): Available in full-load current ratings spanning 20 to 1600 amps, with each IP 65 enclosure offering plenty of room to add accessories. These are available in two ranges: insulated polycarbonate enclosures 20-100 amps, and steel enclosures 20-1600 amps. Highly visible red handles in the insulated range makes them ideal for local motor isolation applications. Custom-enclosed load-break, changeover switch solutions can be designed and made to order.

Standard changeover switches (SCO): The SCO range uses 'double-decker' construction that saves valuable switchboard space, but does not compromise the electrical characteristics of the switch.

Visible changeover switches (VCO): If visible indication is required in a changeover application, then Socomec's range of visual changeover switches is the answer.

Bypass changeover switches (BCO): Socomec's unique bypass switch saves cost and installation time. The range is simply three load-break switches sharing the same actuation mechanism. Two switches work simultaneously, and then the corresponding switch operates when switched. This allows for complete isolation of UPS units for maintenance purposes.

Motorised changeover switches (ATyS): Utilising the characteristics of the compact SCO, the motorised changeover switches can be remotely operated using separate control products. The ATyS is also available with built logic control relay for automatic transfer switch applications.

Standard switch fuses (SSF): A modular construction system allows these switches to be custom-assembled to suit a wide variety of applications. With snap-on accessories, such as shrouds and auxiliary contacts, the SSF series can be easily incorporated into everyday switchboard design. An extensive range is available in BS and DIN configuration.

Remote 'shunt-trip' switch fuses (RSF): These switches are available standard with a 240 V shunt-trip coil, with other coil voltage ratings available as an option. The perfect solution where fault current protection and isolation by remote control is required, such as emergency stops.

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RLB load-break switch



ELB load-break switch



Carlo Gavazzi proximity sensors—reliable and robust

Proximity-sensing applications in harsh industrial environments require high-performance, dependable detection equipment that will stand the test of time. The Carlo Gavazzi range of inductive proximity sensors from NHP offers just this—reliable and robust proximity detection solutions for a wide variety of industries. The inductive proximity sensors group is a vital element of the Carlo Gavazzi sensing device family—a comprehensive range that includes photoelectric, ultrasonic, capacitive proximity and inductive proximity variants.

According to NHP Sales Representative, Chris Brandon, the Carlo Gavazzi range of inductive proximity sensors is ideally suited to applications in the factory automation, automotive, metal fabrication, and machine tools industries. "Inductive proximity sensors provide reliable metal detection in dusty and dirty industrial environments, and better-enable the precise positioning of metallic components," said Chris. "Over-sprayed metal-cutting fluids, built-up grease, and airborne debris from metal machining don't impede the performance of these sensors."

The Carlo Gavazzi range of inductive proximity sensors presents distinct advantages over other types of sensors when subjected to demanding industrial environments. "The electromagnetic field generated by the inductive proximity sensor enables the detection of metallic objects without physically making contact," said Chris. A simple and straightforward metal sensing technology, inductive proximity sensing avoids the 'false trips' sometimes experienced with other proximity sensors, along with the dirt and debris challenge faced

with photoelectric sensors, and the target-to-sensor face orientation requirements of ultrasonic sensors.

Rated to IP 67, the Carlo Gavazzi range of inductive proximity sensors is suitable for washdown environments, and is offered in a number of functional and structural configurations. A choice of nickel-plated brass, thermoplastic or stainless steel housings provide the durability required in punishing industrial environments. Shielded or non-shielded variants with cylindrical-threaded or bracket-mounting options allow flexible sensor installation. Vibration resistant and fully factory tested and calibrated, the Carlo Gavazzi range of inductive proximity sensors ensures consistent accurate detection.

The Carlo Gavazzi inductive proximity sensor range is available in diameters of 5 mm to 30 mm, with sensing distances from 1 mm to 22 mm, and is offered in a range of two- and three-wire (NPN and PNP) output types. Electrical protection against short-circuit, overload, transient noise, and reverse polarity (DC models only) assist in reducing downtime and maintenance costs. LED indication provides 360-degree visibility, allowing easy determination of operational status and maintenance.

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INNOVATIONS



The APC620 (left) and the Automation Panel 900.

Open system platform

From visualisation systems to complex automation tasks, all the advantages of an open system are available with the Bernecker + Rainer industrial PC suite. Operating systems include Windows® XP Professional, or Windows® XP Embedded (with the advantage of low memory requirements). Users can also opt for Windows® CE 5.0, MS-DOS 6.22, or Linux operating systems. The APC620 and Panel PC 700 are ideal platforms for SCADA and visualisation applications.

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Tough for ten

The Bernecker + Rainer industrial PC suite offers a 'ten-year plus' life span—an unrivalled level of reliability, given the rough-and-tumble of the industrial environment. NHP NEWSROOM explores the advanced technology behind this achievement.

A factory floor or plant control room is a far cry from the relatively IT-friendly world of the conventional office. Conventional commercial-grade personal computers, displays and PC peripherals simply don't cut it when placed in a rough and rugged 'real world' industrial environment. Such environments require PC technology that is not only shockproof, but future-proof as well—reliability, continuity of service and compatibility over many years are what counts.

Bringing together premium automation and communication technologies, and in partnership with Bernecker + Rainer, NHP recently launched the 'next generation' industrial PC suite into the Australian and New Zealand markets. The suite is made up of three distinct components:

- The APC620 industrial PC family
- Automation Panel 900 modular display units
- The 'all-in-one' Panel PC 700 series

APC620 industrial PC

Like its Bernecker + Rainer predecessors, the robust mechanical design and construction of the APC620 is based on the results of extensive shock and vibration tests that place the highest demands on materials. During component selection, Bernecker + Rainer's development engineers take long-term availability into consideration— an essential criteria in the design and build of a product series with a ten-year plus lifespan.

To achieve optimum reliability and minimum maintenance requirements, internal cable connections for the APC620 components have been eliminated. Stable fitting of circuit boards and the optional use of solid-state mass memory without rotating parts (CompactFlash) also contribute to protection against breakdowns.

The APC620 is fan-free, eliminating maintenance work, such as the regular change-out of fan filters, or replacement of worn parts. Instead, all components that require cooling are placed on the board so that the heat is distributed directly to the large exterior heat sink.

The compact construction of the APC620 saves space in the control console or cabinet. Drive inserts—HDD, CD-ROM, DVD—are hidden behind a cover on the front of the device. Also, all connections and interfaces are placed on the top of the housing. This avoids protruding connectors at the rear of the housing, and ensures the installation depth is kept to an absolute minimum.

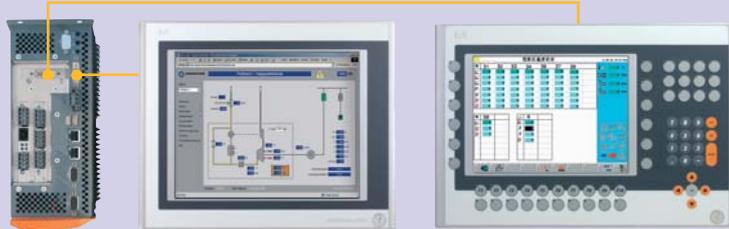
This thoughtful and practical approach is also applied to the PC's modular design and the in-built flexibility of the slots. Three housing types are available, featuring one, two or five PCI slots. A solid-state mass memory (CompactFlash) slot is provided on the base system and can be supplemented with a second CompactFlash or hard disk. Up to two slots are provided for other drives, while the modular plug-in technology makes switching drives easy.

The APC620 utilises the Intel 855GME chipset (with Pentium® M or Celeron® M processor technology), which is designed to provide maximum system performance while minimising generated heat and power consumption. This enables the APC620 to achieve excellent system performance within a compact size—saving valuable space in the control cabinet. In fact,

the Pentium® M processors provide greater system performance than an Intel® Pentium® IV 2.5GHz processor—even when they are running at half the clock-rate.

The APC620 incorporates Bernecker + Rainer's Smart Display Link (SDL)—a technology that combines the digital video signal, touch screen, USB and service data (temperature, operating hours) onto a single interface. With SDL, the display units can be connected up to 40 metres from the APC620 and can be equipped with other PC peripherals, such as USB drives and keyboards. Incorporating the ability to add a second SDL port, Bernecker + Rainer also supports Dual Independent Display, which means that the video content on each display can be different—or the same.

Dual independent Display with the APC620



Automation Panel 900 modular display units

The robust Bernecker + Rainer Automation Panel 900 is a TFT-based display technology. With touch screen, function keys—or a combination of both—and screen sizes ranging from 10.4-inch VGA through to 21.3-inch with UXGA resolution, all options are open for the developer to create an optimum operator interface meeting individual requirements.

With IP 65 protection and a front constructed of milled aluminium or stainless steel, the Automation Panel 900 series provides the essential durability expected of operation panels in industrial environments.

The Automation Panel 900 connects simply to one of the APC620's dual independent display ports via the Smart Display Link technology, or to a standard PC via the industry standard Digital Video Interface. The display panels can even be added to panels, for optimum display capabilities and distance—up to four panels can be 'daisy-chained' on each of the APC620's two Smart Display Link ports. With a maximum segment length of 40 metres, this means that 'client' displays can be located up to 160 metres from the 'server' APC620.

Panel PC 700—PC and display in one

Where installation is required in cramped quarters, the Panel PC 700 combines PC and display into a single, compact, yet robust unit. Embracing the same platform as the APC620, the Panel PC 700 also offers the same selection of processors. Panel PCs are available as touch devices with 10.4-inch VGA, 12.1-inch SVGA and 15-inch XGA TFT displays.

Like the APC620, the Panel PC 700 is also fan-free. Its housing ranges from the very flat models without PCI slots, to deeper expandable units with two PCI-slots. Each Panel PC 700 has an integrated CompactFlash slot, which can be expanded with a second CompactFlash slot or hard disk. Two additional Automation Panels can be connected to the Panel PC 700 (Dual Automation Display).

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