

5-YEARS-OLD WITH 100 YEARS' EXPERIENCE



LEDVANCE employees in Johannesburg recently celebrated the company's 5th birthday.

During the month of July, LEDVANCE celebrated its 5th anniversary. Emerging from the general lighting business of Osram, the company is now owned by Chinese lighting company MLS Co., LTD. With offices in more than 50 countries and business activities in more than 140 countries, LEDVANCE possesses an outstanding global market access built on trusted, long-standing customer relationships and a powerful distribution network.

After the lockdown restrictions were eased, the South African branch of LEDVANCE had a staff lunch with the company's CFO and MD as speakers sharing the organisations accomplishments over the last five years and looking to advancing light in the future.

LEDVANCE is one of the world's leaders in general lighting for lighting professionals as well as end users, offering a broad variety of LED luminaires, advanced LED lamps, intelligent Smart Home and Smart Building solutions as well as traditional light sources. The company continues to increase its market share with innovative, award-winning products and advancing technologies. "We are already leaders in the lamp sector as Osram. LEDVANCE has successfully introduced luminaires and with our innovations we keep on improving and expanding our range. LEDVANCE is in the top five fastest growing luminaires company globally," noted a representative from LEDVANCE.

Highlights from the last five years include:

- 2016: Brand founded
- 2017: EU No. 10 in luminaires
- 2018: EU No. 8 in luminaires
- 2019: German Design Award winner
- 2019: EU No. 6 in luminaires
- 2019: EU No. 2 in lighting
- 2020: German Innovation Award winner
- 2020: LED LUM Europe CY ranking No. 6

Future endeavours

As a global brand, it is important for LEDVANCE to distribute to all countries, and therefore LEDVANCE South Africa is aiming to grow its market share in Africa, building on long-lasting relationships and encouraging growth with marketing efforts.

More exciting news out of the company is that this spring, LEDVANCE will begin to roll out new eco-friendly packaging for its products. "Not only do our products save energy, but our new packaging is bold and

eco-friendly, contributing to a sustainable future," says LEDVANCE. The new packing, which will stand out on the shelves with its distinctive black and orange colouring, is 100% plastic-free.

See page 14 for more images from the celebrations.

Enquiries: +27 (0)11 207 5600

Stone-Stamcor
bringing power to your product

Tested to IEC 61238-1
Locally Manufactured
Quality Copper/Aluminium
Lugs & Ferrules

Tested to IEC 61238-1
Locally Manufactured
Quality Copper XLPE
Lugs & Ferrules

C Shaped Copper
Connectors & Bi-metallic
Lugs and Ferrules

Tested to IEC 61238-1
Torque Shear Lugs & Ferrules

JHB: 011 452 14151 DBN: 031 304 97571 CT: 021 511 8143
www.stonestamcor.co.za

DISCOVER THE POWER OF APPINESS

DOWNLOAD THE VOLTEX APP

Everything you need for the job, just one click away.

The Voltex App is the easiest, fastest way to get exactly what you need. We deliver or you collect.

Grab your smartphone and scan the QR code to download the App now!

With the Voltex App you can:

- Find the store closest to you
- Shop hundreds of products
- Stay connected for service or queries
- Click & collect or deliver

Keep up to date with innovative new product offerings and see what a product will look like in your home or office with our augmented reality feature

SAFE 1000 Proudly Bidvest

www.voltex.co.za

facebook.com/Voltex_SA instagram.com/Voltex_SA twitter.com/voltexsa info@voltex.co.za

voltex
your electrical connection

Shuttle

Programmable bell press dimmers for LED, halogen and incandescent lighting

Shuttle Lighting Control Systems (Pty) Ltd +27 (0)21 448 8229 www.shuttlelighting.com





An all-in-one catalogue for electrical panels

Three-D Agencies has recently introduced a catalogue dedicated to panel builders in the industry. "For a while we have been looking at a marketing tool which will be easy to get into the market," explains Three-D's Mark Jenkins. "This catalogue now gives customers a very good overview of all of our products, and it dovetails nicely with the range of Conta-Clip products which we now supply."

The 80-page catalogue features thousands of products – many of them new releases – that are used in the day-to-day work of panel builders. From terminals and cable management to lugs, ferrules and cable ties, as well as tools, meters and instruments, the new catalogue is an all-encompassing solution.

5000 catalogues have been printed, and are being handed out manually to wholesalers and panel builders, while an online version is

also available on the Three-D website. "We have put a huge amount of effort into the catalogue to provide panel builders with a quick reference and a reminder of what we do," says Jenkins. "Every product in the catalogue has been selected on the basis that it is right for the market, to offer a one-stop-solution."

Other developments at Three-D Agencies

"When the going gets tough you need to think out of the box, so that is what we have been doing," says Jenkins after relaying a story of how the company's Durban warehouse was looted during the unrest in the country in July. Instead of sulking and resting on their laurels, the company has been hard at work improving its routes to market.

Apart from the panel catalogue, August also saw the distribution

of 30 000 pamphlets for the bi-annual Uni-T product specials, flyers distributed showcasing the HikMicro brand of thermal imagers and thermal cameras, as well as the launch of a new website. "The new site, a business-to-business platform, will make it easier for wholesalers to order Uni-T stock," he says. "They simply have to register at www.uni-trend.co.za and order any of the Uni-T meters, instruments, testers and measurement tools online." The website is sleek and fast and will streamline the purchasing process. The sales team has recently been trained on the new website, which also includes downloadable technical specs for all the products.

Download Three-D Agencies' comprehensive catalogue by scanning the QR code



Enquiries: sales@three-d.co.za

Avoid the purchase & use of sub-standard, dangerous electrical products & services.



Download your free guide from safehousesa.co.za

We don't know what you know, report unsafe products & services.

The SAFEhouse Association is a non-profit, industry organisation committed to the fight against sub-standard, unsafe electrical products and services.

These brands are proud members of



ABERDARE
a member of the safehouse group

Crabtree

APEX
CONCEPT TECHNOLOGIES

Voltex
your electrical specialist

M.E.S.
ELECTRICAL SERVICES

ARB
Electrical Wholesalers

CHINT
CHINT ELECTRIC

eurolux
Lighting your way

HellermannTyton

legrand

Build it

THREE-D
THE CABLE ACCESSORY COMPANY

LESCO
MANUFACTURING (PTY) LTD

ELECTRIX

Matelec

WACO
waco electrical solutions

SWAN
ELECTRIC

ECA
ELECTRICAL CONTRACTORS ASSOCIATION

WALRO FLEX

Stone-Stamcor
ELECTRICAL & PLUMBING

ABB

SW
PRODUCTS
LIGHTING AND ELECTRICAL FOR AFRICA

LivingBrands

GENTECH

THE LIGHTING WAREHOUSE

ACDC
EXPRESS
ALBERTON

lumax
LIGHTING

Shuttle

ZEBBIES
Love Lighting

LEDVANCE

PIOLED LIGHTING

ARS
LIQUID TRANSFER

AXFLOW
fluidity, no stop

D4

MILNEX 587

Switch Technique
"The Team To Rely On"

BEKA-Schröder

Make a commitment to safety. JOIN TODAY!

For more information contact:

Connie Jonker: Tel: 011 396 8251
Email: connie.jonker@safehousesa.co.za

Barry O'Leary: Tel: 011 396 8117
Email: barry.oleary@safehousesa.co.za

www.safehousesa.co.za



Electrical installation by Zest WEG at platinum expansion

Zest WEG is installing a range of electrical control and instrumentation equipment at Anglo American Platinum's Mogalakwena mine in Limpopo province, working closely with engineering group DRA Global.

The construction is taking place within the Mogalakwena mine's existing North Concentrator Plant, around various plant areas. The Electrical Control Instrumentation (ECI) package is being led by Eben Kleynhans, E&I electrical project engineer from DRA.

According to Calvin Fisher, electrical and instrumentation construction proposals manager at Zest WEG, the Zest WEG work is being conducted for the mine's Coarse Particle Rejection (CPR) plant, and will be completed in the second half of 2021.

"In addition to applying the highest level of workmanship and professionalism, we are carrying out the project in line with our client's Mining Charter requirements on local procurement," says Fisher. "This means that over 70% of people involved in our scope of work will be drawn from local communities, and we are sourcing a significant level of our supplies from local businesses."

Equipment to be installed includes three 2 MVA transformers, stepping down from 11 kV to 550 V, and a 630 kVA mini substation for lighting and small power requirements. Containerised Motor Control Centres (MCCs), complete with Variable Speed Drives (VSDs), an HVAC unit, cable racking, cables, lighting and small power also form part of the scope of supply. In addition, two backup generators will be installed – one of 630 kVA capacity and the other 330 kVA. About 70 km of cable will be laid – ranging from low voltage to medium voltage cable – as well as 3300 terminations and almost 2,5 km of cable racking.

Fisher notes that the electrical installation specialists are typically among the last contractors on a project, and must be flexible to accommodate modifications that may have been required in the civils, structural and mechanical work completed beforehand.

Enquiries: www.zestweg.com

WORKING KNOWLEDGE WITH TERRY MACKENZIE HOY

Going digital, and how electricians can join in the fun

STEWART GREGORY, VICE PRESIDENT, Power Products, Schneider Electric UK and Ireland, wrote the following: "An unprecedented number of installers and engineers will soon be retiring from the electrical industry. This provides the opportunity to upskill the sector 'en-masse'. Therefore, those in the profession, and those entering it, need the training to prepare them for the rapidly digitising workplace. End-users are digitising, and electrical engineers need to digitise along with them, otherwise companies may find themselves unable to fulfil the needs of their customers. In the residential sphere, customers are demanding smart homes, whilst in corporate buildings, energy management systems have become indispensable. To match changing customer expectations, electrical contractors need to get trained on what these products are, the benefits, and how to install them to avoid being left behind."

Now it happens that in South Africa the use of digital devices is not really widespread. There are lighting control systems in some upper market houses and building management systems, but nothing too smart. Digital systems are often sold as being 'able to save money' and 'being convenient' and 'managing energy', and there is no doubt that this is all possible, but right now it's not worth the cost. It is really nice to remotely open the electric gate and garage door and dim the lights automatically but, really, how many people want to?

Forgetting about the domestic markets, the real future of digitisation lies in the fact that the whole world (and RSA as much as anybody) is working online. Meeting online. Buying online. There are whole factories that are completely controlled by an operator who is online, some distance away. At the factory there are four staff – two security guards and two technicians to deal with and report on breakdowns. All this on-line stuff, however, has one big Achilles' heel – it does not work without electricity. In addition, the programming may be done by some smart cookie, but the wiring of the power system and the data cabling must be done by an artisan type of person. Thus, the market is going to drive the requirement for a digital/electrical sort of person who must be familiar with data cabling, electrical wiring, UPS systems, generator systems and computer interfaces.

Right now, the computer guy does the data cabling and the electrician does the electrical stuff, only because the electrician has no idea how the data cabling works. This is all going to change. In the not-too-distant future – cables will have a data core (probably optical fibre) and a power core. The cabling will be from one computer unit to the others, both data and power. Computers/computer ancillaries will have the ability to support each other through power dips. Up until now it was not permitted to have data and electricity in the same cable, yet

this all changes with optical fibre.

Furthermore, computers have traditionally had a power supply unit (which sometimes fails). However, computers and computer displays have become much more energy efficient (the computers in our offices used to consume 700 W, now they consume 70 W), and, as the efficiency increases, computers can be supplied at lower voltages which will make cabling simpler and cheaper. It will be possible to supply power to computers via an earth return system so the computer data/power cable will have a single power core and maybe two fibre optic cores – and the cable will be no thicker than a knitting needle.

All of this can happen very quickly. If I look around our office I see cobwebs of wires from the server to the WiFi, the UPS to the main drive, to the computers to the printers. Ah, the printers. Printers will not quite disappear, but they will become fewer as more offices (such as ours) take to filing documents electronically.

All this leaves today's young electrician with a lot to learn. For these people I recommend the following: start learning now how computers are connected and what the various bits do. It's not difficult. Then, when the revolution predicted by Stewart Gregory, the "rapidly digitising workplace" starts, you'll be ready. It will be a great time.



New Voltex app provides enhanced customer shopping

On Wednesday, 1 September, Voltex officially launched its new app. Allowing anybody who owns a mobile device to shop online, the new app offers an enhanced shopping experience for Voltex customers. "Everything available on our website will also be available on our app, including the ability to shop across devices," says Maureen Zulberg, National Marketing at Voltex. "We will have monthly as well as ad hoc specials which will be available online and through our app only. There are also one or two unique features on our app, but you will have to download it to find out what they are!"

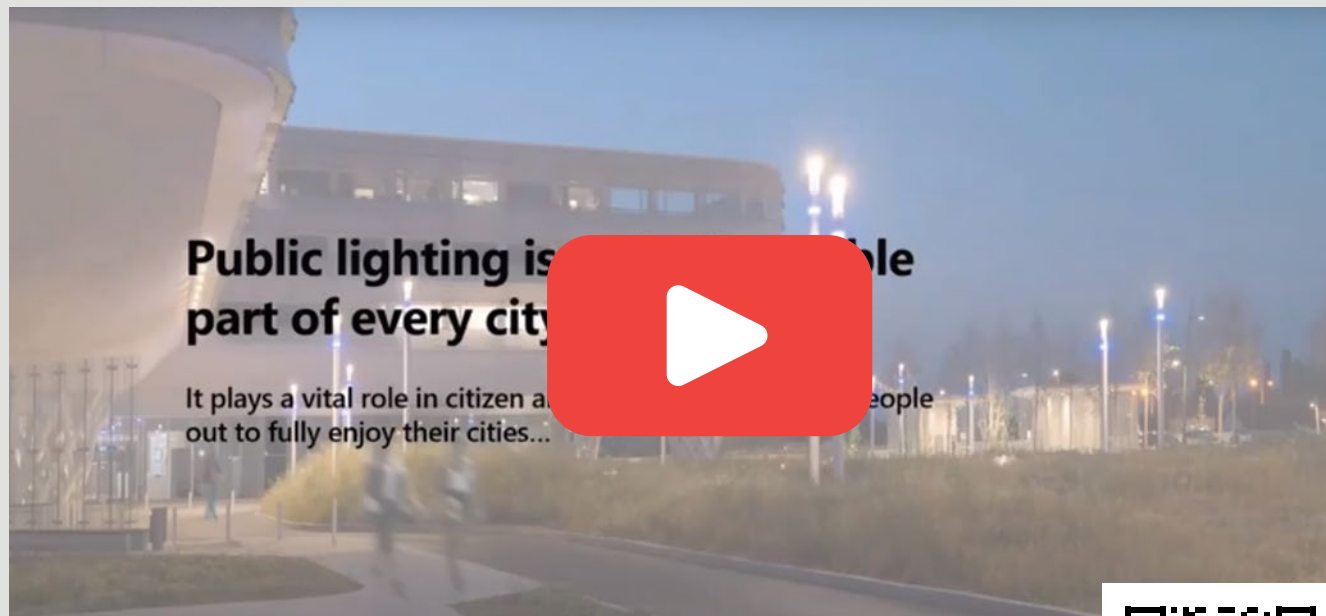
The app can be downloaded from the Apple App Store and the Google Playstore.

As South Africa's pre-eminent electrical and lighting distributor,

Voltex supplies the widest range of electrical and related products through its vast distribution network strategically located within South Africa. Through this diverse network, Voltex services the agricultural, mining, manufacturing, construction, wholesale, electrical and communication sectors with a variety of products and services. These include, *inter alia*, energy efficient products and solutions, cable and wire, power generation and optimisation, transmission and distribution, motor control solutions, commercial, industrial and residential lighting applications and a host of other highly specialised products and services.

Enquiries: www.voltex.co.za

Catch up on or rewatch recent lighting webinar



SCAN THE QR
CODE TO WATCH
THE VIDEO



If you missed it, rewatch a webinar introducing the Shuffle, BEKA Schröder's smart lighting-based multi-functional system which connects people to their social environment, that took place on Friday, 6th August 2021.



THAT WHICH IS BUILT SOUNDLY **ENDURES WELL**

Hello!
Spring



Cable Management Systems

- ROBUST • RUST FREE • TERMITE/RODENT FREE
- NO SCREWS • SELF COLOURED
- EXTRUDED FLAME RETARDANT RIGID PVC





MADE IN SA. SINCE 1947.

For further information: Contact your local Crabtree representative
on Sales: 0860 SOCKET (762 538) | 011 874 7600
WhatsApp 0619060326 | Instagram [crabtreesouthafrica](#)
info@crabtree.co.za | www.crabtree.co.za



Suppliers you can trust









photo created by bedneyimage



The world's easiest cable gland to fit

A cable gland performs two basic functions, namely fastening the cable to the apparatus so that it cannot pull out and earthing the cable armouring to which it is connected. Cable termination manufacturer Pratley produces a uniquely adjustable cable gland for SWA cable that fits any size armouring. The adjustability of the gland makes it "the world's easiest to fit," asserts Marketing Director Eldon Kruger.

Unique to the gland is an ingenious differential nut device to ensure unprecedented clamping force for aggressive armour anchoring. Using two lightly different coarse pitch threads, it achieves the mechanical advantage of an ultra-fine pitch thread. The armour is sufficiently gripped when the gland is only hand tightened. "This can be compared to the gearbox of a truck that is going uphill in first gear. It's like having a gearbox in a cable gland," explains Kruger. The differential nut is also self-locking, which means that the gland is locked in the adjusted position, even under extreme vibration.

The loose cone allows for clear visibility of exactly how the cone is fitted under the armouring. This is normally not achievable with fixed-cone bushes on ordinary cable glands. Occasionally with an ordinary cable gland, where one cannot see what is happening with the cone, a wire strand of the armouring can get caught under the cone. When the gland is tightened, this wire may penetrate the bedding and come into contact with a conductor. "This is no longer an issue with the Pratley cable gland," highlights Kruger.

The cone bush is made from high-tensile brass, meaning the gland can be tightened as much as is required without crushing or distorting the cone. Ensuring the gland is as tight as possible is critical for a good grip and proper earthing over a long period. The fact that the cone is loose also makes it 'self-centring', meaning an even and uniform grip all the way round the armouring. Ordinary cable glands usually screw in eccentrically, with the grip on one side of the armouring being tighter than on the other. However, the loose cone in the Pratley Adjustable Cable Gland will not turn and distort the armouring.

Adjustability is very important, especially when fitting large cables. When fitting a gland, the cone pushes the armouring out, while simultaneously trying to get the threads of the two parts of the gland to mate. Such an operation can be frustrating when using ordinary cable glands, especially on heavier cables where the armouring is thick and difficult to work with.

With the Pratley Adjustable Cable Gland, simply turn back the nipple so that it does not press on the cone, get the threads on the cone and differential nut to mate and then screw in the nipple. By varying this adjustment, the gland is fitted correctly and fitted far quicker than a conventional cable gland, thus saving on installation time and cost.

Each gland size covers a range of cable sizes, while the thickness of the armouring also varies. On an ordinary cable gland, the only place to make up for these changes is in the thread. When the maximum size of cable that will go into a given gland is reached, one section of the gland clings to the other by only a thread or two



when it is tightened up. This does not happen with the Pratley Adjustable Cable Gland, as the same number of threads are always mated.

Each Pratley Adjustable Cable gland size fits two knock-out hole sizes, namely 20 mm and 25 mm. While the nipple will pass through the 20 mm knock-out, the spigot will also fit a 25 mm hole. This is important because when fitting an ordinary 20 mm gland to a 25 mm hole, the gland tends to shift to one side and very often a corner of the lock nut slips into the hole. The worker fitting the gland becomes impatient, decides that the gland is tight enough and thereby compromises the earth continuity and causes a safety issue. A Pratley Adjustable Cable Gland, on the other hand, always pulls up nice and evenly.

The Pratley Adjustable Cable Gland is also nickel-plated to reduce bimetal corrosion. The shroud is made from a unique, specially formulated synthetic rubber to render the gland watertight. It will also resist acids and oils and will be unaffected by sunlight and UV radiation. Moreover, it fits snugly into the groove provided for it on the gland. Unlike conventional glands, the shroud covers the whole gland, meaning that when it is fitted, the only exposed part is this portion of the nut.

Enquiries: sales@pratley.co.za

AWEaP: champion of African women in the power industry

Some 600-million people on the African continent have no access to modern, clean and affordable energy. They still use what African Women in Energy and Power (AWEaP) President Bertha Dlamini terms "detrimental" sources of energy.

"When people have access to electricity," she told *Sparks Electrical News*, "they can enter into enterprise and connect to information which allows them to stimulate micro economies by finding solutions to daily challenges." She says the participation in Africa of women, youth and people living with disabilities in the mainstream economy leaves much to be desired: "The continent has not industrialised to its full potential. Access to energy is a key driver to industrialisation. Foreign direct investors look to the availability of reliable energy supply to determine their investments".

When women and youth are empowered to participate in the energy sector, the possibility of finding electrification solutions for the continent increases. "When these solutions are found, we will start to see more enterprise on the continent. People will generate income which will enable them to access quality health care, education and decent housing while they become part of the mainstream economy."

She says her driver for participating in the energy space and advocating for an inclusive energy sector is the dignity that access to electricity affords the people of this continent.

The idea of women participating in any economy usually evokes images of women working as receptionists or participating in other, non-technical areas. "The truth is, there is an emergence of women and young people who are taking STEM (science, technology, engineering and mathematics) related courses, who are graduating from engineering schools and who can participate in sophisticated systems and solutions across the value chains of energy generation, transmission and distribution."

She says she founded AWEaP with the vision to orientate women on the opportunities that exist across the value chains of the energy industry. "It is my belief that, when people don't know how an industry is constructed and how it functions, they'll never understand the entrepreneurial opportunities within it. "My aim is to rally women from an expert perspective, to articulate how each value chain is constructed, and to speak theoretically and practically about how utilities and power users are procuring products, services, systems and solutions from the market so that women can see the hidden entrepreneurial opportunities within each vertical of the value chain."

Personal journey

Dlamini transitioned into the energy sector in 2012, through a partnership with an engineering consulting firm. "That was my introduction to the full value chain of energy generation, transmission and distribution. It helped me to understand both Eskom's construct and its role both in South Africa, and in the region." She says that, as a service provider to Eskom, she gained an appreciation for the utility's achievements in terms of the technology built and the intellectual capital required to build such technology, as well as for the capacity to deliver power on large scale. She was also introduced to the network of some 177 municipal electricity utilities in South Africa, all of which are licenced to distribute electricity.

"I learnt as I provided my services to the clients. I immersed myself in the journey of learning and understanding the sector and the opportunities that exist within it, as well as the dignity that the sector can provide to women in Africa." She says neither renewable energy generation technologies nor the Fourth Industrial Revolution (4IR) can take place in a vacuum. "There is a strategist within the utility and a service provider in the market and, together, they realise the solution. Therein lie entrepreneurial opportunities across multiple verticals. If we don't create awareness of these, then women will have no opportunity to participate in the sector."

Webinars

AWEaP creates awareness by means of webinars where industry experts speak about the construct of their sectors, and on how they provide products, solutions, systems and services to their sectors. This enables women engineers who have never run businesses to recognise their own capability and to realise that they can learn entrepreneurial skills and provide services.

"This way, women entrepreneurs in other sectors who wish to diversify into the energy sector will start to understand where the existing and emerging opportunities lie, especially when you look at how sectors are decarbonising and looking for new technologies. These sectors are decentralising for universal access to electricity and are looking for new suppliers. They are digitalising systems, and are therefore looking for new solutions."

"During our webinars, we talk about building networks, obtaining membership with industry organisations, creating a support system and taking the initiative to build an ecosystem, as well as how to become a channel partner to original equipment manufacturers in order to trade technology that is in demand in the market as a way to enter the market."

"We are committed to breaching this information gap and making the electricity sector less daunting to women entrepreneurs while encouraging them to come onboard and explore entrepreneurial opportunities in the sector, since they don't see many women as role models in the sector."

Barriers to entry

Dlamini ascribes the barriers of entry largely to the capital-intensive nature

POLICY STATEMENT
"The performance of our products must exceed all others on the World Market"
KGM Integrity

PRATLEY
Taper-Tech
BRASS COMPRESSION GLAND

- Latest Taper-Tech® technology eliminates the need for cable damaging weak-back bushes!
- Heavy duty Brass Compression Cable Glands for unarmoured cable
- SABS certified to SANS 1213, SANS 62444 & IP68 (150m of water head) No other gland comes close!
- Each gland size accommodates an unmatched range of cable glands
- Also accommodates Flat Twin & Earth and Arial Bundled cables (Adaptor bush required)
- NPT and Pg threads available

THE PRATLEY "TAPER-TECH" BUSH SOLUTION
DIFFERENTIAL TAPER
Due to the unique differential Taper Design, the gripping force of the bush increases proportionally with the axial load on the cable. This means that the cable remains safely secured, even at very high pull-out loads, without damaging the cable.

+27 11 955 2190
sales@pratley.co.za

[/PratleySA](#) [/company/pratleysa](#) [/PratleySA](#) [@PratleySA](#)

www.pratleyelectrical.com



AWEaP President, Bertha Dlamini.

of the energy sector. "Energy projects are high-risk and very technical, and access to intellectual property and technology is a challenge, as is access to finance and skilled resources in the verticals within the value chain."

She says the REIPPP (Renewable Energy Independent Power Producer Procurement) programme in the South African alternative energy sector is an auction-based programme whereby independent renewable energy producers submit bids with tariffs per kWh, in response to government calls for tenders. "However, entrepreneurs need finance to develop their projects to the point where they can guarantee tariffs and succeed in the market."

She refers to President Ramaphosa's recent announcement that 40% of public procurement spend in South Africa shall be designated to women-owned businesses. "This is a deliberate effort from the highest office in the country to ensure that women-owned businesses are able to secure projects."

She says African women are world leaders in terms of entrepreneurship as some 27% of women on the continent are involved in entrepreneurship while around 58% are involved in early-stage entrepreneurship. "Without a supportive ecosystem that avails access for women to skills development, finance and the market, we are relegating 50% of human enterprising potential to grassroot level trading instead of taking that entrepreneurial momentum and supporting it as part of the industrialisation of the continent."

AWEaP

AWEaP's role is to provide access to credible market information by "rallying the ecosystem of industry experts": "We don't have all the answers but we have access to networks and are consistently building new networks with local, regional and international companies and organisations."

"We also encourage women to attend our webinars with the intention to identify where they can participate in the energy sector. Once they achieve this, we encourage them to 'own' their journey of participation. In this sector, there is no-one to spoon feed new entrants. You have to do the research and invest in your growth by attending the webinars and engaging with the sector. New entrants should also be willing to try, fail and try again, for that is the nature of entrepreneurship."

AWEaP is building an acceleration programme aimed at fast-tracking the participation of women in the energy industry. "We are raising funds for that programme, which is currently in its concept phase, but we are happy that a number of leaders in the market have expressed interest to partner in the development of the accelerator." She says this will ensure that women in energy are given the requisite business acumen to succeed in the industry.

Business acumen, as opposed to technical skills, is gained by interacting with those who have successfully delivered energy projects in the past. They possess insights through their lived experience on the risks inherent in energy projects, on approaching OEMs and financiers and on how to package projects, enter into partnerships and safeguard your share of the value proposition.

AWEaP is also rallying partners to create an online

directory of women entrepreneurs in energy. This, too, is still in its planning phase as AWEaP is a non-profit organisation dependant on sponsorships and grants.

"We aim to create a broad net of support for women entrepreneurs in energy, and we are rallying industry stakeholders to support us so that we can deliver tangible value to industry and to entrepreneurs."

Message to women entrepreneurs

Dlamini's message to women entrepreneurs wanting to enter the sector is, first and foremost, that their participation in the sector is their own responsibility. "Take the initiative to research and understand the electricity value chains: generation, transmission and distribution. Study the verticals that you are interested

in. Connect with industry associations and research institutions active in those verticals. Also connect with multinational companies that supply products, services, solutions and systems in that sector."

"Make it your mission to understand the construct of the energy sector so that you can identify areas that resonate with you and your business interest. It is possible to be an entrepreneur in the energy space when you immerse yourself as a student of the sector, but you will need people to support you on your journey. There are huge opportunities in Africa's energy sectors. If the continent is only 50% electrified, then be part of its full electrification."

She says the successful participation of women, youth and people living with disabilities in the power

sector is a multi-stakeholder mission as no single stakeholder can succeed in integrating these designate population groups successfully alone. "This mission calls for OEMs, IPPs, financiers, government departments, academic institutions, industry associations and specialist consultants to cooperate and support women in the African energy sector – and not only in the last mile as providers of residential solar systems."

"Upstream the value chains, it is our mission to ensure that we see a representation of women as directors, chairpersons, CEOs and as entrepreneurs. This is the only way we will see Africa in a different light."

Enquiries: www.aweap.africa

Motors | Automation | Transmission & Distribution | Energy Solutions | Electrical Construction

MORE THAN JUST IE3 EFFICIENCY... NOW IE4 SUPER PREMIUM EFFICIENCY

THE MOST EFFICIENT MOTOR LINE ON THE MARKET

SOME THINGS JUST KEEP GETTING BETTER

0861 009378
www.zestweg.com | info@zestweg.com

BENEFITS

- NO extra cost to you**
- From 37kW up to 355kW (frames ≥225)
- Suitable for VSD applications up to 690V
- Spare parts remain interchangeable
- Reduced Total Cost of Ownership
- Reduced payback periods, below 1 year
- Most robust and reliable motor range in industry
- Network of pre-approved service providers

FEATURES

- Efficiency values above IEC IE4 levels
- Removable gland plates for frames ≥280
- Extended grease pipe on DE bearing
- IP66 degree of protection
- WISE® insulation system for VSDs
- Insulated NDE bearing for frames ≥315
- Ready to be controlled by VSDs without alterations
- Class H, Trickle Impregnation System
- Premium grade C4 silicon steel laminations to ensure quality core and allow rewinds back to full efficiency
- Versatile split level terminal box
- WSeal® sealing system
- Rubber drains for easy maintenance
- Solid and integrated feet for low vibration levels

The different types of lightning

Cloud to Ground

This is where lightning travels from the cloud to the ground. These strikes usually cause the most damage, the type we often call "forked" lightning. Usually multiple strikes occur along the same path. This type of lightning makes up approximately 80% of strikes.

Cloud-to-Cloud

An impressive display of flashes, accompanied by little rain or no thunder. 80% of all lightning is inter- or intra-cloud.

Ground to Cloud

Not very common but may normally be experi-

enced from high objects where the lightning flash travels from the ground object to the cloud. Damage does result from this discharge. This type of lightning makes up approximately 10% of strikes

Beaded Lightning

Is rather unusual in that beaded lightning persists for some seconds, and then appears to break up into a string of luminous fragments that gradually fade. Very rare.

Ball Lightning

A very unusual brush discharge reported as a luminous spherical or pear shaped body with a blurred outline. It normally causes no harm. Very rare.

Bolts from the Blue

One of the most dangerous types of cloud-to-ground lightning are bolts from the blue. A "Bolt from the Blue" is a cloud-to-ground lightning flash that typically:

- Comes out of the back side of the cloud.
- Travels a relatively large distance in clear air away from the storm cloud.
- Then angles down and strikes the ground. These lightning flashes have been documented to travel more than 40 km away from the cloud.

Intercloud

The least common is the strike between the positive and negative charges within separate clouds when the

strike travels in the air between them.

Intracloud Lightning

Intra-cloud is the most common form of lightning. It appears as a flash within the cloud occurring between the positive and negative charges that are within the same thunder cloud. Due to it causing very little danger or damage, not a lot of research has been carried out on it in comparison to cloud to ground.

Triggered Lightning

Lightning which has been triggered directly by human activity.

Enquiries: www.lectrotech.co.za

Keeping telecommunications online with surge protection

Webb Industries, a division of Jasco Trading, is a leading supplier of imported and locally manufactured RF ancillary products in the telecommunications and data networking industries. Webb offers turnkey telecommunications solutions for data network infrastructure, supporting both copper and fibre networks, in-building coverage enhancement consisting of distributed antenna solutions, site specific installation kit services as well as a range of mast and tower offerings.

Webb was established in 1973 as a mast and rigging company, and until 1976 specialised in self-supporting poles, guyed lattice and self-supporting structures. In 1983 Webb was acquired by Jasco and started co-operating with Jasco International, which was at that time involved in the military telecoms market. In 1985 Webb and Jasco International merged.

The company has over forty years of experience in cable assembly practices and supplies low intermodulation cable and connector assemblies to meet high operating specifications required in demanding communications applications. Webb also supplies various makes of lightning protection and grounding options to safeguard sophisticated communication equipment deployed in harsh environmental conditions, as well as world-class range of coaxial cables and connectors for low loss corrugated copper, low loss foil and braid, semi-rigid and standard braided; and jumper cables compliant with IP68 specifications.

A solid partnership – Webb and Dehn

Webb partners with the world's leading data and telecommunications ancillary product vendors to deliver the best quality components and ensure that your network operates optimally. Partners include Comba, Eupen, Laird, Telegartner, Times Microwave Systems and mWave amongst others.

Lightning and surge protection is indispensable for protecting human lives, preventing fires and avoiding cost-intensive outages of networked systems. When it comes to protection, Dehn has been the partner of choice for the last five years for ac/dc surge and lightning protection

solutions as well as safety equipment.

Supplied by Webb, DEHNvap modular prewired combined arresters protect the 230/400 V power supply of cell sites, can be universally used for TN-S and TT systems, and are specifically designed for mobile communication applications. When using combined arresters, energy coordination with system and equipment technology is an important criterion. For this reason, Dehn has extensively tested DEHNvap in its test laboratory to ensure its coordination with the integrated input circuits of power supply units.

The DEHNvap range includes:

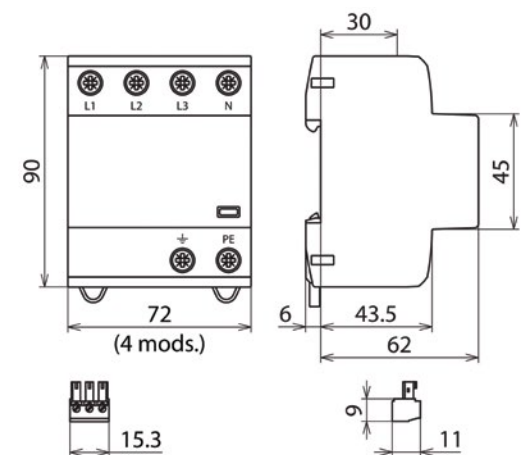
- **DEHNvap CSP 1P 50 S FM:** Prewired combined arrester, energy-coordinated with power supply systems for cell sites in new compact 2 standard DIN module design.
- **DEHNvap CSP 3P 100 S FM:** Prewired combined arrester, energy-coordinated with power supply systems for cell sites in new compact 4 standard DIN module design.
- **DEHNvap CSP 1P 255 FM:** Plug-in, prewired combined arrester, energy-coordinated with power supply systems for cell sites in 2 standard DIN module design.
- **DEHNvap CSP 3P 100 FM:** Plug-in, prewired combined arrester, energy-coordinated with power supply systems for cell sites in 8 standard DIN module design.

Webb is proud to be premiering its new brand image this November – *Sparks Electrical News* will bring the news to you first.

The importance of surge protection in the lightning protection arena

In order to understand the need for surge protection, it is important to understand how lightning causes damage. The sources of lightning damage can be quite different, therefore different protection techniques may be required to protect different items.

There are two areas of concern when evaluating a building or struc-



ture, namely the structure itself, and all incoming cables, meaning IT equipment as well as power. From this, the four sources of damage are derived, as per the following possibilities:

- Having a lightning strike directly to the building.
- A strike near the building.
- A strike directly to an incoming line.
- A strike near the incoming line.

Nearby strikes cause surges: in striking neighbouring buildings, surrounding objects or areas next to incoming lines, the lightning current coming down generates a magnetic field, which is cast over the structure or lines. This magnetic field generates an induced current on the incoming line, or on cables inside the structure. To prevent resulting damage to electrical equipment, surge protective devices (SPD) are recommended to reduce the induced effects of lightning. To prevent burning or mechanical damage, lightning rods are installed, also known as external lightning protection.

By installing external protection, users protect against structural damage, but this will not necessarily prevent electronic equipment from being damaged (for example TVs, Internet routers and appliances such as kettles, fridges, microwaves and so on). Therefore, in order to protect equipment, surge protective devices are needed as well.

The calculation from the SANS 62305-2 standard to evaluate the risks are as follows:

- The area to be considered for direct strikes is a radius around the structure, which is three times the height of the structure.
- The area to be considered for surges is a radius of 500 metres around the structure, and can be up to two kilometres away in both directions for incoming lines.

The risk of resultant surges therefore exceeds that of direct lightning strikes, meaning that the correct installation of surge protection devices is extremely important. Other benefits of surge arresters include the minimising of switching surges coming from the grid. This is a relevant topic when seen against the background of recent load shedding from the South African grid.

Enquiries: +27 (0)11 719 0000

DEHNvap, the Next Generation 5G-Ready combined arrester for protecting your 230/400 V Cell Site Power Supply.

For a surge and lightning protector that works, contact Webb Industries at webb@webb.co.za or +2711 719 0000 now.



dehn-partners-south-africa

DEHNventil: welcome to the family

Since 1983, DEHNventil has been synonymous with power in the ranks of lightning current arrestors. Now, with the new slim design combined with the original DEHNventil strength, you can save space in your switchgear cabinet while providing your electrical assets with the same protection as before.

With the slim design, the new DEHNventil has the width of four standard DIN modules and, together with the combined arrester, saves up to 50% of the space occupied by the previous module and other, similar devices available in the market.

It allows for easy module replacement with a spring supported plug-in module making replacement quick and effortless and leaving you with more room for extra components. Maximum protection is achieved with RAC spark gap technology which provides added safety with minimum residual energy and maximum follow current extinguishing capabilities of up to 100 kArms. DEHNventil creates the best possible protection for assets based on downstream terminals.

Performance that saves you time and money

The new features of DEHNventil enable savings in terms of both time and cost thanks to easy installation and maintenance. Installation is seamless, with an entire block plug-in that can be changed with one hand. This is achieved by means of a spring loaded ejection mechanism making installation and replacement quick and easy.

Protection during load shedding

Load shedding is becoming a daily reality in South Africa, and is not only affecting businesses and essential services, but all of us in our homes. This is particularly true of small to medium-sized businesses, which are more at risk due to their limited ability to maintain security and generate revenue during downtime, and while many people are turning to generators to get them through load shedding, soaring petrol prices mean this is an expensive and not very eco-friendly way to go. However, for both homes and businesses, an uninterrupted power supply (UPS) can protect businesses against downtime.

UPS solutions protect and save the electronic equipment we rely on so heavily, and are scalable according to different needs. For example, a UPS for basic home use will allow a Wi-Fi router to run, cell phone chargers to operate, and the safe shut down of a single PC, below 500 W.

“or an advanced home or basic small office use, there are solutions that will enable a TV and or decoder or game console and surround sound to run. Users would also be able to keep the lights on, if connected to the DB board, and are between 1000 and 3000 W. In this instance, runtime would be dependent on additional external batteries and physical load.

A UPS offers guaranteed power protection for connected electronics, which ensures businesses can keep their doors open and maintain contact with partners and customers. “Remember, keeping Wi-Fi up and running rather than having to rely on cellular data during load shedding gives you a better chance of staying online, for longer.

And, should power be interrupted, or fluctuate outside safe levels, an UPS instantly provides clean battery backup power and surge protection for sensitive equipment, giving enough time to safely power down non-essential devices and keep critical business operations up and running. It will also provide battery backup power and protection for equipment such as TVs security systems, gaming consoles and mobile devices.

Using a single module, DEHNventil requires less maintenance than its predecessor. Protection is at optimal level immediately after replacement, so preventing gaps in your protection while extending maintenance intervals. It also replaces equivalent or older devices, which futureproofs your protection. Additionally, the new DEHNventil models now come equipped with remote signaling contact, simplifying your product selection.

With its slim design, DEHNventil saves you money in terms of space gained in the switchgear cabinet. With this all-in-one, combined type 1 + 2 + 3 arrester, all your electrical assets within a protection range of 10 m are protected, which does away with expenses for additional devices and installations.

Relying on the expertise of spark-gap technology specialists and made-in-Germany quality, the DEHNventil uses this combined type 1 + 2 + 3 arrester to safeguard against over-voltages or transients in low-voltage switchgear and control units. Extra performance comes from high reaction-rate RAC gap technology which reduces the impact on linked installations and systems with lower residual energies.

DEHNventil puts your mind at ease during storms or surges with the reliability of the RAC gap technology and German design, leaving you with more time and more resources to focus on what matters most – your business.

The new DEHNventil is a worthy competitor and replaces equivalent and older devices effortlessly, so guaranteeing future compatibility. The DEHNventil is powerful, reliable, future-proof and space saving by design. At half the size, it packs all the power as a new benchmark in surge protection.

Enquiries: www.dehn-africa.com

DEHN
PROTECTS.

YOUR TRUSTED PARTNER FOR SURGE AND LIGHTNING PROTECTION

Enquiries: www.se.com/za



MANUFACTURERS	CONTACTS	PROTECTION	FUSES
<p>ABB South Africa</p> <p>Brother International SA</p> <p>C3 Technologies</p> <p>Circuit Breaker Industries: Low voltage</p> <p>Crabtree South Africa</p> <p>DEHN Africa</p> <p>Denver Technical Products</p> <p>Eurolux</p> <p>Hamar Controls</p> <p>HellermannTyton</p> <p>JB Switchgear Solutions</p> <p>Legrand SA</p> <p>Magnitech</p> <p>Marechal Electric Africa</p> <p>O-Line</p> <p>Phoenix Contact</p> <p>Power Panels and Electrical</p> <p>Radiant Group</p> <p>Shuttle Lighting Control Systems</p> <p>Siemens</p> <p>Superlume</p> <p>Surge Technology</p> <p>Switchboard Manufacturers</p> <p>Switch Boards Unlimited</p> <p>The Switch Shop</p> <p>Telbit</p> <p>WEG</p> <p>World Power Products</p>	<p>Major Tech</p> <p>Werner Grobbelaar</p> <p>Marechal Electric Africa</p> <p>Sales</p> <p>MCE Electric</p> <p>Sales</p> <p>Nordland Lighting</p> <p>Johann Lamprecht</p> <p>O-line</p> <p>Sales</p> <p>Phambili</p> <p>Steve Lea</p> <p>Phoenix Contact</p> <p>Carl Coetzer</p> <p>Power Panels and Electrical</p> <p>Freddie van der Merwe</p> <p>Radiant Group</p> <p>Alfred Weldon</p> <p>Shuttle Lighting Control Systems</p> <p>Tracey Steyn</p> <p>SIBA Fuses</p> <p>H.I. Hassen</p> <p>Siemens</p> <p>Yullen Govender</p> <p>Stone Stamcor</p> <p>Mark Talbot</p> <p>Superlume</p> <p>Willie Garbers</p> <p>Surge Technology</p> <p>Paul van As</p> <p>Swan Electric</p> <p>Franza van den Heever</p> <p>Switchboard Manufacturers</p> <p>Josh Berman</p> <p>Switch Boards Unlimited</p> <p>Zienet Mahomed</p> <p>The Switch Shop</p> <p>Michael or Brandon</p> <p>Telbit</p> <p>Martin Hogan</p> <p>Voltex</p> <p>Hugh Ward</p> <p>Voltex LSis</p> <p>Rose Schulz</p> <p>Voltex MVLV</p> <p>Sales</p> <p>Waco</p> <p>Jaco Coetzee</p> <p>Webb Industries</p> <p>Jacqui Brookes</p> <p>World Power Products</p> <p>Chris du Preez/Jan Gortzen</p> <p>Zest WEG Group</p> <p>Switchgear call centre</p> <p>Vossloh-Schwabe</p> <p>Barry Harrison</p>	<p>Comtest</p> <p>IS meters; Atex equipment</p> <p>DEHN Africa</p> <p>Full range of protection devices</p> <p>Fusecomp</p> <p>Range of protection devices</p> <p>HellermannTyton</p> <p>Cable protection systems that include heatshrink, protective sleeves (Helagraine, Helahook), tubing (PVC, flexible metal and convoluted), binding (NFP-series) and edge clips</p> <p>Khanyisa Electrical Supplies</p> <p>Complete range of protection devices</p> <p>Legrand SA</p> <p>Full range of protection devices</p> <p>Magnet Electrical Suppliers</p> <p>Schneider and Eaton protection devices</p> <p>O-Line</p> <p>Full range of protection devices</p> <p>Phoenix Contact</p> <p>Range of surge protection devices</p> <p>Siemens</p> <p>Full range of protection devices</p> <p>Swan Electric</p> <p>Full range of protection devices</p> <p>Voltex</p> <p>Full range of protection devices</p> <p>Zest WEG Group</p> <p>Full range of thermal and thermal/magnetic overload devices; electronic overload protection</p>	<p>ABB South Africa</p> <p>Full range of fuses</p> <p>ACDC Dynamics</p> <p>BS and DIN type fuses for fused isolators</p> <p>ACTOM Electrical Products</p> <p>Full range of fuses</p> <p>ARB Electrical Wholesalers</p> <p>Full range of fuses</p> <p>Fusecomp</p> <p>Full range of fuses</p> <p>Khanyisa Electrical Supplies</p> <p>Full range of fuses</p> <p>Legrand SA</p> <p>HRC, domestic and industrial fuses</p> <p>Magnet Electrical Suppliers</p> <p>Full range of fuses</p> <p>MCE Electric</p> <p>MCE fuses and fuse holders; Onesto fuses and fuse holders; Onesto dc fuses and fuse holders</p> <p>Phoenix Contact</p> <p>Din rail mounted</p> <p>SIBA Fuses</p> <p>Complete range of fuses for all applications</p> <p>Siemens</p> <p>Full range of fuses</p> <p>Swan Electric</p> <p>Full range of fuses</p> <p>Voltex</p> <p>Full range of fuses</p> <p>Waco</p> <p>Full range of fuses</p> <p>Zest WEG Group</p> <p>High speed fuses ranging from 20-1000 A; fuse holders</p>
DISTRIBUTORS	CIRCUIT BREAKERS / EARTH LEAKAGE BREAKERS	DISTRIBUTION BOARDS	SWITCHES/ISOLATORS
<p>ACDC Dynamics</p> <p>ACTOM Electrical Products</p> <p>ARB Electrical Wholesalers</p> <p>Altron Arrow</p> <p>Atlas Group</p> <p>C3 Technologies</p> <p>Comtest</p> <p>Denver Technical Products</p> <p>DEHN Africa</p> <p>Elen Electrical Enclosures</p> <p>Eurolux</p> <p>Fusecomp</p> <p>HellermannTyton</p> <p>Inher SA</p> <p>Khanyisa Electrical Supplies</p> <p>Magnet Electrical Suppliers</p> <p>Magnitech</p> <p>Major Tech</p> <p>MCE Electric</p> <p>Nordland Lighting</p> <p>Phambili</p> <p>SIBA Fuses</p> <p>Stone Stamcor</p> <p>Superlume</p> <p>Surge Technology</p> <p>Swan Electric</p> <p>Switchboard Manufacturers</p> <p>The Switch Shop</p> <p>Voltex</p> <p>Voltex LSis</p> <p>Voltex MVLV</p> <p>Vossloh-Schwabe</p> <p>Waco</p> <p>Webb Industries</p> <p>Zest WEG Group</p>	<p>ABB South Africa</p> <p>Full range of circuit breakers, earth leakage breakers</p> <p>ACDC Dynamics</p> <p>Full range of switchgear from 13 mm MCBs to MCCBs and ACBs; MCCBs rated from 20 A to 1 600 A; complementary isolator and earth leakage ranges also available</p> <p>ACTOM Electrical Products</p> <p>Full range of circuit breakers/earth leakage breakers</p> <p>ARB Electrical Wholesalers</p> <p>Full range of circuit breakers/earth leakage breakers</p> <p>Atlas Group</p> <p>Full range of circuit breakers/earth leakage breakers</p> <p>Circuit Breaker Industries: Low voltage</p> <p>Full range of commercial/industrial, miniature circuit breakers; moulded case circuit breakers; earth leakage protection devices</p> <p>Eurolux</p> <p>Limited range of circuit breakers and earth leakage devices, single and three phase</p> <p>Fusecomp</p> <p>Full range of circuit breakers and earth leakage breakers</p> <p>HellermannTyton</p> <p>Wide selection of Earth Resistance Testers (e.g. TCTCOMP/T2000); Circuit breaker finder (HT38)</p> <p>Inher SA</p> <p>P&B Protection Relays</p> <p>Khanyisa Electrical Supplies</p> <p>Full range of circuit breakers and earth leakage breakers</p> <p>Legrand SA</p> <p>Complete range of circuit breakers up to 6 300 A, MCB, MCCB and ACB</p> <p>Magnet Electrical Suppliers</p> <p>Schneider and Eaton circuit breaks and earth leakage breakers</p> <p>Major Tech</p> <p>Full range of miniature circuit breakers, isolator switches, earth leakage breakers and populated boards</p> <p>MCE Electric</p> <p>Onesto DIN rail circuit breakers and earth leakage devices; Schenker mini rail circuit breakers and earth leakage devices; Schenker 13 mm mini rail circuit breakers and earth leakage devices; Onesto dc circuit breakers</p> <p>O-Line</p> <p>Full range of circuit breakers and earth leakage breakers</p> <p>Phoenix Contact</p> <p>Range of circuit breakers</p> <p>Siemens</p> <p>Full range of circuit breakers</p> <p>Swan Electric</p> <p>Full range of circuit breakers</p> <p>Switchboard Manufacturers</p> <p>Full range of circuit breakers/earth leakage breakers</p> <p>Voltex</p> <p>Full range of circuit breakers, earth leakage breakers</p> <p>Voltex LSis</p> <p>Full range of circuit breakers, earth leakage breakers</p> <p>Waco</p> <p>Full range of circuit breakers, earth leakage breakers</p> <p>Zest WEG Group</p> <p>Comprehensive range of miniature circuit breakers, moulded case circuit breakers, air circuit breakers and earth leakage devices</p>	<p>ABB South Africa</p> <p>Full range of DBs</p> <p>ACDC Dynamics</p> <p>Wide range of DBs in various materials; economy plastic to steel; pre-wired and open boxes; surface and flush mount boxes available in most ranges; watertight enclosures</p> <p>ACTOM Electrical Products</p> <p>Full range of DBs</p> <p>ARB Electrical Wholesalers</p> <p>Full range of DBs</p> <p>Atlas Group</p> <p>Full range of DBs</p> <p>C3 Technologies</p> <p>Manufacturers of LV distribution boards and all associated products</p> <p>Circuit Breaker Industries: Low voltage</p> <p>12- and 20-way distribution boards</p> <p>Elen Electrical Enclosures</p> <p>Surface-mount distribution boards</p> <p>Eurolux</p> <p>Full range of distribution boards</p> <p>Hamar Controls</p> <p>Manufacturers of Low Voltage Distribution Boards and Motor Control Centres to Customer Specifications and Requirements</p> <p>HellermannTyton</p> <p>Suitable printers and labels for labeling your distributism board</p> <p>JB Switchgear Solutions</p> <p>Full range of distribution boards and distribution board enclosures</p> <p>Khanyisa Electrical Supplies</p> <p>Full range of DBs</p> <p>Legrand SA</p> <p>Full range of flush- and surface-mount, waterproof, DIN rail boards</p> <p>Magnet Electrical Suppliers</p> <p>Schneider DBs</p> <p>Major Tech</p> <p>Full range of distribution boards</p> <p>MCE Electric</p> <p>Onesto ready boards with or without bulkhead; Schenker ready boards with or without bulkhead; Onesto swimming pool distribution board; Onesto caravan distribution board; MCE multi-purpose distribution board</p> <p>Phoenix Contact</p> <p>Range of terminals</p> <p>Power Panels and Electrical</p> <p>Wide range of distribution boards</p> <p>Siemens</p> <p>Full range of distribution boards</p> <p>Swan Electric</p> <p>Full range of distribution boards</p> <p>Switchboard Manufacturers</p> <p>Full range of DBs and weather proof kiosks</p> <p>Switch Boards Unlimited</p> <p>Full range of distribution boards</p> <p>The Switch Shop</p> <p>Full range of distribution boards</p> <p>Voltex</p> <p>Full range of DBs</p> <p>Voltex LSis</p> <p>Full range of DBs</p> <p>Voltex MVLV</p> <p>Full range of DBs</p> <p>Waco</p> <p>Full range of DBs</p> <p>World Power Products</p> <p>Full range of distribution boards; enclosures and floor standing cabinets (TTA/MCC)</p> <p>Zest WEG Group</p> <p>Full range of indoor and outdoor distribution boards, custom made to client specification</p>	<p>ABB South Africa</p> <p>Full range of switches and isolators</p> <p>ACDC Dynamics</p> <p>Wide variety of switches and isolators</p> <p>ACTOM Electrical Products</p> <p>Full range of switches/isolators</p> <p>ARB Electrical Wholesalers</p> <p>Full range of switches/isolators</p> <p>Atlas Group</p> <p>Full range of switches/isolators</p> <p>Circuit Breaker Industries: Low voltage</p> <p>Full range of commercial and industrial switch disconnectors</p> <p>Crabtree South Africa</p> <p>Full range of switches/isolators</p> <p>Fusecomp</p> <p>Full range of switches/isolators</p> <p>Khanyisa Electrical Supplies</p> <p>Range of switches/isolators</p> <p>Legrand SA</p> <p>Domestic, commercial and industrial switches and isolators</p> <p>Magnet Electrical Suppliers</p> <p>Full range of Schneider and Eaton switches and isolators</p> <p>Major Tech</p> <p>VETI complete switches in modular and assembled; VETI complete isolator range; VETI IS isolator series (one-pole to four-pole)</p> <p>Marechal Electric Africa</p> <p>SA-700A 1000V DECONTACTOR™, Multi Contact connectors, Industrial Plugs & Socket Outlets</p> <p>MCE Electric</p> <p>Onesto din rail isolators; Schenker mini rail isolators; Onesto dc isolators; MCE surface mount (IP66 and IP65) and base mount isolators</p> <p>Phoenix Contact</p> <p>Wide range of switches and isolators</p> <p>Shuttle Lighting</p> <p>LED dimmers</p> <p>Siemens</p> <p>Full range of switches and isolators</p> <p>Stone Stamcor</p> <p>Chilly toggle switches; Triton float switches</p> <p>Superlume</p> <p>New range of Smart Home WiFi switches</p> <p>Swan Electric</p> <p>Range of switches and isolators</p> <p>Switchboard Manufacturers</p> <p>Full range of switches/isolators</p> <p>The Switch Shop</p> <p>Full range of switches/isolators</p> <p>Voltex</p> <p>Full range of switches and isolators</p> <p>Waco</p> <p>Full range of switches and isolators</p> <p>Zest WEG Group</p> <p>Comprehensive range of miniature and moulded case isolators ranging from 40-1600 A</p>
CONTACT	PROTECTION	LABELLING	CONTACTORS
<p>ABB South Africa</p> <p>Customer contact centre</p> <p>ACDC Dynamics</p> <p>Elmari Erasmus/Dirk Klynsmith</p> <p>ACTOM Electrical Products</p> <p>Russel Ramsden</p> <p>Altron Arrow</p> <p>Jeva Narian</p> <p>ARB Electrical Wholesalers</p> <p>Sales</p> <p>Atlas Group</p> <p>Annie Storar</p> <p>Brother International SA</p> <p>Munna Desai</p> <p>C3 Technologies</p> <p>Charles du Plessis</p> <p>Circuit Breaker Industries: Low voltage</p> <p>Aletta Olivier</p> <p>Comtest</p> <p>Sales</p> <p>Crabtree South Africa</p> <p>Sales</p> <p>Denver Technical Products</p> <p>Mervyn Stocks</p> <p>DEHN Africa</p> <p>Florian Voegerl</p> <p>Elen Electrical Enclosures</p> <p>Andy Kapral</p> <p>Eurolux</p> <p>Patrick Stuckie</p> <p>Fusecomp</p> <p>Charmaine</p> <p>Hamar Controls</p> <p>Corné de Villiers</p> <p>HellermannTyton</p> <p>Ingrid Nicolaus</p> <p>Inher SA</p> <p>Johan van Staden</p> <p>JB Switchgear Solutions</p> <p>Johan Basson</p> <p>Khanyisa Electrical Supplies</p> <p>Dominic Kalil</p> <p>Legrand SA</p> <p>Johan Bosch</p> <p>Magnet Electrical Suppliers</p> <p>Kevin Govender</p> <p>Magnitech</p> <p>Mark Vigus-Brown</p>	<p>ABB South Africa</p> <p>Full range of protection devices</p> <p>ACDC Dynamics</p> <p>Full range of motor protection circuit breakers (MPCBs) from 32 A to 110 A frame high break capacity; all accessories and auxiliary contacts available including the Gewiss IEC309 HP range of connectors</p> <p>ACTOM Electrical Products</p> <p>Full range of protection devices</p> <p>ARB Electrical Wholesalers</p> <p>Full range of protection devices</p> <p>Atlas Group</p> <p>Full range of protection devices</p>	<p>ARB Electrical Wholesalers</p> <p>Full range of labelling products</p> <p>Atlas Group</p> <p>Full range of labelling products</p> <p>Brother International SA</p> <p>Full range of labelling products</p> <p>Comtest</p> <p>Digital meters; clamp meters; laser distance meters</p> <p>HellermannTyton</p> <p>Variety of pre-termination and post terminal labels and cable markers</p> <p>Khanyisa Electrical Supplies</p> <p>Full range of labelling products</p> <p>Legrand SA</p> <p>CAB3 and Memocab cable markers</p> <p>Magnet Electrical Suppliers</p> <p>Brady labelling products</p> <p>Phambili</p> <p>Full range of labelling products</p> <p>Phoenix Contact</p> <p>Range of marking materials and printers</p> <p>Swan Electric</p> <p>Full range of labelling products</p> <p>Voltex</p> <p>Full range of labelling products</p>	<p>ABB South Africa</p> <p>Full range of contactors</p> <p>ACDC Dynamics</p> <p>Wide variety of contactors</p> <p>ACTOM Electrical Products</p> <p>Full range of contactors</p> <p>ARB Electrical Wholesalers</p> <p>Full range of contactors</p> <p>Atlas Group</p> <p>Full range of contactors</p> <p>Circuit Breaker Industries: Low voltage</p> <p>Full range of magnetic contactors and thermal overload relays</p> <p>Denver Technical Products</p> <p>GIGAVAC dc contactors up to 1 000 A 1 000 V</p> <p>Fusecomp</p> <p>Full range of contactors</p> <p>Khanyisa Electrical Supplies</p> <p>Full range of contactors</p> <p>Legrand SA</p> <p>Contactors up to 800 A</p> <p>Magnet Electrical Suppliers</p> <p>Schneider and Eaton contactors</p> <p>MCE Electric</p> <p>MCE ac magnetic contactors in 3- and 4-pole; MCE contactor accessories; S&C ac magnetic contactors in 3- and 4-pole; S&C contactor accessories</p> <p>Phoenix Contact</p> <p>Range of contactors</p> <p>Siemens</p> <p>Full range of contactors</p> <p>Swan Electric</p> <p>Full range of contactors</p> <p>Switchboard Manufacturers</p> <p>Full range of contactors</p> <p>Voltex</p> <p>Full range of contactors</p> <p>Voltex LSis</p> <p>Full range of contactors</p>

CONTACTORS	METERS	HAZARDOUS AREAS
<p>Waco Full range of contactors</p> <p>Zest WEG Group Complete range of contactors from 7-800 A, suitable for AC1 or AC3 use</p> <p>SURGE PROTECTION DEVICES</p> <p>ABB South Africa Full range of surge protection devices</p> <p>ACDC Dynamics Wide variety of surge protection devices</p> <p>ACTOM Electrical Products Full range of surge protection devices</p> <p>Altron Arrow Full range of surge protection devices</p> <p>ARB Electrical Wholesalers Full range of surge protection devices</p> <p>Atlas Group Full range of surge protection devices</p> <p>Circuit Breaker Industries: Low voltage Clip-in dual mount surge protection devices</p> <p>DEHN Africa DEHNguard ACI Technology series; DEHNguard 952 310; DEHNguard 952 110; DEHNguard 952 070; DEHNguard 952 030; DEHNventil 951 310; DEHNventil 951 110; DEHNshield 941 310; DEHNshield 941 310; DEHNguard CI 952 322; DEHNguard CI 952 327; DEHNven CI 961 200; DEHNgap Maxi 961 180; DEHNCord 900 430</p> <p>Fusecomp Full range of protection devices</p> <p>HellermannTyton Surge plugs (TSP1A/TSP1AF) – high surge handling capacity</p> <p>Khanyisa Electrical Supplies Full range of protection devices</p> <p>Legrand SA Full range of surge protection devices</p> <p>Magnet Electrical Suppliers Schneider and Phoenix Contact surge protection devices</p> <p>Magnitech Full range of surge protection devices</p> <p>Major Tech MTD6 – appliance surge protector</p> <p>MCE Electric Onesto surge arresters; Schenker surge arresters; Onesto dc surge arrestors</p> <p>O-Line Full range of surge protection devices</p> <p>Phoenix Contact Broad range of surge protection devices</p> <p>Siemens Full range of surge protection devices</p> <p>Surge Technology DEHN, Saltek, Copa, Tridelta</p> <p>Swan Electric Range of surge protection devices</p> <p>Switchboard Manufacturers Range of protection devices</p> <p>Telbit Full range of surge protection devices</p> <p>Voltex Full range of surge protection devices</p> <p>Voltex LSis Full range of surge protection devices</p> <p>Vossloh-Schwabe Full range of surge protection devices</p> <p>Webb Industries Universal surge and lightning protection solutions</p> <p>Zest WEG Group Fanox surge arrester Class C Type II</p>	<p>Circuit Breaker Industries: Low voltage Rail mount meters</p> <p>HellermannTyton Large selection from DIY to professional range of multimeters, clamp meters and energy meters</p> <p>Khanyisa Electrical Supplies Wide range of meters</p> <p>Legrand SA Electrical energy and multifunction metering</p> <p>Magnet Electrical Suppliers Schneider and Power Star meters</p> <p>Major Tech Full range of professional test instruments and DIY meters</p> <p>MCE Electric MCE ammeters and voltmeters</p> <p>Phoenix Contact Energy power meters and CTs</p> <p>Siemens Full range of meters</p> <p>Swan Electric Range of meters</p> <p>Switchboard Manufacturers Full range of meters</p> <p>Voltex Voltex range of LSis panel meters</p> <p>Waco Full range of meters</p> <p>Zest WEG Group Electronic range of power factor meters and power meters</p> <p>DB BOARD ENCLOSURES</p> <p>ABB South Africa Full range of DB enclosures</p> <p>ACDC Dynamics Wide range of DB enclosures in all colours, materials and sizes</p> <p>ACTOM Electrical Products Full range of DB enclosures</p> <p>ARB Electrical Wholesalers Full range of DB enclosures</p> <p>Atlas Group Full range of DB enclosures</p> <p>C3 Technologies Manufacturers of LV distribution boards and all associated products</p> <p>Circuit Breaker Industries: Low voltage Flush mounted distribution boards</p> <p>Elen Electrical Enclosures Surface-mount distribution boards</p> <p>Eurolux Limited range of distribution boards enclosures</p> <p>Hamar Controls Manufacturers of Low Voltage Distribution Boards and Motor Control Centres to Customer Specifications and Requirements</p> <p>JB Switchgear Solutions Full range of distribution board enclosures</p> <p>Khanyisa Electrical Supplies Full range of distribution board enclosures</p> <p>Legrand SA Full range of flush- and surface-mount, waterproof, DIN rail boards</p> <p>Magnet Electrical Suppliers Rittal and Alibro DB enclosures</p> <p>Major Tech Full range of IP65 and IP55 enclosures</p> <p>Marechal Electric Africa Boxes, Portable Power Distribution</p> <p>MCE Electric Onesto - full range of mild steel enclosures; MCE - full range of plastic and mild steel enclosures</p> <p>Power Panels and Electrical Broad range of distribution board enclosures</p> <p>Siemens Full range of distribution board enclosures</p> <p>Swan Electrical Full range of distribution board enclosures</p> <p>Switchboard Manufacturers Full range of DB enclosures</p> <p>Switch Boards Unlimited Full range of DB enclosures</p> <p>The Switch Shop Full range of DB enclosures</p> <p>Voltex Full range of DB enclosures</p> <p>Voltex LSis Full range of DB enclosures and custom panels</p> <p>Waco Full range of DB enclosures</p> <p>World Power Products MCC: floor standing, 19" racks; kiosks</p> <p>Zest WEG Group Full range of indoor and outdoor distribution boards and DB enclosures, custom built to client specification</p> <p>HAZARDOUS AREAS</p> <p>ACDC Dynamics Full range of products for hazardous areas</p> <p>ARB Electrical Wholesalers Full range of products for hazardous areas</p> <p>Atlas Group Full range of products for hazardous areas</p> <p>Comtest Digital multimeters; process calibrators; pressure calibrators; infrared thermometers; pressure models</p> <p>Elen Electrical Enclosures Junction boxes Eex'e zone 1, 2, 21, 22</p> <p>Eurolux Limited range of products for hazardous areas</p> <p>HellermannTyton Multimeters (TBM811XEX, TBM812EXE) and labels for hazardous area</p> <p>Khanyisa Electrical Supplies Full range of products for hazardous areas</p> <p>Legrand SA Full range of flush and surface mount, waterproof DIN rail boards</p> <p>Magnet Electrical Suppliers ATX products for hazardous areas</p> <p>Magnitech Full range of products for hazardous areas</p> <p>Marechal Electric Africa Lighting, Control Stations, Junction Boxes, Flameproof Enclosures, Ex Plugs & Socket Outlets</p> <p>Nordland Lighting Lighting for hazardous areas</p> <p>Phoenix Contact Safety relays and Ex barriers</p> <p>Siemens Full range of products for hazardous areas</p> <p>Superlume A range of zone rated light fixtures for hazardous areas</p> <p>Voltex Complete range of products for hazardous areas</p>	<p>Voltex LSis Full range of products for hazardous areas</p> <p>Waco Full range of products for hazardous areas</p> <p>Zest WEG Group Variable speed drives and motor combination certification for hazardous areas</p>



+27 (0)11 874 7600



+27 (0)11 879 2000



+27 (0)11 723 6000



+27 (0)21 448 8229



+27 (0)11 452 1415



+27 (0)11 314 4340



+27 (0)11 719 0000



+27 (0)11 704 1487

ABB's new all-in-one protection relay offers innovative simplicity

With world energy usage predicted to nearly double by 2050, power distribution networks are continuing to grow in size and complexity. In response, ABB is launching a new addition to its Relion product family designed to support safe, smart and sustainable electrification. Packed with innovative simplicity, REX610 makes protecting grids, industrial processes and people easier.

REX610 draws on ABB's strong heritage of freely configurable multifunctional relays and proven protection algorithms to create a simple and innovative solution that provides optimal protection for all basic power distribution applications.

Alessandro Palin, president of ABB's Distribution Solutions division, said: "Energy demand is rising together with the need for higher reliability and availability of energy supply. This requires innovative and future-proof technology, together with adaptability and readiness to respond to changing market and grid requirements. Designed to adapt to the needs of evolving power grids and the society of tomorrow, REX610 meets all these requirements to make it a flexible and sustainable choice."

Innovative simplicity is at the heart of REX610. It is a pure plug-and-play solution with installed hardware modules unlocking all available functionality. REX610 is the first all-in-one protection relay to support all basic power distribution applications with only six variants, making it easy to order, set up, use and service. To save further time and money, the low number of variants also allows modules and spare

units to be kept in store for quick replacement and changing project requirements.

Its modular and scalable design makes creating a unique protection solution easy and the extensive range of default functionality, including communication options, allows easy alterations with no additional costs or hardware changes.

REX610 is futureproofed for an evolving grid. As the market shifts and requirements change, modules can be easily added, removed or replaced without the need to change the entire relay. The modular hardware makes modifications possible at any time, throughout the life cycle, even years after installation. To minimise costly downtime, the innovative, withdrawable plug-in unit ensures quick and easy installation, maintenance and testing, as well as swift replacement and quick repairs.

To further support changing grid requirements, new developments can be accessed via firmware updates. Access to the latest versions of ABB's protection algorithms will ensure optimal protection and control solutions, whereas new protection functionality opens up the possibility for new applications. The extensive range of default functionality allows users to adapt to changing protection, communication and network requirements, accessible via ABB's relay setting and configuration tool, PCM600.

Fully IEC 61850-compliant, REX610 enables communication and interoperability between substation automation devices and to various smart services, such as those on the ABB Ability platform, now and in years to come.



REX610 offers extensive life cycle services for optimal future usability and extended switchgear lifetime. This ensures safe, reliable and cost-effective protection solutions with predictable maintenance costs. The services include a web-based data-sharing and backup service, ABB Ability Backup Management for electrical systems – Data Care. This provides secure online storage and easy sharing of technical information from the protection relays. Data Care is also where all firmware updates will be accessible.

For the retrofit market, ABB has also developed a tailor-made adapter to allow quick and easy replace-

ment of ABB's SPACOM relays with REX610 relays. With more than ABB 700,000 SPACOM relays installed worldwide, dating back to the 1980's, the retrofit adapter offers a simple way to easily modernise the protection and control system to the shifting requirements of future power demand.

ABB launched REX610 during a virtual event on 18 May 2021, at which ABB Electrification's chief technology officer, Amina Hamidi, delivered a keynote address on 'Innovation for greener, smarter electrification of the future.'

Enquiries: go.abb/electrification

Circuit protection for safety on the 24 V side

Unlike on the 230 V primary side, circuit protection in the secondary circuit is often neglected. Another concern is that in the event of a failure of the 24 V dc voltage supply, standard mechanical circuit breakers often do not trigger. This may happen with long cables, for example. Electronic circuit breakers from ifm monitor the circuit and, if required, disconnect reliably. Individual branch circuits can be disconnected selectively. This allows for a reduction of wire cross-sections in the load circuit of the switched-mode power supplies. On the new adjustable protection modules, the tripping current can be set, allowing for optimum adaptation of a plant's circuits to the machinery. With the optional potential modules, the fuse block can be expanded into an intelligent wiring system. The IO-Link version also enables the cause of the trigger to be detected; it tracks current and voltage measurement in each channel and provides for evaluation of important diagnostic data.

Modular installation

The system has a modular structure and consists of a supply module to feed maximum of 40 A. The protection modules can be mounted side by side. This is done via a simple clip mechanism, without any bridges, jumpers or the like. Potential modules are used to distribute the circuits and wire the ground lead. Easy mounting and minimised wiring complexity save costs and time. With the standard version the user can connect up to 10 and with the IO-Link version up to 8 safety modules to the head module.

In addition to the triggering mechanism, the modules feature an LED which signals if the module has triggered, if it is active and to what extent it is used. Each channel can be activated, deactivated, or set via a pushbutton. The feed module has an additional collective output to provide a warning signal if a module has triggered.

Enquiries: www.ifm.com



The Pepperl+Fuchs M-LB-5000 surge protection system

Surge voltages have many possible causes. Electronics can receive sustained damage from lightning strikes, transients caused by switching operations and load drops and interruptions to the supply. There are other effects in addition to the direct destruction of components, in particular the risk posed to plant availability and the resulting consequences, such as production downtime, which drives operating costs up.

Surge protection systems must therefore form an integral part of process engineering plants. In addition, current standards such as EN 62305 (SANS 62305) require that the effectiveness of these systems be checked regularly. Up to now, this check has usually been carried out manually on-site, which is costly for large plants in particular and requires trained personnel and tools such as a test kit. However, the test results do not give any indications of prior damage to the protection module and its state of wear. It has previously only been possible to rate the tested devices as 'good' or 'bad'. To meet the different safety requirements of the signal line market, Pepperl+Fuchs offers two surge protection systems with different functions.

Surge protection with condition monitoring

The M-LB-5000 surge protection system with condition monitoring function monitors signal lines automatically and continuously. The patented diagnostics use a special algorithm to detect the different load situations that cause the surge protection system to wear. This includes counting the number of times the gas discharge tube has ignited, detecting the silicon temperature of the suppressor diodes and measuring the interior temperature of the surge voltage protection module.

When the protection module has reached 90% of its useful life, this is indicated by a yellow diode. The protection modules are therefore replaced neither too early nor too late: replacing them too early leads to an unnecessarily high replacement frequency, while replacing them too late leads to the plant having phases without sufficient surge protection if defective modules are not replaced immediately. This optimises the availability of the surge protection functionality and of the plant and at the same time minimises maintenance costs.

The M-LB-5000 modules are mounted on a standard DIN mounting rail. The devices each consist of a base module and the actual protection module. The system also has an insulating partition to maintain clearance

when mounting Ex and non-Ex modules on a DIN mounting rail. All modules have a width of only 6.2 mm and allow simple commissioning without special aids. In addition to the protection and base modules, there are three function modules. The maintenance module reports when a yellow LED lights up on at least one protection module, indicating that this module should be replaced. The fault module indicates when at least one device has a fault (red LED) and needs to be replaced directly. The third unit is a power module that powers the protection modules via the power rail. The error messages are also sent to the function modules or the control panel via the power rail.

Terminal block with surge protection

Pepperl+Fuchs has developed the M-LB-2000 for applications requiring only minimum specifications, plus loop connect. It has a form factor very similar to the M-LB-5000 and is designed to be attached directly to the DIN mounting rail. The main differences are that the module cannot be diagnosed or replaced without interrupting the signal line. A loop disconnect function is achieved when the module is plugged in via two easily accessible switches on the front.

The M-LB-2000, which is also only 6.2 mm wide, not only saves a lot of space in the switch cabinet, it practically replaces the terminal block with surge protection. This means that disconnect terminal blocks are no longer necessary, saving costs. The certificates range from ATEX, IECEx, Zone 1 and SIL 3.

Conclusion

The M-LB-5000 surge protection system's diagnostics use a special algorithm to detect different load situations and send a signal when the protection module has reached 90% of its life cycle. This significantly increases the efficiency of the protective function and keeps maintenance costs to a minimum. The modularity of the device enables the protection module to be replaced without tools and without interrupting operation.

The M-LB-2000 with loop disconnect function is designed for significantly lower requirements in surge protection. With a width of 6.2 mm, it saves just as much space in the switch cabinet and can be used as a replacement for the terminal block with surge protection.

Enquiries: info@za.pepperl-fuchs.com

Blitz-Detect high precision lightning detection systems

Blitz-Detect, in partnership with Nowcast, is proud to bring to South Africa high-precision lightning detection services by means of a completely autonomous lightning detection networks (LDN).

Nowcast is a German lightning detection expert company which is known for its strong project partnership approach. In such partnerships, nowcast sets up ultra-precise, long-range lightning detection sensor networks in countries across the world and together with local partners to jointly operate those networks. Key to such joint ventures is Nowcast's deep belief in true long-term partnerships. Acting like colleagues leads to the addition of great value to the region through technology. Celebrating mutual success as quality leaders in ultra-precise lightning detection, early thunderstorm warning and leading-edge short-term forecasting has proved to be an excellent driver for first-class services and outstanding customer satisfaction in the private and public segments.

A trusted partner

"When Nowcast deployed its first partnership lightning detection network together with a local company in Latin America many years ago, enthusiasm fueled the approach of engaging in longlasting, professional, open-minded business partnerships across the globe," says Richard Fellner, MD of Nowcast.

"Highly qualified local partners that are working closely with Nowcast enable the success of best-in-class lightningdetection technology and thus also success in the defined market. Today, Nowcast is proud to call numerous qualified and passionate private companies and national weather services its trusted partners with one goal: to provide the most reliable and precise lightning data, particularly for lightningprone countries. Maximum safety and efficiency for people, investments and processes. Nowcast's partnership missions are based on the Nowcast LINET (Lightning detection NETWORK) technology," Fellner explains.

In May 2021, a brand-new partnership LINET system was installed in South Africa. Trevor Manas, managing director of Blitz-Detect, and his business partners, Alexis Barwise, Wilfried Wagner and Etienne Gerber, are bringing their vast experience in lightning and lightning protection to this endeavour and form the local core team in South Africa.

Here, the Blitz-Detect team provides deeper insight into the partnership, as well as the benefits of ultra-precise lightning detection:

What made you decide to build a lightning detection network (LDN) in South Africa?

Trevor Manas: As a lightning protection specialist, it has always been a challenge to confidently recommend lightning detection systems as part of the lightning safety plans drawn up for schools, golf courses and mines. Furthermore, when conducting lightning damage investigations, the procurement of accurate lightning data has always been extremely difficult and expensive. We have found that most local systems did not meet the lightning detection accuracy and efficiency required to provide optimum operational safety for outdoor facilities nor do they provide reliable verification of historical lightning activity. This led us to start the search for a LDN that would meet the highest possible specifications.

Why is lightning detection important in South Africa?

Alexis Barwise: Many parts of South Africa have high lightning stroke densities, our country also has one of the highest lightning fatality rates per capita in the world, with numerous deaths and injuries being reported every year. At Blitz Detect, we are confident that Nowcast's ultra-precise lightning detection system will be instrumental in saving many lives and lightning induced injuries. We also aim to provide valuable lightning data to the insurance industry, aviation industry and energy suppliers in South Africa. At Blitz Detect, we strongly believe that the our system will make a substantial contribution to lightning safety and to the effective operation of essential services to the public in Southern Africa.

What is your mission for lightning detection?

Etienne Gerber: First and foremost, we want to save lives. South Africa has a very strong outdoor culture.

The Nowcast system provides meticulous monitoring of all types of outdoor facilities, thereby making these operations and activities much safer for everybody. Of course, lightning data is valuable in maintaining vital operations to many other types of industries such as the insurance, energy and aviation industry. Weather service providers as well as research facilities also benefit enormously from highly accurate lightning detection information. Here at Blitz-Detect we look forward to providing these customers with precise, easily accessible, cost-effective data-based lightning detection solutions.

What convinced you to partner with Nowcast and its LINET technology?

Wilfried Wagner: Due to the fact that our team has been actively involved in the lightning protection industry for many years and have a deep understanding of the mechanisms of lightning, we knew exactly what we were searching for. The Nowcast LINET system's unsurpassed accuracy, efficiency and reliability without doubt sets the benchmark in lightning detection. When you add the easy to use customer interfaces of the Nowcast LINET system, this made our decision to partner with Nowcast very easy.

The partnership agreement with Nowcast has also vastly reduced the capital outlay into building the LDN, this means that we are able to offer cost effective lightning detection and lightning data packages to our customers.

What makes the Nowcast LINET system so unique?

Trevor Manas: There are many features that make the Nowcast system unique. Most importantly, the Nowcast system provides industry leading detection accuracy and efficiency. The Nowcast system boasts an unsurpassed lightning location average accuracy of 75m and a lightning detection efficiency of 99% of all lightning strokes. The Nowcast system also has various patented features such as its rTNT (real Time Tracking and Nowcasting of Thunderstorms) algorithm for tracking and prediction of lightning activity as well as its 3D detection of intra-cloud lightning which is used to provide accurate severe weather and hail warnings. The Nowcast LINET system represents the pinnacle of German engineering and has an impeccable track record around the world.

How did the rollout of the new lightning detection network go?

Etienne Gerber: The Nowcast team provided invaluable support throughout the entire network setup. It was only with their help that I am happy to report the rollout was seamlessly executed in only a few weeks, with all sensors functioning properly and without failure.

How important is the highest possible precision and reliability of such a service for your customers in South Africa?

Alexis Barwise: It is of utmost importance. Precision and reliability are key to the success of the South African network. Professional customers that require lightning data, can only profit from this data when the highest standards of quality are fulfilled. Thunderstorms are sharply delineated events and should therefore be detected and forecast with the highest possible accuracy and reliability to achieve optimum benefit for decision making and operations.

What makes your overall business stand out in your market?

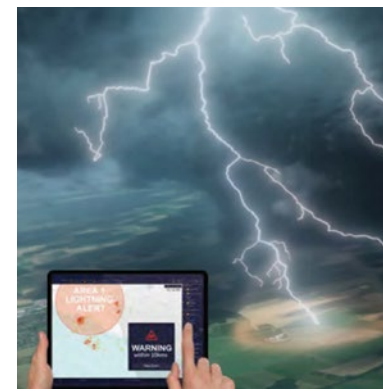
Wilfried Wagner: Given the fact that we are able to offer the highest standard in lightning detection in cost effective packages with no capital outlay, makes Blitz-Detect clearly stand out in our market. The Blitz-Detect team also offers comprehensive lightning safety plans incorporating the Nowcast LINET system. Most important, the user friendly, easy to access LINET system plays a vital role in providing our customers with autonomous, independent and professional lightning detection solutions.

What can customers expect from Blitz-Detect's new services?

Alexis Barwise: All of our customers, be it for early warnings/nowcasting or for historical lightning data, can ex-



3D detection of lightning for severe storm warning.



Industry leading lightning detection.



Alexis Barwise, Wilfried Wagner and Trevor Manas.

pect the highest level of accuracy and reliability in the detection of lightning and severe storms.

They can also expect to be provided with an accessible, real-time, easy-to-use interface that is also cost-effective.

Enquiries: www.blitz-detect.com

POWER QUALITY

Specializing in:

- Audits
- Soil Survey
- ELP Installations
- Consultations
- Earthing Seminars

Founding Chairman and Current Secretary:

Mike Visser

Get a 10% discount on one day in-house training!

On line training now available

Tel: 011 827 3270

Email: info@powerquality.co.za

Website: www.powerquality.co.za

30 YEARS OF SERVICE TO INDUSTRY

Certainty Through Certification

Switches and sockets designed for style, convenience and energy efficiency



Legrand's Ysalis switches and sockets – with advanced technology for energy saving, safety and reliability – are gaining popularity in South Africa, as end-users seek a stylish, yet affordable way to ensure comfort at home.

The company's strategy to introduce a chic range of wiring devices to economy and standard market segments, meets local demand for sophisticated, yet affordable fittings with high quality, safe and reliable control features.

The Ysalis range has a contemporary design that enriches the décor of any home or office and also provides easy and convenient control of lighting, air-conditioning and the television. Slim, curvy shaped plates, available in white and champagne, can be fitted with fluorescent indicators on the switches for improved comfort and safety in the dark.

Ysalis – designed for new and existing installations – accommodates current and new RSA standards for local plugs. Legrand's 3000 mA intelligent USB technology provides fast charging of two devices, with balanced load sharing. 16 A RSA monoblocs feature both the old and new RSA 2P and E sockets, as well as USB A-type and C-type connectivity for high-speed charging of all mobile devices. A monobloc is a single mould of multiple wiring devices arranged together and factory-wired in a fixed form. According to Legrand specialists, the advantage is that multiple components can be powered up with one termination connection.

Ysalis is easily adapted to suit European two-pin socket appliances. Universal dimmers control incandescent and halogen loads, as well as LEDs and compact fluorescent lamps. This range is also fully compatible with Legrand trunking systems.

According to Legrand, electrical installers are impressed with these compact mechanisms, where there is more space in the back box for easy wiring. For improved safety, a spacer separates high and data currents. Installation is also effortless. Data sockets are fitted with tool-less connectors, eliminating the need for punch down tools.

The modular design allows any configuration of Ysalis to be adapted to suit present and future needs. With this system, it's not necessary to damage the wall to increase, remove or change the number of lighting points or connections – the same box and support frames are used to accommodate all modifications.

Various modules are available – from one to three modules, up to six modules – with double or triple pole switches.

Legrand's commitment to its local customer base encompasses the ongoing launch of products to meet exact market requirements. Ysalis wiring devices suit standard market segments looking for sophisticated, yet affordable fittings, with safe and reliable control features.

Ysalis is available throughout the country from Legrand and its extensive distributor network.

Enquiries: legrand.south-africa@legrand.co.za

Programmable multicolour indicator

The K30 Pro Series bright, uniform indicator light is a 30 mm illuminated dome that provides dynamic control. It allows users to configure colour, flashing, dimming, and advanced animations like rotation, strobing, two-colour display, two-colour rotation, two-colour flashing, and chase, as well as a variety of connector options. Its rugged IP66, IP67 or IP69K polycarbonate housing protects against impact, and withstands high pressure and high temperature wash-down to ensure reliable performance in challenging environments.

The K30 Pro Touch Button features excellent im-

munity to false triggering by water spray, oils, and other foreign materials. Its ergonomic design requires no physical pressure to operate, preventing stress on hands and wrists. It can be actuated with bare hands or gloves for simple operation with the touch of a finger, and is ideal for pick-to-light and call button applications in a variety of industries.

Applications include: Pick-to-light and manual assembly; Error proofing; Call button; Dynamic operator interface; Food and beverage applications.

Enquiries: sales@turckbanner.co.za

Selection of correct types of earth leakage (or RCDs)

One are the days when one went in search of an earth leakage (EL) unit and just installed the unit supplied on all sites.

The power supply at the 230/400 V 50 Hz frequency is used by equipment which changes the power supplied or current drawn to power the device in such a fashion as to change the characteristics as to potentially render the EL in-operative or result in nuisance tripping.

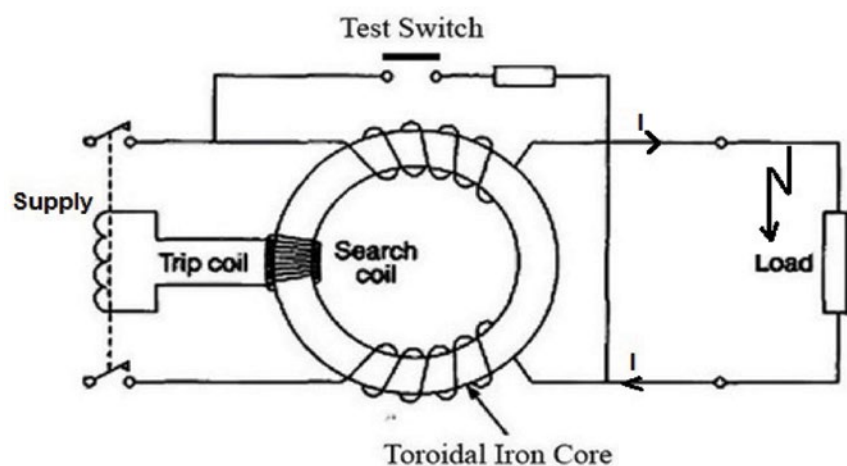
As the EL is a vital item in electrical protection this could have serious consequences!

Earth leakage units are available in overload

and non-overload types, which poses an area of risk that needs clarification. Although not part of this particular discussion the operating variations of either thermal-magnetic (TM) or hydraulic-magnetic (HM) overload detection/tripping must also be factored into the EL selection equation.

EL can also be those that require a voltage to function (voltage dependant) and those that use their own current transformer (CT) power to trip, also called voltage independent.

Virtually all modern EL's detect the imbalance via a CT/toroidal transformer circuit, see below:



EL TYPE	Typical loads
AC	Resistive, capacitive, inductive loads Immersion element heater, oven with resistive heating elements, electric shower, tungsten / halogen lighting
A	Single phase with electronic circuitry Single phase inverters, class 1 IT and multimedia equipment, power supplies for class 2 equipment, appliances such as washing machines, lighting controls, induction hobs & EV charging, switch mode power supplies
F	Frequency controlled equipment Appliances containing synchronous motors, some class 1 power tools, some air conditioning controllers using variable frequency speed drives
B	Three phase electronic equipment Inverters for speed control, ups, EV charging where dc fault current is > 6mA, PV

EL symbol to be seen on the unit:



Type AC

General purpose use, RCD can detect and respond to ac sinusoidal wave only. Probably now considered obsolete



Type A

Equipment incorporating electronic components which the RCD can detect and respond to, as for Type ac, plus pulsating dc components. Now the most basic of functions required.



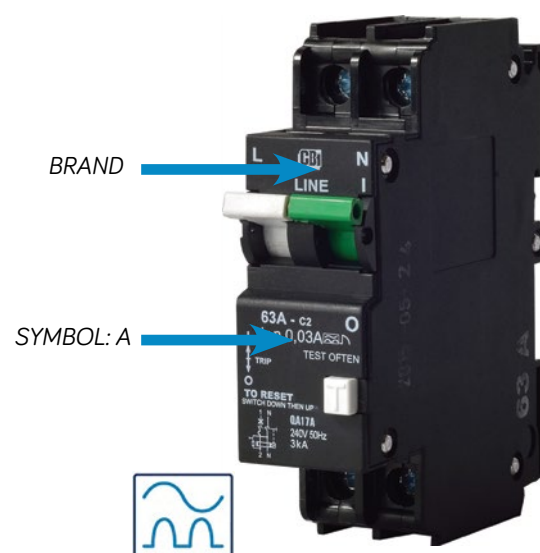
Type F

Equipment with frequency-controlled speed drives RCD can detect and responds as for type A, plus high frequency residual current.



Type F

Equipment with frequency-controlled speed drives which the RCD can detect and respond to for Type A, plus high frequency residual current.



By Kevin Flack

Kevin Flack has recently retired from industry and believes he still has valuable in-depth knowledge of the South African electrical landscape due to wide experiences gained in his 45+ years working career. He is keen to explore the training arena so that this can be passed on to the current youth so as to benefit their practical ability in the electrical field. In these trying COVID-19 times, Flack can provide online training to keep your staff up to date on all aspects of circuit breaker deployment. Email kevin.flack@outlook.com

New range of IOT smart products launched

CBI-electric: low voltage's newly launched Astute range of Smart IoT products can be used in residential, commercial, agricultural and light industrial applications to remotely switch geysers, lights, underfloor heating, pool pumps, etc, via the CBI Home App.

The Astute range currently includes the Astute Smart Controller (ASC), the Astute Smart Isolator (ASI) and Astute Smart Plug (ASP), with more products in the pipeline for this range. The Astute devices are energy monitoring, scheduling and control switches with both load management and automation capabilities.

The new Astute Smart range fulfils the need for a reliable switch that is quickly installed and simple to set up, all within a compact form factor. "The current trend for energy and cost savings, as well as a reduced carbon footprint, calls for load control," states Larry Barnes, Product Manager at CBI-electric. "The consumer also wants a 'set-and-forget' solution easily accessible on their mobile phone."

The CBI Home App enables the user to configure and automate the Astute Device to react to any change in current, voltage, time, power, and many other variables or a combination thereof. The CBI Home App allows the user to set up seven-day scheduling and automation according to time, weather conditions and much more. Energy usage can also be monitored on the App. The usage is displayed in daily and monthly graphs. The App is available on the App Store or on Google Play.

Consumers can achieve energy and cost savings by installing the ASI on geysers, air conditioners, and underfloor heating, to name a few. Business owners can use the devices to automatically switch billboard/storefront signage off after midnight to save costs and energy.

The ASC is perfect for automating lights at home or the office as well as ensuring that driveway or security lights are activated at night. The ASC is also suited for automating pool pumps and water features. The ASP can be used to automate lamps according to day/night and to monitor appliances' energy consumption, such as dishwashers, fridges and washing machines. In addition to the standalone scheduling and energy monitoring features, the consumer can set up an energy management scenario through the automation of multiple installed Astute Devices.

As an example, the user can setup an automation between a pool pump and geyser. When the pool pump is switched on and the current exceeds the user-defined maximum rating of the energy consumption setting, the supply to the hot water geyser will be temporarily interrupted. The geyser will be reconnected when the pool pump current is reduced, or the pool pump is switched off.

The only requirements to use the Astute range are a 2.4 GHz Wi-Fi with an internet connection and a smartphone or tablet. The Astute devices allow for multiple on/off programs and also have manual by-pass capabilities with on/off control.

The Astute Smart Range is rated and certified as follows: The ASC is compact with both DIN- and Mini-rail mount option. It is certified to SANS 60730-2-7 and is ICASA approved. The ASC is rated for single-phase, 50 Hz at 230 V with a maximum resistive load of 30 A and a maximum inductive load of 10 A.

The ASI has a fluorescent strip on the lever for easy, manual switching when installed at the geyser. It is certified to IEC 60947-3 and is ICASA approved. The ASI is rated for single-

phase, 50 Hz at 230 V with a maximum resistive load of 30 A and a maximum inductive load of 10 A.

The ASP features SA and Euro sockets and is rated at 16 A, 230 V. It is certified to SANS 164 and is ICASA approved.

Features

- Wi-Fi enabled (2.4 GHz only)
- Energy monitoring
- Energy control
- Application controlled (CBI Home App)
- Custom automation and custom scenarios
- Multiple ON/OFF programs
- Manual bypass with ON/OFF switch (Power Button)
- Scheduling function - weekday/hour/minute
- No hub required

Applications

- Automation and IoT
- Residential
- Commercial
- Light industrial
- Agriculture
- Home/office automation

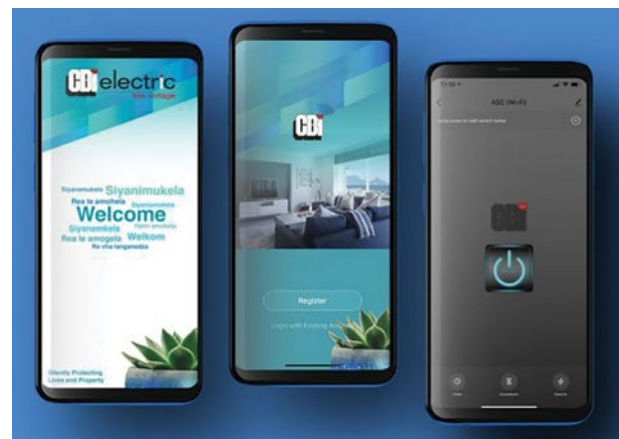
Requirements

- 2.4 GHz Wi-Fi with an internet connection
- Smartphone or Tablet

Approvals

- SANS 60730-2-7 (ASC)
- IEC 60947-3 (ASI)
- SANS 164 (ASP)
- ICASA

Enquiries: +27 (0)11 928 2000



Phoenix Contact launches a new Value Added Centre

Towards the end of August, Phoenix Contact launched its new Value Added Centre (VAC) at its head office in Randburg. The new centre is a massive upgrade from a much smaller facility that was previously being used, including a whole new workshop with state-of-the-art equipment and quality control procedures in place.

Phoenix Contact South Africa General Manager, Carl Kleynhans had the following to say regarding the new value added centre: "With our current focus on empowering the all electric society and reducing the carbon footprint when it comes to energy being created, stored, transmitted, measured and monitored, this VAC will assist in our drive to provide more systems and solutions beyond supplying only components. We want it to be clear that in no way are we competing with our partners; this service is being offered to our partners to take away some of their production burden and assists them in having to take valuable human resources off of more important projects to populate din-rails. Effectively, it will save our partners time and money."

The idea behind this centre is to offer Phoenix Contact's partners value-added services such as already populated rails according to their exact specifications which reduces wastage, time and money. Customers will be able to design their rails on the Project Complete software, send Phoenix Contact the design and an article number will then be generated for the entire rail. The team will then populate the rails according to the approved design, complete with the accessories such as marking and bridging. This allows the company's partners to order the complete rail, then simply insert it into the cabinet and wire it.

The VAC is not only limited to din-rails, however, as there are a number of different variations and designs available. Phoenix Contact have recently started assembling cable harnesses, complete with the connectors and marking, and are also able to populate standard junction boxes with a variety of terminals in different configurations.

The launch, which saw guests served delicious gourmet hotdogs, craft beer and gin, also featured an eye-catching electrical cabinet fire suppression demonstration by I-CAT. "We are very excited to offer our partners this new service and assist them in any way we can," says Kleynhans. "The event was a great success and well received by our partners - we thank everyone who took time out of their day to attend the launch and celebrate with us."

Enquiries: Richard Schoonebeek on
rschoonebeek@phoenixcontact.co.za



Phoenix Contact South Africa General Manager, Carl Kleynhans, officially opening the VAC.



An example of the custom-made solutions currently being produced.



The Phoenix Contact team, including Richard Schoonebeek (far left) who will be heading up VAC.

How do your eyes affect the quality of light?

I appreciate that I am older in years, which is perhaps the reason why time seems to flash by so quickly. What a thought that it is almost time to get the Christmas shopping done!

As I ended off my column last month, I said that this month I would focus on the subject known as Equivalent Visual Efficiency (EVE) which has its foundation in the spectral quality of light. Of course, LED lighting has the highest spectral quality characteristics of all light sources.

So, what does this mean? How does it benefit a lighting design for a project?

Let's think about a typical office environment for a moment. The occupants are probably varied, from different backgrounds, different lifestyles and different ages, which also means differing levels of ocular health. If I asked you to give me the typical human field of vision, would you be able to tell me? Probably not, and that is not intended to be derogatory. The typical human field of vision is 120 degrees. See the diagramme.

However, because we have binocular vision, although each eye has a slightly bigger range, the interesting fact is that our brain combines the images received in each eye, giving us a 120-degree field of vision. As you would have noticed in the diagram, we have lateral as well as vertical fields of vision.

What is the significance of this? When we are exposed to light, it has a greater impact on us than the light measured with a typical photometer which most of us know as a lux meter. It measures for an equivalent visual field of only two degrees at V(l). V(l) represents photopic or daylight vision.

Now we get to the really interesting part. When

LED light sources are used, they produce short wavelength light which is, of course, blue light. Therefore, it promotes a V(l) or scotopic response from our vision or, put into greater perspective, a Mesopic response is prompted. The end result is that our eye and therefore human vision has been found from the available research proven to function best when the size of the pupil is between 2 and 2.8 mm.

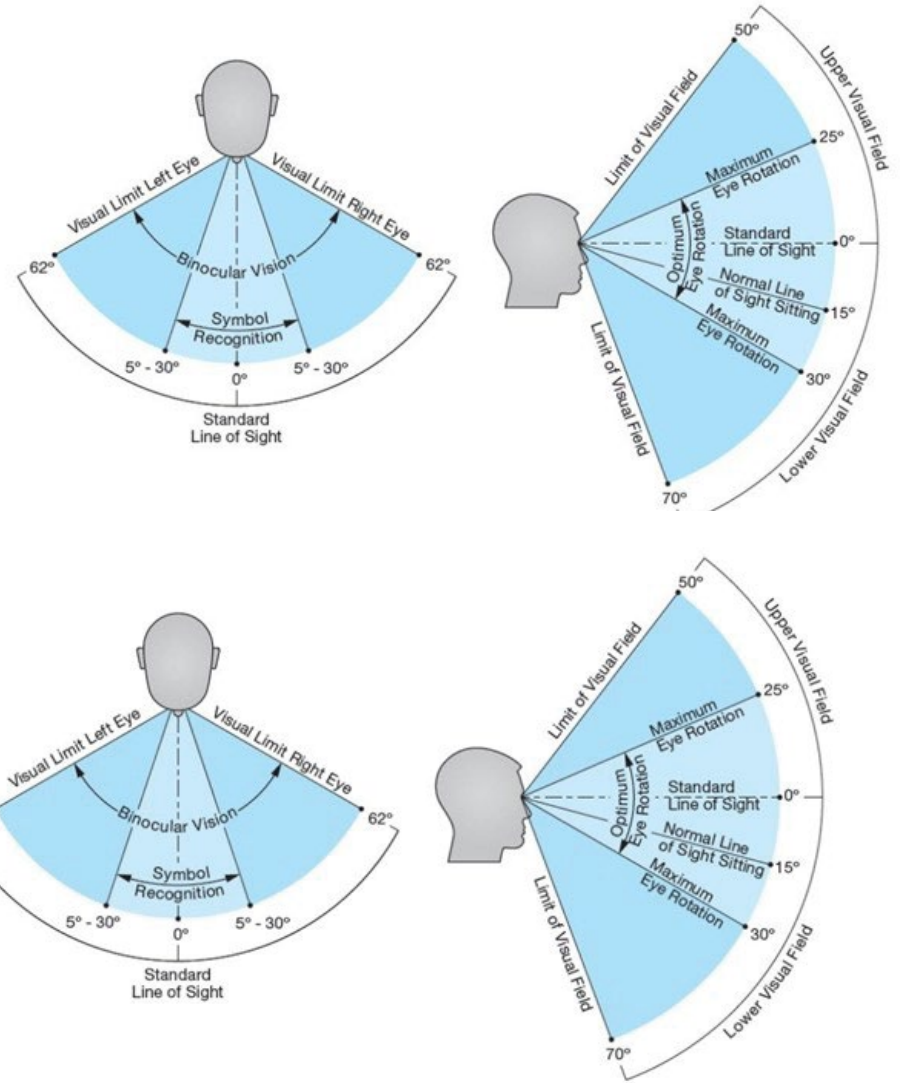
Cast your mind back to an earlier section in this article; a typical office population has occupants of different ages and therefore different ocular health as well.

Before I continue, it is very important to be aware that the illuminance levels in the standards are typically based on the young human eye from age 20 to 30 years. As the human eye ages, various ocular ailments can become evident. When that happens, higher illuminance levels are required to have the same level of visual acuity (the ability to see clearly and all detail). Therefore, we need a method to calculate the correct illuminance value for the space based on the assumed average age mix of the occupants.

The method that we apply is referred to as the Equivalent Visual Efficiency (EVE) factor. This takes the spectral quality and characteristics of the light source and especially LED light sources, which are spectrally rich.

Next month, I will continue this discussion and explain how we actually do the calculation and how we can also include this in Relux desktop when doing a lighting design.

Enquiries: www.bhaschooloflighting.co.za



Highlights from LEDVANCE's fifth anniversary celebrations



General area lighting for FurnitureMart

BEKA Schröder has supplied the general area lighting for the new FurnitureMart in Polokwane. FurnitureMart is a furniture wholesaler direct to the public.

Various BEKA Schröder LED luminaires were supplied to provide an energy-efficient lighting solution.

Warehouse and showroom

The warehouse and showroom were illuminated with the ECOBAY. Cost savings were achieved because of the ECOBAY's high performance, leading to fewer luminaires being required whilst still achieving the required light levels (200 lux in the warehouse and 300 lux in the showroom).

The ECOBAY is the ideal luminaire for lighting industrial facilities at optimised light levels. It delivers the best solution for lowbay and highbay applications. The ECOBAY offers substantial energy savings, high performance and is able to operate at high ambient temperatures. Available with four typical lumen packages and various light distributions, the ECOBAY is perfectly suited for multiple indoor lighting applications. The ECOBAY not only lowers your initial investment; it maximises it by providing a comfortable environment for your staff while limiting energy consumption to what is absolutely necessary. Thanks to its reliable performance, low dust accumulation and no need for relamping and regular maintenance, the ECOBAY is the luminaire of choice.

General outdoor area lighting

The LEDNOVA-MINI was installed to provide general outdoor area lighting. The LEDNOVA is a robust and versatile LED bulkhead range, and offers optimal photometric performance and high reliability to reduce energy consumption and maintenance in all types of lighting applications.

The LEDNOVA range is suitable for use in various environments, which include outdoor mining areas, oil and gas refineries, food and beverage plants, manufacturing process plants and any application that requires robust and well-built

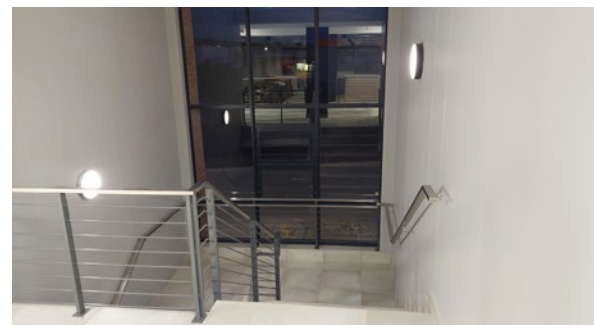
luminaires. Indeed, the LEDNOVA range has been developed to reduce disability glare and thus improve the quality of light.

Office Staircase

The SERIES 300 LED bulkhead has been installed inside the office building, by the staircases. The SERIES 300 with its modern and simple design allows this LED bulkhead to blend into any areas by day, and to make an impact when it is dark. It is the ideal solution to beautify buildings and to provide area lighting for commercial developments, retail areas, shopping malls and public buildings. High-quality materials are used to ensure a high ingress protection and non-discolouring diffuser. This, together with the long lifetime of the LEDs, and an easy installation procedure, makes the SERIES 300 the bulkhead of choice.

BEKA Schröder locally develops and manufactures energy-efficient LED lighting products, designed and suitable for local conditions. The company is proud to be associated with Pienaar & Erwee Consulting Engineers, Prism Architects and DG Consulting Structural Engineers in providing a successful area lighting solution for this project.

Enquiries: pta@beka-schreder.co.za



FurnitureMart3: The SERIES 300 LED bulkhead has been installed inside the office building.



The LEDNOVA-MINI provides general outdoor area lighting.



The warehouse is illuminated with the ECOBAY.

Garden lighting installations tips for electricians

Former electrician Chris Hudson, now owner of Hudson Lighting, shares his top tips for ensuring longevity in garden lighting installations.

If you can, use extra low voltage (ELV) over low voltage (LV) every time. Very few reading this will have worked with anything higher voltage and, for most, that's probably the first time you've realised the definition of low voltage was being used incorrectly. However, many manufacturers are still labelling their products with the wrong information, so looking at the voltage used is the best way to determine this.

ELV (<50 V ac or <120V dc) installations are far safer, simpler and can be less troublesome – providing you use quality components. You can use flexible cables, HI-Tuffs of similar length for their installation rather than armoured, and you don't need to bury the cables approximately 600 mm, as you do with LV (50 V to 1000 V ac, 120 V to 1500 V dc) installations. You can chop through the cable with a shovel without incident; the worst thing that can happen is the lights may stop working and you may need to replace a transformer or driver. Believe me: a shovel can go through armoured too, just to be clear for anyone thinking it offers enough protection.

Armoured is used in LV installs to ensure the fault current goes down the Earth to disconnect the circuit quickly – although, in most armoured installs I've seen, the armour is not connected properly so this is now pointless. ELV installations also mean reliability will be better as the lighting can tolerate water in light fittings without causing the safety device to trip.

Whereas, with LV installations, the amount of water in any part of the installation can cause tripping issues – and we all know that few have the luxury of having a dedicated circuit for outdoor lighting. Instead, 90% of the time, we have the lighting installation feed from some part of the kitchen.

Your customer will be really upset if they don't have a working kitchen because of your outdoor lighting installation causing tripping issues. The best method is to place all of your LED drivers or transformers in an accessible location, ideally inside the property or on the outside wall. Then, run all of the cables needed for the outdoor lighting from this point.

I would personally add more cables, or cables with spare cores, so that if extra lights are needed they can be added, since transformers and LED drivers have limits to the number of lights they can power.

Ducting, ducting and more ducting

Running cables around an outdoor space has its challenges. Normally, the installation is carried out in a newly-installed garden. If a cable becomes damaged three years later when the garden has

matured, replacing that cable is going to be a challenge without ducting. Anyone who has installed lighting outdoors for a few years will have no doubt come across a fox, squirrel or rat having a good chew on some of the cables – ducting can be a real lifesaver and preventer too.

If you can install a larger 50-63 mm duct between joint boxes, it will make pulling cables through easier. Ground-type permitting, burying the duct 600 mm will save it from being damaged later on. For those pesky foxes, use a 10 or 20 mm flexible conduit for the small, pre-installed flexes on the lights, e.g. spike lights – these always seem to be a fox favourite for some reason.

Cable entry on boxes – strain relief

Cables half pulling out of joint boxes can be a problem. From an electrical standpoint, if the installation is LV and there are exposed single insulated cores outside of the box, then we have a potentially dangerous installation. It also means water can get in and corrode the connections or cause tripping. Generally, this is only really an issue for lights than can be moved, e.g. spike lights.

It is inevitable either that the client will one day reposition a fitting or someone doing maintenance will move it out of their way. Stuffing glands and strain relief clamps provide the best means to ensure the cable doesn't pull out easily. Checking they are fully tight is important though, too often are these glands installed but left loose.

If you are using Wiska boxes with the soft membrane, then a cable tie on the inside of the box around each cable can be enough to stop it from being pulled out.

Connection boxes and their mounting

Often, being able to access and maintain a connection box is vital in an outdoor installation. Burial of connection boxes should be avoided where possible.

It can be a nightmare to fault find, so consider that the person coming back to carry out repairs may be several years in the future, and buried boxes can be impossible to find in a mature garden.

The best practice is to mount all boxes to a fixed position, be that to a wall, fence or appropriate stake/post.

The electrical supply

In 90% of cases, the outdoor lighting is a complete afterthought to the building. Therefore, it's often taken from an existing circuit, commonly via the kitchen sockets through a fused spur.

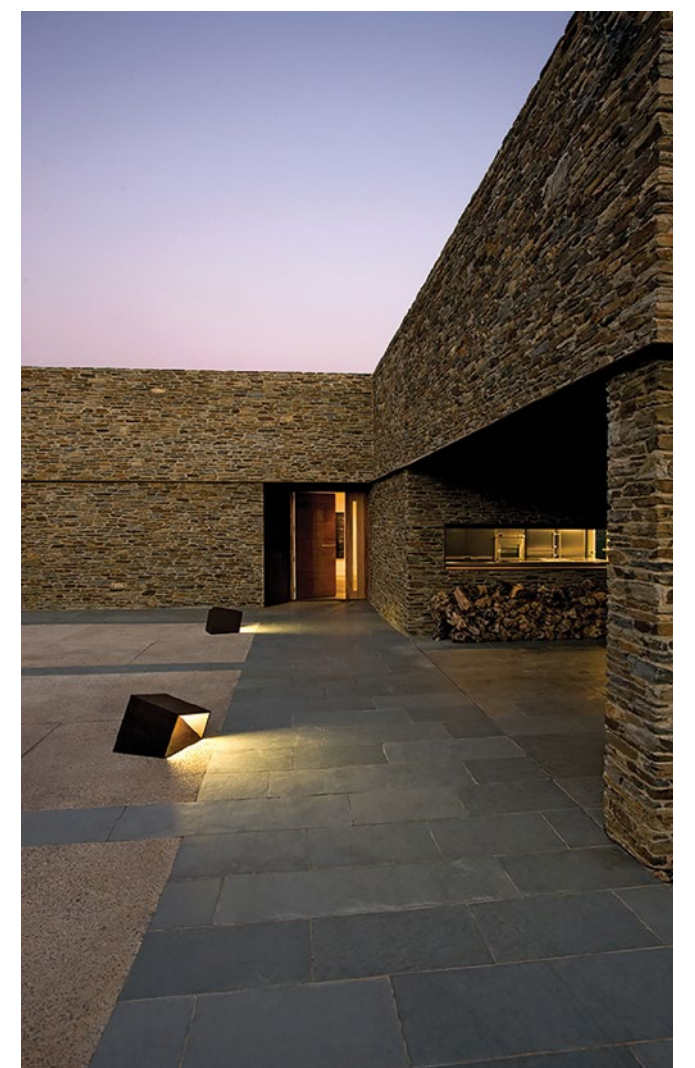
Ideally, the supply to the garden lighting installation should be an independent circuit with an independent RCD/RCBO so that, if tripping issues do occur, they don't affect the rest of the installation.

Selection of lighting fittings

LV light fittings work well for surface or inset wall lights, where the water can drain away fairly easily. In the case of ground or spike lights, it's my opinion that only ELV should be used.

Inevitably, most light fittings will have some water ingress at some point. With LV, this will not only cause the light fitting to fail, but also the circuit to trip. If ELV fittings are used then this issue will be mitigated as the supply is separated by a transformer/driver.

Enquiries: www.professional-electrician.com





Blue Ridge Power



Justen Burgin
Lead Scheduler

Bosch Rexroth
Botswana

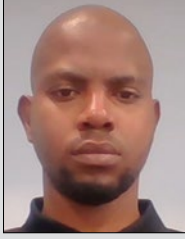
Riaan Loots
General Manager

Rubicon



Quintin Neveling
Technical Sales
Representative

ACDC Express



Letthogonolo Kgame
Technical Sales
Consultant, Southgate

Schneider Electric



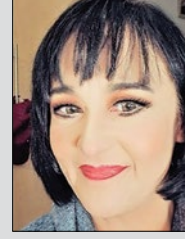
Tanya Bayley
Segment Marketing
Manager - Industrial
Segments

Ellies Electronics

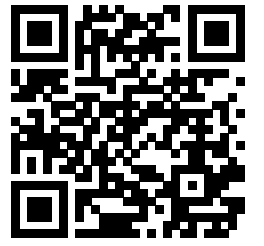


Johan Klein
Chief Commercial
Officer

Chint Global



Heather Scott
Assistant Country
Manager



SCAN THIS QR CODE TO READ THE LATEST ISSUE OF
SPARKS ELECTRICAL NEWS ON YOUR MOBILE DEVICE.

SUBMIT your photos of new appointments and promotions to People on the Move at sparks@crown.co.za. All photos must be in jpeg format and high resolution (at least 1 MB when attached).



International brands.....

backed by South African lighting expertise!



YOUR ONE STOP SHOP for European High Quality Lighting Components!

Tel : +27-11-314-4340 ■ Fax : +27-11-314-5287 ■ Mail : harrison@vsaf.co.za

African Lighting Agents (Pty) Ltd

BRIGHT SPARK

TERRIFYING TIGER

On a hot Saturday afternoon, a woman was walking slowly through the savannah when she spotted a tiger in the distance. Instead of turning around, hiding, or seeking help, the woman began to run towards where the tiger was. Why wasn't she afraid and run away?

AUGUST SOLUTION

The family still had twelve chickens, four dead and eight alive.

OCTOBER FEATURES

- MCCs and motor protection
- Energy measurement and supply
- Lighting

Buyers' guide

- Motor control centres and motor protection

NOVEMBER FEATURES

- Cables and cable accessories
- Standby and emergency power
- Lighting

Buyers' guide

- Standby and emergency power

Editor:

Gregg Cocking
082 870 6390

Advertising:

Carin Hannay
072 142 5330

Design:

Anoonashe Shumba

Publisher:

Karen Grant

Deputy publisher:

Wilhelm du Plessis

Published monthly by:

Crown Publications (Pty) Ltd
P O Box 140
Bedfordview, 2008
Tel: (011) 622-4770
Fax: (011) 615-6108
e-mail: sparks@crown.co.za
Website: www.crown.co.za

Printed by:

Tandym Print
The views expressed in this publication are not necessarily those of the editor or the publisher.

This publication is distributed to electrical contractors, wholesalers, distributors, OEMs, panel builders, Eskom, mining electricians and consulting engineers (electrical) as well as libraries, members of IESSA and public utilities.



Total 10 151 per month.

UNI-T

Spring
into action

THREED
AGENCIES
THE CABLE ACCESSORY COMPANY
a member of the **Hudaco** group

Promotion runs from 1 September 2021 to 31 December 2021 or while stocks last . E & OE.



UT373 MINI NON-CONTACT TACHOMETERS

- RPM Range: 10RPM ~ 99999RPM
- Auto Range
- APO
- Low Battery Indication
- Laser-on Indication
- Data Hold
- MAX/MIN
- Rotating Speed/Count Function Switching
- Overload Indication
- LCD Backlight
- Refresh Rate: 1s ~ 7s
- Sensor Type: Photodiode & Laser Tube
- Target Distance: 50mm ~ 200mm
- Measuring Angle: 30°

excl VAT
R582.00
incl VAT
R669.30

UT890C TRMS MULTIMETER

- DC Voltage: 1000V
- AC Voltage: 750V
- AC/DC Current: 20A
- ACV Frequency: 10Hz ~ 10kHz
- Resistance: 60MΩ
- Frequency: 9.999MHz
- Capacitance: 100mF
- Temperature: 1000°C
- NCV
- Diode
- hFE Transistor
- High Voltage Phase Detection
- Data Hold
- LCD Backlight
- Low Battery Indication
- APO
- Test Pen Holder
- 6000 Display Count



excl VAT
R529.00
incl VAT
R608.35

UT705 SINGLE FUNCTION LOOP CALIBRATOR

- DC Voltage: 30V
- DC Current: 24mA
- Loop Current: 24mA
- Loop Power Function
- Ramp Function
- Step Function



excl VAT
R6 999.00
incl VAT
R8 048.85

UT383S MINI LIGHT METER

- Illuminance Measurement (Lux): 0 ~ 199,900 Lux
- Illuminance Measurement (FC): 0 ~ 18,500FC
- Data Hold
- APO
- MAX/MIN
- LCD Backlight
- Overload Indication
- Unit Selection
- Split Design



excl VAT
R799.00
incl VAT
R918.85

UTi85A THERMAL IMAGER

- Display: 2.8" LCD
- Temperature Range: -10°C ~ 400°C
- IR Resolution: 80 x 60 Pixels
- NETD: ≤ 150mK
- Spatial Resolution: 11.1mrad
- Frame Rate: <9Hz
- PC Analysis Software
- FOV: 51°(h) * 38°(V)



excl VAT
R7 111.00
incl VAT
R8 177.65

UT300A+ INFRARED THERMOMETER

- Temperature: -20°C ~ 400°C
- Accuracy: +/- 2°C
- Repeatability: 1°C
- D:S Ratio: 10:1
- Response Time: ≤500ms
- Emissivity: 0.95
- Spectral Response: 5.5μm ~ 14μm
- Laser Power: < 1mW
- Selection °C/°F
- Data Hold
- APO
- Low Battery Indication
- LCD Backlight
- Single Laser



excl VAT
R412.00
incl VAT
R473.80

UT-L27 DOUBLE INSULATED TEST LEADS

- Cable Length: 900mm
- Rod Length: 130mm
- Tip Length: 16.3mm Threaded
- CAT Rating: CATIII 1000V, CATIV 600V 10A
- Safety Certificate: EN 61010-031 A1:2015
- Recommended Alligator Clips: UT-C02B
- Double Insulation UL Authenticated Material
- Removable Insulation Cap
- Banana Plug Input Terminal
- General Type Probes

excl VAT
R155.00
incl VAT
R178.25



UT210D 200A AC/DC MINI CLAMP METER TRUE RMS

- 200A AC/DC Current
- 600V AC/DC Voltage
- Resistance 20MΩ
- Frequency 60KHz
- Capacitance 20mF
- Temp: -40°C ~ 1000°C
- Display Count 2000
- Auto Range
- Jaw 17mm
- True RMS
- Diode
- NCV
- Data Hold
- MAX/MIN
- Zero
- LCD Backlight
- Auto Power Off
- Continuity Buzzer
- Low Battery Indication
- Input Protection
- CAT II 600V, CAT III 300V



excl VAT
R1 369.00
incl VAT
R1 574.35



Get a **FREE** SDVT-1 / SDVT-2 Screwdriver with any product purchased on this special between **R100 - R399**

Get a **FREE** SDE3 Screwdriver set with any product purchased on this special between **R400 - R999**



OR



Get a **FREE** SDSBS35 Screwdriver set with any product purchased on this special between **R1000 - R2999**



Get a **FREE** UT300R Forehead IR Thermometer with any product purchased on this special over **R3000**

UT593 COMPLIANCE TESTER - MULTI FUNCTIONAL

- AC Voltage: 440V
- DC Voltage: 440V
- Insulation Test: 250/500/1000V
- Prospective Short Circuit: 26kA
- 10 000 Display Count
- Phase Rotation
- Low Ohm Measurement
- Loop Impedance
- ELCB Test (Time & Sensitivity)
- Auto Power Off
- Backlight
- Low Battery Indication
- ELCB: 10/30/100/300/500 mA



excl VAT
R11 999.00
incl VAT
R13 798.85

UT61B+ MULTIMETER

- AC/DC Voltage: 1000V
- AC/DC Current: 10A
- Resistance: 60MΩ
- Frequency: 10Hz ~ 10MHz
- Capacitance: 60mF
- MAX/MIN
- Diode
- Continuity Buzzer
- Relative Mode
- Analog Bar
- NCV
- Data Hold
- LCD Backlight
- Low Battery Indication
- Auto Power Off
- Display Count 6000



excl VAT
R1 425.00
incl VAT
R1 638.75

UTi80P POCKET SIZE THERMAL IMAGER

- Display: 60mm TFT LCD
- Temperature Range: -10°C ~ 400°C
- IR Resolution: 80 x 60 Pixels
- Palettes: Iron, Rainbow, Grey
- Emissivity: 0.1 ~ 0.99 Adjustable
- NETD: ≤ 150mK
- High/Low Temperature Alarm
- Tripod Mounting Hole
- Size: 76mm x 76mm x 22mm
- FOV: 51°(h) * 38°(V)
- High and Low Temperature Tracking
- Rechargeable Lithium Battery
- PC Analysis Software
- Stores Photos to SD Card
- Display: 320 x 240 pixels
- Backlight: High/ Medium/ Low



excl VAT
R8 195.00
incl VAT
R9 424.25

UT12D DUAL AC VOLTAGE DETECTOR

- AC Voltage: 90V~1000V
- Sensitivity Switching: Auto
- Flashlight
- Neutral & Live Line Distinction
- AC Voltage: 24V~1000V
- APO
- Audible/Visual Alarm
- Indication LED: Green/Red/Yellow



excl VAT
R159.00
incl VAT
R182.85

UT505A 20GΩ TRMS HANDHELD INSULATION RESISTANCE TESTER

- Test Voltage(Ω): 50V, 100V, 250V, 500V, 1000V
- Load Current 50V ~ 1000V 1mA
- Short Circuit Current <2mA
- Low Resistance 0.01Ω ~ 20.00kΩ
- DC Voltage: 600 V
- AC Voltage: 600V
- Auto Range
- DAR & PI
- Step Voltage 10% Step @ 50%~ 120% of Range
- Timer ● APO
- High Voltage Output Alarm
- Analogue Bar Graph
- LCD Backlight
- Continuity Buzzer
- Low Battery Indication
- Data Hold
- Data Storage 99
- Comparison Measurement
- Auto Discharge
- 6000 Display Count



excl VAT
R4 929.⁰⁰
incl VAT
R5 668.³⁵

UT363S MINI ANEMOMETER

- Wind Speed Rate: 0.4 ~ 30m/s
- Temperature Range: -10°C ~ 50°C
- Beaufort Wind Scale 0~12 level
- Sampling Rate 0.5/s
- Data Hold
- APO
- Split Design
- Low Battery Indication
- MAX/MIN
- AVG Mode
- LCD Backlight
- Wind Speed Unit Selection m/s, km/h, ft/min, knots, mph
- Temperature °C/°F
- Overload Indication



excl VAT
R975.⁰⁰
incl VAT
R1 121.²⁵

UT501B 1 kV INSULATION TESTER

- Insulation Test Voltage: 250V/500V/1000V
- Short Circuit Current: < 2mA
- Low Resistance: 0.01Ω ~ 200Ω
- AC Voltage: 600V
- DAR
- Auto Ranging
- Low Battery Indication
- Alarm Buzzer
- Alarm Indication
- High Voltage Indication
- 10MΩ Internal Resistance Test
- 2000 Display Count
- PI
- LCD Backlight
- Alarm Buzzer
- Over Load Indication
- Auto Discharge
- Continuity



excl VAT
R2 239.⁰⁰
incl VAT
R2 574.⁸⁵

LM600 RANGE FINDER

- Distance Range: 3m - 553m
- Height: 228.6m
- Accuracy: 0.2%
- Velocity Range: 0-300km/h
- Magnification: 7x
- Power: 3.7V Li-ion
- Angle: +/- 60°
- Pulse Laser (Harmless to Eyes)
- Fast Distance Measurement
- APO
- LCD Display



excl VAT
R2 399.⁰⁰
incl VAT
R2 758.⁸⁵

UT195E PROFESSIONAL TRMS IP65 MULTIMETER

- DC Voltage: 1000 V
- AC Voltage: 750V
- LoZ ACV: 600V
- AC/DC Current: 20A
- Resistance: 60MΩ
- Capacitance: 60mF
- Frequency: 10MHz
- Auto/Manual Ranging ● Duty Cycle
- Flashlight & Auto LCD Backlight
- Analogue Bar Graph
- Sampling Rate: 3 times/sec
- Diode ● Data Hold
- APO ● MAX/MIN
- Continuity Buzzer
- Low Battery Indication
- 6000 Display Count



excl VAT
R2 499.⁰⁰
incl VAT
R2 873.⁸⁵



excl VAT
R559.⁰⁰
incl VAT
R642.⁸⁵

UT33A+ PALM SIZE MULTIMETER

- AC/DC Voltage: 600 V
- AC/DC Current: 10A
- Resistance: 200MΩ
- Capacitance: 2mF
- APO
- Diode
- Continuity Buzzer
- LCD Backlight
- Relative Mode
- LCD Size 53mm x 28mm
- Probe Placing Slots
- 2000 Display Count



excl VAT
R399.⁰⁰
incl VAT
R458.⁸⁵

A61 DIGITAL THERMOMETER

- Measurement: -40°C ~ 250°C
- Minimum Measuring Depth: 12mm
- NTC Sensor
- Stabilization Time: 12s
- Power: 3V button Cell
- Battery Duration: 12h



excl VAT
R280.⁰⁰
incl VAT
R322.⁰⁰

UT33B+ PALM SIZE MULTIMETER

- AC/DC Voltage: 600 V
- DC Current: 10A
- Resistance: 20MΩ
- Battery Test: 1.5V/9V/12V
- APO
- Diode
- Continuity Buzzer
- LCD Backlight
- Relative Mode
- LCD Size 53mm x 28mm
- Probe Placing Slots
- 2000 Display Count



excl VAT
R229.⁰⁰
incl VAT
R263.³⁵

UT261A PHASE SEQUENCE & MOTOR ROTATION INDICATOR

- AC Voltage: 40V ~ 690V
- Frequency: 15Hz ~ 400Hz
- Working Current: < 1mA
- Phase Sequence Indication: LCD
- Missing Phase Indication: LCD
- No Batteries Required



excl VAT
R1 049.⁰⁰
incl VAT
R1 206.³⁵

UT207B 1000A TRMS CLAMP METER

- AC/DC Current: 1000A
- AC/DC Voltage: 1000 V
- LoZ ACV: 1000V
- Resistance: 46MΩ
- Capacitance: 60mF
- Auto/Manual Range
- Continuity Buzzer
- Diode Test
- Analog Bar 31
- Continuity Test
- APO
- Jaw Capacity 42mm
- Low Battery Indication
- Relative Mode
- 6000 Display Count



excl VAT
R1 999.⁰⁰
incl VAT
R2 298.⁸⁵

UT202A+ 600A TRMS CLAMP METER

- AC Current: 600A
- AC/DC Voltage: 600V
- Resistance 60MΩ
- Capacitance: 60mF
- Frequency: 10Hz ~ 10MHz
- Duty Cycle
- Display Size: 35 x 27mm
- Backlight
- NCV
- Data Hold
- Diode
- Neutral/Live Wire Test
- MAX/MIN/REL
- Auto Ranging
- Continuity Test
- Low Voltage Indicator
- Jaw Capacity 28mm
- APO
- 6000 Display Count



excl VAT
R775.⁰⁰
incl VAT
R891.²⁵

UT203+ 400A TRMS CLAMP METER

- AC/DC Current: 400 ~ 600A
- AC/DC Voltage: 600V
- Frequency: 10Hz ~ 10MHz
- Resistance 40MΩ
- Capacitance: 60mF
- Temperature: -40°C ~ 1000°C
- MAX/MIN
- NCV
- Relative Mode
- Backlight
- Display Size: 35 x 27mm
- Auto Ranging
- Data Hold
- Jaw Capacity 28mm
- APO
- 4000 Display Count



excl VAT
R1 399.⁰⁰
incl VAT
R1 608.⁸⁵

UTi165K BODY THERMAL IMAGER

- Display: 2.8" LCD
- Temperature Range: 30°C ~ 45°C
- IR Resolution: 160 x 120 Pixels
- Palettes: Iron red, Rainbow, White, Black, Red, Lava, High-contrast rainbow
- NETD: ≤ 50mK
- Spatial Resolution: 6mrad
- Frame Rate: <9Hz
- PC Analysis Software
- FOV: 56°(h) * 42°(V)
- Visible Light
- Real-time Image Transmission
- USB
- APO



excl VAT
R12 999.⁰⁰
incl VAT
R14 948.⁸⁵

UT521 2000Ω EARTH GROUND TESTER

- Earth Resistance Testing Range: 0 ~ 2000Ω
- AC Earth Voltage (V) 0 ~ 200V
- Frequency (Hz) 50Hz/60Hz
- Display Count 2000
- Data Storage 20
- Manual Range
- Low Battery Indication
- LCD Backlight
- Full Icon Display
- Double Insulation Protection
- Data Hold
- Contact Badness Display
- Over-range Display
- Simple 2-wire Testing
- Precision 3-wire Testing
- Auto Power Off



excl VAT
R3 499.⁰⁰
incl VAT
R4 023.⁸⁵

UT387A WALL SCANNER

- Ferrous Metals: 19mm ~ 28.5mm
- Non-Ferrous Metals: 19mm ~ 28.5mm
- Copper Conductors: 50mm
- Wood: 19mm ~ 28.5mm
- Scanning Modes: StudScan & ThickScan
- Auto Calibration
- Buzzer Indication
- APO
- Error Calibration Alarm
- LED Alarm
- Low Battery Indication



excl VAT
R499.⁰⁰
incl VAT
R573.⁸⁵

UT107 AUTOMOBILE MULTIMETER

- DC Voltage: 1000 V
- AC Voltage: 750V
- DC Current: 10A
- Resistance: 20MΩ
- Frequency: 2kHz
- Temperature: -40°C ~ 1000°C
- Data Hold
- Low Battery Indication
- Input Protection
- Manual Range
- Diode
- Dwell/Tach: 4CYL/6CYL/8CYL
- Battery Test 12V
- Duty Cycle
- Continuity Buzzer
- 2000 Display Count



excl VAT
R875.⁰⁰
incl VAT
R1 006.²⁵

UT15C VOLTAGE TESTER (VOLTSTICK)

- LED AC/DC Voltage Indication (V) 12V ~ 690V
- LCD AC/DC Voltage Display (V) 24V ~ 690V
- Phase Rotation Test
- Single Lead (L2) Voltage Detection
- Continuity Test: Resistance 0~100kΩ, Beeper LED Light Indicator
- Polarity Detection
- Auto Range
- Low Battery Indication
- Work Light

excl VAT
R739.⁰⁰
incl VAT
R849.⁸⁵

UT206B 1000A AC CLAMP METER

- AC Current: 1000A
- AC/DC Voltage: 1000 V
- LoZ ACV": 1000V
- Resistance: 60MΩ
- Capacitance: 60mF
- Temperature: -40°C ~ 1000°C
- Auto/Manual Range
- Continuity Test
- Data Hold
- Diode Test
- APO
- Analog Bar 31
- Jaw Capacity 42mm
- Low Battery Indication
- Relative Mode
- 6000 Display Count

excl VAT
R1 625.⁰⁰
incl VAT
R1 868.⁷⁵

UT191T PRO MULTIMETER

- AC/DC Voltage: 600 V
- AC/DC Current: 20A
- Resistance: 60MΩ
- Capacitance: 40mF
- Frequency: 10Hz ~ 1MHz
- Temperature: 400°C
- 6000 Display Count
- Auto Ranging
- Low Pass Filter: 600V
- Low Impedance Input: 600V
- 31 - Segment Analog Bar
- Flashlight
- Auto Backlight
- ACV Peak Hold
- Peak current detection

excl VAT
R1 999.⁰⁰
incl VAT
R2 298.⁸⁵

UT-C02B ALLIGATOR CLIPS

- Length: 80mm
- Clip Opening: 36mm
- CAT Rating: CATIII 1000V, CAT IV 600V 10A
- Insulated with M4 Threaded Bore Screw Connection
- Recommended Test Leads: UT-L27

excl VAT
R219.⁰⁰
incl VAT
R251.⁸⁵

UT39A+ MULTIMETER

- DC Voltage: 1000 V
- AC Voltage: 750V
- AC/DC Current: 10A
- Resistance: 200MΩ
- Capacitance: 10mF
- Manual Ranging
- Diode
- Data Hold
- Low Battery Indication
- Auto Power Off
- Continuity Test
- Relative Mode
- 4000 Display Count

excl VAT
R439.⁰⁰
incl VAT
R504.⁸⁵

UT89XD TRMS MULTIMETER

- AC/DC Voltage: 1000 V
- Resistance: 60MΩ
- Frequency: 10MHz
- Diode
- Continuity Buzzer
- Low Battery Indication
- Transistor hFE
- Data Hold
- Dual Range NCV Test
- Flashlight
- Auto Backlight
- Audible / Visual Alarm
- Capacitor Charging Indicator
- LED Test
- Duty Cycle
- Relative Mode
- APO
- Input Alarm
- 6000 Display Count
- AC/DC Current: 20A
- Capacitance: 100mF

excl VAT
R729.⁰⁰
incl VAT
R838.³⁵

UT216C TRMS CLAMP METER

- AC/DC Current: 600A
- AC Voltage: 750V
- DC Voltage: 1000V
- Resistance: 60MΩ
- Capacitance: 60mF
- Frequency: 1MHz
- Jaw capacity: 30mm
- Auto Ranging
- Diode
- V.F.C.
- NCV
- Data Hold
- MAX/MIN/REL
- LCD Backlight
- Flashlight
- Continuity Buzzer
- Low Battery Indication
- Input Protection
- 6000 Display Count

excl VAT
R2 315.⁰⁰
incl VAT
R2 662.²⁵

UT216A 600A TRMS CLAMP METER

- AC Current: 600A
- DC Voltage: 1000 V
- AC Voltage: 750V
- Resistance: 60MΩ
- Capacitance: 60mF
- Jaw Capacity 30mm
- Auto Range
- Diode
- NCV
- Data Hold
- Flashlight
- APO
- MAX/MIN/REL
- LCD Backlight
- Continuity Buzzer
- Low Battery Indication
- Input Protection
- 6000 Display Count

excl VAT
R1 219.⁰⁰
incl VAT
R1 401.⁸⁵

UT305R FOREHEAD INFRARED THERMOMETER

- Temperature: 32°C ~ 42.9°C
- Accuracy: +/- 0.3°C
- Optimal Measuring Distance: 5 ~ 10cm
- Repeatability: 0.3°C
- Response Time: <250ms
- Spectral Response: 8μm ~ 14μm
- Selection °C/°F
- Data Hold
- APO
- Low Battery Indication
- LCD Display TN LCD
- High/Low Alarm

excl VAT
R1 099.⁰⁰
incl VAT
R1 263.⁸⁵

UT201+ 400A TRMS CLAMP METER

- AC Current: 400A
- AC/DC Voltage: 600V
- Resistance 40MΩ
- Display Size: 35 x 27mm
- Backlight
- NCV
- MAX/MIN
- Auto Ranging
- Data Hold
- Diode
- Continuity Test
- Low Voltage Indicator
- Jaw Capacity 28mm
- APO
- 4000 Display Count

excl VAT
R559.⁰⁰
incl VAT
R642.⁸⁵

UT387D WALL SCANNER

- Detect Principle: Electro-magnetic induction
- Detects: Wooden beams, metal objects, electrical wire
- Metal-scan depth: Ferrous Metal: 100mm; Non-Ferrous Metal: 80mm
- Stud-scan depth: Wood: 38mm
- AC Electrical wire depth: 40mm
- Detect accuracy: +/- 15mm
- Voice notification

excl VAT
R1 691.⁰⁰
incl VAT
R1 944.⁶⁵

UT-CS09D FLEX CLAMP SENSOR

- AC Current: 3000A
- Frequency Response: 45Hz ~ 500Hz
- Inrush Current: 0.5A ~ 3000A
- Auto Range
- Flex Coil Size: 45.7cm
- Auto Power Off
- Low Battery Indication

excl VAT
R2 499.⁰⁰
incl VAT
R2 873.⁸⁵

UT516B 12kV INSULATION RESISTANCE TESTER

- 12KV Digital Insulation Resistance Tester
- Output Voltage: 500V ~ 12000V
- Load Current: 1mA ~ 1.2mA
- Short Circuit Current: 5mA
- DC Voltage: 30V ~ 1000V
- AC Voltage: 30V ~ 750V
- PC Software for data analysis
- Backlight Function
- Data storage 999 sets
- Dielectric Absorption Ratio (DAR): 0.0 ~ 999
- Polarization Index: 0.0 ~ 999
- Low Battery Indication
- Over-range Alarm
- 9999 Display Count

excl VAT
R29 964.⁰⁰
incl VAT
R34 458.⁶⁰

UT682KIT WIRE TRACKER

- Transmitter
- Port Flashing
- Wire Tracking
- Line Alignment
- Open-short Test: 10kΩ
- Polarity Test
- Operating Time: > 8 hours
- Receiver
- Wire Tracking: RJ11 > 3000m, RJ45 > 100m
- NCV
- Headset Jack
- Low Battery Indication

excl VAT
R1 986.⁰⁰
incl VAT
R2 283.⁹⁰

Available
October
2021

UT123D POCKET SIZE HOUSEHOLD MULTIMETER

- AC/DC Voltage: 600V
- AC/DC Current: 10A
- Resistance: 40MΩ
- Capacitance: 400μF
- Acousto-optic Indication
- Data Hold
- Low Battery Indication
- NCV/Live
- 4000 Display Count
- APO

excl VAT
R663.⁰⁰
incl VAT
R762.⁴⁵

UT256A 200A TRMS FORK METER

- AC/DC Current: 200A
- AC/DC Voltage: 1000 V
- Resistance: 20MΩ
- Capacitance: 60mF
- Frequency: 10 ~ 10kHz
- Auto Range
- Data Hold
- NCV
- LCD Backlight
- APO
- Continuity Buzzer
- Low Battery Indication
- 6000 Display Count



NEW
excl VAT
R1 667.⁰⁰
incl VAT
R1 917.⁰⁵

UT315A VIBRATION TESTER

- Vibration Acceleration(O - P): 0.1 ~ 199.9m/s²
- Vibration Velocity(RMS): 0.1 ~ 19.9cm/s
- Vibration Displacement(P - P): 1 ~ 1999μm
- Data Hold
- Low Battery Indication
- APO
- Battery Life: > 8hrs
- 2000 Display Count



NEW
excl VAT
R12 237.⁰⁰
incl VAT
R14 072.⁵⁵

M10 THERMAL IMAGER

- Thermal resolution: 160 × 120 (19 200 pixels)
- NETD : < 40mK
- Temperature measurement range : -20 °C - 550 °C
- Accuracy: Max (±2°C, ±2%)
- FOV: 25° × 18.7° ● Pixel Pitch: 17μm
- Measurement Presets: Center spot, Hot spot, Cold spot, User Preset Point/Line/Area
- Manual focus
- Colour Palette: White Hot, Rainbow, Ironbow, Red Hot, Fusion, Rain
- High Temperature Alarm
- Bluetooth ● WiFi
- 25 Hz image frequency
- 3.5" LCD touch screen display



NEW
excl VAT
R30 888.⁰⁰
incl VAT
R35 521.²⁰

UTi120T THERMAL IMAGER

- Display: 3.5" LCD
- IR Resolution: 120 x 90 Pixels
- Spatial Resolution: 7.6mrad
- PC Analysis Software
- Display Modes: Thermal, Image blending, Visible light
- Auto Capture Of HI/LOW Temps
- Temperature Range: -20°C ~ 400°C
- NETD: ≤ 60mK
- Frame Rate: <9Hz
- FOV: 50°(h) * 38°(V)
- WiFi



NEW
excl VAT
R11 220.⁰⁰
incl VAT
R12 903.⁰⁰

UT673A BATTERY TESTER

- 12V Battery Test: 7 ~ 16V DC
- 12V/24V Cranking System Test: 7 ~ 30V DC
- 12v/24v Charging system test: 7 ~ 30V DC
- Battery Type: Ordinary Lead Acid Battery, AGM Flat Plate Battery, AGM Spiral Battery, GEL Battery, EFB Battery
- Battery Capacity: 3 ~ 250Ah
- Over Voltage Protection
- Reverse Connection Protection
- A Prompt For Poor Contact
- Battery Status, Life, Capacity Display
- Battery Internal Resistance Display
- Four-Terminal Kelvin Test
- Test without Battery Disassembly
- LED Colour Indication for Test Results



Available
October
2021

NEW
excl VAT
R1 263.⁰⁰
incl VAT
R1 452.⁴⁵

MINI-1 SMART PHONE THERMAL IMAGER

- Thermal resolution: 160 × 120 (19 200 pixels)
- Pixel Pitch: 17μm ● NETD: < 40 mK
- Accuracy: Max (±2°C, ±2%)
- Object Temperature: -20°C ~ 350°C
- Hot Spot, Cold Spot, Center Spot, 1 Point Preset, 1 Area Preset, Off
- Colour Palettes: Black Hot, White Hot, Red Hot, Rainbow, Ironbow, Fusion, Rain
- Fixed Focus
- USB Type-C Interface (Android)
- 26 g Weight



NEW
excl VAT
R9 266.⁴⁰
incl VAT
R10 656.³⁶

LC06 THERMAL MONOCULAR

- High sensitivity thermal module with 160 × 120 resolution
- NETD < 35 mK ● Pixel Interval: 17μm
- FOV: 24.7° × 18.7°
- Colour Palettes: Black Hot, White Hot, Red Hot, Fusion
- Leading thermal image processing technology: Adaptive AGC, DDE, 3D DNR
- 720 × 540 resolution 0.2-inch LCOS display
- Built-in rechargeable lithium battery
- Up to 10 hours continuous operation
- Wi-Fi hot spot ● Type-C Interface
- Ideal for patrolling, search & rescue, hiking, travel and hunting



NEW
excl VAT
R10 717.²⁰
incl VAT
R12 324.⁷⁸

UT675A BATTERY TESTER

- 12V Battery Test: 7 ~ 16V DC
- 12V/24V Cranking System Test: 7 ~ 30V DC
- 12V/24V Charging system test: 7 ~ 30V DC
- Battery Type: Ordinary Lead Acid Battery, AGM Flat Plate Battery, AGM Spiral Battery, GEL Battery, EFB Battery
- Battery Capacity: 3 ~ 250Ah
- Reverse Connection Protection
- Battery Status, Life and Capacity Display
- Battery Internal Resistance Display
- USB Communication
- Printing Function
- Four-Terminal Kelvin Test
- Test without Battery Disassembly
- LED Colour Indication for Test Results

Available
October
2021



NEW
excl VAT
R3 175.⁰⁰
incl VAT
R3 654.²⁵

E1L THERMAL IMAGER

- Thermal resolution: 160 × 120 (19 200 pixels)
- NETD : < 40 mK
- Temperature measurement range : -20°C ~ 550°C
- Accuracy: Max (±2°C, ±2%)
- Measurement Presets: Center spot, Hot spot, Cold spot, User Preset Point
- Pixel Pitch: 17μm
- FOV: 32.9° × 44.4°
- Colour Palettes: White Hot, Black Hot, Rainbow, Ironbow
- High Temperature Alarm
- 25 Hz image frequency
- 3.2" LCD screen display
- Up to 8 hours continuous running



NEW
excl VAT
R10 642.³²
incl VAT
R12 238.⁶⁷

LH19 THERMAL MONOCULAR

- 384 × 288 resolution, 12 μm, high sensitivity detector
- Adaptive AGC, DDE, 3D DNR, NETD less than 35 mK
- 1280 × 960 resolution 0.4-inch LCOS display
- 19mm Lens
- FOV: 13.8° × 10.4°
- Pixel Interval: 12μ
- Built-in rechargeable lithium battery
- Up to 7.5 hours continuous running
- Wi-Fi hot spot
- Type-C Interface
- Palettes: Black Hot, White Hot, Red Hot, Fusion
- Frame Frequency: 50Hz
- Ideal for patrolling, search & rescue, hiking, travel and hunting



NEW
excl VAT
R36 925.²⁰
incl VAT
R42 463.⁹⁸

M30 THERMAL IMAGER

- Thermal resolution: 384 × 288 (110 592 pixels)
- NETD : < 35mK
- Temperature measurement range : -20 °C - 550 °C
- Accuracy: Max (±2°C, ±2%)
- Measurement Presets: Center spot, Hot spot, Cold spot, User Preset Point/Line/Area
- FOV: 37.5° × 28.5° ● Pixel Pitch: 17μm
- Colour Palettes: White Hot, Black Hot, Rainbow, Ironbow, Red hot, Fusion, Rain
- Manual focus
- Image Mode: Thermal / Optical / Fusion / PIP
- 25 Hz image frequency
- 3.5" LCD touch screen display
- Bluetooth ● WiFi
- USB Interface



NEW
excl VAT
R71 604.⁰⁰
incl VAT
R82 344.⁶⁰

Promotion runs from 1 September 2021 to 31 December 2021 or while stocks last . E & OE.

Johannesburg
Tel: +27 (11) 392-3804

Cape Town
Tel: +27 (21) 552-5242

Durban
Tel: +27 (31) 263-7800

Email: sales@three-d.co.za
Website: www.three-d.co.za

THREED
AGENCIES

THE CABLE ACCESSORY COMPANY
a member of the **Hudaco** group