

## NEW RLS SHOWROOM IMMERSSES VISITORS IN A LIGHTING EXPERIENCE



Lasse Ehmsen, OEM Sales Manager at Signify South Africa, with Randal Wahl, owner of Regent Lighting Solutions. Ehmsen delivered an interactive talk at the opening of the upgraded Regent Lighting Solutions showroom.

After 15 months of upgrades and renovations, Regent Lighting Solutions (RLS) has opened its interior showroom and exterior rooftop showroom. The company's Johannesburg head office has been completely renovated to create a more interactive and engaging experience for clients.

Aesthetically the building has undergone a facelift; however, the main focus of the upgrade was for clients to physically and visually experience the company's wide range of products with various control integrations. The concept is that once you step through the entrance, you are immediately taken on a visual catalogue walkthrough that shows the history of where the company started in the lighting industry to where it has come, all the while showcasing how light can transform a space.

Two open days were held at the beginning of October where customers and clients could interact with the technology, discuss new concepts and see the products in action. Lasse Ehmsen, OEM Sales Manager at Signify South Africa, delivered an interactive talk on lighting controls and technology which took in subjects such as lighting in the Circular Economy, standardising CRI values and the role China has to play in the LEDs of the future.

Enquiries: [www.regentlight.co.za](http://www.regentlight.co.za)

**TURN TO PAGE 23**

to view more photographs of the launch and the showroom

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## SWITCHGEAR FOR MARINE VESSEL



The De Beers marine business unit recently embarked on a project to upgrade the power and propulsion system on its 'Gariiep' offshore mining vessel. The project will include modifications to the vessel to facilitate the physical and functional integration of new generating plant and a new electrically driven propulsion system. Additionally, the project will involve changes to support auxiliary, structural and control systems.

JB Switchgear Solutions secured the contract for the low voltage primary switchboard. The scope includes manufacture, factory acceptance testing, delivery, installation and 'C1' commissioning of the switchboard. This marine-certified, 100 kA, 600 V, 60 Hz switchboard includes 1 x 6300 A, 5 x 5000 A and 2 x 1600 A air circuit breakers. The switchboard is fed from four diesel-powered generator sets and includes synchronising capabilities.

Strict quality control procedures at JB Switchgear, and adherence to the applicable marine standard for the manufacture and assembly of this switchboard, are in place.

JB Switchgear is a Level 3 BEE supplier, and ISO-9001 listed for its quality management system.

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In industrial facilities with ac and dc motors, motor control centres, and variable frequency drives (VFD), the clamp meter's VFD mode tackles noisy signals to ensure accurate readings. In addition to performing current and voltage functions, industrial electricians, utility workers, and electrical contractors can troubleshoot connections and components with a continuity test mode, diode test and resistance, or frequency and temperature measurements. The IP40-rated FLIR CM94 is drop-tested to withstand a 2 m drop from a ladder or into a utility vault.

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## LESSONS LEARNED BUILDING A NEW BUSINESS



Andy Gerke

**ANDY GERKE**, Production/Operations Director at Switch Boards Unlimited, launched the company with Zienet Mahomed with limited initial capital in 2014, and the company has shown great growth year on year since it opened. Gerke programs and runs the CNC and laser machines and is constantly working on improving the quality and design of the company's products. His knowledge of boards, which he has gained over the past 30 years, is extensive.

**Sparks: Where were you educated?**

**AG:** I attended boarding school for most of my school career, matriculating at St. Martins High School and finally completing my Mechanical Engineering studies in Johannesburg.

**Sparks: How long have you been involved in the electrical industry?**

**AG:** I have officially been employed in the industry for approximately 30 years. However, being part of a family business (Switch Board Utilities) I have been passionate about manufacturing and the switchboards game since I can remember, working during school holidays and in my spare time as a teenager whenever I got the chance.

**Sparks: When and where did you start your career?**

**AG:** My father arrived in South Africa in the 1960s and started a small switch boards manufacturing concern in a garage before moving to the centre of Johannesburg and finally settling in Industria West. I joined the family business straight after my studies and army service in the late 1980s. I started at the bottom, learning the ropes in the factory, concentrating mostly on production and the operations of the business. I was a part of the SBU Manufacturing Group right up until the business was sold to First Strut in 2010. After First Strut closed its doors in 2013, and this being the only industry I knew, I managed to purchase a number of machines on auction and, together with Zienet Mahomed who heads sales, Switch Boards Unlimited opened its doors in early 2014.

**Sparks: Who has been your inspiration/mentor who has influenced your career?**

**AG:** My mentors must be both my father Heinz, who worked tirelessly up until the day he passed in 2015, and my mother Karin who initially built the sales side of the business. They both taught me that working smart and hard will get you to the finish line. I experienced the courage they both had, emigrating from Germany in 1964 with a few rands in their pocket and a dream. Don't ever be afraid to follow your dreams.

**Sparks: What is one of the biggest challenges facing the industry at this time?**

**AG:** Innovation. I believe that we need to put more energy into research and development.

**Sparks: What do you enjoy most about your job?**

**AG:** Every day is a challenge and starting a new business and building it up takes courage and perseverance.

**Sparks: How do you motivate your staff?**

**AG:** I am surrounded by a dynamic team. Zienet and I have worked together for over 25 years, and she heads a competent sales team who are constantly striving to maintain and improve our customers' experience. We also have a devoted and hardworking factory team. I appreciate the dedication and effort that our entire team give to this business every day. It has not been an easy ride, starting the business from scratch in these tough economic times,

but I believe that our entire team understands that if we all work and pull together, we can achieve anything.

**Sparks: Would you advise a school leaver to enter the electrical industry? And why?**

**AG:** I would definitely recommend entering the industry. Electricity is a 'need product' and the opportunities within the industry are endless. Our country requires more artisans and engineers who think 'outside of the box' and strive to ensure every South African and business has access to affordable, reliable and environmentally friendly electricity.

**Sparks: What is your favourite quote?**

**AG:** Never look down on anyone unless you are helping them up.

**Sparks: Name some things on your 'bucket list'.**

**AG:** I am thankful for the opportunities I have received to bring me to where I am today. I would like to be able to offer an internship programme, allowing young, newly qualified students an opportunity to gain practical experience in the industry. I would like to be afforded more time to spend on the research and development of new and innovative industry related products.

Enquiries: [www.switchboardsunlimited.co.za](http://www.switchboardsunlimited.co.za)

## PRATLEY PUTTY PART OF SCI-BONO 'DESTINATION MOON' EXHIBITION

The only South African product to go to the moon, Pratley Putty, is being featured at a 'Destination Moon' exhibition at the Sci-Bono Discovery Centre in the historic Electric Workshop in the cultural precinct of Newtown, Johannesburg. One of nearly 400 interactive exhibitions, 'Destination Moon' celebrates the 50<sup>th</sup> anniversary of the Apollo 11 moon landing on 20 July.

Southern Africa's largest science centre, Sci-Bono is affiliated to the Gauteng Department of Education to support maths, science, and technology education, and to help expand the country's science, engineering, and technology capacity.

The latest showcase of Pratley Putty's involvement with this historic event follows it being featured in a 2019 commemorative coin series from the South African Mint, entitled the 'South African inventions' series.

Pratley founder George Montague (Monty) Pratley launched the world's first epoxy putty during the early 1960s. Initially it was intended to be used internally for insulating and affixing terminals to cast iron electrical junction boxes. However, the product was subsequently introduced into the local market as Pratley Plastic Putty, whereafter it eventually became known by the household name, Pratley Putty.

An agreement to manufacture the product under licence in the United States was concluded with a company in Pennsylvania, which introduced the product to the National Aeronautics and Space Administration (NASA) even before it could enter production. Ultimately the company supplied the product from South Africa to NASA for use onboard its Ranger moon-landing craft. This led to Pratley Putty acquiring its global fame as the only South African product to go to the moon.

Executive Manager Andrew Pratley says that the company is especially proud to be associated with Sci-Bono, a non-profit organisation, as it showcases the achievements of local companies, as well as the critical role that innovation continues to play in South Africa. "Our roots are in innovation, research and development. It's one of the cornerstones of what we do at Pratley and we continue to live and breathe by it."

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## AN INTRODUCTION TO THE DOL REGISTRATION CERTIFICATE

One of the most versatile and exciting jobs anyone can become involved in is that of an electrician. With the skills, training and expertise you gain as an electrician, you can work across a multitude of industries and can even start your own business, working the times and hours you want. However, the process you need to follow to become an electrician who is legally allowed to work in South Africa is complex. You must be registered with the Department of Labour (DOL) as an electrical contractor and you need to undergo rigorous testing to prove that you have the skills and attributes that the role demands. You are legally recognised as a qualified electrical contractor only once you have your Wire-

man's License and your DOL Registration Certificate.

### How to become a registered electrician

Achieve a recognised qualification: There are numerous institutions that offer training courses to become an electrician but do your homework and ensure that it is SETA recognised, that your organisation is accredited, and that your training includes the certification required to register with the Department of Labour. You must pass a trade test, have a NQF level 3 minimum that includes a Technical Senior Certificate, and you have to pass the national exam on SANS 10142-1.

According to the Department of Labour, your

educational requirements need to be relevant across whichever phase of testing you are applying for. In other words ...

**Know what the phases are and how these affect your application:** Electricians can register across three specific categories, each one allowing them to work on different phases of installation with regards to electricity. A single-phase electrician usually works on homes and electrical supplies of 220 volts, a three-phase electrician works with 380 volt three-phase supplies, and a master electrician specialises in hazardous locations. Each of these phases will impact on which documentation you hand to the DOL and which qualifications and testing you will undergo.

**Apply for three years on your DOL, it will save you time:** Registration for your DOL needs to be done every year. However, many individuals who have applied for their DOL certificates are still waiting for their paperwork more than a year later. The process is slow. To avoid frustration, it's a good idea to invest in a DOL Registration Certificate that is valid for up to three years. You are allowed to do this and the application form clearly indicates what you need to do.

**Don't get annoyed, get proactive:** The length of time it takes to receive your DOL is famously long and obviously frustrating. However, there are organisations that can help you find your feet and get the process moving. The following organisations are committed to providing you with support and insight into your DOL:

1. The Electrical Contractors Association of South Africa (ECA)

The ECA helps people to prepare what they need to get their DOL and offers ongoing training courses to help you expand your skills.

2. The Department of Labour (DOL)

There is an array of supporting documentation on the DOL's website designed to help you learn more about your registration and the paperwork required. However, this can be out of date with the paperwork asking for one thing, and the person behind the desk asking for another. In our next article we will go into more detail around the exact route you need to take for your DOL, starting with your wireman's license. If you are stuck, take a look through this list of contacts to see if you can get hold of someone in your area: [www.labour.gov.za/DOL/contacts/](http://www.labour.gov.za/DOL/contacts/)

3. Forums and publications

There are publications and forums that provide insight into the challenges of being an electrical contractor and getting registration right. Consider reading through ESI Africa, the ECA publication Wired, and Sparks Electrical News.

Enquiries: [www.citiqprepaid.co.za](http://www.citiqprepaid.co.za)

## PERFECT SYNERGY BETWEEN DRONES AND ROPE ACCESS

The perfect synergy between drone technology and traditional rope access was demonstrated at a recent inspection project undertaken by Skyriders at one of the country's oldest power stations, located in Mpumalanga. The fast-track project was undertaken in conjunction with partner company Nyeleti Consulting.

The two-part project involved the inspection of two 155 m high smokestacks. The external inspection component was carried out by a two-person team deploying hi-tech drones fitted with high-definition 4K and thermal cameras.

The thermal imaging was carried out very early in the morning, before the sun's heat could have an impact on the smokestacks. This was necessary to identify any hotspots that could indicate areas where the internal brick lining of the concrete wind shield had deteriorated.

In the second part of the project, a two-person rope access team took core samples from the two smokestacks. This involved drilling 100 mm deep holes into the concrete, and extracting the samples to be submitted for laboratory testing for compression strength and carbonation, among others. After the core samples have been physically cut out, the subsequent holes are patched with an approved patching material to ensure the integrity of the structure.

Following receipt of the laboratory results, a detailed report is submitted to the client, highlighting any issues that may require attention. "Depending on the findings, we could very well be contracted to carry out additional maintenance or repair work in the near future," explains Mike Zinn, Skyriders Marketing Manager.

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## A FIRST IN THE MARKET: ACI TECHNOLOGY REDEFINES DEVICE SAFETY

Both in South Africa and overseas, we are seeing ongoing transitions around power supplies. DEHN's new Advanced Circuit Interruption (ACI) technology, however, is well-equipped to deal with the issues being brought about by future energy mix possibilities, as well as the existing ongoing local supply uncertainty around the national grid.

This is according to Hano Oelofse, managing director at DEHN Africa, who says, "ACI technology is brand new - a first in the market and a product of DEHN exclusively. The new DEHNGuard surge arrester with ACI technology allows the user to save space, time and costs. DEHNGuard is a pre-wired, complete unit that consists of a base part and plug-in protection modules."

Oelofse says ACI technology presents a technical solution to dimensioning issues, eliminating the need to select the right back-up fuse or conductor cross-section, which increases the safety of the electrical installation and saves space.

"The technology also removes the occurrence of leakage current, preventing ageing of the protective device and saving both time and expense in replacing arrestors ahead of schedule. In addition, DEHNGuard ACI prevent the accidental tripping of the insulation

monitoring, contributing to operational safety."

DEHNGuard with ACI technology has recently become available in South Africa through DEHN Africa. Its benefits include:

**Safe dimensioning and the elimination of mistakes:** With ACI arrestors, users are able to avoid making certain configuration errors, which can occur when selecting and dimensioning a suitable backup fuse. This increases the availability of the system. The new switch/spark gap combination is integrated directly into, and ideally adjusted to, the arrester. The user does not need to spend time and effort selecting the correct fuse size and tripping characteristics.

**Withstanding temporary over-voltages (TOV) to increase system availability:** Temporary overvoltages (for example, caused by loss of neutral) can destroy conventional surge protective devices. The new ACI arrestors have a much better TOV withstand, which increases the availability of your system and avoids wasting time and money on repairs.

**Zero leakage current to increase the service lifetime of arrestors:** The technology in an ACI makes sure that there are no leakage currents. This prevents premature ageing and saves the time and expense of replacing arrestors ahead of schedule. ACI arrestors also avert the ac-

cidental tripping of the insulation monitoring and contribute towards operational safety.

**Connection cross-section of just 6 mm<sup>2</sup> makes for easier installation:** A conductor cross-section of just 6 mm<sup>2</sup> is sufficient, allowing the installer to save on the valuable time that otherwise needs to be spent dimensioning the cross-section. This size also makes installation easier because the radiuses are smaller and the wing shorter.

**Fulfills future requirements in the energy sector as renewable power generation creates new grid parameters:** The global power supply is in a period of transition, and isolated grids and storage systems are changing the short-circuiting conditions. The DEHN ACI technology equips users for these future requirements.

"Renewable power generation is creating new grid parameters, and isolated grids and storage systems are changing the short-circuiting conditions. With DEHN's ACI technology, you are able to future-proof your grid parameter requirements, while at the same time adapting to the legacy issues of today," concludes Oelofse.

Enquiries: +27 (0)11 704 1487.

## LOCAL PANEL MANUFACTURER STAYS AT THE LEADING EDGE



A fully withdrawable direct online starter bucket produced at WEG Automation Africa.

As a leading electrical control panel manufacturer, WEG Automation Africa stays at the cutting edge of innovation through its research and development driven approach which sees continuous product improvement setting benchmarks within the industry sector. The company was previously known as Shaw Controls and is part of the Zest WEG Group which is, in turn, owned by Brazil-based WEG Group.

According to Tyrone Willemse, business development manager - projects and contracts at WEG Automation Africa, the focus throughout the process is on safety and quality as well as local manufacturing capability. The company manufactures a range of low voltage (LV) and medium voltage (MV) electrical switchgear as well as LV fixed and withdrawable motor control centres (MCCs).

"Our fixed pattern boards have three configurations - front entry, back entry and back-to-back," Willemse explains. "We can supply these in top or bottom busbar, or cable supply entry, to suit the customer's glanding and entry preferences." WEG Automation Africa's latest family of fixed pattern boards is internally arc classified at the highest level - Class C in accordance with IEC 61641 guideline.

Willemse says this makes it possible to conduct an assessment and repair of the board after a flash and then it can be returned to temporary use after a dielectric test, to minimise unscheduled downtime. He notes that the IEC61641 guideline is starting to be introduced into LV designs to enhance safety.

"The fully withdrawable MCC option offers the major advantage that operators do not work on a live board in front of the bucket," he says. "This allows the technician to take the bucket out and move it to a safe environment before working on it."

Significantly, WEG Automation Africa has introduced a new, fully-withdrawable MCC compliant with both IEC61439 and IEC61641 guidelines. While initially sourced from WEG's manufacturing facilities in Brazil, the model is being considered for local build.

With the use of Solidworks modelling computer-aided design and engineering software, the MCC chassis is pre-punched to reduce wiring time. All digital components are loaded onto the system and carefully placed in the design of MCCs, so that equipment can be assembled and replicated to the highest standards. "Our closed-loop project planning and control system also contributes to ensuring optimal efficiencies in the manufacturing line, saving both time and money for our customers," he says.

The availability of Aluzinc instead of mild steel for the panel shells is an added advantage to the standard range of panels. This assists with the continuity of the earthing system and is corrosion-resistant, adding to its safety.

WEG Automation Africa's extensive facilities at Robertsham in Gauteng also manufactures a variety of supplementary equipment for use on process and other plants. These range from custom-designed PLC panels, standalone starter panels, junction boxes, remote isolator panels and control desks. Panels are designed and produced for indoor and outdoor applications, whether skid-mounted, in a sub-station, in a container, or in a prefabricated room or specially constructed E-house.

Enquiries: [www.zestweg.com](http://www.zestweg.com)

## THREE-D AGENCIES COMPETITION WINNERS ANNOUNCED



Elnette Du Plessis



Giorgio Tarazza

In the September issue of *Sparks Electrical News*, Three-D Agencies offered five lucky people the chance to win a Uni-T UT123 Residential Multimetre. The Uni-T UT123 Digital multimeter is a pocket-sized residential multimeter designed for home use. Its compact structure makes it easy to hold in one hand, and the EBTN screen allows users to obtain clear readings.



Robbie Lamberti



Cameron Taylor

The five lucky winners were:

- Theo Gordon
- Robbie Lamberti
- Cameron Taylor
- Elnette Du Plessis
- Giorgio Tarazza

Thanks to all those who entered and to Three-D Agencies for supplying the prizes.

Enquiries: [www.three-d.co.za](http://www.three-d.co.za)

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## SEW-EURODRIVE DURBAN PASSES INTERNATIONAL AUDIT WITH FLYING COLOURS

The Durban branch of SEW-EURODRIVE (Pty) Ltd. has passed an internal audit by its German parent with flying colours. This means that not only does it comply with the latest standards such as ISO 9001:2015, but is on par with other group companies globally in terms of quality and internal policies and procedures.

The fact that KwaZulu-Natal is home to some of the harshest operating environments in the country, from sawmills and sugar mills to ports and pulp and paper, assures clients that all products supplied adhere to stringent international standards, according to Clive O'Reilly, Branch Manager for KwaZulu-Natal, who is based in Prospecton, Durban.

Not only is it a high-humidity climate, but there is a lot of salt and dust to contend with as well, which has a corrosive impact on equipment, especially in the sugar industry. "Therefore we assemble our

gearboxes and motors in accordance with a strict specification and assembly process verified by our German parent," O'Reilly notes.

As a result, the staff are highly motivated by the fact that the Durban branch passed the audit successfully. It underlines the fact that SEW-EURODRIVE (Pty) Ltd. is able to offer the best solutions available locally, based on the highest-quality products. "It gives our customers peace of mind that they will not incur any downtime due to unplanned breakdowns," O'Reilly affirms.

This is supported with a 24/7 service offering, with technicians on standby to attend to any emergencies throughout the province. "We can handle any breakdown situation. We also stock aggressively in-house, which reduces lead times considerably. All of this affirms our high capability, which has now been underscored by the international audit."

SEW-EURODRIVE (Pty) Ltd.'s strong standing in the sugar industry in KwaZulu-Natal was recently underscored when it clinched an award for the best exhibit at the 91<sup>st</sup> congress of the South African Sugar Technologists' Association (SASTA) from 14-16 August at the International Convention Centre in Durban. "It was a very successful event for us, capped off by our award. We found that a lot of engineers in this and other industries are unaware of our turnkey solutions, which poses a huge scope for growth," O'Reilly notes.

Commenting on the growth opportunities in the sugar industry, O'Reilly reveals that SEW-EURODRIVE (Pty) Ltd. is already providing detailed assistance with planning for next year's off-crop season in the sugar industry, a period during which general maintenance and refurbishment traditionally take place.

Enquiries: [www.sew-eurodrive.co.za](http://www.sew-eurodrive.co.za)



## SPACE-SAVING DIN-RAIL MOUNT

CALOG INSTRUMENT'S versatile Calog by Instrotech DPM9000 series – a miniature DIN-rail mount programmable isolated transmitter range – has consistently sold well into the market, partly due to its reliability and partly to the versatile wide range of programmable inputs. With dimensions of 92 x 92 x 26 mm, the DPM9000 series is a valuable space-saver. Configuration and field calibration is done via any Windows-based computer or tablet, running the user-friendly SmartView® software, available for download on the Instrotech website.

The model DPM9000 transmitter offers complete 3-way isolation between power supply, input and output. The inputs are programmable to accept thermocouples

of type J, K, N, R, S, T & W5, RTD's of type Pt100 or Ni100, mV inputs up to 52 mV, 0-20 mA/4-20 mA inputs, volt inputs up to 10 V, potentiometer inputs and frequency inputs from NPN/PNP proximity switches.

Integral 2-wire transmitter power is supplied as standard with the units, as well as a precision reference for potentiometer inputs. The analogue output is programmable for 0-20 mA/4-20 mA or 0-10 V outputs. The power supply comes standard as 95-265 V ac/dc as well as the RS-232 serial. The serial interface allows connections to remote computers and SCADA systems using Calog's DIGIbus protocol. The RS-485 option allows for up to 99 transmitters to be linked on the same

bus. The unit can also accept an ASCII based serial input signal for conversion to an analogue output signal. The linearizer feature is standard and the user can select s-curve, sphere, square-root extraction or off (no linearization). The model DPM9240 offers a 10-30 V dc isolated power supply instead of 95-265 V ac/dc.

Also available in the series are the Models DPM9004, 95-265 V ac/dc supply, and the DPM9244, 10-30 V dc supply, ideal for load cell applications. The model DPM9006 is a High Current (0-5 A) or High Voltage (0-500 V ac/dc) input version. All units meet the European EMC directive 89/336/EEC and Low Voltage directive 73/23/EEC.

Locally designed and manufactured by



Calog Instruments, the DPM9000 series forms part of its extensive range of high quality process control instrumentation.

Enquiries: +27 (0)10 595 1831

## ANNUAL CONFERENCE FOR ENERGY EFFICIENCY CONFEDERATION TO BE HELD THIS MONTH

The annual conference of the Southern African Energy Efficiency Confederation – this year called the 2019SAEEC – serves the energy management; environmental; facilities; building; energy engineering; cogeneration; power generation and efficiency improvement industries by bringing together all stakeholders on one platform. It will be held on 14-15 November at Farm Inn, Silver Lakes, Pretoria.

The 2019SAEEC Conference is an important energy event of national scope for end-users and energy professionals in all areas of the energy field. It is the one truly comprehensive forum where you can fully assess the big picture – and see exactly how all the economic and market forces, new technologies, regulatory developments and industry trends merge to shape the critical decisions on your organisation's energy and economic future.

The 2019SAEEC Conference, together with the exhibition, targets the complete spectrum of technologies and services of great importance to our delegates in attendance, including:

- Renewable and alternative energy.
- Combined heat and power/cogeneration/distributed generation.
- Lighting efficiency.
- HVAC systems and controls.
- Integrated building automation and energy management.
- Thermal storage and load management.
- Boilers and combustion controls.
- Demand Side Management.
- Solar and fuel cell technologies.
- Energy services and project financing.
- Applications to National Energy Management programs.
- Bio fuels.

The 2019SAEEC Conference will be post validated for CPD points by the SAIEE in accordance with the ECSA policy.

Enquiries: [www.saeefconfed.org.za](http://www.saeefconfed.org.za)

## KEY FRAMEWORKS TO INVESTOR INTEREST IN RENEWABLE ENERGY

With a population of more than a billion people and a collective economy of around US\$1.5 trillion, Africa is a continent ripe for economic growth, believes Grant Henderson, Director at DLA Piper Africa. Developing the capacity to satisfy its people's energy demands is key to unlocking that potential.

Historically, one of the biggest inhibiting factors associated with renewable energy projects has been the cost, however, the cost of delivering power from renewable energy projects is declining as a result of emerging technologies.

Securing the buy-in of the private sector is key to development in this sector. Incentivising investment in the industry is at the heart of this, but so too is the establishment of clear, transparent frameworks for procurement and the setting of tariffs. Investors need not only a thorough understanding of the environment in which they are committing, but assurances that these markets will remain predictable and stable. In the absence of these frameworks and the security that they provide investors will simply take their capital to countries to where the environment is perceived as more secure.

The second iteration of DLA Piper's Renewable Energy in Africa summarises the regulatory environment for renewable energy in twenty African countries, highlights the key policy objectives for

national governments and provides insight into the projects which are expected to deliver these goals. In showcasing the diverse approach to renewable energy being adopted across the African continent – and the legal, economic and technological developments being implemented – this report highlights that African governments are, despite the challenges they face, increasingly prioritising the creation of policies and frameworks that allow for the industry to be developed.

Kenya, for example, has since the 1990s allowed for independent power producers to operate in the country. Now with its long-awaited 2019 Energy Act finally having been passed in March of this year – the private sector will also have the opportunity to participate in the industry in a distributive capacity.

If the improvements to the regulatory environment continues, then so too will the accompanying spike in investor interest. "The future could hold some exciting developments, such as the ability to store electricity and a move away from fixed grids to the development of mini or micro grids to power remote communities and businesses. Ultimately, more power drives stronger economies and that is something that we should all get behind," concludes Henderson.

Enquiries: [www.dlapiper.com](http://www.dlapiper.com)

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## CHANGING THE FUTURE, ONE SOLUTION AT A TIME

The sub-metering industry has been growing steadily over the past few years because it makes life easier. Sub-metering solutions can help landlords, property owners and tenants overcome some of the frustrating challenges that come with utility management and billing. Managing electricity consumption has always been complex – tenants complaining about their bills because they have to share costs

with others, property managers juggling admin and payments, and landlords struggling to keep everyone happy. Added into this mix are changing attitudes towards electricity consumption and customers becoming more aware of their impact on the environment. With sub-metering, these problems are sorted with one call to a contractor, and Citiq Prepaid.

“Sub-metering is the easiest, most reliable

and convenient way of accessing and providing electricity to tenants without any frustration, irritation or disputes. The word prepaid means we pay for a service before we can use it – the human nature element of this is we become more aware of what we spend,” says Carel Scheepers, General Manager: Sales at Citiq Prepaid. “This awareness leads to a positive impact on our carbon footprint and environment, as people become more aware of their usage thanks to the granular level of control that it provides. It also minimises admin, improves billing accuracy and changes how people approach their consumption.”

For the contractor, sub-metering offers an opportunity to work with customers to ensure that their electricity needs are met and to help them address growing awareness around the environment. Transparency is one of the key things that sub-metering brings to the table. It allows for landlords, tenants and property owners to see exactly how much power they are using and where they can adjust consumption.

“We are always asking ourselves one question – how can we help solve the challenges faced by contractors and their customers,” says

Scheepers. “This is why we focus on providing sub-metering solutions and value-added features that help contractors to grow their businesses and support their customers.”

With an online portal, clear reporting, visibility into consumption trends, and two support centres, Citiq Prepaid ensures that users have everything they need to streamline their electricity and their lives.

“For the contractor, their customer is the landlord, the owner, the developer, the body corporate – and these customers want to know more about the systems they are installing and how they benefit them,” says Scheepers. “With Citiq Prepaid, contractors can direct customers to the support centre or portal so that they can see how they gain complete control over their usage and spend. They can also show their customers how sub-metering can bring about awareness about their impact on the environment.”

Contractors are in the unique position to offer customers relevant and helpful insights into improving how they manage their utilities. They can help shift the conversation from frustration around complex billing and unfair costs to complete control and carefully planned budgets.

“Contractors can work with their customers to install sub-metering systems that make their lives easier and less expensive,” concludes Scheepers. “We walk with contractors through every step of the process, from purchase to installation to the management of customer expectations, partnering with you to build your business and customer relationships.”

Enquiries: [www.citiqprepaid.co.za](http://www.citiqprepaid.co.za)



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## STONE-STAMCOR BOOSTS CAPE TOWN OPERATION

In order to enhance its service to its Western and Eastern Cape customers, Stone-Stamcor has embarked on a business improvement project for its Cape Town branch. The new location of the Cape Town branch, along with its new employees in the region will make it easier for customers to interact with the company while also improving product collection and deliveries in the region.

With a long history of local manufacturing and product distribution, dating back to 1942 when the company was founded as J Stone & Co (Africa) (Pty) Ltd, to be renamed Stone-Stamcor (Pty) Ltd in 1965, the company has prided itself on supplying the best product range

to the electrical and mechanical industries, along with premium customer service to its clients throughout South Africa. Stone-Stamcor's head office is located in Sebenza, Edenvale, in Gauteng, where its 4000 m<sup>2</sup> of factory and administration facilities support the company's national footprint and manufacturing operations. The company is ISO 9001 certified (certified by the BSI Group) and is a SANAS accredited BBBEE Level 2 certified company.

### Moving to a secure office park

In the 1990s, Stone-Stamcor moved its Cape Town office to Maitland, from where it has been operating for over twenty years. Given the

changes in the environment and the crime situation in the area, the company decided to move and has taken up residence in Unit A4, in the Pinelands Office Park.

Mark Talbot, sales manager for Stone-Stamcor, explains that the move will officially take place in November 2019, but the company will be running both the old and new offices until all the administrative tasks are completed; such as having the phone numbers ported to the new office and informing clients of the new premises.

"Our clients will find the new premises much improved in all aspects. Firstly, the office park is secured with 24-hour security, which means

collections and drop-offs will be safer and less stressful. In addition, the location provides for easier access and parking will no longer be a problem due to us having more space for visitors as well as the strict access controls at Pinelands Office Park," he says.

### New faces in Cape Town

Talbot will be taking over the role of branch manager for the Cape Town branch for the near future, dividing his time between the office in Johannesburg and the Mother City. The branch will naturally have permanent Capetonians on site to ensure that customer service is given the boost it needs to compete in a tough economy. The role of sales and customer service has been assigned to Wendy Thom, who has over 20 years of sales experience in the electrical industry in the Western Cape region.

"Wendy started on 1 September and is focusing on getting to meet the Stone-Stamcor customers face-to-face, while also assisting in product delivery where she can," Talbot adds. "Her long experience in the electrical market means she already knows many of our customers and she has slotted into her role with ease. She will be supported by the appointment of a new sales representative in the new financial year, should the business levels increase as expected."

Clinton Alexander is also a known entity in the Cape Town office. He is currently the storeman for Stone-Stamcor and handles internal sales. Clinton often interacts with most of Stone-Stamcor's customers which means he has already built up relationships and knows the product ranges well.

The third staff member in the Cape Town office is another person that customers already know. Sharon Kirby has been and still is responsible for office administration in Cape Town as well as internal sales. Sharon has been with the company for seven years, but her relationship with the company goes back much further. She worked for Stone-Stamcor for many years before her family relocated and she had to leave the company. A few years later, upon another relocation, she re-joined the company in her current position.

Talbot states that the Cape Town branch will be fully supported by the Johannesburg head office. This means any products ordered that may not be immediately available in Cape Town will be sent through to the branch within 24 or 48 hours, depending on volumes. In addition, any queries, support, repairs or advice issues that cannot be dealt with in the branch will have immediate access to the full resources of head office in Johannesburg to resolve the situation quickly.



Wendy Thom, sales and customer service.



Clinton Alexander, storeman and internal sales.

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THINK ELECTRICAL

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## LEGRAND LAUNCHES A NEW RANGE OF PLUGS

LEGRAND has introduced a range of plugs to the local market that meets the latest electrical standards, and also offers advanced features, enhanced aesthetics, user convenience and simple installation.

Legrand's newly-designed plugs – available in two standards (old and new South African) with white or magnesium finishes – have a modern, sleek look and are suitable for all electrical appliances.

The new Legrand 2P and E 164-1 and 2P and E 164-2 plugs feature a solid brass pin with an insulated sleeve. The assembly plug accommodates a 1,5 mm cable with a screw terminal for fast connection. Technical specifications of these plugs are 16 A/250 V ac, with a maximum power of 4 000 W.

According to Legrand, the 164-2 plug will become essential in every household, as the new legislation of the wiring code states that all socket outlet points for new electrical installations shall include at least one socket-outlet complying with the SANS 164-2 and this may be combined with other types of socket-outlets.

Through the ongoing launch of advanced electrical and digital technologies, Legrand ensures the local market has access to the latest products. The company offers a technical advisory and support service throughout the country.

Enquiries: +27 (0)11 444 7971



Legrand has introduced a range of plugs to the local market that meets the latest electrical standards, and also offers advanced features, enhanced aesthetics, user convenience and simple installation.

### Full range of products available

Of critical importance to the Stone-Stamcor customer base in Cape Town, Talbot says, is that the full range of company products be available from the Cape Town branch. In short, this means that products from the electrical and mechanical divisions of the company will be on sale, along with repairs and advice on the whole product range. As noted above, the Johannesburg office will function in a support role where needed, but customers' first port of call will be the local branch as the Cape Town staff members are well trained and able to assist with any queries customers may have.

The Stone-Stamcor Electrical Division manufactures a comprehensive range of copper and aluminium compression cable connectors (lugs and ferrules) for fitment to cable conductors. Stone-Stamcor has been manufacturing locally for decades and has made a name for itself in the market and established its brand as one associated with well-designed products (which are tested to the SANS IEC 61238-1 standard), as well as reliability and customer service.

The locally manufactured products are supplemented by other types of connectors for earthing and customer specific solutions for special applications. Stone-Stamcor also supplies a full range of compression crimping and cable cutting tools.

The Mechanical Division represents several renowned international companies with high-quality brands. It can supply a range of industrial gearboxes, motors, linear motion control products, converting industry products and rotating unions, to name a few.

"We may be moving, but as far as the product range and service from Stone-Stamcor is concerned, it's business as usual. Once the move is completed, it will be business better than usual, a statement we will prove and reinforce every day as we go forward with our growth plans for the Cape Town branch and the region as a whole," says Talbot.

Enquiries: Johannesburg: +27 (0)11 452 1415, Cape Town: +27 (0)21 511 8143 and Durban: +27 (0)31 304 9757



Sharon Kirby, office administration and internal sales.

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- Bundle Φ (max): 50
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SA  

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## THE IMPORTANCE OF CABLE MARKERS

Although labelling cables is a simple task, it is an important part of electrical work. Wherever you are working, the last thing you want is to be grappling about and trying to figure out which cable is the one you are looking for.

No matter how small or large a job, if you can't identify a cable, it can significantly hamper your productivity and even lead to serious injuries. Furthermore, the more complex a cable and wiring structure, the harder it is to keep track of everything.

The easiest and most efficient way to accomplish successful wire and cable identification is to start from the very beginning, by marking each and every wire as it is added. Not only will this help you to effectively keep track of which wire is which and which wire goes with what, it will also significantly simplify the process of altering or adding to any given wire assembly down the road. From wire markers and cable ID tags, to blank flag cable ties – choosing the right cable and wire ID solution for your specific wiring job will help to make the wire labelling and identification process as quick and straightforward as possible.

Control and clarity are especially important in the panel building industry. With the right markers as part of a clear cable management system, you can install in a highly compact manner, which in turn enables you to save the space you need within the control panel. "Everything in a panel has to be identified," says HellermannTyton South Africa network products manager, Ken Dunn, "You need to know where it's come from and where it's going to." Furthermore, all wires need to be easily identified, either through numbering or colour coding.

Cable markers from HellermannTyton have always been quick to install, yet the company hasn't rested on its laurels and last year designed and manufactured two new machines to streamline the cable manufacturing process. "We made a decision to scrap everything and start from scratch," says Dunn. "We have optimised how the machines run and redesigned them to cater to modern manufacturing methods." The HellermannTyton engineering team made new heads for the extruders so that there is a better flow and better control on the actual markers, improving the quality of the end product.

"The two state-of-the-art cable marker manufacturing machines, using the latest pneumatics and PLC control systems, have taken the place of eight larger machines which were previously used," notes Claude Middleton, HellermannTyton South Africa manag-

### Resistor Colour Code refresher

Resistor Colour Coding uses coloured bands to easily identify a resistor's resistive value and its percentage tolerance.

#### The Resistor Colour Code Table

Colour	Digit	Multiplier	Tolerance
Black	0	1	
Brown	1	10	± 1%
Red	2	100	± 2%
Orange	3	1,000	
Yellow	4	10,000	
Green	5	100,000	± 0.5%
Blue	6	1,000,000	± 0.25%
Violet	7	10,000,000	± 0.1%
Grey	8		± 0.05%
White	9		
Gold		0.1	± 5%
Silver		0.01	± 10%
None			± 20%

ing director. The locally designed and built machines – which are so energy efficient that they can run on generators – each produce 250 cable markers per minute, more than three times the capacity of the previous machines.

A heat foil process is used for the printing onto the PVC markers which also embosses into markers to ensure that cables can be easily identified, even after a number of years. "We are flexible and help customers to get the best solution for their needs, and as such we can also provide customised marking," says Dunn.

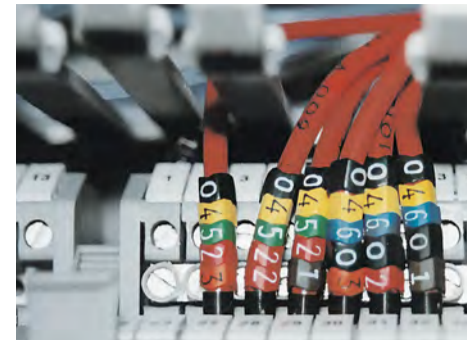
The company purchases the raw material, extrudes it, colours, prints, cuts and bags all at the Johannesburg facility. Across the board, whether it is a cable tie, a marker, or convoluted tubing, virgin material is used in the production process to ensure the integrity of the finished product.

Middleton says that although the design is not necessarily HellermannTyton's, the company has still been able to innovate, such as with the unique WIC clip-on markers. A testament to the quality of the products being produced locally is that cable markers are manufactured in South Africa for the European market.

### Further HellermannTyton cable marking solution

Every environment requires specific cable marking solutions that are fit for purpose. Today, it is no longer enough to simply hand write onto cables and wires with some sticky tape or other makeshift solution.

Current needs require modern products that are durable and easy to use. HellermannTyton offers ranges from simple pre-printed cable markers, to adhesive labels printable heat shrink tubing and cable



tags to our more sophisticated RFID Cable Ties used for asset tracking or asset management.

Below are two examples from HellermannTyton's vast range of industrial identification solutions: **Industrial identification tags for cable bundle, TIPTAG:** TIPTAG industrial identification plates were developed especially for permanent loading under rough conditions. Even large diameters such as hydraulic hoses, lines for drives or power cables can be marked later. Halogen-free TIPTAG tags are suitable for marking large cable diameters. They are used with high fire protection requirements in tunnel construction. Cable ties are used to secure TIPTAG.

**Identification ties and plates for marking cable bundles:** IT Ties offer simple identification and securing of cable bundles in one step. Labels can either be hand written for manual or temporary markings or printed for a professional finish. The labels used in conjunction with the IT Ties offer good resistance against water, oil and most solvents. Unique numbering, graphics or barcodes can be printed on the label for possible asset identification.

Enquiries: [www.hellermanntyton.co.za](http://www.hellermanntyton.co.za)

## INDUSTRY LEADERS CONVENE TO FOCUS ON TRADE AND PRODUCTIVITY ACROSS AFRICA

As interest in the market potential of Africa grows, the inaugural CRU Africa Wire, Cable & Tube Conference is perfectly timed to address business opportunities for local producers and manufacturers seeking to establish new trade partnerships with international stakeholders involved in the African steel, copper and aluminium supply chains.

This important new event is co-organised by CRU and The Southern African-German Chamber of Commerce and Industry (AHK), and will be held on 11-13 November 2019 in Johannesburg, South Africa. The conference has attracted strong support from key local associations including the Steel Tube Export Association of South Africa (STEASA) and the Association of Electric Cable Manufacturers of South Africa (AECMSA). International supporters include Wire and Tube Düsseldorf, the world's largest trade shows in these fields, as lead sponsors.

"We are very excited by how this event has taken shape. It promises to be a great opportunity to explore the trade dynamics and market conditions in a region that



has traditionally been less well understood. It is a fantastic chance to learn about opportunities to boost trade and investment, and consider the real challenges being faced by the companies that are advancing the African manufacturing sector," said Michael Finch, Head of Wire and Cable, CRU.

Companies confirmed to speak include the South African Department of Trade and Investment, and the Nigerian Ministry of Mines & Steel Development. Major international companies such as ArcelorMittal, El Sewedy Electric and Aurubis will be sharing their market insights, and local manufacturing leaders such as Aberdare Cables, Alcon Marepha, CBI African Cables, Barnes Tubing Industries, Honingcraft, Hall Longmore and Macsteel Tube & Pipe will discuss the opportunities and challenges in a series of high-level panel discussions.

CRU's experts will explore main trends impacting the global copper, aluminium and steel markets, and how they might affect African development across the wire & cable, and tube & pipe industries. The agenda also includes a day of technical showcases, with industry experts exploring the latest global technological advances in manufacturing, and how they can be applied to African operations.

The conference will be complemented by an exhibition of more than 20 leading international metals manufacturing technology service providers, including: SMS Group, AESA, Cable Manufacturing Optimization (Pty) Ltd, Clobbi, Jiangsu Hero Way Rolling Co., Ltd. Macotech, Maysky, OMS, Sikora, Supermac, WPSSP, and Zumbach.

The inaugural CRU Africa Wire, Cable & Tube Conference will be held at the Emperors Palace, Johannesburg, South Africa.

CRU offers unrivalled business intelligence on the global metals, industrial products, mining and fertiliser industries through market analysis, price assessments, consultancy and events. In 2019, CRU celebrates 50 years in business. Over this time, the company has built a reputation for integrity, reliability, independence and authority with customers. CRU employs over 250 experts and has more than 10 offices in Europe, the Americas, China, Asia and Australia.

Enquiries: [www.crugroup.com/events](http://www.crugroup.com/events)

## THE ULTIMATE TOOL BACKPACK FOR MAINTENANCE PROFESSIONALS



It can be very inefficient, not to mention frustrating, for maintenance professionals to have to go back and forth to office stores to get additional tools they need on site. The Fluke Pack30 Professional Tool Backpack, available through Comtest, makes it easy to organise, transport, and access all the tools needed for the day. Designed specifically for electricians with DMMs, clamps, tools, and accessories, the rugged backpack also protects tools, even in the dirtiest of work sites. For digital users, the Fluke Pack30 offers a way to carry all the necessary tools while keeping hands free to use cell phones and tablets.

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## UNDERSTANDING DATA CABLES, THEIR CATEGORIES, AND WHAT THEY MEAN



is not enough. Furthermore, each screening material has advantages and disadvantages.

Aluminium foil is inexpensive, but by itself this material does not perform well in applications that require flexible, track or torsion cables. If one moves a metal foil again and again, one starts to see cracks, which decreases the effectiveness of the screening in the cable. This is the reason some manufacturers construct cables that move frequently or are located in electromagnetic vulnerable (EMV) areas, using both an aluminium foil screen and a copper braid. This applies even to cables that are 'only' Cat 5 classification.

For cables with high amounts of bending cycles and small bending radii, some manufacturers use an additional metallised tape to fulfil effective screening. This is similar to a woven tape with integrated metalised parts, which offers longer lifespan without cracking compared to a standard aluminium foil.

### Core material options

Let us now turn to a variety of possible core options, from both a material and stranding perspective. In most applications, bare copper is the preferred core material to use. However, in specific applications, such as the railway industry, a tinned copper core is preferred due to its higher corrosion resistance.

In terms of core stranding, solid cores are typically used in fixed installations, while flexible applications require a more nimble core which typically consists of seven strands. Flexible cores are used for drag chains and robotic applications with short lay length in order to achieve a more flexible cable and smaller bending radius. For the smallest bend radii and maximum cycle quantity/service life, customers can request to have data cables constructed with 19-strand cores. Having more strands in a core increases its flexibility; however, the best solution for a customer specific application should be discussed in consultation with the cable manufacturer.

### Sheath material options

Cable sheath types are plentiful and can be

narrowed down according to the application. For cable installations in buildings, polyvinyl chloride (PVC) or flame retardant non-corrosive (FRNC) compounds are the typical choice of sheath material. PVC is not halogen free, but it is flexible and inexpensive. FRNC compounds meet the requirements of halogen-free and flame retardant, and emit a less optically dense smoke, which makes exiting a building easier and allows for improved firefighting operations in the event of a fire emergency.

Polyethylene (PE) sheaths are mainly used for outdoor cable applications or in cases where a cable needs to be buried into the ground. These cable sheaths are good at resisting moisture and exposure to the sun.

Due to the increase of data cables being used in industrial automation, it is common to use oil-resistant PVC blends, polyurethane (PUR) or thermoplastic elastomer (TPE) sheath compounds. These cable sheath types are preferred for their increased oil resistance, and ability to withstand the mechanical stresses often associated with the use of drag chains, and robotics. The choice of a particular compound or blend is based on the application and operating conditions.

### Cable quality

Finally, it is highly recommended to use data cables that have had their mechanical capabilities extensively tested to withstand the rigors of operating in continuous-flex (drag chains) and torsion (robotics) applications. Data transmission rates can lessen, or signal quality could erode, due to cables that are unable to withstand strenuous operating conditions. Manufacturers should use a combination of test equipment, such as drag chains, torsion apparatuses, ovens and freezers, and, in some cases, specific application testing rigs, such as towers that mimic the strain and load on cables found inside wind turbines.

Enquiries: [www.helukabel.co.za](http://www.helukabel.co.za)

Customers often ask about data cable categories and what they mean. For many end-users, engineers and purchasing agents, who do not work with these types of cables on a daily basis, the different categories can seem complicated and overwhelming. However, what appears to be complex at first glance, can be simple to understand with a couple of tips. The category positively correlates with the data speed, i.e. the higher the category, the higher the possible frequency and the higher the frequency, the higher the possible data rate.

### Data cable basics

One can compare category cables to a multi-lane road; the more lanes a road has, the more vehicles are able to travel on this road concurrently. The standards are generally based on a maximum cable length of 100 m. This cable length consists of 90 m of installation cable and 10 m, of patch cable. After the initial 100 m a repeater/extender is added to the cable system, which strengthens the signal and prepares it to be transmitted an ad-

ditional 100 m as needed to connect the machine or its apparatus, and the control unit. Additionally, category data cables have to fulfil decoupling values of the pairs, e.g. near end cross talk (NEXT).

For Cat 5 cables, the decoupling of the pairs is realised in the cable construction with different twisting lengths of each pair. That means for four pairs, one has four individual twisting lengths during production.

Cat 6 cables allow users to choose between two technical designs. The relevant decoupling values of Cat 6 can be achieved with a plastic cross that creates distance between the pairs. Another way is to use a pair in metal foil (PIMF) construction. The thickness of the aluminium foil influences the effectiveness of the screen. Many people think that a screen in the construction protects the cable from environmental influences. However, it also has the opposite effect – the screen keeps the electrical signal in the cable and avoids negatively influencing other equipment in the vicinity.

For even higher categories, such as Cat 7, 7e, and 7A, a copper braid is mandatory to fulfil the standardised electrical values because an aluminium foil alone

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Features include radial mounting and dismounting, on-site maintenance, reduced operating costs, no need for special tools, no need for drive or driven machine displacement, alignment preservation, lubrication-free, and interchangeability. BI currently offers the Ringfeder TNB buffer coupling and the HDFB split elastic coupling, which is dimensionally interchangeable with the TNB.

"This makes it possible for customers already using buffer roller couplings to change over to the new split coupling design with ease. They are interchangeable with most traditional elastic couplings on the market. With minor changes,

these can replace grid and gear couplings," says BI Product Manager Hilton Woest.

BI can supply all spares and components through its extensive branch network, in addition to full engineering and technical support. Woest reveals that Ringfeder delegates will be visit-


ing South Africa at the end of the year, at which time BI will be apprised of any further developments planned for the local market.


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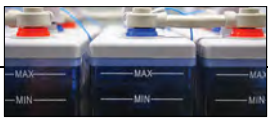
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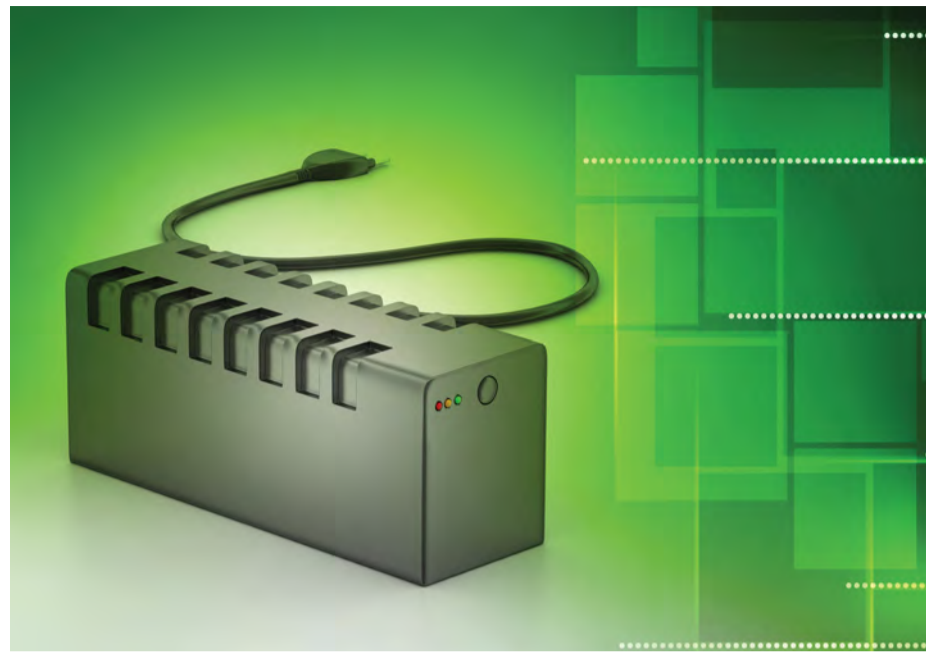
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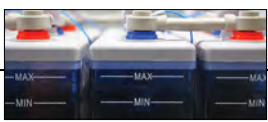
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## DECADES OF INNOVATION DRIVING WEG PRODUCT EFFICIENCY

Africa has embraced the innovation that drives WEG products and services, with customers seeing value in constant technological improvement. Siegfried Kreutzfeld, CEO of the South African based Zest WEG Group, explains that WEG is quick to introduce its new products into the African market, sometimes even before launching elsewhere in the world.

"We pride ourselves on the significant investment we, as WEG, make in research and development," Kreutzfeld says. "About 2,6% of our net revenue is ploughed back into continuous product improvement as well as new development. This keeps us at the cutting edge of technology."

The result of this intense commitment to innovation is that 43,7% of all WEG products sold in 2018 were launched in the last five years. Another indicator is that Brazil-based WEG Group holds 174 patents that are used on its products.

Significantly, this has placed WEG among the thousand most innovative companies in the world, ranked by The Global Innovation 1000 of 2014. This world ranking evaluates the total R&D investments of each company, including the strategy, purpose and success of these investments.

"More than 35 years ago, we led the way in South Africa by introducing reliable high performance motors into the mining sector," he says. "Today, we have a solid market share on the continent based on the trust we have built with our customers. This relationship makes it easier to introduce and test new WEG technologies in Africa."

While continuously improving its products, WEG also closely monitors how they perform in the field, Kreutzfeld notes. "An indicator of the confidence we have in WEG technology is that we provide a five year warranty on WEG motors," he says. "This is unique on the continent and difficult for competitors to match."

WEG's innovation and the market trust are paying dividends. Despite the country's poor overall economic performance, Kreutzfeld says Zest WEG Group is targeting 15% growth with its high quality offerings.

Among the latest WEG technologies are energy-efficient IE3 motors which reduce electricity consumption, and the WEG CFW 11 Variable Speed Drive (VSD) which selects the best efficiency, again conserving energy and saving costs.

Kreutzfeld says that during 2019 a new series of WEG VSDs, specifically for mine fan applications, will be introduced to the market.

WEG's innovative Motor Scan device is another important development, harnessing connectivity and the power of Industry 4.0 technology to monitor motor health. Attached to the motor itself, the WEG Motor Scan gathers vital data including vibration, temperature and running time. This is communicated wirelessly to a hand-held device or to WEG's Internet of Things (IoT) platform.

"Extending electric motor life is going to be an important trend in the market,



WEG Motor Scan monitors motor data that can be accessed by App and IoT platforms.

especially in the mining sector," Kreutzfeld explains. "Only a decade ago mines expected less than two years of life from an electric motor, and we have been able to change that. Using Motor Scan will allow end users to optimise routine maintenance and extend motor life."

Another technological innovation is the large WEG slipring motors considered ideal for the cement industry. Cement plants place high wear demands on electric motors, and WEG has developed features to address this challenge.

"We innovate by being close to our customers and seeing the problems they face," he says. "You cannot pursue innovation without understanding customer applications and market trends."

To drive this process, WEG established a Scientific and Technological Committee in 1998. This forum allows WEG's engineering team to engage with five university specialists, three from abroad and two from Brazil. The forum meets every two years to discuss market trends, technology and innovation, and importantly how to apply this to WEG products.

"During this meeting, we share new concepts and products with the academic experts," he says. "This collaboration has many mutual benefits. We gain ideas and feedback, and the universities can gather topics for their students to research."

Inside WEG itself, there is a team focused on new product concepts and technologies. Kreutzfeld says many of these might remain in development for years, even decades, and are only commercialised in response to market trends.

"This pipeline of innovation is vital to meet changing customer needs and is what sets WEG apart," Kreutzfeld concludes.

Enquiries: [www.zestweg.com](http://www.zestweg.com)

## ELECTRONIC MONITORING, TIMING DEVICES

A comprehensive range of electronic monitoring and timing devices in different formats for ease of use and retrofit purposes is available from leading supplier ElectroMechanica (EM). The ElectroDev units are suited to all industrial applications where parameter monitoring is essential for the wellbeing of plant and machinery.

The timing devices, on the other hand, are machine devices to facilitate easy timing and control functions, according to EM Product Manager Jaap Grobler. He adds that ElectroDev is a key supplier, and has enjoyed a two-decade-long business relationship with EM to date.

"The most popular products in the ElectroDev line-up are its voltage- and phase-monitoring devices to protect plant and machinery. Of course, the timing devices are very popular as well due to their versatility and simplistic programming methods," Grobler highlights. In addition, all products and applications are supported by EM's countrywide network of offices and sales and technical personnel. He ascribes the success of the ElectroDev product range to the combination of EM's large stockholding to meet all requirements, and the quality of the products themselves. Another key factor of its success is the extensive range. As an example, products are available in a DIN rail mounting format, with or without display, and an 11-pin plug-in mounting format.

"ElectroDev fits in perfectly with our complementary products needed to complete plant and machine installations," Grobler elaborates.

Enquiries: [www.em.co.za](http://www.em.co.za)



## PROTECT AGAINST ALL KNOWN POWER PROBLEMS

### Protection against:



The Sollatek AVS30 will disconnect the power when it's bad and reconnect automatically once the power is restored.

In the events of loss of neutral, voltage levels will rise subjecting equipment to >400V instead of 230V. This can be catastrophic, and without the right protection can result in blackouts and long-term damages to appliances and electrical goods.

The AVS30 has enhanced features allowing the user to set the delay time and monitor the state of the voltage making it suitable for air conditioners, refrigeration appliances and all industrial applications.

Ensure longevity of electrical goods from further damage and in the events of loss of neutral.

To learn more visit: <https://www.sollatek.com/avs30>

**Voltshield**  
Automatic Voltage Switcher



AVS30 protects all your electrical valuable equipment



## LOSS OF NEUTRAL

A broken neutral is relatively common but potentially life-threatening electrical fault that can affect households and businesses. Power flows in and out of your premise from a distribution network, entering via the active cable and leaving via the neutral cable. If there is no neutral, there will be an influx of voltage entering your premise, resulting in over voltage and a possible life-threatening situation. Loss of neutral results in equipment being over heated, damaged and sometimes non-fixable. Replacing valuable electronic equipment can be very expensive.

Loss of neutral is a serious condition. A break in the neutral conductor will simply result in a loss of the energy supply which leads to an Irrespective of load balance.

### What causes Loss of Neutral?

Loss of neutral can be caused by several ways. Some of the most common causes are:

- **Weather** – Bad weather such as storms and lightning can cause power problems.
- **Accidents** – Unpredictable accidents such as a tree falling on the wires can result in loss of neutral.
- **Stolen copper wires** – While there is blackout there is no electricity running through wires, this is an easy opportunity for copper wires to be stolen and sold for money.
- **Overhead wires** – Overhead wires are not only easily damaged, but they are also easily accessible to be stolen.

### Where is Loss of Neutral common?

Many African countries are a victim of loss of neutral, especially South Africa. South Africa are currently suffering from rolling blackouts. An app which provides schedules, alerts and forecasts for power outages, has become the most popular downloaded app in SA. Eskom, the state

power monopoly, is struggling to generate enough electricity to meet needs, and has re-introduced a byzantine system of rotating outages known as 'load-shedding.'

Quote from The Economist: "The blackouts suit copper-cable thieves, who can steal without fear of electrocution. And when the electricity is switched backed on, substations sometimes explode, resulting in secondary outages" (economist.com).

### The impact of Loss of Neutral

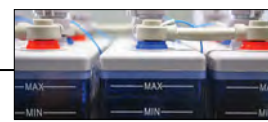
In the event of loss of neutral, the single-phase voltage will rise to the three-phase level subjecting your equipment to >400 V instead of 230 V. This results in over voltage and can be catastrophic for your appliance. Any electronic appliance connected to the wiring will most likely be damaged due to overheating.

If there are problems with the neutral line, electricity may travel through a different path. This may be via water pipes, stoves and metal taps or any other conductor of electricity. This can be very dangerous, and you may suffer a serious electric shock if you touch something where electricity is present.

### Solution to Loss of Neutral

To protect against loss of neutral, the Sollatek AVS30 can protect against temporary over voltage of 400 V (TOV400). It will also protect against high and low voltage, brown-outs, power back surges and voltage dips. The AVS30 will disconnect the power when it's bad and reconnect automatically on return of normal power which protects against short- and long-term damage to ensure longevity of your appliance. Reconnection takes place after a start-up delay protecting against frequent fluctuations.

Enquiries: +27 (0)11 788 1614



WORKING KNOWLEDGE WITH TERRY MACKENZIE HOY

## DISCUSSING YOUR POWER SUPPLY

If you live in residential premises, take a moment to visualise how your electrical supply gets to you. The domestic distribution board is fed from the building distribution board which is fed from a mini-sub about 100 m away and this is supplied (almost always) from the 11 000 volt power system. That 11 000 volt system will be supplied from a 66 000 V/11 000 V sub-station (or 132 000 V/11 000 V). The 66 kV or 132 kV system will be supplied from a 400 kV/132 kV or 400 kV/66 kV system which ... will be fed from power stations located up country or, in the case of Koeberg, from the coast.

In South Africa, there are about 18 coal power stations and 13 gas turbine stations and 13 pump storage or hydro power stations. The total generating capacity is about 52 000 Megawatt (MW). Knowing that your residence draws probably 32 amps max at 220 V (about 7 kW) you realise that there is enough power to supply a maximum of 7.5 million houses. Since there are about 15 million residences in South Africa 52 000 MW is not enough to supply them all with 7 kW. But this is not really required – apart from a large household, most residences seldom draw available peak power. Thus, when designing residential power supplies there is a factor, the diversity factor, which is

applied to the load. If there are four or less residences then the diversity factor is 1 (i.e. for a 7 kW supply, the peak consumptions for four residences is  $4 \times 7 = 28$  kW).

For 50 and more residences the diversity factor is 0.38 so the peak consumption for 50 residences is  $50 \times 7 \text{ kW} \times 0.38 = 133$  kW. Thus the 52 000 MW generating capacity is enough to supply 19,5 million residences, more than enough. Even more, in general not all residences have a 32 amp supply. It is much more common for low income groups to have a 16 amp supply or less. There is naturally the problem of illegal electrical connections. Typically these are dangerous and often result in lethal electrocutions and fires.

In other countries, notably Mauritius and India, they have the whole matter of residential power supplies under control. Any residence, shack, house, caravan can apply for a 220 V supply with a 2 amp circuit breaker. This is about enough for a light and a fan but not enough for a cooker or heater. When you have paid for the 2 amp supply you don't ever need to pay again... unless you connect a load which causes the circuit breaker to trip. When this happens you have to wait until month end when the Municipality will reset the circuit breaker. You can

get a bigger supply, the next up being a 5 amp circuit breaker. For this you also only pay once. For more than 5 amps the electrical connection is on a prepaid meter basis. If there are any illegal connections the chief occupant of the connected residence is arrested and jailed, fined and released the following Monday. The system works well and is safe. This in complete contrast to South Africa where you need policemen and an armoured car with teargas to remove illegal electrical connections.

A good thought experiment is to try visualise the extent of the power system; millions of kilometres of high voltage power lines, medium voltage and low voltage lines. Hundreds of thousands of transformers and mini-subs. If you do this you will grasp that Eskom is no small thing. It is a big power system. You need lots of experience to run Eskom and only Eskom has that experience. When one considers the millions of people whose lives are made so much better by having an electricity connection to their dwelling place you have to be pretty much in awe of the whole system. While there is much criticism of Eskom it is not the whole of Eskom that is wrong – it's the management. And when the lights are on at home, we should be thankful.

## GUARANTEED POWER PROTECTION

What equipment in your office or data centre is critical to keep online?

Adopting smart uninterruptible power supply (UPS) technology has become the preferred course of action to take, especially in South Africa, where blackouts occur frequently.

Downtime caused by power outages is frustrating for anyone but can be financially crippling for a business or organisation. Every year, millions of rands are lost due to downtime caused by power disruptions that could have been prevented by a UPS. Small to medium-sized businesses may be most at financial risk due to a limited ability to generate revenue during downtime.

Schneider Electric's UPS offers guaranteed power protection for connected electronics. When power is interrupted, or fluctuates outside safe levels, the UPS will instantly provide clean battery backup power and surge protection for plugged-in, sen-

sitive equipment. It can be selected for home, office or even data centres and configured to provide a reliable source of power.

### Selection criteria

When selecting a UPS, electronics have both maximum watt ratings and maximum VA (volt-ampere) ratings. Neither rating may be exceeded by attached equipment. Watts measure real power drawn by the equipment, while volt-amps are the product of the voltage applied to the equipment times the current drawn by the equipment.

For computers and UPS units, watt and VA ratings can differ significantly. The ratio of watts to VA is called the power factor and is expressed either as a number or a percentage. When sizing a UPS for your specific requirements, the power factor matters most. Generally, your UPS should have an output watt capacity

20-25% higher than the total power drawn by any attached equipment.

Three-phase power protection, with fully integrated solutions, is needed for enterprise-wide networks, data centres, mission critical systems and industrial manufacturing processes.

### How much runtime do you need to support your attached equipment?

That depends on what you intend to backup with your UPS. Runtime refers to the amount of time a UPS will be able to power its attached equipment in the event of a power disruption. The more equipment you have plugged into your UPS, the less runtime you will have, so it is important to make sure your UPS is only providing backup power to your most critical equipment.

### Selecting features

- **Basic:** user-replaceable batteries;

surge-only outlets; building wiring fault indicator; transformer-block spaced outlets; automatic self-test.

- **Enhanced:** automatic voltage regulation; pure sine-wave output on battery; Smart-Slot; scalable runtime; power conditioning.
- **Advanced:** adjustable voltage transfer points; temperature-compensated battery charging; intelligent battery management; predictive failure notifications; plug-and-play external batteries.

Schneider Electric South Africa is leading the digital transformation of energy management and automation in homes, buildings, data centres, infrastructure and industries. It provides UPS power supply for homes, data centres and industrial environments. UPS power supply provides protection from power surges, blackouts

(load shedding) and unpredictable weather conditions.

Enquiries: +27 (0)11 254 6400



## WITS POWER UPGRADE CALLS FOR TRAFQ DRY-TYPE TRANSFORMERS

Dry-type transformer specialist Trafo Power Solutions has supplied four purpose-designed units to the University of Witwatersrand (Wits) as part of the institution's electrical infrastructure upgrades on both its Braamfontein and Parktown campuses.

According to Trafo Power Solutions managing director David Claassen, Wits decided to replace the original oil-cooled transformers with the dry-type, cast-resin transformers. These are safer and more environmentally-friendly due to the absence of oil in the system.

"The high safety factor associated with dry-type transformers has an impact on flexibility and cost," says Claassen. "The user can be more flexible in terms of where the units are installed, as they can be placed indoors, in basements or in other confined spaces for convenience. This also means the cost of building special infrastructure for outside installations – a requirement of oil-cooled transformers – can be avoided."

He highlights that Trafo Power Solutions was closely involved from



One of the 2500 kVA, 11 kV/420 V dry type transformers supplied to Wits by Trafo Power Solutions.

the proposal stage in this project, providing the necessary application engineering to ensure the appropriate design for the generator company responsible.

"As specialists in transformer technology, our expertise is not just in the product that we are installing but also in understanding the bigger picture – the infrastructure requirements as a whole," he says. "Any successful installation is a close collaboration between Trafo Power Solutions, the engineering company, the consultants and the contractors

to ensure that the final result is fit for purpose and serves the customer's need."

With the growing installed base of dry-type transformers in the global marketplace, the price differential between this design and that of conventional transformers has become insignificant. This has opened the door for users to take advantage of the numerous benefits of dry-type transformers, he says.

Enquiries: [www.trafo.co.za](http://www.trafo.co.za)



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**Certainty Through Certification**

## SIGNIFICANT ENHANCEMENTS TO ECOSTRUXURE POWER PLATFORM

**SCHNEIDER ELECTRIC**, a leader in digital transformation of energy management and automation, recently announced a significant evolution in its EcoStruxure Power architecture and platform, with the launch of its third-generation offering.

First announced in 2016, EcoStruxure Power is an IoT-enabled platform that digitises and simplifies low and medium-voltage electrical distribution systems. It provides actionable data to aid the decisions that help protect people, safeguard assets, maximise operational efficiency and business continuity, and maintain regulatory compliance.

This major new update builds on the existing set of digital applications that EcoStruxure Power delivers, with innovative enhancements that offer increased safety, efficiency, and reliability in power distribution.

### Leveraging the power of digitisation for electrical distribution

"EcoStruxure Power was originally conceived in response to our customers' requirements and expectations for a fully digitised power distribution system," said Philippe Delorme, Executive Vice President, Energy Management Business, Schneider Electric. "This latest evolution demonstrates our ongoing commitment to providing these customers with the most robust digital ecosystem on the market, and one that takes power distribution efficiency, reliability and safety to the next level."

### EcoStruxure Power – new customer benefits at a glance:

#### Safety:

Continuous Thermal Monitoring reduces the risk of electrical fires by signalling early detection of faulty connections and abnormal temperature rises within installations. By reducing or eliminating the need

for periodic thermographic inspections, total cost of ownership can be reduced by up to 60 percent throughout the lifecycle compared to traditional methods. Available for low-voltage as well as medium-voltage systems for comprehensive coverage of the power distribution infrastructure.

Active Arc Flash Protection is augmented with Easergy protection relays that have been updated with a built-in arc flash protection function and offer seamless integration into the edge control software EcoStruxure Power Monitoring Expert and EcoStruxure Power SCADA Operation. This is beneficial to maintenance operators who are responsible for keeping the risks associated with electrical safety/arc flashes to an absolute minimum.

#### Efficiency:

With the Energy Performance application, it is already possible to integrate Power Monitoring Expert with SCADA systems for optimised supervisory energy management. Now, however, Schneider Electric is harnessing the capabilities of EcoStruxure Power by partnering with world leading engineering technology providers, AVEVA. As part of this partnership, the company is integrating Power Monitoring Expert with AVEVA's industrial software – Wonderware, so facility managers can access important KPI data based on energy consumption activity to compare, benchmark and analyse energy data usage per process application. This makes it an ideal tool for sectors like automotive and consumer packaged goods.

PowerLogic™ PowerTag® is a robust energy monitoring system that provides complete visibility into how power is distributed by your electrical panels. The energy sensors fit directly onto the circuit breaker – wireless, self-powered, no tools required. Collecting information from

every circuit means always knowing which loads are using the most energy, so enhancing energy and operational efficiency.

#### Cybersecurity:

Easergy P5 protection relays, Easergy T300 remote terminal units, and the EnerlinX IFE switchboard server have all been reinforced, in line with Schneider Electric's stringent cybersecurity strategy, and in accordance with the established ISA/IEC 62443 global standard for the security of Industrial Control System networks.

The new EcoStruxure Cybersecurity Admin Expert is a comprehensive and intuitive cybersecurity configuration and policy tool for operational technology environments that enables system-wide cybersecurity policy management.

### EcoStruxure Power – software and services highlights:

EcoStruxure Microgrid Operation and EcoStruxure Microgrid Advisor are scalable, predictive software applications that take real-time control of distributed energy resources in order to better manage these resources, and to bolster resilience when faced with unpredictable grid conditions. What's more, these solutions propose operational scenarios and forecasts based on predictive algorithms, designed to optimise system reliability, energy efficiency and sustainability.

EcoStruxure Asset Advisor is a cloud-based digital service that evaluates live data from critical, connected electrical distribution assets and applies advanced analytics to identify potential threats. The Predictive service helps to manage asset performance and safety through predictive analytics. The newly launched Preventive service helps to anticipate maintenance and to manage day to day operations through smart alarming.



Achieve financial efficiency and secure operational excellence by minimising unplanned shutdown, monitoring energy consumption, and optimising maintenance budget.

EcoStruxure Power Advisor is an analytics-based suite of services for power management systems that optimises network reliability and increases the operational efficiency of services teams by finding and prioritising electrical network and data quality issues anywhere in the power distribution system. By sending automated, expert recommendations, facility teams can shift from non-productive hours to high value work via two core categories of analytics. Data Quality analytics provide insights and recommendations that establish a trustworthy data foundation and facilitate ongoing electrical network health. Electrical Network analytics detail system and trend summaries that identify weaknesses and propose mitigation solutions to prevent a detrimental impact on operations.

Enquiries: [www.se.com](http://www.se.com)

## GLOBAL TECHNOLOGY DRIVING THE FUTURE SOUTH AFRICAN MARKETPLACE

Today's global marketplace finds itself in the ever growing, ever evolving digital era. As a result of Industry 4.0 and its emerging technologies, the constant technological advances and innovations are considered great successes among many industries. First world countries often have the resources they need to keep up with the demands of this so called fourth industrial revolution, but what of the rest of the world?

The significance and importance of keeping up technological advances is highly evident, particularly within the realm of tertiary education. After all, institutions providing tertiary education are the very places that are training and guiding a large percentage of the future workforce of South Africa. As these graduates step out into the marketplace, they will be faced with the challenge of not only functioning but thriving within a wholly technologically driven world.

Acknowledging the importance of bringing global technology to South African tertiary education has motivated milestone achievements. One such accomplishment is the recent partnership between the University of Pretoria (UP) and Eiffel Corp (as the provider of Modo Campus in South Africa), to create the UP Mobile App.

The innovative UP Mobile App, built on the Modo Labs platform, offers students, staff and alumni an 'always-on', localised place to access all necessary and relevant information with ease. With a dedication to mobility and accessibility, the UP App features

unique benefits for students, including: online access to study material; navigation of campus grounds using Google Maps; and the power to connect with alumni for advice, support or mentorship, to name a few. For UP, the UP Mobile App empowers staff to access vital operational and HR documents, such as leave information and salary slips.

The UP Mobile App was officially launched at an event held at the University of Pretoria's Future Africa Campus on 13 August 2019. While addressing guests at the event, Stefan Du Plessis, Chief Commercial Officer at Eiffel Corp referred to the partnership as a step towards "...realising the potential of technology in furthering education."

Modo Campus is recognised as a leading platform within the global market. It was founded by a team from MIT and is currently trusted and used in over 30 countries by hundreds of companies, institutions and hospitals. The creation of the UP Mobile App on the Modo Labs platform marks a milestone as it is the first public university in South Africa to utilise this technology. As an enterprise-scale mobile and communication platform, the creation of institutional or corporate apps – without the need for coding skills – becomes easily accessible, and thereby perfect for all markets.

Dr. Wimpie Beeken, Information Technology Services Capability Development Management at the University of Pretoria, confirmed that

the partnership with Eiffel Corp was carefully considered and found to be the solution to UP's needs – delivering an affordable, cloud-based application. According to Dr. Beeken, UP chose to partner with Eiffel Corp rather than develop its own App, to save both time and budget.

"Our approach was that we would rather purchase than develop something that was our vision. When we engaged with Eiffel Corp and they presented the Modo Labs Solution (Modo Campus), we did a bit of our own homework and it showed us that Modo Labs has successfully been used across the globe at other universities. This partnership fit what we needed. This is a solution that is fit for purpose in the higher education space," he concluded.

Enquiries: [www.eiffelcorp.co.za](http://www.eiffelcorp.co.za)



Stefan du Plessis, Eiffel Corp's Chief Commercial Officer.

## FESTO INSPIRES WITH SMART DIGITAL SOLUTIONS AT THE AUTOMATION EXPO

**FESTO** hosted the first leg of the Automation Expo in Johannesburg at the Sandton Convention Centre, while the second took place in Port Elizabeth at the Boardwalk Convention Centre. Both ended on a high and promising note. The expos attracted numerous industry leaders, engineering professionals, senior executives and technology enthusiasts. On show were the latest smart solutions from Festo, aimed at increasing productivity, maximising competitiveness and simplifying life in the workplace.

Industry 4.0 is one of the most discussed topics as new technologies increase efficiency and escalate production in the industry. However, there are worries that these new technologies might increase the already high unemployment rate. As a result, Festo offered a course on 'Introduction to Industry 4.0: Core elements and business opportunities' to outline and educate industry professionals on how Industry 4.0 can enhance productivity in the workplace and improve efficiency.

Furthermore, four Festo industry specialists: Adrian Bromfield (head of national sales), Nico Landman (head of Didactic), Skye Prato (head of business development) and Russell Schwulst (head of process automation) engaged in a panel discussion and tackled some of the frequently asked Industry 4.0 questions.

As an industry leader, Festo constantly pursues advanced ways to ensure that its customers remain at the top. This is why it took the initiative to help customers move with the times by showing them how to go digital with the latest solutions. The company showcased solutions in its various business units namely pneumatic automation, electric automation, process automation and Didactic. An example of the showcased solutions was the Festo Motion Terminal (VTEM), which catapults pneumatics into Industry 4.0 with a product and apps that can replace over 50 individual components. VTEM is set to revolutionise automation technology and will arrive in South Africa later this year.

The Festo CP factory is another smart solution that was showcased. This holistic learning factory solution can be used to qualify personnel in the operation of a production process or in a specific field of work, such as production technology. VTEM and the CP Factory were among the many cutting-edge solutions on show, but what better way to end than with a German-themed cocktail function. Festo treated attendees in both cities to a glass of cold beer, a great way to get them networking with the industry specialists.

Enquiries: [www.festo.co.za](http://www.festo.co.za)





## AUGMENTED REALITY IN THE WORKPLACE

For the past three years, a consortium of six companies and institutions chaired by Siemens has been researching the use of augmented reality (AR) in industry. The aim of the project, known as Glass@Service, was to be able to use intelligent data glasses as personalised information systems by combining them with new types of interactions, such as eye and gesture control, and innovative IT services.

The first practical tests in actual production and logistics processes have now been successfully completed. Digitalisation is increasingly making its presence felt in manufacturing. In some areas, primarily when retooling machines and picking orders, employees are often still working with print-outs, printing stocks of labels for marking material, and laboriously recording all the data in the inventory control system at the end of the process. Investigations have therefore been in place for several years to assess the extent to which AR could be used in these areas.

However, it is only now that the technological components required for this, such as micro-displays, controller electronics, 3D cameras, and sensors, have become sufficiently sophisticated that they can be com-



combined to form an innovative human/machine interface and be integrated into the IT landscape of a manufacturing plant. "Siemens would like to play an active role in shaping this change to the workplace right from the start," explains FrankPeter Schiefelbein from Siemens Corporate Technology, the Siemens arm of the Glass@Service project.

The practical tests took place in the Siemens Electronics Factory in Amberg and at the Fürth manufacturing site. The AR system's software had to be specially adapted to the demands of each site. In logistics, the primary concern is to provide employees with warehouse orientation aids in the form of wearable devices and to identify, mark, and process the products online without error in the inventory control system. When retooling or maintaining machines, the data

glasses can provide invaluable assistance by showing each work step on the display and supporting the employee as he or she operates the machines. Eye movements are captured with an eye-tracking camera. It is therefore possible to interact with the system through specific control of the line of sight and, for example, to scroll through a data sheet or activate virtual buttons.

The possible AR applications in Siemens plants are being followed up through internal projects which should bear productive fruit in the medium term. Further research projects are to follow in the future so that other augmented reality application areas in manufacturing and service can be investigated based on experiences to date.

Enquiries: [www.siemens.com](http://www.siemens.com)

## RS COMPONENTS HIGHLIGHTED THE IMPORTANCE OF STEM EDUCATION AT EDUTECH 2019



The sixth annual Edutech Africa exhibition took place recently at the Sandton Convention Centre and saw more than 80 companies and start-ups showcase their education offerings to all in attendance. RS Components South Africa supported the event by exhibiting some of the latest STEM (science, technology, engineering and mathematics) education products on the market.

Brian Andrew, the managing director of RS Components SA said that these events are important as they highlight the need for STEM education in the country as well as show off the various projects and initiatives that are already making waves not only in Africa but globally as well. "Exhibiting at EduTECH Africa is a natural fit for us. The STEM education space is one that needs to be nurtured in our country and in Africa. We support many education initiatives annually and, along with our DesignSpark platform, we hope to influence many more people to be as involved with and in this industrial revolution shift that we are now in. We are very proud of our DesignSpark platform which is an online technical community for engineers, students and creators around the world with more than 750 000 members, who can be of assistance to those working on real-world applications," he said.

Andrew also added that DesignSpark offered free software tools for users. "The software has an integrated library of components that comprises more than 250 000 components and parts, which can easily be added to customer designs. We want to encourage more

people to enjoy the benefits of this free-to-use platform," added Andrew.

Limaine Pungan, Education Business Development Manager for RS Components South Africa addressed those in attendance on the importance of STEM education in South African schools. "Stem education plays a vital role in the development of our future leaders. It is imperative that teachers, community leaders and parents nurture the interest of science, technology, engineering and mathematics to the youth. Yes, a majority of our schools in the country are not fully able to teach coding, engineering and robotics to our kids. However, there are so many free resources online such as DesignSpark that will assist learners get up to speed. Google also offers free courses and so does Youtube. We need to encourage the youth to ask the right questions and become more involved in the fourth industrial revolution," he said.

This year's EduTECH Africa event explored the latest technology in education giving educators and lecturers the opportunity to transform from their classroom experience and deliver more engaging lessons to students. The event also provided attendees opportunities to learn and get insights during the many seminars that took place throughout the show hosted by industry experts. Topics being covered include: Getting started with EdTech tools, Robotics in the classroom, How to protect data, Gamification and SEN Technologies among many others.

Enquiries: +27 (0)11 691 9300

## EVRT AFRICA SEES GOVERNMENT AND INDUSTRY WORK TOGETHER IN ELECTRIFICATION, AUTOMATION AND CONNECTIVITY

As technology continues to shape and reshape our everyday lives, new trends cause shifting customer expectations to place new demands on the automotive sector as well as on government. The two both have a role to play in paving the way for a new era of electrification, automation and connectivity, says Kabelo Rabotho, Marketing Director, Nissan South Africa.

Nissan South Africa and Generation.e in conjunction with the Department of Transport and Gauteng Provincial Government, will be embarking on the trip between Johannesburg and Cape Town. Rabotho said, "Nissan's participation in embracing a safe and reliable mode of transport in October Transport Month is both, a pledge and vision for EVs to one day be a holistic reality to transition to smarter and electric mobility for all South Africans."

Electric Vehicle Road Trip (EVRT) Africa embarked on the road trip from October 3 to October 10 on the back of the Smarter Mobility Africa conference which kicked off on October 1 – where captains of industry from public and private sectors to collaborate, connect and accelerate the transition to efficient and effective, zero-emission mobility. Delegates were treated to keynote presentations, case studies, expert panel discussions, peer-to-peer roundtables and immersive electric vehicle experiences.

Intelligent transport systems and services are the backbone of smart mobility and a cornerstone of a smart city which works to harness the power of technology in order to improve service delivery and quality of life through the use of sustainable solutions Rabotho adds.

"These systems and services use technology as a means through which to improve performance, safety, mobility and environmental sustainability." Ben Pullen, Generation.e co-founder and CEO says the EVRT Africa initiative is a gateway towards strengthening the local economy as the adoption of electric vehicles offers an opportunity for SMME development. "With the correct information and support, the expansion of this industry can create opportunities for local entrepreneurs to develop their skills in a variety of areas such as the manufacture of lithium battery components, the installation of charging stations which can be increasingly powered by renewable energy such as wind and solar."

Throughout EVRT Africa, Nissan will have various activation stands along the route using the LEAF 2.0, ranging from Port Elisabeth, Nelson Mandela University and Cape Town where guests are invited to an EV stands powered by Nissan Energy and ride and drive test drives.

One year ago, Transport Minister Blade Nzimande together with his Deputy Sindisiwe Chikunga launched and signed the Green Transport Strategy into law. Nzimande said the strategy aimed at promoting an environment friendly transport system and help boost economic growth as well as creates jobs.

The minister has continued to urge both the public and private sector including the automobile manufacturers to work together with government in reducing the ever-increasing carbon dioxide emissions.

"Through this strategy, we aim to promote green mobility to ensure that the transport sector supports the achievements of the economic growth targets whilst protecting our environment. As we know, transport is the driver of socio-economic development, but of course, our carbon footprint continues to grow at a highly unacceptable level."

Enquiries: +27 (0)12 529 5000

## INDUSTRY 4.0: MANUFACTURING EXECUTING SYSTEMS

Industry 4.0 is set to lead the way for digitisation of manufacturing processes. Manufacturing Executing Systems (MES) are a critical component of Industry 4.0 as they act as an enabler for end-to-end digitisation.

Manufacturing Executing Systems are information systems that control complex manufacturing processes on the factory floor. MES achieves this by tracking and gathering accurate, real-time data about the production lifecycle. The data which is collected is about product genealogy, performance, traceability, material management, WIP and other plant activities. The importance of the MES lies within its functionality as it serves as a layer between the enterprise resource planning (ERP) and the process control systems on the factory floor, giving manufacturers real-time workflow visibility and insight into how best to improve manufacturing operations across the enterprise.

Industry 4.0 dictates the end of traditional centralised applications for production control. Industry 4.0's vision of ecosystems of smart factories with intelligent and autonomous shop-floor entities is inherently decentralised. A new environment is created due to customer demands for tailor-made products. These plants are fuelled by technology enablers such as 3D printing, Internet of Things (IoT), Cloud Computing, mobile devices and Big Data. Future manufacturing systems, including MES, will have to be built to support this paradigm shift.

Enquiries: [www.s4.co.za](http://www.s4.co.za)



## LAUNCH OF PRESS ON/OFF PROGRAMMABLE ROTARY DIMMER WITH MULTI-WAY DIMMING

SHUTTLE LIGHTING has announced its highly anticipated Press On/Of Programmable Rotary Dimmer, designed to equip electricians with a certified rotary dimmer that integrates Shuttle's bell press dimmer functionality and industry leading capabilities.

Designed and manufactured in South Africa to provide optimised dimming of LED-based lamps and drivers, this high quality, universal rotary dimmer can be connected to an open bell press switch for two or multi-way dimming. Although optimised for LED lighting loads, the dimmer also provides excellent compatibility with other common lamp types such as incandescent and halogen lamps.

To enhance compatibility with the ever-increasing range of lighting options now available to customers, Shuttle Push On/Off Rotary dimmers are programmable by pressing the rotary switch at 0.5s intervals.

### Basic programmable setup functions:

#### Specifications:

Nominal operating voltage	190-253 V ac, 50 Hz $\pm$ 5%
Dimming method	Trailing or leading edge
Minimum Load Power	2 W Resistive
Maximum Load	Visit <a href="http://www.shuttlelighting.com">www.shuttlelighting.com</a> for loads and compatibility
Rating	225 W

Setup functions	Description
Minimum brightness	If an LED lamp becomes unstable at low dimming levels, it can flicker or pulse on/off. The dimmer's minimum brightness can be set to a level above the point at which a lamp flickers/pulses.
Maximum brightness	the maximum brightness level provided by the dimmer can be set to suit customer requirements.
Minimum brightness lower than factory default	the minimum brightness level of the lamp can be set to lower than its factory default.
Trailing or leading edge	the dimmer ships in trailing edge mode which suits most dimmable lamps. It can be set to leading edge if required.

Shuttle Lighting Control Systems (Pty) Ltd is a worldwide technology leader that has built a line of 100% silent and smooth dimming products. The company's distinctive dimmers are flicker free, can dim to the lowest point and have multizone capability

Shuttle Lighting is headquartered in Cape Town, where all its products are manufactured, and its technical research and development team operates from the Pretoria Laboratory.

Enquiries: +27 (0)21 448 8229

## CHANDELIER LIGHTING DONE RIGHT

### Space matters

Proportion is everything when it comes to selecting the right chandelier for a room. The diameter of the chandelier matters a lot and can impact on how the fixture is perceived in a space. To calculate the ideal diameter, add the width of the room to the height of the room (using metres). Now times that number by 10. This will give you the ideal diameter in centimetres. If you're still unsure, it's better to have a chandelier that is slightly too big as opposed to one that is too small.

### Hang it right

Chandeliers suspended above dining tables or kitchen islands

should hang 76 cm to 92 cm above the tabletop. This measurement is taken from the bottom of the chandelier to the countertop. If you're hanging a chandelier in the living room or entrance hall, aim for at least 2 m from the bottom of the chandelier to the floor. To adjust the height of your chandelier, use pliers to remove links in the chain and coil up the extra electrical wire in the ceiling housing. Chandeliers without chains can be adjusted by doubling up the cord to shorten the length thanks to a sliding mechanism.

### Classic vs. Modern

The design of chandeliers has evolved over the years and they're now available in a range of styles and designs and have become

generally more affordable to the public. If you're going for a more traditional look then a classic chandelier is your best bet. This style of chandelier usually has suspended crystal prisms that illuminate the room with refracted light. If contemporary decor is more to your taste, then a modern chandelier is more suitable. This style of chandelier is usually minimalist in design with a simple silhouette and offers direct light, often using LED lamps. Classic chandeliers work well with warm white bulbs to produce a slightly golden glow, while cool white bulbs suit modern chandeliers and offer a light similar to that of daylight.

Enquiries: [www.radiant.co.za](http://www.radiant.co.za)

## EXTENDED TRUNKING SYSTEM PORTFOLIO FOR ADVANCED INDUSTRIAL LED LIGHTING

LEDVANCE'S trunking system, which goes by the name of TruSys, provides one amongst numerous specific LED lighting solutions for industrial use. With the extension of the portfolio by the new TruSys Perfor-

mance, Ledvance expands its wide range of attractive lighting solutions for factories, workshops and warehouses even further. The luminaires in the TruSys Performance series offer a very high system efficacy and life span, as well as quick and easy installation and a good price-performance ratio.

In the industrial environment, lighting can be quite complex and faces particular challenges: a well-balanced illumination and an optimal brightness level are essential for the establishment of a safe, comfortable and productive work environment. At the same time, lighting in industrial applications is made for long operating hours. Therefore, lighting systems in this application area should be highly flexible, so that they can be quickly and easily adapted to the complex conditions and layout changes, minimising potential production downtime. The new TruSys Performance luminaires, the latest addition to the TruSys product family of trunking systems from Ledvance, are optimally suited for those requirements. The luminaires can be mounted quickly and easily without any additional tools through click into place solution and the smart click buttons also provide more comfort for demounting.

### Three different models

The expansion of the existing TruSys product family consists of the three different models TruSys Performance On/Off, TruSys Performance DALI (Digital Addressable Lighting Interface) and the TruSys Performance EM (emergency). All of the new luminaires generate up to 11 200 lumens with a colour temperature of 4 000 Kelvin. Additionally, they have a very high system efficacy of up to 160 lumen per watt and an above average lifespan L80/B10 with up to 60 000 hours. Besides the TruSys Performance On/Off, Ledvance also launches the TruSys Performance DALI model, which is dimmable and offers the possibility to add connectivity and intelligence to the luminaires as they can be extended with external presence and daylight sensors, enabling daylight and occupancy-dependent operation. This version is compatible with a

central battery system for emergency lighting. The third model, the TruSys Performance EM, provides an emergency lighting option for self-contained operation, and is applicable as single luminaire solution designed for three hours of operating time in the event of a power failure. Ledvance provides a three-year guarantee for all three models.

With four beam angles (very wide 120°, wide 90°, narrow 60°, very narrow 30°) and three different lumen packets (5 600 lm, 8 000 lm or 11 200 lm) the TruSys Performance series can cope with different heights up to 10 m in industrial buildings as the luminaires provide the required illuminance and uniformity defined in the process of lighting. Trunking system luminaire modules featuring narrow-beam optics, for example, can be used in high-bay warehouses with high ceilings to illuminate the shelf fronts with at least 200 lux on average, while wide-beam optics are ideal for workshops or factories with low ceilings as they provide uniform illumination.

### New features offer even more advantages

The new Ledvance TruSys Performance portfolio offers various additional advantages. It does not only convince by a great price/performance ratio, but also by an even easier mounting and dismounting. Like the existing trunking system from Ledvance, the Performance models also consist of mounting rails and extremely flat linear luminaires, which can be quickly clicked into place - as a continuous or intermittent lighting strip. The difference lies in the material of the housing and the diffuser. The housing of the existing luminaires portfolio is made of lightweight anodized aluminium, the housing of the new models comes in high-quality steel sheet. Also, the material of the diffuser has been upgraded from PC to tough and lightweight PMMA, resulting in a better performance in terms of UV-resistance and efficiency.

### Matching energy rail and accessories

Besides the three versions of 1.5 m long high-quality luminaires, the new Ledvance TruSys Performance portfolio also consists of matching 1.5 and 3 m long energy rails and a selection of the most frequently used accessories. A well-organised cable system, with 5 and 8 pole options, as well as a mechanical and electrical connector for easy mounting are included in the energy rail. Part of the Performance portfolio are also two 1.5 m energy rails (END), 5 and 8 pole, to close a line seamless. The set of accessories consists of different types of quick-fix brackets for mounting rails on ceiling or grid ceiling surfaces, as well as adjustable ropes or brackets plus hook for the suspension mounting of energy rails. The mounting brackets are recessed in the rails and therefore almost invisible from the outside, which adds to TruSys' clean appearance. Blind covers serve the purpose to cover a gap in the light row.

Enquiries: [www.ledvance.com](http://www.ledvance.com)

## INTRODUCING

### NGB - LED

FLOODLIGHT · BULKHEAD · HIGHBAY

Available in  
7 wattage options  
ranging from  
30W - 102W



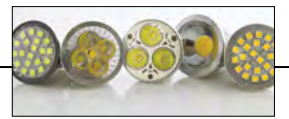
The NGB - LED luminaire range is a high-performance industrial luminaire designed to replace the conventional HID lamps which makes it energy efficient with high performance, low maintenance and longer life span. It's suitable for wall, ceiling, bracket and pole mounting. The NGB - LED continues the proud heritage of NORDLAND LIGHTING's quality standards.



NORDLAND LIGHTING®

tel: +27 010 442 2809  
email: [sales@nordland.co.za](mailto:sales@nordland.co.za)  
web: [www.nordland-lighting.com](http://www.nordland-lighting.com)  
f @1Nordland  
in Nordland Lighting

address:  
70 Driefontein Road  
Muldersdrift  
Gauteng



## ENLITE HAS CHANGED TO AURORA LIGHTING GROUP

After five years of success, Enlite, the LED lighting brand established by the Aurora Lighting Group, has been rebranded Aurora from September 2019.

The Aurora Lighting Group is an international LED lighting and technology organisation – renowned globally for its quality, reliability and service – servicing the residential, commercial, industrial, retail and hospitality sectors. Combined with award winning marketing and distribution, the Group serves customers through a global network in more than 70 countries.

“Five years ago, Enlite was launched by the Aurora Lighting Group in response to market changes,” explains Andrew Johnson, Founder and CEO of the Aurora Lighting Group. “Big performance, high quality and great value are what Enlite stands for, and these qualities have led to sales far exceeding expectations, with the range quickly becoming the number one choice for contractors and specifiers alike.”

From its market leading fire rated downlights to the popular Aria™ Pro highbays, Enlite products are now installed in thousands of homes and businesses around the world. During this period, Aurora continued to push boundaries and innovate, becoming a globally recognised leader in smart connected lighting that provides exceptional Value Beyond Illumination™.

## GET YOUR CITY READY FOR THE FUTURE WITH PHILIPS ROADCHARM ROAD LIGHTING



Developed with the aim of becoming your long term partner, the system-ready architecture of RoadCharm enables you to enjoy the benefits of connected lighting systems and gets the city ready for future innovations.

It is designed to achieve better light uniformity and maximum spacing between poles for both pedestrian and vehicle road applications. With its die-cast aluminum housing and Philips LED platform, it is easy to maintain, has a long lifetime and a consistency you can count on. It also offers two housing sizes and a range of beam optics to fully cater to different road configurations and conditions. RoadCharm offers 50% energy savings compared to conventional lamp systems, making it the perfect sustainable lighting solution for any emerging metropolis.

### Benefits

- Up to 50% energy savings: Uses significantly less energy than conventional street lighting solutions.
  - Ease of maintenance: Tool-less opening of gear compartment and gear tray replacement.
  - Long fixture lifetime: Solid die-cast housing design with Ingress (IP) and Surge protection.
  - Long system lifetime: Excellent thermal management that reduces early failures
- The RoadCharm was a recent winner of the prestigious Red Dot award.

Enquiries: [www.signify.co.za](http://www.signify.co.za)

To continue on the back of both Enlite and Aurora's successes, and to assist our customers with the sale and promotion of these products in South Africa and internationally, our extensive product range and the AOne™ smart platform is being driven through one brand: Aurora Lighting.

“Bringing all our lighting products together enables greater focus, meaning there's one brand, one catalogue, one website, making our entire product portfolio easily accessible. Therefore, from October 2019, all our Enlite products have been rebranded under Aurora. The product and part numbers will remain the same, just the brand has changed. In addition, look out for new exciting products to be launched in October,” says Johnson.

Enquiries: +27 (0)11 234 4878



Andrew Johnson, Founder and CEO of the Aurora Lighting Group.

# LED SWITCH and SAVE

Soft Hue

Regular LED

BASE B22

**6W**  
≈ 230V | **LUMENS 620**

**Soft Hue Filament LED**

300° Beam Angle  
15 000 hours  
Warm White

2 YEAR WARRANTY

**Make the conscious choice** and reduce 80% electricity, running costs and harmful pollutants by switching to the ultimate in energy efficient lighting on offer in our range of high quality LED lamps.

**80%** Electricity Saving  
Less Running Costs  
Less Pollution

With a retrofit option to suit your specific needs, being environmentally conscious has never been easier.

**Features:**

- WARM WHITE or COOL WHITE
- HIGH BRIGHTNESS
- DIMMABLE & NON-DIMMABLE
- 15 000 or 25 000 HOURS

BASE GU10    Also available: E14 & B22    Also available: E27    Also available: E27    Also available: B22

Mosquito Repellent

0% MERCURY

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**eurolux**  
Lighting your way



## VETI STRIP LIGHTS: ELEGANCE, QUALITY AND VERSATILITY

LED strip lights are versatile and flexible lighting strips that fit in with almost any architectural style and decor, from small rooms to entire buildings. Today's strip lights offer a range of illumination choices, from soft lighting to enhance the ambience of a room, to powerful lighting that can illuminate an entrance hall or even an auditorium.

Provided on a narrow, flexible circuit board on which LED emitters are mounted, strip lights are normally supplied in rolls, which the installer will cut to fit each project. Exact cut lengths vary from strip to strip, depending on the project requirement and VETi has a wide range of options to choose from in its Professional range.

The brightness of a strip light can vary, depending on the output and efficiency of each LED emitter, the number of LEDs per metre and the power draw of the strip. It is therefore essential that high-quality strip lights be chosen for reliable performance in the long term.

VETi's range of professional strip lights is designed to the highest quality standards to ensure they deliver consistent performance and a long lifespan. The company offers different strip lighting products in its Professional range, all with a five-year guarantee. All the strip lighting products are built to the quality standards VETi is renowned for.

The strip lights are available in rolls rated from

IP20 up to and including IP67, depending on requirements. An IP20 rating means the product is protected against solid particles sized 12.5 mm and larger. IP65 means the product is 'dust tight' and is protected from water, such as rain, fire sprinklers or an errant hosepipe. IP67 products are dust tight and protected from water, including immersion up to a depth of one metre. The strips are supplied in a silicone tube or full silicone extrusion, which ensures a longer life and less chance of discolouration than standard PVC tubes.

The LEDs are powered by a 24 V dc power adapter and customers can easily automate the tone and effects of their lighting by using automation

controllers, such as those available from Major Tech.

Moreover, running the strip lights on dc power allows for a longer life, hence lower maintenance costs from prematurely failing LEDs. Using dc power for strip lighting will also reduce the possibility of lumen (Lm) depreciation, and the LEDs will hold their colour for longer.

### The Elite Series

The VETi Elite Series of strip lights provides for an extremely high lumen output and delivers benefits such as a high CRI (colour rendering index), high efficiency and brightness, and superior quality to ensure it can be effectively used in high-end projects.

As a top-of-the-range strip lighting product, the Elite Series promises a long lifespan for the LED strips to ensure the installation requires minimal maintenance, lowering the costs over the working life of the LEDs. This series can be used in almost any setting as it can produce between 2 400 Lm and 4 550 Lm per metre.

### The Eco Series

The VETi Eco Series is an eco-friendly, high quality strip lighting range. The strips are designed for low power consumption, but deliver maximum brightness and crisp colours. This series is primarily aimed at decorative lighting, but owing to its broad range of lumen output (300 Lm to 1 200 Lm per metre), it can also be installed in locations where bright lights are required.

### The Power Series

The VETi Power Series fills the gap between the Elite and Eco series, producing illumination of between 1 400 Lm and 2 400 Lm. The series delivers a high CRI, stable performance and unrivalled colour matching.

### The Toning Series

To set the tone of any location, be it a bar, entertainment venue or personal space, the VETi Toning Series has been designed to deliver almost any colour and lighting effect the customer may desire. A variety of colours is available to suit any environment, from a commercial setting to personalised tastes.

### The Vario Series

The Vario Series offers customers the versatility to customise lighting to specific environments. The LEDs in this series can be directed in different directions as the LEDs are side mounted on the PCB. The series is designed primarily for decorative lighting where specific angles are desired.

The VETi range of strip lights is aimed at the most discerning customers. As testament to this, the Eco and Power series have been specified for use throughout The Leonardo in Sandton. This mixed property development comprises luxury apartments and penthouse suites as well as premium grade offices. Apart from being one of the most luxurious and elite buildings in the country, The Leonardo is also the tallest building in Africa, standing 55 stories above Sandton and the Nelson Mandela Square.

VETi also provides a broad range of quality Aluminium profiling channels for its strip lights. Because the range is aimed at project work, the profiling is not held in stock but must be ordered to meet the specific requirements of each project. Many of the VETi lights used at The Leonardo have been enhanced with custom-designed profiling to add a stylish finish to the luxury complex's lighting installation.

Enquiries: [www.vetionline.co.za](http://www.vetionline.co.za)

## LED PERFORMER HIGHBAY 4

## LED ECOMAX WATERPROOF 2

# OPPLE

LIGHTING

OpplMEA.com



## APPLICATIONS



## BENEFITS

- Easily replace conventional fixtures
- Accommodate various applications
- Adaptive in rough environment
- Quick installation

## FEATURES

- Multiple power options available
- Long lifetime up to 70,000 hours
- IP 66 Protection Rating
- High efficacy
- Flicker free and high performance

Unit C3, Gantry Lifestyle Centre  
Fourways, SA

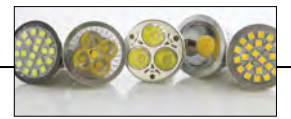
+27 11 465 1651

[willem.venter@opple.com](mailto:willem.venter@opple.com)



OpplLightingMEA





## NEW LED WALL BOX DIMMERS

After increasing demand from the South African market, Spazio Lighting has announced the launch of its own range of high quality dimmers. These dimmers are compatible with a wide range of LED lamps and, most importantly, they are guaranteed to be compatible with all Spazio dimmable LED lamps. The range consists of two new dimmers:

The Preset dimmer is the most compact dimmer

### DECORATIVE LED LIGHTING SOLUTION FOR BATTERY PARK, V&A WATERFRONT

BEKA SCHRÉDER supplied the decorative LED lighting solution for Battery Park, a new urban park that forms the gateway to the V&A Waterfront, integrating Cape Town's CBD and the V&A Waterfront through a series of pedestrian routes. Against the backdrop of Table Mountain, visitors to the park are able to engage in a range of outdoor recreation, entertainment and retail activities on various levels of public space. The site, which contains the rear ramparts of the historical Amsterdam Battery – one of the oldest structures in Cape Town – is also of archaeological importance.

Within Battery Park there is a free public skate and scooter park. It is the first skate park built within the city to world class skate park standards and using lightweight construction. The multi-court is suitable for basketball and mini soccer games, and with adjustable hoops it is accessible to younger players.

#### Lighting solution

With their aesthetic appeal and good performance, BEKA Schröder's ZELA post top LED luminaires and LEDpost bollards were the luminaires chosen. The elegant ZELA, with its timeless shape, is ideal for applications where energy saving, low maintenance and precise light control considerations are important factors. This LED post top emits a pleasant, glare-free light, making it the perfect luminaire for architectural spaces. The ZELA offers a cost-effective lighting solution for the creation of ambience.

The BEKA LEDpost bollard with its distinct design incorporates a highly efficient LED light source. Light pollution is avoided because no spill light is emitted upwards. The easy-to-install, low maintenance LEDpost offers energy savings of up to 70%.

BEKA Schröder locally develops and manufactures LED lighting products, designed and suitable for African conditions. The company is proud to be associated with Element Consultant Engineers in providing a successful decorative LED lighting solution for this prestigious project.

Enquiries: +27 (0)21 510 8900



The BEKA LEDpost guides the way in Battery Park at the V&A Waterfront.

currently available in the market, measuring only 37 x 34 x 12 mm. The dimmer utilises Trailing Edge technology making it compatible with all resistive and capacitive loads. It is specially designed to dim a very wide range of LED lamps and all 230 V halogen or incandescent lamps. It is very important to note that trailing edge dimmers are not suitable for any magnetic loads. The Preset dimmer is operated by a simple bell press switch and this can be controlled from multiple bell press switches by simply wiring the two control wires parallel to one another.

The Adjustable dimmer is a high end solution for professional installations where clients demand maximum control of their lighting. It

offers a few unique features which until now have not been available in wall box dimmers in South Africa. You can set a default state that the dimmer returns to after a power failure. This is a very useful feature given the status of South Africa's electricity supply. This dimmer also has a memory function, so it can be set either to turn on at the previous level or it can be set to turn on at maximum intensity or minimum intensity. Finally, you can also adjust the speed at which the dimmer adjusts the light level.

This dimmer also utilises Trailing Edge technology making it compatible with all resistive and capacitive loads. It is smaller than most wall box dimmers available locally, especially if you

consider that it is rated for 400 W resistive and 250 W LED. The dimmer is operated by a simple bell press switch and this can be controlled from multiple bell press switches by simply wiring the two control wires parallel to one another.

Spazio feels confident these dimmers will set a new standard for dimmers in the market. Not only are they of high quality, but they are also extremely well priced; the Preset Dimmer is the cheapest true LED dimmer currently available in South Africa.

This exciting new range of products is available from all leading Spazio distributors throughout the country.

Enquiries: [www.spazio.co.za](http://www.spazio.co.za)

# LED DIMMERS

## BEST TACTILE DIMMERS FOR WALL BOXES

ACTUAL SCALE

### PRESET DIMMER

LED DIMMER WITH MIN. AND MAX. RANGE PRESET FOR WALL MOUNTED BOXES TO BE CONNECTED TO PUSH SWITCHES.

**MAXIMUM LOADS:**

LED	150W
HALOGEN	300W

**R 310**

ACTUAL SCALE

### ADJUSTABLE DIMMER

LED DIMMER WITH ADJUSTABLE DIMMING OPTIONS FOR WALL MOUNTED BOXES TO BE CONNECTED TO PUSH SWITCHES.

**ADJUSTMENTS:**

- MINIMUM VOLTAGE
- MAXIMUM VOLTAGE
- DIMMING SPEED
- MEMORY ON/OFF

**MAXIMUM LOADS:**

LED	250W
HALOGEN	400W

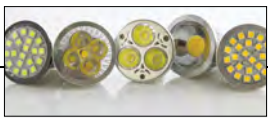
**R 410**

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CENTRAL SWITCHBOARD



**AFFORDABLE.  
QUALITY.  
LIGHTING.**



## NEW PRODUCT RELEASES FROM TRIDONIC

TRIDONIC has a long history as a pioneer in electronic component solutions for the lighting industry. As a partner for components and systems, the company has a permanent presence on the lighting market. Tridonic's components are perfectly matched to one another and offer a high level of reliability and safety for your applications and projects.

The company's extensive portfolio includes LED light sources and LED drivers, electronic lighting control gear, emergency lighting units and digital lighting control systems. The high proportion of new products in its portfolio indicates a high level of innovation, including the two recently released products.

### Tridonic completes its portfolio of SceneCOM hybrid controls solutions

With the introduction of the SceneCOM 'S' (in addition to the existing 'L' and 'XL' versions) Tridonic now offers a full portfolio of hybrid control systems. All SceneCOM versions have a wired part (connecting DALI drivers, – sensors and – power supplies on 1 to 3 DALI lines) but can be wirelessly programmed with an App on a tablet, allowing the programming on site to be done when waking around. The various SceneCOM lighting management systems provide perfect light 24 hours a day. SceneCOM combines individuality, safety and dynamics and has been designed primarily for use in offices, hospitality situations, and educational facilities.

### Tridonic's Flex tape Excite 2 offers High Output versions

LED tape has many applications and there are hundreds of suppliers offering a wide array of products, with a high variation in performance and quality. The second generation of Tridonic's Excite flex tape offers versions with an extremely high light output per metre, up to 4000 lm, with a CRI of 90. The LED tape offers a continuous PCB, is being produced using the reel2reel method and does not require any solder points at all, ensuring a high quality and easy to use solution. Due to IC control every 5 cm the Excite 2 flex tape offers a constant luminous flux over long distances.

Enquiries: +27 (0)11 894 3525



## THE NEW STREET LIGHTING ECOSYSTEM

Today, as connected replaces conventional lighting, the familiar street light is becoming an innovation platform. And with the base of urban connected street-lighting poised to grow six-fold over the next five years, connected lighting has outgrown its anchor function of saving energy. It's now emerging as the technological foundation of an entire ecosystem of urban projects that will transform how city dwellers inhabit their environments.

Smart lighting provides the perfect infrastructure for the urban Internet of Things. Light poles can sufficiently power a wide array of IoT devices, and they're already distributed across the cityscape. The fact that they're typically positioned above the street means that they're well-positioned to host sensors that track movement across, and a range of conditions within, an urban area. In these ways, citywide connected lighting is ideal for hosting a communications network that can support IoT applications both today and into the future.

So far, so good. Yet making the smart lighting ecosystem work requires the coordinated efforts of numerous stakeholders, including engineers, systems integrators, street-lighting vendors, IoT vendors, and communications service providers – not to mention municipal authorities. So it's crucial to work with a vendor that can cover a number of the competencies that establishing a connected lighting system demands.

An ecosystem that can change and grow, moreover, is one more likely to please the ultimate stakeholder in a connected lighting project: the public. Citizen buy-in becomes increasingly important to smart city initiatives as public knowledge about these initiatives grows – and as empowered citizenries in "world cities" around the globe become even more scrupulous about the projects that affect their communities. In a sign of the times, Wales' capital, Cardiff, actually polled residents before selecting the light temperature for its new LED street fixtures.

Building a citywide connected street lighting network is an integral step towards creating a communications network that can support IoT applications today and into the future. It's also a planning- and labour-intensive initiative that requires coordination between a range of stakeholders. Given all the moving parts, you have the best chance of success if you enlist a vendor that can offer a wide range of competencies.

Enquiries: [www.lightingsummit.com](http://www.lightingsummit.com)



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# UPCOMING INDUSTRY EVENTS

**NOV**

**Electric fence Installer course**  
**WHEN:** 4-5 November  
**WHERE:** Wadeville, Germiston  
**MORE INFORMATION:** [www.pandttechnology.co.za](http://www.pandttechnology.co.za)

**ORHVS course**  
**WHEN:** 4-8 November  
**WHERE:** H.V. Test training centre, Randburg  
**MORE INFORMATION:** [www.hvtraining.co.za](http://www.hvtraining.co.za)

**KNX building automation (advance course on request)**  
**WHEN:** 4-8 November  
**WHERE:** Wadeville, Germiston  
**MORE INFORMATION:** [www.pandttechnology.co.za](http://www.pandttechnology.co.za)

**Electric fence installer course**  
**WHEN:** 6-8 November  
**WHERE:** ECA(SA) Head Office, Germiston  
**MORE INFORMATION:** [www.ecasa.co.za](http://www.ecasa.co.za)

**CoC course**  
**WHEN:** 12 November  
**WHERE:** ECA(SA) Head Office, Germiston  
**MORE INFORMATION:** [www.ecasa.co.za](http://www.ecasa.co.za)

**Cable Fault Location course**  
**WHEN:** 13-15 November  
**WHERE:** H.V. Test training centre, Randburg  
**MORE INFORMATION:** [www.hvtraining.co.za](http://www.hvtraining.co.za)

**Inspect, test and certify and single phase electrical installations course**  
**WHEN:** 16-18 November  
**WHERE:** Wadeville, Germiston  
**MORE INFORMATION:** [www.pandttechnology.co.za](http://www.pandttechnology.co.za)

**CoC course/Units Standards**  
**WHEN:** 18 November  
**WHERE:** ECA(SA) Pretoria office  
**MORE INFORMATION:** [www.ecasa.co.za](http://www.ecasa.co.za)

**Cable Jointing and Terminations course**  
**WHEN:** 18-20 November  
**WHERE:** H.V. Test training centre, Randburg  
**MORE INFORMATION:** [www.hvtraining.co.za](http://www.hvtraining.co.za)

**ID & Spiking course**  
**WHEN:** 25-26 November  
**WHERE:** H.V. Test training centre, Randburg  
**MORE INFORMATION:** [www.hvtraining.co.za](http://www.hvtraining.co.za)

**Earthing and Bonding course**  
**WHEN:** 26-27 November  
**WHERE:** ECA(SA) Head Office, Germiston  
**MORE INFORMATION:** [www.ecasa.co.za](http://www.ecasa.co.za)

**Solar PV course**  
**WHEN:** 28-29 November  
**WHERE:** ECA(SA) Head Office, Germiston  
**MORE INFORMATION:** [www.ecasa.co.za](http://www.ecasa.co.za)

**Cable Diagnostics course**  
**WHEN:** 28-29 November  
**WHERE:** H.V. Test training centre, Randburg  
**MORE INFORMATION:** [www.hvtraining.co.za](http://www.hvtraining.co.za)

**DEC**

**ORHVS course**  
**WHEN:** 2-6 December  
**WHERE:** H.V. Test training centre, Randburg  
**MORE INFORMATION:** [www.hvtraining.co.za](http://www.hvtraining.co.za)

**Cable Diagnostics course**  
**WHEN:** 9-10 December  
**WHERE:** H.V. Test training centre, Randburg  
**MORE INFORMATION:** [www.hvtraining.co.za](http://www.hvtraining.co.za)

**Cable Jointing and Terminations course**  
**WHEN:** 11-13 December  
**WHERE:** H.V. Test training centre, Randburg  
**MORE INFORMATION:** [www.hvtraining.co.za](http://www.hvtraining.co.za)

**Cable Fault Location course**  
**WHEN:** 17-19 December  
**WHERE:** H.V. Test training centre, Randburg  
**MORE INFORMATION:** [www.hvtraining.co.za](http://www.hvtraining.co.za)

Planning any training courses or events for 2020? Publicise them in the monthly *Sparks Electrical News* Industry Events page. Email the event details to [sparks@crownc.co.za](mailto:sparks@crownc.co.za)

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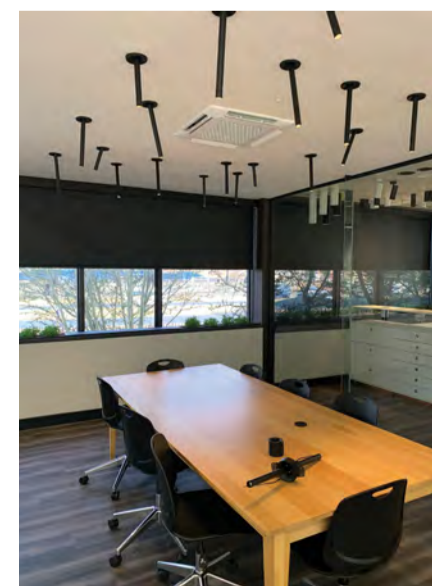
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CONTINUED FROM PAGE 1





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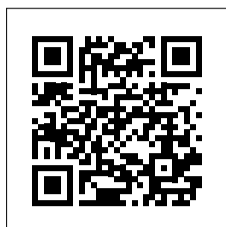
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**Sudeer Kamalall**  
Junior Administration, Durban

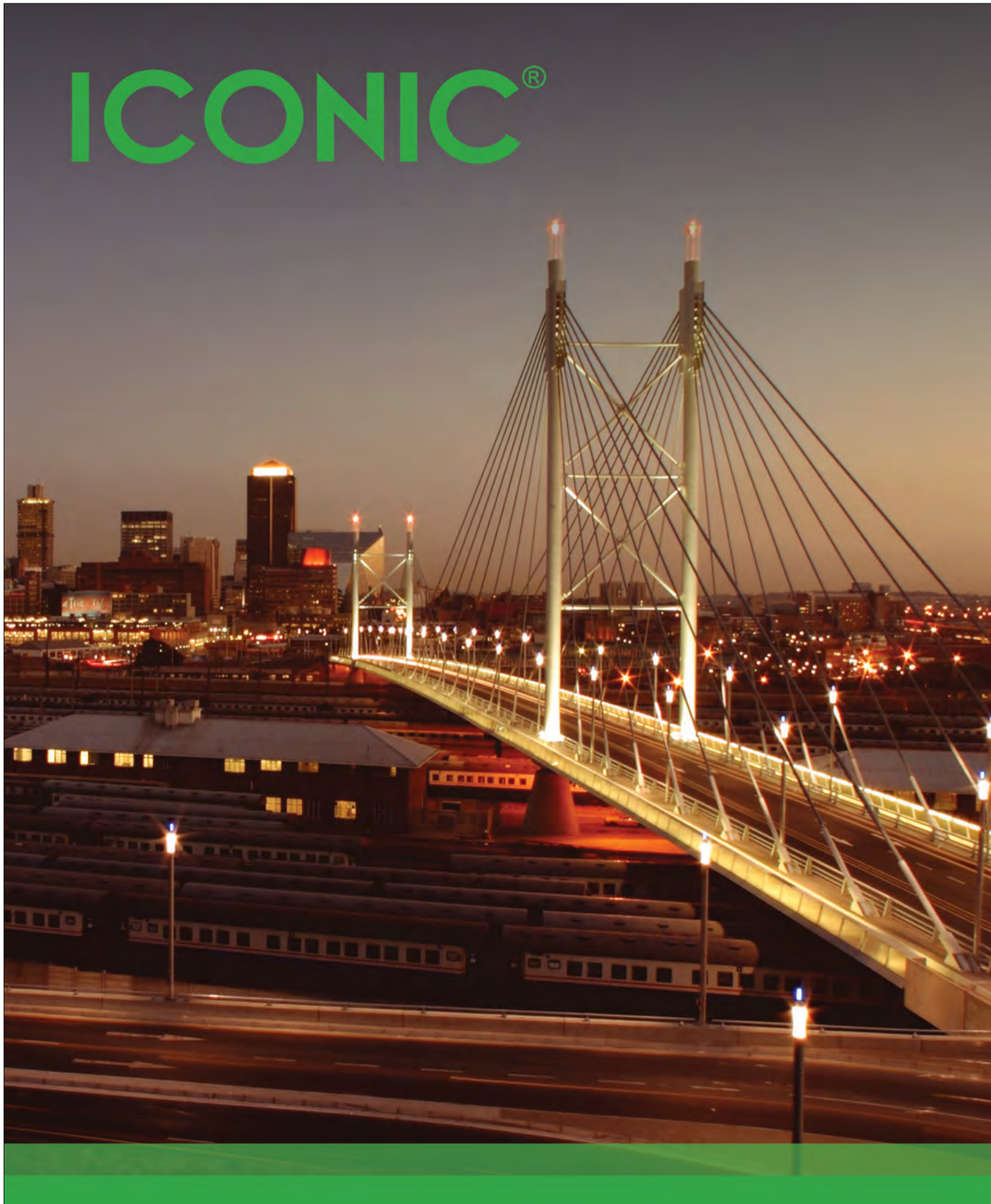


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- Cables and cable accessories
- Earthing, lightning and surge protection
- Lighting

**Buyers' guide**

- Earthing, lightning and surge protection

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