

# sparks

electrical news

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**INSIDE:**

## A BUNCH OF JOLLY GOOD GIFTS

The holidays are here and it's time to celebrate! This year, 13 of our advertisers have donated 29 handy gifts. Pull out this page to see the fantastic gifts that are up for grabs!

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### HOW TO ENTER

To stand a chance of winning one of these great gifts, email your name, postal address and daytime contact number to the editor at sparks@crown.co.za or fax your details to (011) 615 6108 – but hurry – to be eligible for the draw, those entries must reach us before 9 am on 13 January, 2016.

All the entries we receive will go into a big box and the advertisers who have donated gifts will join the Sparks team on 13 January 2016 to draw the names of 29 lucky winners. The advertisers will arrange for delivery of the gifts to the winners, whose names will be published in the February issue of Sparks Electrical News.

One entry per person, please. Neither Crown Publications' staff, nor the advertisers' agencies will be eligible for the draw.

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LET'S GET THIS PARTY STARTED!

- UP FOR GRABS:**
- Aberdare Cables**
    - 1 Tool box
    - 1 Tool bag
  - ARB Electrical Wholesalers**
    - 1 Chint flush populated distribution board
  - Crabtree**
    - 2 Huawei tablets
  - Eurolux**
    - 1 FS203 Rechargeable 10 W portable work light
  - Comtest**
    - 2 Fluke 107 palm-sized digital multimeters
  - Garry Lumpe Imports**
    - 2 Knipex 'all-in-one' multipliers VDE 1 000 V
    - 2 Wiha six-piece handheld toolkits
    - 2 Unilite 220 lumen LED inspection lights
  - HellermannTyton**
    - 3 TBM3030 digital clamp meters
  - MCE Global Suppliers**
    - 1 O-lite 10 W LED rechargeable portable work light
  - Stone Stamcor**
    - 3 SU16A crimping tools (green handle ratchet tool)
    - 1 KH120B crimp tool
    - 1 HX50B crimp tool
  - Three-D Agencies**
    - 3 UT50B digital multimeters
  - Voltex**
    - 1 Distribution board with main switch, stove, plugs/geyser, earth leakage, lights and busbar
  - Waco**
    - 1 Ceiling fan
  - Zest WEG Group**
    - 1 Socket and spanner tool set

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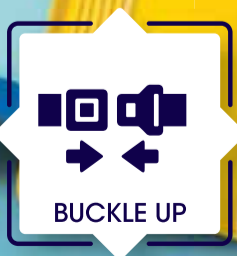
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BUCKLE UP

**voltex**  
*your electrical connection*

Personality of the Month

# Make things as simple as possible – but not simpler



Gianfranco Campetti.

GIANFRANCO Campetti – one of the electrical industry's most respected protagonists – can look back on his 50 years in the industry with a great deal of pride and satisfaction.

He has been behind the innovation, design and development of several industry-leading products and his dedicated participation on the SABS Standards committees over many years has brought about several new South African standards – including the SANS 164 series of standards and, in particular, SANS 164-2, which has been adopted as the conventional plug and socket system in this country.

**Sparks:** Where were you educated?

**GC:** I matriculated at Germiston High School in 1964 and graduated from the Witwatersrand Technical College with an Electrical Engineering diploma in 1970. But, for me, education was a life-long journey having along the way acquired the Government Certificate of Competency (GCC) (Electrical, Factories), the American Society for Quality (ASQ) Certified Quality Engineer and finally a BCom from UNISA in 2001.

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

**GC:** I started out as a Barlows' student bursar and was seconded to Heinemann Electric (now CBI) in 1968 in perhaps one of the best electrical 'nursery schools' in the industry – an industry that has kept me busy for almost 50 years now. Eighteen of those were at

Heinemann/CBI, then a nine-year whirlwind development of wiring accessories at Lumex/Clipsal, followed by 16 years with Crabtree where I was obliged to retire at 63. For the past three years, I have been consulting for several companies; so, in summary, I have really only had three jobs.

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

**GC:** I started my career in product development at Heinemann in 1970. Those were great years for South Africa from an engineering point of view because gradual political isolation encouraged local innovation, design and development. Heinemann developed many overload and earth leakage protection products within a strong competitive environment of locally designed and manufactured products by Fuchs, EPC and others.

**Sparks:** What are the greatest changes you have seen over the years?

**GC:** The introduction of computer aided design (CAD) and rapid prototyping has transformed design over the past 30 years, to the point that where development of a new product would take three years to the point of manufacture, the same product would now be accomplished in six months. Sadly though, one now has to go East to execute these extraordinary turn-around times!

The second most significant change has been the influx of cheap non-compliant Chinese products – not altogether the fault of the exporter but rather the presence of unscrupulous local entrepreneurs, the declining environment of statutory standards enforcement and a lack of will of local industry to tackle the problems.

**Sparks:** What major projects have you worked on and what is your greatest accomplishment?

**GC:** I was fortunate that, along the way, I have either been involved in or have headed some great product development teams. Major projects include the introduction of the Samite range of MCB and ELCBs in the 1980s; the introduction of the Snapper family of products with Lumex/Clipsal in the 1990s; and Crabtree's Diamond range of wiring accessories in 2000.

I have participated on the SABS Standards committees for many years and I am still Mirror Committee chair to the IEC committees SC23B and 23C and 23H. My involvement with SABS has produced some milestones, for instance, the publication of the SANS 164 series of standards and, in particular, SANS 164-2, which is now the conventional plug and socket system in SA.

**Sparks:** Have you won any awards?

**GC:** I have been privileged to win three awards. Heinemann was awarded the Design Institute Shell Design Award in 1982 for the SAMITE range of products. In 2002, Crabtree was awarded the SABS Design Institute Award for the Diamond Ducting range of products.

In 2012, I was awarded the SABS Standards Development Award for what I believe is the work in the publication of these seven South African standards.

But, to designers, something that transcends awards is the registration of patents and designs – this is a true measure of ingenuity and it greatly enhances a company's goodwill.

**Sparks:** Who has been your inspiration or have you had a mentor who has influenced your career?

**GC:** Wolf Wilckens, ex-MD of Heinemann and John Myers, ex-MD of Crabtree were most influential in my career, both having a common trait: a 'firm hand on the wheel', a clear vision of the strategy and the constant drive to achieve it.

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

**GC:** The demise of manufacturing in SA is undoubtedly one of the biggest destroyers of jobs. Once a factory has been closed down, it is virtually impossible to start up again. The loss of skills and 'know how' is irreparable. I don't think anyone has the answer on how to reverse this but it is abundantly clear that it is leadership that is missing.

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

**GC:** I really enjoy solving technical problems – alone, but more so within groups of like-minded people. From a career point of view, the most enjoyable moments are when companies grow and prosper.

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

**GC:** Staff need structure and, although designers and engineers often rebel against it, there is always a measure of respect for it. However, I have found that a great motivator is working with your staff and leading by involvement, leading by example, and leading by making practical decisions.

**Sparks:** If you could 'do it all again', would you change anything? If so,

what would that be?

**GC:** I wouldn't stay in one company for more than five years because of the 'yawn' factor, where even new stuff looks and feels jaded. After five years or so, one tends to be solving the same problems.

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

**GC:** After leaving school, before embarking on tertiary education, I would advise any youngster to find a 'nursery school' – in other words, companies that will employ youngsters in technical sections such as design, production engineering, quality and toolmaking for short periods (three to six months) in order to gain first-hand experience in the engineering / technical areas of manufacturing.

Look forward to a future of changing energy usage and supply, with many new product and technologies

**Sparks:** What is your advice to electrical contractors and/or electrical engineers?

**GC:** Support what is left of your local manufacturing industry – these are your 'electrical springboks'.

Specify and use only SANS standard-compliant electrical products. And local industries must innovate, be bold, and find new South African solutions.

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

**GC:** "Make things as simple as possible – but not simpler." - Albert Einstein.

**Sparks:** Name three things on your 'bucket list' (things you want to do before you 'kick the bucket').

**GC:** It's difficult to choose only three ... paint a great painting; design a new range of electrical products; and finish my little book on Germiston.



*Erika, Carin and Colin along with the rest of the Crown team wish all our readers and advertisers, a happy, safe holiday and best wishes for 2016*

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## ECA(SA) launches corporate video to celebrate 65 years' service to the industry

THE Electrical Contractors Association (SA) turns 65 this year! To celebrate this milestone, the ECA(SA) has produced a DVD to document the association's history, which will be widely distributed within this country's electrical industry.

The DVD is not just a narrative – it tells a story of an organisation with a heart. I doubt that the ECA(SA)'s first president, Jimmy Fraser, could have imagined that the organisation he led in 1950 would today have found reason to donate a netball kit to a team of black children in Jericho, a forgotten village in the North West – but this act of goodwill is an integral part of the ECA(SA)'s

story. The ECA(SA) was able to give those children the opportunity to play with dignity and identity ... and it is this tale of intervention that is told in our corporate DVD – the story we prefer to tell ahead of reports that detail our core business.

We could have emphasised that Shantonnette Naidoo, KwaZulu-Natal's regional director, successfully helped a member fight for his contractual rights in a dispute in KwaZulu-Natal, where she is affectionately called 'Miss LLB'. While the ECA(SA) is a professional organisation, we prefer to tell a story of an organisation with compassion.

This explains why we support a school for the

deaf and why we are comfortable with talking about the destitute and homeless children we help in Pretoria – long before we tell the story of how we have helped a contractor win a 'hopeless' case at the CCMA.

We could say that Stephen Khola – the ECA(SA)'s national labour director – wins almost every case he takes on at the labour dispute resolution forum and that every recommendation he makes in disciplinary proceedings is correct. And that if you go to the CCMA to fight a labour matter and you do not have Stephen Khola by your side, you are in the wrong company. And

while this is all true, the pleasure of helping those less fortunate than us overshadows these technological achievements.

That is why the regional director of the Western Cape, Pierre Foot, would rather celebrate the fact that he raised R40 000 for charity this year than boast that he has a record of clean administration and service excellence.

Pieter Du Toit, the regional director in the Free State can tell you that our members' work is guaranteed and that the ECA(SA) has increased the workmanship guarantee scheme to R20 000 per incident and that we back this scheme ourselves.

The ECA(SA)'s members' clients know that this association backs up its members to the tune of R20 000 should any workmanship issues arise. It would be easy to say that we provide this as "a service to our members". That would not be the entire truth – we provide this as a source of comfort to the people within the communities that our members serve.

The regional director of the Highveld region, Louis Pretorius, puts less emphasis on the fact that he has trained a great many electricians throughout the history of this association.

Together with William Maraba, they have trained many of our members from when they were young apprentices. They're pleased that they're shaping the ECA(SA)'s training offering to include electric fencing – not only for the benefit of our members but also their customers' peace of mind.

Lucas Bowles, the South East Cape regional director, tells a compassionate story of how the region assists an organisation that cares for sick dogs in the local townships.

This is an ECA(SA) story that is as much a part of our existence as is our intervention to ensure that the Joint Building Contracts Committee (JBCC), as adopted by Construction Industry Development Board (CIDB), is favourable to electrical contractors.

The Paul Kruger Children's Home is supported by Cecil Lancaster, the Bosveld regional director, with the same level of energy that he communicates this industry's needs in various SANS codes.

And, a professional practitioner and proponent of solid administration, Tembe Mwemba, the ECA's national finance manager, reminds us to avoid wasteful and fruitless expenditure.

The ECA(SA) accepts that it is as much a community organisation as it is an electrical industry institution. Without the community, no institution can exist.

The ECA(SA) has created an opportunity for corporates to be part of the story that we tell and Florence Mabena, executive secretary of the marketing committee will supply the terms of participation on request.

Enquiries: +27 12 342 3242

### Introducing The Matrix Collection

**NEW**

**VERSATILE & STYLISH WIRING ACCESSORIES**

The Matrix Collection is perfect for commercial and residential projects where quality & aesthetics are essential. This new range has been meticulously crafted from strong polycarbonate with a high quality finish. Its modular format allows you to tailor-make your own wiring accessories. There are various modules that can fit into the surrounds in various different combinations. The new South African specification 16A socket is available as well as digital and data modules for example, the usb, satellite, data, & TV modules. There are isolator modules available in 2 & 3 Pole from 30 Amp to 60 Amp. The Matrix Collection also includes red dedicated sockets that are ideal for computers & emergency standby systems. Silver & black modules & surrounds will be available in 2016.

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MCE would like to wish all our loyal customers a happy festive season and a prosperous new year.

## December puzzle solution

The answers to the holiday crossword on the back page are:

**Across**

4. Fuse
5. Ohms
7. Breaker
8. Lightning
12. Amps
15. Resistor
16. Insulator
18. Switch
19. Current

**Down**

1. Positive
2. Negative
3. Short
6. Series
10. Electrons
11. Circuit
13. Parallel
14. Conductor
16. Static

# New initiative to increase participation of women in electricity sector

AT the centenary convention of the Association of Municipal Electricity Utilities (AMEU) that was held in Sandton, Johannesburg recently, a ground-breaking initiative aimed at fast-tracking the development and participation of women in the electricity sector was launched.

This initiative, which is the first of its kind in the electricity sector, is called Women in Electricity (WIE) and it will be driven by female professionals in the electricity and engineering sector.

WIE has a three-pronged mandate to accelerate gender transformation in the industry, create tangible programmes that are designed to groom women in the electricity sector and to maximise the positive contribution that women can make in the industry.

To kick-start its activities, WIE will compile a database of women professionals in the sector, create a mentorship and leadership programme

and embark on a career awareness campaign in schools.

The second leg of the WIE activities, which will commence next year, includes the establishment of international exchange programmes and activating career days and competitions.

Refilwe Mokgosi, president of WIE, says the formation of WIE is a culmination of months of consultation within and outside the sector along with "lessons from the BEE Charter that maps transformation for other sectors of the economy".

She adds that WIE is set to "change the composition of the electricity and engineering sector and ensure that women, particularly those of African descent, play a meaningful role in the sector".

The formation of WIE was mooted last year by the then incoming president of the Association of Municipal Electricity Utilities, Sicelo Xulu.

In his acceptance speech, Xulu said his mandate as the incoming president is "to drive transformation within the electricity industry".

"One of the key mandates of the Association is to enable women, particularly African women, to become a critical mass in the electricity generation and distribution sector. We need to work diligently to achieve meaningful transformation by identifying the right candidates with the right skills' sets and provide coaching and mentoring opportunities for them so they can add value and contribute positively to the growth and development of this important sector," said Xulu.

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



Refilwe Mokgosi, president, Women in Electricity (WIE).

## Compact smart relay offers greater flexibility



Designed for use with power supplies from 24 to 220 Vac/dc, the WEG SRW01 has a facility, if selected, to monitor voltage up to 690 V ac and measure current from 0.25 A up to 840 A.



Engineered as a plug-and-play solution, the compact WEG SRW01 is ideal for applications where space is limited.

THE modular design of the WEG low voltage electric motor management system offers flexibility by allowing expansion of its functionalities. Engineered as a plug-and-play solution, the compact WEG SRW01, with state-of-the-art technology and network communication capabilities, is ideal for applications where space is limited.

Designed for use with power supplies from 24 to 220 V ac/dc, the WEG SRW01 has a facility, if selected, to monitor voltage up to 690 V ac and measures current from 0.25 A up to 840 A. The reliability and precision achieved with the WEG SRW01 smart relay makes the device suitable for the toughest industrial applications. Pre-programmed operation modes allow use in several starting and monitoring configurations, and this includes a mode which allows the device to be programmed for an individual application allowing optimum flexibility. The unit provides LED indication for input and output activations status, operation mode status, power supply status, and alarm status.

The digital input and output functions of the control unit are automatically configured as operation mode is selected. The system will also automatically recognise which protocol is in use. The digital inputs can be configured to monitor external digital signals. Using this feature, the

output contact from an external relay can be connected to the digital input of the smart relay. Significantly, it is this feature which enables the user to incorporate various protection mechanisms, such as earth leakage and thermal (PTC), in the same relay.

The WEG SRW01 supports a range of communications networks including DeviceNet, Modbus-RTU, Profibus-DP, and Ethernet (2016). The communications modules can be easily exchanged due to the design of the system. The WEG SRW01 has a USB port for relay monitoring, programming and online back-up through a PC when using WLP software.

Rapid system monitoring and relay parameterisation is done via a Human Machine Interface (HMI) keypad, and the device's internal memory makes it possible to record up to three parameter settings or user programmes. The relay incorporates a thermal memory circuit which will maintain the motor thermal image, even in the event of power loss. This handheld keypad allows engineers to link up to 250 WEG SRW01 smart relays offering great flexibility.

The WEG SRW01 smart relay is available from Zest WEG Group's network of branches and representatives.

Enquiries: +27 11 723 6000

## Durable infrared window raises the 'toughness' bar for durability

INFRARED windows that are designed to withstand the rigours of the industrial environment and maintain accuracy are the products for which IRISS is already world-renowned. With its latest introduction, however, the company has set the bar even higher in terms of product durability. What sets this product apart from others in the IRISS range is a stainless steel housing complete with a reinforced, lockable door which is environmentally sealed to IP67/NEMA 6. This means that accurate quantitative and qualitative measurements can now be taken from live electrical systems in the most hostile of conditions. IRISS CAP-ENV is therefore ideal for use in offshore, onshore or marine applications, exposed industrial environments and in climates characterised by temperature extremes.

An exclusive pharmaceutical grade reinforced Poly-View System polymeric material creates the large and clear, rectangular IR window of the

CAP-ENV. It provides an unparalleled field of view when compared to traditional round windows and a choice of standard sizes is available to suit the application. These range up to CAP-ENV 24 that measures 61 cm x 21.8 cm; custom sizes, materials, locking devices, labelling and colour are also available.

The benefits of the IRISS IR transmissive polymers for industrial applications are clear. The materials are unaffected by mechanical stress and are shatterproof. They maintain a fixed and stable transmission rate even when exposed to humidity, moisture, seawater and a broad spectrum of acids and alkalis. The addition of an environmentally sealed door on the CAP-ENV system, allows IRISS to complement these qualities with another layer of application security, creating a supremely reliable data collection port for tough applications.

Enquiries: +27 11 300 5622

## Acquisition of specialist high mast lighting manufacturer announced

VOLTEX recently acquired Lighting Structures, a leading supplier of masts for high mast lighting in South Africa and other African countries. Operating since 1976, Lighting Structures has an ISO 9001:2008-certified production facility located in the East Rand.

Lighting Structures design and fabricate masts for special applications and has successfully completed numerous installations throughout Africa where masts are purpose designed for unique applications. Adapting to the growing demand for alternative energy sources, Lighting Structures also designs and

builds solar panel support structures that can be used in conjunction with masts fitted with LED luminaires.

The acquisition presented itself at an opportune time for Voltex to expand its products and services into this niche segment whilst securing the valuable expertise of highly experienced professionals. As a specialist manufacturer, Lighting Structures will operate as a subsidiary of Cabstrut, one of Voltex's Specialist Supply Divisions in order to maximise focus and responsiveness in these specialised markets.

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## Solar energy – mankind's gift to the earth

By Bennie Swanepoel, technical sales engineer, HellermannTyton



A string combiner box, produced at the state-of-the-art assembly plant at HellermannTyton's premises in Johannesburg, which is destined for a 90 MW solar farm currently close to completion in De Aar.

EVEN though the concept of renewable energy is well known, most of us still do not grasp the reality of this miracle of light and heat from the sun. Most areas in South Africa average more than 2 500 hours of sunshine per year and average solar-radiation levels range between 4.5 and 6.5 kWh/m<sup>2</sup> in one day – among the highest recorded in the world.

The sun is about 150-million km from earth, and it takes an average of eight minutes and 20 seconds for the sun's rays to reach earth's surface. We can measure its energy and calculate overwhelming possibilities but, even with all the latest technology available to us, we are able to control only a fraction of the energy entering our atmosphere.

Solar technology isn't new. It began almost 250 years ago when Swiss scientist, Horace

de Saussure, was credited with building the world's first solar collector in 1767, which was later used by Sir John Herschel to cook food during his South Africa expedition in the 1830s.

It has taken an evolution in technology over many generations for us to harness the sun's energy in a safe manner.

Renewable energy may indeed be the future of electricity as well as mankind's gift to the earth that will protect its resources but it is also extremely dangerous if it is not understood and respected.

**HellermannTyton's involvement**  
HellermannTyton South Africa became involved in renewable energy not only because we recognised the need for safe and clean energy, but also because we understand the

importance of investing in our planet for many future generations so that everyone can enjoy clean, healthy living.

HellermannTyton's involvement in all industries including renewable energy reaches far beyond a supply chain of products currently being used all over the world. In the renewable energy sector, and specifically the string combiner boxes (SCB) needed for solar energy, we offer a tailor-made service to suit customers' energy needs. The customer is assisted from the initial enquiry through to the commissioning stage of the solar plant.

On receipt of a new enquiry, HellermannTyton does the full design of the SCB, the general assembly as well as the single line diagram (SLD). After approval, a prototype is built by using only the highest class approved safety products, electronic controllers, switchgear and specially designed photovoltaic items, all populated and prepared for final installation in a Class II double-insulated enclosure system. Production of these boxes takes place at a state-of-the-art assembly plant at HellermannTyton's premises in Johannesburg.

Both production and assembly are subject to strict safety and quality control schedules

throughout the process and, after completion, each SCB is thoroughly re-checked and electronically tested. The completed SCB is then labelled with a barcoded ID for future reference and packed for shipment.

### Solar farm

HellermannTyton is currently engaged in the final stages of a 90 MW solar farm covering an area of about 12 km<sup>2</sup> – one of the biggest ever built in South Africa. The company was responsible for designing and managing the full production process of more than 600 SCBs as well as ensuring final delivery to site.

In light of this experience, HellermannTyton received additional requests to supply hundreds of thousands of products required for general installation on site.

Through our strong international support, we are also able to offer an excellent percentage local content, further adding positive value to the South African economy.

HellermannTyton currently also offers assistance to a growing rooftop solar market; belongs to various corporate bodies; and strives to stay up-to-date with ever-improving renewable energy technologies.

Enquiries: +27 11 881 7000

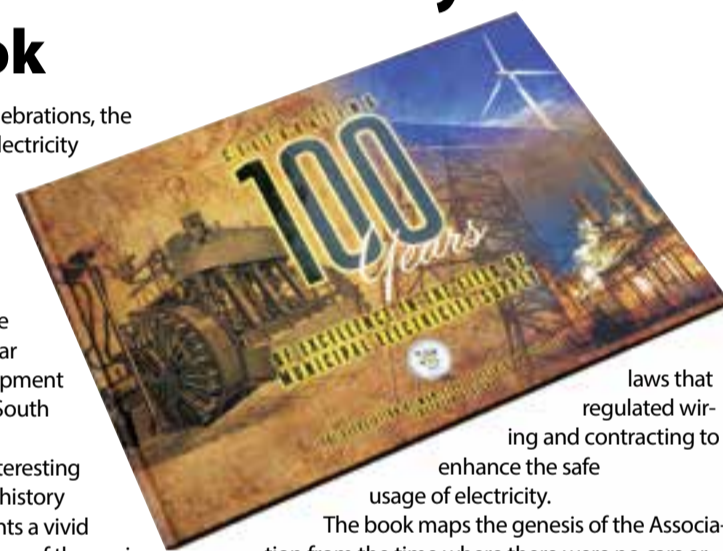
## AMEU launches centenary coffee table book

AS part of its centenary celebrations, the Association of Municipal Electricity Utilities (AMEU) Southern Africa has launched a coffee table book that documents the history of electricity in South Africa and the details the timeline of the Association's 100-year contribution to the development of the electricity sector in South Africa.

The book provides an interesting and insightful read on the history of the Association and paints a vivid picture in words and pictures of the era in which the Association was born.

It tracks the organisation's existence from 1915 to 2015, and details the Association's key contributions to the development of the electricity sector in South Africa.

The AMEU centenary book provides a rich narrative of some of the industry's regulatory frameworks and documents AMEU's contribution in shaping policy framework – from the first Electricity Act of 1922, which paved the way for the establishment of Eskom to its proposals for the establishment of a national standard for voltage and frequency and the enactment of the first



laws that regulated wiring and contracting to enhance the safe usage of electricity.

The book maps the genesis of the Association from the time where there were no cars or traffic lights, to the introduction of traffic lights, the first houses to be electrified and the first townships to have access to electricity.

Says Sicelo Xulu, president of the AMEU: "This book documents a rich heritage of the milestones the electricity industry has achieved in South Africa over the last century ... It's a must read for any organisation that has an ambition to sustain itself for 100 years and beyond."

Enquiries: www.ameu.co.za

## SPD designed to give more space in the distribution board

DEHN Africa, has launched the coordinated type 1 DEHNBloc Maxi 1 CI 440 FM and DEHNBloc Maxi 1 CI 760 FM surge protective devices (SPD), specifically designed for higher system voltages, thus ensuring efficient protection against direct and indirect lightning currents in various industrial applications.

The devices require up to 60% less space than a conventional solution with an external backup fuse. In addition, the user does not have to be concerned about the correct dimensioning of the backup fuse as it is already integrated in the device, and is therefore adapted to the performance parameters of the surge protection components of the type 1 SPD.

The impulse-current-resistant fuse is optimised for discharging lightning currents of 10/350 µs wave form. Within the device, a spark gap is used which has a high mains follow current extinguish-

ing capability in case of higher system voltages up to 760 V AC. Thus, power-frequency follow currents are significantly limited and extinguished within a few milliseconds.

The operating-current-free status / fault indication of DEHNBloc Maxi 1 CI also monitors the integrated backup fuse and indicates its status. In addition to the standard visual indication with green and red indicator flags, the device features a dry contact remote signalling terminal. With its floating changeover contact, the remote signalling contact can be used as a break or make contact according to the particular circuit concept.

The normative requirement (IEC 60364-5-53), which states that the total length of the connecting cables of an SPD must not exceed one metre, can be easily fulfilled as the fuse is integrated in the arrester.

Enquiries: +27 11 704 1487

## Call for papers: POWER-GEN Africa, DistribuTECH Africa to focus on sustainability

PENNWELL Corporation, the organisers of the fourth annual POWER-GEN Africa and third DistribuTECH Africa conference and exhibition, has announced the 'call for papers' for both events now open, with a deadline for abstract submissions of 6 January 2016.

PennWell's events director for Africa, Feray Gurel notes that these African power events move back to Johannesburg in 2016 after being staged in Cape Town for the past two years. "These co-located conferences and expo have grown in stature in the four years since the inaugural POWER-GEN Africa conference in 2012.

Attracting over 2 000 delegates and over 110 exhibitors from across Africa and abroad, POWER-GEN Africa and DistribuTECH Africa serve as a key information

sharing hub for the continent's power sector stakeholders. "In 2015, the events attracted high-level decision-makers from government and the private sector across countries including Botswana, Ghana, Lesotho, Rwanda, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe."

The next POWER-GEN Africa and DistribuTECH Africa will be held at the Sandton Convention Centre from 19 – 21 July 2016, under the banner 'Creating power for sustainable growth'. Industry experts, government leaders, researchers and academics are invited to submit abstracts for speaking slots at either event.

The abstracts will be assessed by POWER-GEN Africa and DistribuTECH Africa's high-level, pan-African advisory boards to compile a topical programme in line

with industry requirements. DistribuTECH Africa, with its focus on power transmission and distribution addresses a broad range of topics including automation and control systems; energy efficiency; demand response; renewable energy integration; the rapidly-growing advanced metering market and technologies; T and D system operation and reliability; power delivery equipment; and utility technology.

Abstracts are invited under themes including utility business sustainability, metering, system automation, system operation, power and water delivery, and people/resources.

To submit abstracts for the call for papers, and for more details, please visit [www.powergenafrika.com](http://www.powergenafrika.com) or <http://www.distributechafrika.com/>

## Toolkit for photovoltaics



Knipex offers the ideal toolkit for technicians who work on solar panels. The kit includes a precision insulation stripper with adapted blades, cable shears and special crimp pliers for exchangeable crimp dies all neatly laid in a foam insert supplied in a shock resistant case. An extensive range of crimp dies are available for Amphenol, Huber & Suhner, Multi Contact (MC3 & MC4), Hirschmann, Wieland & Tyco are available. Special mounting tools for MC3 & MC4 are also available. This all-in-one solution is ideal for anyone in the solar installation industry.

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## Stadium lighting

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 Distributors of imported and local manufactured product  
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 Full range of stadium lighting  
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 Floodlights; masts; poles for mounting  
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 Full range of stadium lighting luminaires  
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 Floodlights; masts; poles for mounting  
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 All-purpose energy saving floodlights  
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 Range of imported stadium floods for short range ARC and standard metal halide and HPS/MV lamps; 1-2 kW floodlight luminaires  
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 LED power supplies; LED strips; light meters  
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 O-lite range of LED floodlights  
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## Contacts

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## Exhibition lighting

**ACDC Dynamics**  
 ACDC supports exhibition stand builders with a wide range of lighting, spots, downlighting and floodlights  
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 Distributors of GE brand LED lighting solutions  
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 Full range of exhibition lighting  
**Atlas Group**  
 Available on request to customer specifications  
**Aurora Lighting**  
 Full range of exhibition lighting  
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 Full range of Vision exhibition lighting  
**Eaton Electric**  
 Full range of exhibition lighting  
**Eurolux**  
 HIF and PL downlights, recessed and surface-mounted fluorescent fittings  
**Genlux Lighting**  
 Full range of exhibition lighting  
**Mantech Electronics**  
 LED power supplies; LED strips; light meters  
**MCE Global Suppliers**  
 O-lite LED down lights; O-lite panel lights; O-lite LED tubes and fittings; O-lite LED strip and rope lights; O-lite LED floodlights  
**Shuttle Lighting**  
 Control systems especially to provide dimming of LED, halogen and incandescent lamps

## Entertainment lighting

**ACDC Dynamics**  
 Full range of entertainment lighting: flexible and rigid LED strip lighting, LED bar lights (IP65), LED border lights (IP65), disco lights, stage flood lights, lasers and mini laser lights, colour changing LED strip lights, high power LED lights and various Christmas/festive lighting  
**ACTOM Electrical Products**  
 Distributors of GE brand entertainment lighting  
**ARB Electrical Wholesalers**  
 Full range of entertainment lighting  
**Atlas Group**  
 Available on request, eg spotlights, follow spots and strobe lights  
**Bellco**  
 Available on request, eg spotlights, follow spots and strobe lights  
**Citilec**  
 Full range of Vision entertainment lighting  
**Genlux Lighting**  
 Full range of entertainment lighting  
**Mantech Electronics**  
 LED power supplies; LED strips; light meters  
**MCE Global Suppliers**  
 O-lite LED strip and rope lights  
**Philips SA**  
 Full range of entertainment lighting  
**Radiant Group**  
 Full range of entertainment lighting  
**Shuttle Lighting**  
 Control systems especially to provide dimming of LED, halogen and incandescent lamps  
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 Available on request, eg spotlights, follow spots and strobe lights

## Street lighting

**ACDC Dynamics**  
 Full range of street lighting: solar lights, LED lights, traffic lights, high power LED street lights (IP65), high power single LED chip lights in die-cast aluminium and Technopolymer  
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 Distributors of imported and local manufactured product  
**ARB Electrical Wholesalers**  
 Full range of street lighting luminaires  
**Atlas Group**  
 Masts and poles available on request; solar street lights; floodlights; bulkheads; sensor lights with conventional control gear, energy efficient and LED  
**BEKA Schröder**  
 Full range of street lighting luminaires  
**Bellco**  
 Masts and poles available on request; solar street lights; floodlights; bulkheads; sensor lights with conventional control gear, energy efficient and LED  
**Citilec**  
 Full range of Vision street lighting  
**Eaton Electric**  
 Full range of street lighting  
**Genlux Lighting**  
 Full range of street lighting  
**LS Lighting Structures**  
 Masts and poles available on request; solar street lights; floodlights; bulkheads; sensor lights with conventional control gear, energy efficient and LED  
**Magnitech**  
 Waylite 1; Alpha range; Suburban 70 W – 400 W luminaires  
**Voltex**  
 Full range of street lighting luminaires  
**Voltex Smart Solutions**  
 Masts and poles available on request; solar street lights; floodlights; bulkheads; sensor lights with conventional control gear, energy efficient and LED

## Flameproof/hazardous area lighting

**ACDC Dynamics**  
 Full range of flameproof/hazardous area lighting: visual alarms and beacons  
**ARB Electrical Wholesalers**  
 Full range of flameproof/hazardous area lighting  
**Atlas Group**  
 Distributors of Zone 1, 2 and 22 specialised lighting for indoor and outdoor  
**Aurora Lighting**  
 Full range of flameproof/hazardous area lighting  
**BEKA Schröder**  
 Full range of flameproof/hazardous area lighting  
**Bellco**  
 Distributors of Zone 1, 2 and 22 specialised lighting for indoor and outdoor  
**Citilec**  
 Full range of Vision flameproof/hazardous area lighting  
**Eaton Electric**  
 Full range of flameproof/hazardous area lighting  
**MCE Global Suppliers**  
 O-lite LED security floodlights with or without PIR sensors  
**Nordland**  
 Full range of flameproof/hazardous area lighting  
**Voltex**  
 Distributors of Zone 1, 2 and 22 specialised lighting for indoor and outdoor  
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 Distributors of Zone 1, 2 and 22 specialised lighting for indoor and outdoor

## Outdoor decorative lighting

**ACDC Dynamics**  
 Wide range of outdoor decorative lighting: bulkheads, wall mounts, deck and floor lighting, floodlights, lanterns, garden lights, solar garden lights, security lights, decorative bollards  
**ACTOM Electrical Products**  
 Distributors of imported and local manufactured product  
**ARB Electrical Wholesalers**  
 Full range of outdoor decorative lighting  
**Atlas Group**  
 Solar street lights, flood lights, bulkheads, sensor lights with conventional control gears; energy efficient and LED  
**Aurora Lighting**  
 Full range of outdoor decorative lighting  
**BEKA Schröder**  
 Full range of outdoor decorative lighting  
**Bellco**  
 Solar street lights, flood lights, bulkheads, sensor lights with conventional control gears; energy efficient and LED  
**Citilec**  
 Full range of Vision outdoor decorative lighting  
**Crabtree Electrical Accessories**  
 Totally enclosed, high impact, corrosion resistant fluorescent luminaires  
**Eurolux**  
 Bulkheads, outdoor lights, flood and security lights  
**Genlux Lighting**  
 Full range of outdoor decorative lighting  
**Magnitech**  
 Post-tops (sk3, sk4, sk30); complete range of bollards; small bulkheads for CFL lamps (B30-B15)  
**Major Tech**  
 Full range of LED garden lights ideal for office, home and park gardens  
**Mantech Electronics**  
 LED power supplies; LED strips; light meters  
**MCE Global Suppliers**  
 O-lite LED aluminium light fittings; O-lite E27 aluminium light fittings; O-lite LED bulkhead fittings; O-lite E27 bulkhead fittings  
**Shuttle Lighting**  
 Control systems especially to provide dimming of LED, halogen and incandescent lamps  
**Voltex**  
 Solar street lights, flood lights, bulkheads, sensor lights with conventional control gears; energy efficient and LED  
**Voltex Lighting**  
 Solar street lights, flood lights, bulkheads, sensor lights with conventional control gears; energy efficient and LED  
**Waco**  
 Solar street lights, flood lights, bulkheads, sensor lights with conventional control gears; energy efficient and LED

## Retail lighting

**ACDC Dynamics**  
 Full range of retail lighting: downlights, LED flexible and rigid strip lighting, LED track lighting, under-counter LED fittings, LED single modules, light box high power LEDs, LED neon flex lights  
**ACTOM Electrical Products**  
 Distributors of GE brand LED and CMH lighting solutions  
**ARB Electrical Wholesalers**  
 Full range of retail lighting  
**Atlas Group**  
 Full range available; troffer fittings; track lights; downlights and spots  
**Aurora Lighting**  
 Full range of retail lighting  
**BEKA Schröder**  
 Full range of retail lighting luminaires  
**Bellco**  
 Full range available; troffer fittings; track lights; downlights and spots  
**Citilec**  
 Full range of Vision retail lighting  
**Crabtree Electrical Accessories**  
 Channel fittings 2.4 5-foot single and double open channels  
**Denver Technical Products**  
 Mains fail safety lighting  
**Eaton Electric**  
 Full range of retail lighting  
**Eurolux**  
 Highbays, HID and PL downlights, recessed and surface-mounted fluorescent fittings  
**Genlux Lighting**  
 Full range of retail lighting luminaires  
**Major Tech**  
 Wide range of LED lighting to meet specific retail applications  
**Mantech Electronics**  
 LED power supplies; LED strips; light meters  
**MCE Global Suppliers**  
 O-lite LED downlights; O-lite LED panel lights; O-lite LED tubes and fittings; O-lite LED strip and rope lights  
**Shuttle Lighting**  
 Control systems especially to provide dimming of LED, halogen and incandescent lamps  
**Voltex**  
 Full range available; troffer fittings; track lights; downlights and spots  
**Voltex Lighting**  
 Full range available; troffer fittings; track lights; downlights and spots  
**Waco**  
 Full range available; troffer fittings; track lights; downlights and spots

## Industrial lighting

**ACDC Dynamics**  
Full range of industrial lighting: IP65 highbays, lowbays, bulkheads in aluminium and acrylic, surface-mounted and recessed fluorescent fittings, downlighting

**ACTOM Electrical Products**  
Distributors of imported and local manufactured highbays, lowbays, bulkheads

**ARB Electrical Wholesalers**  
Full range of industrial lighting

**Atlas Group**  
Complete range available; bulkheads, floodlights and weatherproof; energy efficient high bays and low bays

**Aurora Lighting**  
Full range of industrial lighting luminaires

**BEKA Schröder**  
Full range of industrial lighting luminaires

**Bello**  
Full range of industrial lighting luminaires

**Citilec**  
Full range of Vision industrial lighting

**Crabtree Electrical Accessories**  
Hi-bay luminaires

**Denver Technical Products**  
Mains fail safety lighting

**Eaton Electric**  
Full range of industrial lighting

**Eurolux**  
Highbays, HID and PL downlights, recessed and surface-mounted fluorescent fittings

**Genlux Lighting**  
Full range of industrial lighting

**Legrand**  
Weatherproof bulk headlights as well as vandal-resistant units

**Magnitech**  
Cast aluminium and stainless steel luminaires and lamps; Baymaster high bay luminaires; Maglite 22, 40-45 bulkheads; Floodmaster HP10 and HP15 fittings

**Major Tech**  
Range of fully enclosed work lights

**Mantech Electronics**  
LED power supplies; LED strips; light meters

**MCE Global Suppliers**  
O-lite LED panel lights; O-lite LED floodlights; O-lite LED tubes and fittings

**Nordland**  
Full range of industrial lighting luminaires

**Radiant Group**  
Full range of industrial lighting luminaires

**Shuttle Lighting**  
Control systems especially to provide dimming of LED, halogen and incandescent lamps

**Voltex**  
Complete range available; bulkheads, floodlights and weatherproof; energy efficient high bays and low bays

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## Emergency lighting

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Full range of emergency lighting

**Atlas Group**  
Distributors of Voltex lighting: emergency and other signs; emergency control gear for fluorescent lights as specified in the OHS Act

**Aurora Lighting**  
Full range of emergency lighting

**BEKA Schröder**  
Full range of emergency lighting

**Bello**  
Distributors of Voltex lighting: emergency and other signs; emergency control gear for fluorescent lights as specified in the OHS Act

**Citilec**  
Full range of Vision emergency lighting

**Denver Technical Products**  
Mains fail safety lighting; track mounted lights

**Eaton Electric**  
Full range of emergency lighting

**Genlux Lighting**  
Full range of emergency lighting

**Legrand**  
Full range of emergency lighting units ranging from fluorescent to LED including maintained and non-maintained

**Magnitech**  
Emergency lighting; battery backup and battery cycling units; Maglite 22 and Maglite 40 - 45 bulkheads and lamps; Floodmaster HP10 and HP15 floodlight fittings and lamps

**Major Tech**  
Full range of portable lighting - in LED and fluorescent - ideal for power outages, camping, fishing, hiking, hotel, office and warehouse applications

**Mantech Electronics**  
Power supplies

**MCE Global Suppliers**  
O-lite LED emergency tubes with back-up battery; O-lite LED rechargeable and portable work light

**Nordland**  
Full range of emergency lighting

**Radiant Group**  
Full range of emergency lighting

**Shuttle Lighting**  
Control systems especially to provide dimming of LED, halogen and incandescent lamps

**Voltex**  
Distributors of Voltex lighting: emergency and other signs; emergency control gear for fluorescent lights as specified in the OHS Act

**Voltex Lighting**  
Distributors of Voltex lighting: emergency and other signs; emergency control gear for fluorescent lights as specified in the OHS Act

**Waco Industries**  
Distributors of Voltex lighting: emergency and other signs; emergency control gear for fluorescent lights as specified in the OHS Act

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## Indoor decorative lighting

**ACDC Dynamics**  
Full range of indoor decorative lighting: LED, LED glare-reducing and standard CFL options - downlights, chandeliers, wall mounts, spotlights, LED strip lights, wall washer LEDs, stainless steel light fittings

**ACTOM Electrical Products**  
Distributors of imported and local manufactured product

**ARB Electrical Wholesalers**  
Full range of indoor decorative lighting

**Atlas Group**  
Distributor of a wide variety of reputable brands, designs and specifications eg energy saving and LED

**Aurora Lighting**  
Full range of indoor decorative lighting luminaires

**BEKA Schröder**  
Full range of indoor decorative lighting luminaires

**Bello**  
Distributor of a wide variety of reputable brands, designs and specifications eg energy saving and LED

**Citilec**  
Full range of Vision indoor decorative lighting

**Crabtree Electrical Accessories**  
Acrylic diffuser with conical light control prisms (single; double - new Econo narrow body; and wide body decorative)

**Eurolux**  
Downlights, chandeliers, ceiling lights, spotlights, pendant lights, table lights, floor lights, fans

**Genlux Lighting**  
Full range of indoor decorative lighting

**Major Tech**  
Full range of LED wall lights, picture and mirror lights, step lights and ceiling lights ideal for office, home, hotels and general lighting applications

**Mantech Electronics**  
LED power supplies; LED strips; light meters

**MCE Global Suppliers**  
O-lite LED aluminium light fittings; O-lite E27 aluminium light fittings; O-lite LED 'Cyclops' square and round downlights; O-lite LED panel lights; O-lite strip and rope lights

**Radiant Group**  
Full range of indoor decorative lighting

**Shuttle Lighting**  
Control systems - especially to provide dimming of LED, Halogen and incandescent lamps

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Distributor of a wide variety of reputable brands, designs and specifications eg energy saving and LED

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## Office lighting

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Full range of office lighting: CFL and LED and high power LED downlights, surface and recess wall lighting; bulkheads, T5 and T8 linear lights, bay lights, glare reducing LED lamps

**ACTOM Electrical Products**  
Distributors of imported and local manufactured downlighters, fluorescent

**ARB Electrical Wholesalers**  
Full range of office lighting luminaires

**Atlas Group**  
Recessed and surface lighting for all applications; energy efficient and LED light sources

**Aurora Lighting**  
Full range of office lighting luminaires

**BEKA Schröder**  
Full range of office lighting luminaires

**Bello**  
Recessed and surface lighting for all applications; energy efficient and LED light sources

**Citilec**  
Full range of Vision office lighting

**Denver Technical Products**  
Mains fail safety lighting

**Eaton Electric**  
Full range of office lighting

**Eurolux**  
Highbays, HID and PL downlights, recessed and surface-mounted fluorescent fittings

**Genlux Lighting**  
Full range of office lighting

**Magnitech**  
Full range of office lighting fluorescent luminaires

**Major Tech**  
Wide range of dynamic and modern energy saving LED lighting products

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LED power supplies; LED strips; light meters

**MCE Global Suppliers**  
O-lite LED downlights; O-lite LED panel lights; O-lite LED tubes and fittings

**Radiant Group**  
Full range of office lighting luminaires

**Shuttle Lighting**  
Control systems especially to provide dimming of LED, halogen and incandescent lamps

**Voltex Lighting**  
Recessed and surface lighting for all applications; energy efficient and LED light sources

**Waco**  
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Klippon control stations.

## A safe way to control work processes in hazardous areas

HARSH industrial environments and hazardous areas – such as those in the oil and gas industry – place extreme demands on the safety, robustness and quality of electrical products and devices.

Phambili Interface's Alex Lockyer says the company aims to meet these challenges with its Exe and Exia junction boxes with terminals. "The latest addition to Phambili's range of customised enclosures is the new Klippon control station, assembled according to customer requirements and engineered to Weidmuller's trusted quality standards together with comprehensive international and local approvals and certificates

for explosion hazardous areas.

"The new Klippon control stations are available in standard sizes with up to four control and display elements and provide a flexible solution to meet specific requirements. The prepared modules use the standard Klippon enclosure series STB-stainless steel, POK-polyester and K aluminium with the pushbuttons and indication elements," explains Lockyer.

The Klippon control stations are tested and certified according to ATEX and IECEx, among others. "Phambili Interface manufactures junction boxes with terminals and control solutions

suited to clients' specific applications and we are able to do so at short notice," he says, adding, "Klippon control stations reduce storage costs, maintenance and repair operations in a plant as well as provide reliable security at a single source." Weidmuller connectivity and interface products are exclusively distributed by Phambili Interface, a division of Voltex since 2014. These German-engineered quality interface products include terminal blocks and accessories, heavy duty connectors, PCB connectors and innovative push-in type terminals.

Enquiries: +27 11 452 1930



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## With Power There's Life



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## Circuit breakers for harsh African environments



All motor protection circuit breakers in the WEG MPW range are manufactured in accordance with the IEC 60947 and UL 508 international standards.

THE addition of two new models to the WEG MPW range of motor protection circuit breakers will offer customers a broader range from which to select the most appropriate protection for electric motors. All motor protection circuit breakers in the WEG MPW range are manufactured in accordance with IEC 60947 and UL 508 international standards giving absolute assurance in terms of operational parameters and quality.

These devices offer the major benefit of being compact and modular, which allows space saving within the electrical panel itself. This means that the panel can be smaller or where necessary more components can be included in the panel. Engineered to withstand harsh operating conditions, the WEG MPW range of motor protection circuit breakers are robustly constructed for optimal reliability.

The range facilitates the protection of a wide range of electric motors from 0.16 A up to 100 A. Significantly, the WEG MPW range has both thermal magnetic versions which provide protection against any potential short circuit and overload conditions and magnetic only versions which provide protection against short circuits. Use of the thermal magnetic device will reduce the amount of components required when manufacturing a motor control centre and this can translate into a significant cost saving. The magnetic-only version allows the use of electronic overload protection devices which can reduce costs further.

This motor protection circuit breaker is available with a full range of accessories including auxiliary contacts, shunt trips, under voltage releases, door mounting handles and free standing enclosures. The devices are certified to Type 2 allowing continuous operation until replaced. This is important in a production critical environment.

Enquiries: +27 011 723 6000

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and click on the P & T Technology logo.

## Brushless motor models new to cordless range

THE two latest updates to Makita's range of cordless 18V Lithium-Ion power tools – the DHP459Z Cordless Impact Drill Driver and the DTD129ZK Cordless Impact Driver – both have all the latest innovative technology, including brushless motors, which are smaller, stronger, lighter, smarter and maintenance free. The DHP459Z with its compact body style measures just 192 mm from the front of the chuck to the back of the body and weighs 1.7 kg (when loaded with a 3.0 Ah battery) – extremely useful advantages when working in confined spaces. The LED light on the front of the tool provides good illumination even in dark places.

This variable speed model has 16 torque settings to choose from and is capable of drilling 13 mm in masonry, 38 mm in wood and 13 mm in steel. The tool offers up to 22 500 impacts per minute and features an all-metal gear construction that ensures high transmission durability.

The DTD129ZK Impact Driver is a variable speed model with a no load speed of 0 – 2 500 r/min and a maximum fastening torque of 160 Nm. It produces up to 3 200 impacts per minutes and has a net weight of 1.5 kg when loaded with a 3.0 Ah battery. The DTD129ZK has the capacity to drive machine screws from M4 through to M8; standard bolts M5 through M13; high tensile bolts M5 through M12 and coarse threads that are between 22 and 125 mm in length.

As has become expected from Makita, both models have an ergonomically designed handle with rubberised soft grip, providing comfort and control.

Both these models are compatible with the Makita 5.0 Ah (45 minutes charge time), 4.0 Ah (36 minutes charge time), 3.0 Ah (22 minutes charge time) and 1.5 Ah (15 min-

utes charge time) batteries.

The batteries and the charger are sold separately. The 3.0 Ah batteries are interchangeable with other 18V Makita Lithium-Ion cordless tools in the range, while the 4.0 Ah and 5.0 Ah batteries are compatible with all models that start with a 'D' in the model name and have a star on the battery terminal. The rechargeable and eco-friendly 18V Li-Ion batteries provide longer run time. The LXT Li-Ion battery generates an impressive 430% more lifetime work with two-and-a-half times more cycles. Bits are sold separately.

Enquiries: +27 11 878 2600



## VDE pliers for long lasting reliability



MAJOR Tech VDE pliers are manufactured to international standards using the latest technology and finest materials. All cutting edges on Major Tech VDE 1000 V pliers are made from chrome vanadium steel, induction hardened in a polished finish to guarantee effortless cutting and provide long lasting durability. The specially designed impact resistant handles with non-slip grip for comfort offers maximum torque transfer and roll resistance. A full range of choice insulated pliers include combination pliers, long nose pliers, diagonal cutting pliers and wire stripping Pliers.

Major Tech insulated tools are made of high quality materials and are made and tested to in accordance with national and international standards. Taking into consideration other safety regulations they offer the greatest possible protection for working with live systems with voltages of up to 1 000 V ac and dc. Major Tech VDE pliers are fully insulated to VDE/GS and EN60900 standards to protect the user from electric shocks up to 1 000 V.

Stringent quality control ensures that Major Tech pliers are amongst the finest in the world and particularly suited to industrial applications.

Enquiries: +27 11 872 5500



# DLX2069M Tool Set

## Continuous Innovation

**DHP456ZK 18V Cordless Impact Drill/Driver**

Protects battery from over discharge and high temperatures.

Capacity: - Masonry:	13mm
- Steel:	13mm
- Wood:	38mm

Impacts per minute:	Hi: 0 - 22,500 / Lo: 0 - 6,000
No load speed (r/min):	Hi: 0 - 1,500 / Lo: 0 - 400
Max. fastening torque:	Hard: 50Nm / Soft: 36Nm
Net weight:	1,6kg

**DHR263ZK - 36V (18V + 18V) Cordless Combination Hammer**

The model below is powered by two 18V batteries in series to supply the same power as a 36V machine.



Outstanding Performance and Compact Design.

Capacity: - Concrete:	26mm
- Steel:	13mm
- Wood:	32mm

Blows per min (b/min): 0 - 4,800  
No load speed (r/min): 0 - 1,200

- Powered by two 18V Li-ion batteries in series.
- LED job light.
- 3 mode operation - rotation only, hammering with rotation and hammering only.
- Compatible with 1.5Ah, 3.0Ah and 4.0Ah batteries.

The Tool Set includes:  
DHP456Z Cordless 18V Impact Driver Drill, DHR263Z Cordless 18V + 18V Rotary Hammer - 36V, 3 x BL1840 4.0Ah Rechargeable Batteries, DC18RC Charger and a 16 Pocket Tool Bag.



Limited Availability



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MakitaToolsSA

For more info, contact Rutherford:  
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www.makita.co.za



# When it comes to great prizes, we light the way!



Spend R500 or more on any Philips lighting products for an online entry to stand a chance to win instant prizes and go into the draw to **win 1 of 4 Chevrolet UTEs per month** filled with electrical contractor equipment valued at R8000!

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Go to [www.philipslightingcompetition.co.za](http://www.philipslightingcompetition.co.za) to enter.

Enter the following details:

- Name, surname, company name, phone number and email address
- Store name and invoice number. Upload a copy of the invoice and retain proof of purchase
- Answer the questions
- Agree to the Ts & Cs



Congratulations to **Mahomed Ebrahim Moola**, winner of the 1st bakkie!

Loads of instant prizes up for grabs!



Terms and conditions apply. For full terms and conditions go to [www.facebook.com/PhilipsLightingSouthAfrica](http://www.facebook.com/PhilipsLightingSouthAfrica). No substitution or cash redemption of prizes are permitted. The bakkie and instant prizes awarded may differ from the images in the photograph.

PhilipsLightingSouthAfrica @PhilipsLightSA [www.philips.co.za](http://www.philips.co.za).

# PHILIPS

## Let's light up summer with stylish and functional outdoor lighting

WITH summer in full swing, South Africans are enjoying outdoor living well beyond sunset. This calls for the installation of effective outdoor lighting and lighting designs that complement interior and exterior décor. The latest EGLO lighting range, exclusively available from Eurolux, offers a variety of designs and functionalities suited to any outdoor space.

### Nocella

The ultramodern EGLO Nocella is a multi-functional wall light, available in either a white or black anthracite finish.

The Nocella shines its beams both up and down, making for an attractive, highly functional outside feature light. It is fitted with two 2.5 W lamps and features a weatherproof IP44 rating.

### Kaleo

Boasting an attractive, timeless design, the EGLO Kaleo makes a bold statement in any garden or outdoor space. The base has a classic square design and is made from galvanised steel, featuring an anthracite finish to provide an aged look. The round lamp sits on top of the steel base and is made from white coated glass. This 240 V floor lamp comes with 1.5 m of cable and stands 575 mm high.

### Terraluna

The EGLO range includes a collection of garden spikes, one of these being the Terraluna. Though it offers the option of three coloured shades (red, green and blue), the standard light is a black ground spike with a white, globe-shaped diffuser. "Those looking for a low-maintenance, environmentally friendly option will find the Terraluna LED solar garden spike the perfect choice. Measuring 630 mm in length, this light will allow you to cut costs, protect the environment and light up your outside walkways and borders with ease," explains Shaun Bouchier, director at Eurolux.

### Milton

A classic design and time-tested metal finishes bring quality and distinction to EGLO's Milton collection. Bouchier says this beautifully crafted wall lamp reminds of an 'olden day' lantern casting its light on a cobblestone pathway, but it is set to complement any home. The product is available in various finishes, including antique brown, antique green, stainless steel and galvanised. The fixture's IP44 rating signals its weatherproof qualities and when used with the EGLO corner bracket it can easily be corner mounted.

### Buckingham

The Buckingham wall lantern offers a contemporary twist on a modern classic. It is a stainless steel wall light with a clear, waved glass diffuser that is durable and weatherproof. The Buckingham offers an IP54 rating; and is 380 mm high and 160 mm deep. The product is suitable for use with low energy bulbs and will complement most décor choices.

To see the complete range of EGLO products available through Eurolux, visit one of their showrooms in Cape Town or Johannesburg, or log onto [www.eurolux.co.za](http://www.eurolux.co.za).

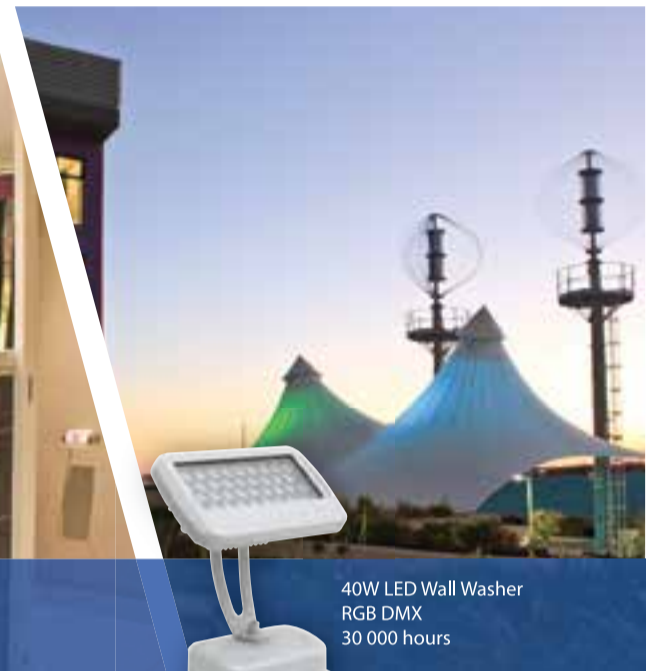
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30 000 Hours



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Red & Blue  
50 000 hours



ELT LED Modules  
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50 000 hours



ALT 92W Lodestar Floodlight  
Natural White  
100 000 hours

## EUROLUX PROJECT SOLUTIONS

*Enhance your commercial and industrial environments*

Eurolux Project Solutions offers a variety of energy efficient lighting solutions. Recent projects include Caxton Publishing House, Namibia Breweries, Hyundai Showroom, the River Club, the renowned Hotel Verde: The greenest hotel in Africa; as well as the Agulhas Marine research vessel.

Eurolux offers a comprehensive lighting design and specification solution to its customers – all completed by a qualified lighting engineer.

- A project begins with the initial site inspection and customer briefings.
- A detailed lighting design, with full 3D simulation and energy efficiency report, to comply with SANS and OHS, is then presented to the client.
- Detailed cost-of-ownership and lifecycle cost analysis is presented to the client, thus allowing for informed easy decision making.



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[www.eurolux.co.za](http://www.eurolux.co.za)

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Lighting your way





Hoosein Unice, the winner of the Eskom award for best design (professional category) and the recipient of a R100 000 seed grant from the SAB Foundation.



## Seed grant for designer of inexpensive alternative light source

THE Genie Lamp designed by Hoosein Unice of Johannesburg has earned him the Eskom award for Best Design in the Professional and Overall category and, at the recent South African Breweries (SAB) Foundation Social Innovation Awards, Unice was awarded a seed grant of R100 000.

His entry, the Genie Lamp, has a 12 V battery that powers an 11 W energy-saving bayonet globe. It has a USB port, which can charge a cellphone, laptop or PC – and it can burn for

up to eight hours on a single charge.

The SAB Foundation Social Innovation Awards calls for “sustainable innovations”, either a product or process that addresses a challenge faced by its beneficiary groups: women, youth, people with disabilities and people living in rural areas. Emphasis is placed on innovations that are scalable and able to be commercialised.

Underscoring SAB's belief that investing in the country's entrepreneurs will help to grow SA's economy, Unice will receive the seed grant funding in tranches that will be determined by his growth plan to commercialise and upscale his product. The SAB Social Innovation Awards has, to date, invested R20-million in 63 innovations that are geared at benefiting the SAB Foundation's core beneficiaries.

Enquiries: +27 82 0484372

## Shuttle

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#### SAVE UP TO 70% ENERGY

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- Adds to security as it provides an early warning signal of occupancy when controlling lights
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- 4 Independent 16A circuits
- Up to 5 independent sensors per circuit
- 16 Selectable delay times (10s – 1 hour)
- Fail-safe



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### Practical lights for practical people



THE recently launched Legrand lighting devices for the DIY sector are easy to install and safe to use and include inspection lamps, LED portable lamps, bulkhead lights, night lights, switches and sockets, as well as plug-in devices with an adjustable night light function.

Two types of inspection lamps are available – a 230 V 75 W unit fitted with a clamp and a 230 V 11 W lamp supplied with a 2P (two-pin) 10/16 A plug, a fluorescent tube and a 5 m cable.

The LED portable lamp, with a built-in battery pack, has a manual on/off switching facility with three lighting levels – 20 lumen for three hour's duration, 40 lumen for 90 minutes and 60 lumen for an operation period of one hour. Vandal resistant bulkhead lights are suitable for interior and exterior applications, including corrosive environments, such as seaside homes.

Night lights, for automatic lighting control, have the latest LED technology and a light sensitive sensor that automatically controls lighting levels, according to pre-set light level thresholds.

Legrand's BE plug-in lights, with an adjustable night light function, can also be used as a removable torch. In the event of a power failure, the plug-in lighting device automatically turns on to maximum intensity, with a cool light LED. In manual mode, the lighting device is plugged into a socket and when the lens is pressed, it can be used as a courtesy light with warm illumination. In automatic mode, a warm light LED automatically switches on and off, depending on the light intensity in the room. The dimmer function enables light intensity to be adjusted.

Enquiries: +27 11 444 7971



# ENLITE'S ICE™ LAMP - A BIG, BRIGHT PERFORMER!



108lm/W  
lowest Rand  
per lumen cost  
1.5kV surge  
protection  
3 Year  
Warranty

Warwick Webber, Aurora's Technical Director, reveals why the ICE™ lamp was designed with exceptional savings and flexibility in mind.

## Solid State Lighting for a residential or commercial application comes in many forms.

Either the integral luminaire and light source is already fixed within the housing or there's a fitting that accepts LED lamps by using one of the tried and trusted methods of fixing in mains voltage GU10's or Extra Low Voltage MR16's.

Having a fitting and separate lamp allows a designer to produce a solution using the widest range of luminaires available, then tailoring the design to accept a light source that meets clients' needs.

The Enlite GU10 and MR16 Lamps provide an ideal solution for replacing the Tungsten Halogen lamp, not only within Aurora recessed downlights, but also those fittings manufactured by other lighting companies. With superb performance, the 5 Watt lamp offers a retrofit for a 50 Watt Halogen lamp, providing increased illumination together with a 90% reduction in energy consumption.

Brighter than most lamps, the ICE™ Lamp provides between 480 and 540 Lumens, depending upon the colour temperature selected for just 5 Watts of consumed power, equating to an efficacy of between 96 and 108 Lumens per Watt. Non Dimmable versions of both the GU10 and MR16 provide an ideal solution where performance is the main criteria. However, should there be a requirement to adjust illumination levels, there is a GU10 Dimmable version, allowing the creation of a lighting scene that meets the customer's needs.

Innovative in design, the ICE™ Lamps utilise a combination of highly efficient, low temperature LED chips, internal aluminium heat sinking and thermoplastic material, called ThermoTec™ heat management, which allows the LEDs to provide consistent performance through a longer life.

The EnFiniti™ lenses used within the lamps provide an edge-to-edge multifaceted polycarbonate lens, offering a halogen-like appearance from the wide 60 degree beam angle optic, which will replace and improve your lighting levels whilst also ensuring low glare.

Fully tested and in compliance with European legislation, and with a 1.5kV surge protection, these lamps are ideal for most applications and electrical installation, providing contractors with the confidence that they can be installed into fittings easily and safely.

Through its quality construction and design, together with the thermal management of the LED, the ICE™ Lamps will provide an L70 performance at 25,000 hours when installed within a vented ceiling.

A 3-year warranty is provided by Enlite, which is part of the Aurora Group, the international LED lighting organisation.

For more information on purchasing Enlite ICE lamps, checking dimmer compatibility

and to view our lighting design guide, visit [enlitelighting.com](http://enlitelighting.com).

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L I G H T I N G  
**ENLITE**®  
E S S E N T I A L S

B I G P E R F O R M A N C E | H I G H Q U A L I T Y | L O W P R I C E



**ICE**™  
**LAMP**



## GU10 LED RETROFIT LAMPS

EN-DGU005 Dimmable  
EN-GU005 Non-Dimmable

### Features & Benefits

- Excellent efficacy - Up to 108lm/W delivers more light using less energy
- ThermoTec™ for longer life and consistent performance
- EnFiniti™ halogen-like low glare lenses
- Wide 60° beam angle delivers increased light distribution
- 1.5kV surge protection - GU10
- L70 25,000 Hours
- 3 year warranty



"What really sets it apart from other lamps we tested is the efficacy"  
Alan Tulla, Technical Editor, Lux Magazine



## Thermo Tec™

ThermoTec™ technology utilises a combination of highly efficient LED light source, aluminium heat sinking and thermoplastic material for longer life and consistent performance.



## EnFiniti™

EnFiniti™ edge-to-edge multifaceted polycarbonate lens creates low glare and halogen like appearance.



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Bright Spark

Holiday puzzle

Across

- 4 Safety device that breaks a circuit when excessive current is flowing (4)
- 5 Unit that resistance is measured in (4)
- 7 Switch that opens a circuit when too much current is flowing (7)
- 8 Electric discharge during a storm (9)
- 12 Unit that current is measured in (abbr) (4)
- 15 Device that resists the flow of electricity in a circuit (8)
- 17 Material that does not conduct electricity well (9)

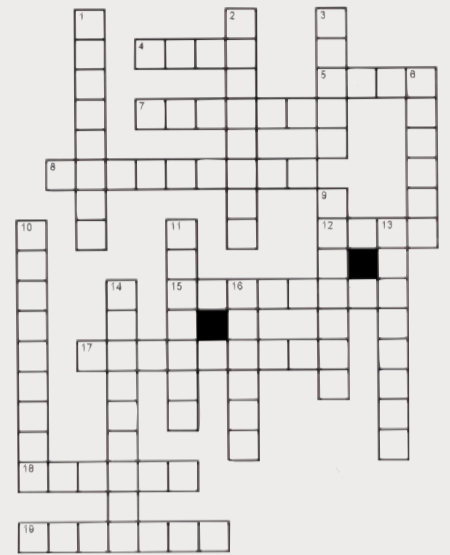
- 18 Device that will open or close a circuit (6)
- 19 The flow of electrons through a material is called electric \_\_\_\_\_ (7)

Down

- 1 Charge on a proton (8)
- 2 Charge on an electron (8)
- 3 Type of circuit where current bypasses most resistance and large, dangerous currents flow (5)
- 6 Circuit with only one path through which electrons flow (6)
- 9 Voltage supply used in flashlights

- and toys (7)
- 10 Electricity is the movement of \_\_\_\_\_ through a conductor (9)
- 11 Path through which electric current flows (7)
- 13 Circuit with more than one path through which electrons can flow (8)
- 14 Material that conducts electricity well (9)
- 16 Kind of electricity resulting from a build-up of charged particles (6)

See solution on page 4



November solution

A riddle party

In order, the answers are: a coffin; your breath; your name; silence; the moth, because it only eats holes; fire; and footsteps.



JANUARY FEATURES

CABLES AND CABLE ACCESSORIES

Regular topics such as cables, cable accessories, cable management systems, cable sizing, skirting, trunking, conduit, cable trays, cable marking and labelling, cable jointing techniques, wire sizing, fault finding, hazardous areas, flameproof, cable terminations, glands, cable installations and trenching will be included.

EARTHING, LIGHTNING AND SURGE PROTECTION

Earthing, lightning and surge protection, earthing systems, surge protective devices, fuses, protection of structures and electronic equipment against lightning and surge, internal and external lightning protection systems, correct cabling strategies, earth electrode testing, impedance measurement and insurance.

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Published monthly by:

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

Printed by:

Tandym Print

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

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

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  - Low impedance 0.01Ω
  - Direct readout of PSC
  - 3 LED's for checking correct wiring status
  - CAT III 600V / CAT II 1000V
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  - Loop & PFC/PSC
  - Phase Rotation
  - Anti-Trip Technology
  - Lock-down test button
  - Dual display
  - IP54 Casing
  - CAT III 300V
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  - Loop and PSC test, Phase Rotation
  - Bluetooth / SD Card / USB
  - CAT IV 400V
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  - 3.5" TFT colour LCD display
  - 320 x 240 Pixels
  - Loop and PSC test, Phase Rotation
  - Bluetooth / SD Card / USB
  - CAT IV 400V

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