

SUPPLYING THE LOCAL ELECTRICAL INDUSTRY WITH NOTHING LESS THAN THE BEST



The CED team in front of the company's new facility in Linbro Park, Johannesburg.

CONTINUED ON PAGE 7

PHILIPS

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Consolidated Electrical Distributor (CED) has been known for successfully distributing low-voltage switchgear and motor control for over a decade. With client requirements and demands changing over time, the company has diversified its portfolio and now offers clients a basket of goods in the LV sector.

This move has not only increased the products on offer, but also the range of brands that CED houses, giving clients more options in terms of quality, price and, more importantly, an extensive range meeting most of their requirements. In turn, this has also grown the client base that CED can now service, increasing its model not only to the wholesale sector, but also to the panel building and OEM markets. The company already has a portfolio of clients who have moved a large portion of their business to CED's new range of brands to reduce the number of suppliers on their books, and also to reduce overall risk on service and delivery of their end products.

"We are one of a handful of companies in the market to have partnerships with multiple established brands and recognised international names, such as, TosunLux, ABB, Hellermann Tyton, as well as local brands like Horizon, Stone Stamcor and Uniclamp, offering a basket of products which will cover the majority of any wholesaler's and panel building requirements on a low voltage level," says CED general manager, Richard Egenrieder.

TosunLux, one of the new international brands recently introduced by CED into the South African market, has had a successful presence in 35 countries around the world and a prominent footprint in the African market for over 27 years. CED is proud to be in partnership with TosunLux and over the past few months has been introducing the new range into the local market. The company has procured a generous stock holding of the switchgear and motor control brand, which has already shown acceptance in the market. "These customers have shown great confidence in the products," says Egenrieder.

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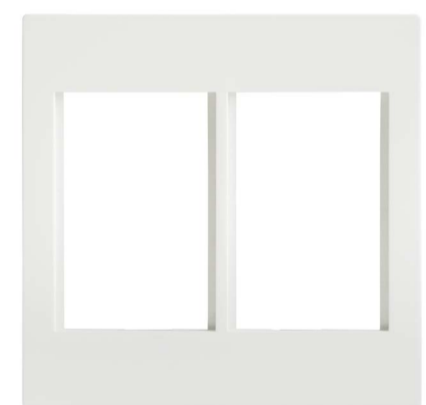
Proudly SA designed Crabtree modular range: configure your own

Crabtree South Africa's modules allow users versatility to meet the needs and requirements of any installation in its Diamond and Topaz Grid range. The modular range allows the end user to configure and combine any of Crabtree's locally manufactured modular components in a 2x4 and 4x4, 9 way and 18 way footprint.

The modular components are either 50 x 50 mm or 25 x 50 mm in size and range from sockets through to switches, blanks, keystone and even USB modules. All of these can be viewed in Crabtree's catalogue. The 2x4 footprint allows for any combination of the modular

components within its single 75 x 50 mm area, while the 4x4 allows for two variations; a single 75 x 50 mm which is new to the product range and a double 75 x 50 mm area. This allows for many different configuration options which will benefit the end user. Crabtree's modules can be used in OEM products ranging from power skirting, power poles, floor boxes, pedestals and the clip in feature of the modular components allows for smooth assembly. Configure yours today!

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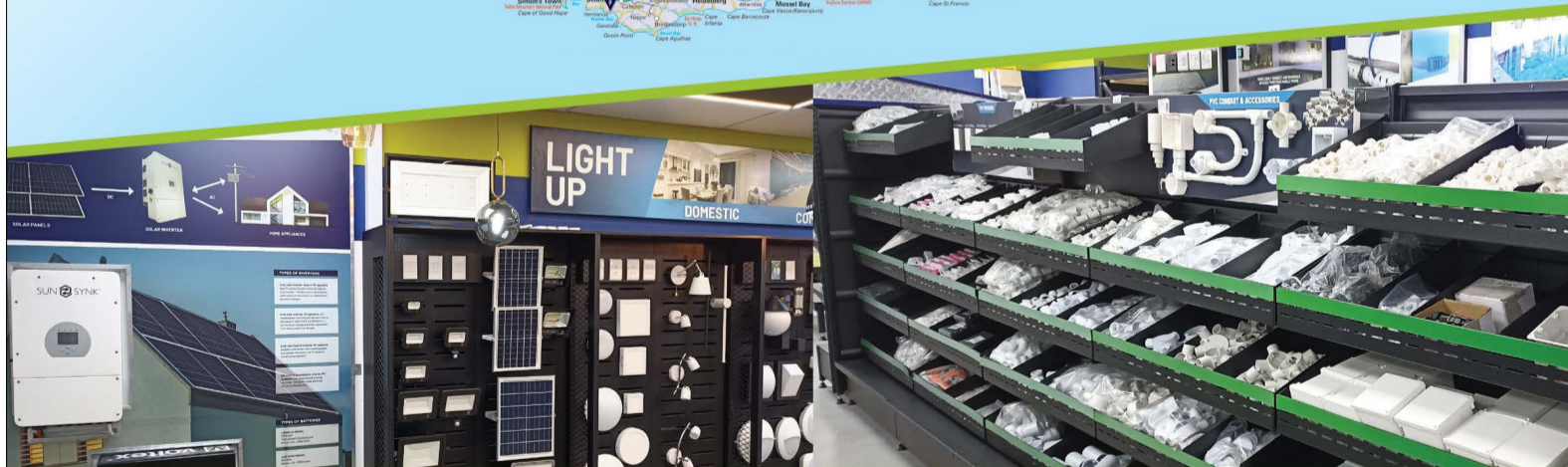


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ECA(SA) Highveld Region Golf Day

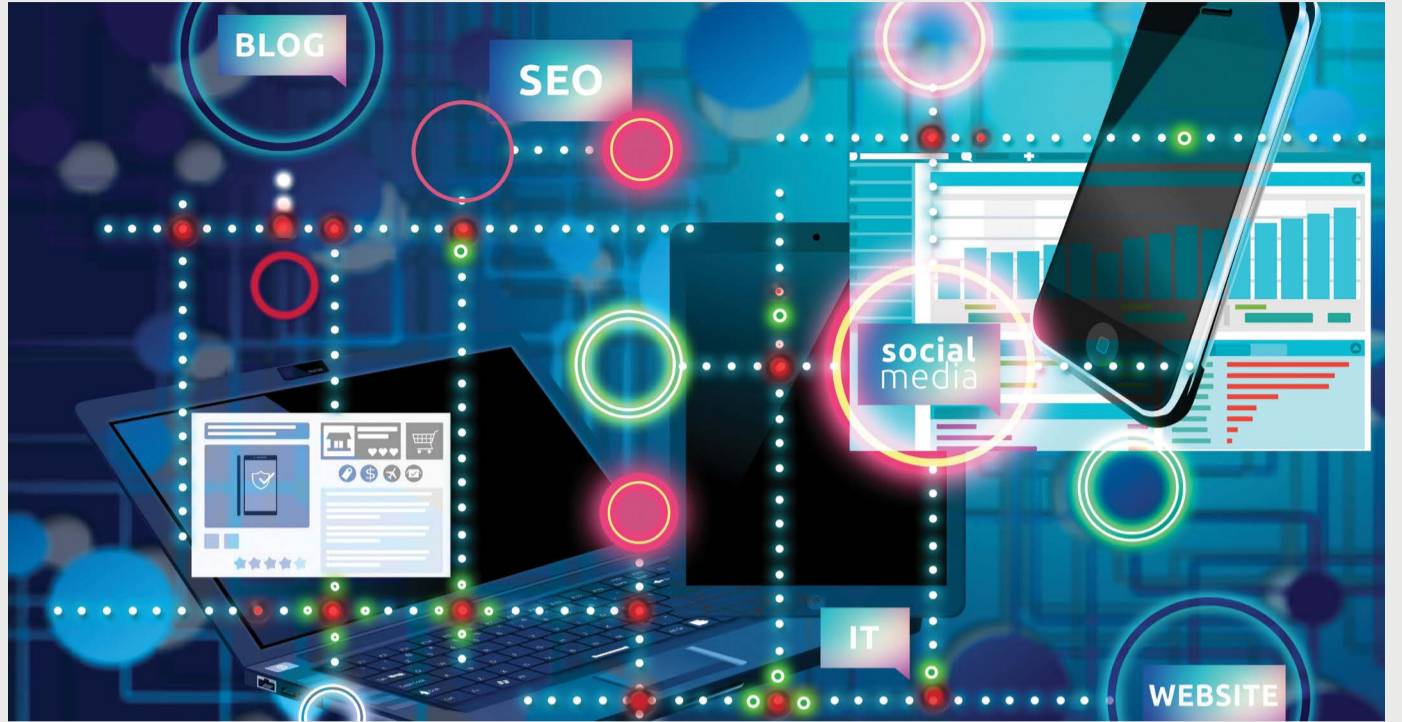
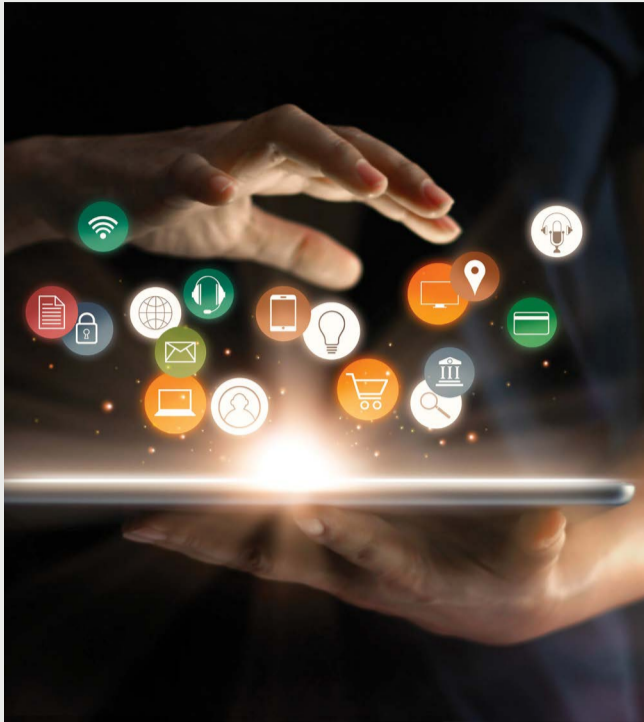
Anthony Schewitz, ECA(SA) Highveld Regional Director, invites keen golfers to join the Highveld team at the Germiston Golf Course on 16 September and network with members and sponsors while having a great day out. All proceeds are donated to charity.

For more information about booking a fourball or sponsoring holes and prizes, contact Leola on +27 (0)10 271 0686/leola@ecasa.co.za or Theresa Megalane on +27 (0)11 392 0000/theresa@ecasa.co.za

The ECA(SA) is the most influential members' association for electrical contractors in South Africa. Registered in terms of the Labour Relations Act, the ECA(SA) has represented South African electrical contractors since 1948 and is firmly established as the 'home' of trusted electrical contractors. The ECA(SA) has a membership network of around 4 000 electrical contractors, which employs around 75% of the workforce employed within the electrical contracting industry.



Best apps for self-employed contractors



Being self-employed comes with some perks. Most contractors are seeking that feeling of 'being your own boss'. Not reporting to anyone except the customer, setting your own work hours, as well as deciding how much to charge.

But keeping the business wheels turning requires a lot of admin on top of, you know, actually doing the work. Knowing how to monitor and manage all the aspects of your business will be the key to your success.

There is lots of time to be saved – and money to be made – by improving the efficiency of your business with the right apps. The best tools for self-employed contractors will simplify and speed up business processes, significantly reducing the number of balls you are juggling. With job management tools you can spend less time on your admin and more time out in the field.

What makes a great app?

Before we list the best apps for self-employed contractors, here is what needs to be considered:

- Core functionality: Not all apps are created equal. The best apps focus on essential business tasks that contractors need to manage.
- Integration capabilities: Systems that can be seamlessly integrated with a wide range of apps and tools will help you streamline your admin and significantly speed up your data and information processing.
- Intuitive and simple: A user-friendly interface with simple processes will make it easy for you to incorporate any app into your daily work life. Fancy bells and whistles are not necessary.
- Cloud-based and mobile-friendly: You want a seamless user experience across all your devices, so whether you're on the move or in your office, you can still run your business efficiently.

Best accounting and bookkeeping apps

For tracking your income and expenses and keeping on top of your tax obligations, you need a good accounting app with robust bookkeeping capabilities. Here we have a few recommendations, as the best app for you may depend on your location and existing services.

Xero (available on iPhone, Android)

The beauty about Xero is you can add more functionality as your contracting business grows. You can use it to send out quotes and invoices, connect it to your bank and reconcile your accounts, or upgrade and add payroll when you hire new staff members. If your accountant uses Xero, you can share your financial data with them directly. Xero also integrates with a wide variety of other apps which means you can add more tools over time.

Now used by more than 700 000 subscribers across the globe, it's the solution of choice for businesses operating in every sector, including contractors.

Sage (available on iPhone, Android)

Sage is a popular accounting app among contractors. It's affordable and easy to use, with all the features you need to perform core accounting tasks. You can keep track and manage your finances from anywhere, integrate with dozens of third-party apps, and work with an intuitive dashboard – great if you're new to the whole bookkeeping thing.

QuickBooks Online (available on iPhone, Android)

This app is well-known all over the world as one of the best accounting tools for small businesses. It's been around for many years – giving its developers plenty of time to perfect its features. QuickBooks does everything in regard to your business finances: it's easy

to use, available on all devices, and has integration capabilities with many other apps.

Best payment apps

Stripe (available on iPhone, Android)

Getting paid on time is essential for good cash flow. Giving your customers payment options, like paying online with a credit card, makes it easier for you to stay on top of your invoices. Stripe lets you process payments on the go, so you can get paid the same day you finish a job. You can also integrate Stripe with other tools like accounting software, or your job management app, to automatically chase up or reconcile payments.

Best online communication app

Zoom (available on iPhone, Android)

If meeting and communicating with customers or employees in person is difficult for you, Zoom is a great app for contractors. The user-friendly video-conferencing and chat software allows you schedule online meetings and take calls on any device. It can be integrated with calendar apps, you can record calls for future reference, and it has a free 45-minute time limit (for calls between up to three people) – a bonus for contractors just starting.

Best app for business

Tradify (available on iPhone, Android)

Tradify's Instant Website feature makes building a website fast and easy. Get found online with a professional-looking website, capture enquiries, provide a quote, turn it into a job, schedule it in, do the work, raise an invoice and take payment – end to end job management!

Take a look at Tradify's trade business name generator too – if you are planning on going out on your own or just want to spice your brand up a bit – the first port of call is finding a good business name. This free generator finds a name that's specific to your industry and the unique identity of your business. Just plug in one word that describes your business and it'll spit out a whole list of different names and report whether their domain names, Facebook pages, and Instagram are available to use.

Best social media management app

Buffer (available on iPhone, Android)

If maintaining an active social media presence is an essential part of marketing your contracting business, you'll need an app to help you manage your accounts. Using the specific app for every social media platform can be distracting and cuts into valuable billable time. Buffer lets you queue posts for all your social accounts – just pick a day and time, and it will publish your posts for you. It also offers in-depth analytics to optimise your posts even further.

Best job management app

Being your own boss is liberating but it is also a lot of hard work. As a self-employed contractor, you are also the bookkeeper, marketer, receptionist and manager (just to name a few). To avoid being overwhelmed by the daily grind, use apps to leverage your time and streamline your workflow.

Tradify is a job management app made for tradesmen, by tradesmen. From customer enquiries to invoicing, you can track and manage your jobs in the palm of your hand. It also seamlessly integrates with other third-party accounting and online payment apps, so you do not have to worry about transferring information between different systems.

Enquires: www.tradifyhq.com

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70 years of partnering for engineering excellence: CESA's Platinum Jubilee

Consulting Engineers South Africa (CESA), representing close to 600 member firms employing approximately 17 000 people, is celebrating 70 years of engineering excellence in 2022. CESA's Platinum Jubilee celebrates the organisation's remarkable and enduring history of contributing to the representation and development of the all-important engineering sector within South Africa, and they have much to celebrate.

"Our 70th anniversary bears testament to the critical role we continue to play in the engineering sector since the organisation was first established in 1952. We have unquestionably become the apex organisation of the consulting engineering sector," states Chris Campbell, CEO of CESA.

The past decade has been a particularly eventful one for South Africa and the industry. The Covid-19 pandemic had an important impact on the country's economy and has contributed to setting back a number of infrastructure development initiatives, as well as the broader SA economy. "Within this constrained environment, we have played a critical role in supporting our members, the broader built environment and construction sector, while contributing to the development of practitioners both in the public and private sectors" says Campbell.

"One of our strategic goals is to promote transformation of the sector. In South Africa there is a recognition of the need to develop local capacity to address the backlogs in infrastructure resulting from the Apartheid era" continues Campbell. This has necessitated CESA's focus on capacity development and through their member base, has developed the means for larger established companies to partner with newer SMME businesses and for the latter to participate in public sector projects. This has worked to address inequalities in access to business, as well as to support and capacitate these small businesses.

In full support of the Government's transformation targets, more than 70% of CESA member companies are more than 51% Black owned and of these, 3,1% are owned by black women. Two thirds of the member firms have a staff of 20 or less and 50% less than 10. Many of these being emerging consulting engineering organisations are either majority owned or wholly owned by Black South Africans. The number of Black owned and managed firms joining CESA has grown from 38% in 2009 to 55% in 2022.

In another milestone, celebrating 20 years of service excellence, CESA's School of Consulting Engineering (SCE), offers more than 100 courses

country-wide and has provided training to thousands of practitioners. The SCE courses go a long way to ensuring skills development and the retention of skills within the consulting industry.

CESA's Young Professionals Forum (YPF), established in 2004, serves the needs of professional engineers, technologists, and technicians in member firms, under the age of 35, providing a platform for young practitioners to network and grow. CESA's YPF Imbizo also celebrates its 10th anniversary this year.

CESA became a member of International Federation of Consulting Engineers (FIDIC) in 1959 and of its regional grouping the Group of African Member Associations (GAMA) in 1981, now FIDIC Africa, with CESA fulfilling the role as Secretariat to this Regional Body, representing the African continent, since 2018. CESA has been recognised during two FIDIC Award ceremonies both in 2019 in Mexico City as well as online in 2021 for our achievements amongst FIDIC's 106 country member associations.

For 50 years, the engineering excellence of CESA member firms has been celebrated at the annual CESA Aon Engineering Excellence Awards. This is a showcase of both member firms, their clients and their projects, that are world class in their

standards of design and innovation which contribute to enhancing the quality of life of the public and the communities being served.

"We remain committed to the promotion of excellence in the consulting engineering industry on behalf of our members and stakeholders. We continue to strive not only to develop and support the consulting engineering sector, but also to have a meaningful impact on the lives of all South Africans. We look forward to another 70 years of contributing to the sector and to our country as we continue in our quest to Protect Lives and Livelihoods", concludes Campbell

Enquiries: www.cesa.co.za



CESA CEO, Chris Campbell.

More to see and do at Electra Mining Africa, celebrating 50 years this year

Electra Mining Africa and its line-up of conferences and free-to-attend seminars will be taking place from 5-9 September at the Expo Centre, Nasrec, in Johannesburg. Hundreds of exhibitors are ready to showcase their latest innovations, technology, products and services at Southern Africa's biggest mining, electrical, automation, manufacturing, power and transport trade exhibition. It's an exhibition viewed by industry as one of the most important events on the calendar.

This year, Specialised Exhibitions, organisers of the show, are promising an exciting interactive event with many activities planned by exhibitors and industry partners, and to also celebrate the show's 50th anniversary.

In an effort to promote the importance of Forklift Operation and operators in the Supply Chain & Logistics industry, Lifting Africa and LEEASA (Lifting Equipment Engineering Association of SA) will be hosting a Forklift Driver competition during Electra Mining Africa.

As in previous years, many respected Associations and industry organisations will be partnering with Electra Mining Africa. Charlene Hefer, Portfolio Director at Specialised Exhibitions, has confirmed that the Southern African Institute of Mining and

Metallurgy (SAIMM), Society for Automation Instrumentation Mechatronics and Control (SAIMC), South African Capital Equipment Export Council (SACEEC), Mining Equipment Manufacturers of South Africa (MEMSA), South African Mineral Processing Equipment Cluster (SAMPEC), the SA Institution of Mechanical Engineering (SAIMechE), Women in Mining South Africa (WIMSA) and LEEASA are on board as partners.

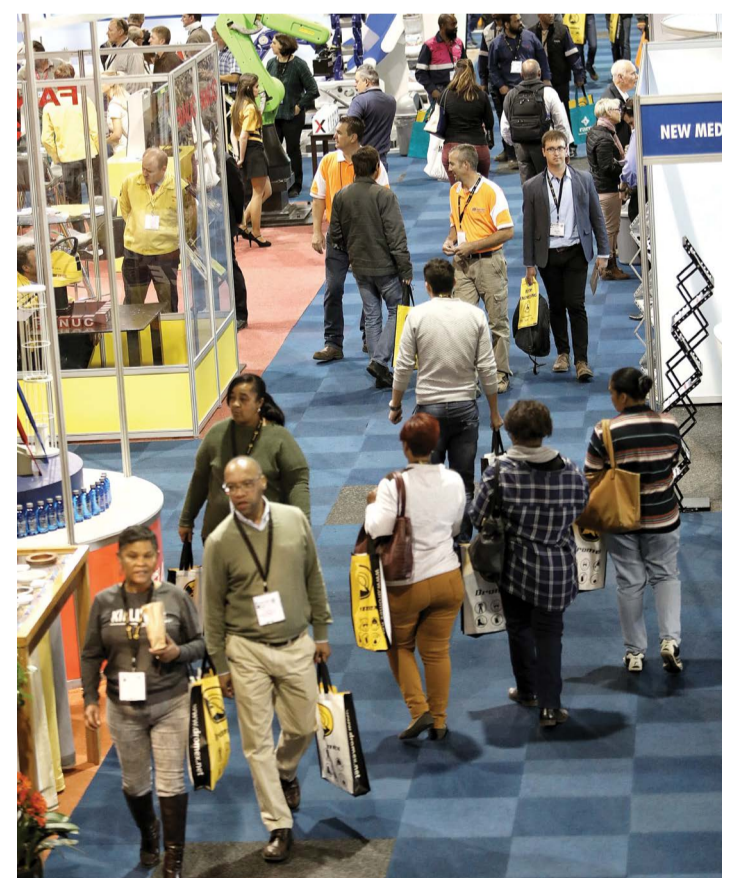
Electra Mining Africa and co-located shows Elenex Africa, Powerex, Transport Expo and Automation Expo will be supported by a programme of content-rich conferences including SAIMC, WiMSA Women in Mining Workshop and LEEASA Lifting Equipment Conference and SAIMechE free-to-attend seminars. Industry experts will be speaking on a range of topical and important issues. The seminars will be live-streamed to enable a wider audience to participate in the learning experience.

The 'every day a theme day' experience will again be part of this year's event with Automation Day, Innovation Day, Safety Day, Future Skills Day and South African Day confirmed.

Electra Mining Africa is a much needed platform for buyers and sellers to connect face-to-face again. It presents an opportunity for industry networking to take place, to build business partner-

ships and new connections, and for new products and services to be launched.

Enquiries: www.electramining.co.za





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Expo Centre, Nasrec, JHB, South Africa



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The Tork Craft TCMT001 Rotary Multi-Function mini power tool is said to be one of the most popular tools on site or in a workshop today. With its small size and a substantial number of uses, including cutting, grinding, sanding, polishing, drilling, carving, and engraving, it is a handy machine to have in your toolbox.

For these units there are bits for this tool to do any job; the main feature of these tools is getting into small spaces – there is no place this tool could not get to. It is also available with a flexible shaft and flex light; both these accessories make this tool a winner in any situation.

This Tork Craft unit comes with a powerful new

170 W motor, revving from 8 000-35 000 RPM. It is also the first tool in its category to come with a clever handy pistol grip, which is preferable to other units.

“In the normal tests we do on all new products, we compare them to some of the key competitors,” says Ryan Hunt, Director Tork Craft/Vermont Sales. “Our team felt that the new TCMT001 was certainly on par with the best of them, if not better overall, but certainly a lot more affordable.”

The Multi Tool is available from all leading stores countrywide.

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Cummins announces new appointments

Cummins has announced that, effective 1 August 2022, Tom Linebarger will end his term as Chief Executive Officer (CEO) and Jennifer Rumsey, President and Chief Operating Officer (COO), will assume the role of President and CEO.

Rumsey will be the seventh CEO and first woman to lead the company since it was founded in 1919. Linebarger will continue to serve as Chairman of the Board of Directors and in an Executive Chairman role, working directly with Rumsey on specific initiatives that position the company for continued success, including completing the pending acquisition of Meritor.

“Jen is a once in a generation talent and the right leader for Cummins at this important time in our history,” said Linebarger. “She has been my partner in developing the Destination Zero strategy, which sets forth how the decarbonisation of our industry will be a significant growth opportunity for Cummins. Her background as an engineer and her technology expertise provide her with a deep understanding of the major technical changes taking place and how to capitalise on them. Jen uniquely understands our customers and business, having worked in many different parts of the business during her more than 20-year career and, in every role, she has consistently delivered results. Most recently, she led our global operations as COO during one of the most challenging periods in our history, delivering record revenues and dramatically improving product quality and our market position while addressing unprecedented supply chain constraints. Most importantly, Jen is a principled leader who cares deeply about our stakeholders. We share a common vision for Cummins, and I am confident that Jen will lead Cummins into an even more prosperous future.”

Tom Lynch, Cummins Lead Director, said: “On behalf of the Cummins board, I want to thank Tom for his three decades at the company, including the last 15 years where he served first in the COO role and then as CEO. His leadership has grown Cummins’ global business, positioned the company to lead in zero- and low-carbon solutions, and developed a highly capable and diverse management team to lead us through the technology transition. We look forward to his continued contributions as Executive Chairman. During our long-term strategic planning, the Board had the opportunity to see Jen lead on key business initiatives and co-author the Destination Zero strategy with Tom. Jen is the ideal choice to lead Cummins into its next chapter, and we are confident that she will drive continued success for our business and customers.”

Since taking on the role of COO in March 2021, Rumsey has overseen Cummins’ global operations. In February 2022, she was elected to the Cummins Board of Directors, and she will maintain her seat on the board.

“I am honoured and proud to be appointed the next CEO of Cummins and excited about what the future holds for the company,” said Rumsey. “I am grateful to Tom for his support and mentorship over the years and to the Board for their confidence in my leadership.”

Enquiries: www.cummins.com

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Zest WEG poised for African growth

After a decade-long expansion of its manufacturing capabilities in South Africa, Zest WEG, the South African subsidiary of Brazil's WEG Group, is well placed to extend its already extensive footprint in the African market.

"We now have six manufacturing facilities in Gauteng and Cape Town, producing a wide range of equipment including gensets, transformers, electrical panels, E-Houses, MCCs and mini sub-stations," says Zest WEG's outgoing CEO, Juliano Vargas. "This ability to manufacture locally gives us a huge advantage in the African market, as we can produce economically and deliver promptly to countries throughout the sub-Saharan region."

According to Vargas, who is taking up an appointment at another operation of WEG Group, Zest WEG's drive on local manufacture and local sourcing is consistent with WEG's global approach of maximising local content and procurement wherever possible. It has also contributed to Zest WEG earning coveted Level 1 B-BBEE status.

"WEG now manufactures in 12 countries outside of Brazil with these facilities accounting for more than a third of the Group's global production," he says. He adds that Zest WEG is amongst the largest WEG operations outside of Brazil, including USA, Germany, and China.

Vargas's successor as CEO of Zest WEG is Eduardo Werninghaus, who has been with WEG for more than 15 years and who comes to South Africa from WEG's USA subsidiary. "I've been briefed to build on the very firm base created by Juliano and his predecessors," he says. "WEG is not a company that is fixated on next quarter results only. It thinks and acts long term and considers Zest WEG as being crucial to its future, given Africa's enormous

growth prospects which include a need for massive investments in energy infrastructure."

Zest WEG is responsible for the entire sub-Saharan region and works through an extensive network of branches and Value-Added Resellers (VARs) throughout the continent.

"Being local in Africa is a key part of our strategy," says Werninghaus. "We need to be close to the countries and communities we serve. There is a perception that all African countries are the same. This is not so. Each as its own unique culture, its own challenges and its own strengths. Having a presence on the ground in so many countries across the continent allows us to address this diversity."

Most of Zest WEG's product offering will be on display at the Electra Mining Africa 2022 exhibition. "Our theme, as always, will be how to change energy into solutions," says Werninghaus. "There will, however, be a particular emphasis on efficiency and sustainability. One of the products that we'll be highlighting is our range of WEG IE4-rated super-premium efficiency electric motors which were launched locally last year and which cost no more than their IE3 predecessors. These are the most energy efficient motors in the market and offer major operating cost advantages to users."

Werninghaus says that the WEG IE4 motors have already received a warm reception from the mining industry, which is struggling with constantly rising electricity costs. "A medium-sized mine typically has between 2 000 and 3 000 electric motors on site – powering everything from fans and pumps to conveyor belts and screens – so the potential for very significant energy and cost savings is huge."

He points out that electric motors account for



Motor control centres at Zest WEG's manufacturing facility in Robertsham.



The WEG IE4 super premium efficiency motor will be highlighted at Electra Mining Africa 2022.

about 40 % of all industrial electricity consumption and that around two-thirds of these motors are on mines.

Werninghaus adds that Zest WEG will also be showcasing many high-tech products and systems at Electra Mining Africa 2022. These include the already available WEG Motor Scan, which allows the continuous monitoring of electric motors and other rotating machines; and Pump Genius, a software package that enables a standard VSD to be dedicated to specific pumping systems with various motor and pump combinations, thereby providing improved control and monitoring capability.

Also on show will be WEG's new Motion Fleet Management system, which uses artificial intelligence and machine learning to diagnose and monitor rotating equipment such as motors, VSDs, gearboxes and compressors. Based on cloud computing technology, the performance of assets can be monitored at any time from any part of the world. This approach reduces unplanned downtime



Zest WEG will showcase its mobile substation capabilities at Electra Mining

and optimises repair actions.

According to Werninghaus, WEG has fully embraced the world of Industry 4.0 (also known as the Internet of Things). "Keeping abreast of digital developments is a priority for us and Electra Mining Africa will give us an opportunity to show just how far we've come on our digital journey," he concludes.

Enquiries: www.zestweg.com

What is a digital multimeter?

Multimeters. They've been described as a modern-day tape measure. But what exactly is a digital multimeter (DMM) and what can you do with it? How do you make measurements safely? What features do you need? What is the easiest way to get the most out of your meter? Which meter is best suited to the environment you're working in?

Technology is rapidly changing our world. Electrical and electronic circuitry seems to permeate everything and continues to get more complex and smaller in size. The communication industry booms with cell phones and pagers, and Internet connections have put more pressure on electronics technicians. Servicing, repairing, and installing this complex equipment in these environments requires diagnostic tools that provide accurate information.

So, what exactly is a DMM? A DMM is simply an electronic tape measure for making electrical measurements. It may have any number of special features, but mainly a DMM measures volts, ohms, and amperes. DMMs measure faster, more efficiently and with greater accuracy, in almost any job in any industry. The three watchwords when selecting your DMM are safety, quality and performance. Fluke models include handheld troubleshooters to ultra-smart instruments packed with features, including the ability to log and graph data, as well as high-precision bench units.

Choosing your DMM

Choosing a DMM for the job requires not only looking at basic specifications, but also looking at features, functions, and the overall value represented by a meter's design and the care taken in its production, reliability and robustness. Reliability, especially under tough conditions, is more important than ever today. By the time Fluke DMMs are ready to be tossed into tool cases, they've undergone a rigorous testing and evaluation program.

User safety is a primary consideration in the design of Fluke's DMMs, providing adequate component spacing, double insulation and input protection helps prevent injury and meter damage when they are used improperly. Fluke designs its DMMs to the latest, most demanding safety standards, with your safety in mind. Fluke offers many DMMs with different combinations of features like Auto Hold analogue bar graphs, and



enhanced resolution. Accessories for high current and temperature measurements are available to extend the capabilities of DMMs.

The range comprises:

- 280 Series DMMs – for advanced diagnostic and logging functionality for maximizing productivity.
- 233 Remote display multimeter – ultimate flexibility with removable display.
- 80 Series V DMMs – performance and accuracy for maximum industrial productivity.
- 170 Series DMMs – versatile meters for field service or bench repair.
- 110 Series DMMs – compact design for ergonomic one-handed operation.
- 27II/28II Rugged Industrial Meters – designed to survive water, dust and rough handling troubleshooting most electrical problems.
- 88 V Automotive meter – for auto-electric diagnosis.

Enquiries: sales@comtest.co.za For more information, visit <https://bit.ly/3jbsN3u>

ABB displays its safe, smart and sustainable solutions at MINE-ENTRA 2022 in Bulawayo

Global technology leader in electrical distribution and management from source to socket, ABB exhibited its safe, smart, and sustainable solutions via its channel partner in Zimbabwe at MINE-ENTRA 2022 in Bulawayo from 20 to 22 July.

This was the 25th edition of the largest mining, engineering, and transport expo in the country, which returned after a two-year hiatus due to the Covid-19 pandemic. The expo took place at the Zimbabwe International Exhibition Centre (ZIEC) in Bulawayo.

The mining industry is an economic mainstay in Zimbabwe, contributing about 70% of the country's foreign currency revenue. Its ambitious Strategic Road to Achievement plan aims to boost the annual revenue from its mining industry from \$4 billion to more than \$12 billion over a four-year period.

ABB products on display for the mineral processing industry included its motor control solutions, including contactors, overload protection, push buttons and pilot devices, says Product Marketing Director Etienne Delpont. The company was represented at MINE-ENTRA 2022 by Product Marketing Specialist Egmont Dennyshen.

"Mining and mineral processing plants need integrated process control systems that use process measurements, drive, and power distribution information to increase plant-wide efficiency, productivity, and reliability. Plants must also manage vital process and business information if management objectives are to be met," says Delpont.

ABB is a leader in providing mining operations with immediate access to essential information, including business, financial, production, environmental, technical, and quality management data. With complete access to bundled plant and operating data, mines can deploy personnel and resources decisively and effectively to achieve reliable operations.

One of ABB's latest product innovations that was on display at MINE-ENTRA 2022 was the newly launched SACE Tmax XT range of moulded case circuit breakers (MCCBs). It features higher performances, protection, metering, and connectivity features up to 1600A.

The MCCB range has been designed for maximum ease of use, integration, and connectivity, and is built to deliver safety, reliability, and quality. The range offers thermomagnetic, electronic, and Display/Touch trip unit technology.

Electrifying the world in a safe, smart, and sustainable way, ABB Electrification is a global technology leader in electrical distribution and management from source to socket. As the world's demand for electricity grows, our 50,000+ employees across 100 countries collaborate with customers and partners to transform how people connect, live and work. We develop innovative products, solutions and digital technologies that enable energy efficiency and a low carbon society across all sectors. By applying global scale with local expertise, the company shapes and supports global trends, delivers excellence for customers and power a sustainable future for society.

Enquiries: www.go.abb/electrification





Local assembly of MACC drives to slash lead times

SEW-Eurodrive's expanded local capability out of its new Aeroton facility will include the assembly of SEW MACC air-cooled condenser drives for delivery at a rate of three units per week, slashing current lead times from overseas OEMs by approximately 36 weeks.

Built as part SEW-Eurodrive's M-Series modular industrial gear (IG) units, the MACC is a purpose designed gearbox solution for driving the modern fan-based air-cooled condenser (ACC) systems used in steam-driven power generation plants.

"The first SEW-MACC drives were installed at the South African concentrated solar thermal plant in the Northern Cape," says Jonathan McKey - SEW-Eurodrive's National and Africa Manager for Business Development, Sales and Marketing. "This was followed by a further 24 units, which have now been installed at a utility station in Limpopo - and these Size 09 MACC drives are the largest ever built by SEW-Eurodrive."

The units were assembled in SEW-Eurodrive's factory in Nelspruit, but a new assembly line is now being built in Johannesburg to take production capacity to the next level. "An ACC fan works in the same way as any cooling fan, but in power stations and industrial condensing systems, they need to generate huge air flows to efficiently condense exhaust steam from turbines. Our M-Series Air Cooled Condenser (MACC) drives adopt a modular design concept and gearing technology with specific optimisations to make them better suited to these applications," McKey explains.

Highlighting key innovations, he says that a stiffer case with built-in cooling veins has been developed for improved cooling. "Our internal EBD (extended bearing distance) system has also been incorporated, which better enables the gearbox bearings to accommodate the very high axial and radial forces transferred through the fan and the drive shaft," he explains, adding that an optional dry-well is also in-

cluded to better prevent oil leakage at the output shaft, while still allowing standard mounting dynamics to be used.

With the EBD and the stiffer casing, SEW's MACCs offer larger service factors, can handle higher loads and the whole drive train is stronger and more robust. "We have also built-in a maintenance brake so that when servicing is required, wind from the outside can be prevented from turning the fan and the main shaft, improving safety risks and making the boxes easier to maintain in-situ.

These are compelling reasons for power stations to replace faulty ACCs with SEW-Eurodrive MACCs.

"To make this easier for plant operators, we build customised adapter plates to enable our design to be easily retrofitted as a direct replacement for any older-generation boxes currently in use. We also customise the output shaft length to perfectly match the ACC infrastructure onsite and to establish the ideal fan position for maximum efficiency," McKey adds.

Turning attention back to the advantages of local assembly, he says that a single casing with key ratios will be able to accommodate all of the different ACC requirements of South Africa's Power Stations. "Our stocking policy is very simple, we will stock a single casing size with multiple components and specific ratios depending on which power station requires the drive," he points out.

This modular approach will enable the new facility to custom-assemble SEW MACCs to suit any local power station at a rate of two to three units per week.

"We have already ordered the components for the 30 units we intend to hold in stock, and we expect to be assembling units here by September 2022. Current typical lead times from overseas OEMs is



around 36 weeks, no matter how many boxes are being ordered. Our new local assembly capability gives South and Southern African clients massively reduced lead times for replacement ACC drives," he says.

With regard to service and repairs, we are already up and running, both here and in Nelspruit. Our new assembly line equipment and test bench is on its way, and these precisely replicate SEW-Eurodrive's assembly and testing capability in Finland.

"This is a bold step that demonstrates our commitment to being part of solving SA's power problems. We also expect to attract business from ACC

users across the world who may also be experiencing long delays when they find they have to replace an ACC gearbox.

"We at SEW-Eurodrive are on a mission to localise our modular drive concept for a variety of industrial drive applications so as to best meet local needs and conditions and massively reduce lead times. Local assembly is key to achieving this and, going forward, we hope to be closing the local supply and service loop for all users of our drives," McKey concludes.

Enquiries: www.sew-eurodrive.co.za

CONTINUED FROM PAGE 1

SUPPLYING THE LOCAL ELECTRICAL INDUSTRY WITH NOTHING LESS THAN THE BEST

"Some have moved their entire production line, where possible, to the TosunLux brand. It offers clients the best of both worlds; a reliable, internationally recognised brand which is readily available locally at economic prices."

At this moment in time, many OEMs and manufacturers are struggling with their supply chains, and as such, CED has a very close relationship with its clients, assisting them with forecasting, and more importantly, reducing their overall costs and increasing margins. "I believe that this differentiates us in the market," says Egenrieder. "We don't just sell products; we're here to offer a service and assist our clients in streamlining their businesses and making them more profitable."

Another distinguishing factor of CED is that the team is electrically qualified at various levels and are able to speak the same language to assist in finding the right solution for a customer's application. Furthermore, CED is an 'above-board business' - everything the company imports and distributes is certified and approved to both local and applicable international standards and requirements. The company is busy growing its footprint within South Africa and has recently invested in a substantial distribution facility to alleviate supply chain challenges and increase customer service and delivery.

Looking ahead, Egenrieder notes that it is an exciting time for the company with multiple new local and international brands on the horizon. However, it hasn't all been smooth sailing with the tumultuous events which have shaped business since the start of 2020. "CED is growing, and any business which goes through growth does have its fair share of challenges, and we have obviously been exposed to what has been happening locally and abroad over the last two years. Fortunately, we have a very dedicated team, and with our combined experience, we have been able to push CED into a new era, taking on challenges head-on, and coming out on the other side stronger," he says.

"CED is not going anywhere any time soon," concludes Egenrieder. "We have a very optimistic outlook on the South African market, and it is a positive time to be involved in the LV sector. We look forward to the growth ahead."

Enquiries: +27 (0)11 314 8869





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TosunLux range of 3kA
Miniature Circuit Breakers.

Readily Available in South Africa.



Miniature Circuit Breaker



Residual Current Circuit Breaker





www.cedsa.co.za



MANUFACTURERS

ABB South Africa
AFCAP Lighting and Allied Products
Aurora Lighting
BEKA Schröder
Crabtree South Africa
Eaton Electric SA
Envirowatt
Giantlight
HellermannTyton
Lamps Electrical Distributors
Legrand
Magnitech
Maranata Flameproofing
Nordland Lighting
Regent Lighting Solutions
Shuttle Lighting Control Systems
Signify Commercial (Philips Lighting)
Spazio Lighting
Superlume

DISTRIBUTORS

ACDC Dynamics
ACTOM Electrical Products
AFCAP Lighting and Allied Products
ARB Electrical Wholesalers
Belco
Crabtree South Africa
Eagle Lighting
Envirolight
Eurolux
Electrahertz
Hoi P'loy
Ideal Electrical and Mining Supplies
K. Light
Krelum Lighting
Lamps Electrical Distributors
Lumax Lighting
Magnet Electrical Supplies
Magnitech
Major Tech
MCE Electric
Nordland Lighting
Radiant Lighting
Regent Lighting Solutions
Sinetech
Spazio Lighting
Superlume
Triac Lighting
Tridonic SA
Unique Lighting
Voltex
VS Lighting Solutions
Waco
Zap Wholesalers

CONTACTS

ABB South Africa
Customer contact centre
ACDC Dynamics
Elmari Erasmus/Dirk Klynsmith
ACTOM Electrical Products
Neil van Blerk
AFCAP Lighting and Allied Products
Gareth Cabral
ARB Electrical Wholesalers
Sales
Aurora Lighting
Olivia Tate
BEKA Schröder
Grant Combrink
Belco
Shiraj Wentzel
Crabtree South Africa
Sales
Eagle Lighting
Robin Lewis
Electrahertz
Frank Proude (Pta) Peet Lourens (Jhb)
Envirolight
Mark Rice
Eurolux
Patrick Stuckie
Giantlight
Otto Horlacher
HellermannTyton
Ingrid Nicolaus
Hoi P'loy
Lisa van Heerden
Ideal Electrical and Mining Supplies
Alex Agostinho (Snr or Jnr)
K. Light
Eli Kalmi
Krelum Lighting
Krisen Pillay
Lamps Electrical Distributors
Shaun
LEDVANCE
Mark Greenhill
Legrand
Johan Bosch
Lumax Lighting
Sales
Magnet Electrical Supplies
Sales
Magnitech
Mark Vigus-Brown
Major Tech
Werner Grobbelaar
Maranata Flameproofing
Reger
MCE Electric
Sales
Nordland Lighting
Cyril Nunns
Radiant Lighting
Sales
Regent Lighting Solutions
Leeanne Blyth
Shuttle Lighting Control Systems
Tracey Steyn
Signify Commercial (Philips Lighting)
Linda Sekobane
Sinetech
Alex Hattingh
Spazio Lighting
Sales
Superlume
Willie Garbers
Triac Lighting
Ryan Ashford-Smit
Tridonic SA
Trevor Milne
Unique Lighting
Michael Smith
Voltex
Hugh Ward
Voltex
Lizet de Jager
VS Lighting Solutions
Barry Harrison
Waco
Jaco Coetzee
Zap Wholesalers
Sales

TRANSFORMERS FOR HALOGEN LAMPS

ACDC Dynamics
Full range of linear and electronic lighting transformers
ARB Electrical Wholesalers
Full range of transformers for halogen lamps
Belco
Distributor of transformers for halogen lamps
Eagle Lighting
Full range of transformers for halogen lamps
Electrahertz
Full range of transformers for halogen lamps
Eurolux
Full range available
Ideal Electrical and Mining Supplies
Range of transformers for halogen lamps
Lamps Electrical Distributors
Full range of transformers for halogen lamps
Radiant Lighting
Full range of transformers for halogen lamps
Unique Lighting
Range of transformers for halogen lamps
Voltex
Distributor of transformers for halogen lamps
VS Lighting Solutions
Full range of transformers for halogen lamps
Zap Wholesalers
Full range of transformers for halogen lamps

MAGNETIC (CONVENTIONAL) BALLASTS

ACDC Dynamics
Magnetic ballasts for fluorescent and discharge lamps and associated switchgear such as starters and igniters
AFCAP Lighting and Allied Products
All magnetic ballasts, CFL, fluorescent and HID
ARB Electrical Wholesalers
Full range of magnetic ballasts
Belco
Distributor of magnetic ballasts
Crabtree South Africa
Open and closed channel fittings
Eagle Lighting
Full range of magnetic ballasts
Electrahertz
Full range of magnetic ballasts
Eurolux
Full range available
Ideal Electrical and Mining Supplies
Range of magnetic ballasts
Lamps Electrical Distributors
Range of magnetic ballasts
LEDVANCE
Full range of magnetic ballasts
Magnet Electrical Supplies
Vossloh-Schwabe
Magnitech
Full range of magnetic ballasts
Nordland Lighting
Full range of magnetic ballasts
Radiant Lighting
Full range of magnetic ballasts
Superlume
IP Vapor proof fittings
Unique Lighting
Full range of magnetic ballasts
Voltex
Distributor of magnetic ballasts
VS Lighting Solutions
Full range of magnetic ballasts
Waco
Distributor of magnetic ballasts
Zap Wholesalers
Full range of magnetic ballasts

ELECTRONIC BALLASTS/LED DRIVERS

ACDC Dynamics
Electronic ballasts for all applications, pre-heat, rapid start and dimmable
ARB Electrical Wholesalers
Full range of electronic ballasts
Belco
Distributor of electronic ballasts
Crabtree South Africa
Open and closed channel fittings
Eagle Lighting
Full range of electronic ballasts
Electrahertz
Full range of electronic ballasts
Eurolux
Limited range available
Ideal Electrical and Mining Supplies
Range of electronic ballasts
Lamps Electrical Distributors
Range of electronic ballasts
LEDVANCE
Full range of electronic ballasts
Magnet Electrical Supplies
Philips, Vossloh-Schwabe
Radiant Lighting
Full range of electronic ballasts
Signify Commercial South Africa
Full range of electronic ballasts
Tridonic SA
Full range of electronic ballasts
Unique Lighting
Full range of electronic ballasts
Voltex
Full range of electronic ballasts
VS Lighting Solutions
Full range of electronic ballasts
Waco
Wide range of electronic ballasts
Zap Wholesalers
Full range of electronic ballasts

LIGHTING CONTROL SYSTEMS

ABB South Africa
Range of lighting control systems
ACDC Dynamics
DMX controllers, dimmers and RGB controllers for LED lighting applications; remote control switching and automation products such as occupancy sensors and timers
ARB Electrical Wholesalers
Lighting control systems
Aurora Lighting
Range of lighting control systems
BEKA Schröder
Full range of lighting control systems
Belco
Distributor of lighting control systems
Eagle Lighting
Full range of lighting control systems
Electrahertz
Full range of lighting control systems
Envirolight
Full range of lighting control systems
Eurolux
Limited range available
Giantlight
Full range of lighting control systems
HellermannTyton
HellermannTyton offers a wide range of labelling solutions to ensure lighting control systems comply and for easy identification such as pre-printed markers (pre and post installation) and cable connectors (Helacon)
Ideal Electrical and Mining Supplies
Range of lighting control systems
Lamps Electrical Distributors
Full range of lighting control systems
LEDVANCE
Full range of lighting control systems
Legrand SA
Arteor with Netatmo connected wiring devices
Magnet Electrical Supplies
Full range of lighting control systems

LIGHTING CONTROL SYSTEMS

Magnitech
Full range of lighting control systems
Major Tech
DMX, DALI and standard CC/CV lighting control systems. RF and Wifi lighting control. PIR, microwave and day/night sensors
MCE Electric
Onesto Trailing Edge Dimmers, Olite Dimmer Regulators, Voltage Stabilisers, Matrix Wiring Systems, Oracle Wiring Systems and Trinity Wiring Systems
Nordland Lighting
Full range of lighting control systems
Regent Lighting Solutions
Range of lighting control systems
Shuttle Lighting Control Systems
Dimmers for LED, incandescent and halogen lamps, and lighting control systems
Signify Commercial South Africa
Full range of lighting control systems
Triac Lighting
Range of lighting control systems
Tridonic SA
Range of lighting control systems
Unique Lighting
Range of lighting control systems
Voltex
Distributor of lighting control systems
VS Lighting Solutions
Full range of lighting control systems

SMART LIGHTING

ABB South Africa
Range of smart lighting
AFCAP Lighting and Allied Products
Under counter, streetlights, LED panels, easy link channels
Aurora Lighting
Range of smart lighting
BEKA Schröder
Full range of smart lighting
Belco
Range of smart lighting
Eagle Lighting
Full range of smart lighting
Electrahertz
Full range of smart lighting
Eurolux
Limited range available
HellermannTyton
WIFI Smart Timers (TWST2, TWSTM2) easily installed to control lightening and other appliances
Ideal Electrical and Mining Supplies
Range of smart lighting
Krelum Lighting
Full range of smart lighting
Lamps Electrical Distributors
Range of smart lighting
LEDVANCE
Full range of smart lighting
Legrand SA
Arteor with Netatmo connected wiring devices
Magnitech
Full range of smart lighting
MCE Electric
Onesto Trailing Edge Dimmers, Olite Dimmer Regulators, Voltage Stabilisers
Nordland Lighting
Full range of smart lighting
Regent Lighting Solutions
Range of smart lighting
Signify Commercial (Philips Lighting)
Full range of smart lighting
Triac Lighting
Range of smart lighting
Unique Lighting
Range of smart lighting
Voltex
Range of smart lighting
VS Lighting Solutions
Full range of smart lighting plus B2L
Zap Wholesalers
Range of smart lighting

HALOGEN LAMPS

ACDC Dynamics
Full range of halogen lamps, energy saving halogen bulbs and candle lamps
ACTOM Electrical Products
Distributors of GE brand: MR16, GU10, capsules, linear halogen; energy saving: MR16, linear halogen, halogen energy efficient incandescent shapes
ARB Electrical Wholesalers
Full range of halogen lamps
Belco
Distributor of halogen lamps
Eagle Lighting
Full range of halogen lamps
Electrahertz
Full range of halogen lamps
Eurolux
Full range available
HellermannTyton
Test instruments e.g. Luxmeter (T630)
Ideal Electrical and Mining Supplies
Range of halogen lamps
Lamps Electrical Distributors
Full range of halogen lamps
Magnet Electrical Supplies
Philips
Magnitech
Full range of halogen lamps
Radiant Lighting
Full range of halogen lamps
Regent Lighting Solutions
Range of halogen lamps
Unique Lighting
Range of halogen lamps
Voltex
Distributor of halogen lamps
Zap Wholesalers
Range of halogen lamps

COMPACT FLUORESCENT LAMPS (CFLS)

ACDC Dynamics
Full range of CFLs in a variety of formats
ACTOM Electrical Products
Distributors of GE brand: T3 9/11/15/18 W; T3 11/15/20 W spiral; T4 15 W day/night sensor, T3 20 W dimmable
AFCAP Lighting and Allied Products
All types of CFL Philips and Osram lamps
ARB Electrical Wholesalers
Full range of CFLs
Belco
Distributor of CFLs
Eagle Lighting
Full range of CFLs
Electrahertz
Full range of CFLs
Eurolux
Full range available
HellermannTyton
Test instruments e.g. Luxmeter (T630)
Hoi P'loy
CFL Energy Squirrel
Ideal Electrical and Mining Supplies
Range of CFLs
Krelum Lighting
Range of high power CFLs available
Lamps Electrical Distributors
Full range of CFLs
LEDVANCE
Full range of CFLs
Magnet Electrical Supplies
Philips
Magnitech
Full range of CFLs

COMPACT FLUORESCENT LAMPS (CFLS)

Maranata Flameproofing
Flameproof 8-23 W
Nordland Lighting
Full range of CFLs
Radiant Lighting
Full range of CFLs
Regent Lighting Solutions
Range of CFLs
Signify Commercial (Philips Lighting)
Full range of CFLs
Superlume
18w 4100k 2G11 4 PIN lamps
Unique Lighting
Range of compact fluorescent lamps
Voltex
Distributor of CFLs
Waco
Distributor of CFLs
Zap Wholesalers
Range of compact fluorescent lamps

LINEAR FLUORESCENT LAMPS

ACDC Dynamics
Full range of linear fluorescent lamps T5 and T8 in all popular wattages with retrofit options from T8 to T5 for energy savings
ACTOM Electrical Products
Distributors of GE brand: T12, T8 - standard/triphosphor/CovRguard; T5; energy saving retrofit: T8 Wattmiser, T5 Wattmiser
ARB Electrical Wholesalers
Full range of linear fluorescent lamps
Belco
Distributor of linear fluorescent lamps
Eagle Lighting
Full range of linear fluorescent lamps
Electrahertz
Full range of linear fluorescent lamps
Envirolight
Full range of linear fluorescent lamps
Eurolux
Full range available
HellermannTyton
Test instruments e.g. Luxmeter (T630)
Ideal Electrical and Mining Supplies
Range of linear fluorescent lamps
Krelum Lighting
Full range of linear fluorescent lamps
Lamps Electrical Distributors
Full range of linear fluorescent lamps
LEDVANCE
Full range of linear fluorescent lamps
Magnet Electrical Supplies
Philips
Magnitech
Full range of linear fluorescent lamps
Maranata Flameproofing
Flameproof 20 - 80 W
Nordland Lighting
Full range of linear fluorescent lamps
Radiant Lighting
Full range of linear fluorescent lamps
Regent Lighting Solutions
Range of linear fluorescent lamps
Signify Commercial (Philips Lighting)
Full range of linear fluorescent lamps
Superlume
T8 and T5 fluorescent lamps
Unique Lighting
Full range of linear fluorescent lamps
Voltex
Distributor of linear fluorescent lamps
Waco
Distributor of linear fluorescent lamps
Zap Wholesalers
Full range of linear fluorescent lamps

HID LAMPS

ACDC Dynamics
Full range of HID lamps and associated switchgear
ACTOM Electrical Products
Distributors of GE brand: mercury vapour, high pressure sodium - standard/XO Superlife, metal halide quartz, ceramic metal halide
AFCAP Lighting and Allied Products
All sizes Philips and Osram lamps
ARB Electrical Wholesalers
Full range of HID lamps
Belco
Distributor of HID lamps
Eagle Lighting
Full range of HID lamps
Electrahertz
Full range of HID lamps
Eurolux
Full range available
Ideal Electrical and Mining Supplies
Range of HID lamps
Krelum Lighting
Full range of HID lamps
Lamps Electrical Distributors
Full range of HID lamps
LEDVANCE
Full range of HID lamps
Magnet Electrical Supplies
Philips
Magnitech
Full range of HID lamps
Maranata Flameproofing
Flameproof vehicle or loc lights
Nordland Lighting
Full range of HID lamps
Radiant Lighting
Full range of HID lamps
Regent Lighting Solutions
Range of HID lamps
Signify Commercial (Philips Lighting)
Full range of HID lamps
Superlume
Wide range of HID lamps
Unique Lighting
Full range of HID lamps
Voltex
Distributor of HID lamps
Waco
Distributor of HID lamps
Zap Wholesalers
Full range of HID lamps

LEDS

ABB South Africa
Range of LEDs
ACDC Dynamics
Full range of LED lamps, strips, modules and complete fittings and all associated power supplies and accessories
ACTOM Electrical Products
Distributor of GE brand: Retrofit R50, R63, GU10, PAR30, lighting solutions - retail display units, cove lighting, contour lighting, refrigeration, architectural - various, VIO LED
AFCAP Lighting and Allied Products
Open channels, weatherproofs, prismatic fittings, louvre recessed 1200 x 600 mm, flood lights, led lamps
ARB Electrical Wholesalers
Full range of LEDs
Aurora Lighting
Full range of LEDs
BEKA Schröder
Full range of LEDs
Belco
Distributor of LEDs
Eagle Lighting
Full range of LEDs
Electrahertz
Full range of LEDs



LEDS

EnviroLight
Full range of LEDs

EuroLux
Full range available

Giantlight
Full range of LEDs

HellermannTyton
Test instruments e.g. LED Light Meter (T531)

Hoi P'loy
Squirrel Cage LED bulb E27; Victorian LED bulb E27; Petite Pear LED bulb E27

Ideal Electrical and Mining Supplies
Range of LEDs

K. Light
Full range of LEDs

Krelum Lighting
Full range of LEDs

Lamps Electrical Distributors
Full range of LEDs

LEDVANCE
Full range of LEDs

Lumax Lighting
Range of LED lights and fittings

Magnet Electrical Supplies
Philips, Vossloh-Schwabe

Magnitech
Full range of LEDs

Major Tech
Full range of high powered LED floodlights, GU10 spotlights, frosted LED lamps, LED filament lamps, decorative LED wall, stairs and ceiling lights

Maranata Flameproofing
Flameproof vehicle or area lights from 12 - 40 W; replacement flameproof for 4 to 8 ft fluorescent

MCE Electric
O-Lite: Bulkheads, LED aluminium light fittings, LED light bulbs, LED spotlights, LED filament bulbs, LED downlights, LED tube fittings, LED strip lights, LED floodlights and LED solar flood and street lights

Nordland Lighting
Full range of LEDs

Radiant Lighting
Full range of LEDs

Regent Lighting Solutions
Wide range of LEDs

Spazio Lighting
Full range of LEDs

Signify Commercial (Philips Lighting)
Full range of LEDs

Sinotech
Solar powered LED street, garden and flood lights using lithium-ion batteries and offering up to three days autonomy

Superlume
Replacement LED lamps for halogen and fluorescent

Triac Lighting
Full range of LEDs

Tridonic SA
Full range of LEDs and drivers for fixed output and dimming options

Unique Lighting
Full range of LEDs

Voltex
Distributor of LEDs

VS Lighting Solutions
LED Components; Modules, Drivers, Optics

Waco
Distributor of LEDs

Zap Wholesalers
Full range of LEDs

INCANDESCENT LAMPS

ACTOM Electrical Products
Distributors of GE brand: GLS, candles, round, pygmy, reflectors

ARB Electrical Wholesalers
Full range of incandescent lamps

Eagle Lighting
Full range of incandescent lamps

Electrahertz
Full range of incandescent lamps

EuroLux
Full range available

Hoi P'loy
Wide range of Edison style incandescent bulbs

Ideal Electrical and Mining Supplies
Range of incandescent lamps

Lamps Electrical Distributors
Range of incandescent lamps

Magnet Electrical Supplies
Philips, Vossloh-Schwabe

Radiant Lighting
Full range of incandescent lamps

Spazio Lighting
Full range of incandescent lamps

Triac Lighting
Range of incandescent lamps

Unique Lighting
Range of incandescent lamps

Zap Wholesalers
Range of incandescent lamps

LIGHTING CAPACITORS

ACDC Dynamics
Full range of lighting capacitors

AFCAP Lighting and Allied Products
Full range of lighting capacitors

ARB Electrical Wholesalers
Full range of lighting capacitors

Belco
Range of lighting capacitors

Eagle Lighting
Full range of lighting capacitors

Electrahertz
Full range of lighting capacitors

EuroLux
Limited range available

Ideal Electrical and Mining Supplies
Range of lighting capacitors

Lamps Electrical Distributors
Range of lighting capacitors

Magnet Electrical Supplies
Vossloh-Schwabe

Magnitech
Full range of lighting capacitors

Nordland Lighting
Full range of lighting capacitors

Regent Lighting Solutions
Range of lighting capacitors

Superlume
Wide range of lighting capacitors

Triac Lighting
Range of lighting capacitors

Unique Lighting
Range of lighting capacitors

Voltex
Distributor of lighting capacitors

VS Lighting Solutions
Full range of lighting capacitors

IGNITERS

ACDC Dynamics
Full range of igniters

AFCAP Lighting and Allied Products
70 W to the 1000 W igniters

ARB Electrical Wholesalers
Full range of igniters

Belco
Range of igniters

Eagle Lighting
Full range of igniters

Electrahertz
Full range of igniters

EuroLux
Limited range available

Ideal Electrical and Mining Supplies
Range of igniters

Lamps Electrical Distributors
Range of igniters

Magnet Electrical Supplies
Vossloh-Schwabe

Magnitech
Full range of igniters

Nordland Lighting
Full range of igniters

Regent Lighting Solutions
Range of igniters

Superlume
Wide range of igniters

Unique Lighting
Full range of igniters

Voltex
Distributor of igniters

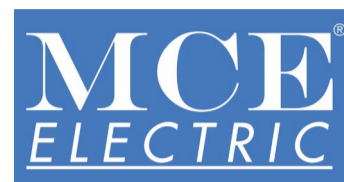
VS Lighting Solutions
Full range of igniters

Waco
Distributor of igniters

Zap Wholesalers
Range of igniters



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+27 (0)11 683 0641



+27 (0)11 238 0000



+27 (0)11 207 5600



+27 (0)10 446 1919



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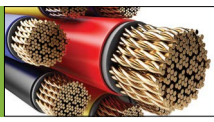
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Hitachi Energy achieves 100% fossil free electricity in own operations



Hitachi Energy has announced that it has achieved the first-step target set out in its Sustainability 2030 plan – the use of 100% fossil-free electricity in its own operations. The company is driving towards being carbon-neutral in its own operations by 2030, in line with its Purpose, 'Advancing a sustainable energy future for all.'

"By achieving 100% fossil-free electricity in our own operations, we have reduced our CO₂ equivalent emissions by over 50% compared to 2019," says Claudio Facchin, CEO of Hitachi Energy. He continued, "The Net Zero challenge is global and it's about acting now, innovating and collaborating across countries, industries and societies. Together with customers, partners, and all stakeholders, we are advancing the world's energy system to be more sustainable, flexible and secure."

The targeted 50% reduction achieved ahead of plan will amount to approximately 175 kilo tonnes of CO₂e per year, equivalent to removing over 35 000 passenger cars off the road.

To achieve 100% fossil-free electricity in its own operations – and in support of the Hitachi Group's carbon-neutrality goal – the company has pursued a number of pathways including supporting projects to generate its own fossil-free electricity, such as installing solar roof panels combined with e-mesh™ digital solutions for distributed energy resources maximizing energy efficiency and minimizing CO₂ emissions. In its Zhongshan factory in China, the company is generating nearly 20% of its total energy consumption from solar panels. In its first year of operation, the power generated at the factory is expected to reach 1 510 megawatt hours (MWh), contributing to the reduction in annual carbon emissions by more than 1 000 tonnes.

To achieve 100% fossil-free electricity, Hitachi Energy has also switched to green tariffs, bought Energy Attribute Certificates (EACs), and signed Power

Purchase Agreements (PPAs) across its operations and facilities in 90 countries.

Looking ahead, Hitachi Energy is continuing to invest in its journey towards carbon-neutrality by further increasing energy efficiency, as well as electrifying its own operations. In Ludvika, Sweden, the company is now using 100% renewable electricity generated from hydropower and from solar panels to support its operations. Ludvika, which is one of Hitachi Energy's largest production facilities, has gone beyond tackling its electricity supply and is now close to removing the use of all fossil fuels from the whole of its operations.

The company has a track record of implementing its own technologies in its operations to enable the integration of renewable energy. For example, in 2015 its South Africa operations installed a 750 kW rooftop photovoltaic plant and a 1 MVA/380 kWh battery-based PowerStore™ for enhancing the use of renewables and providing a continuous supply of power.

Through its Sustainability 2030 plan and targets, the company reinforces its commitment to accelerating actions driving business in a sustainable way. Based around four pillars – Planet, People, Peace, and Partnerships – the strategy draws from the UN's Sustainable Development Goals (SDGs), with specific focus on the following eight: 3 (Good health and well-being), 4 (Quality education), 5 (Gender equality), 6 (Clean water and sanitation), 7 (Affordable and clean energy), 12 (Responsible consumption and production), 16 (Peace, justice and strong institutions); and 17 (Partnerships for the Goals). In line with these SDGs, each pillar has corresponding targets that drive the business to contribute social, environmental, and economic value.

Enquiries: www.hitachienergy.com

Bentley Park goes green with its own solar farm

Taking forward its sustainability agenda while safeguarding operational performance, Murray & Roberts Cementation is now powering its Bentley Park site near Carletonville using solar energy.

The move puts the multi-purpose training and engineering facility on a stable and reliable energy platform, according to Murray & Roberts Cementation engineering services executive Hercilus Harmse. It is also in line with the company's strategic aim of reducing its carbon footprint.

"In recent years, the case for a more sustainable energy supply has grown – especially with ongoing load shedding and power outages due to cable theft," says Harmse. "This solution allows the leveraging of solar energy to protect the facility against the direct and indirect disruption caused by unreliable electricity supply."

The solution is a hybrid system using solar energy for most of the site's requirements, with lithium batteries providing continuous electricity in the case of outages. The existing backup diesel generating system adds another level of redundancy.

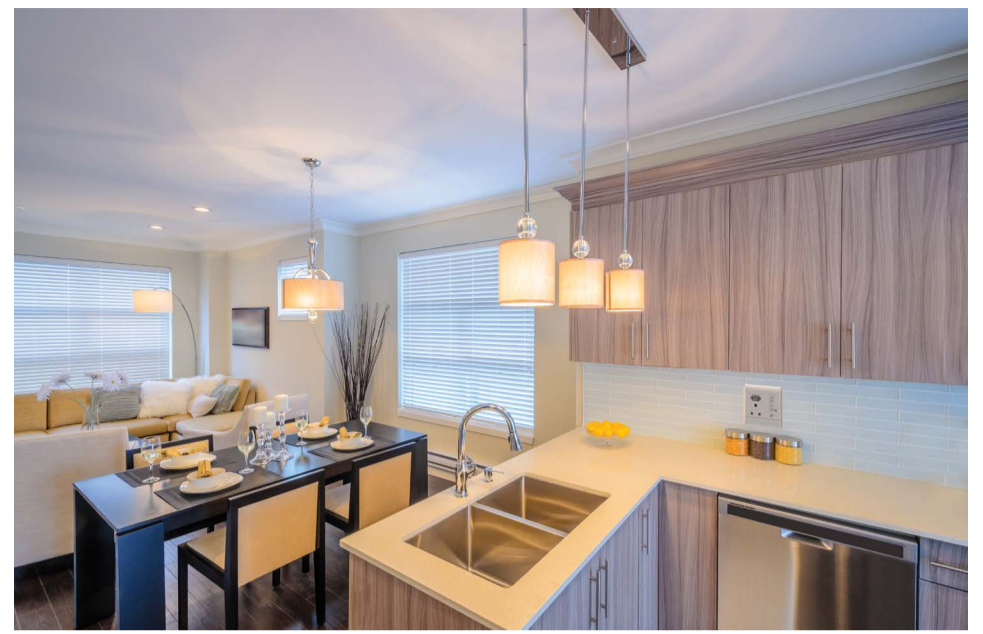
"This comprehensive design assures customers that we can continue to deliver our training and refurbishment services irrespective of the threats fac-

ing our national energy network," he says.

The photovoltaic installation comprises almost 1 400 solar panels and will generate 726 kW of power for the site. Securely situated adjacent to Bentley Park's offices, training rooms, workshops and other infrastructure, the solar farm comprises about a hectare of north-facing, ground-mounted photovoltaic panels at an efficient 12-degree angle. These also feed into 800 kWh of battery capacity, which provide uninterrupted flow to the range of sophisticated electrical and electronic equipment on site.

"As our operational technology at Bentley Park advances, there is steadily more risk posed by unplanned outages," Harmse notes. "Our training equipment, for instance, today includes sensitive and costly computerised tools such as simulators, which ideally require constant and controlled energy supply."

These risks add to the time and opportunities lost when outages prevent training being conducted according to plan, or refurbishments and other engineering work being completed on time. He argues that the direct and indirect costs of power failures made the decision to invest in renewable energy a "no-brainer". The board approval of the project's budget allowed work to proceed from mid-2021,



Building a smart city one home at a time

It is predicted that by 2050, nearly 70% of people worldwide will reside in urban areas, up from 55% of the global population who currently live in cities. As a result, 78% of the world's energy is being consumed in cities which produce more than 60% of greenhouse gas emissions. This is set to increase following the speed and scale of urbanisation. To mitigate this impact, smart cities may provide a solution to reduce energy consumption while still meeting service demand, improving grid stability and overall quality of life.

In positive news, two years after President Cyril Ramaphosa announced his future plans to build the first smart city in Lanseria, the draft master plan has been completed and is out for public comment. The city will house between 350 000 and 500 000 occupants within the next decade.

Dr Andrew Dickson, Engineering Executive at CBI-electric: low voltage says that while our Government works towards building new smart cities, South African citizens can start building their own smart cities at home by investing in smart home technologies. "This is because smart homes will be a key component in the creation of smarter cities."

Smarter consumption

He explains that South African households consume roughly 17% of the country's total grid electrical energy and can account for up to 35% of national electricity demand during peak periods. "Installing smart home devices, which use an internet-connection to enable the remote monitoring and management of appliances and systems such as lighting and heating, can help improve energy efficiency in the residential sector. This is because smart home devices not only enable users to keep an eye on how much electricity their appliances and systems consume, but also schedule them to turn on and off at specific times on a daily or periodic basis to reduce consumption.

"The need for these solutions is all the more

pressing when one considers that a third of the world's greenhouse gas emissions are the result of household energy consumption. To put this in perspective, South Africa is the 14th largest emitter of greenhouse gases in the world, with the average South African emitting approximately 7.41 tons of CO₂ – nearly double that of the world average of 4.47 metric tons per person. These emissions result from everyday routines such as turning air conditioning systems on and off, however, home automation has been found to reduce emissions by 12.78% – something which will be crucial for helping South Africa fulfil its commitment to limit its annual greenhouse gas emissions to between 398 to 440 million tons of CO₂ equivalent by 2030. In the United Kingdom, for instance, the Nottingham City Council revealed that the city managed to reduce CO₂ emissions by 26% from 2005 levels using smart homes as one of the tactical solutions."

City-wide benefits

Dickson notes that smart homes also present cost-saving opportunities not just for those living within them but also for the cities in which they are situated. "By being able to remotely monitor their energy consumption, smart homeowners are able to save on their monthly electricity bills. But imagine what would happen if this concept was applied to a city-wide housing grid. This could enable local authorities to track energy usage and spikes across the community, ensuring fairer pricing as well as the ability to tackle outages, energy leaks and the environmental issues associated with overuse."

He concludes by saying, "With 70% of South Africans set to be living in urban areas by 2030 and the cities of Johannesburg, Tshwane, Cape Town and Ethekwini under pressure to accommodate everyone, now's the time for investment in smart home technology. I envisage smart homes working together to benefit all citizens and positively impact our planet."

Enquiries: www.cbi-lowvoltage.co.za

with the installation starting in November 2021 and commissioning was completed at end-January 2022. It is estimated that the investment will pay itself back through direct savings in just seven years.

Prior to starting, the project required extensive data collection and analysis to identify electricity usage patterns and peaks – leading to the most effective strategy. Harmse says the renewable power project forms part of a broader sustainability strategy at Bentley Park, which includes environmental initiatives related to water, recycling and the reduced use of hydrocarbons in energy generation.

"This bold step into a renewable future puts us on a firm footing where customers can feel confident about our commitment to sustainability and our ability to deliver," he says.

Enquiries: www.cementation.murrob.com



Almost a hectare of photovoltaic panels – supported by lithium batteries for seamless continuity – generates around 726 kW of power.



The solution is a hybrid system using solar energy for most of the site's requirements, with lithium batteries providing continuous electricity in the case of outages.



An introduction to lighting for cannabis growth

Contemporary indoor cannabis cultivation usually involves at least one of three artificial light sources: HID, CFL, and LED. However, the LED industry for horticultural applications is growing rapidly due to the number of advantages it has. Lighting for indoor cannabis growing has evolved dramatically in the last few years, with LED grow lights being a top choice for both professional and recreational cultivators.

"Light is made of particles called photons, a part of the electromagnetic field that carries a specific amount of energy at specific wavelengths," explains Nico Cahna from InDorSun, "Therefore a light fitting is a photon delivery system."

Full spectrum LED grow lights for optimal results

Cultivators have been using natural light from the sun for years in greenhouses. However, it isn't always practical and this is where full spectrum LED grow lights come in; they mimic the sun's natural light as closely as possible.

Light spectrum is the range of wavelengths produced by a light. "As growers, we're most interested in the wavelengths that are relevant to plants," notes Cahna. Plants detect wavelengths that include ultraviolet radiation (260-380 nm) and most of the visible spectrum, which includes PAR (400-700 nm), and far-red radiation (700-850 nm). Full spectrum is what we are looking for. This includes all colours within the PAR zone.

Light spectrum impact on cannabis plant

Plants react to different spectrums, the ratio mix of different spectrums within a light is what makes the light different.

- **Violet (315 -400nm):** Improved THC and resin accumulation through defence mechanisms.
- **Blue (400-500nm):** Chloroplast and chlorophyll development, leaf growth, compactness, regulates response to shade and stress.
- **Green (500-565nm):** Early stem growth, small amounts promote growth, large amounts can aggravate the stomata and cause lower THC.
- **Yellow (565-590nm):** Mixed data, with the addition of yellow and green light, the result appears white to the human eye. Making it easier to identify and detect pests, pathogens and deficiencies.
- **Orange (590-625nm):** Little data available, some increased yields.
- **RED (590-700nm):** Improves leaf nutrients, chlorophyll production and healthier seedlings.
- **Far RED (700-780nm):** Improves plant cell development, increase in overall growth, regulates flowering, mediates stresses.

How to identify quality LED grow lights

As you continue to become an experienced grower and find new ways to improve your yield, it will benefit you to familiarise yourself with some acronyms for indoor plant growing.

What is PAR?

Photosynthetic Active Radiation (PAR) is the measure of total par that a light source produces; the total amount of light in the PAR zone that is produced by a light source is measured in micromoles per second or $\mu\text{Mol}\cdot\text{s}^{-1}$.

When purchasing LED grow lights, PAR is an important consideration because the more PAR your light can produce, the more PAR available to plants, the better they will grow.

What is PPF?

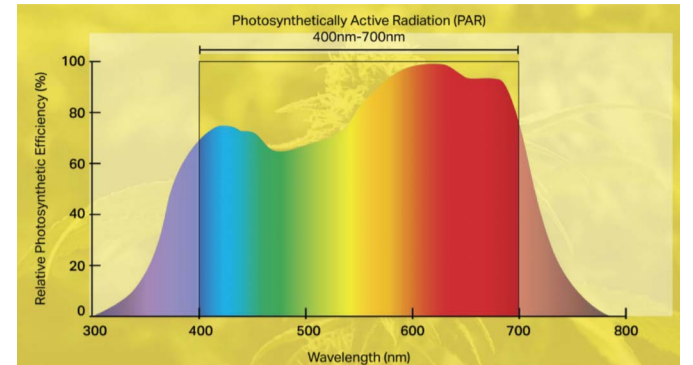
Photosynthetic Photon Flux (PPF) is the term we use to define the measurement of PAR. Its underlying value determines how much PAR your LED grow lights can produce per second. The PPF measurement helps you understand how much of the light your fixtures are producing, which can be used by your marijuana plants for photosynthesis.

PPF is measured in micromoles per second or " $\mu\text{Mol}/\text{s}$ ", where one micromole is equal to approxi-

mately 602 quadrillion photons. Measuring your PPF properly requires a thorough understanding of the process and a little bit of mathematical subtlety and patience. And while there are PPF measurement tools that can be purchased from the open market, you might work with a trusted partner who can help you choose the perfect LED grow lights that are efficient enough to provide the desired PAR and PPF.

What is PPF?

Photosynthetic Photon Flux Density (PPFD) is the third and final part of the PAR equation. PPFD is the intensity of PAR light that lands on a square metre each second. It is measured in micromoles per square metre per second ($\mu\text{Mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$) PPFD is how much PPF is hitting each square metre of your crop at any given second.



CONTINUED ON PAGE 14



InDorSun

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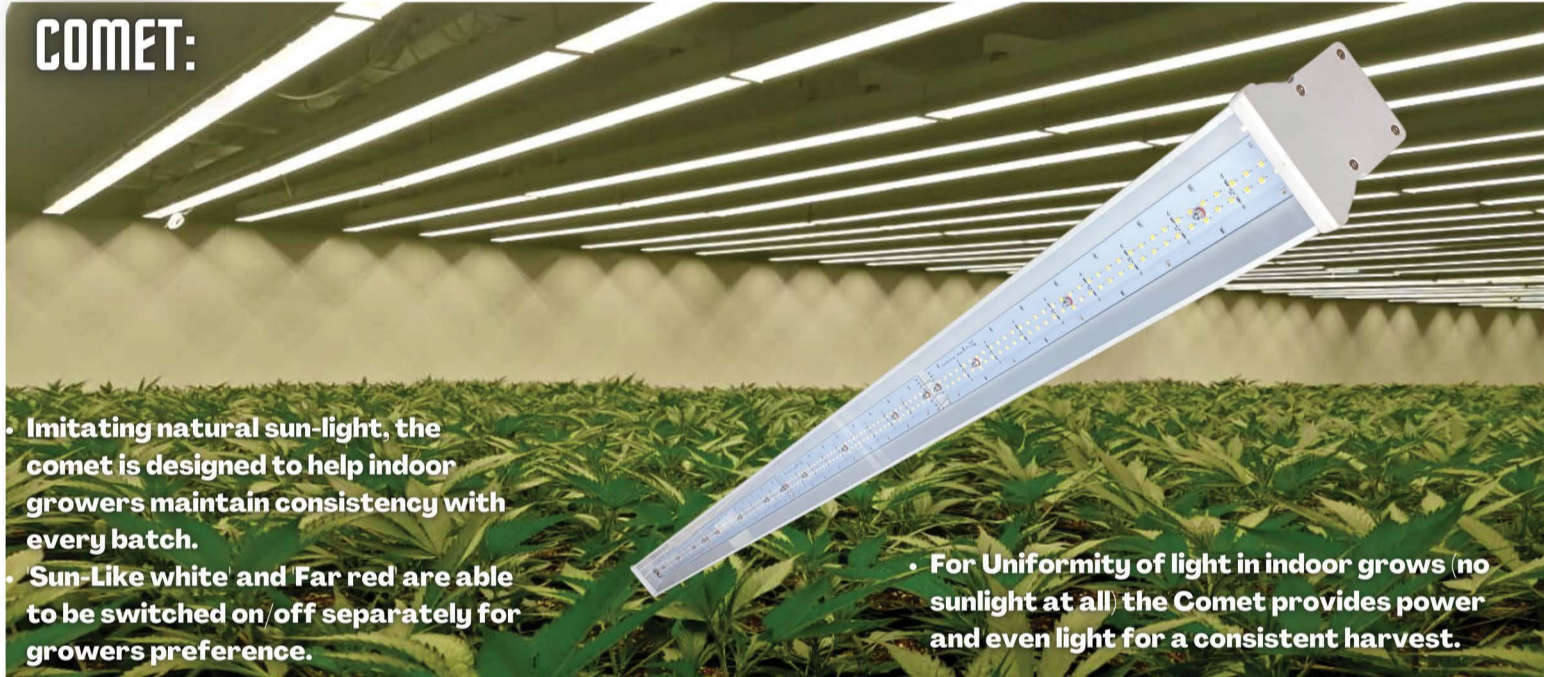
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METEOR:




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The shortfalls of SANS 10114-1

Last month, the subject 'Standards and Compliance' was the theme. I ended by informing you, the readers, that we will take a closer look at this subject in this edition.

You will recall that SANS 10114-1 is applicable for interior lighting, albeit a poor copy on EN 12464-1, the European standard on which the SANS is modelled.

What will you miss if you keep to SANS 10114-1?

1. More detail.
2. It specifies the requirements for good lighting solutions rather than giving design guidelines. With the experience of applying the standard the next steps were taken in the development of this new edition and

human and user needs are given broader acknowledgement. Lighting requirements for task areas to fulfil visual tasks are given a close relation to the space in which they are carried out. Technologically, LED has taken over as the light source from conventional lamps. The main changes with respect to the previous edition are:

- User needs are better reflected by adding an additional level of recommendations in the tables in Clause 6 next to the minimum requirements. This gives more emphasis to already existing requirements in 4.3.3.
- The impact of visual and non-image forming ef-

fects of light are elaborated in the new Annex C.

- Requirements for walls, ceilings and cylindrical illuminances are moved from the main text to the tables in Clause 6 for increased visibility and usability.
- A new chapter on design considerations (Clause 5) gives advice on how to apply the requirements when designing lighting for visual tasks and activities within a space.
- Relation between task area and its immediate surround and the background area is more detailed (4.3.3, 4.3.4, 4.3.5).
- Glare requirements have been clarified for im-

SHEDDING LIGHT WITH PHILIP HAMMOND

proved usability including clarification for shielding in 4.5 and recommended practices for UGR in non-standard situations has been added in a new Annex B.

- Flicker and stroboscopic effect is updated (4.8).
- A new Annex D is introduced including examples on how to derive the requirements in different applications (office/industry) for designing lighting. A very important section contained in EN 12464-1 is not covered whatsoever in SANS 10114-1. That is the section on Illuminances on the task or activity area, three pages of essential detail to provide professionals and lighting designers with critical information to add to their knowledge.

BHA School of Lighting has been teaching students, professionals who attend workshops and webinars the correct method to provide the correct illumination. It is wrong to provide the same illumination and thus the illuminance or lux levels throughout a space. It results in energy wastage, over illumination, boring lighting and in many cases is the cause of various workplace ailments for the occupants. Space in the article does not permit an in-depth discussion on the value of the contents of EN 12464-1.

Another important omission in SANS 10114-1, is the section that deals with "Mean cylindrical illuminance requirement in the activity space". Good visual communication and recognition of objects within a space require that the volume of space in which people move or work shall be illuminated. This is satisfied by providing adequate mean cylindrical illuminance, \bar{E}_z , in the space.

EN 2464-1 includes the "Variability of Light" which address light that affects the mood, emotion, and mental alertness of people. It can also support and adjust the circadian rhythms and influence people's physiological and psychological state. It addresses the general well-being of the occupants. More importantly, it complies with CIE S 026/E2018: CIE System for Metrology of Optical Radiation for ip-RGC-Influenced Responses to Light. This is about the non-visual or Non-image forming illuminances and colour of light - responsible for adjusting our Circadian Rhythms and our hormone production and general body functioning.

By now I am sure that you will have gathered that there is so much more to lighting than simply installing a quantity of luminaires evenly spaced in all directions. The role of the lighting designer, particularly a lighting designer who is qualified and has a solid grounding in the theory of light and lighting, one who understands lighting for the well being of the occupants and one who understands the detail of every applicable standard for the specific area for which lighting is to be designed.

The last significant difference contained in EN 12464-1 is the tables of required maintained illuminance values. Qualified Illumination Engineers and qualified lighting designers will have immense appreciation for the fact that all aspects of lighting to be measured are now reflected in the comprehensive tables. This makes it easy for the lighting designer to be fully compliant with Standards, Regulations and CIE Directives from the outset.

Finally, there is an entire appendix to EN 12464-1 that provides "Additional information on visual and non-visual (non-image forming) effects of light", is provided.

We have only scratched the surface of this fascinating subject. For those who are familiar with SANS 10114-1: Lighting for interiors, I hope that your interest has been stimulated and that you will purchase a copy of EN 12464-1. I always use the highest, most comprehensive, and latest standard that is available to me. Of course, I am familiar with the relevant and applicable standards from many different countries which apply to our students from those countries.

In September, we will continue this journey of discovery. I will address standards applicable to Emergency Lighting, particularly the most comprehensive and the best standard which is IS 3217. It is an eye-opener in terms of the detail. Unfortunately, SANS 10114-2 falls very far short of IS 3217.

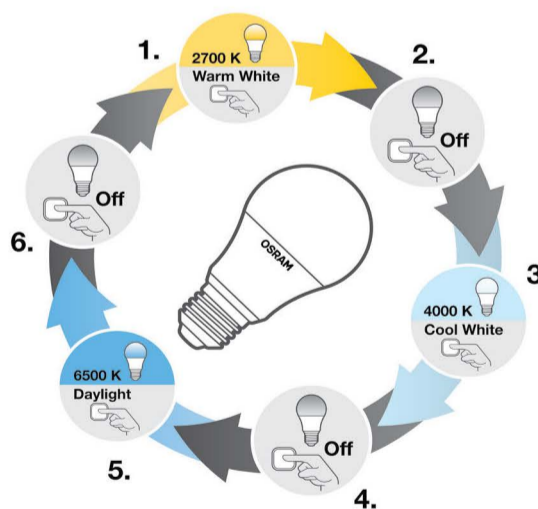
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Ex classified lighting solution for AlcoNCP

BEKA Schröder supplied the LED lighting solution for AlcoNCP in Durban, KwaZulu-Natal. This new lighting installation needed to comply to Zone specifications whilst providing a highly reliable and energy-efficient lighting solution.

AlcoNCP is a leading producer of high-quality fermentation alcohol for the South African and international beverage, cosmetic and pharmaceutical markets. Its product offering – fermented from sustainable locally grown maize – includes a range of neutral ethanol products and Distillers Dried Grains with Solubles (DDGS) – a protein-rich livestock feed, which is the by-product of their bioethanol production.

Sustainability is one of the core drivers of its production activities and business practices. BEKA Schröder's 'circular lighting' enables AlcoNCP to maintain their approach on sustainability by being able to maintain the luminaire throughout its useable lifespan, as well as reducing the negative impact on the environment by means of refurbishing, parts harvesting and recycling of our products.

AlcoNCP's newly commissioned plant was designed and engineered with its Sustainability goals as one of the main areas of focus. Forming part of this drive was an energy-efficient lighting solution for its newly upgraded distillery, suitable for Zone applications.

Distillery

BEKA Schröder's South-African designed and manufactured LEDNOVA-MIDI LED bulkhead and BEKA VAPOURLINE industrial LED luminaire suitable for Zone 2 applications were installed throughout AlcoNCP's distillery. These products were the luminaires of choice for the following reasons:

- High reliability and long lifespan.
- High energy savings due to LED technology.
- Quality products at competitive prices.
- Locally manufactured with aftersales support.
- Products are suited for Hazardous environments.
- Alternative brands are still using old technologies for these applications.
- BEKA Schröder is a well-established company with a proven track record.

Products are easily maintained.

The LEDNOVA is a robust and highly reliable LED bulkhead range and is suitable for use in various environments, which include outdoor mining areas, oil and gas refineries, food and beverage plants, manufacturing process plants and any application that requires robust and well-built luminaires. The LEDNOVA offers optimal photometric performance and high reliability to reduce energy consumption and maintenance. The LEDNOVA range can also be used in hazardous environments where a Zone 2 or 21/22 rated luminaire is required. It is available with a battery backup version, to be used in emergency situations.

The BEKA VAPOURLINE offers a robust and efficient LED alternative for replacing fixtures fitted with T5/T8 fluorescent tubes. Designed to provide a long-term solution for harsh industrial environments, the BEKA VAPOURLINE has a strong mechanical design that makes it highly resistant to shock and vibration while its IP rating makes it ideal for dusty and wet locations. It is available with an optional 1-hour emergency back-up and Zone 2 and 21/22 versions.

Grain offloading area

BEKA Schröder's OMNISTAR-MIDI floodlight has been installed in the grain offloading area. The OMNISTAR-MIDI has been designed to provide an unrivalled combination of performance and flexibility for lighting areas where high lumen packages are needed while offering maximum savings in energy and maintenance costs with a short payback time. It is available in Emergency, Zone 2 and 21/22 versions.

BEKA Schröder locally develops and manufactures sustainable LED lighting products, designed and suitable for local conditions. The company is proud to be associated with SiVEST Electrical Division and AlcoNCP in providing an energy-efficient LED lighting solution for this project.

Enquiries: dbn@beka-schreder.co.za



BEKA Schröder has supplied the LED lighting solution for AlcoNCP in Durban.



The LEDNOVA-MIDI and BEKA VAPOURLINE are suitable for Zone 2 applications were installed throughout AlcoNCP's distillery.



The OMNISTAR-MIDI has been installed in the grain offloading area.

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100
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An introduction to lighting for cannabis growth

How much PPF is needed to grow cannabis?

The average cannabis plant in a regular 'home-scale' operation requires a PPF of 100-300 $\mu\text{Mol}/\text{m}^2/\text{s}$ during the seedling phase, 400-600 $\mu\text{Mol}/\text{m}^2/\text{s}$ during the vegetative stage, and 800-1 000 $\mu\text{Mol}/\text{m}^2/\text{s}$ during the flowering period. These are just baseline values for food photons that are needed to grow a strong and healthy plant.

Each marijuana plant has a genetic saturation point, after which PPF's benefits start to taper off. It is wrong for growers to assume that the more PPF they have at their disposal, the better and generally higher the yields – this simply isn't true because more PPF does not always translate to 'more plant'. Also, giving your plant too much full-spectrum light at specific growth phases can lead to a higher risk of plant health problems, such as nutrient burn, water deprivation, and light burn.

Distance from the plants

As a recap, PAR is the portion of the visible spectrum light that plants can "see" and effectively use for the photosynthesis process, right? This occurs within the 400nm to 700nm range. PPF measures how much PAR your plant can receive over time (light density that the plant will receive). PPF can be visualised in a way similar to how the sun

'pours' light onto plants – the leaves suck up energy as the sun bathes them with its light.

PPFD is a critical metric to consider when we talk about the distance of plants from different-powered LED lights – it allows you to accurately measure the light intensity of the photosynthesis process at the roof level. So, for example, if you place your LED grow lights too close to the plant's surface or canopy, you can cause stunted growth, bleaching, and even discoloration.

Generally speaking, LED grow lights need to be closer to your canopy for the vegetative and flowering stages; therefore, as the light source moves closer to the canopy, the light intensity increases. For seedlings, LED grow lights should be no lower than 0.9 m to 1.5 m, although these are just baseline values, as the power or wattage of the light source influences the values. Most LED lights have a dimming function, so growers keep it at a minimum and increase it gradually over the following weeks.

If you keep your LED grow lights at the highest range this will keep the light intensity levels from being overbearing and prevent the seedlings from drying out. Once they have taken root and the sprouting begins, you can move the lights closer in the first 2-3 weeks and/or increase power using the dimming function.

Your lights can be anywhere between 0.3m



and 0.6m above the plant canopy in the vegetative and flowering stages. At this point, you need more light for photosynthesis to take place, so your LED grow lights will need to be closer to the plants, naturally.

LED grow lights beam angle

Equally important is the beam angle of your LED grow lights. For example, at a 120° angle,

InDorSun

InDorSun is a proudly South African LED manufacturer whose founders originated from the solar and PV industry developing energy efficient solutions for a wide variety of industries. With manufacturing partner Giantlight, InDorSun has shone the light on cannabis horticultural lighting. Together the companies manufacture LED grow lights which produce full-spectrum light that replicates the colour of the sun.

Giantlight

Giantlight is at the forefront of lighting technology – specifically solid state lighting and everything relating to LEDs and special effects. The company strives to remain the market leader in new and innovative lighting applications and continually brings new products to the market first. From design through manufacture and installation, Giantlight projects make a visual statement. Giantlight offers a comprehensive effect lighting solution.

your lights will cast a wider net or coverage, which is ideal if you want to fit as many plants as possible within a specific coverage area. With that said, since 120° casts a broader net, it is not as concentrated as, say, a 90° or 60° angle. This means that light will not penetrate the lower levels of your plant very well because the wider your beam is, the lower the intensity will be.

In the next issue, and the second article in the series on lighting for cannabis, growth we will delve deeper into the science behind horticultural lighting.

Enquiries: www.giantlight.co.za and www.indorsun.co.za

Krelum Lighting expands electrical division

Krelum Lighting, which distributes the Krilux brand range of lamps as well as electrical accessories, is expanding its range on electrical items.

Neville Pillay, the company's electrical specialist with over 30 years of experience in the electrical industry, is aware of what the market requires, and Krelum Lighting wants to offer its clients what they want at the right price without compromising on quality.

The electrical division consists of the following:

- GU10 lamp holder with bracket.
- 10/25 Amp Day night switches.
- 16-amp Rubber plug tops.
- Galvanized locknuts (20/25/32 mm).
- LED modules.

New electrical items that have just arrived include extractor fans, both 200 and 250 mm, as well as open channel fixtures (4ft/5 ft).

All products comply with compulsory specifications set out by the NRCS and the company ensures it has the Letter of Authority (LOA) before it import. "We continue to be innovative on the lamp division by adding more on the LED product range," says general manager, Krisen Pillay. "We have just launched a 40 W LED elliptical lamp which is a replacement for 160 W mercury blended or small floods light applications."

Enquiries: www.krelum.co.za

Mouser Electronics honoured with top performance awards from manufacturer partners



Mouser Electronics, Inc., a leading New Product Introduction (NPI) distributor with the widest selection of semiconductors and electronic components, is pleased to announce that it has received 28 top business awards from its manufacturer partners for best-in-class distribution performance during 2021 and 2022.

In presenting the awards, manufacturers cited criteria such as best-in-class global logistics, digital excellence, double-digit sales growth, fastest new product introductions (NPIs), commitment to teamwork, investment in inventory, breadth of inventory, successful marketing campaigns, customer

growth, and expanding footprint.

"It's gratifying to receive such high praise from our valued manufacturer partners," said Jeff Newell, Senior Vice President of Products at Mouser Electronics. "Together our shared goals and emphasis on best-on-class customer service benefits engineers and purchasing professionals around the world."

Performance awards for excellence in 2021 and 2022 include:

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2021 High Service Semiconductors Distributor of the Year; 2021 EMEA High Service Distributor of the Year

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Budget-friendly ways to improve lighting

If a client is looking to improve the lighting in their home, but they are asking you to stretch the budget as much as possible, follow the advice from Radiant Lighting's expert to give your customer more bang for their buck.

Create a cohesive look with light bulbs

A simple change that can have a huge visual impact on a space is light bulbs. Most people often only change them if they are burnt out, but it may be worth going around your home to take note of the type and colour temperature of the bulbs you have in each fixture. Fluorescents or harsh white bulbs can make a space feel uninviting. Replace all your existing bulbs with warm-tone LEDs to create a cosier, more unified feel. Having bulbs in various colour temperatures can make a space feel chaotic, while homes that feature the same temperature bulb throughout, tend to have a more cohesive feel. LEDs are also energy-efficient and require replacing less often, saving you money in the long run.



Don't underestimate the impact of a table lamp

If you are looking to update the look of a room, don't underestimate the power of a table lamp. They're one of the more affordable lighting options that can be positioned in multiple locations, to add both decorative flair and essential task lighting. Consider pairing a small table lamp with a larger design, so as to create a cluster of lighting on a console table or countertop.

Give your kitchen a polished look with strip lighting

Adding strip lights underneath your wall-mounted kitchen cabinets is immediately going to give the room a polished look. They not only make the space look professionally designed, but also provide both decorative and task illumination. If you have an attractive backsplash or countertop item that you want to highlight, then position the strip light towards the back of the cabinet, closer to the wall. If illumination for tasks such as preparing food or reading recipe books is a priority, then the fixtures need to be closer to the front of the cabinet.

Move fixtures around

Simply moving fixtures around is an easy way to elevate the look of your home and it doesn't cost a cent. By removing a fixture from one room and placing it in another, you give the fixture new life and create a fresh look. Try placing fixtures in unexpected places for an interesting look. A chandelier in the bathroom, a small table lamp perched on a bookshelf, or sconces flanking the bed are all practical examples.

Make sure you have diffused light

When layering lighting, make sure that at least one fixture is offering diffused illumination. Diffused light is softer, warmer and more flattering – a nice contrast to other concentrated, direct undiffused light sources in the space. Opaque

glass, paper and fabric shades all produce diffused light. This simple swap will make an entire room feel different.

Check the dimensions of your fixtures

Scale is everything, so if you are going to splurge and buy a new fixture then ensure it is the right size for its intended space. A fixture that is too large for a room can look out of place and overwhelming, while one that is too small will look somewhat comical and won't provide sufficient illumination. If you're buying online, always check the dimensions first as pictures can be deceiving.

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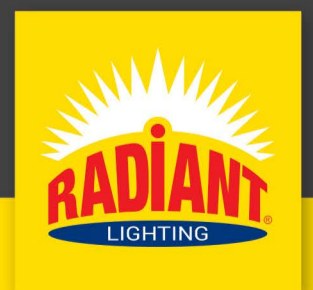
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BRIGHT SPARK

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

JULY SOLUTION

His father was in front of him when he was born, therefore he was born before him. His mother died while giving birth to him. Finally, he grew up to be a minister and married his sister at her ceremony.

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- DBs, Switches, Sockets and Protection
- Industry 4.0 and Automation
- Lighting

Buyers' guide

- DBs, Switches, Sockets and Protection

OCTOBER FEATURES

- MCCs and motor protection
- Energy measurement and supply
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- Motor control centres and motor protection

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