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JUNE 2026

MCA GROUP: BUILT IN SOUTH AFRICA. ENGINEERED FOR THE WORLD

In an industry where reliability is everything, companies earn their reputations over decades, not through marketing slogans, but through performance under pressure. For more than 30 years, MCA has quietly built that reputation across Africa's mining, industrial and infrastructure sectors.

From containerised substations and motor control centres to automation, commissioning, and turnkey electrical projects, MCA has become a recognised name in electrical engineering by doing what many companies struggle to sustain: consistently delivering technically sound solutions in demanding environments.

What began in a garage in Johannesburg in 1994 has since evolved into an internationally active engineering and manufacturing group supporting projects across South Africa and the African continent.

"We pride ourselves on South African engineering excellence while competing on the global stage," says Kevin Dodd, Chief Operations Officer.

Built from experience – not theory

MCA founder and CEO Grant Smith started the company after leaving established multinational firms, including Siemens and AEG. Without external funding or a corporate safety net, the business was built on practical engineering knowledge, long hours and a determination to create something independent.

"I didn't have a job or salary, so I started my own venture," he says. That hands-on foundation still defines the business today.

Unlike many engineering firms that have become heavily administrative over time, MCA remains deeply operational. The company's leadership stays closely connected to projects, manufacturing, and client requirements, which customers in mining and heavy industry continue to value.

Today, MCA employs more than 70 full-time staff and operates internationally, with a sales headquarters in Dubai and manufacturing facilities in South Africa, supporting projects across Africa and beyond. Many employees have been with the company for nearly twenty years, reflecting loyalty and a strong sense of community. "It's taken on a life of its own," Smith observes. "Most of the staff have been with me for 18 to 20 years."

Comprehensive engineering solutions

MCA specialises in low-voltage motor control centres (MCCs), medium-voltage electrical systems, automation, instrumentation, containerised solutions, and turnkey electrical solutions for mining and industrial applications.

Its equipment is designed and manufactured to comply with internationally recognised LV and MV standards, including IEC 61439-1/2, IEC 61641, and IEC 62271-200, as well as VDE 0671-200. This is a critical requirement for clients operating in high-risk industrial environments, where uptime, safety and maintainability are non-negotiable.

The company services sectors, including:

- Mining and minerals processing
- Water and wastewater treatment
- Food and beverage production
- Heavy industrial manufacturing
- Infrastructure and utilities

Rather than simply supplying equipment, MCA focuses on delivering integrated, deployment-ready systems that are engineered and tested for real-world operating conditions.

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Pratley expands Durban depot to meet growing industry demand

In response to growing market demand, Pratley, a leading South African manufacturer and distributor of high-performance adhesives, minerals, and electrical termination products, has expanded and relocated its Durban depot. The new facility in Cornubia, north of Durban in KwaZulu-Natal, offers increased stockholding capacity, a state-of-the-art training centre and enhanced security for customers.

"The decision to expand and relocate our Durban depot was driven by two key factors," explains Eldon Kruger, Marketing Director at Pratley. "First, our previous premises were in an ageing and deteriorating section in Durban, which posed security risks for both staff and customers. Second, we needed a much larger facility to accommodate increased stock volumes, as our sales continue to grow."The newly established depot is significantly larger, enabling Pratley to stock higher volumes across its product range, which leads to faster product availability and improved service efficiency. Customers in the region no longer need to rely on stock deliveries from the company's head office in Krugersdorp, Gauteng. "We are now able to maintain higher inventory levels in Durban," says Kruger. "This means reduced delivery times and a much more responsive service that meets our customers' needs."

Eldon Kruger, Pratley Marketing Director.

One impactful upgrade is the facility's ability to accommodate interlink trucks, compared with the previous seven-tonne transport capacity. This has streamlined logistics, reduced transport costs, and significantly improved delivery efficiency across KwaZulu-Natal and beyond.

Among the products now more readily available are Pratley's lightweight mineral products, Pratliperl® and Grolite®, with stock levels exceeding 1 000 bags per product. The depot now also stocks a broader range of Pratley Electrical Termination products, including cable glands and junction boxes, as well as the company's renowned high-strength adhesives and epoxy solutions.

Strategically located in Cornubia, near Umhlanga, the new site offers easy access to both Durban and Richards Bay, two key industrial hubs. "This move positions us closer to our customers and strengthens our logistics efficiency," adds Kruger.The upgraded depot also includes a new training centre, which aims to educate and empower customers in the proper use of Pratley's products. "One of our objectives is to engage the younger generation by showcasing the advantages of using Pratley products in real-world applications and equipping them with the knowledge to use them effectively," notes Kruger.

Customer feedback has already been overwhelmingly positive, with appreciation for the safer location, improved parking, and overall convenience. The Durban expansion follows similar developments in Cape Town, Western Cape, where Pratley has also acquired additional depot properties to improve supply chain efficiency and customer support across South Africa."This expansion reflects our broader strategy to enhance national supply and support." "We warmly encourage our clients to visit our new depot or to take advantage of the training facilities, valuable resources designed to strengthen product knowledge and improve the customer experience," concludes Kruger.

www.pratley.com

Editor's Note: Powering progress in June

Welcome to the June issue of Sparks! As we reach the midpoint of the year, we're excited to bring you a comprehensive look at some of the industry's most vital components: DBs, Sockets & Switches, Tools & Tooling, and Lighting. These elements are at the heart of every successful project, whether you're working on new installations, upgrades, or maintenance.

This issue is packed with the latest product developments, practical tips from industry professionals, and expert commentary to help you stay ahead of the curve.

Inside, you'll find in-depth articles on distribution boards and their evolving technology, reviews of the latest sockets and switches, and a closer look at advances in tooling that make every job safer and more efficient. Our lighting feature explores solutions for a range of settings, from commercial to residential, ensuring you have the knowledge to tackle any challenge.

Looking ahead, our July issue will focus on Cables & Cable Accessories, Standby, Backup & Emergency Power, and Lighting. Don't forget—the submission deadline is 10 June 2026. I invite your contributions!

Minx Avrabos
sparks@crown.co.za

As we reach the midpoint of the year, we're excited to bring you a comprehensive look at some of the industry's most vital components: DBs, Sockets & Switches, Tools & Tooling, and Lighting.

Unlocking the power of thermal imaging: HIKMICRO and HellermannTyton's complete solution for electrical contractors

In the world of electrical maintenance, the ability to detect problems before they become costly failures is invaluable. HellermannTyton, as the authorised distributor of HIKMICRO in South Africa, now offers a powerful combination: state-of-the-art thermal imaging cameras, internationally certified training, and full aftercare support—delivering a complete solution for electrical contractors.

Practical, high-performance thermal imaging

HIKMICRO delivers an accessible, high-quality, and affordable thermal imaging solution that enables fast, accurate fault detection. This helps reduce equipment downtime and improve maintenance efficiency. The HIKMICRO range offers models at various price points, making advanced thermal imaging accessible to contractors with differing budgets and project scopes.

Why early fault detection matters

Industrial equipment seldom fails without warning. Overheating, electrical faults, bearing wear, insulation breakdown, loose connections, steam leaks, and overloaded systems all exhibit heat signatures before catastrophic failure. With HIKMICRO's industrial thermal imaging cameras, maintenance teams can identify these indicators early on, reducing unplanned downtime, improving safety, and saving thousands in repair costs.

Why industries are switching to HIKMICRO

- High-resolution thermal imaging
- Exceptional temperature accuracy
- Fast, reliable fault detection
- Easy-to-use reporting software
- Rugged industrial design suitable for harsh environments
- Outstanding performance-to-price ratio
- Ideal for electrical, mechanical, manufacturing, utility, mining, and solar inspections

From handheld cameras to advanced solutions, HIKMICRO empowers contractors to see what the naked eye cannot—enabling predictive maintenance to start today.

The critical factor: certified skills and training

A thermal camera is only as good as its operator. That's why HellermannTyton supports their technology offering with certified Snell Thermography training (ASNT Levels I, II, & III). After years of pandemic disruption, in-person practical training has returned—vital for a hands-on discipline like thermography. Jeanri Mellanby, a Level III Thermographer and BDM for HIKMICRO, leads these sessions, bringing over 20 years of industry experience and a groundbreaking role as the first female Snell Group trainer. The next Level I training is at HellermannTyton from July 20th, open to users of any thermal camera.

Why get certified?

- Internationally respected thermography certification
- Vendor-neutral, ASNT-aligned standards
- Real-world inspection training for electrical, mechanical, utility, and building applications
- In-person, hands-on sessions for real competency
- Learn from experienced professionals.
- Enhance career prospects and technical credibility.

Who should attend?

Electricians, engineers, maintenance staff, reliability engineers, condition monitoring specialists, thermographers, utility and mining professionals, solar inspectors, and facility maintenance teams will all benefit.

The complete solution: technology, training, and support With HellermannTyton as your partner, you gain access to cutting-edge HIKMICRO cameras, globally respected training, and ongoing support across Southern Africa and beyond. This collaboration means better tools, greater knowledge, and a safer, more reliable future for your clients and your business. Take your maintenance program to the next level—book a demonstration, get certified, and discover why thermal imaging is no longer optional for modern electrical contractors.

SCAN QR CODES TO WATCH THE VIDEOS

For more information, email Jeanri at hikmicroafrica@gmail.com

MCA GROUP: BUILT IN SOUTH AFRICA. ENGINEERED FOR THE WORLD

CONTINUED FROM PAGE 1

That integration has become particularly valuable in mining projects across Africa, where remote locations and compressed schedules leave little room for error.

Clients are increasingly looking for partners capable of delivering complete electrical solutions rather than fragmented supply packages. MCA's growth reflects that shift.

Opportunities for young professionals

At a time when South Africa faces a growing technical skills shortage, MCA continues to invest heavily in apprenticeship and mentorship programmes.

Young electricians, technicians and engineers entering the business are exposed to large-scale industrial and mining projects early in their careers, often working on equipment destined for major operations across the continent. For many apprentices, it changes their perception of the industry entirely.

"People think electricians only wire houses or small buildings," one apprentice explains. "Then you walk into a workshop building mining MCCs for major operations, and you realise how big this industry really is."

Training at MCA combines formal apprenticeship structures with practical mentorship from experienced engineers and technicians, who have been with MCA for nearly two decades. That staff retention is uncommon in the industry and speaks to the company culture Smith has built over the years.

MCA also participates in youth development initiatives such as Yes4Youth, helping school leavers and graduates gain exposure to the engineering and manufacturing sectors.

Balancing local strength with global competitiveness

While MCA remains firmly rooted in South Africa, its focus increasingly extends beyond local borders. The company continues expanding its footprint into broader African and international markets, particularly within mining and industrial infrastructure sectors, where demand for reliable electrical systems remains strong.

At the same time, MCA believes South African engineering expertise still holds significant global value when supported by quality manufacturing and technical competence. That is exactly why quality and relationships remain so important at MCA.

Relationships still matter

In an era increasingly dominated by automation, procurement systems, and transactional business models, MCA has maintained a relationship-driven approach.

For many clients, particularly in mining and heavy industry, technical support and responsiveness remain as important as the equipment itself.

"We maintain strong, responsive client relationships—our clients can reach us at any time, and support is always available," says Kevin Dodd. That level of accountability remains fundamental to this industry.

It's an approach that has helped MCA build long-term partnerships across multiple sectors, not simply through product supply, but through consistent delivery and technical expertise.

Looking forward

As industrial projects across Africa continue to demand higher levels of safety, reliability and technical integration, companies capable of combining engineering depth with practical execution will remain critical to the sector's growth.

For MCA, the focus moving forward remains straightforward: continue building high-quality electrical solutions, continue investing in people, and continue proving that South African engineering can compete on the global stage.

After more than three decades in business, the company's trajectory indicates that the approach is working.

www.motorcontrol.co.za

HellermannTyton South Africa: six decades of building, adapting, and leading

Sixty years ago, a vision took root in South Africa—one grounded not just in supplying products, but in building capability. That vision would grow into HellermannTyton South Africa, a company synonymous with innovation, reliability, and local excellence in the cable management and electrical sectors.

Today, as part of a global organisation operating in 37+ countries, HellermannTyton South Africa is both a contributor to international progress and a champion of local industry. Its story is not simply one of growth—it is a narrative shaped by bold decisions, technological ambition, and an unwavering commitment to the market it serves.

A commitment to local manufacturing

From the outset, HellermannTyton made a deliberate choice: to manufacture locally to meet local needs. This decision would define its trajectory.

Investing in advanced production facilities in South Africa did more than strengthen the company's operational capacity—it created jobs, developed skills, and seeded technical expertise across the broader economy. By staying close to its customers, HellermannTyton ensured it could respond quickly to demand, shorten lead times, and uphold strict quality standards.

But the impact goes deeper. Local manufacturing enabled the transfer of knowledge and technology to the region, positioning the company not only as a supplier but also as a partner in South Africa's industrial development.

Milestones that shaped the journey

Every legacy is built step by step, and HellermannTyton's path is defined by defining moments of progress.

It began in 1976 with the commissioning of its first injection-moulding machine—a move that significantly increased production capacity. Just a few years later, in 1982, the introduction of its first extrusion machine streamlined manufacturing processes and strengthened its technical foundation.

As demand grew, so did the business. In 1999, the Head Office relocated to Linbro Park, creating space for expansion. By 2006, further growth required greater manufacturing, warehouse, and office capacity, signalling the company's rising prominence.

Operational excellence became a focus in 2014 with the implementation of Netstock, which enhanced inventory management and efficiency. The company's responsiveness to customer needs was further strengthened in 2018 through the expansion of its Custom Assemblies division—delivering specialised, tailored solutions.

More recently, 2022 marked a new era of modernisation. The introduction of advanced manufacturing equipment, Plant Master systems, and robotics transformed cable tie production, improving efficiency and consistency. In 2024, another Head Office expansion underscored the company's readiness for future demand.

Today, HellermannTyton South Africa offers one of the most comprehensive product ranges in the market, with over 6,500 stock-keeping units (SKUs)—each item reflecting decades of refinement and innovation.

Built on quality, trusted by industry

Behind every product lies a commitment to excellence. Strategic partnerships and relentless customer focus have enabled continuous improvement, earning the company a host of respected certifications.

From IATF 16949:2016 and ISO9001:2015 Quality Management to ISO 14001:2015 Environmental Management, ISO45001:2018 Occupational Health and Safety (OH&S) Management Systems, and SANS1213:2020 Standard for Cable Glands, alongside product accreditations including NRCS, SANS, and IEC compliance, HellermannTyton meets the highest global standards. Adherence to SANS 10142:2024—the South African code for electrical installations—further reflects its dedication to safety and reliability.

These achievements are more than credentials; they are markers of trust built over decades with customers across industries.

A legacy powered by people

While machinery, systems, and innovation have driven growth, it is people who have shaped the company's identity.

Many employees have spent their entire careers at HellermannTyton, growing with the business and contributing to its culture of excellence. Likewise, long-standing customer relationships reflect a reputation built on consistency, reliability, and partnership.

As the company celebrates its 60th anniversary, it is not merely marking time—it is honouring the individuals and relationships that have shaped its journey.

Looking ahead: expanding impact across Africa

Standing at this milestone, HellermannTyton South Africa is firmly focused on the future.

Its reach continues to extend across key sectors, including electrical markets—spanning energy, utilities, mining, agriculture, and industrial applications—as well as the automotive industry, where high-performance cable management solutions remain essential.

From a single machine in 1976 to a sophisticated, future-ready operation today, HellermannTyton South Africa's story is one of resilience and evolution.

As industries continue to change and customer expectations shift, the company is well-positioned to lead—grounded in its history, driven by innovation, and committed to making a lasting impact.

And if the past six decades are anything to go by, the next chapter promises not just growth, but transformation.

www.hellermantyton.co.za

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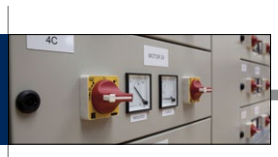
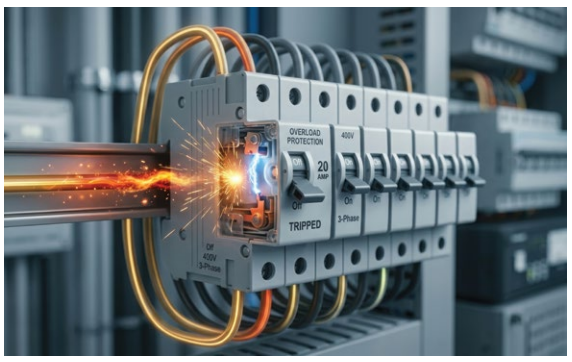


The importance of circuit protection

Circuit protection is a fundamental aspect of electrical engineering, ensuring the safety and longevity of electrical systems in residential, commercial, and industrial settings. Its primary purpose is to prevent damage from overcurrent, short circuits, and other electrical faults that could otherwise result in fire, equipment failure, or even personal injury.

At the heart of circuit protection are devices such as fuses, circuit breakers, and surge protectors. Fuses are simple yet effective components that contain a thin metal wire that melts when excessive current flows through it, thereby breaking the circuit and stopping the flow of electricity. While fuses are cost-effective, they must be replaced once they operate. Circuit breakers, on the other hand, perform a similar function but can be reset after tripping. This makes them particularly useful in environments where rapid power restoration is necessary.

Surge protectors add another layer of defence by diverting excess voltage away from sensitive electronics during power surges, such as those caused by lightning strikes or sudden changes in power demand. Proper grounding and the use of ground-fault circuit interrupters (GFCIs) are also crucial, especially in areas prone to moisture, to protect people and equipment from electric shock.



Selecting the correct circuit protection device depends on factors such as load type, current rating, and the application's specific requirements. Regular maintenance and timely replacement of these devices are essential to ensure continued protection. As technology advances, modern circuit protection devices are becoming smarter, with features like remote monitoring and automatic fault detection, enhancing both safety and convenience.

In summary, circuit protection is indispensable for minimising risks and maintaining the integrity of electrical systems. By understanding and implementing appropriate protection methods, individuals and organisations can safeguard their investments and ensure a safer environment.

Exploring different types of distribution boards in South Africa

Distribution boards, commonly known as DBs, are essential components of any electrical installation, serving as the central hub for power distribution in homes, businesses, and industrial facilities. In South Africa, the variety of distribution boards reflects the nation's diverse electrical needs and stringent safety standards. Here's a closer look at the most common types and their applications.

1. Single-Phase Distribution Boards
Single-phase DBs are widely used in residential settings, small commercial premises, and rural installations. These boards are powered by a single-phase supply, typically 230V. They distribute electricity to lighting circuits, plug points, and appliances, and incorporate safety devices like circuit breakers and earth leakage protection. Their compact size and straightforward configuration make them ideal for homes and small offices.

2. Three-Phase Distribution Boards
Three-phase DBs are designed for facilities with higher power demands, such as factories, large commercial buildings, and apartment blocks. Operating on a 400V supply, these boards distribute power across three phases, ensuring balanced electrical loads and more efficient energy use. They accommodate more circuits and handle powerful equipment, making them indispensable for industrial environments.

3. Split-Load Distribution Boards
Split-load DBs are increasingly popular in South African homes, especially those that comply with updated wiring regulations. These boards separate circuits into two groups: one protected by earth-leakage devices (for sockets and wet areas), and the other without (for lighting and critical circuits). This configuration enhances safety while minimising nuisance tripping, ensuring that essential circuits remain operational during a fault.

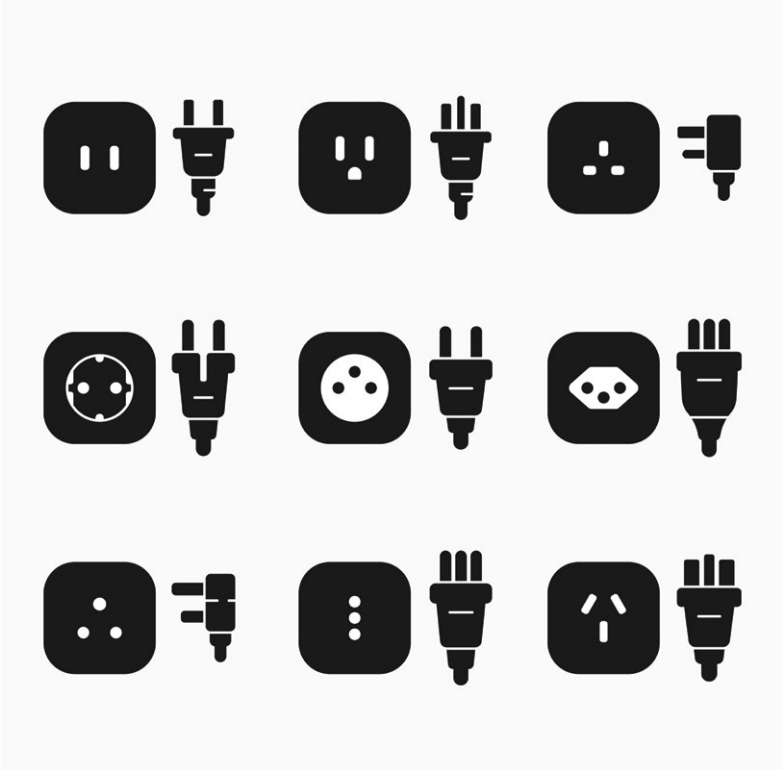
4. Main Distribution Boards (MDBs) and Sub Distribution Boards (SDBs)
In larger installations, the main distribution board serves as the primary power source, supplying power to sub-distribution boards throughout the premises. MDBs are robust, often custom-built for commercial or industrial use. SDBs, in turn, supply power to specific areas or departments, allowing for localised control and maintenance.

5. Weatherproof and Outdoor Distribution Boards
South Africa's climate necessitates DBs that can withstand harsh conditions. Weatherproof boards, constructed with durable materials and sealed enclosures, are suitable for outdoor installations, construction sites, and agricultural facilities. They protect electrical components from moisture, dust, and physical damage, ensuring long-term reliability.

Conclusion
The choice of distribution board in South Africa depends on power requirements, safety considerations, and environmental factors. With ongoing advancements in electrical technology and compliance standards, selecting the right DB is crucial for efficient, safe, and reliable power distribution.

Socket types and configurations: a guide for electrical contractors

When installing sockets, always adhere to SANS 10142 wiring regulations. Correct mounting height, circuit protection (via circuit breakers or RCDs), and proper earthing are essential for safety. It's also important to future-proof installations by considering the integration of USB outlets and surge protection, which are increasingly in demand.



Electrical sockets, or power outlets, are a fundamental aspect of any wiring installation. For electrical contractors in South Africa, understanding the various socket types and configurations is crucial for ensuring safety, compliance, and customer satisfaction.

Common socket types in South Africa
The predominant socket in South Africa is the Type M (SANS 164-1), featuring three large round pins in a triangular pattern. It is rated at 16A and is widely used in residential, commercial, and industrial settings. In recent years, the Type N (SANS 164-2) socket, which is compatible with the new international standard (IEC 60906-1), has also been introduced. Type N sockets are designed for improved safety, offering recessed contacts and compatibility with a wider range of plugs, including Europlug (Type C).

Socket configurations
Sockets can be configured as single-, double-, or multi-gang units, providing flexibility for different installations. Double and multi-gang sockets are especially useful in offices or homes where multiple appliances require simultaneous connection. Switched sockets, often with neon indicators, provide added convenience and energy-saving benefits by allowing users to isolate appliances without unplugging them.

Special purpose sockets
Contractors may also encounter dedicated sockets for high-power appliances, such as ovens and air conditioners. These sockets typically have higher current ratings and may use different pin configurations or colours for easy identification.

Installation considerations
When installing sockets, always adhere to SANS 10142 wiring regulations. Correct mounting height, circuit protection (via circuit breakers or RCDs), and proper earthing are essential for safety. It's also important to future-proof installations by considering the integration of USB outlets and surge protection, which are increasingly in demand.

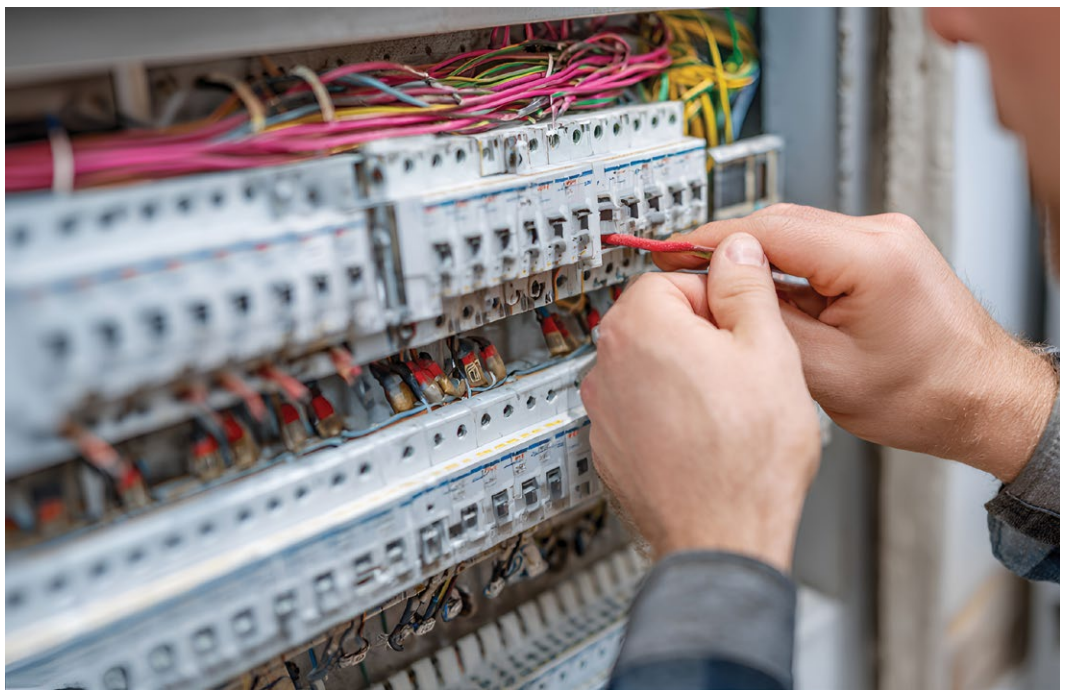
By staying informed on socket types and configurations, South African electrical contractors can deliver safe, compliant, and modern electrical solutions for their clients.

Exploring electrical switch technologies in South Africa

Electrical switches are vital components in residential, commercial, and industrial environments, controlling the flow of electricity to appliances and lighting systems. In South Africa, the market offers a wide array of switch types and technologies, each designed to suit specific applications and aesthetic preferences.

1. Traditional mechanical switches
The most common type is the mechanical switch, such as the classic rocker and toggle switches. These are simple in construction and operation—flipping or pressing the actuator completes or breaks the circuit. They are reliable, cost-effective, and widely available, making them the default choice for most homes and businesses.

2. Modular switches
Modular switches have grown in popularity due to their sleek design and flexibility. Brands like Legrand, Clipsal, and Schneider Electric offer modular solutions that allow users to customise switchboards for specific needs, integrating sockets, dimmers, and communication ports. These switches often feature smooth, silent operation and are available in a variety of finishes to match modern interiors.



3. Smart and touch switches
With the rise of smart homes in South Africa, touch and smart switches have entered the mainstream. Touch switches use capacitive or resistive touch technology, enabling users to control lighting with a simple tap. Smart switches, meanwhile, integrate with Wi-Fi or Zigbee networks, allowing remote or voice-controlled operation via mobile apps or smart assistants like Google Home and Amazon Alexa. Brands such as Sonoff and Livolo are notable players in this segment.

4. Dimmer switches
Dimmer switches are popular for their ability to adjust lighting intensity, enhancing comfort and energy efficiency. Modern dimmers support both incandescent and LED lighting, but it's crucial to choose compatible models to avoid flickering or reduced LED lifespan. South African suppliers offer both rotary and touch-based dimmers.

5. Industrial and safety switches
For industrial settings, robust switches such as rotary isolators, pushbutton switches, and emergency stop switches are essential for safety and machinery control. These are designed to withstand harsh environments and heavy-duty use, with products from ABB, Siemens, and CBI Electric being widely available in South Africa.

Conclusion
The South African market offers a diverse range of electrical switches, from basic mechanical models to advanced smart systems. As technology evolves, consumers have more options to enhance convenience, safety, and energy efficiency in their spaces, making the right choice crucial for every application.

> **Smart switches, meanwhile, integrate with Wi-Fi or Zigbee networks, allowing remote or voice-controlled operation via mobile apps or smart assistants like Google Home and Amazon Alexa. B**

SCAME industrial connection and distribution systems

In industrial projects, success depends on installation speed, absolute reliability, and seamless integration. SCAME's connection and distribution systems are built specifically for electrical contractors who refuse to compromise on efficiency or performance.

A key material characteristic across selected SCAME ranges is the use of halogen-free engineering polymers. In the event of fire or extreme thermal conditions, these materials minimise the emission of toxic gases and dense smoke, supporting compliance with safety requirements across industrial, commercial and domestic applications.

Built for industrial conditions
Industrial environments demand durable connection systems capable of withstanding impact, vibration and exposure to dust and moisture. SCAME's industrial plugs, sockets, enclosure systems and junction boxes are suitable for demanding operating conditions, with durable thermoplastic construction, halogen-free materials across selected ranges, and from IP55 up to IP69 protection against dust and water ingress. SCAME's interlocked socket outlets also feature padlockable switch handles, allowing circuits to be locked in the OFF position during maintenance procedures for improved on-site safety.

SCAME products use standardised mounting dimensions and compatible configurations to support installation across industrial and commercial applications.

These include:

- OPTIMA fast-wiring industrial plugs and connectors with external cable clamp
- EUREKA industrial plugs and connectors with 90° angled cable outlet
- OMNIA modular systems of compact industrial switched interlocked socket outlets
- SCABOX Junction boxes for cable connection and routing
- The OPTIMA range is available in surface-mount and flush-mount versions.
-

Quality standards with local support
SCAME products are manufactured under ISO 9001 and ISO 14001 certified quality and environmental management systems. Product verification is supported by SCAME's internal laboratory, which is CTF-certified by IMQ, and tested in accordance with international testing and manufacturing standards. SCAME industrial plugs and sockets are manufactured in accordance with IEC 60309 standards, adopted locally as SANS 60309-1 and SANS 60309-2 for industrial plug and socket systems. Selected configurations are compatible with SANS 10142-1 installation requirements and are available in SANS 164-1 compliant configurations for South African applications.

In South Africa, ElectroMechanica (EM) has represented SCAME since 1996, providing local stock availability, technical support and access through its national branch network.

Scan the QR code to visit the EM partner page and locate your nearest distributor.

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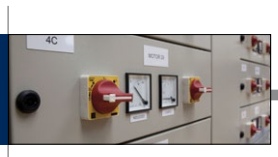


The rise of smart electrical devices

In recent years, the adoption of smart electrical devices has transformed the electrical contracting landscape in South Africa. As the demand for energy efficiency, convenience, and advanced safety features grows, electrical contractors are uniquely positioned to capitalise on these opportunities by integrating smart solutions into their offerings.

What are smart electrical devices?
Smart electrical devices are components such as switches, sockets, lighting, circuit breakers, and sensors that are equipped with connectivity, automation, and remote management capabilities. These devices can be controlled via smartphones, tablets, or voice assistants and communicate with each other via wireless protocols such as Wi-Fi, Zigbee, or Bluetooth.

Key benefits for contractors and clients
Energy efficiency: Smart devices offer real-time monitoring and control of power usage, enabling users to reduce energy consumption and lower electricity bills. Features like occupancy sensors and programmable schedules ensure that lights and appliances are only active when needed.
Convenience and automation: With automation, clients can control devices remotely or set them to operate based on specific conditions (e.g., switching off all lights when leaving the house). This adds significant value to residential, commercial, and industrial projects.

Enhanced safety: Many smart devices include advanced safety features, such as overload protection, surge detection, and remote fault notifications. These capabilities help prevent electrical hazards and allow for rapid response to potential issues.

Opportunities for South African contractors
As the smart device market expands, contractors can diversify their services by offering smart home and building automation solutions. This includes retrofitting existing installations and specifying intelligent systems in new projects. Partnering with reputable suppliers ensures access to reliable products and technical support.

Challenges and considerations
Contractors should stay informed about local standards (such as SANS regulations) and ensure that all smart devices are certified and compatible with South African power systems. Training is crucial—both for contractors and their teams—to guarantee proper installation and client education on system use and maintenance.

Conclusion
Smart electrical devices represent a significant growth area for electrical contractors in South Africa. By embracing these technologies, contractors can deliver greater value, improve energy efficiency, and set themselves apart in a competitive market. Investing in knowledge and partnerships today will ensure success in the smart future of electrical contracting.

Contractors should stay informed about local standards (such as SANS regulations) and ensure that all smart devices are certified and compatible with South African power systems.

Electrical sockets: key considerations for modern contractors

For electrical contractors, understanding the evolving landscape of electrical sockets (outlets) is essential for delivering safe, reliable, and future-proof installations. With increasing demands for energy efficiency, user safety, and device compatibility, sockets are no longer a one-size-fits-all component. Here are the key factors every contractor should consider when specifying and installing electrical outlets.

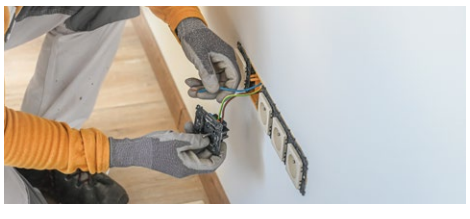
Pin configurations and regional standards
Sockets come in a variety of pin configurations, each designed for specific safety and performance needs. The most common are 2-pin sockets, used predominantly for double-insulated devices that do not require grounding. However, 3-pin and even 5-pin sockets are widely used in commercial and industrial settings, providing grounding and, in some cases, additional functionality. Staying up to date with national and international standards—such as IEC, NEMA, and local codes—is critical to avoiding compliance issues and ensuring user safety.

Enhanced safety features
Modern sockets increasingly incorporate advanced safety features. Safety shutters are now standard in many regions, particularly where child safety is a concern. In moist environments—such as bathrooms, kitchens, or outdoor areas—specifying GFCI (Ground Fault Circuit Interrupter) or RCD (Residual Current Device) protection can prevent potentially fatal electric shocks. Contractors should always assess the installation environment and recommend appropriate protective measures.

Specialised and smart sockets
Today's clients expect more from their electrical installations. Integrated USB sockets are now commonplace, allowing smartphones, tablets, and other devices to charge directly without bulky adapters. Switched sockets are another popular choice, enabling users to cut power at the outlet to reduce standby energy consumption. For outdoor or harsh environments, weatherproof or IP-rated sockets are essential for long-term reliability and safety.

Future-proofing and client education
Technology adoption is accelerating, and contractors should anticipate future needs. Consider specifying modular or upgradable socket systems and discussing options such as smart outlets that support home automation or energy monitoring. Educating clients about the benefits and limitations of different socket types not only adds value but also positions you as a trusted advisor.

In summary, the role of the electrical socket is rapidly evolving. By staying informed about emerging technologies, safety features, and industry standards, electrical contractors can ensure their installations are both safe and adaptable to future requirements.



Understanding electrical switches: types, configurations, and modern innovations

Electrical switches play a pivotal role in shaping the functionality and aesthetics of modern spaces. These humble devices are much more than simple on-off toggles; their design and configuration directly influence how we interact with our environments, control appliances, and ensure safety in our homes and workplaces.

At their core, switches are the gatekeepers of electricity, controlling the flow to lighting fixtures and appliances. The type of switch chosen can determine the convenience and flexibility of a space. For instance, the difference between a single-pole and a double-pole switch is significant. A single-pole switch, the most common type, controls one circuit and is typically used for standard lighting. In contrast, a double-pole switch can cut off both the live and neutral wires, making it ideal for high-power appliances such as kitchen equipment or water heaters, where enhanced safety is paramount.

Another crucial consideration is the configuration. One-way switches allow users to control a light or appliance from a single location, which is suitable for smaller rooms or straightforward layouts. However, two-way switches offer greater flexibility by enabling control from two separate locations. This is particularly advantageous in situations such as staircases or long hallways, where it is practical to operate a single light from both ends, thereby enhancing user convenience and safety.

The evolution of electrical switches has also led to the development of specialised options that cater to specific needs. Dimmers, for example, allow users to adjust the brightness of lights or the speed of fans, promoting energy efficiency and creating customisable atmospheres. Bell switches, commonly found in doorbell systems, serve specialised signalling purposes. Most recently, the advent of smart switches has revolutionised the way we interact with electrical systems. Integrated with Wi-Fi or Bluetooth, these switches can be controlled remotely via smartphones or voice assistants, offering unprecedented levels of automation and energy management.

In conclusion, understanding the various types of electrical switches and their configurations is essential to creating safe, efficient, and adaptable living and working spaces. From the basic single-pole switch to sophisticated smart controls, the right switch not only enhances a space's functionality but also contributes to its overall comfort and usability.

Power tool trends 2026: What electrical contractors need to know

As power tools evolve, 2026 will be crucial for South African electrical contractors. Newer tools offer higher output, advanced batteries, and smart charging, bringing greater convenience but also new challenges for domestic electrical infrastructure. This makes electrical contractors' expertise more essential.

Unlike their simple plug-in predecessors, today's power tools are sophisticated, battery-powered devices with rapid chargers and high-wattage requirements. High-capacity lithium-ion batteries now allow cordless tools to rival corded models in torque and endurance. However, this leap in performance comes at a cost: fast chargers and multi-battery stations can draw substantial current, often rivalling small household appliances. In a typical garage, it's not unusual to find a charger running alongside a table saw, dust extractor, and LED task lighting—all sharing the same circuit.

This surge in demand places considerable stress on household electrical circuits, plugs, and sockets. Overloaded extension leads, ageing outlets, and under-rated multiplugs can overheat, risking damaged wiring or electrical faults. For contractors, this means advising clients about electrical safety is no longer optional—it's a necessity.

Electrical contractors should conduct a thorough assessment of workshop electrical demands. Recommend dedicated circuits for heavy-duty tools, confirm plugs and sockets are correctly rated for these loads, and advise using industrial-grade extension reels to support sustained use. These steps ensure safe operation and reliable performance.

Contractors should teach clients to avoid overloading extension leads or adaptors at charging stations. Suggest investing in compliant, heavy-duty accessories and encourage customers to check plug points for heat buildup, which signals circuit stress. Offer guidance for safer charging setups.

Encourage clients to add surge protection at distribution boards and use surge-protected outlets for all sensitive chargers and batteries. Advise these measures to guard against damage from load shedding and voltage fluctuations.

In summary, power tool trends in 2026 present exciting opportunities and new risks for homeowners and contractors alike. By proactively addressing these challenges, electrical contractors can ensure workshops remain safe, reliable, and ready for future demands—solidifying their essential role in creating high-performance workspaces for the next generation of tools.

Diagnostic and testing tools for electrical contractors in South Africa

By: Minx Avrabos

Electrical contractors rely on a wide range of diagnostic and testing tools to ensure electrical systems are safe, compliant, and operating optimally. These tools not only support installation but are also essential for maintenance, troubleshooting, and certification. In South Africa, a range of reputable brands provides high-quality equipment to meet these needs.

Multimeters
Multimeters are indispensable for measuring voltage, current, and resistance. Digital multimeters, such as the Fluke 117 and the Uni-T UT61E, are popular among South African electricians for their accuracy and reliability. Major Tech, a well-known South African supplier, also offers a range of multimeters for different applications.

Insulation testers
Insulation resistance testing is vital for detecting deteriorating wiring and preventing electrical leaks. Brands such as Megger and Fluke are widely used in South Africa for high-quality insulation testers. Major Tech's insulation testers are also favoured for their affordability and compliance with local safety standards.

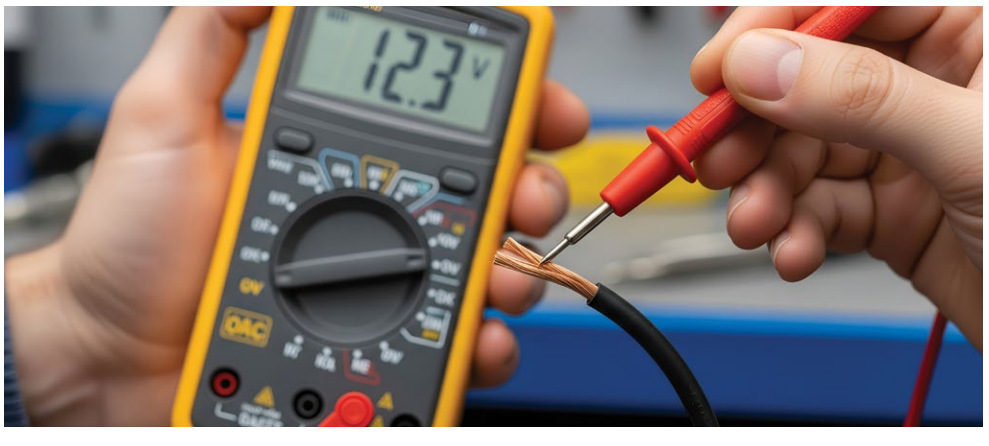
Earth ground testers
Ensuring proper earthing is crucial for any electrical installation. The Fluke 1625 and the Megger DET4T are widely used earth ground testers in South Africa, providing accurate soil resistance measurements. Chauvin Arnoux, distributed locally, offers additional options for earth testing.

Circuit testers and continuity testers
These tools help contractors check for live wires, open circuits, and continuity. Brands such as Major Tech, Fluke, and Klein Tools offer a variety of testers available through South African electrical wholesalers.

Clamp Meters
Clamp meters enable non-intrusive current measurement in live circuits. The Fluke 376 FC and Major Tech MT600 are respected models in the South African market, known for their durability and accurate readings.

Thermal imagers
Thermal imaging cameras such as the Flir E5 and Fluke TiS20+ are used to detect overheating components and potential faults before they become serious issues. These brands are available through South African distributors, ensuring contractors have access to advanced diagnostic technology.

Conclusion
South African electrical contractors have access to a wide range of diagnostic and testing tools from both global and local brands, including Fluke, Megger, Major Tech, Uni-T, Chauvin Arnoux, Klein Tools, and Flir. Choosing the right tools ensures that electrical work is carried out safely, efficiently, and in compliance with regulations.



LESCO launches Apollo Shadow range: contemporary wiring accessories for the modern contractor

Proudly South African electrical manufacturer LESCO has launched its new Apollo Shadow Range, an extension of its flagship Apollo wiring accessories line, aimed at homeowners, specifiers and electrical contractors seeking a more contemporary aesthetic at price points tailored to the local market.

The Shadow series is distinguished from earlier Apollo products by a straight-edged frame, a matt finish, and a subtly curved side profile that casts a soft shadow line against the wall when installed — the design cue that gives the range its name. It is offered in two finishes, Apollo Shadow White and Apollo Shadow Black, allowing it to sit comfortably alongside both light and dark interior palettes.

The launch covers the full breadth of residential and light-commercial fit-outs. On the switch side, LESCO has populated the range with one-way and two-way variants, from a single lever to a six-lever in the 4×4 format, with 2×4 versions available from 1 to 4 levers. On the socket side, the line-up includes a 16A switched single and double, a 16A switched single with IEC, a 16A Schuko/IEC un-switched combination, and a 16A switched single with USB 3.1 A+C. The range also extends to 4×4 and 4×2 50A isolators, blanks, and 1-way/2-way switch modules in matched Shadow finishes.

Customised two-way switch configurations are available on request through the LESCO sales team.

For LESCO, the Shadow launch marks an inflection point in the company's history. The business traces its roots to 1958, when Natie Shapiro founded Switch King. It was reconstituted as LESCO Manufacturing in 1999 under his son, David, and today operates under the third generation of family leadership, with Jonathan Shapiro as CEO. The company is ISO-approved, SMETA-audited, and a Proudly South African member. LESCO has a long-standing commitment to employing people with disabilities, women, and youth, and it frames the local manufacture of its products as central to that mission.

> **The Shadow series is distinguished from earlier Apollo products by a straight-edged frame, a matt finish, and a subtly curved side profile that casts a soft shadow line against the wall when installed — the design cue that gives the range its name.**

The Apollo Shadow Range is now available through LESCO's retail and electrical wholesale channels in South Africa. Trade enquiries, specifier samples and merchandising support can be requested directly from LESCO.

www.lescosk.com

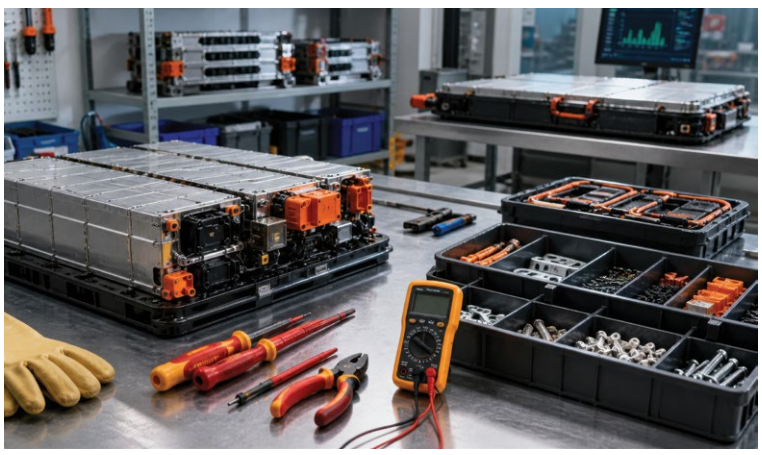
5 Tools an electrical contractor can't live without

Electrical contractors are the backbone of modern infrastructure, ensuring that homes, offices, and industries are powered safely and efficiently. Their profession demands a unique set of skills and, equally important, a specialised toolkit. While technology continues to evolve, a handful of essential tools remain indispensable for every electrician on the job. Here are five tools an electrical contractor simply can't live without:

1. Multimeter
A multimeter is arguably the most critical tool in an electrician's arsenal. It combines several measurement functions into a single device—most notably the ability to measure voltage, current, and resistance. This tool is essential for diagnosing electrical issues, verifying circuit continuity, and ensuring that installations are safe before power is restored. Modern digital multimeters offer improved accuracy, user-friendly interfaces, and advanced features like auto-ranging and data logging, making them a daily necessity on any job site.

2. Wire Strippers
Precise wiring work requires the ability to strip insulation cleanly from electrical wires without damaging the conductors underneath. Wire strippers feature multiple notches to accommodate a range of wire gauges, ensuring fast, accurate stripping. High-quality wire strippers offer ergonomic handles for comfort, adjustable tension, and built-in cutters for added convenience. Without this tool, even the most basic tasks—such as installing outlets or connecting fixtures—become tedious and time-consuming.

3. Fish Tape
Running new wiring through walls, ceilings, or conduit is a common challenge for electrical contractors. Fish tape is a flexible, coiled tool that guides wires through tight or hard-to-reach spaces. Available in steel or non-conductive fibreglass, it saves time and reduces frustration during installation and retrofitting. Its durability and ease of use make it indispensable for both residential and commercial projects.



4. Voltage Tester
Safety is paramount in electrical work. A non-contact voltage tester enables electricians to quickly and safely detect live wires without making direct contact. These pen-sized devices emit visual or audible alerts when voltage is present, helping contractors avoid shocks and identify which circuits are energised. With a voltage tester in hand, electricians can confidently troubleshoot and work on electrical systems without unnecessary risk.

5. Cordless Power Drill
From mounting electrical boxes to installing light fittings, a reliable cordless power drill is essential for efficiency and versatility. Modern drills offer variable speeds, adjustable torque, and a range of attachments for drilling, driving, and fastening. The cordless design ensures mobility on large job sites, while lithium-ion batteries deliver long-lasting performance. For electrical contractors, a power drill is not just a convenience—it's a time-saving necessity.

Conclusion
While every electrical contractor may have personal preferences for brands or models, these five tools are universally recognised as must-haves. Investing in high-quality versions of each ensures safety, productivity, and professional results on every project. With the right tools, electrical contractors can tackle any challenge the job throws their way.

Importance of electrical safety equipment

There is no doubt that electricity is an extremely powerful source of energy, used to power machinery, lighting, tools, devices, and other products we use in our day-to-day lives. However, the same electricity can also be a serious health hazard, causing serious injuries and deaths. This is why people who work in the electrical industry ought to develop electrical safety standards and use electrical safety equipment to safeguard themselves from potential hazards when dealing with electricity during the installation, operation, or maintenance of electrical systems.

Electrical safety at home or at work is of immense importance to prevent disasters and mishaps. If you know you'll be dealing with electricity, it makes sense to wear electrical safety equipment to protect yourself from electric shocks, which can be deadly! These protective items are particularly useful for those in the commercial or industrial construction and maintenance industry. If you were to compare electrical safety gear from the past with the gear available in the market today, you would notice that it has certainly come a long way and undergone tremendous evolution!

Electricity flows only when there is a complete circuit comprising a load (a device that consumes electricity), a ground and a conductor. The electric current flows through the conductor, then to the load, and finally to ground to complete the circuit. Electrical energy can be fatal when an individual becomes part of that circuit, causing an electric shock. Even a small amount of electrical energy, i.e. 50 milliamperes, can result in death.

Owners of electrical companies should maintain electrical safety practices at work to protect workers from injury or electric shock. While purchasing electrical safety equipment will cost money, it will be money well spent. From a practical point of view, this cost is very small compared with what you will have to spend if your workers or employees file a lawsuit against your company for an unsafe working environment!

If you have any equipment or product that deals with live electricity, you should have it inspected by professionals. At times, simply knowing about potential hazards isn't enough; you also need to obtain electrical safety equipment, such as arc-flash clothing, electrical gloves, electrical shoes or boots, an electrical face shield and helmet, insulating blankets, insulated hand tools, and so on.

One should use insulated tools when working with live conductors. In fact, these tools should be used even when one is not directly handling such conductors but is present near them. As for electrical protective equipment, it should be used generously and inspected regularly to detect damage such as punctures, holes, cuts, tears, and embedded foreign objects. If found defective or worn out, it should be replaced to provide maximum protection against electricity.

www.adcenergy.co.za

If you know you'll be dealing with electricity, it makes sense to wear electrical safety equipment to protect yourself from electric shocks, which can be deadly!

'Toolbox on the Move' brings critical components and support directly to the door

BMG - specialists in the supply and support of engineering solutions - has expanded its services to businesses operating in remote areas of the Eastern Cape with the launch of a new mobile sales and support initiative.

"Toolbox on the Move" delivers products, technical expertise and on-site support directly to customers across many industries, including agriculture, automotive, wind energy, construction and general workshops.

"The new BMG Toolbox on the Move van has been kitted out with essential technical support tools and is operated by a specialist who provides a hands-on service, including product demonstrations and practical guidance tailored to specific operational requirements," explains Darryn Wright, Group Marketing Executive at BMG, a division of Invicta Holdings Limited. "Our new mobile service has been developed in response to customers in the Eastern Cape who are a fair distance from our traditional branches and who are looking for convenient access to correctly selected components and on-site technical support."

"A key advantage of Toolbox on the Move is that businesses, with assistance from BMG's technical experts, are able to evaluate products first-hand, reducing uncertainty in component selection and saving valuable time that would otherwise be spent travelling to a branch."

"This mobile service enables customers to purchase a selected range of essential products directly from the vehicle, while also providing a seamless link to BMG's broader portfolio via our user-friendly online platform. This approach ensures that customers are not restricted to the stock carried on board. Where additional items are required, orders can be placed via BMG's digital channels and fulfilled through the company's central dispatch facility. Timely delivery of a wider product range enhances convenience for customers."

Over 65,000 BMG products are available on the digital platform, including bearings, seals, fasteners and power transmission components, as well as hand and power tools, abrasives, brushware, spanners, wrenches and sockets. Added to this are agricultural-specific components, including PTO shafts."

Toolbox on Move also creates opportunities for BMG to participate in local open days and community events, strengthening relationships and maintaining a visible presence in the Eastern Cape.

The company, which is committed to constantly improving its solutions service to meet exact market requirements, plans to extend this mobile service to other regions, particularly in areas where operational efficiency and rapid access to products are critical.

Customers interested in arranging a visit or obtaining further information about Toolbox on the Move can visit www.bmgworld.net.

Best software tools for running an electrical business

Choosing the right software is as crucial as selecting quality tools. Consider these essential software tools to boost efficiency and productivity:

- Field service management software is an all-in-one solution designed for trade businesses. It enables you to:
- Schedule and dispatch jobs efficiently.
- Optimise technician routes using intelligent scheduling.
- Monitor service performance with built-in reporting tools.
- Track job progress throughout each stage.
- Manage your technicians anywhere, anytime.
- Integrate with your existing systems, like accounting solutions and communication platforms.
- Utilise mobile workflows to ensure seamless collaboration between the field and office.

Customer Relationship Management (CRM) system

A CRM system helps you maintain customer data, monitor interactions, and nurture relationships-ensuring you retain clients, drive repeat business, and build loyalty through targeted communication and improved service.

Managing a growing client base manually can quickly overwhelm you, causing missed opportunities or lost clients. Use a CRM system to streamline this process, retain customers, and stay ahead of the competition.

Digital sales pipeline

A digital sales pipeline streamlines your sales process with fast, accurate quotes, easier invoicing, and KPI tracking, helping you convert leads and grow revenue efficiently.

Integrated proposal builders generate custom quotes for each client, simplifying bidding, boosting accuracy, and enhancing satisfaction and profitability.

Field sales CRMs provide real-time insights to help you optimise strategies and boost business performance.

Job scheduling software

Job scheduling software is essential for growing electrical businesses, enabling efficient planning, coordination, and work order monitoring to reduce delays and increase productivity.

Intuitive workflows guide businesses through daily tasks, helping you set timelines, allocate resources, and track project progress in real time.

Assign tasks, create comprehensive calendars, and identify potential bottlenecks to improve scheduling and prevent issues with job management software.

Inventory management software

Dedicated inventory management tools track parts and maintain stock levels, helping electrical companies reduce shortages, control costs, and fulfil orders faster.

Custom digital forms

Digital forms simplify compliance and standardise processes, helping you ensure accurate inspections and documentation, reduce errors, and maintain regulatory standards across operations.

Customisable forms give electrical businesses a major advantage. Tailor processes to your specific services; conduct inspections, document safety, and address hazards easily.

Modernise your record keeping to speed up processes and promote best safety practices, whether you report incidents, implement corrective measures, or update forms to stay compliant with the latest regulations.

Equipping your business with the right tools-both in the field and behind the scenes-builds a foundation for long-term success by streamlining workflows, enhancing service delivery, and providing a competitive edge through efficiency and better client satisfaction.

> **Managing a growing client base manually can quickly overwhelm you, causing missed opportunities or lost clients. Use a CRM system to streamline this process, retain customers, and stay ahead of the competition.**

The best contractors' tools for your belt and business

Whether you're a master electrician or just starting your career, having the right tools can make all the difference. A well-equipped electrician is safer, more efficient, and more likely to deliver high-quality results on every job.

Equipping your team with the right tools is essential for running a successful electrical business. The proper equipment not only boosts efficiency but also minimises workplace risks and ensures top-quality work.

This article explores the essential tools every electrician needs to deliver outstanding fieldwork and uphold the highest safety standards.

Protective gear to keep your team safe

Prioritising your team's safety is non-negotiable-no employee should ever feel at risk due to outdated or missing equipment.

Beyond the risk of serious injury or worse, neglecting safety tools can damage your reputation and lead to costly legal consequences if an incident occurs.

Here are the top electrician tools and equipment to keep your employees safe and healthy:

- **Hard hat:** Even if your technicians aren't working on a construction or industrial site, it's still good practice for them to carry a hard hat in the van at all times.
- **Gloves:** Insulated, shock-resistant gloves are essential for protecting your hands from electric shock and burns in the field.
- **Safety glasses:** Protect your eyes from debris, sparks, and harmful chemicals while working on-site.
- **Fire extinguisher:** Keep one accessible at all times. It can prevent small electrical fires from escalating and protect both lives and property.
- **Personal protective equipment (PPE):** Always use appropriate gear, such as flame-resistant clothing and hearing protection, to ensure safety in hazardous environments.

Specialist equipment for advanced electrical work

Experienced electricians can broaden their service offerings and increase daily productivity by investing in advanced tools.

The following specialist tools may not be needed for every job, but are valuable investments for electricians aiming to expand their capabilities:

- Clamp meter: measures current in a wire without disconnecting it, ideal for troubleshooting.
- Reciprocating and circular saws: a reciprocating saw is a powerful cutting tool that can quickly cut through materials, whereas a circular saw is useful for cutting straight lines through general construction materials.
- Crimping tool: required for creating secure electrical connections, such as crimping connectors onto wires.
- Lockout/tagout kit: can prevent accidental equipment start-up during maintenance or repairs.

By investing in high-quality tools and prioritising safety, electrical contractors can work more efficiently, earn client trust, and build a reputation for reliability. Whether you're growing a business or refining your personal toolkit, the right equipment empowers you to deliver outstanding results and adapt to new challenges in a constantly evolving industry.

> **Equipping your team with the right tools is essential for running a successful electrical business. The proper equipment not only boosts efficiency but also minimises workplace risks and ensures top-quality work.**

The missing metric: introducing the Lighting Value Index

By Callum Grant, Director — Prime Market Agencies

Finding the right luminaire for a project is rarely straightforward. The market is crowded, and every supplier is convinced their catalogue holds the answer. Ask five suppliers, and you'll get five different opinions and five different spec sheets to assess. You compare the numbers, weigh things up, and pick one. It feels analytical. But is it really?

Honestly, not entirely. The way our industry evaluates luminaires has always been fragmented. Efficacy tells you how well a fitting converts power to light, but not how well it maintains that output over time. An A-rated lifetime tells you how long it should last, but not how confident you should be in that claim. Price tells you what you'll pay today, but not what you'll get for that money over the product's life.

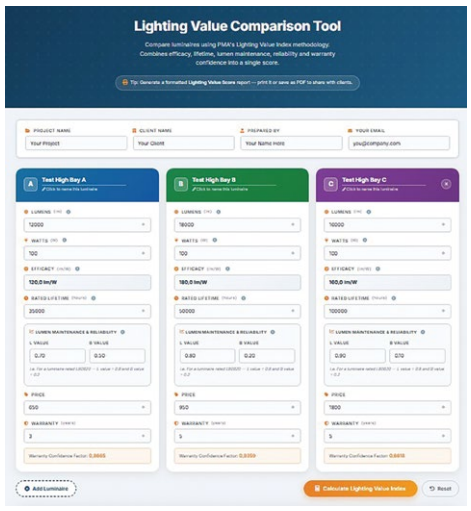
We've been comparing complex products using inconsistent metrics and, in lighting, poor specification leads to years of wasted energy, underperformance, and premature replacements. Every project aims for the best quality and longest life, but budgets force trade-offs, and the most expensive option is rarely the best value. So how do you decide?

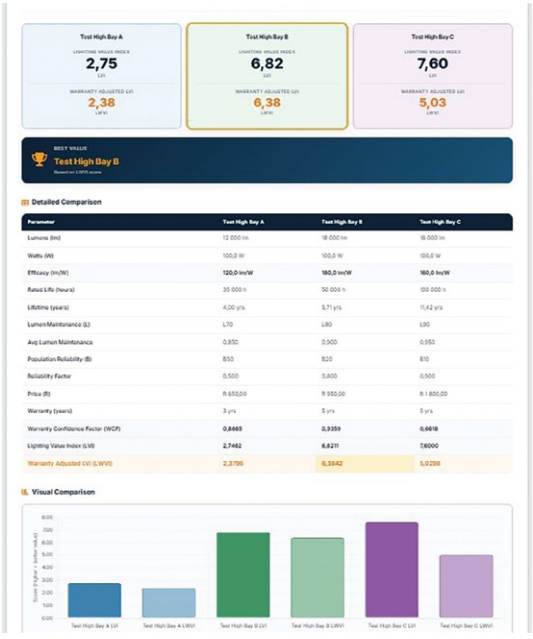
A single, objective score

The Lighting Value Index (LVI) is a metric I developed to answer exactly that question. It combines efficacy, lumen maintenance, rated lifetime, expected reliability, and purchase price into a single objective score: a higher score indicates better value per Rand spent.

A second metric, the Warranty Adjusted LVI (LWVI), then incorporates warranty confidence, defined as the gap between what a manufacturer claims and what they're prepared to stand behind. A luminaire with a lifetime rated at 50,000 hours and only a three-year warranty will score lower than an equivalent 50,000-hour product with a five-year warranty.

I've built both metrics into a free online tool that compares up to eight luminaires at a time. Enter the key parameters, and it returns scores, a ranked table, a visual chart and a clear best-value recommendation, plus a printable report for client files. It doesn't replace photometric analysis or engineering judgement. Light distribution, thermal management, materials and driver quality still matter. The LVI sits alongside those, bringing structure to a commercial evaluation that, in my experience, is still done on gut feel more often than anyone admits.





An invitation

The industry would benefit from a standardised method for evaluating luminaire value. The LVI is my contribution to that conversation, and I'd welcome scrutiny and feedback from the professionals who use it. Try it free at www.primemarketagencies.com/lvicalculator. Try it on your next comparison. See whether the numbers change how you think about the decision.

Helen le Roux's journey through BHA Lighting's Premier course

Helen le Roux, a draftsman at Pienaar & Erwee Engineers (Pty) Ltd, recently completed the BHA Lighting Premier Course. Her journey into the field was sparked by a colleague's encouragement to explore lighting design software. What began as a way to learn a new tool evolved into a deep passion for the discipline. Helen soon realised that true excellence in lighting design comes not only from mastering software but also from a firm grasp of illumination engineering principles.

Seeking to build a solid technical foundation, Helen enrolled in the BHA School of Lighting's renowned programme. She describes the experience as transformative, equipping her with the technical and creative skills essential for modern lighting professionals. "The programme taught me to combine analytical thinking with creativity to develop solutions that are effective, efficient, and purposeful," she reflects.

Key skills Helen developed included manual lighting calculations, which deepened her understanding of the mathematical principles underpinning good design. This enabled her to move beyond reliance on software to validate and refine solutions independently. She also became adept at analysing photometric data sheets and evaluating lighting products, enabling her to select the most suitable luminaires for any project.

In addition to technical skills, the course emphasised design sketching, conceptualisation, and the preparation of technical specification write-ups—critical for clear communication and documentation. Mastery of ReluxDesktop was another highlight, but more important was learning to apply sound design principles on the digital platform.

Like any rigorous course, Helen encountered challenges. Modules on the control of light, reflection, and refraction required a new way of thinking about how light interacts with its environment. The study of human vision and perception introduced scientific and physiological concepts, while topics such as photometry and human-centric lighting pushed her beyond her comfort zone. By dedicating time to research and revisiting course material, Helen turned these challenges into valuable learning experiences.

Her understanding of lighting technology broadened considerably. She came to appreciate lighting not only as a technical necessity but also as an art, a science, an engineering discipline, a field of psychology, and a driver of innovation. The industry's rapid evolution—with smart controls, energy-efficient systems, and IoT integration—underscored the importance of continuous learning.

A key hands-on assignment involved designing a lighting solution for a simulated retail shop. Helen's approach was systematic: analysing the brief, selecting suitable luminaires, simulating the designs in ReluxDesktop, and presenting clear technical specifications. This exercise brought together the programme's teachings and gave her confidence in her ability to deliver effective, real-world solutions.

The course also introduced Helen to best practices, including flicker control, emergency lighting, glare reduction, and safety in hazardous environments. She learned the importance of designing not only for aesthetics but also for human comfort and safety, while always complying with industry standards.

Helen credits mentors such as Principal Philip Hammond and Daniel Hammond with shaping her learning experience and professional mindset. To future students, she advises discipline, curiosity, and strong time management. For those seeking a rewarding career in lighting design, she believes the BHA programme provides the ideal foundation.

Retrofitting classroom lighting: why upgrades are more complex than they appear

Classroom lighting upgrades are often seen as simple maintenance—just swapping old fluorescent fittings for modern LEDs. In reality, retrofitting is a complex engineering challenge shaped by ageing infrastructure, compliance requirements, procurement limits, and maintenance needs.

Success in public-sector lighting upgrades depends not only on luminaire performance but also on how well solutions fit existing constraints.

These projects highlight the need to balance technical compliance, practical implementation and long-term sustainability within educational infrastructure.

Working within existing infrastructure

A major challenge is the condition and configuration of older building infrastructure. Many older schools were designed for fluorescent systems in shallow ceilings, leaving little room for modification, especially with surface-mounted fittings and ageing wiring.

Existing installations often dictate replacement choices more than modern design preferences. Mounting points, wiring access, and restricted ceilings determine which luminaires can be installed without major alterations.

Compliance is more than wattage replacement

It's a misconception that simply replacing fluorescent lamps with LEDs ensures compliance. LEDs are more efficient, but compliance with standards such as SANS 10114-1 also depends on illuminance, uniformity, and glare control.

Differences in beam distribution, lumen output, and luminaire spacing can significantly affect classroom usability and occupants' comfort.

Balancing standardisation and practicality

Public sector projects emphasise standardisation. Facilities try to minimise spare-part variations, simplify maintenance, and reduce stock by standardising luminaires across sites.

But what's ideal for new builds isn't always suitable for retrofits. This requires balancing compatibility with existing infrastructure, practicality of maintenance, and future-focused design.

Product availability still shapes design decisions

Product availability and supply chain issues also shape engineering decisions. Many luminaires in older facilities are no longer made, and direct replacements are scarce.

Even modern alternatives can complicate installation due to size or mounting differences. Projects may use adaptable luminaires that work with both LED and fluorescent tech. This aids flexibility and maintenance, reflecting the transition from fluorescent to LED systems.

Procurement and site constraints

Public sector procurement adds further complexity. Specifications are often set before site conditions are fully understood. After tenders, there's little flexibility to adapt specifications to unexpected installation issues.

This can create a disconnect between design intent and on-site reality. Success depends on early technical assessments and a realistic consideration of infrastructure limits before procurement.

Maintenance and lifecycle considerations

LEDs last longer and save energy, but maintenance remains crucial. Modern luminaires often have integrated, non-replaceable components that must be replaced entirely if they fail. For facilities with tight budgets, this affects lifecycle costs. Maintenance teams often prefer simple like-for-like replacements to reduce the risk of disruption.

More than a lighting upgrade

Classroom lighting retrofits aren't just technology upgrades. They're infrastructure projects at the intersection of engineering compliance, legacy constraints, procurement realities, and maintenance strategies.

Success requires more than selecting efficient luminaires. It demands an understanding of operations, infrastructure constraints, and practical realities in public-sector facilities.

Beyond lux levels: the real drivers of lighting efficiency in retail

Retail lighting is often specified to meet a lux target at the lowest possible upfront cost. But on site, the real cost of a lighting system is reflected in how long installation takes, how reliably it performs, and how often contractors need to return to address issues.

As energy costs rise and retailers place greater emphasis on store efficiency, lighting design is attracting closer scrutiny from engineers, contractors and procurement teams alike.

"Too often, lighting is over-specified using rule-of-thumb spacing and nominal datasheet figures," says Riaan Nel, Senior Key Account Manager at Rubicon. "This usually means more fittings than necessary, higher energy consumption, and higher costs for both the contractor and the retail client."

A more efficient outcome comes from viewing the lighting installation as a complete system rather than a collection of individual fittings.

Why datasheet figures can be misleading

Nominal performance data is measured under ideal test conditions. In real installations, heat, dust, voltage fluctuations and driver losses all reduce actual output.

"Nominal figures show what the LED can do under ideal conditions," explains Sello Leeuw, Head of Sales at Rubicon. "Effective figures reflect what the fitting will deliver once real-world losses are accounted for. Those figures give engineers and contractors a more realistic basis for planning."

This distinction is important. If a fitting delivers less light than expected, additional fittings may be required to meet compliance requirements, increasing the project's time and cost.

The metrics that have the biggest impact on lifecycle cost

According to Rubicon, three factors have the greatest influence on the total cost of owning and operating a lighting installation over its life:

- Number of fittings installed
- Wattage per square metre
- Lifespan and maintenance requirements

"Fixture price is only one part of the equation," says Nel. "The bigger savings often come from reducing fitting quantities, lowering energy consumption and minimising maintenance over the life of the installation."

By achieving the required light levels with fewer fittings spaced further apart, contractors can reduce cabling, installation time and labour costs upfront, while also lowering the retail store's ongoing energy consumption.

Engineering the system to do more with less

Rubicon developed its Protega Gen 2 linear LED luminaire around this principle.

By improving the optical design and reducing system losses, Protega Gen 2 increases spacing from 2.4 m to 3.0 m while maintaining the required retail lux levels. In a recent large retail project, it also reduced lighting power density from 12 W/m² to 7.5 W/m², resulting in very significant lifetime energy savings.

From left: Nick Roche – Chief Product Officer; Jeffrey Martin – Factory Manager; Riaan Nel – Key Account Manager; Sello Leeuw – Head of Sales.

Protega Gen 2 is modular and plug-and-play, with built-in safety features designed to reduce installation complexity and minimise the risk of incorrect assembly. It is engineered to be straightforward to install and maintain, without requiring highly specialised on-site labour.

"In practical terms, contractors install fewer fittings, spend less time on site and have fewer potential failure points," says Leeuw. "That translates into fewer call-backs and a simpler installation process."

Rubicon has seen projects where reducing fitting quantities by 20% to 30%, combined with lower wattage per square metre, significantly reduce both capital and operating costs without compromising lighting quality.

Designed for easier upgrades

"Retail environments change constantly," says Nel. "Lighting systems need to adapt without requiring a full replacement."

Because the Protega Gen 2 luminaire is modular, internal components can be replaced without discarding the entire fitting, helping retailers reduce future maintenance costs and enabling contractors to service installations more efficiently.

For contractors, this means a lighting solution that is easier to install, reliable in operation, and designed to support long-term client satisfaction.

When a lighting system is installed smoothly and performs as expected, it strengthens confidence across the supply chain and helps contractors build long-term relationships with their clients.

As Leeuw puts it: "When real-world performance, fitting count and energy efficiency are considered from the start, the installation becomes simpler and the long-term results are better for all involved."

www.rubicon.tech

BEKA Schréder is proud to have supplied the exterior lighting solution for the recently refurbished Irene Farm in Pretoria, Gauteng

Often described as the ultimate "farm in the city", Irene Farm offers the perfect family-friendly escape in Centurion. Nestled between the bustling cities of Pretoria and Johannesburg, this picturesque working dairy farm combines old-world charm with a welcoming countryside atmosphere. Visitors can enjoy a variety of attractions, including on-site restaurants, a well-stocked farm shop, scenic walking trails, and the opportunity to see the farm's herd up close. The venue also offers conference facilities and serves as a beautiful setting for weddings and special events.

BEKA Schréder supplied the exterior lighting solution for this well-loved destination. All luminaires installed on site are designed and manufactured in South Africa, ensuring reliable technical performance while also supporting local industry and job creation.

VERTICE – Versatile post top luminaire range

The VERTICE luminaires have been installed at the entrance to Irene Farm and along the walkways, providing a warm, reliable glow throughout these key areas.

Designed with ease of installation in mind, the VERTICE requires minimal maintenance and is backed by a full 5-year warranty. Its versatility sets it apart, offering a range of light distributions and three LED engine configurations, allowing the luminaire to complement the aesthetic and functional requirements of various applications.

BEKABRITE – Classic bollard

The BEKABRITE bollards illuminate the pathways leading to the newly built Waters Edge venue and Woodland Conference Rooms.

With its refined design that blends easily into a wide range of environments, the BEKABRITE offers an effective lighting solution for pedestrian areas, parks, walkways, car parks and cycle paths. It enhances outdoor spaces while providing reliable nighttime guidance with minimal energy consumption.

SERIES 300 – Decorative and highly efficient bulkhead

The SERIES 300 bulkheads have been installed on the newly constructed Woodland Conference building, The Cottage building and new Dairy buildings.

With its modern and minimalist design, this LED bulkhead blends seamlessly into its surroundings during the day while creating a striking visual effect after dark. Its distinctive halo lighting effect enhances building façades while providing functional illumination for commercial developments, retail areas, shopping centres and public buildings.

LEDDUO – Decorative wall-mounted luminaire

The LEDDUO/SQUARE has been installed on the exterior of the newly constructed Woodland Conference Rooms and Waters Edge, adding a magical touch to the evening atmosphere. Combining energy efficiency with a sleek, robust design, the LEDDUO is suitable for both interior and exterior applications. Available in square and round models, it allows for seamless integration into architectural designs.

ECOBAY – Lowbay and highbay range

The ECOBAY RP MAXI with skirt has been installed inside The Shed venue.

Designed for lowbay and highbay applications, the ECOBAY is ideal for large indoor spaces, delivering optimal light levels and energy efficiency. It is available with round or square PCBs, and an optional skirt is available to suit specific applications. Offering substantial energy savings, high performance, and the ability to operate in high ambient temperatures, the ECOBAY meets the requirements of multiple indoor lighting applications.

Enhancing Experiences with Light

BEKA Schréder is proud to have contributed to the lighting at Irene Farm, enhancing its functionality and ambience while highlighting its architectural features and outdoor spaces. With a full range of locally designed and manufactured luminaires, the project showcases the company's commitment to quality, energy efficiency and support for South African industry. The result is a safe, inviting and visually appealing environment that complements the farm's charm and ensures memorable experiences for all visitors.

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JULY 2026 FEATURES

- Cables and Cable Accessories
- Standby, Back Up, and Emergency PowerLighting
- Lighting

AUGUST 2026 FEATURES

- MCCs and motor protection
- Energy efficiency
- Lighting

Editor:
Minx Avrobos
sparks@crown.co.za

Advertising:
Carin Hannay
072 142 5330
carinh@crown.co.za

Design:
Ano Shumba

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Wilhelm du Plessis

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