

#05 MARCH 2024

# NEWSLTR

IMPROVING LIVES BY TRANSFORMING THE SPACES WHERE PEOPLE LIVE, WORK AND MEET



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THE GLOBAL SPECIALIST  
IN ELECTRICAL AND DIGITAL BUILDING INFRASTRUCTURES



# FROM THE GM'S DESK...

Our first newsletter of 2024 and the end of the first quarter of the year. And what a start to the year it has been!

Adding to the woes of an economy battered by loadshedding, congested ports and a broken freight-rail system, in our industrial heartland and most populated region, we are now facing the prospect of a breakdown in our water supply. All these factors of course do not bode well for industry and economic growth. With just two months until our National Elections, it will be interesting to see how these political crises affect the popular vote.

As South Africans, with our ever present spirit of resilience and a drive to seek alternative solutions, and as Legrand South Africa, with our own local expertise and skilled team, the support of international research and development, as well as Legrand's extensive and high-quality product offering, we are confident in our ability to navigate our way through the challenges we face.

The Legrand Services department is only going from strength to strength. Our ability to offer tailor made solutions for individual projects, from planning stage, through to installation and most importantly, after sales care and maintenance, is proving an invaluable asset to project managers and businesses alike.

With digitilization of basically everything, the Data Center market continues to expand. Increasing foreign investment from cloud providers and colocation data center operators, affords us, as Legrand, with our A to Z solutions for Data Centers, a robust future in this domain.

I wish to end with a quote by General George S. Patton: "Accept the challenges so that you can feel the exhilaration of victory"

Let it remind us all that in facing adversity, we discover what we are capable of, and in that, the thrill of overcoming difficulties.



**Johan Bosch**  
General Manager Legrand South Africa





**Legrand South Africa**

As SA seeks to address infrastructure needs and embrace digitalization, we stand poised to navigate challenges and capitalize on emerging opportunities.

**Elle@Legrand**

Local committee formed with focus on issues like Equality, Human Rights, Inclusion and Mental and Physical Health Awareness.

**Smart Electrical Panel**

With energy scarcity and rising costs being pressing concerns, our Smart Electrical Panel addresses these matters by offering a complete solution.

**Data Centers**

As data centers address more expansive and unique challenges, so too must their power distribution equipment meet those performance needs.

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**Zambia - A Team Up 2 Success Story**

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# Legrand South Africa

## A Look Ahead to 2024



As a recognised global leader in electrical and digital building infrastructure, Legrand plays a significant role in South Africa's construction and manufacturing sectors. As the nation seeks to address infrastructure needs and embrace digitalization, Legrand South Africa stands poised to navigate challenges and capitalize on emerging opportunities in 2024.

### Current Landscape

Legrand South Africa operates within a dynamic market characterized by rapid population growth, increasing connectivity demands, and evolving regulatory frameworks. The company offers a comprehensive range of products and solutions, including wiring devices, cable management, lighting controls, energy distribution systems, data center solutions, and comprehensive services, catering to residential, IT, commercial, and industrial customers.

Despite the disruptions caused by the COVID-19 pandemic, Legrand has demonstrated resilience, leveraging its global expertise and local partnerships to support critical infrastructure projects and meet customer needs. Legrand's commitment to innovation, sustainability,

and customer-centricity has solidified our position as a trusted partner for building professionals and end-users alike.

### Forecast for 2024

Looking ahead to 2024, drivers in the South African market that remain key focus areas for Legrand South Africa:

- 1. Digital Transformation:** The convergence of electrical and digital technologies is reshaping the building industry, driving demand for smart solutions that enhance efficiency, comfort, and safety. Legrand is well-positioned to capitalize on this trend, offering a wide range of connected devices and IoT-enabled systems that empower users to monitor and control their environments remotely.





**2. Infrastructure Investment:** Government initiatives aimed at addressing infrastructure deficits, such as the National Infrastructure Plan present opportunities for Legrand to participate in large-scale projects across sectors such as healthcare, and telecommunications.

**3. South Africa grapples with a persistent challenges:** the brain drain and shortage of expertise across various sectors. Talented professionals, including doctors, engineers, researchers, and skilled workers, seek opportunities abroad, leaving a void in critical fields. This trend exacerbates socio-economic disparities, impedes innovation, and hampers the nation's development trajectory. Legrand South Africa has over the past 3 years invested heavily in the accumulation of resources to bolster its ability to deliver in-house services for projects. This allows us to not only supply, but also provide customers with complete solutions, including design, installation, commissioning, after sales service and end-of-life planning.

**4. Regulatory Compliance:** Compliance with local regulations and standards, including the South African National Standards (SANS) and the National Building Regulations, is essential for Legrand to maintain its market presence and ensure product quality and safety. Continued investment in research and development, testing, and certification continues to be a focus area to meet evolving regulatory requirements.

Legrand South Africa's remains cautiously optimistic for the 2024 year, amidst a myriad of challenges, fuelled by innovation, sustainability, and a commitment to customer satisfaction.



## Local Committee Formed

Legrand South Africa recently formed its own local committee of Elle@Legrand.

In 2013, with a team of twenty women, Elle@Legrand was the first social network formed within the Legrand Group. One of the first topics addressed was work and private life balance, which of course is a matter applicable to all Legrand employees. From the start the aim of the network was about diversity and coeducation and as such, men were also invited to join the network.

Today Elle@Legrand has grown substantially with numerous committees having been formed in other countries around the world where Legrand is present, such as the USA, Italy, Brazil, Germany and Austria.

Legrand South Africa has now joined this international league with the forming of our own local committee. Elle@Legrand South Africa will be responsible for leading and organizing internal and external awareness campaigns and activities with focus on issues like Equality, Human Rights, Inclusion, Mental Health and Physical Health Awareness.



# Smart Electrical Panel

## A complete system for controlling your electrical installation



In today's world, where energy scarcity and rising costs are pressing concerns, Legrand's Smart Electrical Panel "with Netatmo" addresses these concerns by offering a complete solution that is ideal for private residences and provides reliable control over electrical installations and effective tracking of energy consumption.

### A Single App for Comprehensive Control

Components of this system are fully compatible with Arteor with Netatmo wiring devices and just like Arteor with Netatmo, users need to begin the installation with a gateway module - the brains of the operation. This system is available in both a DIN rail mount version or Arteor with a Netatmo gateway kit. The gateway acts as an interface between the router and the connected products. Modules available for the Smart Electrical

Panel include a smart connected electricity meter, a 16A smart lighting latching relay and a 20A Smart contactor.

By downloading the Home+ app from the Google Play or Apple App store, users are able to intelligently control their home, by managing all electrical aspects of their home remotely from anywhere in the world, or by voice command through their preferred voice assistant. (Google, Apple & Amazon) With smart speakers users can talk to their home give instructions like, "Okay Google turn on my





security light” or “Hey Siri, turn on the pool pump.”

### Tailored to Tackle Eskom’s “Load Limiting” Initiative

Implementing Legrand’s Smart electrical panels is a strategic response to Eskom’s “load limiting” initiative. When Eskom reduces the load, the smart electrical panel allows users to selectively turn off high-consumption loads, like electric geysers, ensuring uninterrupted power for essential devices.

### Monitoring and Reducing Energy Consumption

The connected electricity meter is key for monitoring energy use. It provides detailed insights into the home’s total electricity consumption history, enabling users to track usage on a daily, weekly, monthly, or annual basis. This data is crucial for identifying high-consumption devices and improving overall energy efficiency.

### Advanced Control for Lighting and High-Consumption Appliances

The connected latching relay revolutionises lighting control. This device integrates seamlessly into wireless switches in the Arteor with Netatmo range, allowing users to control lighting remotely and to set up personalised schedules, while monitoring consumption.

For high-energy consumption

appliances, the connected contactor offers local and remote control, including operation in peak/off-peak automatic modes or as a conventional ON/OFF power contactor. This ensures efficient management of devices like electric geysers and swimming pool pumps.

### Commitment to Smart, Energy-Efficient Solutions

Legrand’s commitment to fostering Smart, energy-efficient homes in South Africa is evident in these user-friendly systems that are enhanced by comprehensive technical support and advisory services throughout Southern Africa.

Legrand’s smart electrical panels with Netatmo home control solutions are more than just a technological advancement; they are a step towards a more sustainable and energy-efficient future, aligning perfectly with initiatives like Eskom’s “load limiting” schedule, to create smarter, more resilient homes.



## How can you become a Legrand Accredited Installer?

- Legrand trained Installers will be equipped with the basic knowledge to do single home installations with our range of Connected Home Solutions.
- Ideal for electrical contractors wishing to diversify their offering into the Connected Home market, as well as System Integrators.
- Post training technical assistance from Legrand.

Accreditation training:

- No prerequisites
- Duration - 8 hours
- Online or in person at our Innoval Training Centre in Sandton, Johannesburg

To register scan the QR Code:



For more information, contact us on:

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011 444 7971

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# Data Centers

## Powering the most challenging environments

As data centers address more expansive and unique challenges, so too must their power distribution equipment meet those performance needs. Server cabinets and racks, even individual server units, need to be designed for maximum adaptability to the ever-changing power consumption requirements of their unique and demanding environments. Whether dedicated to supercomputing or artificial intelligence, data centers are by their very nature unique in form factor and physical architecture. Sometimes they'll fit into an existing building on campus, with a retrofit of new infrastructure to support the additional demands placed on the power and cooling systems of the facility. Other times they're installed in an entirely new facility designed expressly

for housing the machinery. In both instances, administrators must find custom solutions for delivering power, cooling, networking, and so forth.

On the other hand, edge computing is designed to put applications and data closer to devices— and their users. But it brings a different set of challenges than the massive data centers used in supercomputing and AI applications. Space is a significant one in many cases; smaller enclosures mean even less space for the power distribution equipment. Because edge computing takes place remotely, you need to validate remote connectivity and possibly remediate any issues.

### Data Centers Require Power, And Lots of It!

It's as simple as that.

The design of data centers has always required solving how to feed their power needs and distributing the electrical power once it's in the facility.

Some of the world's largest data centers can each contain many tens of thousands of IT devices and require more than 100 megawatts (M.W.) of power capacity.

With this immense power consumption demand comes the challenge of managing power distribution on a more granular level. Off-the-shelf and semi-custom solutions for remote access, power, and white space infrastructure







satisfy the needs of most enterprise and SMB data center applications. More expansive and complex data centers often use similar solutions.

However, the need for ongoing improvements in efficiency and sustainability leads many HPC installations, AI applications, hyperscale data centers, and telecom operators to seek novel custom solutions to layout, power density, cooling, and connectivity.

It's a safe assumption that each software workload has its unique power consumption requirements. If form follows function, then the application drives architectural choices for hardware and its environment. Hyperscalers provide a roadmap for adding more space and more racks for more servers when we think we've reached, or are about to hit, our power consumption caps. But supercomputing wants everything physically close together to maximize throughput, while AI wants to be on specialized processors, and by its very nature, edge computing is inherently distributed.

### AI Poses Possible Predicaments for PDUs

Artificial intelligence regularly produces incredible accomplishments with computers, learning the subtleties of language, becoming your emotional health assistant, beating humans at Jeopardy, and driving your car. But all these accomplishments require astonishing amounts of computing power—and electricity—to devise and train algorithms. A unique aspect of AI applications is their high

internal bandwidth between boxes/nodes and optical connections, which can be power intensive.

When designing a power distribution plan for an AI facility, you often face similar challenges as you would with a supercomputer facility.

- You may need a PDU that can help with capacity planning and maximizing electrical power utilization.
- AI facilities often require the use of custom racks, which demand ingenuity in the location of PDUs.
- High density and higher power installations test the limitations of standard PDUs.
- Your power density goes beyond what a C19 or other standard outlets can deliver.

### Gaining an Edge with PDUs

Edge computing occurs at or near the user's physical location or the source of the data. By placing computing services closer to these locations, users benefit from faster, more reliable services. The explosive growth of IoT devices and new applications that require real-time computing power continues to drive edge-computing systems.

Edge computing can occur in harsh environments like manufacturing facilities, warehouses, or outdoor locations (for example, oil rigs and cell phone towers). These demanding environments may require the edge data center to operate in sizeable operating temperature ranges, which impose the need for support for environmental sensors. Their placement at the data source may demand remote

management capabilities and limited remote access control. Therefore, edge computing offers some distinctive challenges.

- Need for environmental monitoring as a safeguard against temperature and power extremes outside the operating capabilities of the equipment.
- Presents a case for remotely monitoring power consumption.
- PDUs that have onboard communications capable of scheduling outlet power on and off.
- PDUs capable of shedding the power load to maximize battery power uptime if the unit exceeds thresholds.
- Your operating environment dictates that the PDU go beyond the usual 0-60 degrees celcius.

### When Custom Power Components are the Only Real Solution

As previously mentioned, off-the-shelf and semi-custom solutions for remote access, power, and white space infrastructure satisfy the needs of most enterprise and SMB data center applications. However, the self-imposed drive for ongoing improvements in efficiency and sustainability worldwide has led HPC installations, AI applications, hyperscale data centers, and telecom operators to seek novel custom solutions to layout, power density, cooling, and connectivity. The push for renewable energy sources also influences the use of DC power versus conventional AC power.

**Legrand can consult with you, building the one platform in the world that can meet all your requirements. For more information contact our Data Center Team: 011 444 7971**



# Eco Friendly Transformers

## Offering new standards for energy efficiency and environmental sustainability

series – that leads the way in reliability, energy efficiency and environmental responsibility during energy distribution.

Legrand GreenT cast resin transformers - which efficiently transfer electrical power between two different voltage systems, at the same frequency – have significant advantages over other units on the market. Benefits include a reduction in energy consumption, minimal energy waste and improved safety, as well as lower CO<sub>2</sub> emissions and greater economic savings.

GreenT cast resin transformers comply with stringent quality, safety and environmental specifications, including the IEC 60076-11:2018 standard.

This classification is based on no-load loss (P<sub>0</sub>) and load loss (P<sub>k</sub>) with an average reduction in losses of 15% compared with previous Legrand ranges. The average load factor for this range is considered 30% for continuous use.

In fact, these eco-friendly transformers have a partial discharge value <5 pC that is significantly lower than 10 pC, which is the maximum value indicated by the product Standard IEC 60076-11:2018.

This translates to higher efficiencies, greater resistance to work stresses and extended service life of the system.

The 60076-11:2018 standard also endorses these transformers for safe usage, storage and transportation in extreme environmental conditions. GreenT transformers, which incorporate the use of high-quality epoxy resins, comply with environmental class E3, climate class C2 and fire behaviour class F1 categories. These units operate safely at ambient room temperature between -25 and +40°C and can withstand a maximum relative humidity level of 95%

Standard configuration GreenT transformers offer seismic resistance up to 0.2g, with the ability to be fixed to the ground to prevent overturning.

GreenT transformers incorporate advanced materials and the latest technologies in the design to guarantee high-performance, easy installation and low maintenance requirements. Notable features of the magnetic core include HV (high voltage) and LV (low voltage) terminals, that have been modified to facilitate easy connection. The height of the LV terminals has been reduced for easier positioning of the connections for installers, while HV windings have BIL LIST 2 reinforced insulation in critical points of the unit for enhanced safety.

**Legrand keeps abreast with constantly changing global demand in electrical and digital building infrastructures through the ongoing development of new products and systems that encompass the latest technology and advanced materials.**

The company has developed a range of environmentally-friendly cast resin transformers – the Legrand 50 Hz GreenT





Legrand offers customised solutions based on specific requirements. As such, GreenT transformers are available with the enclosure either mounted or dismantled, to be assembled on site. There are nine enclosure sizes in this range, with the selection of two types of ventilation grill for each.

Typical installations for GreenT transformers include data centres, shopping malls, hospitals and residential buildings. CRTs are also suitable for photovoltaic (PV) installations and wind power, as well as offshore applications, the railways, shipping and airport facilities.

The company's commitment to sustainability extends beyond the operational life of the transformer, allowing for easy recycling or disposal of all materials.

The synergy of products from Legrand group companies facilitates seamless integration between power distribution systems, to provide the guarantee of a certified distribution system.

Legrand EdM cast resin transformers, Zucchini busbar trunking systems and XL<sup>3</sup> cabinets, are manufactured according to stringent quality, environmental and safety specifications. Each component in the system ensures simplified and safe installation, with the versatility for any type of power application, in any environment.

Legrand's specialist services include enclosure building up to IP31, power factor monitoring and thermal imaging.

The company, with Final Acceptance Test (FAT) and Site Acceptance Testing (SAT) capabilities, also offers complete installation and commissioning services, as well as service level agreements.

Legrand's commitment to the highest standards is highlighted by the recent qualification of its test lab "IB03" by ACAE, to work in accordance with the IEC EN 17025 standard on all routine tests and on some tests for medium-voltage transformers. This acknowledgement and qualification is an important milestone for the company, shared with only a limited number of companies around the world being able to offer this service. All Legrand transformers are individually tested before being delivered to the customer.





# Zambia

## A Team Up 2 Success Story

**It is thanks to successful partnerships with a number of Distributors in Zambia that Legrand not only has a strong footprint in the electrical market in the country, but it is an ever growing one.**

Through Legrand's original Light It Up programme, our distribution partners in the country, the likes of EML and Pioneer Power, were instrumental in not only implementing the programme, but seeing to it that the products were well received and that sufficient product training was provided.

In a market research visit to Zambia, Legrand Management Team walked the city streets of Zambia, visiting the likes of Chachacha Road in Lusaka, where one finds the largest hardware stores. This visit was to better understand how we, as Legrand, could better improve on our relationships as well as bringing the right products and solutions to the Zambian market. The high cost of bring goods into the country as well as the extended lead times experienced because of the COVID-19 pandemic, were also noted.

After some lengthy research and analysis, TEAM UP 2 was launched in the country.

Through TEAM UP 2 we were able to alleviate the difficulties previously experienced by our customers in Zambia. Our distribution partners (Pioneer Power, EML and Iletco) committed fully to the programme by investing in, and keeping stock in the country, enough to service the entire Zambia. There are currently over 100 000 Legrand product skus stocked in Zambia by our partners. This allows resellers, contractors, installers, and end users access to Legrand products in country.

The Arteor range of switches and sockets remains the most popular range of switches and sockets in the Zambian market, and we have over the past 2 years also launched new ranges to offer a wider range of choice to the market, including Belanko S, Eloé and Galion.

For office solutions, the New Incara Range was launched in 2024, which offers a blend of sophisticated style and practicality.

### ELOÉ™



### Belanko™ S



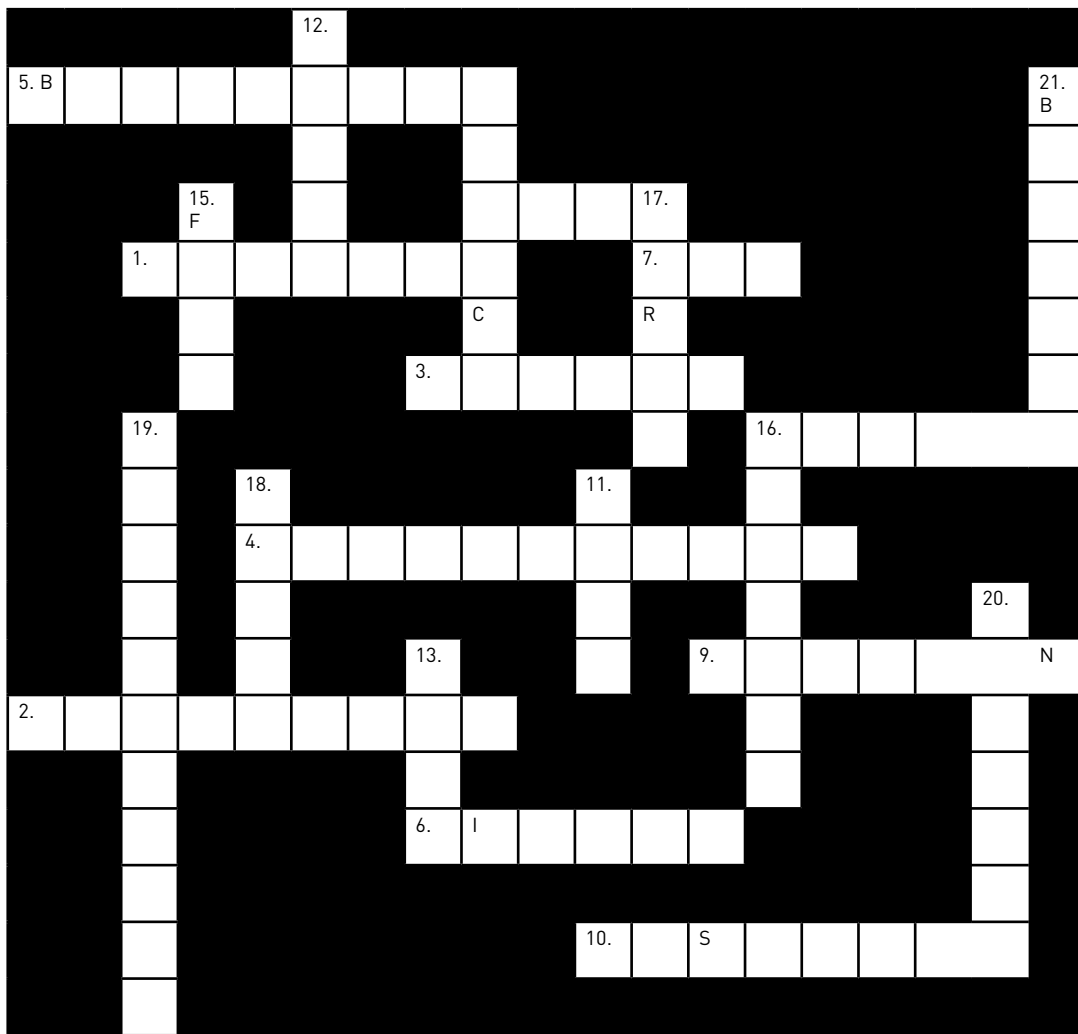
### GALION



### INCARA™







**Across:**

- 1. It is measured in Amperes.
- 2. A machine which converts mechanical energy into electrical energy.
- 3. Electricity produced by a surplus or a shortage of electrons in an object.
- 4. The flow of electrons
- 5. Total loss of electric power from the power distributor.
- 6. A device/switch that allows a person to control the brightness of a light.
- 7. A \_\_\_ is a type of device that powers equipment, nearly instantaneously, in the event of grid power failure, protecting the equipment from damage.
- 8. Any atom or group of atoms that bears one or more positive or negative electrical charges.
- 9. A \_\_\_ is a part of an atom that has no electrical charge.
- 10. Most often, warm colors (yellow, red, and orange) are considered to be \_\_\_
- 16. A conductor or bar that serves as a common connection point for multiple electrical circuits in a power distribution system.

**Down:**

- 11. Electrical \_\_\_ is used for power distribution to transmit electricity from a transformer or other source to an outlet, appliance, device, cable, switch, distribution board, socket, or light fitting.
- 12. It is measured in Watts.
- 13. An electrical \_\_\_ is simply any component of a circuit that consumes power or energy.
- 14. An electrical component used for connecting, breaking, or changing the connections in an electrical circuit.
- 15. An electrical safety device consisting of a wire or strip of fusible metal that melts and interrupts the circuit when the current exceeds a preset amperage.
- 16. A single or group of connected electric cells that produces a direct electric current.
- 17. A short duration of increased voltage
- 18. An instrument that records the amount of electricity passing through it.
- 19. An electric current that reverses direction periodically.
- 20. The electric potential difference between two points, which causes the movement of electric charge.
- 21. A protective device that automatically interrupts electrical flow when excessive current is detected, preventing damage or hazards.

**SOLUTIONS ON PAGE 3**

# Photo Page



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FEBRUARY 2024