

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



DATA CENTRES LDCS EXPERTISE AT PADC

Subsidiary news

Raising the bar for Higher Power Africa's Digital Growth

12

4



10



FROM THE GM'S DESK...

Its astounding to realise that we are already halfway through 2024. What is also quite remarkable are the recent election results.

Following the African National Congress' unprecedented loss of its parlimentary majority, it could have joined with the risky populist parties, but instead opted for a government that adheres to the values of the 1994 settlement, and has a chance of overseeing essential reforms.

Going forward, we should hopefully see a focus on the priorities of Operation Vulindlela - reforming of Eskom; unclogging ports; fixing water infrastucture; streamling skilled visas; and attracting more investment.

This bodes well for bolstering the economy and promoting economic growth. What a perfect alignment of circumstance and opportunity for South Africa, as the demand for digital access continues to flourish both at home and throughout the African continent. South Africa's advantageous location and favourable business conditions make it a popular choice for those investing in data centers.

To demontrate our competency in the market, and our proficiency in providing both complete, and innovative product solutions, as well as tailor made services, we will be exhibiting at the Pan African Data Center Exhibition at the Sandton Convention Center in Johannesburg on the 16th and 17th of July 2024.

This free to attend exhibition brings together the market, and most importantly, key desion makers, all in one place. I invite you to visit our team on our stand for insight into Legrand Data Center Solutions' extensive offering and how our expertise can help you.

I look forward to seeing you there.



Johan Bosch General Manager Legrand South Africa



04

06

80

10

Subsidiiary News

Get up to speed with local staff movements and new comers to our team. Also meet our local initiate in our Early In Career Development Program.

Boat Builders

With SA ranking second in the world for building catamarans, we look at how electrical accesories can enhance the on-board living space whilst out at sea.

Recreational Vehicles

Rethink traditional camping and off-roading paradigms. Electrical accessories can add comfort and increased safety to the home away from home.

Raising the Bar for Higher Power

The infrastructure necessary to support our increasingly digitized and interconnected world means demand for bandwidth, and with it, power.

LDCS at the PADC

Legrand Data Center Solutions will be exhibiting at at the Pan African Data Center Exhibition 16th - 17th July 2024 at the Sandton Convention Center.

Africa's Digital Growth

12

13

why responding to demand with the same old designs and power grid dependency, is simply not sustainable.

The Legrand NEWSLTR publication team would like to thank all the participants:

DIRECTOR OF PUBLICATION: Melanie Vosloo EDITORIAL STAFF: Shaun Dobbs, Kelisha Gungadeen LAYOUT: Shaun Dobbs PHOTOS: Legrand, Shutterstock All rights reserved © Legrand June 2024 LEGRAND BUSINESS NEWS

Staff Changes

Dion Chetty: Dion started with Legrand in 2017 and is based in Kwa Zulu Natal, he started as a Business Developer for Wholesale in the KZN region. In April this year he moved from Wholesale to Projects and is now heading up Projects for Legrand LDCS and LES in the KZN region.

Donavan Ramsamy: Donavan joined the Legrand team as recently as May 2024 Based in KwaZulu Natal he has taken over managing the Business Development aspect for all our Wholesale stakeholders in the KZN region.

Hendrick Sebola: Hendrick's Legrand career began in 2015 when he joined our team as a Customer Service Administrator. progressing to Customer Service Manager. and then Export Business Developer. Hendrick has now recently taken on the role of Back Office Manager, leading the Customer Service team.

Kundwani Mavhungu: Kundwani started with Legrand in 2015 as a Customer Service Administrator. He then progressed into the Back Office Manager role and in March 2024 became charged with LDCS & LES customer service.

Quinton Pillay: Starting with Legrand in 2018 as a Junior Specifications Consultant, Quinton. In 2021 he took on the role of Back Office Manager. With an affinity for projects, in 2023 he moved from Johannesburg to our Cape Town office as the Business Development Manager where he is currently serving as a BDM and Project Manager for the Western Cape region.

Zandile Mncube: Zandile, and her effervescent personality, became a part of the Legrand South Africa team in 2021. Starting as an Office Administrator and Receptionist, she then moved into a Customer Service Administrator role ultimately advancing into the Back Office Manager position. In June 2024, her new position as an External Sales Representative, sees her stepping out of the office and on to the road, sevicing and developing DIY stores in the Gauteng region.











LEGRAND BUSINESS NEWS



Early in Career Development

Legrand's commitment to innovation begins with fostering new talent who share the same curiosity and purpose that drive everything we do. Our Early in Career Development Program offers recent graduates realworld and hands-on experiences.

One of our local initiates in the program is Kumeshnee Aiyer.

Kumeshnee joined Legrand South Africa in April 2022 as a Customer Service Administrator. In March 2023, she was promoted to Project Support Manager.

At the beginning of 2024 in supporting her in her ambition to beome pat of the Legrand Data Service Team, she officially became an Aftersales Engineer Trainee.



C3 Training Technical Team Upskilling for Better Services



Legrand experts from France recently visited our susidiary head office in Sandton to take our technical services team through C3 UPS Training.

With this training now completed by our team, they are now able to respond to services for higher tier data centers.



SANS 164-0:2020 Socket-Outlet Configuration Requirements

Since June 2021, in the interest of safety, certain socket-outlet configurations are required by law. As a reminder, lets have a look at what is not allowed and what the correct configurations should be.



Where switches are incorporated into multiple socket-outlets on one wall plate for fixed installations, the switch shall disconnect the live connection to all socket-outlets, alternatively each socket-outlet shall be disconnected by its own switch as specified in figure 1.



Drg.1112

Figure 1 – Fixed electrical installation socket-outlet with and without switches

WATCH THE VIDEO

For further understanding about SANS 164-0, scan the QR Code to watch our TECH TALK video.





This issue marks the launch of our Arteor with Netatmo Online Store Surprise Winner lucky draw.

How do you enter? Its simple really. All you have to do is buy any Arteor product on our online store to be entered into the draw. We will be doing the draw in each of the forthcoming newsletters for 2024, so you have another two chances to win!

What's the prize?

Having already chosen to buy Arteor, you know these carefully crafted masterpieces give any space an elegant yet discrete look, adding to the design without distracting attention. So now discover how to take that to the next level with Connected Home funtionality, thanks to Arteor with Netatmo. The selected winner will win an Arteor with Netamo starter case which includes:

- Wifi Gateway
- Wireless Master Switch:
- Smart Powerpoint:
- Smart Light Switch:
- Wireless Switch

Plus we will also include free installation (excludes any additional consumables)*

*A WiFi network connected to Internet, via Modem/Router, is required.

Terms and Conditions

- Only customers of our online store who have purchased Arteor products are eligible to be entered into the draw.

- The draw takes place with the publication of every newsletter. Any Arteor sales on our online store for July, August and September will be entered into the September draw. Any Arteor sales on our online store for October and November will be entered into the December draw. Winners will be published in the September and December issues respectively.

- Winners need to scan the QR code and fill in the form to claim their prize. Prize needs to be claimed within two months of publication of the newsletter.

- Prize is not exchangeable for other product or cash.

- The judges decision is final.



VISIT OUR WEBSITE FOR MORE AWN INFO



OUR JUNE

WINNER IS:

Karien Kannemeyer

Be sure to scan the QR Code to claim your prize Karien





Boat Builders RETHINK: The Possibilities



Did you know that SA ranks second in the world for building catamarans, after France?

Quoting a News 24 article published 17th June 2023, "According to Wesgro, the official tourism, trade, and investment promotion agency for the Western Cape, the vast majority of boats built in the Western Cape are for the export market. Wesgro data shows that the sector has had post-Covid-19 growth rates of 20%. As of 2023, the industry is worth about R3 billion. SA was ranked as roughly the 18th biggest exporter of recreational boats worldwide in 2021.

The top export markets are the US (R1.4 billion), Italy (R840 million), the British Virgin Islands (R472 million), France (R319 million), and Turkey (R126 million). The Western Cape is SA's boatbuilding hub, accounting for an estimated 70% of the country's marine manufacturing capacity. Most boatbuilding companies are based in Cape Town, but there are also boatyards in St Helena Bay, Saldanha Bay, Swellendam, George, and Knysna."

With the average price per vessel being launched sitting at about R9 million, those who can afford that price tag are likely to also be seeking an on board living environment that caters to added comfort, convenience and safety.

You'll be surprised how electrical accessories including switches, sockets, wireless chargers, lighting, trunking and pop up boxes can not only enhance the on-board living space, but also add a dimension of added luxury and increased well-being whilst out at sea.

Robust trunking, with a sleek modern design, ensures tidy and efficient management of cabling along passage ways and cabin interiors. Add to that skirting light options or overdoor lighting in stairwells and passages for discreet illumination to guide the way.

Outdoor areas on any sea vessel are obviously more prone to wet conditions, but this doesn't mean that safe and practical power supply cannot be easily achieved in these areas. With products like the Plexo weatherproof wiring accessories and P17 Tempra Pro industrial plugs and sockets, protected and easily accessible power supply is always close at hand.





NEWSLTR #05 9



Recreational Vehicles RETHINK: The Possibilities



Caravanning and camping are without doubt an intergral part of South Africa's history. From the days of the Voortrekkers, we've been packing our belongings into caravans and travelling around the country.

With inflation forever on the rise, holidays and getaways are more and more out of reach for many people. Road trips and stays in camping resorts are not only more afforadbale, but also a geat way to see our country.

Then there is the rise of the overlanders. Something that actually started in SA and Australia and spread to other countries and continents.

Overland vehicles are customised 4x4 high clearance comfortable vehicles that are built to endure our tough South African roads and terrain and are self-sufficient to carry everything needed for an overland tour; food, camping gear, tents, chairs, cutlery and even the kitchen sink!

Consequently, the overlanding phenomenon presents the automotive and recreational vehicle aftermarket with a vast array of crossover market opportunities.

This market segment tends to see the serendipity of expeditioning as their goal and enjoy immersing themselves in the environments and cultures they encounter. Simultaneously they are seeking "glamping" and creature comforts while they are exploring the great outdoors.

So, in rethinking traditional camping and off-roading

paradigms, lets consider how electrical accessories, including switches, sockets, wireless chargers and trunking can not only enhance the recreational vehicle living space but also add a dimension of added comfort and increased safety to the home away from home.

Being in the outdoors means being exposed to all kinds of weather conditions. Safe and practical power supply is therefore of utmost importance. With products like the Plexo weatherproof wiring accessories, the Plexo cabinets, and P17 Tempra Pro industrial plugs and sockets, power supply is protected and safe to use



ARTEOR SWITCHES AND SOCKETS

FLEXIBLE COVER SNAP-ON DLP TRUNKING



Data Centers Raising the Bar for Higher Power

We often take for granted the infrastructure necessary to support our increasingly digitized and interconnected world. This demand for bandwidth is only growing, and with it, so is the demand for power.

Mission critical facilities need to be larger to accommodate for more servers, and facilities managers need to be able to quickly address this constant need for additional capacity. In order to support the extra elements required, worldwide IT spending on servers, power and cooling, and management/ administration has rapidly increased over the past decade. But other than just an increase in costs, the need for a higher voltage of power poses additional challenges.

To accommodate this need, overhead power distribution systems emerged within the data center arena within the past decade or two, and quickly began rising to the challenge of providing increasing amperages of power.

Past Power: "The Way It Always Was"

When building a data center, power and cooling are two of the top priorities. Historically, raised floors, or concrete tiles installed onto a steel grid resting on stanchions 2 to 4 feet above a slab floor, have been deployed for cooling purposes. The perforated tiles that make up the floor allow for cool air to flow out of the below passage and onto the server racks. However, this underfloor area also houses whips and cables that supply power to the racks. As a data center space grows, more server racks are installed which require more power, in turn creating more and more cables under the raised floor; ultimately restricting the flow of cool air and completely contradicting the purpose of the excess space to begin with.

Over time many have realized this drawback of the traditional underfloor method, as well as various others, including the fact that raised floors are costly; maintenance is required to remove unused cables, which tend to be abandoned; and risk of human error while working with circuit breakers and cables that are not clearly associated with a given load.



STADI



Higher, Sustainable Busway Power

Overhead power distributionotherwise known as busway systems-directly combat the traditional power solution of whips and cables beneath a raised floor. These systems have been proven to be both scalable and sustainable solutions to providing power.

Select busway systems also provide a continuous access slot to power- meaning that a data center space will always be prepared for future reconfigurations or expansion. Power can be tapped at any location with a variety of plug-in units, eliminating panel boards, long runs of conduit and wire and expensive installation costs for dedicated power outlets.

With an overhead bus system, there is no need to work on live panels or schedule outages to add, move or change outlets. Busway systems eliminate the need to remove and scrap short or undersized cable whips and run new longer or larger ones. Therefore, the risk of unintended potential power outages is avoided and racks can be installed or moved without disrupting operations.

Busways are highly sustainable systems: they can be used for years and years and create much less material waste than the traditional whips and cables method does. Also, in order to cope with today's everincreasing server densities, an increase in kW power density is needed, which equates to a related increase in cooling requirements. Before, this would mean additional power cables under the floor that obstruct air flow and thus make



Flexible & Scalable

It is often difficult to know the exact electrical design needed at the beginning of a project. This can result in the need to reconfigure electrical outlets and their locations, which increases costs and causes schedule delays.

With a scalable overhead busway system, components and power circuits can be added as needed—without tying up capital and wasting resources—rather than building out the entire facility in the beginning. This is very beneficial for colocation and other facilities that are built out over time. It also means that the cost of maintenance is automatically dropped for the long run, as there is no need to reconfigure electrical outlet locations and types.

Increased Usable Space

With data center floor space at a premium, every square foot is critical. Overhead busway systems eliminate RPPs, which result in more usable space in the data center for IT equipment and server racks. In addition, miles of power cables are eliminated when power outlets or drops can be located exactly where they are needed.

Monitored Power Usage

In a data center it is especially important to accurately monitor the amount of power being used. Uptime is

everything for mission critical environments, and thus unplanned outages must be avoided at all costs. Premium overhead power distribution systems are capable of incorporating metering units at both the feed and circuit breaker level. Power and energy measurements are captured instantaneously, providing the granular data necessary to make informed decisions such as enabling phase balancing as needed.

Further potential metering functionality includes optional display, daisy-chain Ethernet to save on network switch ports, alarm functions and remote communication via an integrated webpage. Having all of these capabilities included within your power distribution system makes it simple for data center managers to intelligently track usage and plan for the future.

Installation & Future Cost Savings

The busway system provides immediate monetary advantages

in terms of installation and future costs. The installation of traditional methods is labour intensive in nature, and very costly. Compared to installing a raised floor and hundreds or thousands of whips and cables, busway installation is very simple and not time or labour intensive.

When designing a data center with traditional electric systems, engineers or designers must pre-plan every outlet. Because it is nearly impossible to predetermine the power requirements for each rack in each location when a data center goes live-let alone plan for future requirements- this will result in expensive and time consuming changes that will have to occur in the future. However, with a flexible. adaptable busway system, future changes that require expensive labour charges and potential outages are completely avoided.

With the world around us becoming more and more dependent on the Internet,

it is clear that the need for additional bandwidth is only going to increase. This additional bandwidth results in more and larger mission critical facilities and infrastructure, which require more power. To address this challenge in the most efficient way possible, it's essential to take advantage of the most up-todate technology available; as opposed to facing the needs of the future with the solution of the past.

The Legrand Data Centre Solutions specialists work closely with customers, offering technical pre-sales support at the project design stage, through to supervision of installation, testing, commissioning, and site acceptance tests. The team also offers operator training, as well extended after sales support, including annual maintenance contracts and fast, efficient intervention to emergency calls.

For more information contact us on: TEL: 011 444 7971 or E-MAIL : legrand.south-africa@ legrand.co.za



Legrand Data Center Solutions



Building a data center demands a high degree of flexibility and a modular approach in order to adapt to the changing needs of the market. Projects are becoming more complex due to increasing globalisation. Support and assistance from a well-informed, trustworthy partner is essential.

RELIABLE, SUSTAINABLE & SCALABLE DATA CENTER SOLUTIONS

Legrand is a reliable partner with over 30 years data center experience. Legrand Data Center Solutions provides flexible, proven, and scalable data center solutions. With award-winning solutions from strong data center players like Legrand, With over 30 years data center experience, Legrand Data Center Solutions provides flexible, proven, and scalable data center solutions.

With award-winning solutions from strong data center players like Legrand, Minkels, Starline, Modulan, USystems, Cablofil, Compose, Raritan, Zucchini and Server Technology you benefit from optimal uptime of missioncritical operations. Our team of local specialists design and build innovative solutions including enclosures, cooling, power, structured cabling and access management to meet your exact requirements. Over 30 years, thousands of organisations have relied on our expertise, knowing that Legrand Data Center Solutions is a global partner to count on. you benefit from optimaluptime of mission-critical operations. Our team of local specialists design and build innovative solutions including enclosures, cooling, power, structured cabling and access management to meet your exact requirements.

Legrand Data Center Solutions will be exhibiting at this year's Pan African Data Centers Exhibition and Conference from the 16th - 17th July 2024 at the Sandton Convention Center.

Come visit us at Stand B4.

CABLOFIL COMP©SE MINKELS modulan Raritan Server Technology Starline USystems



Africa's Digital Growth An Opportunity to Think & Act Differently Around Data Centers



In a December 2023 article, Ed Ansett, co-founder and chairman of the i3 Solutions Group, addressed why responding to demand with the same old designs and power grid dependency, is simply not sustainable.

Two of Africa's biggest economies suffer regular power grid blackouts. South Africa continues to grapple with a formidable energy challenge caused by a strained and unreliable power grid prone to rolling outages. In Nigeria, the grid crisis has reached alarming levels, with two total grid collapses occurring within a single week in September 2023.

Such grid instability poses

a significant hurdle for data center development, as these are facilities that require constant and uninterrupted power. The situation is being exacerbated by aging infrastructure, maintenance issues, and a surge in energy demand.

Yet, the situation in both countries and across the African continent also presents a unique set of opportunities for innovation. Data center developers in South Africa and Nigeria could explore alternative power solutions, such as microgrids and demand response mechanisms, to fortify their energy ecosystems and at the same time fuel the growth of their digital economies. This juxtaposition of challenge and opportunity highlights the imperative for innovative and sustainable energy solutions in an increasingly data-driven world. Sector growth in Africa's digital services in line with the rollout of off-grid power, increasing internet penetration, rising smartphone usage, and e-commerce have sparked a rush into data centers.

Existing and future investment figures are impressive, and demand drivers are accelerating, but such rapid growth should not be delivered in a gold rush fever that ignores the opportunities to respond to demand with long-term, efficient, and sustainable facilities. There is much to be optimistic about in Africa's data center space. A report from market research group Arizton found that \$2.6bn was invested in the market in 2021. It is expected that \$5.4bn will be invested by 2027, at a compound annual growth rate of 12.73 percent over five years.

Digital Realty (bought Teraco in 2022), Equinix (\$320m acquisition of MainOne in December 2021 to expand in Ghana, the Ivory Coast, and Nigeria), and Vantage (\$1bn invested with plans for more) have all made significant market moves in South Africa and are pushing into new territories across the continent.

At the same time, local players are emerging. Typical projects include Liquid Intelligent Technologies' 10MW data center in Lagos, Nigeria. Africa Data Centres' new facility in Accra, Ghana with an initial capacity of 10MW. and the potential to expand to 30MW is the largest data center facility in West Africa outside Nigeria. Raxio Data Centres has secured a "sustainability-linked" \$170m loan from a consortium of investors, who include French development finance institution Proparco, Emerging Africa Infrastructure Fund (EAIF) and investment manager Ninetv-One. Raxio aims to accelerate the expansion of its facilities in seven African markets.

However, the growth of data center facilities in both size and number across Africa inevitably raises concerns about their environmental impact. Globally there is a need for the industry to take a more sustainable approach to minimize its carbon footprint and new builds in Africa present a sustainability opportunity which must not be wasted. Simply building as before and then fighting to get grid energy by relying on Africa's power generation mix that is heavily reliant on traditional sources such as coal, oil, and natural gas is not viable.

Crucial for the industry is developers choosing to move away from conservative design approaches and adopting more sustainable practices. Only through the use of energyefficient technologies run off renewable energy dominant microgrids can data centers expect to significantly reduce their emissions profiles. In short, the question is whether the industry is willing to leapfrog itself to adopt new sustainable designs, technologies, energy sources, and practices.

Demand Drivers

Power and connectivity can mean different things in different markets of Africa.

Of Africa's 1.2bn population, 600 million people don't have a dependable networked electricity supply. In Sub-Saharan Africa, two-thirds of people have no regular access to electricity.

This is being changed through the development of off-grid power systems. Much of this off-grid solar power is largely used to charge the more than 1bn mobile phone handsets as people rush to get connected and online.

According to the GSMA Mobile Economy Sub-Saharan Africa 2022 report there will be 613 million unique mobile subscribers by 2025, covering

INDUSTRY NEWS - AFRICA

50 percent of the population (of which 41 million will be 5G connections). Mobile is forecast to generate \$154bn in economic value by 2025. Nigeria boasted 199.6 million mobile connections as of March 2022, according to the West African country's Communication Commission (NCC).

GSMA Intelligence data also showed that there were 108.6 million cellular mobile connections in South Africa at the start of 2022, equivalent to 179.8 percent of its population. Egypt's 98.29 million mobile users during the first guarter of 2022, represent 93.4 percent of its population. Yet currently in central Africa, 39 percent of the population lives outside a mobile broadband coverage area. This figure is 16 percent for West Africa, 13 percent for East Africa, and 12 percent in Southern Africa. In all, it is estimated that 43 percent of the entire African population is still without smartphone access.

Africa, more than a distributed and rural data story

Africa is not just a story of remoteness and rurality. Africa's 10 largest cities amount to 55 million people living in the continent's biggest metros. Building and running the data centers required to support the businesses in these metros and how they serve a growing and ever more connected population means facing up to new challenges from dealing with unreliable grids to finding sustainable energy.

The data center sector should look to the 'leapfrogging' efforts of the power and mobile sectors of off-grid power and network rollouts. In the power supply

1



INDUSTRY NEWS - AFRICA

The African data center sector should look to the 'leapfrogging' efforts of the power and mobile sectors of off-grid power and network rollouts

areas, industrial microgrids are being built around a combination of renewable sources (where available) and on-site enginebased power generation.

Power companies are onto the huge opportunities for leapfrogging outside the major cities – avoiding vast and costly fixed power line investment by jumping straight to solar and wind for power generation and building community, rural, and networked microgrids.

The African data center sector should look to the 'leapfrogging' efforts of the power and mobile sectors of off-grid power and network rollouts Leapfrogging is not a panacea but it shows that in power and telecoms, new thinking in supply and demand is facilitating rapid adoption and expansion.

New designs and operaions

This is one reason among many that points to new data center development in Africa requiring new thinking, new designs, and new ways of operating.

The use of microgrids and battery energy storage systems (BESS) can enable data centers to operate independently of the main utility grid or use a combination of grid and renewable power sources. The BESS stores excess renewable energy generated during times of low demand and releases it when needed. In doing so, it overcomes intermittency issues to extend the usefulness of renewable power and reduce reliance on non-renewable sources.

The African battery market and value chain could lead to the generation of thousands of jobs across the continent and a market revenue estimated to reach \$1 billion by 2030. This market is driven by behindthe-meter (BTM) battery installations including UPS, telecom, rooftop solar, solar home lighting systems, and microgrids.

Beyond the direct resources that data centers can provide through district heating and cooling schemes from combined heat and power (CHP) systems within the facilities and feeding power to microgrids, data centers can also play a role in supporting social initiatives beyond their core operations.

In this respect, data center developments hold the potential to be a catalyst for a host of power and connectivity investments. They can, for example, partner with sustainable, affordable housing developers. There are also many opportunities for partnering with local organizations to provide digital literacy programs or supporting education and healthcare services in underserved areas, helping to bridge the digital divide and enhance overall societal wellbeing.

Africa is an emerging powerhouse that nationally and regionally will decide its own digital infrastructure future according to its resources. For engineers and designers, the game starts sidestepping traditional thinking and leapfrogging to a sustainable future.

(Source: https://www. datacenterdynamics.com/en/ opinions/africas-digital-growthis-an-opportunity-to-think-andact-differently-arounds-datacenters/)



PUZZLE PAGE



Data Center Boggle

Set a timer for 3 (three) minutes and see how many of our Data Center related words you can find. Note though, that there are plenty of other words to be found too, so see how many you can find in total.

DATA CENTER RELATED WORDS TO LOOK FOR:

1. Transformer 2. Power 3. Busways 4. Racks 5. UPS 6. Cable 7. Legrand 8. Cabinet 9. PDU 10. Data

Llegrand®

Everything just **ADDS** up

TM

ADD DETAILS THAT MATTER **Superior design** and quality



UNIVERSAL DIMMER SUITABLE

Ŷ

Halogen

300W Universal dimmer

Incandescent

Dimmable

Fluorescent

ADD POSSIBILITIES **TO PROJECTS**

Versatility for modern living

cover allows a 1-gang ELOÉ™ mechanism to IP55 protection with





4-gang 1-way



1-gang British standard switched



Available to purchase from PIONEER POWER or ILETCO in ZAMBIA and FLINT ELECTRICAL or ECO LIGHTING in ZIMBABWE