

# LV SYSTEM SOLUTIONS

FOR UP TO 6300 A



YOUR  
BUILDING'S  
ELECTRICAL  
BACKBONE

POWERED BY SPECIALISTS

 **legrand**<sup>®</sup>

# Global strength built on local knowledge

Legrand transforms the spaces where people live, work and meet.

We're meeting the world's technological, social and environmental challenges by pursuing our purpose: to improve lives with electrical and digital infrastructures and connected solutions that are simple, innovative and sustainable.

## Legrand in the UK and Ireland

We have been manufacturing in the UK since 1980 and our six manufacturing sites create mechanical, electrical, electronic and digital solutions. Around 80% of UK sales come from products manufactured in the UK.

With specialist sales people who have a thorough understanding of your industry and our team of engineers on the road to help with project management, commissioning, maintenance and any post-build challenges, we're with you every step of the way.



**At Legrand** we are committed to improving lives and this means creating a more sustainable world for everybody.

To achieve this, reducing our carbon footprint and developing a circular economy approach within our activities are our priorities. In addition, we are committed to promoting diversity and inclusion, while being a responsible business in our day-to-day relationships with all our stakeholders, especially our employees, customers and suppliers.



## CRITICAL POWER EXPERTS

From cast resin transformers, through high power and rising main busbar to protection devices and uninterruptible power supplies - we provide market leading solutions to the increasing demands of today's buildings.

## SUPPORT THROUGHOUT YOUR PROJECT

When you work with us you'll receive expert support at every stage. Alongside our specialist sales and technical support teams you'll also benefit from:

- Bank of technical information and data sheets on our website
- BIM files
- CPD seminars
- Drawings service
- Product Environmental Profiles (PEPs)
- Product training
- Quotations service
- Site visits

# A COMPLETE SOLUTION

## FOR LV POWER DISTRIBUTION

# CRITICAL POWER

### BUILT FOR RELIABILITY

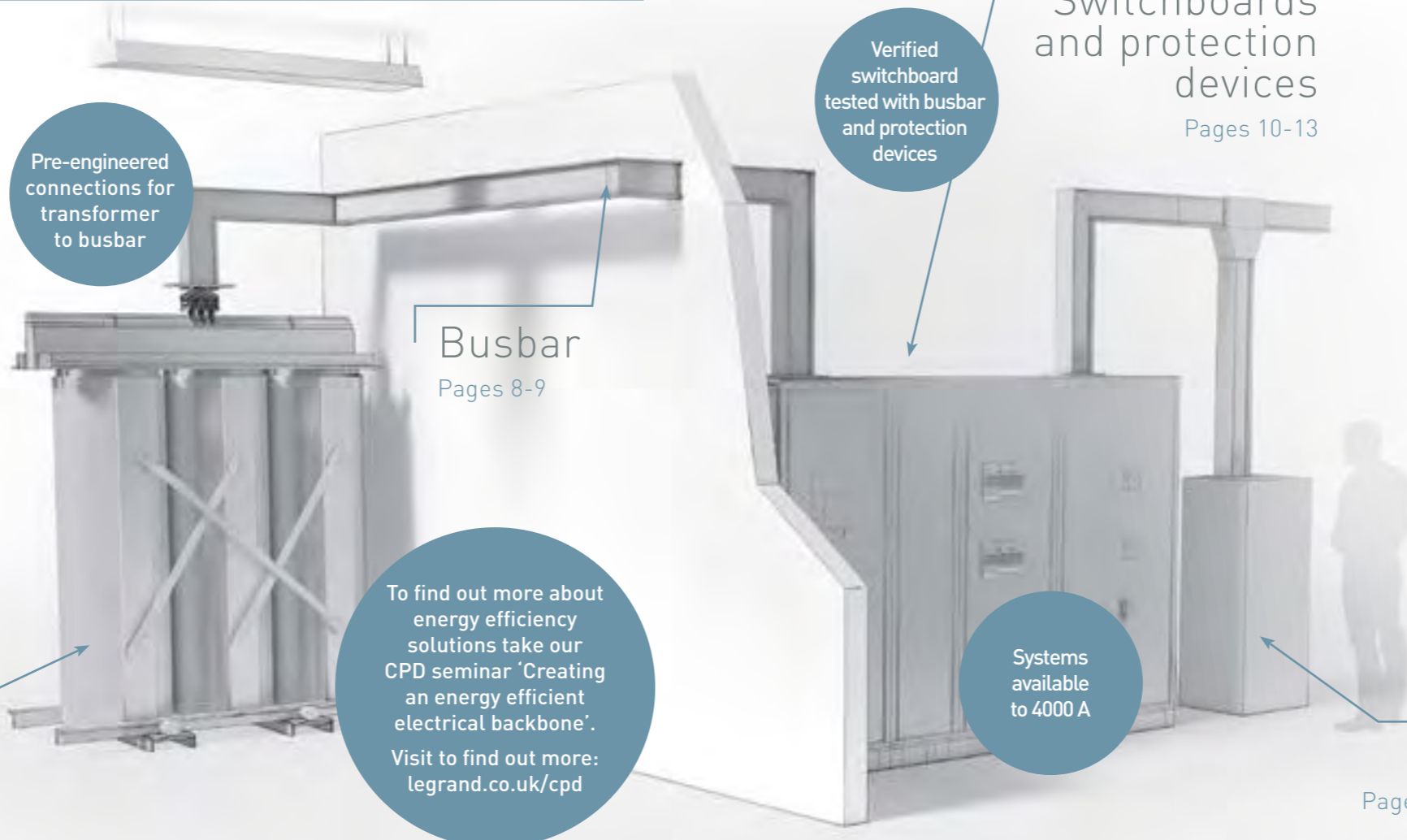
Legrand's advanced technology solutions are proven to deliver excellent reliability and service.

With a complete package from a trusted, global manufacturer, products that are designed to work together and support throughout each stage of your project, we can provide a power distribution system that is reliable, efficient and meets bespoke requirements.

All Legrand products are built with superior design and quality manufacturing, and are delivered with service excellence to meet the demanding requirements of any building.

### Cast resin transformers

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### CAST RESIN TRANSFORMERS

Green T.HE transformers guarantee a significant reduction in energy consumption, promoting enhanced economic savings and the reduction of CO2 emissions into the atmosphere.

### HIGH POWER BUSBAR

Ranging from 630-6300 amps, our high power busbar is characterised by a smart and ultra-compact design that delivers up to an IP68 degree of protection.

### UPS

Legrand's UPS range offers a variety of technological functions to guarantee maximum protection and uptime for all systems.

### DMX<sup>3</sup> AIR CIRCUIT BREAKERS & DPX<sup>3</sup> MOULDED CASE CIRCUIT BREAKERS

The right protection for your high-performance installations with optimum continuity of service.

### ALL THE EQUIPMENT YOU NEED

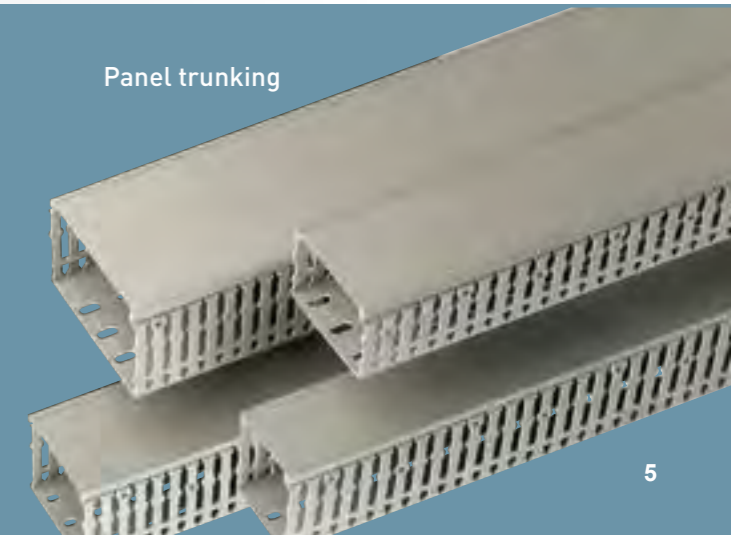
A complementary range of products and accessories can be found on our website: [legrand.co.uk](http://legrand.co.uk)



Metering devices



Industrial plugs and sockets



Panel trunking

# Green T.HE TRANSFORMERS

## LOW PARTIAL DISCHARGES, HIGH QUALITY

Our Zucchini Green T.HE Tier 2 transformers offer excellent performance and reduced losses, in full compliance with regulation 548/2014 and subsequent updates (EU regulation 2019/1783).

Thanks to the use of innovative materials and the measures taken during their design, these transformers are characterised by the following distinctive features:

- **HV** (high voltage) and **LV** (low voltage) **terminals** facilitate the connection on both windings
- HV windings are all made in **BIL LIST 2**, thanks to **reinforced insulation** in critical points of the unit
- New **magnetic core** ensures high performance while maintaining equivalent weights and dimensions of the previous version.

### FEATURES

- Power ratings from 100 to 3150 kVA
- On request: power up to 20 MVA
- Primary voltage up to 36 kV
- Secondary voltage up to 690 V
- Aluminium and copper winding options
- Class E3 C2 F1 (E4 on request)
- Ucc of 6% (Other impedances available on request\*)
- Meets the requirements of the EcoDesign Directive
- Compliant to standard IEC 60076-11
- Special products are available on demand\*

\* For further information contact us on +44 (0) 370 608 9020



Our cast resin transformers can be installed as **part of a package substation** or **standalone** using Legrand high power busbar to connect to the LV switchboard

By utilising Tier 2 High Efficiency cast resin transformers a 10% reduction in no load losses can be achieved

### CLASSIFICATION

The classification of a cast resin transformer depends on the value of the no-load loss ( $P_0$ ), as well as the load loss ( $P_k$ ).

More precisely,  $P_0$  losses are independent from the loads and remain constant for the whole time the transformer is connected to the electrical grid.

On the other hand,  $P_k$  losses only occur when the transformer is feeding a load and they are proportional to the square of the load.

NO-LOAD LOSS ( $P_0$ )	LOAD LOSS ( $P_k$ )
$A_0 - 10\%$	$A_k$

ECODESIGN REQUIREMENTS - TIER 2 (from 1st July 2021)

Rated power [kVA]	Maximum no-load loss $P_0$ [W]	Maximum load loss $P_k$ [W]
≤ 50	$A_0 - 10\%$ (180)	$A_k$ (1500)
100	$A_0 - 10\%$ (252)	$A_k$ (1800)
160	$A_0 - 10\%$ (360)	$A_k$ (2600)
250	$A_0 - 10\%$ (468)	$A_k$ (3400)
400	$A_0 - 10\%$ (675)	$A_k$ (4500)
630	$A_0 - 10\%$ (990)	$A_k$ (7100)
800	$A_0 - 10\%$ (1170)	$A_k$ (8000)
1000	$A_0 - 10\%$ (1395)	$A_k$ (9000)
1250	$A_0 - 10\%$ (1620)	$A_k$ (11000)
1600	$A_0 - 10\%$ (1980)	$A_k$ (13000)
2000	$A_0 - 10\%$ (2340)	$A_k$ (16000)
2500	$A_0 - 10\%$ (2790)	$A_k$ (19000)
3150	$A_0 - 10\%$ (3420)	$A_k$ (22000)

Requirements applicable (losses values) to medium power three phase transformers with rated power ≤ 3150 kVA dry type, and one winding  $U_m \leq 24$  kV

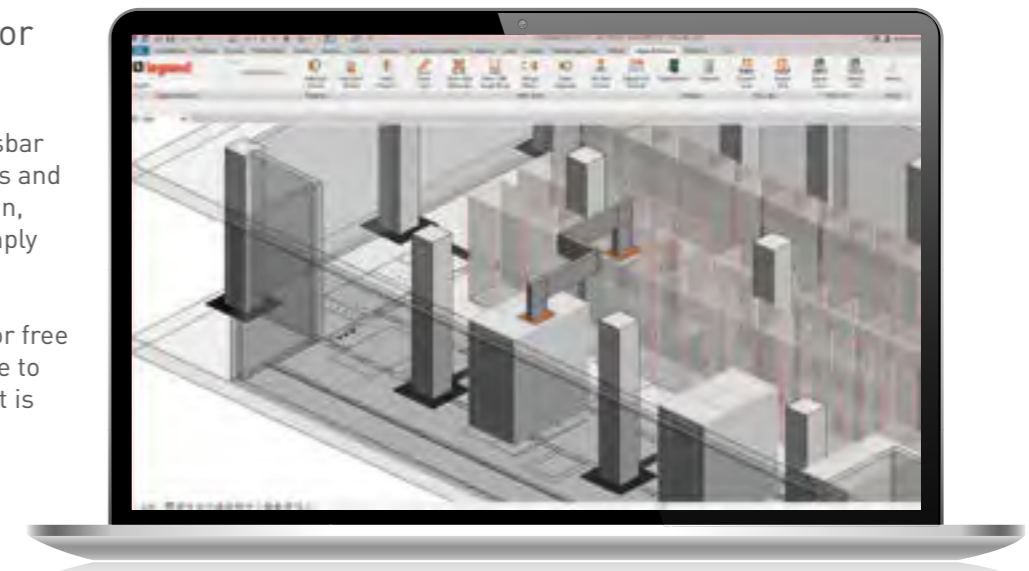
## ZUCCHINI AUTODESK REVIT PLUGIN

We've developed an Autodesk Revit plugin for our Zucchini ranges.

Revit users can add Zucchini busbar lines and cast resin transformers and enclosures to their system design, creating a complete solution simply and quickly.

The plugin can be downloaded for free from the BIM page of our website to computers where Autodesk Revit is installed.

To find out more visit the BIM page of our website: [legrand.co.uk](http://legrand.co.uk)



# HIGH POWER BUSBAR



## ZUCCHINI XCP

XCP busbar is a compact, high performance busbar system.

With a range of accessories, XCP is the perfect solution for energy distribution in most applications.

### FEATURES

- Fully rated, to an ambient temperature of up to 50°C
- System with nominal amperage 630-6300 A, for continuous operation up to 1000 Vac
- Extra compact design with 3, 4 or 5 aluminium or copper conductors
- Variety of tap-off boxes in metal or GRP up to 1250 A
- Insulation classes B and F
- Fully tested and in compliance with standard BS EN 61439-6



### KEY BENEFITS

- Better efficiency in power distribution reducing voltage drops
- PSZ software ensures fast and accurate layouts, bills of material and revit files
- Revit plugin for Zucchini busbar
- Quick and simple installation
- Safety assured: high rated short-circuit current, superior technology and fire resistance



## SAVING ENERGY OVER THE PRODUCT'S LIFESPAN

### XCP FEATURES TWO RANGES, XCP-S AND XCP-HP.

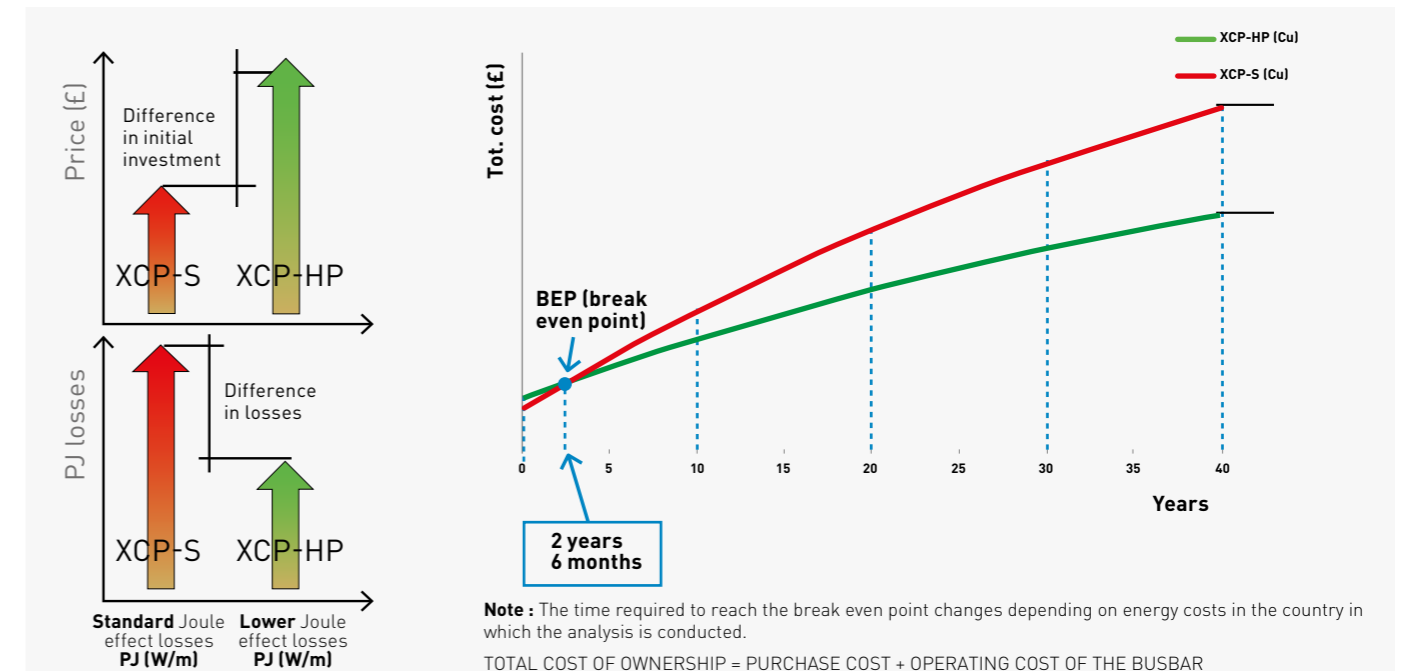
XCP-HP has lower Joule losses compared to XCP-S and this feature means that, in a relatively short time, it will be possible to recover the additional cost invested in the system.

**XCP-S** is the solution for most common applications.

**XCP-HP** is designed to offer a higher performance in terms of energy saving and short circuit withstand. It can work at an ambient temperature of 50°C.

This makes XCP-HP the ideal solution for heavy duty applications, higher temperature environments and installations where enhanced energy efficiency is required.

In the graph below you can see an indicative example of the possible economic savings in relation to the loss values of the busbar system.



## An extensive range...

The Zucchini range of prefabricated busbars is one of the most comprehensive on the market, ranging from 25 A lighting through to 6300 A high power systems. Zucchini busbar is widely used for power distribution in industrial, commercial and high rise residential applications.



### RCP IP68 - RESIN BUSBAR

RCP can be used indoors or outdoors and provides high levels of mechanical strength, chemical resistance, ingress and impact protection, and continuity of service in the event of fire.



### LB PLUS - LOW POWER BUSBAR

LB PLUS offers simplicity, high performance and easy installation and can meet all lighting and power demands from 25 A to 63 A.



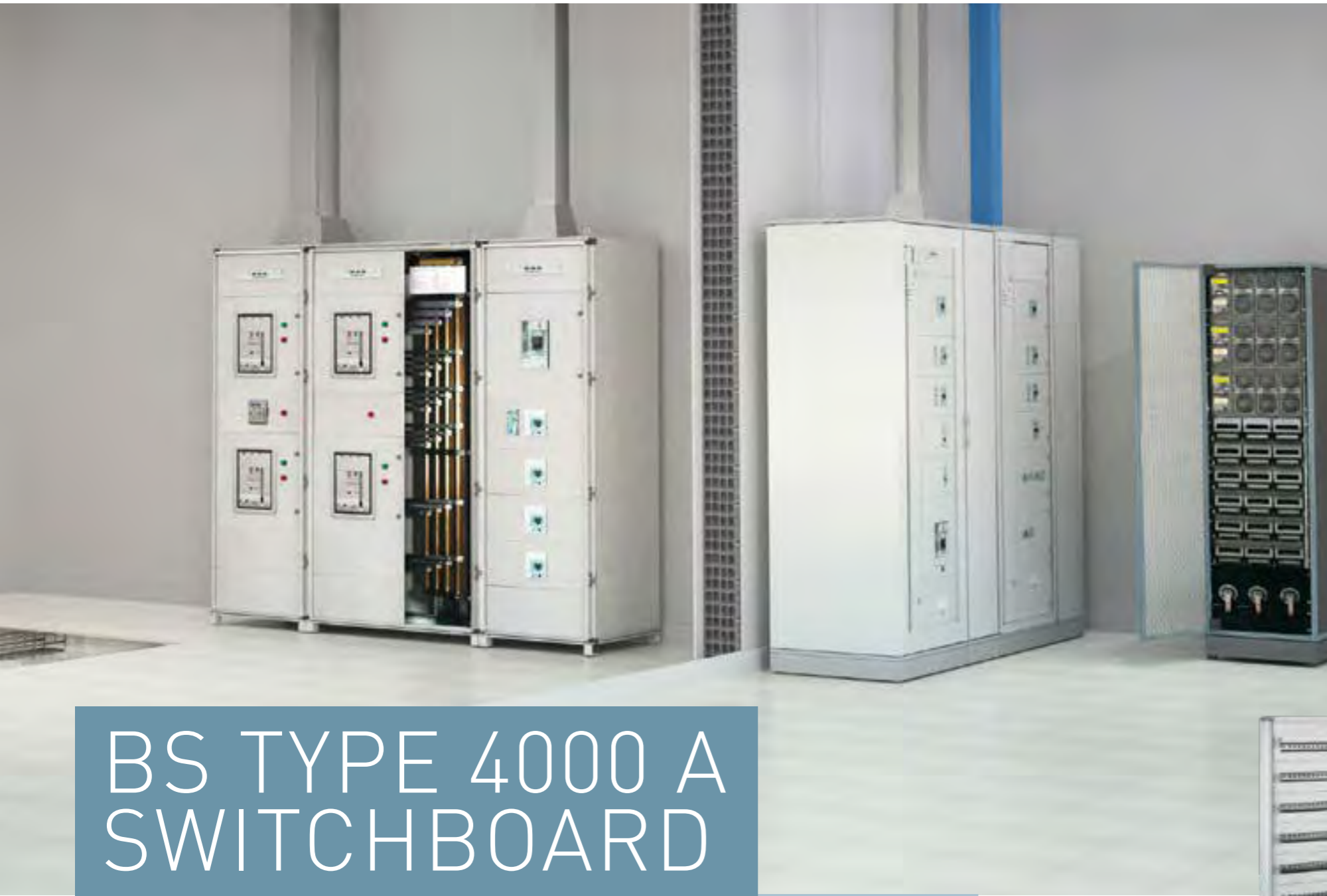
### MEDIUM POWER BUSBAR

MR medium power busbars offer speed, simplicity and flexibility during planning and installation. The range also offers the perfect solution for rising mains up to 1000 A.



### RESIDENTIAL TAP-OFF

The distribution fuse board tap-off is designed to save space and time on site. Plugging directly onto Zucchini MR busbar, it eliminates the need for separate tap-offs and wall mounted fuse boards.



# BS TYPE 4000 A SWITCHBOARD

## LV SWITCHBOARD ASSEMBLIES

Our products can be utilised in BS type fully verified switchboard systems

**Switchboard assemblies** offer ingress protection of up to IP55 and form of separation up to Form 4 Type 7. They are suitable for connection to busbar systems up to 4000 A and certified for withstand up to 100 kA for 1 second.

Independently verified in accordance with IEC / BS EN 61439-2.

### FEATURES

- System rated to 4000 A
- Withstand 100 kA for 1 second
- Separation Form 4 Type 7 to BS EN 61439-2
- Withdrawable or fixed ACB and MCCBs
- Available with electronic or thermal magnetic MCCBs
- Ingress Protection IP43 to BS EN 60529
- Icc up to 85 kA on outgoing devices
- Device options include residual current protection
- Device long time adjustment down to 0.2 x I<sub>r</sub>

### SUITABLE FOR

- Main switchboards
- Distribution switchboards
- Package substations
- Fixed or withdrawable
- Power factor correction centres
- UPS applications



## CONVIVIO

### Panelboards and distribution boards

A new range of panelboards and distribution boards with incoming devices up to 630 A. The boards are ready to use, with pre-fitted doors, faceplate, distribution system, connection terminals, neutral and earth terminal blocks for the main circuit breaker.

# PROTECTION DEVICES



## A COMPLETE PORTFOLIO FOR ANY INSTALLATION

Legrand offers ACBs, MCCBs and other protection devices for complete circuit protection, operator safety, energy efficiency and reliability in critical power environments.

### FEATURES

#### DMX<sup>3</sup> ACBs 630 A to 6300 A

- Four breaking capacities: 42 kA, 50 kA, 65 kA and 100 kA
- All DMX<sup>3</sup> breakers are factory equipped with protection units and option for embedded energy measurement
- Innovative and user-friendly touch screen tripping units
- Full range of fast clip control accessories

#### DPX<sup>3</sup> & DPX<sup>3</sup> HP MCCBs from 160 A to 1600 A

- Four breaking capacities: 36 kA, 50 kA, 70 kA and 100 kA
- Thermal magnetic and electronic

#### Options available include:

- 3 or 4 pole options
- Optional integrated metering
- Fixed, plug in or withdrawable options and earth leakage protection

### KEY BENEFITS

- Circuit protection selectivity between DPX<sup>3</sup>/DMX<sup>3</sup> electronic circuit breakers
- Full compliance with EN/IEC standard 60947-2 and 60947-3
- Compliant with European Directives REACH and ROHS and PEPs (Product Environmental Profiles) are available

### DMX<sup>3</sup>: ACCURACY AND SIMPLICITY

Electronic protection units allow accurate adjustment of the various limits for current and time delay values. The result is effective protection against electrical failures while ensuring total selectivity with the downstream circuit breakers.

Fitted with batteries, they are used to monitor parameters and memorise data, even if the circuit breaker is de-energised. Thanks to the LCD display, measured current values can be monitored and incorrect adjustments logged.



### DPX<sup>3</sup> & DPX<sup>3</sup> HP: RELIABLE PROTECTION AND MEASUREMENT

Suitable for all types of site, the DPX<sup>3</sup> range includes four sizes of MCCB, for ratings between 16 A and 1600 A and breaking capacities ranging from 16 to 100 kA.

It also offers a wide choice of versions to suit all requirements:

- Thermal magnetic or electronic releases according to the required level of protection
- Fixed, withdrawable and plug-in devices according to the required level of maintenance



### DX<sup>3</sup>: ADVANCED PROTECTION

Packed with innovative functions and technical features, the DX<sup>3</sup> range meets the needs of the most demanding residential, commercial and industrial installations in terms of safety, performance and selectivity.

Comprising MCBs, RCBOs, RCCBs and add-on modules, the DX<sup>3</sup> range ensures the safety of people and property as well as maximum continuity of service.



# UPS



## MODULAR & SCALABLE

To meet the demands of a constantly evolving market that requires an increasing focus on energy efficiency, our uninterruptible power supply (UPS) range delivers technological functions able to guarantee maximum protection for all systems.

### FEATURES

- Efficiency up to 97.2% in online mode
- True hotswap and hotscalable solutions
- Reduced footprint
- Low MTTR for maintenance
- Optimised Total Cost of Ownership (TCO)
- XaaS : Everything as a service
- Battery life optimisation technology
- Integrated protection and switching

### KEY BENEFITS

- Modular and scalable solution
- From 1 kW to 21 MW
- Single and three phase
- Monolithic and modular



Keor HPE



Keor XPE

## PowerControl

A specialist in uninterruptible power supplies for over 30 years

Power Control is trusted by businesses worldwide, protecting clients' critical power loads and avoiding unplanned business downtime with leading uninterruptible power supply technologies. Power Control is a sales, installation and service provider for Legrand's range of UPS.



For more information visit: [www.powercontrol.co.uk](http://www.powercontrol.co.uk)



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