

SHOPPING CENTERS AND SHOPS



INTEGRATED SOLUTIONS

THE GLOBAL SPECIALIST
IN ELECTRICAL AND DIGITAL BUILDING INFRASTRUCTURES



LEGRAND, A WORLD RENOWNED GROUP



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In a context of rapid globalisation and increasingly complex projects, the support of a reliable, competent partner is absolutely essential.

Choosing the Legrand Group means the assurance of global expertise available at any time, throughout the world, via its network of professionals.

A vast choice of carefully designed products make up solutions which in turn form coherent systems incorporating the latest technological innovations.

CORPORATE SOCIAL RESPONSIBILITY

Legrand is committed to a global policy of transparency, illustrated by voluntary actions such as signature of the Global Compact or its response to the strict social and environmental criteria of the FTSE4Good and DJSI stock market indices*.

* Based on an assessment in 2011, subject to annual re-evaluation



LEGRAND AND SUSTAINABLE DEVELOPMENT

For many years, Legrand has been committed, with its customers and partners, to a process of continuous improvement to ensure the profitable, long-term and responsible growth of its businesses.

The Group thus intends to respond to the environmental, economic and social challenges of today and the future.

1. A global approach to sustainable development

Legrand's sustainable development policy covers three areas: social responsibility, the environment and governance.

To find out more visit www.legrand.com

2. Reducing the impact of the Group's sites

Legrand has been incorporating environmental management and protection in the way it operates its industrial sites since 1996.

3. Controlling the use of chemical substances

The Legrand Group always seeks technical solutions to replace hazardous substances in the manufacture of its products.

4. Eco-designed products

Legrand implements an eco-design approach to limit the global environmental impact of products throughout their life cycle.

LEGRAND - KEY FIGURES:

Sales:

4.5 billion € in 2013

Established in over

80 countries

Products sold in

180 countries

Workforce in 2013:

36,000

Around

215,000 catalogue items

SHOPPING CENTRES, RESPONDING TO ECONOMIC AND ENVIRONMENTAL CHALLENGES



To enable you to respond to the economic and environmental challenges of today
Legrand will help you to full filled specific requirements of the building's infrastructure
and of the shops.



COMPLYING WITH ENVIRONMENTAL STANDARDS

Current environmental standards require us to implement more sustainable design, building and refurbishment methods. Legrand's experts are there to advise and support you in your LEED, HQE or BREEAM initiatives.



REDUCING THE RUNNING COSTS

Using solutions that improve the energy performance of the building, or installing high-performance operating systems for effective supervision and management of consumption, will enable you to reduce your energy bills as well as your environmental impact.



ATTRACTING SHOPS AND VISITORS

Technological innovations in the safety of installations and people and the sophisticated design of Legrand's products provide you with aesthetic appeal, comfort and peace of mind.



OPTIMISING CUSTOMER EXPERIENCE

A dynamic shopping centre first and foremost involves attractive merchandising and the well-being of people. To achieve this, Legrand works with you, offering solutions which help to promote your products, while providing a comfortable environment for your customers.

SHOPPING CENTRES

A TWOFOLD CHALLENGE

Investors, design offices, etc. You have a project to build or refurbish a shopping centre:

Legrand will be involved at every stage, from design through to installation, and can provide you with specific solutions for optimised energy performance and an innovative building.





MALL CENTER

Reducing opex* by controlling the energy consumption of the building

ENERGY PERFORMANCE AND REDUCTION OF RUNNING COSTS

The increasing cost of energy means that today's investors are looking for ways to reduce consumption in buildings.

Reducing energy bills not only involves the thermal aspect but also depends on the electricity management solutions chosen.

With this in mind, Legrand offers you innovative solutions to improve the energy efficiency of your shopping centre: energy metering, lighting management, LED emergency lighting, etc.

ENERGY AND CONSUMPTION MANAGEMENT

To control the energy consumption of a building, users need to have an overview of the whole building.

Legrand control and supervision tools meet this requirement and enable preventive or corrective measures to be implemented as necessary.

Legrand solutions, which can be controlled remotely, are designed for easy integration in a building management system BMS.



* OPEX = Operational expenditure

Attracting shops and visitors

SAFETY AND SECURITY OF SHOPS AND VISITORS

A shopping centre must ensure the safety of its visitors, for example in the event of fire, but it must also prevent theft and attacks which could also affect the shops.

To respond to these issues, Legrand offers a wide range of intruder alarms, CCTV systems and access control systems to support the activities of the security teams.

EASE OF INSTALLATION FOR SHOPS

To enable shops to be set up under the best possible conditions, Legrand meets all their needs, whatever their size or line of business.

Legrand, a global specialist in electrical and digital building infrastructures, has a global offer providing easy installation and maintenance, thus ensuring quick, easy and safe access to both power and data for shops.

GREEN CERTIFICATION TO ATTRACT VISITORS

A Green Building approach considers not only the overall environmental impact of a building but also the health and well-being of its occupants.

In this context, holding green certifications such as LEED, BREEAM and HQE can constitute an additional attraction for visitors and shops which associate their brand image with that of the shopping centre.

To incorporate this environmental approach, call in our experts for their advice.



DRY-TYPE TRANSFORMERS UP TO 20 MVA

Achieve high energy performance, safely.

Legrand low loss dry-type transformers (up to 20 MVA) cause less pollution and are more economical than conventional transformers, and provide a reduction in electricity consumption that can reach 20% when in operation.



Low loss dry-type transformer



The "dry cast resin" technology used in Legrand HV/LV dry-type transformers reduces the risks of fire and releasing substances that are hazardous for people into the environment. Legrand transformers comply with standard EN 60076-11: 2004.

>> "Green" transformers, see p. 26

ENERGY QUALITY

Reactive energy compensation to optimise the performance of the electrical installation.

Because it consumes more power, the reactive energy of an electrical installation contributes to increasing CO₂ emissions into the atmosphere and drives up energy bills. Legrand capacitor banks store this reactive energy and release it on request, optimising consumption, and therefore reducing costs.



Alpimatic capacitor bank

Alpivar² capacitor



Alpivar² capacitors are premium quality products compared to conventional aluminium capacitors. They therefore last much longer!



Electrical distribution

High performance to help save energy

DISTRIBUTION ENCLOSURES AND CIRCUIT BREAKERS

Ensuring safety of property and continuity of service.

Compliant with standard IEC 61439-2, Legrand XL³ distribution enclosures provide strength and high performance for distribution assemblies.

They can take circuit breakers from the DX³, DPX³ and DMX³ ranges, which cover all breaking capacities and currents up to 6300 A.



XL³ enclosure

DMX³ air circuit breakers with their sophisticated electronic protection units provide a real response in terms of safety and energy management (on-board metering).



DMX³ air circuit breaker

CABLE MANAGEMENT

Mechanical and electrical performance made easy.

Legrand, world leader in cable management, offers a complete range that is safe to install, made of sheet metal or wire, for power and data cables.

Plexo junction boxes, which can be used with cable trays, ensure easy installation and flexibility of the infrastructure.



Cablofil wire mesh cable tray

Our cable tray range also includes a complete range of innovative accessories, for a perfect, flexible installation.

MEASUREMENT VIA "E-COMMUNICATION"

Smart measurement for optimised consumption.

Measurement is the basis of all energy diagnostics. Legrand has therefore developed an e-communicating infrastructure that can display all the consumption data.

By analysing this data and implementing corrective measures, savings of 8 to 12% can be made.



Measurement control unit



Electricity meter

With the Legrand supervision software, electricity consumption data can be accessed remotely. The Legrand web server can be used to display consumption data on any type of screen with a web browser: PC, Smartphone, TV, tablet, etc.



e-communicating software



Web server

IP 66 FLOOR BOXES

Solutions that can be integrated quickly in concrete floors for optimum high and low current distribution.

IP 66 heavy duty floor boxes are the ideal solution for very busy areas requiring mechanical strength and/or a high degree of dust and damp protection.



IP 66 box for marble or tiled floors

Conforming to standards EN 60-670 and EN 50-085-2-2, Legrand heavy duty floor boxes can take loads of up to 2 tonnes.

CHARGING STATIONS FOR ELECTRIC VEHICLES

Legrand's Green'up charging solutions are a guarantee of increased respect for the environment.



Green'up charging station

With the Green'up premium charging station, an electric vehicle can be charged in just one hour.

CCTV SECURITY

A range developed for global monitoring of the shopping centre.

Legrand offers complete solutions for displaying, recording and analysing information relating to the building.

The implementation of high quality solutions requires a reliable bandwidth. With Legrand's IP cameras, all you need is 1.5 Mbps to 4 Mbps bandwidth to obtain a high quality image.



CCTV using cameras



All Legrand IP products are ONVIF*-compliant to enable them to be integrated into third-party software for integrators.

* The Open Network Video Interface Forum (ONVIF) is an industry group dedicated to the development of standards relating to open IP video networking enabling the use of compliant products over non-proprietary networks.

EMERGENCY LIGHTING

Standalone or addressable solutions for evacuating people quickly and safely.

With its emergency lighting solutions and their LED technology Legrand more than ever combines safety and energy savings. These safety systems, available worldwide, comply with the Group's environmental commitments.



LED emergency lighting unit

Flush-mounting emergency lighting unit



The Legrand Vision System² software centralises the operating status of addressable emergency lighting units.



Optimised safety
Monitoring and protection,
key factors for success

FIRE ALARM

A complete alarm system, from detection through to implementation of safety measures for optimum protection.

Legrand's conventional or addressable fire alarm systems detect and indicate a fire, enabling the building to be evacuated and made safe.



Breaking device for shop

Self-contained siren unit



To facilitate operation and maintenance in buildings, Legrand offers training and other services for its fire safety systems (FSS).

LCS² STRUCTURED CABLING

Optimising the performance of the shopping centre's LAN.

The LCS² racks have been designed for easy management of all categories of cables and cords (cat. 5e to cat. 6A). This structured cabling system includes fibre optic, copper and Wi-Fi solutions, as well as cabinets for cabling systems.



LCS² enclosure with integrated cabling unit



Committed to delivering a durable LCS² system, Legrand gives a 25-year guarantee on the performance of the channel and its components.

ACCESS CONTROL

Control at strategic points (entrances to sensitive areas, storerooms, staff areas, etc.) for appropriate protection.

Legrand offers a low-maintenance access control system with simple, user-friendly functions: the ideal solution for access to reception areas, while protecting private areas.



Biometric reader and card reader



Offering guaranteed performance and scalability, the access control system can manage up to 500 users in standalone mode and 10,000 in centralised mode using its supervision software.

BUILDING MANAGEMENT

A building management solution for more effective control of the shopping centre.

The supervision software can be used to manage building management solutions such as:

- Control of lighting and emergency lighting
- Checking the status of all alarms (e.g. fire alarm)
- Displaying the energy consumption of the building
- Temperature control

For even more sophisticated control, the "Building Manager Decider" automatic control system can be used to make all the solutions interact with one another.



"Building Manager viewer": supervision software, for displaying data.



"Building Manager Decider": automatic control system for automated control in commercial buildings.



The "Building Manager viewer" software has an assisted mode in which the software is preconfigured and the screens are generated automatically. It is therefore easy to create projects with Legrand solutions.

SHOPS

KEY FACTORS FOR SUCCESS

Shop managers, interior designers, project managers, etc. You have a project to fit out spaces in a shopping centre: Legrand can provide a high performance offer, combining continuity of service, comfort and attractive appearance.



Providing the best possible customer experience

ENERGY PERFORMANCE & GREEN LEASE

In order to fit in with the environmental and energy efficiency approach initiated by the landlord of the shopping center, shops are frequently requested to comply with environmental specifications such as "green lease".

Legrand is offering innovative energy efficient solutions to fulfill these requirements.

These new offers enable shops to save energy by measuring their consumption, by controlling their lighting and their temperature.

CONTINUITY OF SERVICE

Legrand has developed various solutions to ensure the continuity of operation of electrical equipment.

In case of power failure, critical systems such as cash registers and cold units (refrigerated displays or cold rooms) can continue to operate.

Shops are protected against any interruption of service, billing or taking payment.

The ability to work on a live electrical panel is critical to solve quickly an issue. Legrand IS (Increased Safety) distribution solutions provide an innovative response by providing electrical enclosures with drawers that can be operated in live.



CUSTOMER COMFORT & WELL-BEING

Customer experience is an important key of success. The lighting environment and sound system are now an integral part of the overall design of shops, just like the choice of colour scheme or furniture. Legrand works closely with shops on choosing the right solutions for their needs and offers a wide range of colours and materials for their finishes.

SHOWCASING PRODUCTS/MERCHANDISING

Highlighting a product or a new range encourages impulse buying.

With the Legrand lighting management solution it is easy for shops to reorganise the lighting of their display areas.

This solution can also be centralised to provide scalability of installations and a wide variety of available functions (such as dimming by area).





Small shops, fast-food outlets
Innovative, attractive functions
for a unique customer experience



01 PROTECTION AND MEASUREMENT

02 POWER DISTRIBUTION

03 04 POWER ACCESS

05 WIRING DEVICES

06 SCENARIO MANAGEMENT

POWER DISTRIBUTION CABINET

Efficiency, simplicity and attractive design for a high-performance electrical installation, accessible whether surface-mounted or flush-mounted.

XL³ 125 distribution cabinets offer a wide range of innovative functions to simplify wiring and installation, with a modern surface-mounting design.

Blending in perfectly in all environments, Practibox flush-mounting cabinets make installation easier, for example making more space available between the rails.



Practibox flush-mounting cabinet

XL³ 125 surface mounting cabinet



XL³ 125 distribution cabinets incorporate measurement solutions for optimum management of consumption.



Eco-meter

DLP TRUNKING

Universal, attractive solutions for discreet power distribution.

Packed full of innovations combining quick installation, attractive appearance and pull-out resistance, trunking is the ideal answer for cable management requirements and installing wiring accessories.

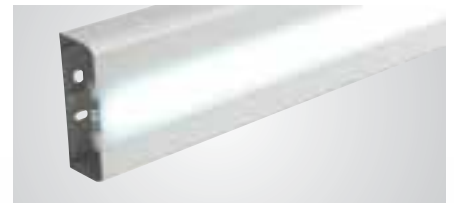
Main advantage: a solution that is easy to install, flexible and scalable, incorporating power and data as well as control devices.



Black and white PVC trunking



Legrand trunking is available in 3 colours (white, black and aluminium) and can incorporate LED lighting for indication or background lighting functions, which are ideal for shops.



LED System trunking



Small shops, fast-food outlets
 Innovative, attractive functions
 for a unique customer experience

03

POWER ACCESS

POP-UP BOXES

Quick, safe access to networks for maximum ease of use.

Extra-flat and available in several finishes, pop-up boxes blend perfectly in floors or furniture.

Their sophisticated design and the locking system which prevents accidental opening ensure discreet, attractive and safe integration.



Pop-up box with power and RJ45 sockets and a USB charger

+

The USB port can provide 2 A - enough to charge an iPad.

04

POWER ACCESS

FLOOR SOCKETS

An extra-flat solution for access to power in a slim unit.

These extra-slim plates have high protection indexes (IP44 dust and damp protection and IK 08 impact resistance).

With a cover that opens 180°, the units for floor sockets have an extra-slim finish (2 mm thick) for discreet integration.



Stainless steel rectangular floor sockets

+

The bases of the units have a white LED which backlights the outline of the socket for easier location.

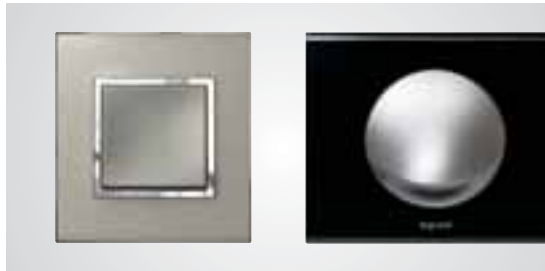
05

WIRING DEVICES

CÉLIANE & ARTEOR

Innovative wiring accessories improve the "customer experience".

The Céliane and Arteor ranges provide both simple lighting functions and smart solutions to ensure even greater comfort and more attractive decor, for example with LED pilot lights.



Arteor switch, Woven Metal finish

Céliane directional spotlight, Corian Nocturne finish

+

The wide variety of Legrand wiring accessories in terms of shape (square or round), material (stainless steel, wood, glass, leather, porcelain, etc.) and colour (taupe, anise, graphite, magenta, cyan, etc.) makes them the ideal choice for all types of layout, whatever the design requirements.

06

SCENARIO MANAGEMENT

CONTROL

Smart solutions for centralised management of a shop.

Touch screens with innovative, user-friendly control interfaces can be used for centralised control of the shop's lighting system, roller blinds and sound system.



BUS/KNX system touch screen

BUS/SCS system touch screen

+

Using these sophisticated systems which have BUS/SCS or BUS/KNX technology, the shop can be opened and closed with a single click. So the shop staff can devote more time to their customers. The systems help to give the shop a modern image.



Department stores

Unfailing continuity of service
for electricity and data



- 01 POWER DISTRIBUTION
- 02 POWER SUPPLY
- 03 DATA NETWORK
- 04 DATA CONNECTORS
- 05 LIGHTING
- 06 SECURITY

01
POWER DISTRIBUTION

DISTRIBUTION ENCLOSURES AND CIRCUIT BREAKERS

Ensuring safety of people and continuity of service. Legrand offers a range of enclosures and MCCBs for electrical distribution in shops, which provide strength and high performance. Hpi RCBOs detect faults with AC and DC components providing increased immunity to false tripping.



XL³ 400 distribution enclosure

HPI RCBO

+

Legrand flush-mounting desktop multi-outlet extensions, which make it easy to provide power on a piece of furniture or a counter, can incorporate residual current protection as close as possible to equipment, ensuring discrimination.



Flush-mounting desktop multi-outlet extension

02
POWER SUPPLY

UPS (UNINTERRUPTIBLE POWER SUPPLY)

From 0.5 KVA up to 800 KVA, Legrand UPS stand out with their innovative technology and excellent reliability.

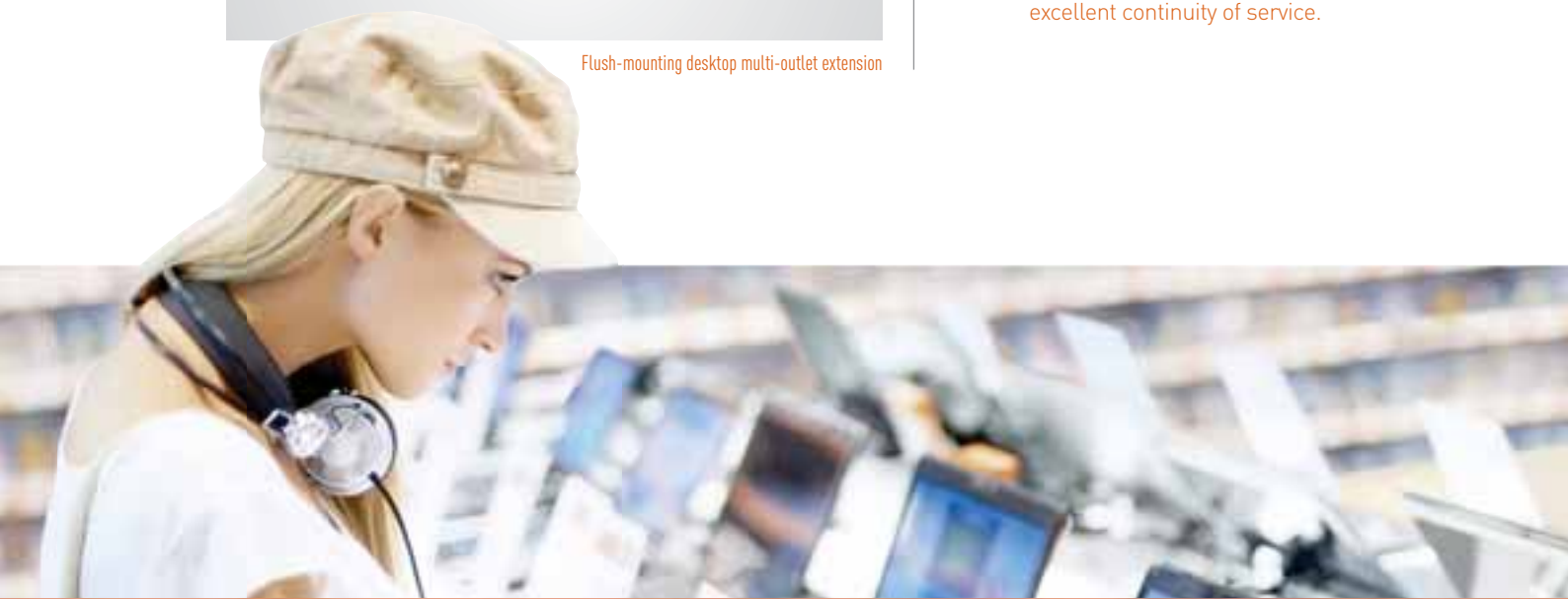
The Trimod HE range provides power between 10 and 60 KVA. Its compact structure is ideal for medium sized shops. The fully modular design of TRIMOD HE UPS enables each power module to be programmed to obtain the required I/O configuration.



Trimod HE UPS

+

At the leading edge of technology, the Trimod HE meets new requirements for high energy performance with certified efficiency of up to 96% and a power factor of 1. The Trimod HE has one of the shortest MTTRs (Mean Time to Repair) on the market, 30 seconds, which makes maintenance easier and provides excellent continuity of service.



Department stores

Unfailing continuity of service for electricity and data

LCS² STRUCTURED CABLING

The design of the LCS² patch panels optimises maintenance and installation.

The new design has improved clamp fixing: the cable is held in its cable guide.

There is also more room for maintenance by simply unclipping the LCS² connectors. The innovative quick-fixing system provides speed and all-purpose benefits for assembling the 19" panel.



LCS² enclosure with integrated cabling unit

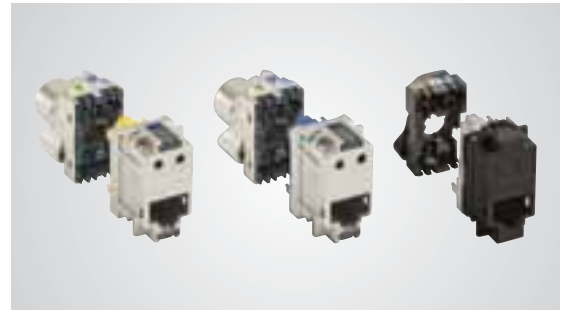


Complete systems with a 25-year guarantee. The LCS² cat. 6A (up to 500 MHz), cat. 6 (up to 250 MHz) and cat. 5e (up to 100 MHz) systems have been designed as coherent entities to optimise their performance.

LCS² CONNECTORS

High-performance installation for an optimised network.

The presence of several critical networks within one shop, such as the cash register network, requires increased security and performance of the installation. The Legrand range of RJ 45 LCS² connectors provides responses in each category (6A, 6 and 5e), with a link test for each of them, in accordance with the applicable standards: TIA/EIA 568- C, EN 50173, EN 50174 and ISO/IEC 11801.



LCS² fast connect connectors

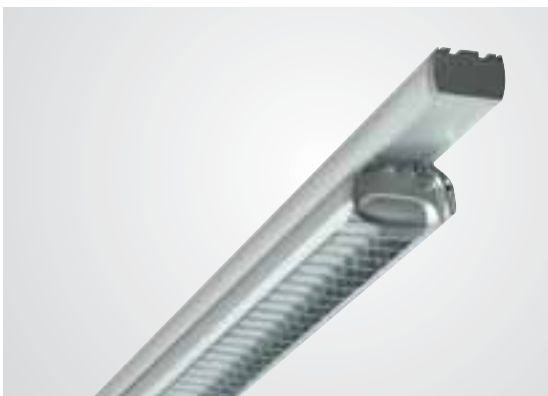


With its toolless crimping mechanism, the RJ 45 LCS² connector ensures a perfect, safe connection for optimum performance of the link, from the patch panel to the RJ 45 socket.

EASYWAY

Attractive, flexible lighting system.

Easyway is a unique system for powering and managing lighting in commercial areas. The power supply is provided via integrated busbars, up to 40 A. There is a wide range of lighting fixtures with quick mechanical and electrical connections. The trunking is equipped with a 2-wire bus for quick connection of Legrand SCS lighting solutions.



This attractive solution does not require a suspended ceiling: the electrical distribution and lighting are cleverly suspended.

CCTV SECURITY

A range developed for optimum, easy monitoring of the shop.

To ensure increased safety of people and property, it is necessary to be able to film, record, display and analyse information relating to the shop. Legrand offers ready-to-use CCTV solutions in kit form, combining simplicity, reliability and high performance.



The monitoring system can be accessed remotely via a Smartphone using the Legrand camera viewer application.



Superstores

Constant power safely,
under all circumstances

06

05

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- 03 BUILDING MANAGEMENT
- 04 05 CONTINUITY OF SERVICE
- 06 POWER DISTRIBUTION

01
ENERGY PERFORMANCE

HIGH EFFICIENCY "GREEN" TRANSFORMERS UP TO 3.15 MVA

Achieve high energy performance, safely.

In the context of the new European standard, Legrand has developed a new range of "green" transformers up to 3.15 MVA. These high efficiency transformers provide a considerable reduction in energy losses, both when on-load and with no load. They enable greater energy savings and lower CO₂ emissions.



Legrand "green" transformers comply with European standard EN 50541-1.
>> [Dry-type transformers](#), see p. 8

02
ENERGY PERFORMANCE

COMMUNICATING ELECTRICAL PANEL - XL³ MODBUS

The electricity supply is a sensitive aspect of a superstore or supermarket.

For ease of maintenance, Legrand has developed a supervision solution that enables all the electrical parameters to be read in real time: current, voltage, active energy and reactive power. This system also displays alarm signals such as no voltage, overload, overheating and short-circuit, and provides information on the number of times the circuit breakers have operated and for how long.



When this communicating enclosure is connected to a "Building Manager viewer", it can be used to control a supply inverter and to close a circuit breaker remotely.



Superstores

Constant power safely,
under all circumstances

03

BUILDING MANAGEMENT

BUILDING MANAGEMENT

Smart metering for optimised consumption in superstores.

The key applications of a superstore can be incorporated in a supervision system: status of the emergency lighting, lighting control, control of shutters, display of energy consumption, HVAC (Heating, Ventilation and Air Conditioning) control and alarm status. The Legrand building management system includes the "Building Manager viewer" supervision software, for managing applications (KNX IP, Modbus IP, Bacnet IP and SCS IP). The "Building Manager Decider" automatic control system can be used to make these solutions interact with one another, according to your requirements.



"Building Manager viewer": supervision software, for displaying data.

"Building Manager Decider": automatic control system for automated control in commercial buildings.

+

The "Building Manager viewer" software has an assisted mode in which the software is preconfigured and the screens are generated automatically, making it easy to create projects.

05

POWER DISTRIBUTION

ATLANTIC STAINLESS STEEL CABINETS

Food preparation areas work to extremely strict hygiene standards. Atlantic 304L or 316L stainless steel cabinets are specially designed for use in the food processing industry. Their IP 66 protection and IK 10 impact resistance enable them to withstand anything. Their surface roughness of less than 0.5 µm ensures they are compatible with foodstuffs.



+

The cabinets can be fitted with a 4 mm Securit glass window to avoid having to open them too frequently in sensitive areas.

04

CONTINUITY OF SERVICE

SUPPLY INVERTER

Inversion of supplies for continuous service.

The refrigeration unit in a hypermarket or a supermarket needs excellent continuity of service: if there is a power cut, it must be possible to keep the freezers and cold stores at the correct temperature. This requires a motor-driven supply inverter to be installed which will be able to detect any loss or absence of power on the main line, give the command to the backup generator to start and invert the supply to the backup generator.



Control unit for supply inverter

+

The Legrand supply inverter uses the DMX³ (up to 6300 A) and DPX³ (up to 250 A) ranges of circuit breakers.

06

POWER DISTRIBUTION

PREFABRICATED BUSBAR SYSTEMS

All-in-one solutions with innovative capabilities for optimum distribution.

Specifically for supplying lighting and distributing energy in the building, Legrand prefabricated busbar trunking is very easy to install. It reduces the installation time by 50% in comparison with conventional systems and gives users a great deal of flexibility for easy reconfiguration of areas.



+

Legrand introduces a new range of tap-off plugs which have numerous advantages: They have spring clamp contacts and can be moved while the busbar is energised. They have self-extinguishing plastic components and are IP55.

AT YOUR SERVICE WORLDWIDE



Day-to-day support, a specialist consulting team,
extended product warranties.



Showrooms and products in real-life situations
worldwide.

Legrand will work closely with you on all your shopping centre and shop projects, carrying out rigorous monitoring, from the initial idea right through to building, as well as during use.

At every stage in the design process, Legrand has a certified network of partners who can provide their technological expertise and essential support for the progress of the project.



Training and presentations given by professionals.



A variety of supporting information: catalogues, technical brochures, website, etc.



Software for determining the size of installations and programming products.



Certified products:
LOVAG – ACAE certification.



Headquarters

128, avenue de Lattre de Tassigny
87045 Limoges Cedex

France

Tel. : + 33 (0) 5 55 06 87 87

Fax : + 33 (0) 5 55 06 88 88

www.legrandgroup.com