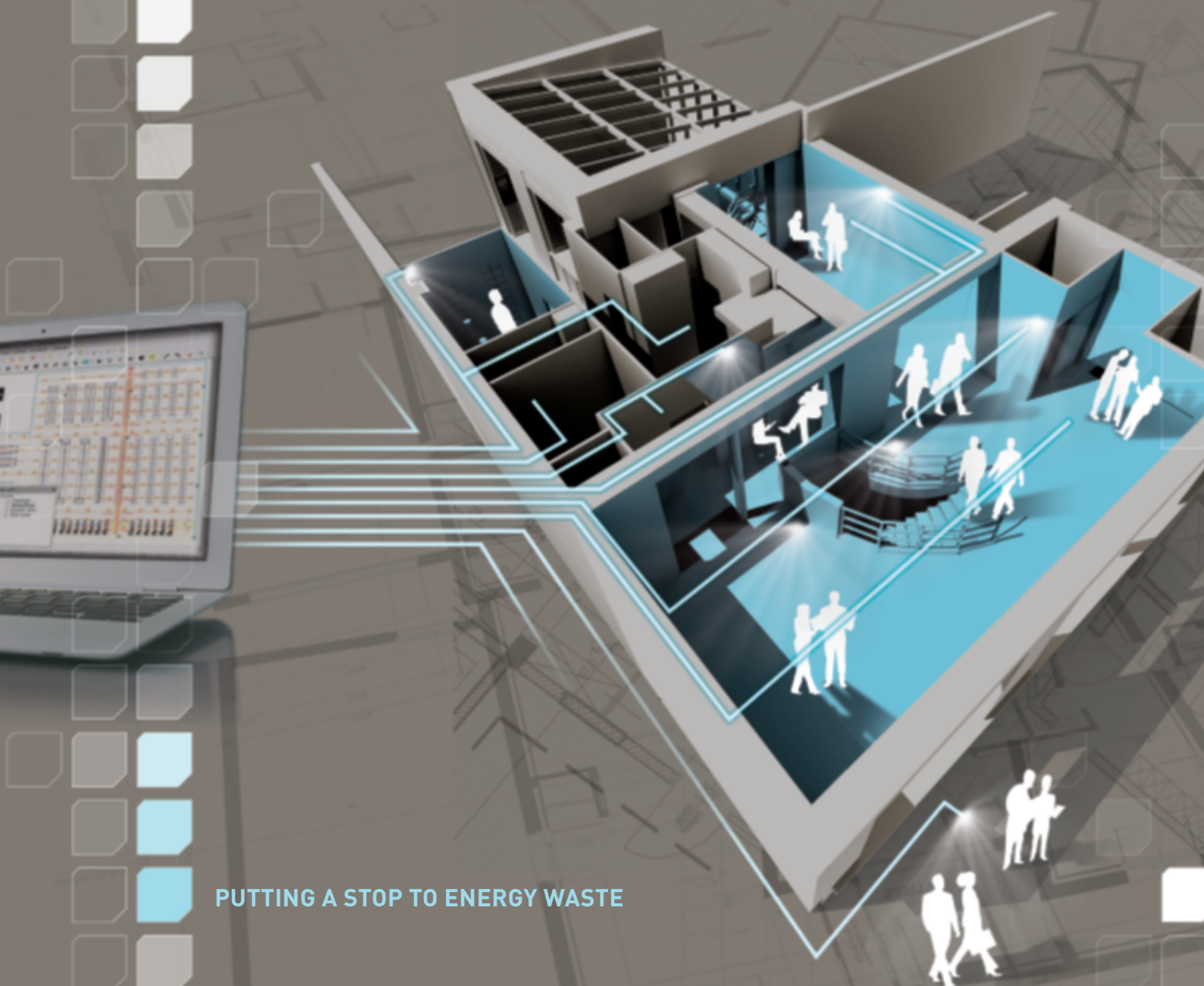


Lighting Management Solutions

Products & systems catalogue



PUTTING A STOP TO ENERGY WASTE

Putting a stop to energy waste

CONTENTS

| | | | |
|---|-----|--|-----|
| Our vision..... | p3 | Lighting Management products & systems | p12 |
| Why implement Lighting Management?..... | p4 | Related services..... | p26 |
| Requirements for implementing Lighting Management | p6 | Catalogue pages..... | p28 |
| How to implement Lighting Management ? | p10 | Glossary | p45 |

OUR VISION

Our vision at Legrand is to provide products and services that make buildings more energy-efficient.

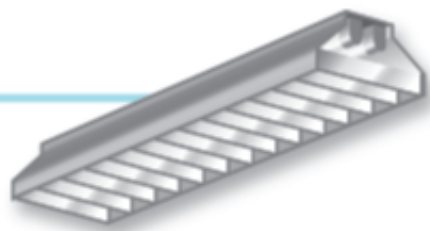
We are committed to 'put a stop to energy waste'.

Energy-efficient lighting management systems ensure there is just the right amount of light when and where you need it. They are reliable and easy to use, provide safety and security, reduce expenses and are code compliant, sustainable and environmentally friendly.

Legrand offers two types of solutions and proposes related services to ensure that your lighting management project saves energy and helps the environment.

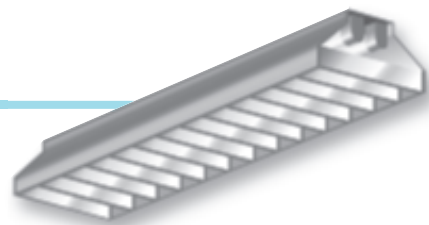
Switch sensors

100-240 Vac 50/60 Hz



BUS | SCS systems

BUS | SCS 27 V



The background image shows a modern office building with a glass facade. In the foreground, a person in a dark suit is walking on a highly reflective floor, their legs and feet visible. In the background, two other people in business attire are walking away from the camera. The overall color scheme is a cool blue/cyan, and there are several semi-transparent square and rectangular shapes scattered across the image, particularly on the left and right sides.

WHY IMPLEMENT LIGHTING MANAGEMENT?

**Lighting is a significant consumer of energy
in commercial buildings**

20% of total site energy is consumed by lighting.

**Lighting is the first electricity end-user with up to
40% electricity consumed.***

*Energy end-use distribution varies greatly depending on the activity of the building and across geographical and climate regions (Source: Energy Information Administration, USA)

Together with heating and air conditioning, lighting accounts for the greatest energy consumption and costs of a building. These significant costs can be managed more effectively through the use of lighting management.

Each year, increasing numbers of organisations are implementing lighting management because they recognise its wide range of benefits:



Energy savings

Perhaps the primary benefit is that of energy savings. Lighting management can result in energy savings of more than 30%, reducing building operating costs by 10% or more⁽¹⁾. Energy waste can be eliminated by using automatic lighting management so that lights work intelligently: the right levels in the right locations, at precisely the right times.



Economic savings

Reduced lighting usage lowers operating costs, saves money and helps reduce Green House Gas (GHG) emissions. Additional savings stem from reduced AVC costs, lamp replacement, maintenance and reduction of power demand during peak hours.

Up to 55% savings based on EN15193 (with occupancy sensor + manual switch + daylighting sensor)⁽²⁾



Code compliance

European standard 15193 (Energy performance of buildings - energy requirements for lighting) is developing as a major standard for defining energy efficient lighting systems. This standard is likely to form a basis for most building codes around the world. The Legrand Group has chosen this standard as a basis for all its energy savings calculations so as to incorporate the largest shared-understanding on energy efficient lighting systems and provide reliable and credible energy saving ratios.



Sustainable building practice

Lighting management can be used in green building projects (i.e. LEED, HQE, BREEAM or GREEN STAR, etc.) as energy-efficient solutions that can also enhance the comfort of occupants.

⁽¹⁾ Source: Energy Information Administration, USA

⁽²⁾ The level of savings that can be achieved with sensors depends on the type of building and the type of room (activity)

'Green' sense is simply common sense

Sustainable building practices are rapidly gaining mainstream acceptance

In all developed countries, as well as in a growing number of developing countries, governments are adopting regulations and standards to improve the energy performance of buildings.

Mandatory requirements and **voluntary programmes** are multiplying. They have different scopes and levels of requirements, but they all share the same objective: to improve the energy efficiency of buildings.

Group approach:

The Legrand Group is an active member of many industry and energy efficiency oriented organisations

By recognising the need to preserve environment and conserve resources, Legrand works to adopt greener practices and to integrate our commitment to the environment into our strategic planning and decision-making processes.



Mandatory requirements

There are a number of standards (non-binding energy standards) that promote best practice and are often used as guidelines for future regulations.

Standards on energy savings

Some standards also provide guidelines on the energy efficiency of specific installations. For instance, European Standard EN15193 provides guidelines for energy performance of lighting systems. Legrand has chosen this standard as a basis to demonstrate the energy performance of its lighting solutions.

This standard is widely recognised and provides a calculation methodology for energy savings according to the type of solution installed, the type of building and the type of room.

This is a recognised reference that contributes to building Legrand's rightful position on the energy efficiency market.

Putting a stop to energy waste

By installing lighting management and other automated controls, energy waste is avoided and the building only consumes just the amount of energy it needs, when it needs it.

Legrand is committed to providing customers with comprehensive, transparent information on actual savings for its lighting management solutions: saving on energy + Green House Gas (GHG) emissions avoided. You can find this information in our best practice literatures.

SAVING ON ENERGY⁽¹⁾

333 € | year

GREENHOUSE GAS (GHG) EMISSIONS AVOIDED⁽²⁾

751 kg | CO₂ eq. | year

Legrand lighting management solution for large partitioned office area – 300 m² based on:
vacancy-based control + daylight-based control

(1) Based on EN 15 193

(2) Greenhouse gases (GHGs) include water vapour, ozone, carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). They are measured in CO₂ equivalent units

Note: A vehicle with an average consumption of 4.5 l/100 km emits 11.8 kg of CO₂/100 km, i.e. 0.118 g of CO₂/km

Example from the Switch sensor application guide – Large partitioned office area

Voluntary programmes

Our approach to building is currently moving towards a more sustainable way of designing, constructing and renovating buildings.

Green Building is an approach to building that considers the overall environmental impact of a building as well as the health and well-being of its occupants.



breeam



Green Building programmes

Various Green Building initiatives are being developed around the world, providing a framework for local development of Green Buildings.

These Green Building programmes are voluntary, consensus-based programmes that provide guidelines for building in line with sustainable criteria.

These programmes generally have an associated rating tool for assessing the environmental performance of the building and certifying its compliance with the standard.

Green Building certification is awarded to differentiate sustainable building projects and give them credibility. Major Green Building programmes include LEED, BREEAM, HQE and GREEN STAR.

Lighting management strategies

Lighting management strategies refer to the basic method that will be used to control lighting systems. This will include automatic operation of the lighting, taking into account the needs of the space's occupants.



Occupancy-based control

Lighting is switched on and off in response to the occupancy of a particular area. It is not dependent on time intervals or scheduled periods, but responds to the individual usage of a controlled area.



Vacancy-based control

Lighting is switched on and off in response to an area becoming vacant. It is not dependent on time intervals or scheduled periods, but responds to the individual usage of a controlled area.



Scheduled control

Lighting is managed according to time schedules based on when buildings are open/occupied and closed/unoccupied.



Dimming control

Lighting levels are adjusted to achieve the required lighting effects or appropriate light levels for the various activities of the occupants.

Light level control

This strategy involves adjusting the light output level in a number of ways to achieve specific objectives. The main types of light level control include:



Daylighting (daylighting setpoint)

In areas inside buildings that receive abundant natural light, this strategy uses that light to supplement and replace the use of artificial light.

Tuning (lighting profile)

This approach uses the adjustment of lighting levels to achieve appropriate light levels for the various activities of the occupants. For instance, an individual engaged in drawing or reading will require a higher light level than someone who is shelving merchandise.

Lumen maintenance

This strategy focuses on maintaining an even level of illumination throughout the lifespan of the lighting system lamps. To do so, it relies on reducing initial light levels at the outset of the lifespan, and gradually increasing light levels as lamps age.



Lighting management technologies

Lighting management technologies refer to the actual device that will be used to implement a specific strategy and the method the device will use to operate (passive infrared, ultrasonic or dual technology sensors, timers or dimmers).

Occupancy sensors

Occupancy sensors use a variety of technologies to detect occupants and send appropriate signals to area lighting.



PIR technology

Passive infrared technology detects occupancy by reacting to infrared energy sources, such as the human body, in motion. By identifying the difference between such energy sources and the background area, the sensor can locate occupants and signal lights to turn on. To operate effectively, PIR sensors require a direct line-of-sight view that encompasses the coverage area.



Ultrasonic technology

This type of occupancy sensor utilizes Doppler signalling to detect occupants. The sensor emits ultrasonic sound waves that bounce off objects in the area covered, and then measures the amount of time it takes for the wave to return. When there is movement in the area, these sound waves will return to the sensor's receiver at different frequencies, resulting in occupancy detection. This technology is ideal for applications where the sensor would not have line-of-sight views of occupants or where activity levels may be low.



Dual technology

Occupancy sensors that employ multiple sensing technologies are usually referred to as 'dual technology' or hybrid devices. They generally

use PIR and ultrasonic technologies, where lighting is turned on when both technologies detect occupancy, and remains on as long as at least one of the sensing technologies continues detecting occupancy.



Daylighting setpoint

The light level feature keeps lighting OFF when the natural light levels rise above a pre-set level. This setting is adjustable and can be overridden. It is available in all Legrand ceiling sensors. This function is activated by default.

Time switches

These mechanical or electronic devices turn lights on or off after a specified interval. The interval can be varied to meet the needs of the occupant, usually from brief periods of five minutes up to intervals as long as 12 hours. These switches can often replace conventional wall switches without the need for any additional wiring. Practical uses for time switches are areas that are used frequently but only for short periods of time, such as utility or control rooms, storage areas, and library book stacks.

Dimming controls

For personal control of work areas, users can choose remote controls that switch lighting on, off, or dim light levels.

These types of control are particularly useful for task tuning, since the individual user can match their required light level to their specific work tasks.

You will want to use the most appropriate products for every lighting management project

Because different types of area are best served by different control strategies, most projects require a number of solutions to maximize energy savings and occupant satisfaction.

Switch sensors

A simple, economical solution

This solution is ideal for managing single or multiple areas. It includes switch sensors that work on 100-240 Vac. These switch sensors are available in occupancy-mode and vacancy-mode lighting management strategies and use PIR, ultrasonic or dual technologies. In addition, all Legrand ceiling sensors have the daylighting setpoint feature. This keeps the lighting OFF when the natural light level rises above a preset level. This setting is adjustable and can be overridden.



Sensor



Sensor



Sensor

BUS | SCS systems

Complete solution for lighting management

This solution can manage a floor or a whole building. Equipment and lighting features, managed by actuators or dimmers, communicate by means of the BUS. The installation can be designed, monitored and supervised on a PC using our software suite.

The Legrand BUS/SCS system is compatible with all types of lighting features, including Dali.



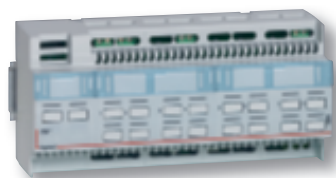
Control



SCS sensor



Room controller



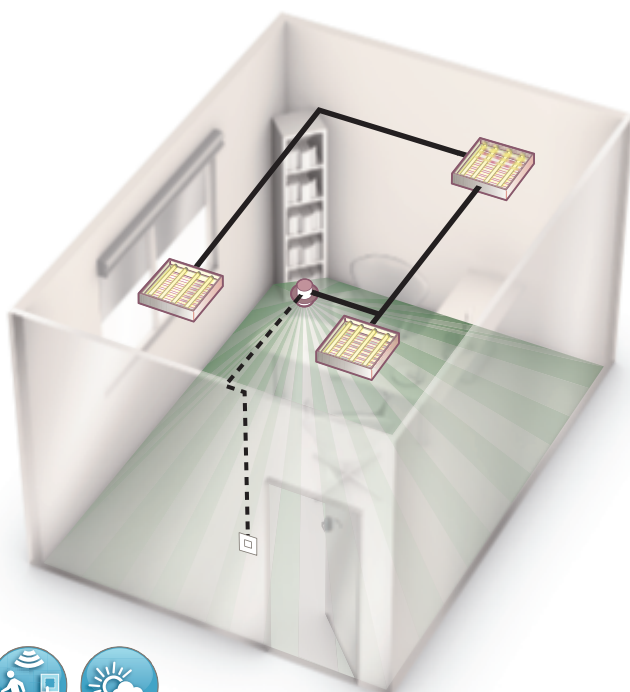
Dimmer



Software

Switch sensors: Energy savings and comfort, adaptable & easy to install

Solution & application enclosed offices



Cat.No 488 08: PIR (passive infrared technology) 360° ceiling mount switch sensor. Linked to a standard pushbutton to turn light "ON" manually. Its quick connection is ideal for repetitive actions. The PIR ceiling mount sensor can accommodate lower levels of activity without causing false triggers, as the room controller is small. This sensor is shipped with the time preset at 15 minutes and daylight at 500 lux. These settings can be modified using commissioning tools Cat.Nos 882 30/35.



Cat. No 488 08

SAVING ON ENERGY⁽¹⁾

300 € | year

GREENHOUSE GAS (GHG) EMISSIONS AVOIDED⁽²⁾

660 kg | CO₂ eq. | year

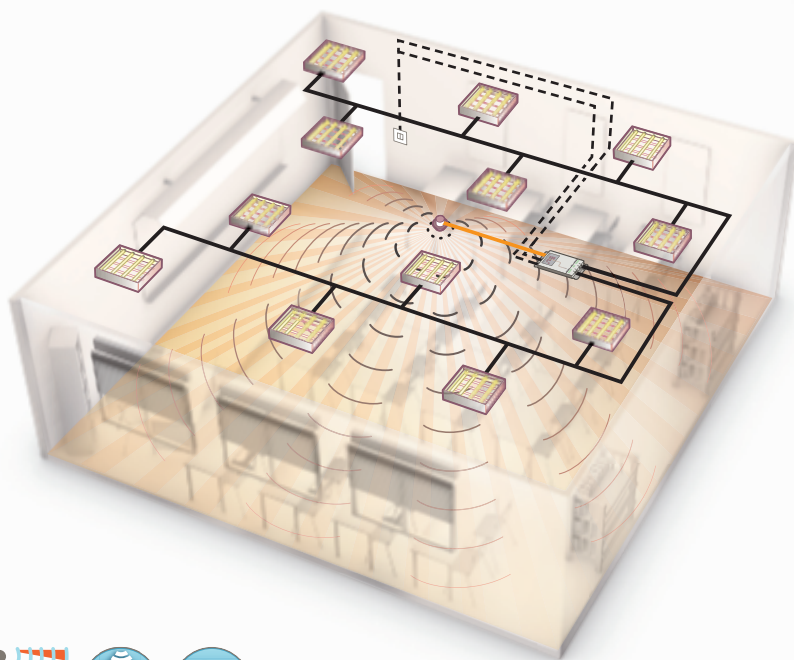
Legrand lighting management solution for an office building with 20 x 15 m² enclosed offices based on: vacancy-based control + daylight-based control

(1) Based on EN 15 193
(2) Greenhouse gases (GHGs) include water vapour, ozone, carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). They are measured in CO₂ equivalent units

Note: A vehicle with an average consumption of 4.5 l/100 km emits 11.8 kg of CO₂/100 km, i.e. 0.118 g of CO₂/km



Solution & application Classroom



Cat.No 488 22 Dual Tech Bus sensor + 488 50 standard room controller.
The Dual Technology Sensor and standard room controller control 2 zones.
The Daylight function is only activated for output 2 as it controls Zone 2.
The Bus sensor should be placed in the centre of the room.
Two standard pushbuttons are used to turn the light "ON" manually and for overrides. Useful when lights need to be turned off during presentations.
This sensor is shipped with the time preset at 15 minutes and daylight at 500 lux. Use commissioning tool Cat.No 882 30 or 882 35 to modify these settings if necessary.



Cat. No 488 50



Cat. No 488 22

SAVING ON ENERGY⁽¹⁾

270 € | year

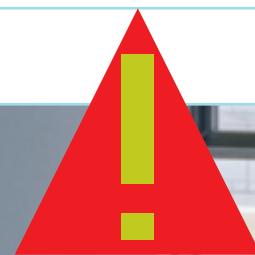
GREENHOUSE GAS (GHG) EMISSIONS AVOIDED⁽²⁾

610 kg | CO₂ eq. | year

Legrand lighting management solution for a campus
with 5 x 63 m² classrooms based on: vacancy-based
control + daylight-based control

(1) Based on EN 15 193
(2) Greenhouse gases (GHGs) include water vapour, ozone, carbon dioxide [CO₂], methane [CH₄], and nitrous oxide [N₂O]. They are measured in CO₂ equivalent units

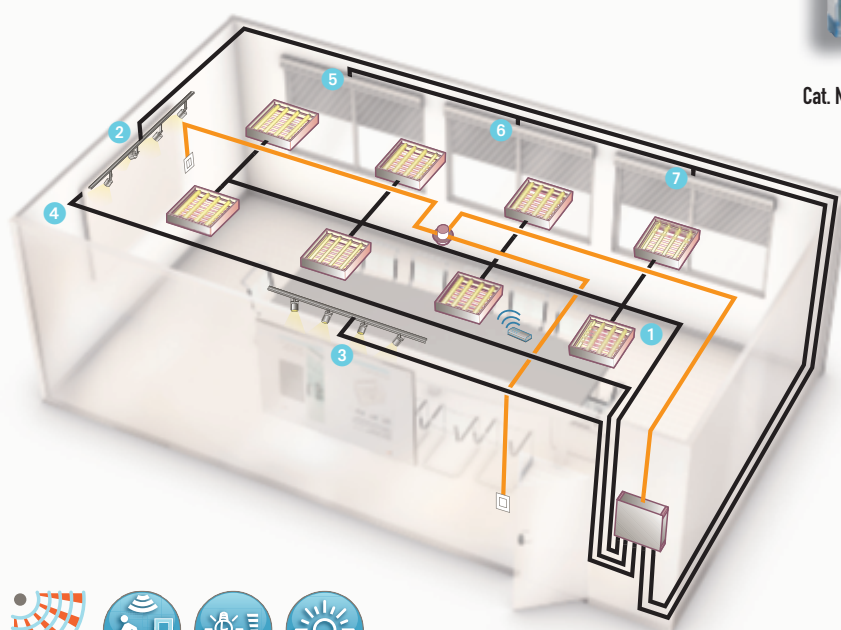
Note: A vehicle with an average consumption of 4.5 l/100 km emits 11.8 kg of CO₂/100 km, i.e. 0.118 g of CO₂/km



PENDING

BUS | SCS systems: comfort, maximum flexibility, energy efficiency, energy savings & attractive appearance

Solution & application Large conference room



Cat. No 038 42



Cat. No 882 31



Cat. No 488 22


SAVING ON ENERGY*
PENDING 1 year


RETURN ON INVESTMENT, PAYBACK PERIOD

2 years

GREENHOUSE GAS (GHG) EMISSIONS AVOIDED ⁽¹⁾
470 kg | GHG | year

Legrand lighting management solution for a small conference room – 25m² based on: Vacancy-based control + dimming 0-10 V – halogen control + screen + fan

(1) Based on EN 15 193
 (2) GHG include [...]



The DIN controller Cat.No 026 12 has 4 dimmable outputs. It controls the 3 lighting circuits. Control luminaires (Dim) + Screen luminaires (on/off) + whiteboard luminaires (on/off)

The 4 DIN controllers Cat.No 038 42 control the 3 blind motors & the screen motor.

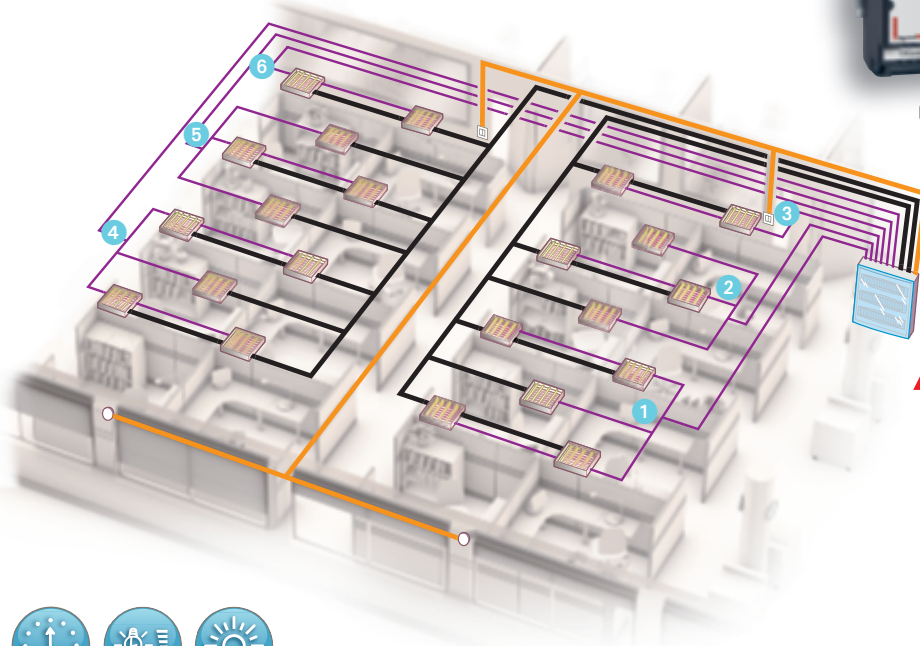
The 2-way multifunction control Cat.No 784 73 has 2 directions of operation. It controls (up/down/stop) the motors for the screen and the blinds.

The 1-way light control Cat.No 784 75 is used to turn on/off and dim +/- manually the light circuit above the whiteboard circuit

The remote control Cat.No 882 31 is used to: 



Solution & application Open office



The lighting is controlled based on time schedules, manual control and daylighting. The area manager Cat.No 026 45 is used for automatically dimming 6 lighting zones based on available daylight. The 2 daylight sensors Cat.No 488 28 read the daylight level at the window and provide this information to the area manager Cat.No 026 45 and to the DIN Dali controller Cat.No 026 33. The light of the luminaires is increased or decreased accordingly. 2 daylight photosensors are used for precise measurement. After hours control is carried out using 2-way light control Cat.No 784 72. Lights are turned on manually and remain ON for 30 minutes.



Cat. No 026 45



Cat. No 488 28



SAVING ON ENERGY™

PENDING



RETURN ON INVESTMENT, PAYBACK PERIOD

2 years

GREENHOUSE GAS (GHG) EMISSIONS AVOIDED ⁽¹⁾

470 kg | GHG | year

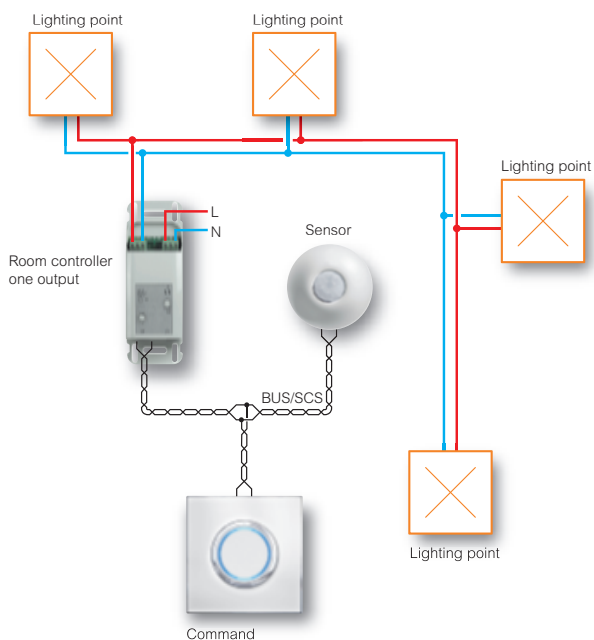
Legrand lighting management solution for a small conference room – 25m² based on: Vacancy-based control + dimming 0-10 V – halogen control + screen + fan

(1) Based on EN 15 193
(2) GHG include [...]

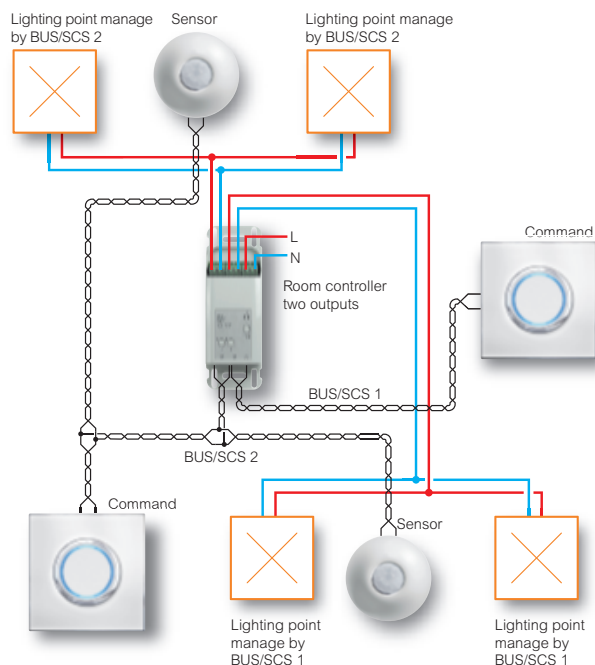
description of local management

One room controller (one zone & two zones)

One zone



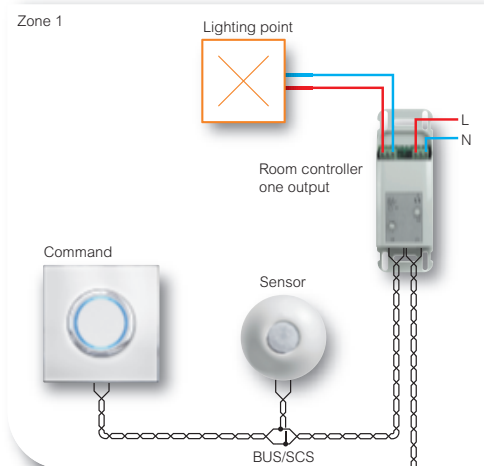
Two zones



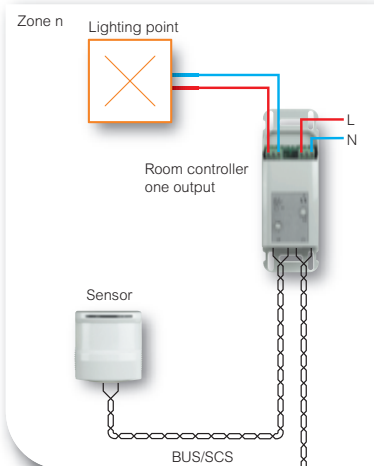
description of local management

Two room controllers (with actuator)

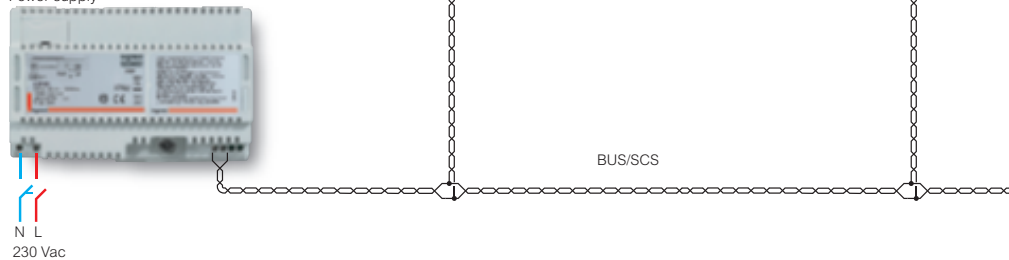
Zone 1



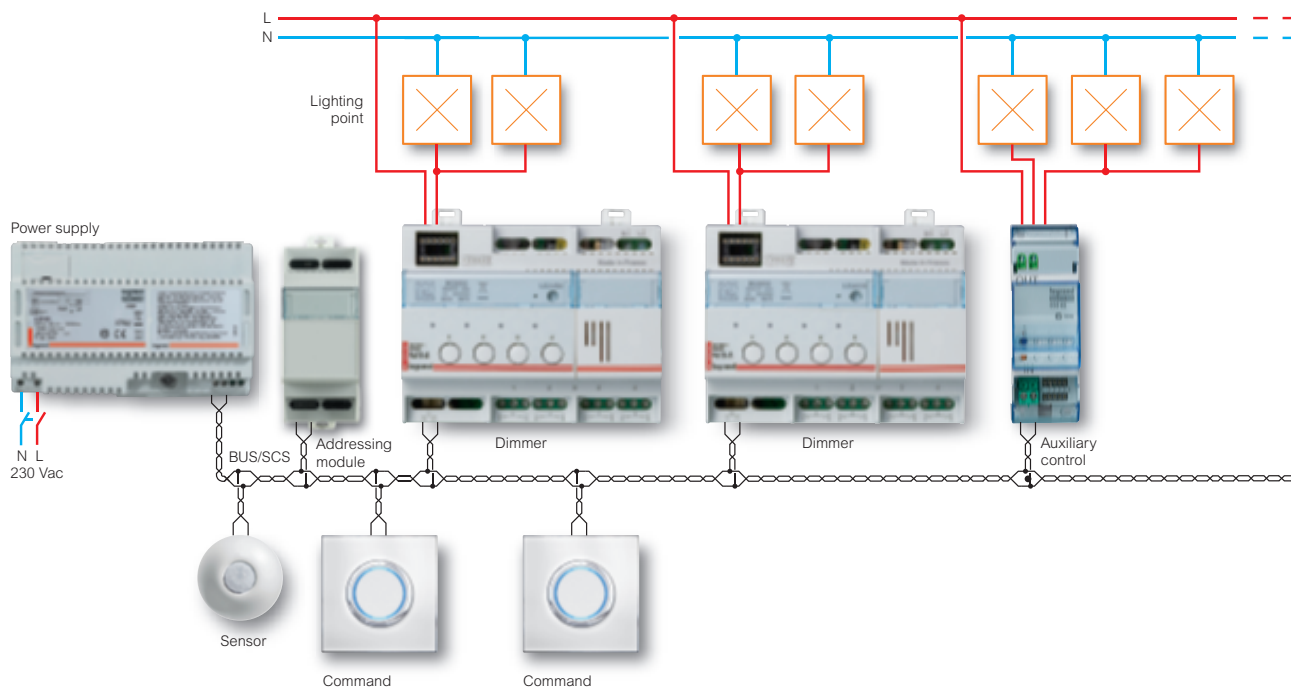
Zone n



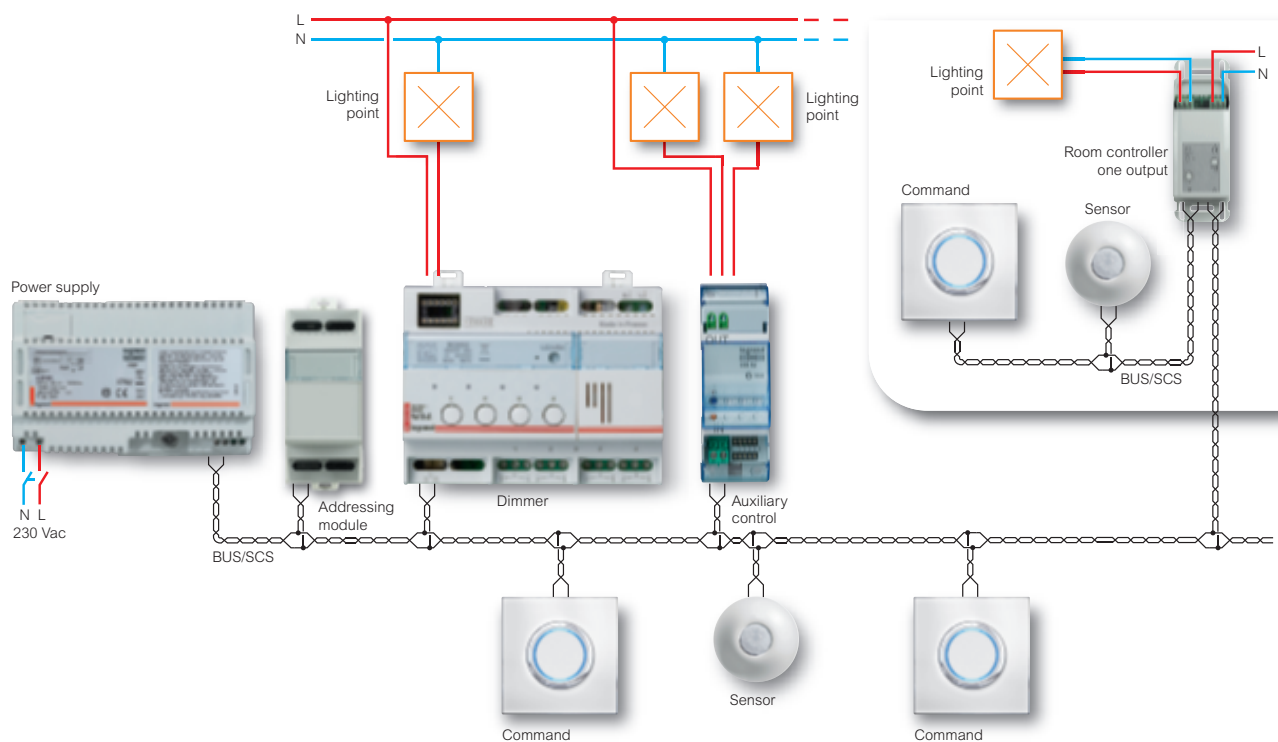
Power supply



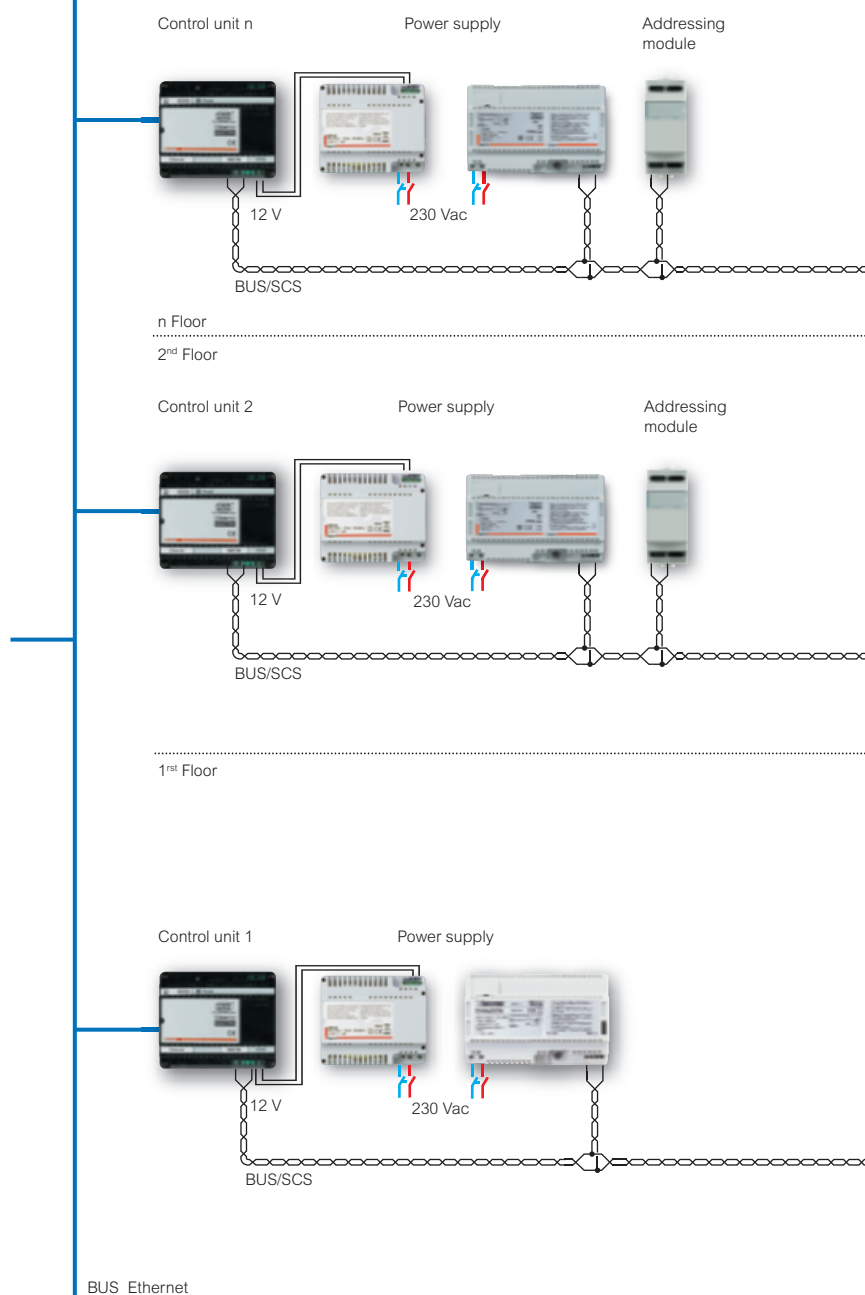
solution SCS system



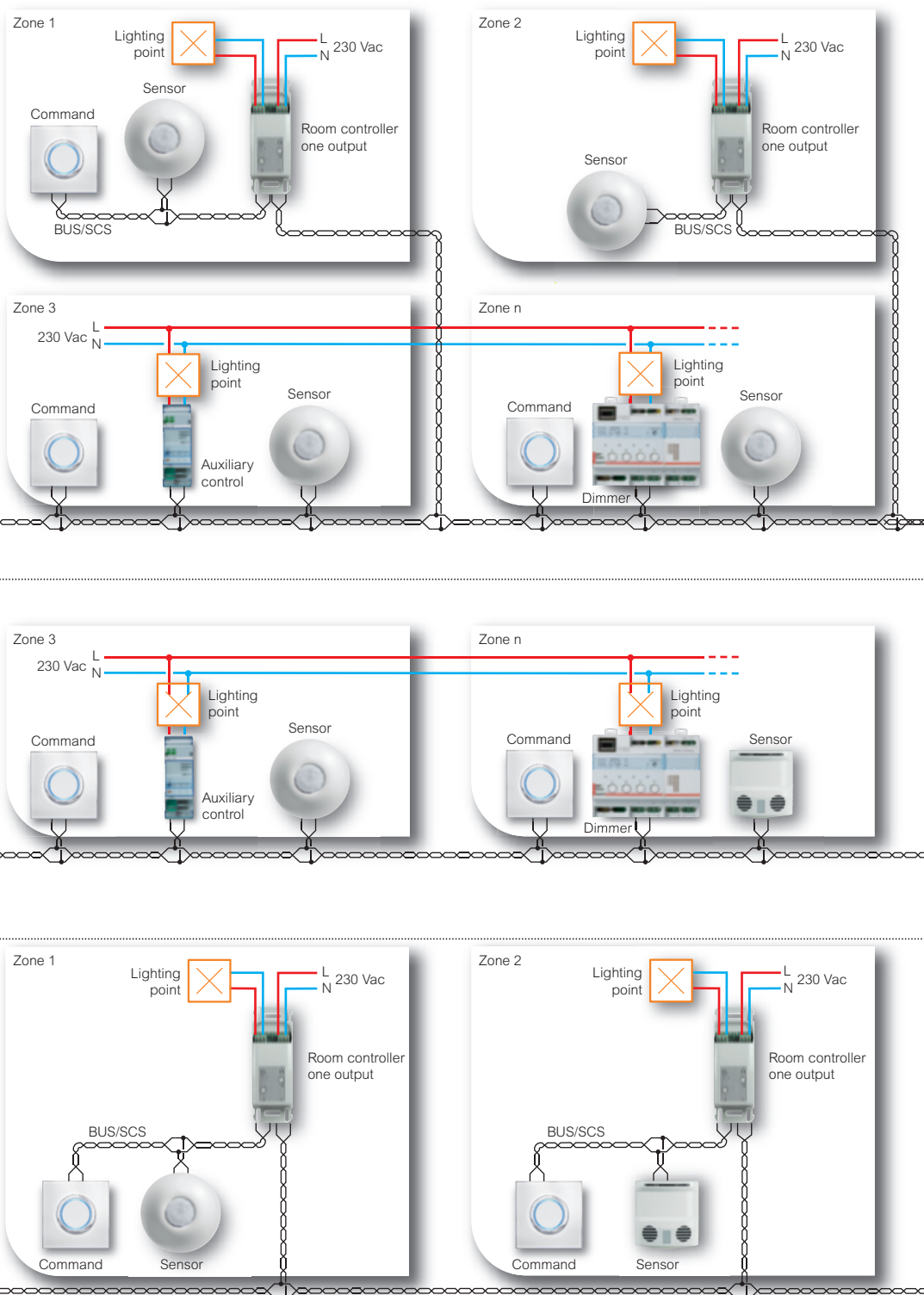
solution SCS system & room controller



description of centralised management
**Installation solution for an
 office building with 3 floors**



CENTRALISED MANAGEMENT



Configuration tools

Legrand offers three types of configuration for connecting our products to the BUS/SCS line:



1

Plug n' go

At initial installation, the room controller recognizes the control which is directly connected to the input and sets its outputs accordingly. It can remain at this initial setup configuration, or it can be modified.



2

Push n' learn

The Push and Learn method is used to change or to adapt the default configuration between the control and the room controller.



3

Lighting Management Suite

With the Lighting Management Suite, all configuration work is carried out using the software, in OFFLINE mode, and then downloaded to the installation. Any modification and tuning can be carried out directly on or off-site.

Software suite

With the Lighting Management Suite, all configuration work is carried out using the software



1

Pre-sales

The LIGHTING PAYBACK software is used for quick, easy calculation of the benefits of the lighting management strategies chosen for a given project, evaluating the energy consumption and the economic return on the investment.

This software can be downloaded free of charge. It is not part of the 'Legrand Lighting Management Suite'.

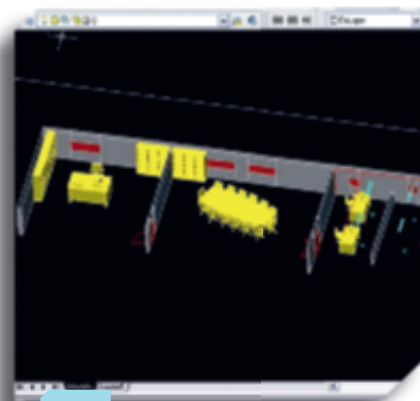


2

Project

With YouPROJECT you can quickly obtain economic costings for a project, determining the list of equipment, its price and all the installation costs. Once the project has been validated, it can be used as a basis for designing the working documents.

YouPROJECT is part of the 'Legrand Lighting Management Suite'.



3

Design | Installation

The YouPROJECT software can be used with SPAC or AUTOCAD to create the whole installation design, from the wiring to addressing the products, and right through to the initial OFFLINE configuration of the devices. An installation drawing can be printed out and given to the user.



4

Configuration

Once the products have been installed, using the installation drawing file created in the preceding step, the installer can use the VIRTUAL CONFIGURATOR software to download the actual configuration of the installation.

VIRTUAL CONFIGURATOR is part of the 'Legrand Lighting Management Suite'.



5

System Monitoring

SYSTEM UTILITIES & BM VISUAL are used to operate and supervise the project throughout its existence.

These two items of software are part of the 'Legrand Lighting Management Suite'.

RELATED SERVICES

Enjoy a unique level of service

From the initial design stage to the first time an occupant enters a building, you can be sure that Legrand will be available to help.



Ranging from technical support and free design services to field services for commissioning, our team of experts is available to assist you with all your lighting management requirements. With our team, you can be confident that your lighting management project will provide optimum performance and comply with any guidelines required for code compliance or sustainability.

Local support

Our sales representatives are available to assist with all aspects of lighting management projects. Services include building walk-through, training, payback analysis reports and product demonstrations.

Contact 

Technical support

Telephone technical support from our dedicated team offers personal guidance for application-related questions, installation assistance or troubleshooting.

Contact country and corporate 

Field services

Factory-trained assistance during the critical startup and commissioning stages to ensure optimum system performance.

Contact 

**Our range provides you with
the most appropriate
solutions**

Switch sensors

BUS/SCS system

Switch sensors
(1 output)



P30

Room controllers
(2 outputs)



P32

Controls



P35

SCS sensors



P36

Room controllers



P38

Dimmers & actuators



P40

Software
& accessories



P42











Radio & ZigBee®
accessories



P43

lighting management switch sensors

1 output

| Cat.Nos | |  |  |  |  |  |  |  |  |  |  |
|----------------------------------|--|---|---|---|---|---|--|---|---|---|---|
| | | 488 03 | 488 02 | 488 01 | 488 05 | 488 06 | 488 07 | 488 08 | 488 10 | 488 11 | 697 40/80 |
| MAIN CHARACTERISTICS | Installation type | false ceiling | | | surface-mounting | | | surface-mounting + false ceiling | | | |
| | Operation | ON-OFF | ON-OFF | ON-OFF | ON-OFF | ON-OFF | ON-OFF | ON-OFF | ON-OFF | ON-OFF | ON-OFF |
| | Type of operation | occupancy | | | vacancy & occupancy | | | occupancy | | | |
| | Override | - | Push-buttons or mobile configurators | | | | | | - | - | |
| | Detector technology | PIR | PIR | PIR | US | PIR/ US | PIR | PIR | PIR | PIR | PIR |
| | Power supply | 100 V / 240 V - 50/60 Hz | | | | | | | | | |
| | Operating temperature | -5°C to +45°C | | | | | | | | | |
| | IP | IP 20 | IP 20 | IP 20 | IP 20 | IP 20 | IP 20 | IP 20 | IP 55 | IP 42 | IP 55 |
| | Cover L x W | 45 m ² | 45 m ² | 45 m ² | 150 m ² | 90 m ² | 45 m ² | 45 m ² | 180 m ² | 45 m ² | 45 m ² |
| | Diameter at 2.5 m | Ø 8 m | Ø 8 m | Ø 8 m | Ø 14 m | Ø 11 m | Ø 8 m | Ø 8 m | Ø 15 m | Ø 8 m | Ø 8 m |
| | Lux level | from 1 to 1275 lux | | | | | | | | | |
| | Time delay (mn) | from 20 s to 30 mn | from 0 s to 60 mn | | | | | | from 20 s to 30 mn | from 10 s to 16 mn | |
| FUNCTIONALITY | Audible Alerts | - | yes | yes | yes | yes | yes | yes | yes | - | - |
| | Walkthrough mode | - | yes | yes | yes | yes | yes | yes | yes | - | - |
| | Daylighting setting | - | yes | yes | yes | yes | yes | yes | yes | - | - |
| ADJUSTMENT | Pre-settings | time delay mini, lux maxi | | | 15 minutes 500 lux | | | 15 minutes 300 lux | time delay mini lux maxi | | |
| | Trim pot | yes | yes | yes | - | - | - | - | yes | yes | |
| | Tool | - | 882 35 882 30 | | | 882 35 882 30 | | | - | - | |
| DIMENSIONS | Weight (g) | 114.5 | 150 | 150 | 159.1 | 162.2 | 114.2 | 174.6 | 205 | 266.6 | 266.6 |
| | Connection type | auto terminals | quick connection | auto terminals | auto terminals | auto terminals | auto terminals | quick connection | auto terminals | auto terminals | screw terminals |
| | Depth (mm) | without auxiliaries 52.3 with auxiliaries 55.6 | 58.97 62.27 | 58.97 62.27 | 58.97 62.27 | 58.97 62.27 | 52.3 55.6 | 72.2 73.2 | 165.83 | 115.86 | 115 |
| COMPATIBILITY WITH TYPE OF LIGHT | Halogen light | 240 V | - | 2500 W | 2500 W | 2000 W | 2000 W | 2000 W | 2000 W | 2000 W | 2000 W |
| | | 100 V | - | 1250 W | 1250 W | 1000 W | 1000 W | 1000 W | 1000 W | 1000 W | 1000 W |
| | ELV halogen with separate ferromagnetic or electromagnetic transformer | 240 V | 1000 VA | | | | | | | | |
| | | 100 V | 1500 VA | | | | | | | | |
| | Fluorescent tube | 240 V | 70 x (2 x 36 W) | | | | | | | | |
| | | 100 V | 5 x (2 x 36 W) | | | | | | | | |
| | Fluorescent light with separate ferromagnetic or electronic ballast | 240 V | 1000 VA | 1000 VA | 1000 VA | 1000 VA | 1000 VA | 1000 VA | 1000 VA | 1000 VA | 1000 VA |
| | | 100 V | 500 VA | 500 VA | 500 VA | 500 VA | 500 VA | 500 VA | 500 VA | 500 VA | 500 VA |
| | LED | 240 V | 500 W | 500 W | 500 W | 500 W | 500 W | 500 W | 500 W | 500 W | 500 W |
| | | 100 V | 250 W | 250 W | 250 W | 250 W | 250 W | 250 W | 250 W | 250 W | 250 W |
| | Compact fluorescent light with 1-10 V ballasts | 240 V | 500 W | 500 W | 500 W | 500 W | 500 W | 500 W | 500 W | 500 W | 500 W |
| | | 100 V | 250 W | 250 W | 250 W | 250 W | 250 W | 250 W | 250 W | 250 W | 250 W |
| | Contactors | 240 V | max. W ≤ 2 A | | | | | | | | |
| | | 100 V | | | | | | | | | |



lighting management switch sensors

1 output



Technologies (p. XX)








| Pack | Cat.Nos | Ceiling sensors |
|------|---------|--|
| | | Fixed directly to a false ceiling with mounting claws (provided) or installed in Batibox flush-mounting box with depth of 50 mm |
| | | Detection field 45 m² |
| | | Ø 8 m Optimum distance between 2 detectors: 6 m Consumption 0.4 W on standby |
| 1 | 488 03 | PIR ceiling mount switch sensor 360°, occupancy mode, automatic terminal connection All load 8.5 A - 240 V |
| 1 | 488 01 | PIR ceiling mount switch sensor 360°, vacancy & occupancy mode (push-button override or mobile configurator), automatic terminal connection All load 10 A - 240 V |
| 1 | 488 02 | PIR ceiling mount switch sensor 360°, vacancy & occupancy mode (push-button override, or mobile configurator), quick connection All load 10 A - 240 V |
| 1 | 488 07 | PIR ceiling switch sensor 360°, vacancy & occupancy mode (push-button override or mobile configurator), automatic terminal connection All load 8.5 A - 240 V |
| 1 | 488 08 | PIR ceiling mount switch sensor 360°, vacancy & occupancy mode (push-button override or mobile configurator), quick connection All load 8.5 A - 240 V |
| | | Detection field 90 m² |
| | | Ø 11 m Optimum distance between 2 detectors: 10 m Consumption 0.8 W on standby All load 8.5 A - 240 V |
| 1 | 488 06 | Dual ceiling mount switch sensor 360°, vacancy & occupancy mode (push-button override, or mobile configurator), automatic terminal connection |
| | | Detection field 150 m² |
| | | Ø 14 m Optimum distance between 2 detectors: 12 m Consumption 0.8 W on standby All load 8.5 A - 240 V |
| 1 | 488 05 | US ceiling mount switch sensor 360°, vacancy & occupancy mode (push-button override, or mobile configurator), automatic terminal connection |

| Pack | Cat.Nos | Corner indoor sensors |
|------|---------|--|
| | | Supplied with fixing base |
| | | Detection field 45 m² |
| | | Maximum range 8 m Optimum distance between 2 detectors: 6 m Consumption 0.4 W on standby All load 8.5 A - 240 V |
| 1 | 488 11 | PIR corner mount switch sensor 170°, occupancy mode, automatic terminal connection |

| Pack | Cat.Nos | Outdoor sensors |
|------|--------------|---|
| | | Detection field 45 m² |
| | | Maximum range 8 m - IP 55 |
| 1 | Grey 697 40 | PIR outdoor switch sensor 360°, occupancy mode |
| 1 | White 697 80 | coverage pattern adjustable during installation process |
| | | PIR outdoor switch sensor 360°, occupancy mode |
| | | coverage pattern adjustable during installation process |
| | | Detection field 180 m² |
| | | Maximum range 15 m - IP 55 |
| | | Consumption 0.4 W on standby |
| | | All load 8.5 A - 240 V |
| 1 | 488 10 | PIR outdoor switch sensor 270°, vacancy & occupancy mode (push-button override or mobile configurator), automatic terminal connection |
| | | Mobile configurators |
| | | All detectors are pre-set in the factory |
| | | - lighting threshold: 500 lux false ceiling, 300 lux surface-mounted |
| | | - time delay: 15 minutes and walkthrough function activated |
| | | The mobile configurators allow the pre-adjusted settings and the detection sensitivity to be readjusted |
| 1 | 882 35 | Step programming on pre-set buttons |
| 1 | 882 30 | Digital programming to the nearest decimal place |
| | | Instant programming control |
| | | Allows the settings of each detector to be displayed |
| | | Option of putting adjustment settings in the memory and using them for other detectors |
| | | RJ 45-BUS/SCS connectors |
| | | Allow controller(s) and detector(s) to be connected directly using BUS/SCS wiring by branch connection |
| 1 | 488 72 | Male connector |
| 1 | 488 73 | Female connector |
| | | RJ 45 doubler |
| 10 | 488 68 | Allows the number of controller inputs to be doubled |

lighting management room controller

2 outputs

| Cat.Nos | | |  |  |  |  |  |  |  |
|----------------------------------|--|--------------|---|---|---|---|---|---|---|
| | | | 488 50 ⁽¹⁾ | 488 20 | 488 21 | 488 22 | 488 23 | 488 24 | 488 30 |
| MAIN CHARACTERISTICS | Installation type | | false ceiling cable ducting | false ceiling | | | surface-mounting | | |
| | Operation | | ON-OFF | ON-OFF | ON-OFF | ON-OFF | ON-OFF | ON-OFF | ON-OFF |
| | Type of operation | | - | vacancy & occupancy | | | | | |
| | | Override | - | Push-buttons, or IR remote | | | | | |
| | Detector technology | | - | PIR | US | PIR/US | PIR/US | PIR | PIR |
| | Power supply | | 100 V / 240 V | 27 V powered by 488 50 | | | | | |
| | Operating temperature | | -5 °C to +45 °C | | | | | | |
| | IP | | IP 20 | IP 20 | IP 20 | IP 20 | IP 42 | IP 42 | IP 55 |
| | Cover L x W | | - | 45 m² | 150 m² | 90 m² | 90 m² | 45 m² | 180 m² |
| | Diameter at 2.5 m | | - | Ø 8 m | Ø 14 m | Ø 11 m | Ø 11 m | Ø 8 m | Ø 15 m |
| | Lux level | | - | from 1 to 1275 lux | | | | | |
| | Time delay (mn) | | - | from 0 to 255 h | | | | | |
| FUNCTIONALITY | Audible Alerts | | - | yes | yes | yes | yes | yes | yes |
| | Walkthrough mode | | - | yes | yes | yes | yes | yes | yes |
| | Daylight setting | | - | yes | yes | yes | yes | yes | yes |
| ADJUSTMENT | Pre-settings | | - | 15 minutes / 500 lux | | | 15 minutes / 300 lux | | |
| | Trim pot | | - | - | - | - | - | - | - |
| | Tool | | - | 882 30 & 882 35 and software | | | | | |
| DIMENSIONS | Weight (g) | | 272 | 95.5 | 143.1 | 147.8 | 241.7 | 237.5 | 205 |
| | Dimensions L x W x H (mm) | | 190 x 70 x 51 | 55 X Ø 102 | 55 X Ø 102 | 55 X Ø 102 | 105 x 70 x 70 | 105 x 70 x 70 | 166 X 81 X 104 |
| | Connection type | | screw terminals | RJ 45 | RJ 45 | RJ 45 | RJ 45 | RJ 45 | RJ 45 |
| | Flush-mounted depth (mm) | | - | 50 | | | | | |
| COMPATIBILITY WITH TYPE OF LIGHT | Halogen light | 240 V | 3600 W | - | - | - | - | - | - |
| | | 100 V | 1800 W | - | - | - | - | - | - |
| | ELV halogen with separate ferromagnetic or electromagnetic transformer | 240 V | 1800 VA | - | - | - | - | - | - |
| | | 100 V | 900 VA | - | - | - | - | - | - |
| | Fluorescent tube | 240 V | 1800 VA | - | - | - | - | - | - |
| | | 100 V | 900 VA | - | - | - | - | - | - |
| | Fluorescent light with separate ferromagnetic or electronic ballast | 240 V | 500 W | - | - | - | - | - | - |
| | | 100 V | 250 W | - | - | - | - | - | - |
| | LED | 240 V | 500 W | - | - | - | - | - | - |
| | | 100 V | 250 W | - | - | - | - | - | - |
| | Compact fluorescent light with 1-10 V ballasts | 240 V | 1800 VA | - | - | - | - | - | - |
| | | 100 V | 900 VA | - | - | - | - | - | - |
| Contactors | 240 V | relay output | - | - | - | - | - | - | |
| | 100 V | | | | | | | | |

(1) to be associated with Cat.Nos 488 20/21/22/23/24/30



lighting management room controller

2 outputs



488 50



488 20



488 22



488 23
(directional head)



Technologies (p. XX)

| Pack | Cat.Nos | Room controller |
|------|---------|---|
| 1 | 488 50 | <p>Allows 2 lighting circuits to be controlled in 2 different phases or 1 lighting circuit and 1 A/C circuit</p> <p>Ability to connect the detector(s) and push-button(s) on each circuit</p> <p>Fixed directly to the false ceiling via cable ducting</p> <p>Controller/detector output connection (up to 10 detectors Cat.Nos 488 20/21/22/30/24/23) by cord or RJ 45 cable (please refer to Legrand general catalogue) or BUS/SCS cable to be fitted with RJ 45 connector Cat.No 488 72 (p. 31)</p> <p>Power supply 100/240 V</p> <p>Room controller 2 inputs 2 outputs 16 A</p> |

| Pack | Cat.Nos | Ceiling SCS sensors |
|------|---------|---|
| 1 | 488 20 | <p>Fixed directly to the false ceiling with mounting claws (supplied) or installed in deep Batibox boxes with depth of 50 mm</p> <p>Connect to 2 circuit controller Cat.No 488 50 by cord or RJ 45 cable or BUS/SCS cable fitted with RJ 45 connector Cat.No 488 72 (p. 31)</p> <p>Detection field 45 m²</p> <p> Ø 8 m</p> <p>Optimum distance between 2 detectors: 6 m</p> <p>Consumption 0.2 W on standby</p> <p>All load 10 A - 240 V</p> <p>PIR ceiling mount switch sensor 360°, vacancy & occupancy mode (push-button override, or IR remote), RJ 45 connection</p> |
| 1 | 488 22 | <p>Detection field 90 m²</p> <p> Ø 11 m</p> <p>Optimum distance between 2 detectors: 10 m</p> <p>Consumption 0.5 W on standby</p> <p>All load 10 A - 240 V</p> <p>DUAL corner mount SCS sensor 360°, vacancy & occupancy mode (push-button override, or IR remote), RJ 45 connection</p> |
| 1 | 488 21 | <p>Detection field 150 m²</p> <p> Ø 14 m</p> <p>Optimum distance between 2 detectors: 12 m</p> <p>Consumption 0.5 W on standby</p> <p>All load 10 A - 240 V</p> <p>US ceiling mount SCS sensor 360°, vacancy & occupancy mode (push-button override, or IR remote), RJ 45 connection</p> |

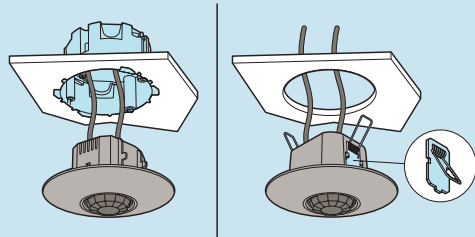
| Pack | Cat.Nos | Corner SCS sensors |
|------|---------|--|
| 1 | 488 24 | <p>Supplied with fixing base</p> <p>Connect to 2 circuit controller Cat.No 488 50 by cord or RJ 45 cable or BUS/SCS cable fitted with RJ 45 connector Cat.No 488 72 (p. 31)</p> <p>Detection field 45 m²</p> <p> Maximum range 8 m - IP 42</p> <p>Optimum distance between 2 detectors: 6 m</p> <p>Consumption 0.2 W on standby</p> <p>All load 10 A - 240 V</p> <p>PIR corner mount switch sensor 180°, vacancy & occupancy mode (push-button override, or IR remote), RJ 45 connection</p> |
| 1 | 488 23 | <p>Detection field 90 m²</p> <p> Maximum range 11 m - IP 42</p> <p>With directional head</p> <p>Optimum distance between 2 detectors: 10 m</p> <p>Consumption 0.2 W on standby</p> <p>All load 10 A - 240 V</p> <p>DUAL corner mount SCS sensor 180°, vacancy & occupancy mode (push-button override, or IR remote), RJ 45 connection</p> |
| 1 | 488 30 | <p>Detection field 180 m²</p> <p> Maximum range 15 m - IP 55</p> <p>Consumption 0.5 W on standby</p> <p>All load 10 A - 240 V</p> <p>PIR corner mount SCS sensor 270°, vacancy & occupancy mode (push-button override, or IR remote), RJ 45 connection</p> |

Lighting management technologies

■ Ceiling mounting



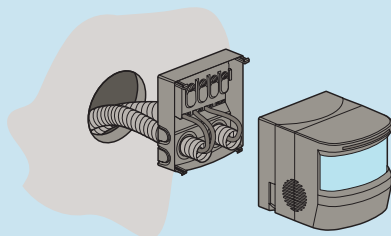
All sensors have built-in bracket systems that enable ceiling mounting. Most sensors are suitable for standard EU boxes (diam 65). This is important for applications where the ceiling is unavailable for sensor installation. Only one Cat.No for two ways of mounting.



■ Wall mounting



Wall mount sensors have a mounting base. For easy and quick mounting the base has to be fixed against the wall, the wires connected to the automatic wiring block. Then the sensor part is fitted onto the base.

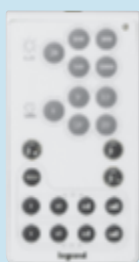


■ Settings

Most sensors feature Smart Factory Set technology, adjustments are typically not needed after installation. If adjustments need to be made (due to last minute changes in furniture or fixture placement), sensitivity and time delays should match the activity levels of the monitored spaces.

Two commissioning tools can be used to adjust settings:

For standard configuration:



Cat.No 882 35

- Time level: 3, 5, 10, 15, 20 mn
- Lux level: 20, 100, 300, 500, 1000 lux
- Occupancy, occupancy walkthrough, vacancy, modes
- PIR & US detection sensibility: low, medium, high, very high
- test mode

For advanced configuration:

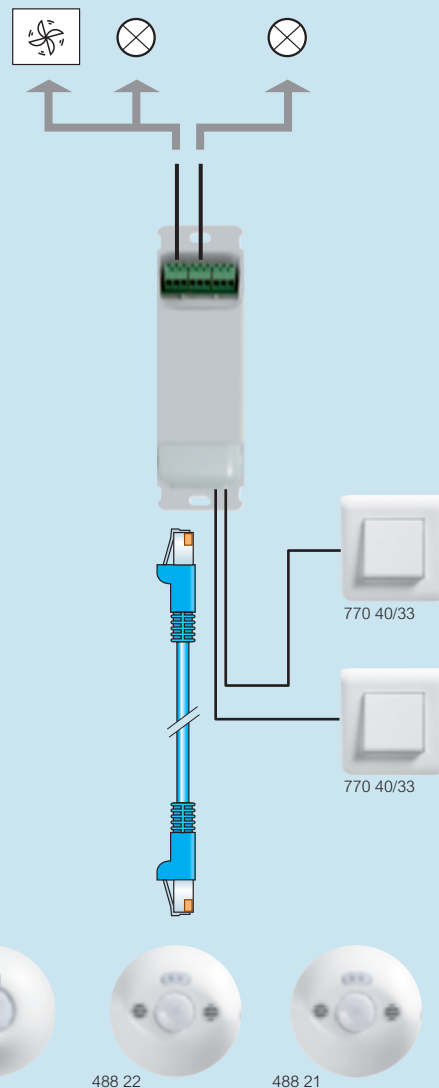


Cat.No 882 30

- This commissioning tool enables a very precise commissioning of your sensors.
- Time: from 0 seconds to 60 mn
 - Lux: from 1 lux to 1275 lux
 - Detection mode: occupancy, occupancy walkthrough, vacancy modes
 - PIR & US detection sensibility: low, medium, high, very high
 - It also provides access to advanced functions such as calibration, alarms, choice of mode of detection (initial detection, maintain detection, retrigger), daylight function
 - It also allows downloading of sensor parameters, saving of these parameters in folders and their duplication

■ Room controller (2 outputs)

The room controller is a key component of the lighting control system. It provides low voltage power to SCS sensors. Several sensors, can be linked (up to 10). Only one Cat.No for several applications.



Product features

- > Screw terminal block
- > Auxiliary input for manual control by simple push
- > 1 RJ 45 input for SCS sensors
- > 16 A outputs for lighting and FAN

lighting management BUS/SCS system controls



784 73



5739 60

Individual or centralised controls for lighting management

Supplied with BUS/SCS connector Cat.No 492 22 (p. 42) for connection with the BUS/SCS cable with branch connection

• Connection:

- to the fixed ceiling controller via BUS/SCS cable fitted with connector Cat.No 488 72 (p. 37)
- directly to the BUS/SCS cable in the event of a modular controller control unit

"Push-button type" lighting control units

| Pack | Cat.Nos | |
|------|-------------------|--|
| 1 | Mosaic 784 75 | Used to control 1 controller |
| 1 | 791 75 | ON/OFF control units - 1 way Used to control 1 lighting circuit |
| | | ○ White ● Aluminium |
| 1 | 784 72 | ON/OFF control units - 2 way Used to control 2 lighting circuits |
| 1 | 791 72 | ○ White ● Aluminium |
| 1 | Arteor 5739 87 | Arteor mechanism |

"Switch type" multifunctional control units

| | | |
|---|-------------------|---|
| 1 | Mosaic 784 71 | For controlling a group of controllers: ON/OFF, dimming, ventilation, rolling blinds |
| 1 | 791 71 | 1 way ○ White ● Aluminium |
| 1 | 784 73 | 2 way ○ White ● Aluminium |
| 1 | 791 73 | |
| 1 | Arteor 5739 74 | Arteor mechanism |

Scenario management








| | | |
|---|-------------------|--|
| | | Allows several controllers to be operated |
| | | 4 scenarios 4 buttons allowing 1 scenario to be managed per button Example: lighting level adjustment, lighting control with openings... |
| 1 | Mosaic 784 78 | ○ White |
| 1 | 791 78 | ● Aluminium |
| 1 | Arteor 5739 02 | ○ White |
| 1 | 5739 03 | ● Magnesium |
| | | Multiple scenarios Touch-screen control Allows manual or programmed control of lighting (lighting level), openings, fans and multimedia equipment Option of timed management Combines with Cat.No 035 51 (p. 41) to create scenarios without software tools To be fitted with plate Cat.No 784 70 white or 791 74 aluminium, supplied with support. Assembled in flush-mounting box Cat.Nos 892 79 or 893 79 (please refer to Legrand general catalogue) Equipped with White and Magnesium surround To be installed in flush-mounting box Cat.Nos 892 79 or 893 79 To be fitted with plates Cat.Nos 5764 84 Mirror White, 5764 83 Mirror Black, 5764 86 Stainless Steel, 5764 80 Gold Brass and 5764 87 Woven Metal |
| 1 | Mosaic 784 74 | |
| 1 | Arteor 5739 60 | |



To be equipped with plates Mosaic, key covers and plates Arteor and Batibox supports, please consult your local office

lighting management BUS/SCS system

SCS sensors

| Cat.Nos | |  |  |  |  |  |  |  | |
|----------------------|--------------------------|---|---|---|---|---|---|---|---------------------|
| | | 488 20 | 488 21 | 488 22 | 488 23 | 488 24 | 488 30 | 488 33 | |
| MAIN CHARACTERISTICS | Installation type | false ceiling | | | surface mounting | | | | |
| | Operation | ON-OFF & dimming + adjust | | | | | | | |
| | Type of operation | vacancy & occupancy | | | | | | | |
| | | Override | Push-buttons, mobile configurators or software | | | | | | SCS controls & soft |
| | Detector technology | | PIR | US | PIR/US | PIR/US | PIR | PIR | PIR |
| | Power supply | | 27 V powered by BUS/SCS or room controllers | | | | | | |
| | Operating temperature | | -5°C to +45°C | | | | | | |
| | IP | | IP 20 | IP 20 | IP 20 | IP 42 | IP 42 | IP 55 | IP 20 |
| | Cover L x W | | 45 m² | 150 m² | 90 m² | 90 m² | 45 m² | 180 m² | 25 m² |
| | Diameter at 2.5 m | | Ø 8 m | Ø 14 m | Ø 11 m | Ø 11 m | Ø 8 m | Ø 15 m | Ø 6 m |
| | Lux level | | from 1 to 1275 lux | | | | | | |
| | Time delay (mn) | | from 0 to 255 h | | | | | | |
| FUNCTIONALITY | Audible Alerts | yes | yes | yes | yes | yes | yes | - | |
| | Walkthrough mode | yes | yes | yes | yes | yes | yes | - | |
| | Daylight setting | yes | yes | yes | yes | yes | yes | yes | |
| ADJUSTMENT | Pre-settings | 15 minutes / 500 lux | | | 15 minutes / 300 lux | | | N/A | |
| | Trim pot | - | - | - | - | - | - | - | |
| | Tool | 882 30 and 822 35 and software | | | | | | N/A | |
| DIMENSIONS | Weight (g) | 95.5 | 143.1 | 147.8 | 241.7 | 237.5 | 205 | 75 | |
| | Connection type | RJ 45 | RJ 45 | RJ 45 | RJ 45 | RJ 45 | RJ 45 | screw | |
| | Flush-mounted depth (mm) | 50 | 50 | 50 | 50 | 50 | 50 | 22 | |



lighting management BUS/SCS system

SCS sensors



Technologies (p. xx)

- Connection:
 - to the controller by cord or RJ 45 cable (please refer to Legrand general catalogue) or BUS/SCS cable to be fitted with RJ 45 connector Cat.No 488 72 (p. 37)
 - to the BUS/SCS directly by cord or cable to be fitted with RJ 45 / BUS/SCS connector Cat.No 488 72 (p. 37)
 - Factory pre-set lighting threshold 500 lux for false ceiling detectors, 300 lux for surface-mounted detectors
 - Factory pre-set time delay 15 minutes. Walkthrough function activated (short time delay of 3 minutes for 1 walkthrough)
 - Site adjustment with mobile configurators Cat.No 882 30/35 (p. 42)
- IR receivers








| Pack | Cat.Nos | Ceiling SCS sensors |
|------|---------|---|
| 1 | 488 33 | Fastened directly to a false ceiling with mounting claws (supplied) or installed in Batibox flush-mounting boxes with depth of 50 mm Connect to 2 circuit room controller Cat.No 488 50 by cord or RJ 45 cable or BUS/SCS cable to be fitted with RJ 45 connector Cat.No 488 72 (p. 37) Detection field 25 m² Ø 6 m Optimum distance between 2 detectors: 4 m Consumption 0.2 W on standby All load 10 A - 240 V PIR ceiling mount SCS sensor 360°, vacancy & occupancy mode (push-button override or software), RJ 45 connection Detection field 45 m² Ø 8 m Optimum distance between 2 detectors: 6 m Consumption 0.2 W on standby All load 10 A - 240 V PIR ceiling mount switch sensor 360°, vacancy & occupancy mode (push-button override, mobile configurator or software) RJ 45 connection Detection field 90 m² Ø 11 m Optimum distance between 2 detectors: 10 m Consumption 0.5 W on standby All load 10 A - 240 V DUAL ceiling mount SCS sensor 360°, vacancy & occupancy mode (push-button override, mobile configurator or software) RJ 45 connection Detection field 150 m² Ø 14 m Optimum distance between 2 detectors: 12 m Consumption 0.5 W on standby All load 10 A - 240 V US ceiling mount SCS sensor 360°, vacancy & occupancy mode (push-button override, mobile configurator or software) RJ 45 connection |

| Pack | Cat.Nos | Corner SCS sensors |
|------|---------|---|
| 1 | 488 24 | Supplied with fixing plate Connect to the 2 circuit controller Cat.No 488 50 by cord or RJ 45 cable or BUS/SCS cable to be fitted with RJ 45 connector Cat.No 488 72 (p. XXX) Detection field 45 m² Maximum range 8 m - IP 42 Optimum distance between 2 detectors: 6 m Consumption 0.2 W on standby All load 10 A - 240 V PIR corner mount SCS sensor 180°, vacancy & occupancy mode (push-button override, mobile configurator or software) RJ 45 connection Detection field 90 m² Maximum range 11 m - IP 42 With directional head Optimum distance between 2 detectors: 10 m Consumption 0.2 W on standby All load 10 A - 240 V DUAL corner mount SCS sensor 180°, vacancy & occupancy mode (push-button override, mobile configurator or software), RJ 45 connection Detection field 180 m² Maximum range 15 m - IP 55 Consumption 0.5 W on standby All load 10 A - 240 V PIR corner mount SCS sensor 270°, vacancy & occupancy mode (push-button override, mobile configurator or software), RJ 45 connection |
| 1 | 488 23 | |
| 1 | 488 30 | |

| Pack | Cat.Nos | Lighting measurement cell |
|------|---------|---|
| 1 | 488 28 | 2 usage options: - used in conjunction with detectors it allows synchronisation of lighting measurement - lighting management for 1 zone without detector The mobile configurator must be used to configure the lighting cell Cat.No 882 30 (p. XXX) Connects to BUS/SCS cable with connector Cat.No 488 72 |

| Pack | Cat.Nos | RJ 45-BUS/SCS connectors |
|------|---------|--|
| 1 | 488 72 | Allow controller(s) and detector(s) to be connected directly using BUS/SCS wiring by branch connection Male connector |
| 1 | 488 73 | Female connector |

lighting management BUS/SCS system room controllers

| Cat.Nos | | |  |  |  |  |  |  |  |
|----------------------------------|--|-------|---|---|---|--|---|---|---|
| | | | 488 40 | 488 41 | 488 42 | 488 43 | 488 44 | 488 45 | 488 47 |
| MAIN CHARACTERISTICS | Installation type | | ← fixed false ceiling and cable ducting → | | | | | | |
| | Type of operation | | ← ON-OFF → | | ← dimming → | | | | ON-OFF dimming + automation |
| | Number of outputs | | 1 | 2 | 2 | 4 | 4 | 2 | 2 lighting + 2 automation |
| | Power supply | | ← 100 / 240 V → | | | | | | |
| | Operating temperature | | ← -5°C to +45°C → | | | | | | |
| | IP | | IP 20 | IP 20 | IP 20 | IP 20 | IP 20 | IP 20 | IP 20 |
| | Dimensions (mm) L x W x H | | 207 x 71 x 48 | 207 x 71 x 48 | 207 x 97 x 48 | 257 x 148 x 51 | 257 x 148 x 51 | 257 x 148 x 51 | 257 x 148 x 51 |
| | Weight (g.) | | 255 | 265 | 337 | 380 | 424 | 458 | 430 |
| | Connection type | | screw terminals | screw terminals | screw terminals | screw terminals | screw terminals | screw terminals | screw terminals |
| COMPATIBILITY WITH TYPE OF LIGHT | Halogen light | 240 V | 3600 W | 3600 W | 3600 W | 3600 W | - | 2000 W | 3600 W |
| | | 100 V | 1800 W | 1800 W | 1800 W | 1800 W | - | 1000 W | 1800 W |
| | ELV halogen with separate ferromagnetic or electromagnetic transformer | 240 V | 3600 W | 3600 W | 3600 W | 3600 W | - | 2000 VA | 3600 VA |
| | | 100 V | 1800 VA | 1800 VA | 1800 VA | 1800 VA | - | 1000 VA | 1800 VA |
| | Fluorescent tube | 240 V | 1 x 1000 VA | 2 x 1000 VA | 2 x 1000 VA | 4 x 1000 VA | - | - | 2 x 1000 W |
| | | 100 V | 1 x 500 VA | 2 x 500 VA | 2 x 500 VA | 4 x 500 VA | - | - | 2 x 500 W |
| | Fluorescent light with separate ferromagnetic or electronic ballast | 240 V | 1 x 1000 VA | 2 x 1000 VA | 2 x 1000 VA | 4 x 1000 VA | - | - | 2 x 1000 VA |
| | | 100 V | 1 x 500 VA | 2 x 500 VA | 2 x 500 VA | 4 x 500 VA | - | - | 2 x 500 VA |
| | LED | 240 V | 1 x 500 W | 2 x 500 W | - | 4 x 500 W | - | - | 2 x 500 W |
| | | 100 V | 1 x 250 W | 2 x 250 W | - | 4 x 250 W | - | - | 2 x 250 W |
| | Compact fluorescent light with 1-10 V ballasts | 240 V | 1 x 1000 VA | 2 x 1000 VA | 2 x 1000 VA | 4 x 1000 VA | - | - | 2 x 1000 VA |
| | | 100 V | 1 x 500 VA | 2 x 500 VA | 2 x 500 VA | 4 x 500 VA | - | - | 2 x 500 VA |
| | DALI Ballast | | - | - | - | - | 4 x 16 ballasts | - | - |
| | Motors | | - | - | - | - | - | - | 500 VA |

lighting management BUS/SCS system room controllers



488 47



488 42

• Connection:

- to the detector by cord or RJ 45 cable or BUS/SCS cable BUS/SCS to be fitted with RJ 45 connector Cat.No 488 72 (p. 37)
- to the BUS/SCS directly by cord or cable to be fitted with RJ 45 / BUS/SCS connector Cat.No 488 72 (p. 37)

Can be controlled for each output by a detector and/or an individual or centralised BUS/SCS control

• Configuration with controls and detectors:

- intuitive by default - Plug n' go mode
- product customisation by touch support or by mobile configurator Cat.No 882 30 (p. 42) (via detectors) - Push n' learn mode
- via programming software Cat.No 488 80 (p. 42)

Install on false ceiling via cable ducting

| Pack | Cat.Nos | Multi-application controllers |
|------|---------|--|
| 1 | 488 47 | 2 on/off or 1-10 V dimming lighting outputs 2 electronic control box outputs for blinds or fans |













| Pack | Cat.Nos | Light dimming controllers |
|------|---------|---|
| 1 | 488 44 | For DALI protocol 4 outputs 16 ballasts maximum per output |
| 1 | 488 42 | For 1-10 V ballast 2 outputs 1000 VA maximum per output |
| 1 | 488 43 | 4 outputs 1000 VA maximum per output |
| 1 | 488 45 | For LV and ELV halogen 2 outputs 1000 W maximum per output |

| Pack | Cat.Nos | ON/OFF lighting controllers |
|------|---------|-----------------------------|
| 1 | 488 40 | 16 A on 1 output |
| 1 | 488 41 | 10 A on 2 outputs |

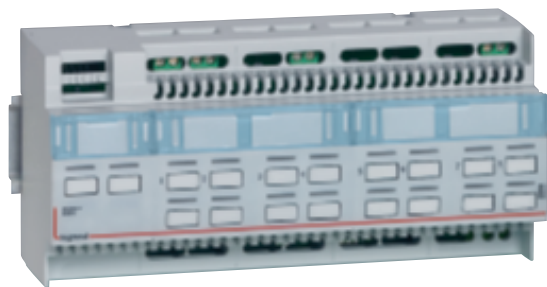
| Pack | Cat.Nos | RJ 45 doubler |
|------|---------|--|
| 10 | 488 68 | Allows the number of controller inputs to be doubled |

lighting management BUS/SCS system

dimming and actuators

| Cat.Nos | |  |  |  |  |  |  |
|----------------------------------|--|---|---|---|---|---|---|
| | | 026 33 | 026 11 | 026 12 | 026 21 | 026 22 | 026 00 |
| CHARACTERISTICS | Type of operation | ← dimming → | | | | | ON-OFF |
| | Outputs | 8 | 1 | 4 | 1 | 2 | 1 |
| | Power supply | ← 100 / 240 V → | | | | | |
| | No. of modules | 10 | 6 | 10 | 6 | 6 | 4 |
| COMPATIBILITY WITH TYPE OF LIGHT | Halogen light | 240 V | - | - | 1 x 1000 W | 2 x 400 W | 1 x 3600 W |
| | | 100 V | - | - | 1 x 500 W | 2 x 200 W | 1 x 1800 W |
| | ELV halogen with separate ferromagnetic or electromagnetic transformer | 240 V | - | - | 1 x 1000 VA | 2 x 400 VA | 1 x 3600 W |
| | | 100 V | - | - | 1 x 500 VA | 2 x 200 VA | 1 x 1800 W |
| | Fluorescent tube | 240 V | - | - | - | - | 1 x 1000 VA |
| | | 100 V | - | - | - | - | 1 x 500 VA |
| | Fluorescent light with separate ferromagnetic or electronic ballast | 240 V | - | - | - | - | 1 x 1000 VA |
| | | 100 V | - | - | - | - | 1 x 500 VA |
| | LED | 240 V | - | - | - | - | - |
| | | 100 V | - | - | - | - | - |
| | Compact fluorescent light with 1-10 V ballasts | 240 V | - | 1 x 1000 VA | 4 x 1000 VA | - | - |
| | | 100 V | - | 1 x 500 VA | 4 x 500 VA | - | - |
| | DALI Ballast | | 8 x 16 ballasts | | | | |
| Cat.Nos | |  |  |  |  |  |  |
| | | 026 01 | 026 02 | 026 04 | 038 41 | 038 42 | 038 44 |
| CHARACTERISTICS | Type of operation | ON/OFF | ON/OFF | ON/OFF | ← Multi-application → | | |
| | Outputs | 2 | 4 | 8 | 1 | 2 | 4 |
| | Power supply | ← 100 / 240 V → | | | | | |
| | No. of modules | 4 | 6 | 10 | 2 | 2 | 2 |
| COMPATIBILITY WITH TYPE OF LIGHT | Halogen light | 240 V | 2 x 3600 W | 4 x 3600 W | 8 x 3600 W | - | - |
| | | 100 V | 2 x 1800 W | 4 x 1800 W | 8 x 1800 W | - | - |
| | ELV halogen with separate ferromagnetic or electromagnetic transformer | 240 V | 2 x 3600 W | 4 x 3600 W | 8 x 3600 W | - | - |
| | | 100 V | 2 x 1800 W | 4 x 1800 W | 8 x 1800 W | - | - |
| | Fluorescent tube | 240 V | 2 x 1000 VA | 4 x 1000 VA | 8 x 1000 VA | - | - |
| | | 100 V | 2 x 500 VA | 4 x 500 VA | 8 x 500 VA | - | - |
| | Fluorescent light with separate ferromagnetic or electronic ballast | 240 V | 2 x 1000 VA | 4 x 1000 VA | 8 x 1000 VA | - | - |
| | | 100 V | 2 x 500 VA | 4 x 500 VA | 8 x 500 VA | - | - |
| | LED | 240 V | - | - | - | - | - |
| | | 100 V | - | - | - | - | - |
| | Compact fluorescent light with 1-10 V ballasts | 240 V | - | - | - | - | - |
| | | 100 V | - | - | - | - | - |
| | Motor | | - | - | 4 A x 1 output | 2 A x 2 outputs | 2 A x 4 outputs |

lighting management BUS/SCS system dimming and actuators



026 33



038 42



5739 93



035 62

Modular controllers and interfaces connected to the BUS/SCS by BUS/SCS cable. Each output is independent and can be used in conjunction with a control

Configuration with controls and detectors:

- intuitive with Cat.No 035 70 (addressing module)
- product customisation by touch support
- through programming software Cat.No 488 80 (p. 42)

| Pack | Cat.Nos | Dimming controllers |
|------|---------|---|
| 1 | 026 33 | For DALI protocol 10 x 17.5 mm DIN modules 8 outputs 16 ballasts maximum per output, frame steering |
| 1 | 026 11 | For 1-10 V ballast 1 output - 1000 VA maximum 6 x 17.5 mm DIN modules |
| 1 | 026 12 | 4 outputs - 1000 VA maximum per output 10 x 17.5 mm DIN modules |
| 1 | 026 21 | For LV and ELV halogen 6 x 17.5 mm DIN modules 1 output - 1000 W maximum |
| 1 | 026 22 | 2 outputs - 500 W maximum per output |

| Pack | Cat.Nos | ON/OFF lighting controllers |
|------|---------|--|
| 1 | 026 00 | 1 x 16 A output 4 x 17.5 mm DIN modules |
| 1 | 026 01 | 2 x 16 A outputs 4 x 17.5 mm DIN modules |
| 1 | 026 02 | 4 x 16 A outputs 6 x 17.5 mm DIN modules |
| 1 | 026 04 | 8 x 16 A outputs 10 x 17.5 mm DIN modules |

| Pack | Cat.Nos | Multi-application controllers |
|------|---------|---|
| 1 | 038 41 | NO contact For roller blinds and motors 2 x 17.5 mm DIN modules |
| 1 | 038 42 | 1 x 16 A output 2 x 6 A outputs |
| 1 | 038 44 | 4 x 6 A outputs |

| Pack | Cat.Nos | Addressing module |
|------|---------|---|
| 1 | 035 70 | To be used with controller for touch support customisation directly on the controller and the control unit 2 x 17.5 mm DIN modules |

| Pack | Cat.Nos | Konnex - BUS/SCS IP interface |
|------|---------|--|
| 1 | 5739 93 | Requires power supply unit Cat.No 035 64 To be connected to zone management unit Cat.No 026 45 For operation requires software pack Cat.No 488 81 or supervision requires Cat.No 488 82 (p. 42) 6 x 17.5 mm DIN modules |

| Pack | Cat.Nos | Zone management unit |
|------|---------|--|
| 1 | 026 45 | Includes 2 functions: - manages scenario programming (e.g. time management, lighting, presence) - IP interface, links the BUS/SCS infrastructure and the IP network Requires power supply unit Cat.No 035 64 For operation requires software pack Cat.No 488 81 or supervision requires Cat.No 488 82 (p. 42) 6 x 17.5 mm DIN modules |

| Pack | Cat.Nos | Extension gateways |
|------|---------|---|
| 1 | 035 51 | Allow the BUS/SCS to communicate with other systems Scenario module Allows scenarios to be created through link with Mosaic Cat.No 784 74, or Arteur Cat.No 5739 60 without a software tool |
| 1 | 035 63 | Konnex - BUS/SCS Allows the on/off signal to travel between a Konnex installation and the BUS/SCS installation 2 x 17.5 mm DIN modules |
| 1 | 035 53 | Wiring system - BUS/SCS Used to connect traditional wiring systems (e.g. switch, timer, external sensor) 2 independent contacts 2 x 17.5 mm DIN modules |

| Pack | Cat.Nos | BUS - BUS/SCS extension |
|------|---------|---|
| 1 | 035 62 | Used to extend a line beyond 175 products and 300 m and therefore allows product identification in the same line Needs a power supply Cat.Nos 035 60/66 2 x 17.5 mm DIN modules |

| Pack | Cat.Nos | Modular power supply units |
|------|---------|---|
| 1 | 035 60 | For BUS/SCS 240 V~ - 27 Vac - 1.2 A 8 x 17.5 mm DIN modules |
| 1 | 035 67 | 240 V~ - 27 Vac - 500 mA 2 x 17.5 mm DIN modules |
| 1 | 035 64 | For Cat.Nos 5739 93 and 026 45 240 V~ - 12 Vac - 1.2 A 6 x 17.5 mm DIN modules |

lighting management BUS/SCS system software



| Pack | Cat.Nos | Software packs |
|------|---------|---|
| 1 | 488 80 | Pack 1: - quoting software - product setup on AutoCad installation diagram - system configuration (addressing and product interlinking) |
| 1 | 488 81 | Pack 2: - quoting software - product setup on AutoCad installation diagram - system configuration (addressing and product interlinking) - use (installation monitoring and maintenance with optimised energy consumption in the building) Option of installing remote control on the PC desktop |
| 1 | 488 82 | Pack 3: - quoting software - product setup on AutoCad installation diagram - system configuration (addressing and product interlinking) - use (installation monitoring and maintenance with optimised energy consumption in the building) Option of installing remote control on the PC desktop - supervision (surveillance and remote control of the installation) |

lighting management BUS/SCS system accessories



882 35

882 30

| Pack | Cat.Nos | BUS/SCS cables |
|------|---------|--------------------|
| 1 | 492 31 | Supplied on a reel |
| 1 | 492 32 | Length 100 m |
| 1 | 492 33 | Length 500 m |
| | | Length 200 m |
| | | Halogen free |

| Pack | Cat.Nos | Mobile configurators |
|------|---------|--|
| | | All detectors are pre-set in the factory - lighting threshold: 500 lux false ceiling, 300 lux surface-mounted - time delay: 15 minutes and walkthrough function activated The mobile configurators allow the pre-adjusted settings and the detection sensitivity to be readjusted |
| 1 | 882 35 | Step programming on pre-set buttons |
| 1 | 882 30 | Digital programming to the nearest decimal place using digital screen Instant programming control Allows the settings of each detector to be displayed Option of putting adjustment settings in the memory and using them for other detectors |

| Pack | Cat.Nos | BUS/SCS connectors |
|------|---------|---|
| | | Enables the BUS/SCS to be connected to a BUS/SCS control unit |
| 10 | 492 24 | Auto terminals |
| 10 | 492 22 | Screw terminals |



lighting management Radio/ZigBee® control units and false ceiling controllers



784 44



784 49

















5738 62

Radio/ZigBee® 2.4 GHz, signal range 100 m

• Operation:

- in association with Radio/ZigBee® products - with BUS/SCS installation using BUS/SCS interface - Radio ZigBee® Cat.No 488 32 (p. 43)
To be fitted with Mosaic or Arteor plates (please refer to Legrand general catalogue)

| Pack | Cat.Nos | Wireless wall controls |
|------|-------------------|---|
| | | Powered by 3V CR 2032 lithium batteries, supplied Supplied with support, directly mounted on the wall without flush-mounting box 2 modules |
| | | Lighting control ON/OFF 1 way |
| | | Allows 1 Radio/ZigBee® product to be controlled (e.g. 1 controller) |
| 1 | Mosaic 784 43 | ○ White |
| 1 | 791 43 | ● Aluminium |
| | |  |
| 1 | Arteor 5738 34 | ○ White |
| 1 | 5738 35 | ● Black |
| | |  |
| | | Lighting control ON/OFF 2 way |
| | | Allows 2 Radio/ZigBee® products to be controlled (e.g. 1 controller and a 240 V~ control unit) |
| 1 | Mosaic 784 44 | ○ White |
| 1 | 791 44 | ● Aluminium |
| | |  |
| 1 | Arteor 5738 36 | ○ White |
| 1 | 5738 37 | ● Black |
| | |  |
| | | Lighting dimming controls 1 way |
| | | Allows 1 Radio/ZigBee® DALI, 1-10 V, LV and ELV halogen control unit to be controlled |
| 1 | Mosaic 784 09 | ○ White |
| 1 | 791 09 | ● Aluminium |
| | |  |
| 1 | Arteor 5738 38 | ○ White |
| 1 | 5738 39 | ● Black |
| | |  |
| | | Roller blind controls |
| 1 | Mosaic 784 28 | ○ White |
| 1 | 791 28 | ● Aluminium |
| | |  |
| 1 | Arteor 5738 42 | ○ White |
| 1 | 5738 43 | ● Black |
| | |  |

| Pack | Cat.Nos | Wireless wall controls (continued) |
|------|-------------------|---|
| | | 4 scenario controls |
| | | Allow 4 scenarios to be managed using 4 buttons Example: e.g. lighting level adjustment, lighting control with openings...as well as normal cut off |
| 1 | Mosaic 784 49 | ○ White |
| 1 | 791 49 | ● Aluminium |
| | |  |
| 1 | Arteor 5738 48 | ○ White |
| 1 | 5738 49 | ● Black |
| | |  |
| | | 240 V~ switches |
| | | Transmitter/receiver switches For installation in flush-mounting box with depth of 50 mm recommended (p. XXX) 2 modules |
| | | Switches ON/OFF 1 way |
| | | With LED to see output control status Max. load: 1 x 2500 W |
| 1 | Mosaic 784 47 | ○ White |
| 1 | 791 47 | ● Aluminium |
| | |  |
| 1 | Arteor 5738 22 | ○ White |
| 1 | 5738 23 | ● Black |
| | |  |
| | | Switches ON/OFF 2 way |
| | | With LED to see output control status Max. load: 2 x 1000 W |
| 1 | Mosaic 784 48 | ○ White |
| 1 | 791 48 | ● Aluminium |
| | |  |
| 1 | Arteor 5738 24 | ○ White |
| 1 | 5738 25 | ● Black |
| | |  |
| | | Controllers for dimming |
| | | For 1-10 V ballast |
| 1 | 5738 66 | 1 output - 500 VA |
| | | For LV and ELV halogen |
| 1 | 5738 64 | 1 output - 600 W |
| | | On/off lighting controller |
| 1 | 5738 62 | 1 output - 2500 W |
| | | BUS/SCS interface - Radio/ZigBee® |
| | | Used to link a BUS/SCS installation and an additional Radio/ZigBee® installation BUS/SCS interface - Radio/ZigBee® Installs on false ceiling |
| 1 | 488 32 | |
| | | Repeater |
| 1 | 488 37 | Used to increase the receiving distance from the radio signal Power supply 240 V~ |

lighting management Radio/ZigBee® detectors and remote control units



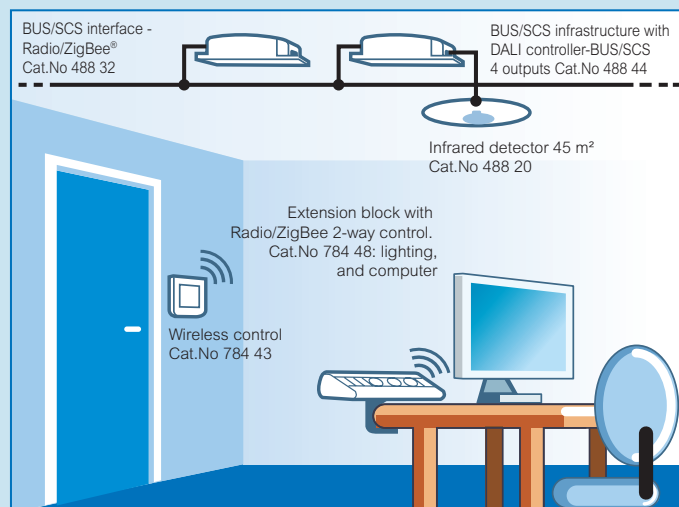
488 14

882 32

| Pack | Cat.Nos | Infrared 230 V~ detector switches |
|------|---------|--|
| 1 | 488 35 | <p>Power supply 230 V~ Recommended fixing height: 2.50 m</p> <p>Detection field 90 m²</p> <p>Ø 11 m</p> <p>Dual ceiling mount detector 360° This dual technology allows accurate presence detection from the point where the signal given by the detector is interrupted (e.g. : hand movement on a keyboard)</p> <p>Fixed directly to a false ceiling with mounting claws (provided) or in Batibox flush-mounting box with depth of 50 mm (please refer to Legrand general catalogue) Optimum distance between 2 detectors: 10 m</p> |
| 1 | 488 14 | <p>Detection field 180 m²</p> <p>Maximum range 15 m - IP 55</p> <p>PIR surface mount detector 270° Dual side detection specially adapted for long narrow areas (e.g. corridors)</p> |
| 1 | 488 31 | <p>Battery-powered infrared detector</p> <p>Powered by two 1.5 V LR 03 alkaline batteries (supplied) Recommended fixing height: 2.50 m</p> <p>Detection field 180 m²</p> <p>Ø 15 m - IP 55</p> <p>PIR surface mount detector 270° Dual detection specially adapted for long narrow areas (e.g. corridors)</p> |
| 1 | 882 31 | <p>Remote control devices</p> <p>4 scenario controls</p> <p>4 buttons allowing 1 scenario to be managed per button Example: lighting level adjustment, lighting control with openings... in the same way as normal cut off</p> <p>IR control Powered by two 1.5 V LR 03 alkaline batteries (supplied)</p> |
| 1 | 882 32 | <p>IR/RF control Powered by two 1.5 V LR 03 alkaline batteries (supplied)</p> |

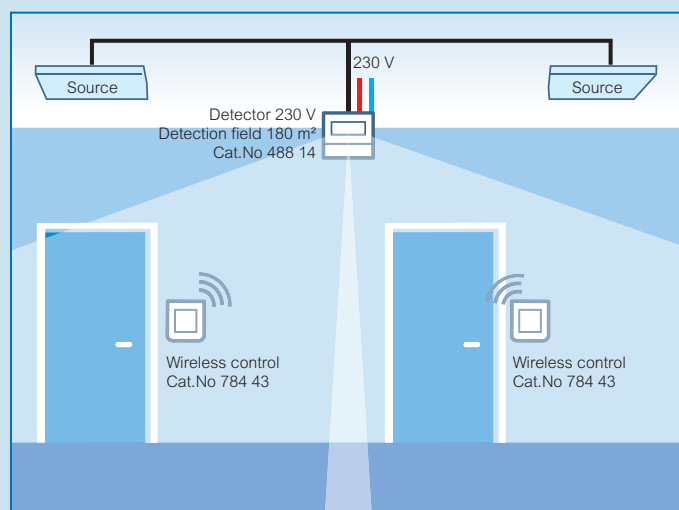
lighting management Radio/ZigBee® detectors and remote control units

■ Use case No 1: also using a BUS/SCS infrastructure



Where an office is fitted out completely in glass and the BUS/SCS cannot drop vertically, a wireless Radio/ZigBee® control unit can be installed at the door. At the same time in the extension block, a 230 V Radio/ZigBee® control unit will allow office lighting to be controlled and will allow this to be switched on and off from the PC

■ Use case No 2: using only Radio/ZigBee®



The new thermal regulation recommendations are that a manual on-switch and an automatic cut-off will provide an even bigger saving (55%)

In a building renovation for example, if a large area is fitted with self-contained presence detectors but the vertical connection cannot be made with its control points, Radio/ZigBee® wireless control units will be installed

GLOSSARY

ADDRESSING

Process at the end of which the products in a system are individually recognised and identified. Addressing can be carried out in various different ways (configurator, virtual configuration, automatic addressing, etc.).

ADDRESS MODULE

In Push n' learn addressing mode, this product is used to assign one or more addresses to certain components in the system so that they can communicate with one another. This module is not essential if the installation is created using a software tool

ARTIFICIAL LIGHT

Light produced by electric lights

ASTRONOMICAL CONTROL

A method of calculating dusk/sunset and dawn/sunrise times that change with the seasons of the year, based on global latitude/longitude position. This method can be used instead of photocell control as a basis for on/off control of exterior lighting.

AUDIBLE WARNING

An automated method of warning occupants of impending lighting shut-off by sounding a tone. Sometimes referred to as "beep warning."

AUTO ON/OFF

A control strategy used with occupancy sensors, turning lights on and off automatically. Off when an area is unoccupied and on whenever occupancy is detected. Also called 'occupancy mode'

AUTOMATIC SHUTOFF

A scheduled shutdown of lighting by a lighting control system.

AUXILIARY INPUT

Connector enabling an override command to be sent to a product.

BACKBONE

LAN (IP) used to link several branches of the SCS network to one another via zone controllers.

BACNET

Communication protocol. BACnet, acronym for Building Automation & Control networks. BACnet is a registered trademark owned by the ASHRAE association.

BALLAST

Component of a luminaire that is used to control the lamp.

BI-LEVEL SWITCHING

A control strategy that focuses on switching individual lamps within a luminaire, or groups of luminaires to achieve a reduced, balanced lighting level.

BISTABLE RELAY

Latching contact which does not require a permanent holding voltage.

BLINK WARNING

An automated method of warning occupants of an impending shut-off of lighting by blinking lights. Sometimes referred to as "flick warning."

BMS/BAS

Building management system/building automation system

BUS

The bus is defined by the combination of a communication protocol and a transmission medium. It is a means of transporting and exchanging data, information and commands. It can be physical (cable) or non-physical (radio or IR).

BUS TOPOLOGY

All devices are connected to a central cable, called the bus or backbone. Bus networks are relatively inexpensive and easy to install for small networks. Ethernet systems use a bus topology

CENTRAL/CENTRALIZED CONTROL

A control method where the system control is located in one central location. Usually all control commands come from this location and wiring connections originate at this location.

CLOSED LOOP SYSTEM

A daylighting control system that measures and uses data on the total light level from all sources (i.e. natural and artificial light levels) in the controlled area to adjust artificial lighting levels.

COMMISSIONING TOOL

Device for assigning operating characteristics to the various products in the offer.

CONFIGURATION MODE

Products have a default operating mode. This can be adapted: thumbwheels or configuration tools or software.

CONSTANT SETPOINT

Use of a single setpoint for daylighting controls. As daylight increases or decreases, the control attempts to maintain this setpoint.

GLOSSARY

CONTINUOUS DIMMING

Lighting control method that is capable of varying the light output of lamps over a continuous range from maximum to minimum output (also referred to as 'dimming').

CONTROL GROUP OR ZONE

See 'zone'

CONTROL SCENARIO

A pre-programmed control strategy usually designed for common commercial or industrial applications.

COVERAGE PATTERN

The shape and size of an area throughout which occupancy is detectable by a sensor. The pattern is determined by the technology, the lens design (if applicable) and the mounting position of the sensor.

DAISY CHAIN, OR LINEAR, TOPOLOGY

A method of wiring devices where the wire runs in a straight line from one device to another.

DAYLIGHT

Light produced by solar radiation. This includes daylight components such as sunlight scattered by the atmosphere, light reflected from the ground and light reflected from interior surfaces of a building.

DAYLIGHT FACTOR

Ratio of daylight illumination on a horizontal point indoors to the horizontal illumination outdoors, expressed as a percentage, excluding direct sunlight.

DAYLIGHTING CONTROL

A lighting control method that changes the amount of light provided by lighting fixtures as the contribution of ambient sunlight changes.

DEADBAND

In daylighting control, a control margin above and/or below a fixed setpoint in which minute variations in light levels (footcandles) will not trigger an ON or OFF response from the daylighting controller. This prevents lamp cycling.

DEFAULT SETTING

Default product setting covering the most common uses.

DIMMING

See 'continuous dimming'

DISTRIBUTED CONTROL

Where control for a device is located at or near the item being controlled. This is the opposite of centralized control. The benefits of this approach are often better modularity, convenience and reduced wiring costs.

DOPPLER PRINCIPLE

The apparent change of frequency of sound or light waves varying with the relative velocity of the source and the observer. This is used by ultrasonic sensors to detect occupancy.

DOUBLE CONNECTOR

Accessory enabling two RJ45 connectors to be connected on one input.

DRY CONTACT CLOSURE

Any pair of contacts that carry no live voltage.

DUAL TECHNOLOGY

The Legrand group has invented and patented Dual Technology to combine the best of both PIR and Active technologies. PIR and Active sensors provide optimum control for many areas, as some applications can be a problem for single technology products. Our Dual Tech sensors ensure maximum sensitivity and coverage in tough applications, providing optimum reliability and energy savings.

EGRESS TIME DELAY

A time delay specifically designed to keep lighting ON for a period of time after a control signal would otherwise have shut the lighting OFF, thereby providing illumination for occupants as they leave a building.

EIB/KONNEX/KNX

Communication protocol for building control, from the EIB (European Installation Bus) protocol.

Konnex and KNX are registered trademarks owned by the Konnex association.

ELECTRICALLY HELD

Describes a type of switching device, contactor or relay which requires a constant electrical supply to maintain or hold it in ON or OFF state.

ELECTRONIC DIMMING BALLAST

A variable output electronic fluorescent ballast.

FADE RATE

The speed at which the output of lighting decreases in response to a control signal (also referred to as 'dimming rate'). The corresponding rate of increase in light output is referred to as 'ramp rate'.

FALSE TRIGGER

The erroneous switching of lighting by a sensor either in the presence or absence of occupancy, often due to poor placement, product selection or adjustment.

FAST CONNECT

Electrical connection system for products which saves time (no tools required), is simple to use and foolproof, and ensures high quality, appropriate connections.

FOOTCANDLE (FC)

A standard measurement of illumination, which represents the amount of illuminance over a one foot square surface on which there is a uniformly distributed flux of one lumen. The metric unit is the Lux (one fc = 10.764 lux).

FREE TOPOLOGY

A method of wiring devices that allows connections, wire runs and branching in any location and in any direction without compromising the reliability of the dataline communications.

FRESNEL LENS

The (Fresnel) lens is the faceted plastic optical component used to split the infrared ray by diffraction.

Detection by the system occurs when someone breaks several of these rays.

IP

Acronym for Internet Protocol. The IP address gives a product connected to the network an individual identification.

LAMP EFFICACY

The ratio of a lamp's light output to the electrical input power, expressed in lumens per watt (LPW).

LIGHT LEVEL THRESHOLD

Light level that is set at the factory or by the installer/user below which the measurement by the light level cell will trigger switching on of the light load.

LIGHT METER

An instrument, generally handheld, that is used for measuring light levels.

LIGHT SHELF

Horizontal architectural element positioned above eye level to reflect daylight onto the ceiling and into the area.

LINEAR TOPOLOGY

See 'topology'

LINE VOLTAGE

The AC supply voltage that provides the prime source of electrical power for a facility. Typically 120 or 277 volts AC, at 60 hertz in North America. In Europe, the line voltage is nominally specified as 240 volts AC, at 50 hertz.

LOOP TOPOLOGY

See 'topology'

LOW VOLTAGE

A stepped-down supply voltage, often 24 VDC, used to power devices such as sensors.

LOW VOLTAGE SWITCH

A switch capable of switching a remote device, such as a relay, by means of a low voltage signal.

LUMEN (LM)

Basic metric unit of luminous flux, or quantity of light.

LUMEN MAINTENANCE

An energy saving lighting control strategy which focuses on maintaining an even level of illumination throughout the lifespan of lamps. It relies on reducing initial light levels at the outset of the lifespan and gradually increasing light levels as lamps age.

LUMINAIRE

A complete lighting unit consisting of a lamp and ballast(s) (when applicable) together with the parts designed to distribute the light, to position and protect the lamps, and to connect the lamps to the power supply.

LUMINOUS FLUX

Value derived from the energy flux.

LUX (LX)

Metric unit of illuminance. One lux is one lumen per square metre and equals 0.0929 footcandles.

MAC ADDRESS

English acronym used to refer to the unique physical address given to each product connected to an IP network. This address, which is coded on 6 bytes, enables each product to be precisely identified. It is made up of a manufacturer ID part (00 04 74 for Legrand) followed by an order number (from 00 0000 to FFFFFF) in hexadecimal.

MANUAL ON/AUTO OFF

An energy saving lighting control strategy requiring an occupant to manually activate the lights. Required for selected applications under California Title 24 2005. Also called vacancy mode

MANUAL OVERRIDE

A control feature allowing occupants to temporarily select lighting levels other than those programmed.

MECHANICALLY HELD (ALSO CALLED LATCHING)

Describes a type of switching device, contactor or relay that requires a momentary electrical signal to change the switch from one ON/OFF state to the other. After the state change, power is no longer required to keep it in the ON or OFF state.

GLOSSARY

MEMORY BACKUP

The capacity of a lighting controller to retain programming information and restore lights to an appropriate state following a power failure.

MINIMUM LOAD REQUIREMENT

The minimum electrical load required by certain devices to ensure proper operation.

MOTION SENSOR

A device controlling outdoor lighting systems that automatically turns lights off soon after an area has been vacated. When the device is used to control indoor lighting systems, it is termed an occupant sensor, occupancy sensor or occupant-sensing device.

NATURAL LIGHT/ARTIFICIAL LIGHT

A distinction is made between natural light from the sun and artificial light provided by lighting loads.

NETWORKING, NETWORK COMMUNICATION

A type of communication between lighting control panels and devices where electronic information is transmitted and received, usually over a pair of wires.

NORMALLY CLOSED

A relay or contactor whose manufactured design is to be closed in the resting state.

NORMALLY OPEN

A relay or contactor whose manufactured design is to be open in the resting state.

OCCUPANCY EMULATION

Ability to capture lighting usage over a specified period of time and repeat it, in order to simulate the effect of occupancy.

OCCUPANCY SENSOR

A device that switches light on and off, or dims and brightens lights, based on the presence or absence of people.

OCCUPIED/UNOCCUPIED

Strategy where control scenarios are based on whether a facility or specific facility or specific area within the facility is operating during normal business hours when occupants are in the facility, or a specific area within the facility is operating during normal business hours when occupancy is very low (Unoccupied). Sometimes called normal hours/after hours.

OFF DELAY

In daylighting control, the time interval between when the light level sensor detects an adequate level of light and when the controlled lights actually switch off. This interval prevents controlled lights from cycling on and off in response to transient light levels (i.e. lightning flashes, car headlights, glare, etc.).

ON DELAY

In daylighting control, the time interval between when the light level sensor detects an inadequate level of light and when the controlled lights actually switch on. This interval prevents false triggering, such as would occur with transient cloud cover.

OPEN LOOP SYSTEM

A daylighting control system that measures daylight only, in order to adjust artificial lighting levels.

OPENWEBNET

Proprietary communication protocol over IP accessible to all by means of a user community.

OVERLAPPING ZONES

Process consisting of defining the location of sensors in an area in such a way that their respective effective detection fields overlap. The purpose of this is to ensure that no zone is not covered and/or to provide the user with continuity of detection (example: the user moves from one lit zone covered by a sensor to another detection zone without having to pass through an unlit zone).

PIR/IR

This detects the difference between heat emitted from the human body in motion and the background area. It requires a clear line-of-sight or unobstructed view to detect movements and make 100% cut-off possible. This is most effective detecting large movements (i.e. walking) and works best with movement across the sensor.

PANIC MODE

An operational mode that causes selected lights to flash ON/OFF indicating that there is a panic situation.

PHOTOCELL

A device that senses the level of light, usually for the purpose of controlling internal or external lighting.

PHOTOCELL LOCKOUT

A control operation that keeps lighting off or "locks out" lighting because a photocell detects an adequate sunlight contribution.

PHOTOMETER

An instrument for measuring light intensity and distribution.

PHOTOPIC CURVE

A graphical representation of the visual sensitivity of the human eye under daylight, or bright light, conditions.

PHOTOSENSITIVE CONTROLS

ON/OFF or dimming control devices that sense levels of daylight and adjust artificial lighting levels, based on the adequacy of the available daylight.

PHOTOSENSOR

A self-contained daylighting control device that contains a photocell as well as the control logic component.

PILOT CONTACT

A switch that monitors the operation of a device in order to provide information on status of the device to a system or to monitoring apparatus. Also, a switch that directs the operation of another device.

PLENUM

A ceiling compartment or chamber to which one or more air ducts are connected and that forms part of the air distribution system.

PLUG N' GO

Setup mode for the Room Controller unit, consisting by default of adopting a factory-defined operating mode which corresponds to the majority of applications. This configuration is carried out each time the unit is switched on and only concerns products that have not yet been configured.

PUSH & LEARN

Tool-free method for addressing products. Using a learn button on the products, they can be combined and made to work together.

POWER SUPPLY

A transformer or power conditioning circuit designed to provide the correct operating voltage for devices such as sensors, panels, etc.

PRESET

See 'scene'

PROTOCOL

"Language" used by the elements of a network. It defines the communication rules that will be used for exchanging messages between products. There are many different protocols which are not all compatible with one another. To make two products using different protocols communicate with one another, gateways must be used which act as "translators" from one language to the other.

RAMP RATE

The speed at which the output of lighting increases or decreases in response to a control signal.

RECONFIGURATION

Reconfiguration of the operation of products, corresponding to a change in the work practices or requirements of the users of the areas.

REMOTE CONTROL

Product for controlling a function remotely. The remote control can be infrared, radio, or use the medium of the bus.

RETRIGGER

When "Retrigger" mode is activated, if the light goes out as a result of the occupant not moving during the time delay, any new detection within a period of 3 minutes after it went out will trigger the light to automatically switch on again.

RESET (FACTORY MODE)

Operation in which the product is returned to the standard factory settings.

RF CONTROL

Radio frequency control. Systems that use RF communication to propagate control messages between devices and/or throughout the system.

RFI

Radio frequency interference. Interference on the radio frequency band caused by other frequency-generating equipment or devices in the immediate area.

RING, OR LOOP, TOPOLOGY

Another type of daisy chain topology in which all devices are connected to one another in the shape of a closed loop, so that each device is connected directly to two other devices, one on either side of it.

RJ 45

Connection plug format from the world of telecommunications. It used used for quick, reliable, safe connection for low voltages.

ROOM CONTROLLER

A transformer and high current relay designed to provide the correct operating voltage (usually 24 VDC) to devices such as sensors.

SCCR

Short-circuit current rating.

SCENE

Light level settings established for a particular task that can be recalled by a dimming controller. Also referred to as 'preset'.

SCENE CONTROL

A control capability that uses dimming controllers to provide quick access to several different preset lighting settings.

SCHEDULING

An energy-saving lighting control strategy that employs time-based intervals at which lighting is automatically turned ON or OFF, such as time of day and day of the week.

SCS

Acronym for Simplified Cabling System. Name of the proprietary protocol used on the Legrand wired bus.

GLOSSARY

SENSITIVITY

Precision of the sensor. Depending on the detection technology used, it is possible to set the precision of the product, i.e. to detect a close or distant object, or to exclude detection beyond a certain distance. (Example: I want the light to come on when I walk down the corridor, but there is no need for it to come on when someone moves around in the office that is a continuation of this corridor).

SETPPOINT

User-defined thresholds for when control events will occur (i.e. light level parameters, time delays).

SHUTOFF/SWEEP OFF

A lighting control event that is intended to shut off lighting. Particularly designed for turning off lighting that has been left on and is not needed. Sometimes this event can be repeated at regular intervals to turn lighting OFF that may have been left ON.

SPATIAL SENSITIVITY

Description of how a photosensor reacts to light striking it from different angles.

SPECULAR SURFACE

Surface from which reflection is predominantly directional. Specular surfaces are mirror-like or shiny, as opposed to blurred.

STAR TOPOLOGY

See 'topology'

STATUS LED

A light emitting diode that provides a visual indication of the state of a device.

SUSTAINABILITY

Efficient design practices that minimize construction-related impacts on the environment and decrease the ongoing demand for natural resources.

TCP/IP CONNECTIVITY

Data communication using Transmission Control Protocol/Internet Protocol, the suite of communication protocols used to connect hosts on the Internet.

TERMINAL WIRING

A space and time-saving method of making electrical connections.

TIME DELAY

A period of time when a load is energized or de-energized. At the end of the required time period the load changes state (i.e. ON or OFF).

TIME OUT SWITCH

An electronic or electromechanical control used to automatically turn lighting off at the end of a preset interval.

TOPLIGHTING

Daylight provided by skylights.

TOPOLOGY

The method in which nodes of a network are connected by links. When a certain topology is specified, correct wiring is essential to ensure reliable signals reach all devices. The following topologies are used in lighting control applications:

STAR TOPOLOGY

All devices are connected to a central hub.

TREE TOPOLOGY

Type of network topology in which a node is connected to one or more other nodes that are one level lower in the hierarchy.

TRUE OVERRIDE TIME PERIOD

A timed override of lighting that begins timing from the moment an occupant initiates the override until the override time expires. This is in contrast to an override that only continues until the next scheduled system event.

TUNING

An energy saving lighting control strategy in which the light output of an individual fixture or group of fixtures is adjusted to provide the correct amount of light for a local task.

USB INTERFACE

Connection for serial transfer of settings or data from one product to another using the USB protocol. The connectors can be type A or type B ("mini USB") and male or female.

ULTRASONIC

This type of detection works by transmitting a high frequency signal throughout an area and measuring the speed at which it returns. Movements by occupants change the frequency, resulting in occupancy detection. They do not require clear line-of-sight, are most effective detecting minor movements (i.e. arm movement), and work best with movements toward the sensor.

UNIVERSAL DIMMING

Dimmers that can operate a wide range of light sources, including incandescent, low voltage, neon, cold cathode and fluorescent loads.

Required for certain residential applications under California Title 24.

VIRTUAL CONFIGURATION

This is an expert setting mode that consists of assigning addresses and particular types of behaviour to products or groups of products.

Virtual configuration requires the use of software tools.

WALKTHROUGH

Function available on motion sensors. If the function is activated and presence is detected for a period of less than 3 minutes, the switch-off takes place quickly. After three minutes, if the detection is confirmed, the normal time delay chosen by the user starts.

WATERTIGHT

Constructed so that moisture will not enter the enclosure under specified test conditions. See IP level chart.

WEATHERPROOF

Constructed or protected so that exposure to the weather will not interfere with successful operation. See IP level chart.

ZERO CROSS SWITCHING

A technique used by switching devices, relays, contactors, etc., that reduces wear and increases service life by switching the instant the AC voltage is zero.

ZIGBEE

Communication protocol using radio as the medium in the 2.4 GHz licence-exempt frequency band. ZigBee is a registered trademark owned by the ZigBee Alliance association.

ZONE


Geographical location inside which one or more control groups are located.

ZONE CONTROL

The ability to assign different fixtures to separate control groups, which have different lighting control objectives, for the purposes of lighting control. This accommodates different types of tasks as well as areas with different characteristics.



**World Headquarters
and International Department**
87045 Limoges Cedex - France

 : + 33 (0) 5 55 06 87 87
Fax : + 33 (0) 5 55 06 74 55