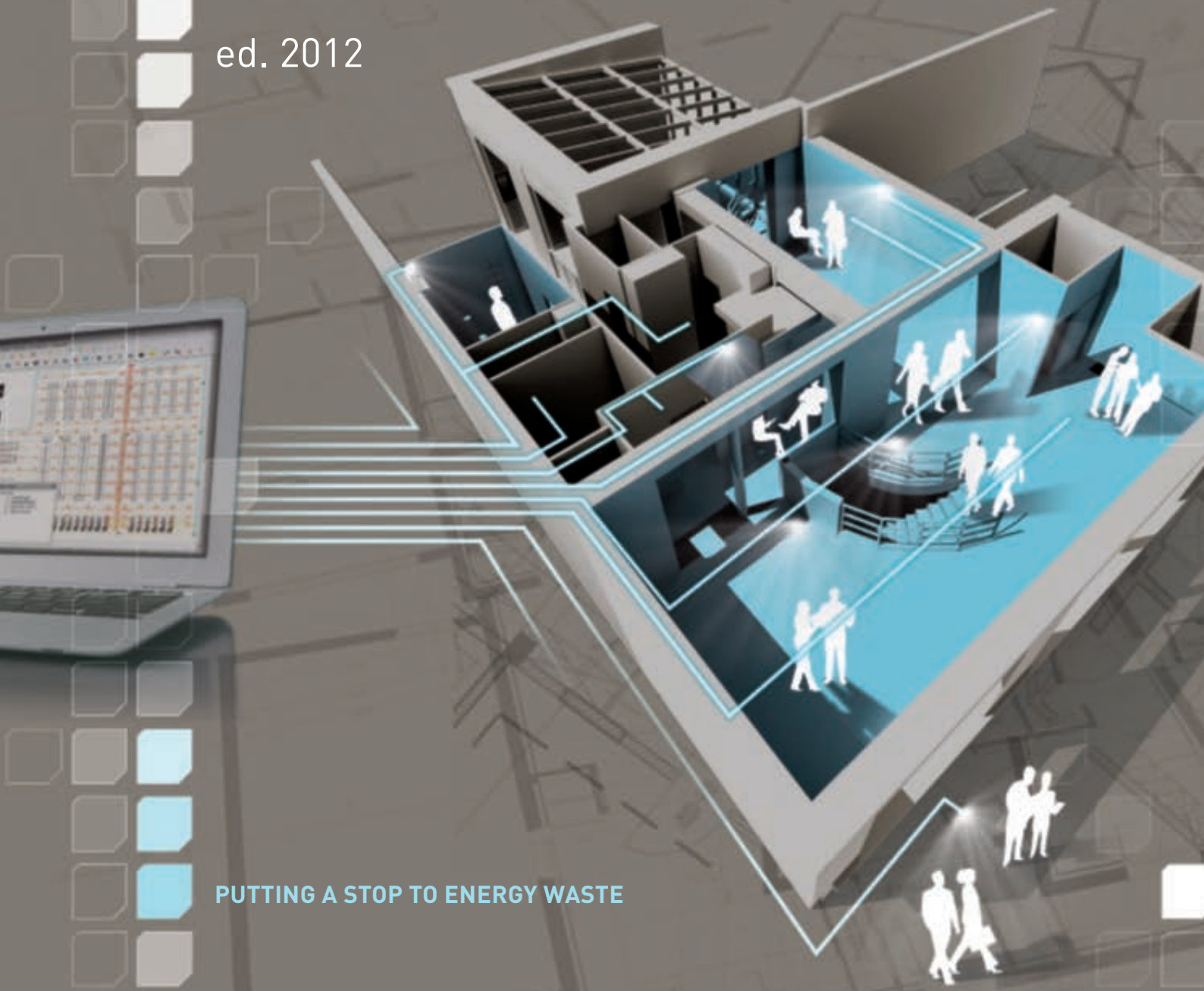
Lighting Management Solutions

Switch sensors & KNX

ed. 2012



PUTTING A STOP TO ENERGY WASTE

legrand®

Putting a stop to energy waste

CONTENTS

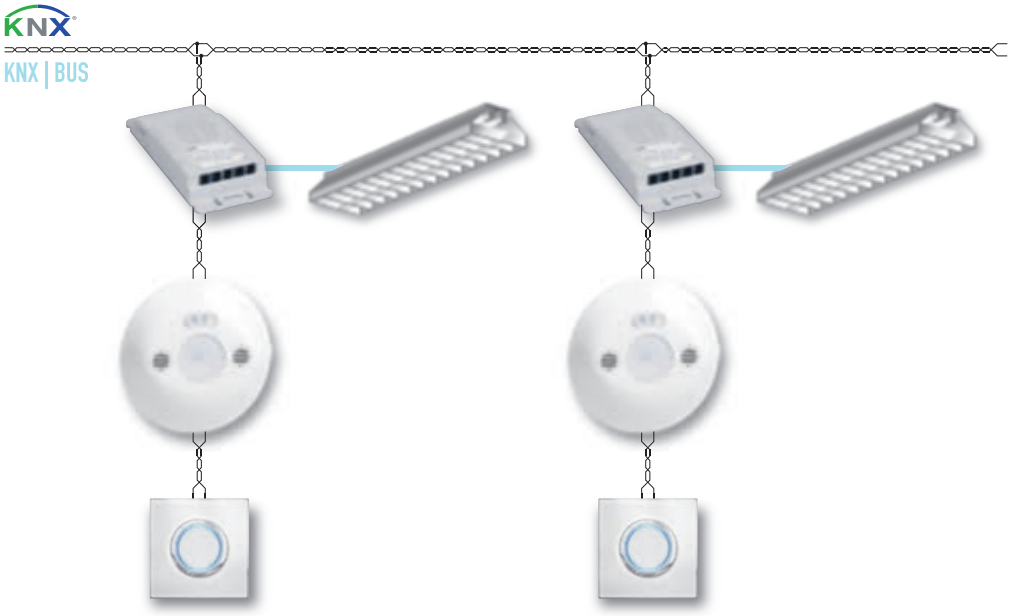
Our vision at Legrand is to provide products and services that make buildings more energy-efficient.
We are committed to ‘put a stop to energy waste’.

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

KNX systems



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 that 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

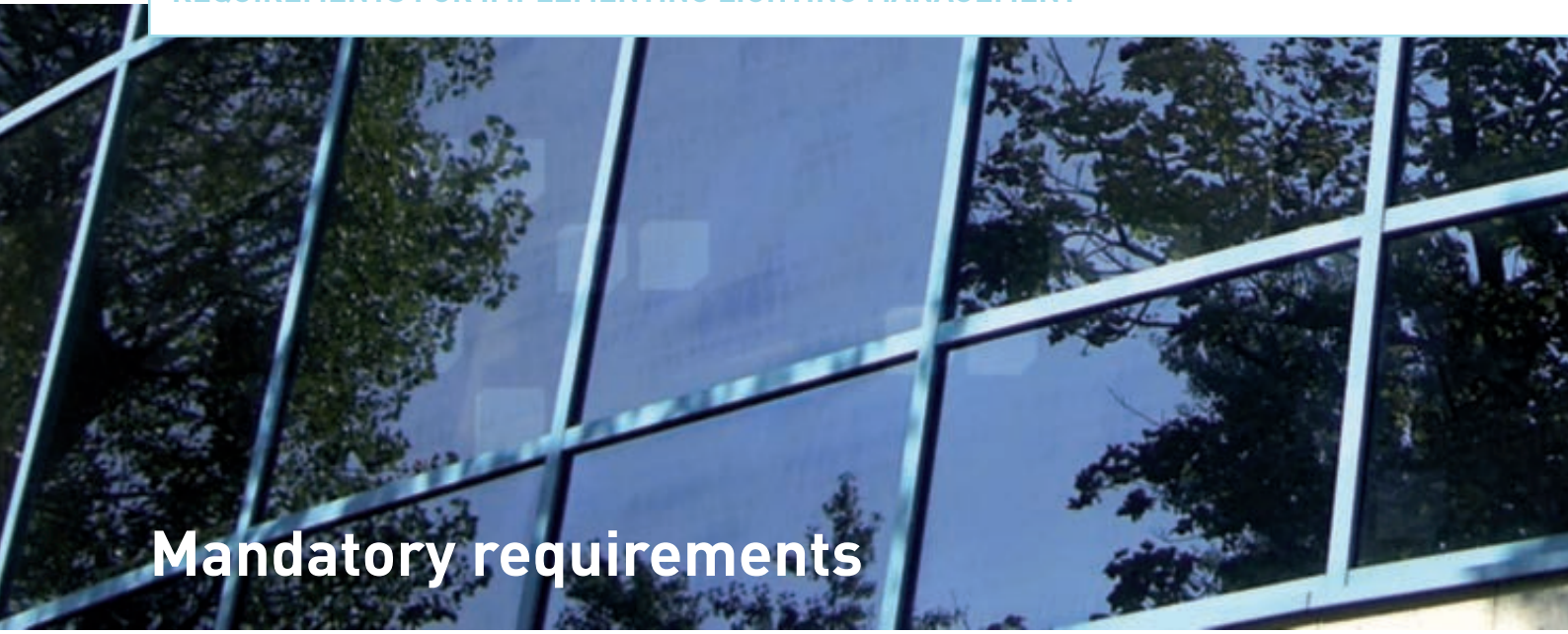
In all developed countries, as well as in a growing number of developing countries, governments are adopting regulations and standards to improve the energy performance of buildings.

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 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.

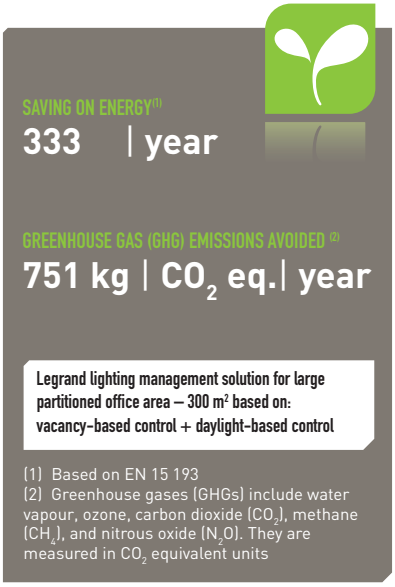
This is a recognised reference that contributes to building Legrand's rightful position on the energy efficiency market.

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.



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

Note: A vehicle with an average consumption of 4.5 l/100 km emits 11.8 kg of CO_2/100 km, i.e. 0.118 g of CO_2/km

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.

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 manually 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

KNX 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 KNX. The installation is configured with ETS software.

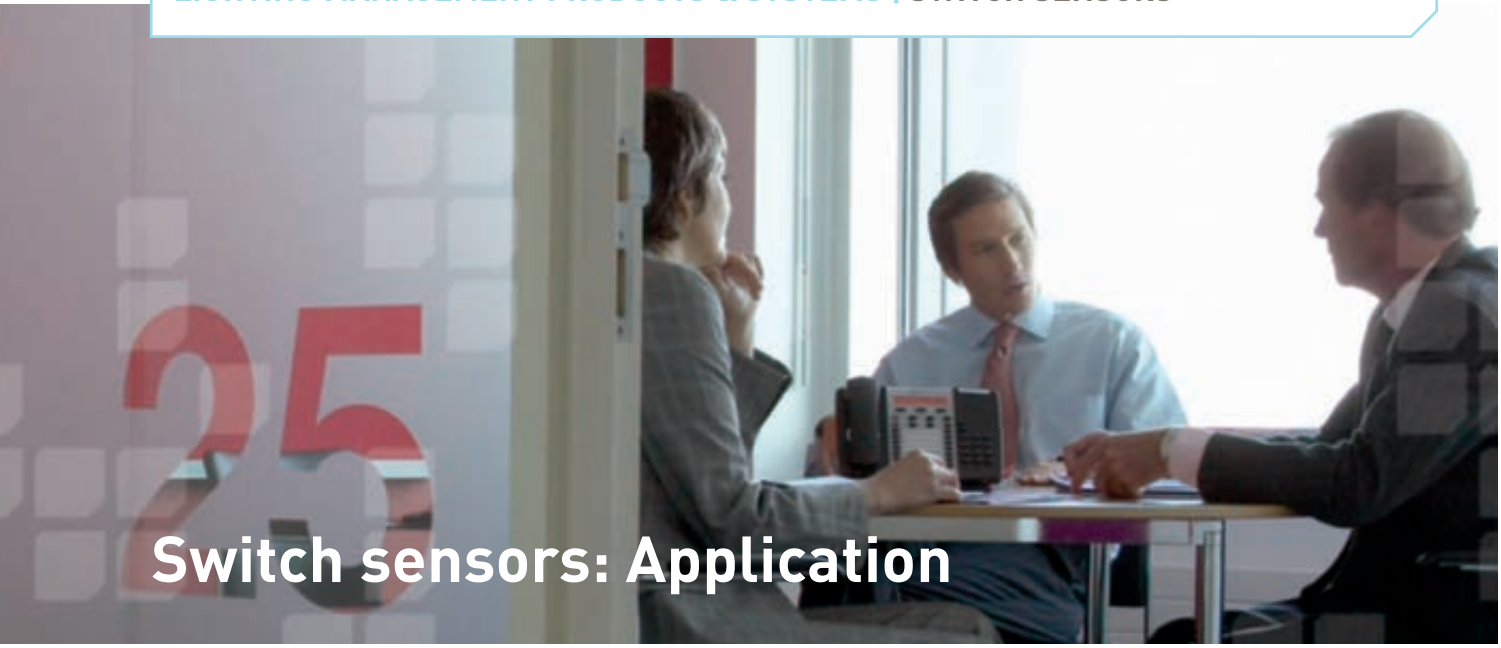

Control


Sensor


Room controller

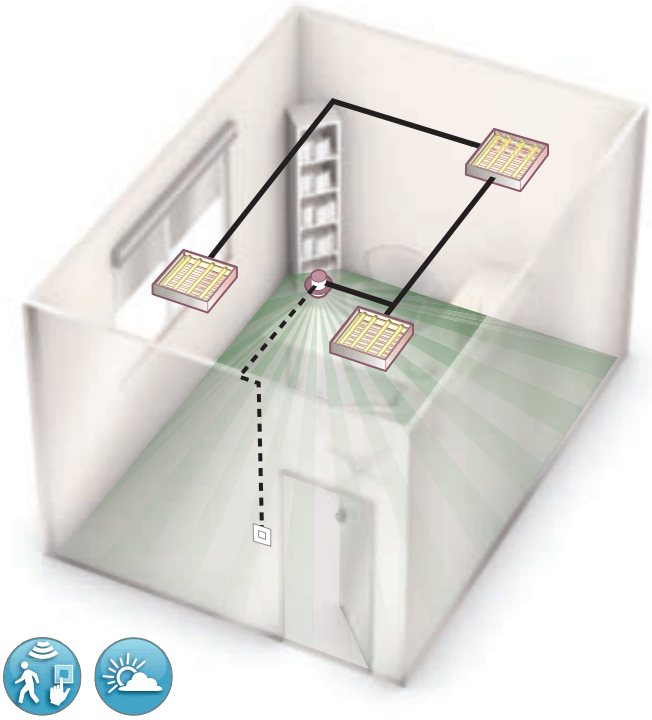

Dimmer

Software



Switch sensors: Application

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 is small. This sensor is supplied 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

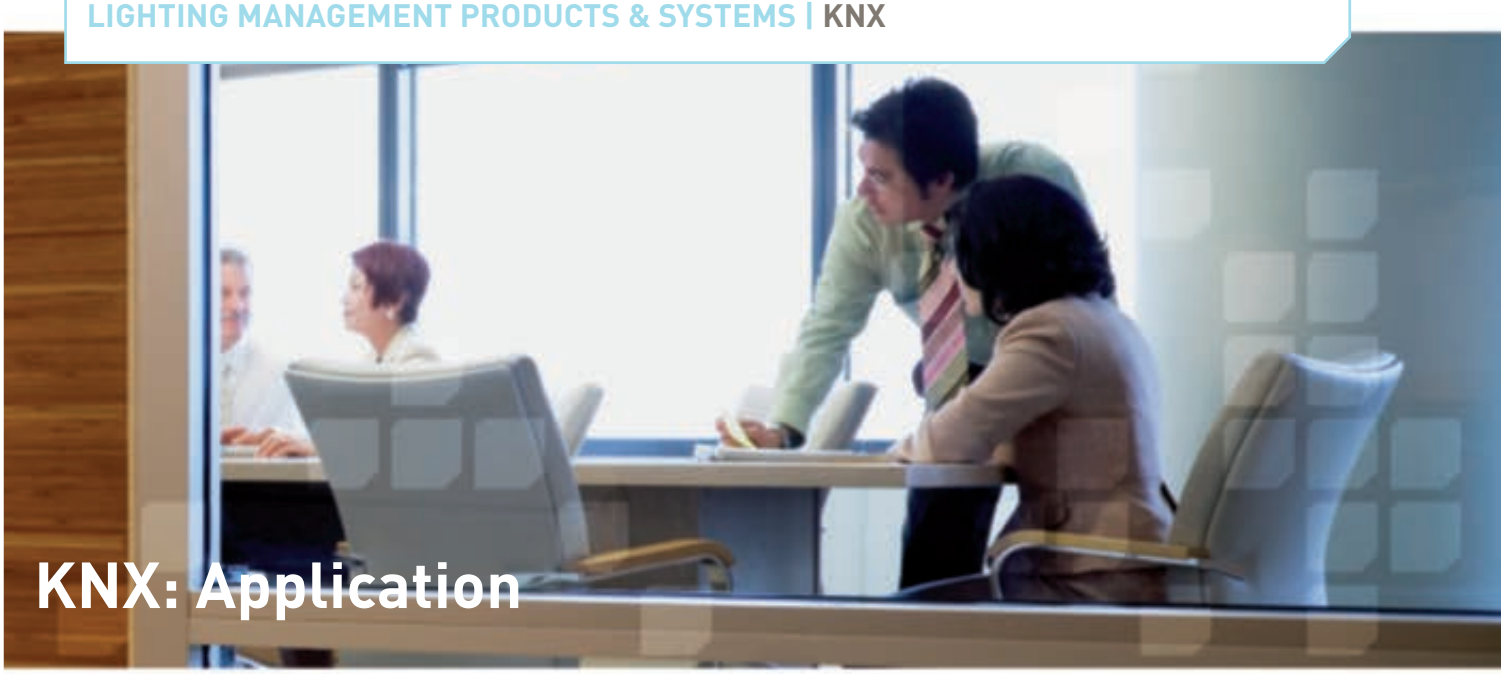
SAVING ON ENERGY(1)
300 | year

GREENHOUSE GAS (GHG) EMISSIONS AVOIDED (2)
660 kg | CO_2 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 (CO_2), methane (CH_4), and nitrous oxide (N_2O). They are measured in CO_2 equivalent units

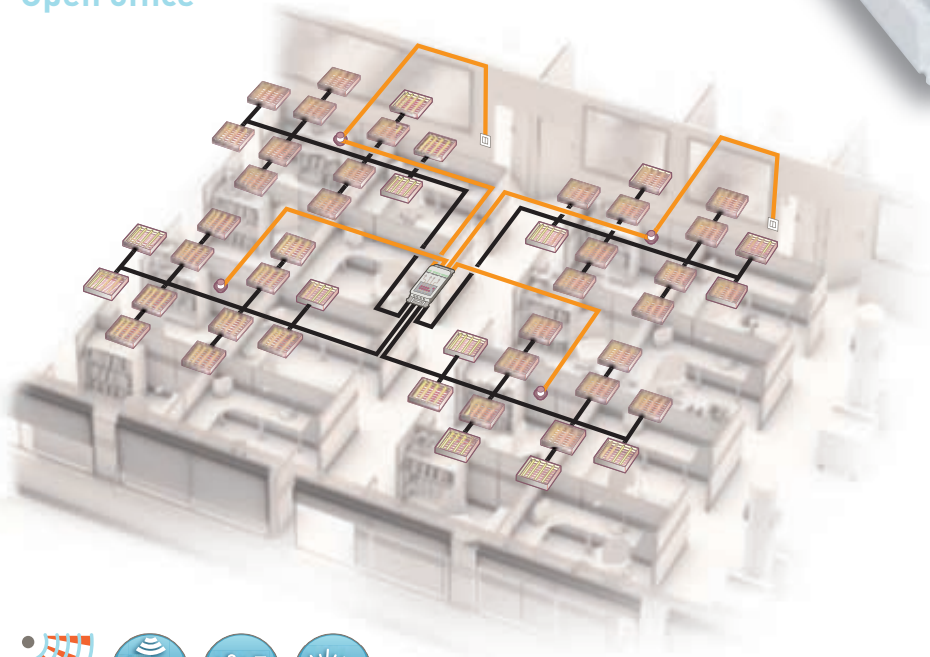
Note: A vehicle with an average consumption of 4.5 l/100 km emits 11.8 kg of CO_2/100 km, i.e. 0.118 g of CO_2/km

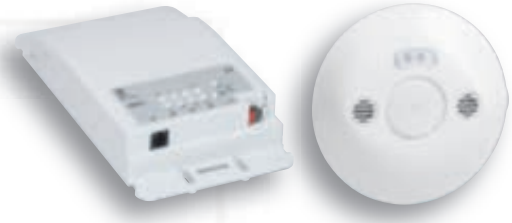


KNX: Application

Solution & application

Open office





Cat.No 488 64 Cat.No 488 22

Lights are manually turned ON by pressing the 2 ways light command located at the entrance of each zone. The Cat.No 488 22 dual tech sensor covers 90 m² and assures adequate coverage (through partitions). Each zone is divided in 2 parts. Close to the windows and far to windows. Each part is controlled by 2 dual tech sensors.
While the area is occupied the sensor will hold the lighting ON and will dim automatically the associated circuit. After the area is vacated and after the sensor's time delay expires, the sensor will turn lights off.
Manual override is possible using the push-buttons.

SAVING ON ENERGY(1)

386 | year

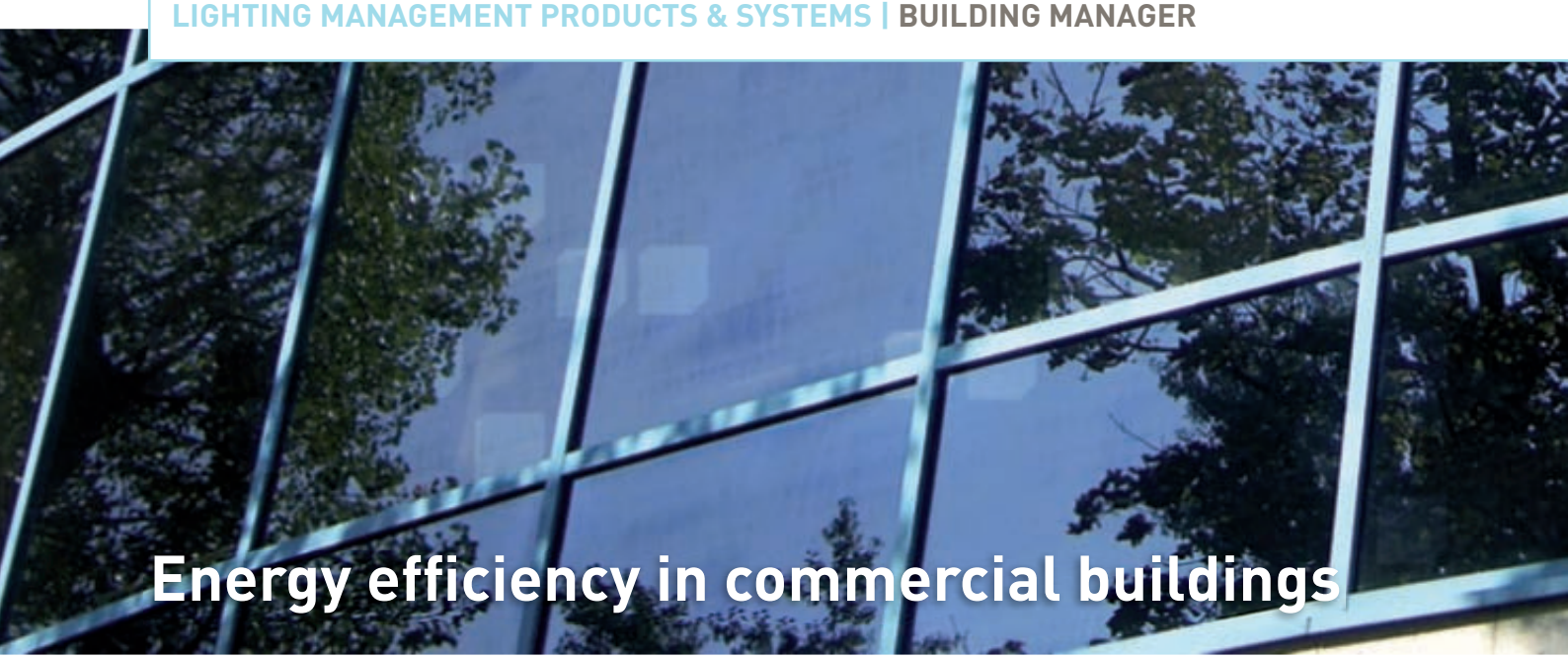
GREENHOUSE GAS (GHG) EMISSIONS AVOIDED (2)

868 kg | CO_2 eq.| year

Legrand lighting management solution for an office building with an 300 m² open office based on: vacancy-based control + daylight-based control + dimming-based control

(1) Based on EN 15 193
(2) Greenhouse gases (GHGs) include water vapour, ozone, carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). They are measured in CO_2 equivalent units

Note: A vehicle with an average consumption of 4.5 l/100 km emits 11.8 kg of CO_2/100 km, i.e. 0.118 g of CO_2/km



Energy efficiency in commercial buildings

Going beyond lighting control...

In addition to its lighting control solutions, Legrand provides a consistent set of eco-sustainable solutions to ensure the energy efficiency of commercial buildings and optimise their maintenance.
Save both time and money through supervision and control of all your installations via a computer screen.

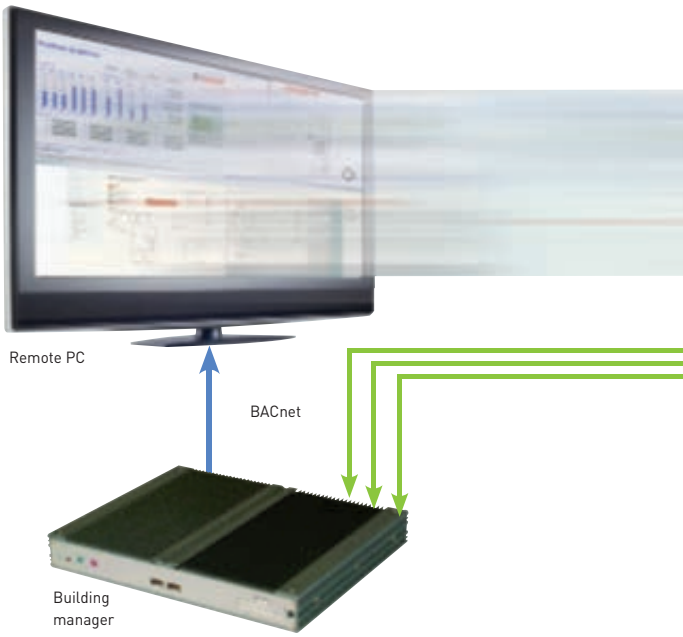
The Legrand building manager enables convergence between control, emergency lighting, measuring and metering solutions, as well as other building applications such as HVAC.

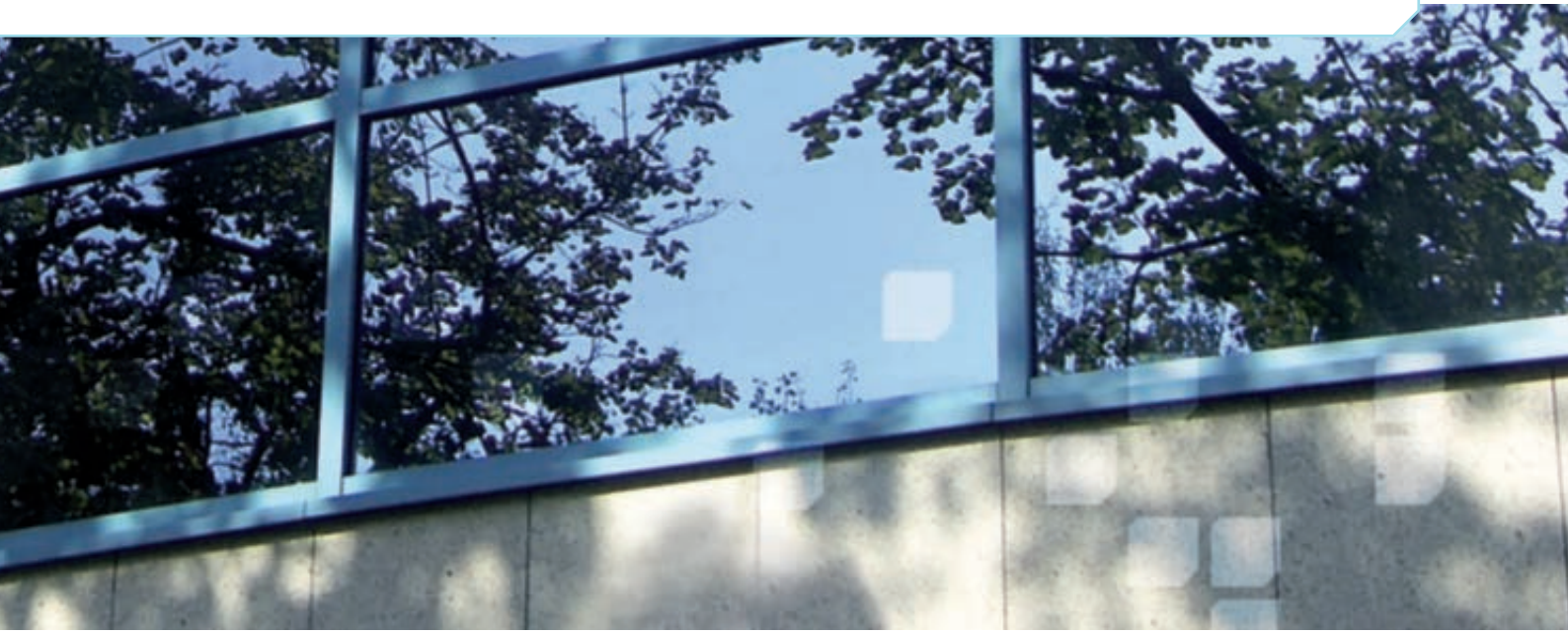
It ensures:

- data processing: measurement, power, lighting, heating, etc.

- automatic management: time slot programming, load shedding, etc.

- monitoring and surveillance: archiving, alerts, etc.





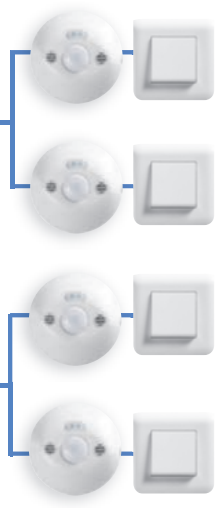
Lighting control

Power

Other applications

IP NETWORK

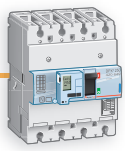
BUS/KNX-IP Interface



BUS/SCS or BUS/KNX

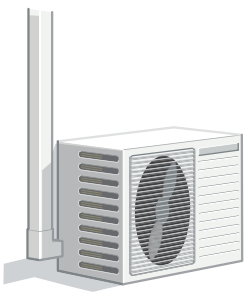
Controlling lighting consumption

RS 485 BUS



Measuring both the quantity and quality of energy consumed.

Other building applications: HVAC



legrand

Enjoy a unique level of service

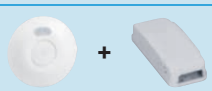
From the initial design stage to the first time an occupant enters a building, you can be sure that Legrand will be available to help.

Switch sensors

KNX

Radio & ZigBee

lighting management switch sensors, room controllers
main characteristics

Cat.Nos	Outputs	Operation	Installation type	Detector technology	IP	Cover L x W	Diameter at 2.5 m	Best application
 **488 03**	1	ON/OFF	ceiling	PIR	IP 20	45 m²	Ø 8 m	• movement indoor
 **488 11**	1	ON/OFF	wall mount	PIR	IP 20	45 m²	range 8 m	• movement indoor
 **697 40/80**	1	ON/OFF	outdoor	PIR	IP 55	45 m²	range 8 m	• movement outdoor
 **784 54/792 58** **784 55/792 59**	1	ON/OFF	wiring devices	PIR	IP 41	15 m²	range 8 m	• movement indoor
 **488 05**	1	ON/OFF	ceiling	US	IP 20	150 m²	Ø 14 m	• restrooms • enclosed hallways • stairways
 **488 21** + 488 50/51/52	2	ON/OFF/ dimming						
 **488 06** **488 09**	1	ON/OFF	ceiling	DUAL TECH	IP 20	90 m²	Ø 11 m	• offices • conference rooms • classrooms
 **488 22** + 488 50/51/52	2	ON/OFF/ dimming						
 **488 07** **488 08**	1	ON/OFF	ceiling	PIR	IP 20	45 m²	Ø 8 m	• small offices • hallways • lobbies
 **488 20** + 488 50/51/52	2	ON/OFF/ dimming						
 **488 13**	1	ON/OFF	wall mount	PIR	IP 42	length 30 m	range 30 m	• warehouse • high ceiling location
 **488 25** + 488 50/51/52	2	ON/OFF/ dimming						
 **488 23** + 488 50/51/52	2	ON/OFF/ dimming	wall mount	PIR	IP 42	90 m²	range 7 m	• offices • conference rooms • classrooms
 **488 24** + 488 50/51/52	2	ON/OFF/ dimming	wall mount	PIR	IP 42	45 m²	range 5 m	• small offices • hallways • lobbies
488 10	1	ON/OFF	outdoor	PIR	IP 55	180 m²	Ø 15 m	• building entrance • warehouse
 **488 30** + 488 50/51/52	2	ON/OFF/ dimming						
 **784 52/792 52**	1	ON/OFF	wiring devices	DUAL TECH	IP 41	15 m²	range 10 m	• offices • conference rooms
 **784 53/792 53**	1	ON/OFF	wiring devices	PIR	IP 41	15 m²	range 10 m	• small offices

lighting management switch sensors, room controllers

compatibility with type of light

	Cat.Nos	With/ without neutral	Power supply	Halogen light	ELV halogen with separate ferromagnetic or electromagnetic transformer	Fluorescent tube	Fluorescent light with separate ferromagnetic or electronic ballast	LED	Compact fluorescent light with 1-10 V ballasts	DALI Ballast	Contactors
1 OUTPUT	 488 03	neutral	240 V	2000 W	1000 VA	10 x (2 x 36 W)	1000 VA	500 W	500 W	-	max. ≤ 2 A
			100 V	1000 W	1500 VA	5 x (2 x 36 W)	500 VA	250 W	250 W		max. ≤ 2 A
	 488 11	neutral	240 V	2000 W	1000 VA	10 x (2 x 36 W)	1000 VA	500 W	500 W	-	max. ≤ 2 A
			100 V	1000 W	1500 VA	5 x (2 x 36 W)	500 VA	250 W	250 W		max. ≤ 2 A
	 697 40/80	neutral	240 V	2000 W	1000 VA	10 x (2 x 36 W)	1000 VA	500 W	500 W	-	max. ≤ 2 A
			100 V	1000 W	1500 VA	5 x (2 x 36 W)	500 VA	250 W	250 W		max. ≤ 2 A
	 784 54/ 792 58	neutral	240 V	1000 W	500 VA	5 x (2 x 36 W)	500 VA	250 W	250 VA	-	< 1 A
			100 V	500 W	250 VA	2 x (2 x 36 W)	250 VA	100 W	100 VA		-
	 784 55/ 792 59	no neutral	240 V	400 W max 40 W min	-	-	-	-	-	-	-
			100 V	200 W max 20 W min							
	 488 05	neutral	240 V	2000 W	1000 VA	10 x (2 x 36 W)	1000 VA	500 W	500 W	-	max. ≤ 2 A
			100 V	1000 W	1500 VA	5 x (2 x 36 W)	500 VA	250 W	250 W		max. ≤ 2 A
	 488 06 488 09	neutral	240 V	2000 W	1000 VA	10 x (2 x 36 W)	1000 VA	500 W	500 W	-	max. ≤ 2 A
			100 V	1000 W	1500 VA	5 x (2 x 36 W)	500 VA	250 W	250 W		max. ≤ 2 A
	 488 07 488 08	neutral	240 V	2000 W	1000 VA	10 x (2 x 36 W)	1000 VA	500 W	500 W	-	max. ≤ 2 A
			100 V	1000 W	1500 VA	5 x (2 x 36 W)	500 VA	250 W	250 W		max. ≤ 2 A
	488 10	neutral	240 V	2000 W	1000 VA	10 x (2 x 36 W)	1000 VA	500 W	500 W	-	max. ≤ 2 A
			100 V	1000 W	1500 VA	5 x (2 x 36 W)	500 VA	250 W	250 W		max. ≤ 2 A
	 488 13	neutral	240 V	2000 W	1000 VA	10 x (2 x 36 W)	1000 VA	500 W	500 W	-	max. ≤ 2 A
			100 V	1000 W	1500 VA	5 x (2 x 36 W)	500 VA	250 W	250 W		max. ≤ 2 A
	 784 52/ 792 52	neutral	240 V	1000 W	500 VA	5 x (2 x 36 W)	500 VA	250 W	250 VA	-	< 1 A
			100 V	500 W	250 VA	2 x (2 x 36 W)	250 VA	100 W	100 VA		-
	 784 53/ 792 53	no neutral	240 V	400 W max 40 W min	-	-	-	-	-	-	-
			100 V	200 W max 20 W min							
2 OUTPUTS	 488 50(1)	neutral	240 V	3600 W	1800 VA	1800 VA	500 W	500 W	1800 VA	-	max. ≤ 2 A
			100 V	1800 W	900 VA	900 VA	250 W	250 W	900 VA		
	 488 51	neutral	240 V	-	-	-	-	-	-	2 x 16 ballasts	-
			100 V								
	 488 52	neutral	240 V	3600 W	1800 VA	1800 VA	500 W	500 W	1000 VA	-	-
			100 V	1800 W	900 VA	900 VA	250 W	250 W	500 VA		

ON/OFF Dimming

lighting management switch sensors
1 output


488 03


488 11


697 80


784 54

Detectors for lighting over a short duration. For spaces receiving little or no daylight.

• Operating mode:
- Switched on and off automatically
• Adjustment of light level threshold and time delay
- Max. lux and min. time delay factory pre-set
- Settings modified on the device via thumbwheel

Ceiling sensor

Pack	Cat.Nos	
		Fixed directly to a false ceiling with mounting claws (provided) or installed in Batibox flush-mounting box with depth of 50 mm or in surface mounting box Cat.Nos 488 74/75 **Detection field 45 m** 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

Corner indoor sensor

Pack	Cat.Nos	
		Supplied with fixing base **Detection field 45 m** 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 180°, occupancy mode Automatic terminal connection

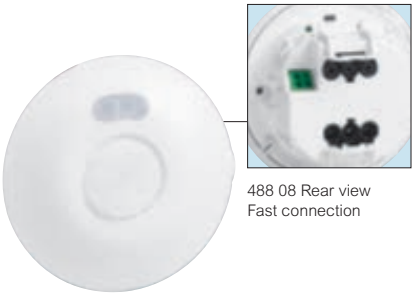
Outdoor sensors

Pack	Cat.Nos	
		Detection field 45 m Maximum range 8 m - IP 55 PIR outdoor switch sensor 360°, occupancy mode Coverage pattern adjustable during installation process Screw terminal connection
1	697 40	Grey
1	697 80	White

Wiring devices sensors

Pack	Cat.Nos	
		Detection field 15 m Maximum range 10 m PIR wall mount switch sensor 180°, occupancy mode Screw terminal connection
	Mosaic	With neutral
1	784 54	White
1	792 58	Grey
		Without neutral
1	784 55	White
1	792 59	Grey

lighting management switch sensors
1 output



488 08 Rear view
Fast connection

488 08

488 13

488 10

784 52

Technologies (p. 11)

Detectors for lighting over a long duration. For spaces receiving natural daylight.

• Operating mode:
- Vacancy/occupancy mode: switched on manually via push-button, switched off automatically via detector or by pressing push-button
- Occupancy mode: switched on and off automatically
- Factory pre-set to occupancy mode. Vacancy/occupancy mode activated by mobile configurators
• Factory pre-set light level threshold 500 lux for false ceiling detectors, 300 lux for surface-mounted/flush-mounted detectors (wiring devices)
• Factory pre-set time delay 15 minutes. Walkthrough function activated (short time delay of 3 minutes for 1 walkthrough)
• Precise adjustment on-site with mobile configurators Cat.Nos 882 30/35 (p. 25)
• Serial wiring Phase + Neutral + Source
With terminals to connect the push-button(s) including push-buttons with LED indicator Cat.Nos 770 40/33

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 or in surface mounting box Cat.Nos 488 74/75
		Detection field 45 m
		Ø 8 m Optimum distance between 2 detectors: 6 m Consumption 0.4 W on standby
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) Fast connection All load 8.5 A - 240 V
		Detection field 90 m
		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
1	488 09	Dual ceiling mount switch sensor 360°, vacancy & occupancy mode (push-button override, or mobile configurator) Fast connection
		Detection field 150 m
		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 sensor
		Maximum range 30 m - IP 42 Consumption 0.4 W on standby All load 2.5 A - 240 V Detection specially adapted for long narrow areas (example: corridors) or very high areas (example: warehouses)
1	488 13	PIR corner mount switch sensor 180°, occupancy mode Automatic terminal connection

Pack	Cat.Nos	Outdoor sensors
		Detection field 180 m
		Maximum range 15 m - IP 55 Consumption 0.4 W on standby All load 8.5 A - 240 V Dual side detection specially adapted for wide areas (example: entrance hall)
1	488 10	PIR outdoor switch sensor 270°, vacancy & occupancy mode (push-button override or mobile configurator) Automatic terminal connection

Pack	Cat.Nos	Wiring devices sensors
		Detection field 15 m
		Maximum range 10 m - IP 41 Dual-tech wall mount switch sensor 180°, vacancy mode with neutral
	Mosaic	
1	784 52	○ White
1	792 52	● Grey
		Maximum range 10 m - IP 41 PIR wall mount switch sensor 180°, vacancy mode without neutral
1	784 53	○ White
1	792 53	● Grey

Red catalogue numbers: New products

lighting management room controller 2 outputs


488 50


488 20


488 22

Technologies (p. 11)

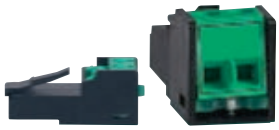
Detectors for lighting over a long duration. For spaces receiving natural daylight.

Pack	Cat.Nos	Room controller
		Ability to connect the detector(s) and push-button(s) on each circuit Fixed directly to the false ceiling via cable ducting 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 Power supply 100/240 V
1	488 50	Room controller 2 outputs 16 A Allows 2 lighting circuits to be controlled in 2 different phases or 1 lighting circuit and 1 A/C circuit
1	488 51	Room control 1 input, 2 outputs DALI/DSI Controller for DALI and DSI dimming Enables the window side of a room (which has the benefit of natural light) and the corridor (which has less natural light) to be dimmed separately with a single detector 1 detector input, 2 inputs for auxiliaries, 2 DALI outputs and 1 fan output (volt-free contact) For controlling light sources with detectors (with up to 5 detectors): - 2 x 16 DALI/DSI ballasts Connected via screw terminals
1	488 52	Room control 1 input, 2 outputs 1-10 V Dimming lighting controller 1-10 V Enables the window side of a room (which has the benefit of natural light) and the corridor (which has less natural light) to be dimmed separately with a single detector 1 detector input, 2 inputs for auxiliaries and 2 lighting outputs Connected via screw terminals

Pack	Cat.Nos	Ceiling SCS sensors
		Fixed directly to the false ceiling with mounting claws (supplied) or installed in deep Batibox boxes with depth of 50 mm or in surface mounting box Cat.Nos 488 74/75 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
		Detection field 45 m Ø 8 m Optimum distance between 2 detectors: 6 m Consumption 0.2 W on standby All load 10 A - 240 V
1	488 20	PIR ceiling mount switch sensor 360°, vacancy & occupancy mode (push-button override, or IR remote) RJ 45 connection
		Detection field 90 m Ø 11 m Optimum distance between 2 detectors: 10 m Consumption 0.5 W on standby All load 10 A - 240 V
1	488 22	DUAL corner mount SCS sensor 360°, vacancy & occupancy mode (push-button override, or IR remote) RJ 45 connection
		Detection field 150 m Ø 14 m Optimum distance between 2 detectors: 12 m Consumption 0.5 W on standby All load 10 A - 240 V
1	488 21	US ceiling mount SCS sensor 360°, vacancy & occupancy mode (push-button override, or IR remote) RJ 45 connection

lighting management room controller
2 outputs

488 23
(directional head)



RJ 45 connectors 488 72

488 68

882 35

882 30

Detectors for lighting over a long duration. For spaces receiving natural daylight.

Pack	Cat.Nos	Corner SCS sensors
		Supplied with fixing base 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
		Detection field 45 m 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
1	488 24	PIR corner mount switch sensor 180°, vacancy & occupancy mode (push-button override, or IR remote), RJ 45 connection
		Detection field 90 m 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
1	488 23	DUAL corner mount SCS sensor 180°, vacancy & occupancy mode (push-button override, or IR remote), RJ 45 connection
		Detection field 180 m Maximum range 15 m - IP 55 Consumption 0.5 W on standby All load 10 A - 240 V
1	488 30	PIR corner mount SCS sensor 270°, vacancy & occupancy mode (push-button override, or IR remote), RJ 45 connection

		Special for corridors or very high areas
		Front range 30 m - IP 42 With directional head
1	488 25	Specially adapted for long narrow areas Example: corridors, very high areas or warehouses

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

		RJ 45 doubler
10	488 68	Allows the number of controller inputs to be doubled

		Mobile configurators
		All detectors are pre-set in the factory - lighting threshold: 500 lux in 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

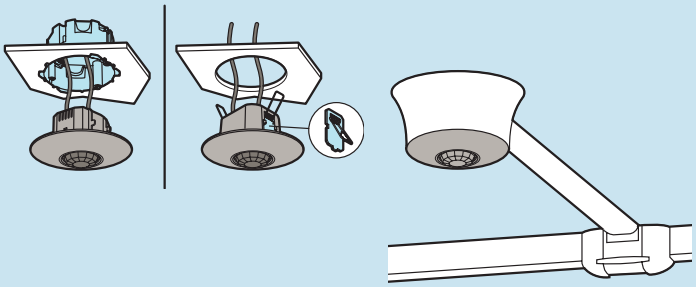
		IR Remote Control
		ON/OFF-dimming control
1	882 31	Powered by two 1.5 V LR 03 alkaline batteries (supplied) For remote control of detectors Cat.Nos 488 05/06/07/08/09/10/13/20/21/22/23/24/25

		Surface mounting boxes
		Used for surface mounting false ceiling detectors
5	488 74	For false ceiling detectors Cat.Nos 488 03, 488 07 and 488 20
5	488 75	For false ceiling detectors Cat.Nos 488 05/06, 488 21/22 and 488 35

Red catalogue numbers: New products

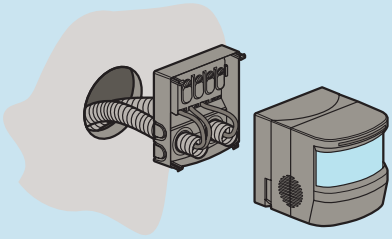
■ Ceiling mounting

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:

- 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

Occupancy mode

Walkthrough mode

Vacancy mode

Cat.No 882 35

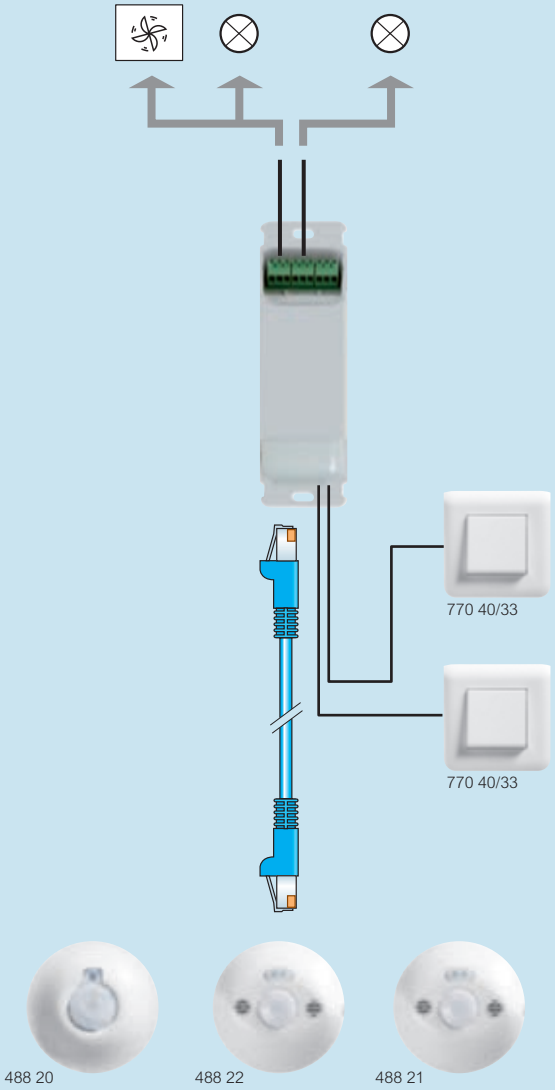
For advanced configuration:

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

Cat.No 882 30

■ 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.



488 20 488 22 488 21

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/KNX system controls


791 75


784 73


488 84

Individual or centralised controls for lighting management
Controls for connection to BUS/KNX controllers by cords or RJ 45 cable or BUS/SCS cable

"Push-button type" lighting control units

Used to control 1 controller

ON/OFF control units - 1 way

Used to control 1 lighting circuit

Pack	Cat.Nos	
	Mosaic	
1	784 75	○ White
1	791 75	● Aluminium

ON/OFF control units - 2 way

Used to control 2 lighting circuits

Pack	Cat.Nos	
1	784 72	○ White
1	791 72	● Aluminium
	Arteor	
1	573 987	Arteor mechanism

"Switch type" multifunctional control units

For controlling a group of controllers:
ON/OFF, dimming, ventilation, rolling blinds

1 way

Pack	Cat.Nos	
	Mosaic	
1	784 71	○ White
1	791 71	● Aluminium

2 way

Pack	Cat.Nos	
1	784 73	○ White
1	791 73	● Aluminium
	Arteor	
1	573 974	Arteor mechanism

Scenario management

Allows several controllers to be operated

4 scenarios

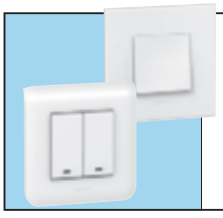
4 buttons allowing 1 scenario to managed per button
Example: lighting level adjustment, lighting control with openings...

Pack	Cat.Nos	
	Mosaic	
1	784 78	○ White
1	791 78	● Aluminium
	Arteor	
1	573 902	○ White
1	573 903	● Magnesium

Multiple scenarios

KNX 5.7" touch control
For connection to BUS/KNX cable Cat.No 492 91 with the connectors installed on the product

Pack	Cat.Nos	
1	488 84	Touch-screen control Allows several BUS/KNX controllers to be operated Allows manual or programmed control of lighting (lighting level), openings, fans and multimedia equipment Manages scenario programming (example: time management, lighting, presence) Supplied complete with aluminium finishing plate, support and flush mounting box



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

lighting management BUS/KNX system
SCS sensors

Cat.Nos	MAIN CHARACTERISTICS						DIMENSIONS	Recommended application
	Installation type	Detector technology	Power supply	IP	Coverage	Diameter at 2.5 m	Connection type	
488 20	false ceiling	PIR	BUS/KNX controller	IP 20	45 m²	Ø 8 m	RJ 45	• small offices • hallways • lobbies
 **488 21**	false ceiling	US	BUS/KNX controller	IP 20	150 m²	Ø 14 m	RJ 45	• restrooms • enclosed hallways • stairways
 **488 22**	false ceiling	PIR/US	BUS/KNX controller	IP 20	90 m²	Ø 11 m	RJ 45	• offices • conference rooms • classrooms
 **488 23**	surface mounting	PIR/US	BUS/KNX controller	IP 42	90 m²	range 11 m	RJ 45	• offices • conference rooms • classrooms
 **488 24**	surface mounting	PIR	BUS/KNX controller	IP 42	45 m²	range 8 m	RJ 45	• small offices • hallways • lobbies
 **488 25**	surface mounting	PIR	BUS/KNX controller	IP 42	180 m²	range 30 m	RJ 45	• warehouse • high ceiling location
488 30	surface mounting	PIR	BUS/KNX controller	IP 55	180 m²	Ø 15 m	RJ 45	• building entrance • warehouse

KNX certified


488 20


488 22


488 24


488 28


RJ 45 connectors


488 72

Technologies (p. 11)

• Connection:
- to the KNX controller by RJ 45 patch cord or BUS/KNX cable to be fitted with RJ 45 connector Cat.No 488 72
• 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. 25)
IR receivers

Pack	Cat.Nos	Ceiling SCS sensors
		Fastened directly to a false ceiling with mounting claws (supplied) or installed in Batibox flush-mounting boxes with depth of 50 mm
		Detection field 45 m
		Ø 8 m Optimum distance between 2 detectors: 6 m Consumption 0.2 W on standby
1	488 20	PIR ceiling mount switch sensor 360°, vacancy & occupancy mode RJ 45 connection
		Detection field 90 m
		Ø 11 m Optimum distance between 2 detectors: 10 m Consumption 0.5 W on standby
1	488 22	DUAL ceiling mount SCS sensor 360°, vacancy & occupancy mode RJ 45 connection
		Detection field 150 m
		Ø 14 m Optimum distance between 2 detectors: 12 m Consumption 0.5 W on standby
1	488 21	US ceiling mount SCS sensor 360°, vacancy & occupancy mode RJ 45 connection

Pack	Cat.Nos	Corner SCS sensors
		Supplied with fixing plate
		Detection field 45 m
		Maximum range 8 m - IP 42 Optimum distance between 2 detectors: 6 m Consumption 0.2 W on standby
1	488 24	PIR corner mount SCS sensor 180°, vacancy & occupancy mode RJ 45 connection
		Detection field 90 m
		Maximum range 11 m - IP 42 With directional head Optimum distance between 2 detectors: 10 m Consumption 0.2 W on standby
1	488 23	DUAL corner mount SCS sensor 180°, vacancy & occupancy mode RJ 45 connection

Pack	Cat.Nos	Corner SCS sensors (continued)
		Detection field 180 m
		Maximum range 15 m - IP 55 Consumption 0.5 W on standby
1	488 30	PIR corner mount SCS sensor 270°, vacancy & occupancy mode RJ 45 connection

		Special for corridors or very high areas
		Front range 30 m - IP 42 With directional head
1	488 25	Specially adapted for long narrow areas Example: corridors, very high areas or warehouses

		Wiring devices sensors
		Detection field 15 m
		Maximum range 10 m - IP 41 PIR occupancy sensor 180°
	Mosaic	
1	784 85	○ White
	Arteor	
1	574 046	○ White
		Detection field 15 m
		Maximum range 10 m - IP 41 DUAL vacancy sensor 180°
	Mosaic	
1	784 26	○ White
	Arteor	
1	574 048	○ White

		Lighting measurement cell
1	488 28	Used in conjunction with detectors it allows synchronisation of lighting measurement The mobile configurator must be used to configure the lighting cell Cat.No 882 30 Connects to BUS/SCS cable with connector Cat.No 488 72

		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

		Surface mounting boxes
		Used for surface mounting false ceiling detectors
5	488 74	For false ceiling detectors Cat.Nos 488 03, 488 07 and 488 20
5	488 75	For false ceiling detectors Cat.Nos 488 05/06, 488 21/22 and 488 35

Red catalogue numbers: New products

lighting management BUS/KNX system
room controllers

	Cat.Nos	MAIN CHARACTERISTICS		COMPATIBILITY WITH TYPE OF LIGHT						
		Number of outputs	Power supply	Halogen light	ELV halogen with separate ferromagnetic or electromagnetic transformer	Fluorescent tube	Fluorescent light with separate ferromagnetic or electronic ballast	LED	Compact fluorescent light with 1-10 V ballasts	DALI Ballast
ON/OFF	 **488 61**	1	240 V	2000 W	2000 VA	-	-	-	-	-
			100 V	1000 W	1000 VA	-	-	-	-	
	 **488 62**	2	240 V	3600 W	3600 W	4 x 1000 VA	4 x 1000 VA	4 x 500 W	4 x 1000 VA	-
			100 V	1800 W	1800 VA	4 x 500 VA	4 x 500 VA	4 x 250 W	4 x 500 VA	
DIMMING	 **488 64**	4	240 V	-	-	-	-	-	-	4 x 32 ballasts
			100 V	-	-	-	-	-	-	
	 **488 66**	8	240 V	-	-	-	-	-	-	8 x 16 ballasts
			100 V	-	-	-	-	-	-	

ON/OFF Dimming

lighting management BUS/KNX system room controllers

KNX certified

488 64

488 62

• Connection:
- On BUS/KNX cable Cat.No 492 91 with connectors installed on the product
Configuration by ETS programming tool

Pack	Cat.Nos	BUS/KNX false ceiling controllers for dimming
		Can be controlled for each output by a detector and/or an individual BUS control Connect to the detector by cord or RJ 45 cable or BUS/SCS cable to be fitted with RJ 45 connector Cat.No 488 72
		For DALI protocol
1	488 64	4 outputs 32 ballasts maximum per output
1	488 66	8 outputs 16 ballasts maximum per output
		For 1-10 V ballast
1	488 62	4 outputs 1000 VA maximum per output Can also provide "ON/OFF" control of 4 circuits
		For LV and ELV
1	488 61	2 outputs 1000 W maximum per output

lighting management BUS/KNX system dimming and actuators

026 35

026 33

• Connection:
- On BUS/KNX cable Cat.No 492 91 with connectors installed on the product
Configuration by ETS programming tool

Pack	Cat.Nos	BUS/KNX modular controller for dimming
		For DALI protocol
1	026 35	Used to control 64 ballasts individually Supplied with DALI addressing tool 6 x 17.5 mm DIN modules
		KNX multi-channel modular controllers
1	026 34	For use with BUS/SCS modular controllers, BUS controls and detectors For connecting these products to the BUS/KNX system Supplied with power supply unit Cat.No 035 67 2 + 2 x 17.5 mm DIN modules
		Dimming controller for DALI protocol
		10 x 17.5 mm DIN modules
1	026 33	8 outputs 16 ballasts maximum per output, frame steering
		Dimming controller for 1-10 V ballast
1	026 12	4 outputs - 1000 VA maximum per output 10 x 17.5 mm DIN modules
		Dimming controllers for LV and ELV halogen
		6 x 17.5 mm DIN modules
1	026 21	1 output - 1000 W maximum
1	026 22	2 outputs - 500 W maximum per output
		ON/OFF lighting controllers
1	026 00	1 x 16 A 4 x 17.5 mm DIN modules
1	026 01	2 x 16 A 4 x 17.5 mm DIN modules
1	026 02	4 x 16 A 6 x 17.5 mm DIN modules
1	026 04	8 x 16 A 10 x 17.5 mm DIN modules

lighting management BUS/KNX system
dimming and actuators

	Cat.Nos	CHARACTERISTICS			COMPATIBILITY WITH TYPE OF LIGHT					
		Outputs	Number of modules	Power supply	Halogen light	ELV halogen with separate ferromagnetic or electromagnetic transformer	Fluorescent tube	Fluorescent light with separate ferromagnetic or electronic ballast	Compact fluorescent light with 1-10 V ballasts	DALI Ballast
DIMMING	 026 35	-	-	-	-	-	-	-	-	64 ballasts
	 026 33 + 026 34	8	10	240 V	-	-	-	-	-	8 x 16 ballasts
				100 V	-	-	-	-	-	
	 026 12 + 026 34	4	10	240 V	-	-	-	-	4 x 1000 VA	-
				100 V	-	-	-	-	4 x 500 VA	
	 026 21 + 026 34	1	6	240 V	1 x 1000 W	1 x 1000 VA	-	-	-	-
				100 V	1 x 500 W	1 x 500 VA	-	-	-	
	 026 22 + 026 34	2	6	240 V	2 x 400 W	2 x 400 VA	-	-	-	-
				100 V	2 x 200 W	2 x 200 VA	-	-	-	
ON/OFF	 026 00 + 026 34	1	4	240 V	1 x 3600 W	1 x 3600 W	1 x 1000 VA	1 x 1000 VA	-	-
				100 V	1 x 1800 W	1 x 1800 W	1 x 500 VA	1 x 500 VA	-	
	 026 01 + 026 34	2	4	240 V	2 x 3600 W	2 x 3600 W	2 x 1000 VA	2 x 1000 VA	-	-
				100 V	2 x 1800 W	2 x 1800 W	2 x 500 VA	2 x 500 VA	-	
	 026 02 + 026 34	4	6	240 V	4 x 3600 W	4 x 3600 W	4 x 1000 VA	4 x 1000 VA	-	-
				100 V	4 x 1800 W	4 x 1800 W	4 x 500 VA	4 x 500 VA	-	
	 026 04 + 026 34	8	10	240 V	8 x 3600 W	8 x 3600 W	8 x 1000 VA	8 x 1000 VA	-	-
				100 V	8 x 1800 W	8 x 1800 W	8 x 500 VA	8 x 500 VA	-	

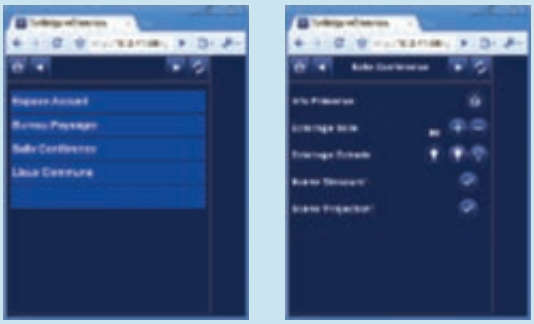
ON/OFF Dimming

035 43

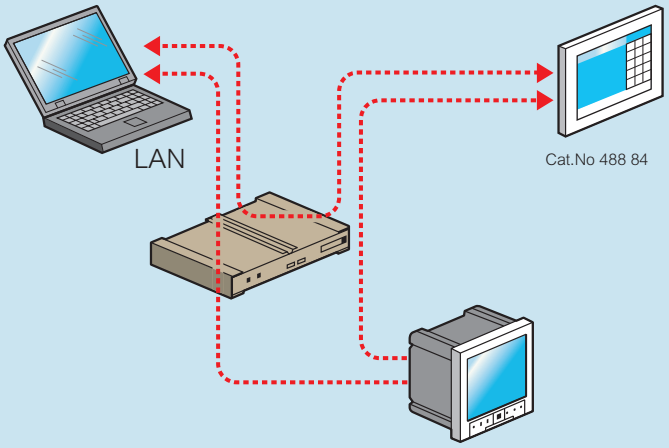
035 44

Pack	Cat.Nos	BUS/KNX - USB interface
1	035 47	Used to connect a PC to the BUS/KNX system via the USB port 1 x 17.5 mm DIN module
		BUS/KNX cable
1	492 91	Length 500 m
		IP communication module
1	035 43	BUS/KNX - IP gateway 2 functions: - The IP interface provides the link between the BUS/KNX infrastructure and the IP network to set the parameters remotely with ETS tool - Web communication interface to activate scenarios remotely via a dedicated Web page Enables off-site operation 4 x 17.5 mm DIN modules
		Building manager
1	035 44	Used together with Legrand and third party systems, this building manager enables: - Processing and combination of the data from these systems (KNX, Modbus and Bacnet protocols) - Automatic control by time programming, load shedding, management of conditions, etc. - Alarm monitoring and surveillance - All this data to be available for an overall supervision system

■ Operating principle of the IP communication module Cat.No 035 43



■ Operating principle of the supervision gateway Cat.No 035 44



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


784 44


784 49


573 862

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
To be fitted with Mosaic or Arteor plates (please refer to Legrand general catalogue)

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)

Pack	Cat.Nos	
	Mosaic	
1	784 43	○ White
1	791 43	◉ Aluminium
	Arteor	
1	573 834	○ White
1	573 835	● 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)

Pack	Cat.Nos	
	Mosaic	
1	784 44	○ White
1	791 44	◉ Aluminium
	Arteor	
1	573 836	○ White
1	573 837	● Black

Lighting dimming controls 1 way

Allows 1 Radio/ZigBee DALI, 1-10 V, LV and ELV halogen control unit to be controlled

Pack	Cat.Nos	
	Mosaic	
1	784 09	○ White
1	791 09	◉ Aluminium
	Arteor	
1	573 838	○ White
1	573 839	● Black

Roller blind controls

Pack	Cat.Nos	
	Mosaic	
1	784 28	○ White
1	791 28	◉ Aluminium
	Arteor	
1	573 842	○ White
1	573 843	● Black

4 scenario controls

Allow 4 scenarios to be managed using 4 buttons
E.g. lighting level adjustment, lighting control with openings...as well as normal cut off

Pack	Cat.Nos	
	Mosaic	
1	784 49	○ White
1	791 49	◉ Aluminium
	Arteor	
1	573 848	○ White
1	573 849	● Black

240 V∿ switches

Transmitter/receiver switches
For installation in flush-mounting box with depth of 50 mm recommended
2 modules

Switches ON/OFF 1 way

With LED to see output control status
Max. load: 1 x 2500 W

Pack	Cat.Nos	
	Mosaic	
1	784 47	○ White
1	791 47	◉ Aluminium
	Arteor	
1	573 822	○ White
1	573 823	● Black

Switches ON/OFF 2 way

With LED to see output control status
Max. load: 2 x 1000 W

Pack	Cat.Nos	
	Mosaic	
1	784 48	○ White
1	791 48	◉ Aluminium
	Arteor	
1	573 824	○ White
1	573 825	● Black

Roller blind switches

For flush-mounting in box, depth 50 mm recommended

Pack	Cat.Nos	
	Mosaic	
1	784 27	○ White
1	791 27	◉ Aluminium
	Arteor	
1	573 840	○ White
1	573 841	● Black

Controllers for dimming

For 1-10 V ballast

Pack	Cat.Nos	
1	573 866	1 output - 500 VA

For LV and ELV halogen

Pack	Cat.Nos	
1	573 864	1 output - 600 W

ON/OFF lighting controller

Pack	Cat.Nos	
1	573 862	1 output - 2500 W

BUS/SCS interface - Radio/ZigBee

Used to link a BUS/SCS installation and an additional Radio/ZigBee installation

Pack	Cat.Nos	
1	488 32	BUS/SCS interface - Radio/ZigBee Installs on false ceiling

Repeater

Pack	Cat.Nos	
1	488 37	Used to increase the receiving distance from the radio signal Power supply 240 V∿

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lighting management Radio/ZigBee··· detectors and remote control units

488 14

882 32

882 33

Pack	Cat.Nos	Infrared 230 V~ detector switches
		Power supply 230 V~ Recommended fixing height: 2.50 m **Detection field 90 m** Ø 11 m
1	488 35	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) 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
		Detection field 180 m Maximum range 15 m - IP 55
1	488 14	PIR surface mount detector 270° Dual side detection specially adapted for long narrow areas (e.g. corridors)

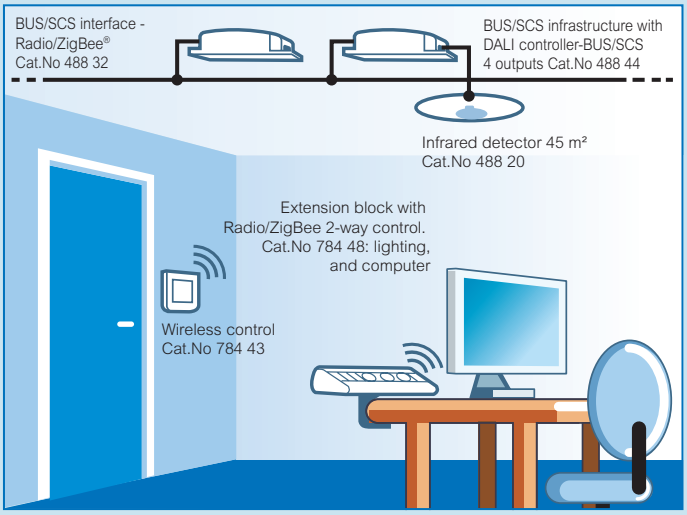
		Battery-powered infrared detector
		Powered by two 1.5 V LR 03 alkaline batteries (supplied) Recommended fixing height: 2.50 m **Detection field 180 m** Ø 15 m - IP 55
1	488 31	PIR surface mount detector 270° Dual detection specially adapted for long narrow areas (e.g. corridors)

		Remote control devices
		4 scenario controls 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
1	882 32	IR/RF control Powered by two 1.5 V LR 03 alkaline batteries (supplied)
1	882 33	IR/RF control with screen Powered by two 1.5 V LR 03 alkaline batteries (supplied)

ZigBee : ZigBee certified product with Manufacturer Specific Profile

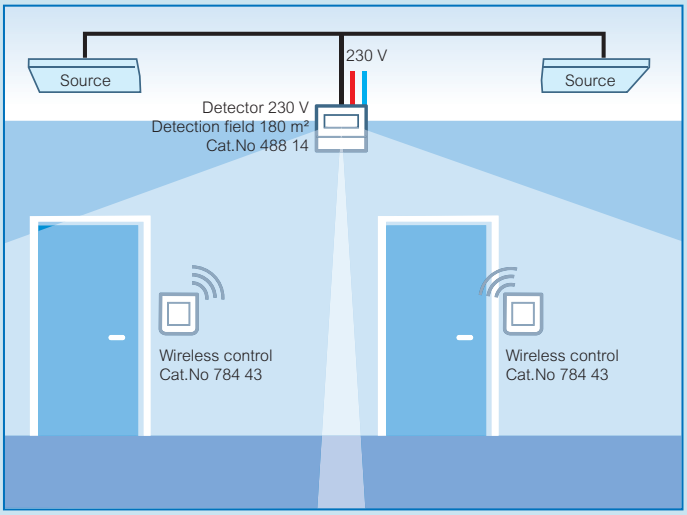
lighting management Radio/ZigBee··· detectors and remote control units

■ 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

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