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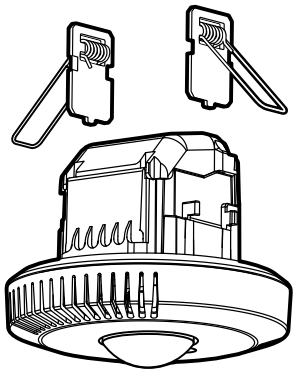
Tel: +33(0)5 55 06 87 87 - Fax: +33(0)5 55 06 88 88
www.legrandgroup.com

LIGHT-UP 3-zone DALI multisensor advanced detector

Cat. No(s): 0 485 73



Access to the full Light Up documentation

CONTENTS PAGE

1. USE

This product is a presence detector, which allows light sources to be controlled automatically and it is equipped with environmental sensors.

The mounting position is on the ceiling, it has a 360° detection angle.

It has:

- The option of being paired with a wireless batteryless switch and/or controlling a connected power outlet.
- **1 auxiliary input** for priority lighting using the wired push-button connected to the line.
- **1 motion sensor** (PIR technology) with lens for detecting occupancy.
- **1 daylight sensor** which allows it to regulate the light level automatically.
- **1 temperature sensor** which measures the room temperature in degrees Celsius.
- **1 relative humidity sensor** which measures the relative humidity in the room as a percentage.
- **1 sound level sensor** which measures the ambient noise in dBspl.
- **1 VOC** which estimates the room indoor air quality. It measures the total volatile organic compounds in ppb, provides an air quality index such as the UBA index and estimates the level of CO_2 in ppm called "eCO2".
- **1 DALI output** for supplying the bus and controlling diffuse lighting.
- **1 relay output** dedicated to providing power for DALI ECGs.

■ **1.1 Bluetooth 5.0 (compatible from 4.2):**

- For commissioning the product in a connectable system – using the **Legrand Close Up** mobile app.

■ **1.2 Radio (2.4 - 2.483 GHz):**

- Creation of a standalone system, can be used to pair one power outlet and/or one wireless batteryless switch.

1. USE *(continued)*

■ **1.3 Management of 3 lighting zones:**

Light Up 3-zone DALI sensors can control 3 lighting zones:

- "window" group dimming
- "corridor" group dimming
- "screen" group ON/OFF

A wireless batteryless switch only controls the ON/OFF output in the "screen" section.

A wired push-button controls dimming in the two other zones.

2. TECHNICAL CHARACTERISTICS

- Voltage: 110 - 230 V~
- Frequency: 50/60 Hz
- Terminal capacity: 2 x 1.5 mm² or 1 x 2.5 mm²
- Standby consumption: OFF relay → 1.15 W
  ON relay → 1.9 W
- Connection: cord or RJ 45 cable
- Flush-mounting diameter: 68 mm
- Impact resistance: IK 04
- Weight: unpackaged 246 g
  packaged 287 g
- Penetration by solid and liquid matter: IP20
- Usage temperature: -10°C to +30°C
- Storage temperature: -20°C to +70°C

2.1 Daylight sensor

Measures natural and artificial light in order to control lighting according to the desired lighting setpoint.

Range: 5 → 1275 lux

It is possible to disable daylight level measurement with this setpoint value: 1275 lux.

Has the light regulation function.

2.2 Temperature sensor

- Measures the ambient temperature in ° Celsius
- Measurement range 0° to 50°C
- Resolution 0.1°C
- Drift: < 0.02°C/year
- Availability of data once commissioned: 1 hour
- Temperature offset from -20°C to +20°C (default: 0)

2.3 Humidity sensor

- Measures the relative humidity in the zone as a percentage
- Measurement range: 20 to 80%
- Drift: < 0.25°C/year
- Accuracy: 5%
- Availability of data once commissioned: 1 hour
- Humidity offset from -20% to +20% (default: 0)

2.4 Acoustic sensor

- Measures the ambient noise in the zone in dB SPL
- Reactivates in any direction
- Measurement range: 38 - 120 dB SPL
- Resolution: 1 dBspl
- Sound level offset from -20 to +20 dB SPL (default: 0)

2.5 VOC sensor

- Measures the total organic compounds TVOC through an air quality index (IAQ) similar to the UBA index and the estimated CO_2 level according to the level of TVOCs
- VOC: Measurement range: 0 to 10,000 ppb
  Resolution: 1 ppb
  Accuracy: +/- 25%

IAQ level: Range: 1.0 to 5.0
Resolution: 0.1
Accuracy: +/- 10%
Availability of data once commissioned: 30 minutes

2.6 Bluetooth® 5.0

Can be used to set up the product with a smartphone.

- The LED indicates: LED off ○ → Not twinned
  Steady blue ● → Twinned
- Range: 10 m
- Compatible from 4.2 upwards

3. DECLARATION OF CONFORMITY

- **f (Frequency): 2.4 to 2.483 GHz**
- **P (Power): <100 mW**

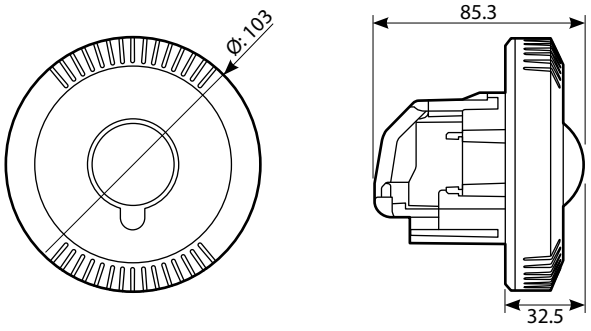
LEGRAND declares that the radio-electric equipment type Cat. No. **0 485 73** complies with directive 2014/53/EU. The full text of the EU declaration of conformity is available on the following website: www.legrand.com/ecatalogue

4. LOADS

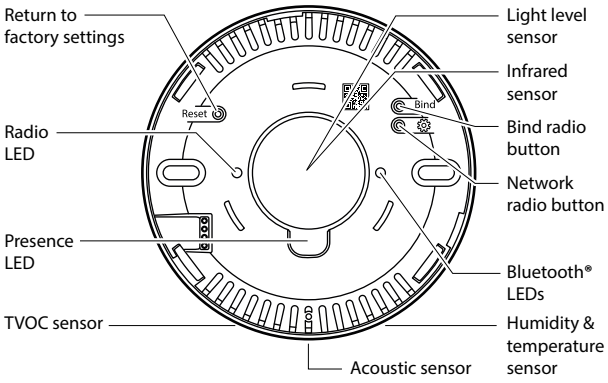
DALI supply

- Voltage: 15 V ⎓
- Guaranteed current: 100 mA
- Maximum current: 130 mA

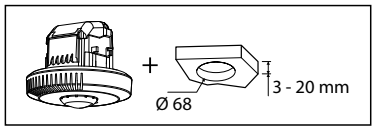
5. DIMENSIONS

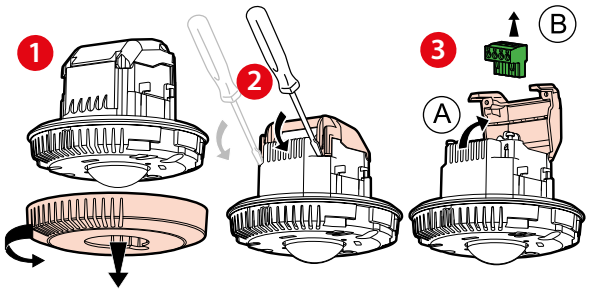


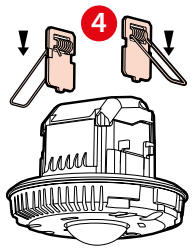
6. DESCRIPTION

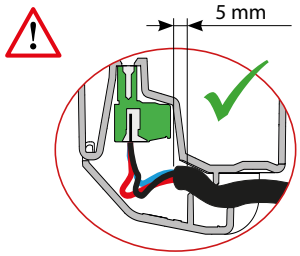


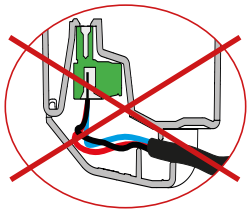
7. MOUNTING

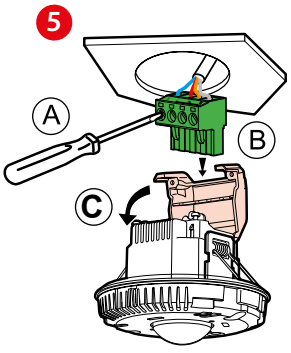


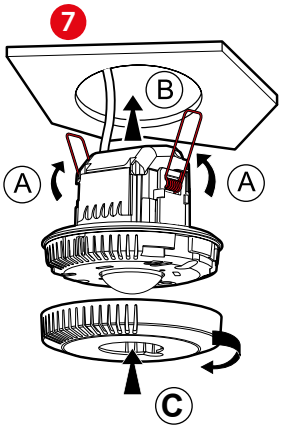


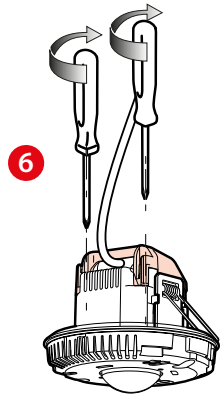


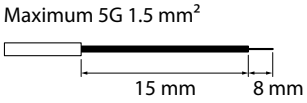








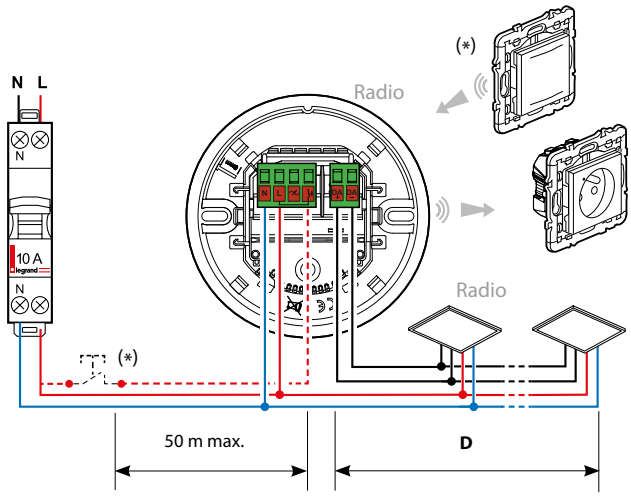




Mounting and wiring must be done with the power off. Please follow the **Safety Instructions** exactly.

8. WIRING

8.1 Standalone



(*) This product can be controlled by:
- A wireless batteryless switch (ON/OFF without dimming)

Or
- A wired push-button (ON/OFF with dimming)

And it can control a connected power outlet (wirelessly)

Note:
The maximum distance between the push-button and the auxiliary input is 50 m.

Note:
To pair a control point and/or a power outlet in standalone mode, please refer to the description of procedures in the **Light Up technical guide**.

CAUTION:
The detector provides the DALI BUS power supply.
Do Not connect 2 sensors to the same **DALI BUS**.

(*)

Option of combining with a wireless batteryless lighting switch (maximum 2 per detector)

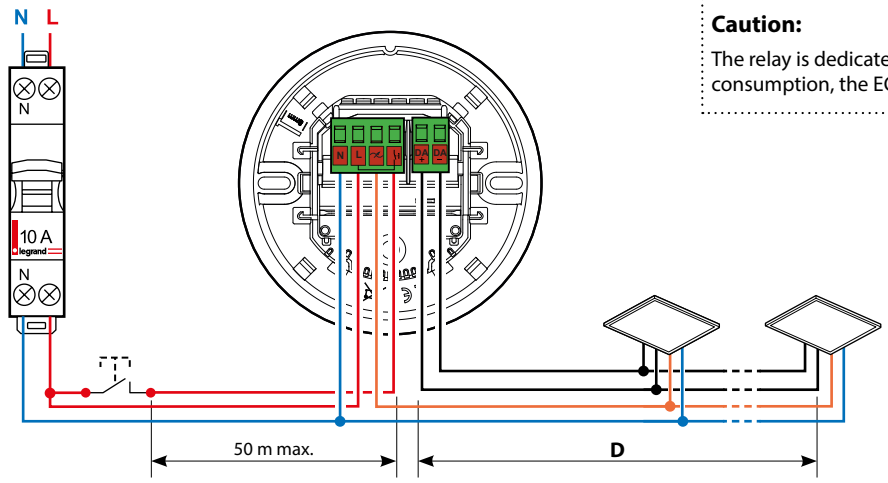
Cat. Nos. 0 677 23L/73L/79L, 0 770 53L, 6 000 83L, 5 742 10/39/55, 5 743 24, 7 418 13L/43L/73L

and a connected power outlet (maximum 5 per detector)

Cat. Nos. 0 677 25A/75A, 0 648 95A, 0 777 11LA, 6 003 91A, 5 742 56/57/58/59, 7 419 11/41/71

as described in the ***Light Up Guide*** procedures

8.2 "DIMMABLE" load type



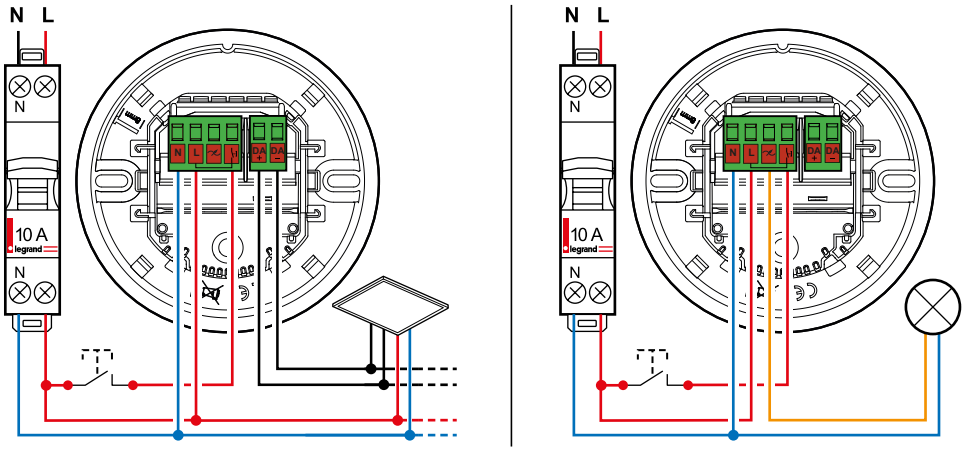
Caution:
The relay is dedicated to powering the ECG to reduce energy consumption, the ECG switch-off is delayed by 5 minutes.

DALI bus

D	
≤ 100 m	0.5 mm²
≤ 150 m	0.75 mm²
≤ 300 m	1.5 mm²

8. WIRING (continued)

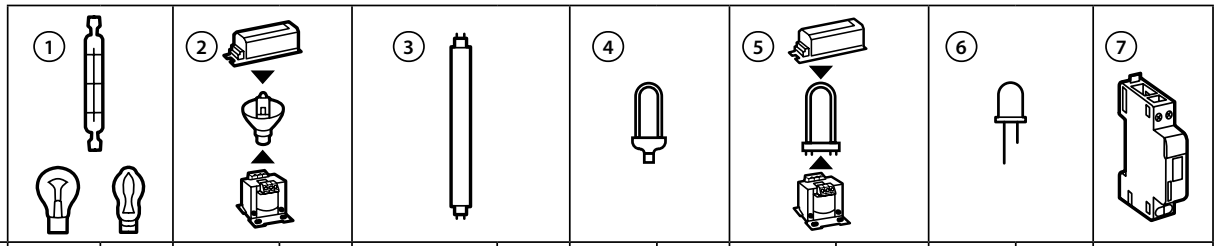
8.3 "NON DIMMABLE" load type



Caution:

Detector 0 485 73 is configured to control dimmable DALI ECGs; it can be paired with DALI actuators (ON/OFF). To do this, use the **"Legrand Close Up"** app on your smartphone to change the type of load used, in this case **"Non Dimmable"**.

8.4 Loads



230 V~	1500 W	6.5 A	1000 VA	4.3 A	10x(2x36 W)	4.3 A	500 VA	2.1 A	1000 VA	4.3 A	350 VA	2.1 A	I max. ≤ 2 A	
110 V~	750 W		500 VA		5x(2x36 W)		250 VA		500 VA		175 VA			

① - Incandescent and halogen lamp

② - Halogen lamp with separate electronic or ferromagnetic transformer

③ - Fluorescent tube

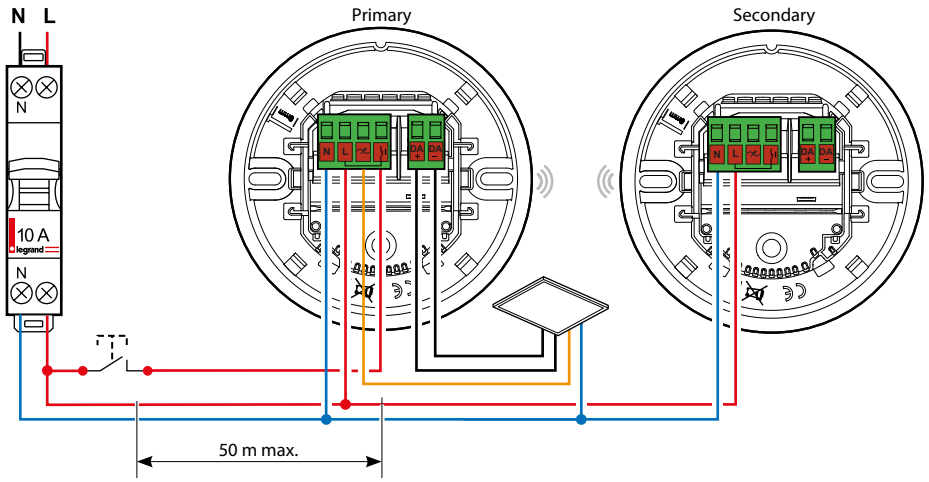
④ - Compact fluorescent lamp with built-in ECG

⑤ - Compact fluorescent lamp with separate ferromagnetic or electronic ECG

⑥ - LED lamp

⑦ - Contactor

8.5 Primary/Secondary



DALI bus

D	
≤ 100 m	0.5 mm²
≤ 150 m	0.75 mm²
≤ 300 m	1.5 mm²

Note:

By default the product is configured as **Primary**. To switch to **Secondary**, use the **Legrand Close Up** app.

Note:

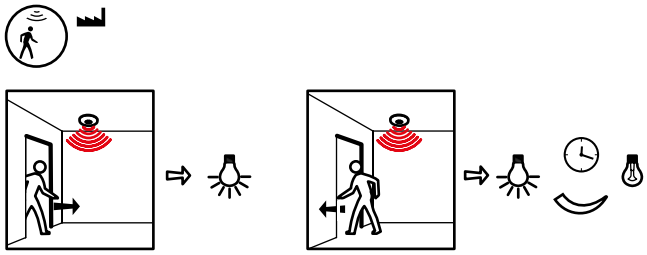
The Secondary can extend the detection zone. No loads should be paired with it..

Note:

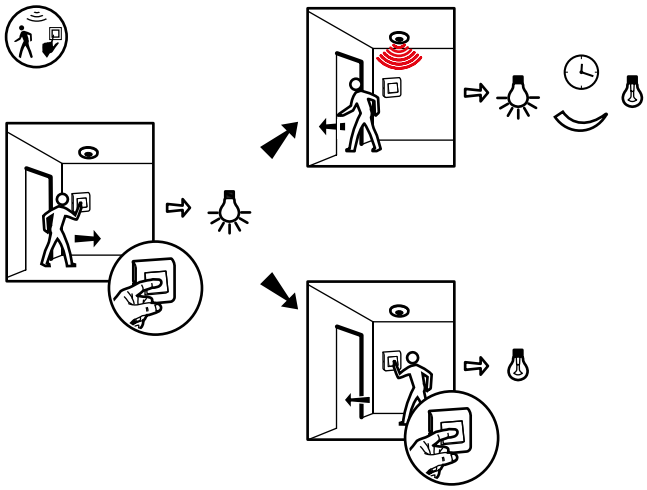
If being used in **"Primary/Secondary"** mode, the push-button should only be connected to the "Primary" detector.

9. DETECTION ZONE

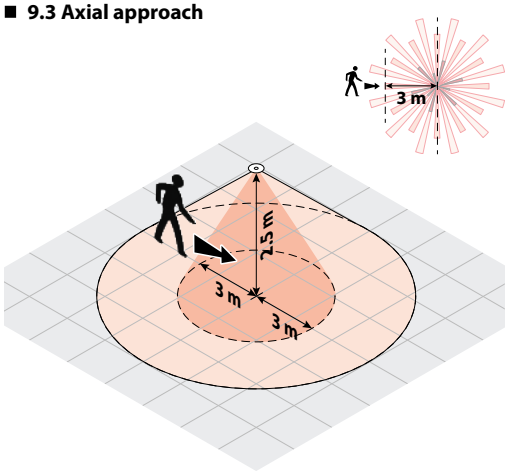
9.1 Auto ON/OFF



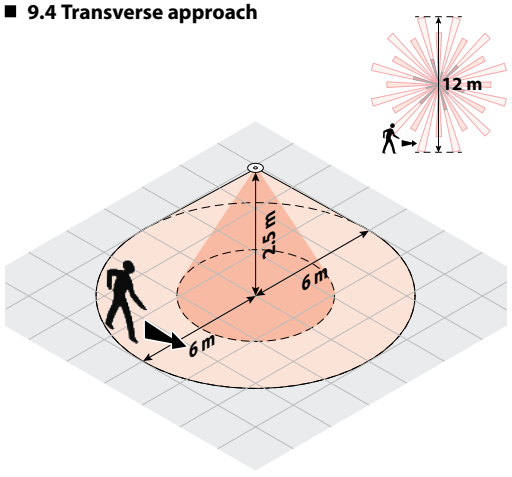
9.2 Manual ON/Auto OFF



9.3 Axial approach

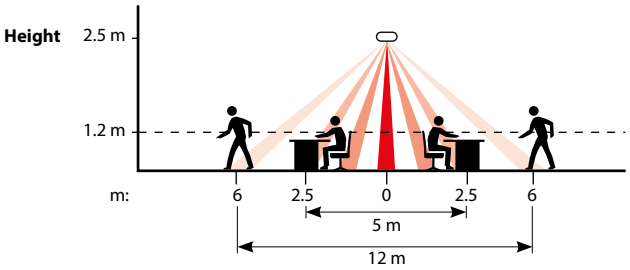


9.4 Transverse approach

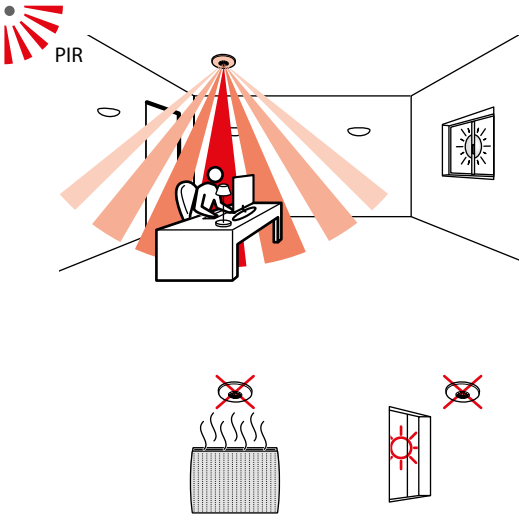


9. DETECTION ZONE (continued)

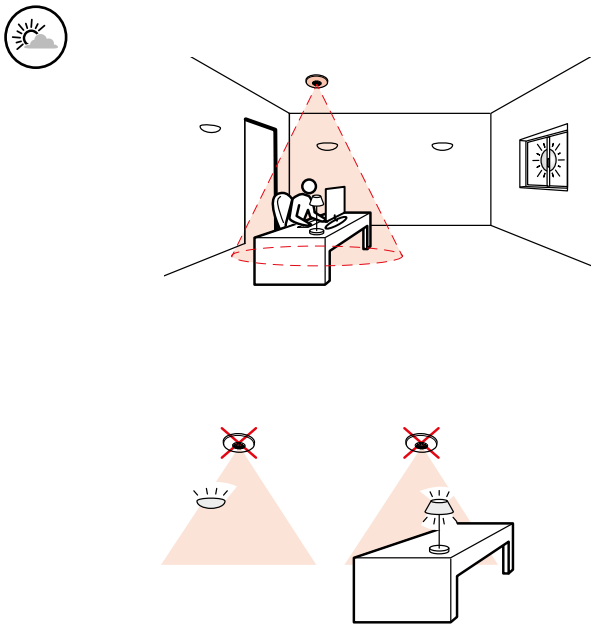
9.5 Maximum sensitivity



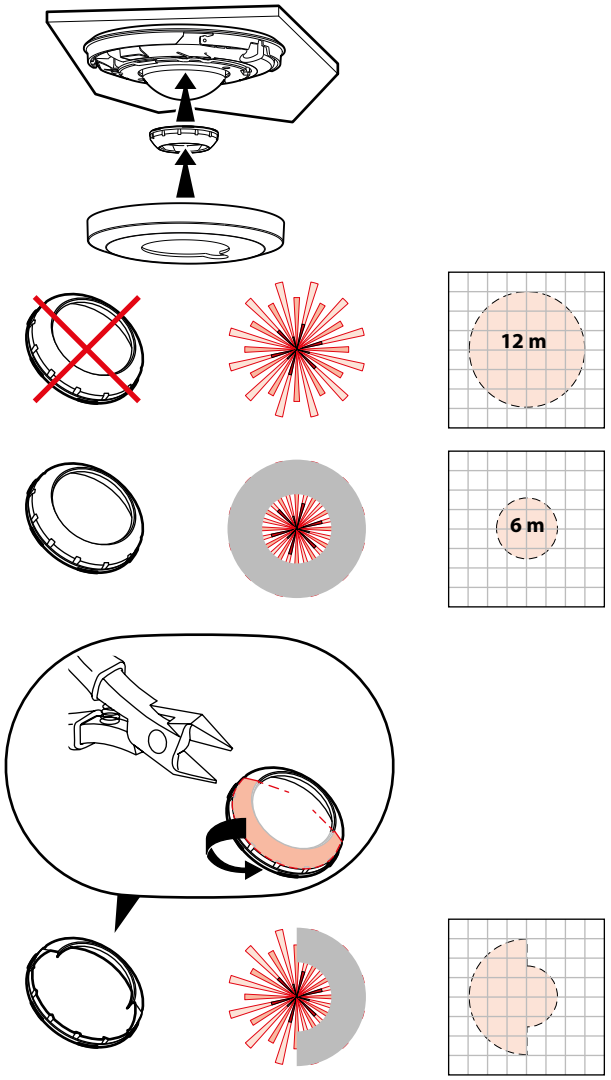
10. PIR



11. MEASURING THE LIGHT LEVEL



12. REDUCING THE DETECTION ZONE



13. LEGRAND CLOSE UP APP

The detector functions are controlled by a number of parameters which can be changed or programmed with the **Legrand Close Up** app.

Legrand Close Up can be used to view and change all the sensor parameters.

Exchanges between the detector and the phone are via Bluetooth®.

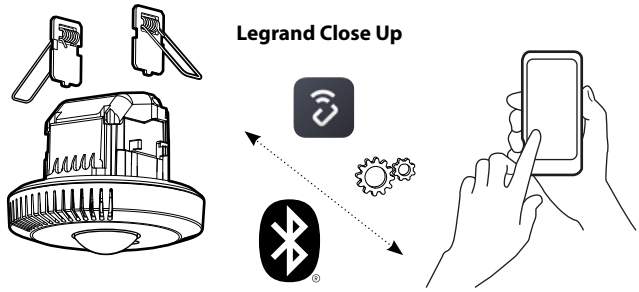
Note:

Refer to the **Light Up Technical Guide** to find the description of procedures for setting up.**Light Up** products.

Available to download from:

Download on the App Store or GET IT ON Google Play

Direct access



14. SETTINGS WITH CLOSE UP

■ 14.1 Different product states

Warm-up: Initial state after switch-on, the lights are on, the presence sensor is in the preheating phase for 80 seconds.
The presence LED is lit.

Initial: The product is ready to control lighting based on its parameters and its sensor measurements.

Test: Enabled by the installer or the expert, this state is used to check the presence sensor and its cover.
The settings are overridden except for PIR sensitivity, every time presence is detected the light comes on for 5 s.
This test is available for 10 minutes if specifically requested.

14. DESCRIPTION OF BUTTONS AND LEDS *(continued)*

14.2 Detection settings

See chart on page 8.

Time delay: Length of time the load remains on after detection.

Sensitivity: Detection range setting.

Detection LED:
Comes on for 80 s when the product is commissioned. Comes on for 1 s to indicate movement detection.

Daylight setpoint
Value at which the load switches on if the light level is less than the setting and goes off if it is above this setpoint.

Regulation:
Automatic switch-off of the load 10 minutes after the daylight setpoint is exceeded. If the level of light is below the daylight setpoint, the load is activated automatically after 20 seconds.

Standby level:
Warns of switch-off by lowering the daylight setpoint before switch-off.

Standby delay:
Used to adjust the switch-off warning duration.

Daylight level:
Light level value measured by the product.

Auto on/Auto off mode:
The lighting switches on automatically:
• On detection of presence if the natural light level is insufficient.

The lighting switches off automatically:
• When no presence is detected and at the end of the set time delay.
Or if the natural light level is sufficient (regulation enabled).

Any new detection triggers an automatic switch-on if there is insufficient light.

Walkthrough mode:
• If no presence is detected in the 3 minutes following initial detection, the product will switch off the load after 3 minutes.
• If another presence is detected in the 3 minutes following initial detection, the device will switch off the load at the end of the set time delay.

Manual on/Auto off mode:
The lighting is switched on via a manual control, but switches off automatically:
• When no presence is detected and at the end of the set time delay.

After switch-off, if another movement is detected within a 30-second period, the lighting switches on automatically.

Temperature:
The product measures the current temperature level in the room by means of a dedicated sensor. The value is expressed in degrees Celsius. This value is used as an "indicator".

Humidity:
The product measures the relative humidity level in the room by means of a dedicated sensor calibrated by the manufacturer. The value is expressed as a %. This value is used as an "indicator".

Current relative humidity (%)
→ direct reading
+ relative humidity offset

14. SETTINGS WITH CLOSE UP *(continued)*

Noise sensor:
The product measures the sound level in the room by means of a dedicated sensor. The value is expressed in dB SPL. This value is used as an "indicator".

Maximum sound level (dB SPL)
→ maximum direct reading between 2 requests
+ sound level offset

Average sound level (dB SPL)
→ direct reading
+ sound level offset for 1 min

Air sensors:
The product measures the total volatile organic compounds in the room by means of a dedicated sensor. The value is expressed in PPB. This value is used as an "indicator".

Current VOC level (PPB) → direct reading

• Measuring the IAQ
The product provides the IAQ level according to the UBA index measured in the room based on the tVOC measurement. This value is used as an "indicator".

Current IAQ index (UBA) → direct reading

• Estimated CO_2 measurement
The product estimates the CO_2 level based on the tVOC measurement. The value is expressed in PPM. This value is used as an "indicator".

eCO_2 (ppm) → direct reading

Restart:
Function allowing automatic switch-on of the product after a period of 30 seconds following the load being switched off.
After switch-off, any new detection within a 30-second period triggers an automatic switch-on.
After more than 30 seconds the device must be switched on manually.

Regulation speed:

Used to extend or reduce the load reaction time based on the light level measurement and user setpoint.
Offsets can be used to adjust the values measured by the product.

Temperature offset: -20°C to +20°C (by default: 0).

Relative humidity offset: -20% to +20% (by default: 0).

Sound pollution offset: -20 to +20 dB SPL (by default: 0).

14. SETTINGS WITH CLOSE UP *(continued)*

TITLE	SETTING	VALUES	DEFAULT VALUE	CONDITIONS
CONFIGURATION				
Time delay	Minutes	0 to 59	15	
	Seconds	15 to 59	0	
Detection	PIR sensitivity	Low / Medium / High / Very high	High	
	Detection Led	Enabled / Disabled	Enabled	
	Occupancy status	*Read only*		
	Retriggering	Enabled / Disabled	Disabled	Only if mode is set to Manual ON / Auto OFF
Luminosity	Daylight setpoint	5 to 1275	300	
	Provision of light	0 to 1275	0	
	Luminosity regulation	Enabled / Disabled	Enabled	
	Standby level	1 to 100	10	
	Standby delay	No standby 5 sec. 10 sec. 20 sec. 30 sec. 1 min. 5 min. 10 min. 15 min. 20 min. 30 min. 60 min. No limit	No standby	
	Daylight factor	1 to 255	35	
	Daylight level	*Read only*		
	Natural daylight factor	1 to 255	10	
	Current provision of light	*Read only*		
	Lighting output type	Dimming / Non dimming	Dimming	
	Regulation speed	5 minutes at least 10 minutes at least 15 minutes at least 20 minutes at least 25 minutes at least	10 minutes at least	
	DALI luminosity offset	0 to 100	25	
Functions	Mode	Auto ON / OFF Walkthrough mode Manual ON / Auto OFF	Walkthrough mode	
	Primary / Secondary	Primary Secondary	Primary	
Temperature	Current temperature	*Read only*		
	Temperature offset	from -20 to +20	0	
Humidity	Current humidity	*Read only*		
	Relative humidity offset	from -20 to +20	0	
Noise sensor	Max noise	*Read only*		
	Current noise level average	*Read only*		
	Noise level offset	from -20 to +20	0	
Air sensors	VOCT	*Read only*		
	Air quality	*Read only*		
	CO2 equivalent	*Read only*		
VERSIONS				
Product version		*Read only*		
Zigbee IEEE		*Read only*		
Software - radio module		*Read only*		
Hardware - lighting module		*Read only*		
RADIO NETWORK				
PAN ID		*Read only*		
Channel		*Read only*		
Coordinator		*Read only*		
SENSOR STATUS				
Sensor status		*See details (access to a new screen)*		

Advanced settings

14. SETTINGS WITH CLOSE UP *(continued)*

14.3 Access to tools

Commands	**Reboot** Allows the product to be rebooted in the event of faulty operation.
	Factory reset By pressing the button on the app or by holding down the Reset button for 5 seconds. The radio LED flashes red, then the device restarts. Results: The settings are reset to their default values. The radio settings (connection, network table) are cleared. The device reverts to an non-secure state.
	Dissociate from the project The product is returned in a non-secured state. It can be linked to a new project.
	Join radio network When the button on the app is pressed, the device attempts to connect to an open wireless network. The radio LED flashes magenta during the operation (max. 180 s). If successful, the LED turns solid magenta. Otherwise, it turns solid red. During the operation, other radio commands are unavailable. You can stop the procedure by pressing this button again (the LED turns solid red).
	Leave radio network If the device is the network coordinator (see parameter chart) the network is terminated. All devices are removed from the network. If the device is not the coordinator, it withdraws from the network.
	Open radio network Opens the radio network for 180 seconds (the radio LED turns a steady magenta). During this time, you can add devices to the network. If the device does not belong to a network, it creates its own network.
	Close radio network Closes the radio network (the radio LED goes out). It is therefore no longer possible to add devices to the network.
	Initial state* This command puts the unit into warm-up mode, which can help the installer check several key points (daylight setpoint, detection, automation).
	End of time delay* Clears the current time limit.
	Walk test* Useful for testing the detector's range of coverage. This mode allows you to override all settings except for PIR sensitivity for 10 minutes. Each detection turns on the presence indicator light (if the relevant setting is enabled) and activates the lighting for 5 seconds. After these 5 seconds, if no presence is detected, the lighting switches off; otherwise, the 5-second timer is reset.

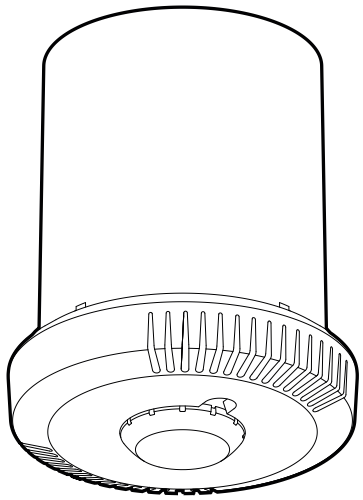
* Command dedicated to checking the product's performance, mainly used by the installer or expert.

14. SETTINGS WITH CLOSE UP *(continued)*

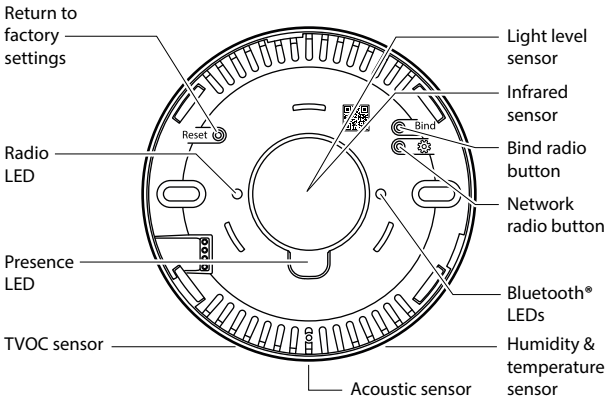
Modules	**Manage Legrand wireless devices** Allows you to add or remove switches and/or sockets.
	Sensor calibration Allows you to set two reference values (lux): lights on/shutters closed and lights off/shutters open. After pressing this button, follow the described procedure.
	Primary / Secondary installation The primary detector controls the load(s). The secondary detector extends the detection range but does not directly control any loads. By default, the detector is set to primary mode.
	DALI management Allows monitoring of up to 50 DALI ballasts divided into three groups: corridor, window and screen.

15. SURFACE-MOUNTING ACCESSORY

Montage en saillie avec l'accessoire **réf. 0 485 80**, suivre les instructions de la notice fournie avec l'accessoire.



16. DESCRIPTION OF BUTTONS AND LEDS



Network radio button	< 0.5 s network/Opening and closing the network > 5 s Radio reset	
Bind button	< 0.5 s Network creation/Initiator binding > 5 s Target Binding	
Reset button	< 0.5 s Reboot > 5 s Return to factory settings	
Radio LED	Failure of network creation, joining a network or binding. Product reset *(flashing red)*	Flashing red
	The product is in a radio network, the network is open.	Steady magenta
	After the **Network** button is pressed: attempt to join a radio network. It changes to steady magenta if the operation was successful. If not, the LED flashes red 5 times.	Blinking magenta
	Binding procedure in progress	Blinking blue
	Updating	Blinking cyan
	Product anomaly, reboots 15 s after the anomaly	Steady white
	Product start-up	Steady yellow
Presence LED	In pre-heating state (commissioning) the LED stays on for 80 s. Each time movement is detected, the LED comes on for 1 s.	Steady green
Bluetooth® LED	Is on when the product is paired with a smartphone.	Steady blue

17. STANDARDS

Installation standards: NFC 15-100

Product standards: EN 50428

LVD "Low Voltage Directives":
- Directive ⟶ 2014/35/EU
- Standard ⟶ NF EN IEC 60669-2-1:2022

EMC "Electromagnetic compatibility":
- Directive ⟶ 2014/53/EU
- Standard ⟶ NF EN IEC 60669-2-1:2022
  ETSI EN 301489-1
  ETSI EN 301489-17

RED (radio equipment):
- Directive ⟶ 2014/53/EU
- Standard ⟶ ETSI300 328 v2.2.2:2020
  IEC62311:2020

RoHS (Restriction of Hazardous Substances):
- Directive ⟶ 2011/65/EU
  2015/863/EU

EC directives:
- European Directive 2002/96/EC:
  WEEE (Waste Electrical and Electronic Equipment).
- EC Directive 2002/95/EC:
  RoHS (Restriction of Hazardous Substances).

18. CARE

Keep the lens clean.

Clean the surface with a cloth.

Do not use acetone, tar-removing cleaning agents or trichloroethylene.

Resistant to the following products:
- Hexane (EN 60669-1)
- Methylated spirit
- Soapy water
- Diluted ammonia
- Bleach diluted to 10%
- Window cleaning products

Caution:

Always test before using other special cleaning products.

19. TROUBLESHOOTING

Problem	Causes	Solutions
The lighting stays on when there is no-one present	Sources of interference such as draughts, vibration or radiators may cause nuisance tripping	1- Reduce the sensitivity level 2- If the interference still continues, move the sensor away from sources of interference
The lighting does not switch off during the day when there is an adequate natural light level	Regulation function inactive Daylight setpoint too high Too much light provided	Enable the **Regulation** function Reduce the light level threshold Check that the detector is positioned correctly in relation to the window Decrease the power of the luminaires
The lighting switches off when there are people present and the natural light level is not adequate (darkness)	Time delay too short Detection sensitivity too low Daylight setpoint too low	Increase the **Time delay** 10 to 1 minutes is recommended for work areas Increase the **Sensitivity** Move the detector closer to the work area Increase the **threshold**