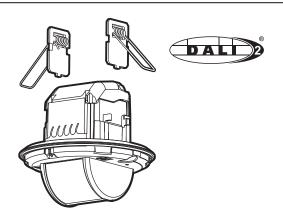


## **LIGHT UP DALI corridor detector**



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Cat. No(s): 0 485 54

**PAGE** 

Access to the full LIGHT UP documentation

### 1. USE

This product is a DALI presence detector.

The presence detector 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 overriding lighting using the wired push-button.
- $\bullet \ \textbf{1 presence sensor} \ (\mathsf{PIR} \ \mathsf{technology}) \ \mathsf{with} \ \mathsf{lens} \ \mathsf{for} \ \mathsf{detecting} \ \mathsf{occupancy}.$
- 1 daylight sensor which measures natural and artificial light in order to control lighting according to the desired lighting setpoint.
- 1 DALI output for supplying the bus and controlling lighting.

#### ■ 1.1 Bluetooth 5.0

- For commissioning the product in a connectable system using the **LEGRAND CLOSE UP** mobile app.
- Product updating.

## ■ 1.2 Radio (2.4 - 2.483 GHz)

• Creation of a standalone system, for managing 1 power outlet and 1 radio-controlled switch.

## 2. TECHNICAL CHARACTERISTICS

## ■ 2.1 Consumption

• Voltage: 110 - 230 V~

• Frequency: 50/60 Hz

# ■ 2.2 Standby consumption

- OFF load → 0.86 W
- ON load → 0.86 W

### ■ 2.3 Installation

- Installation in false ceiling
- Screw terminals: 2 x 1.5 mm<sup>2</sup> or 1 x 2.5 mm<sup>2</sup>
- Drilling diameter: 68 mm

## 2. TECHNICAL CHARACTERISTICS (continued)

**CONTENTS** 

#### ■ 2.4 Mechanical characteristics

- Impact resistance: IK04
- Penetration by solid and liquid matter: IP20
- Weight:
- of product: 239.1 g
- packaged: 283.2 g

#### ■ 2.5 Climate characteristics

- Usage temperature: -10°C to +30°C
- Storage temperature: -20°C to +70°C

#### ■ 2.6 Detector

- Infrared
- Detection diameter: 24 x 3 m (for a height of 2.5 m from the floor)
- Minimum installation height: 1.7 m

## ■ 2.7 Factory settings

- Light level: 150 lux
- Time delay: 10 minutes
- · Walkthrough mode

# ■ 2.8 Bluetooth

- Version 5.0 compatible from 4.2 upwards
- Frequency: 2.4 to 2.483 GHz
- Output power: +8 dBm
- Range: 10 m

## ■ 2.9 Radio

- Frequency: 2.4 GHz (16 channels)
- Output power: +8 dBm
- Data rate: 250 kbps
- Range: 10 m
- Security: Wireless mesh network, self-adaptive and secure (AES 128), conforming to standard IEEE 802.15.4 (LR-WPAN)

## ■ 2.10 Declaration of conformity

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

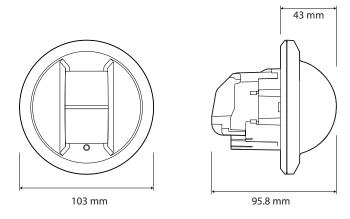
LEGRAND declares that the radio-electric equipment type Cat. No. **0 485 54** complies with directive 2014/53/EU. The full text of the EU declaration of conformity is available on the following website: **www.legrand.com/ecatalogue**.

## 3. LOADS

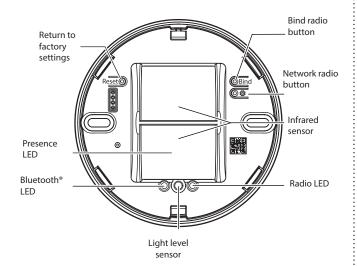
#### ■ 3.1 DALI

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

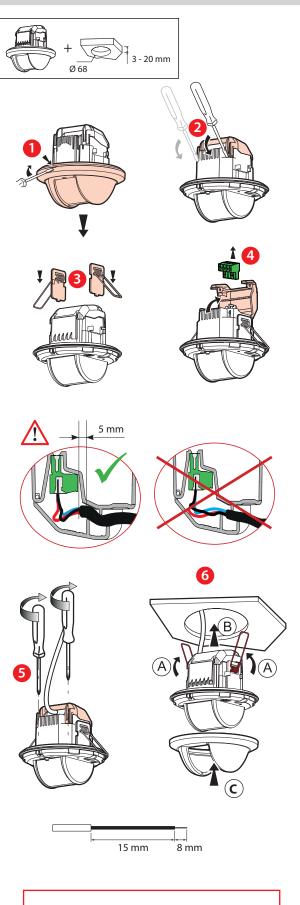
## 4. DIMENSIONS



## 5. DESCRIPTION



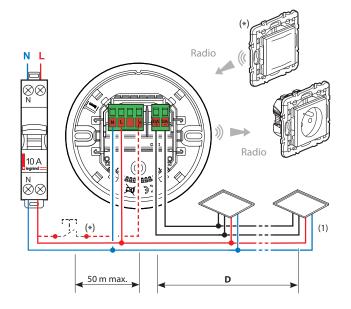
## 6. MOUNTING



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

## 7. WIRING

#### ■ 7.1 Standalone solution



#### (\*) This product can be controlled by:

- A wireless batteryless switch (ON/OFF without dimming)
- A wired push-button (ON/OFF with dimming) And it can control a 2P+E power outlet (wirelessly)

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

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.** 

(1) Recommended cable cross-section for the 1.5 mm<sup>2</sup> DALI output.

#### **DALI** bus

D	
≤ 100 m	0.5 mm <sup>2</sup>
≤ 150 m	0.75 mm <sup>2</sup>
≤ 300 m	1.5 mm <sup>2</sup>

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

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.

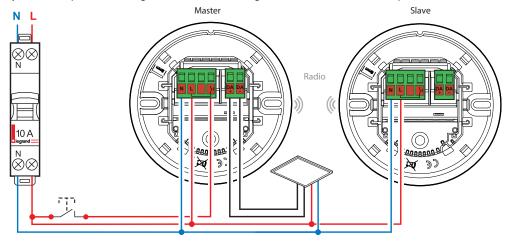
#### **CAUTION:**

The sensor provides the DALI BUS power supply.

Do Not connect 2 sensors to the same DALI BUS.

#### ■ 7.2 Master/Slave

By default the product is configured as Master. To change it to Slave, refer to the description in the LIGHT UP Technical Guide.



The master can be paired with a maximum of 5 sensors configured as slaves.

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

If being used in "Master/Slave" mode, the push-button should only be connected to the "Master" detector.

Detector 0 485 54 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".

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## 8. INSTALLATION

## ■ 8.1 Positioning the detector

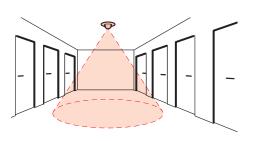






## ■ 8.2 Recommended light exposure



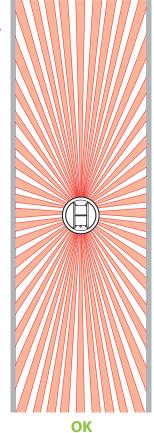


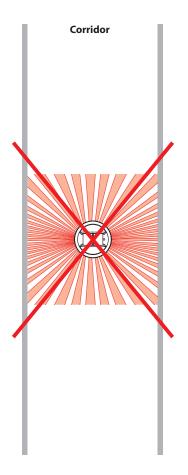


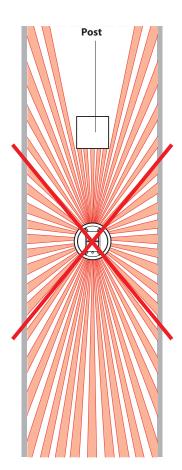


## ■ 8.3 Installation restriction





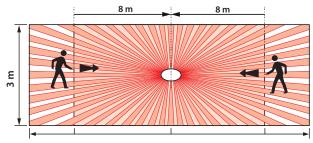




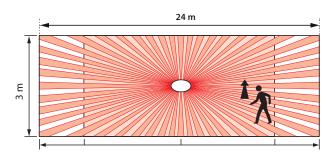
## 9. PERFORMANCE

#### ■ 9.1 Sensing model

## **Axial approach**

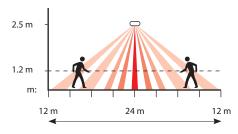


#### **Transverse approach**



## ■ 9.2 Maximum sensitivity

## Height



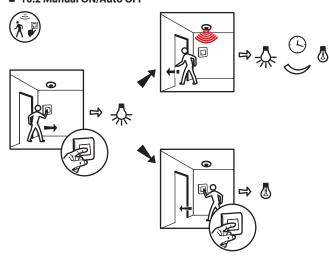
## 10. MODES

#### ■ 10.1 Auto ON/OFF





#### ■ 10.2 Manual ON/Auto OFF



## 11. 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.

 $\ensuremath{\textbf{LEGRAND}}$   $\ensuremath{\textbf{CLOSE}}$   $\ensuremath{\textbf{UP}}$  can be used to view and change all the detector 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:

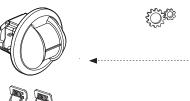






#### Direct access









# 12. SETTINGS WITH CLOSE UP

#### ■ 12.1 Different product states

Warm-up: Initial state after switch-on, the lights are on, the presence detector 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 coverage.

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.

## ■ 12.2 Detection settings





Sensor settings		Default value	Modifiable parameters		
Minutes		10'	0 to 59 min.		
H	ne delay	Seconds	0"	15 to 59 s.	
Detection	PIR sensitivity		High	Low, Medium, High, Very high	
Dete	Detection LED		Enabled	Disabled, Enabled	
	Daylight setpoint		150 lux	5 to 1275 lux	
Ì	Light level regulation		Enabled	Disabled, Enabled	
	Fade level		10	10 to 100	
				Disabled	
				5 sec.	
				10 sec.	
				20 sec.	
Ne l				30 sec.	
Light level	C4		Disabled	1 min.	
Lig	Standby time		Disabled	5 min.	
		10 min.			
				15 min.	
				30 min.	
				60 min.	
				No limit	
	Light level Read-only parameter		er		
	Load type		Dimmable		
Ĕ	Mode		Walkthrough	Auto ON/OFF	
Function				Walkthrough	
Ē				Manual ON/Auto Off	
	Restart (*)		Enabled	Disabled, Enabled	
	Regulation speed		At least 10 minutes	At least 5 minutes	
ğ				At least 10 minutes	
μ				At least 15 minutes	
Advanced mode				At least 20 minutes	
4dv.				At least 25 minutes	
_	Product version		Dood only nove		
ĺ	Zigbee IEEE		Read-only parameters		

(\*) Parameter only accessible if Mode → Manual ON/Auto OFF

Contents

All these parameters can be viewed and/or modified from the **CLOSE UP** app. The procedures for using the app can be viewed in the LIGHT UP **Technical Guide.** 

## 12. SETTINGS WITH CLOSE UP (continued)

#### ■ 12.2 Detection settings (continued)

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

Cat. No(s): 0 485 54

Sensitivity: Detection range setting.

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

Light contribution: Quantity of additional lux brought in by the load being switched on. When the Light contribution parameter is set to 0, the detector automatically calculates the light contribution.

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.

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

**Standby time:** Used to adjust the switch-off warning duration. NB: Choosing an unlimited duration allows there to be a minimum light level when no presence is detected.

#### **Light level:**

Light level value measured by the product.

#### ■ 12.3 Modes:

### 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

## Walkthrough mode:

- · If no presence is detected in the 20 seconds following an initial detection, the device 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 by 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.

## ■ 12.4 Advanced mode

#### **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. Function only available in Manual ON/Auto OFF.

## Regulation speed:

Used to extend or reduce the load reaction time based on the light level measurement and user setpoint.

## 12. SETTINGS WITH CLOSE UP (continued)

#### ■ 12.5 Access to tools





**Reboot:** Used to reboot the product in the event of a fault.

**Return to factory settings:** By pressing the app button or pressing the Reset button for 10 s.

The radio LED flashes red for 5 s at 2 Hz.

Results: The parameters are set to default values. The radio part (link, network table) is cleared. The passwords are reset to their factory value.

**Exit the network:** Remove the product from the Radio network in standalone mode.

**Manage wireless peripherals:** Used to add or delete switches and/or power outlets.

**Calibrate light level detector:** Used to determine 2 reference values (lux), light on/shutters closed and light off/shutters open. After pressing this button, follow the described procedure.

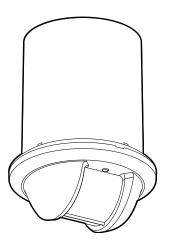
**Test mode:** Switch dedicated to checking the product behaviour, mainly used by the installer or expert.

- **Return to initial state:** This switch is used to put the product in heating mode, which can help the installer check several key points (daylight setpoint, detection, automation device).
- End of time delay: Clears the current delay.
- Walk test: Useful for testing the presence detector's field of vision. This mode is used to override the settings except for PIR sensitivity for 10 minutes. Each detection lights up the presence LED (if the dedicated parameter is enabled) and switches on the lighting for 5 seconds. After these 5 seconds, if no presence is detected, the light goes out, otherwise the 5-second delay is refreshed.

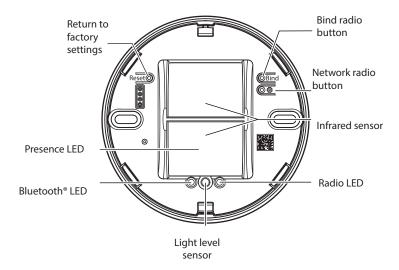
**Master/Slave:** The Master controls the load(s). The slave is used to extend the detection zone; it does not control the load directly. By default the detector is set to Master mode.

## 13. SURFACE MOUNTING ACCESSORY

Surface mounting with accessory **Cat. No. 0 485 80**, follow the instructions in the manual supplied with the accessory.



## 14. DESCRIPTION OF BUTTONS AND LEDS



Network radio button	< 0.5 s Join a network/Open and close 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 Factory reset	
Radio LED	Failure of network creation, joining a network or binding.  Product reset (red flash)	Red flash
	The product is in a radio network, the network is open.	Steady magenta
		•
	After the <b>Network</b> 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.	Flashing magenta **
	Binding procedure in progress	Flashing blue
	Updating	Flashing cyan
	Product anomaly, reboots 15 s after the anomaly	Steady white
	Product start-up	Steady yellow
	Troduct start up	•
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
	Each time movement is detected, the LED comes on for 1 s.	•
Bluetooth® LED	Is on when the product is paired with a smartphone.	Steady blue
		•

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## **15. 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 → ETSI EN 300 328 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)

## 16. 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.

## 17. TROUBLESHOOTING

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