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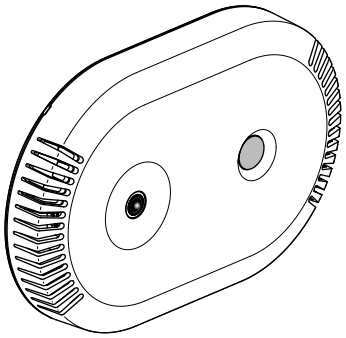
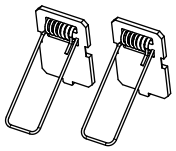
LIGHT UP Activity multisensor

Catalogue number(s): 0 485 91





Access the full documentation documentation for the activity Multisensors

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1. USE

The Activity Multi-Sensor is designed for use in tertiary buildings (small or large), such as co-working offices, meeting rooms, shared spaces, schools, etc., to disseminate information that allows third parties to deliver services such as:

- Space occupancy management,
- Premises cleanliness management,
- Improvement of air quality and comfort of living spaces.

In these objectives, the Activity Multi-Sensor has sensors to perform counting/localization/activity of people and to measure physical quantities:

Temperature, humidity, brightness, tVOC, eCO2, IAQ, sound, etc.

Product updates via the "Close Up" app available for iOS and Android.

2. TECHNICAL CHARACTERISTICS

- PoE → Class 1 (0.44W à 3.94W)
- Standby Consumption: <1,6 W
- Connection: Cord or RJ45 cable
- Mounting Hole Diameter: 68 mm
- Weight (product alone): 241 g
- Weight (packaged product): 307 g
- Shock Resistance: IK04
- Solid and Liquid Ingress Protection: IP20
- Operating Temperature: +5° C to +30° C
- Storage Temperature: -20°C to +70° C
- Bluetooth: From BLE 5.0 onwards

■ 2.1 Counting People

The people counting sensors help reduce the amount of energy consumed by heating, ventilation, and air conditioning (HVAC) systems and lighting systems in buildings.

- **Thermal Camera:**
- Field of Vision: 160°
- Coverage: 8m x 8m
- Installation Height: 2.5m (up to 4m possible)
- Management of 1 to 6 zones of interest
- Management of 1 to 6 exclusion zones
- Counting up to 40 people
- Resolution: 1
- Data Availability at Commissioning: Up to 5 minutes

■ 2.2 Temperature and Humidity

Humidity Sensor:
- Measures the relative humidity in the area in percentage.
- Measurement range: 0 to 100 %.
- Drift: < 0.25 % per year.

2. TECHNICAL CHARACTERISTICS *(continued)*

- Accuracy: ±5 %.
- Data availability at commissioning: 1 hour.
- Humidity offset: from -20 to +20 % (default: 0).
- Temperature Sensor:

Temperature Sensor:
- Measures the ambient temperature in degrees Celsius.
- Measurement range: 0° to 50° C.
- Resolution: 0.1° C.
- Drift: < 0.02° C per year.
- Measurement interval: starting from 3 seconds.
- Data availability at commissioning: 1 hour.
- Temperature offset: from -20 to +20° C (default: 0).

■ 2.3 Air Quality

VOC Sensor:

Estimates the indoor air quality in the room. It measures the total volatile organic compounds in ppb, provides an air quality index such as the UBA index
and estimates the CO2 level in ppm called "eCO2".
- 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 minute

■ 2.4 Sound Level

Sound Sensor:
- Measures the ambient noise in the area in dB SPL.
- Omnidirectional responsiveness.
- Measurement range: 35 - 120 dB SPL.
- Resolution: 1 dB SPL.
- Sound level offset: from -20 to +20 dB SPL (default: 0).

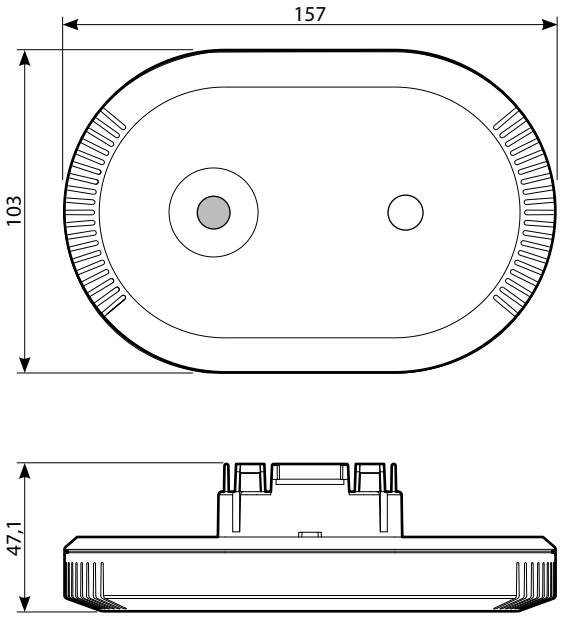
■ 2.5 Brightness

Daylight Sensor:
- Measures both natural and artificial daylight.
- Measurement range: 5 to 1275 lux.

■ 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. DIMENSIONAL SENSOR

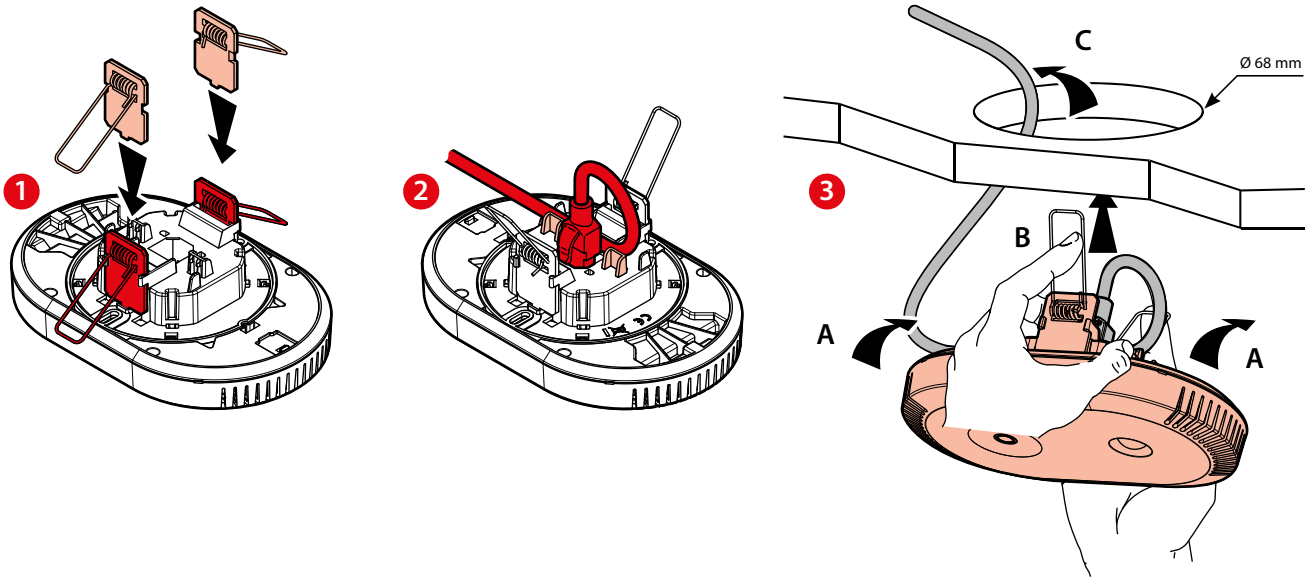


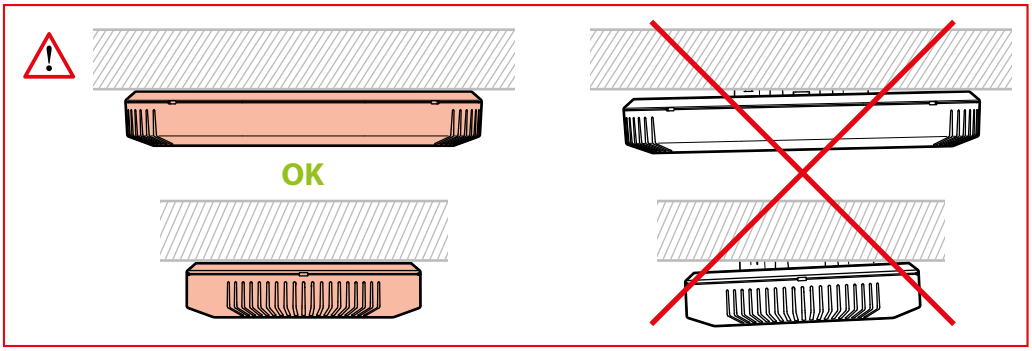
4. SIMPLIFIED EU DECLARATION OF CONFORMITY

- **Frequency (f):** 24 to 2483 GHz
- **Power (P):** < 100 mW

LEGRAND, declares that radio equipment of the type Cat. no. **0 485 91** complies with Directive **2014/53/EU**. The full text of the EU declaration of conformity can be found at: **www.legrand.com/ecatalogue.**

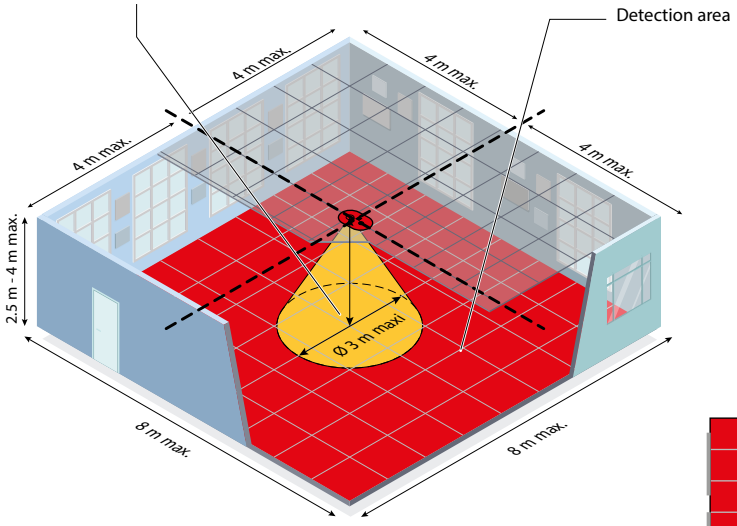
5. MOUNTING

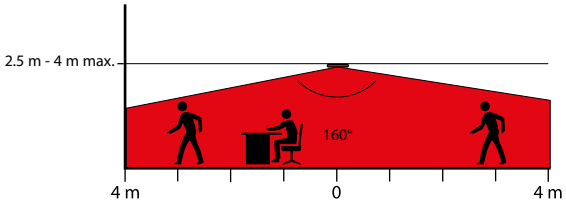


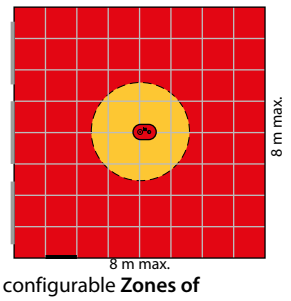


6. DETECTION ZONE

The measurement of the light level is carried out vertically to the detector on a diameter of 3 meters





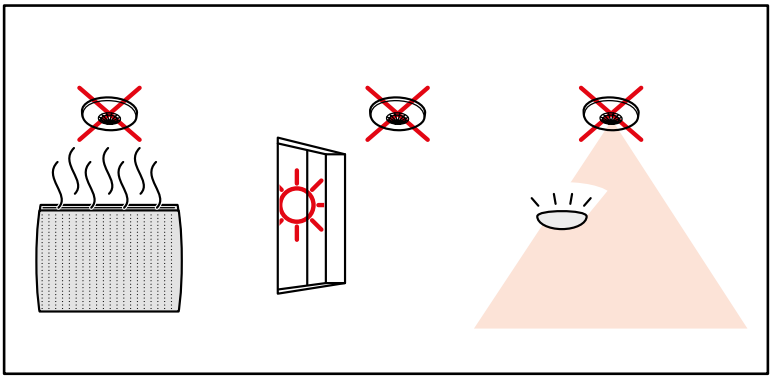


Up to 6 configurable **Zones of Interest** and/or Exclusions can be monitored.

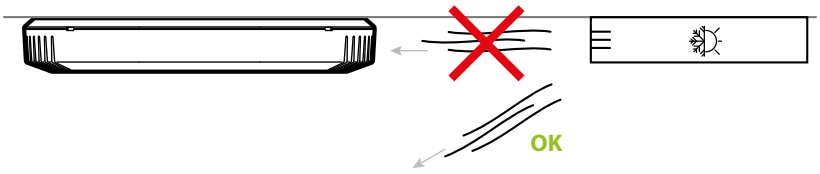
7. INSTALLATION PRECAUTIONS

Maximum installation height 4 m.

Make sure that the thermal imager's field of vision is not obstructed by high objects or devices that could conceal one or more persons.



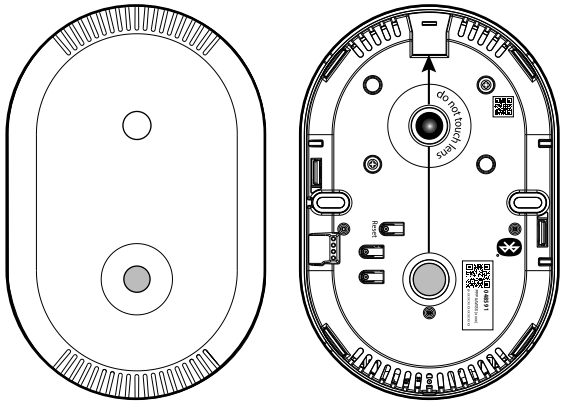
Avoid direct airflow over product vents (air conditioning, ventilation, open windows or glass panels higher than 1.5m to prevent infra-red reflections, etc.).



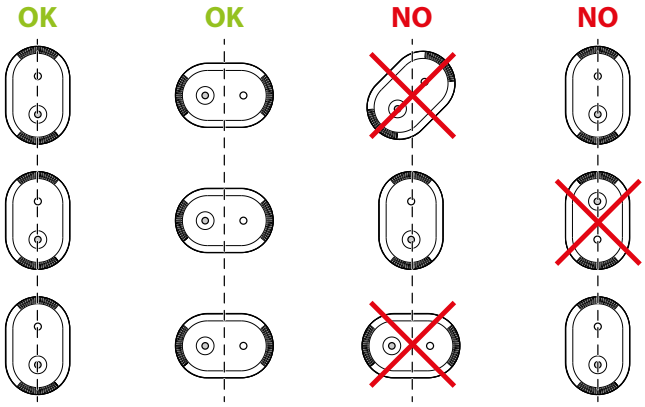
8. FIRST POWER-UP

First commissioning:

The product is operational after 5 minutes. The device self-calibrates in 20 minutes. To calibrate it immediately, start calibration from Close Up, making sure that no-one is in the area covered by the product.



In large areas that require the installation of several devices, it is recommended to install them in a row and facing in the same direction



9. 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®.

Available to download from:

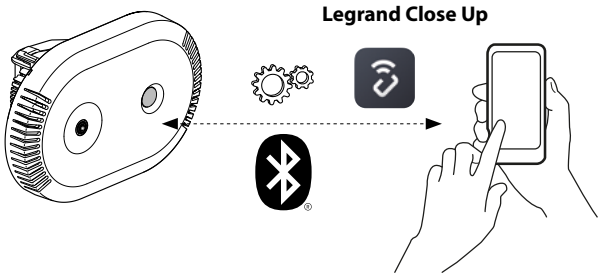
Download on the App Store **or** GET IT ON Google Play

Direct access

Note :

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

9. LEGRAND CLOSE UP APP *(continued)*



10. SETTINGS WITH CLOSE UP

■ 10.1 Temperature Measurement

The product measures the room's temperature level using a dedicated sensor calibrated by the manufacturer. The value is expressed in degrees Celsius and used as an "indicator."

■ 10.2 Sound Level Measurement

The product measures the room's sound level using a dedicated sensor. The value is expressed in dB SPL and used as an "indicator."

Maximum Sound Level (dB SPL):
→ Maximum raw measurement between two queries + sound level offset

Average Sound Level (dB SPL):
→ mesure brute
+ décalage du niveau sonore pendant 1 min

■ 10.3 Humidity Level Measurement

The product measures the room's relative humidity level using a dedicated sensor calibrated by the manufacturer. The value is expressed in percentage and used as an "indicator."

Current Relative Humidity (%):
→ Raw measurement + relative humidity offset

■ 10.4 Air Quality Measurement

The product measures the total volatile organic compounds in the room using a dedicated sensor. The value is expressed in ppb and used as an "indicator."

Current VOC Level (ppb) → Raw measurement

• IAQ Measurement:

The product provides the IAQ level based on the UBA index measured in the room from the TVOC measurement. This value is used as an "indicator."

Current IAQ Index (UBA) → Raw measurement

• Estimated CO2 Measurement:

The product estimates the CO2 level from the TVOC measurement. The value is expressed in ppm and used as an "indicator."

eCO2 (ppm) → Raw measurement

■ 10.5 Returning to Factory Configuration Settings

• Action :

Press the reset button for 10 seconds. (Rapid green flashing until it turns solid green, then release. The LED will flash red for 5 seconds at 2 Hz.).

• Results:

The settings are reset to default values. Product links and the network table are cleared. Passwords are reset to factory values.

10. SETTINGS WITH CLOSE UP *(continued)*

TITLE	SETTING	VALUES	DEFAULT VALUE	CONDITIONS
CONFIGURATION				
Network	DHCP mode	Yes / No	Yes	
	Current IP address	*Read only*		If DHCP mode is enabled
	IP address			If DHCP mode is disabled
	Subnet mask			If DHCP mode is disabled
	Gateway			If DHCP mode is disabled
	NTP server			If DHCP mode is disabled
	DNS server			If DHCP mode is disabled
MQTT	MQTT	Yes / No	No	
	Server			If MQTT is enabled Mandatory
	Client prefix			If MQTT is enabled Mandatory
	Port		0	If MQTT is enabled Mandatory
	Login			If MQTT is enabled
	Password			If MQTT is enabled
	Client ID			If MQTT is enabled Mandatory
	SSL	Yes / No	No	If MQTT is enabled Mandatory
	Keepalive delay		0	If MQTT is enabled
	QOS level		0	If MQTT is enabled
Luminosity	Daylight level	*Read only*		
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*		
Software - counting function		*Read only*		
Hardware - counting function		*Read only*		
Paramètres - counting function		*Read only*		
Statut - counting function		*Read only*		

Advanced settings

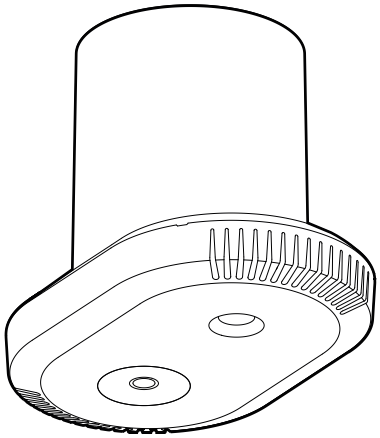
10. SETTINGS WITH CLOSE UP *(continued)*

10.6 Access to tools

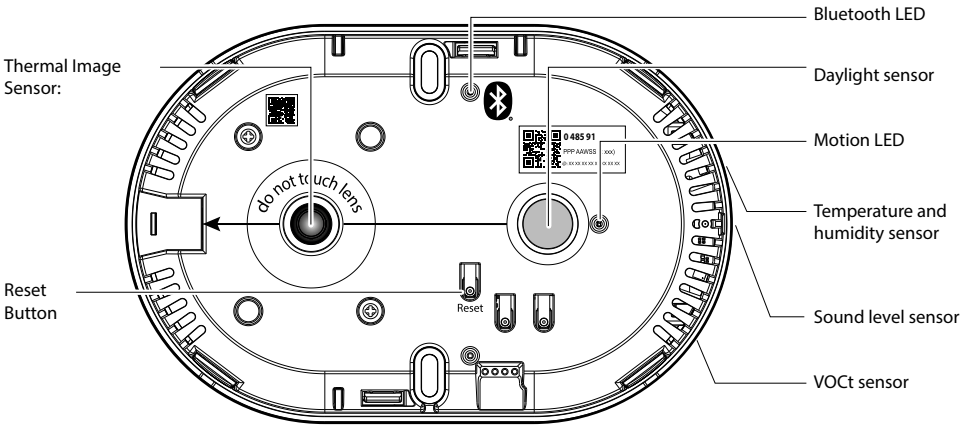
Commands	**Reboot** Allows the product to be rebooted in the event of faulty operation.
	Factory reset By pressing the button on the application or by long-pressing the reset button (press, the motion LED will flash green; hold down until the motion LED stays lit). Result: the settings are reset to their default values. 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.
Modules	**Counting function configuration** This allows configuration of the detector height and the counting module's operating mode, as well as the creation of up to 6 zones of interest and 6 exclusion zones.
	Sensor calibration Allows the measured lux value to be adjusted by entering the values read by a measuring device.

11. SURFACE MOUNTING ACCESSORY

Surface-mounted installation using accessory Cat. No. **0 485 80**.
Follow the instructions supplied with the accessory.



12. DESCRIPTION OF BUTTONS AND LEDS



Reset Button :
This button allows restoring the factory settings.

Bluetooth Indicator (Blue):
Indicates when a device is paired with a mobile device (e.g., smartphone).

Motion Indicator (Green):
A green light dedicated to indicating the sensor's warm-up phase and movement detection.

13. STANDARDS

Installation Standards: NFC 15-100

Product Standards: NF EN 50428

LVD "Low Voltage Directives :" :
- Directive ⟶ 2014/35/EU
- Standard ⟶ NF EN IEC 62368-1:2020

EMC "Electromagnetic Compatibility " :
- Directive ⟶ 2014/53/UE
- Standards ⟶ EN55035:2017
  EN55032:2015
  IEC61000-3-2:2019
  EN61000-3-3:2014
  ETSI EN 301489-1
  ETSI EN 301489-17

RED (Radio Equipment Directive) :
- Directive ⟶ 2014/53/UE
- Standard ⟶ ETSI300 328 v2.2.2:2020
  IEC62311:2020

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

Directives CE :
- European Directive 2002/96/CE :
  DEEE (Déchet des équipements électriques et électroniques) or
  WEEE (Waste Electrical and Electronical Equipment).
- European Directive 2002/95/CE :
  LSD (Limitation des Substances Dangereuses) or
  RoHS (Restriction of Hazardous Substances).

14. CARE

Keep the lens clean.

Perform surface cleaning with a cloth.

Do not use acetone, tar remover, or trichloroethylene.

Resistant to the following products:
- Hexane (En 60669-1),
- Denatured alcohol,
- Soapy water,
- Diluted ammonia,
- 10% diluted bleach,
- and Glass cleaner.

Caution: For the use of specific cleaning products, a preliminary test is necessary.