



MOTION & LIGHT SENSOR



UP TO 25 DALI DRIVERS



WIDE DETECTION AREA



SMALL SIZE



CASAMBI



■ Features

- Casambi motion and light sensor
- DALI Master. Up to 25 DALI drivers
- Wide detection area (up to 12 m)
- Small size (60mm Diameter)
- 24VDC or 100-240Vac operation
- BLE 5.0 compatible (Long Range)
- Multiple Casambi fixture profiles available

■ Applications

- Dropped ceilings
- Residential
- Offices

■ Description

CBU-PIR-CR-DA is a versatile Casambi motion & light sensor with DALI output.

Autonomous control of the lighting in a room is made easy with one single device (Casambi, EnOcean 2,4GHz or DALI-2 push buttons can optionally be used for additional manual control).

Setup and communication with other control devices is done using Bluetooth low Energy (BLE). CBU-PIR-CR-DA is BLE 4.0 and BLE 5.0 capable (compatible with long range network modes).

Configuration and control can be done from a mobile phone or tablet using the free CASAMBI app (available for iOS and Android).

Different fixture profiles are available to match the DALI drivers and luminaries' requirements. Diverse operating modes are possible: on/off, dimming 0-100%, tuneable white, dim to warm, RGB, RGBW, circadian control, DALI groups control, etc. (See fixture profile list).

Some fixture profiles allow the use of DALI-2 push button modules which will appear as Casambi push buttons in the app.

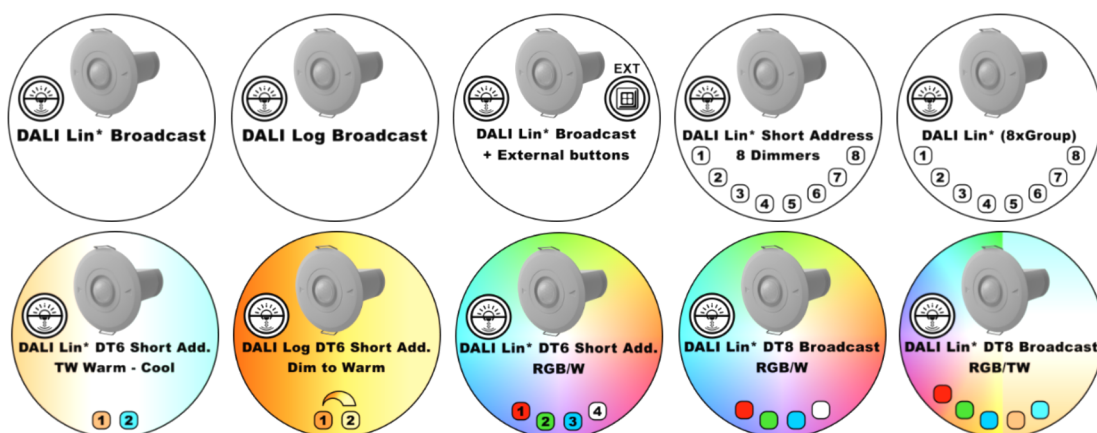
Also it can work only as a Casambi sensor and feature a N.O. push button input (which will operate as Casambi push button), instead of the DALI controller function.

High quality PIR sensor with 208 detection zones and 125° angle allows a wide detection area.

Operates on 24VDC. Accessory AC/DC power supply is included for 100-240Vac applications.

DALI master controller function of CBU-PIR-CR-DA with its internal 50mA DALI Bus Power Supply supports the connection of up to 25 DALI drivers.

Casambi fixture profiles



The factory default fixture is **#43371 Sensor + Push Button**.

Over 30 fixtures are available for enabling different control modes and suit different DALI driver types (DT6, DT8, TW, RGB, RGBW, etc.).

The full and detailed fixture profiles list can be accessed by checking the below link or QR code. Datasheet, manual, certificates and other useful information are also available there:

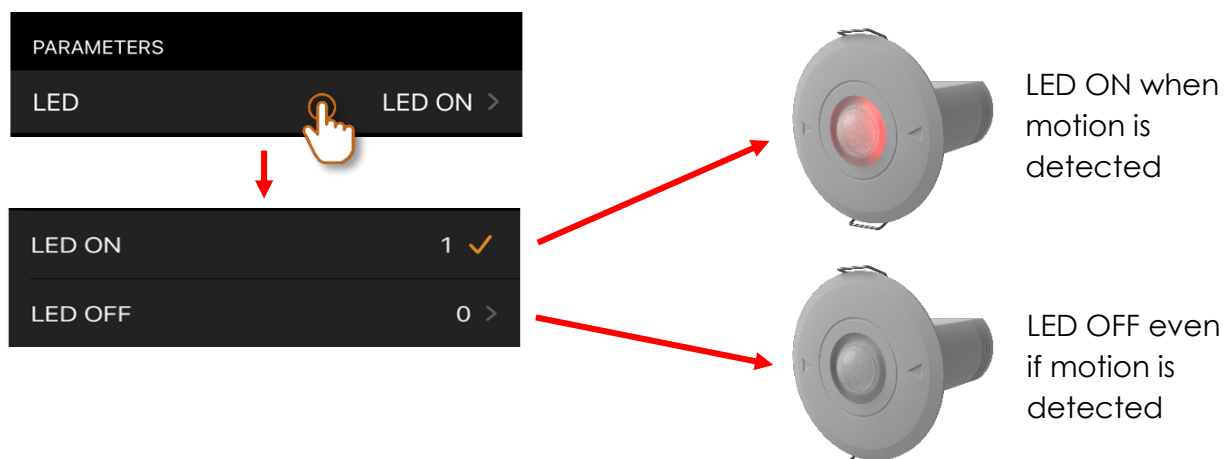
To access all user guides and documents, consult below link or scan QR code:

<https://www.olver.com/olver-cbu-pir-cr-da.html>



▪ Notification LED

The sensor motion notification LED can be disabled within Casambi App options.



■ Technical data

Type	CBU-PIR-CR-DA	
Input	Input voltage	24VDC SELV (18-26,4V). (100-240Vac 50/60hz by use of included adapter)
	Input current	≤85mA ⁽¹⁾
	Power consumption	≤2,25W ⁽¹⁾
	Standby power consumption	≤0,3W ⁽²⁾
DALI output	Bus voltage	14-22,5V
	Isolation	Non isolated from DC input. Isolated from mains by use of SELV adapter
	Maximum number of drivers	25 ⁽³⁾
	Guaranteed DALI Current	50mA
	Maximum DALI current	250mA ⁽⁴⁾
PIR	Type	Quad pyroelectric. Digital output.
	Maximum mounting height	≤3,5m@ΔT8°. ≤2,5m@ΔT4°. ⁽⁵⁾
	Detection angle	125° x 125°
	Detection zones	208
Photocell	Type	Human eye response adapted phototransistor
	Luminance range	20 - 1400 lx
Protections	Input reverse connection	Yes. Both DC input and DALI output
	Input over current	Auto resettable fuse
	DALI bus short-circuit	Limited output current
	Isolation	Class III (use of SELV power supply is mandatory)
	Ingress protection degree	IP20
Environmental	Operation ambient temp.	-20°C to +50°C
	Tc	70°C
	Storage temperature	-20°C to +70°C
	Operation humidity	< 70% RH without condensation
RF Communication	Type	Casambi Bluetooth 4.0 & 5.0 Low energy (BLE)
	Operating frequencies	2402–2483 MHz
	Mesh type	Self-healing and self-organizing, frequency-hopping, spread spectrum mesh
	Maximum output power	+8 dBm
	Wireless class	Class 2
	Data security	AES128 bit encryption + elliptical cryptography
Other	Motion detection LED	Red. Can be enabled/disabled with Casambi app
	Firmware updates	OTA (Over the Air)
	Time/date updates	Internal counter. Updatable from app, Casambi gateway or by use of external time keeping device, after power loss of all the net devices
Mechanical	Mounting hole	Ø40-50mm
	Dimensions (L x W x H)	60 x 60 x 67mm (sensor). 60 x 30 x 23,5mm (AC adapter)
	Fixing	Side springs
	Enclosure material	Polycarbonate. Stainless steel springs
	Colour	White
	Single box size and weight	104 x 92 x 61mm. 0,13Kg (Sensor, AC adapter and packaging)
	Packaging	30 pcs per box / 34 x 31,5 x 23 cm / 4kg
Connections	Wire cross section	0,25-2 mm ² (Solid or stranded)
	Wire peeling length	9-10mm
	Connector type	Push-in, Screwless
Directives	(LVD) 2014/35/UE, (EMC) 2014/30/UE, (RED) 2014/53/UE, (RoHS) 2011/65/UE, (REACH) 1907/2006	
DALI standards	IEC 62386 part 101, 103. Supports luminaire, energy and diagnosis data (251-253 Parts)	

1) Measured with DALI bus maximum output current (50mA).

2) Measured with no load connected to the DALI output.

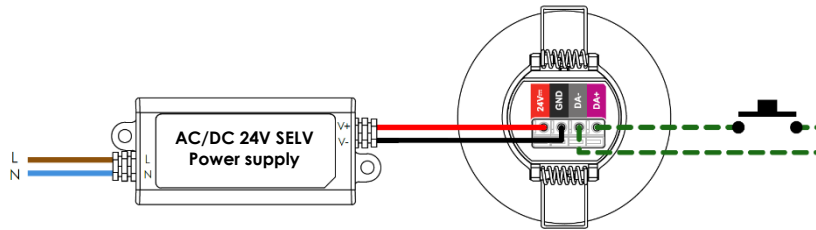
3) DALI certified drivers have DALI bus current consumption <2mA. Non-DALI certified drivers can have higher current draw resulting in less amount of drivers.

4) The integrated DALI Bus Power Supply has a maximum DALI current of 250mA (this does not mean that more than 25 LED drivers can be connected). Do not connect any other DALI power supply to the DALI bus.

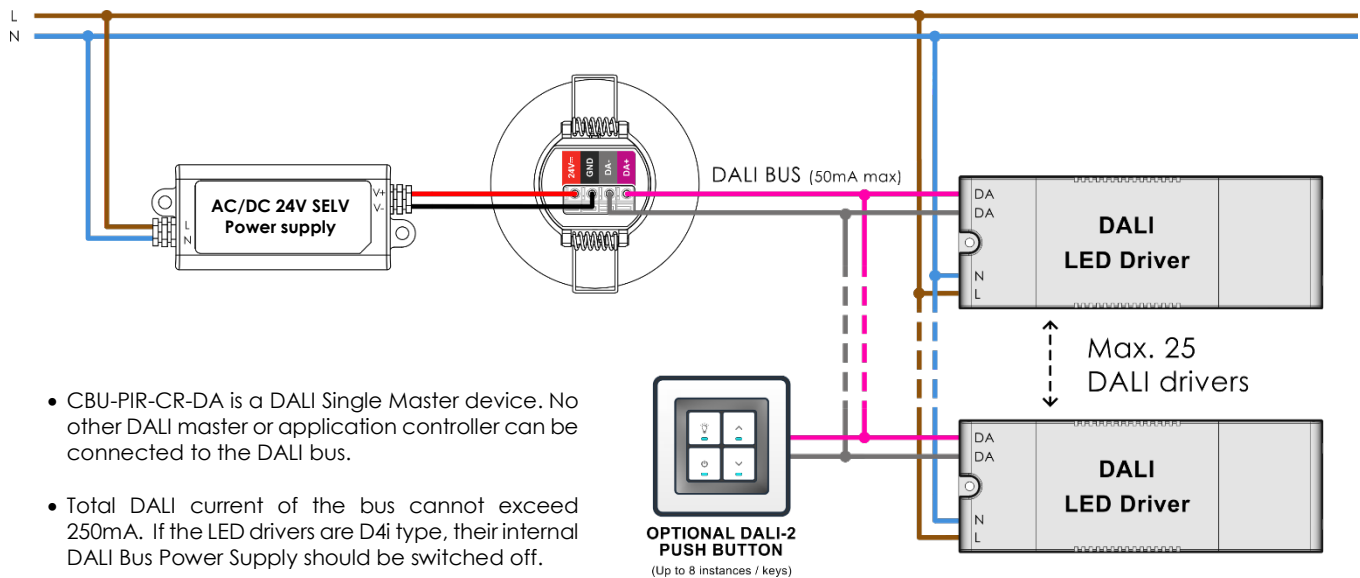
5) ΔT is the temperature difference between the moving object and the surrounding ambient.

■ Wiring diagrams

- Sensor only, with optional normally open pushbutton:

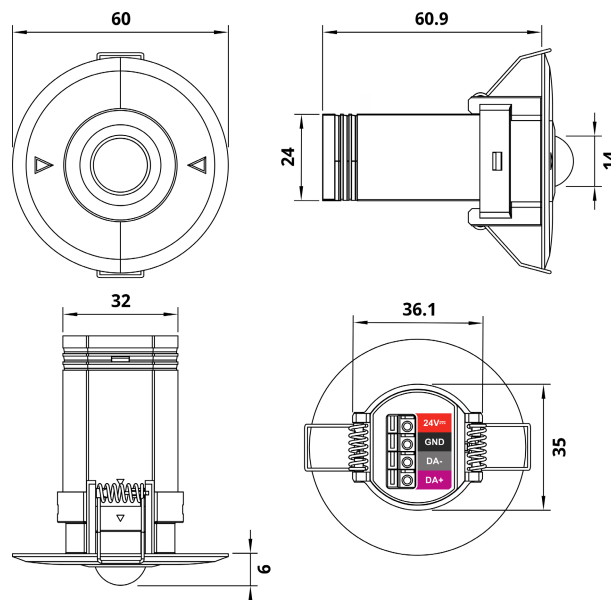


- Sensor and DALI controller:



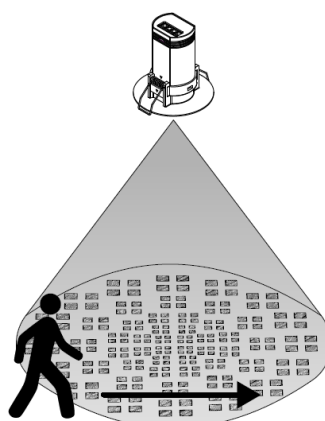
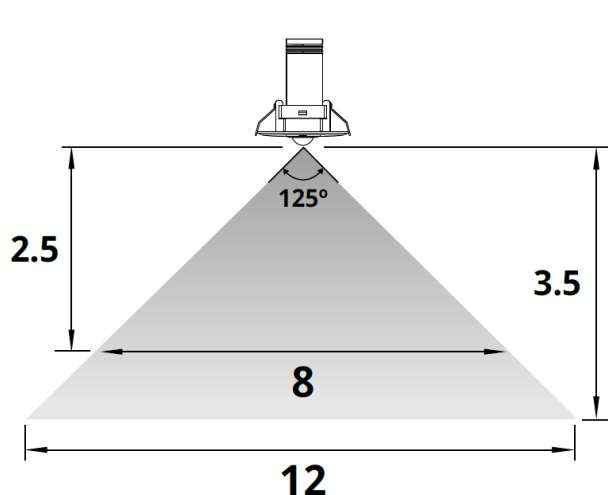
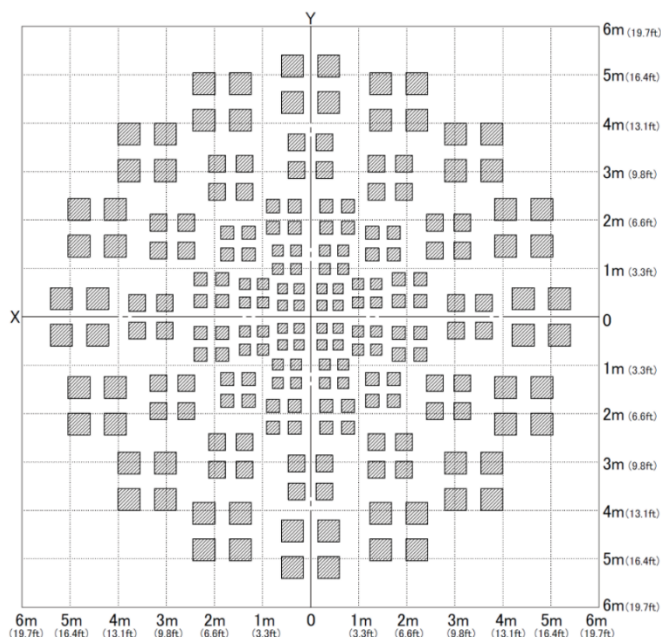
- CBU-PIR-CR-DA is a DALI Single Master device. No other DALI master or application controller can be connected to the DALI bus.
- Total DALI current of the bus cannot exceed 250mA. If the LED drivers are D4i type, their internal DALI Bus Power Supply should be switched off.

■ Mechanical dimensions (mm)

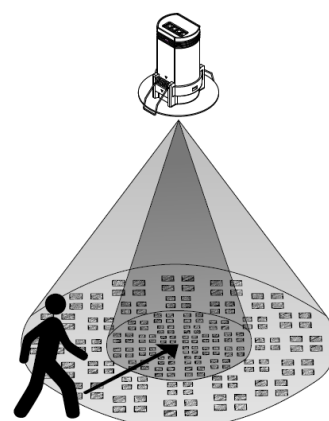


■ Detection area (m)

Detection zones distribution at 2,5m mounting height.



Tangent movement



Radial movement

Mounting height (m)	Detection area diameter for Tangent movements (m)	Detection area diameter for Radial movements (m)	Detection area diameter for Static (small) movements (m)	Required object to ambient temperature difference (ΔT) ($^{\circ}\text{C}$)
2	6,4	4	2,4	≥ 4
2,5	8	5	3	≥ 4
3	10,3	6	3,9	≥ 8
3,5	12	7	4,5	≥ 8

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