

DALI CS Mini



Datasheet **Combi Sensor Module**

DALI sensor module for
presence detection,
light intensity measurement
and constant light control

Art.Nr. 86457244
Art.Nr. 86457244-IP65

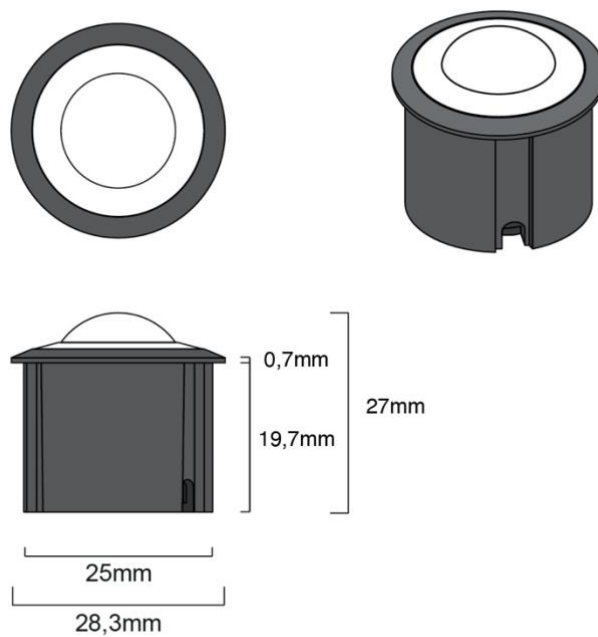
DALI CS Mini Combi Sensor Module

Overview

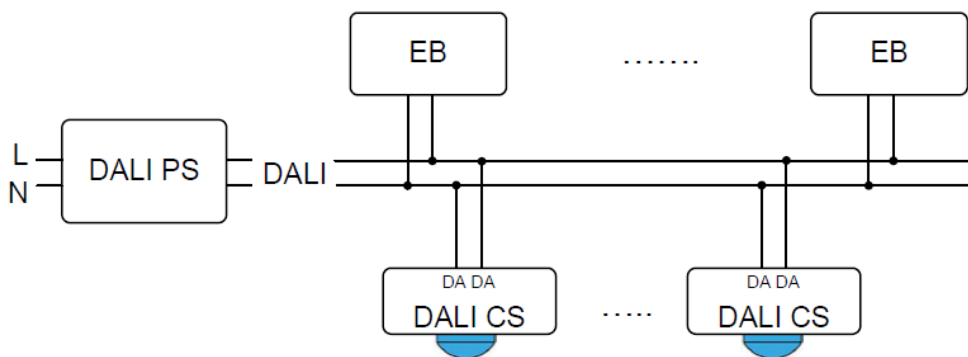
- Sensor module for DALI lighting systems
- Movement detection (PIR)
- Light intensity measurement
- Constant light control
- Time hysteresis to compensate for short-term fluctuations in brightness
- Setting option for basic brightness
- Suitable for installation in luminaries
- Simple configuration via DALI bus line using the DALI Cockpit PC software tool
- Direct power supply via DALI line
- Version for indoor and outdoor use IP65
- Multimaster capable: several DALI CS modules can be used within one DALI-line

Specifications, Characteristics

Type	DALI CS Mini	DALI CS Mini IP65
Article number	86457244	86457244-IP65
Electrical Data:		
Power supply	via DALI line	
Typ. Current consumption on DALI line	3.5 mA	
Input / Output	DALI	
Technical DATA		
Motion sensor type:	PIR	
mounting height:	2.3m / 3m	
Max. detection area:	36 / 48	
Zones:	±44°/±90°	
Detection angle:	±44°/±90°	
Min. Temp. difference:	>4°C	
Light sensor	range: 0-2500lux resolution: 1lux	
Function	configurable	
Ambient temperature	-20°C-70°C	
Protection class	IP20	IP65
suitable ambient	indoor	outdoor
mounting	luminary built in	
Connection cable length	350mm	
housing size	28,3x28,3x27mm	

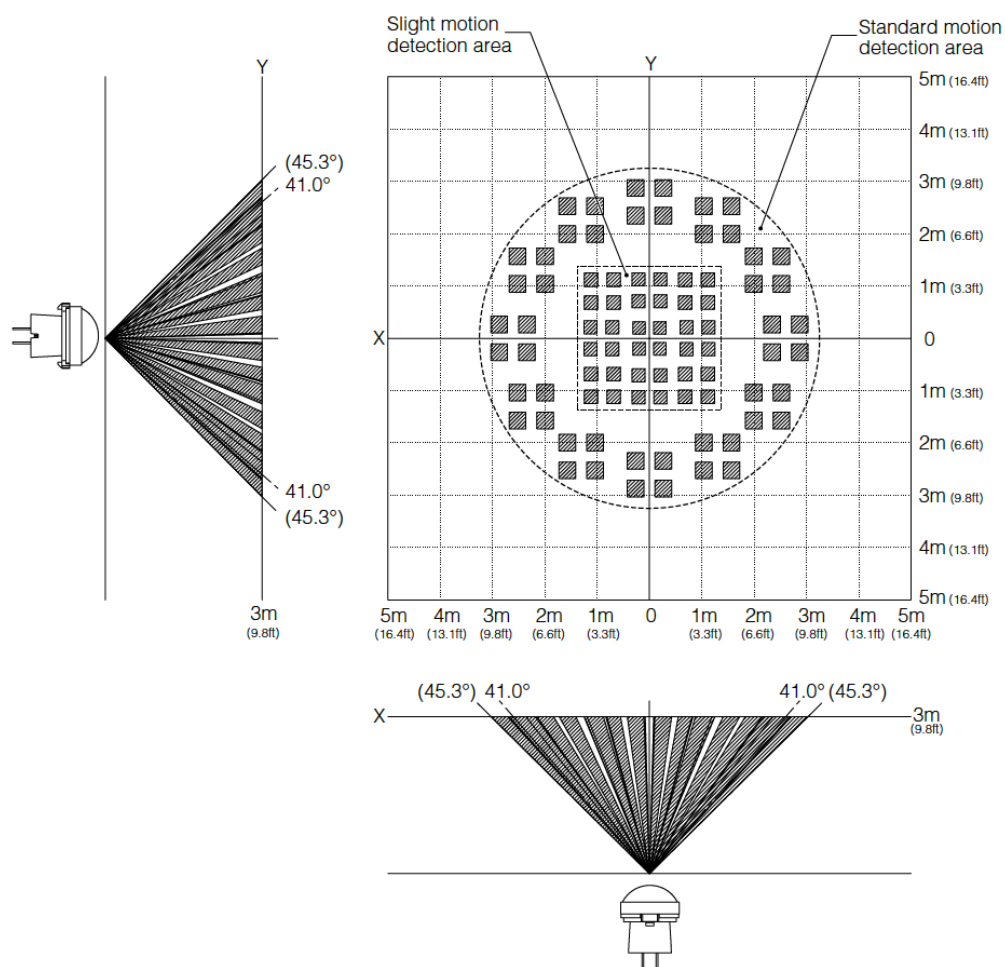


Dimensions sensor head



Typical application: multiple sensors in one DALI line

X-Y cross section at 3m (9.8ft)



Detection area: X-Y cross section at 3m - The rectangular center zone is optimized detecting smallest movements.

Mounting and installation

- The DALI CS Mini module is connected to the DALI line. It is powered directly by the DALI signal line (that is supplied by an adequate bus power supply like the DALI PS). A typical value for the current consumption is 3.5mA.
- The DALI line input is polarity free and protected against overvoltage.

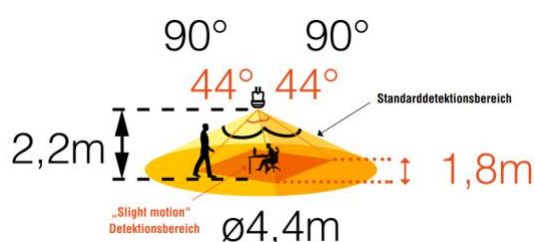
Motion detection

Detection area

In addition to the standard detection in the outer area, DALI CS Mini has a more sensitive inner detection area for the detection of minor movements.

The rectangular central zone is optimized for the smallest motion detection. The area has an opening angle of 44 ° x 44 ° and 36 detection zones. With a mounting height of e.g. 2.2m, an area of 3.24m² can be covered. (see table 1)

The standard motion detection has an opening angle of 90 ° x 90 ° and 48 detection zones. With a mounting height of e.g. 2.2m, an area of 15.2m² can be covered. (see table 1)



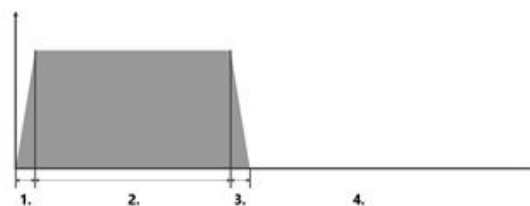
The recommended mounting height is 3m. The distance between the sensor and the object to be detected should not be greater than 3.1m.

h [m]	Standard detection area			Slight Motion detection area	
	a [m]	b [m]	A1 [m2]	l [m]	A2 [m2]
2,0	4	4	12,5	1,6	2,56
2,2	4,4	4,4	15,2	1,8	3,24
2,5	5	5	19,6	2	4
3,0	6	6	28,2	2,4	5,76

Tab. 1

Cycle of motion detection

The motion detection is always processed according to the following schedule:



Procedure motion detection

States:

- 1: Fade In Time
- 2: Hold On Time
- 3: Fade Time
- 4: Basic Brightness

If motion is detected the sensor switches the “to be controlled area” to the defined light level. As long as movement is detected or the hold-on time is running (2), the light level stays on, either at a fixed brightness value or controlled by a constant light control algorithm (selectable in DALI Cockpit Software).

After this state has elapsed, the system switches to the basic brightness value (fixed value, no constant light control).

States 1 and 3 only describe transitions between the states.

Light sensor

Light measurement

The CS Mini module also has a light sensor included. The light sensor measures the reflected illuminance in a range from 0 to 2500 lux. The resolution is 1 lux.

The incident light is assessed using the spectral light sensitivity curve of the human eye and thus comparable to the subjective visual perception of brightness.

Combined sensor behaviour

There are two methods available to take ambient light fluctuations into account: time hysteresis and basic brightness. These can be used to define the dependency between time sequence and brightness.

Basic brightness


If the current brightness is above a defined threshold, the lighting is switched off; If it is lower, it is switched on to an alternative dimming value.

Time hysteresis

Light is only switched if the brightness value is above or below the brightness threshold value for a defined time.

Factory pre-sets

Effective Range	Broadcast
On Command	DAP 100%, without Fading
Hold On Time	5min
Basic Brightness	0%
Brightness Threshold	100lux
Constant Light Control	Off; operating mode: movement triggered light control
Time Hysteresis:	1min
Front-LED	deactivated

 Note: For motion detection a temperature difference between the moving object and environment of at least 4°C is required. Heat sources such as heaters or copy machines may have a negative influence on the motion detection.

Purchase Order Information

Art.Nr. 86457244: DALI CS Mini sensor module (motion/brightness), presence sensor 2.5m, constant light control, black, 28.3x28.3x27mm

Art.Nr. 86457244-IP65: DALI CS Mini sensor module (motion/brightness), presence sensor 2.5m, potted for **outdoor use IP65**, constant light control, black, 28.3x28.3x27mm

Additional Information and Equipment

DALI-Cockpit – free configuration tool from Lunatone for DALI systems

<https://www.lunatone.com/en/product/dali-cockpit/>

Lunatone DALI products

<http://www.lunatone.com/en/>

Lunatone datasheets and manuals

<https://www.lunatone.com/en/downloads-a-z/>

Contact

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www.lunatone.com



Disclaimer

Subject to change. Information provided without guarantee.
The datasheet refers to the current delivery.

The function in installations with other devices must be tested
for compatibility in advance.