DALI MSensor 5DPI 14

Multi-sensor for DALI system

Product description

- Component of the comfortDIM system (DALI standalone)
- With ambient light dependent control and motion detection
- Multiple MSensors possible in a group
- Can be remote controlled
- Lighting control and motion detection can be deactivated
- Individual adjustment of the parameters with configuration software
- Multi-master compatible: Multiple control modules are possible in a DALI system
- Power supply via DALI line
- 5-year guarantee

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Fig. 1

Fig. 2

DALI MSensor 5DPI 14

Multi-sensor for DALI system

Technical data

Supply via	DALI cable
Current draw	6 mA from DALI
Operating temperature	0 ... +50 °C
Storage temperature	-25 ... +55 °C
Type of protection	IP20

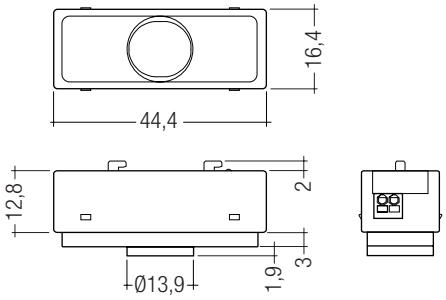


Fig. 1

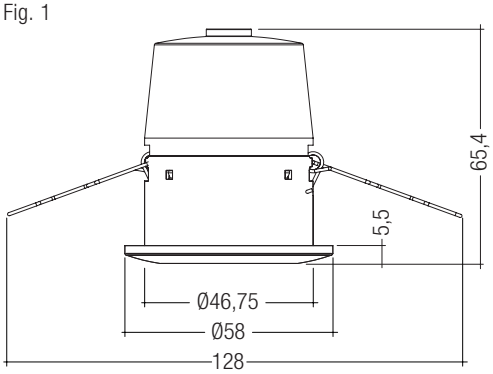


Fig. 2

Ordering data

Type	Article number	Figure	Packaging, carton
DALI MSensor 5DPI 14f Luminaire installation	**28000935**	1	40 pc(s).
DALI MSensor 5DPI 14rc Ceiling installation	**28000936**	2	63 pc(s).

Specific technical data

Type	Detection				
	Ø of detection range, mounted at a height of 2.5 m	Swivel design	Detection angle	Light measurement at the sensor head①	Infra-red control range
DALI MSensor 5DPI 14f	4 m	no	360°	10 – 650 lx	5 m
DALI MSensor 5DPI 14rc	4 m	no	360°	10 – 650 lx	5 m

① The measured value at the sensor head corresponds to approx. 15 to 2,000 lux on the surface measured.

ACCES-SORIES

REMOTECONTROL IR6

Product description

- Optional infra-red remote control
- Switching on and off (On/Off button)
- Dimming (Up/Down button)
- Activation of automatic lighting control
- Setting the threshold control point (Set button)

Ordering data

Type	Article number	Dimensions L x W x H	Packaging carton
REMOTECONTROL IR6	28000647	86.5 x 40.5 x 7.2 mm	500 pc(s).

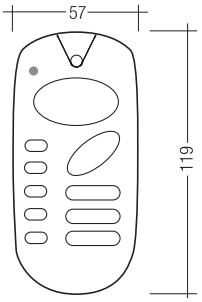
RoHS

ACCES-SORIES

DALI RC

Product description

- Optional infra-red remote control
- Switching on and off (On/Off button)
- Dimming (Up/Down button)
- Activating automatic lighting control (sun/cloud button)
- Calling up two scenes
- Calling up five fixed light output values (100, 50, 25, 12 and 6 %)
- Individual adjustment of the button assignments with configuration software
- Setting the threshold control point
- With wall bracket



Ordering data

Type	Article number	Packaging, carton
DALI-RC	86458263	10 pc(s).

The DALI MSensor is the ideal addition to the comfortDIM series of products as it offers daylight-dependent lighting control, presence detection and remote control. It has been designed for the following principal applications:

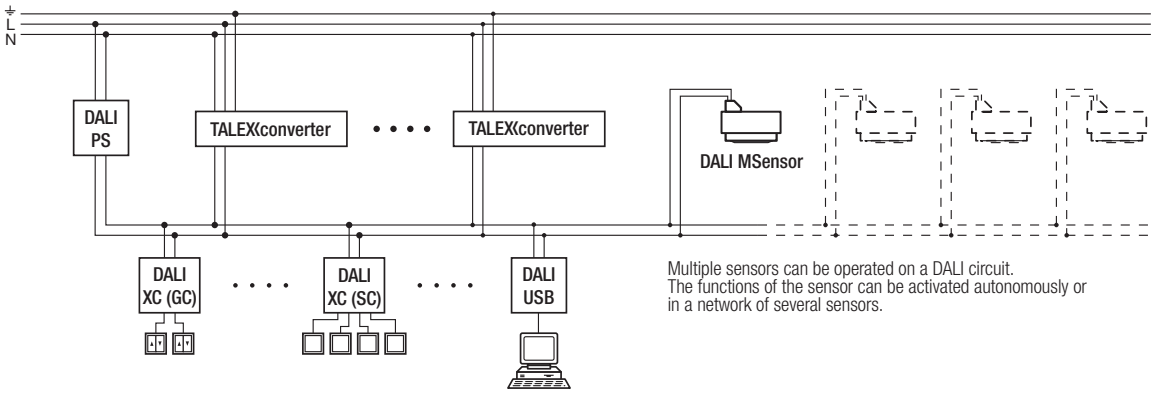
- Individual offices
- Open-plan offices
- Training / presentation rooms
- Corridors, passageways and garages

The DALI MSensor controls a DALI group and is designed that it can be used together with the comfortDIM components (e.g. DALI-XC). For this reason the DALI MSensor can be addressed and grouped like an ECG, making system configuration easier. The configuration of the sensors is done by the masterCONFIGURATOR software tool (since version V2.12). For further information please refer to the DALI MSensor manual on www.tridonic.com.
As an option, the DALI MSensor can be operated from three remote controls. The remote controls available with the system are: DALI-RC and REMOTECONTROL IR6.

A maximum of 12 sensors can be operated on one DALI circuit. This restriction is due to the permitted data traffic on the DALI circuit.

To use the DALI MSensor in conjunction with an external system some modes are available. To ensure a proper function please take account of the advices in the DALI MSensor manual on www.tridonic.com.

Wiring



Standards

EN 61547
EN 61347-1
EN 61347-2-11
EN 55015
EN 62386-101/102

Glow-wire test

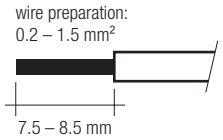
according to
EN 61347-1 passed.

DALI standard

The DALI MSensor is designed to control control gear with DALI standard IEC 60929 (DALI V0) and IEC 62386 (DALI V1).

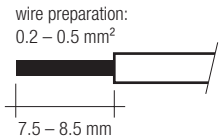
Wiring type and cross section for rc version

The wiring can be solid wire or stranded wire with a cross-section of 0.2 mm² to 1.5 mm².



Wiring type and cross section for f version

The wiring can be solid wire or stranded wire with a cross-section of 0.2 mm² to 0.5 mm².

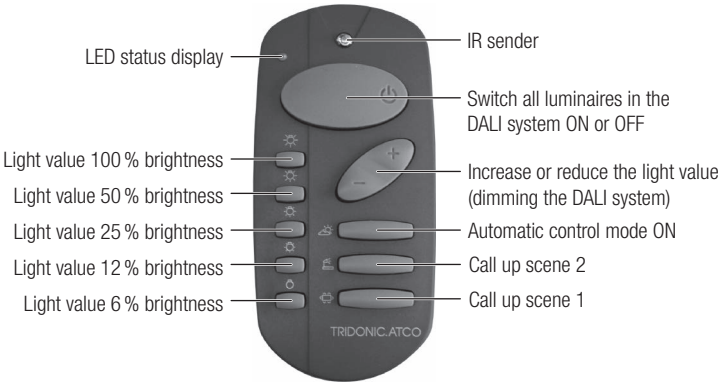


Remote control

The DALI MSensor can be controlled with 2 remote controls:

- DALI-RC
- REMOTECONTROL IR6

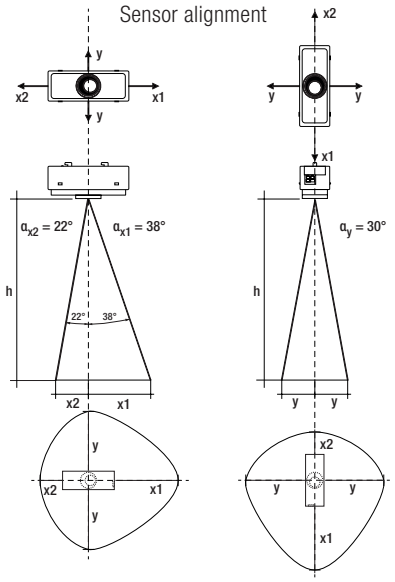
DALI-RC



Installation

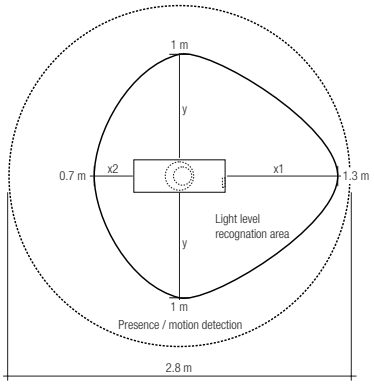
- The DALI MSensor must not be connected to the mains. It is supplied directly via the DALI signal line.
- A maximum of 12 DALI MSensors must be operated in one DALI circuit.
- DALI is not SELV.
  The installation instructions for mains voltage therefore apply.
- Please ensure that the detection range of the sensor lies in the lighting area of the controlled luminaires.
- Please ensure that the detection ranges of the sensors do not overlap. This may have influence to the lighting control.
- When installed at a height other than the recommended installation height (2,5m), the presence sensor might show different characteristics. When mounted at a higher level, its sensitivity is reduced. If mounted at a lower level, its range is diminished.
- Heaters, fans, printers and copiers located in the detection zone may cause incorrect presence detection.

Light level recognition area



h *	x1	x2	y	d
1.7 m	1.3 m	0.7 m	1.0 m	2.8 m
2.0 m	1.6 m	0.8 m	1.2 m	3.2 m
2.3 m	1.8 m	0.9 m	1.3 m	3.7 m
2.5 m	2.0 m	1.0 m	1.4 m	4.0 m
2.7 m	2.1 m	1.1 m	1.6 m	4.4 m
3.0 m	2.3 m	1.2 m	1.7 m	4.9 m
3.5 m	2.7 m	1.4 m	2.0 m	5.7 m
4.0 m	3.1 m	1.6 m	2.3 m	6.5 m

Example for light and motion detection area at height of 1.7 m:

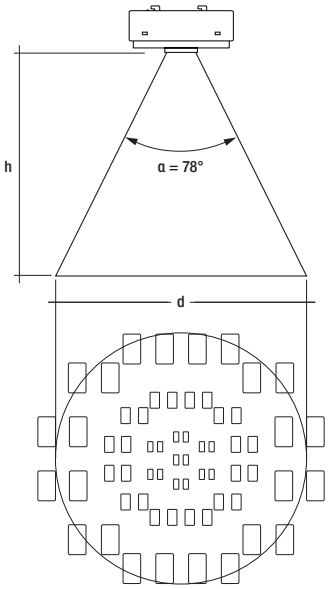


* The recommended maximum room height for office applications is 3 m and for corridor applications for example 4 m. Up to 2 m mounting height presence is detected and over 2 m motion is detected.

Calculation of the diameter (light area):
$x1 = \tan(\alpha_{x1}) \times h$
$x2 = \tan(\alpha_{x2}) \times h$
$y = \tan(\alpha_y) \times h$

Calculation of the diameter (motion area):
$d = 2 \times \tan(0{,}5 \times \alpha) \times h$

Presence / motion detection



The following operating modes can be set for lighting control via the masterCONFIGURATOR configuration software:

Active	Constant light control is active.
Inactive	Constant light control is deactivated. The lighting is switched on an adjustable light value.

Setpoint adjustment
- REMOTECONTROL IR6: Pressing the Set button (> 3 s) stores the current light value as a new setpoint.
- DALI-RC: Über das Drücken der Automatic-Taste (>3 s) wird der aktuell gemessene Lichtwert als neuer Sollwert abgespeichert.
- masterCONFIGURATOR

Bright-out
If the nominal illuminance (e.g. 500 lux) is exceeded for 10 minutes by more than 150 % (e.g. 750 lux), the lighting is switched off even if motion is detected. The lighting is switched on again when the measured light value falls below the setpoint.
This function can be adjusted via the masterCONFIGURATOR.

The following operating modes can be set for the motion detector via the masterCONFIGURATOR configuration software:

Active	The light is switched on or off automatically depending on whether or not there is a person in the room.
Off Only	The motion detector only switches the connected lighting off. The luminaires are switched on manually via the connected external switch or infra-red control.
Never Off	If it has not detected any movement the sensor dims to the “Absence value” parameter and remains at this value
Inactive	The motion sensor is deactivated. The light must be switched on or off manually.

Run-on time
This is the time after which the lighting is switched off if no movement is detected. It can be set via the “Run-on time” parameter.

Absence value
On the DALI MSensor you can set whether the light is to be switched off after the switch-off delay or dimmed to the second light value. The light value and the dwell time (how long the value is held) can be set via the “Absence value” and “Switch-off delay” parameters.

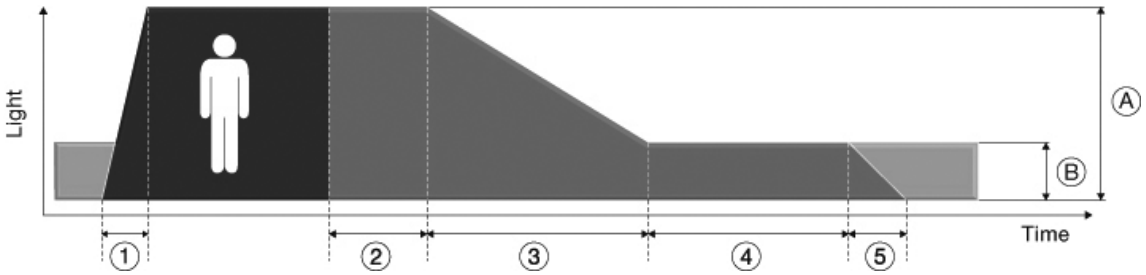
Dead time “Manual-off”
If the system is switched off manually via the switch or remote control the motion sensor is deactivated. At the end of a delay time if motion has not been detected the motion sensor is activated again. If the sensor detects motion during the “Manual-off” delay, the time will be reset to the start.

General settings

Parameter	Default Values	Adjustable range
Motion Detector	enabled	enabled, enabled (only OFF), disabled
Light Regulation	enabled	enabled, disabled
Setpoint Light Regulation	150 lx	10 – 650 lx
Power On Setting	no action	no action, last state, maximum level, off, presence value
Bright-out timeout	10 min	1 – 120 min
Bright-out threshold	150 %	100 – 300 %
Control Speed	4	0 – 7, 0 = slow, 7 = fast
Switch On Value	auto (calculated)	minimum level, maximum level, calculated
Controlled group	Broadcast	Broadcast or group 0 – 15

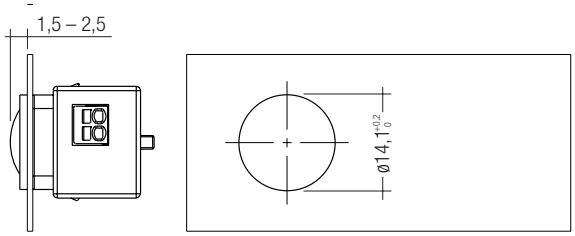
Default Parameter Motion Detector

Parameter		Default Values	Adjustable range
1	Fade-in time	fast	fast, 0.7 – 90.5 s
A	Presence value	ambient light-controlled	ambient light-controlled, fixed
2	Run-on time	20 min	30 s – 60 min, infinite
3	Fade time	5.6 s	fast, 0.7 – 90.5 s
B	Absence value	3 %	1 – 100 %
4	Switch-off delay	10 min	0.7 s – 60 min, never OFF
5	Fade-off time	5.6 s	fast, 0.7 – 90.5 s
	Manual-off	10 min	fast, 0 s – 20 min

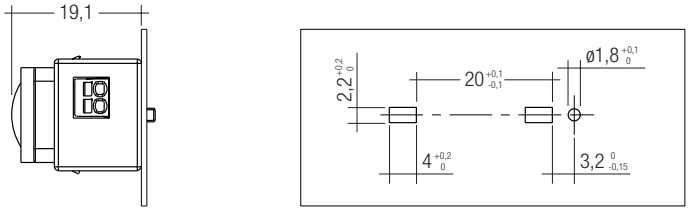


Mounting variants luminair installation sensor:

Size of the sheet: 0.8 – 1.8 mm



Size of the sheet: 0.6 – 0.8 mm



Size of the sheet: 0.8 – 3.0 mm