

e-Multisensor Bus DALI



Motion detector and light sensor for DALI networks

Product references: MS.082002-000 / MS.082002-001

Instruction sheet

e-Multisensor Bus DALI is a multisensor for automatic lighting control in DALI networks. It is used to switch on/off and dim lights to save energy optimally. The device includes a motion sensor and a light sensor that provides the occupancy status and the light level of a zone, and provides this information to a DALI Gateway to manage the lights.

The device includes two movable flanges to adjust the vision angle of the motion sensor that allows it to be adapted to different environments, like corridors and open space zones, and also a potentiometer to adjust the sensitivity of the motion sensor with precision.



Product description

The *e-Multisensor Bus DALI* device is a multisensor for lighting control in installations with DALI communication, which has a high sensitivity motion sensor to switch on/off lights automatically and a light sensor to dim the lights depending on the daylight facing inside the building.

The device provides the motion sensor status instantly to the communication bus to allow a DALI gateway to switch on the lights with minimum delay. The light level is requested constantly from the gateway and is used to adjust the light level of the luminaries depending on the predefined lighting setpoint of the working area.

The device is compliant with the DALI standard and can be installed in a network with up to 16 multisensors and 64 ballasts for lighting control. It can also be part of 16 lighting groups to do any flexible control of the installations.

Two movable flanges placed next to the motion sensor lens are used to adjust the detection area of the sensor to adapt it to different type of zones, like corridors in open spaces, where it is interesting to distinguish between people moving in the corridor in respect the ones working in adjacent zones. A potentiometer also in the side of the device can be used to adjust the sensitivity of the motion sensor. To do this the device must be connected to the bus and powered.

The LED indicator in front of the device lights on briefly when motion is detected. It is possible to enable/disable the LED indicator pressing the front pushbutton up to 3 seconds.

Through the Wink DALI command it is possible to identify the device in the commissioning process.

The device includes a label with the identifier and serial number that can be used to document the project.

Product installation

Important:

- Follow the DALI standard recommendations for the wiring installation.
- For an optimal operation of the light sensor avoid reflections of sun light that can affect directly to the device. Avoid shelves and bright floors over which the sun can be reflected and falsify the light measurement in the zone.

Mounting instructions:

- Drill a 65mm diameter hole on the ceiling.
- Connect wires on the correct terminals as shown in the wiring diagram.
- Clip the springs and insert the product into the hole on ceiling.
- Power up the supply voltage and check the red LED in front of the device is ON.
- Adjust the movable flanges of the motion sensor and the sensitivity potentiometer to the requirements of the zone.

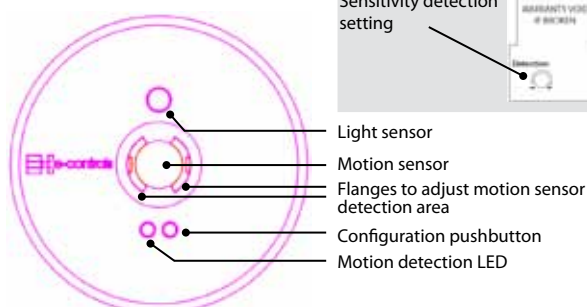
- Configure the device with a DALI gateway and a software to install DALI devices.

Caution:

- The device can't be installed over shelves, behind curtains, near heat/cool air handling units and avoid direct sun radiation over the device.
- Disconnect the device from the power supply before mounting or moving the sensor.
- Do not leave cables peeled or turned around the device.
- Do not connect the device with the hands wet.
- Do not open or hole the device.
- Keep the device and cables away from humidity and dust.
- Clean the front cover with a water moisture soft cloth.

Mechanical description

Front view

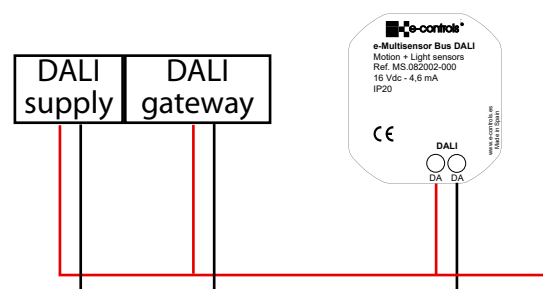


Side view

Sensitivity detection setting



Wiring diagram

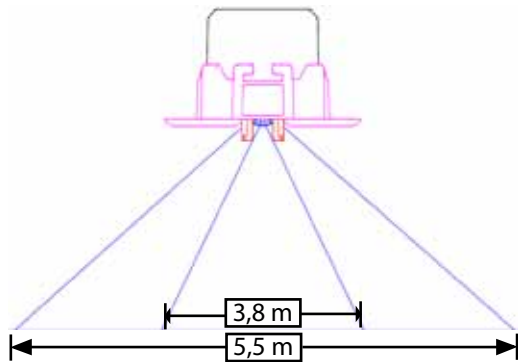


(*) Up to 300 m cable in free topology, using cable cross section 1,5mm²

Motion sensor

Detection diagram

Cross section view (installed at 2,5 m height)



Motion sensor detection area (*)

| Installation height | Detection diameter | Detection width with flanges |
|---------------------|--------------------|------------------------------|
| 2 | 5,0 | 3,6 |
| 2,5 | 5,5 | 3,8 |
| 3 | 6,0 | 3,9 |
| 3,5 | 7,0 | 4,0 |
| 4 | 7,5 | 5,5 |
| 5 | 8,0 | 6,5 |

NOTE: Dimensions shown in meters

(*) In optimal sensitivity conditions

Technical features

Supply power

Operating voltage 16 Vdc ± 30%

Maximum rated current 4,6 mA

NOTE: Use only DALI power supply.

Communications

Technology DALI

Standard IEC 62386

Interface DALI

Communication speed 1200 bps

Motion sensor

Technology PIR (Infrared)

Number of detection zones 88

Detection angle (X, Y) ± 50°

Detection range See table

Maximum detection distance 8 m

Maximum time for stabilization after reset 60 s

Sensitivity adjustment Potentiometer

Coverage adjustment Mechanical flanges

Light sensor

Detection range on the sensor 0 to 1000 lux

Resolution 12 bits

Spectral bandwidth range 400 to 800 nm

Maximum sensitivity wavelength 570nm

Led indicator

Motion detection Red ON

Wink DALI command (*) Blink red 30 s

Side Led indicator (marked SL)

Activity in DALI bus Blink yellow

Commissioning in DALI network (*)

Unique identifier at learning time

Front led blinks every second in Wink state

GTIN unique identification code 8435483900011

Temperature values

Operating 0°C to +50°C (32°F to 104°F)

Storage -20°C to +85°C (-4°F to +185°F)

Humidity values (no condensation)

Operating 10% to 90% RH at 50°C

Storage 95% RH at 50°C

Mechanical installation

Installation Flush mounting in false ceiling

Fixing Two metal springs

Hole diameter 65 mm

Max ceiling thickness 19 mm

Available space behind ceiling 45 mm

Mechanical features

Dimensions 80x50mm (ØxH)

Weight 75 gr

Colour (front) RAL 9016

Enclosure material PP

Cable cross section 0,5 mm² - 2,5 mm² (14 AWG)

Terminals Screw type

Electrical security Class III

Protection degree IP20 (EN 60529:1991)

CE Conformity

Low voltage directive 2006/95/EC

Electromagnetic Compatibility Directive 2004/108/EC

Marking CE

Applicable harmonized standards

Product standard EN 60730-1:2011

Electrical security EN60730-1:2011

Electromagnetic compatibility EN61000-6-3

EN 61000-6-1

NOTES:

1) The device is not intended for use as part of a security system detector.

2) For an optimal detection of the motion sensor, the installer should adjust the sensitivity potentiometer to the environment where device will be installed.

(*) Refer to the DALI gateway installation manual for the commissioning process.

Product references

e-Multisensor Bus DALI White, Motion detector and light sensor for DALI bus, white finished MS.082002-000

e-Multisensor Bus DALI Anthracite, Motion detector and light sensor for DALI bus, anthracite finished MS.082002-001

e-Multisensor Surface, Flush mounting enclosure AC.000001-000

Related documents

Installation drawing DEC

The package of this product is considered as industrial packaging intended for professional use only.
The manufacturer is not responsible of the incorrect installation or use of the product.
Specifications are subject to change without notice.

