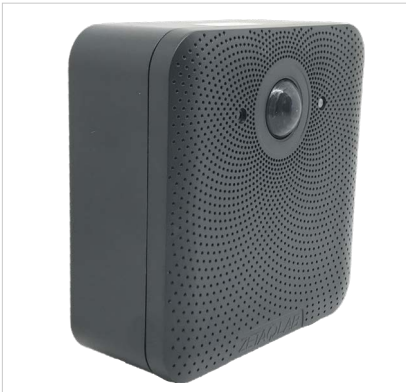


Z-SENSOR-MB R1 Z-SENSOR-HB R1

Wireless multisensor for industrial and logistics applications



Wireless 2.4 GHz mesh network motion and light sensor for industrial and logistics applications. It can be use as stand alone or wired to one or up to 32 LED drivers.

Main features

- Supply from mains 110-240Vac or via DALI bus from D4i driver
- Wireless 2.4 GHz mesh network, compatible to Bluetooth LE and Zigbee 3.0
- Normally closed 5A relay output
- 1/10 and DALI output for max 32 drivers
- Motion sensor for Mid Bay (10m) and High Bay (17m)
- Ambient light sensor
- IP52 protection degree

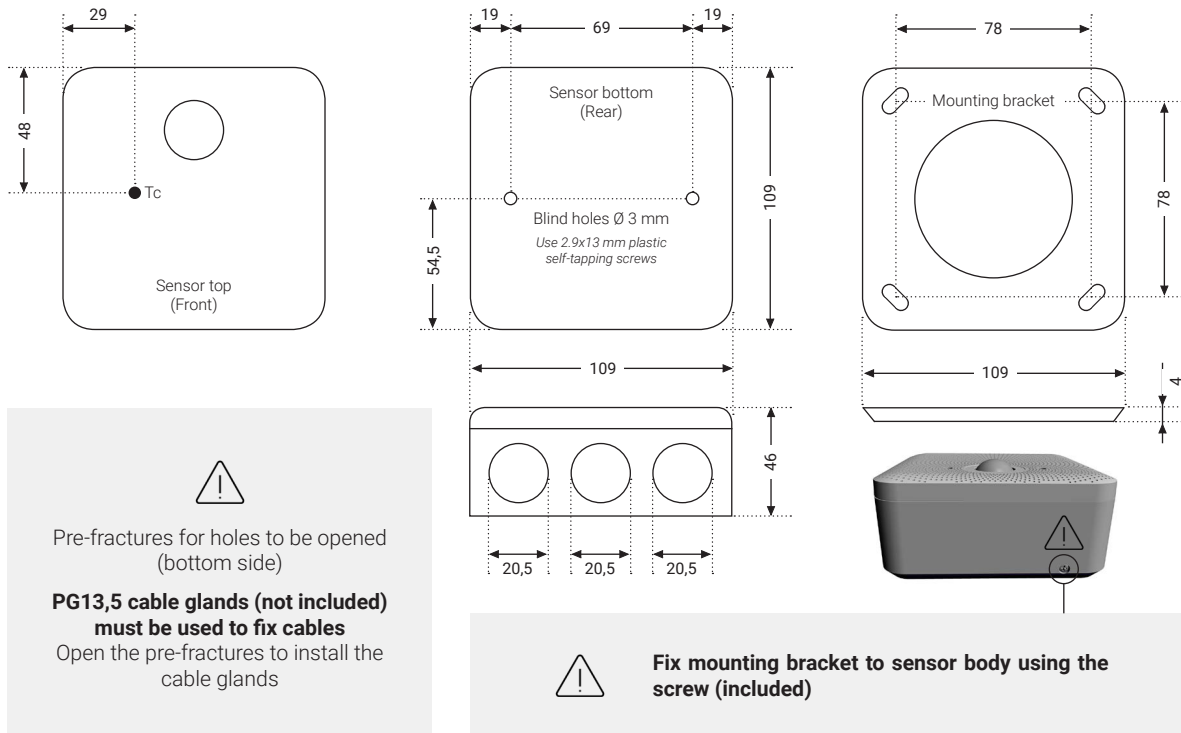
Models

Model	Code	Description
Z-SENSOR-MB R1	ZQ16-00R1	Wireless 2.4 GHz mesh network Mid Bay motion (10m) and light sensor
Z-SENSOR-HB R1	ZQ16-01R1	Wireless 2.4 GHz mesh network High Bay motion (17m) and light sensor

Technical specifications

Input power	Auto sensing between: <ul style="list-style-type: none"> • Mains 110-240 Vac 50-60 Hz, max 2W • 12...22,5 Vdc from DALI bus according to D4i specification (DALI-2 part 250)
Radio transceiver	Operating frequencies: 2.402 GHz – 2.480 GHz Max output power: +10 dBm
Radio protocols	Bluetooth LE & Zigbee Home Automation, active at the same time
Relay output	Normally closed. Rated current 5A. Contact ratings 10 ⁵ cycles (5A, 250VAC, cosφ=1, 85°C) Mechanical endurance, DC coil >10 ⁶ operations
Dimming output	Analog 1/10V: max 32 driver. Digital DALI (powered): max 32 driver
DALI interface	Control up to 32 DALI or 4 D4i drivers: <ul style="list-style-type: none"> • Light level: broadcast • Diagnostic and D4i parameters (DALI-2 part 251, 252, 253): addressed
Motion sensor MB (Mid Bay)	Passive InfraRed, Hmax 10m - FOV 108° - 92 detection zones (cluster)
Motion sensor HB (High Bay)	Passive InfraRed, Hmax 17m - FOV 69° - 128 detection zones (cluster)
Light sensor	Range 5 lux to 500 lux (direct). Maximum recommended height for "closed loop" control 10-12m
Diagnostic LED	Power/Activity
Connector block	Screw terminals. Wire cross section 0,5-2,5 mm ² (AWG 13-20)
Input-output insulation	3,75 kVac
Operating Environment	Ambient temperature (ta) -10°C to +60°C. Relative humidity 10% to 90% Max. housing temp. (tc) 65°C. Storage -20°C to +70°C
Housing	Plastic IP52
Dimensions	109 x 109 x 50 mm
Weight	220 g
Standards & Legislation	RADIO (RED - 2014/53/EU): EN 300328, EN 62311 SAFETY (LVD - 2014/35/EU): EN 61347-1, EN61347-2-11 EMC: EN 61000-3-2, EN 61000-3-3, EN 55015, EN 61547, EN 301489-1, EN 301489-17 Environment: WEEE and RoHS directives

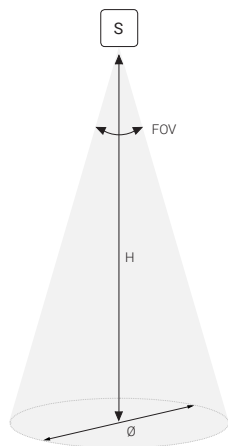
Dimensions (mm)



Motion sensor

Motion detection area

H	MB Ø FOV 108°	HB Ø FOV 69°
3 m	8,3 m	4,1 m
4 m	11,0 m	5,5 m
5 m	13,8 m	6,9 m
6 m	16,5 m	8,2 m
7 m	19,3 m	9,6 m
8 m	22,0 m	11,0 m
9 m	24,8 m	12,4 m
10 m	27,5 m	13,7 m
11 m	-	15,1 m
12 m	-	16,5 m
13 m	-	17,9 m
14 m	-	19,2 m
15 m	-	20,6 m
16 m	-	22,0 m
17 m	-	23,4 m



Motion sensor (PIR)

Sensor performance listed into *Motion detection area* table are referred to ambient temperature of 25°C and objects of size 70x25 cm (human body) moving at a speed of 1.0 m/s.

Maximum height with temperature difference between the target and the background of at least 4°C:

- Z-SENSOR-MB R1: 10m
- Z-SENSOR-HB R1: 17m

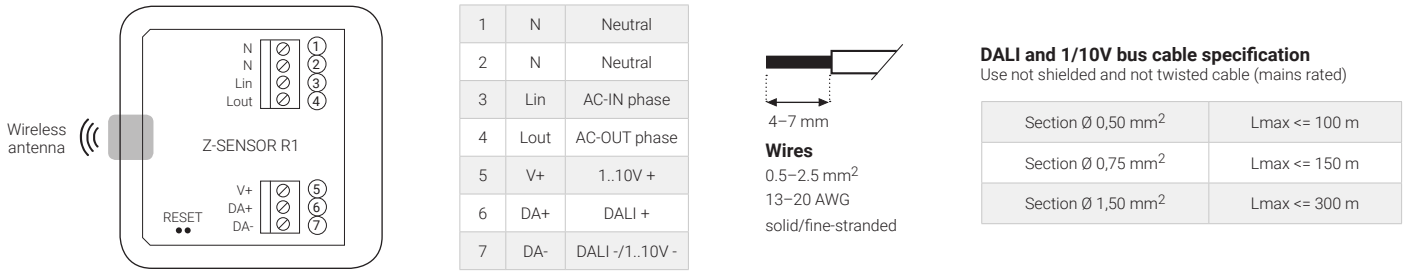
Detection zones within the field of view:

- Z-SENSOR-MB R1: 92 cluster
- Z-SENSOR-HB R1: 128 cluster

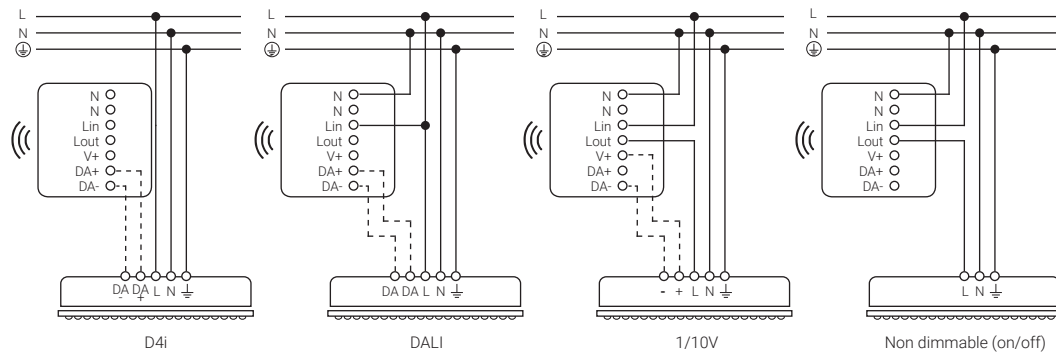
Notes:

- Usable ambient temperature -10°C..+55°C (do not use in the presence of ice or condensation).
- Time required to stabilize the signal from the start-up 30 sec.
- The sensor have not be located in the immediate vicinity of a warm air current, because that can trigger the motion detection.

Wiring diagram

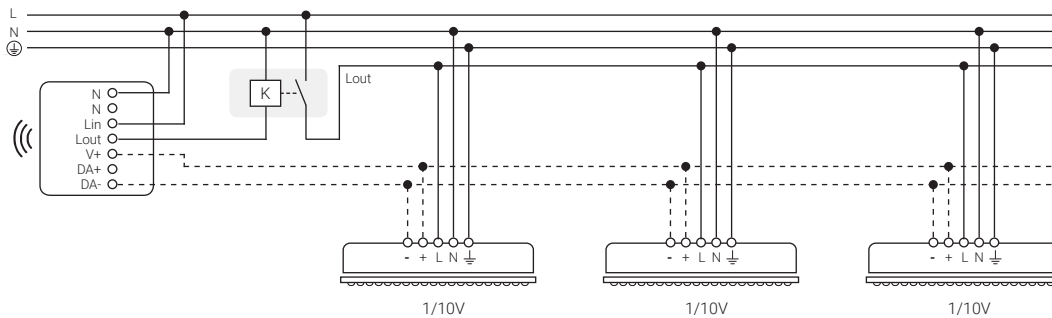


Single luminaire wiring



Wiring a group of non-dimmable or 1/10V luminaires

If the total current is greater than 5A it is necessary to use a support contactor. Z-SENSOR can dim a group up to 32 1/10V drivers.



Wiring a group of DALI luminaires

