

Z-PLUG-HB Z-PLUG-SENSOR-HB

Wireless controller and multisensor for integration in industrial luminaires



Wireless 2.4 GHz mesh network controller, motion and light sensor for integration inside luminaires for industrial and logistics applications.

Main features

- Supply from 12-15Vdc or via DALI bus from D4i driver
- Wireless 2.4 GHz mesh network, compatible to Bluetooth LE and Zigbee 3.0
- Manage up to 4 DALI drivers
- Motion sensor for High Bay (17m - FOV 69°)
- Ambient light sensor
- IP65 protection degree (front)

Models

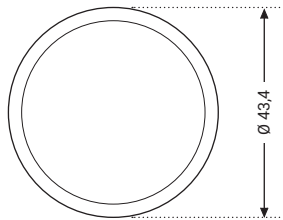
Model	Code	Description
Z-PLUG-HB	ZQ25-00R0	Wireless 2.4 GHz mesh network controller for integration in industrial luminaires
Z-PLUG-SENSOR-HB	ZQ25-01R0	Wireless 2.4 GHz mesh network multisensor for integration in industrial luminaires

Technical specifications

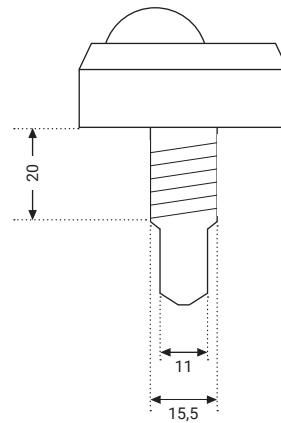
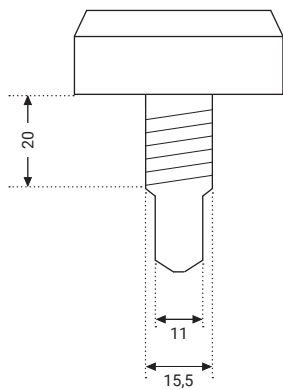
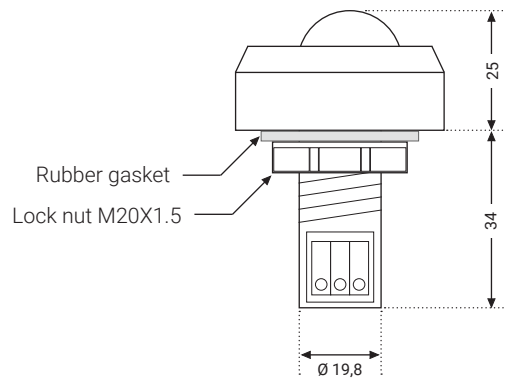
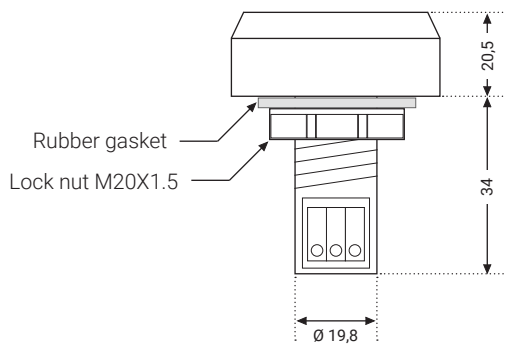
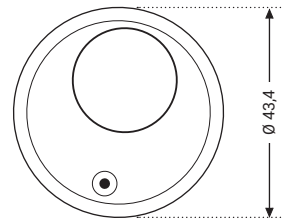
Input power	Auto sensing between: <ul style="list-style-type: none">• 12...15 Vdc from dedicated power supply• 12...22,5 Vdc from DALI bus according to D4i specification (DALI-2 part 250)
Input current	Peak 50 mA - Average 20 mA
Power	System 0,6 W - Stand-by < 0,3 W
Radio transceiver	Operating frequencies: 2.402 GHz – 2.480 GHz Max output power: +10 dBm
Radio protocols	Bluetooth LE & Zigbee Home Automation, active at the same time
DALI interface	Control up to 4 DALI and D4i drivers: <ul style="list-style-type: none">• Light level: broadcast• Diagnostic and D4i parameters (DALI-2 part 251, 252, 253): addressed When powered from 12..15Vdc the DALI bus is powered
Diagnostic LED	Power/Activity
Motion sensor (only Z-PLUG-SENSOR-HB)	Passive InfraRed (PIR), Hmax 17m, FOV 69°, 128 detection zones (cluster)
Light sensor (only Z-PLUG-SENSOR-HB)	Range 5 lux to 500 lux (direct). Maximum recommended height for "closed loop" control 10-12m
Connector block	Push-in terminals. Wire cross section 0,2 - 0,75 mm ² (AWG24 - AWG18), stripping 7 mm
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 IP65 (front), IP20 (rear). M20X1.5 thread mounting
Dimensions	Max Ø 43,4 x 34 (inside luminaire) x max 25 (outside luminaire) mm
Weight	25 g
Standards & Legislation	RED (Directive 2014/53/UE): EN 300328, EN 62311 SAFETY: 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)

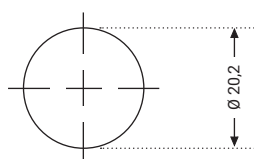
Z-PLUG-HB



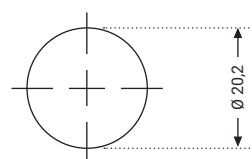
Z-PLUG-SENSOR-HB



Mounting hole on luminaire housing

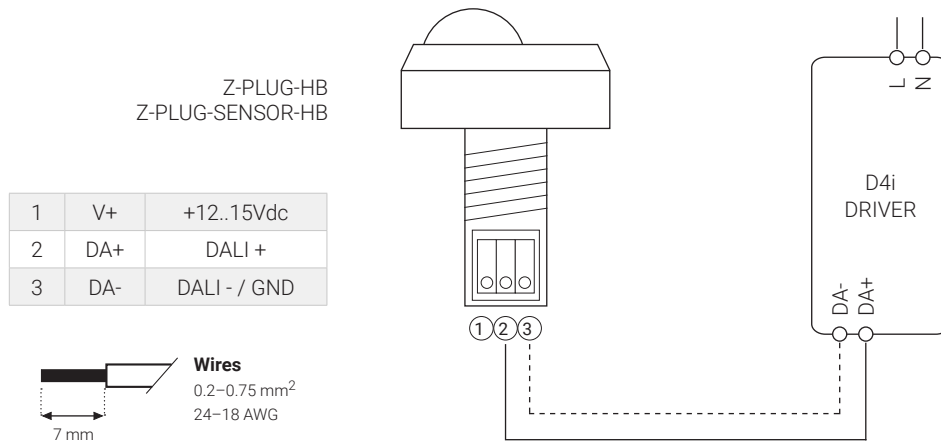


Mounting hole on luminaire housing

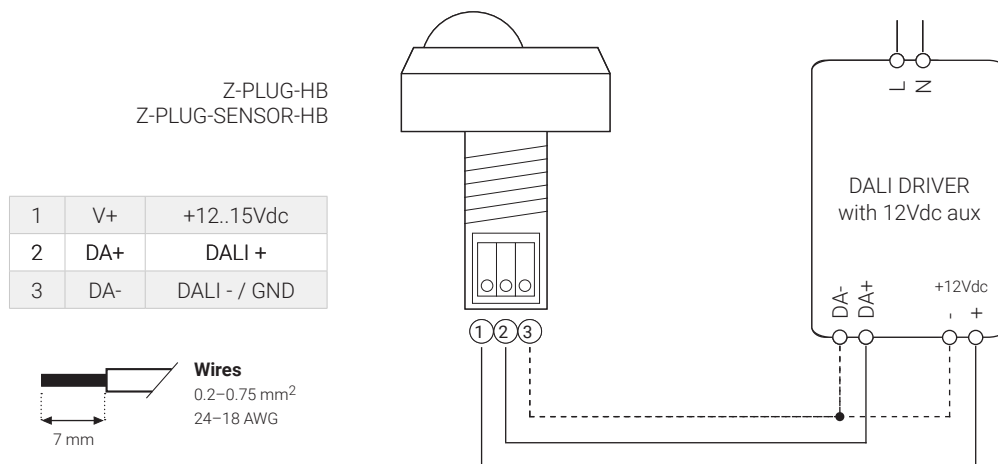
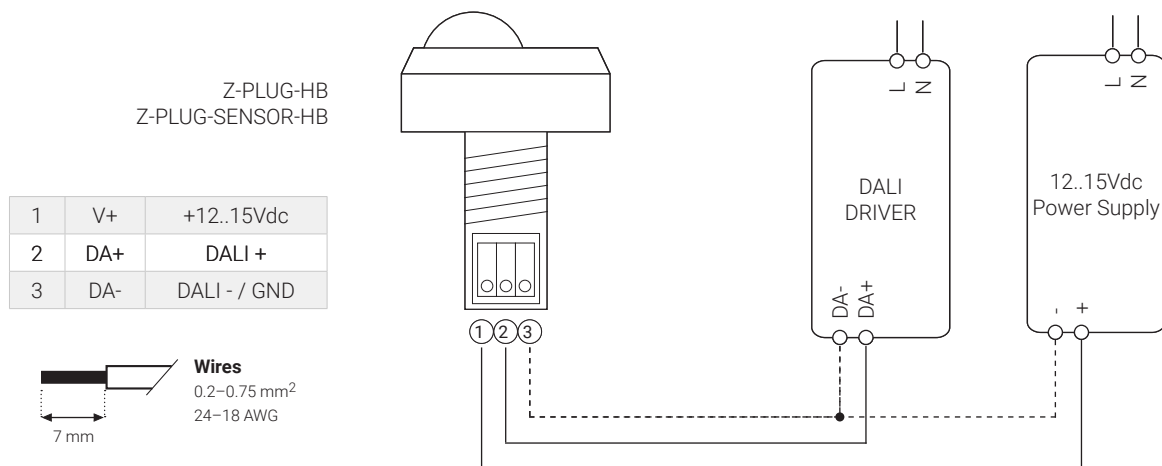


Wiring diagram

Connection of the control module to a D4i drivers



Connection of the control module to a standard DALI drivers



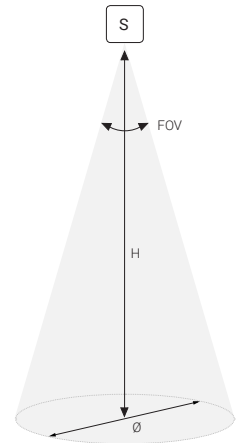
PIR motion sensor

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: 17m
Detection zones within the field of view: 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.



Motion Detection Area	
Installation Height	Z-PLUG-SENSOR-HB (FOV 69°)
H	Ø
3 m	4,1 m
4 m	5,5 m
5 m	6,9 m
6 m	8,2 m
7 m	9,6 m
8 m	11,0 m
9 m	12,4 m
10 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

