

SENSOTEC Sensor NET

110075223	SENSOTEC Sensor HB PIR 3360 NET Intra
110075224	SENSOTEC Sensor HB PIR 3360 NET Wire
110075225	SENSOTEC Sensor HB PIR 3360 NET Zhaga
110075226	SENSOTEC Sensor HB PIR 345 NET Intra
110075227	SENSOTEC Sensor HB PIR 345 NET Wire
110075228	SENSOTEC Sensor HB PIR 345 NET Zhaga
110075229	SENSOTEC Sensor HF2 NET
110075230	SENSOTEC Sensor PIR NET
110075231	SENSOTEC Extension NET



HB PIR 3360 NET



HB PIR 345 NET



Intra



Wire



Zhaga



HF2 NET



PIR NET



Extension NET



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Functional description

Our most innovative sensors wirelessly interconnect via a Bluetooth mesh network, they can be configured by app and control LED drivers via a DALI interface. Quick and easy to fit, they also provide installation flexibility. These are the benefits:

- Sensor with integrated DALI-2 application controller
- Direct connection to a DALI interface
- Straightforward wiring, powered via the DALI bus
- Mesh network in line with Bluetooth SIG specification for interconnecting and integrating sensors and lights
- Parameterization and configuration via Bluetooth app
- Wireless firmware update of the entire network
- Constant-lighting control
- Predefined Scenes
- Any selectable main and basic light level
- User-defined lighting groups with configurable behavior
- Up to 16 DALI LED drivers can be connected

Bluetooth Mesh (SIG) interconnectable sensors

HF2 NET

The HF2 NET is a high frequency sensor module designed for built-in applications. Capable of detecting movement through glass and non-metallic materials, these modules can be installed without a problem inside luminaires or other applications.

PIR NET

Small. Slim. Compact. Inconspicuous presence detectors. 360° passive infrared sensor with a presence detection zone of 4 x 4 m (presence and radial movement detection) or 6 x 6 m (tangential movement detection). With patented multi-segment pyro lens.

Extension NET

Intended to use in luminaires without sensor, the Extension NET is used for extending the Bluetooth mesh network.

Highbay versions

- STEINEL sensor technology for mounting inside luminaires or for mounting on the surface of luminaires
- Applications for offices, commercial properties, public buildings, industry and logistics (room heights of 2 to 14 m)
- Up to IP65 protection rating
- Luminaire surface-mounting versions with Zhaga base or strands for wiring

HB PIR 3360 NET

A head for heights. Powerful reach. Reliable. Ideal for high ceilings in industrial buildings or commercial properties. For mounting heights of up to 14 m. High-precision 360° infrared sensor. Maximum detection range diameter 36m. For watching over up to 1000 m².

HB PIR 345 NET

Surveillance at the highest level. Infrared motion detector for indoors. Ideal for an rectangular detection in large heights in depots, high-bay warehouses, machine shops, check-in areas and departure lounges, installation height from 4 m up to 14 m, detection zone 30 x 4 m (radial movements).

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Sensor technical specifications

	HB PIR 3360 NET Intra	HB PIR 3360 NET Wire	HB PIR 3360 NET Zhaga
Bluetooth Device Name	STE HB PIR 3360 NET I	STE HB PIR 3360 NET W	STE HB PIR 3360 NET Z
Type	9016	9022	9021
Dimensions	91.5 × 63.3 × 49mm 3-D data available online	91.5 × 63.3 × 49mm 3-D data available online	91.5 × 63.3 × 57mm 3-D data available online
Features	Motion detector Light sensor Feedback indicator Bluetooth mesh	Motion detector Light sensor Feedback indicator Bluetooth mesh	Motion detector Light sensor Feedback indicator Bluetooth mesh
Sensor technology	Passive infrared technology	Passive infrared technology	Passive infrared technology
Light measurement range	4 - 1000 lx	4 - 1000 lx	4 - 1000 lx
Mounting height	2.8 – 14.0 m	2.8 – 14.0 m	2.8 – 14.0 m
Reach, radial	Ø 14 m (154 m ²)	Ø 14 m (154 m ²)	Ø 14 m (154 m ²)
Reach, tangential	Ø 36 m (1018 m ²)	Ø 36 m (1018 m ²)	Ø 36 m (1018 m ²)
Connection	0.34 – 0.75 mm ²	Connection strands (0.5mm ² , L=250mm, white)	Zhaga Book 18
Supply voltage / current consumption	12 - 22.5VDC / max. 46mA	12 - 22.5VDC / max. 46mA	12 - 22.5VDC / max. 46mA
IP rating:	IP20 / IP65* * sealed lens	IP65	IP65
Temperature range	-20°C to +50°C	-20°C to +50°C	-20°C to +50°C
tc	50°C	50°C	50°C
Bluetooth Range	35 m	35 m	35 m
Interfaces	DALI, Bluetooth	DALI, Bluetooth	DALI, Bluetooth
Approval marks / Conformity	CE	CE	CE
Standards	EN 61347-1 EN 61347-2-11 EN 55015 EN 61547 EN 301 489-1	EN 61347-1 EN 61347-2-11 EN 55015 EN 61547 EN 301 489-1	EN 61347-1 EN 61347-2-11 EN 55015 EN 61547 EN 301 489-1

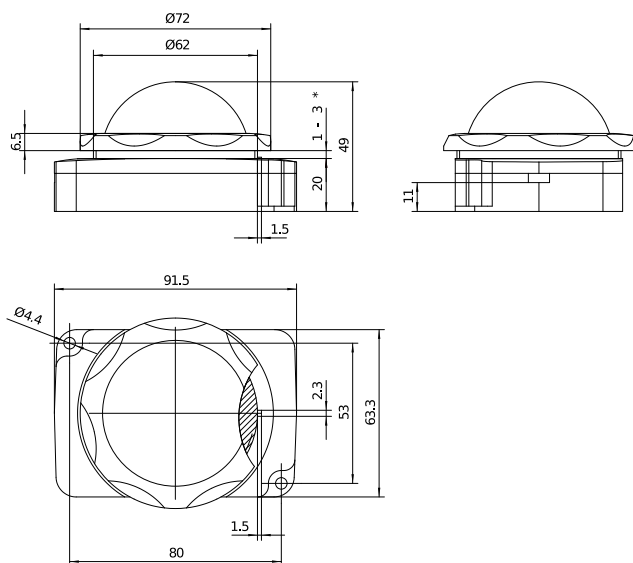
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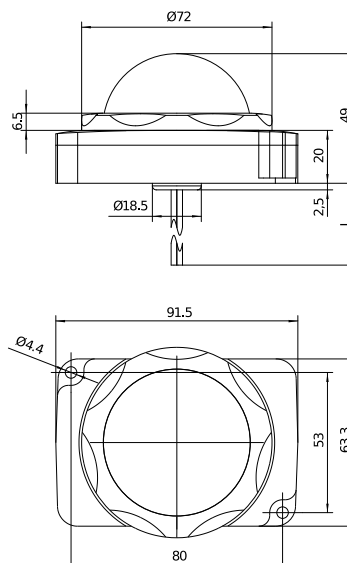
Dimensional drawings

HB PIR 3360 NET Intra

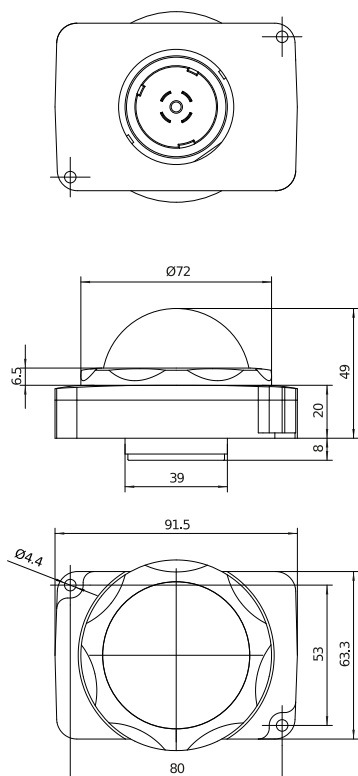


* wall thickness range

HB PIR 3360 NET Wire



HB PIR 3360 NET Zhaga



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Sensor technical specifications

	HB PIR 345 NET Intra	HB PIR 345 NET Wire	HB PIR 345 NET Zhaga
Bluetooth Device Name	STE HB PIR 345 NET I	STE HB PIR 345 NET W	STE HB PIR 345 NET Z
Type	9015	9024	9023
Dimensions	91.5 × 63.3 × 49mm 3-D data available online	91.5 × 63.3 × 49mm 3-D data available online	91.5 × 63.3 × 57mm 3-D data available online
Features	Motion detector Light sensor Feedback indicator Bluetooth mesh	Motion detector Light sensor Feedback indicator Bluetooth mesh	Motion detector Light sensor Feedback indicator Bluetooth mesh
Sensor technology	Passive infrared technology	Passive infrared technology	Passive infrared technology
Light measurement range	4 - 1000 lx	4 - 1000 lx	4 - 1000 lx
Mounting height	4.0 – 14.0 m	4.0 – 14.0 m	4.0 – 14.0 m
Reach, radial	30 x 4 m (120 m ²)	30 x 4 m (120 m ²)	30 x 4 m (120 m ²)
Reach, tangential	30 x 4 m (120 m ²)	30 x 4 m (120 m ²)	30 x 4 m (120 m ²)
Connection	0.34 – 0.75 mm ²	Connection strands (0.5mm ² , L=250mm, white)	Zhaga Book 18
Supply voltage / current consumption	12 - 22.5VDC / max. 46mA	12 - 22.5VDC / max. 46mA	12 - 22.5VDC / max. 46mA
IP rating:	IP20 / IP65* * sealed lens	IP65	IP65
Temperature range	-20°C to +50°C	-20°C to +50°C	-20°C to +50°C
t _c	50°C	50°C	50°C
Bluetooth Range	35 m	35 m	35 m
Interfaces	DALI, Bluetooth	DALI, Bluetooth	DALI, Bluetooth
Approval marks / Conformity	CE	CE	CE
Standards	EN 61347-1 EN 61347-2-11 EN 55015 EN 61547 EN 301 489-1	EN 61347-1 EN 61347-2-11 EN 55015 EN 61547 EN 301 489-1	EN 61347-1 EN 61347-2-11 EN 55015 EN 61547 EN 301 489-1

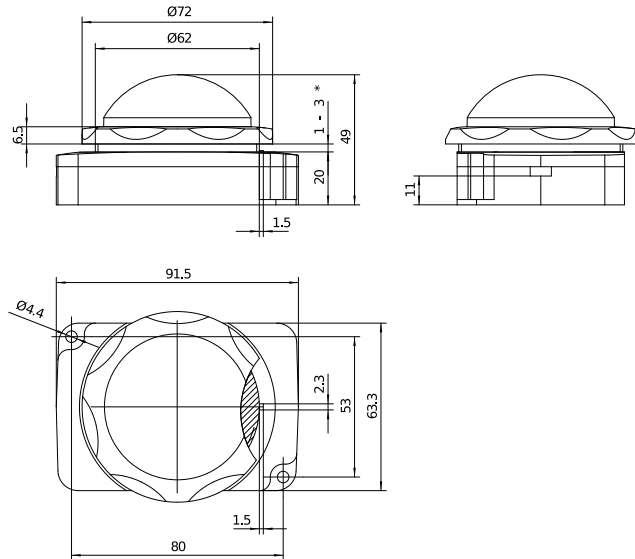
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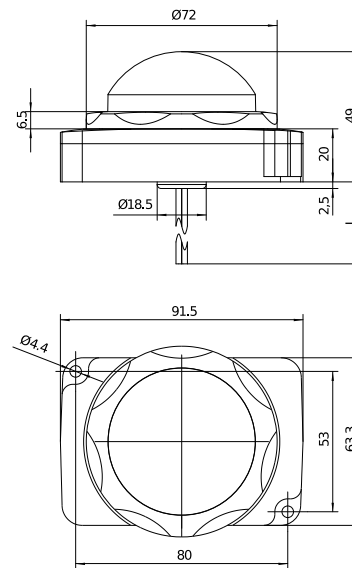
Dimensional drawings

DA HB PIR 345 NET INTRA

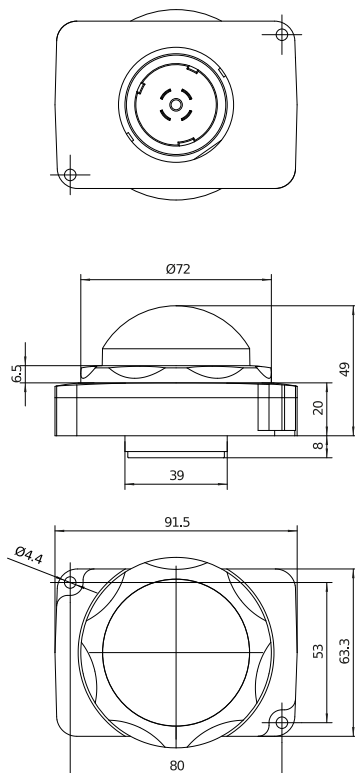


* wall thickness range

DA HB PIR 345 NET WIRE



HB PIR 345 NET Zhaga



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110075230	SENSOTEC Sensor PIR NET
110075231	SENSOTEC Extension NET



Sensor technical specifications

	HF2 NET	PIR NET	Extension NET
Bluetooth Device Name	STE HF2 NET	STE PIR NET	STE EXT NET
Type	9017	9018	9020
Dimensions	52 x 40.5 x 29.2 mm Hole spacing 61mm 3-D data available online	66.4 x 20.4 x 18.5mm Fixing spacing 35 mm 3-D data available online	47 x 29 x 20 mm Hole spacing 55 mm 3-D data available online
Features	Motion detector Light sensor Feedback indicator Bluetooth mesh	Motion detector Light sensor Feedback indicator Bluetooth mesh	- - Feedback indicator Bluetooth mesh
Sensor technology	High-frequency technology	Passive infrared technology	-
Transmitter power	1 - 2 mW	-	-
Transmission frequency	5.8GHz	-	-
Light measurement range	4 - 1000 lx	4 - 1000 lx	-
Angle of coverage	360° with 160° angle of aperture		-
Mounting height	2.5 – 3.5 m	2.0 – 5.0 m	-
Optimum mounting height	2.8 m	2.8 m	-
Reach, radial	Ø 8 m (50 m²)	4 x 4m (16 m²)	-
Reach, tangential	Ø 8 m (50 m²)	6 x 6m (36 m²)	-
Connection	0.34 – 0.75 mm ²	0.34 – 0.75 mm ²	0.34 – 0.75 mm ²
Supply voltage / current consumption	12 - 22.5VDC / max. 46mA	12 - 22.5VDC / max. 46mA	12 - 22.5VDC / max. 46mA
IP rating	IP20	IP20	IP20
Temperature range	-20°C to +60°C	-25°C to +55°C	-25°C to +60°C
tc	60°C	55°C	60°C
Bluetooth Range	15 m	25 m	35 m
Interfaces	DALI, Bluetooth	DALI, Bluetooth	DALI, Bluetooth
Approval marks / Conformity	CE	CE	CE
Standards	EN 61347-1 EN 61347-2-11 EN 55015 EN 61547 EN 301 489-1 EN 300 440	EN 61347-1 EN 61347-2-11 EN 55015 EN 61547 EN 301 489-1	EN 61347-1 EN 61347-2-11 EN 55015 EN 61547 EN 301 489-1

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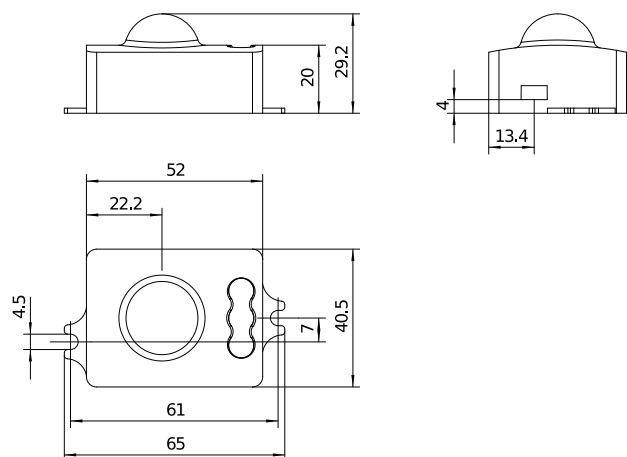
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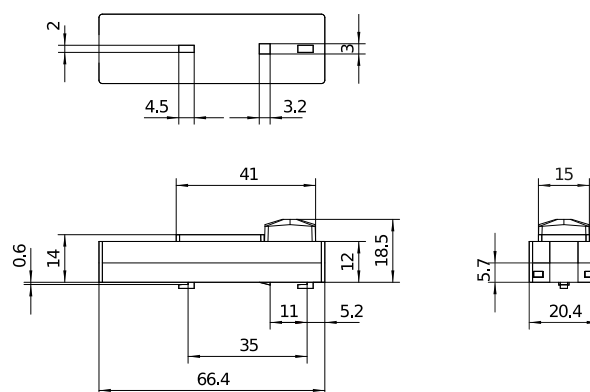


Dimensional drawings

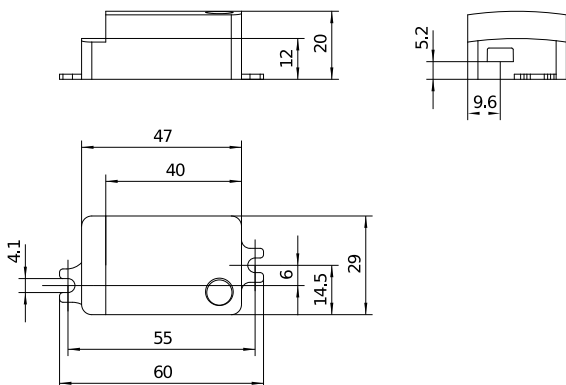
HF2 NET



PIR NET



EXTENSION NET



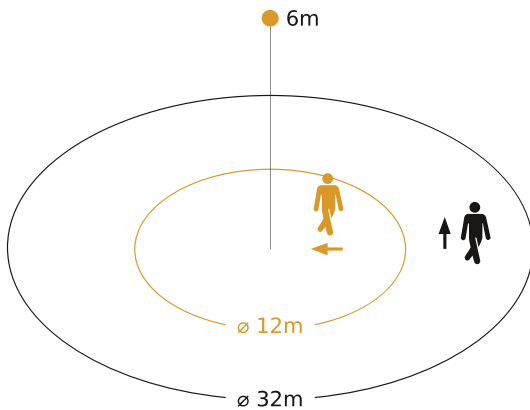
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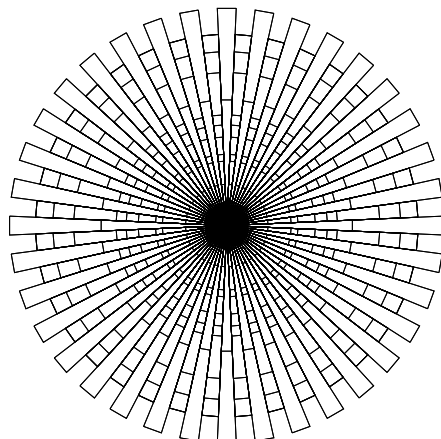
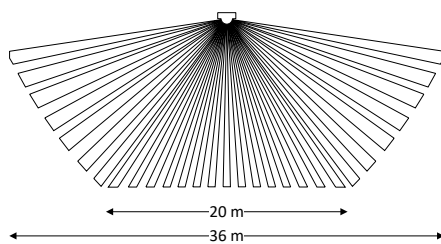
Sensor detection zones

HB PIR 3360 NET

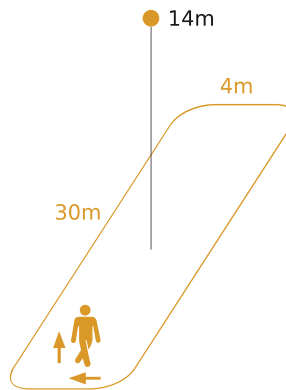


Possible mounting height: 2.80 m – 14.00m
Orange: radial / Black: tangential

Mounting height	Detection Area (tangential)
14 m	∅ 20 m
9 m	∅ 28 m
6 m	∅ 32 m
2.8 m	∅ 36 m

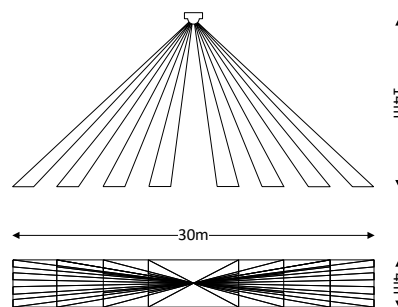


HB PIR 345 NET



Possible mounting height: 4.00 m – 14.00m
Orange: radial and tangential

Mounting height	Detection Area
14 m	30 m x 4 m
10 m	25 m x 4 m
8 m	20 m x 4 m
6 m	15 m x 4 m
4 m	10 m x 4 m

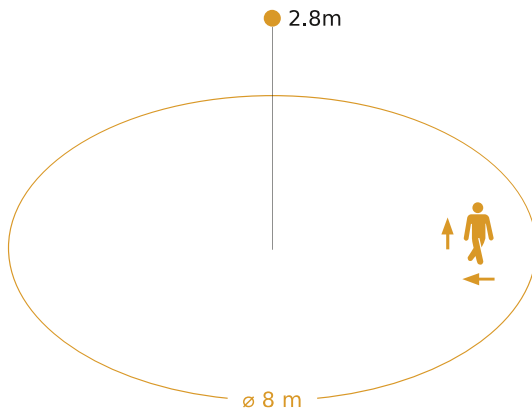


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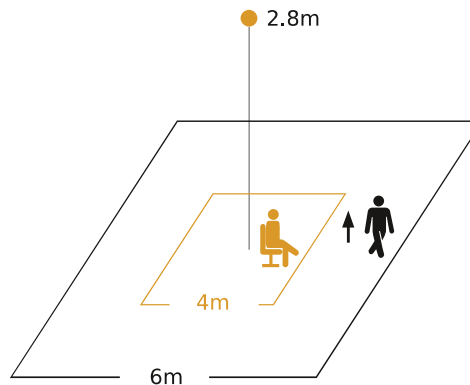


HF2 NET



Possible mounting height 2.5 m – 3.50m
Orange: radial and tangential

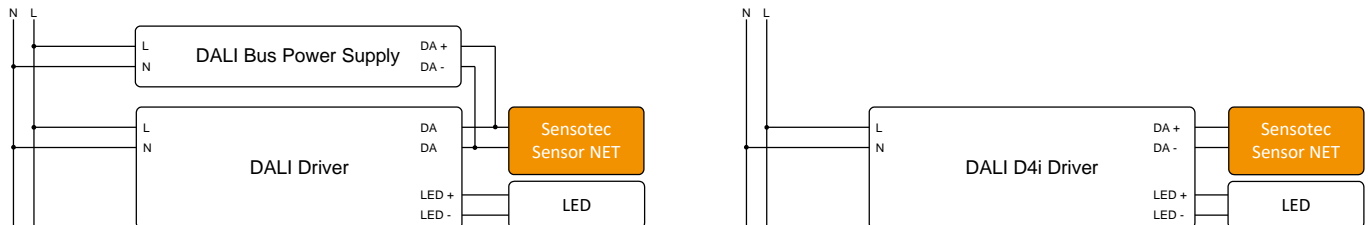
PIR NET



Possible mounting height 2.00 m – 5.00 m
Orange: presence / Black: tangential

Circuit diagram

A wiring example with DALI control gear is shown below. If no additional DALI Bus Power Supply is used, the DALI control gear must support at least Part 250 (Integrated bus power supply) and, by way of option, Part 252 (Energy reporting) and Part 253 (Diagnostics & maintenance).



Installation advantages

- Easily clips onto the enclosure (PIR NET)
- Easy to install by means of Zhaga connector system (Zhaga Book 18)
- Easily screws into enclosure
- Connection via a 2-core terminal (except HB Zhaga and Wire)
- Extremely compact size
- The sensor is supplied with power via the two-core DALI bus line
- No plug polarity to observe

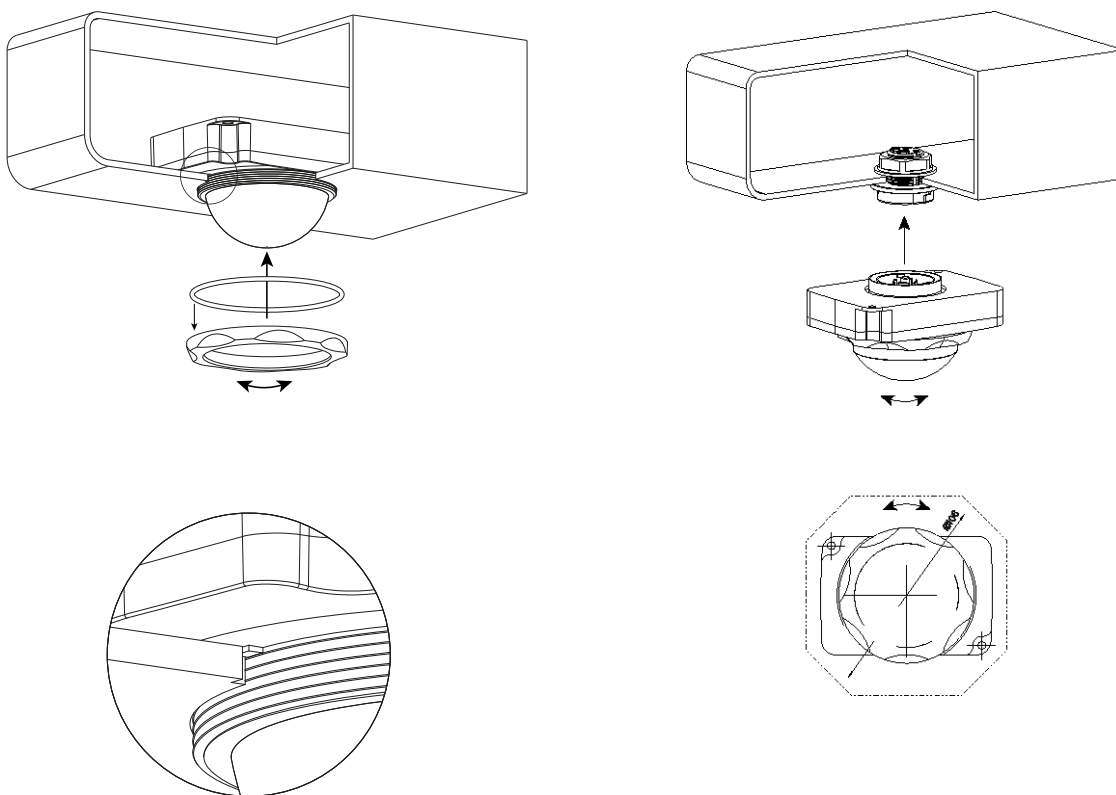
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Installation advice - HB PIR 3360 / 345 NET

- Suitable for a material thickness of 1 to 3 mm
- Hole diameter for lens 62.5 to 63mm
- Alignment is done by mechanical positioning (see dimensional drawings)
- 106mm Ø clearance required for screwing the HB PIR 3360 NET onto the Zhaga base.



Installation advice - HF2 NET

- The sensor is intended to be used indoors only.
- Metallic Materials may influence the performance of the Bluetooth functionality.
- The connected ECG must not exceed the specifications at any time.
- Design-in support from STEINEL specialists.
- It is highly recommended not to place the sensor in immediate proximity of radio transmitting devices (i.e. WLAN Routers).

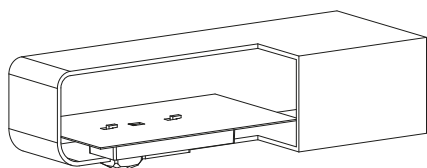
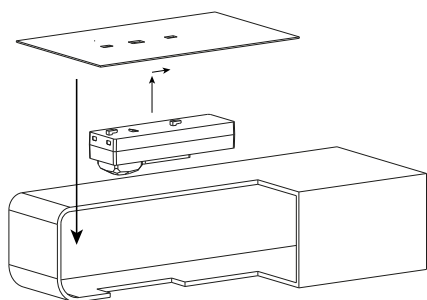
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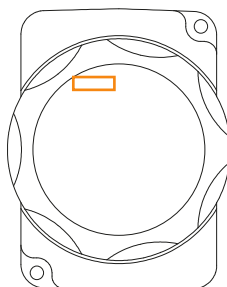
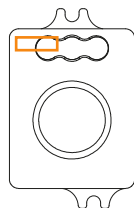
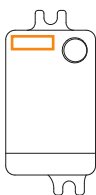
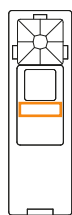


Installation advice - PIR NET

- Provide an aperture 15 mm wide x 41 mm long
- Suitable for a material thickness of 0.5 - 2 mm
- The sensor must have an unobstructed line of vision to the detection area.



Bluetooth antenna locations



Safety precautions

- Electrical devices must only be assembled and installed by qualified electricians.
- Fire hazard. The maximum permissible load must not be exceeded.
- Risk of electric shock. Disconnect before attempting work on the unit or load. Take into account all circuit breakers supplying dangerous voltages to the unit or load.
- Risk of electric shock. Before installing the sensor, check the enclosure to make sure it is not damaged. Never open the enclosure.
- The sensor is not suitable for use in burglar alarm systems or other alarm equipment.

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Operation and configuration

The sensors are commissioned and configured using any Bluetooth mesh compatible app. We will be happy to advise you on this.

Additional product information

- The device can be reset to factory settings by power cycling 5 times: The device should be switched off for at least 5s and switched on for a maximum of 10s. After a successful reset, the feedback LED flashes fastly.
- The feedback LED indicates the the following:
 - Fast blinking: Not commissioned.
 - Slow blinking: Connected to a network.
- The device uses the power supply of the DALI bus, the bus must be able to drive at least 50mA.
- The connected ECG (electronic control gears) are controlled with DAPC (direct arc power control) commands in broadcast mode. All sensors are single master application controller and are intended for use with a DALI-2 control gear.
- The Bluetooth range is dependent on the integration of fixtures, surrounding environment and conditions. It is recommended to conduct testing for range accuracy.
- As Qualified Bluetooth mesh is an open standard, our sensor can be commissioned by any Bluetooth mesh app that is based on the standard. The products are listed at Bluetooth SIG under the Declaration ID D054150.
- The ambient light sensor measures the average brightness in a room. When comparing measurements using a lux meter directly below the sensor, deviations can occur.

Conformity / marks of conformity



Note

As attenuation and reflections can cause a high-frequency sensor to behave differently in any luminaire, we cannot accept any liability for the sensor not working as expected in the particular luminaire it is being used in. Accreditation can be provided by STEINEL. Please contact your contact person find out what assistance we can give you in designing the sensor module into a luminaire. The customer must also guarantee and take responsibility for the way in which the other components behave in the luminaire (lamp, ECG etc.).

The product is sold under the brand name STEINEL Solutions AG. Software updates are made available regularly. For your own branding and software update approval process, contact our OEM account manager.

This product data sheet provides no guarantee of qualities within the meaning of the statutory warranty provisions for the product described.