

# SENSOTEC Sensor NET

110075229	SENSOTEC Sensor HF2 NET
110075230	SENSOTEC Sensor PIR NET
110075231	SENSOTEC Extension NET
110088866	SENSOTEC Sensor HB PIR 3360 NET Intra
110088867	SENSOTEC Sensor HB PIR 3360 NET Wire
110088868	SENSOTEC Sensor HB PIR 3360 NET Zhaga
110088869	SENSOTEC Sensor HB PIR 345 NET Intra
110088870	SENSOTEC Sensor HB PIR 345 NET Wire
110088871	SENSOTEC Sensor HB PIR 345 NET Zhaga

Technology Partner **SILVAIR**  
**Bluetooth®**  
 CE

**HF2 NET**



The HF2 NET is a high-frequency sensor module designed for built-in applications. Detection takes place through glass and non-metallic materials so that the modules can be used inside luminaires or other applications without any problems.

**PIR NET**



Small. Flat. Compact. Inconspicuous presence detector. 360° passive infrared sensor with a presence range of 4 x 4m (presence and radial movement) or 6 x 6m (tangential movement). With patented Fresnel lens.

**Extension NET**



The Extension NET is intended for a luminaire without sensors and is used to extend the Bluetooth Mesh network.

**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 14m. High-precision 360° infrared sensor. Maximum detection range diameter 36m. For watching over up to 1000sqm.

**HB PIR 345 NET**



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

**Connection variants**

**Intra**



**Zhaga**



**Wire**



## SENSOTEC NET product family

Easy to install, ready for networking via Bluetooth Mesh - The innovative NET sensors network wirelessly via a Bluetooth Mesh network, can be configured via app and control LED drivers via the DALI bus. Simple, flexible, quick to install.

The NET product family includes the HF2, PIR, Extension, HB PIR 3360 and HB PIR 345 NET sensors.

### Advantages

- Sensor with integrated DALI-2 application controller
- Direct connection to a DALI interface
- Straightforward wiring, powered via the DALI bus
- Bluetooth® NLC-certified for networking and integration of sensors and luminaires
- Parameterization and configuration via Bluetooth app
- Wireless firmware update of the entire network
- Constant-lighting control
- Predefined Scenes
- Freely adjustable main and ambient light
- Free definition of luminaire groups with configurable behavior
- Adjustable sensor sensitivity for HF2 NET
- Presence control even in unprovisioned state

### Further information on the individual sensors

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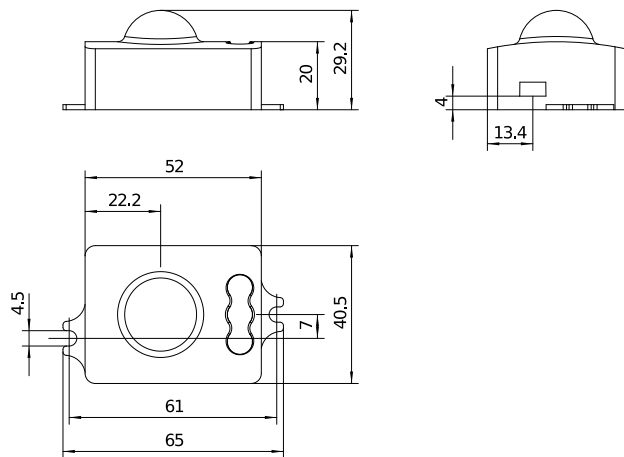
## HF2 NET, PIR NET, Extension NET

### Sensor technical specifications

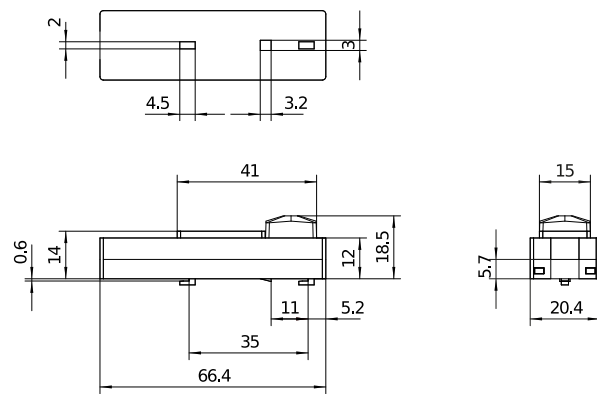
	HF2 NET	PIR NET	Extension NET
Article number	110075229	110075230	110075231
Bluetooth Device Name	STE HF2 NET	STE PIR NET	STE EXT NET
Type	9017	9018	9020
Dimensions	52 × 40.5 × 29.2mm Hole spacing 61mm 3D data available online	66.4 × 20.4 × 18.5mm Fixing spacing 35mm 3D data available online	47 × 29 × 20mm Hole spacing 55mm 3D 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 - 2mW	-	-
Transmission frequency	5,8GHz	-	-
Light measurement range	4 - 1000lx	4 - 1000lx	-
Angle of coverage	360° with 160° angle of aperture	-	-
Mounting height	2.5 - 3.5m	2.0 - 5.0m	-
Optimum mounting height	2.8m	2.8m	-
Reach, radial	Ø 8m (50m <sup>2</sup> )	4 x 4m (16m <sup>2</sup> )	-
Reach, tangential	Ø 8m (50m <sup>2</sup> )	6 x 6m (36m <sup>2</sup> )	-
Sensitivity (motion detection)	Adjustable via app	inactive (0%) or active (100%)	-
Connection	0.34 - 0.75mm <sup>2</sup>	0.34 - 0.75mm <sup>2</sup>	0.34 - 0.75mm <sup>2</sup>
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 bis +60°C (tc +60°C)	-25 bis +55°C (tc +55°C)	-25 bis +60°C (tc +60°C)
Bluetooth Range	15m	25m	35m
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

## Dimensional drawings

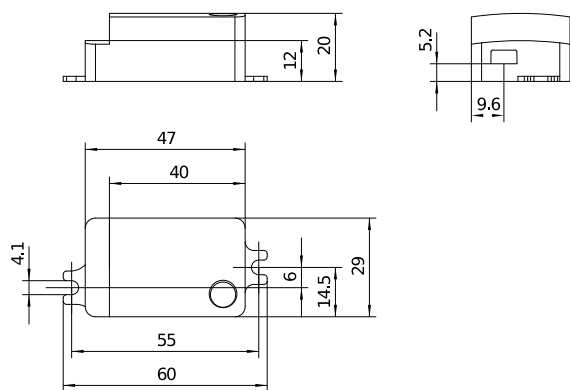
HF2 NET



PIR NET

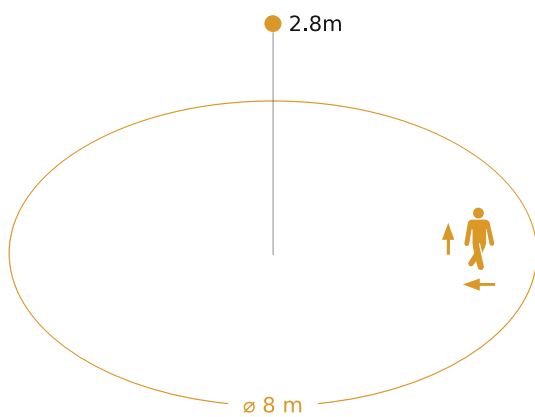


EXTENSION NET



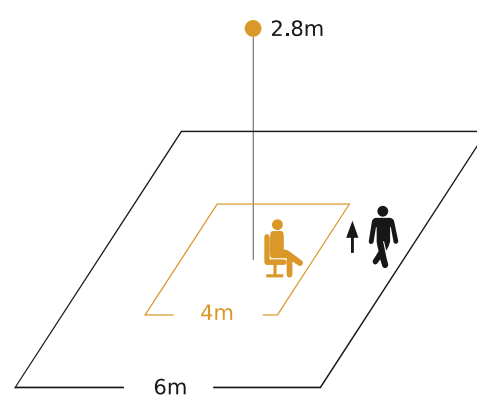
## Sensor detection zones

HF2 NET



Possible mounting height 2.5m - 3.5m  
Orange: radial and tangential

PIR NET



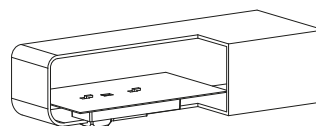
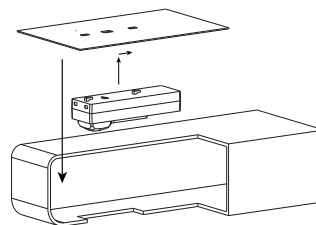
Possible mounting height 2m - 5m  
Orange: presence  
Black: tangential

### **Installation advice HF2 NET**

- The sensor is intended to be used indoors only.
- Metallic Materials may influence the performance of the Bluetooth functionality.
- Design-in support from STEINEL specialists.
- It is highly recommended not to place the sensor in the immediate vicinity of radio transmitters and moving objects (i.e. WLAN routers).

### **Installation advice PIR NET**

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



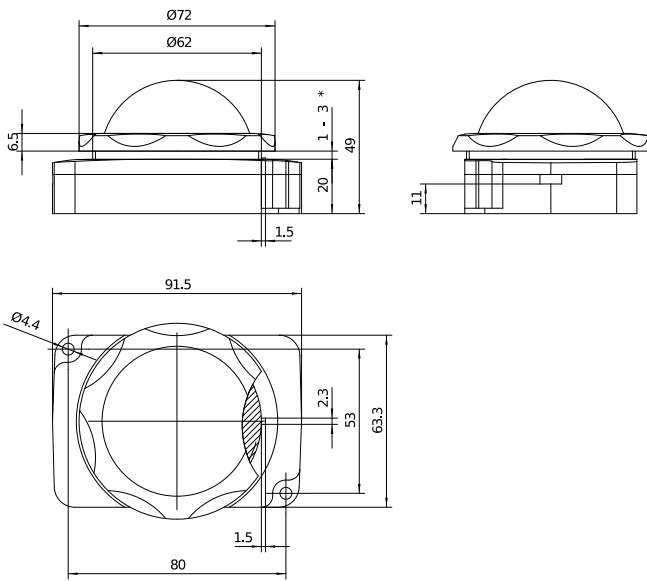
## **HB PIR 3360 NET Intra, Wire, Zhaga**

### **Sensor technical specifications**

	HB PIR 3360 NET Intra	HB PIR 3360 NET Wire	HB PIR 3360 NET Zhaga
Article number	110088866	110088867	110088868
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 3D data available online	91.5 × 63.3 × 49mm 3D data available online	91.5 × 63.3 × 57mm 3D 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 - 1000lx	4 - 1000lx	4 - 1000lx
Mounting height	2.8 - 14.0m	2.8 - 14.0m	2.8 - 14.0m
Reach, radial	Ø 14m (154m <sup>2</sup> )	Ø 14m (154m <sup>2</sup> )	Ø 14m (154m <sup>2</sup> )
Reach, tangential	Ø 36m (1018m <sup>2</sup> )	Ø 36m (1018m <sup>2</sup> )	Ø 36m (1018m <sup>2</sup> )
Sensitivity (motion detection)	inactive (0%) or active (100%)	inactive (0%) or active (100%)	inactive (0%) or active (100%)
Connection	0.34 - 0.75mm <sup>2</sup>	Connection strands (0.5mm <sup>2</sup> , 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
Temperatur range	-20 bis +50°C (tc +50°C)	-20 bis +50°C (tc +50°C)	-20 bis +50°C (tc +50°C)
Bluetooth Range	35m	35m	35m
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

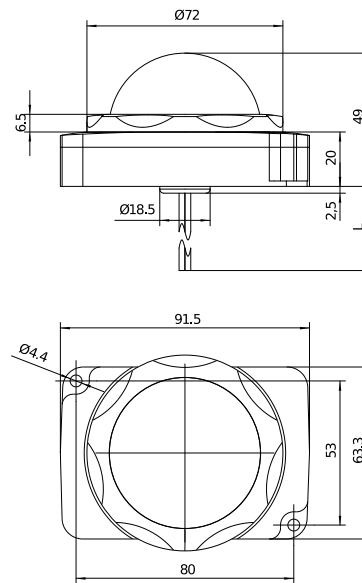
## Dimensional drawings

HB PIR 3360 NET Intra

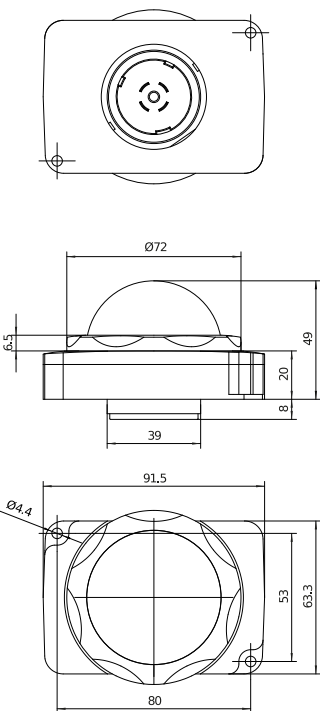


\* wall thickness range

HB PIR 3360 NET Wire

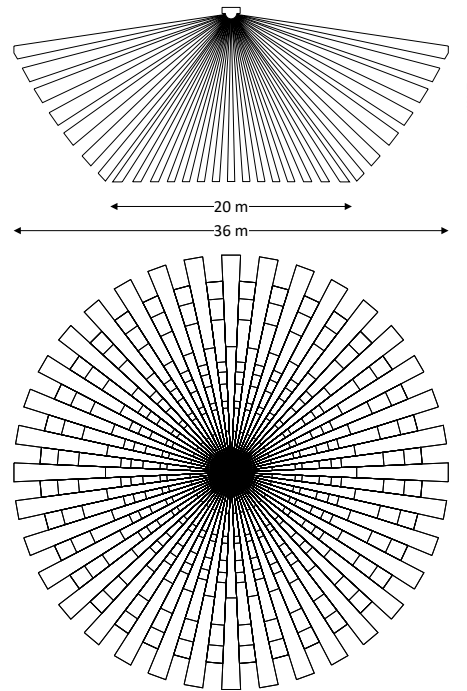
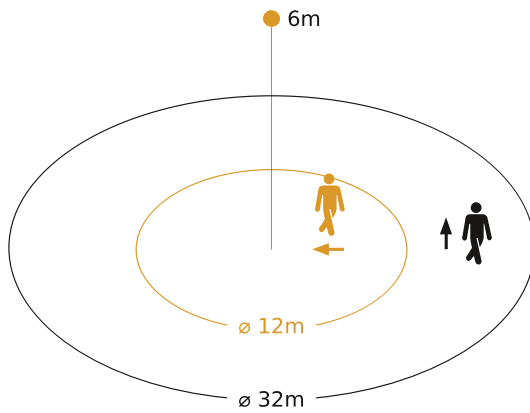


HB PIR 3360 NET Zhaga



## Sensor detection zones

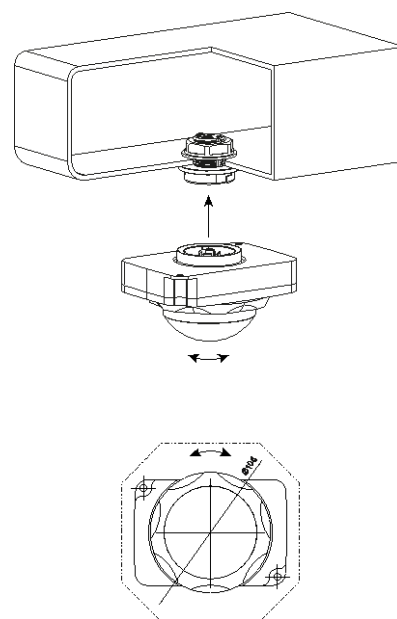
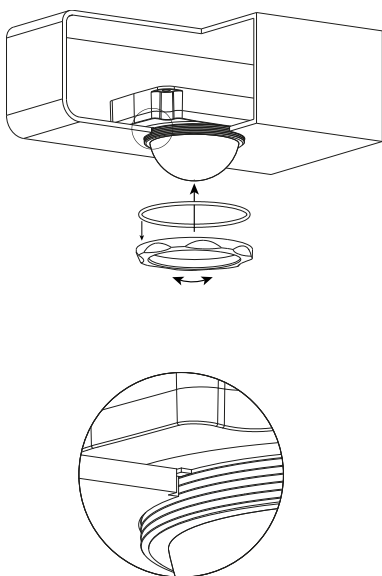
HB PIR 3360 NET



Possible mounting height: 2.8m - 14m  
Orange: radial / Black: tangential

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

## Installation advice HB PIR 3360 NET



- Suitable for material thicknesses of 1 - 3mm.
- Hole diameter for lens 62,5 to 63mm.
- Alignment is done by mechanical positioning (see dimensional drawings).

- Clearance of Ø 106mm required for screwing the HB PIR 3360 NET Zhaga onto the Zhaga base.

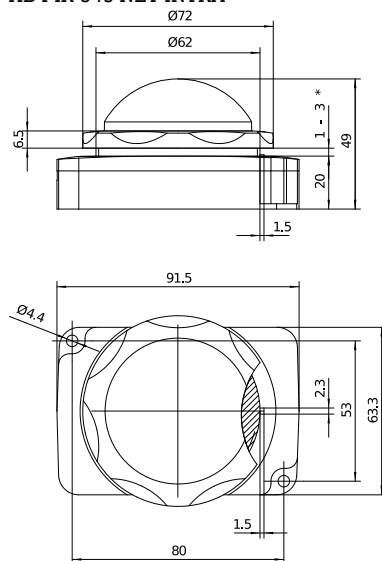
## HB PIR 345 NET Intra, Wire, Zhaga

### Sensor technical specifications

	HB PIR 345 NET Intra	HB PIR 345 NET Wire	HB PIR 345 NET Zhaga
Article number	110088869	110088870	110088871
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 3D data available online	91.5 × 63.3 × 49mm 3D data available online	91.5 × 63.3 × 57mm 3D 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 - 1000lx	4 - 1000lx	4 - 1000lx
Mounting height	4.0 - 14.0m	4.0 - 14.0m	4.0 - 14.0m
Reach, radial	30 x 4m (120m <sup>2</sup> )	30 x 4m (120m <sup>2</sup> )	30 x 4m (120m <sup>2</sup> )
Reach, tangential	30 x 4m (120m <sup>2</sup> )	30 x 4m (120m <sup>2</sup> )	30 x 4m (120m <sup>2</sup> )
Sensitivity (motion detection)	inactive (0%) or active (100%)	inactive (0%) or active (100%)	inactive (0%) or active (100%)
Connection	0.34 - 0.75mm <sup>2</sup>	Connection strands (0.5mm <sup>2</sup> , 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 bis +50°C (tc +50°C)	-20 bis +50°C (tc +50°C)	-20 bis +50°C (tc +50°C)
Bluetooth Range	35m	35m	35m
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

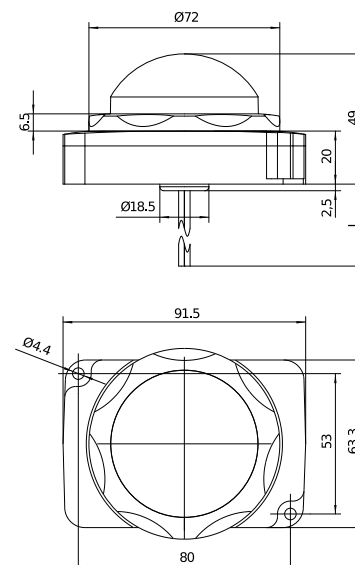
### Dimensional drawings

HB PIR 345 NET INTRA



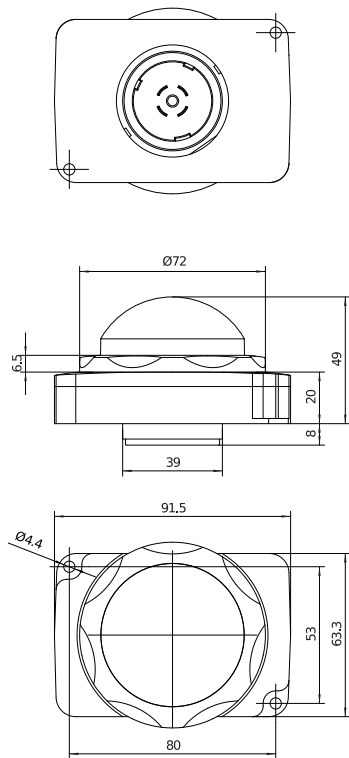
\* wall thickness range

HB PIR 345 NET WIRE



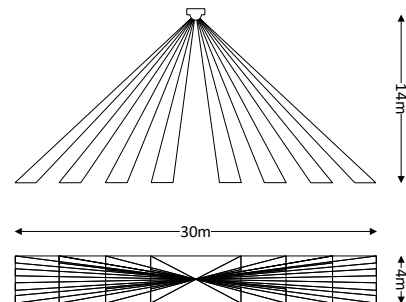
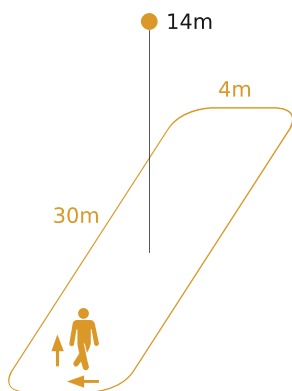


HB PIR 345 NET Zhaga



**Sensor detection zones**

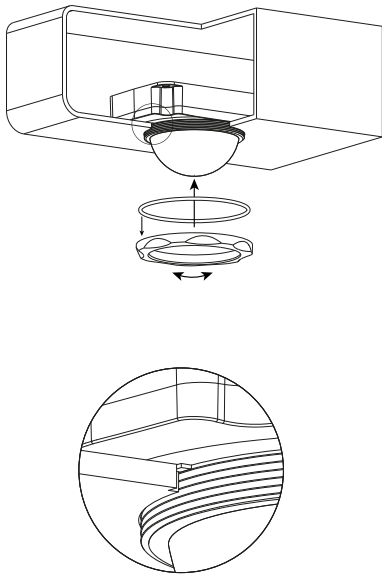
HB PIR 345 NET



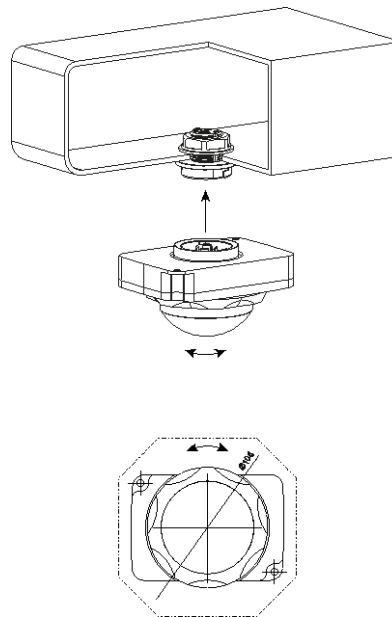
Possible mounting height: 4 - 14m  
 Orange: radial and tangential

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

## Installation advice HB PIR 345 NET



- Suitable for material thicknesses of 1 - 3mm.
- Hole diameter for lens 62,5 to 63mm.
- Alignment is done by mechanical positioning (see dimensional drawings).

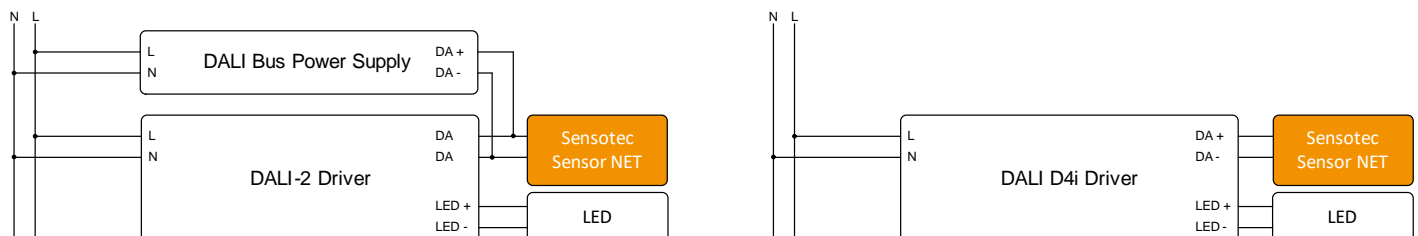


- Clearance of  $\varnothing$  106mm required for screwing the HB PIR 345 NET Zhaga onto the Zhaga base.

## General information

### Circuit diagram

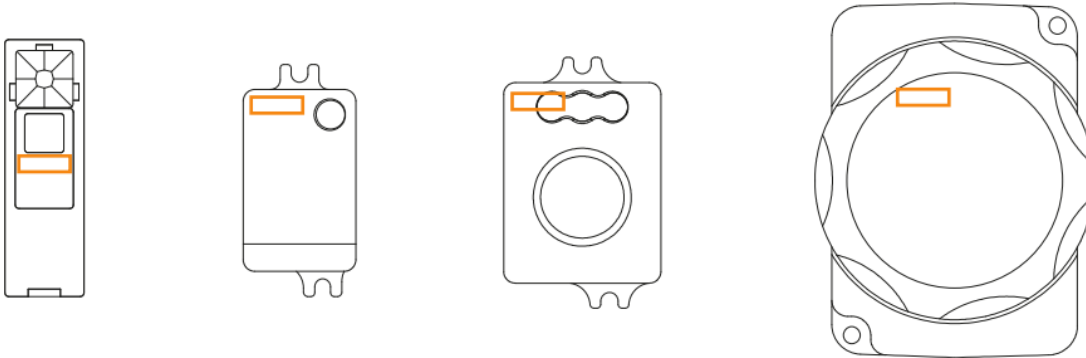
A wiring example with DALI control gear is shown below. If no additional DALI Bus Power Supply is used, the DALI-2 control gear must support at least Part 250 (Integrated bus power supply) and, by way of option, Part 252 (Energy reporting) and Part 253 (Diagnostics & maintenance).



### General 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 und Wire)
- Extremely compact size
- The sensor is supplied with power via the two-core DALI bus line
- No plug polarity to observe

## Bluetooth antenna locations



## Safety precautions

- Electrical devices must only be assembled and installed by qualified electricians.
- 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.

## Operation and configuration

The sensors are commissioned and configured using any Bluetooth mesh compatible app. Or the Silvair app recommended by us.



Silvair Lighting commissioning app (Apple iOS)

Link: <https://apple.co/3RtsdiB> 



Silvair Lighting commissioning app (Google Android)

Link: <https://bit.ly/3RzSETC> 

The SN-204 Silvair Commissioning Quick Start Guide is recommended as an introduction. (<https://silvair.com/resources/product-documents/>)

## 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 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.
- Bluetooth® NLC is a Bluetooth standard. Our sensors can therefore be put into operation with any Bluetooth mesh app based on the standard. The products are listed with the Bluetooth SIG.
- 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.
- In the unprovisioned state, the sensors already have integrated occupancy control. The light switches to 100% for 15 minutes when motion is detected; if no motion is detected during this time, the light switches to 20% for 5 minutes and then switches off completely.
- The sensor sensitivity of the HF2 NET can be set in 1% increments from 0 to 100% (default setting is 80%). This setting depends on the installation situation and environment and must be determined individually for each sensor.
- For sensors based on passive infrared technology, the sensitivity can only be set to 0% or 100%.

## Conformity / marks of conformity



Link: 

## 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.