Data sheet

SENSOTEC Sensor NET wireless Mesh

110075230	SENSOTEC Sensor PIR NET
110075229	SENSOTEC Sensor HF2 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

PIR NET

The unobtrusive PIR presence detector with a detection area of 4x4m (movement 6x6m) is a compact and reliable recessed luminaire sensor for applications up to a maximum height of 5m.

HF2 NET

The HF sensor module has a detection range of up to 8m and a max. height of 3.5m. The presence detection is carried out through glass and non-metallic materials and can therefore be used inside luminaires.

Extension NET

The Extension is used to expand the Bluetooth Mesh network and is intended for Dali luminaires without sensors.

HB PIR 3360 NET

A reliable motion detector with a long range, ideal for high ceilings in industrial buildings or commercial properties. For installation heights of up to 14m and a maximum detection area with a diameter of 36m, this high-precision PIR sensor enables monitoring of up to 1000 square metres.

HB PIR 345 NET

The Highbay motion detector reliably monitors a rectangular detection area up to 30x4m and a mounting height of 14m. Ideal for detection from great heights in warehouses, high-bay warehouses, machine shops, check-in and waiting halls.

Connection variants

Intra

Wire

Zhaga

SENSOTEC NET product family

NET sensors connect wirelessly via mesh networks from third-party providers such as Bluetooth or Wirepas. They can be conveniently configured via an app and control directly connected DALI luminaires.

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 (Single Master)
- Direct connection to a DALI interface
- Straightforward wiring, powered via the DALI bus
- Bluetooth® NLC-certified for networking and integration of sensors and luminaires
- Presence control is activated in the delivery state
- Parameterization and configuration via Bluetooth app from Silvair / Supports all Silvair functions
  - Presence control, main and ambient light freely adjustable
  - Constant-lighting control
  - Scenes
  - Timer switch
  - Free definition of luminaire groups with configurable behaviour
  - Adjustable sensor sensitivity for HF2 NET
  - Wireless firmware update via Bluetooth / Silvair

Further information on the individual sensors

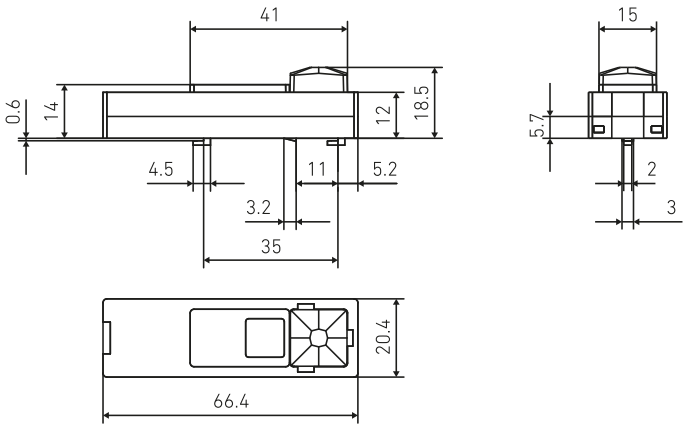
HF2 NET, PIR NET, Extension NET

Sensor technical specifications

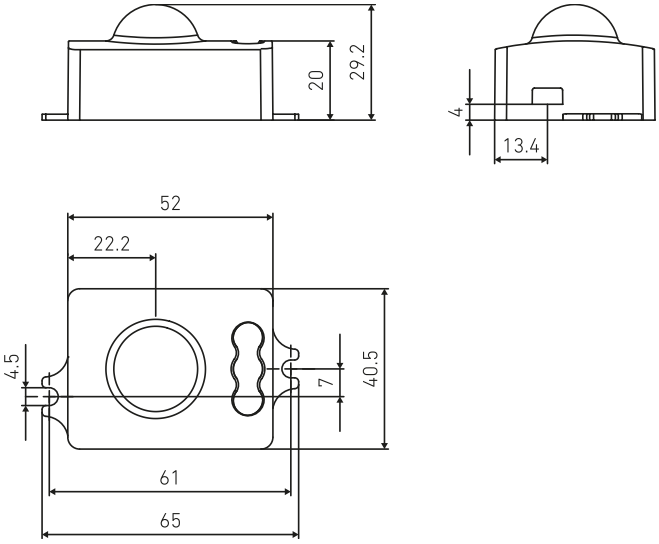
	PIR NET	HF2 NET	Extension NET
Article number	110075230	110075229	110075231
Bluetooth Device Name	STE PIR NET	STE HF2 NET	STE EXT NET
Type	9018	9017	9020
Dimensions	66.4 × 20.4 × 18.5mm Fixing spacing 35mm 3D data available online	52 × 40.5 × 29.2mm Hole spacing 61mm 3D data available online	47 × 29 × 20mm Hole spacing 55mm 3D data available online
Features	Motion detector Light sensor Feedback indicator Bluetooth mesh NLC	Motion detector Light sensor Feedback indicator Bluetooth mesh NLC	- - Feedback indicator Bluetooth mesh NLC
Sensor technology	Passive infrared technology	High-frequency 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	2.0 - 5.0m	2.5 - 3.5m	-
Optimum mounting height	2.8m	2.8m	-
Reach, radial	4 x 4m (16m^2)	Ø 8m (50m^2)	-
Reach, tangential	6 x 6m (36m^2)	Ø 8m (50m^2)	-
Sensitivity (motion detection)	inactive (0%) or active (100%)	Adjustable via app	-
Connection	0.34 - 0.75mm^2	0.34 - 0.75mm^2	0.34 - 0.75mm^2
Supply voltage / current consumption Dali	12 - 22.5VDC / max. 46mA	12 - 22.5VDC / max. 46mA	12 - 22.5VDC / max. 46mA
IP rating:	IP20	IP20	IP20
Temperature range	-25 bis +55°C (tc +55°C)	-20 bis +60°C (tc +60°C)	-25 bis +60°C (tc +60°C)
Bluetooth Range	25m	15m	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 300 440	EN 61347-1 EN 61347-2-11 EN 55015 EN 61547 EN 301 489-1

Dimensional drawings

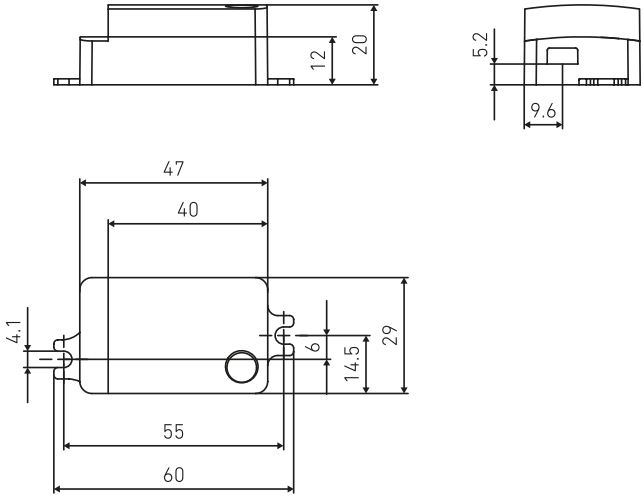
PIR NET



HF2 NET

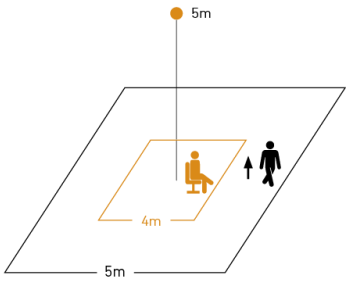


EXTENSION NET



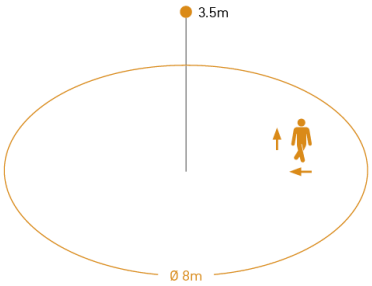
Sensor detection zones

PIR NET



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

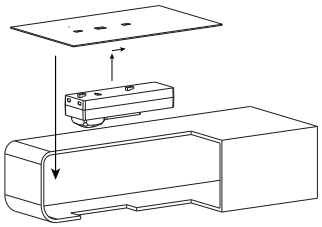
HF2 NET

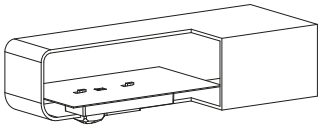


Possible mounting height 2.5m - 3.5m
Orange: radial and tangential

Installation advice PIR NET

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





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).

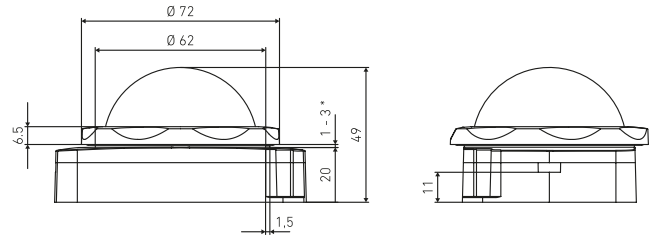
HB PIR 3360 NET Intra, Wire, Zhaga

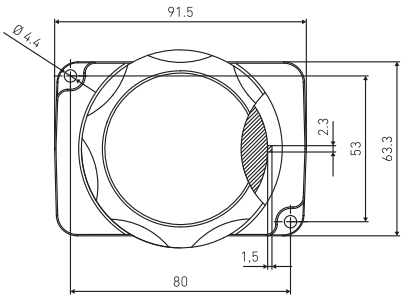
Sensor technical specifications

	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 NLC	Motion detector Light sensor Feedback indicator Bluetooth mesh NLC	Motion detector Light sensor Feedback indicator Bluetooth mesh NLC
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^2)	Ø 14m (154m^2)	Ø 14m (154m^2)
Reach, tangential	Ø 36m (1018m^2)	Ø 36m (1018m^2)	Ø 36m (1018m^2)
Sensitivity (motion detection)	inactive (0%) or active (100%)	inactive (0%) or active (100%)	inactive (0%) or active (100%)
Connection	0.34 - 0.75mm^2	Connection strands (0.5mm^2, L=250mm, white)	Zhaga Book 18
Supply voltage / current consumption Dali	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

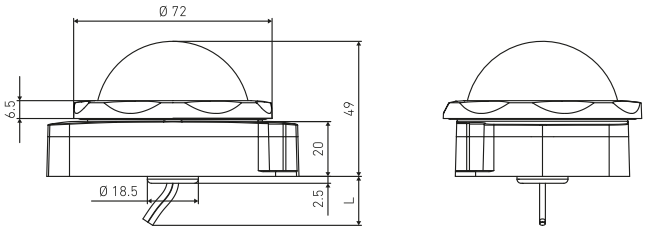
HB PIR 3360 NET Intra

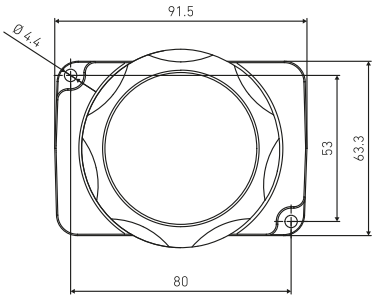




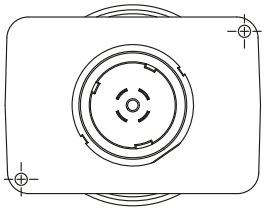
* wall thickness range

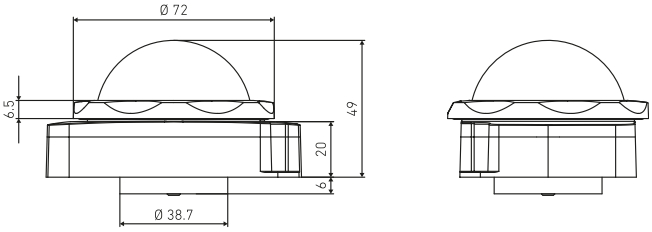
HB PIR 3360 NET Wire

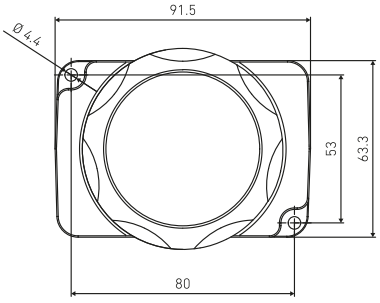




HB PIR 3360 NET Zhaga

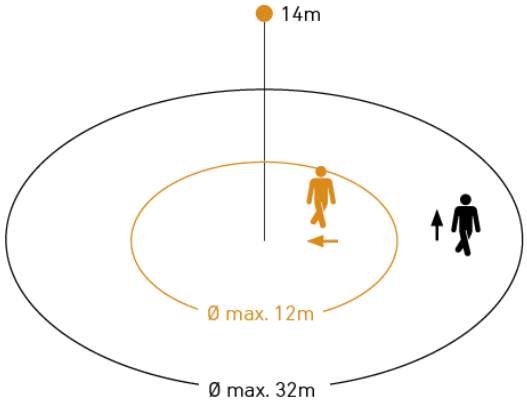


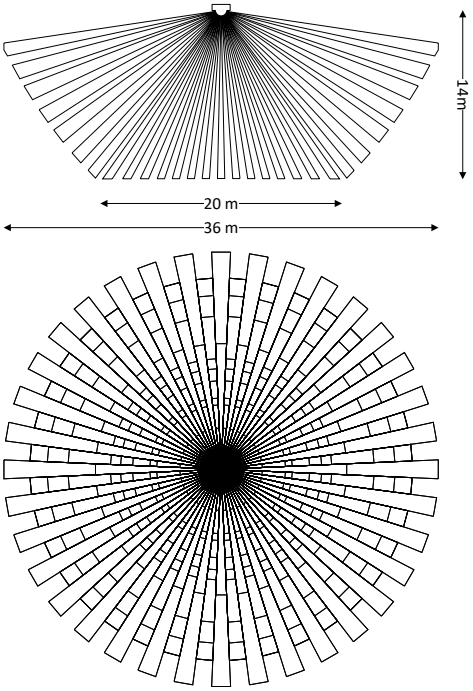




Sensor detection zones

HB PIR 3360 NET

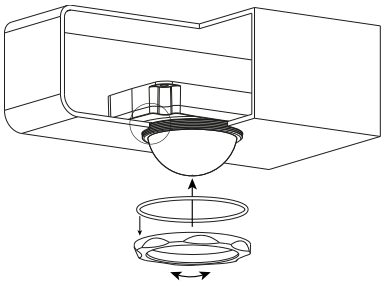


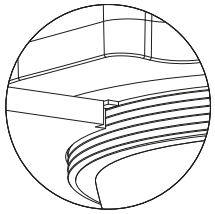


Possible mounting height: 2.8m - 14m
Orange: radial / Black: tangential

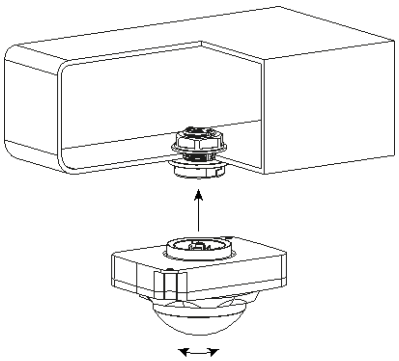
Mounting height	Detection Area (tangential)
14m	⌀ 20m
9m	⌀ 28m
6m	⌀ 32m
2.8m	⌀ 36m

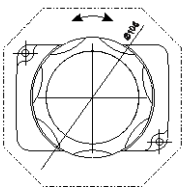
Installation advice HB PIR 3360 NET





- 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.

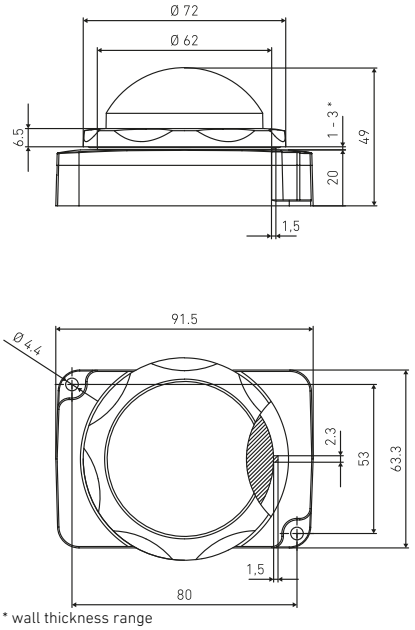
HB PIR 345 NET Intra, Wire, Zhaga

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 NLC	Motion detector Light sensor Feedback indicator Bluetooth mesh NLC	Motion detector Light sensor Feedback indicator Bluetooth mesh NLC
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^2)	30 x 4m (120m^2)	30 x 4m (120m^2)
Reach, tangential	30 x 4m (120m^2)	30 x 4m (120m^2)	30 x 4m (120m^2)
Sensitivity (motion detection)	inactive (0%) or active (100%)	inactive (0%) or active (100%)	inactive (0%) or active (100%)
Connection	0.34 - 0.75mm^2	Connection strands (0.5mm^2, L=250mm, white)	Zhaga Book 18
Supply voltage / current consumption Dali	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

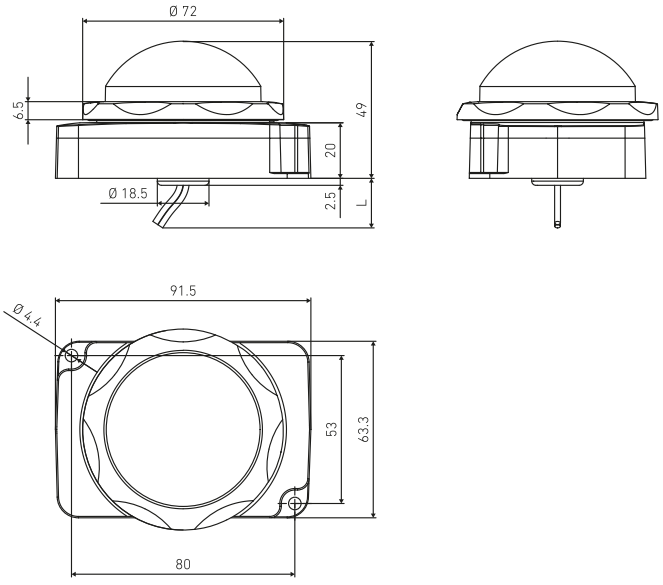
Dimensional drawings

HB PIR 345 NET INTRA

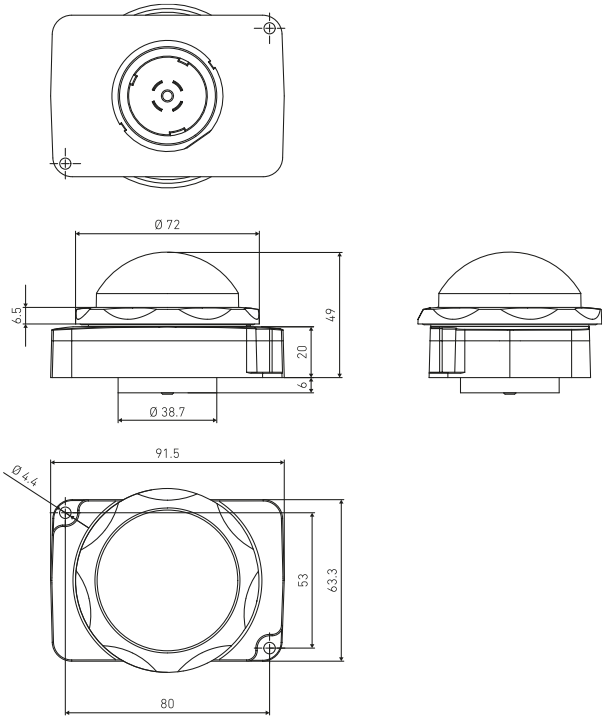


* wall thickness range

HB PIR 345 NET WIRE

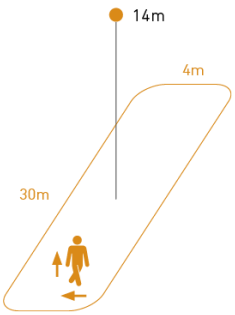


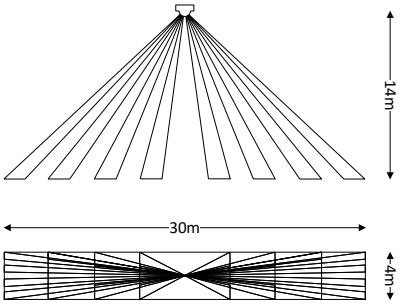
HB PIR 345 NET Zhaga



Sensor detection zones

HB PIR 345 NET

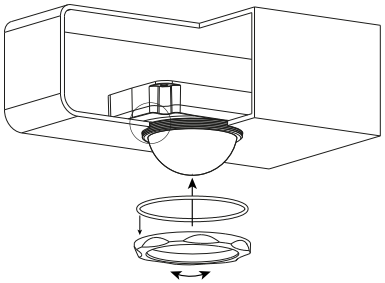


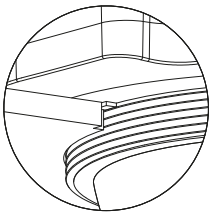


Possible mounting height: 4 - 14m
Orange: radial and tangential

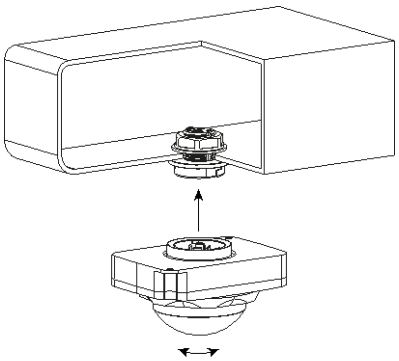
Mounting height	Detection Area
14m	30m x 4m
10m	25m x 4m
8m	20m x 4m
6m	15m x 4m
4m	10m x 4m

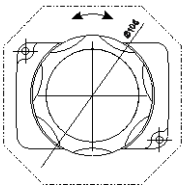
Installation advice HB PIR 345 NET





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



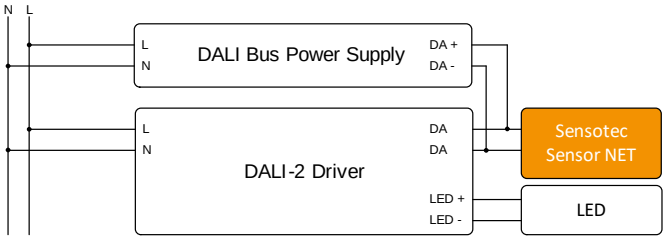


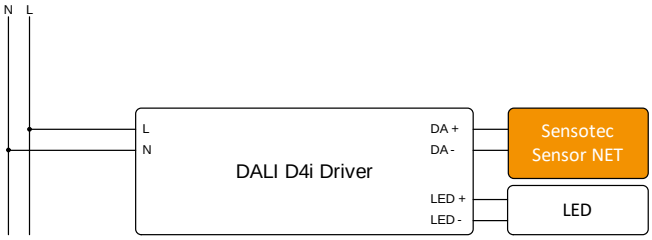
- Clearance of Ø 106mm required for screwing the HB PIR 345 NET Zhaga onto the Zhaga base.

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).

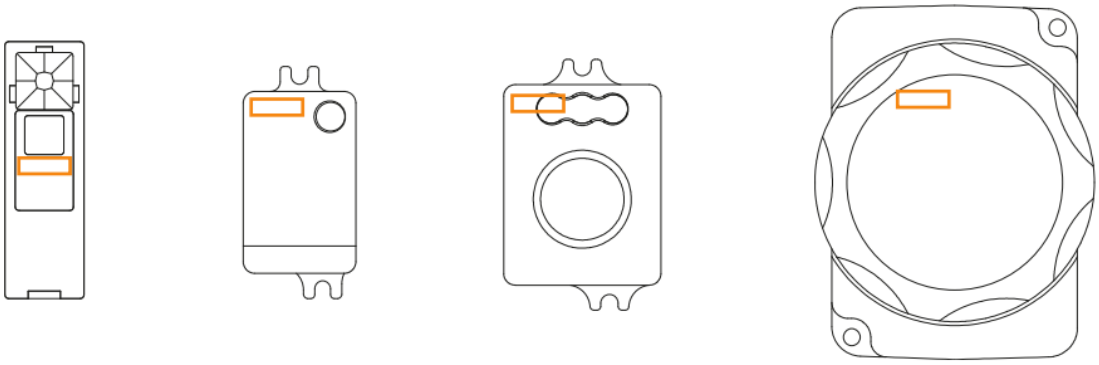




General installation advantages

- 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)
- The sensor is supplied with power via the two-core DALI bus line
- Connection polarity Dali not to be observed

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

- 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 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 from the DALI bus. This must be dimensioned accordingly.
- 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.
- 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 delivery state, the sensors already have integrated presence 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.