PIR Standalone Motion Sensor with Bluetooth® Mesh

HBIR30/CA

Casambi Enabled

HYTRONIK ®

Product Description

HBIR30/CA is a Bluetooth PIR standalone motion sensor. It is ideal for typical indoor applications such as office, classroom, healthcare and other commercial areas. HBIR30/CA works with CBU-ASD module for either 1-10V or DALI output. Meanwhile, all commissioning and settings can be done via CASAMBI app.

HBIR30/CA

HBIR30/CA/R

HBIR30/CA/H

HBIR30/CA/RH
(3-pyro)

Hardware Features

- 1 push input for flexible manual control
- Surface mount kit available as accessory
- Two types of blind inserts / blanking plates
- User-friendly design for installation
- Use Casambi app for commissioning
- High bay version available (up to 15m in height)
- Device firmware update over-the-air
- 5-year warranty

Free smartphone App for set-up and commissioning

Download on the App Store

GET IT ON Google Play

Technical Specifications

Input & Output Characteristics	
Mains voltage	220~240VAC 50/60Hz
Stand-by power	<0.2W
Warming-up	20s

Bluetooth Transceiver	
Operation frequency	2.4 GHz - 2.483 GHz
Transmission power	Max 4 dBm
Range (Typical indoor)	10~30m
Protocol	Bluetooth® 4.0

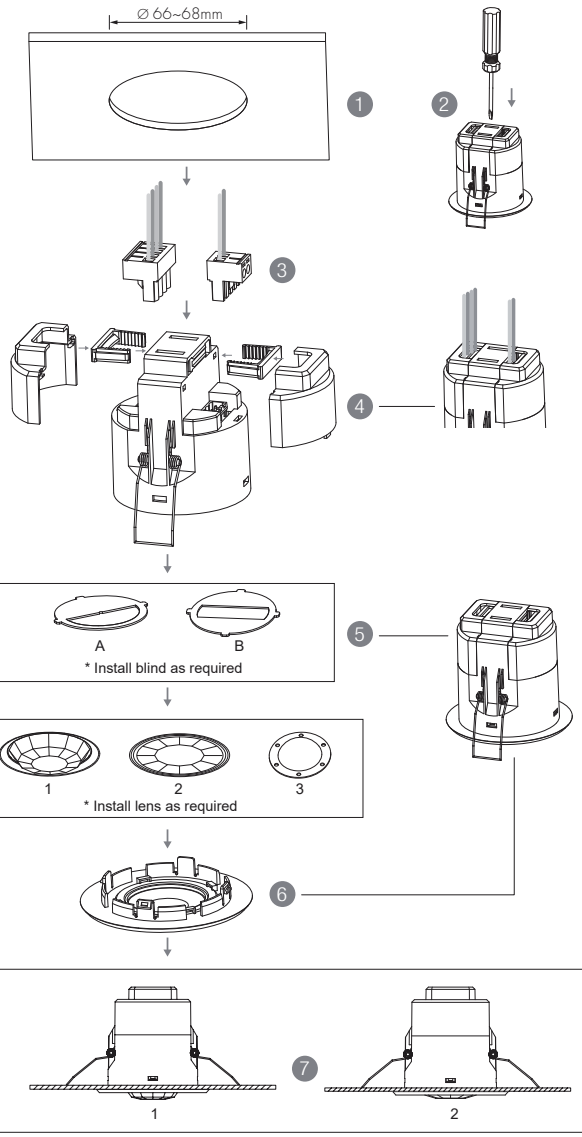
Sensor Data	
Sensor principle	PIR detection
HBIR30/CA	Installation Height : 6m Detection Range(Ø) :9m
HBIR30/CA/R	Installation Height : 6m Detection Range(Ø) :10m
HBIR30/CA/H	Installation height: 15m (forklift) 12m (person) Detection range (Ø): 24m
HBIR30/CA/RH	Installation height: 15m (forklift) 12m (person) Detection range (Ø): 40m
Detection angle	360°

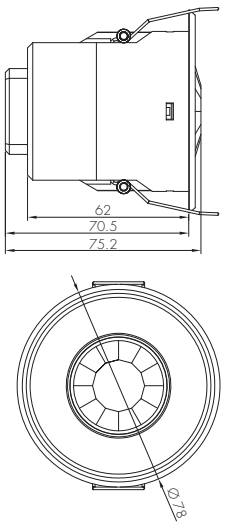
* For more details of detection range, please refer to "detection pattern" section.

Safety & EMC	
EMC standard (EMC)	EN55015, EN61000, EN61547
Safety standard (LVD)	EN60669-1, EN60669-2-1
Certification	CB, CE , EMC, LVD, RCM
RED	EN300328, EN301489-1, EN301489-17

Environment	
Operation temperature	Ta: -20°C ~ +50°C
IP rating	IP20

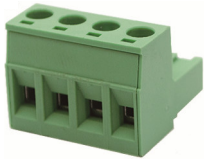
Mechanical Structure & Dimensions

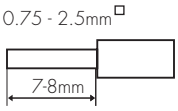




1. Ceiling (drill hole Ø 66~68mm)
2. Carefully prise off the cable clamps.
3. Make connections to the pluggable terminal blocks.
4. Insert plug connectors and secure using the provided cable clamps, then clip terminal covers to the base.
5. Fit detection blind (if required) and desired lens.
6. Clip fascia to body.
7. Bend back springs and insert into ceiling.

Wire Preparation





Pluggable screw terminal. It is recommended to make connections to the terminal before fitting to the sensor.

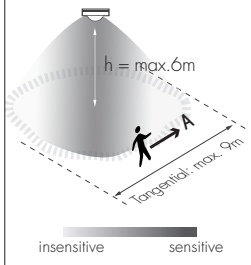
Detection Pattern & Optional Accessories

1. HBIR30/CA (Low-bay)

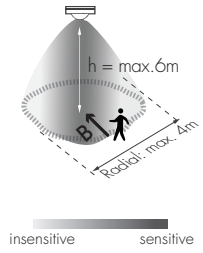
HBIR30/CA: Low-bay flat lens detection pattern for **single person** @ Ta = 20°C

(Recommended ceiling mount installation height **2.5m-6m**)

A: Tangential movement

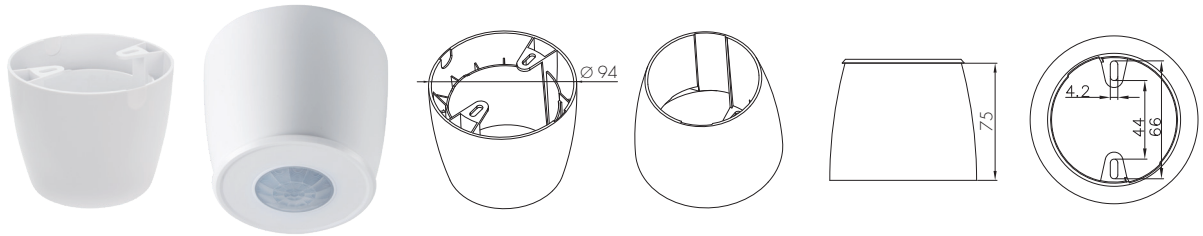


B: Radial movement

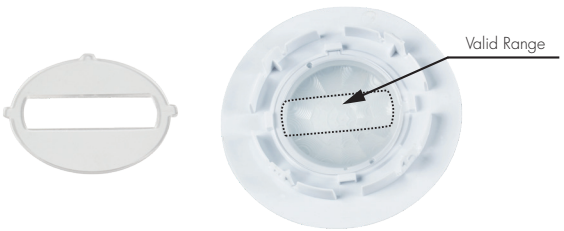


Mount height	Tangential (A)	Radial (B)
2.5m	max 50m² (Ø = 8m)	max 13m² (Ø = 4m)
3m	max 64m² (Ø = 9m)	max 13m² (Ø = 4m)
4m	max 38m² (Ø = 7m)	max 13m² (Ø = 4m)
5m	max 38m² (Ø = 7m)	max 13m² (Ø = 4m)
6m	max 38m² (Ø = 7m)	max 13m² (Ø = 4m)

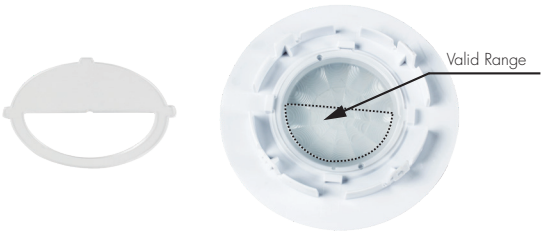
Optional Accessory --- Ceiling/Surface Mount Box: HA03



Optional Accessory --- Blind Insert for Blocking Certain Detection Angles



Blind Option 1 --- Aisle Detection



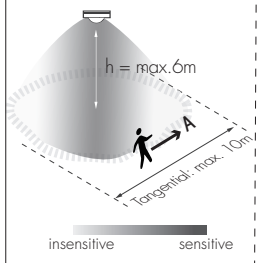
Blind Option 2 --- 180° Detection

2. HBIR30/CA/R (Reinforced Low-bay)

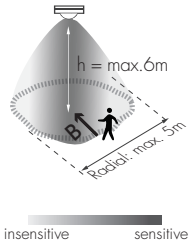
HBIR30/CA/R: Low-bay convex lens detection pattern for **single person** @ Ta = 20°C

(Recommended ceiling mount installation height **2.5m-6m**)

A: Tangential movement

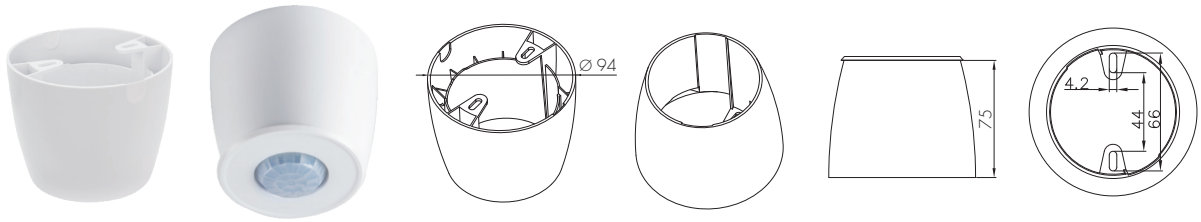


B: Radial movement

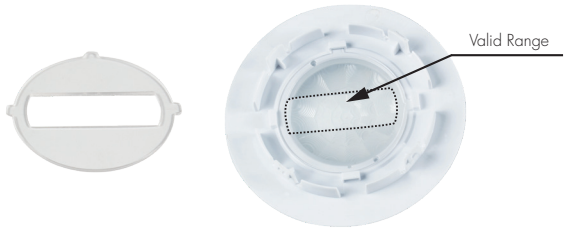


Mount height	Tangential (A)	Radial (B)
2.5m	max 79m² (Ø = 10m)	max 20m² (Ø = 5m)
3m	max 79m² (Ø = 10m)	max 20m² (Ø = 5m)
4m	max 64m² (Ø = 9m)	max 20m² (Ø = 5m)
5m	max 50m² (Ø = 8m)	max 20m² (Ø = 5m)
6m	max 50m² (Ø = 8m)	max 20m² (Ø = 5m)

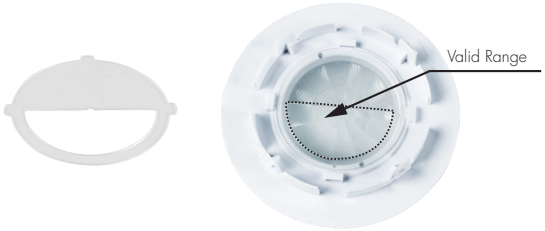
Optional Accessory --- Ceiling/Surface Mount Box: HA03



Optional Accessory --- Blind Insert for Blocking Certain Detection Angles



Blind Option 1 --- Aisle Detection



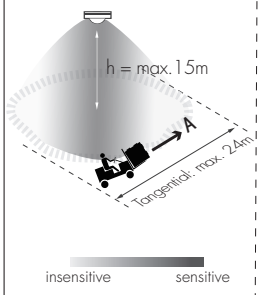
Blind Option 2 --- 180° Detection

3. HBIR30/CA/H (High-bay)

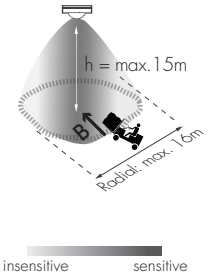
HBIR30/CA/H: High-bay lens detection pattern for **forklift** @ Ta = 20°C

(Recommended ceiling mount installation height **10m-15m**)

A: Tangential movement



B: Radial movement

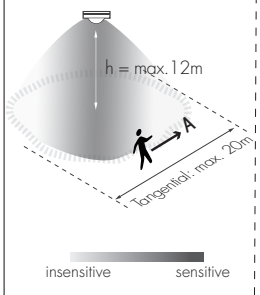


Mount height	Tangential (A)	Radial (B)
10m	max 380m² (Ø = 22m)	max 201m² (Ø = 16m)
11m	max 452m² (Ø = 24m)	max 201m² (Ø = 16m)
12m	max 452m² (Ø = 24m)	max 201m² (Ø = 16m)
13m	max 452m² (Ø = 24m)	max 177m² (Ø = 15m)
14m	max 452m² (Ø = 24m)	max 133m² (Ø = 13m)
15m	max 452m² (Ø = 24m)	max 113m² (Ø = 12m)

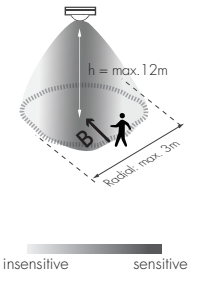
HBIR30/CA/H: High-bay lens detection pattern for **single person** @ Ta = 20°C

(Recommended ceiling mount installation height **2.5m-12m**)

A: Tangential movement

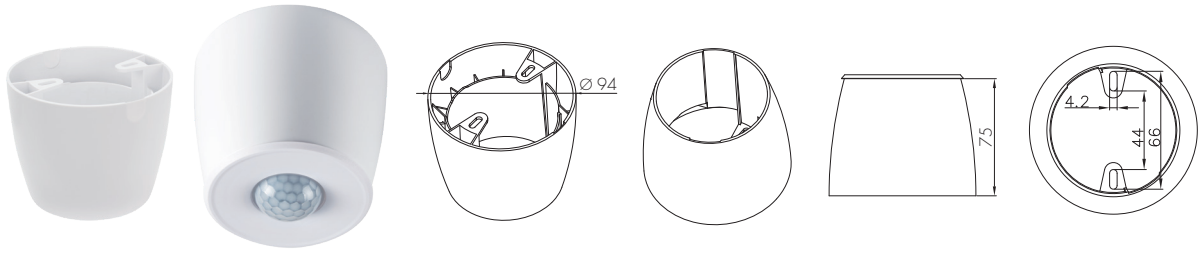


B: Radial movement

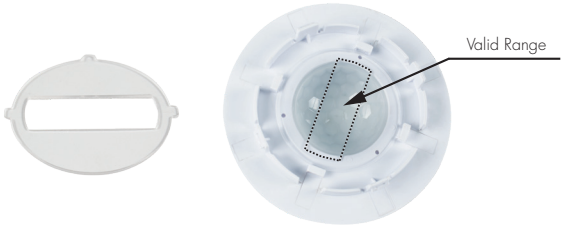


Mount height	Tangential (A)	Radial (B)
2.5m	max 50m² (Ø = 8m)	max 7m² (Ø = 3m)
6m	max 104m² (Ø = 11.5m)	max 7m² (Ø = 3m)
8m	max 154m² (Ø = 14m)	max 7m² (Ø = 3m)
10m	max 227m² (Ø = 17m)	max 7m² (Ø = 3m)
11m	max 269m² (Ø = 18.5m)	max 7m² (Ø = 3m)
12m	max 314m² (Ø = 20m)	max 7m² (Ø = 3m)

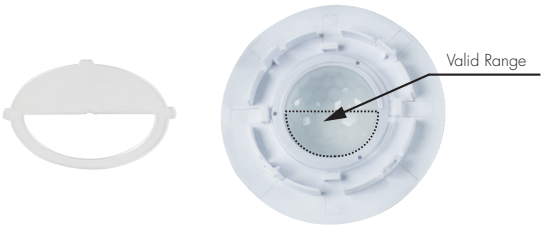
Optional Accessory --- Ceiling/Surface Mount Box: HA03



Optional Accessory --- Blind Insert for Blocking Certain Detection Angles



Blind Option 1 --- Aisle Detection



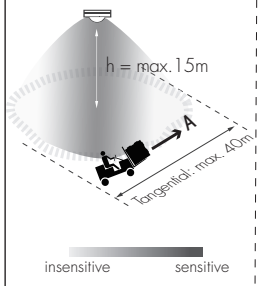
Blind Option 2 --- 180° Detection

4. HBIR30/CA/RH (Reinforced High-bay with 3-Pyro)

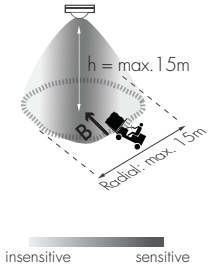
HBIR30/CA/RH: Reinforced high-bay lens detection pattern for **forklift** @ Ta = 20°C

(Recommended ceiling mount installation height **10m-15m**)

A: Tangential movement



B: Radial movement

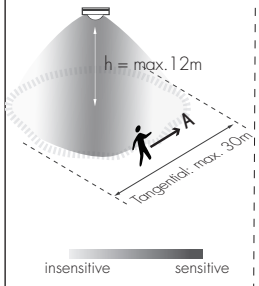


Mount height	Tangential (A)	Radial (B)
10m	max 346m² (Ø = 21m)	max 177m² (Ø = 15m)
11m	max 660m² (Ø = 29m)	max 177m² (Ø = 15m)
12m	max 907m² (Ø = 34m)	max 154m² (Ø = 14m)
13m	max 962m² (Ø = 35m)	max 154m² (Ø = 14m)
14m	max 1075m² (Ø = 37m)	max 113m² (Ø = 12m)
15m	max 1256m² (Ø = 40m)	max 113m² (Ø = 12m)

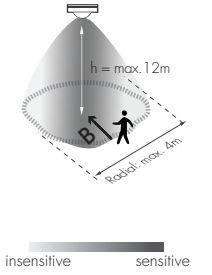
HBIR30/CA/RH: Reinforced high-bay lens detection pattern for **single person** @ Ta = 20°C

(Recommended ceiling mount installation height **2.5m-12m**)

A: Tangential movement

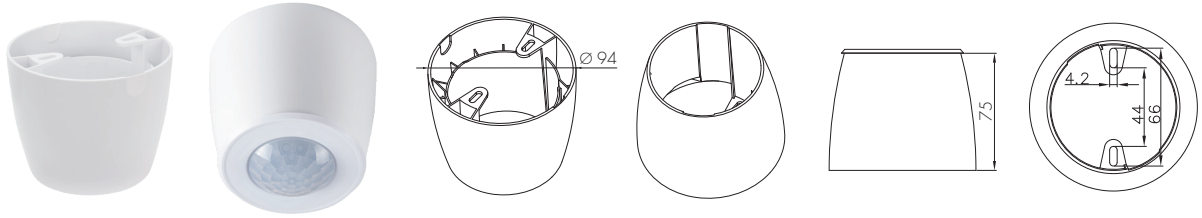


B: Radial movement

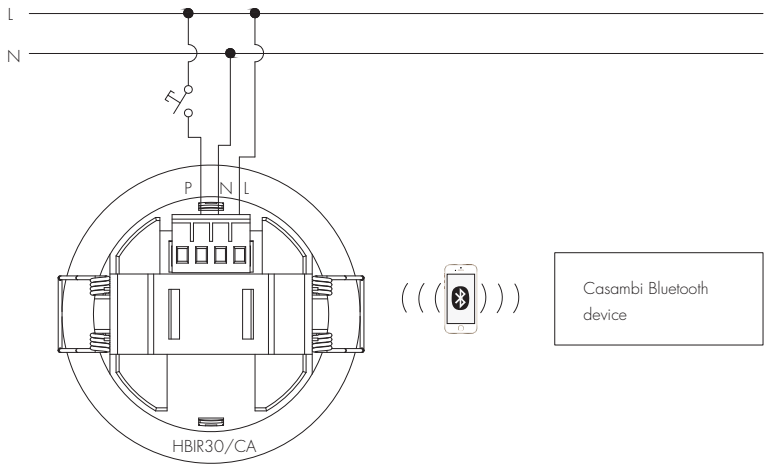


Mount height	Tangential (A)	Radial (B)
2.5m	max 38m² (Ø = 7m)	max 7m² (Ø = 3m)
6m	max 154m² (Ø = 14m)	max 7m² (Ø = 3m)
8m	max 314m² (Ø = 20m)	max 7m² (Ø = 3m)
10m	max 531m² (Ø = 26m)	max 13m² (Ø = 4m)
11m	max 615m² (Ø = 28m)	max 13m² (Ø = 4m)
12m	max 707m² (Ø = 30m)	max 13m² (Ø = 4m)

Optional Accessory --- Ceiling/Surface Mount Box: HA03



Wiring Diagram



Additional Information / Documents

1. To learn more about detailed product features/functions, please refer to
   www.hytronik.com/download ->knowledge ->Introduction of App Scenes and Product Functions

2. Regarding precautions for PIR Sensors installation and operation, please kindly refer to
   www.hytronik.com/download ->knowledge ->PIR Sensors - Precautions for Product Installation and Operation

3. Data sheet is subject to change without notice. Please always refer to the most recent release on
   www.hytronik.com/products/bluetooth technology ->Partnership

4. Regarding Hytronik standard guarantee policy, please refer to
   www.hytronik.com/download ->knowledge ->Hytronik Standard Guarantee Policy