HYTRONIK HBIR29/SV PIR Standalone Motion Sensor with Bluetooth Mesh Instruction Manual

HYTRONIK®

Installation and Instruction Manual
PIR Standalone Motion Sensor with Bluetooth Mesh
One DALI Channel Output

HBIR29/SV HBIR29/SV/R
HBIR29/SV/H HBIR29/SV/RH

Contents

Technical Specifications

Operation frequency	2.4 GHz – 2.483 GHz
Transmission power	4 dBm
Range (Typical indoor)	10~30m
Protocol	Bluetooth Mesh
Operating voltage	220~240VAC 50/60Hz
Stand-by power	<0.65W (Empty load)
Switched power	Max. 40 devices, 80mA
Warming-up	5s
Sensor principle	PIR detection
Detection range (Max.)* HBIR29/SV	Installation Height : 6m Detection Range (Ø) :9m
Detection range (Max.)* HBIR29/SV/R	Installation Height : 6m Detection Range (Ø) :10m
Detection range (Max.)* HBIR29/SV/H	Installation height 15m (forklift) 12m (person) Detection range (Ø) 24m
Detection range (Max.)* HBIR29/SV/RH	Installation height 20m (forklift) 12m (person) Detection range (Ø) 40m
Detection angle	360O
Operation temperature	Ta:-20OC~+50OC
IP rating	IP20
Standard compliance	EN300328, EN301489-1, EN301489-17, EN62479, EN55015, EN 61547, EN60669-1, EN60669-2-1, EN62493
Certification	CB, CE , EMC, RED, RCM

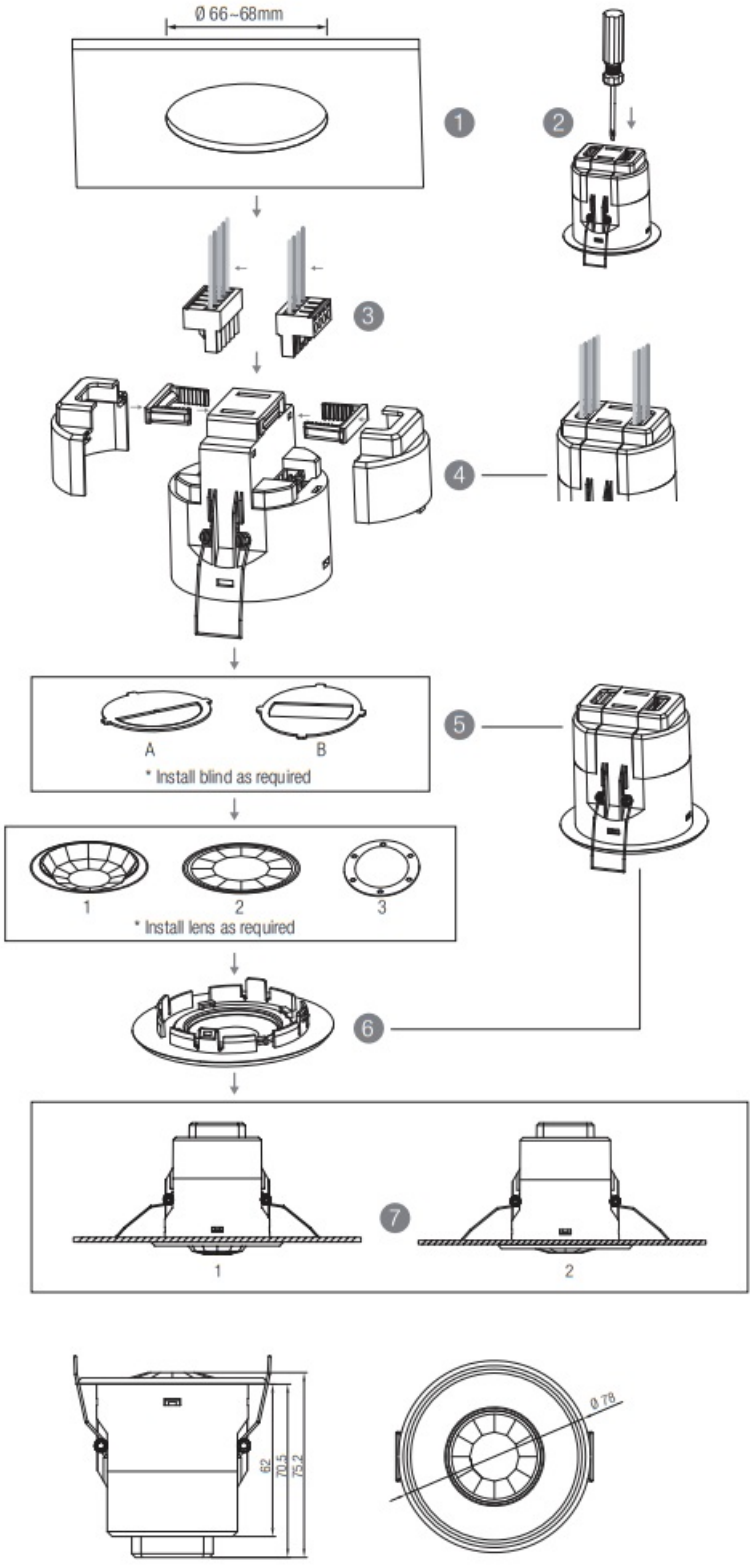
Download the App

Download on the APP Store

The access to Silvair apps mobile app: Silvair on the App Store web app: **platform.silvair.com**

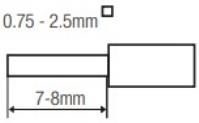
Installation

Mechanical Structure & Dimensions



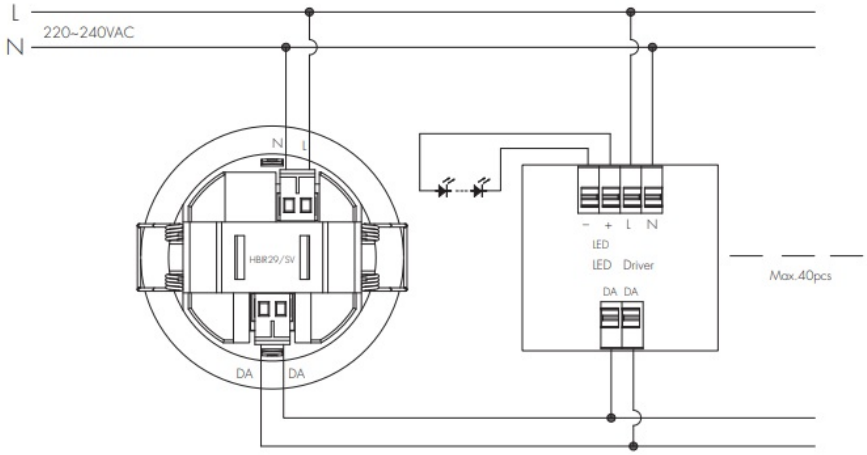
1. Ceiling (drill hole φ66~68mm)
2. Carefully prise off the cable clamps.
3. Make connections to the pluggable terminal blocks.
4. Insert plug connectors and secure using the provided cable clamps, then clip terminal covers to the base.
5. Fit detection blind (if required) and desired lens.
6. Clip fascia 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.

Wiring Diagram



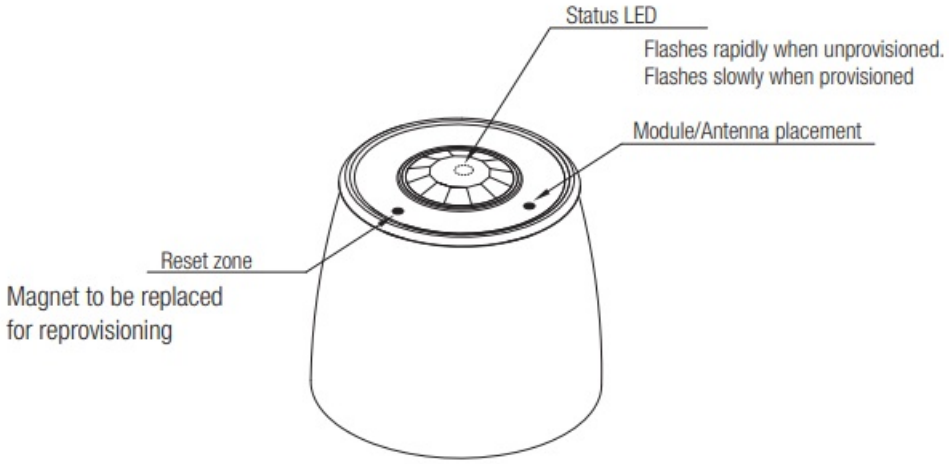
Mesh Factory Reset

The device HBIR29/SV can be reset by placing a strong magnet (e.g. N38 neodymium magnet, d=10mm*h=4mm) near the sensor lens for 5 seconds. Once the factory reset is done successfully, the luminaire flashes and then permanent on, then the device is being able to be re-commissioned by SILVAIR app.

To Reprovision

Place a strong magnet on the site of the Reset/Hall effect sensor (see diagram 4 below). To trigger the reset the magnet must be held in position for 5 seconds.

Diagram

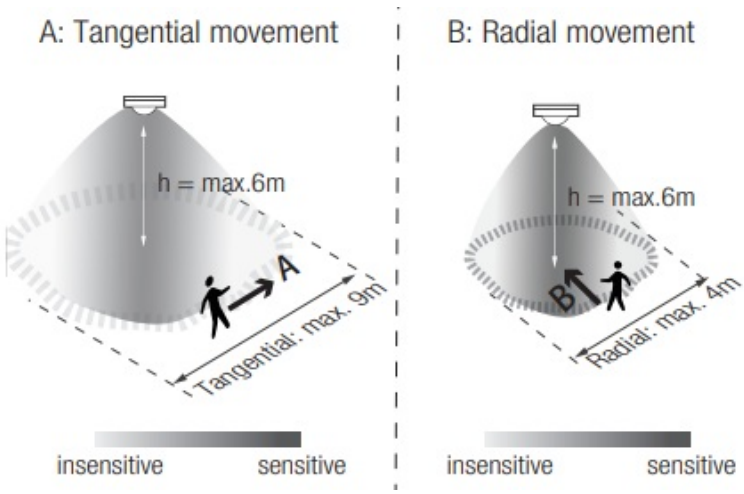


Note: When change the lens part of HBIR29/SV, please kindly make sure that the lens fits the right location, where the “Reset dot” and “BLE dot”matches with the physical location on the PCB.

Status LED blinking Sequence		
HBIR29/SV Unprovisioned	30ms ON	300ms OFF
HBIR29/SV Provisioned	15ms ON	2,000ms OFF
Factory reset	500ms ON	1,000ms OFF
Factory reset (initial burst)	100ms ON	1,000ms OFF
MESH package received	30ms ON	50ms OFF
Attention (from network)	500ms ON	500ms OFF

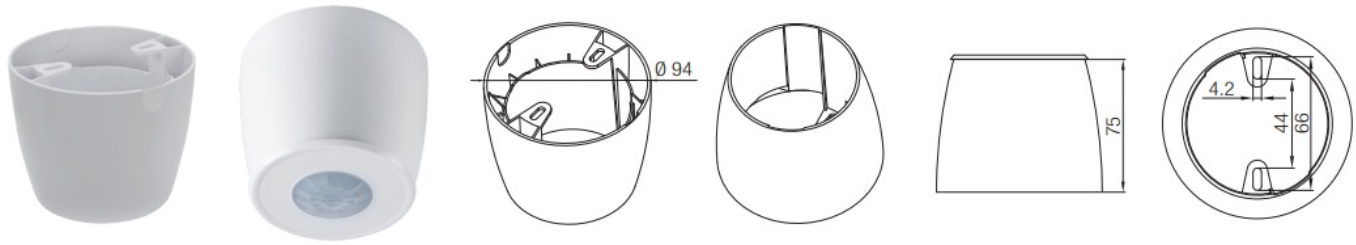
Detection Pattern & Optional Accessories

HBIR29/SV (Low-bay)
HBIR29/SV: Low-bay flat lens detection pattern for single person @ Ta = 20ºC (Recommended ceiling mount installation height 2.5m-6m)

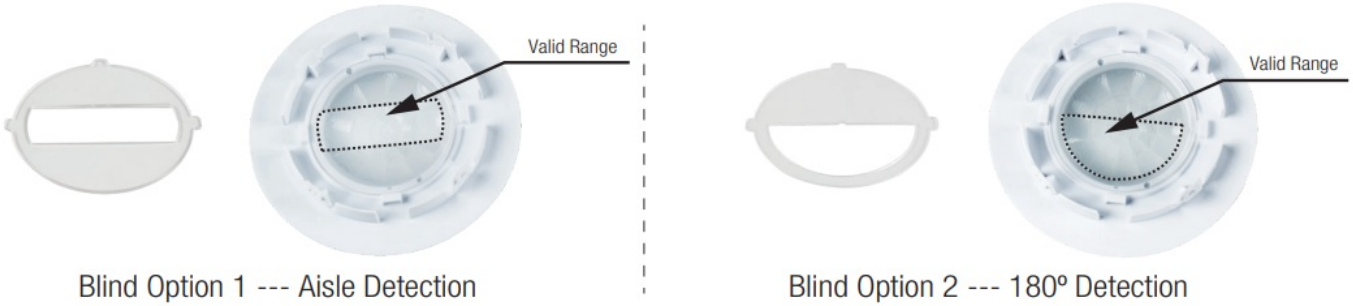


Mount height	Tangential (A)	Radial (B)
2.5m	max 50m2 (∅= 8m)	max 13m2 (∅= 4m)
3m	max 64m2 (∅= 9m)	max 13m2 (∅= 4m)
4m	max 38m2 (∅= 7m)	max 13m2 (∅= 4m)
5m	max 38m2 (∅= 7m)	max 13m2 (∅= 4m)
6m	max 38m2 (∅= 7m)	max 13m2 (∅= 4m)

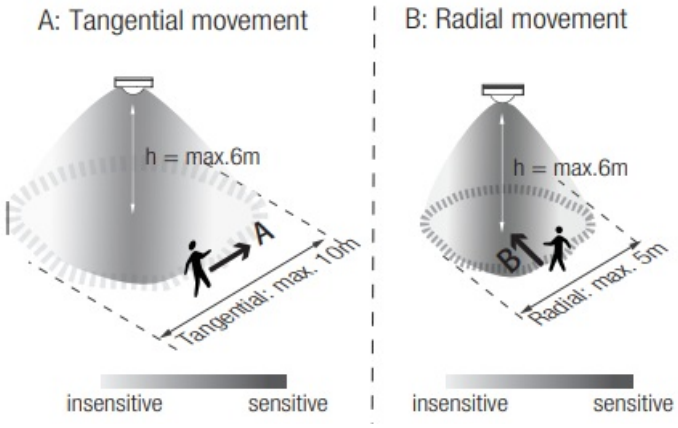
Optional Accessory — Ceiling/Surface Mount Box: HA03



Optional Accessory — Blind Insert for Blocking Certain Detection Angles

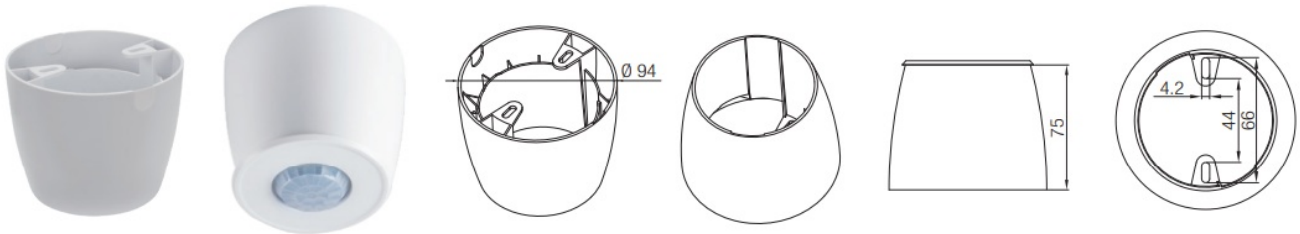


HBIR29/SV/R (Reinforced Low-bay)
HBIR29/SV/R: Low-bay convex lens detection pattern for single person @ Ta = 20ºC (Recommended ceiling mount installation height 2.5m-6m)

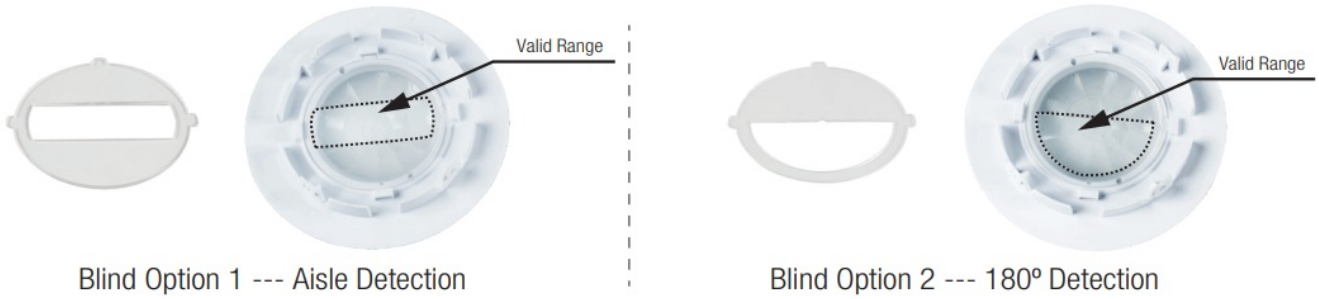


Mount height	Tangential (A)	Radial (B)
2.5m	max 79m2 (∅ = 10rn)	max 20m2 (∅ = 5m)
3m	max 79m2 (∅ = 10rn)	max 20m2 (∅ = 5m)
4m	max 64m2 (∅ = 9m)	max 20m2 (∅ = 5m)
5m	max 50m2 (∅ = 8m)	max 20m2 (∅ = 5m)
6m	max 50m2 (∅ = 8m)	max 20m2 (∅ = 5m)

Optional Accessory — Ceiling/Surface Mount Box: HA03

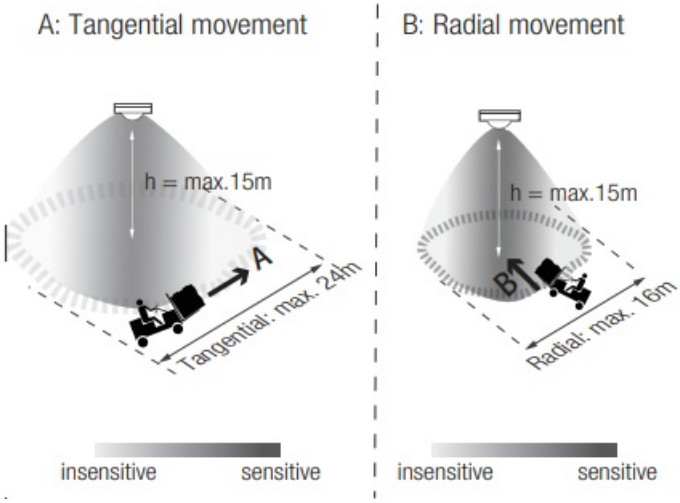


Optional Accessory — Blind Insert for Blocking Certain Detection Angles



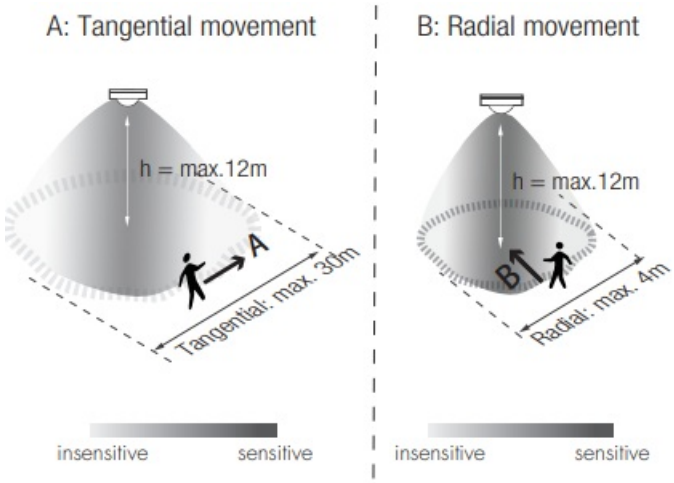
HBIR29/SV/H (High-bay)

HBIR29/SV/H: High-bay lens detection pattern for **forklift** @ Ta = 20ºC (Recommended ceiling mount installation height **10m-15m**)



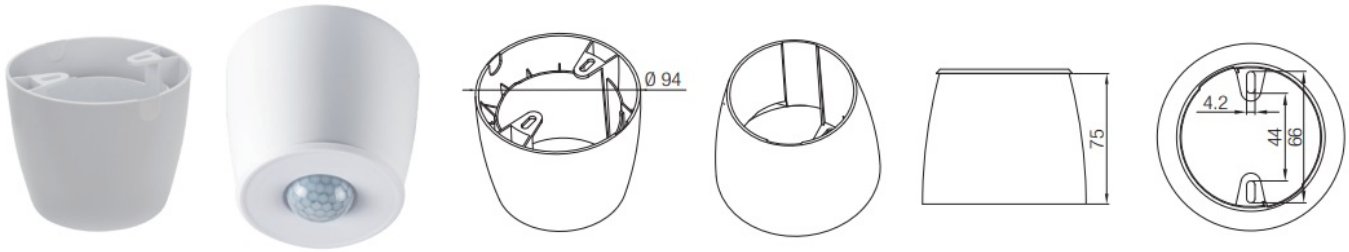
Mount height	Tangential (A)	Radial (B)
10m	max 380m2 (Ø = 22m)	max 201m2 (Ø = 16m)
11m	max 452m2 (Ø = 24m)	max 201m2 (Ø = 16m)
12m	max 452m2 (Ø = 24m)	max 201m2 (Ø = 16m)
13m	max 452m2 (Ø = 24m)	max 177m2 (Ø = 15m)
14m	max 452m2 (Ø = 24m)	max 133m2 (Ø = 13m)
15m	max 452m2 (Ø = 24m)	max 113m2 (Ø = 12m)

HBIR29/SV/H: High-bay lens detection pattern for **single person** @ Ta = 20ºC (Recommended ceiling mount installation height **2.5m-12m**)

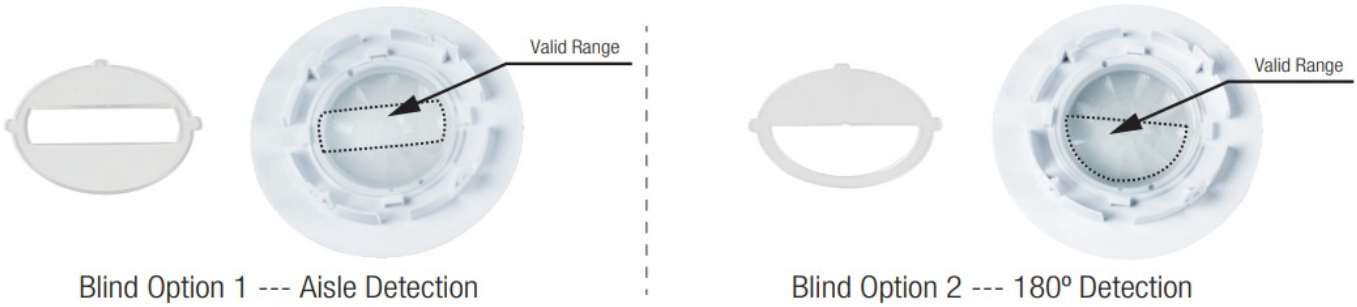


Mount height	Tangential (A)	Radial (B)
2.5m	max 50m2 (Ø = 8m)	max 7m2 (Ø = 3m)
6m	max 104m2 (Ø = 11.5m)	max 7m2 (Ø = 3m)
8m	max 154m2 (Ø = 14m)	max 7m2 (Ø = 3m)
10m	max 227m2 (Ø = 17m)	max 7m2 (Ø = 3m)
11m	max 269m2 (Ø = 18.5m)	max 7m² (Ø = 3m)
12m	max 314m2 (Ø = 20m)	max 7m² (Ø = 3m)

Optional Accessory — Ceiling/Surface Mount Box: HA03

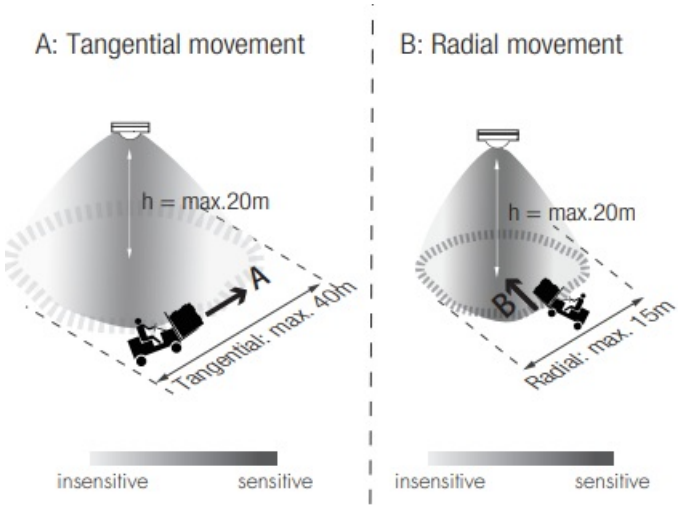


Optional Accessory — Blind Insert for Blocking Certain Detection Angles



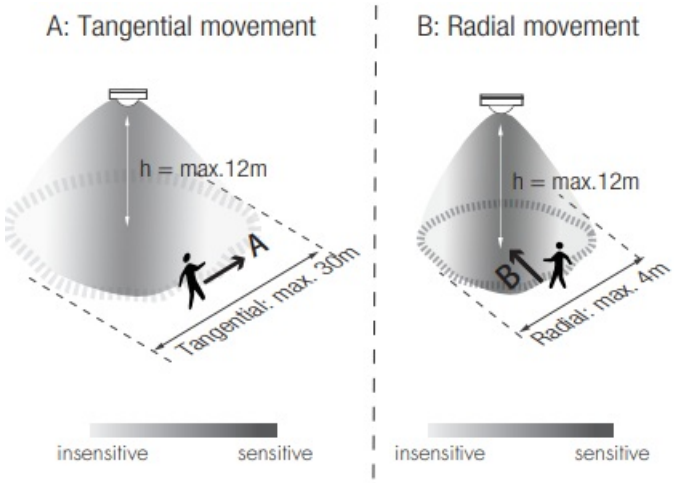
HBIR29/SV/RH (Reinforced High-bay with 3-Pyro)

HBIR29/SV/RH: Reinforced high-bay lens detection pattern for **forklift** @ Ta = 20ºC (Recommended ceiling mount installation height **10m-15m)**



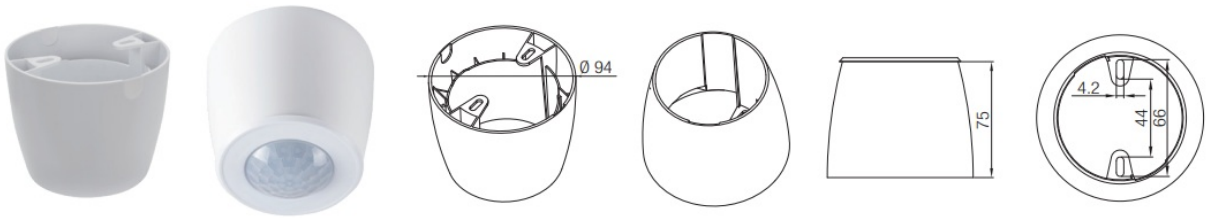
Mount height	Tangential (A)	Radial (B)
10m	max 346m2 (Ø = 21m)	max 177m2 (Ø = 15m)
11m	max 660m2 (Ø = 29m)	max 177m2 (Ø = 15m)
12m	max 907m2 (Ø = 34m)	max 154m2 (Ø = 14m)
13m	max 962m2 (Ø = 35m)	max 154m2 (Ø = 14m)
14m	max 1075m2 (Ø = 37m)	max 113m2 (Ø = 12m)
15m	max 1256m2 (Ø = 40m)	max 113m2 (Ø = 12m)
20m	max 707m2 (Ø = 30m)	max 113m2 (Ø = 12m)

HBIR29/SV/RH: Reinforced high-bay lens detection pattern for **single person** @ Ta = 20OC (Recommended ceiling mount installation height **2.5m-12m**)



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



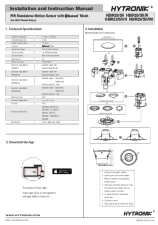
Additional Information / Documents

1. 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
2. Data sheet is subject to change without notice. Please always refer to the most recent release on **www.hytronik.com/products/bluetooth** technology ->Partnership
3. Regarding Hytronik standard guarantee policy, please refer to **www.hytronik.com/download** ->knowledge ->Hytronik Standard Guarantee Policy

HYTRONIK®

WWW.HYTRONIK.COM
Subject to change without notice.
HBIR29/SV-20201012-A0

Documents / Resources

	HYTRONIK HBIR29/SV PIR Standalone Motion Sensor with Bluetooth Mesh [pdf] Instruction Manual HBIR29 SV, HBIR29 SV R, HBIR29 SV H, HBIR29 SV RH, Standalone Motion Sensor with Bluetooth Mesh, HBIR29 SV PIR Standalone Motion Sensor with Bluetooth Mesh, HBIR29 SV PIR Standalone Motion Sensor, PIR Standalone Motion Sensor, Standalone Motion Sensor, Motion Sensor, Sensor

References

- Silvair Commissioning
- Catalogue_Hytronik