HYTRONIK PIR Standalone Motion Sensor with Mesh Instruction Manual

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
Stand-by power	<0.65W (Empty load)
Operating voltage	220~240VAC 50/60Hz
Switched power	5s
Warming-up	Max. 40 devices, 80mA
Sensor principle	PIR detection
Detection range (Max.)* HBIR29/SV	Installation Height: 5m 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 15m (forklift) 2m (person) Detection range (Ø) 40m
Detection angle	360º
Operation temperature	Ta:-20º C~+50º C
IP rating	IP20
Standard compliance	EN300328, EN301489-1, EN301489-17, EN62479, EN55015, EN61547, EN60669-1, EN60669-2-1, EN62493
Certification	CB, CE , EMC, RED, RCM

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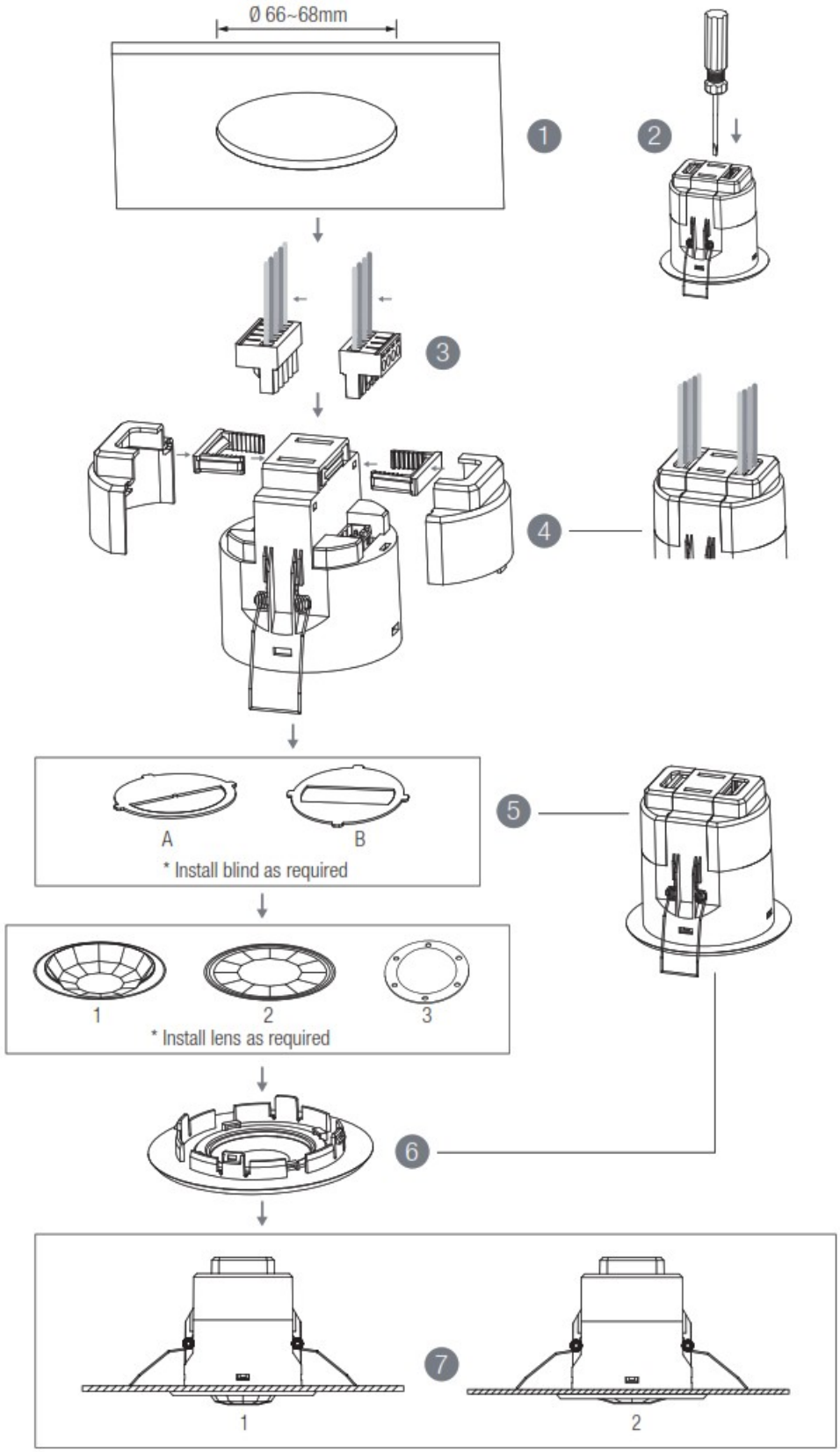
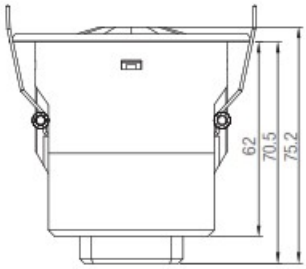
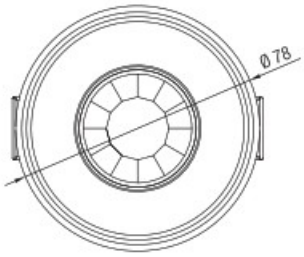
web app: **platform.silvair.com**

Installation

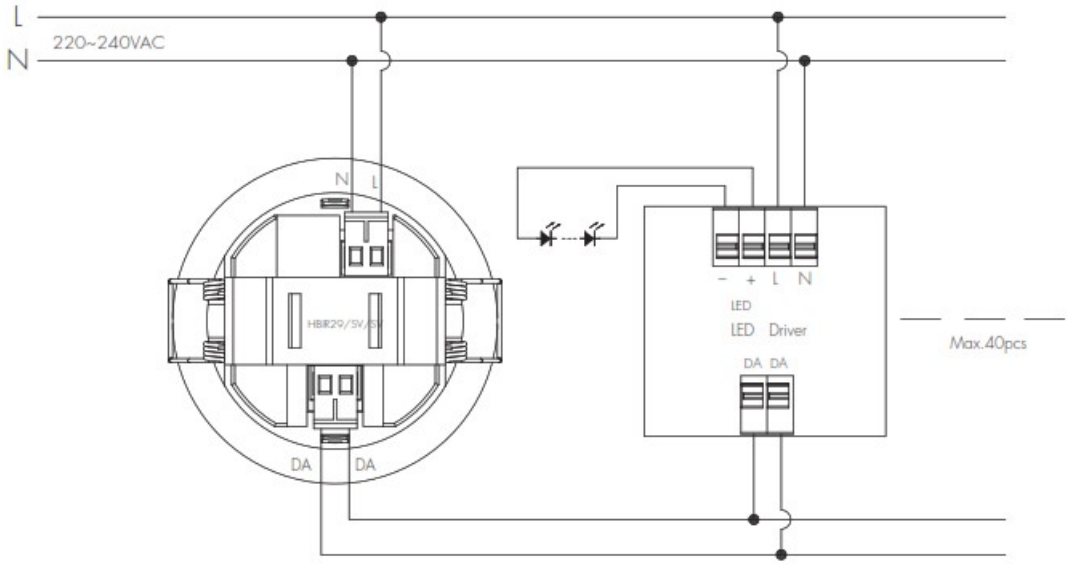
Mechanical Structure & Dimensions



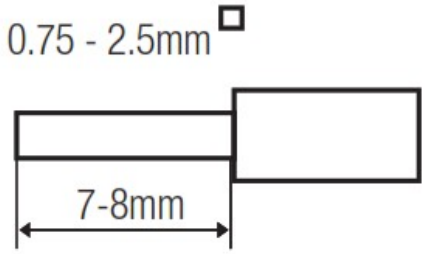




Wiring Diagram



Wire Preparation



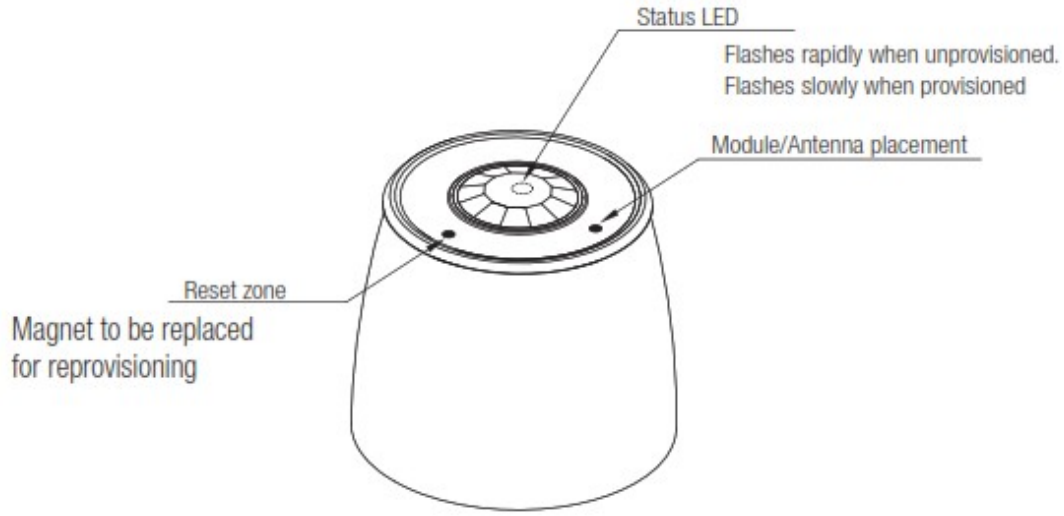
Pluggable screw terminal. It is recommended to make connections to the terminal before fitting to the sensor.

Mesh Factory Reset

The device HBIR29/SV/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.



Note: When change the lens part of HBIR29/SV/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.

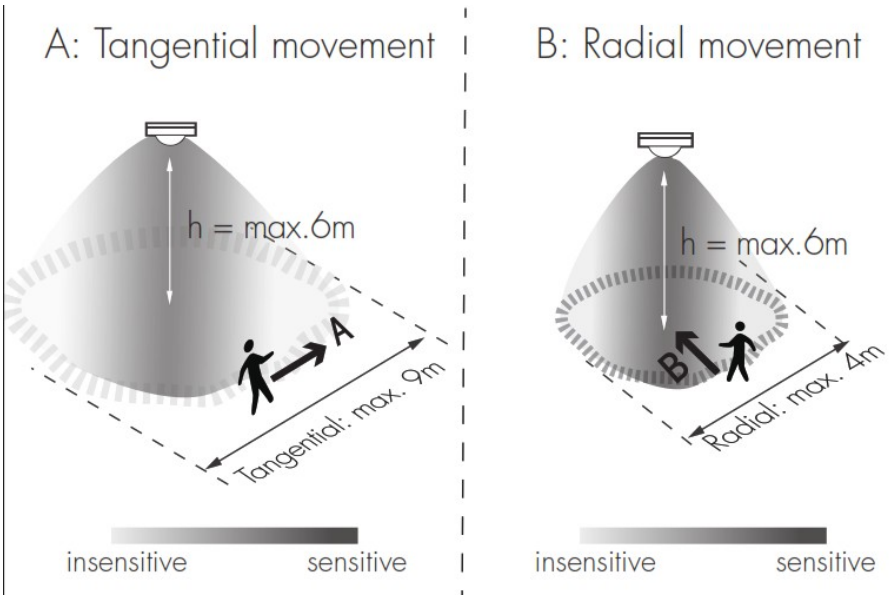
Status LED blinking Sequence

HBIR29/SV/SV Unprovisioned	30ms ON	300ms OFF
HBIR29/SV/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

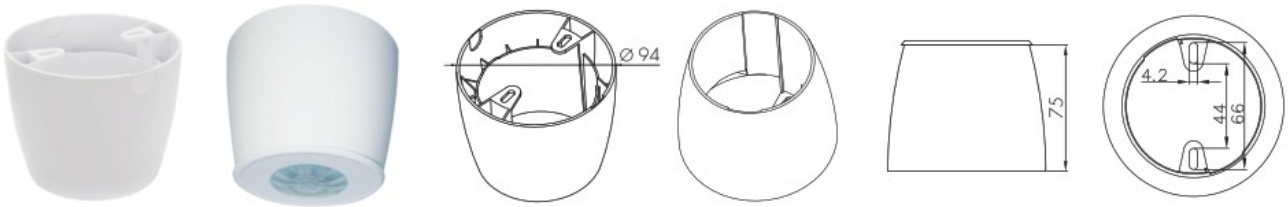
1. HBIR29/SV (Low-bay)

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

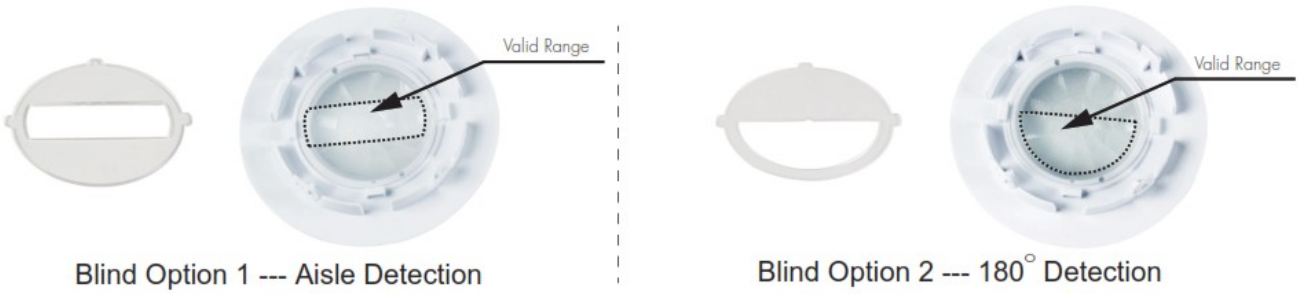


Mount height	Tangential (A)	Radial (B)
2.5m	max 50m² (Ø = 8m)	max 13m² (Ø = 4
3m	max 64m² (Ø = 9m)	max 13m² (Ø = 4
4m	max 38m² (Ø = 7m)	max 13m² (Ø = 4
5m	max 38m² (Ø = 7m)	max 13m² (Ø = 4
6m	max 38m² (Ø = 7m)	max 13m² (Ø = 4

Optional Accessory — Ceiling/Surface Mount Box: HA03

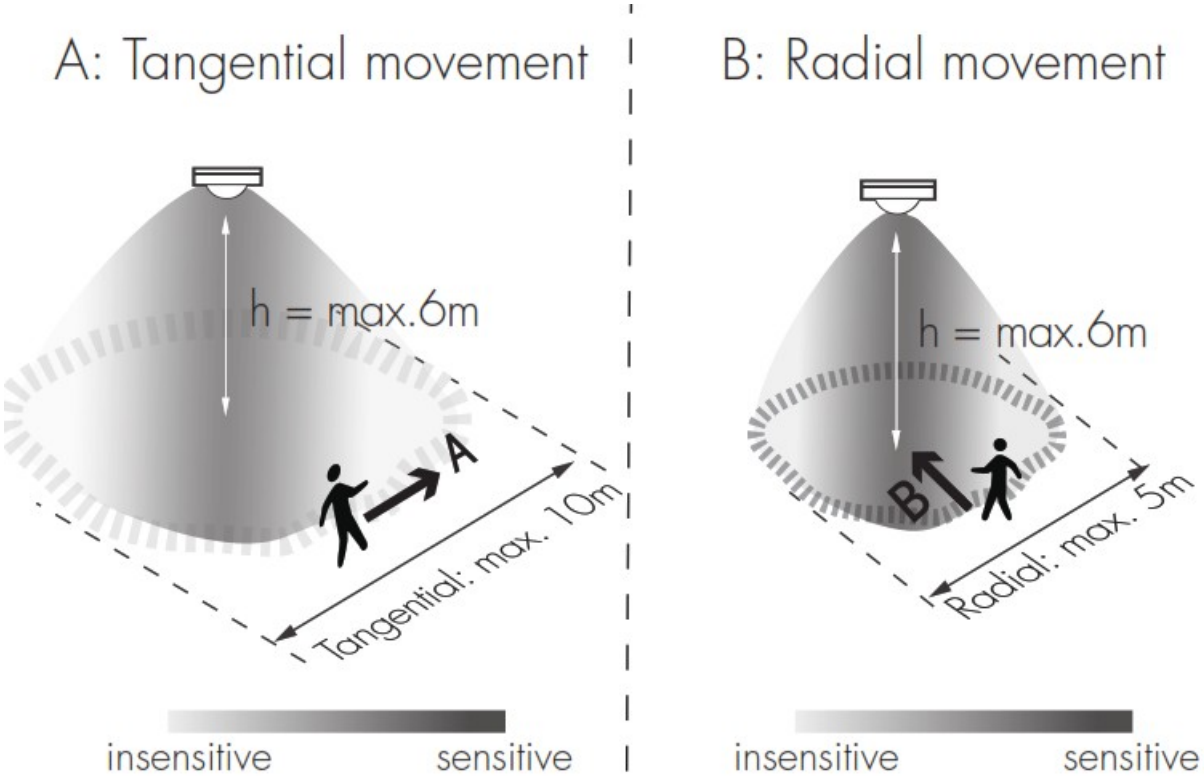


Optional Accessory — Blind Insert for Blocking Certain Detection Angles



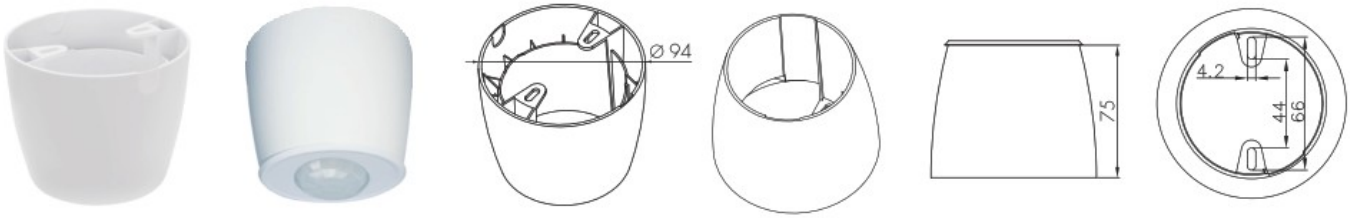
2. HBIR29/SV/R (Reinforced Low-bay)

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 (Ø = 10m)	max 20m² (Ø = 5
3m	max 79m² (Ø = 10m)	max 20m² (Ø = 5
4m	max 64m² (Ø = 9m)	max 20m² (Ø = 5
5m	max 50m² (Ø = 8m)	max 20m² (Ø = 5
6m	max 50m² (Ø = 8m)	max 20m ² (Ø = 5

Optional Accessory — Ceiling/Surface Mount Box: HA03



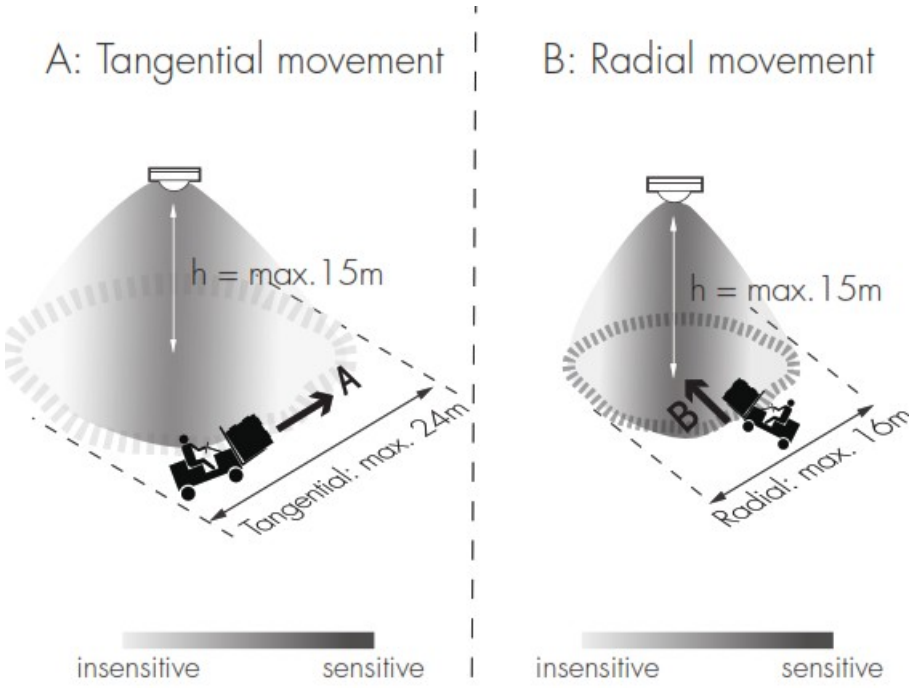
Optional Accessory — Blind Insert for Blocking Certain Detection Angles

Blind Option 1 --- Aisle Detection

Blind Option 2 --- 180° Detection

3. HBIR29/SV/H (High-bay)

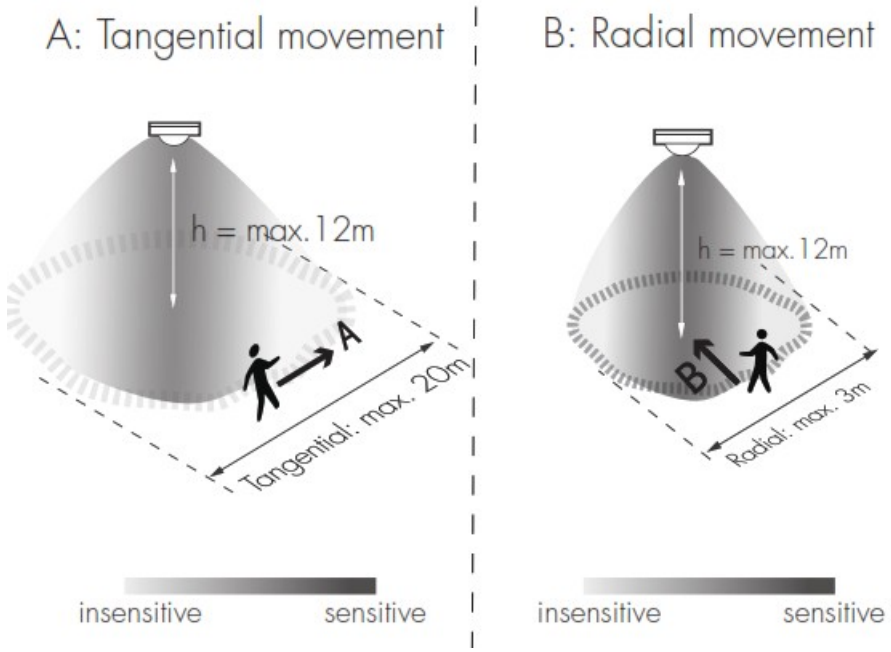
HBIR29/SV/H: High-bay lens detection pattern for forklift @ Ta = 20º C(Recommended ceiling mount installation height 10m-15m)



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

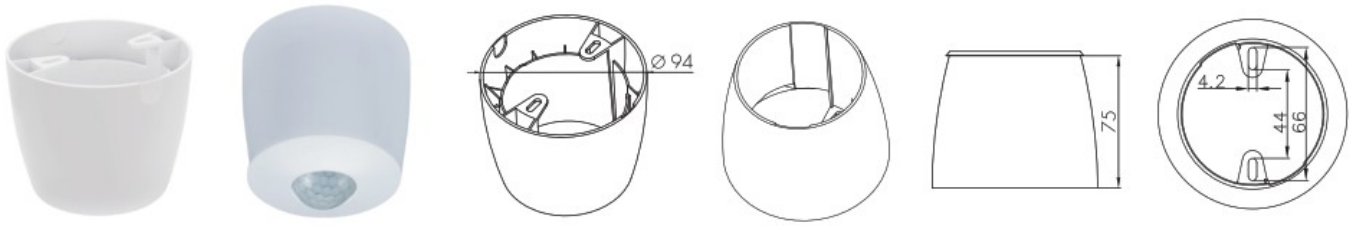
HBIR29/SV/H: High-bay lens detection pattern for single person @ Ta = 20º C

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

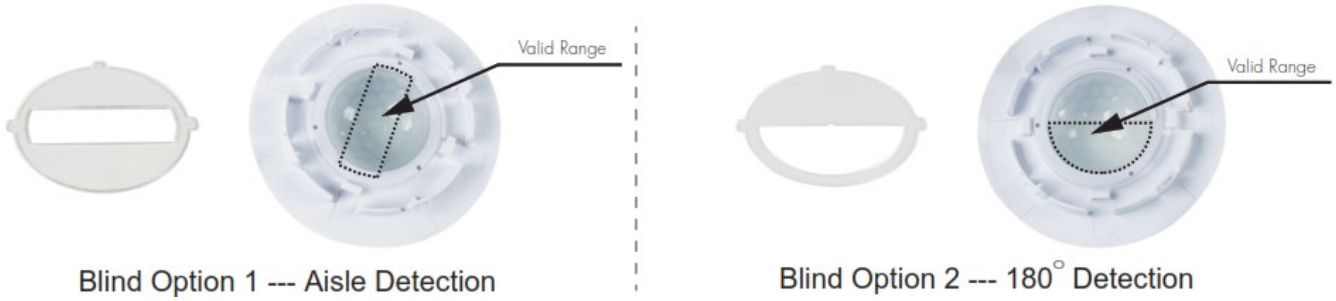


Mount height	Tangential (A)	Radial (B)
2.5m	max 50m² (Ø = 8m)	max 7m² (Ø = 3n
6m	max 104m² (Ø = 11.5m)	max 7m² (Ø = 3n
8m	max 154m² (Ø = 14m)	max 7m² (Ø = 3n
10m	max 227m² (Ø = 17m)	max 7m² (Ø = 3n
11m	max 269m² (Ø = 18.5m)	max 7m² (Ø = 3n
12m	max 314m² (Ø = 20m)	max 7m² (Ø = 3n

Optional Accessory — Ceiling/Surface Mount Box: HA03



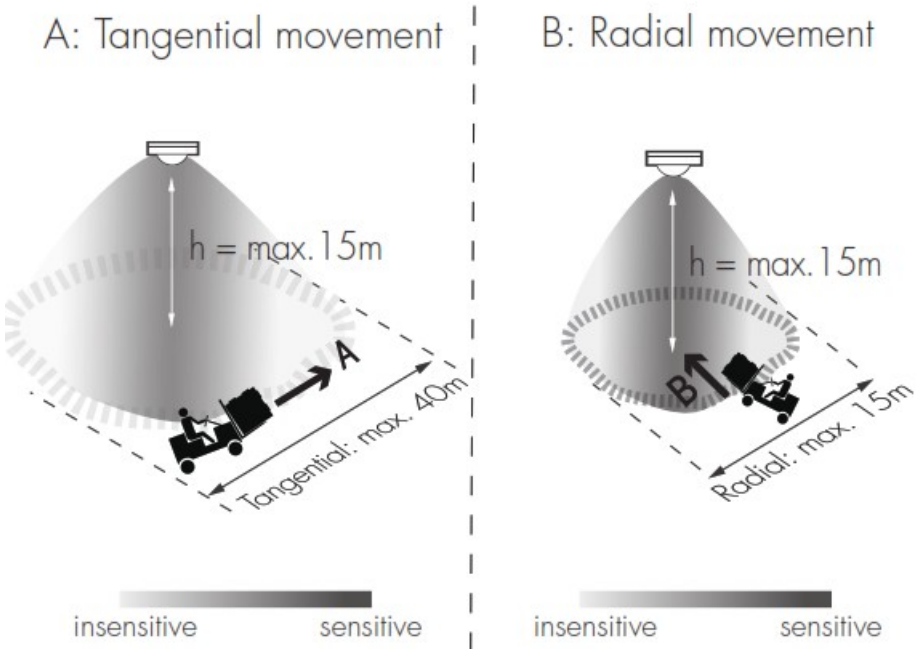
Optional Accessory — Blind Insert for Blocking Certain Detection Angles



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

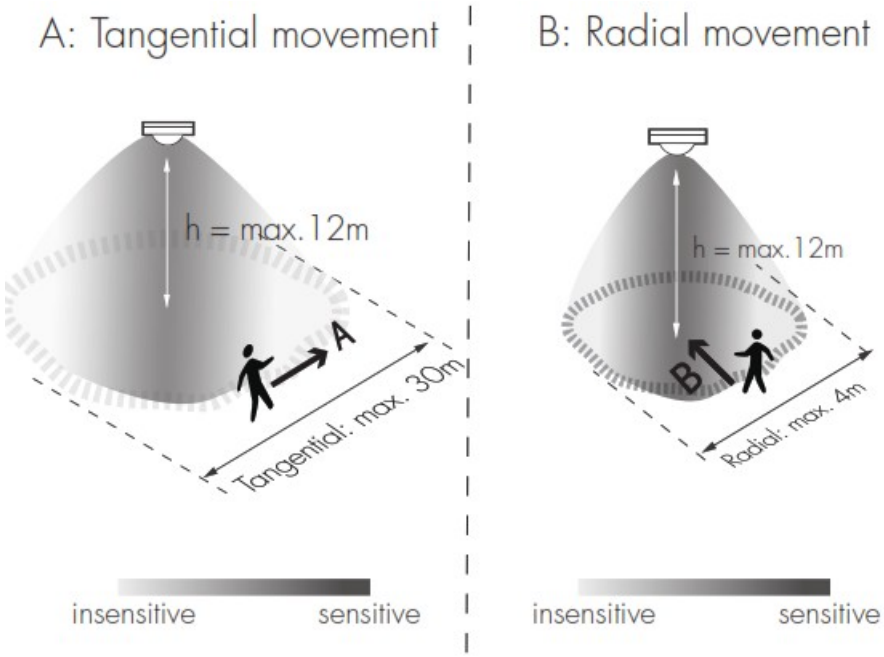
HBIR29/SV/RH: Reinforced high-bay lens detection pattern for forklift @ Ta = 20º C (Recommended ceiling

mount installation height 10m-15m)



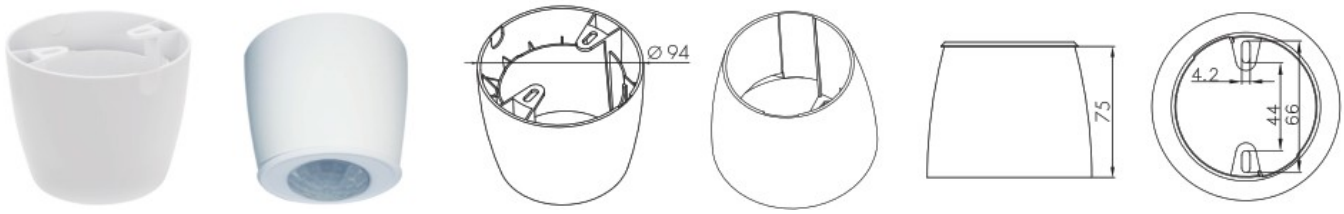
Mount height	Tangential (A)	Radial (B)
10m	max 346m² (Ø = 21m)	max 177m² (Ø = 15m)
11m	max 660m² (Ø = 29m)	max 177m² (Ø = 15m)
12m	max 907m² (Ø = 34m)	max 154m² (Ø = 14m)
13m	max 962m² (Ø = 35m)	max 154m² (Ø = 14m)
14m	max 1075m² (Ø = 37m)	max 113m² (Ø = 12m)
15m	max 1256m² (Ø = 40m)	max 113m² (Ø = 12m)

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. Datasheet 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

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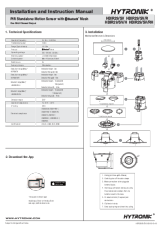
Documents / Resources

	HYTRONIK PIR Standalone Motion Sensor with Mesh [pdf] Instruction Manual HBIR29, HBIR29SV, HBIR29, HBIR29SV, HBIR29R, HBIR29, HBIR29SV, HBIR29H, HBIR29, HBIR29SV, HBIR29RH, PIR Standalone Motion Sensor with Mesh, PIR Standalone Motion Sensor, Mesh Motion Sensor, Motion Sensor, PIR Motion Sensor, Standalone Motion Sensor, Sensor

References

- Silvair Commissioning
- Catalogue_Hytronik