HYTRONIK HBIR29SV-RH PIR Standalone Motion Sensor with Mesh Instruction Manual

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HYTRONIK HBIR29SV-RH PIR Standalone Motion Sensor with Mesh

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- IP rating
- Standard compliance
- Certification: HBIR29/SV/RH-20230831-A0

Product Usage Instructions

Installation

1. Ensure the power source meets the specified operating voltage of 220~240VAC 50/60Hz.
2. Mount the PIR Standalone Motion Sensor in a suitable location within the detection range of 10~30m.
3. Follow the provided guidelines for installation to ensure proper functioning.

Operation

1. The sensor operates on a Mesh protocol within the specified frequency range.
2. Familiarize yourself with the detection angle and adjust the sensor placement accordingly.
3. Ensure the sensor is not obstructed and has a clear line of sight within its detection range.

Maintenance

1. Regularly check for any physical obstructions that may interfere with the sensor's operation.
2. Clean the sensor periodically to prevent dust or debris build-up that could affect performance.

Frequently Asked Questions (FAQ)

Can I install the sensor outdoors?
It is recommended to install the PIR Standalone Motion Sensor indoors for optimal performance.

How can I adjust the detection range of the sensor?
The detection range is fixed and cannot be adjusted manually.
Ensure proper placement within the specified range for best results.

Technical Specifications

Operation frequency	2.4 GHz – 2.483 GHz
Transmission power	4 dBm
Range (Typical indoor)	10~30m
Protocol	Mesh
Operating voltage	220~240VAC 50/60Hz
Stand-by power	<0.65W (Empty load)
Switched power	I guaranteed: 44mA I max: 80mA
Warming-up	5s
Sensor principle	PIR detection
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, EN61547, EN60669-1, EN60669-2-1, EN62493
Certification	CE

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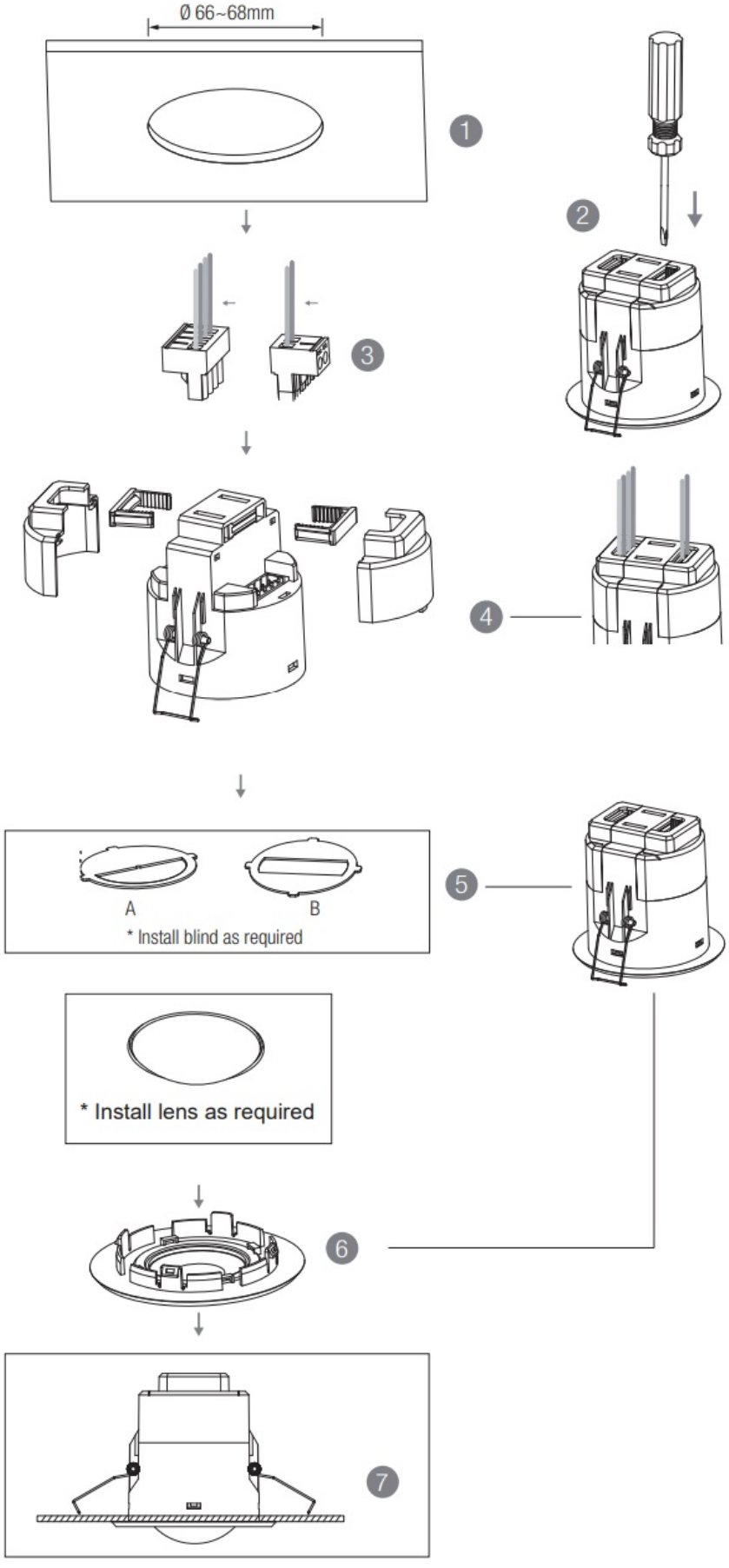
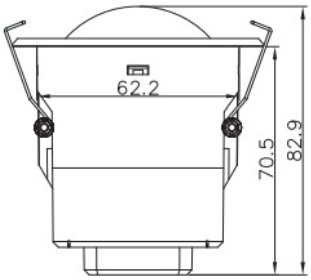
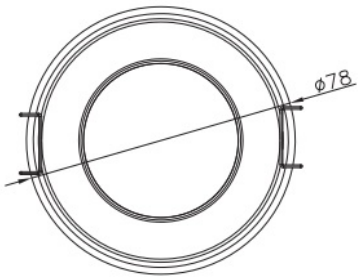
Installation

Mechanical Structure & Dimensions

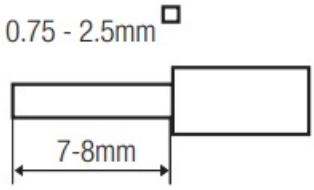

Ø 66~68mm
1
2
3
4
5
A
B
* Install blind as required
* Install lens as required
6
7





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.

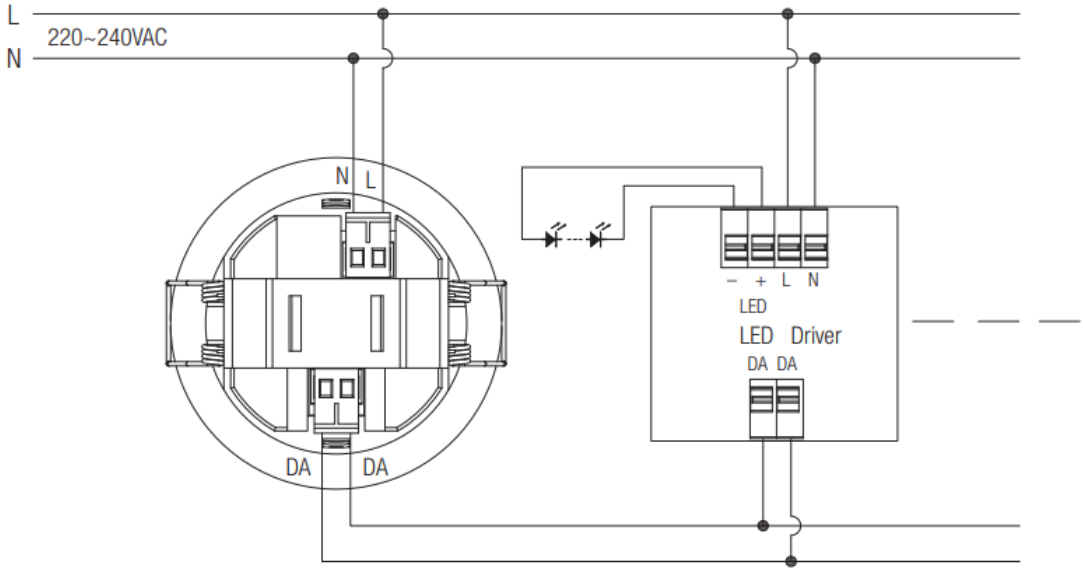
Wire Preparation



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

1. 200 metres (total) max. for 1mm² CSA (Ta = 50°C)
2. 300 metres (total) max. for 1.5mm² CSA (Ta = 50°C)

Wiring Diagram



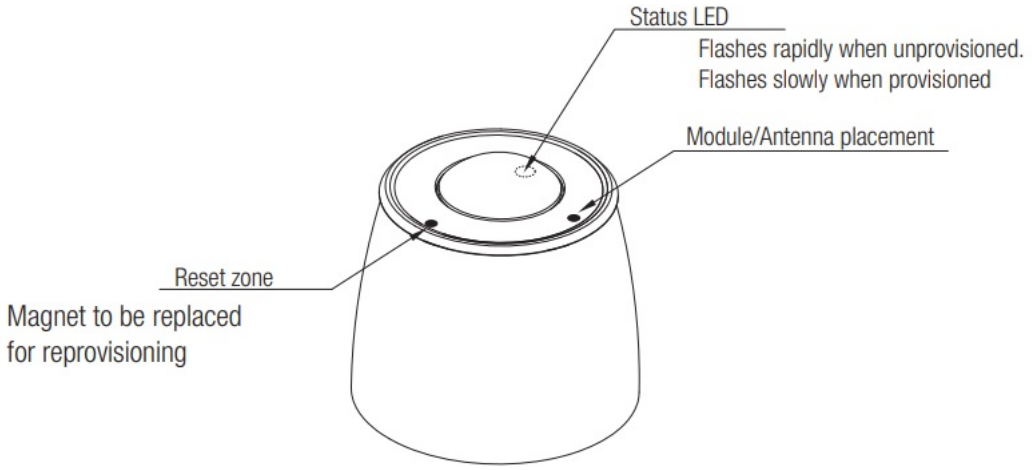
Mesh Factory Reset

The device HBIR29/SV/RH 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



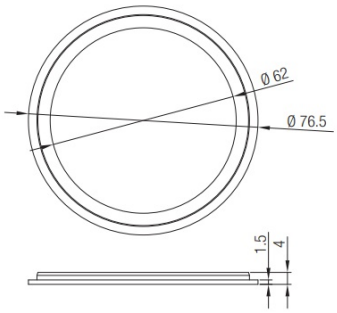
Note: When change the lens part of HBIR29/SV/RH, please kindly make sure that the lens fits the right location,where the “Reset dot” and “BLE dot”matches with the physical location on the PCB.

Status LED blinking Sequence

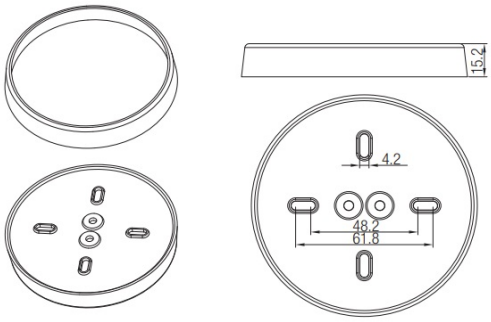
HBIR29/SV/RH Unprovisioned	30ms ON	300ms OFF
HBIR29/SV/RH Provisioned	15ms ON	2,000ms OFF
Factory reset	500ms ON	1,000ms OFF
Factory reset (initial burst)	100ms ON	1,000ms OFF
MESH package received	30ms ON	50ms OFF
Attention (from network)	500ms ON	500ms OFF

Big and small silicon gasket used to make IP54 degree protection when HBIR29/SV/RH series device mounted into HA03 housing for ceiling mount

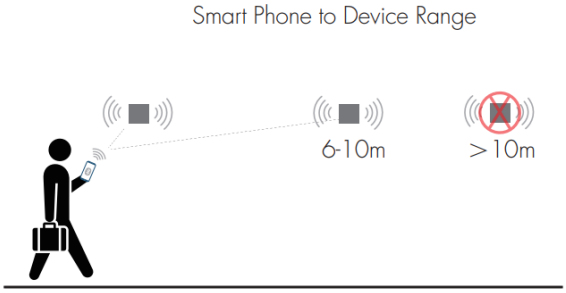
Small silicon water-proof gasket dimension(size:mm)



Big silicon water-proof gasket dimension(size:mm)



Placement Guide and Typical Range



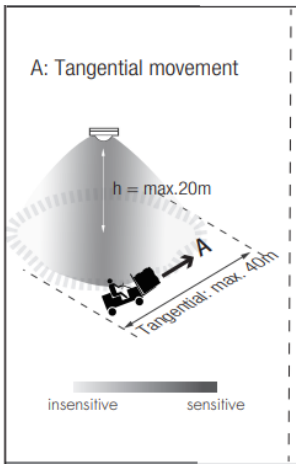
The smart device with the App installed will have a typical range of 10m, but varies from device to device. During commissioning, the installer will need to be in range of the devices when searching for devices to add to the network.

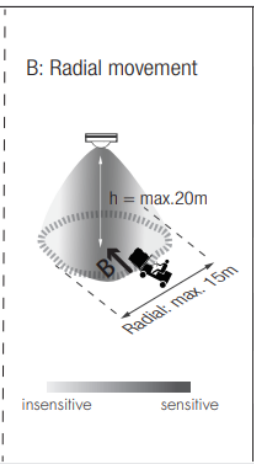
Once the devices have been added to the network via the App, the devices will start communicating within the wireless mesh.
This means that once the network is complete, all devices are accessible from the smart device when in a 20m range of a single point.

Detection Pattern & Optional Accessories

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)

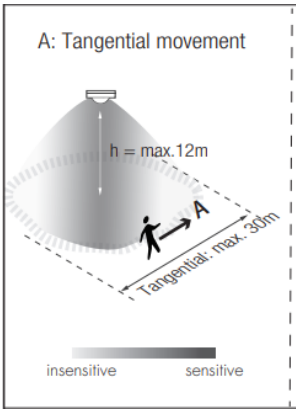


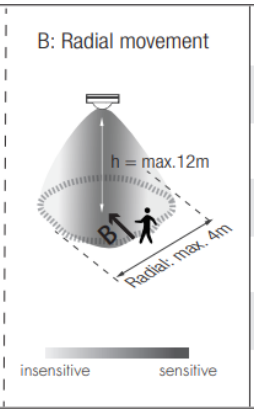


Mount height	Tangential (A)	Radial (B)
10m	max 346m² (Ø = 21m)	max 177m² (Ø = 15m)
11m	max 660m² (Ø = 29m)	max 177m² (Ø = 15m)
12m	max 907m² (Ø = 34m)	max 154m² (Ø = 14m)
13m	max 962m² (Ø = 35m)	max 154m² (Ø = 14m)
14m	max 1075m² (Ø = 37m)	max 113m² (Ø = 12m)
15m	max 1256m² (Ø = 40m)	max 113m² (Ø = 12m)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

HBIR29/SV/RH: Reinforced high-bay lens detection pattern for single person @ Ta = 20OC

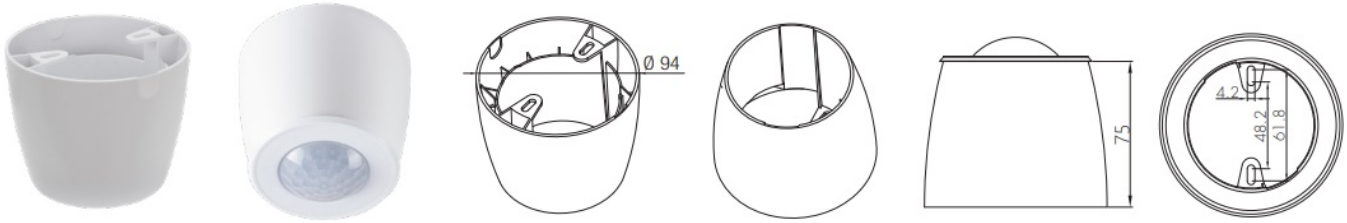
(Recommended ceiling mount installation height 2.5m-12m)





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

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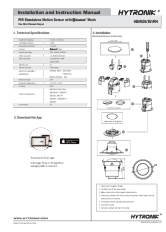
Subject to change without notice.

Documents / Resources

	**HYTRONIK HBIR29SV-RH PIR Standalone Motion Sensor with Mesh** [pdf] Instruction Manual HBIR29SV-RH PIR Standalone Motion Sensor with Mesh, HBIR29SV-RH, PIR Standalone Moti on Sensor with Mesh, Standalone Motion Sensor with Mesh, Motion Sensor with Mesh

References

- Silvair Commissioning
- Catalogue_Hytronik
- User Manual