Installation and Instruction Manual

PIR Standalone Motion Sensor with 🅱 Bluetooth® Mesh
One DALI Channel Output

HBIR29/SV/RH

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1. 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	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	360⁰
Operation temperature	Ta:-20°C~+50°C
IP rating	IP20
Standard compliance	EN300328, EN301489-1, EN301489-17, EN62479, EN55015, EN61547, EN60669-1, EN60669-2-1, EN62493
Certification	CE

2. Download the App

Download on the APP Store

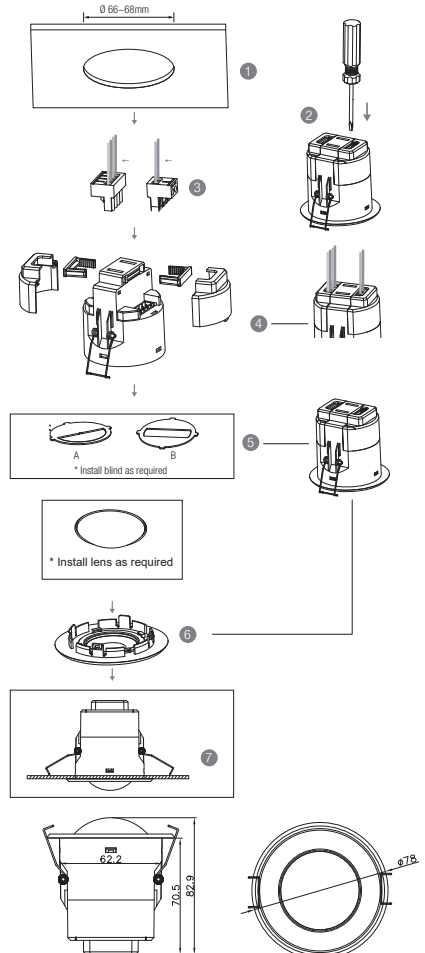The access to Silvair apps

mobile app: Silvair on the App Store
web app: platform.silvair.com

3. Installation

Mechanical Structure & Dimensions

Ø 66~68mm

A   B
* Install blind as required

* Install lens as required

62.2
70.5
82.9
Ø78

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.
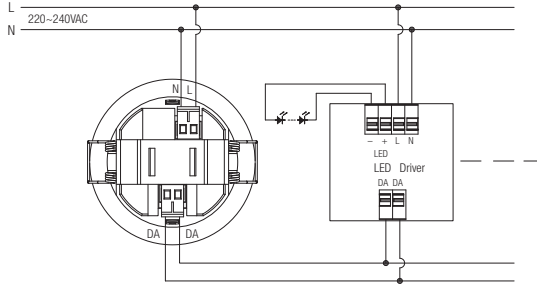7. Bend back springs and insert into ceiling.

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Wire Preparation

0.75 - 2.5mm²

7-8mm
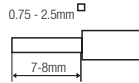
Pluggable screw terminal. It is recommended to make connections to the terminal before fitting to the sensor.

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

Wiring Diagram

L
N   220~240VAC
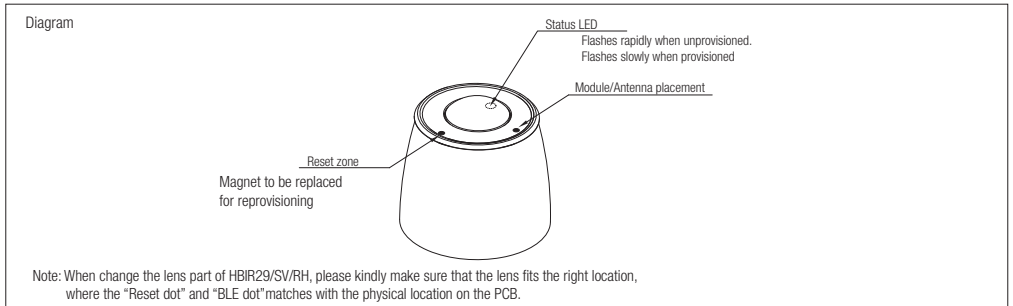
N L

DA DA

LED
LED Driver
DA DA
– + L N

4.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.
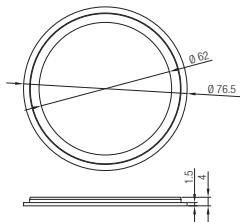
5.To Reprovision

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.
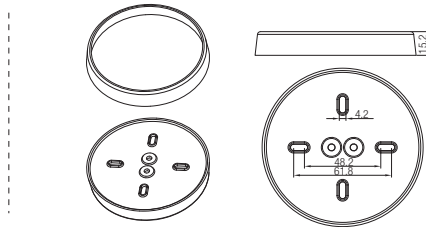
Diagram

Status LED
Flashes rapidly when unprovisioned.
Flashes slowly when provisioned

Module/Antenna placement

Reset zone
Magnet to be replaced
for reprovisioning

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)

Ø 62
Ø 76.5

1.5
4

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

15.2

4.2
48.2
61.8

Placement Guide and Typical Range

Smart Phone to Device Range

6-10m   >10m

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.

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6. 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**)

A: Tangential movement   B: Radial movement

h = max.20m

Tangential: max. 40m   Radial: max. 15m

insensitive   sensitive

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 = 200C
(Recommended ceiling mount installation height **2.5m-12m**)

A: Tangential movement   B: Radial movement

h = max.12m

Tangential: max. 30m   Radial: max. 4m

insensitive   sensitive

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

Ø 94

75

4.2   48.2   61.8
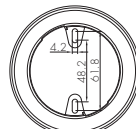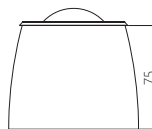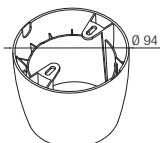
7. Additional Information / Documents

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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