



HYTRONIK HBIR29 PIR Standalone Motion Sensor with Bluetooth 5.0 SIG Mesh Instruction Manual

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HYTRONIK®


Installation and Instruction Manual

PIR Standalone Motion Sensor with  Bluetooth 5.0 SIG Mesh
One DALI Channel Output

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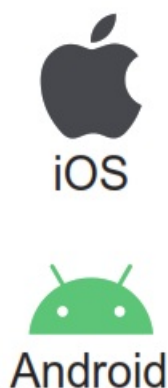
Technical Specifications

Operation frequency	2.4 GHz – 2.483 GHz
Transmission power	4 dBm
Range (Typical indoor)	 Bluetooth 10~30m
Protocol	5.0 SIG Mesh
Stand-by power	<1W
Operating voltage	220~240VAC 50/60Hz
Switched power	20s
Warming-up	Max. 40 devices, 80mA
Sensor principle	PIR detection
Detection range (Max.)* HBIR29	Installation Height : 6m Detection Range (Ø) :9m
Detection angle	
Operation temperature	360°
IP rating	Ta:-20° C~+50°C
EMC standard (EMC)	IP20/IP54
Safety standard (LVD)	EN55015, EN61000, EN61547
RED	EN60669-1/-2-1 AS/NZS60669-1/-2-1
Certification	EN300328, EN301489-1/-17 CB, CE , EMC, RED, RCM

Download the App

Free App for set-up and commissioning

 **Bluetooth 5.0 SIG mesh**



for iOS



for Android

<https://apps.apple.com/cn/app/koolmesh/id1483721878>
<https://play.google.com/store/apps/details?id=com.koolmesh.sig>

Smartphone app for both iOS & Android platform



for iPad

<https://apps.apple.com/cn/app/koolmesh/id1570378349>

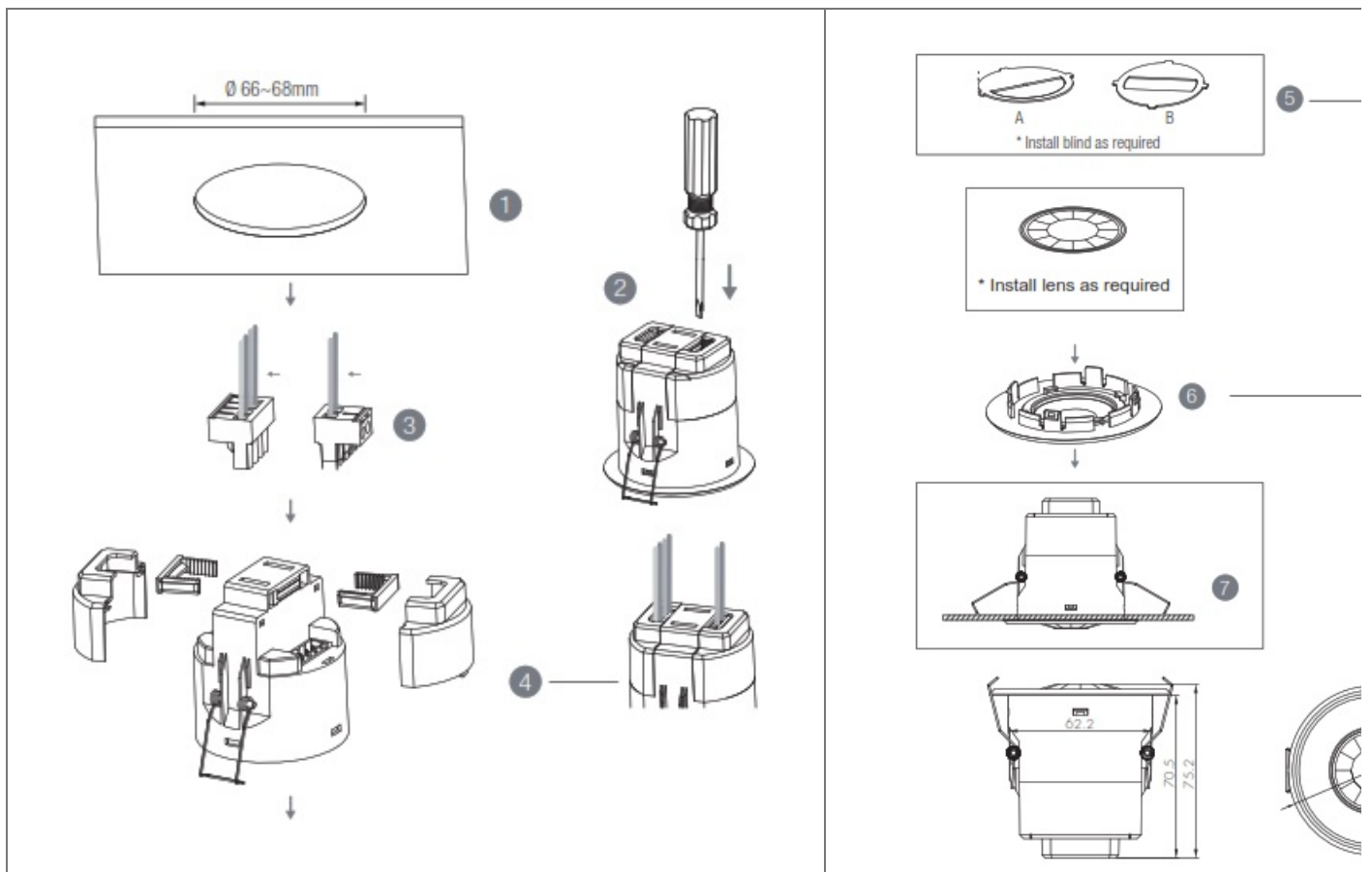
Koolmesh Pro app for iPad

HYTRONIK HBIR29 PIR Standalone Motion Sensor with Bluetooth 5.0 SIG Mesh - qr code2

Web app/platform: www.iot.koolmesh.com

Installation

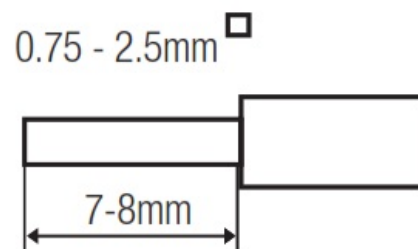
Mechanical Structure & Dimensions



1. Ceiling (drill hole $\phi 66 \sim 68 \text{mm}$)
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.

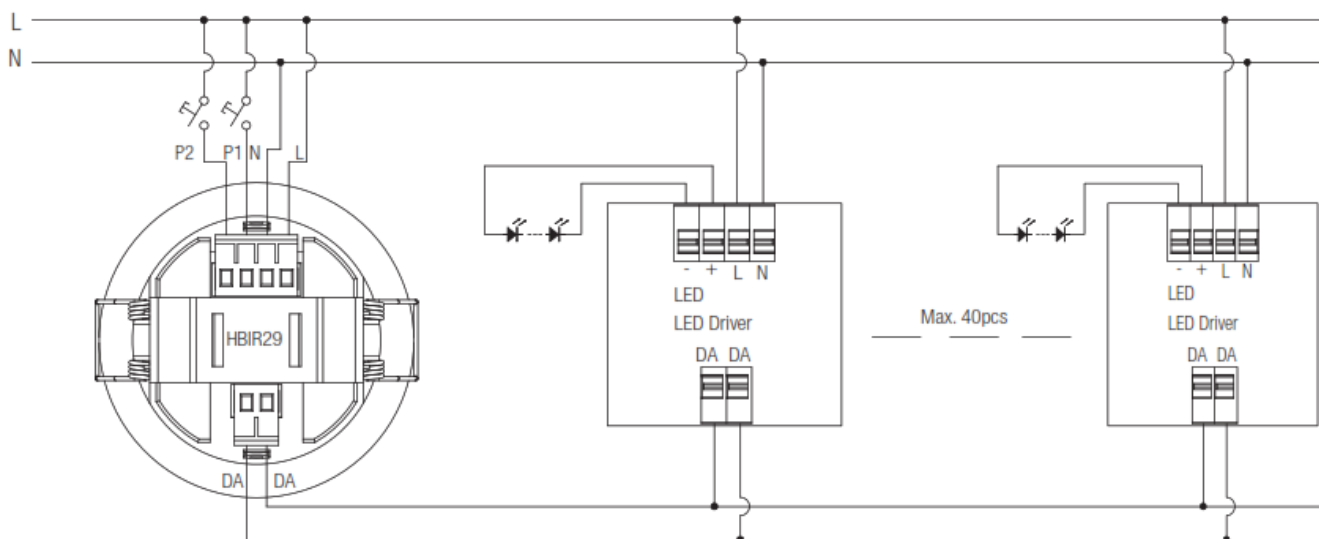
Wire Preparation



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



Dimming Interface Operation Notes

Switch-Dim

The provided Switch-Dim interface allows for a simple dimming method using commercially available non-latching (momentary) wall switches. Detailed Push switch configurations can be set on Koolmesh app.

Switch Function	Action	Descriptions
Push switch	Short press (<1 second) * Short press has to be longer than 0.1 s, or it will be invalid.	<ul style="list-style-type: none"> – Turn on/off – Recall a scene – Turn on only – Exit manual mode – Turn off only – Do nothing
	Double push	<ul style="list-style-type: none"> – Turn on only – Exit manual mode – Turn off only – Do nothing – Recall a scene
	Long press (1 second)	<ul style="list-style-type: none"> – Dimming – Colour tuning- Do nothing
Simulate sensor	/	– Upgrade a normal on/off motion sensor to a Bluetooth controlled motion sensor

Placement Guide and Typical Range

Smart Phone to Device 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.

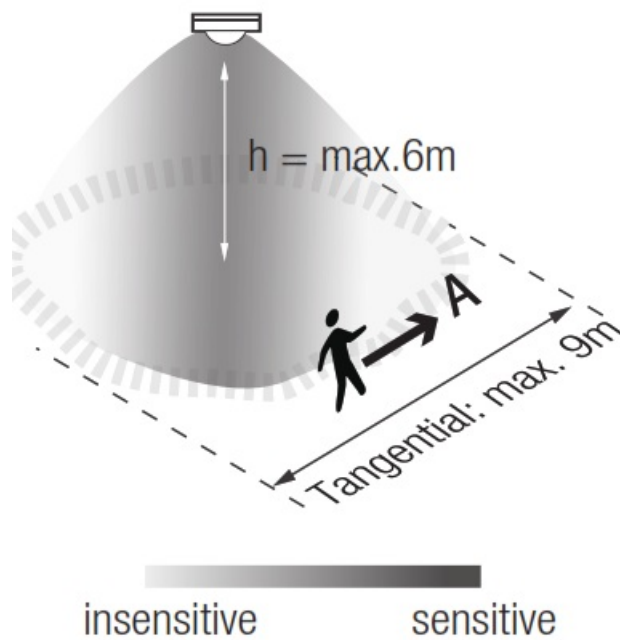
Detection Pattern & Optional Accessories

HBIR29 (Low-bay)

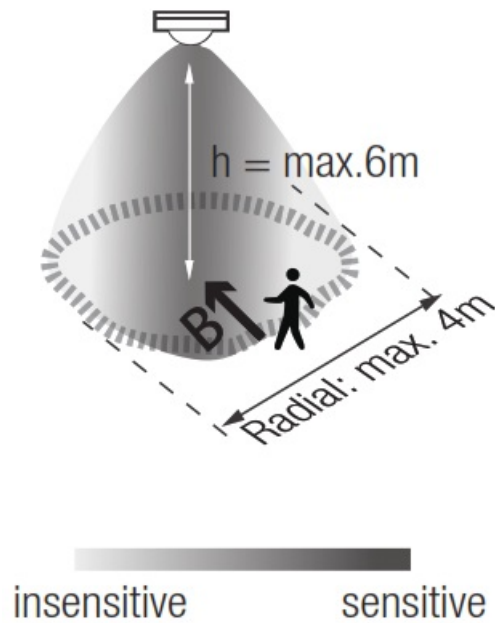


HBIR29: Low-bay flat lens detection pattern for single person @ $T_a = 20^\circ\text{C}$ (Recommended ceiling mount installation height 2.5m-6m)

A: Tangential movement

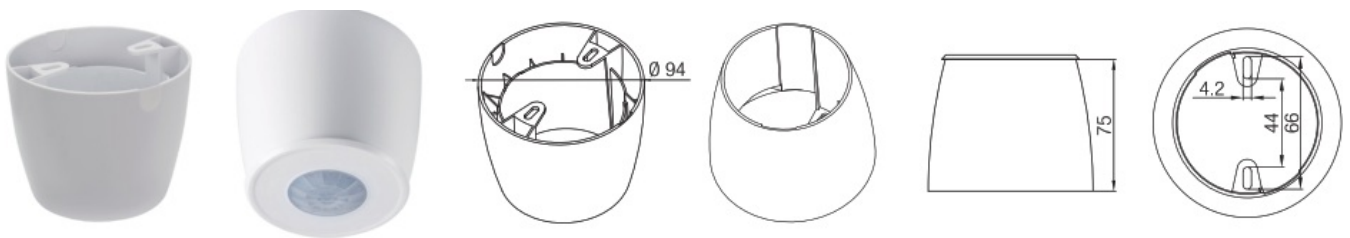


B: Radial movement



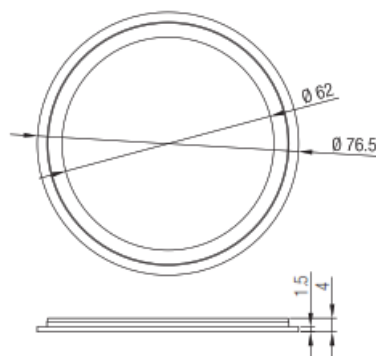
Mount height	Tangential (A)	Radial (B)
2.5m	max 50m ² (Ø = 8m)	max 13m ² (Ø = 4m)
3m	max 64m ² (Ø = 9m)	max 13m ² (Ø = 4m)
4m	max 38m ² (Ø = 7m)	max 13m ² (Ø = 4m)
5m	max 38m ² (Ø = 7m)	max 13m (Ø = 4m)
6m	max 38m ² (Ø = 7m)	max 13m ² (Ø = 4m)

Optional Accessory — Ceiling/Surface Mount Box: HA03

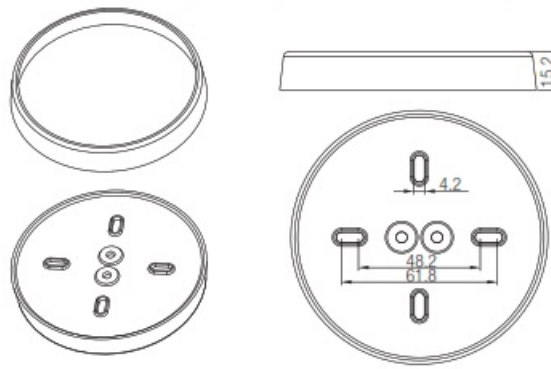


Big and small silicon gasket used to make IP54 degree protection when HBIR29 series device mounted into HA03 housing for ceiling mount

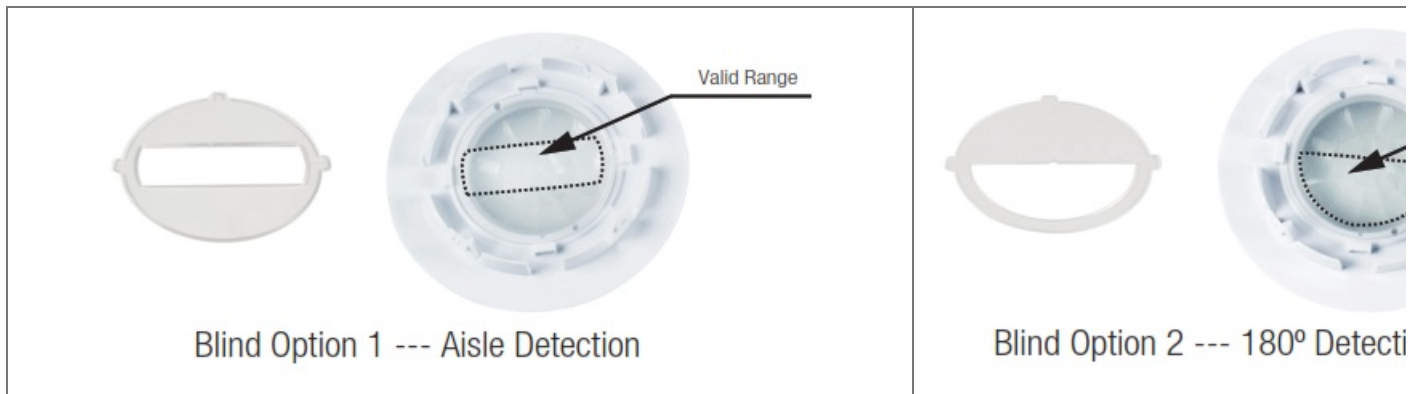
Small silicon water-proof gasket dimension(size:mm)



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



Optional Accessory — Blind Insert for Blocking Certain Detection Angles



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 Bluetooth product installation and operation, please kindly refer to www.hytronik.com->download/knowledge->BluetoothProducts-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/bluetoothtechnology->Bluetooth Sensors
4. Regarding Hytronik standard guarantee policy, please refer to www.hytronik.com/download->knowledge->Hytronik Standard Guarantee Policy

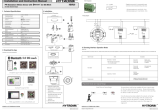
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Subject to change without notice.

HBIR29-20200316-A0

Documents / Resources

	<p>HYTRONIK HBIR29 PIR Standalone Motion Sensor with Bluetooth 5.0 SIG Mesh [pdf] Instruction Manual</p> <p>HBIR29, PIR Standalone Motion Sensor with Bluetooth 5.0 SIG Mesh, HBIR29 PIR Standalone Motion Sensor, PIR Standalone Motion Sensor, Standalone Motion Sensor, Motion Sensor, Sensor</p>
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References

- [Microwave sensor_Microwave motion sensor_Hytronik Electronics Co., Ltd.](#)
- [Catalogue_Hytronik](#)
- [iot.koolmesh.com](#)