

Installation and Instruction Manual

HYTRONIK®

PIR Standalone Motion Sensor with Bluetooth® 5.0 SIG Mesh Two Trailing-edge Channels Output

HBIR36

1. Technical Specifications

Operation frequency	2.4 GHz - 2.483 GHz
Transmission power	4 dBm
Range (Typical indoor)	10~30m
Protocol	Bluetooth® 5.0 SIG Mesh
Operating voltage	230VAC 50Hz
Stand-by power	<1W
Load ratings	2x100VA (Capacitive) 2x150W (Resistive)
Sensor principle	PIR detection
Detection range (Max.)*	Installation Height : 6m
HBIR36	Detection Range (Ø) : 9m
Detection angle	360°
Operation temperature	Ta: -20°C~+45°C
IP rating	IP20
EMC standard (EMC)	EN55015, EN61000, EN61547 EN60669-1, EN60669-2-1
Safety standard (LVD)	AS/NZS60669-1/-2-1
RED	EN300328, EN301489-1/-17
Certification	CB, CE, EMC, RED, RCM

2. Download the App

Free App for set-up and commissioning

Bluetooth 5.0 SIG mesh



Smartphone app for both iOS & Android platform



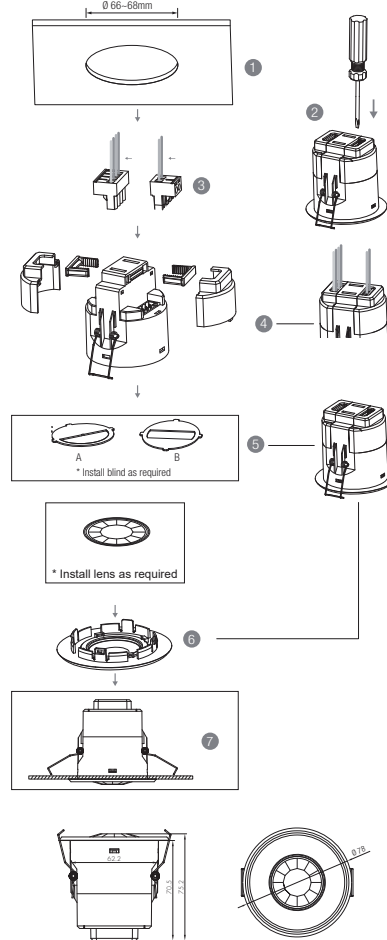
Koolmesh Pro app for iPad



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

3. Installation

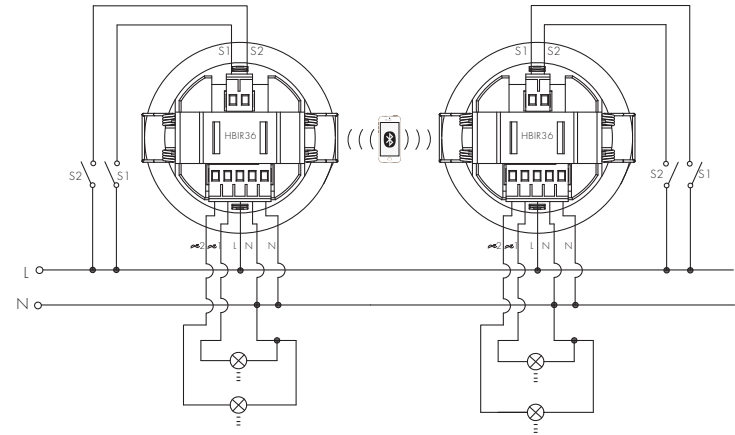
Mechanical Structure & Dimensions



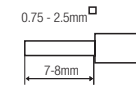
1. Ceiling (drill hole φ66~68mm)
2. Carefully prise off the cable clamps.
3. Make connections to the pluggable terminal blocks.
4. Insert plug connectors and secure using the provided cable clamps, then clip terminal covers to the base.
5. Fit detection blind (if required) and desired lens.
6. Clip fascia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

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Wiring Diagram



Wire Preparation

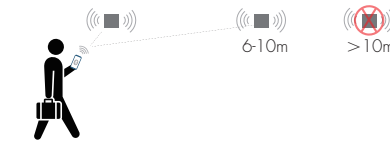


Pluggable screw terminal. It is recommended to make connections to the terminal before fitting to the sensor.

4. Detection Pattern & Optional Accessories

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.

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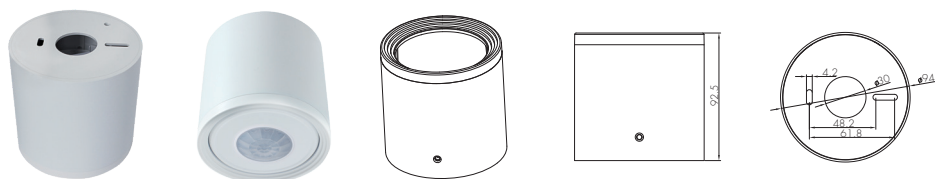
HBIR36 (Low-bay)



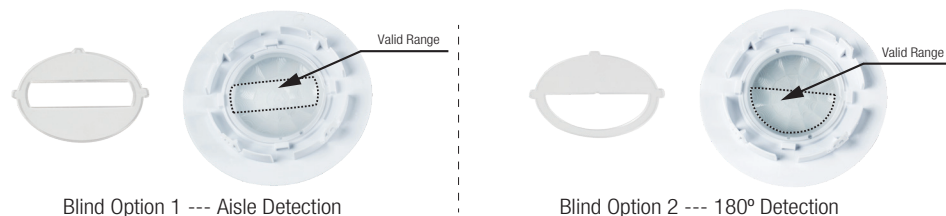
HBIR36: Low-bay flat lens detection pattern for **single person** @ Ta = 20°C
(Recommended ceiling mount installation height **2.5m-6m**)

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

Optional Accessory --- Ceiling/Surface Metal Mount Box: HA09/W, HA09/B, HA09/G

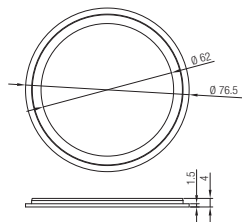


Optional Accessory --- Blind Insert for Blocking Certain Detection Angles

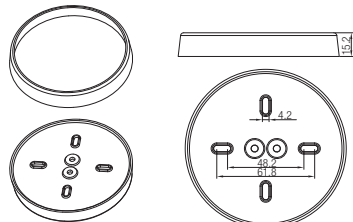


Big and small silicon gasket used to make IP54 degree protection when HBIR36 series device mounted into HA09 housing for ceiling mount

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



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



5. 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 0.1s, or it will be invalid.	- Turn on/off - Turn on only - Turn off only - Recall a scene - Quit manual mode - Do nothing
	Double push	- Turn on only - Turn off only - Recall a scene - Quit manual mode - Do nothing
	Long press (≥ 1 second)	- Dimming - Colour tuning - Do nothing
Sensorlink (VFC signal only)	/	- Upgrade a normal on/off motion sensor to a Bluetooth controlled motion sensor
Emergency Self-Test Function	Short press (< 1 second) * Short press has to be longer than 0.1s, or it will be invalid.	- Start Self test (Monthly) - Stop Self test - Start Self test (Annually) - Invalid
	Long press (≥ 1 second)	- Start Self test (Monthly) - Stop Self test - Start Self test (Annually) - Invalid
Fire Alarm (VFC signal only)	Refer to Koolmesh ™ App User Manual V2.1	- Able to connect the Fire Alarm system - Once the fire alarm system is triggered, all the luminaires controlled by the Push Switch will enter the preset scene (normally it's full on), after the fire alarm system gives the ending signal, all the luminaires controlled by this Push Switch will revert back to normal status.

6. Additional Information / Documents

- To learn more about detailed product features/functions, please refer to www.hytronik.com/download ->knowledge ->Introduction of App Scenes and Product Functions
- Regarding precautions for Bluetooth product installation and operation, please kindly refer to www.hytronik.com ->download/knowledge ->Bluetooth Products - Precautions for Product Installation and Operation
- Data sheet is subject to change without notice. Please always refer to the most recent release on www.hytronik.com/products/bluetooth-technology ->Bluetooth Sensors
- Regarding Hytronik standard guarantee policy, please refer to www.hytronik.com/download ->knowledge ->Hytronik Standard Guarantee Policy