Installation and Instruction Manual

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

HBIR32/W

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	220~240VAC 50/60Hz
Stand-by power	<1W
Switched power	Max. 40 devices, 80mA
Warming-up	20s
Sensor principle	PIR detection
Detection range (Max.)*	Installation Height : 6m
HBIR32/W	Detection Range(Ø) :18m
Detection angle	360⁰
Operation temperature	Ta:-20°C~+50°C
IP rating	IP20
EMC standard (EMC)	EN55015, EN61000, EN61547
Safety standard (LVD)	EN60669-1, EN60669-2-1 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

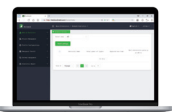### 🅱 Bluetooth 5.0 SIG mesh

iOS
Android

for iOS   for Android

Smartphone app for both iOS & Android platform
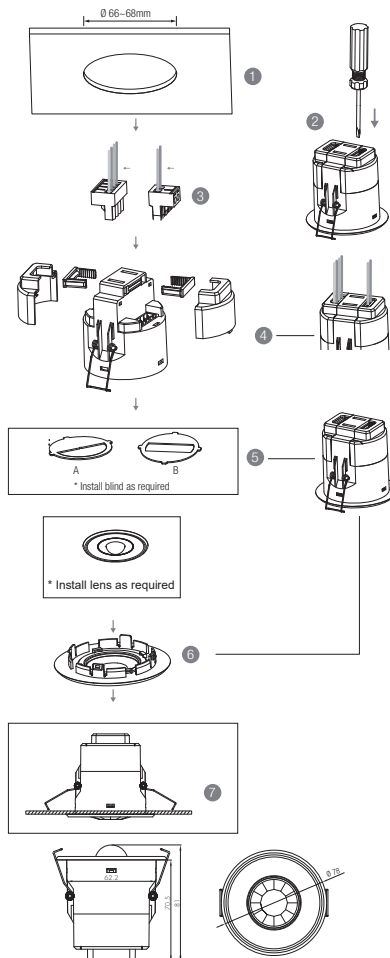
for iPad

Koolmesh Pro app for iPad

Web

for Web

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

3. Installation

Mechanical Structure & Dimensions
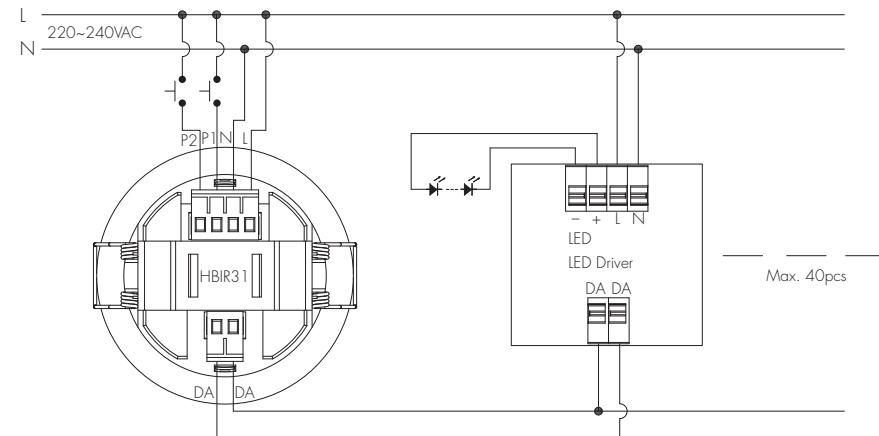

Ø 66~68mm

❶
❷
❸
❹
❺

A   B
* Install blind as required

* Install lens as required

❻

❼

62.2

0.76
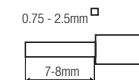
1. Ceiling (drill hole φ66~68mm)
2. Carefully prise off the cable clamps.
3. Make connections to the pluggable terminal blocks.
4. Insert plug connectors and secure using the provided cable clamps, then clip terminal covers to the base.
5. Fit detection blind (if required) and desired lens.
6. Clip fascia to body.
7. Bend back springs and insert into ceiling.

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Wiring Diagram

L
N   220~240VAC

P2 P1 N L

HBIR31

DA DA

LED
LED Driver
DA DA

— + L N

LED
LED Driver

Max. 40pcs

Wire Preparation

0.75 - 2.5mm

7-8mm

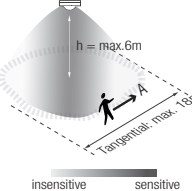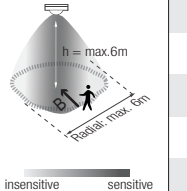Pluggable screw terminal. It is recommended to make connections to the terminal before fitting to the sensor.

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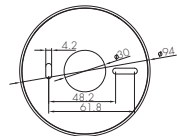2. 300 metres (total) max. for 1.5mm² CSA (Ta = 50℃)

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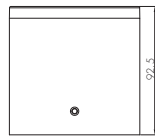
5. Detection Pattern & Optional Accessories

HBIR32/W (Wide range Low-bay)

HBIR32/W: Low-bay convex lens detection pattern for **single person** @ Ta = 20ºC
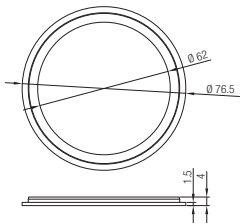(Recommended ceiling mount installation height **2.5m-6m**)

A: Tangential movement   B: Radial movement

Mount height	Tangential (A)	Radial (B)
2.5m	max 254m² (Ø = 18m)	max 28m² (Ø = 6m)
3m	max 254m² (Ø = 18m)	max 28m² (Ø = 6m)
4m	max 154m² (Ø = 14m)	max 28m² (Ø = 6m)
5m	max 113m² (Ø = 12m)	max 28m² (Ø = 6m)
6m	max 79m² (Ø = 10m)	max 13m² (Ø = 4m)

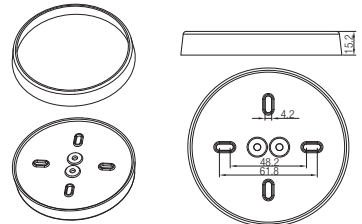### Optional Accessory --- Ceiling/Surface Metal Mount Box: HA09/W, HA09/B, HA09/G

Big and small silicon gasket used to make IP54 degree protection when HBIR32/W series device mounted into HA03 housing for ceiling mount
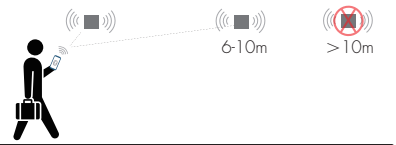
Small silicon water-proof gasket dimension(size:mm)   Big silicon water-proof gasket dimension(size:mm)

Placement Guide and Typical Range

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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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 - Recall a scene - Turn on only - Quit manual mode - Turn off only - Do nothing
	Double push	- Turn on only - Quit manual mode - Turn off only - Do nothing - Recall a scene
	Long press (≥1 second)	- Dimming - Colour tuning - Do nothing
Sensor-link (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) - Start Self test (Annually) - Stop Self test - Invalid
	Long press (≥1 second)	- Start Self test (Monthly) - Start Self test (Annually) - Stop Self test - 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 luminaries 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 luminaries controlled by this Push Switch will revert back to normal status.

6. 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 ->Bluetooth Products - 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/bluetooth technology ->Bluetooth Sensors

4. Regarding Hytronik standard guarantee policy, please refer to www.hytronik.com/download ->knowledge ->Hytronik Standard Guarantee Policy

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