Installation and Instruction Manual

HYTRONIK®

True Occupancy Sensor with ❖Bluetooth® 5.0 SIG Mesh   HBMW28/PRO
On/Off Control with Relay Output

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	<0.5W
Load ratings:	
Capacitive	800VA
Resistive	800W
Sensor principle	Occupancy Motion detection
Ceiling-mounted	Installation Height : 3m
Detection range (Max.)*	Detection Range (Ø) :10m
Wall-mounted	Installation Height : 3m
Detection range (Max.)*	Detection Range (Ø) :6m
Detection angle	360°
Operation temperature	Ta:-20°C~+50°C
IP rating	IP20/IP54

2. Download the App

Free App for set-up and commissioning

❖Bluetooth® 5.0 SIG mesh

HYTRONIK Koolmesh

iOS — for iOS
Android — 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

Ø66~68mm

OR
High Back Caps HA08

62.2
73 / 70.5
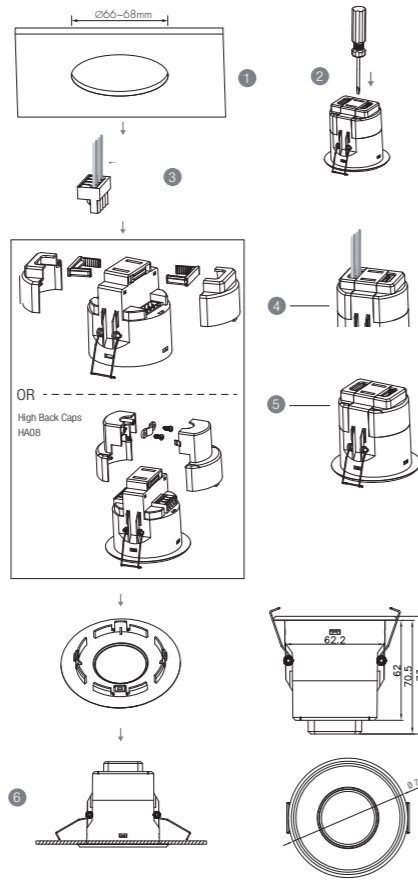
1. Ceiling (drill hole φ66~68mm)
2. Carefully prise off the cable clamps.
3. Make connections to the pluggable terminal blocks.
4. Insert plug connectors and secure using the provided cable clamps, then clip terminal covers to the base. (provide high back caps HA08 option).
5. Clip fascia to body.
6. Bend back springs and insert into ceiling.

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Note:

1. We recommend the mounting distance between sensor to sensor should be more than 2m to prevent sensors from false-triggering.

2. The face-to-face installation between sensors and sensors or other radio sources is not recommended, or false trigger issue will potentially behave.
   a. Make sure the installed environment is free of any obvious vibration, strong air blows, curtain swing, water flow in pipe....
   b. The recommended mounting distance between sensor to sensor is >3m to prevent sensors from false-triggering and furtherly adjust per actual environment.

Wire Preparation

0.75 - 2.5mm²

8mm

(min 6mm, max 11mm)
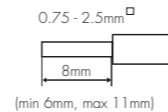
Pluggable screw terminal. It is recommended to make connections to the terminal before fitting to the sensor.

Wiring Diagram

HBMW28/PRO

LED Driver — L N LED+ LED−   Max.800VA   LED Driver — L N LED+ LED−

L N PUSH
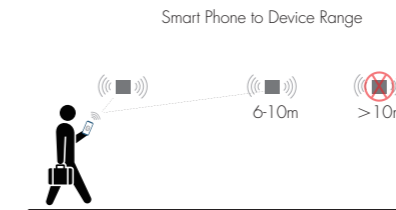
N

L
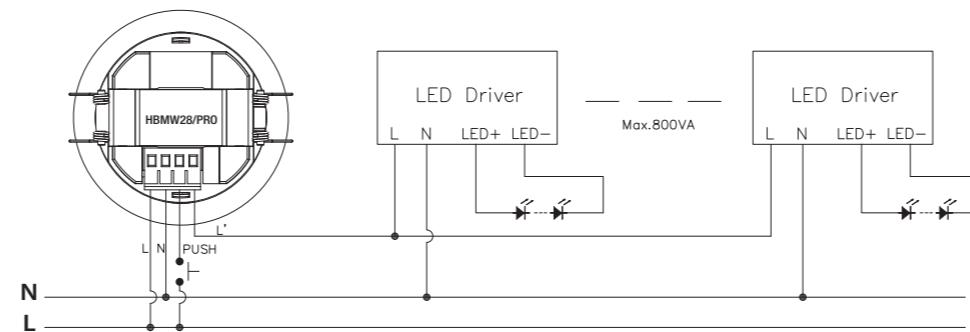
———This product should be installed by a qualified electrician.

4. Detection Pattern & Optionanl Acceories

Placement Guide and Typical Range

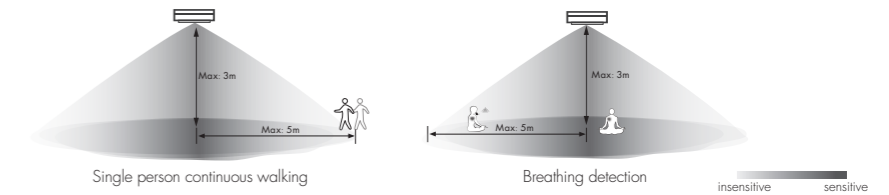Smart Phone to Device Range

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.
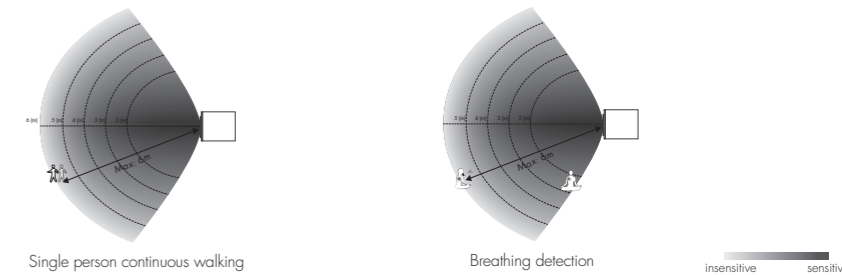
Detection Pattern

Ceiling-mounted application

Installation height: 3m

Max: 3m   Max: 5m   Max: 3m   Max: 5m

Single person continuous walking   Breathing detection

insensitive   sensitive

*When it's in breathing & true occupancy detection mode and in sitting situation, facing to sensor directly will have a better detection range than 90 degrees side facing to sensor.

Wall-mounted application

Installation height: 3m

Single person continuous walking   Breathing detection

insensitive   sensitive

*When it's in breathing & true occupancy detection mode and in sitting situation, facing to sensor directly will have a better detection range than 90 degrees side facing to sensor.
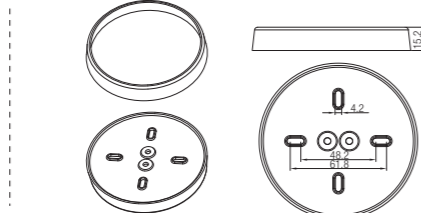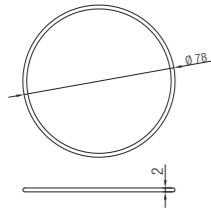
Optional Accessory -- Ceiling/Surface Metal Mount Box: HA09/W, HA09/B, HA09/G
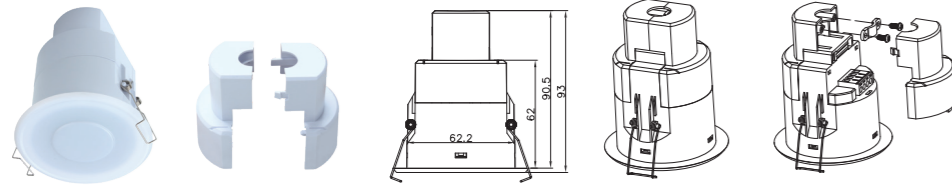

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Big and small silicon gasket used to make IP54 degree protection (mounted into HA09 housing for ceiling mount)

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

Optional Accessory --- HA08

*Note: Optional Accessory HA09 & HA08 can not be uesd together.

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	
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) - 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 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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