

# Installation and Instruction Manual

# HYTRONIK®

## Multi-Directional PIR Sensor with Bluetooth® 5.0 SIG Mesh DALI Output

### HBIR29/AA


### 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
DALI bus power supply	I guaranteed : 64mA I max : 80mA U rated : 15VDC
Sensor principle	PIR detection
Detection range	Installation height : 3m Max. diameter (Ø) : 12m
Detection angle	360°
Operation temperature	Ta: -15°C-- +45°C
IP rating	IP20


### 2. Download the App

Free App for set-up and commissioning


**Bluetooth 5.0 SIG mesh**



iOS




for iOS




for Android

Smartphone app for both iOS & Android platform

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for iPad




for iPad

Koolmesh Pro app for iPad

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Web

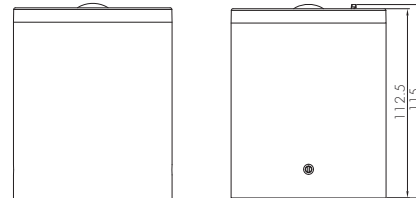
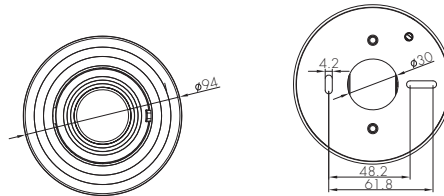
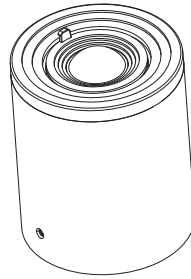


for Web

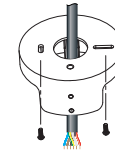
Web app/platform: [www.iot.koolmesh.com](http://www.iot.koolmesh.com)

### 3. Installation

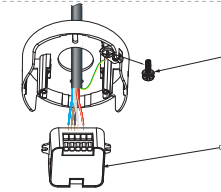
Mechanical Structure & Dimensions



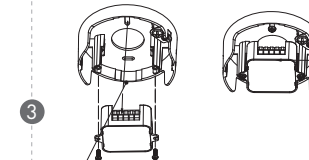
1 Lock the base onto the ceiling(or wall) with screws in advance, and lead out the power cord through the circular hole in the middle.



2 Take out the grounding screw and connect the ground wire, then use the screw to lock it tightly.  
Connect the corresponding functional wires in the control module.

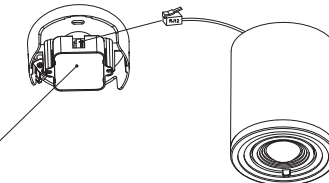


3 After organizing the power cord, align the controller module with the screw holes on both sides of the base and secure it with screws.



Note: This side of the controller module needs to be in the same direction as the upper pore.

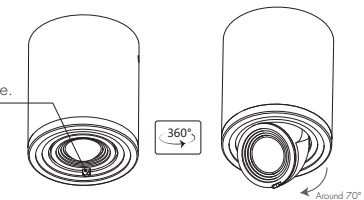
4 Connect to the RJ12 cable.



5 Last, align the screw holes on both sides to tighten the screws. Installation completed.

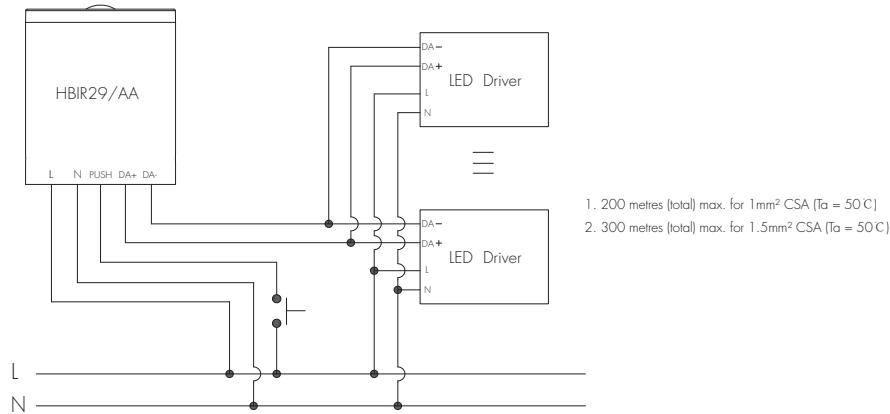


6 The detection angle is adjustable by pulling here.



## Wiring Diagram

Note: It is recommended that the wiring length be > 100mm for installation convenience.

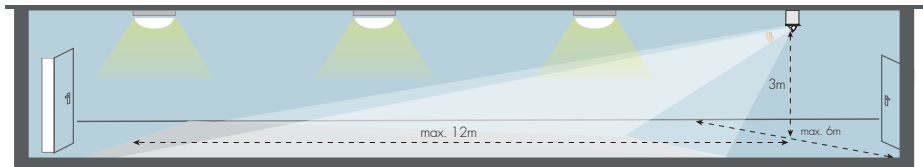


— This product should be installed by a qualified electrician.

## 4. Detection Pattern

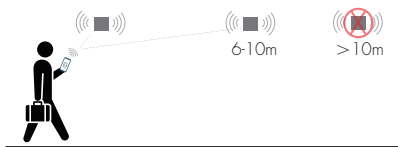
Sensitivity set to maximum, Sensor head angle set to maximum

Installation height: 3m



## 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.

## 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 <b>Koolmesh™</b> 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

- To learn more about detailed product features/functions, please refer to [www.hytronik.com/download](http://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](http://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](http://www.hytronik.com/products/bluetooth) technology ->Bluetooth Sensors
- Regarding Hytronik standard guarantee policy, please refer to [www.hytronik.com/download](http://www.hytronik.com/download) ->knowledge ->Hytronik Standard Guarantee Policy