Multi-Directional HF Sensor

DALI Output & Tri-level Dimming
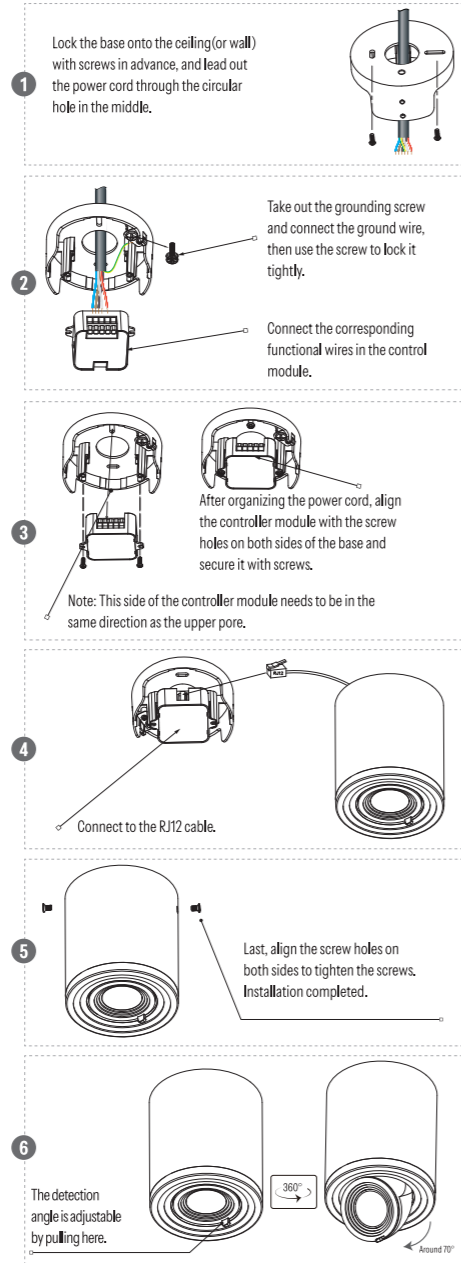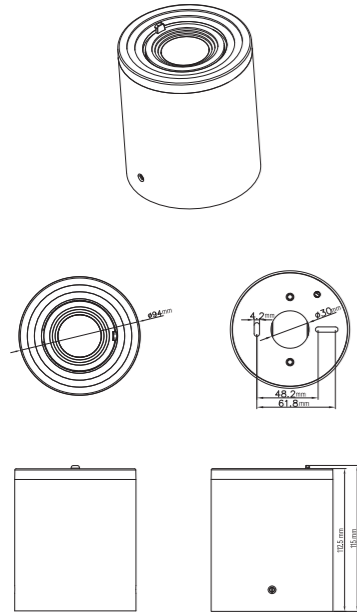
HMW27 / AA

1. Technical Specifications

|	
Operating voltage	220~240VAC 50/60Hz
Stand-by power	< 1W
Sensor Principle	High Frequency (microwave)
Ceiling-mounted Detection Range	Installation Height : 3m Max. Detection Range : 13m *Sensor head angle set to 70°
Wall-mounted Detection Range	Installation Height : 2.5m Max. Detection Range: 22m
Detection angle	360°
DALI Bus Power Supply	I guaranteed: 64mA I max: 80mA U rated: 15VDC
IP rating	IP20

2. 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. Around 70°

3. Wiring Diagram

Note: It is recommended that the wiring length be > 100mm for installation convenience.
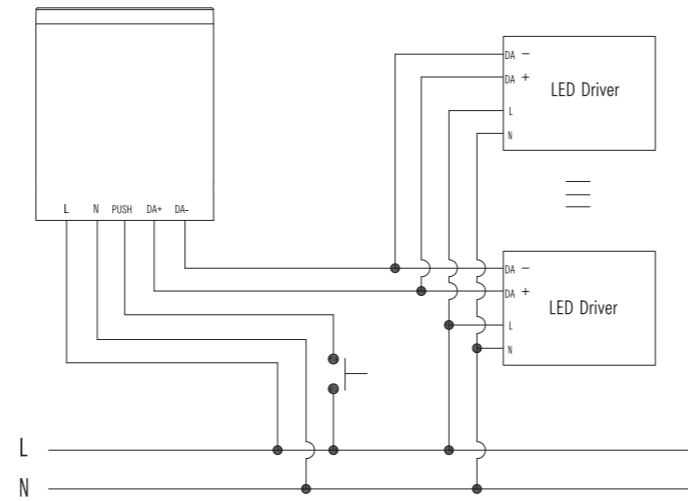
1. 200 metres (total) max. for 1mm^2 CSA (Ta = 50℃)
2. 300 metres (total) max. for 1.5mm^2 CSA (Ta = 50℃)

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

4. Detection Pattern

*Sensitivity set to maximum

Ceiling-mounted application

Installation height: 3m
*Sensor head angle set to 70°

Installation height: 3m
*Sensor head angle set to 90°
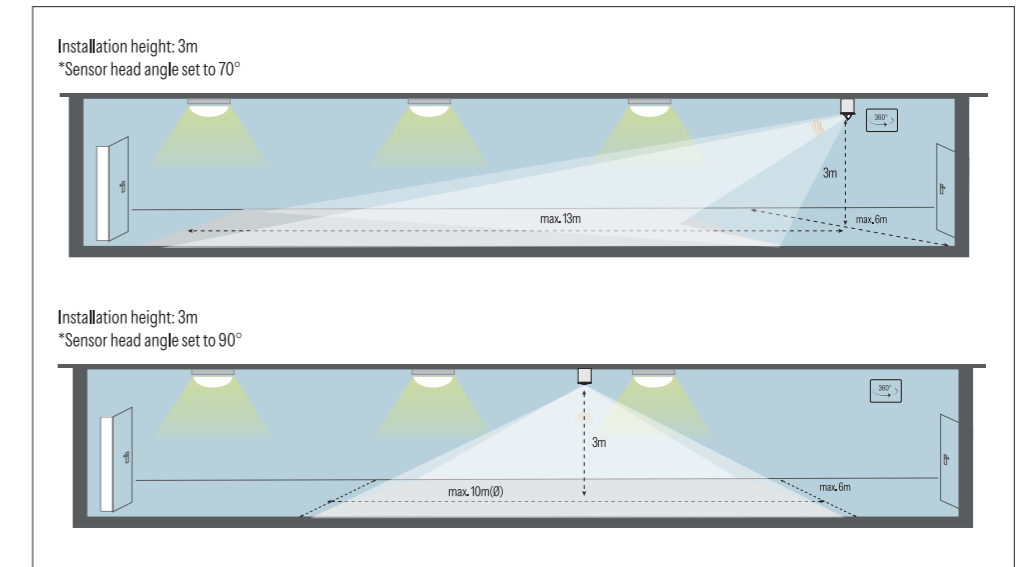
Wall-mounted application
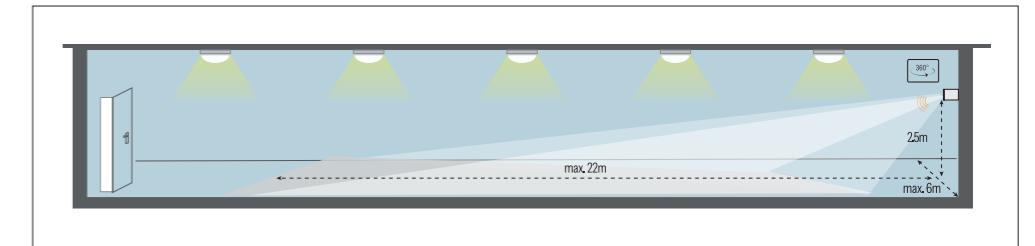
Application	Angle	Height	Sensitivity			
			100%	75%	50%	10%
Ceiling-mounted	90°	3m	10m(Ø)	8m(Ø)	6m(Ø)	4m(Ø)
		8m	14m(Ø)	5m(Ø)	none	none
	70°	3m	13m	11m	9m	7m
		8m	15m	7m	4m	none
Wall-mounted	90°	2.5m	22m	20m	16m	11m

Note: The unit for 90 degree detection data in the case of ceiling installation is diameter.

5.Settings (Remote Control HRC-05)

Permanent ON/OFF function

Press the "ON/OFF" button, the light goes to permanent on or permanent off mode, and the sensor is disabled.
* Press "Auto Mode", "RESET" or "Scene mode" buttons to quit this mode.
The mode will change to AUTO Mode after power failure.

Sensor mode

Press "Auto Mode" button, the sensor starts to function and all settings remain the same as the latest status before the light is switched on/off.

Reset function

Press "RESET" button, all settings go back to default settings.

Dim + / −

Long press "Dim +" or "Dim −" to adjust the target lux level during hold-time. " + " means increasing the target, "−" means decreasing the target.

Test mode

This button is for testing purpose only. The sensor goes to test mode (hold-time is 2s) after commissoning, meanwhile the stand-by period and daylight sensor are disabled.
* This mode can be ended by pressing "reset", or any button of "scene mode" and "hold-time". The sensor settings are changed accordingly.

Power output

By pressing these two buttons, the output shifts between 80% (at initial 10,000 hours) and 100%, for energy saving purpose.

Lux disable

Press this button, the built-in daylight sensor stops working, and all motion detected could turn on the lighting fixture, no matter how bright the natural light is.
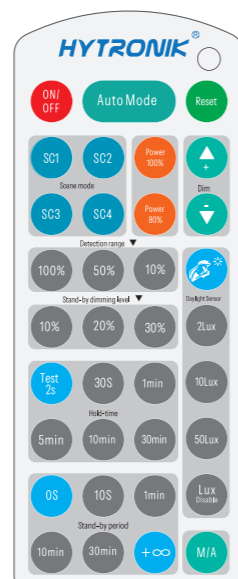
HRC-05

Note: the light will flash ONCE rapidly after receiving the command from the remote control successfully.

Scene mode

There are 4 scene modes fixed program built in the remote control to choose for different applications:

Scene options	Detection range	Hold-time	Stand-by period	Stand-by dimming level	Daylight sensor
SC1	100%	1min	10min	10%	2Lux
SC2	100%	5min	10min	10%	2Lux
SC3	100%	10min	30min	10%	10Lux
SC4	100%	10min	+∞	10%	50Lux

* End-user can adjust the settings by pressing buttons of detection range/hold-time/stand-by period/stand-by dimming level/daylight sensor. The last setting stays in validity.

Detection range

Press the buttons of "detection range" to set detection range at 10% /50% /100%.

Hold-time

Press the buttons of "hold-time" to set hold-time at 2s / 30s / 1min / 5min / 10min.

Daylight sensor

Press the buttons of "daylight sensor" to set daylight threshold at 2Lux / 10Lux / 50Lux. The fixture will not turn on if ambient natural light lux level exceeds the threshold preset when motion detected.

Stand-by period (corridor function)

Press the buttons of "stand-by period" to set stand-by period at 0s / 10s / 1min / 10min / 30min / +∞ .
* "0s" means on/off control; "+∞" means bi-level dimming control, and the fixture never switches off.

Stand-by dimming level

Press the buttons of "stand-by dimming level" to set the stand-by dimming level at 10% / 20% / 30%.

6. 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.

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	

7. Additional Information / Documents

1. Regarding precautions for HF sensor installation and operation, please kindly refer to
   www.hytronik.com/download →knowledge →Microwave Sensors - Precautions for Product Installation and Operation

2. Regarding Hytronik standard guarantee policy, please refer to
   www.hytronik.com/download →knowledge →Hytronik Standard Guarantee Policy