

Specification

Product Name: AC ON/OFF Sensor

Product Model: YH098S

Versions	Release/ change Date	Reason	Publishing
V1.0	25 th August, 2023		James Guo

【Product Feature】

- The product adopts the patented dual coupling pole antenna, which solves the problem of low installation height of the column antenna
- Widely used in parking lots and other places, to solve the problem that the traditional sensor can not detect the vehicle or the vehicle can be sensed by the sensor directly under the sensor
- Low sidelobe, no false trigger in metal reflection space.
- Sensor data can be set by DIP switch & remote control, which is convenient for engineering debugging
- Not affected by temperature, humidity, noise, dust, light etc..

【Parameter】

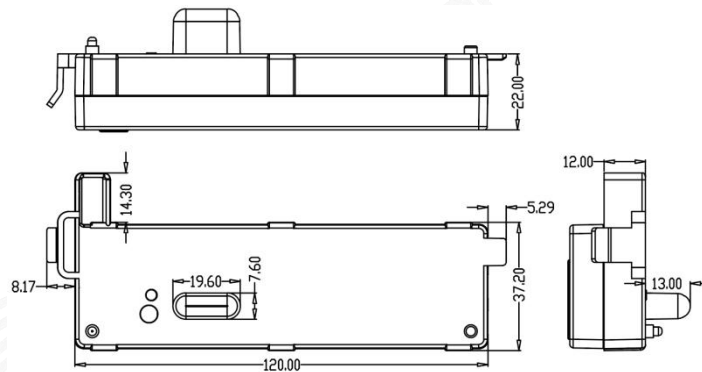
Input	
Rated Voltage	220-240V AC 50/60Hz
Stand-by Power	≤0.5W
Surge Test	L--N: 1kV
Output	
Output Control	ON-OFF
Type of Load	Inductive or Resistive
Load Capacity	400W(Inductive/LED) ; 800W(Resistive)
Max. Surge Capacity	7A relay 20A(50% Ipeak, twidth =200uS, 230Vac full load, cold start);
Sensor Parameter	
Operating Frequency	5.8 GHz ±75MHz, ISM wave band.
Transmitting power	1mW Max.
Detecting Radius	Ceiling installation 3m height: r ≥ 2.5m @1m/s; Horizontal installation 2m height: r ≥ 4m @1m/s; Test conditions: Product setting 100% sensitivity, indoor 60m ² open space
Mounting Height	3m (6m Max)
Environment	
Operating Temperature	-25~60°C
Storage Temperature	-40°C~80°C, Humidity: ≤85%(Non-condensing)
Certificate Standard	
Certificate	CE, RED(Pending), TUV(Pending)
Environmental Requirement	Compliant to RoHS 2.0, Reach
IP Rating	IP20
Product Category	Class II
Other	
Wiring	Press-in type terminal block, wiring 0.5-0.75 mm ²
Installation	Built-in
Package	Bubble bag + Clapboard + Carton(K=A)
Net Weight	N/A
Lifetime	5 years warranty @Ta

【Function Description】

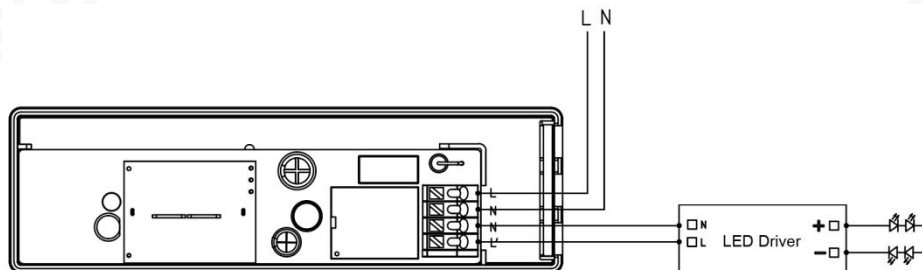
- | | |
|---|---|
| <input checked="" type="checkbox"/> ON-OFF function | When set at daylight disable model or the ambient light level is below the preset daylight lux, the sensor will switch on the light when motion is detected. After the Hold Time, the Light will off. |
| <input type="checkbox"/> 2-step dimming | N/A |
| <input type="checkbox"/> 3-step dimming | N/A |
| <input type="checkbox"/> Daylight priority | N/A |
| <input type="checkbox"/> Daylight harvesting | N/A |

【Product Information】

- Dimension (Unit: mm)



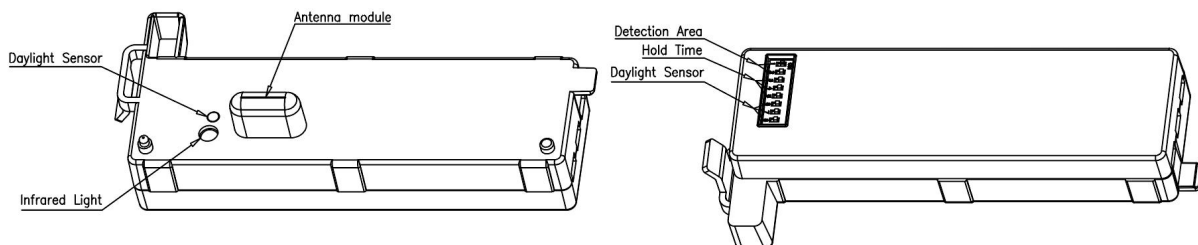
- Wiring



Note

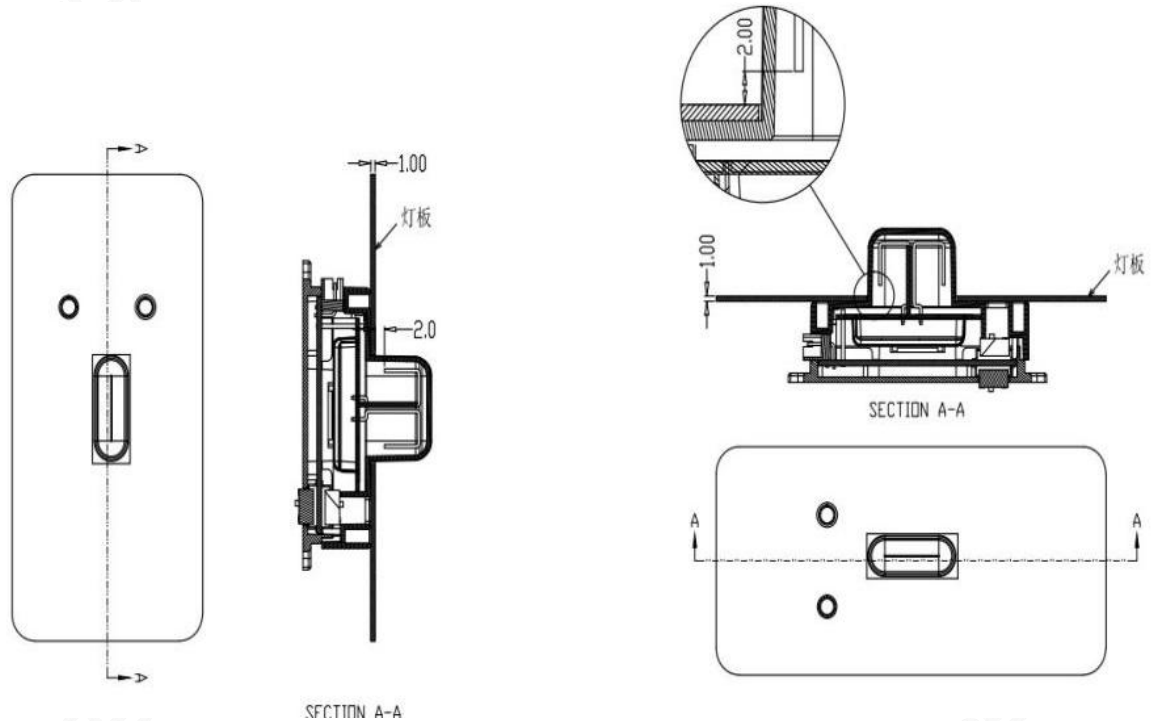
The sensor is allowed to be connected to one load only. The sensor may be damaged if connecting more than one load.

- Function



● Installation Instruction

Antenna installation tips



Suggestion: The bottom Angle of the light plate from the microwave antenna should be higher than 2mm, otherwise the induction distance will become closer

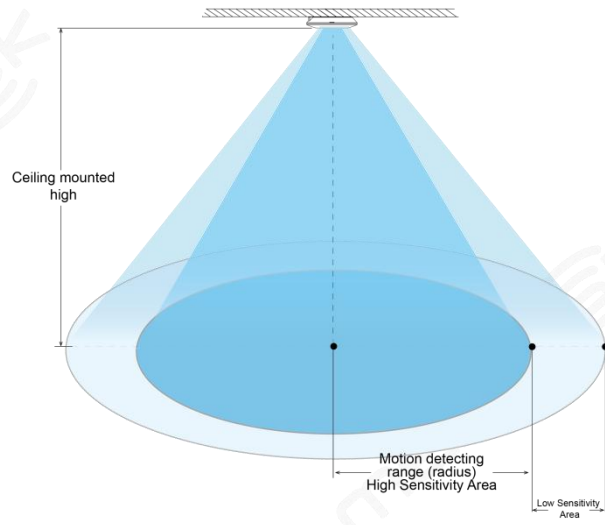
Note

The customer provides the housing. Please ensure that the upper surface of the sensor is close to the light board and does not shake during using.

【DIP Switch Setting】

	Detection Area			Hold Time				Daylight Sensor			
	1	2		3	4	5		6	7	8	
I	ON	ON	100%	ON	ON	ON	5s	ON	ON	ON	5Lux
II	-	ON	75%	-	ON	ON	30s	ON	ON	-	15Lux
III	ON	-	50%	ON	-	ON	90s	-	ON	-	30Lux
IV	-	-	25%	-	-	ON	5min	ON	-	-	50Lux
V				ON	ON	-	20min	-	-	-	Disable
VI				-	-	-	30min				

● Detection Range



【Remote Control】

- MH10

Remote Control Setting	Button	Remarks
		Press the "ON/OFF" button, the load light enters the normal on/off mode, and the sensing function is disabled. In the normal on mode, the load light enter ON after powering on again. If the load light is OFF, the load light is ON for 2 seconds and then enter OFF after powering on again.
		Press "Reset" button, all parameters are same as setting of DIP switch.
		Press "Sensor motion" button, the light quits from the normal on/off mode, and the sensor starts to work. (The latest setting stays in validity)
		N/A
		N/A
		N/A
		N/A
		N/A
		N/A
		Press "HS" button to set the detection area to high sensitivity. Press "LS" button to set the detection area to low sensitivity. The Induction mode is adjusted at the setting detection area. Note: This button is invalid for low-mount sensor.
		Daylight Sensor Set up Daylight Sensor: 5Lux/15Lux/30Lux/50Lux/100Lux/150Lux/Disable
		N/A
		Hold time Set up Hold time: 5s/30s/1min/3min/5min/10min/20min/30min
		N/A
		Detection Area Set up Detection Area: 25%/50%/75%/100%
		Remote Distance Toggle bottom can set the remote distance of remote control and sensor.

Remote control and code setting conversion

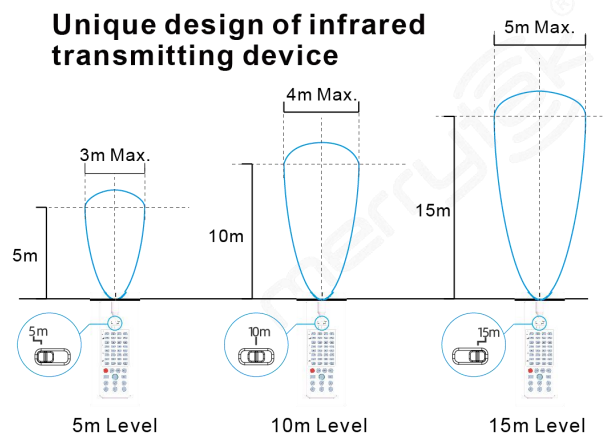
1. DIP switch setting convert to remote control

Press any button except "RESET" on the remote control, and the sensor settings convert to the function currently selected by the remote control. (No function button settings invalid)

2. remote control convert to DIP switch setting

- Press the "RESET" button on the remote control, and all settings return to the DIP switch settings of the sensor.
- Turn off the power, toggle any DIP switch, connect to the power, and all settings return to the DIP switch settings when supply power again.

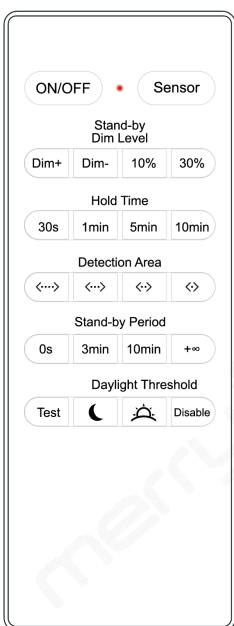
Unique design of infrared transmitting device



● MH12

MH12		
Remote Control Settings	Button	Function
	Detection area	Short press to set detection area :25% / 50% / 75% / 100%, long press 3s to transmit selected value.
	Send	Short press to transmit all selected value on remote screen.
	Stand-by Period	N/A
	Stand-by DIM Level	N/A
	Hold Time	Short press to set hold time 5s / 30s / 1min / 3min / 5min / 10min / 20min / 30min Long press 3s to transmit selected value
	Auto Mode	N/A
	Daylight Threshold	Short press to set Daylight threshold 5Lux / 15Lux / 30Lux / 50Lux / 100Lux / 150Lux / Disable. Long press 3s to transmit selected value. When setting Daylight Threshold to "Disable", the sensor will switch on the light when motion is detected regardless of ambient brightness level.
	Motion Sensor	Short press to quit from constant on/off mode, sensor start to work. (The sensor settings will return to the last saved values.)
	Dim+/Dim-	N/A
	Reset	Long press 3s "Reset" button, all parameters are same as setting of DIP switch or factory default settings. Note: Only the product has DIP switch, it will revert to the current DIP setting.
	S	N/A
	H/L	Press "H" botton to set the detection area to high sensitivity. Press "L" botton to set the detection area to low sensitivity. The Induction mode is adjusted at the setting detection area. Note: This button is invalid for low-mount sensor.
	2	2nd optional quick setting, short press to show the saved configuration, long press 3s to save current configuration. Press "Send" to transmit selected quick setting
	1	1st optional quick setting, short press to show the saved configuration, long press 3s to save current configuration. Press "Send" to transmit selected quick setting
	ON/OFF	Press the "ON/OFF" button, the load enters the constant ON/OFF mode, and the sensor function will be disabled. In the constant "ON" mode, the light turns on after powering on again. While in the constant "OFF" mode, the light turns on for 2s and then turns off after powering on again. Press "Reset" or "Motion Sensor" button will go to the sensor function mode.

● MH16



Button	Function	Description
ON/OFF	Normal ON/OFF	Press the ON/OFF button, sensing function is canceled and the light will remain ON/OFF. Sensor has power-off memory function, that is: Power on again under the "ON" mode of the load lamp, the load lamp enters "ON" mode. Power on again under the "OFF" mode of the load lamp, the load lamp enter the normally "OFF" mode after on for 2s.
Sensor	Recover sensing	Restore the induction function in ON/OFF mode; The parameter settings for the "Test" key will be saved in Test mode.
Dim+	Increasing Brightness	N/A
Dim-	Reducing Brightness	N/A
Stand-by Dim Level	Low Brightness	N/A
Hold Time	100% Brightness	30s, 1min, 5min, 10min
Detection Area	Detection Area	100% <--> , 75% <--> , 50% <--> , 25% <-->
Stand-by Period	Stand-by Time	N/A
Test	TEST Button	Press Test key, Detection Area: 100%, Hold Time: 2s, Stand-by Period: 0s; Restore the previous induction settings after power failure.
Daylight Threshold	Threshold	15lux ☾ , 50lux ☽ , Disable

Note: When a product with an infrared remote control receiver is built into a low color temperature lamp, the wavelength of lamp bead may coincide with the wavelength of the infrared remote control and interfere with signal reception, and it may cause the remote control distance to be short. The remote control distance shall be subject to actual testing.

【Initialization】

After power on, the sensor automatically turns on light to 100% brightness and will be turned off after 10 seconds. During initialization, sensor is not able to detect movement.

【Default Setting】

Sensitivity: 100%, Hold time: 5s, Daylight sensor: Disable

【Application Notice】

- Sensor should be installed by a professional electrician. Please turn off power before installing, wiring, or setting the DIP switches.
- Microwave sensor has good penetration ability to plastic and wood, but microwaves cannot penetrate metal. Do not place product in a closed or a half-closed metal lamp. Neither metal nor glass is not allowed to cover above the product. If antenna needs to pass through the metal plate, please ensure that the top of sensor is close to the metal plate.
- Sensitivity area is related to moving speed of objects, size of moving objects, mounting height, mounting angle, working environment, reflecting materials and etc.. Given detecting area is typical value that was measured by 165cm high testers in an indoor open environment.
- The detection area of the wall installation will be greatly increased compared with ceiling installation. If wall installation is used, please reduce the sensitivity or contact us to confirm the use setting.
- The daylight thresholds are measured on a sunny day without shadow and in an ambient light diffuse reflection status. Different environment and climate cause different brightness values that daylight sensor measures.
- The installation spacing between sensors is recommended to be greater than 2m. Keep it away from wireless devices such as switches and routers, and the installation spacing between sensors and routers is recommended to be greater than 2m.
- Sensor should not be covered or hidden by metal, PCB, LED tray etc.. The spacing between the sensor antenna and surrounding materials should be greater than 5mm.
- Vibration signals will be regarded as moving signals to trigger sensor. Installing sensor should be away from the object that vibrates for a long time, such as large metal equipment, pipes, air conditioning outlets, exhaust vents, smoke exhaust machine ports, shaking fans, etc. Pets in detecting area may cause false trigger.
- The antenna surface of microwave module should be away from input AC, output DC, rectifier bridge, transformer, switch tube and other high-power devices to avoid high frequency signals affecting the normal operation of microwave sensor's antenna.

- Sensor is for indoor use only. The waterproof effect for outdoor or half-outdoor use will be affected. Wind, rain, and moving objects may cause false triggering.
- For the new installation environment, it is recommended to test 5pcs samples before installation.