

SPECIFICATION

Product Name: ON/OFF Sensor for Tri-proof Light

Model No.: MC098S 2

Issue Date: August 26, 2021

CUSTOMER APPROVED

PRODUCT DIRECTOR APPROVED	SALES CHECKED	R&D CHECKED	PREPARED
			

1. Features



- Low Impedance sensor antenna patent helps anti-interference kinds of wireless signal like 5G, Wi-Fi, Bluetooth etc.
- Patented dipole antenna design brings reliable detecting, avoid false trigger when sensor built-in backside of metal LED plate.
- Comply with RED approval.
- Non-isolated switching power supply, will not affect the PF value of the whole lamp, in accordance with the latest ERP.
- Adjustable detecting sensitivity via DIP switches, suitable to variety of installation sites.
- Ultra-slim design for Tri-proof LED light
- Support 6m Max. Mounting height .
- 5 years warranty

2. Parameter

Input	Operating Voltage Range	198-264V AC, 50Hz/60Hz
	Rated Voltage	220-240V AC, 50Hz/60Hz
	Stand-by Power	≤0.5W
	Surge Test	L--N: 1kV
Output	Working Mode	ON/OFF function
	Type of Load	Inductive or Resistive
	Load Capacity	400W(Inductive) ; 800W(Resistive)
	Max. Surge Capacity	30A (50% I _{peak} , t _{width} =500uS, 230Vac full load, cold start); 60A (50% I _{peak} , t _{width} =200uS, 230Vac, full load, cold start)
Sensor Parameters	Operating Frequency	5.8 GHz ±75 MHz , ISM Band.
	Transmitting power	0.5mW Max.
	Hold time	5s//30s/90s/5min/20min/30min
	Detection Sensitivity	100%/75%/50%/25%
	Daylight Sensor	2Lux/10Lux/30Lux/50Lux/Disable
	Detecting Radius	4-6m (mounting height 3m)
	Mounting Height	2.5-6m supported, and 4m is of the max. detecting radius
	Detecting Angle	150° (Wall mounted), 360° (Ceiling mounted)
Operating Environment	Operating Temperature	-25℃...+60℃
	Storage Temperature	-40℃...+80℃(Humidity: 10%-95% Non-condensing)
Certificate Standards	Safety standards	EN61058-1
	EMC standards	EN300440; EN301489-1; EN55015; EN61547; EN61000-3-2; EN61000-3-3; EN62479
	Environmental Requirement	Compliant to RoHS
	Certificate	CE, RED

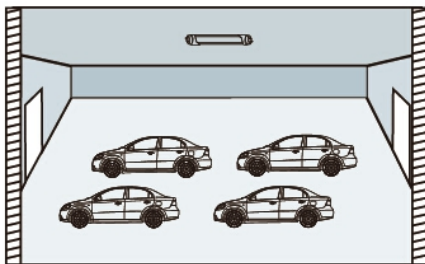
Others	Wiring	Press-in Type Terminals, wire diameter : 0.75-1.5mm ²
	IP Rating	IP20
	Protection Class	Class II
	Installation	Built-in
	Dimension	77.5*34.5*22mm
	Package	Bubble bag+Clapboard + Carton (K=A)
	Net Weight	58±2g
	Lifetime	5 years warranty @Ta 230V full load

Note

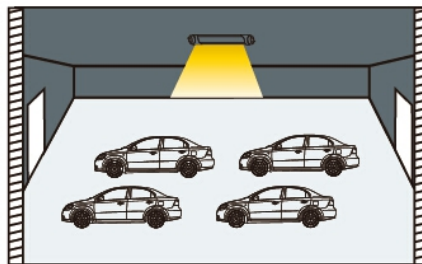
1. "N/A" means not available.
2. Detection area is effected on volume of motion object and motion speed. The detection area is tested by a 170cm height person and walking speed is 0.3m/s.

3. Function

On/OFF Function



- 1 With sufficient ambient light, the light will not be switched on even if with motion signal.

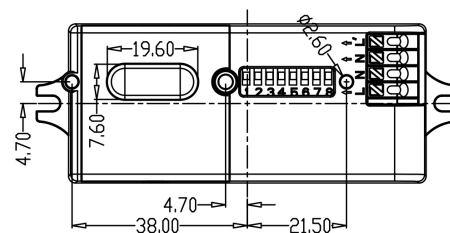
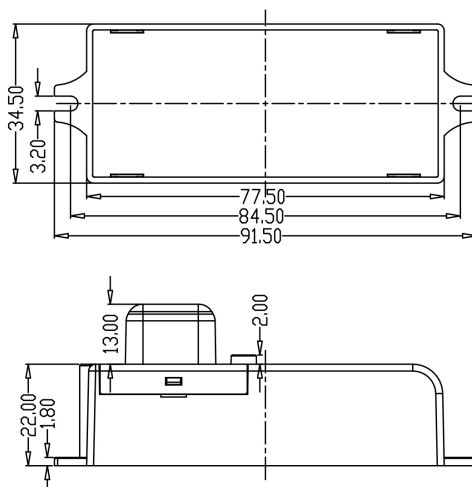


- 2 With insufficient ambient light, the sensor switches on the light when motion is detected.



- 3 After elapse of hold time, the sensor switches off the light when no motion is detected.

4. Dimension (mm)



Shenzhen Merrytek Technology Co.,Ltd

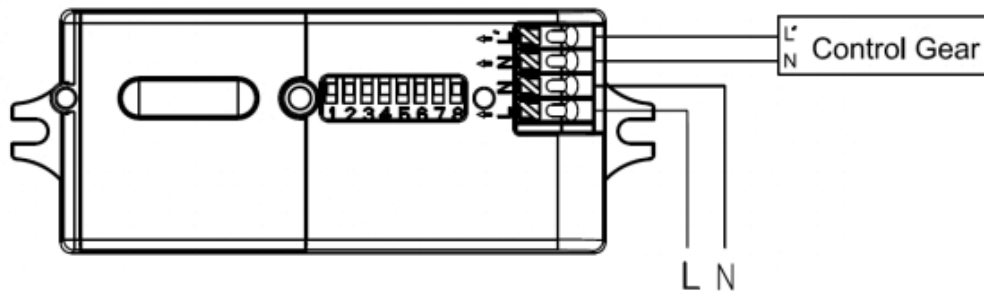
Add: No.17th Building, Dianda Guyuan Industrial Park, Mashantou, Matian, Guangming District, Shenzhen, China, 518106

Tel: +86 (0)755-2305 7253

Fax: +86 (0)755-2786 3012

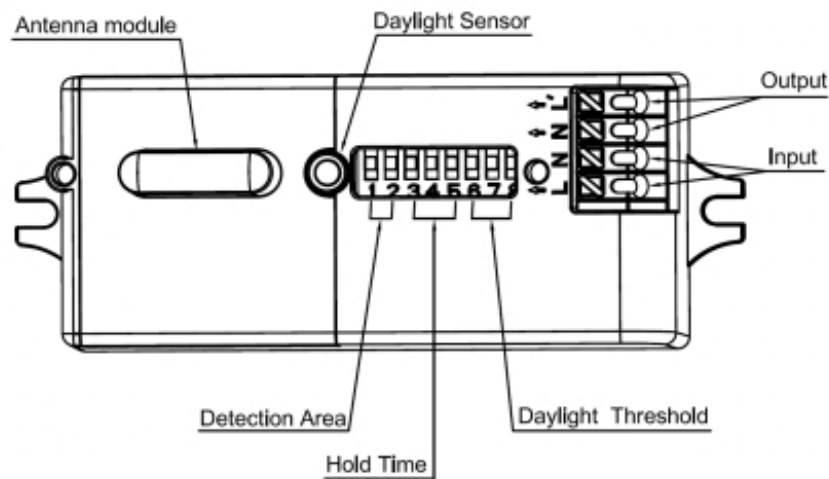
Website: www.merrytek.com

5. Wiring



*The sensor is designed to connect one load only. Connect more than one loads may damage the sensor.

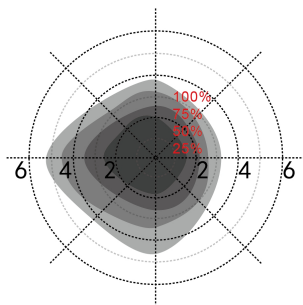
6. Structure



7. Radiation Pattern

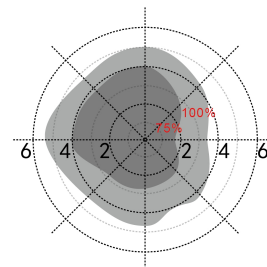
1) Ceiling mounting

Ceiling mounted height: 3m
Sensitivity: 100%/75%/50%/25%

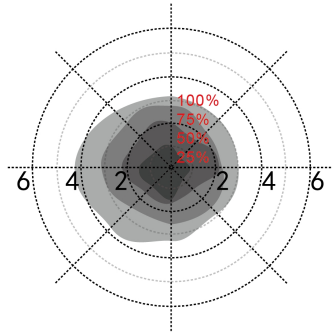


Normal moving (Speed:1m/s)

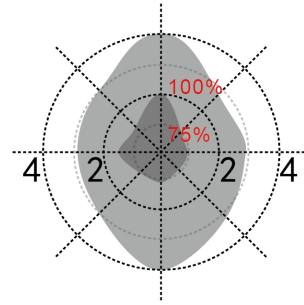
Ceiling mounted height: 6m(*)
Sensitivity:100%/75%



Normal moving (Speed:1m/s)



Slow moving (Speed 0.3m/s)



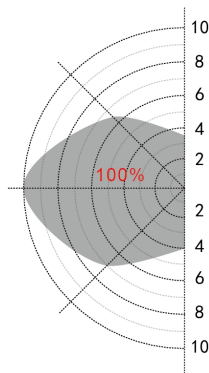
Slow moving (Speed: 0.3m/s)

*Only 100%/75% detection sensitivity is workable when installed at 6m mounting height. 25%/50% sensitivity is not able to detect motion signal.

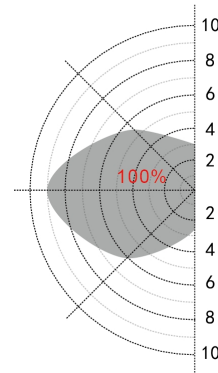
2) Wall mounting

Horizon mounted height: 2m

Sensitivity: 100%



Normal moving (Speed: 1m/s)



Slow moving (Speed 0.3m/s)

8. DIP Switch Setting

Detection Area (Sensitivity)

	1	2
100%	ON	ON
75%	-	ON
50%	ON	-
25%	-	-

Hold Time

	3	4	5	
I	ON	ON	ON	5S
II	-	ON	ON	30S
III	ON	-	ON	90S
IV	-	-	ON	5min
V	ON	ON	-	20min
VI	-	-	-	30min

Daylight Sensor

	6	7	8	
I	ON	ON	ON	2Lux
II	ON	ON	-	10Lux
III	-	ON	-	30Lux
IV	ON	-	-	50Lux
V	-	-	-	Disable*

*Disable” means the daylight sensor not work. it will turn on light once motion is detected regardless of ambient light.

9. Override Function

Power off, quick switch ON/OFF sensor 3 times (ON-OFF-ON-OFF-ON) within 2sec to override sensor function.

Lights will blink 3 times and then switch ON all the time. Power off and on again to recover sensor function.

10. Initialization

After power on, the sensor automatically turns on light at 100% brightness. After 10sec, it turns off the light. During the initialization, the sensor is not able to detect movement.

11. Factory Setting

Detection area: 100%, Hold Time: 5S, Daylight Sensor: Disable

12. Application Notice

- 1) The sensor should be installed by a professional electrician. Please turn off the power before installing, wiring, changing the setting of the DIP switch.
- 2) The sensor which installed in the plastic and glass lampshade will reduce the sensitivity. For every 3mm increase in thickness, the sensitivity will be reduced by 20%.
- 3) The light sensitivity threshold is in a sunny environment, no shadow and ambient light diffuse reflection. Ambient lux level will be different in different environment, weather, climate, time-of-day and season.
- 4) The parameters of the sensor may need to be reconfigured in different installation environments.
- 5) This sensor is for indoor use only. It will affect the waterproof effect for outdoor use. Wind, rain, and moving objects around will cause false triggering.
- 6) The distance between any inductive sensors should be greater than 3m.
- 7) Do not place the sensor close to high-density objects such as metal, glass, concrete walls, etc, false triggering could happen. When the sensor is installed in a metal lamp, metal reflective surface, or a narrow enclosed environment, the microwave will be reflected repeatedly and cause false triggering. Please reduce the sensitivity or contact the manufacturer for technical support.
- 8) Please ensure that there are no moving signals around the sensor, such as fan, DC motor, sewer pipe, air outlet, etc., the sensor may generate false trigger.
- 9) You are advised to test 5 samples before mass application of sensor in a new lighting project.
- 10) Due to continuous improvement, the contents of this instruction could be changed without prior notice.
- 11) If the sensor is built under metal board, make sure the sensor surface should be seamless close to the metal plate without space.

