

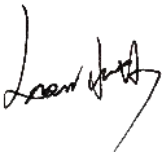
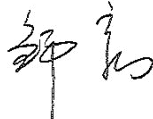
SPECIFICATION

Product Name: Microwave motion sensor

Model No.: MC090S E

Issue Date: September 21, 2019

CUSTOMER APPROVED

PRODUCT DIRECTOR APPROVED	SALES CHECKED	R&D CHECKED	PREPARED
			

Shenzhen Merrytek Technology Co.,Ltd

Add: 2nd and 3rd floor, NO.3 Building, 380 Xiangshan Avenue, Luotian, Yanluo, Baoan, Shenzhen, 518127, China
Tel: +86 (0)755-2305 7253 Fax: +86 (0)755-2786 3012 Website: www.merrytek.com

1. Features



1. Microwave motion detection version.
2. Eight DIP switch setting, distance, time, daylight sensor, multi-speed adjustable.
3. Ultra-small mounting size, multiple mounting options, support for top and bottom mounting options.
4. Super cost-effective, support a variety of lamps, tri-proof lamps, ceiling lamps.
5. The infrared sensor is used to filter out the light sensor, and the light sensitivity value is more accurate, and is not affected by cloudy and sunny days.
6. Low impedance 5.8G antenna for superior immunity to interference.
7. Batch over RED, TUV certification.

2. Parameter

Input	Operating Voltage Range	198-264VAC 50/60Hz
	DC Input Voltage	N/A
	Rated Voltage	220-240VAC 50/60Hz
	No-load Power	≤1.0W
	Stand-by Power	≤0.5W
	Surge Test	Between L and N: 1KV
Output	Working Mode	ON/OFF
	Type of Load	Resistive or Capacitive
	Load Capacity	800W (Resistive) or 400W (Capacitive)
	Current of Load	N/A
	Load surge current	30A relay - 30A (test twidth 500us @230Vac at 50% Ipeak, cold start at full load) or 60A (test twidth 200us @230Vac at 50% Ipeak, cold start at full load)
Interface	1-10V dimmer	N/A
	Synchronization control interface	N/A
	High and Low Level Interface	N/A
	PWM control interface	N/A
	Interface terminal wiring mode	N/A
Sensor	Operating Frequency	5.8 GHz ±74.9 MHz. ISM wave band
	Transmitting power	0.5mW Max.

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	Hold time	5S/30S/60S/3min/5min/10min/20min/30min
	DIM down	N/A
	Cut off	N/A
	Detection Area	100% / 75% / 50% / 25%
	Daylight Sensor	2Lux/10Lux/25Lux/50Lux/Disable
	Daylight on/off	N/A
	Detecting Radius	4-7m (Installed at 3m high)
	Mounting Height	2.5-6 m(Suction Top Installation)
	Detecting Angle	Ceiling mount 150°
Wireless module	Operating Frequency	N/A
	Transmitting power	N/A
	transmission distance	N/A
	modulation mode	N/A
	Coding group number	N/A
Operating Environment	Operating Temperature	-20℃...+60℃ Humidity: 85% (non-condensing)
	Storage Temperature	-40℃...+80℃
Certificate Standards	Safety standards	EN61058-1
	EMC standards	EN300440, EN301489-1, EN55015, EN61547, EN61000-3-2, EN61000-3-3, EN62479
	Environmental Requirement	RoHS
	Certificate	CE, TUV & RED
Others	Input/output terminal specifications	0.5-0.75mm ²
	IP Rating	IP20
	Protection Class	Class II
	Installation	Built-in installation
	Dimension	62*36*25mm
	Package	Bubble bag + partition + outer box (K=A)
	Net Weight	36g
	Lifetime	50,000h @ Ta 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 165cm height person and walking speed is 0.5m/s.

3. Function

On/OFF Function



With sufficient light, the lamp doesn't switch on.

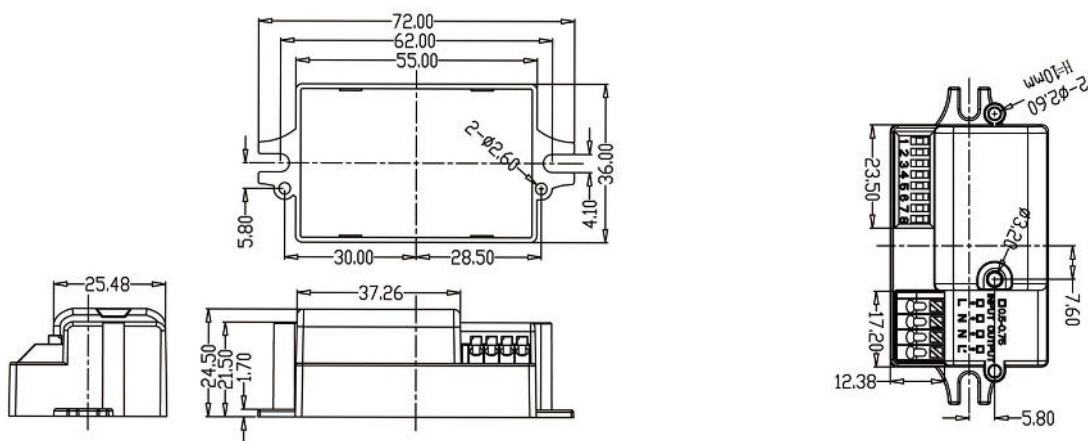


With insufficient ambient light, the sensor switches on the lamp when motion is detected.

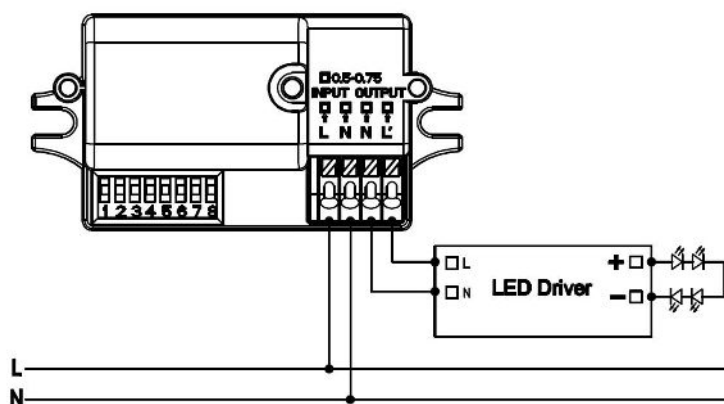


After hold time, the sensor switches off the lamp when no motion is detected.

4. Dimension (mm)

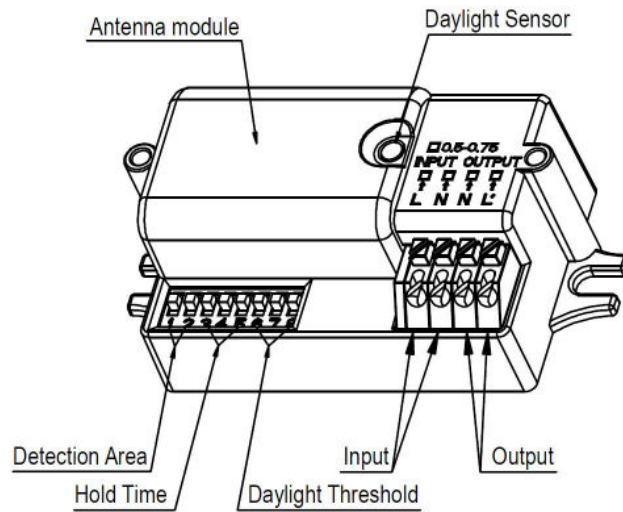


5. Wiring



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

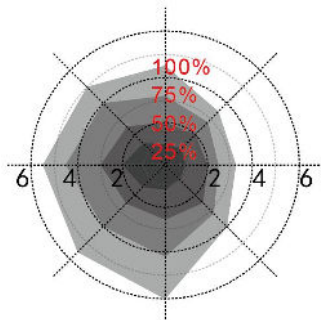
6. Structure



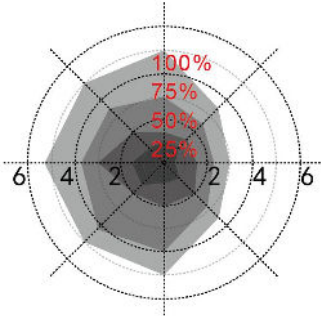
7. Radiation Pattern

Ceiling mounting

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

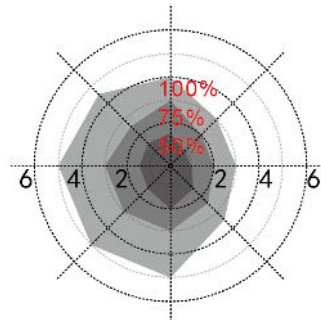


Normal moving (Speed:1m/s)

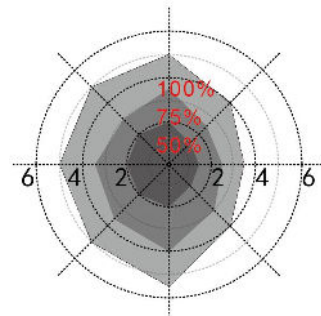


Slow moving (Speed 0.3m/s)

Ceiling mounted height: 6m(*)
Sensitivity: 100%/75%/50%



Normal moving (Speed:1m/s)



Slow moving (Speed: 0.3m/s)

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

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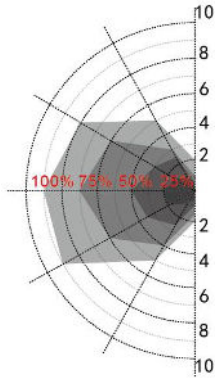
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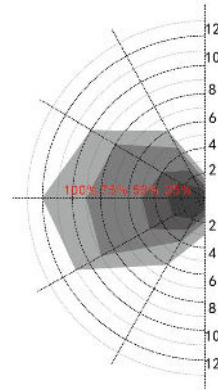
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Wall mounting:

Wall mounted height: 2m
Sensitivity: 100%/75%/50%/25%



Normal moving (Speed: 1m/s)



Slow moving (Speed 0.3m/s)

8. Function Dialing Settings

Detection Area

	1	2	
I	ON	ON	100%
II	ON	-	75%
III	-	ON	50%
IV	-	-	25%

Hold Time

	3	4	5	
I	ON	ON	ON	5S
II	ON	ON	-	30S
III	ON	-	ON	1min
IV	ON	-	-	3min
V	-	ON	ON	5min
VI	-	ON	-	10min
VII	-	-	ON	20min
VIII	-	-	-	30min

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Daylight Sensor

	6	7	8	
I	ON	ON	ON	2Lux
II	ON	ON	-	10Lux
III	-	ON	-	25Lux
IV	ON	-	-	50Lux
V	-	-	-	Disable

*When set to Disable gear, the sensor will turn on the light as long as the motion of the object is detected, regardless of whether the illumination is adequate or not.

9. Override Function

Quick switch ON/OFF 3 times within 2sec to override sensor function. Lights will switch on all the time. Power off and on again to recover sensor function.

10. Initialization

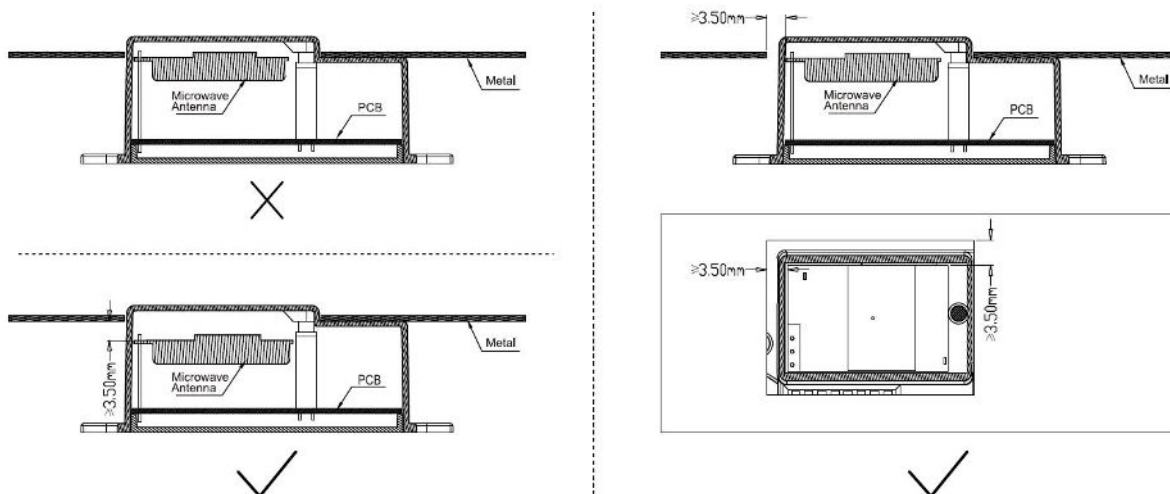
After power on, the sensor automatically turns on light at 100% brightness. After 10sec, it turns off the light. During the initialization, the sensor is not able to detect movement.

11. Factory settings

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

12. Use Caution

1. Be sure to cut off the power supply before installing or adjusting the setting of the dial switch.
2. The microwave cannot pass through the metal, make sure there are no metal above the sensor.
3. It has to be at least 3.5mm away from metal around the microwave antenna. It is not allowed to place antenna and metal on the same horizontal.



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