



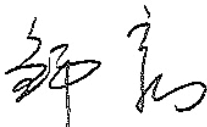
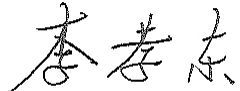
SPECIFICATION

Product Name: DC Microwave Sensor

Model No.: MC002D 7 5

Issue Date: March 17, 2021

CUSTOMER APPROVED

PRODUCT MANAGER APPROVED	SALES CHECKED	R&D CHECKED	PREPARED
			

Shenzhen Merrytek Technology Co.,Ltd

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

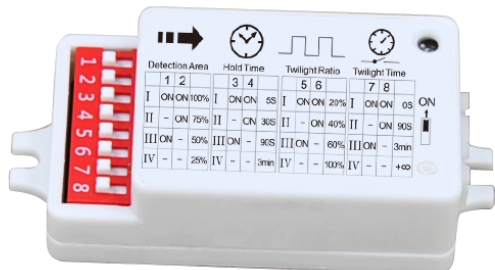
Tel: +86 (0)755-2305 7253

Fax: +86 (0)755-2786 3012

Website: www.merrytek.com

*Please read the 9th instruction carefully before using this product, since the performance of DC-powered microwave products is closely related to the stability and characteristics of the auxiliary power supply of the LED driver.

1. Features



- Powered by low voltage 12V DC.
- Operating mode: high-low level and PWM.
- Super compact design.
- 5 years warranty.

2. Parameter

Input	Operating voltage range	12V DC \pm 2V
	DC input voltage	12V DC \pm 2V
	Rated voltage	12V DC
	Voltage Ripple	<300mVp-p
	No-load power	<0.15W
	Stand-by power	<0.15W
	Surge test	1. PWM, frequency: 1kHz 2. High- low level (when PWM is 0V)
Dim Interface	PWM control	Yes
	Wiring method	Lead wire
Sensor Parameters	Operating frequency	5.8 GHz \pm 75 MHz, ISM wave band.
	Transmitting power	0.5mW Max.
	Hold time	5S/30S/90S/3min(only for PWM signals)
	Stand-by DIM level	100%/60%/40%/20%(only for PWM signals)
	Stand-by period	0S/90S/3min/+ ∞ (only for PWM signals)
	Detection area	100%/75%/50%/25%
	Detecting radius	4-7m (mounting height 3m)
	Mounting height	3-4m (6m Max.)
	Detecting angle	150° (Wall mounted), 360° (Ceiling mounted)
Operating Environment	Operating temperature	-25℃~60℃
	Storage temperature	-40℃~80℃
Certificate Standards	Environmental requirements	Compliant to RoHS
	Certification	CE(Self declaration)
Others	Input/output (terminal/wiring) type	AWG24, exposed line length: 290mm, 4pin female connector
	IP Rating	IP20
	Protection Class	Class II

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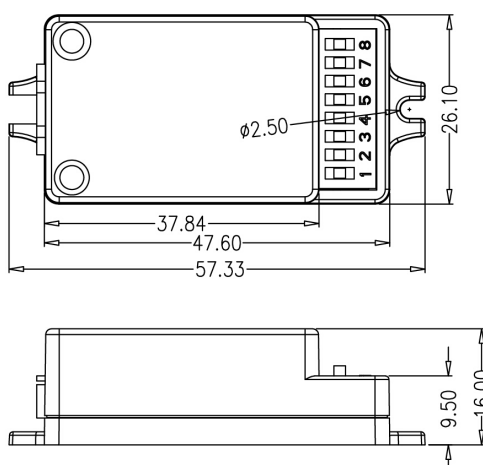
Website: www.merrytek.com

	Installation	Built-in installation
	Dimension	53*26.1*16mm
	Package	Bubble bags+ Clapboard +Outer Carton (K=A)
	Weight	15.6g
	Lifespan	5 years warranty @Ta 230V full load

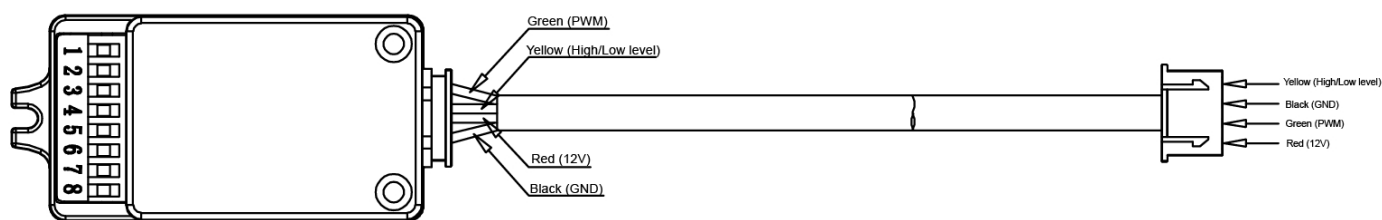
Note

1. "N/A" means not available.
2. Detection area is affected 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. Dimension (mm)

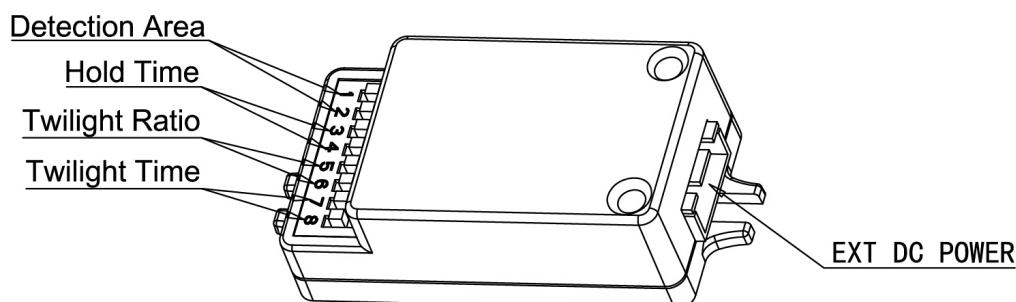


4. Wiring



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

5. Structure



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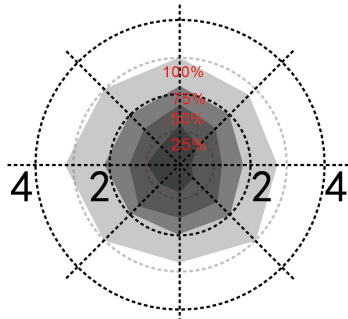
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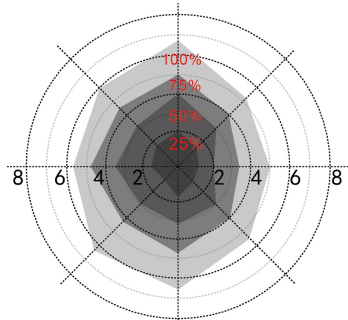
6. Radiation Pattern

Ceiling mounting:

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

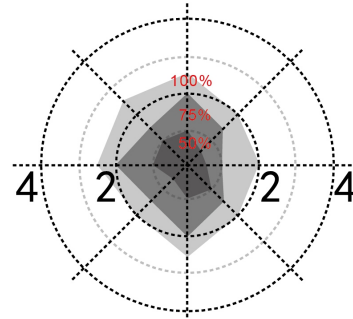


Normal moving (Speed: 1m/s)

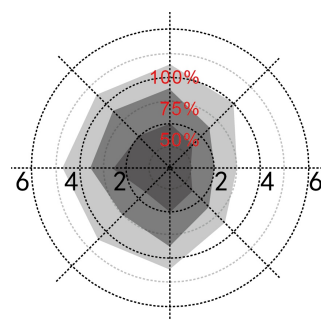


Slow moving (Speed: 0.3m/s)

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



Normal moving (Speed: 1m/s)

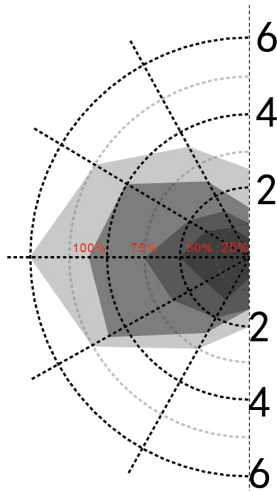


Slow moving (Speed: 0.3m/s)

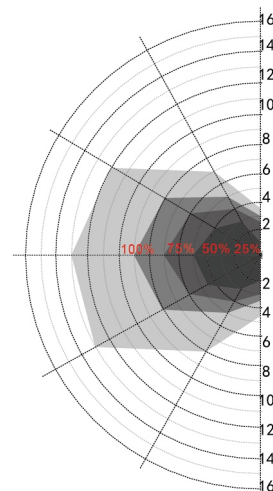
*100% /75%/50% detection sensitivity is workable when installed at 4m mounting height. Only 25% sensitivity is not able to detect motion signal.

Wall mounting:

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



Normal moving (Speed: 1m/s)



Slow moving (Speed: 0.3m/s)

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7. DIP Switch Setting

1) Detection Area (Sensitivity)

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

2) Hold Time

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

3)Twilight Ratio

	5	6	
I	ON	ON	20%
II	-	ON	40%
III	ON	-	60%
IV	-	-	100%

4) Twilight Time

	7	8	
I	ON	ON	0S
II	-	ON	90S
III	ON	-	3min
IV	-	-	+∞

8. Factory Setting

Detection Area: 100%, Hold Time :5S , Twilight Ratio: 20%, Twilight Time: 0S

9. Instruction

- 1) Be sure to power off before adjusting DIP switch setting.
- 2) When the microwave sensor is installed in a metal lighting fixture or space with large reflector, for example a warehouse with metal roof, the microwave will be reflected and cause the lights permanently illuminated even if without motion signal. Please reduce the detection area (sensitivity) to solve the problems, or contact the microwave sensor manufacturer to provide technical support.
- 3) Make sure the sensor not close to or be blocked by high density material, such as metal, glass, concrete walls etc. The materials will reduce or block microwave and cause false trigger.
- 4) Make sure there are no fans or other vibrating objects in installation area. The movements will trigger sensor as well.
- 5) A stabilized DC power supply with stable output voltage and low ripple must be used, the power supply ripple should be less than 300mV, and the load current should be greater than 25mA.

10. Version Change

Version	Date	Description
A0	November 20, 2018	Released new product