

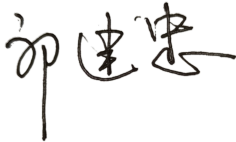
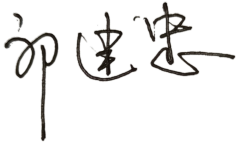


SPECIFICATION

Product Name: Microwave Motion Sensor

Model No.: MC002D 6

Issue Date: Nov 17, 2022

CUSTOMER APPROVED

PRODUCT DIRECTOR APPROVED	P&M CHECKED	R&D CHECKED	PREPARED
			

*Please read the 10th 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



- 1) Built in motion sensor and daylight sensor
- 2) Powered by low voltage 7.5-12VDC, output ON/OFF and PWM signal
- 3) Slim design makes is suitable for more luminaries
- 4) Sensor parameter can be optional via DIP switch
- 5) 5 years warranty

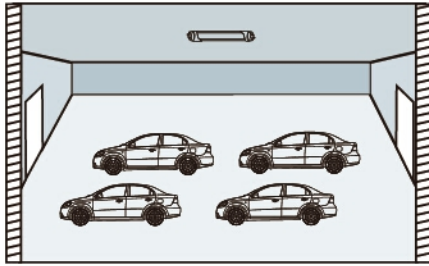
2. Parameter

Input	DC Input Voltage	7.5-12V DC	
	Input Current	< 15mA	
	Voltage Ripple	<100mVp-p	
Output	Working Mode	5V High and low frequency signal(output high level when PWM is 0V) 5V PWM signal	
Sensor Parameters	Operating Frequency	5.8 GHz ±75 MHz	
	Transmitting power	1mW Max.	
	Hold time	5S/90S/3min/10min	
	Stand-by DIM Level	20%(different driver, different brightness)	
	Stand-by period	0s/30S/10min/+∞(PWM signal)	
	Detection Area	100%/75%/50%25%	
	Daylight Sensor	5lux/15Lux/50Lux/Disable(ambient light diffusion)	
	Detecting Radius (Detection Area 100%)	Ceiling mounting(mounting height 3m): 0.3m/S ≥4m, 1m/S ≥2.5m ; Wall Mounting(mounting height: 2m): 0.3m/S ≥6m, 1m/S ≥3m	
	Mounting Height	Typical value: 3m (6m Max)	
Operating Environment	Operating Temperature	-25~70℃	
	Storage Temperature	Temperature: -40℃...+80℃ Humidity: 85%(non-condensing)	
Certificate Standards	Certificate	CE RED	
	Environmental Requirement	Compliant to RoHS	
Others	Wiring Method	terminal	4pin 2.54mm terminal
		wires	AWG24, Exposed wire diameter: 285mm, 4pin terminal block
	IP Rating	IP20	
	Installation	Built-in installation	
	Dimension	See "4. Dimension"	
	Package	Clapboard+carton(K=A)	

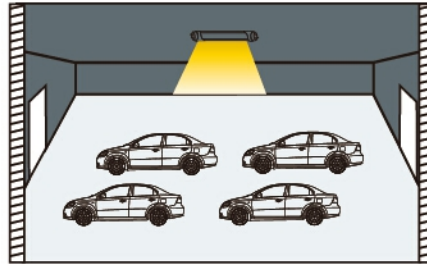
Others	Net Weight	18g without cable
	Lifetime	5 years warranty@Ta
Note 1. "N/A" means not available. 2. Detection area is effected on volume of motion object and motion speed. The detection area is tested by a 165cm height person and walking speed is 0.3m/s.		

3. Function

1) On/OFF Function (stand-by period be set to "0"s)



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

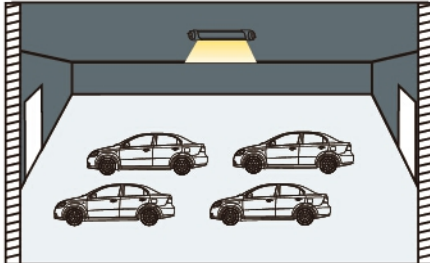


2 With insufficient ambient light, the sensor switches on the light when motion is detected.

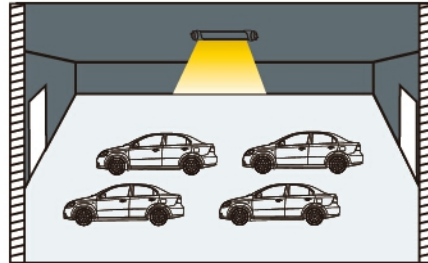


3 After elapse of hold time, the sensor switches off the light when no motion is detected.

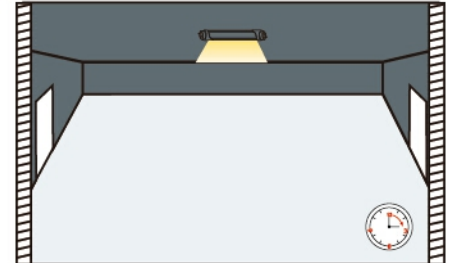
2) 2-step dimming function (stand-by period be set to "+∞")



1 If there is no motion detected, the light will be remained at a low light level all the time.

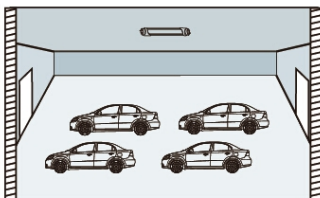


2 When motion is detected, the sensor will switch on the light to 100% brightness

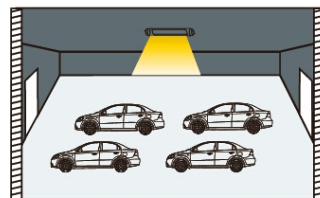


3 After elapse of hold time, the sensor dims the light at the present low light level if no motion is detected.

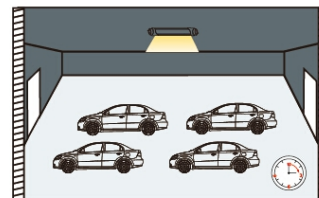
3) 3-step dimming function (stand-by period be set to "30S/10min")



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.

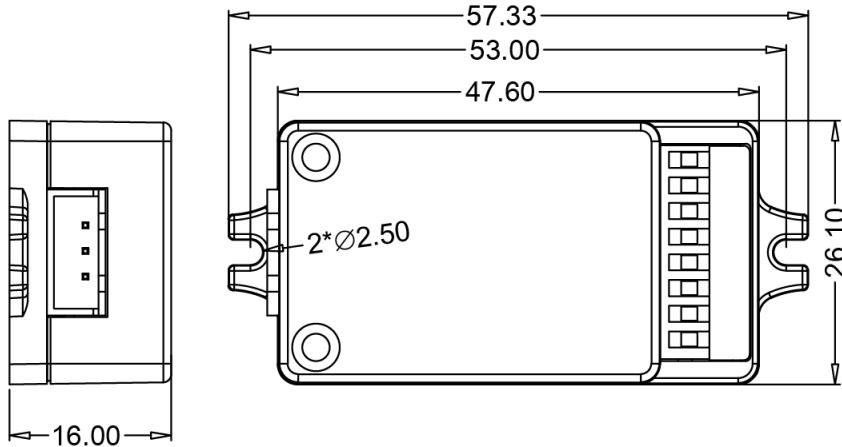


3 After elapse of hold time, the sensor dims the light at a low light level if no new motion is detected.

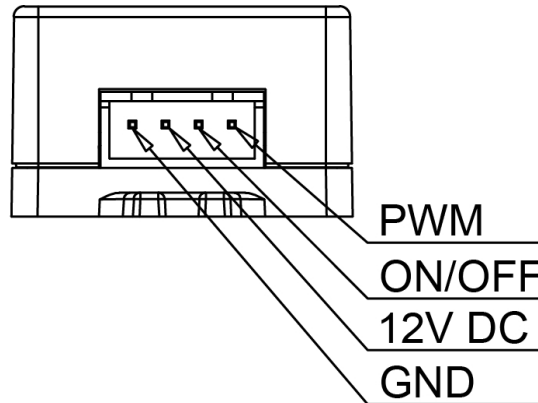


4 After elapse of standby period, the sensor switches off the light if no motion is detected in the detection zone.

4. Dimension (mm)

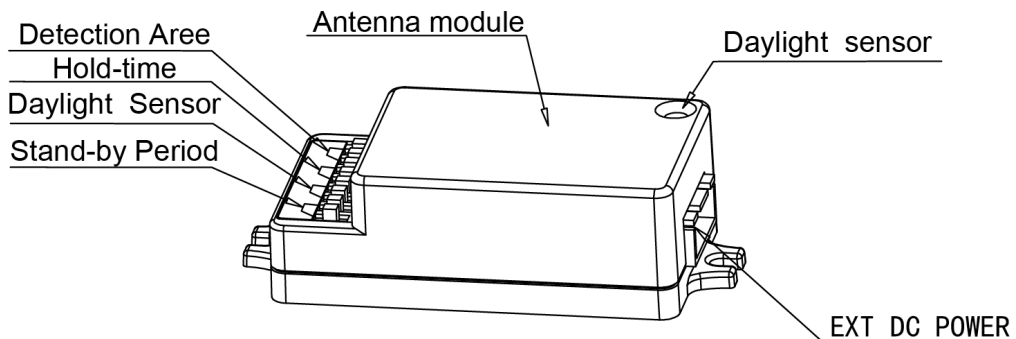


5. Wiring



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

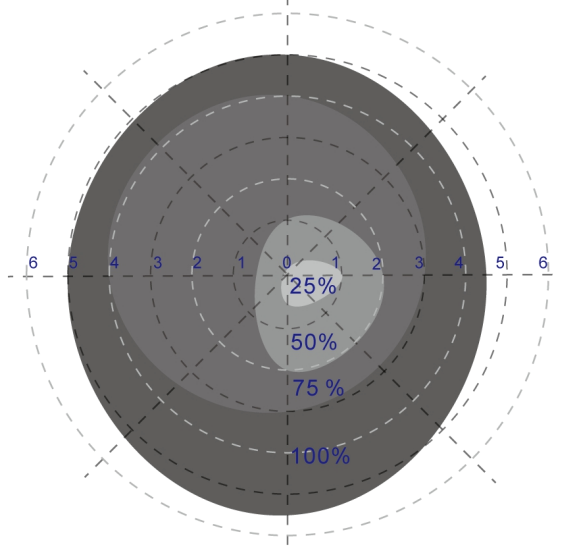
6. Structure



7. Radiation Pattern

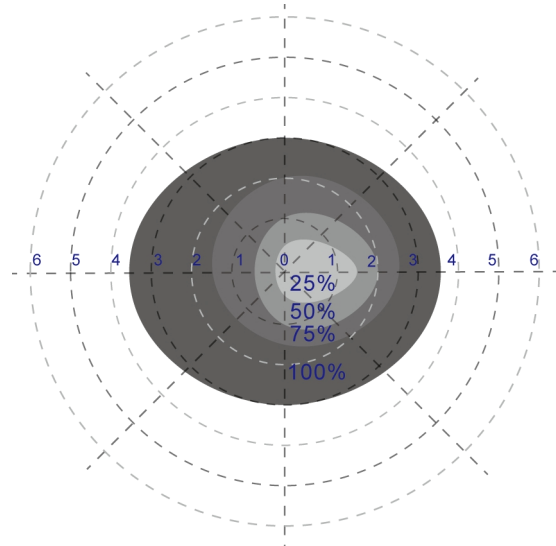
Ceiling mounting

Mounting height: 3m
Detection area: 100%/75%/50%/25%



Moving speed: 1m/s

Mounting height: 3m
Detection area: 100%/75%/50%/25%



Moving speed: 0.3m/s

8. Dip switch setting

1、Detection Area

	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	90S
III	ON	-	3min
IV	-	-	10min

3、Daylight Sensor

	5	6	
I	ON	ON	$+\infty$
II	-	ON	50Lux
III	ON	-	15Lux
IV	-	-	5Lux

4、Stand-by Period

	7	8	
I	ON	ON	0S
II	-	ON	30S
III	ON	-	10min
IV	-	-	$+\infty$

9. Initialization

Sensor turns on the light at 100% brightness when first power on, and turns off the light after ten seconds. During the initialization, sensor does not detect moving signals.

10. Factory Setting

Detection Area: 100%, Hold Time:5S ,Stand-by period:0S , Stand-by dim level:25%, Daylight sensor: Disable

11. 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) Microwaves cannot penetrate metal. Do not place the product in a closed metal lamp or a half-closed metal lamp and metal or glass are not allowed to cover above the product. If antenna needs to pass through the metal plate, please ensure that the top of the sensor is close to the metal plate.
- (3) The distance between any inductive sensors should be greater than two meters. Keep sensor away from switches, routers and other wireless devices to avoid radio interference, more than three meters. The antenna surface of the microwave module should not be directly facing input AC and output DC to avoid low or high frequency signals affecting the normal operation of microwave sensor's antenna.
- (4) Vibration signals will be regarded as moving signals to trigger the sensor. Avoid using objects that vibrate for a long time around the sensor, such as large metal equipment, pipes, air conditioning outlets, exhaust vents, smoke exhaust machine ports, shaking fans, etc. Pets in detecting area may trigger sensing.
- (5) This model is suitable for ceiling mounting. If wall mounting, the detecting area will enlarge, which makes microwave penetrate wall or light not turn off. Please change "detection area" to 25%. If 25% is useless, please avoid wall mounting or contact the manufacturer for technical support.
- (6) This model is suitable for ceiling mounting. If wall mounting, the detecting area will enlarge which makes microwave penetrate wall or light not turn off, and please change sensitivity to 25%. If 25% sensitivity is useless, please avoid wall mounting or contact the manufacturer for technical support.
- (7) Due to continuous improvement, the contents of this instruction could be changed without prior notice.
- (8) Different PWM drivers, different low brightness. The daylight threshold is measured in a sunny environment without shadow and ambient light diffuse reflection. Ambient lux level could be different in different environment, weather, climate, time-of-day and season.
- (9) Sensitivity distance is related to moving speed of objects, size of moving objects, mounting height, mounting angle, working environment, reflecting materials and others.
- (10) Given detecting distance is typical value that was measured by 165cm high testers in an indoor open environment.
- (11) This product needs using with voltage-stabilized DC power supply whose input voltage is stable and ripple factor is low(ripple factor is lower than 100mV; load current is greater than 25mA).