



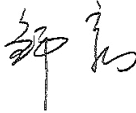

SPECIFICATION

Product Name: Microwave motion sensor

Model No.: MC606V

Issue Date: September 26, 2021

CUSTOMER APPROVED

PRODUCT DIRECTOR APPROVED	SALES CHECKED	R&D CHECKED	PREPARED
			

Shenzhen Merrytek Technology Co.,Ltd

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Tel: +86 (0)755-2305 7253

Fax: +86 (0)755-2786 3012

Website: www.merrytek.com

1. Features



- Built-in motion sensor & daylight sensor
- On/Off, Step Dimming Function
- Wide Input Voltage range 120/277/347Vac
- 15m Max. Mounting Height
- 1-10V & Synchronous Control Interface
- Sensor parameter can be set via DIP switch.
- 5 Year Guarantee

2. Parameters

Input	Operating voltage	108-382V AC 50/60Hz
	Rated voltage	120/277/347V AC 50/60Hz
	Stand-by power	≤1.0W
	Surge test	N—L: 1kV
Output	Working mode	ON/OFF 1-10V dimming
	Type of load	Inductive or resistive
	Load capacity	120V, 50/60Hz, 3.6A, ballast; 277V, 50/60Hz, 3.4A, ballast; 347V, 50/60Hz, 3.3A, ballast;
	Max.surge capacity	30A (50% I _{peak} , twidth =500uS, 230Vac full load, cold start); 60A (50% I _{peak} , twidth =200uS, 230Vac, full load, cold start)
Dim interface	1-10V Dimming	1-10V 0.5mA @Max.
Sensor parameters	Operating frequency	5.8 GHz ±75 MHz, ISM band
	Transmitting power	0.5mW Max.
	Hold time	5S/30S/90S/3min/20min/+∞
	Stand-by dim Level	10%/20%/30%/50%
	Stand-by Period	0S/5S/5min/10min/30min/1h/+∞
	Detection Area	25%/50%/75%/100%
	Daylight Sensor	2Lux/5Lux /10Lux 25Lux /50Lux /100Lux /Disable
	Detection Radius	Refer to detection pattern
	Mounting height	3-12m (Max.12m)
	Detecting Angle	150°(wall mounting) 360°(ceiling mounting)
Operating environment	Operating Temperature	-35℃...+70℃ Humidity: 85% (non-condensing)
	Storage Temperature/humidity	-40℃...+80℃ Humidity: 85% (non-condensing)
Certificate Standards	Safety standards	UL 60730-1
	EMC standards	FCC part 15

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	Environmental Requirement	Compliant to RoHS
	Certificate	UL+CUL
Others	Wiring	Press-in terminals wire diameter: 10-24 AWG
	IP Rating	IP20
	Protection Class	Class II
	Installation	Built-in
	Installation dimension	Inch: 5.04 (mm: 128)
	Package	Bubble bag+ Clapboard+ Carton(K=A)
	Net weight	119g
	Life time	5 years warranty @Ta 277V/347V full load

Note

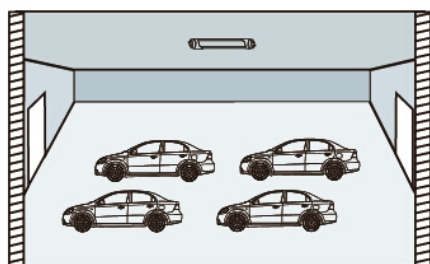
1. "N/A" means not available.

2. The detection range of the sensor is related to the moving speed and size of moving object, mounting height, installation height and angle, installation site, reflectors around the sensor etc. The data in the document is typical value and tested by a 165cm person in an open indoor area.

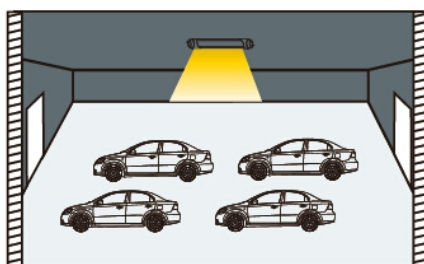
The detection range at wall mounting will be longer at ceiling mounting. Please reduce detection sensitivity at wall mounting or contact us to confirm the sensor data settings.

3.Function

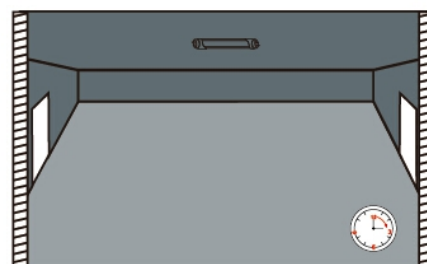
1. On-off function (Stand-by Period "0s")



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.

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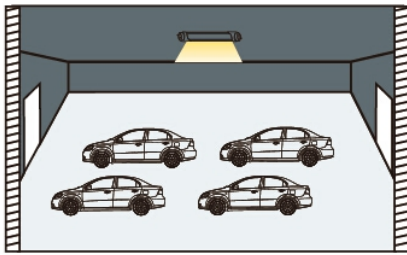
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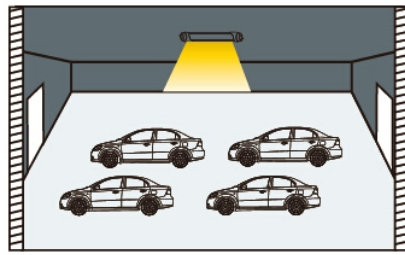
Fax: +86 (0)755-2786 3012

Website: www.merrytek.com

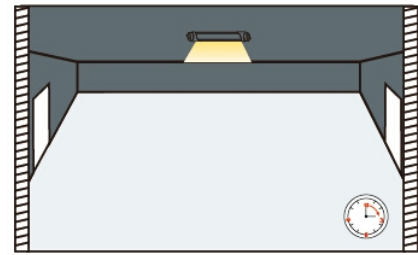
2. 2-step dimming function (Stand-by Period “+∞”)



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

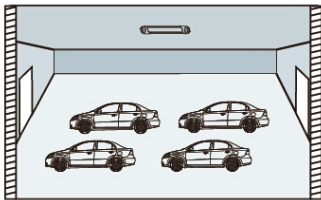


② When motion is detected, the sensor will switch on the light to 100% brightness

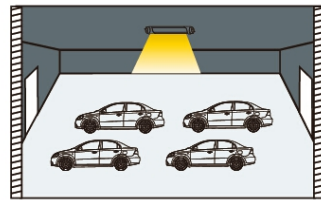


③ After elapse of hold time, the sensor dims the light at the present low light level if no motion is detected.

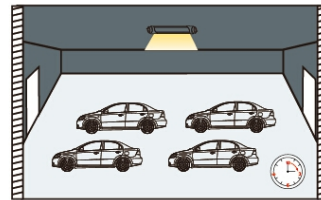
3. 3-step dimming function (Stand-by Period “5s/5min/10min/30min/1h”)



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.

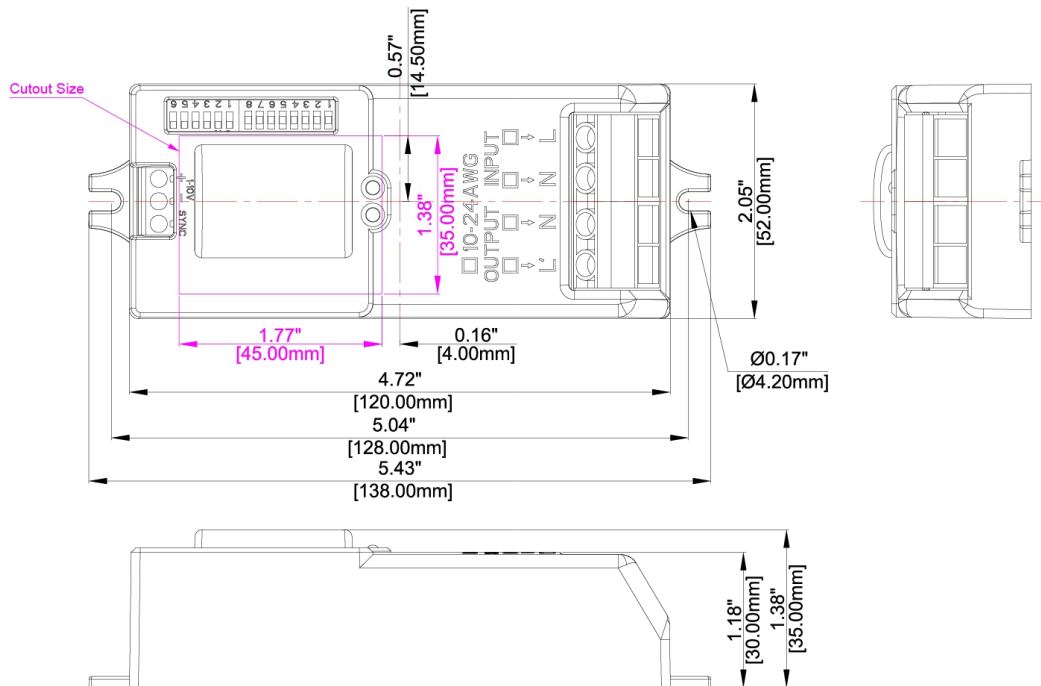


③ After elapse of hold time, the sensor dims the light at a low light level if no new motion is detected.



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

4.Dimension (mm)



Note: During installation, the microwave antenna should be exposed as shown in the figure to prevent metal from blocking and shielding the microwave signal.

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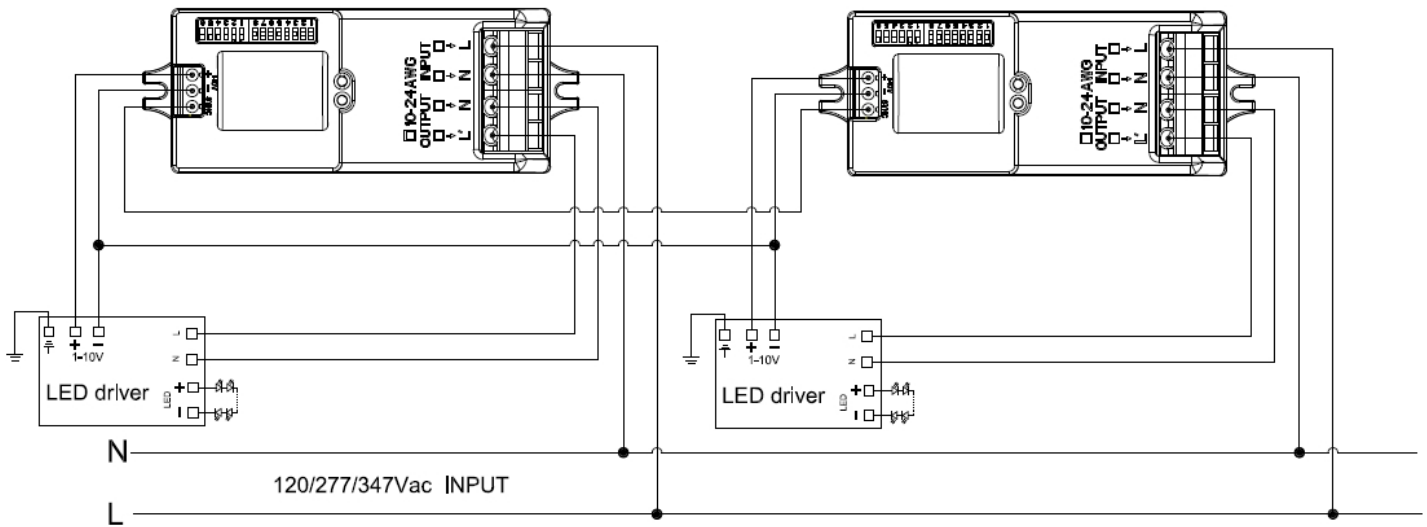
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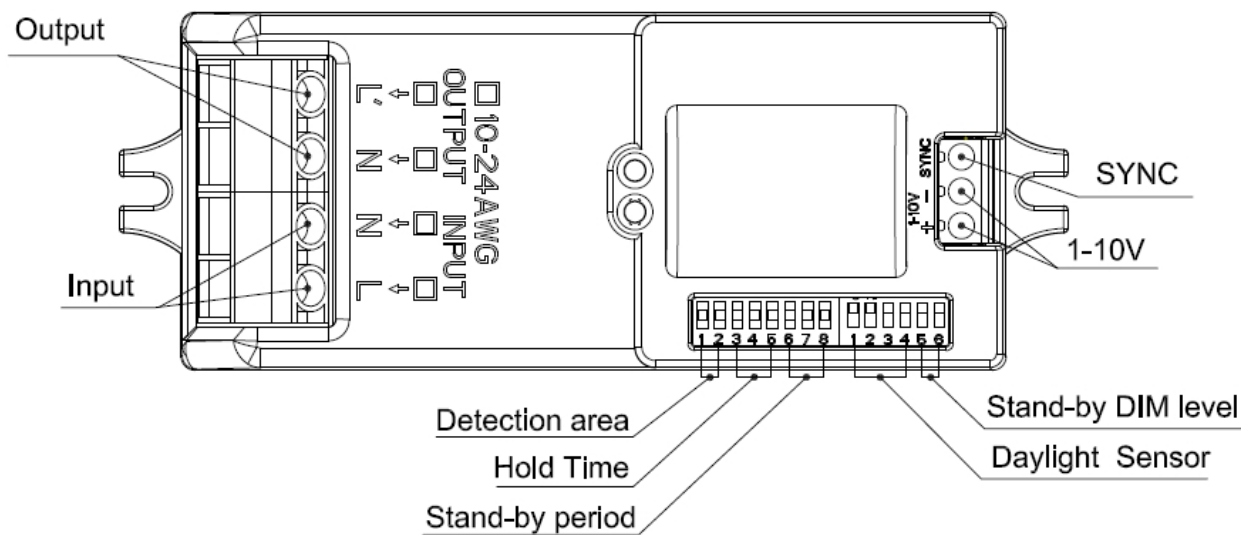
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5. Wiring



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

6. Structure



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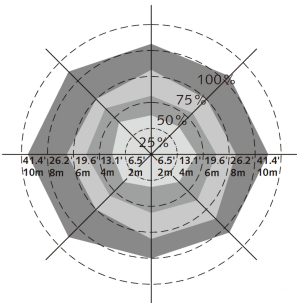
7. Detection pattern

1) Ceiling mounting

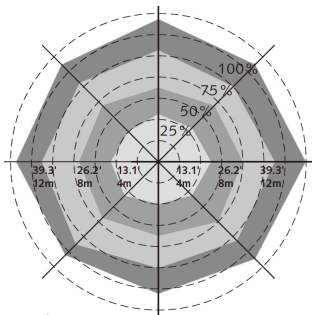
Height: 3m

Sensitivity:

100%/75%50%/25%



Fast moving (Speed: 1m/s)

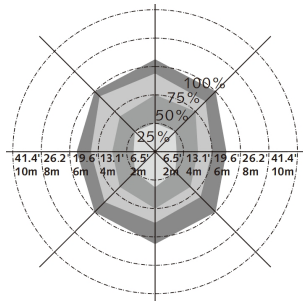


Slow moving (Speed: 0.3m/s)

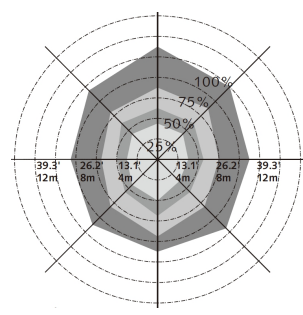
Height: 6m

Sensitivity:

100%/75%50%/25%



Fast moving (Speed: 1m/s)

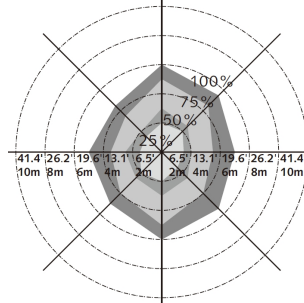


Slow moving (Speed: 0.3m/s)

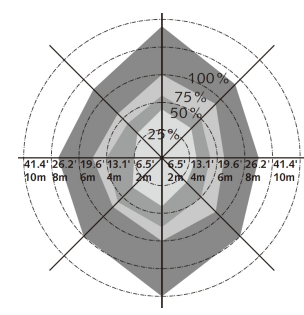
Height: 9m

Sensitivity:

100%/75%50%/25%



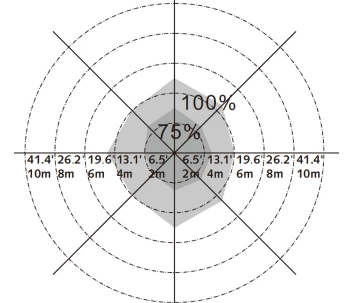
Fast moving (Speed: 1m/s)



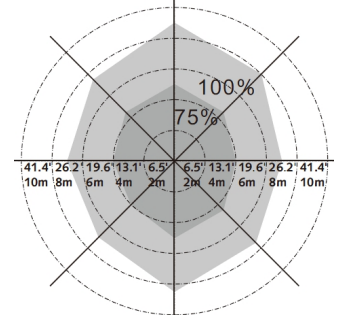
Slow moving (Speed: 0.3m/s)

Height: 12m (*)

Sensitivity: 100%/75%



Fast moving (Speed: 1m/s)



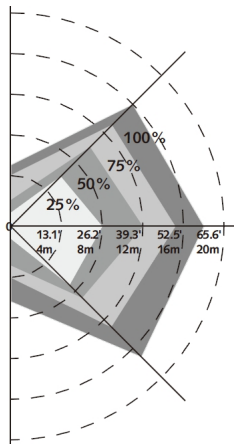
Slow moving (Speed: 0.3m/s)

*When installation height is 3 / 6 / 9 meters, movement signal can be detected at 25%/50%/75%/100% detection sensitivity. When at 12 meters, movement signal is only detected at 75% 100% sensitivity, no movement signal detected for 25%/50% sensitivity.

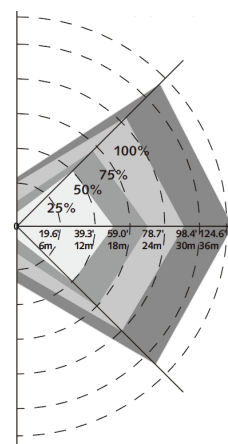
1) Wall mounting:

Wall mounted height: 2m

Sensitivity: 100%/75%/50%/25%



Fast moving (Speed: 1m/s)



Slow moving (Speed: 0.3m/s)

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8. Dip switch settings

1. Detection Area

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

2. Hold Time

	3	4	5	
I	ON	ON	ON	5s
II	-	ON	ON	30s
III	ON	-	ON	90s
IV	-	-	ON	3min
V	ON	ON	-	20min
VI	-	-	-	+∞

3. Stand-by Period

	6	7	8	
I	ON	ON	ON	0s
II	-	ON	ON	5s
III	ON	-	ON	5min
IV	-	-	ON	10min
V	ON	ON	-	30min
VI	-	ON	-	1H
VII	-	-	-	+∞

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4. Daylight Sensor

	1	2	3	4	
I	ON	ON	ON	ON	2Lux
II	-	-	-	ON	5Lux
III	-	ON	ON	-	10Lux
IV	-	-	ON	-	25lux
V	-	ON	-	-	50lux
VI	ON	-	-	-	100lux
VII	-	-	-	-	Disable

5. Dimming brightness preset function

	5	6	
I	ON	ON	50%
II	ON	-	30%
III	-	ON	20%
IV	-	-	10%

9. Initialization

1. On/Off function & 3-step dimming function: 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.

2. 2-step dimming function: After power on, the sensor automatically turns on light at 100% brightness. After 10sec, it dims the light to a low light level (set by stand-by dim level). During the initialization, the sensor is not able to detect movement.

10. Factory setting

Detection Area: 100%, Hold Time: 5S, Daylight Sensor: Disable, Stand-by Period: 0S,

Dimming brightness preset function: 10%

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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) 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 dimming performance could be different from different 0-10v drivers.
- 4) The light sensitivity threshold is in a sunny environment, no shadow and ambient light diffuse reflection. Ambient lux level could be different in different environment, weather, climate, time-of-day and season.
- 5) The parameters of the sensor may need to be reconfigured in different installation environments. Please refer to the following instructions or contact the manufacturer.
- 6) 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.
- 7) The distance between any inductive sensors should be greater than 3m.
- 8) 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.
- 9) Do not place the sensor close to high-density objects such as metal, glass, concrete walls, etc, false triggering could happen.
- 10) 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.
- 11) For a new installation environment, it is recommended to install and test 5pcs of products before batch installation..