

# SPECIFICATION

Product Name: Microwave motion sensor

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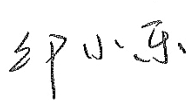

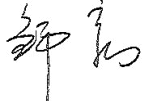

Model No.: MC606V

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Issue Date: March 13, 2018

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CUSTOMER APPROVED

PRODUCT DIRECTOR APPROVED	SALES CHECKED	R&D CHECKED	PREPARED
			

## 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 AC 3.6A Fluorescent / LED @277V AC 3.4A Fluorescent / LED @347V AC 3.3A Fluorescent / LED																					
	Max.surge capacity	30A (50% Ipeak, twidth =500uS, 230Vac full load, cold start); 60A (50% Ipeak, twidth =200uS, 230Vac, full load, cold start)																					
	1-10V dimming terminal/chart	< 50mA not constant current source 10%(1.4-1.6V)/20%(1.9-2.1V)/30%(2.9-3.1V)/50%(4.9-5.1V) chart  <div style="text-align: center;"> <p>1-10V Chart</p> <table border="1"> <caption>Data points for 1-10V Chart</caption> <thead> <tr> <th>Voltage (V)</th> <th>Dimming (%)</th> </tr> </thead> <tbody> <tr><td>1.5</td><td>10%</td></tr> <tr><td>2</td><td>20%</td></tr> <tr><td>3</td><td>30%</td></tr> <tr><td>4</td><td>40%</td></tr> <tr><td>5</td><td>50%</td></tr> <tr><td>6</td><td>60%</td></tr> <tr><td>7</td><td>70%</td></tr> <tr><td>8</td><td>80%</td></tr> <tr><td>9</td><td>90%</td></tr> <tr><td>10</td><td>100%</td></tr> </tbody> </table> </div>	Voltage (V)	Dimming (%)	1.5	10%	2	20%	3	30%	4	40%	5	50%	6	60%	7	70%	8	80%	9	90%	10
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9	90%																						
10	100%																						
Dim interface	1-10V Dimming	1-10V 50mA 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%																					

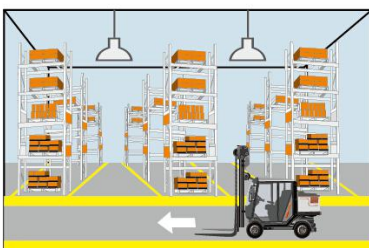
Shenzhen Merrytek Technology Co.,Ltd

Add: 2<sup>nd</sup> and 3<sup>rd</sup> 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

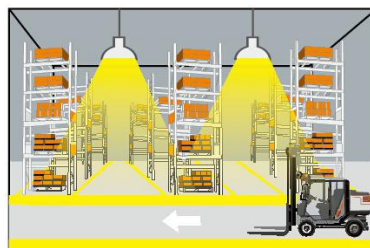
	Daylight Sensor	2Lux/5Lux /10Lux 25Lux /50Lux /100Lux /Disable
	Detection Radius	Refer to detection pattern
	Mounting height	3-15m (Max.15m)
	Detecting Angle	150°(wall mounting) 360°(ceiling mounting)
Operating environment	Operating Temperature	-35℃...+70℃ Humidity: 85% (non-condensing)
	Storage Temperature/humidity	-40℃...+80℃ Humidity: 85% (non-condensing)
Certificate Standards	Safety standards	UL60730
	EMC standards	FCC part 15
	Environmental Requirement	Compliant to RoHS
	Certificate	UL
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
<p>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</p>		

### 3.Function

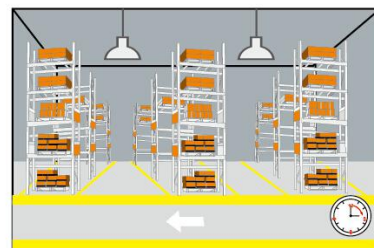
#### 1. On-off function (Stand-by Period "0s" )



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.

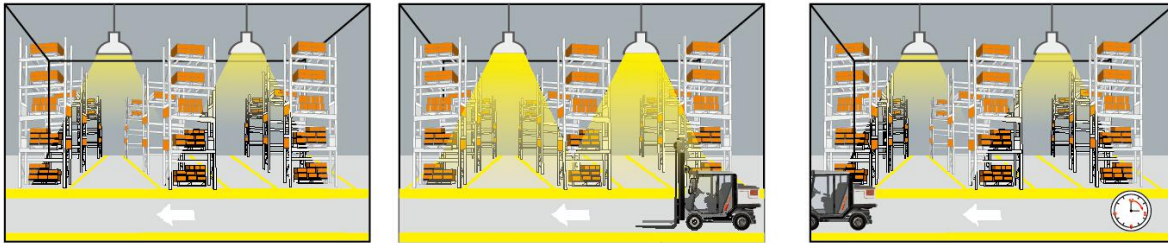


3 After elapse of hold time, the sensor switches off the light when no motion is detected.

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

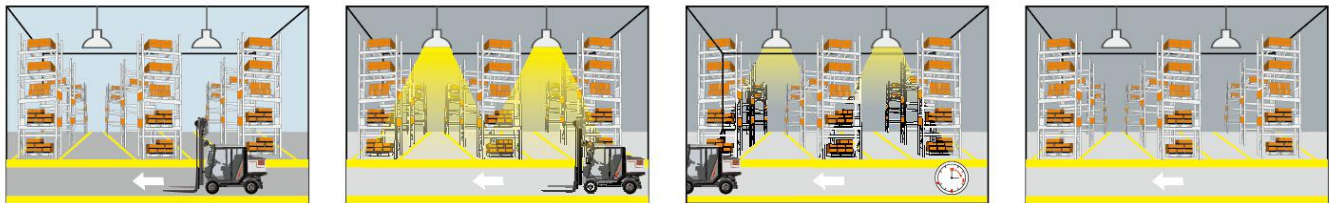


1 If there is no motion detected, the light will be remained at a low light level all the time.

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” )



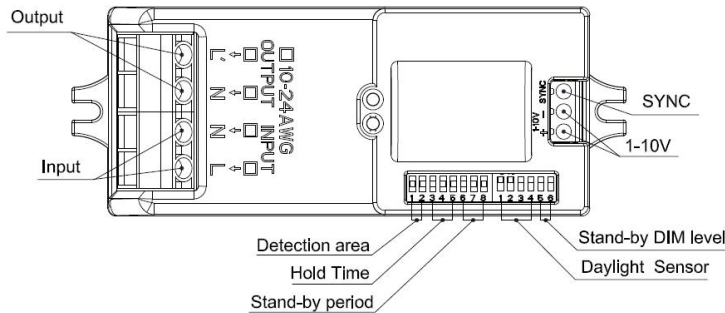
1 With sufficient ambient light, the light will not be switched on even if with motion signal.

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

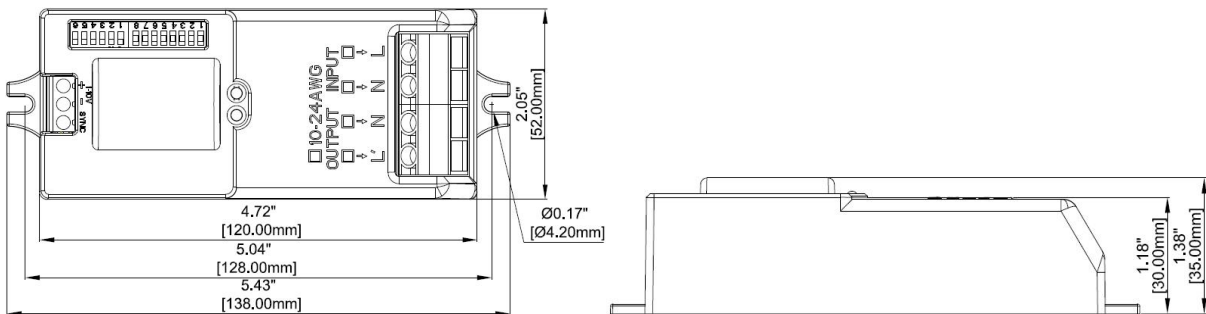
3 After elapse of hold time, the sensor dims the light at a low light level if no new motion is detected.

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

4. Structure



5.Dimension (mm)



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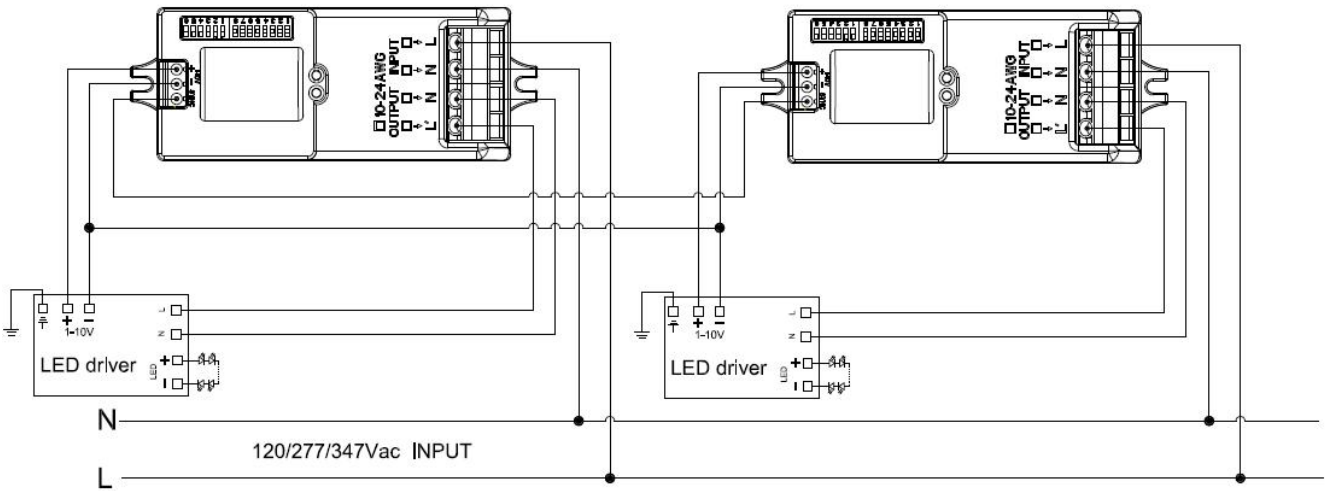
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## 6. Wiring

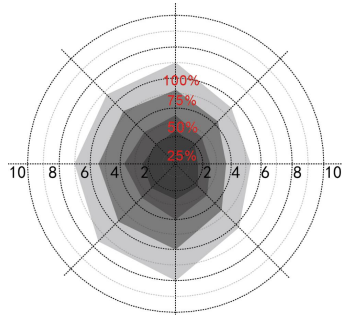


\*The sensor is designed for connect one load only. Connect more than one loads may damage the sensor.

## 7. Detection pattern

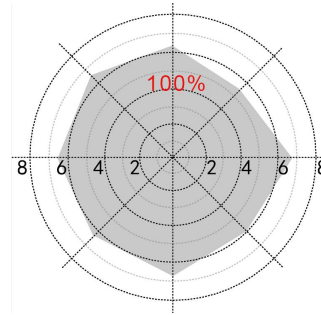
### 1) Ceiling mounting

Height: 3m  
Sensitivity: 100%/75%/50%/25%

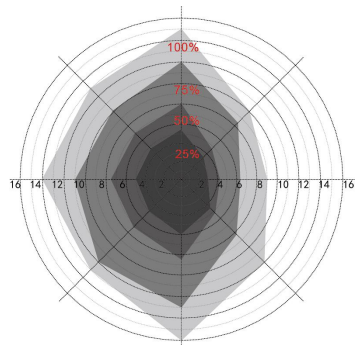


Fast moving (Speed: 1m/s)

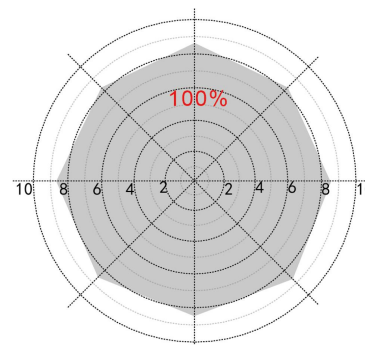
Height: 12m  
Sensitivity: 100%



Fast moving (Speed: 1m/s)



Slow moving (Speed: 0.3m/s)



Slow moving (Speed: 0.3m/s)

## 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: 5S,

Dimming brightness preset function: 50% Mode: Active

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## 11. Application notice

1. The sensor should be installed by a qualified electrician. And ensure that the electricity supply is switched off before installing or servicing the product.
2. Installation inside a glass or plastic housing will result in a reduction of detection sensitivity. Expect a reduction of approximately 20% for every 3mm of thickness.
3. Detection area will be affected by speed of motion, height of installation and volume of moving object.
4. Daylight sensor was tested on sunny environment with no lampshade
5. Sensors settings may need to be adjusted to match installation site, please follow below instructions or contact manufacturer.
6. The sensor is designed for indoor use only. Outdoor use for a long time may reduce the waterproof effects. The raining or wind blowing may trigger the microwave sensor even if without human motion when outdoor use.
7. The distance between any two sensors should be at least 3m to avoid interference with each other.
8. 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.
9. 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.
10. Make sure there are no fans or other vibrating objects in installation area. The movements will trigger sensor as well.



FCC Warning:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

## ISED Statement

- English: This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) This device must accept any interference, including interference that may cause undesired operation of the device.

The digital apparatus complies with Canadian CAN ICES-3 (B)/NMB-3(B).

- French: Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

l'appareil numérique du ciem conforme canadien peut - 3 (b) / nmb - 3 (b).

This device meets the exemption from the routine evaluation limits in section 2.5 of RSS 102 and compliance with RSS 102 RF exposure, users can obtain Canadian information on RF exposure and compliance.

cet appareil est conforme à l'exemption des limites d'évaluation courante dans la section 2.5 du cnr - 102 et conformité avec rss 102 de l'exposition aux rf, les utilisateurs peuvent obtenir des données canadiennes sur l'exposition aux champs rf et la conformité.

This equipment complies with Canada radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Cet équipement est conforme Canada limites d'exposition aux radiations dans un environnement non contrôlé.

Cet équipement doit être installé et utilisé à une distance minimale de 20 cm entre le radiateur et votre corps.