

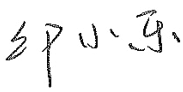
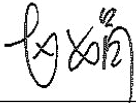
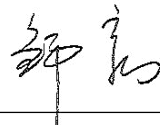
SPECIFICATION

Product Name: Microwave Motion Sensor

Model No.: MC613V D RC

Issue Date: January 30, 2018

CUSTOMER APPROVED

PRODUCT DIRECTOR APPROVED	SALES CHECKED	R&D CHECKED	PREPARED
			

Shenzhen Merrytek Technology Co.,Ltd

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1. Features



1. Built-in motion sensor and daylight sensor for Intelligent control
2. Attachable design ,suitable for more luminaires
3. 1-10v port can match dimmable driver to achieve corridor function
4. Dim+/Dim- to set occupancy light level
5. All sensor Parameters can be set by DIP switch or Remote
6. North American version for linear & batten lights
7. With Ambient learning function
8. 5 years warranty

2. Parameter

Input	Operating Voltage Range	108-305V AC 50/60Hz
	Rated Voltage	120/277V/347VAC 50/60Hz
	Stand-by Power	< 1W
	Surge Test	N--L: 1kV
Output	Working Mode	ON/OFF function, 0-10V DC dimming
	Type of Load	Inductive or Resistive Load
	Load Power	120V, 50/60Hz, 3.6A, ballast; 277V, 50/60Hz, 3.4A, ballast; 347V, 50/60Hz, 3.3A, ballast;
	Max. Surge Power	50A (50% Ipeak, twidth =500uS, 230V AC full load, cold start); 80A (50% Ipeak, twidth =200uS, 230V AC, full load, cold start)
Dim Interface	0-10V Dimming	< 50mA (Non-constant source) 10%(1.4-1.6V) 20%(1.9-2.1V) 30%(2.9-3.1V) 40% (3.9-4.1V)
Sensor Parameters	Operating Frequency	5.8 GHz ±75 MHz, ISM Band.
	Transmitting power	0.5mW Max.
	Hold time	8S/30S/1min/5min/10min/20min/30min Remote Controller Setup :8S1min/5min/15min/30min
	Stand-by DIM Level	10%/20%/30%/40% Remote Controller Setup :10%/20%/30%/40%/50%
	Stand-by Period	0S/1min/3min/5min/10min/30min/+∞ Remote Controller Setup :0S/1min/5min/30min/+∞
	Detection Area	100%/75%/50%/25% Remote Controller Setup ; 100%/75%/50%/25%
	Daylight Sensor	5lux/15lux/30lux/50lux/100lux/150lux/Disable Remote Controller Setup : 5lux/15lux/50lux/150lux/Disable
	Detecting Radius	See note 2
	Mounting Height	6m Max
	Detecting Angle	150°(wall mounting) 360°(ceiling mounting)
Operating	Operating Temperature	-35℃ ...+70℃

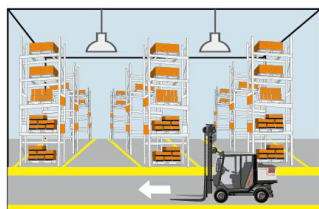
Environment	Storage Temperature	Temperature: -40℃...+80℃; Humidity: 85% (non-condensing)
Certificate Standards	Safety standards	EN61058-1,EN61058-1-2,UL60730
	EMC standards	EN55015,EN61547,EN6100,EN301489,EN300440
	Environmental Requirement	Compliant to RoHS
	Certificate	CE, RED, UL
Others	Wiring Method	Copper wire only (10-18AWG)
	IP Rating	IP20
	Protection Class	Class II
	Installation	Built-in installation (indoor use only)
	Dimension	Inch;3.42
	Package	Bubble bag +Clapboard+ Carton(K=A)
	Net Weight	220g
	Lifetime	5 years warranty @Ta 230V full load

Note

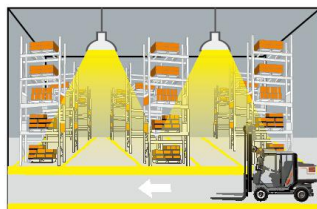
1. "N/A" means not available.
2. Detection area is effected on volume of motion object and motion speed. The detection area is tested by a 165cm height person and walking speed is 0.3m/s.

3. Function

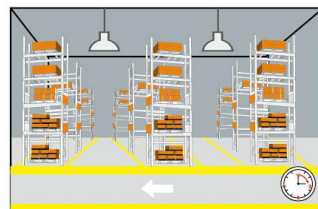
1) ON/OFF function (stand-by period be set to "0"s)



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

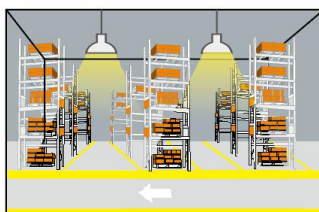


- 2 With insufficient ambient light, the sensor switches on the light when motion is detected.

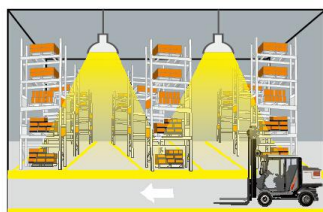


- 3 After elapse of hold time, the sensor switches off the light when no motion is detected.

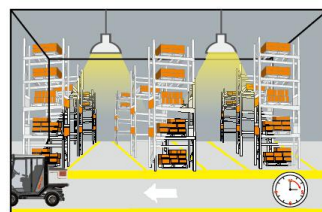
2) 2-step dimming function (stand-by period be set to "+∞")



- 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.

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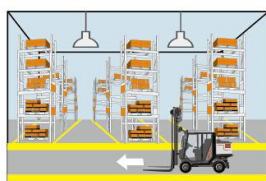
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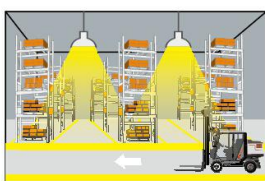
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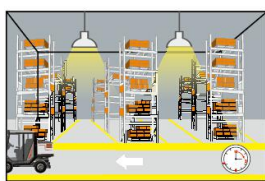
3) 3-step dimming function (stand-by period be set to "10s/1min/3min/5min/10min/30min")



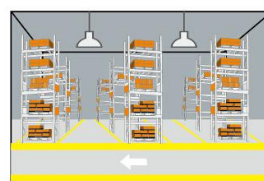
① With sufficient ambient light, the light will not be switched on even if with motion signal.



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



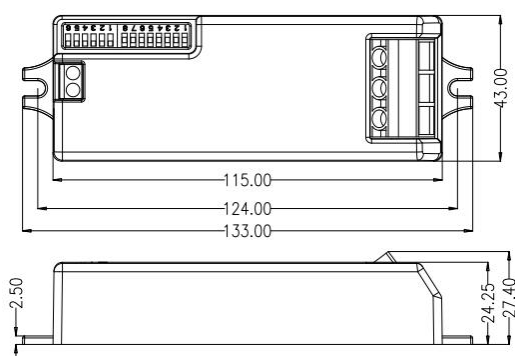
③ After elapse of hold time, the sensor dims the light at a low light level if no new motion is detected.



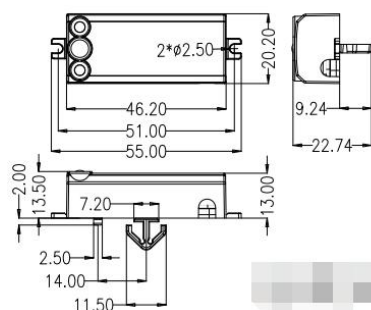
④ After elapse of standby period, the sensor switches off the light if no motion is detected in the detection zone.

4. Dimension (mm)

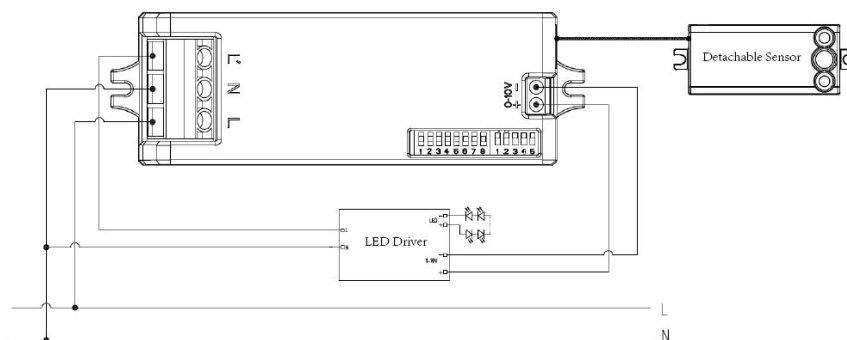
Main part



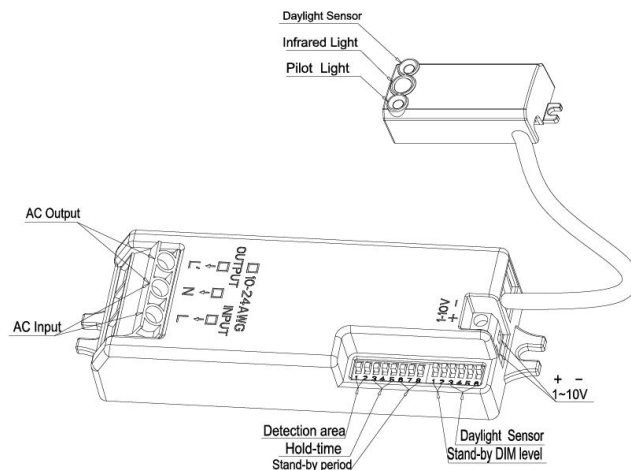
Detachable sensor head:



5. Wiring



6. Structure



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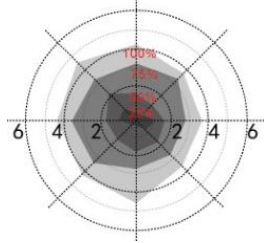
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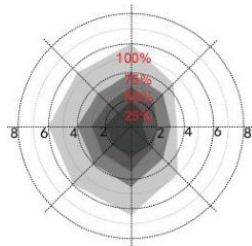
7. Detection Pattern

Ceiling mounting

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

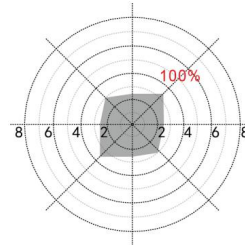


Normal moving (Speed:1m/s)

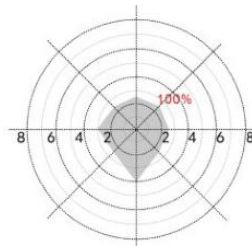


Slow moving (Speed 0.3m/s)

Ceiling mounted height: 6m
Sensitivity: 100%



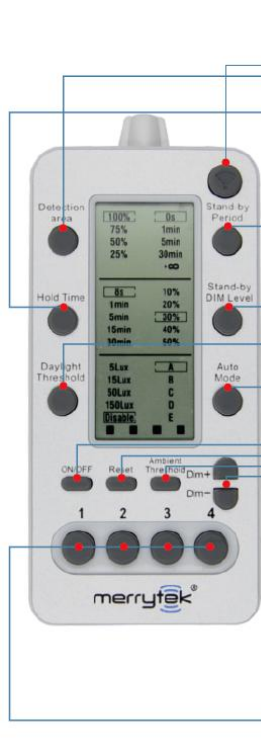
Normal moving (Speed:1m/s)



Slow moving (Speed 0.3m/s)

*Only 100% detection sensitivity is workable when installed at 6m mounting height. able to detect motion signal.

8. Remote Control



Button	Name	Description										
	Transmit	Uploads the settings										
	Detection Area	25%/50%/75%/100%										
	Hold time	The timeout from 100% to dim 8S/1min/5min/15min/30min										
	Daylight Threshold	5Lux/15Lux/50Lux/150Lux/ Disable										
	Stand-by period	The timeout from dim to off 0S/1min/5min/30min/+∞										
	Stand-by DIM level	10%/20%/30%/40%/50%										
	Auto mode	1. Movement Motion detect 3-6m 2. Presence detect 3-6m 3. Presence detect with daylight harvesting 3-6m 4. High mounting: 6-15m 5. High mounting with daylight harvesting : 6-15m										
	ON-OFF	Permanent ON/OFF										
	Reset	Press "Reset" button for factory testing purpose only. <table border="1"> <thead> <tr> <th>Detection Area</th> <th>Hold Time</th> <th>Stand-by period</th> <th>Stand-by dim level</th> <th>Daylight sensor</th> </tr> </thead> <tbody> <tr> <td>100%</td> <td>1min</td> <td>3min</td> <td>20%</td> <td>Disable</td> </tr> </tbody> </table>	Detection Area	Hold Time	Stand-by period	Stand-by dim level	Daylight sensor	100%	1min	3min	20%	Disable
Detection Area	Hold Time	Stand-by period	Stand-by dim level	Daylight sensor								
100%	1min	3min	20%	Disable								
	Ambient Threshold	Pressing this button, will disable the daylight harvesting function, which is offset if the current threshold is not suitable										
	Dim+ / Dim-	Adjust the target light level according to the ambient light										
	1/2/3/4	4 optional quick settings										

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9. DIP Switch Setting

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	8S
II	ON	-	ON	30s
III	-	ON	ON	1min
IV	ON	-	-	5min
V	-	ON	-	10min
VI	-	-	ON	15min
V II	-	-	-	30min

Stand-by Period

	6	7	8	
I	ON	ON	ON	0s
II	ON	-	ON	1min
III	-	ON	ON	3min
IV	ON	-	-	5min
V	-	ON	-	10min
VI	-	-	ON	30min
V II	-	-	-	+∞

Stand-by DIM Level

	S1	S2	Stand-by DIM Level
I	ON	ON	10%
II	ON	-	20%
III	-	ON	30%
IV	-	-	40%

Daylight Sensor

S3	S4	S5	S6	Daylight sensor
ON	ON	ON	ON	5Lux
-	ON	ON	ON	15Lux
ON	-	ON	ON	30Lux
-	-	ON	ON	50lux
ON	ON	-	ON	100lux
ON	ON	ON	-	150lux
-	-	-	-	Disable

10. 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.

11. Factory settings

Detection area: 100%, Hold time: 8s, Stand-by Period: 0s, Stand-by dim level: 10%, Daylight Sensor: Disable

12. 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 is installed in the plastic, the glass lampshade will reduce the sensitivity of the sensor. For every 3mm increase in thickness, the sensitivity will be reduced by 20%.
- 3) The sensing distance will be affected by the height of the sensor installation, the size of the object being detected, and the speed of movement.
- 4) The light sensitivity threshold is in a sunny environment, no shadow, ambient light diffuse reflection conditions. Ambient lux level could be different under different weather, climate, season or environment
- 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. Outdoor use will affect the waterproof effect, and wind and 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 luminaire, a metal reflective surface, or a narrow enclosed environment, the microwave will be reflected multiple times 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, mixed-use walls, etc. The sensor may be triggered by mistake.
- 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.

FCC Warning

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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: 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.

Radiation Exposure Statement

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.