

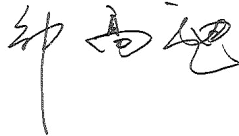

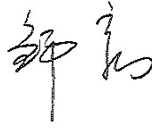

# SPECIFICATION

Product Name: ON/OFF Sensor

Model No.: MC030S L

Issue Date: June 15, 2018

CUSTOMER APPROVED

PRODUCT DIRECTOR APPROVED	SALES CHECKED	R&D CHECKED	PREPARED
			

Shenzhen Merrytek Technology Co.,Ltd

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Fax: +86 (0)755-2786 3012

Website: www.merrytek.com

## 1. Features



- Compact size design, can be built-in most of light fixtures.
- Sensor parameters can be easily adjustable by DIP switches.
- Terminal design for both in and off connection, easy to be connected.
- 5 years warranty.

## 2. Parameter

<b>Input</b>	Operating Voltage Range	198-264V AC, 50Hz/60Hz
	DC Input Voltage	N/A
	Rated Voltage	220-240V AC, 50Hz/60Hz
	No-load Power	N/A
	Stand-by Power	≤0.5W
	Surge Test	L--N: 1kV
<b>Output</b>	Working Mode	ON/OFF function
	Type of Load	Inductive or Resistive Load
	Load Capacity	400W(Inductive) ; 800W(Resistive)
	Current of Load	N/A
	Max. Surge Capacity	30A (50% I <sub>peak</sub> , twidth =500uS, 230Vac full load, cold start); 60A (50% I <sub>peak</sub> , twidth =200uS, 230Vac, full load, cold start )
<b>Dim Interface</b>	1-10V Dimming	N/A
	Synchronous Control	N/A
	High Low-level	N/A
	PWM Control	N/A
<b>Sensor Parameters</b>	Operating Frequency	5.8 GHz ±75 MHz, ISM Band.
	Transmitting power	1mW Max.
	Hold time	5S/30S/90S/3min/20min/30min(set via 3 DIP switch)
	Stand-by DIM Level	N/A
	Stand-by Period	N/A
	Detection Area	100%/75%/50%/25%/10%(set via 3 DIP switch)
	Daylight Sensor	2lux/10lux/25lux/50lux/Disable (set via 3 DIP switch) (Ambient diffusion status)
	Daylight on/off	N/A
	Detecting Radius	4-6m (mounting height 3m)
	Mounting Height	6m Max

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	Detecting Angle	150°
<b>Wireless Module</b>	Operating Frequency	N/A
	Transmitting power	N/A
	Transmitting distance	N/A
	Modulation mode	N/A
	Number of coding	N/A
<b>Operating Environment</b>	Operating Temperature	-20℃...+60℃
	Storage Temperature	-40℃...+80℃ Humidity: 10%-95% (Non-condensing)
<b>Certificate Standards</b>	Safety standards	EN61058-1, EN61058-1-2
	EMC standards	EN300440, EN301489-1, EN55015, EN61547, EN61000-3-2 EN61000-3-3, EN62479
	Environmental Requirement	Compliant to RoHS
	Certificate	CE, TUV, RED
<b>Others</b>	Wiring	Press-in Type Terminals, wire diameter:0.75-1.5mm <sup>2</sup>
	IP Rating	IP20
	Protection Class	Class II
	Installation	Built-in
	Dimension	77*36*25.6mm
	Package	Bubble bag+Clapboard + Carton(K=A)
	Net Weight	41.0g
	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 0.5m/s.

## 3.Function

### On/OFF Function



- 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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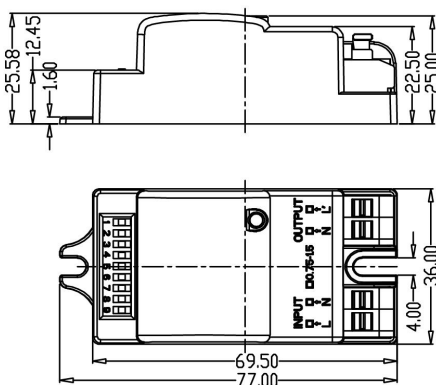
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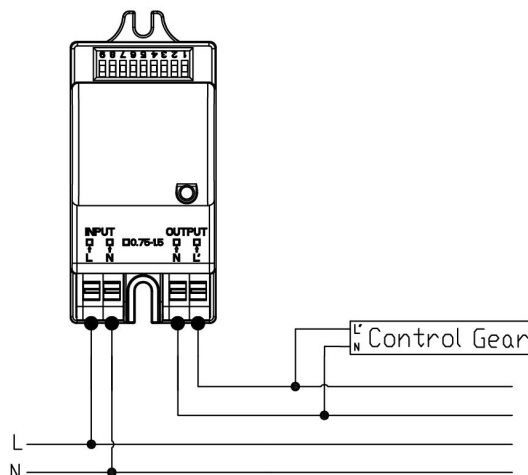
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## 4. Dimension (mm)

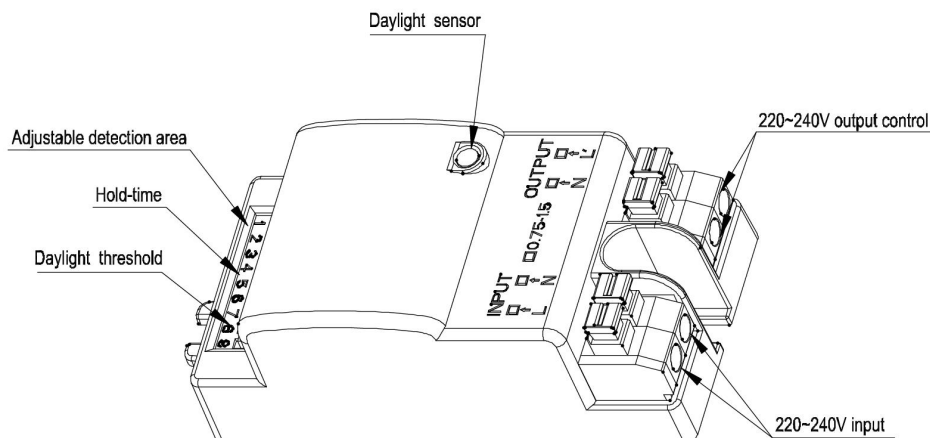


## 5. Wiring



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

## 6. Structure



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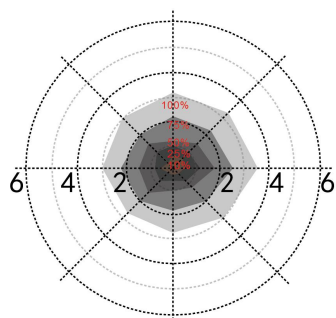
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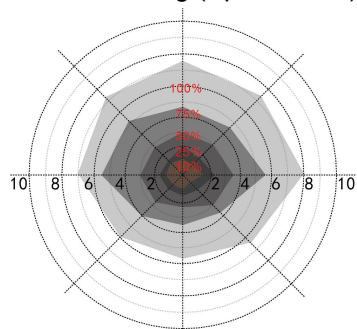
## 7. Radiation Pattern

Ceiling mounting

Ceiling mounted height: 3m  
Sensitivity: 100%/75%/50%/25%/10%

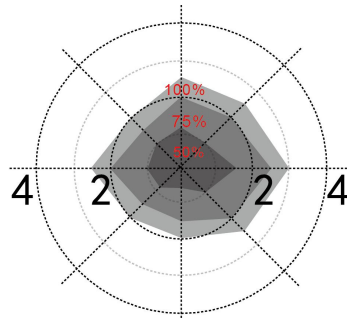


Normal moving (Speed: 1m/s)

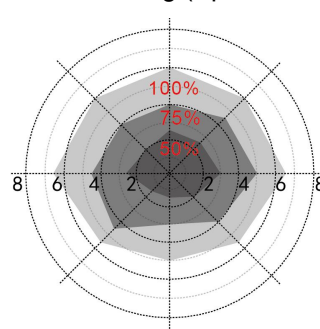


Slow moving (Speed: 0.3m/s)

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



Normal moving (Speed: 1m/s)

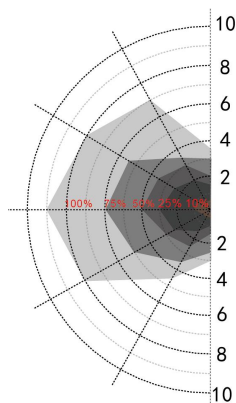


Slow moving (Speed: 0.3m/s)

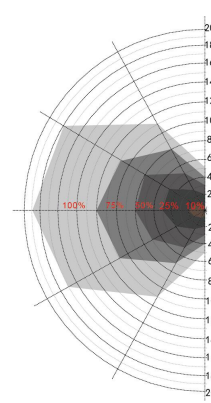
\*50%, 75%, 100% detection sensitivity is workable when installed at 6m mounting height. Only 10%, 25% sensitivity is not able to detect motion signal.

Wall mounting:

Wall mounted height: 2m  
Sensitivity: 100%/75%/50%/25%/10%



Normal moving (Speed: 1m/s)



Slow moving (Speed: 0.3m/s)

## 8. DIP Switch Setting

### Detection Area (Sensitivity)

	1	2	3	
I	ON	ON	ON	100%
II	-	ON	ON	75%
III	ON	-	ON	50%
IV	-	-	ON	25%
V	-	-	-	10%

### Hold Time

	4	5	6	
I	ON	ON	ON	5S
II	-	ON	ON	30S
III	ON	-	ON	90S
IV	-	-	ON	3min
V	ON	ON	-	20min
VI	-	-	-	30min

### Daylight Threshold

	6	7	8	
I	ON	ON	ON	2Lux
II	ON	ON	-	10Lux
III	-	ON	-	25Lux
IV	ON	-	-	50Lux
V	-	-	-	Disable*

\*Disable means the daylight sensor does not work. The sensor will turn on light once motion is detected regardless of ambient light level.

## 9. Initialization

After power on, the sensor automatically turns on light at 100% brightness. During the initialization, the sensor is not able to detect movement.

## 10. Factory Setting

Detection area: 100%, Hold Time: 5S, Daylight Sensor: Disable

## 11. Application Notice

- 1) Be sure to power off before adjusting DIP switch setting.
- 2) The microwave cannot pass through the metal, so the sensor cannot be installed in closed or semi-closed metal lamps and lanterns. Make sure there are no metal or glass above the sensor.

## 12. Version Change

Version	Date	Description
A0	June 15, 2018	Released new product