

# Specification

**Product Name:** High-mounting microwave motion sensor (ON/OFF version)

**Product Model:** MSA003S RC

**Product Version:** V1.0

Versions	Release/ change Date	Publishing
V1.0	2023.8.13	Jacky

## 【Introduction】

MSA003S RC is a 5.8GHz microwave sensor with high antenna gain and wide sensing range, which support max 15m installation. Combined with our unique software algorithm and our antenna's exclusive narrow detection radiation, it can perfectly detect human movements in hallway/corridor/long passage/aisle etc to trigger smart scene application.

## 【Features】

- Merytek patent high gain 5.8GHz microwave antenna technology
- Support max 12m high installation
- Daylight sensor detection available
- Surface mounting available
- Detection area, hold time and daylight threshold can be set by remote or DIP switch
- Accurate ON/OFF output
- 12-15m max detection range for the longer side and 3-5m max detection range for the short side based on 3m installation
- 800w resistive loading or 400w inductive MAX loading
- Ultra low radiation power, no harm to human
- Stable performance, not affected by temperature, humidity, noise, airflow, dust and light



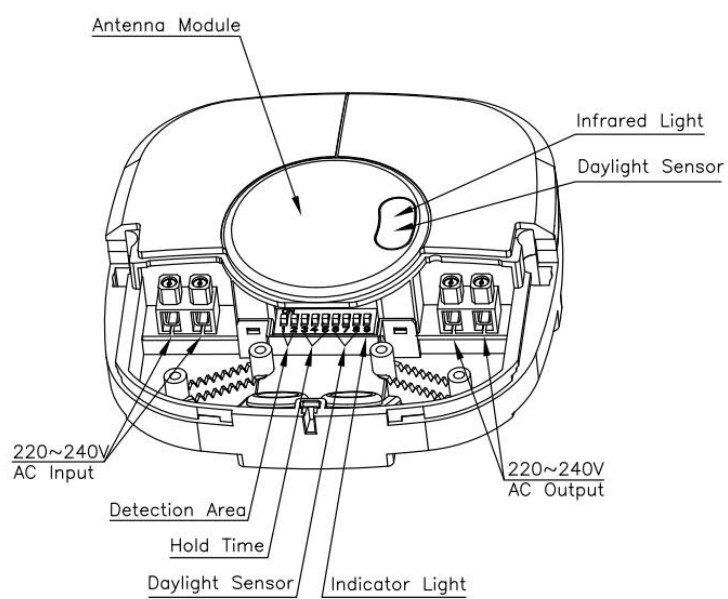
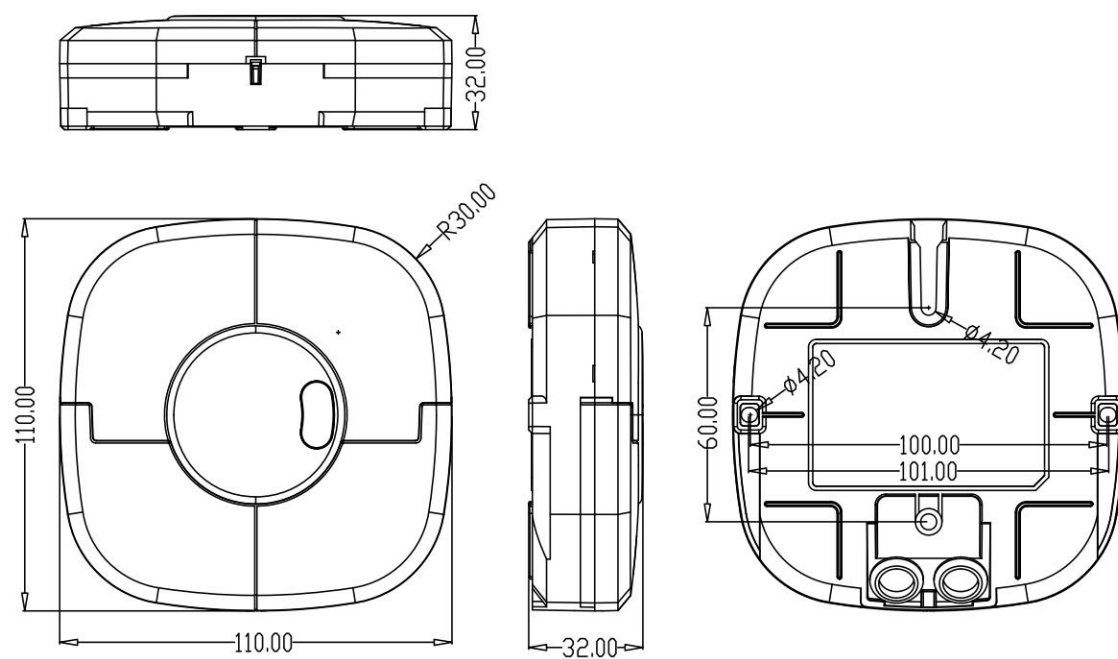
## 【Dimension】

- Product size: 110x110x32mm
- Connection interface: 4-pin terminal

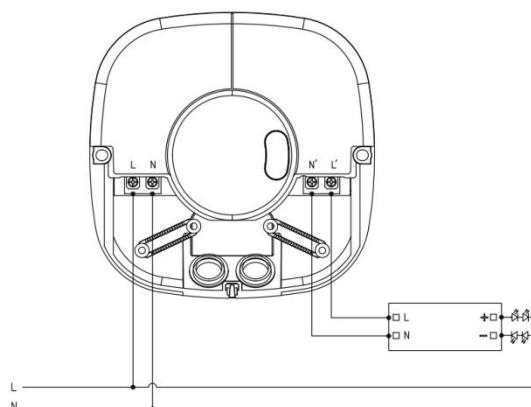
## 【Parameter】

<b>Input/Output</b>	Input voltage	100-240V AC 50-60Hz
	Rated voltage	220V AC
	Working current	50mA max
	Power consumption	≤1W 230V DC
	Load capacity	800w resistive loading or 400w inductive loading
	Loading instant peak current	30A
<b>Sensor parameter</b>	Radar frequency	5.8GHz±75MHz ISM band
	Radar transmit power	5mW Max
	Detection sensitivity	25%-100%
	Hold Time	5s-30min
	Radius detection range(based on 100% sensitivity)	12-15m max detection range for the longer side and 3-5m max detection range for the short side based on 3m installation
	Daylight sensor	5-150lux/Disable
	Remote control	Available
	Mounting height	3-12m typical value: 3m/12m
	Detecting Angle	150°
<b>Application environment</b>	Installation	Surface mounting
	Working temperature	0℃...+50℃
	Storage temperature	-25℃~+80℃
<b>Certificate Standard</b>	Certificate	FCC/RED
	Environmental requirements	Compliant to RoHS
	IP rating	IP20
"N/A" means not available		

## 【Dimension and Function diagram】

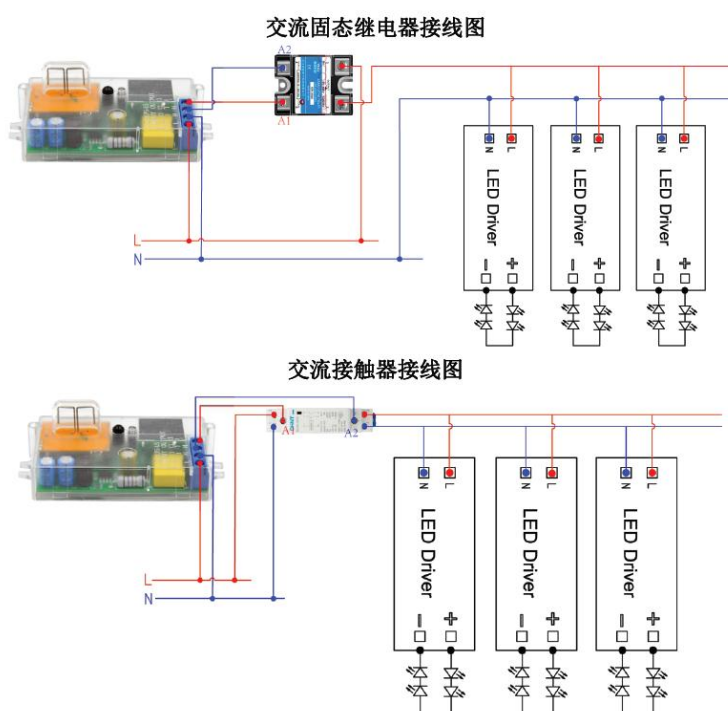


## 【Wiring instruction】



### Wiring layout suggestion:

1. LN terminal stands for AC input, L'N' stands for AC output, please wiring correctly
2. One sensor's max loading capacity is 800w resistive loading and 400w inductive loading for one single load. if you want connect more load in one loop, we recommend to add an AC contactor in our output LN terminal to avoid momentary surge overload.



注：负载能力由交流固态继电器/交流接触器性能决定。

## 【Initialization】

When powered on, sensor indicator will turn off after flashing for 10S and will not detect moving signal during this time. After 10S, you can use our MH10 remote to adjust detection area、hold time and daylight sensor etc parameter.

### 【Factory setting】

Detection Sensitivity : 100%

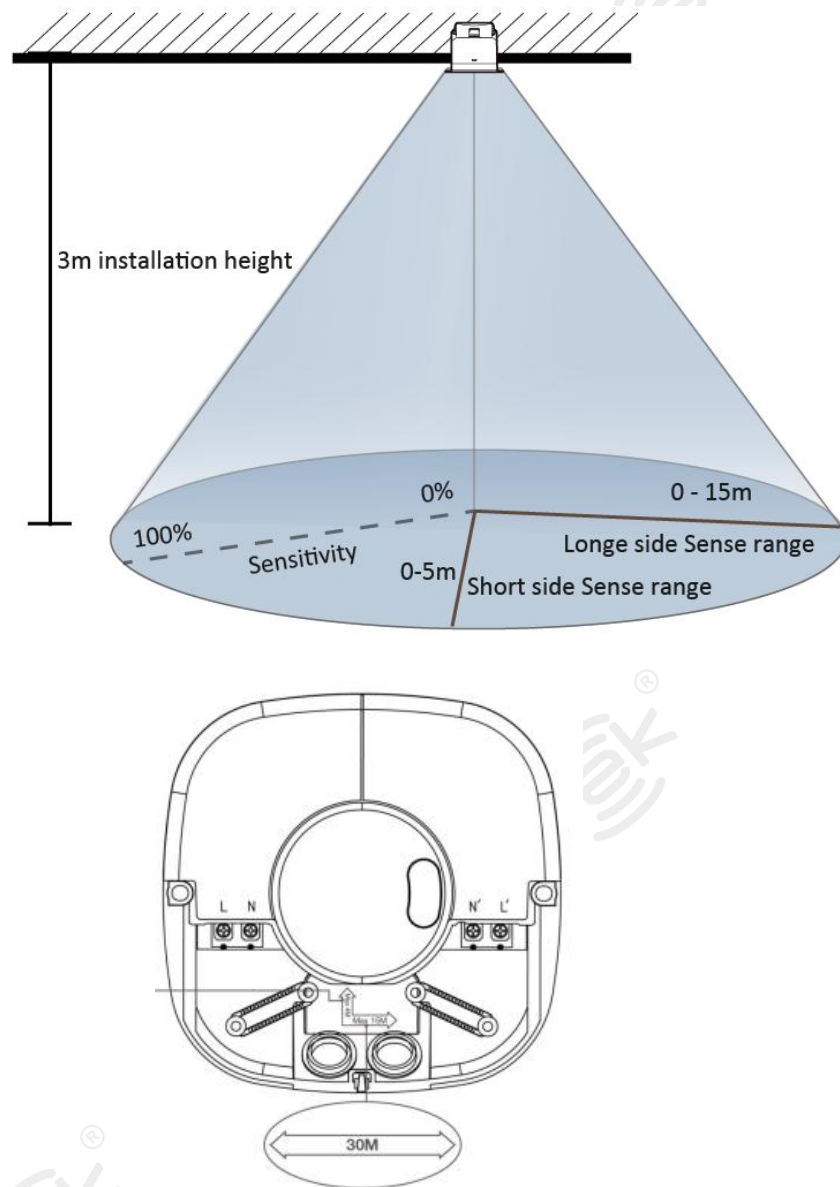
Hold Time : 5S

Indicator light : OFF

Daylight sensor : Disable

### 【Detection radiation】

MSA003S RC is highly recommended surface mounting and its detection radiation is as below shows:



### 【Detection Signal】

The product detects human moving signals and below is a description of the moving signals:

- **Moving signal:** detect the human significant moving (walking) in the detection area.

## 【DIP setting】

Detection sensitivity

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

Hold time

	3	4	5	
I	ON	ON	ON	5S
II	ON	-	ON	30S
III	ON	ON	-	1min
IV	ON	-	-	3min
V	-	ON	ON	5min
VI	-	-	ON	10min
VII	-	ON	-	20min
VIII	-	-	-	30min

Daylight sensor

	6	7	8	
I	ON	ON	ON	5Lux
II	-	ON	ON	30Lux
III	ON	-	ON	50Lux
IV	-	-	ON	100Lux
V	ON	ON	-	150Lux
VI	-	-	-	Disable

Once daylight sensor set as Disable,our motion sensor will detect human movement regardless of

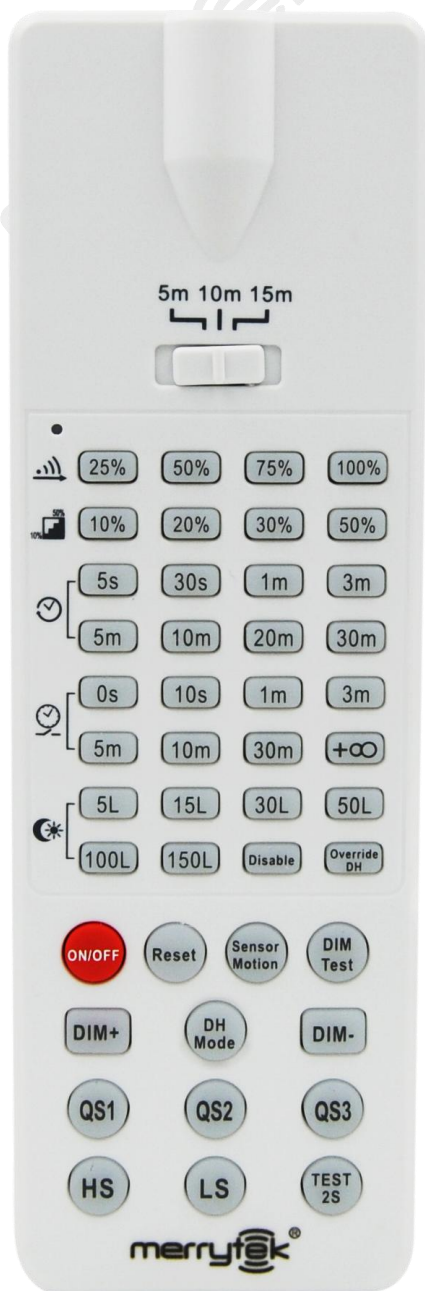
environment lux

Indicator

	9	
I	ON	open
II	-	close



## 【Remote control】



Detection range: 25%/50%/75%/100%

Hold time: 5s/30s/1min/3min/5min/10min/20min/30min

Daylight threshold: 5lux/15lux/30lux/50lux/100lux/150lux/Disable

**ON/OFF:** disable sense function

**Sensor motion:** enable sense function

**Reset:** all parameter back as factory setting

**QS1/QS2/QS3:** High/Medium/Low sensitivity setting

**HS:** turn on indicator

**LS:** turn off indicator

## 【Disclaimer】

Due to the complexity of product technology and differences in application environment, it is difficult to guarantee a completely accurate or complete description, so this specification is only for user reference.

We will reserve the right to make changes to the product specifications without notifying the user, and do not make any commitments and guarantees in the legal sense.

At the same time, our company encourages users to supplement or modify the contents of our specifications after using our products.