Specification

Product series: High-mounting microwave motion sensor (dry contact version)

Product model: MSA003D RC

Product version: V1.0

Versions	Release/ change Date	Publishing
V1.0	2023.8.13	Jacky

【Introduction】

MSA003D RC is a 5.8GHz microwave sensor with high antenna gain and wide sensing range,which support max 15m installation.Combined with the unique software algorithm of Merrytek, it can accurately detect human movements in almost all particular spaces like warehouse/lobby/gym etc to trigger smart scene application.

【Features】

- Merytek patent high gain 5.8GHz microwave antenna technology
- Support max 12m high installation
- Accurate NO/NC dry contact outpu
- Daylight sensor detection available
- Surface mounting available
- Detection area,hold time and daylight threshold can be set by remote or DIP switch
- 6-9m max detection range based on 12m installation
- Ultra low radiation power,no harm to human
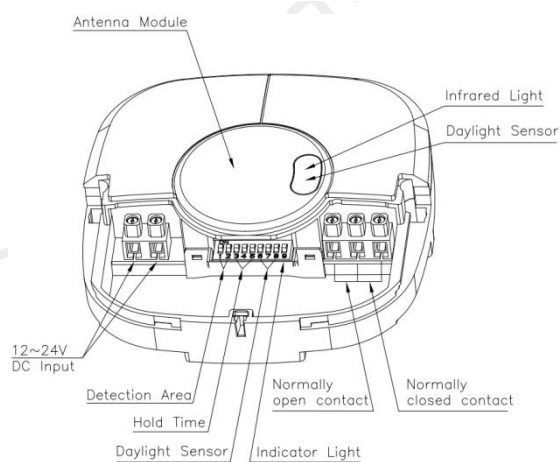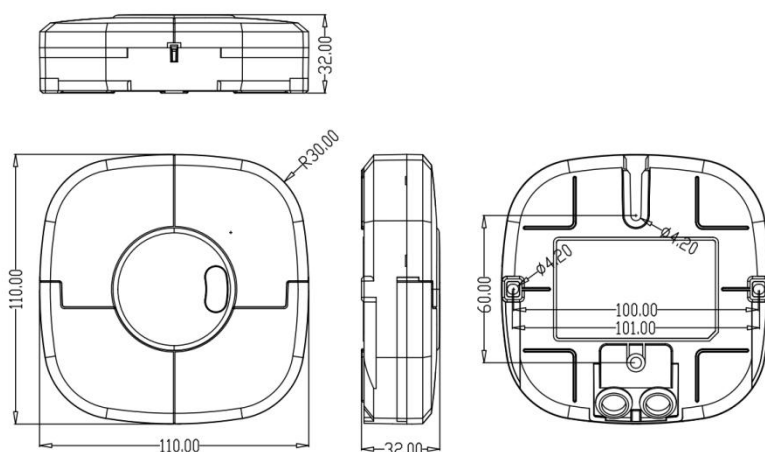- Stable performance, not affected by temperature, humidity, noise, airflow, dust and light

【Dimension】

- Product size: 110x110x32mm
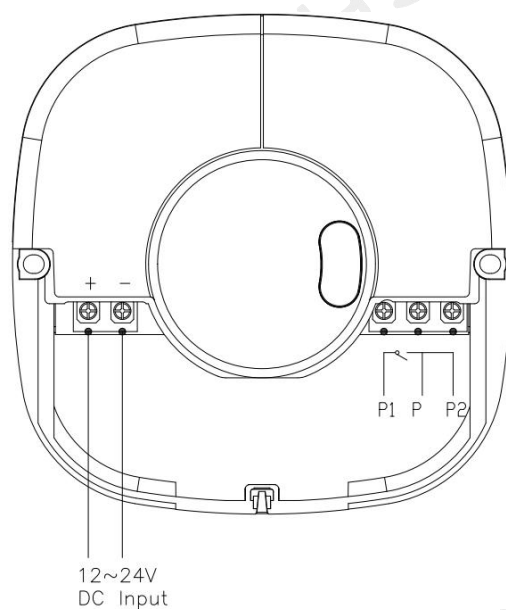- Connection interface: 5-pin terminal

【Parameter】

Input/Output	Input voltage	12-24V DC
	Rated voltage	12/24V DC
	Working current	50mA max
	Power consumption	≤1W　24V DC
Sensor parameter	Microwave 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)	6-9m based on 12m mounting height
	Remote control	Available
	Mounting height	6-12m　typical value:10m
	3dB beam angle	80°（horizontal plan）
		96°（vertical plan）
Application environment	Installation	Surface mounting
	Working temperature	0℃...+50℃
	Storage temperature	-25℃~+80℃
Certificate Standard	Certificate	FCC/RED
	Environmental requirements	Compliant to RoHS
	IP rating	IP20
"N/A" means not available		

【Dimension and Function diagram】

Antenna Module

Infrared Light
Daylight Sensor

12~24V
DC Input

Detection Area
Hold Time
Daylight Sensor

Normally
open contact

Indicator Light

Normally
closed contact

【Wiring instruction】

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P1 P P2

12~24V
DC Input

Wiring layout suggestion：

1. Hand-in-hand wiring is highly recommended,yet star-topology or tree-topology is strongly deprecated

2. Our sensor is recommended layout in UPS circle to guarantee instant smart scene execution or electrical appliance operation

3. P1 is NO terminal,P2 is NC terminal,please apply right wiring to match your smart system

【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】

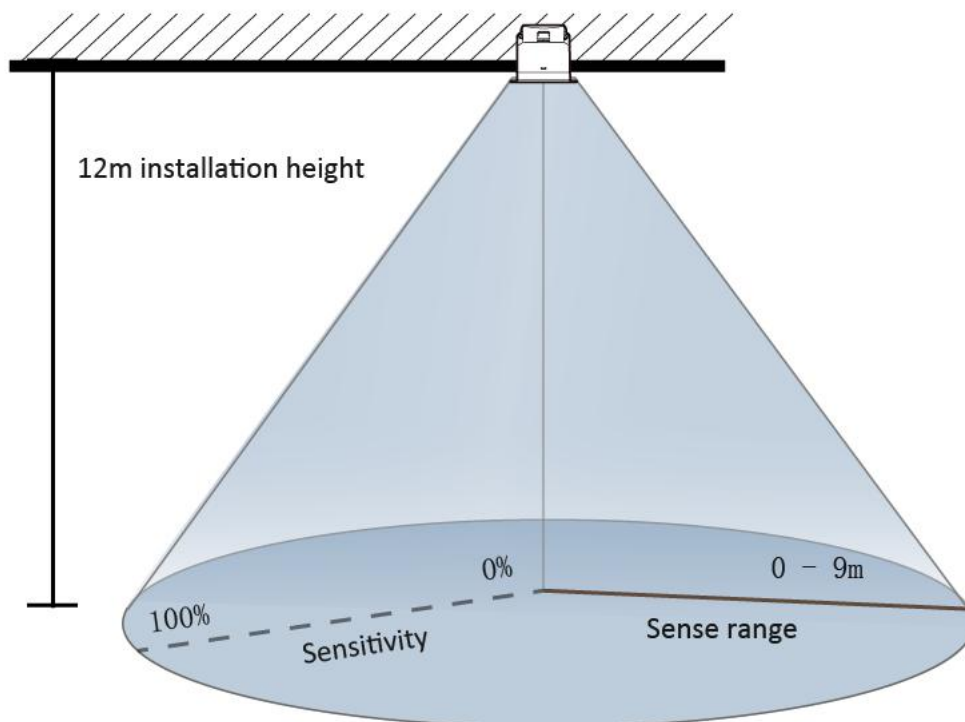|	
Detection Sensitivity : 100%	Hold Time : 5S
Indicator light : OFF	Daylight sensor : Disable

【Detection radiation】

MSA003D 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
100%	ON	ON
75%	-	ON
50%	ON	-
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

Indicator

	9	
I	ON	open
II	-	close

【Remote manual】

Remote Control Settings	Button	Remarks
	ON/OFF	Press the "ON/OFF" button, the load light enters the normal on mode, and the sensing function is disabled
	Reset	Press "Reset" button, all parameters are same as factory settings.
	Sensor motion	Press the "Sensor motion" button to switch from manual mode to sensor mode (the function returns to the last setting)
	DIM Test	N/A
	Override DH	N/A
	DIM+ DIM-	DIM+:Constant on mode DIM-:Constant off mode
	DH Mode	N/A
	Q1	High sensitivity mode
	Q2	Low sensitivity mode
	Q3	N/A
	TEST 2S	N/A
	HS	Turn on the indicator light
	LS	Turn off the indicator light
	☾☀	Daylight Sensor Set up Daylight Sensor: 5Lux/15Lux/30Lux/50Lux/100Lux/150Lux/ Disable。
	⏱	N/A
	⏱	Hold time Set up Daylight Sensor: 2S/30S/1min/3min/5min/10min/20min/30min
	📶	N/A
	📶	Detection Area Set up Detection Area：25%/50%/75%/100%
	5m 10m 15m	Remote Distance Toggle button can set the remote distance of sensor by remote control.

【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.