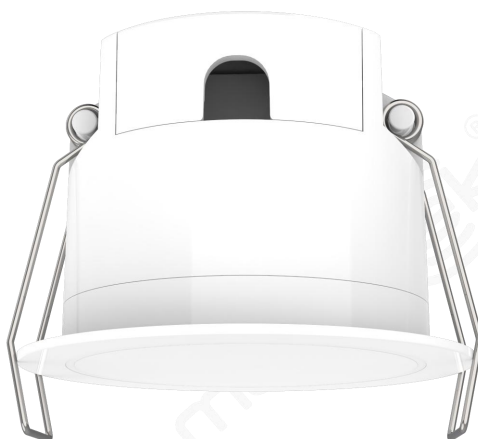


Specification

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

Product model: MSA001D E

Product version: V1.1



Version	Release/ change Date	Publishing
V1.0	2022.12.13	Jacky
V1.1	2023.10.19	Jacky

【Product Description】

MSA001D E is a 5.8GHz microwave sensor with high antenna gain and wide sensing range. Combined with the unique software algorithm of Merrytek, it can accurately detect human movements in almost all indoor spaces to trigger smart scene application in smart homes, smart hotels, and smart offices.

【Features】

- Merrytek patent high gain 5.8GHz microwave antenna technology
- Accurate NO/NC dry contact output
- Daylight sensor detection available
- Detection area, hold time and daylight threshold can be set by remote
- 5.8GHz ISM Band applied
- Max detection range: 6-8m in diameter
- Hallway and Toilet motion detection highly recommended
- Recessed mounting and surface mounting available
- Compacted mini size for perfect ceiling mounting
- Ultra low radiation power, no harm to human
- Stable performance, not affected by temperature, humidity, noise, airflow, dust and light



【Application】

- Smart home
- Smart lighting
- Smart hotel
- Smart system control

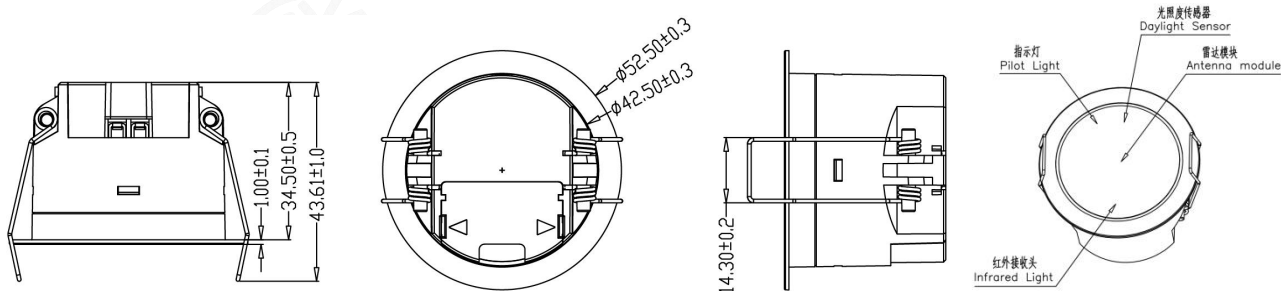
【Dimension】

- Product size: $\phi 52.5 \times 34$ mm
- Connection interface: 4-pin terminal

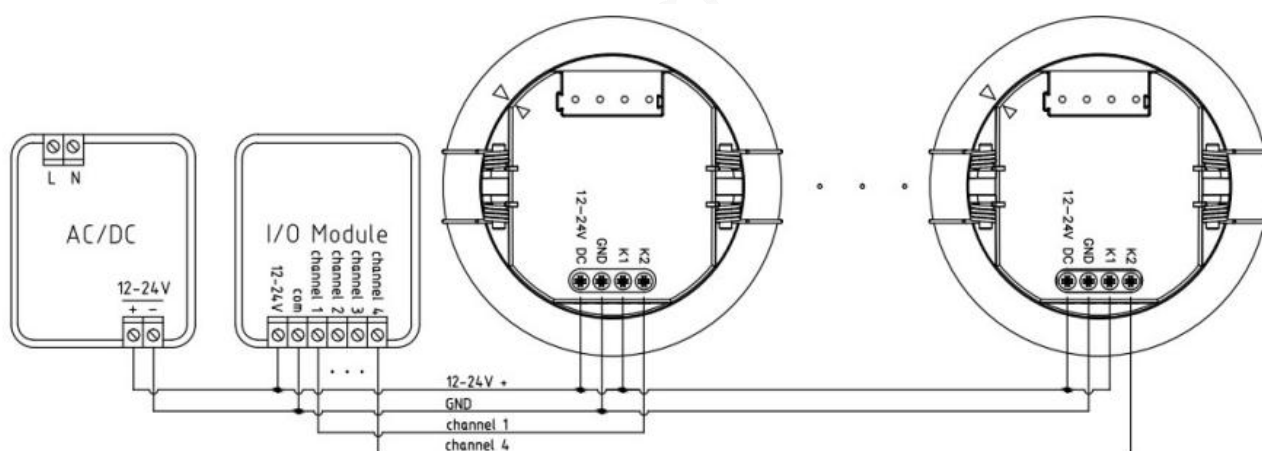
【Parameter】

Input/Output	Input voltage	12-24V DC
	Rated voltage	12/24V DC
	Working current	20mA max
	Power consumption	≤0.5W @24V DC
	Output signal	NO/NC dry contact (Factory setting is NO dry contact)
	Load type	Resistive (load voltage :Vdc≤36V,load current:100mA max)
Sensor parameter	Microwave frequency	5.8 GHz ±75 MHz
	Radar transmit power	2mW Max
	Detection sensitivity	MH10 remote setting: 100%/75%/50%/25%
	Hold Time	MH10 remote setting: 2S/30S/1Min/3Min/5Min/10Min/20Min/30Min
	Daylight sensor threshold	MH10 remote setting: 5Lux/15Lux/30Lux/50Lux/100lux/150lux/Disable
	Radius detection range(based on 100% sensitivity)	3-4m based on 3m mounting height
	Remote control	Available
	Mounting height	2.5-4.0m
	Detecting Angle	120°
Application environment	Drill hole	Φ45mm
	Working temperature	0℃...+50℃
	Storage temperature	-40℃~+80℃
Certificate Standard	Certificate	Compliant to CE
	Environmental requirements	Compliant to RoHS
	IP rating	IP20
"N/A" means not available		

【Dimension and Function diagram】



【Wiring instruction】



Wiring layout suggestion:

1. Hand-in-hand wiring is highly recommended, yet star-topology or tree-topology is strongly deprecated
2. When there's more than 1pc sensor is a line, you shall consider all equipment current consumption shall not surpass your driver's loading capacity.

【Initialization】

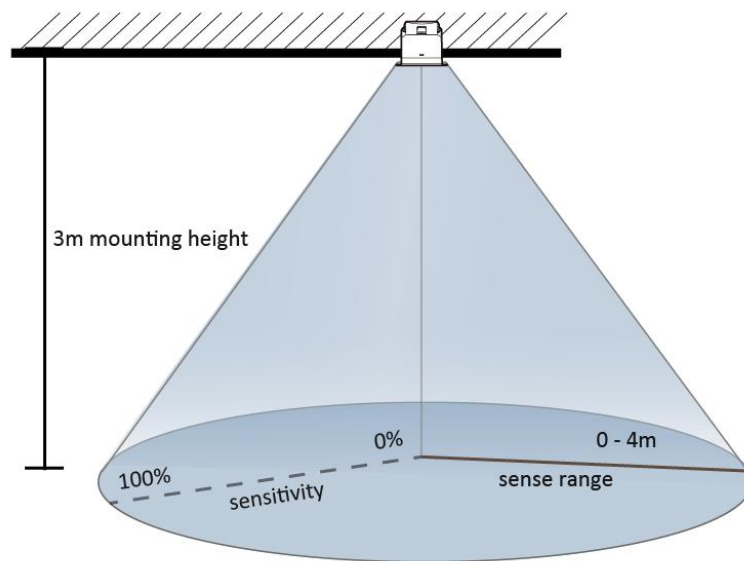
When powered on, sensor indicator will turn off after flashing for 20S and will not detect moving signal during this time. After 20S, you can use our MH10 remote to adjust detection area、hold time and daylight sensor etc parameter.

【Factory setting】

Detection Area: 100%, Hold Time: 2S, Daylight Sensor: Disable

【Detection radiation】

MSA001D E is highly recommended ceiling flush mounting and its detection radiation is as below shows:

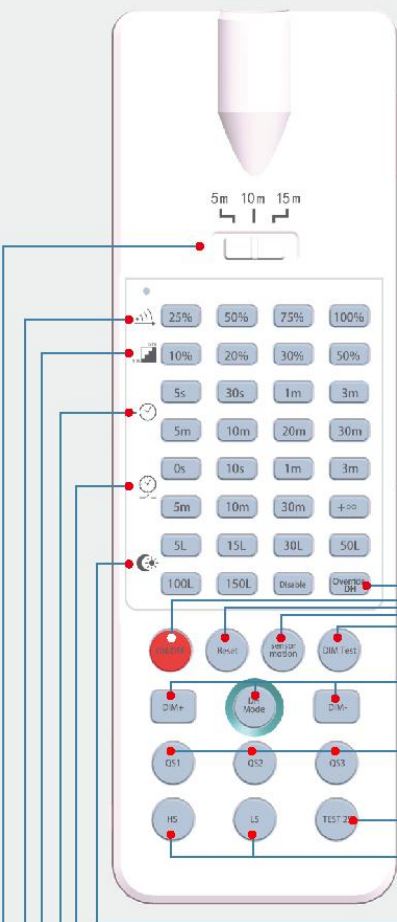






















【Detection Signal】

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.

【Remote manual】

Remote Control Settings	Button	Remarks
		Press the "ON/OFF" button, the load light enters the normal on mode, and the sensing function is disabled
		Press "Reset" button, all parameters are same as factory settings.
		Press the "Sensor motion" button to switch from manual mode to sensor mode (the function returns to the last setting)
		N/A
		N/A
	 	DIM+: Constant on mode
		DIM-: Constant off mode
		N/A
		High sensitivity mode
		Low sensitivity mode
		N/A
		N/A
		Turn on the indicator light
		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%
		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.