Specification

Product series:	**Low-mounting microwave motion sensor (ON/OFF version)**
Product model:	**MSA001S 1**
Product version:	**V1.1**

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

【Product Description】

MSA001S 1 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.

【Product Feature】

- Merrytek patent high gain 5.8GHz microwave antenna technology
- Accurate ON/OFF 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
- Max loading capacity :800w resistive loading and 400w inductive loading
- Hallway and Toilet motion detection highly recommended
- Flush 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

【Dimension】

- Product size: φ52.5x34mm
- Connection interface: 4-pin terminal

【Parameter】

|		
Input/Output	Input voltage	100-240V AC 50/60Hz
	Rated voltage	220V AC
	Working current	20mA max
	Power consumption	≤0.5W @220V DC
	Output signal	ON/OFF
	Load capacity	800w resistive loading or 400w inductive loading
Sensor parameter	Microwave frequency	5.8 GHz ±75 MHz
	Radar transmit power	2mW Max
	Detection Area	DIP or remote setting: 100%/75%/50%/25%
	Hold Time	DIP or remote setting: 5S/1Min/5Min/10Min
	Daylight Sensor threshold	DIP or remote setting: 5Lux/30Lux/50Lux/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	Φ55mm
	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】
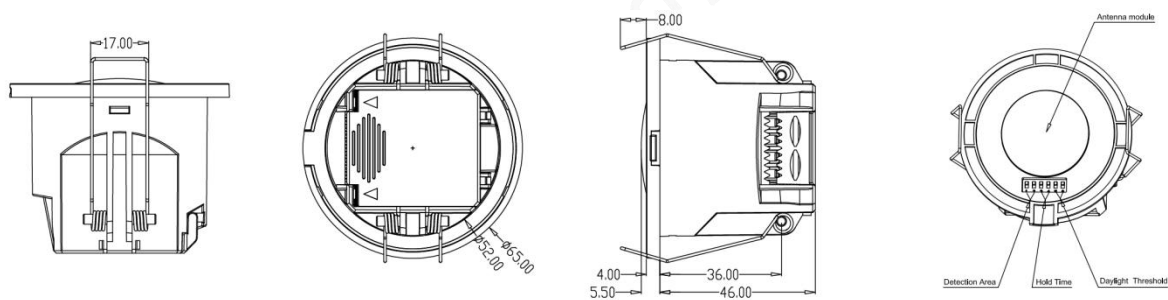
【Wiring instruction】
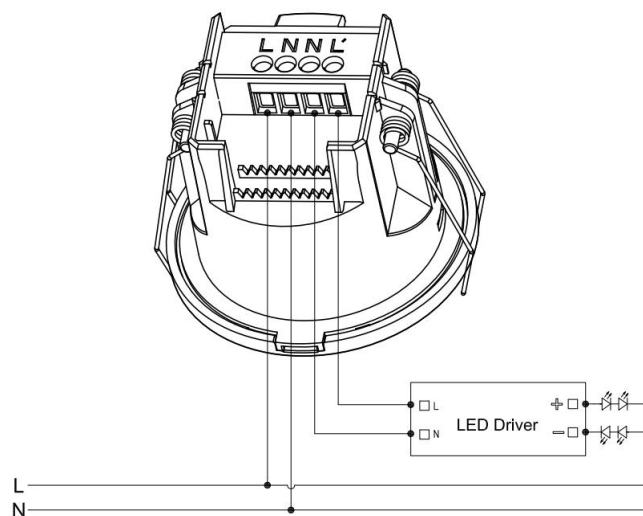
Wiring layout suggestion：

1. 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 terminalto avoid momentary surge overload.

交流固态继电器接线图
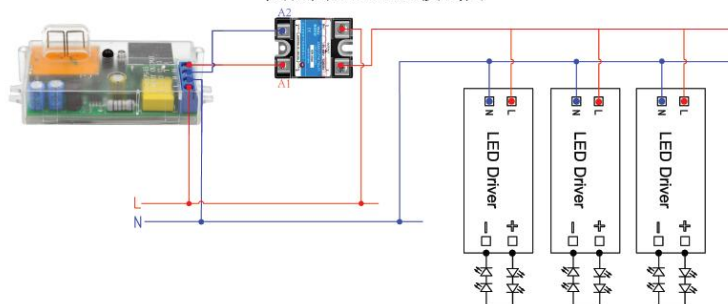
交流接触器接线图
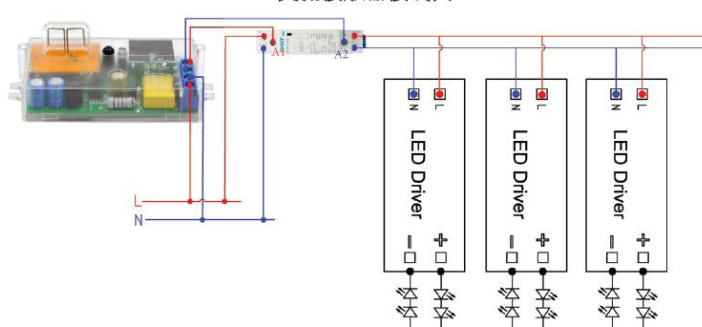
注：负载能力由交流固态继电器/交流接触器性能决定。

【Initialization】

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

【Factory setting】

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

【Detection radiation】

MSA001S 1 is highly recommended ceiling flush mounting and its detection radiation is as below shows:

Ceiling mounting3m

Motion radius: 4m

■ Motion 🚶 ■ Minor-motion 🧎 ☐ Breathing 🛏
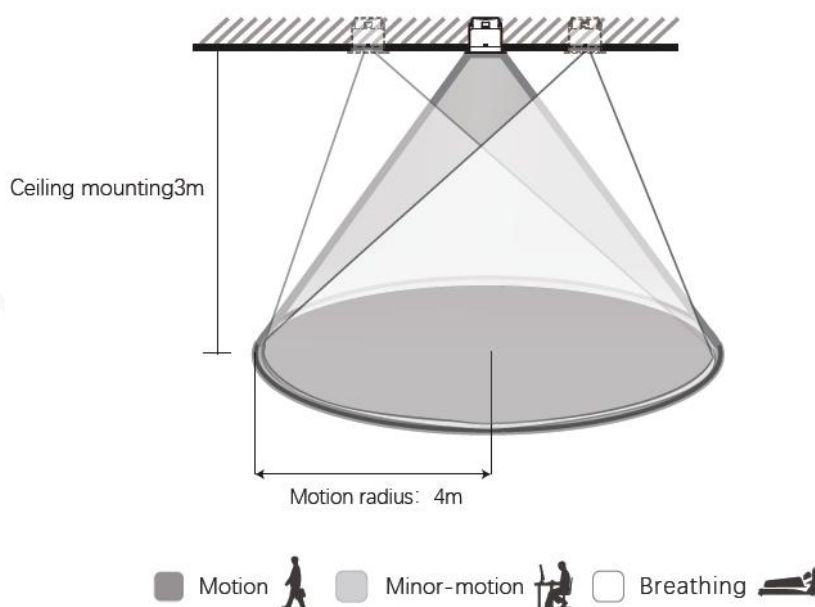
【Detection Signal】

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 switch setting】

Detection Area

	1	2
100%	ON	ON
75%	-	ON
50%	ON	-
25%	-	-

Hold Time

	3	4	
I	ON	ON	5S
II	-	ON	1 Min
III	ON	-	5 Min
IV	-	-	10 Min

Daylight Sensor

	5	6	
I	ON	ON	5Lux
II	ON	-	30Lux
III	-	ON	50Lux
IV	-	-	Disable

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

【Remote manual】
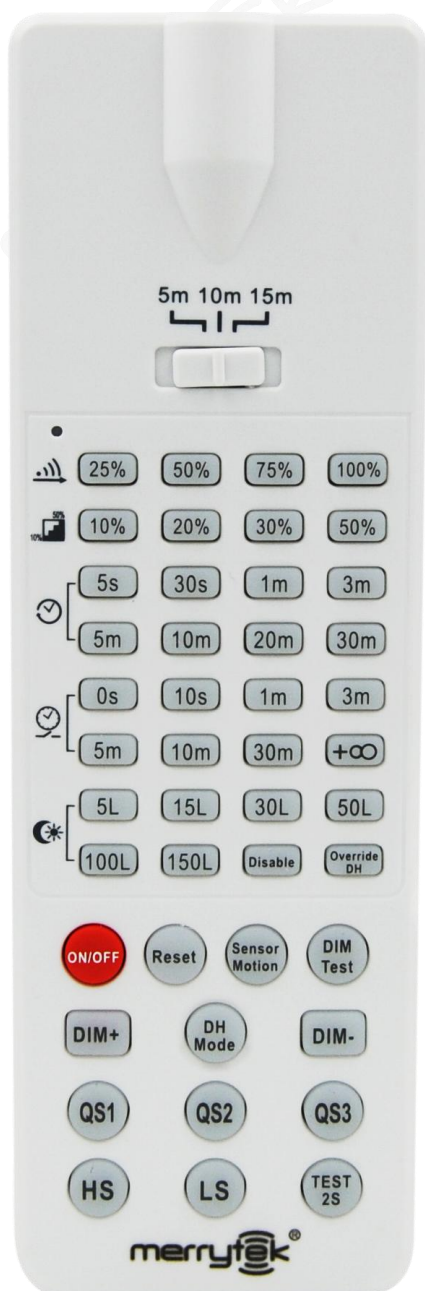
Detection range: 25%/50%/75%/100%

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

Daylightthreshold: 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.