Operating Instructions

Make your choice...
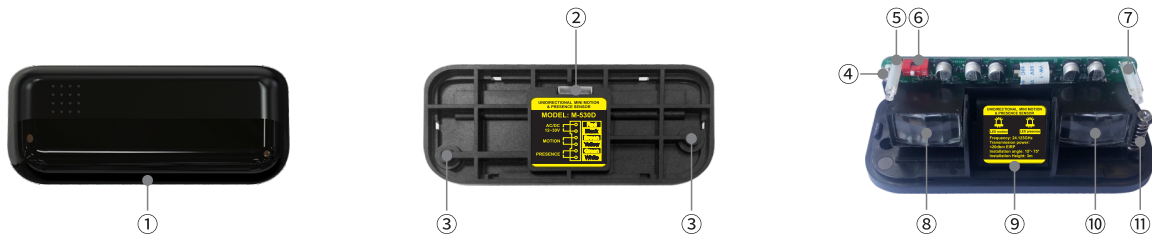
M-530D Unidirectional Mini Microwave Motion & Infrared Presence Sensor
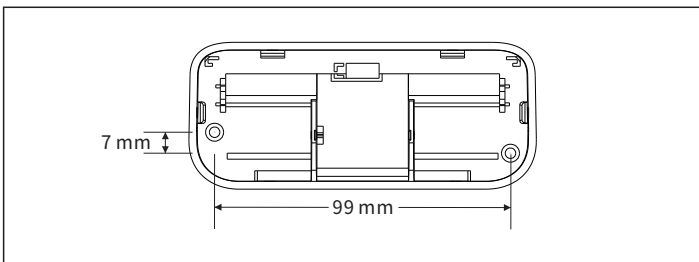

1 Safety Instruction

⚠ The device must be protected with safe insulation at low voltage. All adjustment and repair work must be carried out by a professional engineering workers.
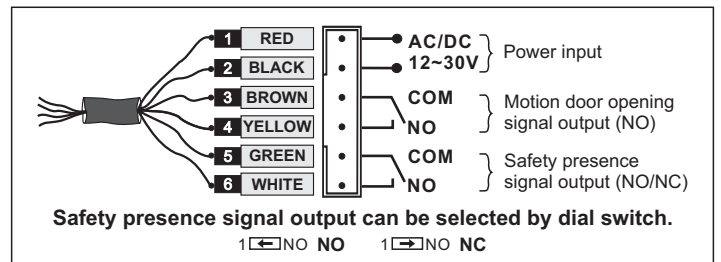
2 Product Overview

① Optical filter   ② Connecting socket   ③ Screw hole for installation   ④ Microwave sensitivity adjustable knob   ⑤ Microwave motion sensing indicator
⑥ Presence output signal NO/NC selector   ⑦ Infrared presence sensing indicator   ⑧ Infrared Presence receiving window
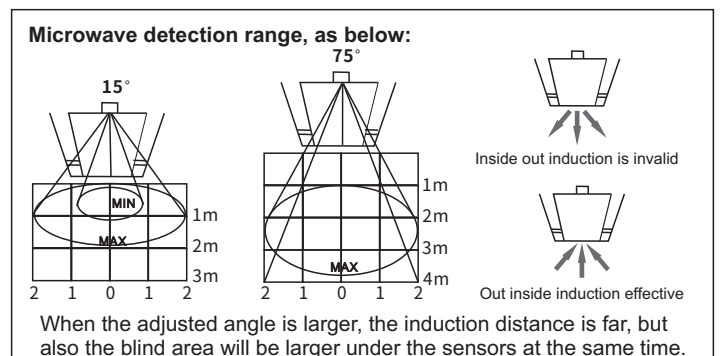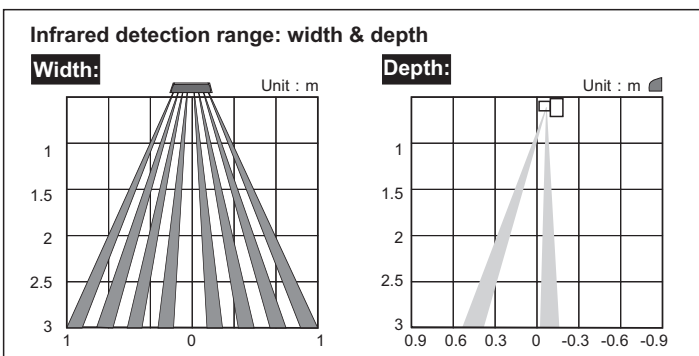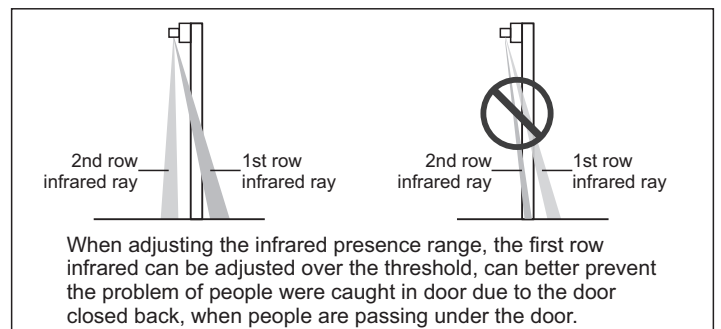⑨ Microwave induction module   ⑩ Infrared presence emission window   ⑪ Infrared presence adjustable screw
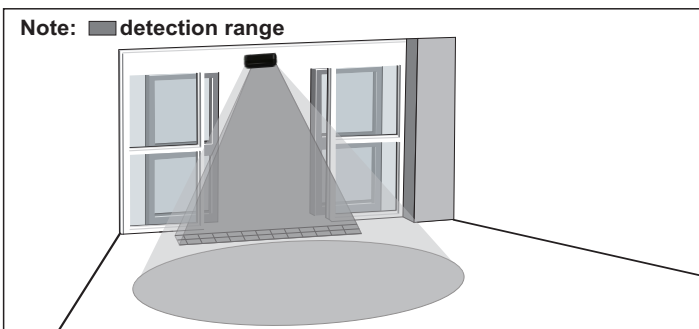

7 mm

99 mm

▲ Hole size

1	RED	AC/DC
2	BLACK	12~30V } Power input
3	BROWN	COM
4	YELLOW	NO } Motion door opening signal output (NO)
5	GREEN	COM
6	WHITE	NO } Safety presence signal output (NO/NC)

Safety presence signal output can be selected by dial switch.
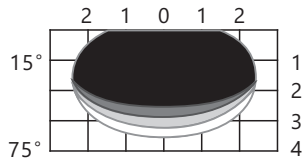1⇐NO **NO**   1⇒NO **NC**

▲ Wiring

⚠ Before background self-learning, please cover the brown lens, and then power-on.
In order to avoid the induction sensitivity automatically weakened, motion and safety presence combo sensor need to installed on the position of the door head, and the distance between the bottom end of door head and the sensor, to ensure that it is less than 70mm.

3 Motion & Safety presence detection range

Note: ▨ detection range

2nd row infrared ray   1st row infrared ray   2nd row infrared ray   1st row infrared ray

When adjusting the infrared presence range, the first row infrared can be adjusted over the threshold, can better prevent the problem of people were caught in door due to the door closed back, when people are passing under the door.

Infrared detection range: width & depth

Width: Unit : m

Depth: Unit : m

Microwave detection range, as below:

15°   75°

Inside out induction is invalid

Out inside induction effective

When the adjusted angle is larger, the induction distance is far, but also the blind area will be larger under the sensors at the same time.

Detection direction adjustment(Front and rear directions can be adjusted flexibly)
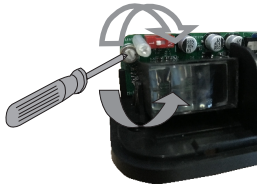Adjusting angle of Plane antenna to get different detection distance and range.

2 1 0 1 2

15°

75°

15° **75°** (Flick up and down)

NOTE:
Initial setting is 45 degree by factory. The above parameter is based on a height of 2.8M. And all parameter values in this manual just for your reference, all are subject to the actual conditions. Detection range will be different because of the making material of door and ground, please adjust the sensitivity by the knob mentioned above.

4 Microwave detection sensitivity and infrared detection range adjustment
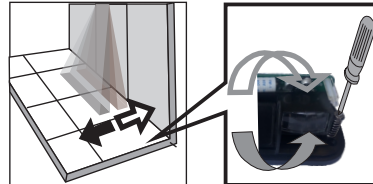
Microwave detection sensitivity adjustment

NOTE:
As picture shows, the higher sensitivity, the larger detection distance and range; The lower sensitivity, the smaller detection distance and range.
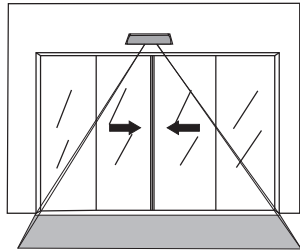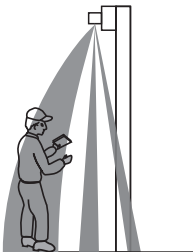
Infrared detection range adjustment

NOTE:
As picture shows, when the knob is adjusted clockwise, the detection range will move inward; when the knob is adjusted counterclockwise, the detection range will move outward.
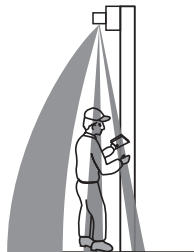
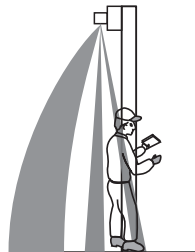**NOTE:** ☐ **Infrared detection range**

When debugging, in order to avoid the wrong background information in the system, during the entire self-learning process, all irrelevant background objects must be removed from the detection range, such as workers, ladders, toolboxes, etc. After the sensor is powered, the left green LED indicator will off after 5 seconds, the right blue LED indicator flashes, and enter to the self-learning background state. When the sensor detects the stable background for 2 consecutive seconds, blue LED indicator flashes quickly and the self-learning is successed, blue LED indicator always on, the sensor enter the standby state.
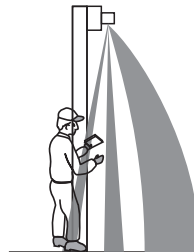
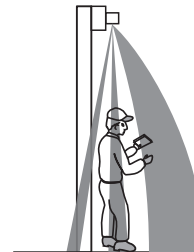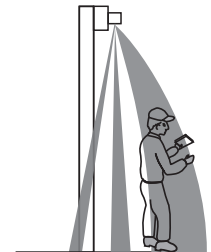| Activation relay output green light on | Anti-clamp relay output red light on | Anti-clamp relay output red light flashes | No induction | Anti-clamp relay output red light on | Motion relay doesn't output |

5 Technical Parameter

Power input:	AC/DC 12~30V(±10%)	LED indicator:	Standby mode: blue LED; 2nd row infrared ray detect mode red light on; 1st row infrared ray detect mode red light flashes.
Cable length:	2.5m		
Output connection:	NO		
Maximum mounting height:	3000mm		
Static current:	53mA		
Action current:	73mA	Detection range:	1800(W) 300-800mm(D) adjustable
External dimension:	116(L)×49(W)×34(H)mm	Output hold time:	1second
Shell material:	ABS	**Microwave induction**	
Infrared safety presence		Technology:	Microwave & Microwave processor
Ray type:	Infrared modulated light	Emission frequency:	24.125GHz
Optical source:	Infrared 940nm	Emission power:	<20dBm EIRP
Light beam:	2 way, 8 transmission, 32 light spot	Emission frequency density:	<5mW/cm^2
Powered self-learning time:	Dynamic stability for 2 seconds	Detection Mode:	Unidirectional Motion
Background self-adapt update:	Stable 15 seconds for self-learning	Temperature:	-20°C to+55°C
Response time:	≤100ms	Output hold time:	1 seconds
Optical surface:	PMMA	Led indicator:	standby mode: light off; action mode: green LED
Temperature:	-40°C to+60°C		

6 Packing List

NO.	PART	QTY	REMARK
1	Sensor	1	
2	6-pin line	1	2.5m
3	Screws bag	1	
4	Operating instructions	1	