

Operating Instructions

Make your choice...

M-530 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.

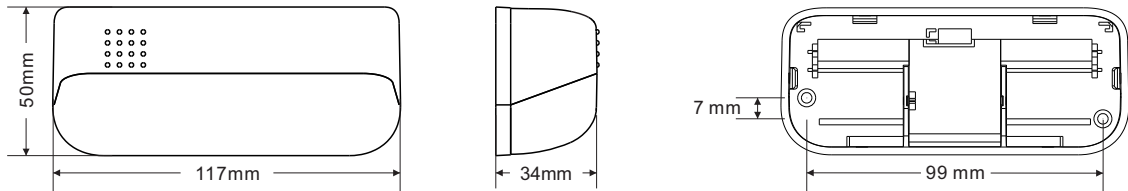
2 Product Overview

Parts



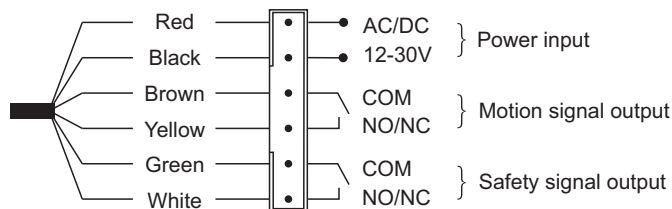
- ① Optical filter ② Connecting socket ③ Screw hole for installation ④ Microwave motion sensitivity adjustable knob ⑤ Indicator light
 ⑥ Infrared safety receiving window ⑦ Microwave induction module ⑧ Infrared safety transmitting window
 ⑨ Infrared safety longitudinal adjustable screw ⑩ DIP switch

Dimension



Before background self-learning, please cover the optical filter, and then power-on. In order to avoid the induction sensitivity automatically weakened, the motion and safety combined sensor should be installed at the position of door head, and the distance between the bottom of the door head and the sensor should be less than 70mm.

3 Wiring Diagram



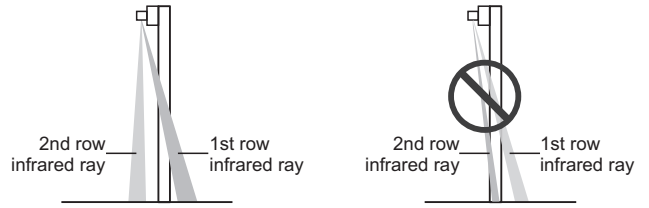
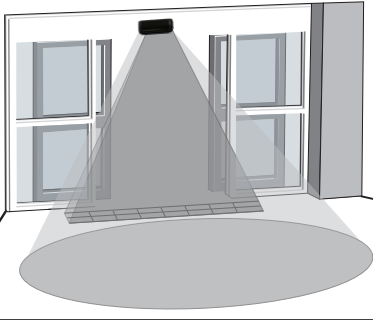
NOTE:
NO/NC signal output, can be selected by DIP switch.

4 DIP Switch

① ②	③	④	⑤	⑥
Safety background update time	Motion signal output	Safety signal output	Sensitivity	A/B channel
↓ ↓ 15sec	↑ NC	↑ NC	↑ Low	↑ B
↑ ↓ 1min				
↓ ↑ 30min	↓ NO	↓ NO	↓ High	↓ A
↑ ↑ Not update				

5 Motion & Safety presence detection range

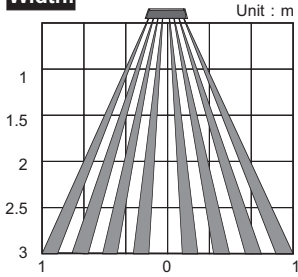
Note:  detection range



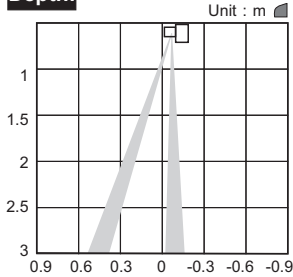
When adjusting the infrared safety setting, the first infrared can be adjusted to cross the threshold, which can better prevent people from being hurt by the door that is closed back.

Infrared detection range: width & depth

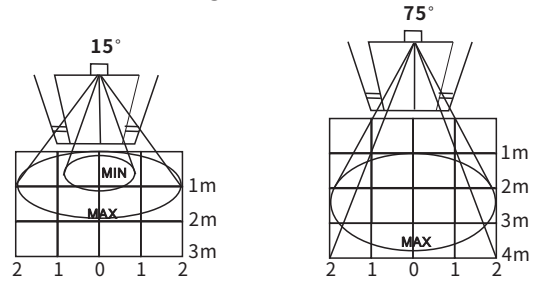
Width:



Depth:



Microwave detection range, as below:



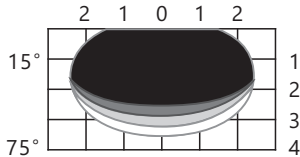
When the adjusted angle is larger, the induction distance is far, but also the blind area will be larger under the sensors at the same time.

Detection direction adjustment (Front and rear directions can be adjusted flexibly)

Adjusting angle of Plane antenna to get different detection distance and range.



15° 75° (Flick up and down)

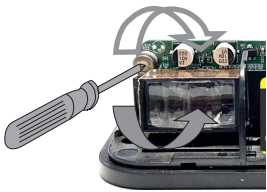


NOTE:

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.

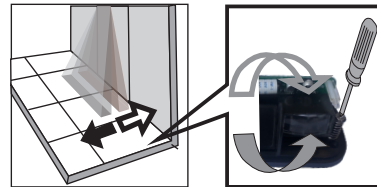
6 Microwave detection sensitivity and infrared detection range adjustment

Microwave detection sensitivity adjustment

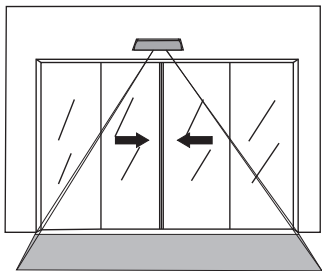


NOTE:
Adjusted clockwise, the higher sensitivity, the larger detection distance and range; Adjusted counterclockwise, the lower sensitivity, the smaller detection distance and range.

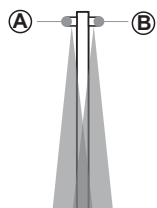
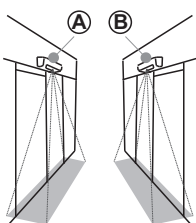
Infrared detection range adjustment



NOTE:
Adjusted clockwise, the detection range will move inward; Adjusted counterclockwise, the detection range will move outward.

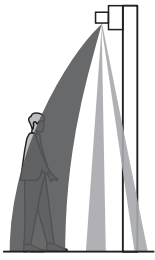


When debugging, in order to avoid the wrong background information in the system, during the entire self-learning process, all irrelevant background objects must be removed from the detection range, such as workers, ladders, toolboxes, etc. When the sensor is powered, the green light flashes, and enter to the self-learning background state. the sensor detects the stable background for 8 consecutive seconds, self-learning is successful, green LED indicator always on, the sensor enter the standby state.

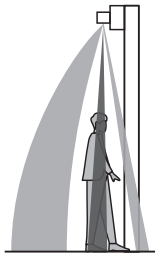


When installing two sensors in adjacent areas, please separately choose channel A and channel B to avoid mutual interference and misoperation.

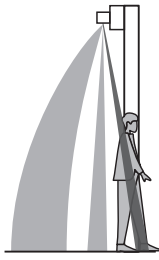
7 Output Diagram



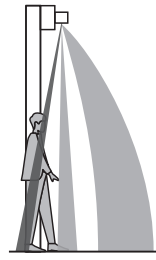
Motion relay output
orange light on



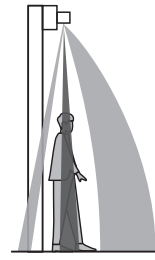
Motion & safety relay output
red light on



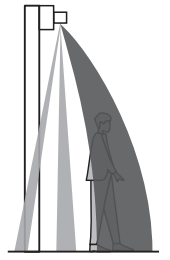
Safety relay output
red light flashes



No induction



Motion & safety relay output
red light on



Motion relay output
orange light on

8 Technical Parameter

Power input:	AC/DC 12~30V(±10%)
Cable length:	2.5m
Maximum mounting height:	3000mm
Static current:	53mA
Action current:	73mA
Dimension:	116(L)×49(W)×34(H)mm
Shell material:	ABS
Temperature:	-25°C to+55°C
LED indicator:	Power on: green LED flashes, Standby mode: green LED on; 1st Row Infrared Action: red LED flashes, 2st Row Infrared Action: red LED on; Microwave motion Action: orange LED on.
Infrared safety presence	
Ray type:	Infrared modulated light
Optical source:	Infrared 940nm
Light beam:	2 way, 8 transmission, 32 light spot
Powered self-learning time:	Dynamic stability for 8 seconds
Background self-adapt update:	4 level optional(default 15s)
Response time:	≤100ms
Optical surface:	PMMA
Detection range:	1800(W), 300-800mm(D) adjustable
Output hold time:	1s
Microwave induction	
Technology:	Microwave & Microwave processor
Emission frequency:	24.125GHz
Emission power:	<20dBm EIRP
Emission frequency density:	<5mW/cm ²
Detection Mode:	Motion
Output hold time:	2 seconds

9 Packing List

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