

Microwave & PIR Intrusion Detector User's Manual

I. Brief Description

Microwave & PIR Intrusion Detector can effectively avoid the limitation of a single method of detection and also anti-interference of strong magnetic radiation. It adopts the microwave detection, infrared PIR movement detection, digital signal processing and blur logical analysis. It has the advantages of false-alarm free and well-performed and can be widely used in families, office buildings, shopping centers, schools, warehouses and so on.

II. Main Feature

- Doppler (effect) + energy analysis
- Single-chip intelligent digital processing technology
- Automatic temperature compensation
- The microwave detective range is adjustable
- Alarm output: NC/NO for option
- Alarm light: ON/OFF for option
- Mono-pulse/Double-pulse is optional, high anti-interference capability
- Anti-white light interference
- Anti-magnetic interference
- It is available to be mounted on the corner of wall or the metope

III. Technology Parameter

- Microwave working frequency: 10.525GHz
- Working voltage: DC10-15V
- Static current: NO \leq 15mA NC \leq 25mA
- Alarm current: NO \leq 25mA NC \leq 15mA
- Installation Height: 2m
- Detective Distance: 12m
- Alarm output: NO/NC is optional
- Tamperproof switch: NC
- Alarm output time: 5 seconds
- Alarm blocking time: 60 seconds
- Anti-white light interference: \geq 6500LUX
- Working temperature: -10 $^{\circ}$ C \sim +55 $^{\circ}$ C
- Preserving temperature: -20 $^{\circ}$ C \sim +65 $^{\circ}$ C
- Size: 128*68*45mm

IV. Structure Demonstration

1. LED light

- Yellow light for Microwave
- Green light for Infrared
- Red light for Alarm

2. Microwave sensitivity adjustment potentiometer (as Diagram 1)

The factory's default state is in the middle location. The sensitivity is higher with clockwise rotating, and lower with counterclockwise rotating.

Note: The microwave sensitivity adjustment potentiometer has been modulated right. If it need to be adjusted, please turn the DIP switch SW2.4 to OFF, and confirm the microwave is lighted with testing in the distance from 12 meters. If the sensitivity is higher or lower, the false-alarm or omitted alarm may be happens. Please turn the DIP switch SW2.4 to ON after adjustment.

3. Wiring terminals

- VCC: to power-anode
- GND: to power cathode
- ALARM: alarm output terminal
- TAMPER: tamperproof output terminal (NC)

4. The selection of DIP SWITCH (as Diagram2)

4.1 The selection of LED switch

Turn the DIP switch SW2.1 to ON, LED light will be on; Turn the DIP switch SW2.1 to OFF, LED light will be off. The default state of LED light is ON.

4.2 The selection of alarm output

Turn the DIP switch SW2.2 to ON, the relay output is NC; Turn the DIP switch SW2.2 to OFF, the relay output is NO. The default state of relay output is NC.

4.3 The selection of pulse method

Turn the DIP switch SW2.3 to ON, the infrared test method is mono-pulse. It is recommended in the ordinary environment. Turn the DIP switch SW2.3 to OFF, the infrared test method is double-pulse, which is recommended in the interference situation. The default state is mono-pulse.

4.4 The selection of mode

Turn the DIP switch SW2.4 to ON. It is for normal work state. The yellow light will be on when microwave is triggered. The green light will be on when infrared is triggered. The red light is on 5 seconds when both microwave and infrared are triggered together at the same time. Meanwhile, the relay outputs alarm signal. Turn the DIP switch SW2.4 to OFF, the detector doesn't alarm. This mode is mainly used to test the operating area of the infrared and microwave. When the infrared signal meets all needs of test, the green indication light is on. When microwave signal meets all needs of test, the yellow indication light is on. The default state is the normal mode.

V. Installation and Adjustment:

1. Installation Requirement

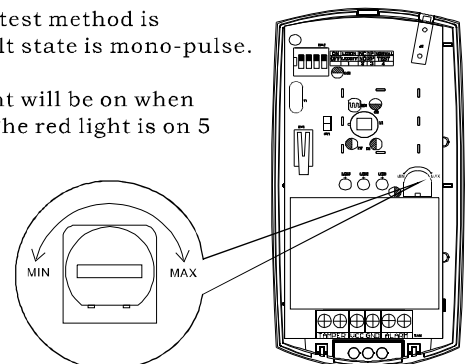
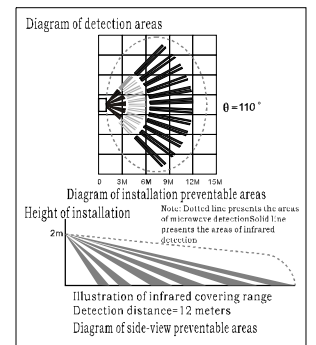
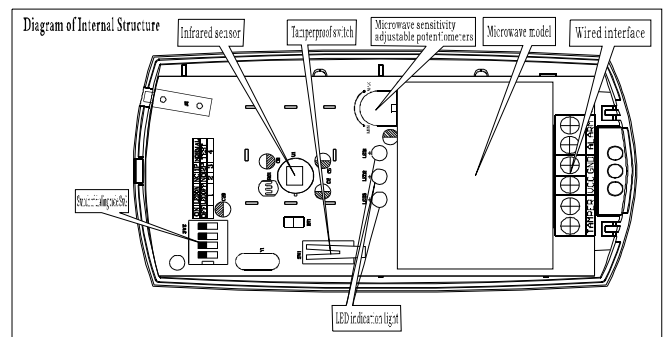


Diagram 1

1.1. The infrared sensor has the highest sensitivity situation when a human body moves horizontally relative to the lens and the lowest when vertically against the lens.

1.2. It's recommended to use double-pulse mode in the intense interference environment.



No.	Function	ON	OFF
1	LED	Open	Close
2	Alarm output	NC	NO
3	Pulse selection	Mono-pulse	Double-pulse
4	Model selection	Normal model	Test model

Diagram2

1.3. Surface of installation should be firm with non-vibration.

1.4. Avoid too hot or cold place and strong air-flow place, such as intake, air-condition, electric radiator, doorway or window.

1.5 Any barrier is forbidden, the detector should be installed directly facing to the preventable areas.

1.6 Avoid the fluorescent light directly.

2. Installation and Operations

2.1 Open the top-cover and cover of the detector as diagrams.

2.2 Install in accordance with the program of installation.

Please assemble the accessories with detector cover, and make it stable with the brace of the universal bearers.

2.3 Choose the pulse mode (mono-pulse or pulse) according to the installation environment and preventable requirement.

2.4 Close the top-cover to the test after confirming.

2.5 Turn on power 60 seconds. Move transversely at 12m distance from the detector in 0.75 m/s for 3m (as Diagram 4).

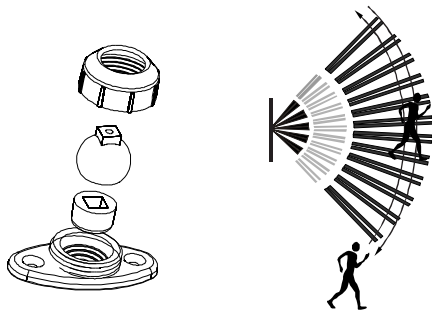
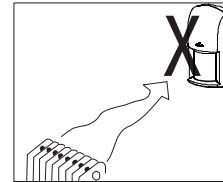
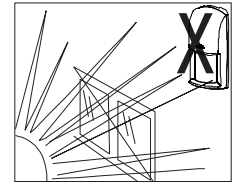


Diagram3

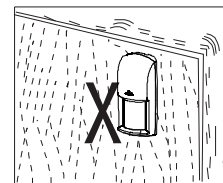
Diagram4



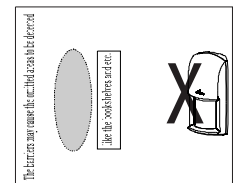
Avoid facing too hot or too cold resources



Avoid facing sunshine

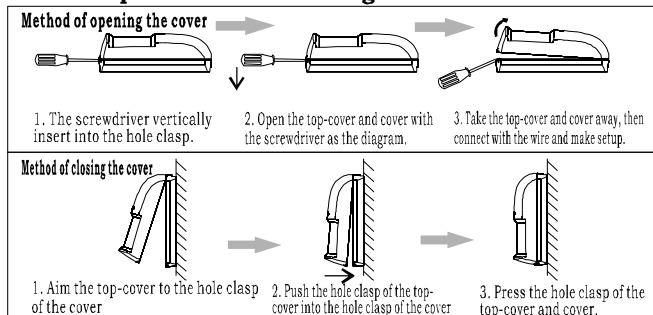


Avoid facing the place without firm foundation

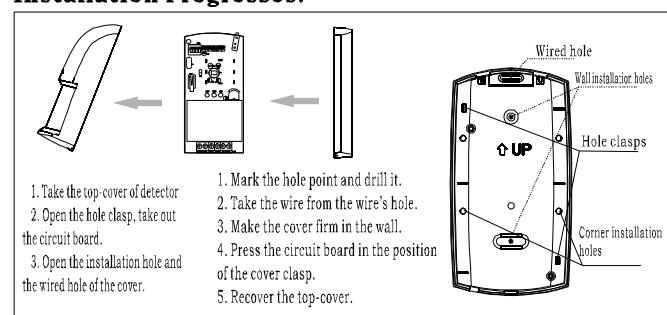


Avoid facing the barriers

Covers Opened & Closed Diagrams:



Installation Progresses:



Warning: Limits Of This Safe System

As an advanced technical guard system, although it can reduce the occurrence of theft, robbery and fire, it can not promise to have no any above-mentioned accidents happens or have no any personnel casualty or property losses happens. And we invite you understanding that any alarm system, whether it is used in business or at home, it may alarm wrongly or failure to alarm because of various reasons. We remind you to pay attention to the following possible reasons:

1 User or installation personnel misunderstand the user' manual or operate wrongly so that the system cannot work normally.

2 Intruder intrude the place where is beyond the detect areas or he can pass by the alarm detector or make it malfunction. Passive infrared detector cannot detect hidden places, like behind the wall, inside ceiling, inside floor, behind the door, glass partition, glass door or behind the glazing.

3 There is no power or the battery is used out or damaged.

4 When someone intrudes, the common reason why the system cannot alarm is that the system doesn't get normal maintenance. Like other electrical equipments, the electronic elements of this equipment also may be damaged. Therefore, user should check the system periodically everyday.

5 Other unpredicted reasons.

If you don't agree with the above clauses, you can send it back if only it is not damaged within three days from you purchase, and we will refund all money. Otherwise, we view it as that you agree with the above clauses.

You should know that the alarm equipment is not insurance substitution. So the users must be careful to protect your life and property.