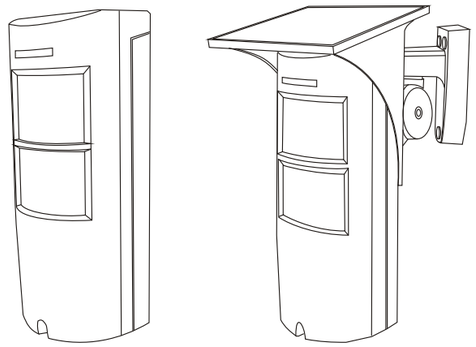
ENGLISH

INTELLIGENT OUTDOOR DETECTOR

Installation instructions

1. INTRODUCTION

The detector is a special three-tech (PIR+PIR+MW) complex detector for outdoor intrusion. Signals of 3 sensorsare with super stability and dependability by its advanced multi-grades digital signal processing technology. And they can offer 3 different detection modes on 2 sensitive grades in order to choose the best the detection way for spot environment and gets the best rate between the best detec tion ability and the minimum false alarm rate. With normal "AND"and "OR" modes, The detector is also with "5P" mode to avoid the damage of dopes spraying on the lens. Its unique water-proof design is totally fit for outdoor installation. At the same time, the detector also provides the installation user with NO/NC output selection mode, which can be directly used to activate THE CCTV system and access control system.



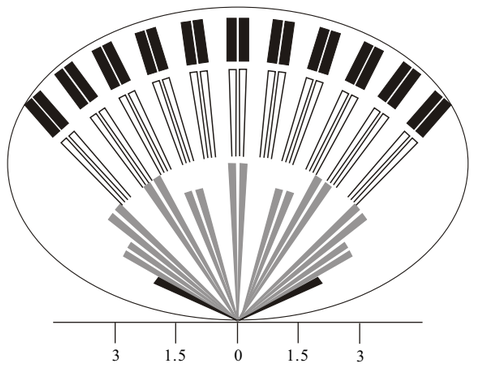
Waterproof cover, purchased separately

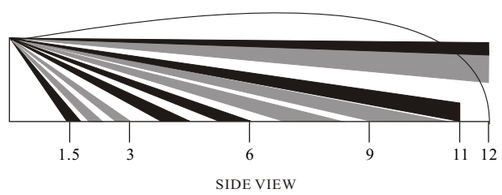
2. BRIEFINTRODUCTION

-Two PIR and MW detection tech
-Automatic setting of anti-masking
-Microwave synchronization
-Detection mode：MW5P-OR - AND
-Selectable detection sensitivity
-Alarm output NO/NC Select
-Anti white light
-Anti-pet ⩾25kg
-Alternative Led OFF
-Micro-strip MW with pulse transmission
-62 beams Fresnel lens with down-view window on its 6 planes
-Vertical adjustment
-Air-proof optical parts
-Wall inlay
-Total view:108° ， Monitoring scale:15m
-Corner and wall installation. Universal connector
- Universal connector for option,
-90°horizontal adjustment 30°vertical adjustment

3. SPECIFICATIONS

Power supply:	*12-24VDC*
Current:	***30mA(standby) 400mA(heating)***
Install high:	*1.5m.-2.4m*
MW frequency:	*10.525GHz*
MW power(EIRP):	*13dBm*
PIR sensor:	*2×Dual elements*
Alarm time:	*3s (Customized by user)*
Anti RFI:	*0.1-1000MHz/30V/m*
Anti-white light:	*>10000LUX*
Anti EMI:	*50000V*
Anti petweight:	*25Kg*
Alarm output:	*NC/NO @2A/24VDC*
Mask output:	*100mA/24V*
Temperature:	*-25℃/+55℃*
Storage temp:	*-40℃/+65℃*
Humidity(RH):	*95%*
Sensitivity:	*H / L Select*
Detect speed:	*0.2m/s to 3.5m/s*
shell material:	*ABS Resin*
Dimensions (H×W×D):	*180mm×76mm×60mm (main)*
Coverage:	*12m×12m 108° (wide lens)*





Standard lens

4. INSTALLATION GUIDE

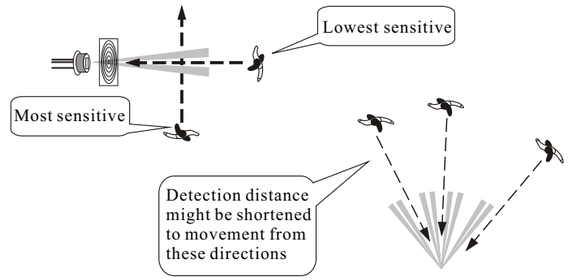
General rules

Select the best installation point fit for PIR and MW technologies. Put detector onto the selected place and keep it away from door, window, running machine or heat sources.

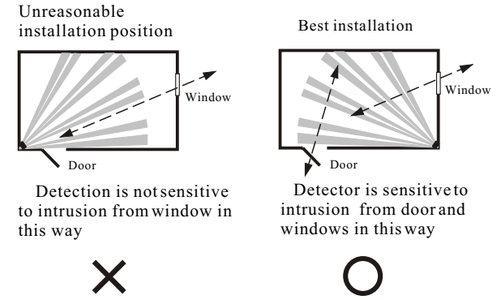
Keep away from strong interference | Keep away from high pressure power | Installation base shall be stable | No direct facing cold /hot source | Don't install more than 2 detectors at the same site | Don't install on the tree | Install error

About installation Angle

There is a physical difference in the Angle of intrusion.



About Installation Position



Detection is not sensitive to intrusion from window in this way

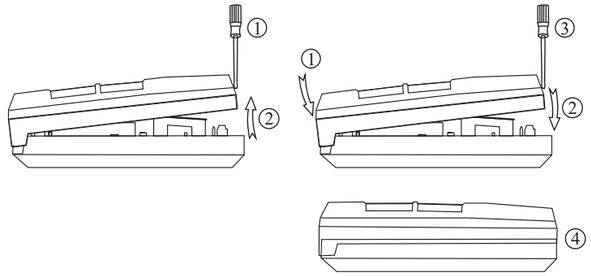
Detector is sensitive to intrusion from door and windows in this way

5. WALL FASTENING & PART EXPLAIN

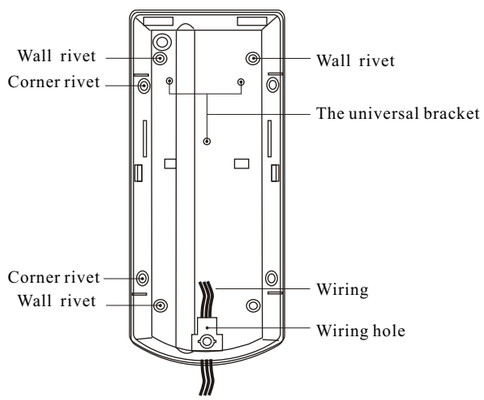
In order to optimize the signal coverage, the detector should be mounted at 2.1 m height and vertically adjusted to zero point. Make sure there are no interference sources working near the detector and that there is a wide field of view in front of the detector. Unscrew, remove the front cover, and pull out the circuit board. Drill through the mounting blind hole, make a mark on the wall, drill a 40mm deep hole with a 6mm diameter drill bit, then punch the rubber plug into the hole, let the screw into the 5-6 mm, then thread the wire through the cable hole, and fix the bottom cover to the wall, finally tighten the screw.

Open the process

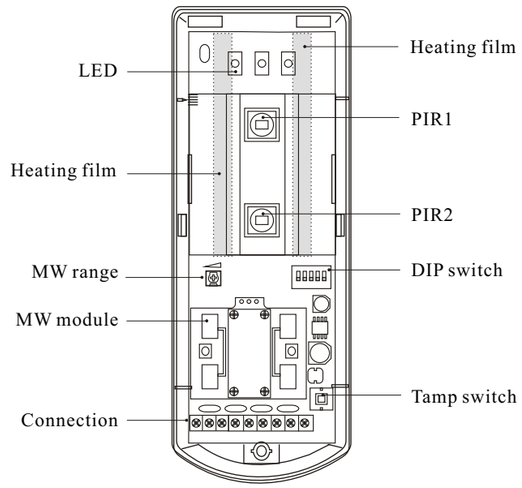
Close the process



Installation Hole

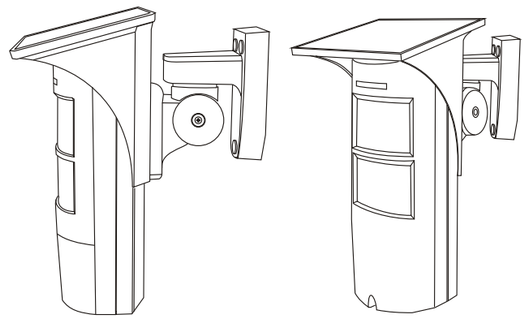


Internal parts



Installation with waterproof cover

(optional accessories, need to be purchased separately)



6. TESTING

DIP 1 switch on “OFF” （anti masking cover “OFF”）
DIP 5 switch on “OFF” （LED actives）

Note:
During this mode, anti-masking is limited.

MW

Tune microwave tuner to minimum, （capacity can be adjusted from 2-15m）; to the extremity of protection area; when LED indicator turns off, operation radial movement to the detector, check MW detection by green LED. If green LED doesn't light, turn the MW tuner in clock wise to increase its capacity; repeat this tests for several times till you get the required distance.
Remarks: MW adjustment: turn the capacity to the minimum, for MW can penetrate wall while over high capacity is not helpful for detector function in its protection area.（MW gets highest sensitivity when it performs radial movement to detectors）

PIR

Close the front cover, when LED indicator turns off, perform horizontal movement in the detection area, check the detection status of PIR through the yellow LED. This step can check whether there is deal corner in the detection area; when PIR gets highest sensitivity when horizontal movement to detector. When all DIP switches are in “OFF” status, monitor is in standard operation.

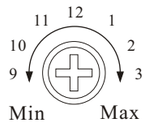
Anti-mask cover control /AND / high sensitivity / LED activation

If want to get max. monitoring, please refer to “monitoring mode” section.

Note:
When there is interference to the monitor, anti-masking cover function will be limited.

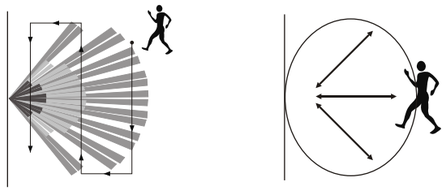
MW RANGE

Time	9	10	11	12	1	2	3
Range	2m	4m	6m	8m	9m	12m	15m



Gain MW

TEST PATH



LED DISPLAY


Yellow led　　Green led

7. MONITORING MODE

ON

	1	2	3	4	5
ON	MASK	OR	5P	SEN L	
OFF		AND		SEN H	LED

AND

DIP 2 switch on “OFF” status
If three sensors （2*PIR&MW）get the detection signal at the same time, alarm will be trigger.
This mode is fit for installation with unstable factors.

OR

DIP 2 switch in “ON” position
Any of the sensors gets detection signal, alarm will be triggered.
This mode is fit for high stable environment and inquires the detector with very high detection ability.

5P（MODE）

DIP 3 switch is in “ON” position
During the status, DIP 2 switch is useless.
If three sensors get the detection signal at the same time, （such as AND mode）, or if it they gets more MW signal while there isn't any 2*PIR signal, alarm conditions are provided.
Fit for the installation which needs “AND” detection mode, but it may exist PIR shadow area, or somebody spray the dope onto the PIR lens will fully to damage the PIR detection.

SENS L

DIP 4 switch is in “ON” position
Detection sensitivity of both sensors are reduced.

PIR: During the time, signals detected by both negative and positive period of PIR are limited.

Mw: the detection response speed of MW is 0.5 seconds, running speed is 0.6m/second.

Anti-masking function

Anti object block the MW may cause alarm by the twinkle of LED indicator, and the signal is transported to monitoring center by MASK connector. Alarm status will last till the causes of formation are cleared away.
DIP 1 switch is in “ON” position
The occlusion activation is the last action to be performed. When this function is activated, the detector will enter a self-detection state, during which the LED indicator will flicker for 110 seconds in turn. In this time close the front end shell, and away from the detector, at this time, the detector into the automatic setting state, perform the automatic correction of the height of the occlusion. During this period, do not have any objects close to the detector, so as not to interfere with the automatic setting of the detector.

LED OFF

DIP 5 switch
In “ON” position, it will limit detection display.

LED DISPLAY

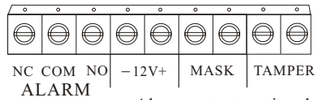
ALARM	Green Led	Red Led	Yellow Led
PIR+MW	OFF	ON	OFF
PIR	OFF	ON	ON
MW	ON	ON	OFF
MASK	FLASH	FLASH	FLASH

About low temperature heating

The detector has automatic temperature detection and control function, when the internal temperature of the product is lower than -15° C, it will automatically start the heating function to stabilize the internal temperature at about -5° C.

The detector has low-temperature heating function, the output current supply of the DC power module is not less than 500mA, otherwise, when the heating function is started, it is likely to burn the power module!

8. WIRE UP THE TERMINAL

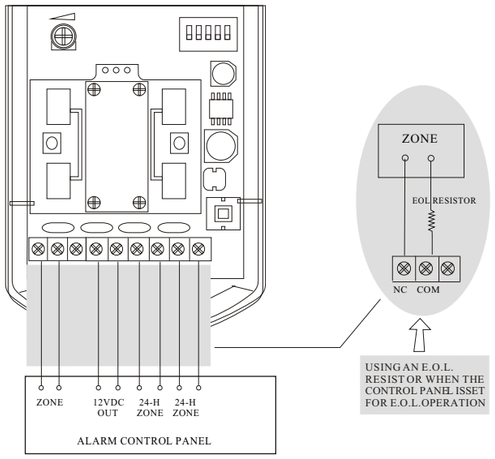


NC COM NO
Alarm output, optional normally closed - normally open,
Select normally closed: normally closed under normal conditions, open when the alarm;
Select normally open: often open and normally closed for alarm (can directly trigger access control system and CCTV system)

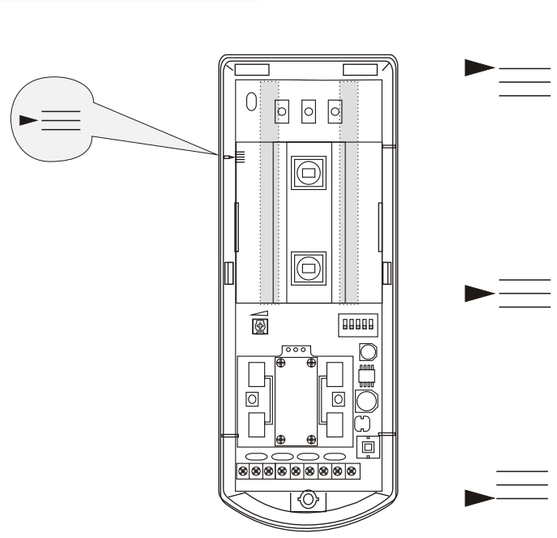
- +
12V
Power supply 12-24VDC input, power flow minimum 500 mA,
The detector has low-temperature heating function, and the output current supply of DC power module is not less than 500mA.

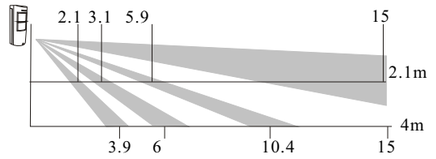
MASK
Anti masking cover output, contact is closed when it is normal.

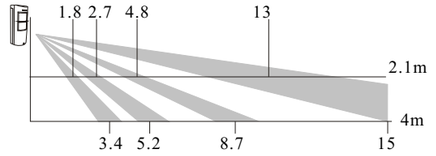
TAMPER
The contact is closed normally, if remove the front small cover or the whole detector from the wall, contact will open. (sensor connects with wall in lay style monitor)

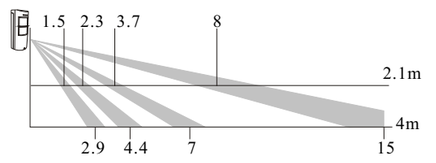


9. VERTICAL ADJUST









10. NOTES AND WARNINGS

Even the most sophisticated detcetors can sometimes be defeated or may fail to warn due to :DC power failure/improper connection, malicious masking of the lens,tampering with the optical system, decreased sensitivity in ambient temperatures near that of the human body and unexpected failure of a component part. The above list includes the most common reasons for failure recommended that the detector and the entire alarm system be checked weekly, to ensure proper performance.
An alarm system should not be regarded as a substitute for insurance. Home & property owners or renters shouldbe prudent enough to continue insuring their lives & property, even though they are protected by an alarm system.

This device has been tested and found to comply with the limits for a Class B digital device, pursuant harmful interference in residential installations .This equipment generates,uses and can radiate radio frequency energy and ,if not installed and used in accordance with the ins-tructions ,may cause harmful in-terference to radio and television reception. However, there is no guarantee that interference will not occur in aparticular installation .If this device does cause such interference , which can be verfied by turning the device off and on ,the user is encoura-ged to eliminate the interference by one or more of the follow ingmeasures:
- Increase the distance between the device and the receiver.
- Connect the device to an outlet on a circuit different from the one that supplies power to the receiver.
- Consult the dealer or an expericnced radio/TV technician.

WARNING! Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user s authority to operate the equipment.

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