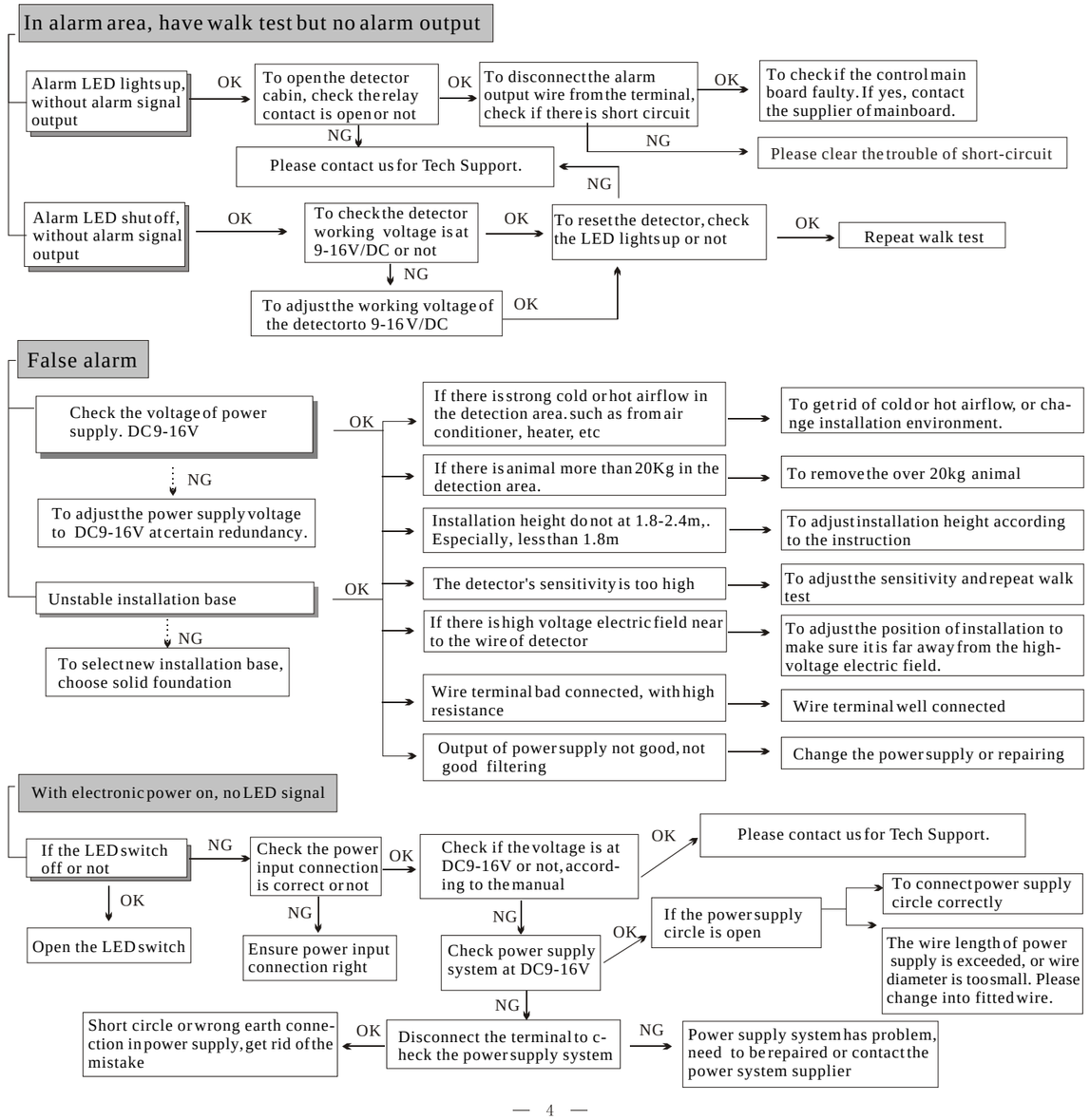
4.Special comments

Even the most sophistic ated detcetors can some times 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 should be 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 instructions ,may cause harmful interference to radio and television reception.However,there is no guarantee that interference will not occur in a particular installation .If this device does cause such interference , which can be verified by turning the device off and on ,the user is encouraged to eliminate the interference by one or more of the following measures:
- 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 users authority to operate the equipment.

5、Solution of usual problem



Installation Guide of ZDD-285PIR
Outdoor Microwave & Infrared Motion Detector

1. Introduction

ZDD-285PIR is virtually the best outdoor/indoor motion detector ever presented, for industrial, commercial and residential security. ZDD-285PIR has a massive aesthetic design and combines the technologies of passive infrared and Microwave as well It is waterproof and all-weather resistant. ZDD-285PIR also alerts in any attempt to damage disable its operation. ZDD-285PIR combines a variety of detection techniques that enable it to work in the most difficult environmental conditions and where high security is required while maintaining unprecedented immunity to false alarms. The two synchronized PIR sensors produce a three-dimensional thermal imaging of the protected area. Combining the fourth dimension ad microwave scanning contributes to an amazing detection capacity and at the same time it also increases the reliability and immunity to false alarms. Using this technique allows high sensitivity level adjustment in both detection technologies without the need of pulse count. In addition to an unprecedented amazing and reliable detection skill, ZDD-285PIR is equipped with unique protection mechanisms against any attempt to damage or to disable its operation. These following protection mechanisms always work-weather the alarm system is Armed or Disarmed:

1.Forntal Anti-masking by a continuous active infrared scan, against masking the near field-of-view of the detector (Detects even transparent objects such as clear glass, plastic bags or transparent spray of any king)

2. Imposes OR mode in distress. If from any reason, the PIR detection channel is neutralized(for example, the detector front was masked) the Microwave detection channel will guard the protected area.

3.Anti-case-shifting, by inertial switch that alerts if someone shifts, moves or turns the detector.

2.Specifications

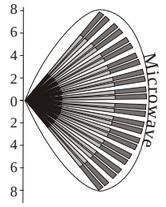
Models:
ZDD-285PIR;

Detection Range:12m
Input Voltage:9 to 16 VDC
Current Drain:About 65mA @ 12 VDC

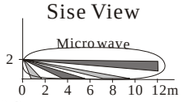
PIR Section:Lens Date
NO.of Curtain Beams:
(11+11+9)*2=62 (Typical)
Max.Coverage: 12*12m /90°
Tripping Indication:
3 colour lights for about 30 seconds

Alarm ,Mask and Tamper
Alarm Output:
Solid-state relay, N.C & N.O up to 100mA/30V,-30Ω
Tamper Contacts: N.C , 50mA resistive /30 VDC
Mask Output: N.C up to 100mA/30V,-30Ω

Top View



Sise View



Mounting:
Surface or corner,at the height of 1.8 to 2.4 m
Note: Base allows single-sided corner mount at 45 to wall

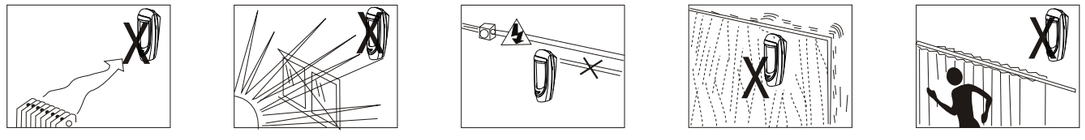
Accessories:
BR-1:Surface mounted swivel bracket, adjustable 30° down and 45° left or right.

Environment:
Operating Temperature: -10° C to 50° C(14° F to 122° F)
Storage Temperature :-20° C to 60° C (-4° F to 40° F)
Anti white light: ＞9 0 0 0 LUX
Physical
Size(H*W*D):176*83*66 m m

This device is coherent to Europe parliament direct 1999/5/EC necessary items and rules, and also coherent to the main spirits of radio and telecom terminal equipments on March 9th. 1999. The device also reaches the Canadian standard RSS-210. It can be used indoor and outdoor, which can reach its maximum protection and avoidance of above interference.

3.Installation

3.1 General Guidelines



Don't face cold or heat directly

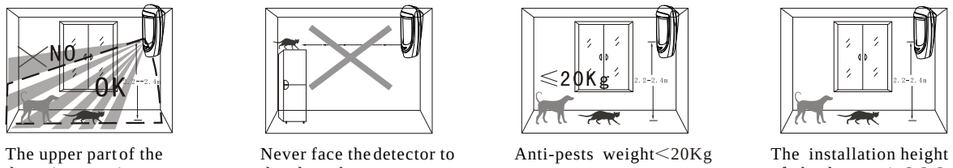
Don't face the sunshine directly

Wire connection or detector can't be near to high-pressure cable

Don't install on a unstable base.

Don't face metal wall

3. 2Anti-pests installation



The upper part of the detection area is non anti-pests area

Never face the detector to the place that pests can climb up directly

Anti-pests weight＜20Kg

The installation height of the detector is 2.2-2.4 meters can Anti-pests

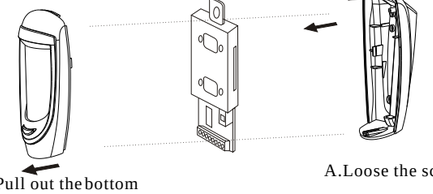
3.3Illustrated Installation Procedure

3.3.1、Disassemble unit

C.Move the cocer to the volitant top and remove it

E.Remove the PCB

D.Loose the screw

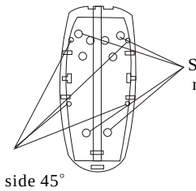


B.Pull out the bottom of the cover

A.Loose the screw

3.3.2、Mount base

1.8-2.4m (6-8ft) above ground



Surface mount

Single side 45° angled side

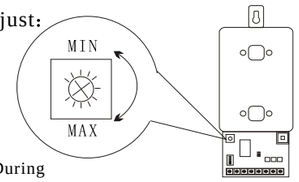
A. Mark the drilling points and drilling the wall

B. Route the wires intothe base VIA therear channel

C. Insert two dowels and attach the base to thewall with two screws

D.Insert the bottom edge of the large PCB underthis TAB & Pressthe top edge in

3.4、MW sensitivity adjust:

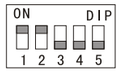


MW sensitivity adjust:

Turn MW scale regulating wheel to the anticlockwise direction and adjust the MW detection scale to the Min, During walking test adjust the wheel to clockwise direction and gradually increase the MW detecting scale till the whole protection area is covered.

Notice: Adjustment of MW detection scale should meet the size of protected room.

3.5、DIP Switch Adjustment:

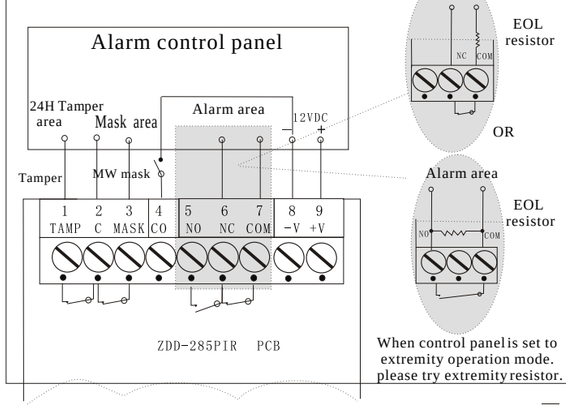


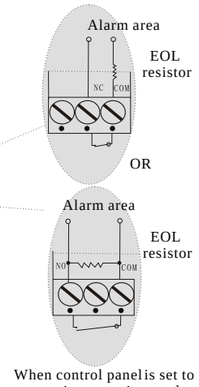
NO	Function	OFF	ON
1	LEDs	OFF	ON
2	PIR Sensitivity	LOW	HIGH
3	Anti-masking& Anti-case-shifting Sensitivity	LOW	HIGH
4	Detection Comb-ination Type	Microwave "AND" PIR	Microwave AND PIR "OR" Just Microwave (During masking only!!!)
5	Anti-case-shifting Enabling	ENABLED	DISABLED

3.6、Product operates its relays and LED indicators according to the detection nature as following:

TYPE OF DETECTION		LED INDICATORS	RELAY STATUS
Alarm-true motion detection		Red +Green blinking together	ALARM relay will activate for 2 seconds
PIR detection		Green	NO relay will operate
MW detection	OR mode	Red	NO relay will operate(During masking only!!!)
	AND mode	Red + Green blinking together (During masking only!!!)	ALARM relay will activate for 2 seconds
Anti-masking detection		Yellow Blinking	If masking exists for more than 2 minutes, the green LED will glow constantly ,and the MASK relay will operate for at least 2 seconds and all time the masking exists
Anti-case-shifting detection			MASK relay will activate for 2 seconds

3.7、.Extremity connection





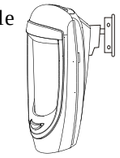
When control panel is set to extremity operation mode. please try extremity resistor.

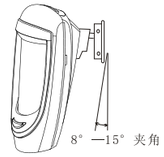
3.8、Wiring terminal specifications

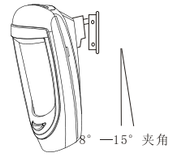
Termindls8+9
Indicated on the circuit as:- +
These are the 12V DC power supply inputs
Terminals 5+6+7
Indicated on the circuit as: ALARM (C/N.C./N.O)
Represent the contacts of the (Alarm Relay)
C+N.C.=Normally Closed. C+N.O=Normally Opened.
Upon any human movement detection, the relay's contacts are Opened for two seconds.
Terminals 2+3
Indicated on the circuit as: **(MASK)**
Represent the contacts of the (Masking Relay)which normally are in closed state(N.C.). Closed state(N.C). If an object blocks(masks)the near field-of-view of the detector for more than 2 minutes, the green LED will glow constantly, and the **(MASK)**elay will operate for at least 2 seconds and all time the masking exists
Terminals 1+2
Indicated on the circuit as **(TAMP)**
Represent the contacts of the built-in TAMPER switch, which are normally in closed state(N.C.) The contacts will open, upon the detector's case is opened.
Terminal 4
Indicated on the circuit as **(CO)**.
This terminal to be used if you wish to get a report from the **detector's memory**, whether it has detected human movement during the armed period. This terminal should get indication from the alarm system's control panel, whether it is in Armed or Disarmed state.
-If 0V received, the detector (understands) <
-If 12V or no voltage at all received, the detector (understands)
That the alarm system is Disarmed.
How to draw and display the detector's memory?
If: the detector has alerted during the (armed) period,
Than: upon switching the alarm system from (Armed) to (Disarmed) mode, the Red LED will be activated for 30 minutes.

3.9、Setting of detection angle

When multi-function bracket is used (optional), installation shad refer to the right diagram, adjust installation angle, in order to get needed detection scale and function





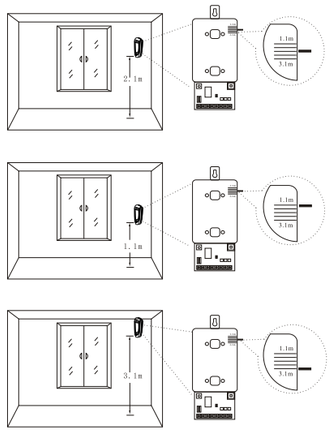


At this angel, sensitivity is in middle. Pet immunity up to 10Kg animal

At this angle, detection angle is largest, Lower section sensitivity is low. Pet immunity up to 20Kg animal

At this angle, detection angle is smallest, sensitivity is highest. no pet immunity function.

3.10、Adjust the PCB:



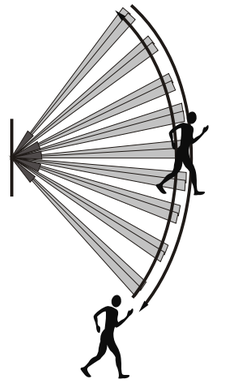
When detector is installed in different environment and places, you can solve the problems you meet through adjustment of the position of PCB, eg: when detector installed on 1.1 m, you need to adjust the marks on PCB to 1.1m position. And also as you install the detector to t3.1 m, adjust the PCB to 3.1 m, usually it is 2.1m, ie, at the middle.

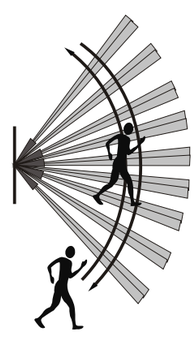
3.11、Preparing the Anti-Masking channel for work

In order to enable the masking detection to operate properly, it is Necessary to allow the detector study and analyze automatically the environmental conditions of its protected area.
The study procedure to be performed in three cases:
1.Upon connecting the power supply to the detector.
2.Upon the position of DIP switch number-3(Masking detection Sensitivity) is changed.
3.Upon relocation of the internal unit of the detector.
The study procedure in the first & third case:
-Close immediately the detector's case (within 15 seconds Maximum).
-Keep away (at least 0.5 meter) from its front, until the study Procedure finished, about 30 seconds.
-As an indication for the study procedure, the Red+Yellow LEDs will blink rapidly once the procedure begins and ends.
The study procedure in the second case:
-Change the position of DIP switch number-3 for about one second, and switch it back to the original place.
-Close immediately the detector's case (within 15 seconds maximum).
-Keep away (at least 0.5 meter) from its front, until the study procedure finished, about 30 seconds.
-As an indication for the study procedure, the Red+Yellow LEDs will blink rapidly once the procedure begins and ends.

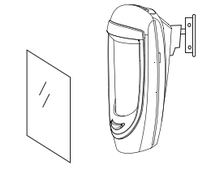
3.12、Perform motion test to the detection area:

1. Start the test at least 2 minutes after power supply
2. Crossing to any direction of the detection area, your walking with 0.75m/s will cause the Red&Yellow LED indicator to light for 2-3 seconds (refer to the right diagram)
3 .Perform motion test from contrary directions in order to confirm the boundary of two sides. Make confirmed that detection center pointing to the center of protected area.
4. Away from the detector 3 to 6 m, raise slowly your arm and reach into the detection zone, mark the lower limit of PIR detection. Do the same step to confirm the upper limit.
5.the center of detection zone should not uphill incline. To obtain a good detection range, please adjust the vertical detection range, ensure the detector is in a correct position.
6. After MW sensitivity or detection angle are adjusted, walking test must be performed according to the above steps.

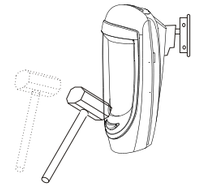




The test procedure for masking detection (Anti-masking):
In a distance of about 10 cm from the detector's front, place a white paper (or any other object).
The necessary reaction of the detector:
The Yellow LED will blink immediately.
After 2 minutes the (asking Relay)will activate.
All time when an object blocks(masks)the near field-of-view of the detector, the masking relay and the Yellow LED will activate



The test procedure for Case-shifting detection:
Shake the detector.
If it fixed to a wall, knock on the detector's case by a screw driver.
The necessary reaction of the detector:
The(Masking Relay)will activate for 2 second.
The Green LED will activate, shortly, upon every knocking.



Important mention: Motion test shall be performed at least one time each week in order to guarantee that each detector can keep excellent function.