

Dual-Tech Detector with Pet Immunity and Anti-Mask

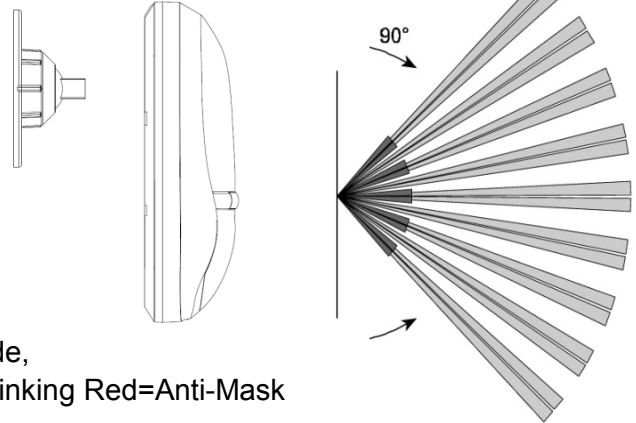
Introduction

The new generation dual-tech PIR detector is based with an ASIC technology MCU processor and 10.525GHZ Doppler detect module, which can distinguish the real motion of an intruder or the interference of the environmental factors. The adopted new algorithm have the PIR detector immunized to the strong EMI/RFI and light interference. The equipped thermal element and the temperature compensation technology greatly increase the applicability of different temperature environment.

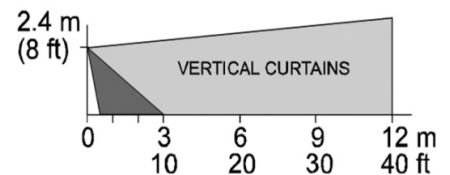
Specifications

Detection Mode:	Dual-element PIR+Microwave Module(X-BAND 10.525GHZ), IR Anti-Mask Technology
Power Input:	9VDC~14VDC
Power Consumption:	10mA in standby mode 30mA in alarm mode
Alarm Output:	NC up to 30VDC, 100mA
Anti-mask Output:	NC up to 30VDC, 100mA
Alarm Period:	2 Sec
Pulse Count:	1 or 2 Selectable
LED indicator:	LED is ON/OFF Selectable Blue=PIR Channel, Red=Alarm Mode, Yellow=Warm up& MW Channel, Blinking Red=Anti-Mask
Tamper Output:	NC, 30VDC, 1A Open when cover is removed
RFI Protection:	30V/m 10 - 1000MHz
EMI Protection:	50000V Electronic Interference
White Light Immunity:	Up to 8000 LUX
Temperature Compensation:	Yes
PIR Sensitivity Adjustable and Pulse Selection:	Yes
Microwave Sensitivity Adjustabel:	Yes
Anti-mask selection:	Yes Anti-Mask distance is around 5CM from the len.
Detection Area:	90 degree X 12M at 25°C
Operating Temperature:	-10°C to 50°C
Operating Humidity:	≅95%
Dimensions:	L 125X W 60X H 38MM

Top View:



Side View:



Coverage Pattern

Installation

1. The detector is designed to be applicable of wall mount, corner mount or ceiling mount with bracket. The installation height is around 2.2-2.4m. For better performance, the detector should avoid the location close to the following sources of interference: reflective surfaces, direct air flow form vents, fans, windows, sources of steam, oil vapor, infrared light sources and objects causing temperature changes such as heaters, refrigerators and ovens.

2. The detector should be straight after installation, and the detection area is better across the len, not facing the len.

Step 1: Remove the front cover with a flat screwdriver, and then unscrew the screw on PCB to remove the pcb. You will find there are several knock-outs on the bottom for different installation purpose.

step 2: Drill or break out the knock-outs you need, and connect the wires, or fix the bracket you need. Then mount the base to the wall, corner or ceiling with bracket.

Step 3: Fix the PCB again and close the cover. (please set the detector before step 3, refer to the setting program).

Step 4: Test the detectors.(refer to the walk test program)

Detector Wiring

Please follow the following instructions for wiring and functions setting.

Terminal 1: marked GND

Connect it to the negative power supply or GND of alarm panel

Terminal 2: marked +12V

Connect it to the positive power supply (9VDC~16VDC)

Terminal 3 & 4: marked MASK

Usually connect it to the 24-hour zone. This is Anti-Mask output. The RED LED will be blinking when the len is covered or is painted.

Terminal 5&6: marked ALARM

This is the alarm output from detector, connect it to a Normally Closed zone of alarm panel. Sometime and EOL resistor is required.

Terminal 7 & 8: marked TAMPER

Usually connect it to the 24-hour zone. If the front cover is opened, an open signal will be sent to the alarm panel immediately. Sometime an EOL resistor is required.

Function Setting

The digital detector is designed with different function settings for different purposes and environment.

Please check the PCB diagram and set the functions as follows:

Switch 1: LED ON/OFF of the LEDs

Position ON to enable the LEDs	Position OFF to disable the LEDs
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Note: LED ON/OFF does not affect the detection performance.

Switch 2: PIR Pulse Setting

Position ON, 2 Pulse,	Position OFF, 1 Pulse, higher sensitivity
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Switch 3: PET immunity Setting

Position ON, immune to 15Kg	Position OFF, immune to 25Kg
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Switch 4: A/O setting A/O =AND/OR

Position ON, OR setting means the relay will be triggered either PIR or Microwave is present
Position OFF, AND setting means the relay will be triggered both the PIR and Microwave are present

Switch 5: Anti-Mask ON/OFF setting

Position ON, Activate Anti-mask	Position OFF, Turn OFF Anti-Mask
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Sensitivity Adjustment

Both the PIR and Microwave sensitivity can be adjusted separately to suit the different detection zones.

The PIR pertentiometer is to adjust the PIR detection distance.

The MW pertentiometer is to adjust the Microwave detection distance.

Walk Test

It is important to test the coverage area after installation. And it is recommended to test the detector once half year to ensure the detector is in proper status. After the detector is powered for about 60 seconds for warm up time, please follow the steps

Step 1: remove the front cover.Set LED in ON position, remount the detector.

Step 2: Adjust the detector angle to keep the len across the detection area.

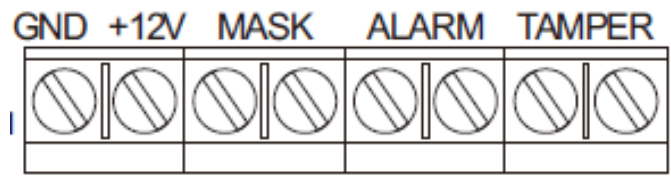
Step 3: Walk across from the far end of the coverage pattern in both sides.

The LED should be on for 2~3 seconds each time when the motion is detected.

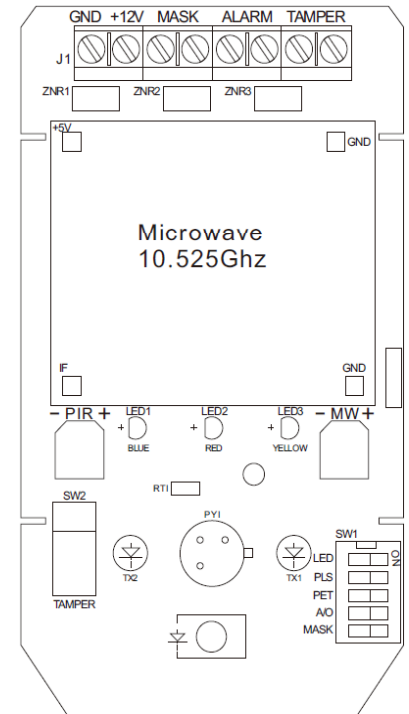
The interval between each motion is not less than 5 seconds.

Step 4: After finishing the test, you can set the LED off, and close the front cover.

The detector design is according to EN50131-2-2:2008 grade 3 standard CE approved.



Terminal Diagram



PCB diagram

Note: Walk test is necessary after the sensitivity adjustment.

