

# DUAL ELEMENT PIR WITH PET IMMUNITY

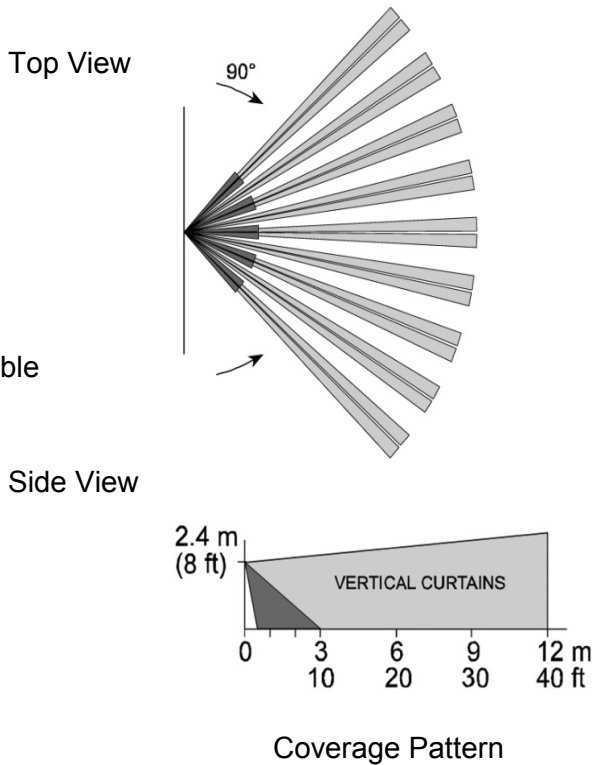
## Manual and Installation

### Introduction

The new generation dual element PIR detector is based with an digital MCU processor, 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  
Power Input: 9VDC~14VDC  
Power Consumption: 10mA in standby mode  
30mA in alarm mode  
Alarm Output: NC, Solid State Relay  
up to 30VDC, 100mA  
Alarm Period: 2 Sec  
Pulse Count: 1 or 2 Selectable  
LED indicator: LED is on When Alarm, ON/OFF Selectable  
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  
Sensitivity Adjustable: Yes  
Pet Immunity: 15Kg or 25Kg, Selectable  
Detection Area: 90 degree X 12M  
Operating Temperature: -10°C to 50°C  
Operating Humidity:  $\leq 95\%$   
Dimensions: 118X60X38.8MM



### 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: Unscrew the holding screw to remove the front cover, and then unscrew the screw on PCB to remove the pcb. You will find there are several knock-outs 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 with screw. (please set the detector before step 3, refer to the setting program).

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

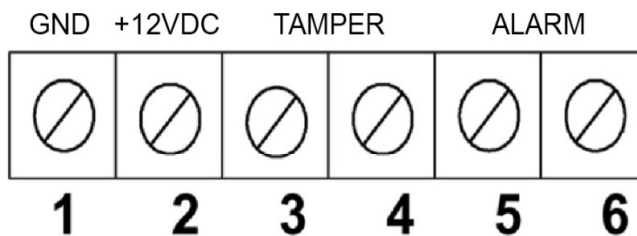
### Detector Wiring

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 +12VDC



TERMINAL DIAGRAM

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

**Terminal 3 & 4: 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.

**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.

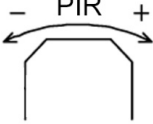
**Function Setting**

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

**1. Pulse Count Setting J2**



This jumper is used for setting the PULSE count function in order to provide PIR sensitivity control according to the environment.

	Very stable environment Jumper #1 = ON PET up to 15 kg
	Moderate nuisance situation Jumper #2 = ON PET up to 25 kg

 sensitivity potentiometer  
Sensitivity can be adjusted with the potentiometer and PULSE setting

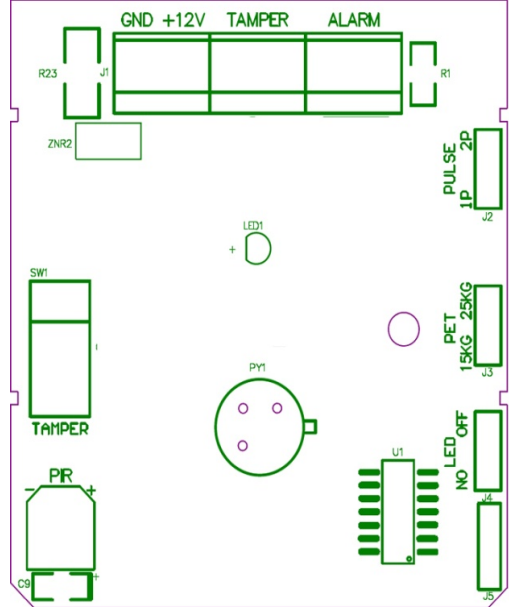
**2. LED Setting J4**

This jumper is used for setting - LED Enable / Disable.

OFF 	ON - LED ENABLE. The LED will activate when the detector is in alarm condition.
ON 	OFF - LED DISABLE, The LED is disabled.



**4. Sensitivity Adjustment**

Use the potentiometer with mark PIR to adjust the sensitivity between 15% to 100% according to the environment. The default sensitivity is 60%.



PCB Diagram

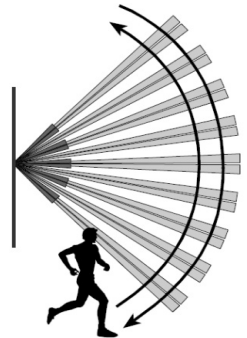
**3. Pet Immunity Setting J3**

	25Kg 15Kg	Immune to pet weighting up to 15 kg
	25Kg 15Kg	Immune to pet weighting up to 25 kg

**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 to test it:

- 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 screw the front cover.



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