

## Installation Instructions

### Location of Detector:

Consider the following before mounting the detector:

- Select a location from which the pattern of the detector is most likely to be crossed by a burglar, should there be a break in.
- Do not place bulky objects in front of the detector.
- Avoid a location which comes in direct contact with Radiators, heating / cooling ducts or air conditioners.
- Do not place the detector in front of windows subject to direct sunlight or drafts.

### Installation Procedure:

1. **Open the housing** by removing the front cover. To do so, press the tab located on the bottom of the detector.
2. **Loosen the PCB hold-down screw** and remove the board from the rear of the protective plastic casing.  
**Note: Do not touch the face of the PYRO sensor.**
3. **Knock out the mounting and wiring holes** as seen in Figure 1.
4. **Thread wires** through the wiring holes (from the **outside** of the unit) using the appropriate wiring hole knock outs.
5. **Attach the base to the wall**, through the opened mounting holes - see *Table 3 for recommended installation height*.

The detector should be mounted with the terminal block at the top as shown in Figure 1.

6. **Connect the wires**, using 20 - 22 AWG connection cable, to the terminal block as shown in Figure 2.

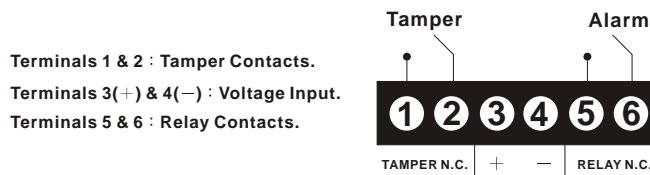


Figure 2 : Terminal Block

7. **Mount the PCB** at the required vertical adjustment setting and tighten the PCB screw.
8. **Attach the front cover**, making sure to click the plastic housing closed.

### Operation and Adjustment:

- Apply 9 - 16VDC and allow the detector to warm up for 90 seconds.
- Position the PCB by loosening the PCB screw, and sliding the PCB up or down to the required setting using the vertical adjustment scale. The detector's maximum coverage area is 14m x 14m when the PCB is positioned at 0. Sliding the PCB towards the - 10 position decreases the coverage area - see *Table 2 for the standard detector's vertical adjustment*.

Sliding the PCB toward the +5 position increases the coverage area.

**Note: The detector is designed to provide optimum cover of up to 14m. Increasing the coverage area to over 14m will reduce the level of performance in the area closest to the detector.**

- Insert the LED jumper to enable the LED indicator, remove the jumper to disable.

**Note: The LED should be disabled only after successfully walk testing the detector.**

- The pulse counter controls the amount of pulses that need to be detected before the detector will produce an alarm signal. The unit is Supplied in two-pules mode. To set the pules counter, refer to Table 1.

Jumper Position	Pulse Count
Removed	1
Pins 2 & 3	2
Pins 1 & 2	3

Table 1

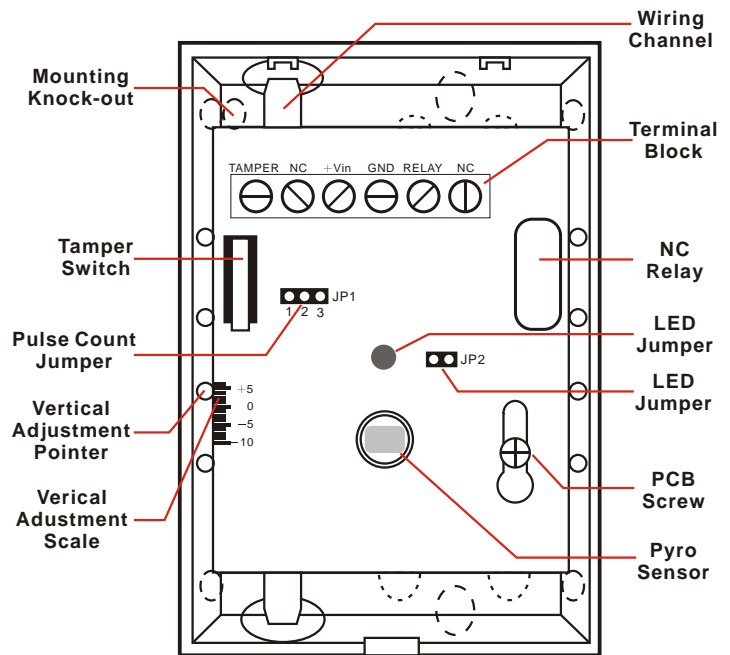


Figure 1 : PCB

- Conduct a walk test by walking across the area protected by the detector. Confirm that the LED activates and deactivates accordingly. This test should be performed weekly.
- To change a lens, release the lens frame using a small screwdriver and fix the new lens into place with the smooth side facing outwards. Verify that the word TOP is located at the top of the lens (alternatively a notch may appear on the bottom edge of the lens) before snapping the lens frame back into place.

## Vertical adjustment for Standard lens:

	0	-5	-10
2.5m / 8.2ft	14	12.5	11
2.0m / 6.6ft	12	10.5	9.5
1.5m / 4.9ft	10	8.5	8

Table 2

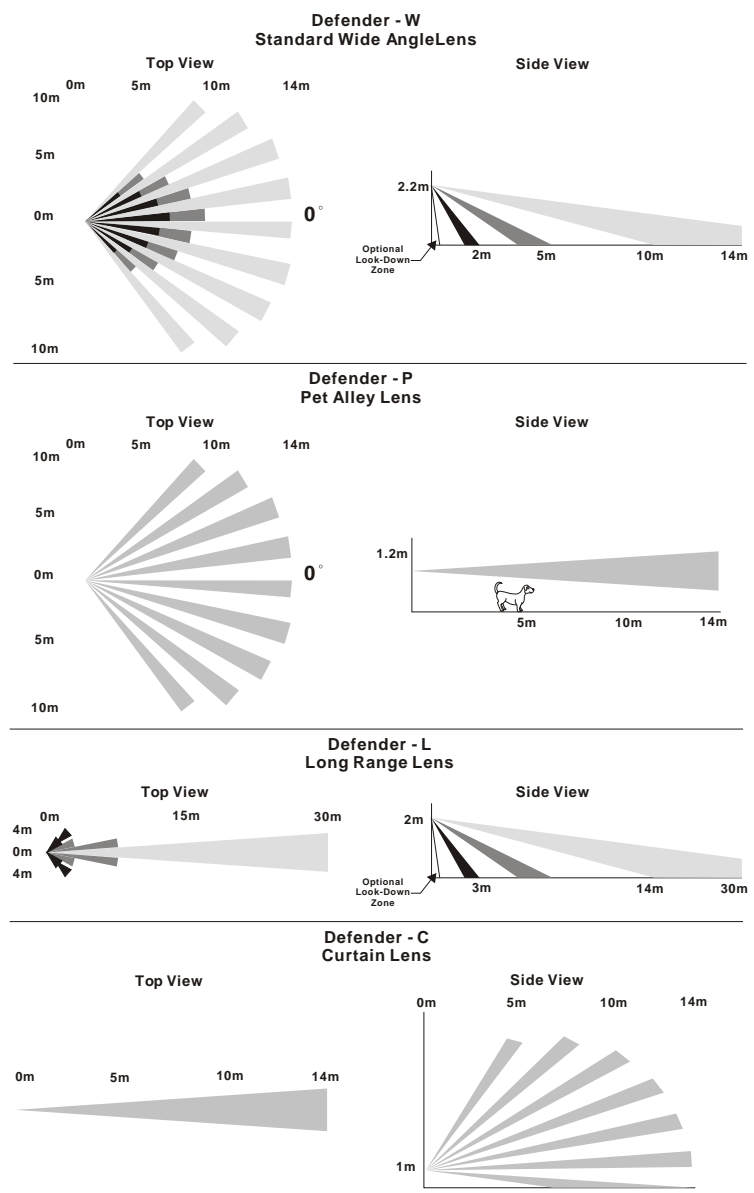
## Installation height according to lens type:

Lens Type	Recommended Installation Height
Standard	2.2m; 7.2ft
Pet	1.2m; 4ft
Long Range	2m; 6.5ft
Curtain	1m; 3.25ft

Table 3

## DEFENDER Technical Specifications:

Input Voltage	9 - 16VDC
Current Consumption	10mA@12V (standby) 29mA@16V (alarm)
Maximum Coverage	14m x 14m
Alarm Duration	1 second minimum
PIR Pulse Count	1, 2 or 3 - Jumper selectable
PIR Sensor	Dual pyroelectric element
Temperature	
Compensation	Thermistor
Tamper Switch	N.C. dry contacts
Contact Rating	30VDC, 50mA max.
Alarm Output	N.C. dry contacts.
Contact Rating	10W max.
Switching Voltage	30VDC not to exceed 10W
Switching Current	0.3A not to exceed 10W
Reverse	
Polarity Protection	Diode
Operating Temperature	-10° to 60°C
Storage Temperature	-40° to 85°C
Maximum Humidity	Up to 95% relative humidity
Sensitivity	0.3-5.0 m / sec
Fire Protection	ABS
LED Indication	Jumper selectable
Warm-up Period	90 seconds max
Dimensions	90mm x 60mm x 44mm



## Ordering Information



PIR 1500-W - Standard wide angle lens

PIR 1500-L - Long range lens

PIR 1500-C - Curtain lens

PIR 1500-P - Pet alley lens

PIR 1500-LD - Look-down zones

PIR 1500-SW - Swivel bracket for all models