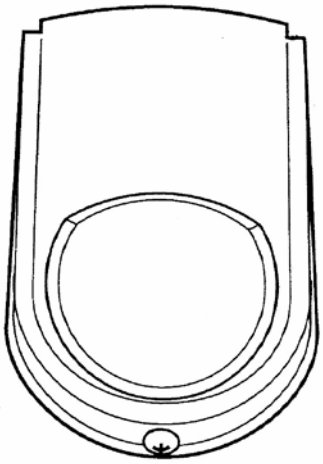
PASSIVE INFRA-RED DETECTOR

LA-5044

Installation and Operating Instructions

These Instructions should be read in conjunction with your System Installation and Operating Manual and be retained for future reference.



Features

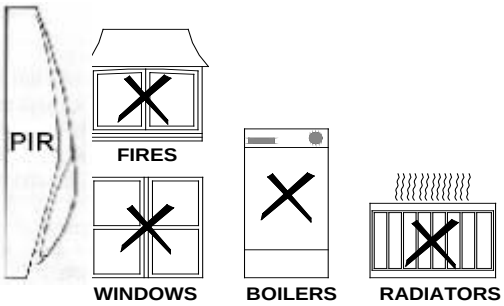
- 12m, 110° Convex honey comb, hemispherical infra-red lens.
- Excellent false alarm suppression.
- Thermal optic protection cavity.
- Walk test LED.
- Pulse Counter (1, 2 and 4 pulses selectable)
- Adjustable mounting bracket included

Introduction

These Dual Element Passive Infra-Red (PIR) Movement Detectors are designed for use with standard wired alarm system. PIR detectors are designed to detect movement in a protected area by detecting changes in infra-red radiation levels caused for example when a person moves within or across the detectors field of vision. If movement is detected, the signal contacts ”open” and an alarm signal is generated at Control Panel (if the system is armed).

Mounting Location

The LA5044 is designed for indoor use. It should not be mounted near to large metal objects or on metal surfaces. It needs to be mounted on a wall or in a corner at a height of approximately 2-2.5meters for the best general coverage in an average room. The detector has been designed to avoid false alarms, nevertheless, it is best to avoid looking directly at sources of heat such as fires and boilers, and always try to keep away from a window. A PIR can look at a radiator but should not be sited above one.



Do not site a PIR where its field of view may be obstructed (e.g. by curtains). Also note that PIRs work best when sensing movement across rather than along their detection beams. You need to consider the need to wire these units back to the Control Unit.

Mounting the detector

1. Remove and retain the screw from the bottom of the PIR and lift off the cover.
2. Carefully remove the electronic module from its retaining clips, ensuring **not to touch the pyroelectric sensor** (Illustration 1).

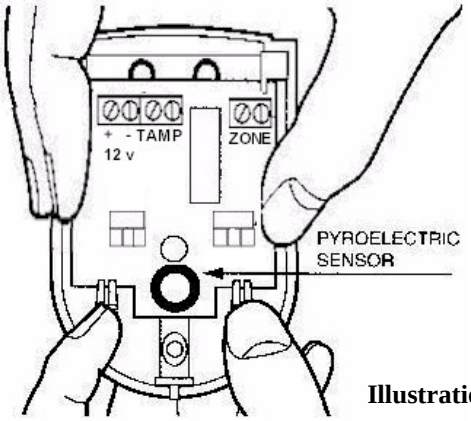


Illustration 1

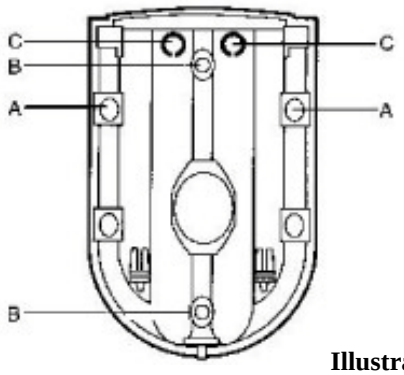


Illustration 2

3. Use mounting points “A”, if you are fitting the detector in a corner. Use mounting points “B”, if you are fitting the detector on a flat surface. Use a small drill to create two fixing holes at the mounting points (Illustration 2).
4. Hold the base of the PIR in the chosen position, ensuring that the front of the PIR will face towards the center of the protected area, mark and drill two fixing holes in the wall.
   Choose one of the cable entry holes “C” and make a third hole in the detector base. Put one end of the wire through this hole “C”, then secure the PIR to the wall.
5. Replace the electronic module into the retaining clips, ensuring that it is correctly positioned and firmly seated.
6. If required, select the PIR LED “ON” or “OFF” option and the sensitivity (pulse count) by setting the corresponding jumpers on the electronic module. Note that Pulse 1 option is more sensitive than the pulse 4 option. Pulse 1 option is used when it is necessary to activate an alarm on the first detected pulse, or in high security installations – where fast “catch” performance is of greatest importance. Pulse 2 or 4 settings provides improved protection against false alarms caused by all types of environmental disturbances. (Illustration 3)

Pulse Count	
Pulse 1	1 2 4
Pulse 2	1 2 4
Pulse 4	1 2 4

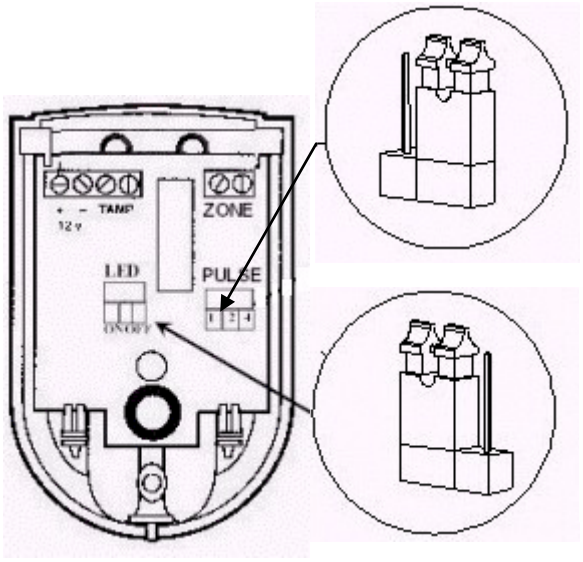


Illustration 3

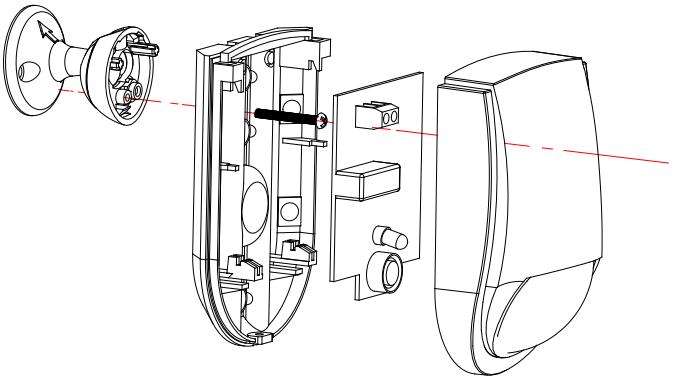
LED	ON	
LED	OFF	

7. Connect the wires in accordance with the terminal block connections.

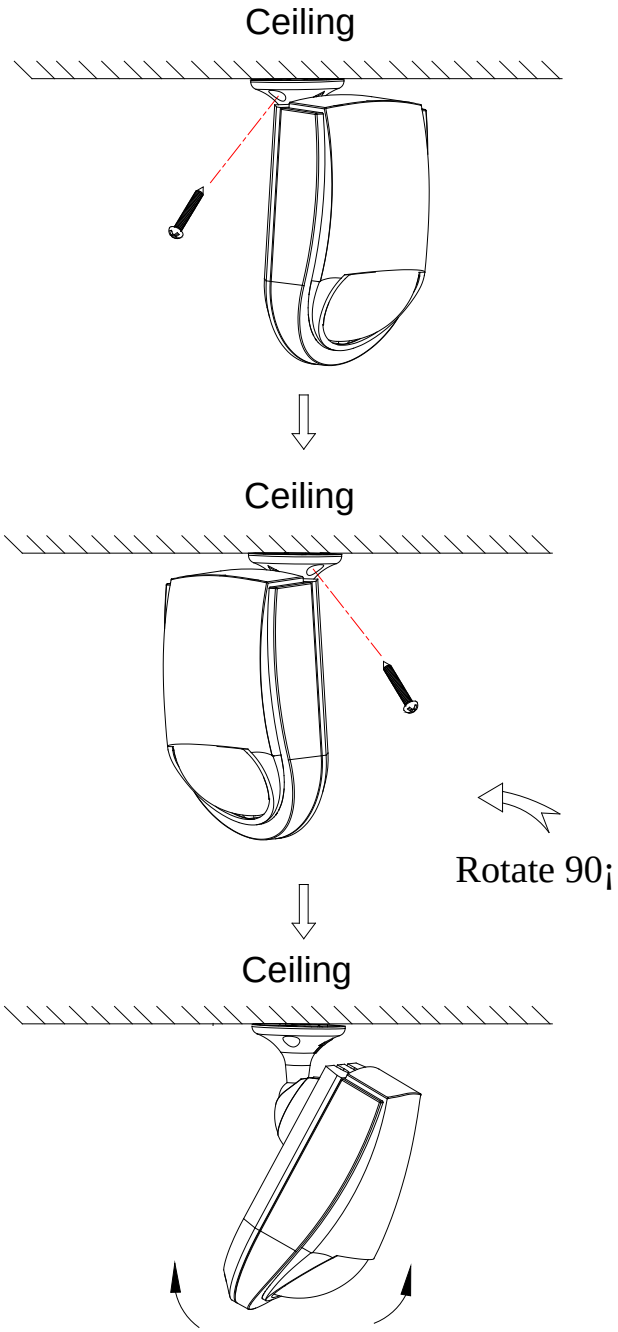
– 12V+	Connect to a regulated D.C. power source, observing correct polarity.
TAMP	Connect to a Tamper or 24 Hr. zone, NC in the control panel. Note these are normally closed switch contacts which **open** when the tamper opens.
ZONE	Connect to an Alarm zone, NC in the control panel. Note these are normally closed relay contacts which **open** when the detector alarms.

Bracket Installation :

1). Wall Mount



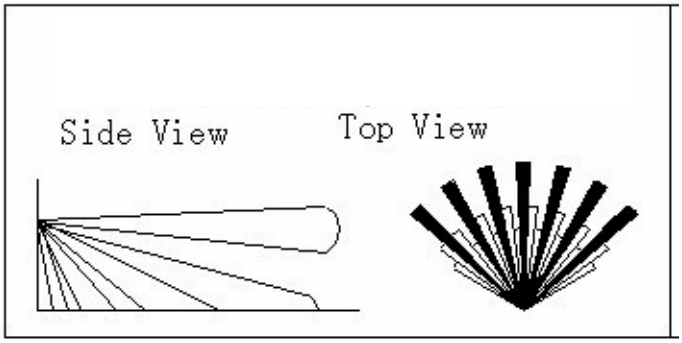
2). Ceiling -mount



Walk Testing

A. Apply power and allow 3 minutes for warming up and stabilizing.
B. Adjust the vertical pattern angle per Fig.1 below.
C. Walk slowly across the field of view (in opposite directions) and observe the LED – it lights whenever you enter or exit a sensitive beam. Allow 5 seconds between each test for the unit to stabilize.
D. After testing, the LED can be disabled to prevent unauthorized tracing of the coverage pattern. To disable the LED, remove the jumper from the left and middle pins of the LED selector (ON) and place it across the middle and right pins (OFF).

Lens Arrays



Specifications

Detector	Dual Element low noise Pyroelectric sensor
Operating Voltage	9 - 15V D.C.
Alarm Output	Normally closed dry contacts (0.5A/24V) with 15Ω resistor in series
Tamper Output	Normally closed dry contacts (0.5A/24V)
Alarm Period	2-3 seconds
Pulse Count	3 position selector 1, 2 and 4 pulse operation
Test LED	Walk test enabled and disabled with internal link
Coverage	110°
Range	Up to 12 meters
Operating Temperature	0 - 50℃