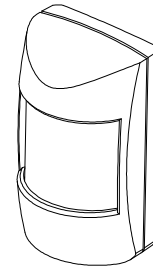# AD04N PIR DETECTOR

## Features

- EXTRA *Low* (8 mA) current draw @12V DC operation.
- S.M.D. Technology.
- Range : Up to 12m,
- Coverage : Up to 110° Convex honey comb, hemispherical infra-red lens.
- Walk test LED.
- High RFI & EMI Immunity.
- Pulse Counter (1, 2 and 4 pulses selectable)

Mounting Location

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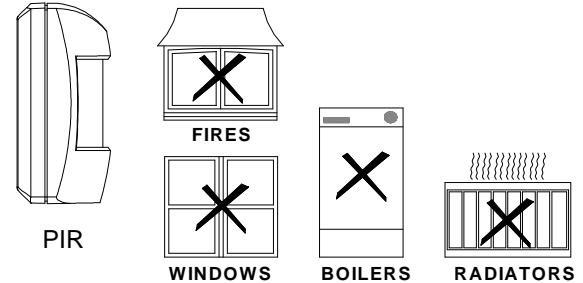
Do not site a PIR where its field of view may be obstructed (e.g. by curtains). Also note that PIRs work best when sensing movement across rather than along their detection beams. You need to consider the need to wire these units back to the Control Unit.

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).
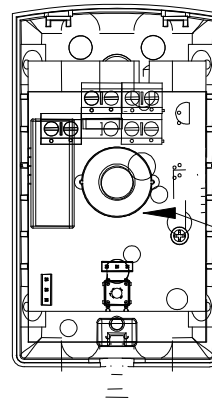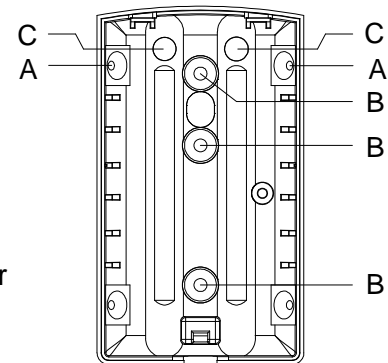
Illustration 1   **Illustration 2**

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.
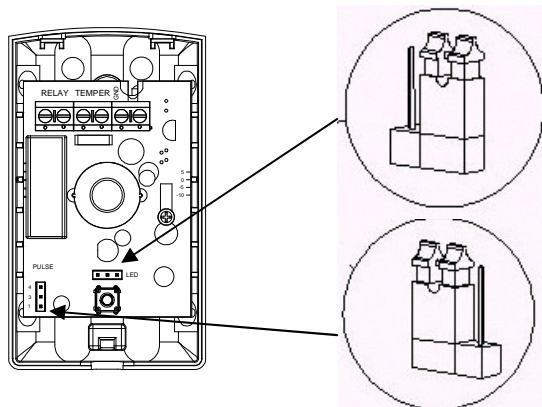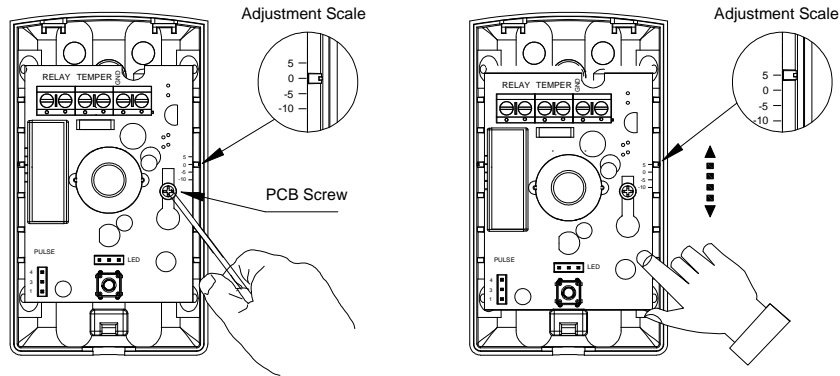
Illustration 3

Pulse Count	
Pulse 1	①②④
Pulse 2	①②④
Pulse 4	①②④

LED	ON	
LED	OFF	

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)

Illustration 4

7. Position the PCB by loosening the PCB screw, and sliding the PCB   up or down to the required setting (Illustration 4) . The optimal coverage area is obtained if the PCB is on setting '0' (default value).

Note : An increase coverage angle will decrease the distance.

Vertical Adjustment Setting	Coverage Angle
5	Up to 85°
0	Up to 90°
-5	Up to 100°
-10	Up to 110°

8. 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.

Walk Testing

A. Apply power and allow 3 minutes for warming up and stabilizing.
B. Adjust the vertical pattern angle.
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).

Specifications

Operating Voltage	9 - 15V DC
Detector	Dual Element low noise Pyroelectric sensor
Current Draw	8 mA nominal at 12 VDC
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
LED	Walk test enabled and disabled with internal link
Coverage	Up to 110°
Range	Up to 12 meters
Operating Temperature	0 - 50℃

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