



PIR750

Installation Instructions

Quad Elements Ceiling Mount Passive Infrared Detector



Item 4727 (A5DS)

PIR750 Features

- * Fully sealed sensor chamber.
- * VLSI Technology (Very Large Scale Integration).
- * Maximum RFI & EMI Immunity.
- * Quad Element Pyro Sensors
- * Pulse Count.
- * Sophisticated signal processing.
- * Memory function.
- * Hard Spherical Lens 360° coverage.
- * Bidirectional temperature compensation.
- * Fluorescent light stability.

Introduction

The PIR750 is a 4-element passive infrared intrusion detector for use in electronic security systems in ceiling mount applications.

You will obtain optimum performance from your PIR750 PIR detector by following this manual.

The PIR750 reduces false alarms to an unprecedented minimal level due to its effective elimination of background noises and nuisance stimuli. The PIR750 employs Automatic Pulse Count making it extremely adaptable to various environments. The unique VLSI, using sophisticated signal processing, makes this detector virtually free of false alarms.

The PIR750 integrates VLSI chip & SMD (surface mount device) to their full advantage.

The detector is easy to install, with no necessary adjustments.

Hard Spherical Lens

The PIR750 is equipped with a special hard lens. This lens is the latest development in the security field and complies with all the new standards requirements. It gives wide coverage patterns, even at low mounting heights. It is especially immune to sunlight, halogen lights and fluorescent lights and is impervious to attack.

Mounting the Detector

Choose location most likely to intercept an intruder. Refer to the detection pattern.

1. Hold the detector in your hand and release the mounting plate by turning it counter-clock-wise, and separate it from the case (Fig. 1).
2. Insert the wires through the hole in the center of the mounting plate (Fig. 2).
3. Mount the plate using the holes marked mounting holes.

WIRE SIZE REQUIREMENTS

Use #22 AWG (0.5 mm) or wires with a larger diameter. Use the following table to determine required wire gauge (diameter) and length of wire between the detector and the control panel.

Wire Length	m	200	300	400	800
Wire Diameter	mm	.5	.75	1.0	1.5
Wire Length	ft.	800	1200	2000	3400
Wire Gauge	#	22	20	18	16

FIG. 1 - PIR750 External View

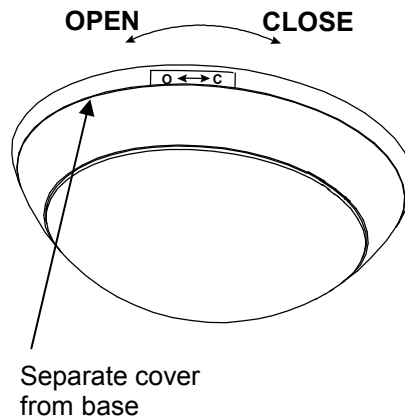
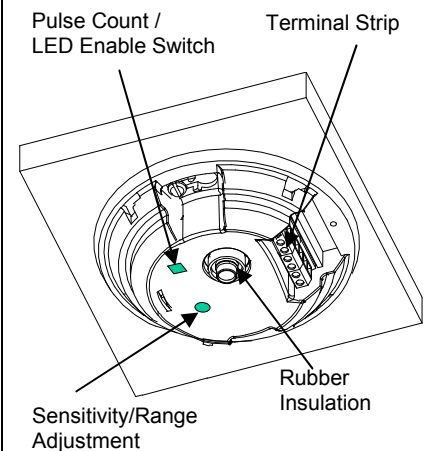


FIG. 2 - PIR750 Internal View



Terminal Block Connections

7	6	5	4	3	2	1
MEM.	TAMPER		RELAY			+12V-

Run the cable through the cable entry hole and connect the wires in accordance with the following instructions:

Terminal 1 - Marked " - " (GND)

Connect to ground of the control panel.

Terminal 2 - Marked " + " (+ 12V)

Connect to a positive Voltage output of 8.2-16 Vdc source (usually from the alarm control unit).

Terminals 3 & 4 - Marked " RELAY "

These are the output relay contacts of the detector. Connect to a normally closed zone in the control panel.

Terminals 5 & 6 - Marked " TAMPER "

If a Tamper function is required connect these terminals to a 24 hour normally closed protective zone in the control unit. If the front cover of the detector is opened, an immediate alarm signal will be sent to the control unit.

Terminal 7 - Marked " MEM "

Used to help wiring End of Line option.

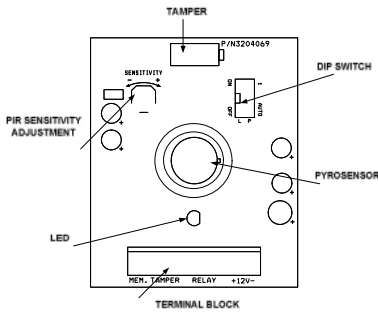
Pulse Count & LED Enable DIP Switch

(Fig.3 and DIP-SWITCH Setting).

To change positions of the DIP-switch you have to open the detector:

1. Turn the detector counter-clock wise and separate it from the mounting base.
2. Change the switch position.
3. Close the detector and reinstall assembly screws.

FIG. 3 - PIR750 PCB View



Important:

1. Do not install the detector where it may encounter water, steam or oil.
2. Do not aim the detector directly at sources of rapid heating or cooling such as: forced air ducts, heaters.
3. Be sure to locate the detector so that valuables are well within its coverage pattern.
4. Range may vary in accordance with ambient temperature.

DIP Switch Settings

Pulse Count - DIP-SWITCH, "PULSE" - provides control for normal or high risk operating environments.

Position "1" (ON) - this setting is for a stable environment.

Position "Auto" (OFF) - the PIR750 will automatically select the appropriate pulse count level (2 or 3) according to the strength of the incoming signals. This setting is for operation within a harsh environment.

When an intrusion is detected, the LED will activate and the alarm relay will switch into alarm condition (open circuit) for 1.6 sec.

LED Enable - DIP-SWITCH, "LED" - to enable or disable the LED.

Position "ON" - LED enable.
Position "OFF" - LED disable.

Technical Specifications (Cont.)

Warm Up Period	20 sec
LED Indicator	LED is blinking during warm up period and self testing, LED is ON during alarm
Operating Temperature	-20°C to +50°C (-4°F to +122°F)
RFI Protection	≥ 30V/m 10 - 1000MHz
EMI Protection	50,000V of electrical interference from lightning or power through
Visible Light Protection	stable against halogen light 2.4m (8 ft) or reflected light
Dimensions	Ø 110mm x 45mm (Ø 4.33" x 1.77")
Weight	123 gr. (4.37 oz)

PIR750 Detection Pattern

Installation Height	Detection Diameter (Effective Range)
2.4m / 8 ft	11m / 36 ft
3m / 10ft	14m / 46ft
3.6m / 12ft	16m / 52ft

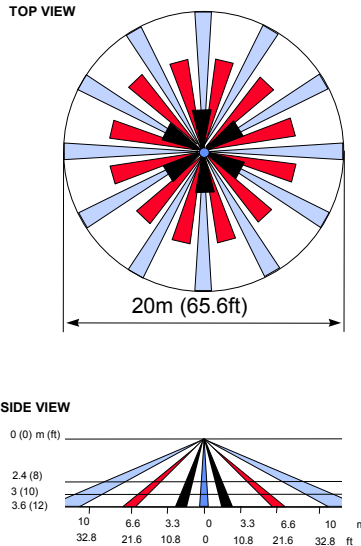
Example: (See Fig. 4). If install at a height of 3 m (10 ft) the detector will cover a circle of 20m (65.5 ft) at floor level, with an effective detection range of 14m (45.9 ft) in diameter.

Note: The detection range is the circle pattern at floor level. The effective range is the range at which an intruder will trigger an alarm.

Walk Test

After the installation, perform a walk test to check that the detector operates properly.

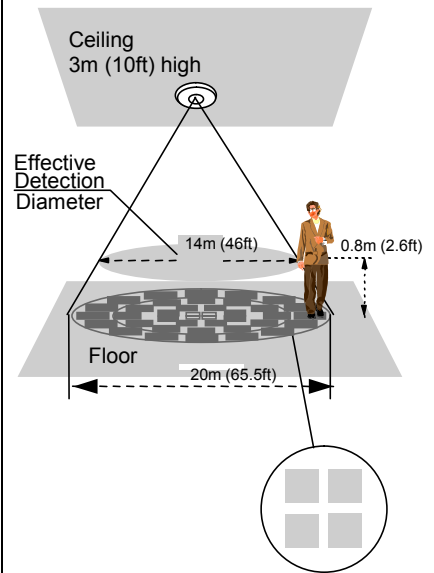
FIG. 5 - Lens Pattern



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FIG. 4 - PIR750 Detection Area



Technical Specifications

Power Input	8.2 - 16 Vdc
Current Draw	Active / Standby: 9 mA
Detection Method	4 (Four) element PIR
Sensitivity	Δ2°C (Δ3.6°F) at 0.6 m/sec (2 ft/sec)
Detection Speed	0.5 - 1.5 m/sec (1.5 - 5 ft/sec)
Bi Directional	YES
Temperature	1,2-automatic switch from 2 to 3 depending on
Pulse Count	1.6 sec
Alarm Period	N.C 28VDC 0.1 A
Alarm Output	with 10 Ohm series protection resistor
Tamper Switch	N.C 28VDC 0.1A with 10 Ohm series protection resistor - open when cover is removed

Buyer understands that a properly installed and maintained alarm may only reduce the risk of burglary, robbery or fire without warning, but it is not insurance or a guarantee that such will not occur or that there will be no personal injury or property loss as a result.

CONSEQUENTLY, SELLER SHALL HAVE NO LIABILITY FOR ANY PERSONAL INJURY, PROPERTY DAMAGE OR OTHER LOSS BASED ON A CLAIM THAT THE PRODUCT FAILS TO GIVE WARNING. HOWEVER, IF SELLER IS HELD LIABLE, WHETHER DIRECTLY OR INDIRECTLY, FOR ANY LOSS OR DAMAGE ARISING UNDER THIS LIMITED WARRANTY OR OTHERWISE, REGARDLESS OF CAUSE OF ORIGIN, SELLER'S MAXIMUM LIABILITY SHALL NOT IN ANY CASE EXCEED THE PURCHASE PRICE OF THE PRODUCT, WHICH SHALL BE THE COMPLETE AND EXCLUSIVE REMEDY AGAINST SELLER.

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Warning: Test this product at least once a week

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