

# PL-1, 2, 3, 4

## Outdoor Passive Infrared Detectors



## Installation Instructions

### 1. INTRODUCTION

The PL series consists of 4 passive infrared (PIR) motion detectors designed for outdoor applications. The integral swivel bracket of these units allows the installer to aim the detector's head horizontally in any desired direction and to tilt it vertically by as much as 30 degrees. Each model has a different lens (see Section 2).

The detection range of the PL series is adjustable with a screwdriver-driven potentiometer at the bottom of the unit. A built-in photocell is utilized to limit the detector's operation to darkness hours only, by adjusting a screwdriver-driven light level

control. In addition, a special "LDR" input can be used to disable the photocell, thereby allowing the detector to function at all times, in daylight and darkness alike.

The detector operates from a 12 VDC source and has a normally open (N.O.) relay output.

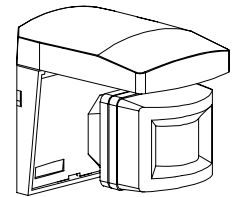


Figure 1. General View

### 2. SPECIFICATIONS

#### OPTICAL

**Detection Pattern:** 90° wide angle. The PL-1 (standard model) provides 34 beams in three detection layers with maximum coverage area of 12 m/90° (40 ft/90°). For other models, see Figures 3 through 5.

**Adjustable Sensor Head:** 360° horizontally, 30° vertically

#### ELECTRICAL

**Voltage:** 9 to 16 VDC

**Current:** 7 mA in standby, 15 mA in alarm.

**Alarm Output:** Normally open contacts. 18 ohm resistor in series with contacts. Rating - 0.1A resistive/30 VDC

**Alarm Period:** 2-4 seconds

**Detectors:** Dual element low-noise pyroelectric sensor.

#### MOUNTING

Flat or corner mounting (no additional brackets).

**Mounting Height:** Recommended mounting height is 2 to 4.5 m (7 to 15 ft). For best detection, mount the unit between 2-3 m (7 to 10 ft)

#### ENVIRONMENTAL

**Operating Temperature:** -10 to 50°C (14 to 122°F)

**Operating Temperature:** -20 to 60°C (-4 to 140°F)

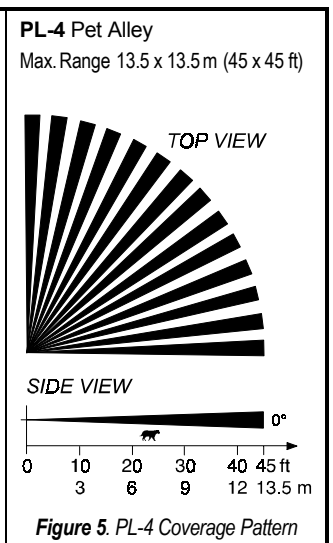
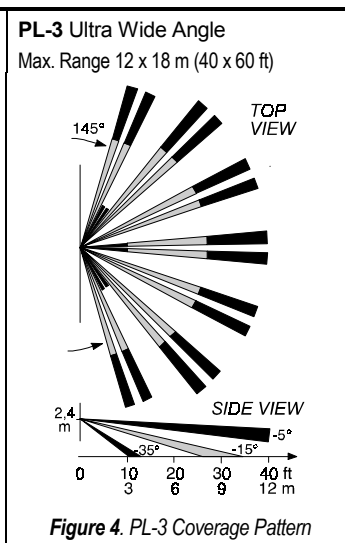
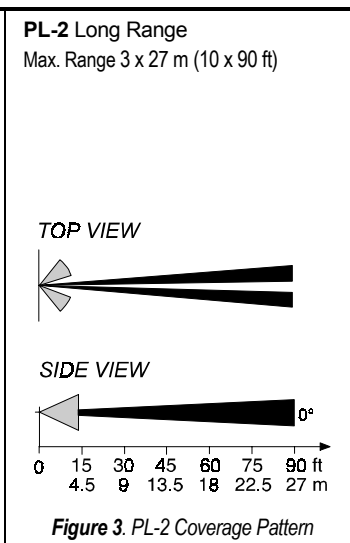
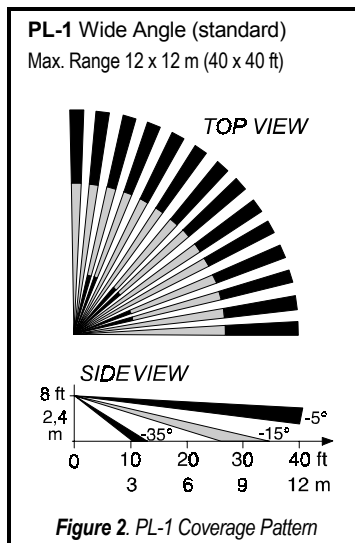
**RFI Protection:** Greater than 20V/m to 1000 MHz

#### PHYSICAL

**Dimensions:** 80 x 110 x 120 mm (3.1 x 4.3 x 4.7 in)

**Weight:** 250 g (8.7 oz)

**Color:** White



### 3. INSTALLATION

#### 3.1 Mounting

- Select the mounting location so that the expected motion will cross the beams of the coverage pattern.
- Select the appropriate mounting height. Avoid installing:
  - Above or below the recommended height
  - On an unstable surface
  - Looking into the sun
  - So that it looks at trees, shrubs, water, etc.
  - Above warm air vents or in the exhaust of a fan.

- Open the cover by gently inserting a quarter-inch screwdriver in the slot at the bottom of the unit. Apply downward pressure until the cover swings outward and removes easily.
- Mount the base in the selected location. For surface mounting, use the 4 knockouts at the back of the base. For corner mounting, use the 4 knockouts on the angled sides.
- Even though the PL series detectors are weather resistant, protect the unit from direct rain, snow and harsh sunlight as much as possible.

## 3.2 Wiring

- Remove the head cover to expose the terminal block by gently lifting the cover up.
- There are 3 wiring knockouts (two on the sides, one on the bottom), and an open hole which accommodates 3/4" conduit.
- Feed wiring through the selected entryway, pass upward through the opening and connect to the terminal block (see Figure 6).
- The photocell can be inhibited by grounding (connecting the power supply (-) to the LDR terminal either from the PIR or from a remote control panel, etc. This can be used to allow operation during daylight hours.

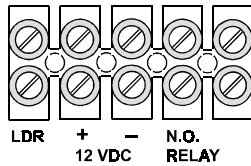


Figure 6. Terminal Block

**CAUTION:** It is not recommended to connect the detector to any system that will call a central station, since various activities (animals etc.) may trigger the unit.

## 3.3 Testing

- Apply power and allow 5 minutes for the unit to warm up.
- Set the light level control fully counterclockwise for testing.
- Set the range control adjustment fully clockwise.

- Slightly release the two ball-joint screws in the head and position the detector head in the direction of the area to be covered. Be sure the detector head is level.
- While monitoring the alarm output relay, walk slowly across the coverage pattern (in opposite directions) to verify proper positioning. Readjust if necessary.
- Tighten the two ball joint retaining screws and replace the cover.
- Set the darkness operating level to mid-position. More accurate adjustment can be carried out in the evening at the actual light level at which you want the unit to operate (counterclockwise means brighter, clockwise means darker).

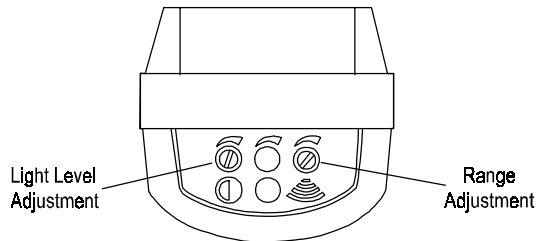


Figure 7. Range and Light-Level Controls

### WARRANTY

Visonic Ltd. and/or its subsidiaries and its affiliates ("the Manufacturer") warrants its products hereinafter referred to as "the Product" or "Products" to be in conformance with its own plans and specifications and to be free of defects in materials and workmanship under normal use and service for a period of twelve months from the date of shipment by the Manufacturer. The Manufacturer's obligations shall be limited within the warranty period, at its option, to repair or replace the product or any part thereof. The Manufacturer shall not be responsible for dismantling and/or reinstallation charges. To exercise the warranty the product must be returned to the Manufacturer freight prepaid and insured.

**This warranty does not apply in the following cases:** improper installation, misuse, failure to follow installation and operating instructions, alteration, abuse, accident or tampering, and repair by anyone other than the Manufacturer.

This warranty is exclusive and expressly in lieu of all other warranties, obligations or liabilities, whether written, oral, express or implied, including any warranty of merchantability or fitness for a particular purpose, or otherwise. In no case shall the Manufacturer be liable to anyone for any consequential or incidental damages for breach of this warranty or any other warranties whatsoever, as aforesaid.

This warranty shall not be modified, varied or extended, and the Manufacturer does not authorize any person to act on its behalf in the modification, variation or extension of this warranty. This warranty shall apply to the Product only. All products, accessories or attachments of others used in conjunction with the Product, including batteries, shall be covered solely by their own warranty, if any. The Manufacturer shall not be liable for any damage or loss whatsoever, whether directly, indirectly, incidentally, consequentially or otherwise, caused by the malfunction of the Product due to products, accessories, or attachments of others, including batteries, used in conjunction with the Products.

The Manufacturer does not represent that its Product may not be compromised and/or circumvented, or that the Product will prevent any death, personal and/or bodily injury and/or damage to property resulting from burglary, robbery, fire or otherwise, or that the Product will in all cases provide adequate warning or protection. User understands that a properly installed and maintained alarm may only reduce the risk of events such as burglary, robbery, and fire without warning, but it is not insurance or a guarantee that such will not occur or that there will be no death, personal damage and/or damage to property as a result.

**The Manufacturer shall have no liability for any death, personal and/or bodily injury and/or damage to property or other loss whether direct, indirect, incidental, consequential or otherwise, based on a claim that the Product failed to function.** However, if the Manufacturer is held liable, whether directly or indirectly, for any loss or damage arising under this limited warranty or otherwise, regardless of cause or origin, the Manufacturer's maximum liability shall not in any case exceed the purchase price of the Product, which shall be fixed as liquidated damages and not as a penalty, and shall be the complete and exclusive remedy against the Manufacturer.

**Warning:** The user should follow the installation and operation instructions and among other things test the Product and the whole system at least once a week. For various reasons, including, but not limited to, changes in environmental conditions, electric or electronic disruptions and tampering, the Product may not perform as expected. The user is advised to take all necessary precautions for his /her safety and the protection of his/her property.

6/91



VISONIC LTD. (ISRAEL): P.O.B 22020 TEL-AVIV 61220 ISRAEL. PHONE: (972-3) 645-6789, FAX: (972-3) 645-6788  
 VISONIC INC. (U.S.A.): 10 NORTHWOOD DRIVE, BLOOMFIELD CT. 06002-1911. PHONE: (860) 243-0833, (800) 223-0020 FAX: (860) 242-8094  
 VISONIC LTD. (UK): UNIT 1, STRATTON PARK, DUNTON LANE, BIGGLESWADE, BEDS. SG18 8QS. PHONE: (01767) 600857 FAX: (01767) 601098  
 INTERNET: www.visonic.com

©VISONIC LTD. 2000 PL-1,2,3,4 DE1711- (REV. 3, 6/00)



MADE IN ISRAEL