



# Installation Instructions

## D9535 Passive Infrared Intrusion Detector

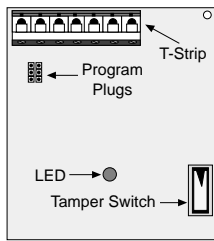
### 1.0 Specifications

- **Input Power:** 9 to 15 VDC; 15 mA @ 12 VDC.
- **Standby Power:** There is no internal standby battery. Connect to DC power sources capable of supplying standby power if primary power fails. Fifteen mA-H required for each hour of standby time needed. *Four hours (60 mA-H) minimum are required for Underwriters Laboratories' Certificated installations.*
- **Coverage:**

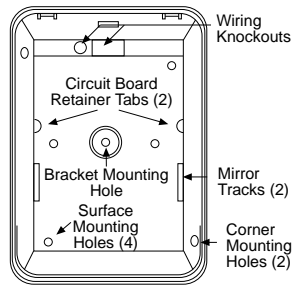
Standard Broad	35 ft. by 35 ft.	(10.7 m by 10.7 m)
Barrier (Optional)	35 ft. by 10 ft.	(10.7 m by 3.1 m)
Long Range (Optional)	70 ft. by 10 ft.	(21.4 m by 3.1 m)
Pet Alley (Optional)	35 ft. by 35 ft.	(10.7 m by 10.7 m)

with 70 ft. (21.4 m) Long Range
- **Sensitivity:** Standard or Intermediate.
- **Alarm Relay:** Normally Closed reed relay with contacts rated at 3 watts, 28 VDC, 125 mA maximum for DC resistive loads.
- **Tamper Switch:** Normally Closed (with cover in place) tamper switch. Contacts rated at 3 watts, 28 VDC, 125 mA maximum.
- **Temperature:** The storage and operating range is -40° to +120°F (-40° to +49°C). *For U. L. Certificated installations, the range is +32° to +120°F (0° to +49°C).*
- **Options:** B335-3\* Low Profile Swivel Mount Bracket, OMB93-3\* Barrier Mirror, OMLR93-3\* Long Range Mirror, and the OMP93-3\* Pet Alley Mirror. \*Shipped in packages of three.  
**Note:** *Misalignment of the detector when using an optional mounting bracket may reduce range.*
- **U. S. Patent Number:** # 4,764,755.

### 2.0 Mounting



Location of major items - Circuit Board



Rear enclosure and mounting holes

Things to Avoid/Remember	
<b>Avoid</b>	
Direct hot and/or cold drafts. Windows. Small animals. Air conditioning outlets. Heat sources. Direct sunlight.	
<b>Remember</b>	
Won't detect through glass. Best catch performance is across the pattern. When using two or more detectors, cross patterns for best coverage.	

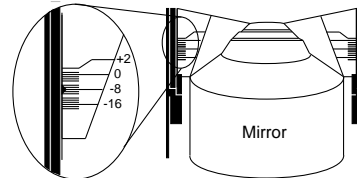
- Select a location that is most likely to intercept an intruder moving **across** the coverage pattern.
- The recommended mounting height range is 6.5 ft. to 8.5 ft. (2 m to 2.6 m).  
**Note:** The mounting surface should be solid and vibration free.
- Remove the cover. Insert a thin flathead screwdriver into the notch at the bottom of the cover and pry up.
- Remove the circuit board by depressing the circuit board retainer tab and lifting the board out from the enclosure. Then remove the mirror by sliding it towards the bottom and out of its tracks.
- Open the knock-out wire entrance and route the wiring through.

#### Surface or Corner Mounting

- Open 2 holes for surface or corner mounting.
- Mark the location for the mounting screws using the enclosure as a template.
- Pre-start the mounting screws.
- Firmly mount the detector.
- Replace the circuit board and mirror.

#### Select the Vertical Angle

The angle adjust markings are on the mirror. Slide the mirror forward or back until the angle hash marks are in-line with the markers on each side of the frame.



This chart will help you set the correct Vertical Angle based on the mounting height, mirror type, and desired range.

Mounting Height	Broad		Barrier		Long Range	
	20(6)	35(10)	20(6)	35(10)	40(12)	70(20)
6.5(2)	-9°	-5°	-9°	-5°	-4°	-2°
7.5(2.3)	-11°	-7°	-11°	-7°	-6°	-3°
8.5(2.6)	-14°	-8°	-14°	-8°	-7°	-4°

Height and desired Range listed in feet (meters)

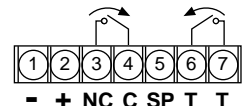
The mirror is adjustable +2° to -18° vertically. To change the mirror, just pull it out from its resting grooves.

**Note:** Excessive handling of the mirror surfaces may lead to performance degradation.

### 3.0 Wiring

**CAUTION:** Only apply power **after** all connections have been made and inspected.

- Connect wiring as shown.



## Terminal Descriptions

- **1 (-) & 2 (+):** Input power. Use no smaller than #22 AWG (0.8 mm) wire pair.
- **3, 4:** Normally Closed reed relay contacts rated at 3 Watts, 125 mA, 28 VDC maximum for DC resistive loads and protected by a 4.7 ohm resistor in the common "C" leg of the relay. **Do not use with capacitive or inductive loads.**
- **5:** Spare.
- **6 & 7:** Tamper Contact, rated 3 watts, 28 VDC, 125 mA.

**Note:** If using the large wiring knockout, seal the wire entrance with the foam plug provided. If using the round four conductor wiring knockout, the plug is not required

**Note:** Do not coil excess wiring inside the detector.

## 4.0 Program Plugs

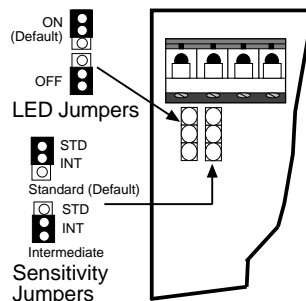
The following functions are controlled by various settings of the program plugs:

### LED Operation:

- **ON:** Allows the LED to operate when activated by alarm.
- **OFF:** The LED will not operate on alarm. The LED will indicate a supervision trouble condition even if this plug is OFF.

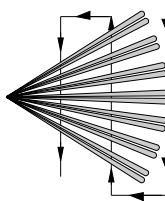
### Sensitivity Mode:

- **Standard:** The recommended setting for maximum false alarm immunity. Tolerates environmental extremes on this setting. Standard Sensitivity is not recommended for Long Range or Barrier type patterns. The detector is shipped in Standard Sensitivity mode.
- **Intermediate:** The recommended setting for any location where an intruder is expected to cover only a small portion of the protected area or when quick catch performance is desired. Tolerates normal environments on this setting. This setting will improve your intruder catch performance.



## 5.0 Setup and Walk Testing

- Replace the cover and insert the tamper screw (if desired).
- Apply power to the unit.
- Wait for approximately 2 minutes (if no motion is detected in the coverage pattern), then start walk testing.
- Walk test **across** the coverage pattern.
- The edge of the coverage is determined by activation of the LED.
- Walk test the unit from both directions to determine the boundaries.
- If the desired range can not be achieved, angle the mirror up or down to assure the coverage pattern is not aimed too high or low.



## 6.0 Other Information

- **Maintenance:** At least once a year, the range and coverage should be checked in accordance with the Walk Testing section. To ensure continual daily operation, the end user should be instructed to daily walk through the outer edge of the coverage pattern and observe the LED operation (if used). This assures an alarm output prior to arming.

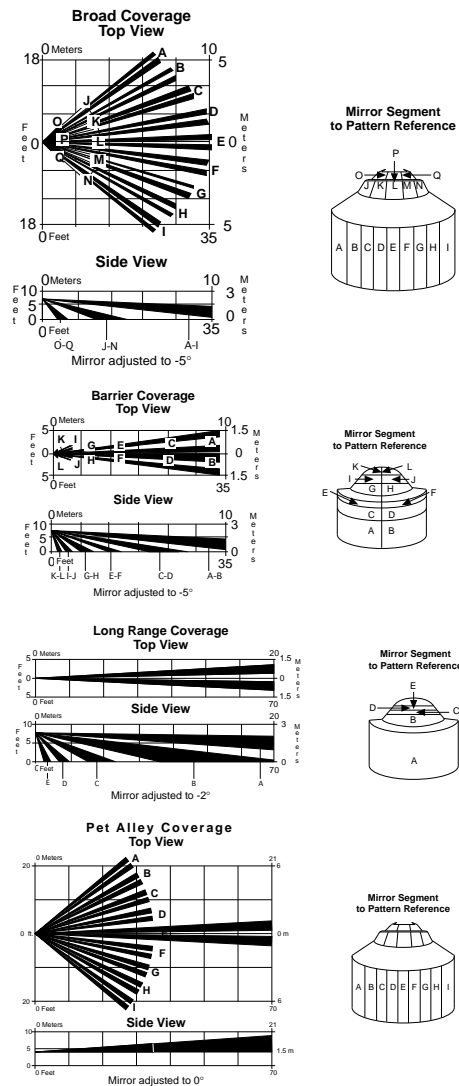
- **Masking:** Before attempting any masking, be sure the chosen mirror surface is the correct one. When attempting to remove any masking, many adhesives will either destroy the mirror surface or leave enough residue behind to reduce coverage performance. See Section 8.0 Mirror Segment to Pattern Reference.

## 7.0 Instructions for Installations Containing Pets

The Pet Alley Mirror is intended to provide protection in installations where pets are allowed to move about freely.

- Adjust the Vertical Angle to 0° when using the Pet Alley Mirror.
- Because the unit will be installed lower than normal, be sure to position the unit so that it has a clear line-of-sight across the room.
- To provide an accurate safety margin, install the unit no lower than twice the height of the pet, and never lower than 3 ft. (1 m).
- Make sure the field of view is free of all furniture or other objects on which the pet could climb or jump, resulting in an unwanted alarm.

## 8.0 Coverage Patterns



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