

# Sentrol 6000 Series PIR

Model PI6000 - with 30 lb. pet immunity

Model 6000 - with high density (HD) performance lens

## Installation Instructions

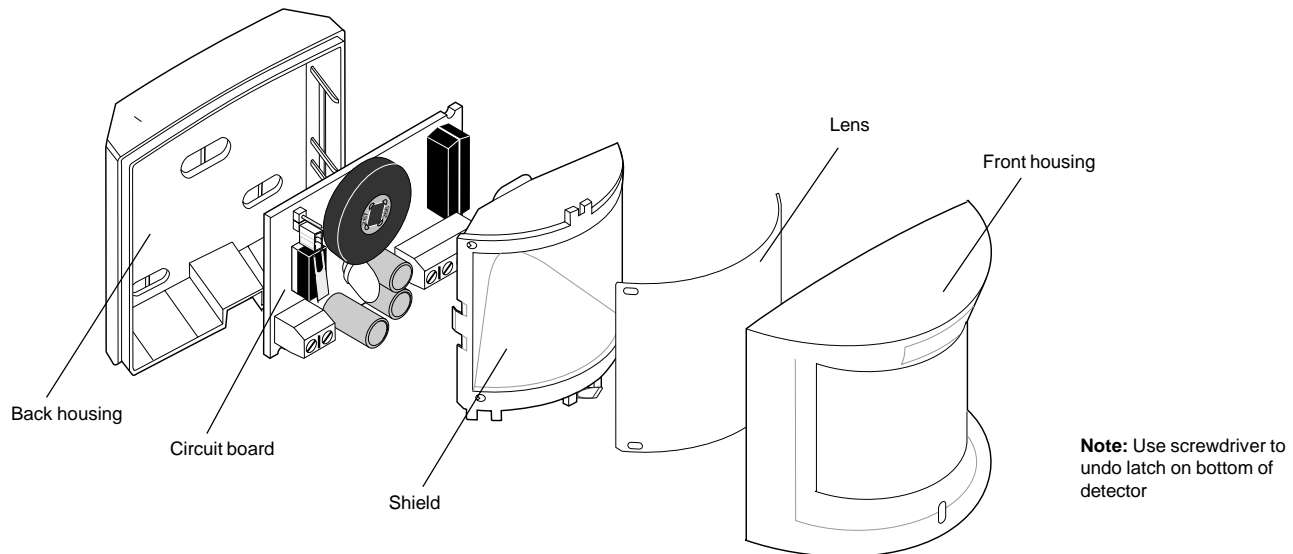


Figure 1. Detector (Exploded)

## Description

The Sentrol 6000 Series Passive Infrared Detectors are designed for use in residential applications. These detectors utilize dual pyroelectric sensors with jumper selectable pulse count (two- or three-pulse mode). Advanced signal processing provides high immunity to false trips - RFI, lightning, vibration, and rapid temperature changes.

An interchangeable, opaque Fresnel lens blocks visible light and provides the ability to select the best coverage pattern for the site. The lens is part of a sealed optic enclosure which isolates the pyroelectric sensor from drafts and insects, common sources of false trips.

The 6000 series comes with a Form A alarm contact and a normally closed tamper switch.

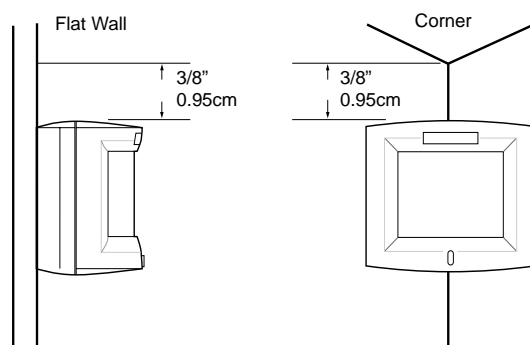


Figure 2. Mounting

## Selecting a Location

- Mount the detector at a height of 7feet (2.1m) to 9 feet (2.7m) . See *Mounting Height Settings*.
- Mount the detector either flat on the wall or in a corner and at least 3/8" (0.95cm) from the ceiling. See Figure 2.
- Do not locate the detector where it may be exposed to false alarm sources, such as:
  - heat sources in the field of view
  - direct or reflected sunlight
  - strong air drafts (fans, air conditioners, etc.) on unit
- Do not aim the detector at windows or glass doors.
- Mount the detector on a rigid, vibration-free surface.
- Do not locate the detector on a surface exposed to moisture.
- Do not locate the detector where the ambient temperature is below 14°F (-10°C) or above 122°F (50°C).
- PIRs require a clear line of sight. Inform end-users not to block the coverage pattern with inventory, furniture, decorations etc.

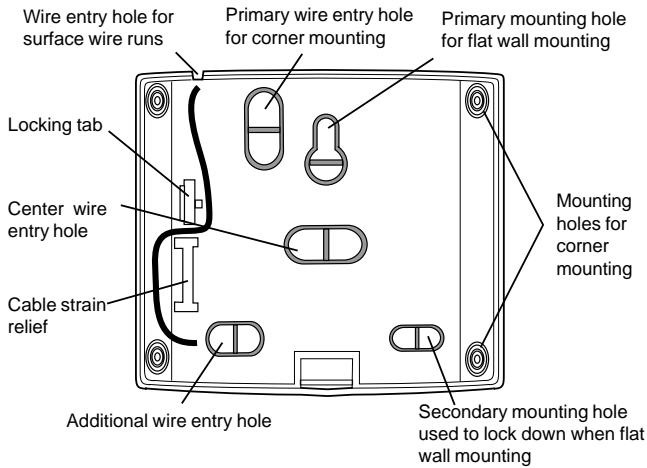


Figure 3. Back Housing

## Mounting Height Settings

The factory setting of the detector is for mounting heights of 7 to 8 feet (2.1 to 2.4m). For this setting, the locking tab on the back housing is in the notch by the 7'-8' arrow on the circuit board (position A in Figure 4).

For proper operation at mounting heights above 8 feet (2.4m), the locking tab must be in the notch by the 8'-9' arrow (position B in Figure 4). To position the circuit board in this manner, the scribed tab on the edge of the circuit board must be broken off.

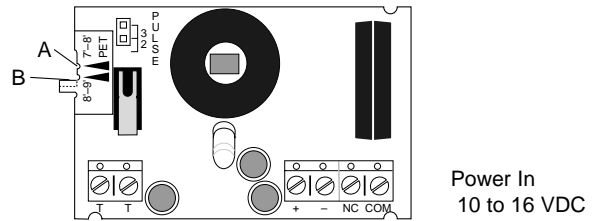


Figure 4 . Circuit Board

## Installing the Detector

1. Select an appropriate mounting location.
2. Route wiring to the detector's location.
3. Open detector and, after selecting appropriate mounting and wire entry options, remove knockouts by depressing from the inside of the detector in the center of desired knockout (see Figure 3). The circuit board may be removed to facilitate mounting and removal of knockouts if desired.

### ⚠ Caution

You must be free of all electricity before handling sensor circuit boards. Touch a grounded bare metal surface before touching circuit boards or wear a grounding strap. Promptly reinstall the circuit board when finished with knockout removal and mounting the back housing.

4. Pull cable through appropriate knockout and fasten detector to the wall.
5. Strip back outer jacket and individual wires of cable and connect conductors to the proper terminals (see Figure 4). The alarm contacts are not polarity sensitive.
6. Route cable through strain relief located on the far left side of the back housing (see Figure 3). Snap on the front housing.
7. Walk test the detector and check for desired coverage.

### Note

Most units walk test more accurately if the person testing waits 10 seconds between tripping the unit and walking again. This allows the detector to stabilize between trips.

## Pet Applications

A. For pet applications, the detector should be installed at the standard 7 to 8 feet (2.1 to 2.4m) mounting height. Verify that the circuit board is properly positioned in the back housing (see *Mounting Height Settings*).

B. Place the zone selection jumper in two-pulse mode. See Figure 5.

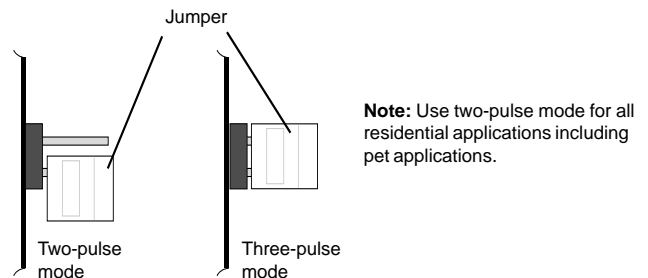


Figure 5. Zone Selection

C. Make sure animals cannot get within 6 feet (1.8m) of the detector's line of sight or climb on furniture within 6 feet (1.8m) of the detector.

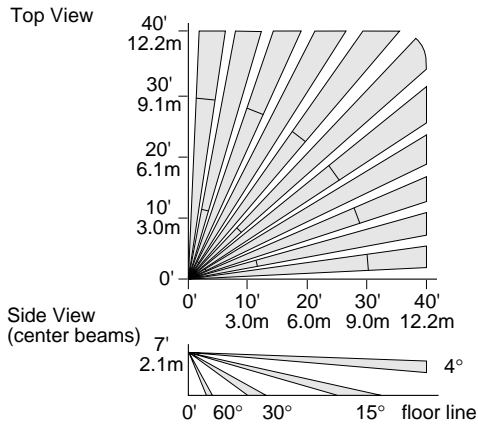
### Note

False alarm immunity from any number of small animals or rodents can be expected so long as the total combined weight does not exceed 30 lbs. and room temperature does not fall below 50° F (10° C).

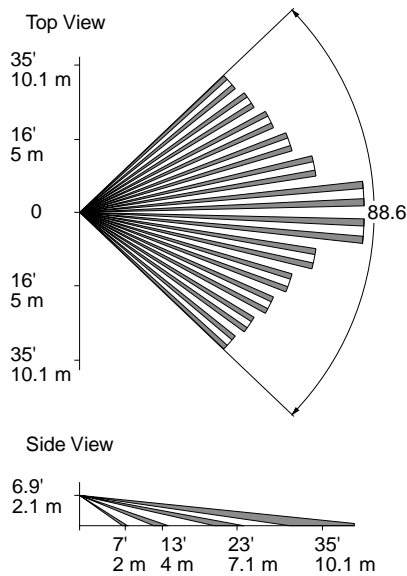
Long Hair Up to 50 lbs	Short Hair Up to 30 lbs	Not Recommended
Cocker Spaniel	Basenji	Doberman
Eskimo	Border Terrier	Greyhound
Husky	French Bulldog	Mastiff
Pekinese	Welch Corgi	Shepherd
Sheepdog	Cats	St. Bernard

*The pet immunity feature has not been tested by Underwriters Laboratories Inc.*

**PI6000  
Standard**



**6000  
High Density Lens**



**Figure 6. Zone Patterns**

**Masking**

1. Unsnap shield from the front cover by grasping the edge of the two tabs holding the shield in place and gently pull the shield away from the front housing. Remove lens from front housing. Make sure fingers are clean.
2. Identify lettered zone on mask that corresponds to letter on lens.
3. Peel off masking strip and press onto corresponding grooved segment on the lens.
4. Reinstall lens in front housing. The notch on the lens matches the notch on the front housing. (bottom right corner).
5. Snap shield assembly back into front cover.

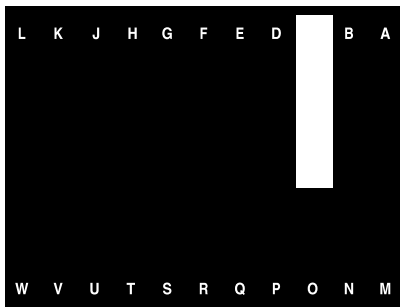
**Maintaining the Detector**

When installed and used properly, the detectors provide up to 5 years of service with minimal maintenance. To ensure proper operation, walk test the detector annually.

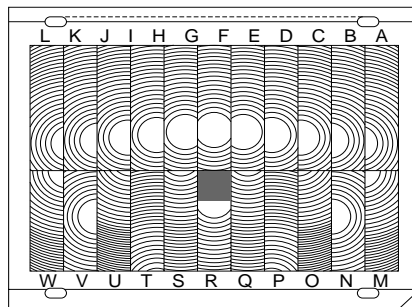
Clean the inside of the detector with a soft bristled brush or compressed air. Clean the outside with a damp (water) cloth as needed to keep it free of dust and dirt. Always test the detector after cleaning.

**PI6000 Lens Mask**

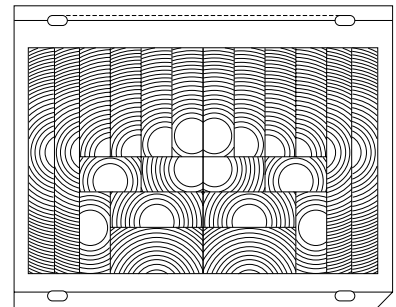
Peel and stick groove side of lens



**PI6000**



**6000 High Density**



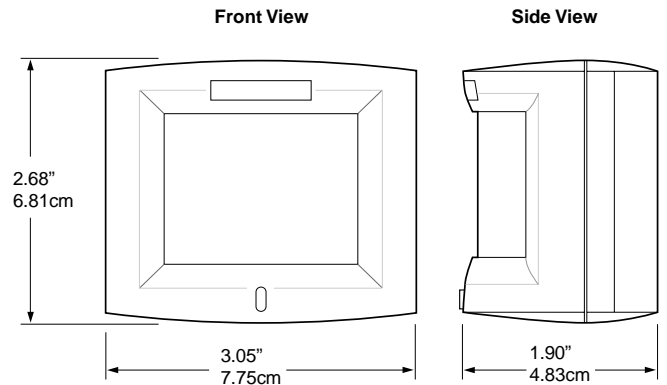
**Figure 7. Masks**

## Specifications

Voltage.....10 to 16VDC  
 Current.....14mA Typical 20 mA max.  
 Maximum loop rating.....16 VDC, 50mA  
 Alarm output.....Fail safe contacts-Form A  
   Normally Closed (N.C.)  
 Alarm duration.....3.2 seconds ( ± 0.5 sec.)  
 Cover tamper contacts.....Normally Closed  
 Rating.....16V, 50mA  
 Operating temperature.....14°F to 122°F (-10°C to 50°C)  
 Humidity.....5 to 95% non-condensing  
 Pulse count.....Two-pulse or three-pulse  
 RFI immunity.....Greater than 10V/meter from 10 to 1000MHz





Static Immunity.....20 kV  
 Lightning immunity.....2.4 kV, 1.2 joules max. energy  
   impulse, 100 usec duration on field wiring  
 Detection range:  
       Standard PI6000.....40' (12.2m) x 90°  
       6000 High Density.....35' (10.1m) x 90°  
 Mounting.....Flat wall or corner  
 Dimensions:  
       Width.....3.05" (7.75 cm)  
       Depth.....1.90" (4.83 cm)  
       Height.....2.68" (6.81 cm)  
 Color.....White

*The unit should be connected to a UL Listed power supply or control unit capable of providing a minimum of 4 hours standby power.  
 The equipment should be installed in accordance with NFPA 70.  
 The unit should be tested at least once a year.*



**Figure 8. Dimensions**

## Product Ordering

Model	Description	Listing
PI6000	40' x 40' PIR with 30 lb Pet Immunity, Form A, with tamper, standard lens with pet immunity	 
6000	35' x 35' High Density PIR, Form A, with tamper, standard lens	 



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