PIR1680P/PT PET IMMUNE PIR • INSTALLATION INSTRUCTIONS

SPECIFICATIONS

Operating Voltage:	10.6 to 16Vdc nominal Filtered DC with battery backup from control panel. (see Note 1)
Standby Current:	28mA at 12VDC (nom.) 33mA at 16VDC (nom.)
Alarm Current:	28mA at 12VDC (nom.) 33mA at 16VDC (nom.)
Alarm Output:	Normally-Closed Form-A Relay
Contact Rating:	100mA, 24VDC w/ internal 10Ω limiting resistor
Trouble Output:	Active Low Open Collector with 47Ω current limiting resistor (100mA. Max.)
Trouble Output Time:	Latched (until restore) for High or Low temp. Momentary (3 sec.) for Self Diagnostics failure
Operating Temperature:	-10° to +50°C (14°F to 122°F)
Temperature Compensation	Yes
Low Temp Output Setting:	40°F +/- 4°F (fixed)
High Temp Output Setting:	90°F +/- 4°F (fixed)
Coverage / Pet Immunity:	45' x 45' High Sense Mode (30 lb Pet Immunity) 40' x 40' Normal Sense Mode (65 lb Pet Immunity)
Mounting Height:	6.5ft – 10ft. (7.5ft. Recommended)
Coverage Angle:	85º at Maximum Range.
Dimensions:	3.3in x 2.5in x 1.9in (8.4cm x 6.4cm x 4.8cm) (HxWxD)
Shipping Weight:	5oz (142g)

Note 1: This unit is intended for operation from a power source that provides a 4 hour battery backup in the event of a power failure.
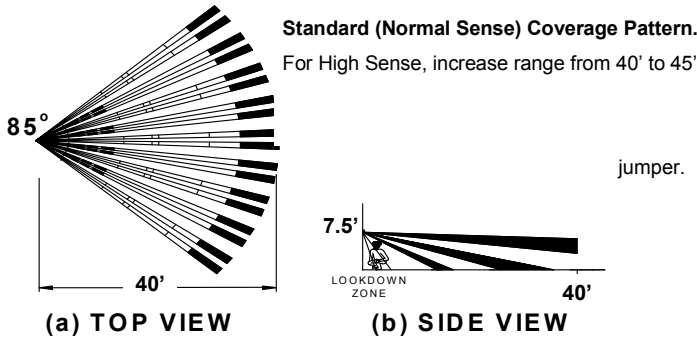
NOTE: Pet Immunity has not been evaluated by UL.

LOCATING THE DETECTOR

  Select a location that will provide the required coverage and allow the detector to be mounted at a height of 6.5ft. to 10ft. Corner mounting is preferred as it provides the best overall coverage. Choose a location where the path of an intruder will most likely cross beams, as opposed to walking towards or away from them.

- Avoid mounting the detector in close proximity to sources of heat, space heaters and air ducts which may blow hot air *directly* onto the detector.
- Do not mount the unit where the sun can shine directly on it.
- Do not aim the detector at a staircase which a pet has access to.
- Do not mount the detector near furniture or objects higher than 4 feet tall which a pet may climb onto (such as a couch within 6 feet of the detector)

NOTE: For 65 pound pet immunity: remove look-down lens and remove SEN jumper.

Standard (Normal Sense) Coverage Pattern.

For High Sense, increase range from 40' to 45'

**(a) TOP VIEW**   **(b) SIDE VIEW**

MOUNTING

1. Use a screw driver to carefully lift the lens cover from the housing.
2. Remove the circuit board from the housing by removing the screw in the center of the board.
3. Determine the wire entry points on the housing. The housing provides four possible wire entry points, two for surface wiring and two for hidden wiring. Determine which entry is most convenient and punch out or remove the thin plastic section.
4. Mount the housing to the wall. There are three mounting options to choose from: flat wall mounting, corner mounting or swivel bracket (SVL2) mounting on ceiling or wall. If using the swivel bracket refer to the instructions with the bracket. For wall or corner mounting simply hold the case in the desired location and using the supplied screws push through the appropriate thin wall mounting screw holes and attach the unit with two or four screws. **Note:** Do not over tighten the screws as this can distort the case and compromise the air seal of the unit, because not all walls are flat and all corners are square. Reinstall the circuit board and proceed to wire the detector.

WIRING & TERMINAL DESCRIPTIONS

Refer to the wiring diagram and connect the appropriate wire to the corresponding terminal. When the wiring is completed, seal the opening around the wire entry hole and any other unused holes with the supplied sealer.
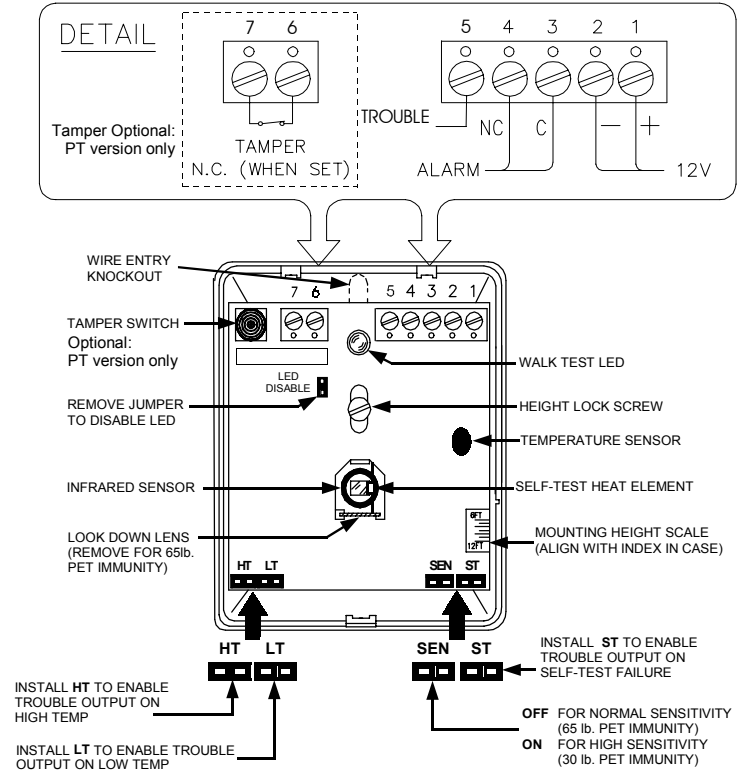
PIR1680PT Circuit Board Detail

LOW AND HIGH TEMP ALERT MONITORING

Low Temperature Alert for Heating System Monitoring (Patented).

To enable the Low Temperature Output in the case of the ambient temperature falling below 40°F, place a jumper across pins LT and wire the Trouble Output (terminal 5) to the positive terminal of a zone programmed for 24 Hour protection. This output will remain active as long as the temperature remains below 40°F, when the temperature rises several degrees above 40° this the output will reset.

High Temperature Alert for Cooling System Monitoring (Patented)

To enable the High Temperature Output in the case of the ambient temperature rising above 90°F, place a jumper across pins HT and wire the Trouble Output (terminal 5) into the positive terminal of a zone programmed for 24 Hour protection. This output will remain active as long as the temperature remains above 90°F, when the temperature falls several degrees below 90° the output will reset.

Both High Temp. and Low Temp. Alert may be enabled simultaneously.

Place a jumper across pins LT and place a jumper across pins HT.

Local Indication

If the unit is in a high or low temperature condition, the LED will glow dimly instead of being completely off during periods of inactivity.

Testing

The temperature monitoring feature may be tested for low temperature alert using freeze spray and for high temperature alert using a hairdryer. Refer to the Circuit Board Detail for the location of the temperature sensor and apply the cold / heat accordingly. *The temperature sensor will respond to an active temp alarm condition once every ten minutes, or upon each sensing of motion.* Either wait for the sensor to detect the temp alarm, or cause a motion alarm to speed up the test. Observe the LED for a dim glow and check the control panel for the proper response.
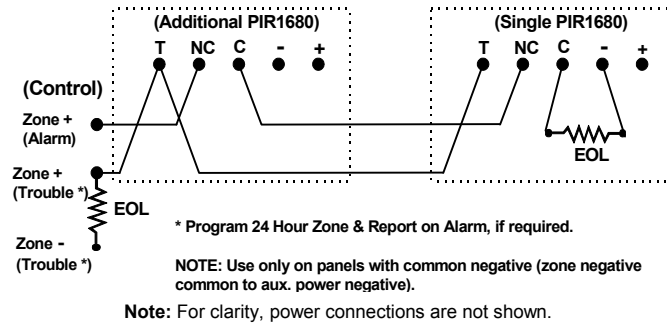
SELF TEST / TROUBLE OUTPUT

The PIR1680P/PT will periodically test its circuitry to insure it is operating properly. Self Test failure will be indicated by the rapid blinking of the LED (do not confuse it with the unit's warm up period, in which it will also blink for approximately 60 seconds). To send a trouble output to the control panel on self test failure, install a jumper connector across pins ST and wire the Trouble Output (terminal 5) into the positive terminal of a zone programmed for 24 Hour protection. **Note:** This output is a 3 second momentary activation. This makes it it possible to differentiate a temperature condition from a self test failure on the same zone. A temperature signal will not immediately be followed by a restore signal (the temperature must rise several degrees first). However, because the selftest failure activation is momentary - the zone will report an open followed by a restoral. *Appropriate control panel programming is required.*

Wiring Alarm with Trouble and/or Temp Alert on one 4 conductor cable. (Using one zone for alarm & second zone for trouble)

* Program 24 Hour Zone & Report on Alarm, if required.

NOTE: Use only on panels with common negative (zone negative common to aux. power negative).

Note: For clarity, power connections are not shown.

LED DISABLE JUMPER

To prevent the walk test LED from turning on, remove the jumper from the pins labeled LED DISABLE. Removing this jumper will not affect the flashing of the LED on self test failure or the dim glow during a high/low temperature condition.

SENSITIVITY SETTING (SEN Jumper)

For 45' range or for single pet under 30 lbs., install the SEN jumper. For 40' range or for pets with a combined weight less than 65 lbs., DO NOT install SEN jumper.

VERTICAL AIMING

The sensor's height scale must be set properly for maximum coverage. Loosen the Height Lock Screw and slide the board up or down to set it to the same height scale number as the unit's mounting height. Tighten the Height Lock Screw and walk test the sensor.

Horizontal Aiming (refer to lens coverage pattern)

The lens may be moved left to right within its holder to help avoid problem areas. However, the most effective solution for a possible problem area is to block the zone, by applying a piece of foil to the zone.

COMPLETING THE INSTALLATION / TESTING

When the installation is complete, the sensor must be thoroughly tested to insure proper operation. Allow at least three minutes for the unit to stabilize after applying power. During this time the unit will perform its own self diagnostics and analyze the ambient room temperature to set a baseline detection level. The LED will flash rapidly for approximately 1 minute and not function until the unit is ready. *If the unit was installed after being kept in a hot or cold vehicle, allow the unit to operate with its cover in place for about 15 minutes before walk test.* This will insure that the unit has measured the proper room temperature. Walk test the unit to insure the desired coverage, making any board height adjustments that may be necessary. During walk test, the unit will go into a zone finding mode for 15 seconds after each trip. This will cause the LED to light each time a beam is entered. To test the normal detection pattern remain motionless for at least 15 seconds while moving between walk tests.

REMOVING / REPLACING THE LENS

The lens is mounted behind a Lens Support insert that fits inside the front cover. To remove and replace the lens, proceed as follows**:**

1. Carefully lift the lens cover from the housing.
2. Remove the bug shield, which will expose the lens support assembly.
3. While pushing the lens in at the top, with fingers straddling the LED jewel, press down at the top of the Lens Support as shown until the support clears the three top retainers. Be careful not to dislodge the look down-lens window.
4. Push the Lens Support up until it clears the three bottom retainers and remove the assembly.
5. Slide out the lens.
6. Install the replacement lens with the grooved side in and the with the lens not in the up side down position. All lenses are marked with with the word top stamped on the border, this may be difficult to see, so as a rule put the taller lens segments up.
7. Install the retainer assembly into the front cover. Slip the Lens Support behind the lower retainers, then push in at the top until the Lens Support snaps into place. Insert the bug shield and place the lens cover back into the housing.
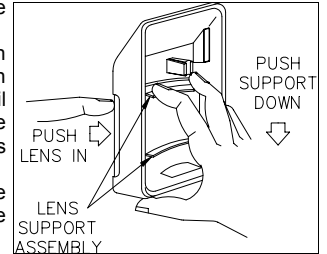
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