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PIR Pet-Immune Motion Sensor (IRP-Y2)

The PIR Pet-Immune Motion Sensor is designed to detect movement in the home while eliminating or decreasing the chance of false triggers caused by small pets in and around the home. IRP-Y2 is designed to detect movement within an assigned area and signals the control panel to activate the alarm if an intruder crosses its path of detection. It will however not detect pets up to 20-25kg in mass. In this literature this item will be referred to as the "PIR".

The PIR consists of a two-part design made up of a cover and a base. The cover contains all of the electronics and optics and the base provides a means of fixing. The base has drill-outs to allow mounting on either a flat surface or in a corner. It is also protected against sabotage, theft and accidental removal by two types of tamper protection. These are the tamper and the tilt tamper switches. The tamper switch triggers when the cover has been removed or the tilt tamper triggers when the PIR is moved without authorisation.

The PIR is designed to give a typical detection range of 12m at 110° when mounted at 2m above ground.

Identifying the Parts

Remove the cover by loosening the button fixing screw (bottom), the inside of the PIR will be revealed as shown.

1. Learn/Test Button

   This button is used for testing the radio range performance and for learning purposes.

2. Battery Insulator

3. Tamper Switch

   The tamper switch protects the enclosure from being opened.

4. Tilt Tamper Switch

   The tilt tamper switch protects the PIR from being rotated, removed, or detached from the mounting surface.

5. Battery Compartment

Sleep Timer

The PIR has a "Sleep Time" of approximately 1 minute to conserve power. After transmitting a detected movement the PIR will not transmit a signal for 1 minute. Any further movement detected during this sleep period will extend the sleep time by another minute.

Test Mode

The PIR can be put into test mode by pressing the test button, which is also the LED, on the front cover. In test mode, it will disable the sleep timer and will enable the LED indicator to light every time a movement is detected. Each time the test button is pressed, the PIR will transmit a test signal to the control panel for radio range test and the PIR will enter the test mode for 3 mins. It will exit test mode automatically after 3 mins and return to normal mode.

LED Indicator

In normal operation mode, the LED indicator remains off except in the following situations:

• When the cover is opened and the tamper switch is triggered.
• The PIR's battery is low, every time the PIR is activated, the LED will light.
• The PIR can be put into test mode by pressing the test button on the front cover. In test mode, it will disable the sleep timer and will enable the LED indicator to light for a period of 3 mins.
• When the PIR is in test mode and is transmitting the signal, the LED will light every time it is activated.
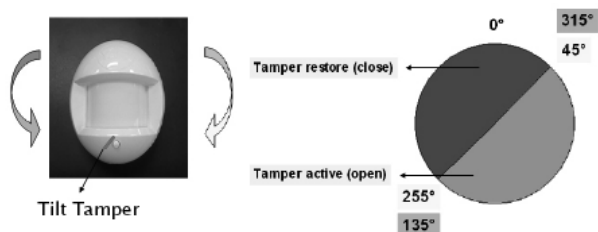
Battery

The PIR uses three 1.5V "AAA" alkaline batteries as its power source. The PIR will have a typical battery life of over 3.6 years at an average of 50 activations a day.

Low battery detection operates at a threshold of 3.2V+/-2% where the PIR has enough reserve power to typically operate for 6 months before complete exhaustion. A low battery signal will be sent to the control panel along with regular signals for the control panel to display the status accordingly.
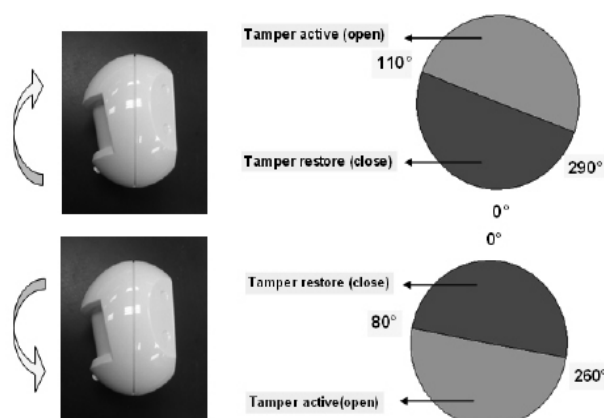
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Understanding the Tilt Tamper Detection Mechanism

- When the PIR is placed on its back, and the tilt is horizontal: a "Tamper activate" signal will be transmitted to the control panel. The tilt tamper will also trigger when the PIR is rotated clockwise at an angle equal to or greater than 45°, or if the counter clockwise angle is equal to or greater than 135°. Once the tilt angle is restored to less than 45° clockwise or 135° counter clockwise, then a "tamper restore" signal will be transmitted to the control

Tilt Tamper

panel.
- When the PIR is placed upright, and the tilt is vertical: a "tamper activate" signal will be transmitted to the control panel when the "learn/test" button is rotated towards you at an angle equal to or greater than 110°, or away from you at an angle equal to or greater than 80°. Once the tilt angle is restored to less than 110°/80° respectively, a "tamper restore" signal will be transmitted to the control panel.

Getting Started

- Remove the battery insulator and you are ready to do the learning process.
- The LED indicator steadily flashes for 30 seconds (PIR is warming up). During the warming up period, the PIR will not be activated. It is recommended that you stay away from the detection area during this time. After the warming up period is over, the light will turn off and the PIR will be ready for operation.
- Put the control panel into learn mode and learn-in the PIR by pressing the "learn/test" button. Please refer to section "Add/Delete Device" in the operation manual of the control panel.
- After the PIR is learnt-in, put the control panel into "Walk Test" mode, hold the PIR in the desired location, and press the test button to confirm that

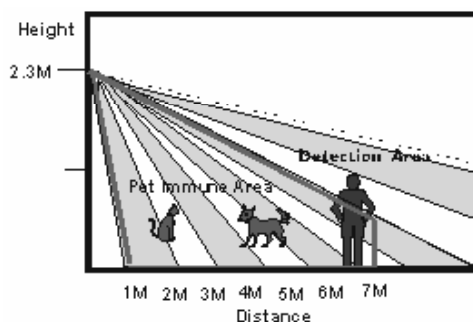this location is within the signal range of the control panel.
- When you are satisfied that the PIR works in the chosen location, you can proceed to install.

Mounting Method
- The PIR is designed to be mounted on either a flat surface or in a corner with the fixing screws and plugs provided.
- The base has drill-outs, where the plastic is thinner, for mounting purposes. Two drill-outs are for flat fixing and four drill-outs are for left or right hand corner fixing.
- To mount the PIR, drill through the appropriate drill-outs. Using the holes in the housing as a template, drill holes into the mounting surface and insert the wall plugs if securing to a brick wall.

Installation
- Decide on the location of the PIR and if it is to be corner or flat mounted.
- Hold the PIR and press the test button to enter test mode for 3 mins. This is to disable the "Sleep Timer" and enable the LED indicator to light every time movement is detected.
- Walk around the protected area, noting when the LED flashes, and check that the detection coverage is adequate.
- When you are satisfied with the detection coverage, remove the cover by loosening the button fixing screw.
- Screw the base to the wall.

- Screw the cover on. Installation is now complete.

Installation Recommendations

The PIR is designed to give a typical detection range of 12 meters when mounted at 2 meters above ground. When mounted at 2.3 meters above ground, it gives a typical pet immune range of 7 meters. The higher the PIR is mounted above ground, the better the pet immunity range.

To take full advantage of the PIR, the following guidelines should be considered:

- It is recommended to install the PIR at the following heights
  - 2.1 - 2.4 m above ground for best performance

IMPORTANT NOTE

> For the best performance of the PIR, adjust the mounting height of the PIR in accordance with the "tallest" pet in the house. For "taller" animals, it is recommended to install the PIR at a higher position.

> When deciding on the height for the mounting of the PIR, remember to take the possible blind spot into consideration. The blind spot underneath the PIR enlarges proportionally to the height of the PIR (at a height of 2.3m, detection range starts from 1m).

- Mount the PIR where animals cannot get into close proximity of the PIR by climbing on furniture or other objects.
- Do not face the PIR at stairways that the animals have access to.
- Mount the PIR in a position such that an intruder would normally move across the PIR's field of view.
- Mount the PIR in a corner to give the widest view.
- Mount the PIR where its field of view will not be obstructed e.g. by curtains, ornaments etc.

Limitations

- Do not position the PIR to directly face a door protected by a door contact, this could cause the door contact and the PIR radio signals to be transmitted at the same time when entering, therefore possibly canceling each other out.
- Do not install the PIR completely exposed to direct sunlight.
- Avoid installing the PIR in areas where devices may cause rapid changes in temperature in the detection area, e.g. air conditioners, heaters, etc.
- Avoid large obstacles in the detection area.
- Do not mount the PIR directly facing sources of heat e.g. fires or boilers, etc.
- Avoid mounting the PIR in areas where there are objects that may move e.g. curtains etc.

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