

Installation Guide

NB PIR Detector
(P119982 / E6310405)



NookBox

Smart Home Security



NB PIR Detector (P119982 / E6310405)

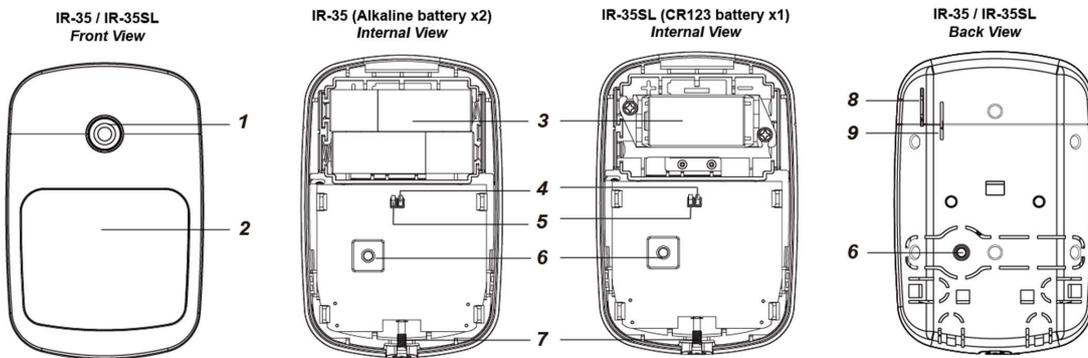
The PIR detector detects infrared signature to pick up movements within an assigned area and signals the Control Panel to activate the alarm if an intruder crosses its' path of detection.

The PIR detector is designed to give a typical detection range of 12 meters when mounted at a height of 2.5 meters above the ground. The PIR sensor also supports pet immunity feature and will not detect pets of up to 25 kg to minimize false alarm situation.

The PIR detector consists of a two-part design made up of a cover and a base. The cover contains all the electronics and optics and the base provides a means of fixing.

NB PIR Detector is powered by two Alkaline batteries

Parts Identification



1. Test Button / LED Indicator

- The test button is used for testing the radio performance and for learning purpose.
- The LED indicator is used to indicate the status of system.

2. IR Sensor

3. Battery Compartment

4. Pet Immunity Enable/Disable Jumper Switch (JP3)

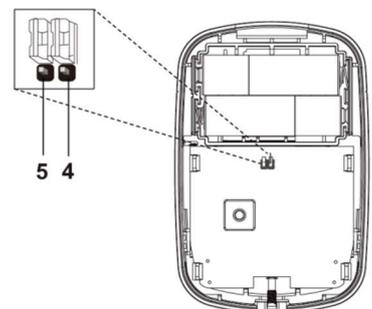


Jumper On
The jumper link is inserted connecting the two pins.



Jumper Off
If the jumper link is removed or "parked" on one pin.

- When set as ON, Pet Immunity is disabled. (Factory default)
- When set as OFF, Pet Immunity is enabled.



5. Sensitivity Increaser Jumper Switch (JP4)

- When set as ON, the PIR's detection sensitivity is high.
- When set as OFF, the PIR's detection sensitivity is in normal level. (Factory default)

6. Tamper Switch

7. Bottom Fixing Screw

8. IR-35 Battery Insulator Hole

Features

LED Indicator

In Normal operation mode, the LED Indicator will light up in the following situations:

- When movement is detected under low battery condition
- When the cover is opened and the tamper switch is triggered
- When movement is detected if the tamper condition continues
- When movement is detected under Test mode
- When the Test Button is pressed under the tamper condition or if the PIR is under low battery

The LED will not flash if the PIR's tamper and batteries are normal and the PIR is not under test mode.

Battery and Low Battery Detection

The NB PIR detector uses two Alkaline AA 1.5 V batteries as its power source.

The PIR features low-battery detection function. If low battery voltage is detected, a low-battery signal will be sent to the Control Panel along with the regular signal transmissions for the Control Panel to display the status accordingly.

For each installation, the batteries are installed in by the factory before shipment with an Insulator inserted.

<NOTE>

When changing the batteries, after removing the old batteries, press the Tamper Switch twice to fully discharge before inserting new batteries.

Tamper Protection

The PIR is protected by a tamper switch which is compressed when the PIR is properly installed. When the PIR is removed from the mounted surface or the mounting bracket, or when its cover is opened, the tamper switch will be activated and the PIR will send a tamper open signal to the system control panel to remind the user of the condition. If any movement is detected when the tamper switch is open, the LED will light up.

Supervision Function

When the PIR is in normal operation mode, it will conduct a self-test periodically by transmitting a supervisory signal once every 30 to 50 minutes.

If the Control Panel fails to receive the supervisory signals transmitted from a certain PIR for a preset time, an "Out-Of-Order" fault message will be generated.

Test Mode

The PIR can be put into test mode by pressing the Test Button. In test mode, it will disable the sleep timer and will enable the LED indicator to light up every time a movement is detected. Every time the Test Button is pressed, the PIR will transmit a test signal to the Control Panel for radio range test and enter the test mode for 3 mins. Test Mode will time out after 3 minutes.

Sleep Timer

The PIR has a “sleep time” of approximately 1 minute to conserve power. After transmitting a signal of a detected movement, the PIR will not retransmit any signals for 1 minute; any further movement detected during this sleep period will extend the sleep time by another minute. In this way, continuous movement in front of the PIR will not unduly exhaust the battery.

Pet Immunity Function

The PIR sensor supports pet immunity feature and will not detect pets of up to 25 kg to minimize false alarm situation. The Pet Immunity function can be enabled/disabled by setting the Jumper Switch (JP3) position. When the Jumper Switch (JP3) is set to ON, Pet Immunity is disabled (Factory default). When the Jumper Switch (JP3) is set to OFF, Pet Immunity is enabled.

Sensitivity Increaser Function

You can use the sensitivity increaser function to increase the PIR’s detection sensitivity. To increase detection sensitivity, set the Jumper Switch (JP4) to ON. To maintain normal detection sensitivity, set the Jumper Switch (JP4) to OFF (Factory default).

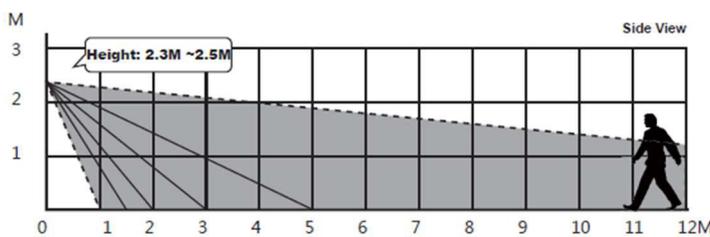
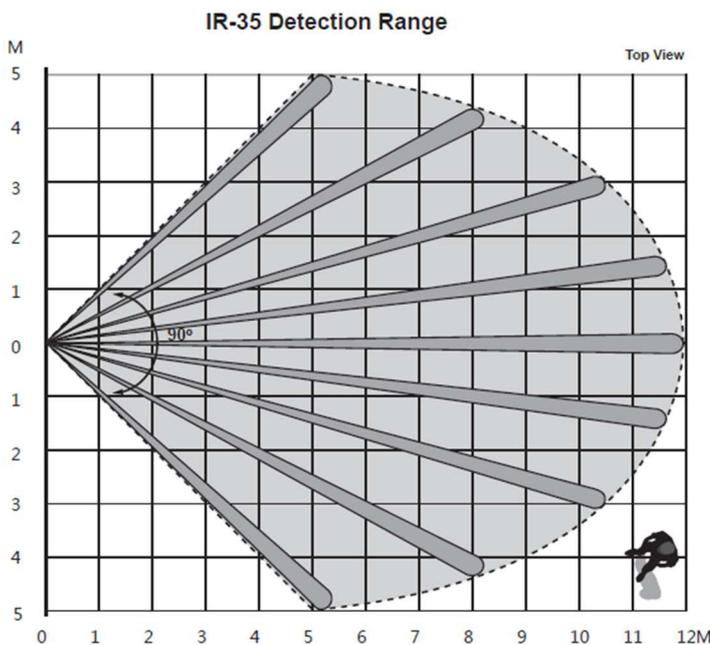
Getting Started

- Pull out the battery insulator to activate the batteries.
- The LED indicator will flash for 30 seconds (the PIR is warming up). During the warm-up period, the PIR will not be activated. After the warm-up period is over, the LED will turn off and the PIR will be ready for operation.
- Put the Control Panel into learning mode (refer to Control Panel manual for details).
- Press the test button.
- Refer to Control Panel manual to complete the learn-in process.
- 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 (refer to Control Panel manual to complete the Walk Test).
- When you are satisfied that the PIR works well in the chosen location, you can proceed with mounting.

Installation

Installation Guideline

- The PIR is designed to be mounted on either a flat surface or in a corner.
- The detection range is up to 12 meters if the PIR is mounted at a height of 2.3-2.5 meters above the ground.
- When Pet-Immunity function is enabled, the PIR will not detect pets up to 25kg when mounted at a height of 2.3-2.5 meters above the ground. If required, you can adjust the height of the PIR according to the size of your pet for optimal pet immunity performance. Higher installation location will provide larger pet-immune space, but will increase the blind spot under the PIR.
- When the PIR is mounted with the rotating bracket, it will not have the regular detection area (as in the diagram below), or the typical pet immune range.
- After the installation site is selected, press the Test Button to enter Test Mode. Walk around the protected area noting when the LED lights up and check that the detection coverage is adequate.
- When detection coverage is found to be satisfying, follow the steps described in **Mounting Method** section below to mount the PIR.



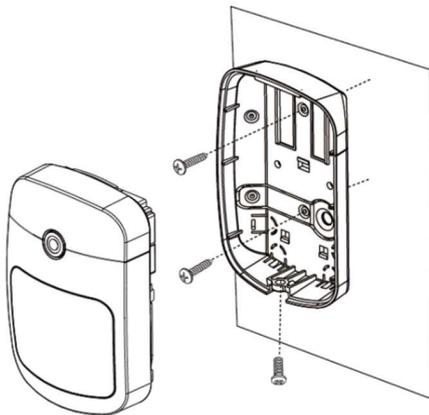
 **Pet's Weight: 25 kg**

Mounting Method

- The PIR is designed to be mounted on either a flat surface or in a corner with the fixing screws and wall plugs provided.
- The base has knockouts, where the plastic is thinner and can be broken for mounting purpose. Two knockouts are for surface fixing and four knockouts are for corner fixing as shown in the picture on the right.
- For corner mounting, a triangular bracket is provided to add Back Tamper Protection. The bracket also includes two knockouts to mount the bracket on the wall.
- For surface mounting, an optional rotating bracket is provided for users to adjust the range of detection. With the rotating bracket, the detector can be rotated 80 degrees horizontally and 70 degrees vertically to provide the optimal coverage.

Surface Mounting:

- 1) Remove the bottom fixing screw and cover assembly.
- 2) Break through the two knockouts on the inside of base.
- 3) Use the holes as a template and drill holes into the surface.
- 4) Insert the wall plugs if the PIR is to be fixed onto plaster or bricks.
- 5) Screw the base onto the wall plugs.
- 6) Screw the cover onto the base.

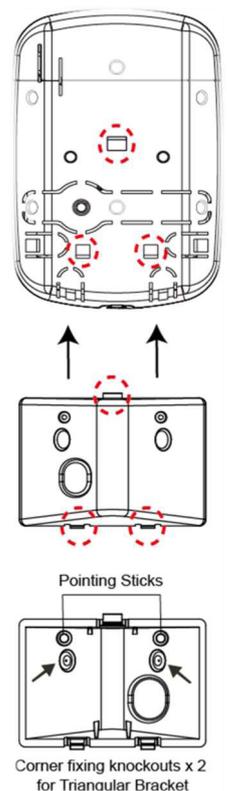
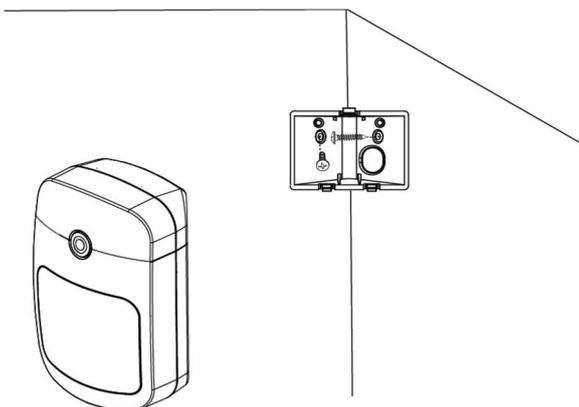


Corner Mounting with the triangular bracket:

The triangular bracket can be mounted on the wall with the screws or double-sided adhesives.

Screw Mounting

- 1) Break through the two knockouts on the triangular bracket.
- 2) Use the two holes as a template and drill holes into the surface to be mounted.
- 3) Insert the wall plugs if the PIR is to be fixed onto plaster or bricks.
- 4) Screw the triangular bracket onto the wall plugs with the two pointing sticks on top and facing you.
- 5) Fit the PIR onto the hooks of the triangular bracket.



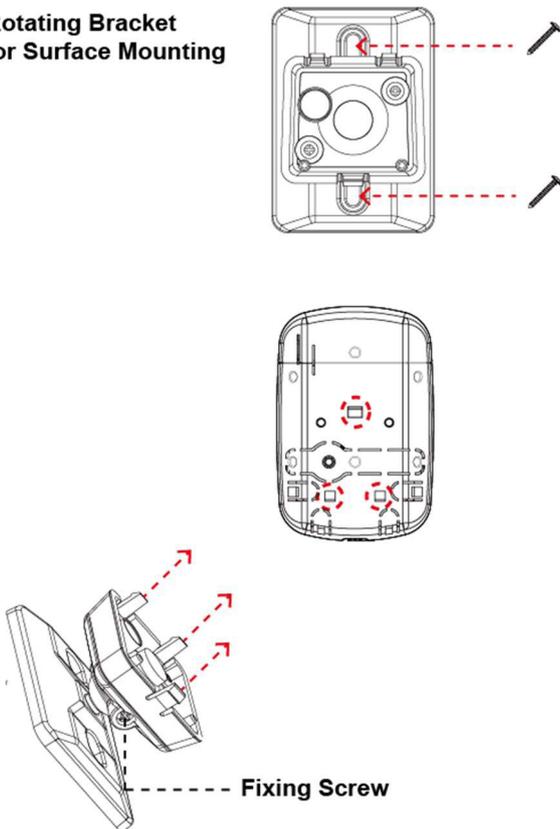
Mounting with Self-adhesive (Optional item, sold separately)

- 1) The mounting corner should be clean, dry, and smooth. Clean the mounting corner with a suitable degreaser if needed.
- 2) Attached the two double-sided adhesives on the triangular bracket.
- 3) Remove the protective covering from the double-sided adhesives.
- 4) Attached the triangular bracket onto the desired corner with the two pointing sticks on top facing you.
- 5) Fit the PIR onto the hooks of the triangular bracket.

Surface mounting with rotating bracket (optional item, sold separately):

- For surface mounting, an optional rotating bracket is provided for users to adjust the range of detection. With the rotating bracket, the detector can be rotated 80 degrees horizontally and 70 degrees vertically to provide the optimal coverage.
 - The rotating bracket can be mounted on the wall with the provided screws.
- 1) Screw the rotating bracket into the wall.
 - 2) Fit the 3 hooks of the rotating bracket into the 3 holes of the base accordingly.
 - 3) Rotate the bracket for the proper range of detection and tighten the fixing screw.

Rotating Bracket for Surface Mounting



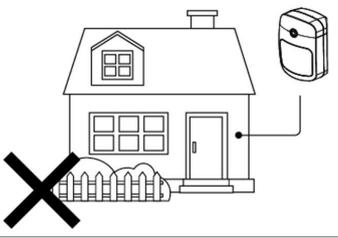
Installation Recommendations

It is recommended to install the PIR in the following locations:

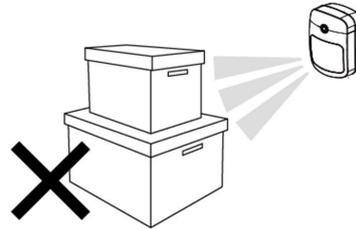
- At a height of 2.3-2.5 meters for best performance:
- At locations where animals cannot come to the detection area by climbing on furniture or other objects.
- Don't aim the sensor at stairways where animals can climb on.
- At a position such that an intruder would normally move across the PIR's field of view from side to side.
- In a corner to give the widest view.
- At a position where its field of view will not be obstructed by e.g., curtains, ornaments etc.

Limitations

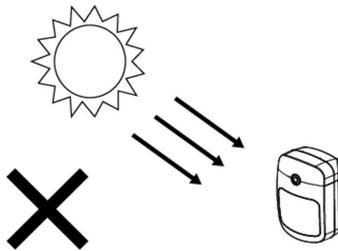
Do not install outdoors.



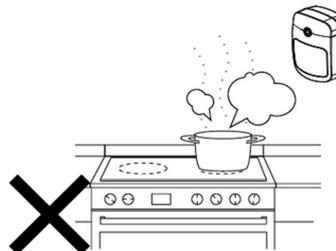
Avoid large obstacles in the detection area.



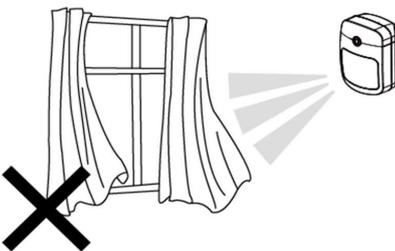
Do not expose the PIR completely to direct sunlight.



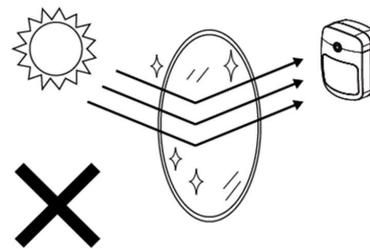
Avoid vapor or high humidity that can cause condensation.



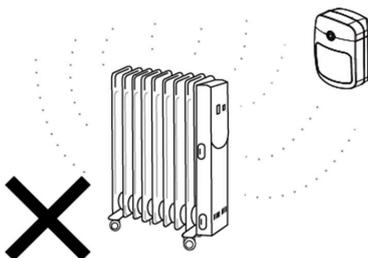
Avoid moving objects, e.g., curtains, wall hangings, etc., in the detection area.



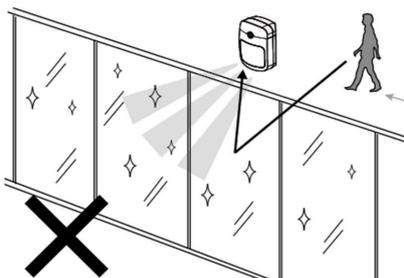
Avoid reflected light from bright surfaces, e.g. mirror, window.



Avoid installing the PIR in areas where machines such as air conditioners or heaters may cause rapid change in temperature in the detection area.



Avoid reflecting surface in the detection area. Reflected infrared signatures may lead to false alarm.





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For more information visit:
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