



230-PIR Personnel Detectors for Wall & Ceiling (Passive Infra-Red) Installation Guide

Introduction

The Passive Infra Red (P.I.R) movement detector works by detecting the warmth of moving bodies walking through the area.

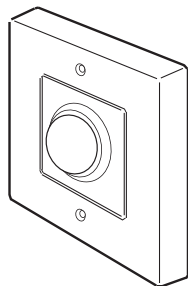
When the P.I.R is triggered it will signal the fan or light to run. The "timer" will run on for the time set. The focusing of the unit is in fact made up of a number of smaller lenses known as facets or zones, each zone is focused on a different spot to give a wide area of coverage.

The P.I.R. is triggered when walking from one zone to the next. Therefore for optimum detection sensitivity it will operate best when walking across the zone patterns.

Coding description:

230PIR IO amp (max load) P.I.R c/w with adjustable timer
230PIR-NT IO amp (max load) P.I.R with no timer included

Figure 1. Remote Personnel Detector (P.I.R.)

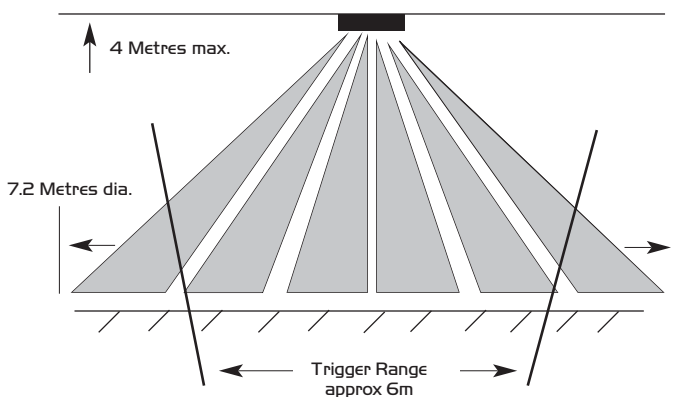


The PIR-NT version is normally used in conjunction with fans which incorporate run on timers. If connecting to a fan without its own run on timer the Timer version (PIR) should be used. When using either version for lighting and fan control, whilst this is suitable for several fans, only one light fitting should be connected directly to the P.I.R.

IMPORTANT

Please note there are high voltages which exist inside the unit and under no circumstances should it be opened, there are no user serviceable parts inside.

Figure 2. Typical ceiling application showing detector range.



Installation

The P.I.R. must be installed in accordance with the latest IEE recommendations.

Before installing the unit or making any adjustments the electricity must be switched off.

Positioning the P.I.R. unit

For best results never position over a heat source.

Never position in a draught.

Do not place in direct sunlight.

Take account of exit/entry points.

Always seal PIR cable entry.

Fix securely to wall or ceiling.

Avoid obstructions such as screen/ furniture.

Be conservative on range and angle.

Avoid walking towards the PIR for prime detection.

Avoid long ranges for instant triggering.

Before installing the switch, the best position must be sought bearing in mind that the unit has a range of up to 6 metres and will provide

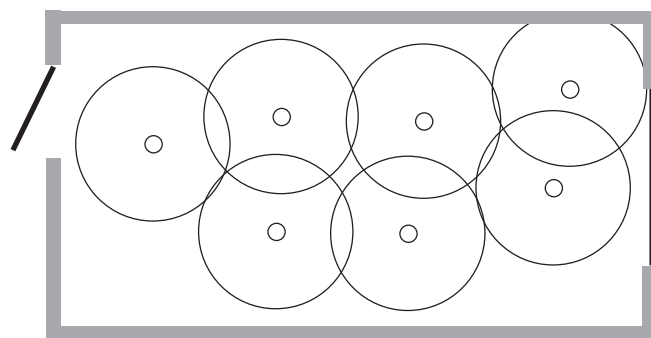
90° coverage in all directions. It also should be noted that the units are not suitable for use in shower cubicles, and should always be used in an indoor environment.

To avoid unnecessary triggering the P.I.R should not be mounted in a draught or directly over a heat source such as a radiator.

Caution* - overloading the unit will result in permanent damage, therefore it should not be used on loads over those stated on the P.I.R. After installing the fan the P.I.R should be wired to the switch/timer.

When the installation is complete, if using the Timer version, adjust the timer by piercing the label in the centre of the timer adjustment hole on the back of the unit to provide a suitable run on time for the fan. This is accomplished by using a screwdriver which is small enough to enter the hole provided. If the Trigger version is used the run on timer may have to be set inside the fan.

Figure 3. Room coverage.



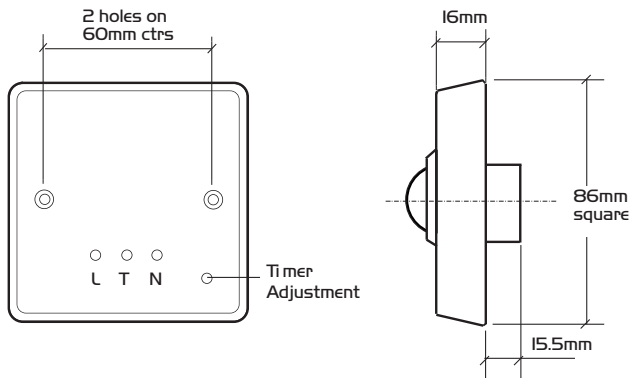
When the installation is complete, switch on the mains and wait for the P.I.R. to settle down. This could take up to 2 minutes for the Trigger version and up to 30 minutes for the Timer version depending on how the timer adjustment is set. To check that the P.I.R. will settle down and switch off the fan, the P.I.R. can be temporarily "blinded" with a piece of paper in front of the lens to stop the circuit triggering each time.

Each time the circuit is triggered on the timer version it will extend the fan run on period, i.e. the full time delay will commence each time it is triggered.

Dimensions (mm) and Fixing Details

Note: for wall fixing, the unit fits into standard wallplate mounting.

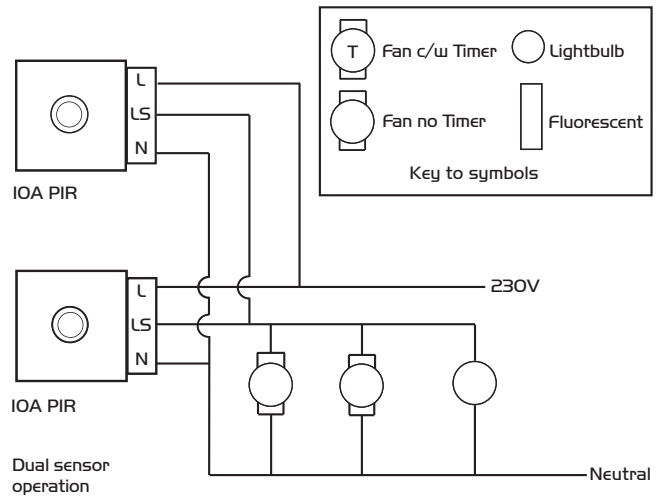
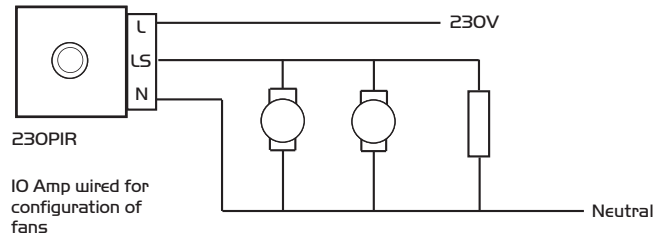
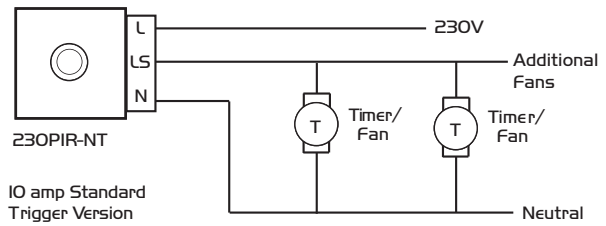
Figure 4. Rear and side views of PIR unit.



Specification PIR & PIR-NT

Nominal voltage:	230V +10% 40-60 Hz
Output:	IOA max. switch on resistive or inductive loads
Minimum load:	5 watts
Range:	Up to 6 metres dependent on body temperature
Angle of detection	90°
Activation time (Timer version)	Approx 3 - 30 minutes run-on from last detection
Installation height	Wallplate version 2 - 2.5 metres Bathroom minimum 2 metres Ceiling mounted version 2 - 4 metres

Wiring and Electrical Details



Technical or commercial considerations may, from time to time, make it necessary to alter the design, performance and dimensions of equipment and the right is reserved to make such changes without prior notice.