



Passive Infrared Sensor

Model PIRT with Timer

Instructions for maintenance, installation, and general use of 51969702.

1.0 Functionality

This section will describe the functions of the product.

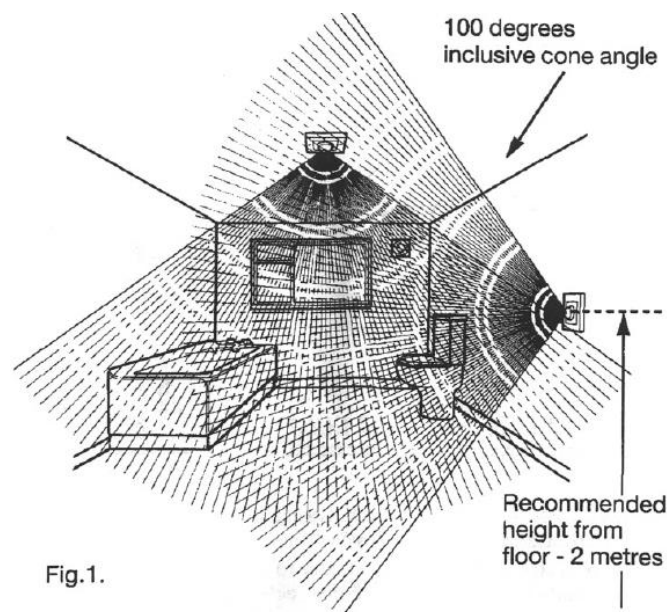
1.1 PIRT Model

The PIRT sensor is designed to provide an automatic means of switching on extractor fans and/or MVHR units. Typically installed in bathrooms, shower rooms and toilets. It can also be used in other situations for similar uses. If it is used with a fan fitted with a timer the fan will run for the total time of the two timers after a heat source is no longer detected. It may be used with many of the Airflow domestic fan range.

2.0 Positioning

This section will describe the location the sensor must be installed.

PIRT sensors must not be positioned where there is a possibility of liquid spray or where the air temperature will exceed 40°C. A PIRT sensor is most effective when it is sited so that a person entering the room passes across the path of the sensor rather than moving toward it. (see fig.1) Note that sources of heat in a room can trigger the sensor as well as condensation on the lens.



3.0 Mounting and Unboxing

In this section instructions for mounting are described.

The carton contains an assembled PIRT sensor and 2x M3.5 by 30mm long screws for fixing the sensor to a switch box which is not supplied. The sensor can be fitted to a surface mounted or recessed box in a wall or ceiling, with an internal depth of at least 16mm and with fixing centers of 60.3mm. Use a metal gang box for wall insertion and PVC for surface.

4.0 Wiring

In this section the wiring diagrams will be described.

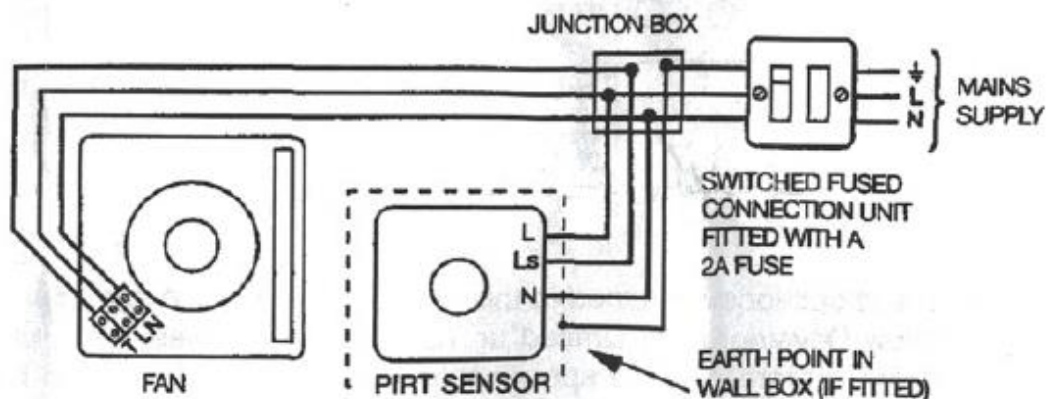
All the relevant electrical installations must comply with national standards. In the UK this standard is BS 7671:1997, and it is a requirement of this standard that all appliances be installed via a fused connection unit, which must be situated outside the room if the sensor and fan are installed in a bathroom or shower room. **NOTE:** This requirement will normally be covered by the fan installation as a sensor acts as a remote switch to the fan.

Note: The installation must be carried out by a qualified electrician.

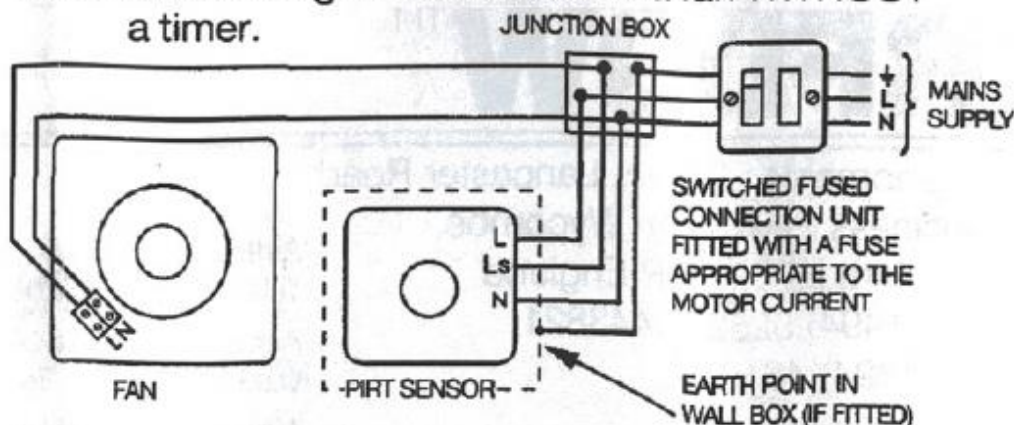
PIRT sensors are designed to operate from a 230 volt supply. The sensor can switch a fan with an inductive load of between 0.4 milliamps and 3.0 amps. The timer period of the PIRT may be set to operate for between 3 and 30 minutes. (see also 1.1 above).

The wiring diagrams below show a typical installation using a typical fan by Airflow Developments.

4.1 Connecting a PIRT sensor to a fan with a timer.



4.4.2. Connecting a PIRT sensor to a fan WITHOUT a timer.



5.0 Installation

This section will describe the installation of the sensor.

Warning: Danger of electric shock. ONLY INSTALL IF CORRECTLY AUTHORISED.

Having selected a position in the room (see fig.1) and decided whether to surface or recess mount the sensor, obtain a suitable switch box. Remove the switch box knock out which corresponds to the planned cable run for the cable, allowing 100mm to protrude for making connections and then install the box.

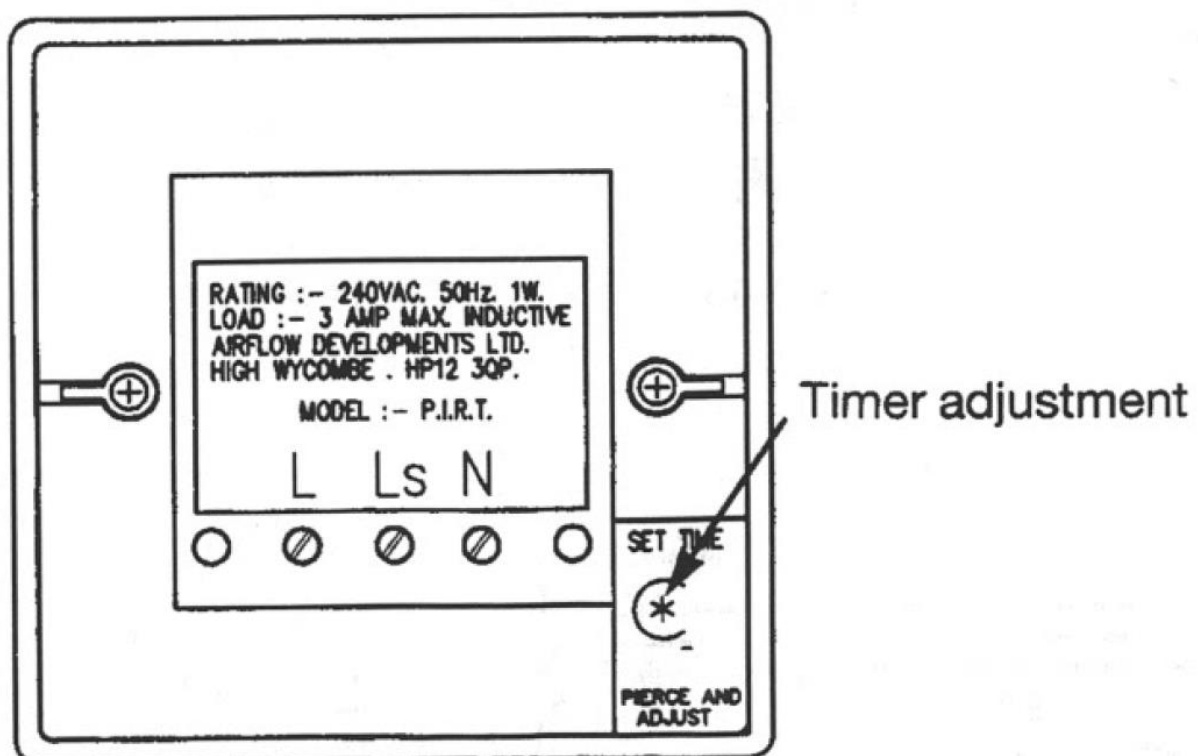
With the electricity turned off make several connections to the LIVE, Switched Live, and Neutral terminals of the terminal block on the back of the sensor, and to the earth terminal if a metal switch box contains one. Fit the sensor to the switch box using the screws provided. Make all other electrical connections necessary to complete the installation.

6.0 Testing

This section will describe the testing procedures for the switch.

When the installation is complete switch on the electricity supply. With the PIRT sensor the fan will start immediately and continue to run for a set period determined by the setting of the timer built into the sensor. The timer period is approximately 15 minutes by default. To adjust the timer, turn off the electricity supply and remove the sensor from the wall box. Using a small screwdriver turn the screw on the back of the sensor clockwise to increase and anti-clockwise to decrease the timer.

Note that the timed period only begins when a change of heat source is no longer detected by the sensor. If a sensor and fan fail to operate correctly, turn off the electricity and make sure all electrical connections have been properly made. Check the fuse in the circuit and retest. After completion of the installation and testing pass these instructions on to the user of the premises.



7.0 User Information

This section will describe user information about the product.

To Clean the product clean the exterior of the sensor with a dry cloth, taking care not to apply excessive force to the lens which may result in damage.

Electric Supply	230 V 1 Phase, 50Hz
Switching Capacity	Between 0.4 MA and 2A inductive load.
Working temperature range	0-40C°
Operation Range	0 – 6 Metres
Detection Zone	360° zone, 100° inclusive angle from lens
Terminal block wire size	2.5mm. MAX.
Switch Box	Simple gang box, 16mm deep min.