ENSA™

Energy Saving Devices

ENSA-PS1

PASSIVE INFRARED OUTDOOR MOTION ACTIVATED SWITCH

INSTRUCTION MANUAL

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Thanks for choosing the ENSA-PIR1 Passive Infrared Sensor!

This product is an automated motion activated switch. It is based around a high sensitivity pyroelectric detector, light sensor and control electronics. The switch will turn on when it detects movement inside the detection area and stay on until a preset time has elapsed. The sensor will only switch the load on when the measured LUX level is below a set threshold.

For installation only by a qualified Electrician – IP65 RATED FOR OUTDOOR USE

SPECIFICATIONS:

AC Input: 220-240VAC

Power Frequency: 50Hz

Ambient Light: <3-2000LUX (adjustable)

Time Delay: Min.10sec±3sec

Max.7min±2min

Rated Load: Max.1200W

300W

Detection Range: 180°

Detection Distance: 12m max(<24℃)

Working Temperature: -20~+40℃

Working Humidity: <93%RH

Power Consumption: approx 0.5W

Installation Height: 1.8-2.5m

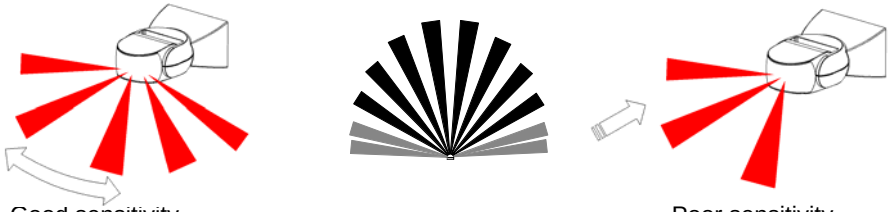
Detection Moving Speed: 0.6-1.5m/s

FEATURES:

- Built in light sensor which can be set to detect between 3 lux (“moon” position) and 2000 lux (“sun” position).
- Time–Delay before load switch off is adjustable between 10 seconds and 7 minutes.
- Time delay before switch off is automatically reset when the sensor detects movement, even if the load is still on. This means that intermittent movement will keep the load on.
- LUX sensing is disabled while the load is on – This stops switched lights from triggering the lux sensor and turning themselves off.
- Wide angle PIR Fresnel lens can be tilted to the best position for optimum sensitivity.

INSTALLATION ADVICE:

To ensure the best detection range, mount the sensor in a position where people will walk across the detection field, rather than toward it

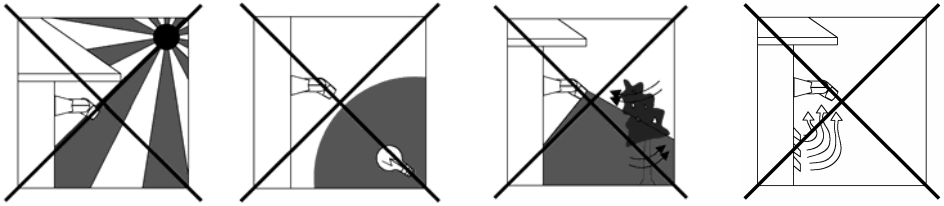


Good sensitivity

Poor sensitivity

As the sensor responds to changes in temperature, avoid the following situations:

- Avoid pointing the detector towards objects with highly reflective surfaces, such as mirrors or polished metal.
- Avoid mounting the detector near heat sources, such as heating vents, air conditioning units or incandescent lights.
- Avoid pointing the detector towards objects that may move in the wind, such as curtains or tall plants.



INSTALLATION:

- Ensure all AC power is switched off.
- Loosen the bottom screw and remove the mounting base (figure 1).
- Pass the power and load wires through the gasket in the bottom of the sensor.
- Connect AC power and the load to the terminal block (figure 2).
- Using two screws mount the base on a fixed object (figure 3).
- Reattach the sensor to the base, tighten the screw and tilt to desired position.

Figure 1:

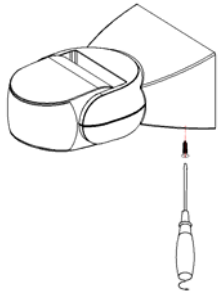


Figure 2:

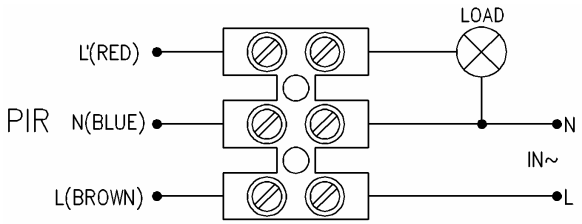
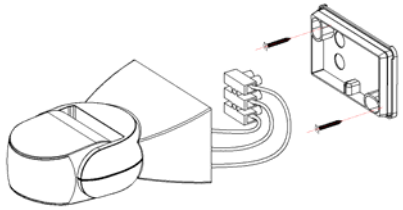


Figure 3:



TESTING THE INSTALLATION:

- Set the LUX selector to the maximum "sun" setting; set the TIME selector to the minimum "-" setting.
- Switch on AC power; during the first 30 seconds the sensor is in warm up mode and its connected load will not turn on. After this period is complete, if movement is detected by the sensor the load will be switched on. After the detected movement stops, the load will switch off in approximately 10 seconds.
- Turn LUX selector anti-clockwise to the minimum setting (moon). If the ambient light is more than three lux, the load will not turn back on after the sensed movement has stopped.

Please note that when testing in daylight, turn the LUX selector to the ☼ (SUN) position, otherwise the sensor will not turn on the load. Also ensure that any lamp connected as a load is pointed away from, and is mounted no closer than 60cm from the sensor.

TROUBLESHOOTING:

- The load does not turn on:
  - a. Double check all wiring to the sensor and the load.
  - b. Try bypassing the sensor to ensure that the load is working correctly.
  - c. Try increasing the "LUX" setting to reject any ambient light.
- The motion detection sensitivity is poor:
  - a. Ensure that the lens is clean with no obstructions between the moving object and the sensor.
  - b. Test at a lower ambient temperature – All PIRs have reduced sensitivity at elevated temperatures.
  - c. Ensure that the sensor is mounted so that the detected object moves across the detection field, rather than towards it.
  - d. Ensure that installation height is between 1.8m and 2.5m
  - e. Try tilting the sensor to move the detection field toward the moving object.
- The sensor does not turn off the load:
  - a. Ensure that there are no moving objects or thermal drafts in the detection area.
  - b. Try reducing the "TIME" setting on the detector.
  - c. Ensure power drawn by the load is less than 1200W (resistive) or 300W (inductive)