ES806 Passive Infrared (PIR) Dual Technology Ceiling Mount Motion Sensor User Manual

General
The ES806 is a ceiling mount motion sensor with PIR and Microphone dual technology. The combination allows the sensor to detect motion and sound (if enabled).

This sensor is ideal for larger areas, such as open plan offices and large rooms.

Once the primary detector (PIR) senses motion, the lights will be switched ON – should the motion be insufficient the microphone (if enabled) will continue to keep the lights on when detecting sound.

When the area is vacated and the sensor detects either no motion or sound the light/s will remain on until such time as the pre set time delay has lapsed.

If, after reviewing this guide, you require additional information or assistance please contact Eco Heat Equipment at info@ecosensor.co.za, +27 (0)861 999 887, or www.ecosensor.co.za.

Technical Specifications
- Voltage: 220 – 240V/AC
- Frequency: 50/60Hz
- Load: Incandescent max: 1 000W
  Fluorescent max: 600W
  LED max: 300W
- Detection Angle: 360 °
- Detection Range: 1 – 10m radius
- Light level: 10 – 2 000 LUX
- Time setting: 10 seconds – 30 minutes
- Installation height: 2.5m – 3.5m
- Working temperature: -10°C to 40°C
- Dimensions: 115mm diameter x 54.9mm(H)

Safety
Any incorrect use or installation procedure not recommended by the manufacturer may cause fire, electrical shock or injury to persons.

Box Contents
Your box should contain the following items:
- Sensor

WARNING:
Controlling a load in excess of the specified ratings will damage the unit and lights and could pose risk of fire and electric shock.

Do not install this unit to control a power socket.

Installation Instructions
WARNING: ALL WIRING MUST BE DONE IN ACCORDANCE WITH NATIONAL AND LOCAL ELECTRICAL CODES AND STANDARDS.

Note: motion sensors respond to rapid changes in temperature so care should be taken not to mount the device near a climate control source (i.e. heaters or air conditioners). Hot or cold draughts will seem like body motion to the sensor and will trigger the device. Recommended distance from climate control devices is 2m.

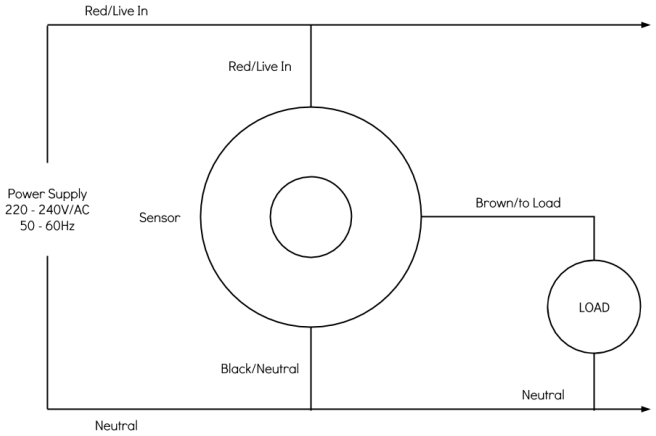
Consider the vibration of the climate control device, in some cases the sensor may need to me mounted further away due to vibration. Vibrating surfaces can cause the sensor to misbehave.

1. Turn power off at circuit breaker or fuse
2. Remove top cover from base of sensor
3. Connect wires as per diagram
4. Sensor can be secured onto ceiling with M5 butterfly screws/spring toggle
5. Restore power at circuit breaker or fuse

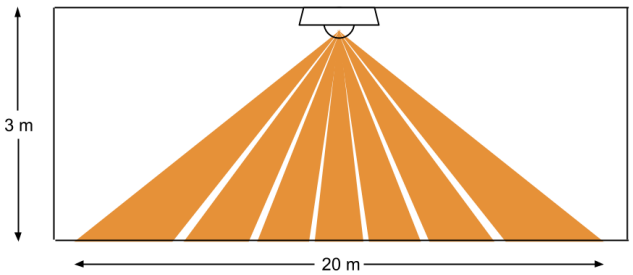
Sensor calibration:
Note: Allow up to 1 minute for the motion sensor to recalibrate after it has been connected for the very first time. This is only necessary during installation or when the mains supply is disconnected.

Operation and Field of View
The motion sensor detects motion within its coverage area and controls the associated lighting connected to the sensor. The passive infra red (PIR) sensor is sensitive to the heat emitted by the human body. In order to trigger the sensor the source of heat must move from one zone of detection to another. The device is most effective in sensing motion across its field of view and less effective sensing motion towards or away from its field of view.

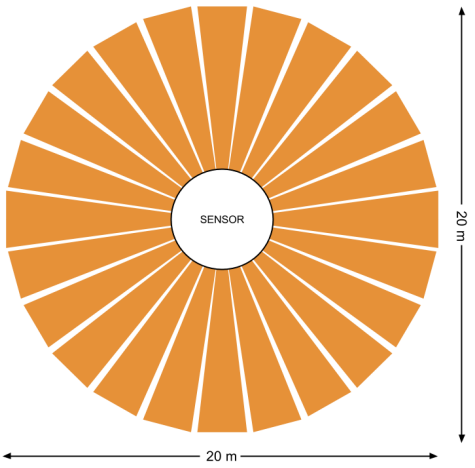
Installation wire diagram



Sensor detection range from side: large motion



Sensor detection range from top: large motion



Motion Sensor Settings and Adjustments
The motion sensor is a Passive Infra Red (PIR) type electronic occupancy detector, which in turn switches the lights when connected to the motion sensor. There are four adjustments that can be made to influence the operation of the motion sensor:

1. RANGE: motion detection range
2. TIME: time delay after motion/sound until shut off
3. LUX/LIGHT: level of ambient light sensitivity
4. MICROPHONE: use of sound as backup to motion detection to keep the device on.

The four adjustments settings are as follows:

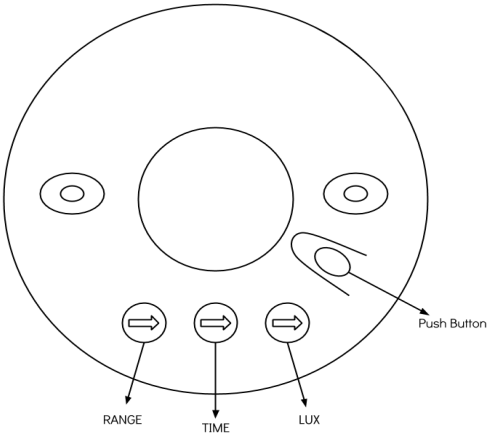
Detection range:	1m to 10m radius
Time setting range:	10 sec to 30 min
Lux (light) sensitivity:	10 to 2 000 LUX
Microphone:	On/Off

Manual Override
For manual control, the ES806 motion sensor features a convenient push button switch.

If the lights are OFF, pressing the button will turn the lights ON for as long as the room is occupied. The lights will turn OFF once the room is vacant, after the delayed OFF time expires.

If the lights are ON, pressing the button will turn the lights OFF and keep them OFF even if the room is occupied. This feature is particular useful when the automatic motion sensor settings need to be overridden. The lights can be turned back ON by simply pressing the button. The sensor will return to normal operation.

Motion Sensor Adjustments



The motion sensor's settings can be adjusted as follows:

Step 1 – Adjust the TIME setting to minimum
Turn the TIME control fully anti-clockwise to set to the 10 second testing setting.

Step 2 – Adjust the LUX/LIGHT setting to maximum
Turn the LUX/LIGHT fully clockwise to set to maximum (sensor functioning in all lighting conditions).

Step 3 – Adjust the RANGE setting
Turn the RANGE control fully anti-clockwise. Move away from the sensor until the LED stops blinking. This will be the minimum detection range for the setting. To increase the range, turn the control clockwise until the desired distance is reached (1m – 8m maximum).

Step 4 – Adjust the LUX/LIGHT setting
If the LUX/LIGHT control is set to maximum (fully clockwise), the lights will turn ON whenever the room is occupied, even in full daylight.

Alternatively, turn the LUX/LIGHT anti-clockwise until the desired LUX setting is achieved.

Step 5 – Adjust the TIME setting
Turn the TIME control clockwise until the desired delay is reached (10sec (testing) to 30mins).

Factory time out is pre set to 10 seconds.

NOTE: All the time intervals are within approximately 10 seconds of the stated time out interval.

Step 6 – Microphone (audio sensor)
To disconnect the microphone, press the Push button once to activate the manual override (sensor will turn OFF). Then hold down the Push button until the LED starts to blink (approximately 5sec). Press the Push button once more to deactivate the manual override (sensor will turn back ON). The PIR will continue to operate when the microphone is disconnected.

To reconnect the microphone, repeat steps above.

Disabling the microphone is ideal for areas where there are high ambient sound levels, such as near a busy road or in a shopping center.

NOTE: Sensor must first detect motion (PIR) to switch the device on. Sensor will NOT switch the device on if no motion is detected.

OTHER CAUTIONS:
Disconnect power when working on electrical outlets or components.
Do not push on the surface of the lens.

Cleaning
Carefully wipe sensor with a soft damp cloth. Do not apply pressure to the lens.

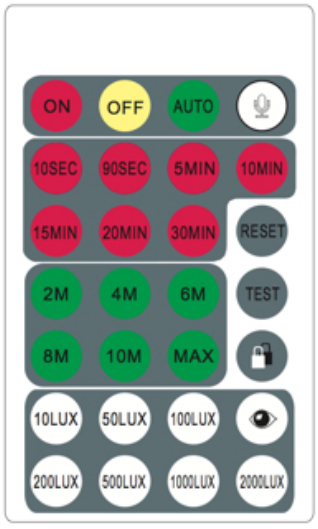
Recycling
Please recycle all packaging material that came with the motion sensor.

Warranty
The sensor has a three (3) year warranty after the date of the original purchase. Please keep your original receipt, as this will be required for any claims under this warranty. The warranty is a strictly carry in policy. (The sensor/s must be returned to Eco Heat offices for a claim to be processed).
The warranty does not cover:

- damage from misuse, including tampering and/or opening
- neglect or abuse,
- products that have been modified in any way,
- shipping and handling cost associated with the product,
- damage resulting from accidents, lightning, fire, water, power surges, natural disasters and/or incorrect installation

For more information, view the Return/Refund Policy at www.ecosensor.co.za.

Optional Remote Control



The sensor LED will flash 3 times to confirm each setting applied

ON	ON=Always on. After about six hours turns to "AUTO" mode.
OFF	OFF=Always off. After about six hours turns to "AUTO" mode.
AUTO	Automatic ON/OFF
TEST	Test mode: Light level will not influence the operation in this mode. Use to test and setup detection range.
RESET	Reset: Resetting of all functions to: Time: 10sec Range: Max Lux: Max
	Microphone ON/OFF (if applicable)
	Automatic reading and saving of the actual light level
	Permanent tamper protection: Lock all settings to avoid tampering. Only On and Off buttons will be functional.
2000 LUX 500 LUX	Lux/Light settings (10 to 2000 Lux). Recommendation: rooms with daylight 500 Lux, without daylight 2000 Lux.
10SEC 30MIN	Time settings (10 secs to 30 mins)
2M 8M	Range settings (2m to Max)

Please note, it is possible that the remote control can interfere with the frequency of different apparatus. This will cause the remote not to operate as intended.

Trouble Shooting

Malfunction	Possible Cause	Remedy
The unit will not switch "on"	a. No mains power b. No movement is detected (in detection zone) c. Wrong LUX/LIGHT level setting d. Electrical circuitry faulty e. Electrical Installation not done correctly f. Unit may be faulty	a. Check mains power is on b. Move towards the unit (in detection zone) or increase the detection range settings c. Adjust setting on the LUX/LIGHT settings d. Refer to the 'Electrical Installation' section to ensure correct installation e. Have a certified electrician disconnect and test the unit f. Contact Eco Heat Equipment
Unit stays "on" permanently	g. Continuous movement in detection zone h. The sensor is not mounted correctly for reliable operation i. Wrong LUX/LIGHT level setting j. Time setting control is set too far k. Unit may be faulty	g. Check detection range setting and reduce detection range sensitivity h. Check detection range setting and mounting procedure i. Adjust setting on the LUX/LIGHT settings j. Adjust the time setting control k. Contact Eco Heat Equipment

Due to minor improvements in design or otherwise, the product you purchase may differ from the one shown in this leaflet. For more information or advice on this or any other Eco Heat Equipment products, visit www.ecosensor.co.za or phone +27 (0)861 999 887.

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