

ES606B High Frequency Ceiling Mount Motion Sensor User Manual



General

The ES606B is a ceiling mount motion sensor using high frequency technology sensing.

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

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
- Working temperature: -15°C to 70°C
- Load: Incandescent max: 1 000W
Fluorescent max: 600W
LED max: 300W
- Detection Range: 2 – 10m radius
- Detection Angle: 360°
- Light level: 10 – 500 LUX
- Time setting: 10 seconds – 30 minutes
- Installation height: 2.5 – 3.5m
- HF system: 5.8GHz CW radar, ISM band
- Transmission power: <0.2mW RF power
- Dimensions: 95mm diameter x 42mm (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: Do not install the motion sensor on unstable or vibrating surfaces, or near doors and windows where outside movement may be detected. Motion may be detected through ceilings, drywall, wood or plastic.

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

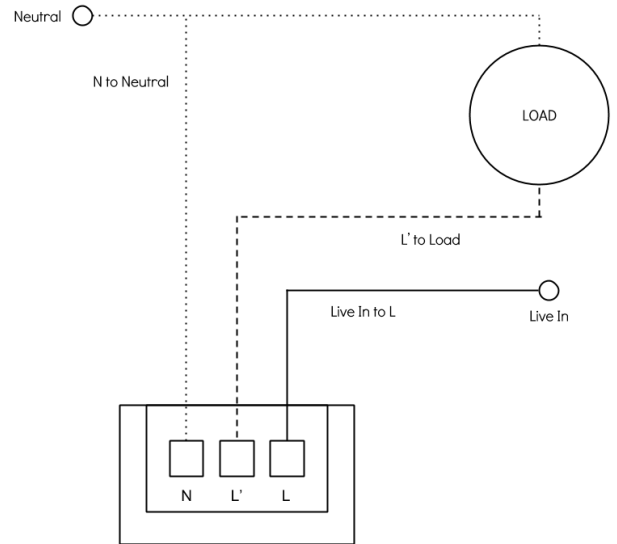
1. Turn power off at circuit breaker or fuse
2. Remove top cover from base of sensor by turning anti-clockwise
3. Hold base against ceiling and mark the two drill holes, paying attention to any existing wiring
4. Drill holes into the surface
5. Feed the power cables through the base hole
6. Attached the unit to the surface
7. Connect wires as per diagram
8. Adjust sensor settings
9. Replace cover, ensuring the LED is visible through the window, and turn clockwise to secure
10. 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.

Note: After the light switches OFF, it takes approximately 4 seconds before it is able to start detecting movement again. The light will only switch on in response to movement once this period has elapsed.

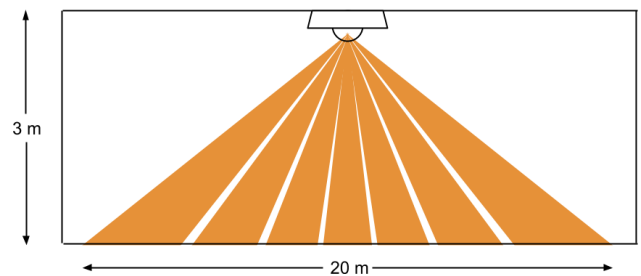
Installation wire diagram



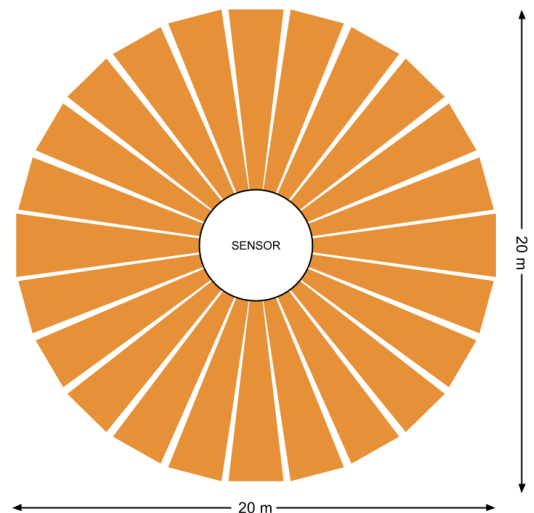
Operation and Field of View

The motion sensor detects motion within its coverage area and controls the associated lighting connected to the sensor. For best performance, persons or objects moving towards the heater are ideal. Detection is possible through wooden doors, panes of glass, dry wall, ceiling tiles, or thin brick walls. Beware of windows facing passages or roads.

Sensor detection range from side: large motion



Sensor detection range from top: large motion



Motion Sensor Settings and Adjustments

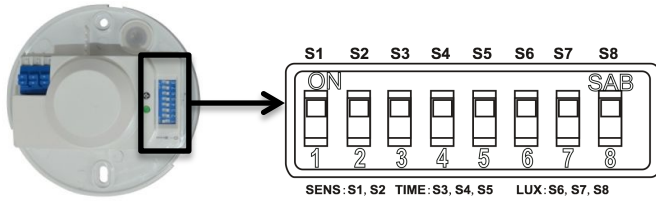
The motion sensor is a high frequency (HF) type electronic occupancy detector, which in turn switches the lights when connected to the motion sensor. There are three adjustments that can be made to influence the operation of the motion sensor:

1. RANGE: motion detection range
2. TIME: time delay after motion until shut off
3. LUX/LIGHT: level of ambient light sensitivity

The four adjustments settings are as follows:

- | | |
|--------------------------|------------------|
| Detection range: | 2m to 10m |
| Time setting range: | 10 sec to 30 min |
| Lux (light) sensitivity: | 10 to 500 LUX |

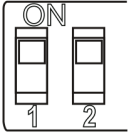
There are 8 settings on the motion sensor that control the range, time and lux.



Step 1 – Adjust the detection range of the motion sensor

The detection range is the term used to describe the radius of the circular detection zone produced on the ground after mounting the unit at a height of about 2.5m.

ON position = "1"
OFF position = "0"



SENS: S1, S2

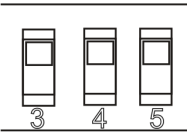
S1	S2	RANGE
0	0	2m
0	1	5m
1	0	8m
1	1	10m

WARNING: If the sensitivity is adjusted too high, the sensor will pick up movement such as curtains blowing in the wind, small animals or movement through windows and thin walls. If the sensor is too sensitive, adjust the detection range lower.

Step 2 – Adjust the time setting of the motion sensor

The time setting will determine the time that needs to lapse before the motion sensor switches off due to lack of movement in the detection area. Any movement detected during the time setting will restart the timer and keep the connected device on.

ON position = "1"
OFF position = "0"



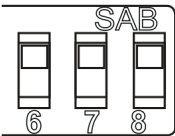
SENS: S3, S4, S5

S3	S4	S5	TIME
0	0	0	10s
0	0	1	1min
0	1	0	5min
0	1	1	10min
1	0	0	15min
1	0	1	20min
1	1	0	25min
1	1	1	30min

Step 3 – Adjust the lux setting of the motion sensor (if applicable)

The lux (light) sensitivity can be used to ensure the unit only operates during minimum lux settings. The lux setting can also be disabled by setting it to the '24hr' position, (S6="0", S7="0", S8="0") meaning the lux (light) level will have no effect on the operation of the unit.

ON position = "1"
OFF position = "0"



LUX: S6, S7, S8

S6	S7	S8	LUX
0	0	0	24H
0	0	1	10LUX
0	1	0	20LUX
0	1	1	50LUX
1	0	0	100LUX
1	0	1	200LUX
1	1	0	300LUX
1	1	1	500LUX

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.

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.

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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