

The EL-2650 is a wireless PIR sensor that is able to distinguish between permitted and non-permitted motion*. This allows the occupants free movement within the premises while detecting intrusion via doors or windows. The sensor implements a feature to combat the problem of multiple transmissions, which drastically reduce the life of the batteries. After a transmission is made, the EL-2650 initiates a delay of approximately four minutes during which transmissions will not be sent.

Location of Detector

Consider the following before mounting the sensor:

- Select a location from which the pattern of the sensor is most likely to be crossed by a burglar, should there be a break in.
- Avoid a location that comes in direct contact with radiators, heating/cooling ducts or air conditioners.
- Do not place bulky objects in front of the sensor.

IMPORTANT: Do not install the sensor above beds, sofas, desks or in any area that people are likely to spend continued periods of time. If the occupant does not move within the delay time, an alarm will be generated when moving away from the protected area.

Installation Instructions

1. To open the housing, remove the cover screw and, using a flathead screwdriver, press the locking tab at the side of the unit.
2. Remove the printed circuit board (PCB) by unscrewing the PCB screw. **Note: Do not touch the face of the PYRO sensor.**
3. Apply battery power by removing the isolator that separates the battery from the contacts on the battery holder.
4. Place the Mode jumper over pins 1 & 2 (Radio mode); the LED flashes. **Note: Install the Mode jumper only after applying battery power.**
5. Set the receiver to Registration mode and wait for the receiver to indicate that the transmitter has been registered successfully. Alternatively, the EL-2650 can be registered to the receiver by manually entering the transmitter's serial number. **Note: The receiver allocates a transmitter number to each registered unit. Write this number and the number of the zone on the sticker provided. Affix the sticker inside the front cover for future reference.**
6. Remove the jumper and place it over one pin for storage - see *Mode Jumper Safeguard*.
7. Knock out the mounting holes and test the transmitter from the exact mounting position before permanently mounting the unit.
8. Attach the base to the wall at the recommended height of 2.2-2.6m. The EL-2650 can be wall or ceiling mounted.
9. Mount the PCB at the required setting using the horizontal adjustment scale and tighten the PCB screw – see *Operation and Adjustment, PCB Adjustment*.
10. Attach the front cover and replace the cover screw.

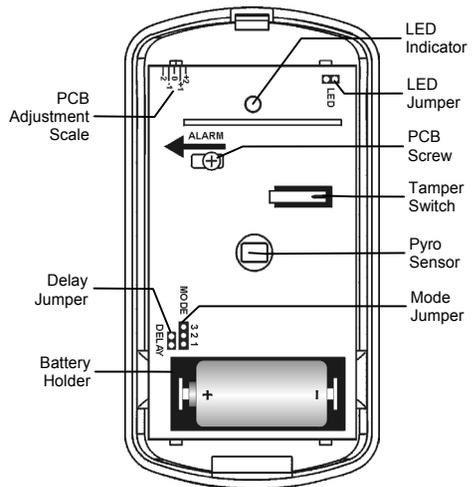


Figure 1: EL-2650 (Cover Off)

Operation and Adjustment

Warm-up Time: After applying power, allow the sensor to warm up for 110 seconds.

Alarm Delay: The Alarm Delay is a feature designed to allow the occupant to move freely within the protected area without triggering a false alarm. When approaching the protected wall, an alarm is not generated because the sensor's beams are crossed from the permitted direction. After detecting permitted motion, the sensor counts down the Alarm Delay time. This timer is re-triggered every time the sensor detects motion. During the Alarm Delay, the sensor permits motion in both directions. The duration of the alarm delay is selected using the Alarm Delay jumper – see *Table 1*.

Delay	Jumper Position
1 minute	Removed
4 minutes	Installed

Table 1

PCB Adjustment: PCB adjustment enables you to angle the infrared beams by changing the position of the pyro element in relation to the lens. To adjust the PCB, loosen the PCB screw and slide the PCB to the required position using the PCB adjustment scale as a guide. Slide the board towards +2 to position the beams closer to the wall. Slide the board towards -2 to position the beams further away from the wall. After adjusting the board, tighten the PCB screw.

For the correct PCB adjustment, you must take into account the distance of the detector from the wall and the distance of the protected door/window from the detector – see Table 2.

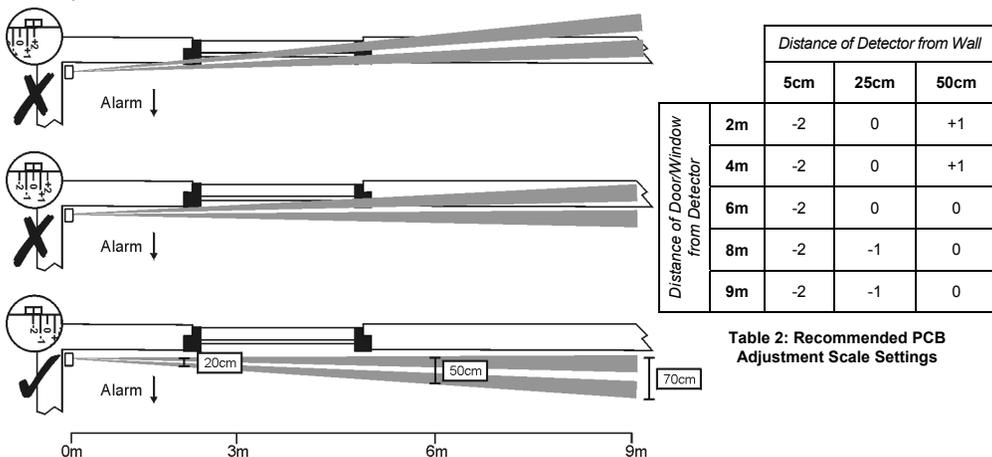


Figure 2: A typical installation where the detector is 5cm from the wall and 2m from the protected window. The top two diagrams show the lens pattern for the detector when incorrectly adjusted to +2 and 0. The bottom diagram shows the PCB correctly adjusted to -2.

Walk Test: A Walk Test enables you to determine the effectiveness of the installation. Before you perform a Walk Test, place the Mode jumper over pins 2 & 3 (Walk Test mode) to cancel the four-minute delay time between detections. To perform a Walk Test, leave the protected area and enter the room; the red LED blinks twice to indicate non-permitted motion. Allow twenty seconds between walk tests. After testing the detector, remove the Mode jumper and place it over one pin for storage - see *Mode Jumper Safeguard*.

LED Disable: To disable the LED, remove the LED jumper located next to the LED indicator.

Note: The LED should only be disabled after successfully walk testing the sensor.

Mode Jumper Safeguard: During normal operation, the Mode jumper should be placed over one pin for storage. When the Mode jumper is placed over two pins, the sensor is either in Radio or Walk Test Mode. As a precaution, these modes are limited to approximately four minutes. After the four minutes have expired, the sensor switches back to normal operation. If this happens, you can reset a mode by removing and replacing the Mode jumper.

Technical Specifications

Antenna: Built-in Internal Whip

Frequency: 433.92MHz, 418MHz or 868.35MHz FM

Power: 3.6V ½ AA Lithium Battery

Caution: Fire, explosion and severe burn hazard!

Do not recharge, disassemble or heat above 100°C.

Current Consumption: 30mA (transmission), 6µA (standby)

Pyroelectric Sensor: Dual Element

Maximum Range: 9m

Operating Temperature: -10° to 60°C

LED indicator: Jumper Selectable

RFI Immunity: 30V/m

Adaptive Temperature Compensation

Fire Protection: ABS Plastic Housing

Dimensions: 90 x 50 x 40mm

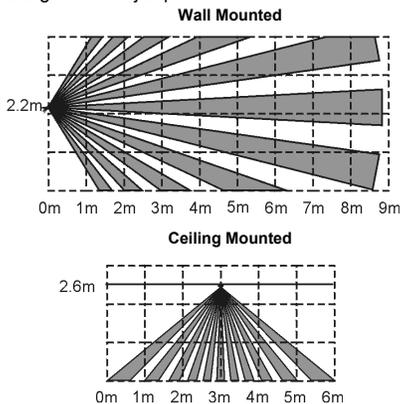


Figure 3: Lens Diagrams (Side View)



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* The directional analysis is an optional feature that can be ordered separately.



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