

Mercury EL-500M

Passive Infrared Detector - Microphone for listen-in applications, Adaptive Temperature Compensation, Range Select, Easy Lock • Détecteur infrarouge passif - Microphone pour les Applications de Levée de Doute Audio, Compensation de Température Adaptive, Sélection de la Distance de Détection, Fermeur • Detector Pasivo de Infrarrojos - Micrófono para Aplicaciones de Escucha Remota, Compensación de Temperatura de con Adaptación Mejorada, Selección de Alcance, Traba de PCB de fácil ajuste "Easy Lock"

English

Location of Detector

Consider the following before mounting the detector:

- Select a location from which the pattern of the detector is most likely to be crossed by a burglar, should there be a break in.
- Select an appropriate height from Table 1.

Lens Type	Recommended Installation Height
Standard	2.2m (6.6')
Long Range	2m (6.5')
Curtain	1m (3.25')

Table 1

- Avoid a location that comes in direct contact with radiators, heating/cooling ducts or air conditioners.
- Do not place the detector in front of windows subject to direct sunlight or drafts.
- Do not place bulky objects in front of the detector.

Installation Instructions

- Open the housing** by removing the front cover. To do so, insert a screwdriver in the release slot (located at the bottom of the detector between the front and back cover). Turn the screwdriver 90° to release the cover.
- Remove the PCB** by turning counter-clockwise and removing the "Easy Lock". **Note: Do not touch the face of the PYRO sensor.**
- Knock out** the required mounting and wiring holes.
- Thread the wires** through the wiring holes (from the outside of the unit) using the appropriate wiring hole knock outs shown in Figure 2.
- Seal the wiring hole** with the foam plug provided.
- Choose an appropriate mounting height** and attach the base to the wall – see Tables 1 and 2.
- Connect the wires** to the terminal block as shown in Figure 1.

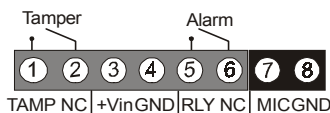


Figure 1: Terminal Block

- Terminals 1 & 2:** Tamper Contacts.
- Terminals 3 (+) & 4 (-):** Voltage Input.
- Terminals 5 & 6:** Alarm Relay Contacts.
- Terminal 7:** Audio Out
- Terminal 8:** GND (separate for microphone)

IMPORTANT: Apply power only after all connections have been made and inspected!

- Mount the PCB at the required vertical adjustment and replace the Easy Lock.

Mounting Height	Vertical Adjustment
2.1m	0
2.3m	-1
2.5m	-3
2.7m	-5

Table 2

- Optional** - If a restricted field of view is desired, mask the appropriate lens segments with the stickers provided.
- Attach the front cover** making sure to close the plastic housing with the screw provided.

Operation and Adjustment

Warm-up Time: The detector needs to warm up for the first 90 seconds after applying power.

Note: The unit is to be connected to a UL listed power supply or control unit capable of providing a minimum of four hours standby power.

Adjusting the detection range: The range select jumper provides the option of either short or long-range detection. For short-range detection (max. 10m), install the range select jumper, JP3. For long-range detection (max. 15m), remove the jumper. Maximum coverage for both detection ranges can be achieved by adjusting the vertical position of the PCB. To do so, turn the "Easy Lock" counter-clockwise and, using the vertical adjustment scale, move the PCB to either 0 (15m) or -4 (10m).

Setting the pulse counter: The pulse counter determines the amount of beams that need to be crossed before an alarm is generated. To set the pulse counter, refer to the following table:

Jumper Position	Pulse Count
Removed	1
Pins 2&3	2
Pins 1&2	3

Table 3

Note: The maximum pulse count for the long range and curtain lenses is 2P. It is not recommended to select 3P for distances above 12m.

Walk testing the detector: A walk test is performed in order to determine the lens coverage pattern of the detector. To do so, walk across the scope of the detector according to the detection pattern selected. Confirm that the LED activates and deactivates accordingly. This test should be performed weekly.

Setting the LED indicator: Insert the LED jumper to enable LED indication or remove the LED jumper to disable LED indication. **Note: The LED should be disabled only after successfully walk testing the detector.**

Adjusting microphone sensitivity: Turn the volume control clockwise to increase sensitivity or counter-clockwise to decrease sensitivity.

Changing Lenses: To change a lens, release the cavity seal using a small screwdriver and fix the new lens into place with the smooth side facing outwards. Verify that the word TOP is located at the top of the lens (alternatively a notch may appear on the bottom edge of the lens) before snapping the cavity seal back into place.

Technical Specifications

Operating Voltage: 9-16VDC

Current Consumption: Standby @ 12V – 10mA
Max. (Alarm) @ 16V – 25mA

Maximum Coverage: 15m x 15m (50' x 50')

Alarm Duration: 1 second min.

Pulse Count: 1, 2 or 3 (jumper selectable)

Pyroelectric Sensor: Dual Element

RFI Immunity: 40V/m up to 1GHz

Alarm Output: N.C., Contact Rating 10W max.

Switching Voltage: 30VDC not to exceed 10W

Switching Current: 0.3A not to exceed 10W

Tamper Switch: N.C.

Contact Rating 30VDC, 50mA max.

Microphone - Sensitivity: -64 ± 3dB.

Frequency Response: 20-16,000Hz.

S/N Ratio: 40dB.

Operating Temperature: -10° to 60°C

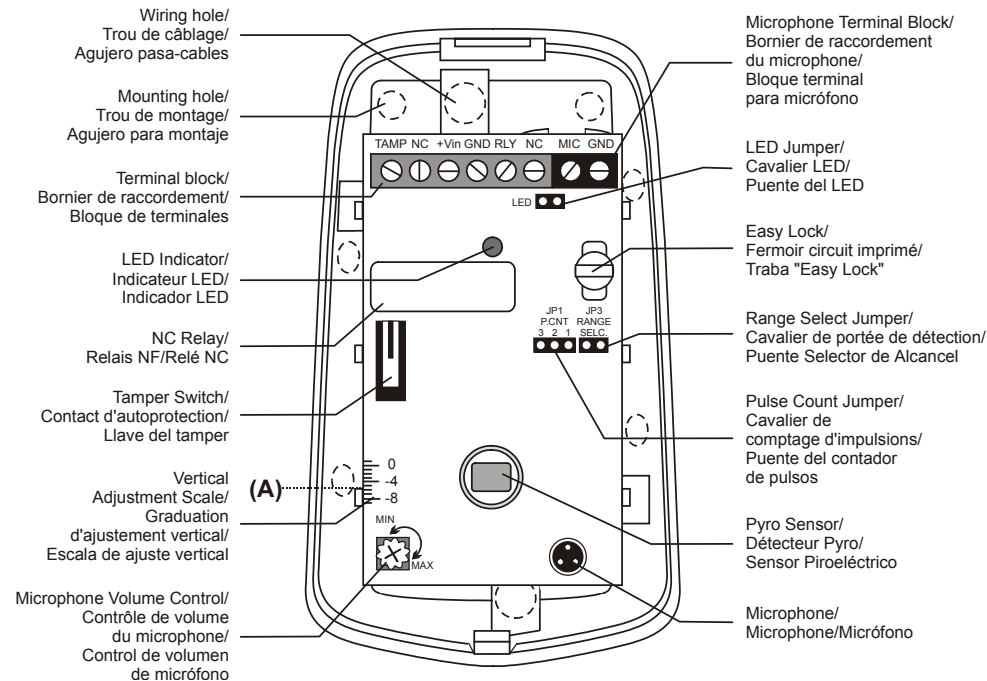
Adaptive Temperature Compensation

Reverse Polarity Protection: Diode

Fire Protection: ABS Plastic Housing

LED Indicator: Jumper Selectable

Dimensions: 110 x 60 x 45mm



Note: The Vertical adjustment scale relates to the top edge of the adjacent plastic stud (A) / Note: La partie supérieure du clou en plastique (A) sert de point de référence pour la graduation d'ajustement verticale / Nota: La escala de ajuste vertical toma como referencia el borde superior del soporte adyacente de plástico (A).

Figure 2: PCB / Figure 2: Circuit Imprimé / Figura 2: PCB

Lens Patterns

The diagram shows the coverage pattern for the detector fitted with a standard lens, with the PCB set at a vertical adjustment of 0 and the range adjustment jumper removed.

Zones de Couverture

Le schéma indique la zone de couverture pour un détecteur équipé d'une lentille standard, avec le circuit imprimé en ajustement vertical à 0 et le cavalier de portée de détection retiré.

Diagramas de Detección

El diagrama muestra la cobertura del detector con lente standard y con la tarjeta PCB en la posición 0 de ajuste.

