

Mercury EL-5020/5120/5220

Passive Infrared Detector - Pet/Animal Immunity, 1 or 2 Pulse Count, White Light Filter/Air Turbulence Shield, Adaptive Temperature Compensation, Easy Lock • Détecteur infrarouge passif - Immunité aux animaux, 1 ou 2 Comptages d'Impulsions, Filtre Contre Lumière Blanche/Protection Contre les Turbulences de l'Air, Compensation de Température Adaptive, Fermeur • Detector Pasivo de Infrarrojos - Alta Inmunidad a Alarmas generadas por mascotas, Conteo de 1 ó 2 pulsos, Filtro de Luz Blanco & Escudo Anti-Turbulencia, Compensación de Temperatura de con Adaptación Mejorada, Traba de PCB de fácil ajuste "Easy Lock"

English

Pet Immunity Guidelines

It is expected that the detector will eliminate false alarms caused by:

- A household pet up to: 23kg/50lbs (EL-5120)
45kg/100lbs (EL-5220)
- Small animals up to 12kg/25lbs (EL-5020)
- Several small rodents
- Random flying birds

Note: The weight of the animal should only be used as a guide. Other factors such as length and color of fur also affect the level of immunity.

For maximum pet immunity the following guidelines are recommended:

- Mount the center of the detector at a height of 2m (6.5ft) and set the vertical adjustment at -4°.
- Set the pulse counter to 2-pulse detection.
- Do not aim the detector at stairways that can be climbed by an animal
- Avoid a location where an animal can come within 1.8m (6ft) of the detector by climbing on furniture, boxes or other objects.

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.

| Installation Height | Vertical Adjustment |
|---------------------|---------------------|
| 2m (6.5ft) | -4° (Pet) |
| 2.1m (7ft) | -5° |
| 2.4m (8ft) | -6° |

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. **Note: Electronics Line recommends using 20-22 AWG connection cable.**
- Seal the wiring hole** with the foam plug provided.
- Choose** an appropriate mounting height from Table 1 and attach the base to the wall.
- Wire the terminal block** as shown in Figure 1. **Note: Wiring methods shall be in accordance with the NFPA 70 standard.**

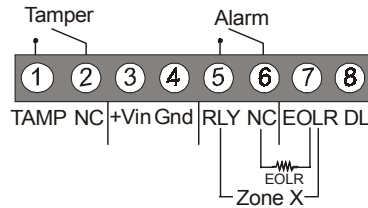


Figure 1: Terminal Block

Terminals 1 & 2: Tamper Contacts.

Terminals 3 (+) & 4 (-): Voltage Input.

Terminals 5 & 6: Alarm Relay Contacts.

Terminal 7: Optional end of line resistor - see Figure 1.

Terminal 8: Disable LED. To remote disable the LED, provide 3.5-12V from the control panel to the DL pin in the terminal block. To enable the LED provide 0-1.5V. **Note: This feature only functions if DIP-switch 2 is in the ON position.**

- Mount the PCB** at the required vertical adjustment and replace the Easy Lock.
- 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 housing screw provided.

Operation and Adjustment

Warm-Up Time: The detector needs to warm up for the first 90 seconds after applying 9 - 16VDC. During the warm-up time the LED indicator flashes (1 pulse/sec).

Setting the pulse counter: The pulse counter controls the amount of beams that need to be crossed before the detector will produce an alarm. To set the pulse counter, refer to Table 2 for the appropriate DIP-switch setting.

Vertical adjustment: The PCB can be positioned at a number of vertical adjustment settings. To do so, turn the 'Easy Lock' counter-clockwise and move the PCB to the required setting using the vertical adjustment scale.

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: To enable/disable the LED indicator refer to Table 2 for the appropriate dip-switch setting. If the LED is disabled by DIP-switch, the LED will still indicate the warm-up period and PIR failure. However, remote LED disable affects all LED operation. **Note: The LED should be disabled only after successfully walk testing the detector.**

DIP-switch configuration: The following table summarizes the options selected using the DIP-switch.

| Switch | ON | OFF |
|--------|---------|---------|
| 1 | 2 Pulse | 1 Pulse |
| 2 | LED On | LED Off |

Table 2

PIR Supervision: The circuit operation of the PIR is checked once per hour. In the event of PIR failure the LED indicator will flash (2 pulse/sec).

Technical Specifications

Operating Voltage: 9 - 16VDC

Current Consumption: Standby @ 12V – 12mA
Max. (Alarm) @ 16V – 17mA

Coverage: 11m x 11m/35ft x 35ft

Pulse Count: 1 or 2 Selectable

Pyroelectric Sensor: Dual Element

Alarm Output: N.C., Contact Rating 10W max.
Switching Voltage: 30VDC not to exceed 10W
Switching Current: 0.3A not to exceed 10W

Alarm Duration: 2 seconds

Tamper Switch: N.C.
Contact Rating 30VDC, 50mA max.

PIR White Light Immunity: 12,000 Lux

ESD Immunity: ±10kV per IEC 801-2

RFI Immunity: 60V/m, 25-1000MHz (PM)

Operating Temperature: -10° to 60°C (14° to 140°F)

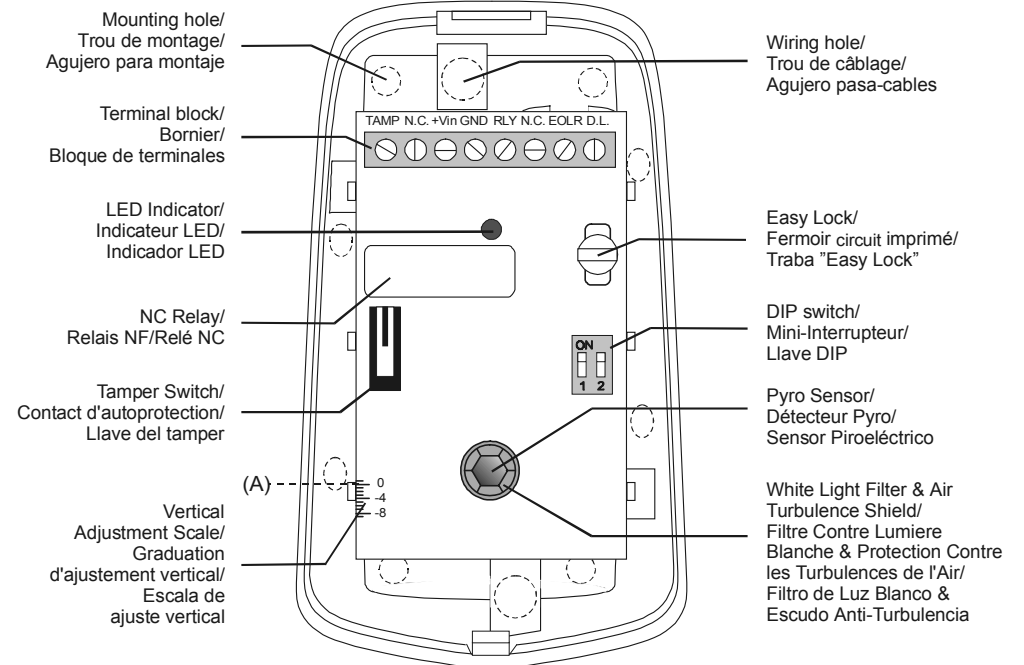
Digital Adaptive Temperature Compensation

Reverse Polarity Protection: Diode

Fire Protection: ABS Plastic Housing

LED Indicator: Selectable

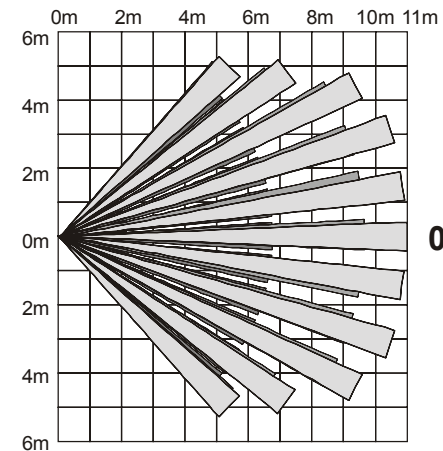
Dimensions: 110 x 60 x 45mm



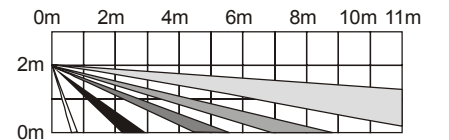
Note: The Vertical adjustment scale relates to the top edge of the adjacent plastic stud (A) / Note: La partie supérieure du clou en plastique (A) sert de point de référence pour la graduation d'ajustement verticale / Nota: La escala de ajuste vertical toma como referencia el borde superior del soporte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

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

Top View/Vue de Dessus/Vista Superior



Side View/Vue de Côte/Vista Lateral



0°

Note: The diagram shows the maximum coverage pattern for the detector set for maximum pet immunity at a vertical adjustment of -4°.

Note: Le schéma indique la portée pour un détecteur réglé pour une immunité maximum aux animaux et un ajustement vertical de -4°.

Nota: El diagrama ilustra acerca de la cobertura máxima del detector en la condición de mayor inmunidad a las mascotas y con el ajuste vertical en -4°.

