



## Description

Doc: Architect/ Engineer Specifications  
Model: LX-402/ LX-802N  
Desc: Outdoor PIR Intrusion Detector

*NOTE: Words/statements within square brackets [ ] may be included when appropriate, or when selection is required.*

The Intrusion Detector[s] shall operate on the Verified Intrusion principle using Passive Infrared (PIR).

### OUTPUT AND ENCLOSURE

[Each] [The] detector shall provide the detection, signal processing, alarm relay, ~~and operating power circuitry~~ in the same enclosure; and shall provide an alarm relay actuation upon the detection of an intruder moving into or through its protection pattern. The enclosure shall be ready for surface and/or corner mounting, and shall be capable of mounting to a compatible Wall or Ceiling Mounting Bracket without modification.

The total weight shall be 5.3 oz. (150g).

[Each] [The] detector shall feature a single piece electronics board whose circuitry is specifically designed for this detector alone, and which has sustained a substantial "Burn-in" test for several days. The board shall be mounted to a housing with the cover being secured with a screw. The case shall include easy wiring knockouts.

### LED OPERATION

The detector[s] shall incorporate a single, Red LED to indicate the operating conditions. Red LED illuminated shall indicate an alarm condition. Red LED not illuminated shall indicate a non-alarm condition. The LED Alarm Indicator shall be optional; it is capable of being disabled

remotely from the control panel, or field disabled using an On/Off pin switch.

### POWER REQUIREMENT

The detector[s] shall be capable of operating from a DC power source rated within the range of 12 volts DC  $\pm$  10%, and shall draw a maximum of 25 milli-amperes (mA) within this voltage range.

### ALARM OPERATION

A condition of alarm shall occur when the PIR alarm conditions are met. The Sensitivity shall be 3°F (1.6°C) at 2ft/sec. (0.6m/sec.). A sensitivity adjustment shall include settings of L(Low), M(Medium), or H(High) for different detection ranges. This shall be adjustable by sliding the PCB and flipping the mirror. The Detectable Speed shall be 1 ~ 3 ft/sec. (0.3 ~ 1m/sec.). The Alarm Period shall be 2.0  $\pm$  1 seconds. The Alarm Output shall be capable of handling 28VDC, 0.2A max, Form C.. The pulse count shall be 20  $\pm$  5 sec. in the "2" position, and it shall be 1 pulse, in the "Test" mode. [Each] [The] detector shall signal the condition of alarm using a Form C Relay with terminal strip connections. [Each] [The] detector shall also contain a tamper switch that shall open when the cover is removed.

To accomplish PIR detection, [each] [the] detector shall contain a sealed Pyro-Electric sensor peaked for the detection of near-infrared energy in the 10-micron region.

## **SENSOR STABILITY**

To guard against false activations caused by RF interference, the detector shall incorporate RFI Protection capability that cancels over 50% of popcorn noise. This noise reduction circuitry shall adjust to background disturbances, in order to help reduce false activations while maintaining catch performance. No alarm shall occur at 20V/m from 100MHz to 1GHz.

The patented multi-focus lens creates zones with high vertical density, providing maximum detection sensibility that shall remain stable even in high temperature conditions. [Each] [The] detector shall be rated to tolerate a temperature change of 3°F/min within the range of [minus 4° Fahrenheit to plus 122° Fahrenheit] [minus 20° Celsius to plus 50° Celsius]. [Each] [The] detector shall also tolerate a humidity rate of 95% max. No false alarm shall occur within these operating conditions.

[Each] [The] detector shall also feature Visible Light Protection capability. The patented Double Conductive Shielding of the Pyro Electric Element shall provide a high protection level that exceeds H4 halogen (car headlight) within 8ft (2.4m) or 50,000lx of reflected sunlight within the detection area. The detector[s] shall also include a photocell adjustment from Day to Night mode, or from approximately 10 to 100,000lx.

To ensure proper circuit operation, the detector[s] shall incorporate a PIR self-test with defaults. When the device is turned on, the warm-up period shall be approx. 60 seconds, during which time the LED blinks.

## **LENS AND DETECTION PATTERN**

[Each] [The] detector shall contain a durable and high grade UV resistant Fresnel

lens that shall focus received infrared energy onto the sensor. The LX-402 sensor shall construct a Wide Angle detection field, in either Normal (Multi-Level) or Pet Alley zone patterns. The LX-802N sensor shall construct a Long Range detection field, in either Normal (Multi-Level) or Pet Alley zone patterns. These alternate detection patterns shall be selectable by internal adjustment of screw and mirror.

This patented multi-focus technology shall create 2 precise detection pattern selections for each device. The LX-402 Wide Range shall consist of a 40ft x 50ft (12m x 15m) 120° range of coverage, in either 40 zones of Normal (Multi-Level) detection, or 18 zones of Pet Alley horizontal fan protection. The LX-802N Long Range shall consist of 80ft x 6ft (24m x 2m) range of coverage, in either 12 zones of Normal (Multi-Level) pattern detection, or 4 zones of Pet-Alley horizontal fan detection.

The LX-402 detector[s] shall also supply area masking strips that can be easily attached to eliminate unwanted detection areas.

The mounting height of the LX-402/ LX-802N detector[s] shall be a maximum of 8.3 ft. (2.5m), when the Multi-Level coverage pattern is selected. The mounting height shall be between a maximum 4 ~ 5 ft. (1.2 ~ 1.5m), when the Pet Alley pattern is selected.

## **MODEL**

The Intrusion Detector shall be model LX-402 [or] [model LX-802N], [with] [optional Multi-Angle Wall Mount Bracket CA-1W], [or] [optional Ceiling Mounting Bracket CA-2C].