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Description

Doc: Architect/ Engineer Specifications
Model: CX-702M
Desc: 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), and shall be Listed by Underwriter's Laboratories, Inc..

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 200g (**7.0oz**).

[Each] [The] detector shall feature a single piece electronics board whose circuitry is specifically designed for this detector alone. 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 standard 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 shall be capable of being field disabled using an

On/Off pin switch, or remotely from the control panel.

POWER REQUIREMENT

The detector[s] shall be capable of operating from a DC power source rated within the range of 9.5 to 16 volts DC, and a maximum draw of 11mA at 12 volts DC.

ALARM OPERATION

A condition of alarm shall occur when the PIR alarm conditions are met. The Detectable Speed shall be 1 ~ 5 ft/sec. (0.3 ~ 1.5m/sec.). The Alarm Period shall be approx. 2.5 seconds. The Alarm Output for the CX-702M shall be capable of handling 28VDC, 0.2A max, N.C.. The pulse count shall be 20 sec., and shall allow for a selection mode of 2 or 4 triggers to initiate an alarm output. [Each] [The] detector shall signal the condition of alarm using a Normally Closed Reed Relay with terminal strip connections. The detector[s] shall also contain a tamper switch that shall open when the cover is removed.

The Alarm Sensitivity shall be 3°F (1.6°C) at 2ft/sec. (0.6m/sec.). The sensitivity compensation circuit shall adjust feature temperature compensation, and shall adjust the detection sensitivity according to the environmental temperatures.

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 the detector[s] shall incorporate both RFI and EMI Protection Capabilities. 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 30V/m within the range of 144 to 1,2GHz. The detector[s] shall also be able to endure 50,000V of electrical interference from lighting or power surges through the signal or power lines.

A Temperature Compensation Circuit shall also increase detection capability under high temperature conditions where the background temperature is similar to that of the human body. The patented multi-focus lens creates zones with high vertical density, providing maximum detection sensibility that shall remain stable even in high, low, or changing temperature conditions. [Each] [The] detector shall be rated to operate within the temperature range of [minus 4° Fahrenheit to plus 122° Fahrenheit] [minus 20° Celsius to plus 50° Celsius]. [Each] [The] detector shall also tolerate an environmental humidity rate of 95% max. No false alarm shall occur within these operating conditions.

[Each] [The] detector shall 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.

Sealed optics shall eliminate the chance of false alarm due to drafts or small insects. The Pyro shall be sealed with the inside of the molding of the housing cover, to prevent these elements from affecting the pyroelectric sensor.

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 shall blink.

LENS AND DETECTION PATTERN

[Each] [The] detector shall contain a front mounted dual-purpose spherical Fresnel lens that shall focus received infrared energy onto the sensor. The spherical design of this lens shall obtain sharp detection, because no bending is required to fit the lens into the curved housing.

A simple rotation of the spherical lens shall switch the device between Wide Angle and Long Range patterns, and shall instantly provide reliable and precisely accurate detection in each pattern. The sensor and module combined shall construct a Wide Angle detection field of up to 70ft x 70ft (21m x 21m), or 85° wide, with 68 zones of detection. The Long Range detection pattern shall provide a coverage field of up to 150 x 8ft (45 x 2.4m), with 22 detection zones. When selecting the Long Range detection pattern, the pulse count selector shall be set to "2".

The mounting height of the detector[s] shall be between 5 ~ 12ft (1.5 ~ 3.6m) High. The angle adjustment shall be 4.5° Vertical by 3 steps. The Dimensions (H x W x D) shall be 5.51" x 3.94" x 2.72" (140mm x 100mm x 69mm).

MODEL

The Intrusion Detector shall be model CX-702M (standard), [or] [model CX-702S ("Form C" Relay Output), [with] [optional Wall Mount Multi Angle Bracket CA-1W], [or] [with optional Ceiling Mount Multi Angle Bracket CA-2C]