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Description

Doc: Architect/ Engineer Specifications
Model: SX-45C/ SX-75C
Desc: Ceiling Mount 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 a Passive Infrared DSP system, 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 mounting to a ceiling without modification.

The total weight of the standard model shall be 7.0 oz. (200g).

[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. A running test on every circuit board ensures that all circuit boards shall have sustained a substantial "Burn-in" test for many hours, prior to use. The case shall include easy wiring knockouts, and a wiring guide with wide wiring space.

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 shall be capable of being 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 6 to 18 volts DC, and shall draw a maximum of 14 milli-amps (mA) within this 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.). The Detectable Speed shall be 1 ~ 6 ft/sec. (0.3 ~ 2.0m/sec.). The Alarm Period shall be 2.0 ± 1 seconds. The Alarm Output shall be capable of handling 28VDC, 0.2A max, N.C.. The pulse count shall be 20 ± 5 sec. with a one second delay 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.

SENSOR STABILITY

To guard against false activations caused by RF interference, the detector shall incorporate RFI Protection capability. The logic built into this noise-reduction circuitry shall allow the sensor chip to cancel 50% of all popcorn noise. No alarm shall occur from a field strength of 25V/m within the range of 100MHz to 1GHz.

Temperature Compensation Circuitry 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 these high 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.

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. 40 seconds, during which time the LED blinks.

LENS AND DETECTION PATTERN

The PIR detection shall use In-Line Quad Signal Processing. The In-Line Quad

Signal Processing provides multi segmented detection zones over the detection area.

[Each] [The] detector shall contain a hard and durable 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. The sensor and module combined of the Wide Angle SX-45C shall provide a coverage field of 45ft. x 45ft. (13.5m x 13.5m), 65° wide, with 80 zones of detection. The Long Range SX-75C shall provide a coverage field of 75ft. x 20ft. (22.5m x 6m) Long Range, with 32 zones of detection. The detection zones of both models shall cover a multi level area.

The detector[s] shall be mounted to a ceiling height within the range of 7 to 18ft. (2.1 to 5.4m).

MODEL

The Intrusion Detector shall be model SX-45C/SX-75C.