

Optex Incorporated



1845 W. 205th St.
Torrance, CA 90501-1510 USA
TEL (310) 533-1500 and (800) 966-7839
FAX (310) 533-5910

Description

Doc: Architect/ Engineer Specifications
Model: EX-35
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 3.2 oz. (90g).

[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 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 9.5 to 14 volts DC, and shall draw a nominal and maximum of 18 milli-amps (mA) at 12 VDC. The V Version (Alarm Memory) shall draw a nominal 18 milli-amps (mA) at 12 VDC, and 25 milli-amps (mA) at maximum.

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 ~ 5 ft/sec. (0.3 ~ 1.5m/sec.). The Alarm Period shall be approx. 2.5 seconds. The Alarm Output shall be N.C., 28VDC, 0.2A max. The pulse count shall be approximately 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. Both model EX-35T and model EX-35V 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. 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.

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. 30 seconds.

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 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 a humidity rate of 95% max. No false alarm shall occur within these operating conditions.

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 sensor and module combined shall construct a selectable Wide Angle or Long Range detection field, in Normal (Multi-Level) or Pet Alley zone patterns. This advanced design provides reliable and precise detection performance, using the same lens surface.

This patented multi-focus technology and selectable sensitivity shall create 4 precise detection pattern selections. The detection range shall be capable of switching between a Wide Angle mode and Long Range mode through a simple rotation of the spherical lens. The detection pattern shall be capable of switching between Normal (Multi-level) and Pet Alley detection modes through a simple sliding of the P.C.B. up or down.

Wide Range shall consist of a 35ft x 35ft (11m x 11m) 85° range of coverage, in either 64 zones of Normal (Multi-Level) detection, or 28 zones of Pet Alley pattern detection. Long Range shall consist of a 55ft x 5.5ft (17m x 1.7m) range of coverage, in either 12 zones of Normal (Multi-Level) pattern detection, or 4 zones of Pet-Alley pattern detection. When selecting the Long Range detection pattern, the "Safety Tab" must be removed, and the pulse count selector shall be set to "2".

The mounting height of the detector[s] shall be between 4 ~ 8ft (1.2 ~ 2.4m) High when Normal (Multi-Level) coverage pattern is selected. The mounting height shall be between 2 ~ 4 ft (0.6~1.2m) High, when the Pet Alley pattern in selected.

MODEL

The Intrusion Detector shall be model EX-35, [or] model EX-35T (Tamper Switch), [with optional Wall Bracket [EA-1W] and Ceiling Mounting Bracket [FA-2C]].