

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: VX-40/ VX-40A
Desc: Multi Stabilized 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 mounting, and shall be capable of mounting to a Wall, Pole, Conduit, or Electrical Box without modification.

The total weight shall be 19.4 oz. (550g).

[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, a wiring guide with wide wiring space, a built-in conduit entry, and an area masking plate. The detector[s] shall also be protected with IP54 Weatherproofing.

[Each] [The] detector shall also be capable of connecting to additional detectors such as PIRs, Active IR Beams or Magnetic Contacts to provide additional features without the use of any special control panel. Self-contained functions can offer not only higher reliability but also the ability to be used in various applications. By wiring

together two sensors, the detection pattern shall be effectively doubled. [Each] [The] detector shall also be equipped to provide Directional Access Control features, which shall be capable of sensing direction, and shall activate only if motion is in a specified direction. A Sequentially Confirmed Alarm Contained selection shall also be included, so that alarm shall be capable of being generated only if two detectors activate sequentially and separately.

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 disabled remotely using a DIP switch.

POWER REQUIREMENT

The detector[s] shall be capable of operating from a DC power source rated within the range of 9.5 to 18 volts DC.

[Each] [The] detector shall contain a selectable N.C. and N.O. Alarm Output.

The N.C. current draw for the VX-40 shall be 25 mA (normal), and 28 mA (maximum) within this voltage range. The N.O. current draw for the VX-40 shall be 10 mA (normal), and 35 mA (maximum) within this voltage range.

The N.C. current draw for the VX-40A shall be 25 mA (normal), and 180 mA (maximum) within this voltage range. The N.O. current draw for the VX-40A shall be

12 mA (normal), and 200 mA (maximum) 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. The user shall perform this adjustment by manually adjusting the lens up or down against the Pyro element.

The Detectable Speed shall be 1 ~ 5 ft/sec. (0.3 ~ 1.5m/sec.). The Alarm Period shall be 2.0 ± 1 seconds. The Alarm Output shall be capable of handling 28VDC, 0.2A max, selectable N.O/N.C.. The pulse count 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 selectable Form A or B Relay with terminal strip connections. [Each] [The] detector shall also contain a tamper switch that shall open when the cover is removed.

The VX-40A model shall also feature a Voice Warning Function. As an optional feature when the system is armed, the Voice Warning Feature (Weatherproof speaker inside sensor) shall deliver one of two types of voice messages to anyone entering the protected area. The warning is designed to deter a would-be intruder from continuing toward the protected area.

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

The PIR detection shall use patent pending "MDP" (Multiple Detection Pattern) Technology for advanced signal processing. MDP Technology shall eliminate the chance of a false alarm caused by moving objects or small animals within the detection area. The VX-40 shall include the first Layered Detection Pattern that provides size-judging logic for the discrimination of objects in the

detection area. The upper zone shall stay parallel to the ground at all times, and the lower zone shall be adjustable from 6.7ft (2.0m) to 40ft (12m). Only when both the upper and lower zones are activated shall the VX-40 generate an alarm.

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 field strength of 30V/m within 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. 30 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-40 sensor shall construct a Wide Angle field of 12m (40ft.) 90° wide, with 14 zones of coverage. The detector[s] shall also contain an area angle adjustment, whereby the detection area shall be adjustable 45 degrees left or right from the center to allow for custom applications of the sensor.

The mounting height of the detector[s] shall be within the range of 0.8 ~ 1.2m (2.7 ~ 4ft).

MODEL

The Intrusion Detector shall be model VX-40 [or] [model VX-40A (Voice Warning Model)], [with] [standard accessories Pole Mount Kit, Screw Kit, Area Masking Plate].