

## **Optex Incorporated**



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

## **Description**

Doc: Architect/ Engineer Specifications  
Model: BX-100 Plus  
Desc: Indoor/Outdoor PIR Intrusion Detector  
with BoundaryGard™

*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 Active Infrared (AIR), 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 have an IP rating of 54, and shall be ready for mounting to an indoor or outdoor wall without modification. The attractive, slender design of this enclosure shall also contain an optional white paintable cover to allow the unit to harmonize with any type of architecture.

The total weight shall be 14.1 oz. (480g).

[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, and shall include 4 self tapping screws and 2 wiring sponges.

### **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 shall also illuminate when the sensor is misaligned, and shall cease illumination when the sensor is re-aligned. This visual alignment indicator, together with the audible alignment indicator, shall facilitate the alignment process.

### **POWER REQUIREMENT**

The detector[s] shall be capable of operating from a DC power source rated within the range of 10.5 volts DC to 28 volts DC, and shall draw a maximum of 75 milli-amps (mA), and a nominal 55 milli-amps (mA) in Stand-by within this voltage range.

### **ALARM OPERATION**

A condition of alarm shall occur when the alarm conditions are met. The Beam Interruption Period shall be 50 msec.. The beam characteristics shall be pulsed infrared from 2 simultaneous beams. The Alarm Period shall be  $2.0 \pm 1$  seconds (Delay). The Alarm Output shall be capable of handling 28VDC, 0.2A max., in 2 relay outputs of N.O. and N.C.. These separate Form A and Form B relays shall enable the simultaneous operation of local alarm, annunciation, and automation functions. [Each] [The] detector shall signal the condition of alarm using a N.C. or N.O. Reed Relay with terminal strip connections. [Each] [The] detector shall also contain an N.C. tamper switch that shall open when the cover is removed. An optional Metal Guard

(MG-1) shall be available to further protect the detector[s] from tampering or vandalism.

[Each] [The] detector shall feature BoundaryGard™ technology to provide more reliable protection and security options. BoundaryGard™ shall protect a building's exterior by detecting intruders, and shall also be capable of providing a deterrent with a sounder before the break-in occurs. The Beeping Period shall be 15 ± 1 seconds (Delay). The Volume of the Audible Alarm Indicator shall be approx. 70dB (at 1 meter distance).

### **SENSOR STABILITY**

[Each] [The] detector shall be rated to tolerate within the range of [minus 30° Fahrenheit to plus 131° Fahrenheit] [minus 35° Celsius to plus 55° 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 feature Visible Light Protection capability. The Light Reduction Filter shall increase the resistance to external light sources. This shall make the detector[s] more reliable, and less likely to be defeated by external light sources.

[Each] [The] detector shall also include a maximum of 99% beam blockage. This shall increase the resistance of [the] [each] detector to environmental disturbances such as fog. With this conditioning, the beam alignment status shall achieve the highest level.

To ensure proper beam alignment, a sounder shall activate and the LED shall come on when the sensor is miss-aligned. The sounder and LED shall shut off when the beam is aligned. The Audible Alignment/Alarm Indicator shall be used as a deterrent to intruders. This option shall be capable of being turned on or off with a switch inside the detector. The adjustment angle shall be ± 92° horizontal. No vertical alignment shall be necessary with this model.

### **LENS AND DETECTION PATTERN**

[Each] [The] detector shall contain a durable and high grade Active Infrared that shall focus received infrared energy onto the sensors. This patented advanced PIR technology shall create a different coverage range for Indoor and Outdoor Use, with 1,000 ft (300m) of Maximum Arrival Distance. The Indoor Coverage Range shall be 200 ft (60m), and the Outdoor Coverage Range shall be 100ft (30m).

### **MODEL**

The Intrusion Detector shall be model BX-100 Plus (Indoor/Outdoor PIR Intrusion Detector with BoundaryGard™) [with] [optional Metal Guard: MG 1], [or] [with] [optional White Decorative Cover: WC-1], [or] [with] [optional Spacer: SP1].