Creating a safe and comfortable world with sensing technology.

In recent years, violent attacks of terrorism and crime, information leakage by internal stakeholders, etc. have become a social problem, and the security measures of facilities are very important themes.

OPTEX proposes to construct an optimum security system for every field by combining our intrusion detectors and access control systems.

We are aiming to provide safe, secure and comfortable living with high precision and reliable sensing technology recognized in the world.
Creating a safe and comfortable world with sensing technology.

Sensing Innovation.

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Application examples

Intrusion detection for solar power plant
Power cables of solar power plants are tend to be stolen by metal thefts and perimeter protections are very effective.

Intrusion detection for power plant / substation
Optex’s detectors are suitable for power plant / substation requiring high security level.

PTZ camera control
Detectors can output detection signals to a control panel and which helps to move control PTZ cameras’ preset position.

Wall protection / Laser scan detectors

Art protection
Form of detection area by laser scan detectors can be easily changed by your PC with dedicated software.

Access control

Anti-tailgating for data center
The access control system which prevents unauthorized persons tailgating at gates and doors makes security level higher at data center.

Access control / Reverse detection

Reverse detection for airport
Pedestrians who walk backward at one-way area in airport can be detected.
CONCEPT FOR LEVEL SURVEILLANCE
[KEY POINT TO ACHIEVE ADVANCED SECURITY]

When a general-purpose mechanical security system is installed, detectors are located inside a building and a monitoring station is notified if an intruder is detected within.

In order to increase the effectiveness of such a security system, Optex recommends not only securing the inside of the building but also adding surveillance to the perimeter area and boundary of the property. Optex has developed a system of enhanced outdoor surveillance that is capable of forestalling unauthorized entry into a building. By integrating outdoor and indoor surveillance, this system creates a defense line incorporating three warning levels targeting the perimeter of the property, the boundary of the building, and the indoor area.

As a result, we can greatly strengthen and improve crime prevention.
SL-200QDM/350QDM/650QDM series is the most advanced long range photoelectric detector. In addition to quad beam and double modulation, our unique technology automatic transmit power control decreases false and missed alarms. LED Indicator and sound assist and upper/lower beam selection button lighten your workload while achieving perfect alignment.

- **SL-200QDM** – detection range 60m
- **SL-350QDM** – detection range 100m
- **SL-650QDM** – detection range 200m

### FEATURES
- High power quad beam
- Double modulation
- A.T.P.C.-Automatic transmit power control
- I.A.S.C.-Integrated alignment status communication
- Upper/lower beam selection button
- Beam power control selector
- LED indicator and sound assist
- Sniper viewfinder with 2X magnification lens
- International protection IP65

### DIMENSIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>Maximum detection range</th>
<th>Maximum arrival distance</th>
<th>Detection method</th>
<th>Selectable beam frequency</th>
<th>Power source</th>
<th>Intermutation period</th>
<th>Optical alignment</th>
<th>Power source (T: Transmit, R: Receiver)</th>
<th>Operating temperature</th>
<th>Operating humidity</th>
<th>Alignment angle</th>
<th>Dimension (H x W x D)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL-200QDM</td>
<td>60m</td>
<td>600m</td>
<td>Quad infrared beam interruption detection</td>
<td>4 channels</td>
<td>Normal</td>
<td>0.5 to 30 VDC</td>
<td>10.5 - 30 VDC</td>
<td>26 mA (T: 11 mA, R: 15 mA) (43 mA)</td>
<td>-35 to +60°C</td>
<td>95% (max.)</td>
<td>±90° Horizontal, ±10° Vertical</td>
<td>448 x 79 x 96 mm</td>
<td>2500 g</td>
</tr>
<tr>
<td>SL-350QDM</td>
<td>100m</td>
<td>1000m</td>
<td>Quad infrared beam interruption detection</td>
<td>4 channels</td>
<td>Normal</td>
<td>0.5 to 30 VDC</td>
<td>10.5 - 30 VDC</td>
<td>30 mA (T: 15 mA, R: 15 mA) (43 mA)</td>
<td>-35 to +60°C</td>
<td>95% (max.)</td>
<td>±90° Horizontal, ±10° Vertical</td>
<td>448 x 79 x 96 mm</td>
<td>2500 g</td>
</tr>
<tr>
<td>SL-650QDM</td>
<td>200m</td>
<td>2000m</td>
<td>Quad infrared beam interruption detection</td>
<td>4 channels</td>
<td>Normal</td>
<td>0.5 to 30 VDC</td>
<td>10.5 - 30 VDC</td>
<td>36 mA (T: 20 mA, R: 20 mA) (43 mA)</td>
<td>-35 to +60°C</td>
<td>95% (max.)</td>
<td>±90° Horizontal, ±10° Vertical</td>
<td>448 x 79 x 96 mm</td>
<td>2500 g</td>
</tr>
</tbody>
</table>

### A.T.P.C.-AUTOMATIC TRANSMIT POWER CONTROL
Automatically controls, adjusts and optimizes the power of the beam and maintains optimal performance. It decreases false and missed alarms caused by fog, frost, cross talk, signal saturation.

### OPTIONS
- **ABC-4**: Anti Bird Cap
- **BC-4**: Back Cover
- **PSC-4**: Pole Side Cover
- **BAU-4**: Beam Alignment Unit
- **HU-3**: Heating Unit
- **CBR-4**: Conduit Bracket

### SPECIFICATIONS
- **Model**: SL-200QDM, SL-350QDM, SL-650QDM
- **Maximum detection range**: 60m, 100m, 200m
- **Maximum arrival distance**: 600m, 1000m, 2000m
- **Detection method**: Quad infrared beam interruption detection
- **Intermutation period**: Variable between 50/100/250/500 ms (4 steps)
- **Power source**:
  - Normal: 10.5 - 30 VDC
  - Form C relay: 30 VDC, 0.2 A (D.Q. and Low battery can be switched.)
- **Current drain (MAX)**:
  - Normal: 15 mA (T), 15 mA (R)
  - Form C relay: 20 mA (T), 23 mA (R)
- **Optical alignment**: ±90° Horizontal, ±10° Vertical
- **Dimensions (H x W x D)**: 448 mm x 79 mm x 96 mm
- **Weight**: 2500 g (Total weight of the transmitter + receiver, excluding accessories)
- **International protection**: IP65

Specifications and design are subject to change without prior notice.
SL-200QDP/350QDP/650QDP series is standard long range photoelectric detector. In addition to basic features such as quad beam / double modulation, sunshine protection technology and beam power control selector decreases false and missed alarms. LED Indicator and sound assist (receiver only) and upper/lower beam selection button lighten your workload while achieving perfect alignment.

• SL-200QDP – detection range 60m
• SL-350QDP – detection range 100m
• SL-650QDP – detection range 200m

**FEATURES**
- High power quad beam
- Double modulation
- Upper/lower beam selection button
- Beam power control selector
- LED indicator and sound assist (receiver only)
- Sniper viewfinder with 2X magnification lens
- International protection IP65

**DIMENSIONS**

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>SL-200QDP</th>
<th>SL-350QDP</th>
<th>SL-650QDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum detection range</td>
<td>60m</td>
<td>100m</td>
<td>200m</td>
</tr>
<tr>
<td>Detector method</td>
<td>Quad infrared beam interruption detection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selectable beam frequency</td>
<td>4 channels</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum arrival distance</td>
<td>600m</td>
<td>1000m</td>
<td>2000m</td>
</tr>
<tr>
<td>Power source</td>
<td>10.5 to 30 VDC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Draw (MAX)</td>
<td>17 mA (T:7.6 mA, R:11 mA)</td>
<td>22 mA (T:11 mA, R:11 mA)</td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td>10.5 to 30 VDC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Optical alignment</td>
<td>21 mA (T:7.7 mA, R:14 mA)</td>
<td>24 mA (T:10 mA, R:14 mA)</td>
<td></td>
</tr>
<tr>
<td>Alarm output</td>
<td>Form C relay, 30 VDC, 0.2 A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alarm current</td>
<td>2 sec (±1) (Nominal)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D.Q. output</td>
<td>Form C relay, 30 VDC, 0.2 A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-35 to +60°C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating humidity</td>
<td>95% (max.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alignment accuracy</td>
<td>±90° Horizontal, ±15° Vertical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions (W x H x D)</td>
<td>448mm x 79mm x 96mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>2400 g (Total weight of the transmitter + receiver, excluding accessories)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.
SL-200QN/350QN/650QN series is basic long range photoelectric detector. It has IP65 structure and quad beam. Sniper viewfinder and beam alignment unit: BAU-4(option) helps you achieve perfect alignment.

• SL-200QN – detection range 60m
• SL-350QN – detection range 100m
• SL-650QN – detection range 200m

### FEATURES

- High power quad beam
- Smart design - slim body
  - vivid interior color
- Sniper viewfinder with 2X magnification lens
- International protection IP65

### DIMENSIONS

![Dimensions Diagram]

### OPTIONS

- ABC-4 : Anti Bird Cap
- BC-4 : Back Cover
- PSC-4 : Pole Side Cover
- BAU-4 : Beam Alignment Unit
- HU-3 : Heating Unit
- CBR-4 : Conduit Bracket

### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>SL-200QN</th>
<th>SL-350QN</th>
<th>SL-650QN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum detection range (m)</td>
<td>60</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>Maximum arrival distance (m)</td>
<td>600</td>
<td>1000</td>
<td>2000</td>
</tr>
<tr>
<td>Detection method</td>
<td>Quad infrared beam interruption detection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interruption time (ms)</td>
<td>Variable between 50/100/250/500 (4 steps)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power source</td>
<td>10.5 to 30 VDC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current draw</td>
<td>38mA (Transmitter 8mA, Receiver 30mA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>39mA (Transmitter 9mA, Receiver 30mA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>40mA (Transmitter 10mA, Receiver 30mA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alarm output</td>
<td>Form C relay, 30 VDC, 0.2 A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alarm period</td>
<td>2sec (±1) (Nominal)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tamper output</td>
<td>NT.C. (contact output)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10V DC, 0.1Aopens when cover removed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>25 to +60°C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating humidity</td>
<td>95% (max)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alignment angle</td>
<td>±90° Horizontal, ±10° Vertical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimension (H x W x D)</td>
<td>448mm x 79mm x 96mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>2400g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>International protection</td>
<td>IP65</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.

Conventional short beam

Smartline series
SL-100TNR/200TNR

SHORT RANGE BATTERY OPERATED PHOTOELECTRIC DETECTOR

- SL-100TNR  – detection range 30m
- SL-200TNR  – detection range 60m

FEATURES
- Universal powered operation
- D size lithium battery x 4pcs
  CR123A lithium battery x 16 pcs (OPTION CRH-5)
- 12-24VDC hardwired operation of the detector.
  (OPTION PCU-5)
- Versatile alarm signal operation
- IR signal technology transmits the low battery status to the receiver.
- Simplified battery replacement
- Easy to access the battery holder and change batteries.

OPTIONS
- BCU-5 : Battery common Unit
- CRH-5 : CR123 Battery Holder
- PCU-5 : Power Convert Unit

DIMENSIONS

Specifications and design are subject to change without prior notice.

Using batteries other than those recommended may shorten the battery life.

<table>
<thead>
<tr>
<th>Model</th>
<th>SL-100TNR</th>
<th>SL-200TNR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum detection range</td>
<td>30 m</td>
<td>60 m</td>
</tr>
<tr>
<td>Maximum arrival distance</td>
<td>263 m</td>
<td>530 m</td>
</tr>
<tr>
<td>Detection method</td>
<td>Twin infrared beam interruption detection</td>
<td></td>
</tr>
<tr>
<td>Power source</td>
<td>3.6 to 3.9 VDC D size lithium batteries</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Each Transmitter and Receiver: 2 units</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(CR123A manufactured by VITZROCELL)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Each Transmitter and Receiver: 8 units</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(OPTION CRH-5: 2units)</td>
<td></td>
</tr>
<tr>
<td>Power source</td>
<td>3.6 VDC CR123A lithium batteries</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Each Transmitter and Receiver: 2 units</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(OPTION CRH-5: 2units)</td>
<td></td>
</tr>
<tr>
<td>Current draw at 25°C</td>
<td>Total: Approx. 500 µA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transmitter: Approx. 200 µA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Receiver: Approx. 300 µA</td>
<td></td>
</tr>
<tr>
<td>Battery life*</td>
<td>Total: Approx. 600 µA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transmitter: Approx. 300 µA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Receiver: Approx. 300 µA</td>
<td></td>
</tr>
<tr>
<td>Battery life*</td>
<td>Approx. 5 years</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transmitter: Approx. 5 years</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Receiver: Approx. 1 year</td>
<td></td>
</tr>
<tr>
<td>Indicator LED</td>
<td>Alarm/Level indicator (Transmitter)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Blinking: Beam not received</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OFF: Beam received sufficiently</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Blinking: Voltage reduction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OFF: Power OFF</td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-20°C to +60°C</td>
<td></td>
</tr>
<tr>
<td>Operating humidity</td>
<td>95 % (max.)</td>
<td></td>
</tr>
<tr>
<td>Alignment angle</td>
<td>±90° Horizontal, ±5° Vertical</td>
<td></td>
</tr>
<tr>
<td>Dimension</td>
<td>H x W x D mm: 295 x 69 x 117</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>1200 g (Total weight of Transmitter + Receiver, excluding accessories)</td>
<td></td>
</tr>
<tr>
<td>International protection</td>
<td>IP65</td>
<td></td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.

* The value is based on the condition that it is used within the ambient temperature range of 20 to 25°C.

** Using batteries other than those recommended may shorten the battery life.
Optex offers a less expensive and more efficient solution with SL-350QFR/SL-350QNR. Typical perimeter systems require expensive trenching or much time for installation. Expensive wire conduit runs and concrete works are unnecessary, allowing installers to save time and money.

- SL-350QFR – 4ch. beam frequencies selectable model
- SL-350QNR – standard model

**FEATURES**
- Long distance 100m
- Long battery life 4 to 8 years
- Wireless ready
- Sniper viewfinder with 2X magnification lens
- International protection IP65
- Spacious back box

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>SL-350QFR</th>
<th>SL-350QNR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum detection range</td>
<td>100m</td>
<td>100m</td>
</tr>
<tr>
<td>Maximum arrival distance</td>
<td>1000m</td>
<td>1000m</td>
</tr>
<tr>
<td>Detection method</td>
<td>Quad infrared beam interruption detection</td>
<td>Quad infrared beam interruption detection</td>
</tr>
<tr>
<td>Selectable beam frequency</td>
<td>4 channels</td>
<td>4 channels</td>
</tr>
<tr>
<td>Interruption period</td>
<td>Variable between 50/100/250/500 ms (4 steps)</td>
<td>Variable between 50/100/250/500 ms (4 steps)</td>
</tr>
<tr>
<td>Power source</td>
<td>LSH20 lithium batteries manufactured by SAFT</td>
<td>LSH20 lithium batteries manufactured by SAFT</td>
</tr>
<tr>
<td>Current draw</td>
<td>480mA Transmitter, 420mA Receiver, 325mA (at 25°C, 3.6 VDC)</td>
<td>480mA Transmitter, 420mA Receiver, 325mA (at 25°C, 3.6 VDC)</td>
</tr>
<tr>
<td>Battery life</td>
<td>Transmitter: Approx. 8 years, Receiver: Approx. 10 years</td>
<td>Transmitter: Approx. 4 years, Receiver: Approx. 5 years</td>
</tr>
<tr>
<td>Alarm output</td>
<td>Form C Solid State Switch: 3.6 VDC, 0.01 A</td>
<td>Form C Solid State Switch: 3.6 VDC, 0.01 A</td>
</tr>
<tr>
<td>Alarm period</td>
<td>2 sec (±1) (Nominal)</td>
<td>2 sec (±1) (Nominal)</td>
</tr>
<tr>
<td>DQ output</td>
<td>Form C Solid State Switch: 3.6 VDC, 0.01 A (Receiver only)</td>
<td>Form C Solid State Switch: 3.6 VDC, 0.01 A (Receiver only)</td>
</tr>
<tr>
<td>Low battery output</td>
<td>N.C. (solid state switch): 3.6 VDC, 0.01 A</td>
<td>N.C. (solid state switch): 3.6 VDC, 0.01 A</td>
</tr>
<tr>
<td>Tamper output</td>
<td>N.C. (mechanical switch): 3.6 VDC, 0.01 A opens when cover, main unit or back box is removed.</td>
<td>N.C. (mechanical switch): 3.6 VDC, 0.01 A opens when cover, main unit or back box is removed.</td>
</tr>
<tr>
<td>Indicator</td>
<td>Alarm: ON, Light receiving: OFF, Power OFF, Flickering or OFF</td>
<td>Alarm: ON, Light receiving: OFF, Power OFF, Flickering or OFF</td>
</tr>
<tr>
<td>Low voltage</td>
<td>Voltage reduction: Flickering</td>
<td>Voltage reduction: Flickering</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-20°C to +60°C</td>
<td>-20°C to +60°C</td>
</tr>
<tr>
<td>Environmental humidity</td>
<td>95% (Max.)</td>
<td>95% (Max.)</td>
</tr>
<tr>
<td>Alignment angle</td>
<td>±90° Horizontal, ±10° Vertical</td>
<td>±90° Horizontal, ±10° Vertical</td>
</tr>
<tr>
<td>Dimensions</td>
<td>452mm x 83mm x 138mm</td>
<td>452mm x 83mm x 138mm</td>
</tr>
<tr>
<td>Weight</td>
<td>3300 g (Total weight of Transmitter + Receiver, excluding accessories)</td>
<td>3300 g (Total weight of Transmitter + Receiver, excluding accessories)</td>
</tr>
<tr>
<td>International protection</td>
<td>IP65</td>
<td>IP65</td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.
* The value is based on the condition that it is used within the ambient temperature range of 20 to 25°C (0.85-0.92 x actual value).
** Using batteries other than those recommended may shorten the battery life. Batteries and wireless transmitters are not included in these products.
BATTERY OPERATED PHOTOELECTRIC DETECTOR

- BCU-5 : Battery Common Unit
- EC-4
- BAU-4
- PSC-4
- BC-4
- Back Cover
- ABC-4

The AX-100/200TFR series are "REVOLUTION" in the perimeter security industry, offering significant cost saving alternatives to traditional hardwired system.

- AX-100TFR – detection range 30m
- AX-200TFR – detection range 60m

Easy battery replacement

**FEATURES**

- Long battery life AX-100TFR: approx. 5 years
- AX-200TFR: approx. 3 years(transmitter) approx. 5 years(receiver)

**OPTIONS**

- MP-4 : Main unit mounting bracket set (for tower mounting)
- BCU-5 : Battery Common Unit

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th></th>
<th>AX-100TFR</th>
<th>AX-200TFR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>AX-100TFR</td>
<td>AX-200TFR</td>
</tr>
<tr>
<td>Detection method</td>
<td>Infrared beam interruption detection</td>
<td></td>
</tr>
<tr>
<td>Selectable beam frequency</td>
<td>4 channels</td>
<td></td>
</tr>
<tr>
<td>Power source</td>
<td>3.6V 13.0Ah : LSH20 lithium batteries manufactured by SAFT (not included)</td>
<td></td>
</tr>
<tr>
<td>Battery life</td>
<td>Battery : 2 or 4 units Receiver : 2 or 4 units</td>
<td></td>
</tr>
<tr>
<td>Alarm output</td>
<td>Form C : Solid State Switch : 3.6 VDC, 0.01A</td>
<td></td>
</tr>
<tr>
<td>Alarm period</td>
<td>2 sec (±1) nominal</td>
<td></td>
</tr>
<tr>
<td>D.O. output</td>
<td>Form A/B : Solid State Switch : 3.6 VDC, 0.01A</td>
<td></td>
</tr>
<tr>
<td>Low battery output</td>
<td>Form A/B : Solid State Switch : 3.6 VDC, 0.01A (Transmitter &amp; Receiver)</td>
<td></td>
</tr>
<tr>
<td>Tamper output</td>
<td>Form C : 3.6 VDC, 0.01 A activates when cover removed. (Receiver only)</td>
<td></td>
</tr>
<tr>
<td>for Front cover</td>
<td>Form C : 3.6 VDC, 0.01 A activates when either back box or chassis is removed from the installation.</td>
<td></td>
</tr>
<tr>
<td>Tamper output</td>
<td>Form C : 3.6 VDC, 0.01 A</td>
<td></td>
</tr>
<tr>
<td>for Back box</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indicator</td>
<td>Alarm (Transmitter)</td>
<td></td>
</tr>
<tr>
<td>Power</td>
<td>Power ON : ON, Power OFF : OFF</td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-40 to +60°C</td>
<td></td>
</tr>
<tr>
<td>Environmental humidity</td>
<td>95%RH(max)</td>
<td></td>
</tr>
<tr>
<td>Mounting</td>
<td>Indoor/Outdoor, Wall/Pole/Tower Mounting (Optional main unit mounting brackets are required, when the units mount in the tower.)</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>1600 g (Total weight of transmitter + receiver, excluding accessories)</td>
<td></td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.
Batteries and wireless transmitters are not included in these products.
The AX-100/200TF series of short range photoelectric detectors are compact in design with selectable beam frequencies.

Also the AX-100TF/200TF series carries the IP65 high durable structure which prevents water, dust or bugs from getting into the unit.

- AX-100TF – detection range 30m
- AX-200TF – detection range 60m

### FEATURES

- Selectable 4 channels beam frequency
- 4 step alarm indicator LED
- Environmental disqualification circuit
- International protection IP65
- Lightning and surge protection
- Anti-frost hood cover
- 99% beam blocking stability
- A.G.C. (Automatic Gain Control) circuit
- Adjustable beam interruption time

### OPTIONS

- HU-3 : Heating Unit
  24V DC/AC, 420mA max.
- BC-3 : Back Cover
- PSC-3 : Pole Side Cover
  Cover for installing 2 units to 1 pole

### RANGES

- AX-100TF – detection range 30m
- AX-200TF – detection range 60m

### SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th>AX-100TF</th>
<th>AX-200TF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>AX-100TF</td>
<td>AX-200TF</td>
</tr>
<tr>
<td>Maximum detection range</td>
<td>30m</td>
<td>60m</td>
</tr>
<tr>
<td>Maximum arrival distance</td>
<td>300m</td>
<td>600m</td>
</tr>
<tr>
<td>Selectable beam frequency</td>
<td>4 channels</td>
<td></td>
</tr>
<tr>
<td>Interruption period</td>
<td>Selectable between 50, 100, 250, and 500 max.</td>
<td></td>
</tr>
<tr>
<td>Power supply</td>
<td>16.5 to 28 VDC</td>
<td></td>
</tr>
<tr>
<td>Current consumption (transmitter + receiver)</td>
<td>44mA (max.)</td>
<td>48mA (max.)</td>
</tr>
<tr>
<td>Alarm period</td>
<td>2 sec. (±1) nominal</td>
<td></td>
</tr>
<tr>
<td>Alarm output</td>
<td>N.C., N.O. 28 VDC 0.3A max.</td>
<td></td>
</tr>
<tr>
<td>Tamper switch</td>
<td>N.C. opens when cover is removed at 28 VDC 0.1A max.</td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-35 to +60°C</td>
<td></td>
</tr>
<tr>
<td>Environmental humidity</td>
<td>93% max.</td>
<td></td>
</tr>
<tr>
<td>Alignment angle</td>
<td>±70° Horizontal, ±45° Vertical</td>
<td></td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall and pole mounting</td>
<td></td>
</tr>
<tr>
<td>Weight (transmitter+receiver)</td>
<td>790 g</td>
<td></td>
</tr>
<tr>
<td>Dimensions (H x W x D)</td>
<td>170 mm x 65 mm x 69.5 mm</td>
<td></td>
</tr>
<tr>
<td>International protection</td>
<td>IP65</td>
<td></td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.
AX-70TN/130TN/200TN

SHORT RANGE PHOTOELECTRIC DETECTOR

The AX-70/130/200TN series of short range photoelectric detectors are compact in design with IP65 high durable structure.

- AX-70TN – detection range 20m
- AX-130TN – detection range 40m
- AX-200TN – detection range 60m

**FEATURES**

- International protection IP65
- Lightning and surge protection
- Anti-frost hood cover
- 99% beam blocking stability
- A.G.C. (Automatic Gain Control) circuit
- Adjustable interruption time

**RANGES**

<table>
<thead>
<tr>
<th>Model</th>
<th>AX-70TN</th>
<th>AX-130TN</th>
<th>AX-200TN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum detection range</td>
<td>20m</td>
<td>40m</td>
<td>60m</td>
</tr>
<tr>
<td>Maximum arrival distance</td>
<td>200m</td>
<td>400m</td>
<td>600m</td>
</tr>
<tr>
<td>Power supply</td>
<td>10.5 to 28 VDC</td>
<td>10.5 to 28 VDC</td>
<td>10.5 to 28 VDC</td>
</tr>
<tr>
<td>Current consumption (transmitter + receiver)</td>
<td>38mA (max.)</td>
<td>41mA (max.)</td>
<td>45mA (max.)</td>
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<tr>
<td>Alarm period</td>
<td>2 sec. (±1) nominal</td>
<td>2 sec. (±1) nominal</td>
<td>2 sec. (±1) nominal</td>
</tr>
<tr>
<td>Tamper switch</td>
<td>N.C. opens when cover is removed at 28 VDC, 0.1A max.</td>
<td>N.C. opens when cover is removed at 28 VDC, 0.1A max.</td>
<td>N.C. opens when cover is removed at 28 VDC, 0.1A max.</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-35 to +60°C</td>
<td>Use the optional heating unit (HU-3) under the environment of -25°C or less minus.</td>
<td></td>
</tr>
<tr>
<td>Environmental humidity</td>
<td>95% max.</td>
<td>95% max.</td>
<td>95% max.</td>
</tr>
<tr>
<td>Alignment angle</td>
<td>±90° Horizontal, ±5° Vertical</td>
<td>±90° Horizontal, ±5° Vertical</td>
<td>±90° Horizontal, ±5° Vertical</td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall and pole mounting</td>
<td>Wall and pole mounting</td>
<td>Wall and pole mounting</td>
</tr>
<tr>
<td>Weight (transmitter + receiver)</td>
<td>550g</td>
<td>550g</td>
<td>550g</td>
</tr>
<tr>
<td>Dimensions</td>
<td>170 mm x 65 mm x 69.5 mm</td>
<td>170 mm x 65 mm x 69.5 mm</td>
<td>170 mm x 65 mm x 69.5 mm</td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.
OPTIONS

ABC-4

Anti Bird Cap
for
• SL-200QDM/350QDM/650QDM
• SL-200QDP/350QDP/650QDP
• SL-200QN/350QN/650QN
• SL-350QFR/SL-350QNR

BC-3

Back Cover
for
• AX-100TF/200TF
• AX-70TN/130TN/200TN

BC-4

Back cover
for
• SL-200QDM/350QDM/650QDM
• SL-200QDP/350QDP/650QDP
• SL-200QN/350QN/650QN
• SL-350QFR/350QNR

PSC-3

Pole Side Cover
for
• SL-200QDM/350QDM/650QDM
• SL-200QDP/350QDP/650QDP
• SL-200QN/350QN/650QN
• SL-350QFR/350QNR

PSC-4

Pole Side Cover
for
• SL-200QDM/350QDM/650QDM
• SL-200QDP/350QDP/650QDP
• SL-200QN/350QN/650QN
• SL-350QFR/350QNR

CBR-4

Conduit Bracket
for
• SL-200QDM/350QDM/650QDM
• SL-200QDP/350QDP/650QDP
• SL-200QN/350QN/650QN
**HU-3**

Heating Unit for
- SL-200QDM/350QDM/650QDM
- SL-200QDP/350QDP/650QDP
- SL-200QN/350QN/650QN
- AX-100TF/200TF
- AX-70TN/130TN/200TN
*2 sets (4 units) are used for SL series.

**MP-4**

Main Unit Mounting Bracket Set (for Tower Mounting) for
- AX-100TFR/200TFR

**BCU-5**

Share power source and low battery signals between the main unit and the wireless transmitter.
- SL-100TNR/200TNR
- AX-100TFR/200TFR
- SL-350QFR/350QNR

**CRH-5**

Battery holder when using CR123A as a power source.
- CR123A: Transmitter x 8pcs, Receiver x 8pcs
- Battery life: Approx. 1 year
- Only for SL-100TNR/200TNR

**PCU-5**

Voltage converter unit used to enable wired operation of the detector.

**BAU-4**

(Sales end when all the stock is sold out)

**EC-4**

Extension Cable with Connector for
- SL-350QFR/SL-350QNR

**Controller**
Dimensions (HxWxD): 180mm x 120mm x 45mm

**Beam Alignment Unit** for
- SL-200QDM/350QDM/650QDM
- SL-200QDP/350QDP/650QDP
- SL-200QN/350QN/650QN
- SL-350QFR/350QNR

Aligns optical axis automatically.
(SL-QDP/QN/QFR/QNR: applicable to receiver only)
## PRODUCT SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (H x W x D mm)</td>
<td>448 x 79 x 96</td>
<td>448 x 79 x 96</td>
<td>448 x 79 x 96</td>
<td>448 x 79 x 96</td>
<td>448 x 79 x 96</td>
<td>448 x 79 x 96</td>
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<tr>
<td>Detection method</td>
<td>P06</td>
<td>P06</td>
<td>P06</td>
<td>P07</td>
<td>P07</td>
<td>P07</td>
</tr>
<tr>
<td>Infrared beam interruption detection</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Maximum detection range</td>
<td>60m</td>
<td>100m</td>
<td>200m</td>
<td>60m</td>
<td>100m</td>
<td>200m</td>
</tr>
<tr>
<td>Maximum arrival range</td>
<td>600m</td>
<td>1000m</td>
<td>2000m</td>
<td>600m</td>
<td>1000m</td>
<td>2000m</td>
</tr>
<tr>
<td>Number of beams</td>
<td>Quad</td>
<td>Quad</td>
<td>Quad</td>
<td>Quad</td>
<td>Quad</td>
<td>Quad</td>
</tr>
<tr>
<td>Beam characteristics</td>
<td>Pulsed infrared</td>
<td>Pulsed infrared</td>
<td>Pulsed infrared</td>
<td>Pulsed infrared</td>
<td>Pulsed infrared</td>
<td>Pulsed infrared</td>
</tr>
<tr>
<td>Double Modulation</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Beam blocking ratio</td>
<td>99%</td>
<td>99%</td>
<td>99%</td>
<td>99%</td>
<td>99%</td>
<td>99%</td>
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<tr>
<td>4 Qt. selectable beam frequency</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>INTERRUPTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interruption period</td>
<td>50,100,250,500msec.</td>
<td>50,100,250,500msec.</td>
<td>50,100,250,500msec.</td>
<td>50,100,250,500msec.</td>
<td>50,100,250,500msec.</td>
<td>50,100,250,500msec.</td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall / Pole/Tower</td>
<td>Wall / Pole/Tower</td>
<td>Wall / Pole/Tower</td>
<td>Wall / Pole/Tower</td>
<td>Wall / Pole/Tower</td>
<td>Wall / Pole/Tower</td>
</tr>
<tr>
<td>Alignment angle</td>
<td>+/- 90˚ Horizontal</td>
<td>+/- 90˚ Horizontal</td>
<td>+/- 90˚ Horizontal</td>
<td>+/- 90˚ Horizontal</td>
<td>+/- 90˚ Horizontal</td>
<td>+/- 90˚ Horizontal</td>
</tr>
<tr>
<td>LED Indicator</td>
<td>✓ 16 steps &amp; Sound assist</td>
<td>✓ 16 steps &amp; Sound assist</td>
<td>✓ 16 steps &amp; Sound assist</td>
<td>✓ 16 steps &amp; Sound assist</td>
<td>✓ 16 steps &amp; Sound assist</td>
<td>✓ 16 steps &amp; Sound assist</td>
</tr>
<tr>
<td>Monitor jack for alignment</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Beam alignment method</td>
<td>Sniper viewfinder™</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIGHTNING PROTECTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental disqualification output</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Integrated alignment status communication (I.A.S.C.)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Power supply</td>
<td>Normal: 10.5 - 30 VDC</td>
<td>Normal: 10.5 - 30 VDC</td>
<td>Normal: 10.5 - 30 VDC</td>
<td>10.5 - 30 VDC</td>
<td>10.5 - 30 VDC</td>
<td>10.5 - 30 VDC</td>
</tr>
<tr>
<td>Current consumption</td>
<td>40 mA max.</td>
<td>40 mA max.</td>
<td>43mA max.</td>
<td>24 mA max.</td>
<td>24 mA max.</td>
<td>33 mA max.</td>
</tr>
<tr>
<td>Alarm output</td>
<td>FormC</td>
<td>FormC</td>
<td>FormC</td>
<td>FormC</td>
<td>FormC</td>
<td>FormC</td>
</tr>
<tr>
<td>Tamper</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Alarm memory</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Anti-frost design</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Optional heating unit</td>
<td>HU-3</td>
<td>HU-3</td>
<td>HU-3</td>
<td>HU-3</td>
<td>HU-3</td>
<td>HU-3</td>
</tr>
<tr>
<td>International protection</td>
<td>IP65</td>
<td>IP65</td>
<td>IP65</td>
<td>IP65</td>
<td>IP65</td>
<td>IP65</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-35 to +60˚C</td>
<td>-35 to +60˚C</td>
<td>-35 to +60˚C</td>
<td>-35 to +60˚C</td>
<td>-35 to +60˚C</td>
<td>-35 to +60˚C</td>
</tr>
<tr>
<td>Operating humidity</td>
<td>95% max</td>
<td>95% max</td>
<td>95% max</td>
<td>95% max</td>
<td>95% max</td>
<td>95% max</td>
</tr>
</tbody>
</table>

---

**SL-200QDM**
- Detection: Infrared beam interruption detection
- Maximum detection range: 60m
- Beam characteristics: Pulsed infrared
- Double Modulation: ✓
- Beam blocking ratio: 99%
- INTERRUPTION:
  - Interruption period: 50,100,250,500msec.
  - Mounting: Wall / Pole/Tower
  - Alignment angle: +/- 90˚ Horizontal
  - LED Indicator: ✓ 16 steps & Sound assist
  - Monitor jack for alignment: ✓
- LIGHTNING PROTECTION:
  - Environmental disqualification output: ✓
  - Power supply: Normal: 10.5 - 30 VDC
  - Current consumption: 40 mA max.
  - Alarm output: FormC
- Tamper: ✓
- Alarm memory: ✓
- Anti-frost design: ✓
- Optional heating unit: HU-3
- International protection: IP65
- Operating temperature: -35 to +60˚C
- Operating humidity: 95% max
- Dimensions (H x W x D mm): 448 x 79 x 96
## PRODUCT SPECIFICATIONS

### SL-200QN/350QN/650QN

<table>
<thead>
<tr>
<th></th>
<th>SL-100TNR/200TNR</th>
<th>SL-350QFR/QNR</th>
<th>AX-100TFR/200TFR</th>
<th>AX-100TF/AX-200TF</th>
<th>AX-70TN/130TN/200TN</th>
<th>BX-100PLUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>P08</td>
<td>P09</td>
<td>P10</td>
<td>P11</td>
<td>P12</td>
<td>P13</td>
<td>P39</td>
</tr>
</tbody>
</table>

### Infrared beam interruption detection

<table>
<thead>
<tr>
<th>Distance</th>
<th>SL-200QDM</th>
<th>SL-350QDM</th>
<th>AX-100TF</th>
<th>AX-70TN</th>
<th>BX-100PLUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>60m/100m/200m</td>
<td>30m/60m</td>
<td>100m</td>
<td>30m/60m</td>
<td>20m/40m/60m</td>
<td>20m/40m/60m</td>
</tr>
<tr>
<td>600m/1000m/2000m</td>
<td>256m/330m</td>
<td>1000m</td>
<td>265m/330m</td>
<td>200m/400m/600m</td>
<td>200m/400m/600m</td>
</tr>
</tbody>
</table>

### Optional heating unit

| Quad | Twin | Quad | Twin | Twin | Twin |

### Alarm output

<table>
<thead>
<tr>
<th>FormC</th>
<th>FormC-solid state switch</th>
<th>FormC</th>
<th>FormC</th>
<th>N.C.</th>
<th>N.C.</th>
<th>2 outs N.O./N.C.</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>N.C.-solid state switch (receiver)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>—</td>
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<td>—</td>
<td>✓</td>
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<tr>
<td>✓</td>
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<td>—</td>
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### Environmental

<table>
<thead>
<tr>
<th>SNIPER viewfinder™</th>
<th>View finder</th>
<th>View finder</th>
<th>View finder</th>
<th>Audible indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>✓ over 14kV</td>
</tr>
<tr>
<td>—</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓ over 14kV</td>
</tr>
<tr>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>✓ over 6kV</td>
</tr>
</tbody>
</table>

### Mounting

<table>
<thead>
<tr>
<th>AX-70TN</th>
<th>AX-200TF</th>
<th>AX-100TFR</th>
<th>AX-100TF</th>
<th>AX-100TFR</th>
<th>AX-100TF</th>
<th>AX-100TFR</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.5 - 30 VDC</td>
<td>3.6V 13.0Ah LSH20 Lithium batteries</td>
<td>3.6V 13.0Ah LSH20 Lithium batteries</td>
<td>10.5 - 28 VDC</td>
<td>10 - 28 VDC</td>
<td>10.5 - 28 VDC</td>
<td></td>
</tr>
<tr>
<td>38mA max</td>
<td>39mA max</td>
<td>40mA max</td>
<td>745mA max</td>
<td>620mA max/810mA max</td>
<td>44mA max, 48mA max</td>
<td>35mA max</td>
</tr>
</tbody>
</table>

### FormC

<table>
<thead>
<tr>
<th>FormC-solid state switch</th>
<th>FormC</th>
<th>FormC</th>
<th>N.C.</th>
<th>N.C.</th>
<th>2 outs N.O./N.C.</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>N.C.-solid state switch (receiver)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>✓</td>
<td>—</td>
</tr>
<tr>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
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<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
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</tr>
</tbody>
</table>

### View Finder

<table>
<thead>
<tr>
<th>HU-3</th>
<th>HU-3</th>
<th>HU-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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</tbody>
</table>

### IP65

<table>
<thead>
<tr>
<th>BX-100PLUS</th>
<th>HU-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP65</td>
<td>HU-3</td>
</tr>
</tbody>
</table>

### Operating temperature

<table>
<thead>
<tr>
<th>-25 to +60°C</th>
<th>-20 to +60°C</th>
<th>-20 to +60°C</th>
<th>-35 to +65°C</th>
<th>-35 to +65°C</th>
<th>-35 to +55°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>95% max</td>
<td>95% max</td>
<td>95% max</td>
<td>95% max</td>
<td>95% max</td>
<td>95% max</td>
</tr>
</tbody>
</table>

### Dimensions

<table>
<thead>
<tr>
<th>AX-70TN</th>
<th>AX-200TF</th>
<th>AX-100TFR</th>
<th>AX-100TF</th>
<th>AX-100TFR</th>
<th>AX-100TF</th>
<th>AX-100TFR</th>
</tr>
</thead>
<tbody>
<tr>
<td>448 x 79 x 96</td>
<td>295 x 69 x 117</td>
<td>452 x 83 x 138</td>
<td>217 x 88.1 x 162.5</td>
<td>170 x 65 x 69.5</td>
<td>170 x 65 x 69.5</td>
<td>230.5 x 51.5 x 61</td>
</tr>
</tbody>
</table>

### Design and manufacturing

&mdash; AX-100TFR/200TFR &mdash; AX-100TF/AX-200TF &mdash; AX-70TN/130TN/200TN &mdash; BX-100PLUS &mdash; HU-3 &mdash; HU-3 &mdash; P06 &mdash; P10 &mdash; P12 &mdash; P13 &mdash; P39
Part of the Shield family, the WXS series is OPTEX’s latest 180° outdoor intrusion detection sensors with flexible range detection and settings, as well as a selectable low (0.8 - 1.2m) or high mount (2m) option and self-learning IR digital anti-masking.

- WXS-AM – active IR anti-masking model
- WXS-DAM – dual technology model with active IR anti-masking

### FEATURES
- Selectable mounting height
- 4PIR + 2MW technology (WXS-DAM only)
- Stability against light disturbance (WXS-DAM only)
- Individual detection area size (WXS-DAM only)
- Panoramic triple layer detection (WXS-DAM only)
- Individual sensitivity setting
- Individual alarm outputs
- Self-learning IR digital anti-masking function
- Blue Touch
- Day /night mode
- Area masking shutter
- Area masking plate
- SM sıra (Super Multidimensional Analysis) logic
- Cover / Back tamper

### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>WXS-AM</th>
<th>WXS-DAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Passive infrared</td>
<td>Passive infrared &amp; Microwave</td>
</tr>
<tr>
<td>PIR coverage</td>
<td>High mount : 9.0 m (30') 180°wide</td>
<td>Low mount : 12.0 m (40') 180°wide</td>
</tr>
<tr>
<td>PIR distance limit</td>
<td>High mount : 9.0 m (fixed)</td>
<td>Low mount : 2.5 to 12.0 m (Stepless adjustment)</td>
</tr>
<tr>
<td>Detectable speed</td>
<td>0.3 to 2.0 m/s (1&quot; to 0.7&quot;)</td>
<td></td>
</tr>
<tr>
<td>Sensitivity</td>
<td>2.0 °C (3.6°F) at 0.6 m/s Selectable for each side individually</td>
<td></td>
</tr>
<tr>
<td>Power input</td>
<td>9.5 - 19 VDC</td>
<td></td>
</tr>
<tr>
<td>Current draw</td>
<td>23 mA max. at 12 VDC</td>
<td>24 mA max. at 12 VDC</td>
</tr>
<tr>
<td>Alarm period</td>
<td>2.0 ±1 sec.</td>
<td></td>
</tr>
<tr>
<td>Warm-up period</td>
<td>Approx. 60 sec. (LED blinks)</td>
<td></td>
</tr>
<tr>
<td>Alarm output</td>
<td>28 VDC 0.1 A max.</td>
<td></td>
</tr>
<tr>
<td>Tamper output</td>
<td>N.C. 28 VDC 0.1 A max.</td>
<td></td>
</tr>
<tr>
<td>Tamper output</td>
<td>Open when either the cover, main or base unit is removed</td>
<td></td>
</tr>
<tr>
<td>LED indicator</td>
<td>1. Warm-up 2. Alarm 3. Masking detection 4. “High mount” setting (When the tamper switch is actuated, LED blinks if it is “High mount” setting.)</td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>30°C to +60°C (86°F to +140°F)</td>
<td></td>
</tr>
<tr>
<td>Environment humidity</td>
<td>95% max.</td>
<td></td>
</tr>
<tr>
<td>International protection</td>
<td>IP53</td>
<td></td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall, Pole (Outdoor, Indoor)</td>
<td></td>
</tr>
<tr>
<td>Mounting height</td>
<td>High mount : 2.0 m (6') Fixed</td>
<td>Low mount : 0.8 to 1.2 m (2’ to 4’ )</td>
</tr>
<tr>
<td>Weight</td>
<td>585 g (20.7 oz)</td>
<td>625 g (22.1 oz)</td>
</tr>
</tbody>
</table>

Specifications and designs are subject to change without prior notice.

### OPTIONS
- FEU-B/C/D/E/F/G/H/I/J/K : Selectable plug-in end of line unit
- PMP-01 : Pole mount plate
- BH-01 : Battery holder
- WXE-BB : Back box
- MKP-01 : Area masking plate
The WX Shield "R" models are battery operated products. Sharing the same design and performance with WXS-AM/DAM, "R" models have the most up-to-date outdoor protection capabilities.

- WXS-RAM – battery operated model
- WXS-RDAM – battery operated dual technology model with active IR anti-masking

**FEATURES**

- Selectable mounting height
- 4PIR + 2MW technology (WXS-RDAM only)
- Stability against light disturbance (WXS-RDAM only)
- Individual detection area size (WXS-RDAM only)
- Panoramic triple layer detection (WXS-RDAM only)
- Individual sensitivity setting
- Individual alarm outputs
- Self-learning IR digital anti-masking function
- Blue Touch
- Day /night mode
- Area masking shutter
- Area masking plate
- SMDA (Super Multidimensional Analysis) logic
- Cover / Back tamper

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>WXS-RAM</th>
<th>WXS-RDAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Passive infrared</td>
<td>Passive infrared &amp; Microwave</td>
</tr>
<tr>
<td>PIR coverage</td>
<td>High mount - 9.0 m (30') 180°wide</td>
<td>High mount - 9.0 m (fixed)</td>
</tr>
<tr>
<td>Low mount - 12.0 m (40') 180°wide</td>
<td>Low mount - 2.5 to 12.6 m (Stepless adjustment)</td>
<td></td>
</tr>
<tr>
<td>PIR distance limit</td>
<td>3 to 2.0 m/s (1&quot; to 7.9&quot;)</td>
<td></td>
</tr>
<tr>
<td>Detectable speed</td>
<td>3 to 2.0 m/s (1&quot; to 7.9&quot;)</td>
<td></td>
</tr>
<tr>
<td>Sensitivity</td>
<td>2.0 °C (3.6°F) at 0.6 m/s. Selectable for each side individually</td>
<td></td>
</tr>
<tr>
<td>Power input</td>
<td>3 to 5 VDC, Lithium Batteries</td>
<td></td>
</tr>
<tr>
<td>Current draw</td>
<td>19 μA stand by 4 mA max. at 3 VDC</td>
<td></td>
</tr>
<tr>
<td>Alarm period</td>
<td>2.0 ±1 sec.</td>
<td></td>
</tr>
<tr>
<td>Warm-up period</td>
<td>Approx. 40 sec. (LED blinks)</td>
<td></td>
</tr>
<tr>
<td>Alarm output</td>
<td>Solid State switch, 10 VDC 0.01 A max.</td>
<td></td>
</tr>
<tr>
<td>(Individual - Right or General, N.O. or N.C. are selectable)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Alarm output (Left)</td>
<td>Solid State switch, 10 VDC 0.01 A max.</td>
<td></td>
</tr>
<tr>
<td>(Individual - Left or General, N.O. or N.C. are selectable)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trouble output</td>
<td>Solid State switch, 10 VDC 0.01 A max.</td>
<td></td>
</tr>
<tr>
<td>(N.O. or N.C.) are selectable (with tamper)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tamper output</td>
<td>Tamper output is shared with trouble output.</td>
<td></td>
</tr>
<tr>
<td>(When the tamper switch is activated, LED blinks if it is “High mount” setting.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red</td>
<td>Yellow</td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>30 °C to +60 °C (-22°F to +140°F)</td>
<td></td>
</tr>
<tr>
<td>(1. Warm-up 2. MW detection)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environment humidity</td>
<td>20 °C to +45 °C (40°F to +113°F)</td>
<td></td>
</tr>
<tr>
<td>International protection</td>
<td>IP55</td>
<td></td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall, Pole (Outdoor, Indoor)</td>
<td></td>
</tr>
<tr>
<td>Mounting height</td>
<td>Wall mount - 2.0 m (8&quot;)</td>
<td></td>
</tr>
<tr>
<td>Light mount - 9.0 m (30') 180°wide</td>
<td>Low mount - 8.0 to 12.6 m (3' to 4')</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>730 g (25.8 oz.)</td>
<td></td>
</tr>
<tr>
<td>(When the tamper switch is activated, LED blinks if it is “High mount” setting.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(7) Lock screw x 1</td>
<td>770 g (27.2 oz.)</td>
<td></td>
</tr>
<tr>
<td>Accessories</td>
<td>1. Connector for POWER and ALARM (B)</td>
<td></td>
</tr>
<tr>
<td>(2) Connector for ALARM (L)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) Connector for TROUBLE (4) Velcro tape</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5) Area masking plate x 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(6) Mounting screw (4 x 20 mm) x 2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Specifications and designs are subject to change without prior notice.

**OPTIONS**

- PMP-01 : Pole mount plate
- BH-01 : Battery holder
- WXX-BB : Back box
- MXK-01 : Area masking plate
WXI-ST/AM

180 DEGREE PANORAMIC OUTDOOR DETECTOR

With its comprehensive 180° field of view and capabilities to tailor its setting to meet the environment around your premise, the WX Infinity series will provide an effective solution for new and existing security systems.

- WXI-ST – standard model
- WXI-AM – active IR anti-masking model

FEATURES
- Individual alarm outputs
- Individual sensitivity setting
- Individual detection area size
- Area masking shutter
- Area masking plate
- Self-learning IR digital anti-masking function
- SMDA (Super Multidimensional Analysis) logic
- Double conductive shielding
- Intelligent AND detection logic
- Active IR digital anti-masking (WXI-AM)
- Cover / Back tamper

COVERAGE

TOP VIEW

SIDE VIEW

DIMENSIONS

SPECIFICATIONS

Model | WXI-ST | WXI-AM
---|---|---
Detection method | Passive infrared | Passive infrared
PIR coverage | 180° wide | 180° wide
PIR distance limit | 2.5 to 12 m (Stepless adjustment) | 2.5 to 12 m (Stepless adjustment)
Detectable speed | 0.3 to 2.0 m/s (11’ to 6’7”) | 0.3 to 2.0 m/s (11’ to 6’7”)
Sensitivity | 2.0°C (3.6°F) at 0.6 m/s. Selectable for each side individually | 2.0°C (3.6°F) at 0.6 m/s. Selectable for each side individually
Power input | 9.5 to 18 VDC | 9.5 to 18 VDC
Current draw | 21 mA max. at 12 VDC | 23 mA max. at 12 VDC
Alarm period | 2.0 ±1 sec. | 2.0 ±1 sec.
Warm-up period | 60 sec or less (LED blinks) | 60 sec or less (LED blinks)
Alarm output | 28 VDC 0.1 A max. | 28 VDC 0.1 A max.
Trouble output | N.C. 28 VDC 0.1 A max. | N.C. 28 VDC 0.1 A max.
Tamper output | Open when either the cover, main or base unit is removed | Open when either the cover, main or base unit is removed
LED indicator | Red LED ; 1. Warm-up | Red LED ; 1. Warm-up
Operating temperature | -30°C to +60°C (-22°F to +140°F) | -30°C to +60°C (-22°F to +140°F)
Environment humidity | 95% max. | 95% max.
International protection | IP55 | IP55
Mounting | Wall, Pole (Outdoor, Indoor) | Wall, Pole (Outdoor, Indoor)
Mounting height | 0.8 to 1.2 m (2’7” to 4’1”) | 0.8 to 1.2 m (2’7” to 4’1”)
Weight | 440 g | 440 g
Accessories | Mounting screw (4 x 20 mm) x 2, lock screw x 1 | Mounting screw (4 x 20 mm) x 2, lock screw x 1

Specifications and designs are subject to change without prior notice.

OPTIONS

- PEU-B/C/D/E/F/G/H/I/J/K : Selectable plug-in end of line unit
- PMP-01 : Pole mount plate
- MKP-01 : Area masking plate
- WXI-BB : Back box
The WX Infinity "R" models are battery operated products. Sharing the same design and performance with WXI-ST/AM, "R" models have the most up-to-date outdoor protection capabilities.

- WXI-R – battery operated model
- WXI-RAM – with active IR anti-masking

**FEATURES**
- Long battery life
- Individual alarm outputs
- Individual sensitivity setting
- Individual detection area size
- Area masking shutter
- Area masking plate
- Self-learning IR digital anti-masking function
- SMDA (Super Multidimensional Analysis) logic
- Double conductive shielding
- Intelligent AND detection logic
- Active IR digital anti-masking (WXI-RAM)
- Cover / Back tamper

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Feature</th>
<th>WXI-R</th>
<th>WXI-RAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Passive infrared</td>
<td></td>
</tr>
<tr>
<td>PIR coverage</td>
<td>180° wide</td>
<td></td>
</tr>
<tr>
<td>PIR distance limit</td>
<td>2.5 to 12 m (Stepless adjustment)</td>
<td></td>
</tr>
<tr>
<td>Detectable speed</td>
<td>0.3 to 2.0 m/s (1' to 6'7&quot;)</td>
<td></td>
</tr>
<tr>
<td>Sensitivity</td>
<td>2.0 °C (3.6°F) at 0.6 m/s</td>
<td></td>
</tr>
<tr>
<td>Power input</td>
<td>3 to 3.6 V DC lithium batteries</td>
<td></td>
</tr>
<tr>
<td>Current draw</td>
<td>15 μA stand by 4 mA max. at 3 V DC except walk test</td>
<td>16 μA stand by 4 mA max. at 3 V DC except walk test</td>
</tr>
<tr>
<td>Alarm period</td>
<td>2.0 ±1 sec.</td>
<td></td>
</tr>
<tr>
<td>Warm-up period</td>
<td>60 sec. or less (LED blinks)</td>
<td></td>
</tr>
<tr>
<td>Alarm output</td>
<td>Solidstate switch, 10 V DC 0.01 A max. (Individual/Right/Left or General, N.O. or N.C.) are selectable</td>
<td>Solidstate switch, 10 V DC 0.01 A max. (N.O. or N.C. is selectable)</td>
</tr>
<tr>
<td>Trouble output</td>
<td>Solidstate switch, 10 V DC 0.01 A max.</td>
<td>Solidstate switch, 10 V DC 0.01 A max.</td>
</tr>
<tr>
<td>Tamper output</td>
<td>Tamper output is shared with trouble output.</td>
<td></td>
</tr>
<tr>
<td>LED indicator</td>
<td>Red LED; 1. Warm-up</td>
<td>Red LED; 1. Warm-up</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-30 °C to +60 °C (-22°F to +140°F) except batteries</td>
<td></td>
</tr>
<tr>
<td>Environment humidity</td>
<td>95% max.</td>
<td></td>
</tr>
<tr>
<td>International protection</td>
<td>IP55</td>
<td></td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall, Pole (Outdoor, Indoor)</td>
<td></td>
</tr>
<tr>
<td>Mounting height</td>
<td>0.8 to 1.2 m (2'7&quot; to 4')</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>440 g</td>
<td></td>
</tr>
<tr>
<td>Accessories</td>
<td>Connector for POWER and ALARM (R), Connector for ALARM (L), Connector for TROUBLE, Velcro tape, Mounting screw (4 x 20 mm) x 2, Lock screw x 1</td>
<td></td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.
The VX Shield is a series of outdoor sensors providing 12 m by 90 degree detection coverage. Anti-masking and dual technology models are available in a lineup.

- VX-AM – active IR anti-masking model
- VX-DAM – dual technology model with active IR anti-masking

**FEATURES**

- Active IR anti-masking
- SMDA (Super Multidimensional Analysis) logic
- Easy masking for over spill prevention
- Double conductive shielding
- Back tamper
- Automatic walk test mode

**COVERAGE**

**TOP VIEW** (Area diagram for D position)

**SIDE VIEW** (Detection Distance by Positions)

**OPTIONS**

- PEU-B/C/D/E/F/G/H/I/J/K : Selectable plug-in end of line unit
- VXS face cover (White / Silver / Black)
- VXS option cover unit (Black / white)

**COLOR**

- Black cover / Black body
- White cover / White body
- Silver cover / Black body

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>VXS-AM</th>
<th>VXS-DAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Passive infrared</td>
<td>Passive infrared &amp; Microwave</td>
</tr>
<tr>
<td>PIR coverage</td>
<td>12 m (40 ft) 90° wide / 16 zones</td>
<td></td>
</tr>
<tr>
<td>PIR distance limit</td>
<td>2.5 to 12 m (5 levels)</td>
<td></td>
</tr>
<tr>
<td>Detectable speed</td>
<td>0.3 to 2.0 m/s (1.0 to 5.0 ft./s)</td>
<td></td>
</tr>
<tr>
<td>Sensitivity</td>
<td>2.0°C (3.6°F) at 0.6 m/s</td>
<td></td>
</tr>
<tr>
<td>Power input</td>
<td>9.5 to 18 V DC</td>
<td></td>
</tr>
<tr>
<td>Current draw</td>
<td>24 mA max. at 12 VDC</td>
<td></td>
</tr>
<tr>
<td>Alarm period</td>
<td>2.0 ± 0.1 sec.</td>
<td></td>
</tr>
<tr>
<td>Warm-up period</td>
<td>Approx. 60 sec. (LED blinks)</td>
<td></td>
</tr>
<tr>
<td>Alarm output</td>
<td>N.C./N.O. Selectable 28 VDC 0.1 A max.</td>
<td></td>
</tr>
<tr>
<td>Trouble output</td>
<td>N.C. 28 VDC 0.1 A max.</td>
<td></td>
</tr>
<tr>
<td>Tamper output</td>
<td>N.C. 28 VDC 0.1 A max. open when cover removed</td>
<td></td>
</tr>
<tr>
<td>LED indicator</td>
<td>Red LED ; 1. Warm-up 2. Alarm 3. Masking detection (DIP switch ON or Walk test)</td>
<td></td>
</tr>
<tr>
<td>Yellow LED ; 1. Warm-up 2. MW detection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-20°C to +60°C (-4°F to +140°F)</td>
<td></td>
</tr>
<tr>
<td>Environment humidity</td>
<td>95 % max.</td>
<td></td>
</tr>
<tr>
<td>International protection</td>
<td>IP55</td>
<td></td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall, Pole (Outdoor/Indoor)</td>
<td></td>
</tr>
<tr>
<td>Mounting height</td>
<td>0.8 to 1.2 m (2.7 to 4.0 ft.)</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>400 g (14.1 oz.) 490 g (17.3 oz.)</td>
<td></td>
</tr>
<tr>
<td>Accessories</td>
<td>Screw (4 x 20 mm) x 2, Wiring sponge x 3, Masking seal x 3</td>
<td></td>
</tr>
</tbody>
</table>

Specifications and designs are subject to change without prior notice.
The VX Shield “R” models are battery operated products. Sharing the same design and performance with VXs-AM/DAM, “R” models have the most up-to-date outdoor protection capabilities.

- VXs-RAM – battery operated model with active IR anti-masking
- VXs-RDAM – battery operated dual technology model with active IR anti-masking

**FEATURES**
- Long battery life
- Active IR anti-masking
- SMDA (Super Multidimensional Analysis) logic
- Easy masking for over spill prevention
- Double conductive shielding
- Back tamper
- Automatic walk test mode

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>VXS-RAM</th>
<th>VXS-RDAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Passive Infrared</td>
<td>Passive Infrared &amp; Microwave</td>
</tr>
<tr>
<td>PIR coverage</td>
<td>12 m (40 ft) 90° wide / 16 zones</td>
<td></td>
</tr>
<tr>
<td>PIR distance limit</td>
<td>2.5 to 12 m (8 ft to 40 ft)</td>
<td></td>
</tr>
<tr>
<td>Detectable speed</td>
<td>0.3 to 2.0 m / s (1 to 6.5 ft / s)</td>
<td></td>
</tr>
<tr>
<td>Sensitivity</td>
<td>2.0 °C, 1.6 °F at 0.6 m / s</td>
<td></td>
</tr>
<tr>
<td>Power input</td>
<td>3.0 V DC lithium or alkaline battery</td>
<td></td>
</tr>
<tr>
<td>Current draw</td>
<td>4 mA max. at 3 V DC</td>
<td>18 μA standby / 8 mA max. at 3 V DC</td>
</tr>
<tr>
<td>LED indicator</td>
<td>Red LED ; 1. Warm-up, 2. Alarm, 3. Masking detection (DIP switch ON or Walk test)</td>
<td>Red LED ; 1. Warm-up, 2. Alarm, 3. Masking detection (DIP switch ON or Walk test)</td>
</tr>
<tr>
<td>Warm-up period</td>
<td>2.0 ± 0.1 sec.</td>
<td></td>
</tr>
<tr>
<td>Alarm outputs</td>
<td>N.C. / N.O. Selectable-Solid State Switch 10 V DC 0.01 A max.</td>
<td>N.C. / N.O. Selectable-Solid State Switch 10 V DC 0.01 A max.</td>
</tr>
<tr>
<td>LED indicator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-20°C to +45°C (-4°F to +113°F)</td>
<td>-20°C to +40°C (-4°F to +104°F)</td>
</tr>
<tr>
<td>Environment humidity</td>
<td>95 % max.</td>
<td>90 % max.</td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall, Pole (Outdoor, Indoor)</td>
<td>Wall, Pole (Outdoor, Indoor)</td>
</tr>
<tr>
<td>Mounting height</td>
<td>0.8 to 1.2 m (2.7 to 4.0 ft)</td>
<td>0.8 to 1.2 m (2.7 to 4.0 ft)</td>
</tr>
<tr>
<td>Weight</td>
<td>550 g (19.4 oz.)</td>
<td>560 g (20 oz.)</td>
</tr>
</tbody>
</table>

Specifications and designs are subject to change without prior notice.
The VX Infinity series provide reliable intrusion detection in severe outdoor environment. Built with a top industry detection algorithm, its performance always remain optimal despite changes of day/night and seasonal environment. Newly added features and mechanism made VX Infinity more versatile and invulnerable in outdoor security system. Anti-masking and dual technology models are available in a lineup.

- VXI-ST – standard model
- VXI-AM – active IR anti-masking model
- VXI-DAM – dual technology model with active IR anti-masking
  - VXI-DAM-X5 : 10.525 GHz
  - VXI-DAM-X8 : 10.587 GHz

**Features**
- 12 m by 90 degree flexible detection pattern adjustable to 5 ranges
- SMDA (Super Multidimensional Analysis) logic
- Easy masking for over spill prevention
- Double conductive shielding
- Conduit/TX-battery case
- Active IR digital anti-masking (VXI-AM, VXI-DAM)
- Tough mod™ dual technology based on OPTEX gold-plated microwave module (VXI-DAM)

**Specifications**

<table>
<thead>
<tr>
<th>Model</th>
<th>VXI-ST</th>
<th>VXI-AM</th>
<th>VXI DAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Passive Infrared</td>
<td>Passive Infrared</td>
<td>Passive Infrared &amp; Microwave</td>
</tr>
<tr>
<td>PIR coverage</td>
<td>12.0 m 90° wide / 16 zones</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PIR distance limit</td>
<td>1.2 to 2.5 m (5 levels)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Detectable speed</td>
<td>0.3 to 1.5 m/s</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensitivity</td>
<td>2.0°C (3.6°F) at 0.6 m/s</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power input</td>
<td>9.5 to 19 VDC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current draw</td>
<td>20 mA (max) at 12 VDC</td>
<td>24 mA (max) at 12 VDC</td>
<td>35 mA (max) at 12 VDC</td>
</tr>
<tr>
<td>Alarm period</td>
<td>2.0 ±1 sec.</td>
<td>Approx. 60 sec. (LED blinks)</td>
<td>Approx. 60 sec. (LED blinks)</td>
</tr>
<tr>
<td>Warm-up period</td>
<td>Approx. 60 sec. (LED blinks)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alarm output</td>
<td>N.C. 0.1 A (max)</td>
<td>N.C. 0.1 A (max)</td>
<td>N.C. 0.1 A (max)</td>
</tr>
<tr>
<td>Troublem output</td>
<td>N.C. 28 VDC 0.1 A (max)</td>
<td>N.C. 28 VDC 0.1 A (max)</td>
<td>N.C. 28 VDC 0.1 A (max)</td>
</tr>
<tr>
<td>Tamper output</td>
<td>N.C. 28 VDC 0.1 A (max)</td>
<td>N.C. 28 VDC 0.1 A (max)</td>
<td>N.C. 28 VDC 0.1 A (max)</td>
</tr>
<tr>
<td>LED indicator</td>
<td>Red: Warm up, alarm, masking detection (VXI-AM only)</td>
<td>Red: Warm up, alarm, masking detection (VXI-AM only)</td>
<td>Red: Warm up, alarm, masking detection (VXI-AM only)</td>
</tr>
<tr>
<td>RF interference</td>
<td>No alarm 10 V/m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-30 to +60°C</td>
<td>-20 to +45°C</td>
<td></td>
</tr>
<tr>
<td>Environment humidity</td>
<td>95% max.</td>
<td>95% max.</td>
<td>95% max.</td>
</tr>
<tr>
<td>International protection</td>
<td>IP55</td>
<td>IP55</td>
<td>IP55</td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall Pole</td>
<td>Wall Pole</td>
<td>Wall Pole</td>
</tr>
<tr>
<td>Mounting height</td>
<td>0.8 to 1.2 m</td>
<td>0.8 to 1.2 m</td>
<td>0.8 to 1.2 m</td>
</tr>
<tr>
<td>Weight</td>
<td>500 g</td>
<td>600 g</td>
<td>600 g</td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.

**Options**
- PEU-B/C/D/E/F/G/H/I/J/K: Selectable plug-in end of line unit
- VXI-T-Bracket
- WRS-02: Wall tamper
VXI-R/-RAM/-RDAM

BATTERY OPERATED OUTDOOR PIR DETECTOR

The VX Infinity "R" models are battery operated products. Sharing the same design and performance with VXI-ST, AM, DAM, "R" models have the most up-to-date outdoor protection capabilities. Utilizing transmitters from various major brands, "R" models enable easy wireless integration of outdoor protection into new and pre-existing security system. Anti-masking and dual technology models are available in a lineup.

- VXI-R – battery operated model
- VXI-RAM – battery operated model with active IR anti-masking
- VXI-RDAM – battery operated dual technology model with active IR anti-masking
  - VXI-RDAM-X5 : 10.525 GHz
  - VXI-RDAM-X8 : 10.587 GHz

**FEATURES**

- 12 m by 90 degree flexible detection pattern adjustable to 5 ranges
- SMAD (Super Multidimensional Analysis) logic
- Easy masking for over spill prevention
- Double conductive shielding
- Conduit/TX-battery case for both wired and wireless-ready models
- Active IR digital anti-masking (VXI-RAM, VXI-RDAM)
- Tough mod™ dual technology based on OPTEX gold-plated microwave module (VXI-RDAM)

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>VXI-R</th>
<th>VXI-RAM</th>
<th>VXI-RDAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Passive infrared</td>
<td>Passive infrared &amp; Microwave</td>
<td></td>
</tr>
<tr>
<td>PIR coverage</td>
<td>12.0 m wide / 16 zones</td>
<td>12 to 2.5 m (5 levels)</td>
<td></td>
</tr>
<tr>
<td>PIR distance limit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Detectable speed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensitivity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power input</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current draw</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alarm period</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warm-up period</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alarm output</td>
<td>N.C. / N.O Selectable Solid State Switch 10 VDC 0.01 A (max)</td>
<td>N.C. / N.O Selectable Solid State Switch 10 VDC 0.01 A (max)</td>
<td>N.C. / N.O Selectable Solid State Switch 10 VDC 0.01 A (max)</td>
</tr>
<tr>
<td>Trouble output</td>
<td>N.C. / N.O Selectable Solid State Switch 10 VDC 0.01 A (max)</td>
<td>N.C. / N.O Selectable Solid State Switch 10 VDC 0.01 A (max)</td>
<td>N.C. / N.O Selectable Solid State Switch 10 VDC 0.01 A (max)</td>
</tr>
<tr>
<td>RF interference</td>
<td>No alarm 10 V/m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-20 to +60°C</td>
<td>-20 to +45°C</td>
<td></td>
</tr>
<tr>
<td>Environment humidity</td>
<td>95% max.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>International protection</td>
<td>IP3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall, Pole</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mounting height</td>
<td>0.8 to 1.2 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>500 g</td>
<td>600 g</td>
<td></td>
</tr>
<tr>
<td>Accessories</td>
<td>Connector for POWER and ALARM, Connector for TROUBLE, Screw (4x20mm) &gt;2, Masking seal &gt;3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice. Batteries and wireless transmitters are not included in these products.
The BX SHIELD is a series of either side detectors providing 12 m side by side (total 24 m / 80 ft) coverage. Anti-masking model is also available in a lineup.

- BX-ST – standard model
- BX-AM – active IR anti-masking model

**FEATURES**

- 4 PIR technology 24 m (80 ft.) 12 m (40 ft.) on each side adjustable to 5 ranges (2.5m, 3.5m, 6.0m, 8.5m, 12.0m)
- Individual detection area and sensitivity setting
- Extreme high detection mode
- SMDA (Super Multidimensional Analysis) logic for advanced temperature compensation Ind individual signal outputs (right / left)
- Double conductive shielding against bright light disturbance
- Back tamper
- Automatic walk test mode

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>BX-ST</th>
<th>BX-AM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Passive infrared</td>
<td>Passive infrared</td>
</tr>
<tr>
<td>PIR coverage</td>
<td>24 m (80') 12 m (40')</td>
<td>24 m (80') 12 m (40')</td>
</tr>
<tr>
<td>PIR distance limit</td>
<td>List the possible range 2.5, 3.5, 6, 8.5, 12 m</td>
<td>List the possible range 2.5, 3.5, 6, 8.5, 12 m</td>
</tr>
<tr>
<td>Detectable speed</td>
<td>0.3 to 2.0 m/s (1’ to 6’ 7”/s)</td>
<td>0.3 to 2.0 m/s (1’ to 6’ 7”/s)</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>Normal: 2.0°C (3.6°F) at 0.6 m/s</td>
<td>Extreme high: 1.0°C (1.8°F) at 0.6 m/s</td>
</tr>
<tr>
<td>Selectable for each side individually</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power input</td>
<td>9.5 to 18 V DC</td>
<td>9.5 to 18 V DC</td>
</tr>
<tr>
<td>Current draw</td>
<td>31 mA max. at 12 V DC</td>
<td>34 mA max. at 12 V DC</td>
</tr>
<tr>
<td>Alarm period</td>
<td>2.0 ±1 sec.</td>
<td>2.0 ±1 sec.</td>
</tr>
<tr>
<td>Warmup period</td>
<td>60 sec. or less (LED blinks)</td>
<td>60 sec. or less (LED blinks)</td>
</tr>
<tr>
<td>Alarm output</td>
<td>28 VDC 0.1 A max.</td>
<td>28 VDC 0.1 A max.</td>
</tr>
<tr>
<td>[Individual Right or General, N.O. or N.C.] are selectable</td>
<td>[Individual Right or General, N.O. or N.C.] are selectable</td>
<td></td>
</tr>
<tr>
<td>Trouble output</td>
<td>N.C. 28 VDC 0.1 A max.</td>
<td>N.C. 28 VDC 0.1 A max.</td>
</tr>
<tr>
<td>Tamper output</td>
<td>N.C. 28 VDC 0.1 A max. open when face cover, main unit or base unit is removed</td>
<td>N.C. 28 VDC 0.1 A max. open when face cover, main unit or base unit is removed</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>±30°C to ±60°C, ±30°F to ±140°F</td>
<td>±30°C to ±60°C, ±30°F to ±140°F</td>
</tr>
<tr>
<td>Environment humidity</td>
<td>95% max.</td>
<td>95% max.</td>
</tr>
<tr>
<td>International protection</td>
<td>IP 55</td>
<td>IP 55</td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall, pole (outdoor/indoor)</td>
<td>Wall, pole (outdoor/indoor)</td>
</tr>
<tr>
<td>Mounting height</td>
<td>0.8 to 1.2 m (2’7” to 4’)</td>
<td>0.8 to 1.2 m (2’7” to 4’)</td>
</tr>
<tr>
<td>Weight</td>
<td>450 g (15.2 oz.)</td>
<td>430 g (15.2 oz.)</td>
</tr>
<tr>
<td>Accessories</td>
<td>Screw (4 x 20 mm) ± 2</td>
<td>Screw (4 x 20 mm) ± 2</td>
</tr>
</tbody>
</table>

Specifications and designs are subject to change without prior notice.
The BX Shield "R" models are battery operated products. Sharing the same design and performance with BXS-ST/AM, "R" models have the most up-to-date outdoor protection capabilities.

- **BXS-R** – battery operated model
- **BXS-RAM** – with active IR anti-masking

### FEATURES

- **Long battery life**
- **4 PIR technology** 24m (80 ft.) 12 m (40 ft.) on each side adjustable to 5 ranges (2.5m, 3.5m, 6.0m, 8.5m, 12.0m)
- **Individual detection area and sensitivity setting**
- **Extreme high detection mode**
- **SMDA (Super Multidimensional Analysis) logic for advanced temperature compensation** Individual signal outputs (right / left)
- **Double conductive shielding against bright light disturbance**
- **Back tamper**
- **Automatic walk test mode**

### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>BXS-R</th>
<th>BXS-RAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Passive infrared</td>
<td></td>
</tr>
<tr>
<td>PIR coverage</td>
<td>24 m (80'), 12 m (40') on each side, 4 zones : 2 zones on each side, 180° narrow</td>
<td></td>
</tr>
<tr>
<td>PIR distance limit</td>
<td>2.5 to 12m (5 levels)</td>
<td></td>
</tr>
<tr>
<td>Detectable speed</td>
<td>0.3 to 2.0 m/s (1' to 6'7&quot;/s)</td>
<td></td>
</tr>
<tr>
<td>Sensitivity</td>
<td>Normal ; 2.0°C (1.8°F) at 0.6 m/s</td>
<td>Extreme high ; 1.0°C (1.8°F) at 0.6 m/s</td>
</tr>
<tr>
<td>Selectable for each side individually</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power input</td>
<td>3 to 9 V DC Lithium or Alkaline batteries</td>
<td>12 m (40') on each side, 4 zones : 2 zones on each side, 180° narrow</td>
</tr>
<tr>
<td>Current draw</td>
<td>15 mA stand-by</td>
<td>16 mA stand-by</td>
</tr>
<tr>
<td>/ 8 mA max. at 3 V DC</td>
<td>/ 8 mA max. at 3 V DC</td>
<td></td>
</tr>
<tr>
<td>Alarm period</td>
<td>2.0 ±1 sec.</td>
<td></td>
</tr>
<tr>
<td>Warm-up period</td>
<td>60 sec. or less (LED blanks)</td>
<td></td>
</tr>
<tr>
<td>Solid state switch, 10 V DC 0.01 A max.</td>
<td>[Individual/Right or General], [N.O. or N.C.] are selectable</td>
<td></td>
</tr>
<tr>
<td>Tamper output</td>
<td>Solid state switch, 10 V DC 0.01 A max.</td>
<td>[Individual/Right or General], [N.O. or N.C.] are selectable</td>
</tr>
<tr>
<td>Tamper output</td>
<td>Tamper output is shared with trouble output.</td>
<td>Tamper output is shared with trouble output.</td>
</tr>
<tr>
<td>LED indicator</td>
<td>Red LED ; 1 W, 2 Alarm</td>
<td>Red LED ; 1 W, 2 Alarm</td>
</tr>
<tr>
<td>2.0 ±1 sec.</td>
<td>2 Alarm, 3 Masking detection</td>
<td>2 Alarm, 3 Masking detection</td>
</tr>
<tr>
<td>(DIP switch ON or Walk test)</td>
<td>(DIP switch ON or Walk test)</td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-30°C to + 60°C (-22°F to +140°F)</td>
<td></td>
</tr>
<tr>
<td>95%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environment humidity</td>
<td>95% max</td>
<td></td>
</tr>
<tr>
<td>International protection</td>
<td>IP 33</td>
<td></td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall, pole (outdoor/indoor)</td>
<td></td>
</tr>
<tr>
<td>Mounting height</td>
<td>0.8 to 1.2 m (27' to 4')</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>550 g (19.4 oz)</td>
<td>750 g (26.5 oz)</td>
</tr>
<tr>
<td>Accessories</td>
<td>1) Connector for POWER and ALARM (L), 2) Connector for ALARM (L), 3) Connector for TROUBLE, 4) Velcro tape, 5) Screw (4x20 mm) x 2</td>
<td></td>
</tr>
</tbody>
</table>

Specifications and designs are subject to change without prior notice.
The BX-80N is stylishly designed to blend in with any architecture and is simple to install and set up.

### FEATURES
- Double conductive shielding
- Advanced temperature compensation
- Limited detection range function
- Size judging function to avoid false alarms
- Variable detection range up to 24m (12m on each side)
- Audible alarm function
- Attractive, slender design

### COVERAGE

#### TOP VIEW

- Detection Area 12m (single side)
- Detection Area 8m (single side)
- Detection Area 5m (single side)
- Detection Area 2m (single side)

#### SIDE VIEW

- Detection Area 12m (single side)
- Detection Area 8m (single side)
- Detection Area 5m (single side)
- Detection Area 2m (single side)

### OPTIONS
- MG-1: Vandal and tamper resistant metal guard
- SP-2: Spacer unit
- BA-1W: Multi angle wall mount bracket

### DIMENSIONS

- **Model**: BX-80N
- **PIR coverage**: 24m (12m on each side)
- **Detection zones**: 4 zones (2 zones on each side)
- **Sensitivity**: 1.6˚C at 0.6m/s
- **Detectable speed**: 0.3 to 2.6m/s
- **Power supply**: 10 to 28VDC
- **Current consumption**: 360mA (max.)
- **Alarm period**: 2 ± 1 sec.
- **Alarm output**: 2 relay outputs N.O. and N.C. 28VDC 0.2A (max.) each
- **Tamper switch**: N.C. opens when cover is removed
- **Warm-up period**: Approx. 45 sec. (LED blinks)
- **Volume of audible alarm**: Approx. 70dB (at 1 meter distance)
- **LED indicator**: Alarm condition
- **Operating temperature**: -20 to +50˚C
- **Environmental humidity**: 95% max.
- **RF interference**: No Alarm 20W/m
- **Mounting height**: 0.8 to 1.2 m
- **Mounting**: Wall
- **Weight**: 400g
- **Dimensions (H x W x D)**: 232.7 mm x 55 mm x 68.7 mm
- **International protection**: IP55

Specifications and design are subject to change without prior notice.
The BX-80NR is quick and easy to install. This unit requires no complicated wiring as it is a battery operated PIR detector. Not only does one save on installation time and cost, but an added benefit of the unit is its sleek design that blends in with any architecture.

**FEATURES**
- Battery saving circuit
- Form C alarm output and tamper output
- Low current draw
- Double conductive shielding
- Advanced temperature compensation
- Limited detection range function
- Size judging function to avoid false alarms
- Variable detection range up to 24m (12m on each side)
- Compatible with numerous wireless transmitters

**DIMENSIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>BX-80NR</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIR coverage</td>
<td>24m (12m on each side)</td>
</tr>
<tr>
<td>Detection zones</td>
<td>4 zones (2 zones on each side)</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>0˚C to 1.5m/s</td>
</tr>
<tr>
<td>Detectable speed</td>
<td>0.3 to 1.5m/s</td>
</tr>
<tr>
<td>Power supply</td>
<td>3 - 9 VDC lithium or alkaline Battery</td>
</tr>
<tr>
<td>Current consumption</td>
<td>1mA (Walktest, LED on)</td>
</tr>
<tr>
<td>Alarm period</td>
<td>2 ± 1 sec.</td>
</tr>
<tr>
<td>Tamper switch</td>
<td>Form C Solid state switch</td>
</tr>
<tr>
<td>Warm-up period</td>
<td>Approx. 3 min.</td>
</tr>
<tr>
<td>LED indicator</td>
<td>Disable during normal operation</td>
</tr>
<tr>
<td>Temperature range</td>
<td>20 to 100˚C</td>
</tr>
<tr>
<td>Environmental humidity</td>
<td>95% max.</td>
</tr>
<tr>
<td>RF interference</td>
<td>No Alarm 20V/m</td>
</tr>
</tbody>
</table>

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>BX-80NR</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIR coverage</td>
<td>24m (12m on each side)</td>
</tr>
<tr>
<td>Detection zones</td>
<td>4 zones (2 zones on each side)</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>0˚C to 1.5m/s</td>
</tr>
<tr>
<td>Detectable speed</td>
<td>0.3 to 1.5m/s</td>
</tr>
<tr>
<td>Power supply</td>
<td>3 - 9 VDC lithium or alkaline Battery</td>
</tr>
<tr>
<td>Current consumption</td>
<td>1mA (Walktest, LED on)</td>
</tr>
<tr>
<td>Alarm period</td>
<td>2 ± 1 sec.</td>
</tr>
<tr>
<td>Tamper switch</td>
<td>Form C Solid state switch</td>
</tr>
<tr>
<td>Warm-up period</td>
<td>Approx. 3 min.</td>
</tr>
<tr>
<td>LED indicator</td>
<td>Disable during normal operation</td>
</tr>
<tr>
<td>Temperature range</td>
<td>20 to 100˚C</td>
</tr>
<tr>
<td>Environmental humidity</td>
<td>95% max.</td>
</tr>
<tr>
<td>RF interference</td>
<td>No Alarm 20V/m</td>
</tr>
</tbody>
</table>

**OPTIONS**

- BA-1W : Multi angle wall mount bracket
FTN series offers the perfect solution for those outdoor areas where environmental disturbances and small animals may cause false alarms.

- FTN-ST – standard model
- FTN-AM – active IR anti-masking model

5m/2m switchable lens

**FEATURES**
- Built in bracket (190° horizontal)
- 5m/2m switchable lens
- SMDA (Super Multidimensional Analysis) logic
- Intelligent AND detection logic
- Active IR digital anti-masking (FTN-AM)
- Wall tamper (options)

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>FTN-ST</th>
<th>FTN-AM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Passive infrared</td>
<td>20mA (max.) (at 12 VDC)</td>
</tr>
<tr>
<td>PIR coverage</td>
<td>5 m, 1 m</td>
<td>2 m detection length</td>
</tr>
<tr>
<td>Detectable speed</td>
<td>0.3 to 1.3 m/s</td>
<td>0.8 m to 1.2 m</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>2.0˚C (at 0.6 m/s)</td>
<td></td>
</tr>
<tr>
<td>Operation voltage</td>
<td>9.5 to 18 VDC</td>
<td>9.5 to 18 VDC</td>
</tr>
<tr>
<td>Current draw</td>
<td>17mA (max.) (at 12 VDC)</td>
<td>20mA (max.) (at 12 VDC)</td>
</tr>
<tr>
<td>Alarm period</td>
<td>2.0 ± 1.0 sec.</td>
<td>Approx. 60 sec. (LED blinks)</td>
</tr>
<tr>
<td>Warm-up period</td>
<td>0.1 A (max.)</td>
<td></td>
</tr>
<tr>
<td>Trouble output</td>
<td>N.C., N.O. Selectable 28 VDC 0.1 A (max.)</td>
<td></td>
</tr>
<tr>
<td>LED Indicator</td>
<td>Light/Blink: Warm-up, alarm, masking detection (FTN-AM only)</td>
<td>Light/Blink: Warm-up, alarm, masking detection (FTN-AM only)</td>
</tr>
<tr>
<td>Operation temperature</td>
<td>-20 to +60°C</td>
<td>-20 to +60°C</td>
</tr>
<tr>
<td>Environmental humidity</td>
<td>90% Max.</td>
<td>85% Max.</td>
</tr>
<tr>
<td>International protection</td>
<td>IP55</td>
<td></td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall (Outdoor, Indoor)</td>
<td></td>
</tr>
<tr>
<td>Mounting height</td>
<td>0.8 to 1.2 m</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>100 g</td>
<td>100 g</td>
</tr>
<tr>
<td>Accessories</td>
<td>Screw (3 x 20 mm) x 2</td>
<td></td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.
FEATURES

— Long battery life
— Built in bracket (190˚ horizontal)
— Active IR digital anti-masking (FTN-RAM)
— Wall tamper (options)

COVERAGE

TOP VIEW

Adjustable range: 95˚ (by 5˚ pitch)

SIDE VIEW

2m detection length

OPTIONS

• WRS-03 : Wall tamper

DIMENSIONS

FTN-R/FTN-RAM

FTN-R-PT/FTN-RAM-PT

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>FTN R</th>
<th>FTN RAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Passive infrared</td>
<td>Passive infrared</td>
</tr>
<tr>
<td>Detection range</td>
<td>2 m, 5 m</td>
<td>2 m, 5 m</td>
</tr>
<tr>
<td>Detectable speed</td>
<td>0.5 to 1.5 m/s</td>
<td>0.5 to 1.5 m/s</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>2.5˚ C (at 0.6 m/s)</td>
<td>2.5˚ C (at 0.6 m/s)</td>
</tr>
<tr>
<td>Operation voltage</td>
<td>2.5 to 10 VDC</td>
<td>2.5 to 10 VDC</td>
</tr>
<tr>
<td>Power input</td>
<td>3 - 9 VDC (Lithium or Alkaline Battery)</td>
<td>3 - 9 VDC (Lithium or Alkaline Battery)</td>
</tr>
<tr>
<td>Current draw</td>
<td>3mA (at stand-by) / 3mA (at 3 VDC)</td>
<td>3mA (at stand-by) / 3mA (at 3 VDC)</td>
</tr>
<tr>
<td>Warm-up period</td>
<td>Approx. 120 sec. (LED blinks)</td>
<td>Approx. 120 sec. (LED blinks)</td>
</tr>
<tr>
<td>Alarm output</td>
<td>N.C./N.O. Selectable-Solid State Switch 10 VDC 0.01 Amax</td>
<td>N.C./N.O. Selectable-Solid State Switch 10 VDC 0.01 Amax</td>
</tr>
<tr>
<td>LED indicator</td>
<td>Enable: During DIP switch 1 (WALK TEST MODE) or DIP switch 4 (LED) ON</td>
<td>Disable: During normal operation Light/Blink: Warm-up, alarm, masking detection (FTN-RAM only)</td>
</tr>
<tr>
<td>Temperature operation</td>
<td>0 to +60°C</td>
<td>0 to +60°C</td>
</tr>
<tr>
<td>Environmental humidity</td>
<td>95% max</td>
<td>95% max</td>
</tr>
<tr>
<td>Protection international</td>
<td>IP55</td>
<td>IP55</td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall (Outdoor, Indoor)</td>
<td>Wall (Outdoor, Indoor)</td>
</tr>
<tr>
<td>Mounting height</td>
<td>0.8 to 1.2 m</td>
<td>0.8 to 1.2 m</td>
</tr>
<tr>
<td>Weight</td>
<td>190 g (FTN-R-PT 180g)</td>
<td>190 g (FTN-RAM-PT 180g)</td>
</tr>
<tr>
<td>Accessories</td>
<td>Connector for POWER and ALARM, connector for TROUBLE, plates nut x 2, screw (M3 x 10 mm) x 2, screw (3 x 20 mm) x 4, sponge for transmitter</td>
<td></td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice. Batteries and wireless transmitters are not included in these products.
HX-80N/NAM

24M LONG AND NARROW RANGE HIGH MOUNT OUTDOOR PIR DETECTOR

HX-80N’s coverage can be adjusted by means of built-in flaps and plates.

**FEATURES**
- Mounting height 2.5-3.0m
- Intelligent AND detection logic
- Double conductive shielding
- Advanced temperature compensation logic
- Summer night compensation logic
- Vegetation sway analysis logic
- Active IR digital anti-masking (HX-80NAM)

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>HX-80N</th>
<th>HX-80NAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Passive infrared</td>
<td>Active IR</td>
</tr>
<tr>
<td>Anti-masking</td>
<td>Passive infrared</td>
<td>Active IR</td>
</tr>
<tr>
<td>PIR coverage</td>
<td>24.0 m x 2.0 m narrow / 20 zones</td>
<td></td>
</tr>
<tr>
<td>PIR distance limit</td>
<td>6.5 m, 10.0 m, 13.0 m, 18.0 m</td>
<td></td>
</tr>
<tr>
<td>Detectable speed</td>
<td>0.3 to 1.5 m/s</td>
<td></td>
</tr>
<tr>
<td>Sensitivity</td>
<td>2.0˚C at 0.6 m/s</td>
<td></td>
</tr>
<tr>
<td>Current drain</td>
<td>9.5 mA at 12 VDC</td>
<td>40 mA (max.) at 12 VDC</td>
</tr>
<tr>
<td>Alarm period</td>
<td>2.0 ± 1 sec.</td>
<td></td>
</tr>
<tr>
<td>Warm-up period</td>
<td>Approx. 60 sec (LED blinks)</td>
<td></td>
</tr>
<tr>
<td>Alarm output</td>
<td>Form C @ 28 VDC, 0.1 A (max.)</td>
<td>Form C @ 28 VDC, 0.1 A (max.)</td>
</tr>
<tr>
<td>Tamper output</td>
<td>N.C. @ 28 VDC, 0.1 A (max.)</td>
<td>N.C. @ 28 VDC, 0.1 A (max.)</td>
</tr>
<tr>
<td>Trouble output</td>
<td>N.C. @ 28 VDC, 0.1 A (max.)</td>
<td>N.C. @ 28 VDC, 0.1 A (max.)</td>
</tr>
<tr>
<td>AUX input</td>
<td>Red: Warm-up, Alarm</td>
<td>Red: Warm-up, Alarm, Trouble</td>
</tr>
<tr>
<td>LED indicator</td>
<td>No alarm</td>
<td></td>
</tr>
<tr>
<td>IR interference</td>
<td>10 V/m</td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-20 to +60°C</td>
<td></td>
</tr>
<tr>
<td>Environmental humidity</td>
<td>95% max.</td>
<td></td>
</tr>
<tr>
<td>International protection</td>
<td>IP53</td>
<td></td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall</td>
<td>Wall</td>
</tr>
<tr>
<td>Mounting height</td>
<td>2.5 to 3.0 m</td>
<td></td>
</tr>
<tr>
<td>Bracket adjust angle</td>
<td>Vertical ± 20°, Horizontal ± 95°</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>720 g</td>
<td></td>
</tr>
<tr>
<td>Accessories</td>
<td>Bracket, Screws (4 x 20 mm) x 4</td>
<td></td>
</tr>
</tbody>
</table>

Specifications and designs are subject to change without prior notice.
# HX-80NRAM

**BATTERY OPERATED 24M LONG AND NARROW RANGE HIGH MOUNT OUTDOOR PIR DETECTOR**

The HX-80NRAM, a battery operated outdoor PIR detector allows for long distance outdoor installation, providing while exceptional detection capabilities.

## FEATURES

- Long battery life
- Active IR digital anti-masking
- Mounting height 2.5-3.0m
- Intelligent AND detection logic
- Double conductive shielding
- Advanced temperature compensation logic
- Summer night compensation logic
- Vegetation sway analysis logic

## DIMENSIONS

<table>
<thead>
<tr>
<th>Using bracket</th>
<th>Without bracket</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>HX-80NRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Passive infrared</td>
</tr>
<tr>
<td>Anti-masking</td>
<td>Active IR</td>
</tr>
<tr>
<td>PIR coverage</td>
<td>24.0 m x 2.0 m narrow / 20 zones</td>
</tr>
<tr>
<td>PIR distance limit</td>
<td>6.5 m, 10.5 m, 13.0 m, 18.0 m</td>
</tr>
<tr>
<td>Detectable speed</td>
<td>0.3 to 1.5 m/s</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>2.0˚C at 0.6 m/s</td>
</tr>
<tr>
<td>Power input</td>
<td>3 - 7.2 VDC (Lithium Battery: CR123A x 3, CR2 x 3, 1/2AA x 3, 1/2AA x 6)</td>
</tr>
<tr>
<td>Operating voltage</td>
<td>2.5 to 9 VDC</td>
</tr>
<tr>
<td>Current draw</td>
<td>380 µA (standby) / 4 mA (max.) at 3 VDC</td>
</tr>
<tr>
<td>Alarm period</td>
<td>2.0 ± 1 sec.</td>
</tr>
<tr>
<td>Warm-up period</td>
<td>Approx. 90 sec. (LED blinks)</td>
</tr>
<tr>
<td>Alarm output</td>
<td>Form C - Solid State Switch - 10 VDC 0.05 A max.</td>
</tr>
<tr>
<td>Trouble output</td>
<td>N.C. / N.O. Selectable - Solid State Switch - 10 VDC 0.05 A max.</td>
</tr>
<tr>
<td>Tamper output</td>
<td>Form C - 28 VDC, 0.1 A max. activates when cover removed</td>
</tr>
<tr>
<td>LED indicator</td>
<td>Enable: During WALK TEST or LED SW on. Red: Warm-up, Alarm, Trouble, Low battery</td>
</tr>
<tr>
<td>RF interference</td>
<td>No alarm 10 V/m</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-20 to +60˚C</td>
</tr>
<tr>
<td>Environmental humidity</td>
<td>95% max.</td>
</tr>
<tr>
<td>International protection</td>
<td>IP53</td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall</td>
</tr>
<tr>
<td>Mounting height</td>
<td>2.5 to 3.0 m</td>
</tr>
<tr>
<td>Bracket adjust angle</td>
<td>Vertical: ±20˚ Horizontal: ±95˚</td>
</tr>
<tr>
<td>Weight</td>
<td>780 g</td>
</tr>
<tr>
<td>Accessories</td>
<td>Bracket, Screw (4 x 20 mm) x 4, Velcro tape x 2, Alarm cable, Battery lead x 2, Dummy battery kit</td>
</tr>
</tbody>
</table>

*Specifications and designs are subject to change without prior notice. Batteries and wireless transmitters are not included in these products.*
HX-40/AM/DAM

HIGH MOUNT OUTDOOR PIR DETECTOR

HX-40 series offers high detection performance against missed alarms in a hostile environment.

• HX-40 : standard model
• HX-40AM : active IR anti-masking model
• HX-40DAM : dual technology model with active IR anti-masking
  • HX-40DAM-X5 : 10.525 GHz
  • HX-40DAM-X8 : 10.587 GHz

Intelligent AND detection Logic

FEATURES
— Active IR digital anti-masking (HX-40AM/DAM only)
— Microwave Intelligent quantification logic (HX-40DAM only)
— Microwave range selector (HX-40DAM only)
— Mounting height 2.5-3m
— Intelligent AND detection logic
— Dual signal processing circuit
— Vegetation sway analysis logic
— Double conductive shielding
— Ideal detection area setting

COVERAGE

TOP VIEW

SIDE VIEW

Installation height 3.0m

Installation height 2.5 m

DIMENSIONS

SPECIFICATIONS

Model  
HX-40  
HX-40 AM  
HX-40 DAM

Detection method  
Passive infrared  
Active IR  
Active IR & Microwave

PIR coverage  
2 m 85˚ wide / 94 zones

PIR detectable range limit  
4 m, 5.5 m, 9 m

Detectable speed  
0.3 to 1.5 m/s

Sensitivity  
2.0˚C at 0.6 m/s

Power input  
9.5 to 18 VDC

Current draw  
50 mA (max) at 12 VDC

Alarm period  
2.0 ± 1 sec

Warm-up period  
Approx. 60 sec(LED blinks)

Alarm output  
Form C, 28 VDC, 0.1A max

Tamper output  
N.C. 28 VDC, 0.1A max. N.C. opens when cover is removed.

Trouble output  
N.C. 28 VDC, 0.1A max

Aux input  
No alarm 10 VDC

RF interference  
No alarm 10 VDC

Operating temperature  
-20 to +60˚C

Environmental humidity  
95% max

International protection  
IP55

Mounting  
Wall

Mounting height  
2.5 to 3.0 m

Bracket adjust angle  
Vertical: ±20˚ Horizontal: ± 95˚

Weight  
600 g  
700 g

Specifications and design are subject to change without prior notice.
The HX-40RAM, a battery operated outdoor PIR detector allows for economical and effortless outdoor installation, providing while exceptional detection capabilities.

Battery box for numerous battery types

- CR123A x 3 (3.0VDC)
- CR2 x 3 (3.0VDC)
- 12AA x 3 (3.6VDC)
- 1/2AA x 6 (1.2VDC x 3, 3CR2 x 3)

*3.6 VDC 1/2 AA battery in series.

### DIMENSIONS

Using bracket and hood

Without bracket and hood

### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>HX-40 RAM</td>
</tr>
<tr>
<td>Detection method</td>
<td>Passive infrared</td>
</tr>
<tr>
<td>Anti-masking</td>
<td>Active IR</td>
</tr>
<tr>
<td>PIR coverage</td>
<td>12 m 85˚ wide / 94 zones</td>
</tr>
<tr>
<td>Distance limit</td>
<td>4 m, 5.5 m, 9 m</td>
</tr>
<tr>
<td>Detectable speed</td>
<td>0.3 to 1.5 m/s</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>2.0˚C at 0.6 m/s</td>
</tr>
<tr>
<td>Power input</td>
<td>3 to 7.2 VDC Lithium Battery (CR123A x 3, CR2 x 3, 1/2AA x 3, 1-2AA x 6)</td>
</tr>
<tr>
<td>Operating Voltage</td>
<td>2.5 to 9 VDC</td>
</tr>
<tr>
<td>Current draw</td>
<td>30 μA (standby) / 4mA (max) at 3 VDC</td>
</tr>
<tr>
<td>Alarm period</td>
<td>2.0 ± 1 sec</td>
</tr>
<tr>
<td>Warm-up period</td>
<td>Approx. 95 sec (for blink)</td>
</tr>
<tr>
<td>Alarm output</td>
<td>Form C - Solid State Switch - 10 VDC 0.01A max.</td>
</tr>
<tr>
<td>Trouble output</td>
<td>N.C./N.O. Selectable - Solid State Switch - 10 VDC 0.01A</td>
</tr>
<tr>
<td>Tamper output</td>
<td>Form C, 28 VDC 0.1A max. changes when cover is removed</td>
</tr>
<tr>
<td>Aux input</td>
<td>Disable: During normal operation. Enable: During WALK TEST or LED 5W on.</td>
</tr>
<tr>
<td>LED indicator</td>
<td>Red: Warm-up, Alarm, Trouble, Low battery</td>
</tr>
<tr>
<td>RF Interference</td>
<td>No alarm 10 V/m</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-20 to +60˚C</td>
</tr>
<tr>
<td>Environmental humidity</td>
<td>95% max</td>
</tr>
<tr>
<td>International protection</td>
<td>IP55</td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall</td>
</tr>
<tr>
<td>Mounting height</td>
<td>2.5 to 3.8 m</td>
</tr>
<tr>
<td>Bracket adjust angle</td>
<td>Vertical ± 20˚ Horizontal ± 95˚</td>
</tr>
<tr>
<td>Weight</td>
<td>600 g</td>
</tr>
<tr>
<td>Accessories</td>
<td>Bracket, Hood, Area masking seal, Screw kit (3 x 10-2, 4 x 20-4) Velcro tape x 2, Alarm cable, Battery lead x 2, Dummy battery kit</td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.

Batteries and wireless transmitters are not included in these products.
The QXI series is a family of outdoor detectors providing 120 degree wide and 12 m (40 ft.) detection area. With its sleek and compact housing, the QXI infinity series fits any residential and commercial buildings without ruining its appearance.

- QXI-ST - standard model
- QXI-DT - dual technology model

**FEATURES**
- Sleek & Compact design
- Selectable Mounting Height & Pattern
- Anti-blocking Function (QXI-DT only)
- Easy Open and Close Front Cover
- Double Conductive Shielding
- SMDA (Super Multi Dimension Analysis) logic
- Operating Temperature:
  - QXI-ST/R: -40 to +60°C (-40 to +140°F)
  - QXI-DT/RDT: -40 to +45°C (-40°F to +113°F)
- UV Resistant ASA body
- Automatic Walk Test Mode
- Tough MOD : super tough microwave module (QXI-DT only)
- Cover / Back tamper

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>QXI-ST</th>
<th>QXI-DT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Passive infrared</td>
<td>Passive infrared</td>
</tr>
<tr>
<td>PIR coverage</td>
<td>12.0 m (40') 120° wide</td>
<td>12.0 m (40') 120° wide</td>
</tr>
<tr>
<td>Detectable speed</td>
<td>0.3 to 2.0 m/s (1' to 6'7'/s)</td>
<td>0.3 to 2.0 m/s (1' to 6'7'/s)</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>2.0°C ± 0.6°F at 0.6 m/s</td>
<td>2.0°C ± 0.6°F at 0.6 m/s</td>
</tr>
<tr>
<td>Power input</td>
<td>9.5 to 16 VDC</td>
<td>9.5 to 16 VDC</td>
</tr>
<tr>
<td>Current draw</td>
<td>20 mA max. at 12 VDC</td>
<td>30 mA max. at 12 VDC</td>
</tr>
<tr>
<td>Alarm period</td>
<td>2.0 ± 0.5 sec. (delay timer)</td>
<td>2.0 ± 0.5 sec. (delay timer)</td>
</tr>
<tr>
<td>Warm-up period</td>
<td>Approx. 60 sec. (LED blinks)</td>
<td>Approx. 60 sec. (LED blinks)</td>
</tr>
<tr>
<td>Alarm output</td>
<td>N.C./N.O. switchable, 28 VDC 0.1 A max.</td>
<td>N.C./N.O. switchable, 28 VDC 0.1 A max.</td>
</tr>
<tr>
<td>Trouble output</td>
<td>N.C. 28 VDC 0.1 A max. N.O.</td>
<td>N.C. 28 VDC 0.1 A max. N.O.</td>
</tr>
<tr>
<td>Tamper output</td>
<td>N.C. 28 VDC 0.1 A max. N.O. cover is opened</td>
<td>N.C. 28 VDC 0.1 A max. N.O. cover is opened</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-40°C to +60°C (-40°F to +140°F)</td>
<td>-40°C to +45°C (-40°F to +113°F)</td>
</tr>
<tr>
<td>Environment humidity</td>
<td>95% max.</td>
<td>95% max.</td>
</tr>
<tr>
<td>International protection</td>
<td>IP34</td>
<td>IP34</td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall, Ceiling (Outdoor, Indoor)</td>
<td>Wall, Ceiling (Outdoor, Indoor)</td>
</tr>
<tr>
<td>Mounting height</td>
<td>Multi level: 2.2 to 2.7 m (7’ 3” to 8’11”)</td>
<td>Multi level: 2.2 to 2.7 m (7’ 3” to 8’11”)</td>
</tr>
<tr>
<td>Pet alley</td>
<td>0.8 to 1.2 m (2’ 7” to 4’)</td>
<td>0.8 to 1.2 m (2’ 7” to 4’)</td>
</tr>
<tr>
<td>Weight</td>
<td>185 g (6.55 oz)</td>
<td>195 g (6.88 oz)</td>
</tr>
<tr>
<td>Accessories</td>
<td>[1] Mounting screw (4 x 12 mm) x 2</td>
<td>[1] Mounting screw (4 x 12 mm) x 2</td>
</tr>
<tr>
<td></td>
<td>[2] Lock screw (3 x 12 mm) x 1</td>
<td>[2] Lock screw (3 x 12 mm) x 1</td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.
The QX Infinity "R" models are battery operated products. Sharing the same design and performance with QXI-ST/DT, "R" models have the most up-to-date outdoor protection capabilities.

- QXI-R – battery operated model
- QXI-RDT – battery operated dual technology model

**FEATURES**
- Sleek & Compact design
- Selectable Mounting Height & Pattern
- Anti-blocking Function
- Easy Open and Close Front Cover
- Double Conductive Shielding
- SMDA (Super Multi Dimension Analysis) logic
- Operating Temperature: QXI-ST/R:-40 to +60°C (-40 to +140°F) / QXI-DT/RDT:-40 to +45°C (40°F to +113°F)
- UV Resistant ASA body
- Automatic Walk Test Mode
- Battery Common Use
- Tough MOD: super tough microwave module (QXI-RDT only)
- Cover / Back tamper

**OPTIONS**
- CA-2C(W) : Multi angle ceiling mount bracket
- CA-1W(W) : Multi angle wall mount bracket

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>QXI-R</th>
<th>QXI-RDT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Passive infrared &amp; Microwave</td>
<td>Passive infrared &amp; Microwave</td>
</tr>
<tr>
<td>PIR coverage</td>
<td>12.0 m (40') 120° wide</td>
<td>12.0 m (40') 120° wide</td>
</tr>
<tr>
<td>Detectable speed</td>
<td>0.3 to 2.0 m/s (1' to 6.7''/s)</td>
<td>0.3 to 2.0 m/s (1' to 6.7''/s)</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>2.0 m/s (3.6°F) at 0.6 m/s</td>
<td>2.0 m/s (3.6°F) at 0.6 m/s</td>
</tr>
<tr>
<td>Power input</td>
<td>CR223A (3 V DC) *Not included</td>
<td>CR223A (3 V DC) *Not included</td>
</tr>
<tr>
<td>Current draw</td>
<td>9 μA stand-by (11 mA max.) at 3 V DC</td>
<td>16 μA stand-by (11 mA max.) at 3 V DC</td>
</tr>
<tr>
<td>Alarm period</td>
<td>2.0 ± 0.5 sec. (delay timer)</td>
<td>2.0 ± 0.5 sec. (delay timer)</td>
</tr>
<tr>
<td>Warm-up period</td>
<td>Approx. 60 sec. (LED blinks)</td>
<td>Approx. 60 sec. (LED blinks)</td>
</tr>
<tr>
<td>Alarm output</td>
<td>N.C./N.O. switchable solidstate switch, 3 V DC 0.01 A max.</td>
<td>N.C./N.O. switchable solidstate switch, 3 V DC 0.01 A max.</td>
</tr>
<tr>
<td>Trouble output (with tamper)</td>
<td>N.C./N.O. switchable solidstate switch, 3 V DC 0.01 A max. (with tamper)</td>
<td>N.C./N.O. switchable solidstate switch, 3 V DC 0.01 A max. (with tamper)</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-40°C to +60°C (4°F to 140°F)</td>
<td>-40°C to +45°C (4°F to 113°F)</td>
</tr>
<tr>
<td>Environment humidity</td>
<td>95% max.</td>
<td>95% max.</td>
</tr>
<tr>
<td>International protection</td>
<td>IP54</td>
<td>IP54</td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall, Ceiling (Outdoor, Indoor)</td>
<td>Wall, Ceiling (Outdoor, Indoor)</td>
</tr>
<tr>
<td>Mounting height</td>
<td>Multi level : 2.2 to 2.7 m (7' 3&quot; to 8'11&quot;) / Pet alley : 0.8 to 1.2 m (2' 7&quot; to 4')</td>
<td>Multi level : 2.2 to 2.7 m (7' 3&quot; to 8'11&quot;) / Pet alley : 0.8 to 1.2 m (2' 7&quot; to 4')</td>
</tr>
<tr>
<td>Weight</td>
<td>215 g (7.58 oz)</td>
<td>220 g (7.71 oz)</td>
</tr>
<tr>
<td></td>
<td>[4] Lock screw (3 x 12 mm) x 1</td>
<td>[4] Lock screw (3 x 12 mm) x 1</td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.
The LX series is robust, weatherproof and specifically designed for short-range outdoor applications with wide angle and long range options.

- **LX-402** – 120˚ wide angle model
- **LX-802N** – long and narrow range model

### FEATURES
- Double conductive shielding
- Selectable detection patterns (pet alley or multi-level)
- Area-masking strips (LX-402)
- Sensitivity selection switch (high, mid and low)
- Selectable pulse count (test or 2)
- Day & night modes

### OPTIONS
- CA-2C : Multi-angle ceiling mounting bracket
- CA-1W : Multi-angle wall mounting bracket

### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>LX-402</th>
<th>LX-802N</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIR coverage</td>
<td>12m x 15m 120˚ wide</td>
<td>24m x 2m long range</td>
</tr>
<tr>
<td>Zones</td>
<td>40 zones</td>
<td>12 zones</td>
</tr>
<tr>
<td>Pet alley area</td>
<td>18 zones</td>
<td>4 zones</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>Selectable 3 position (High / Middle / Low)</td>
<td></td>
</tr>
<tr>
<td>Detectable speed</td>
<td>0.3 to 1.0 m/sec.</td>
<td></td>
</tr>
<tr>
<td>Power supply</td>
<td>10.8 to 13.2 VDC</td>
<td></td>
</tr>
<tr>
<td>Current consumption</td>
<td>25mA max.</td>
<td></td>
</tr>
<tr>
<td>Alarm period</td>
<td>2 x 1 sec. (delay timer)</td>
<td></td>
</tr>
<tr>
<td>Alarm output</td>
<td>N.C. N.O. 28 VDC 0.2A max.</td>
<td></td>
</tr>
<tr>
<td>Tamper switch</td>
<td>N.C. opens when cover is removed</td>
<td></td>
</tr>
<tr>
<td>Pulse count</td>
<td>2 (20 ± 5 sec.) or TEST (1 pulse)</td>
<td></td>
</tr>
<tr>
<td>Warm-up period</td>
<td>Approx. 60 sec.</td>
<td></td>
</tr>
<tr>
<td>LED indicator</td>
<td>LED lights during detection</td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-20 to +50˚C</td>
<td></td>
</tr>
<tr>
<td>Environmental humidity</td>
<td>95% max.</td>
<td></td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall</td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td>Multi-level area</td>
<td>2.5 m max.</td>
</tr>
<tr>
<td>Pet alley area</td>
<td>1.2 to 1.5 m</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>170 g</td>
<td>190 g</td>
</tr>
<tr>
<td>Dimensions (W x H x D)</td>
<td>141 mm x 74.8 mm x 53.5 mm</td>
<td>141 mm x 74.8 mm x 57.5 mm</td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.
BX-100PLUS
PHOTOELECTRIC DETECTOR FOR BUILDING PERIMETER

The BX-100PLUS consists of a pair of small, discreet dual infrared beams designed to protect the immediate perimeter of a building.

FEATURES

- Dual IR pulsed beam system
- Internal sounder
- Easy alignment with visual and audible indicator
- Light reduction filter
- 99% beam blocking stability
- N.O. and N.C. relay outputs
- Active infrared technology
- Slim design

OPTIONS

- SP-1 : Spacer unit
- MG-1 : Vandal and tamper resistant metal guard
- WC-1 : White decorative cover

APPLICATIONS

- Retail
- Business
- Residential
- Industrial

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>BX-100PLUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum detection range</td>
<td>30m</td>
</tr>
<tr>
<td>Maximum arrival distance</td>
<td>300m</td>
</tr>
<tr>
<td>Interruption period</td>
<td>50 msec</td>
</tr>
<tr>
<td>Power supply</td>
<td>10.5 to 28 VDC</td>
</tr>
<tr>
<td>Current consumption</td>
<td>55mA (stand by) / 75mA (max.)</td>
</tr>
<tr>
<td>Alarm period</td>
<td>2 ± 1 sec. (delay)</td>
</tr>
<tr>
<td>Relay output</td>
<td>2 relay outputs N.O. and N.C.</td>
</tr>
<tr>
<td>Beeping period</td>
<td>15 ± 1 sec. (delay)</td>
</tr>
<tr>
<td>Volume of audible alarm indicator</td>
<td>Approx. 70dB (at 1 meter distance)</td>
</tr>
<tr>
<td>Tamper switch</td>
<td>N.C. opens when cover is removed</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-35 to +55°C</td>
</tr>
<tr>
<td>Environmental humidity</td>
<td>95% max.</td>
</tr>
<tr>
<td>Alignment angle</td>
<td>± 90° Horizontal</td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall</td>
</tr>
<tr>
<td>Weight (transmitter+receiver)</td>
<td>400 g</td>
</tr>
<tr>
<td>Dimensions (H x W x D)</td>
<td>230.5 mm x 51.5 mm x 61 mm</td>
</tr>
<tr>
<td>International protection</td>
<td>IP54</td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.
OPTIONS

OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

TECHNICAL INFORMATION

OUTDOOR PROTECTION

INDOOR PROTECTION

REDWALL

ACCESS CONTROL

TECHNICAL INFORMATION

CA-2C

Multi Angle Ceiling Mount Bracket
for
• LX-402/802N
• QXI-ST/DT/R/RDT

CA-1W

Multi Angle Wall Mount Bracket
for
• LX-402/802N
• QXI-ST/DT/R/RDT

VXI-T-BRACKET

Wired model

Battery operated model

T-bracket
for
• VXI-ST/AM
• VXI-R/RAM

RBB-01

Battery Box
for
• VXI-R/RAM/RDAM
• BXS-R/RAM

WRS-02

Wall Tamper
for
• FTN-ST/AM
• VXI-ST/AM/DAM

WRS-03

Wall Tamper
for
• FTN-R/RAM/R-PT/RAM-PT

WRS-04

Wall Tamper
for
• VXI-R/RAM/RDAM

PMP-01

Pole mount plate
for
• WXI-ST/AM
• WXI-R/RAM
• BXS-ST/AM
• BXS-R/RAM

BH-01

Battery holder
for
• WXI-R/RAM
• VXI-RAM/RDAM
• BXS-R/RAM

WXI-BB

Back box
for
• WXI-ST/AM
• WXI-R/RAM

MKP-01

Area masking plate
for
• WXI-ST/AM
• WXI-R/RAM

BXS Face cover

White / Silver / Black
for
• BXS-ST/AM
• BXS-R/RAM

BXS Back box

White / Black
for
• BXS-ST/AM
• BXS-R/RAM

BXS Back box Cap

White / Silver / Black
for
• BXS-ST/AM
• BXS-R/RAM

No warranty is given as to the fitness of this option with noted above manufacturer's product.
Please check for specifications of a control panel before you buy this option.
Some models do not have a trouble output.
**WC-1**

White Decorative Cover for
- BX-100PLUS

**SP-2**

Spacer Unit for
- BX-80N

**SP-1**

Spacer Unit for
- BX-100PLUS

**BA-1W**

Multi Angle Wall Mount Bracket for
- BX-80N*
- BX-80N

*SP-2 spacer is required when BA-1W is used

**MG-1**

Vandal and Tamper Resistant Metal Guard for
- BX-80N
- BX-100PLUS

<table>
<thead>
<tr>
<th>Item</th>
<th>Trouble</th>
<th>Alarm</th>
<th>Tamper</th>
<th>Panels</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEU-B</td>
<td>6.8K</td>
<td>4.7K</td>
<td>4.7K</td>
<td>Old GE/Aritech</td>
</tr>
<tr>
<td>PEU-C</td>
<td>12.0K</td>
<td>1.0K</td>
<td>1.0K</td>
<td>Honeywell Galaxy (U.K.)</td>
</tr>
<tr>
<td>PEU-D</td>
<td>3.0K</td>
<td>1.0K</td>
<td>1.0K</td>
<td>Honeywell Galaxy (Benelux)</td>
</tr>
<tr>
<td>PEU-E</td>
<td>15.0K</td>
<td>1.1K</td>
<td>1.1K</td>
<td>Safel</td>
</tr>
<tr>
<td>PEU-F</td>
<td>5.6K</td>
<td>5.6K</td>
<td>5.6K</td>
<td>DSC</td>
</tr>
<tr>
<td>PEU-G</td>
<td>8.2K</td>
<td>8.2K</td>
<td>8.2K</td>
<td>Guardall</td>
</tr>
<tr>
<td>PEU-H</td>
<td>2.2K</td>
<td>4.7K</td>
<td>2.2K</td>
<td>Old Texacom, Cooper, Scantronics etc.</td>
</tr>
<tr>
<td>PEU-I</td>
<td>1.0K</td>
<td>3.3K</td>
<td>3.3K</td>
<td>New Texecom, NetworkX, Imm</td>
</tr>
<tr>
<td>PEU-J</td>
<td>12.0K</td>
<td>6.8K</td>
<td>4.7K</td>
<td>Risco ProSYS</td>
</tr>
<tr>
<td>PEU-K</td>
<td>2.2K</td>
<td>1.0K</td>
<td>1.0K</td>
<td>Siemens SPC</td>
</tr>
</tbody>
</table>

No warranty is given as to the fitness of this option with noted above manufacture’s product. Please check on specifications of a control panel before you buy this option. Some models do not have a trouble output.
## PRODUCT SPECIFICATIONS

<table>
<thead>
<tr>
<th>WXS-AM/DAM</th>
<th>WXS-RAM/RDAM</th>
<th>WXI-ST</th>
<th>WXI-AM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>WXS-AM: PIR</td>
<td>WXS-RAM: PIR</td>
<td>PIR</td>
</tr>
<tr>
<td>Anti-Masking</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Coverage</td>
<td>180° wide</td>
<td>180° wide</td>
<td>180° wide</td>
</tr>
<tr>
<td>Detection zones</td>
<td>Horizontal 14 pairs, vertical 2 layers</td>
<td>Horizontal 14 pairs, vertical 2 layers</td>
<td>Horizontal 14 pairs, vertical 2 layers</td>
</tr>
<tr>
<td>Mounting height</td>
<td>0.8 - 1.2m</td>
<td>0.8 - 1.2m</td>
<td>0.8 - 1.2m</td>
</tr>
<tr>
<td>Double-layered detection patterns</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Intelligent AND detection logic</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Pet immunity</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>SMDA logic</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Immunity switch</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Area masking method</td>
<td>Shutter / Plate</td>
<td>Shutter / Plate</td>
<td>Shutter / Plate</td>
</tr>
<tr>
<td>Sensitivity adjustment</td>
<td>H / M / L</td>
<td>H / M / L</td>
<td>H / M / L</td>
</tr>
<tr>
<td>Advanced temperature compensation logic</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Pulse Count</td>
<td>1 / 2</td>
<td>1 / 2</td>
<td>1 / 2</td>
</tr>
<tr>
<td>Power supply</td>
<td>9.5 - 18 VDC</td>
<td>9.5 - 18 VDC</td>
<td>9.5 - 18 VDC</td>
</tr>
<tr>
<td>Current consumption</td>
<td>23 mA max. at 12 VDC</td>
<td>21 mA max. at 12 VDC</td>
<td>23 mA max. at 12 VDC</td>
</tr>
<tr>
<td>Alarm output</td>
<td>28 VDC 0.1 A max.</td>
<td>28 VDC 0.1 A max.</td>
<td>28 VDC 0.1 A max.</td>
</tr>
<tr>
<td>Alarm indication LED</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Tamper output</td>
<td>N.C.</td>
<td>N.C.</td>
<td>N.C.</td>
</tr>
<tr>
<td>Day/night mode</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>International protection</td>
<td>IP55</td>
<td>IP55</td>
<td>IP55</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-30 to +60° C</td>
<td>-30 to +60° C</td>
<td>-30 to +60° C</td>
</tr>
<tr>
<td>Environmental humidity</td>
<td>95% max.</td>
<td>95% max.</td>
<td>95% max.</td>
</tr>
<tr>
<td>Dimensions (H x W x D mm)</td>
<td>201.5 x 91.7 x 86.3</td>
<td>201.5 x 91.7 x 86.3</td>
<td>200 x 81.2 x 81.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VXS-AM/RAM</th>
<th>VXS-RDAM</th>
<th>VXI-ST</th>
<th>VXI-AM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>PIR</td>
<td>PIR</td>
<td>PIR</td>
</tr>
<tr>
<td>Anti-Masking</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Coverage</td>
<td>12m 90° wide</td>
<td>12m 90° wide</td>
<td>12m 90° wide</td>
</tr>
<tr>
<td>Detection zones</td>
<td>Horizontal 8 pairs, vertical 2 layers</td>
<td>Horizontal 8 pairs, vertical 2 layers</td>
<td>Horizontal 8 pairs, vertical 2 layers</td>
</tr>
<tr>
<td>Mounting height</td>
<td>0.8 - 1.2m</td>
<td>0.8 - 1.2m</td>
<td>0.8 - 1.2m</td>
</tr>
<tr>
<td>Double-layered detection patterns</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Intelligent AND detection logic</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Pet immunity</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>SMDA logic</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Immunity switch</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Area masking method</td>
<td>Seal</td>
<td>Seal</td>
<td>Seal</td>
</tr>
<tr>
<td>Sensitivity adjustment</td>
<td>H / M / L</td>
<td>H / M / L</td>
<td>H / M / L</td>
</tr>
<tr>
<td>Advanced temperature compensation logic</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Pulse Count</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Power supply</td>
<td>3 to 9 V DC Lithium or Alkaline Battery</td>
<td>3 to 9 V DC Lithium or Alkaline Battery</td>
<td>9.5 - 18 VDC</td>
</tr>
<tr>
<td>Current consumption</td>
<td>10 µA standby / 4 mA max. at 3 V DC</td>
<td>18 mA at 12 VDC</td>
<td>20mA (max.)</td>
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<tr>
<td>Alarm indication LED</td>
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<td>✓</td>
<td>✓</td>
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<tr>
<td>Tamper output</td>
<td>N.C.</td>
<td>N.C.</td>
<td>N.C.</td>
</tr>
<tr>
<td>Day/night mode</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>International protection</td>
<td>IP55</td>
<td>IP55</td>
<td>IP55</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-20 to +60° C</td>
<td>-20 to +45° C</td>
<td>-30 to +60° C</td>
</tr>
<tr>
<td>Environmental humidity</td>
<td>95% max.</td>
<td>95% max.</td>
<td>95% max.</td>
</tr>
<tr>
<td>Dimensions (H x W x D mm)</td>
<td>199.3 x 81.6 x 109.3</td>
<td>199.3 x 81.6 x 109.3</td>
<td>181.9 x 70.9 x 64.5</td>
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</table>
### Environmental Humidity

- International protection
- Current consumption
- Power supply
- Pulse Count
- Sensitivity adjustment
- Immunity switch
- SMDA logic
- Intelligent AND detection logic
- Detection patterns
- Double-layered
- Mounting height
- Detection zones
- Coverage
- Detection method

### Tamper Output

- Alarm output
- Current consumption
- Power supply
- Pulse Count
- Sensitivity adjustment
- Immunity switch
- Pet immunity
- Intelligent AND detection logic
- Detection patterns

### Anti-Masking

- Detection method
- [N.O. or N.C.] are selectable

#### WXS-DAM: PIR & MW

- 23 mA max. at 12 VDC
- 10 V DC 0.01 A max.
- 199.3 x 81.6 x 109.3
- 201.5 x 91.7 x 86.3
- Horizontal 14 pairs, vertical 2 layers
- [Individual; Right/Left or General], [N.O. or N.C.] are selectable
- Pet immunity
- Solid state switch, 10 VDC 0.01 A max.

#### WXI-ST

- 9.5 - 18 VDC
- 95% max.
- Horizontal 14 pairs, vertical 2 layers

#### WXS-AM, WXS-RDAM

- 9.5 - 18 VDC
- 95% max.
- Horizontal 14 pairs, vertical 2 layers

#### WXI-AM

- 9.5 - 18 VDC
- 95% max.
- Horizontal 14 pairs, vertical 2 layers
- [Individual; Right/Left or General], [N.O. or N.C.] are selectable

#### WVX-AM

- 9.5 - 18 VDC
- 95% max.
- Horizontal 14 pairs, vertical 2 layers

#### WXI-RAM

- 9.5 - 18 VDC
- 95% max.
- Horizontal 14 pairs, vertical 2 layers

#### WXI-RDAM

- 9.5 - 18 VDC
- 95% max.
- Horizontal 14 pairs, vertical 2 layers

#### VXI-ST

- 9.5 - 18 VDC
- 95% max.
- Horizontal 14 pairs, vertical 2 layers

#### VXI-RM

- 9.5 - 18 VDC
- 95% max.
- Horizontal 14 pairs, vertical 2 layers

#### VXI-RDAM

- 9.5 - 18 VDC
- 95% max.
- Horizontal 14 pairs, vertical 2 layers
### PRODUCT SPECIFICATIONS

<table>
<thead>
<tr>
<th>BX5-ST</th>
<th>BX5-AM</th>
<th>BX5-R</th>
<th>BX5-RAM</th>
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<tr>
<td><strong>Detection method</strong></td>
<td>P26</td>
<td>P26</td>
<td>P27</td>
</tr>
<tr>
<td><strong>Anti-Masking</strong></td>
<td>—</td>
<td>—</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Coverage</strong></td>
<td>24m; 12m 180° narrow</td>
<td>24m; 12m 180° narrow</td>
<td>24m; 12m 180° narrow</td>
</tr>
<tr>
<td><strong>Detection zones</strong></td>
<td>4 zones; 2 zones on each side</td>
<td>4 zones; 2 zones on each side</td>
<td>4 zones; 2 zones on each side</td>
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<tr>
<td><strong>Mounting height</strong></td>
<td>0.8 - 1.2m</td>
<td>0.8 - 1.2m</td>
<td>0.8 - 1.2m</td>
</tr>
<tr>
<td><strong>Double-layered detection patterns</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Intelligent AND detection logic</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Pet immunity</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Tamper logic</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Area masking method</strong></td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Double conductive shielding</strong></td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Sensitivity adjustment</strong></td>
<td>H / M / L</td>
<td>H / M / L</td>
<td>H / M / L</td>
</tr>
<tr>
<td><strong>Advanced temperature compensation logic</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Pulse Count</strong></td>
<td>1 / 2</td>
<td>1 / 2</td>
<td>1 / 2</td>
</tr>
<tr>
<td><strong>Power supply</strong></td>
<td>9.5 - 18 VDC</td>
<td>9.5 - 18 VDC</td>
<td>3 to 9 V DC Lithium or Alkaline batteries</td>
</tr>
<tr>
<td><strong>Current consumption</strong></td>
<td>31mA (max.)</td>
<td>31mA (max.)</td>
<td>15 µA stand-by / 8 mA max. at 3 V DC</td>
</tr>
<tr>
<td><strong>Alarm output</strong></td>
<td>28 V DC 0.1 A max. [Individual; Right or General], [N.O. or N.C.] are selectable</td>
<td>28 V DC 0.1 A max. [Individual; Right or General], [N.O. or N.C.] are selectable</td>
<td>Solidstate switch, 10 V DC 0.01 A max. [Individual; Right or General], [N.O. or N.C.] are selectable</td>
</tr>
<tr>
<td><strong>Tamper indication LED</strong></td>
<td>N.C. 28 VDC 0.1A max, open when face cover main unit or base unit is removed</td>
<td>N.C. 28 VDC 0.1A max, open when face cover main unit or base unit is removed</td>
<td>Tamper output is shared with trouble output.</td>
</tr>
<tr>
<td><strong>Day/night mode</strong></td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>International protection</strong></td>
<td>IP55</td>
<td>IP55</td>
<td>IP55</td>
</tr>
<tr>
<td><strong>Operating temperature</strong></td>
<td>-30 to +60°C</td>
<td>-30 to +60°C</td>
<td>-30 to +60°C</td>
</tr>
<tr>
<td><strong>Environmental humidity</strong></td>
<td>95% max.</td>
<td>95% max.</td>
<td>95% max.</td>
</tr>
<tr>
<td><strong>Dimensions (H x W x D mm)</strong></td>
<td>199.7 x 92.8 x 52.7</td>
<td>199.7 x 92.8 x 52.7</td>
<td>199.7 x 92.8 x 98.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HX-80N</th>
<th>HX-40</th>
<th>HX-40A</th>
<th>HX-40D</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Detection method</strong></td>
<td>P33</td>
<td>P34</td>
<td>P34</td>
</tr>
<tr>
<td><strong>Anti-Masking</strong></td>
<td>✓</td>
<td>—</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Coverage</strong></td>
<td>24 x 2m narrow</td>
<td>12m 85° wide</td>
<td>12m 85° wide</td>
</tr>
<tr>
<td><strong>Detection zones</strong></td>
<td>20</td>
<td>94</td>
<td>94</td>
</tr>
<tr>
<td><strong>Mounting height</strong></td>
<td>2.5 - 3.0m</td>
<td>2.5 - 3.0m</td>
<td>2.5 - 3.0m</td>
</tr>
<tr>
<td><strong>Double-layered detection patterns</strong></td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Intelligent AND detection logic</strong></td>
<td>✓</td>
<td>—</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Pet immunity</strong></td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Tamper indication LED</strong></td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Immunity switch</strong></td>
<td>STD/Immunity</td>
<td>STD/Immunity</td>
<td>STD/Immunity</td>
</tr>
<tr>
<td><strong>Area masking method</strong></td>
<td>Plate and Flap</td>
<td>Seal</td>
<td>Seal</td>
</tr>
<tr>
<td><strong>Double conductive shielding</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Sensitivity adjustment</strong></td>
<td>H / M / L</td>
<td>H / M / L</td>
<td>H / M / L</td>
</tr>
<tr>
<td><strong>Advanced temperature compensation logic</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Pulse Count</strong></td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td><strong>Power supply</strong></td>
<td>3-7 VDC (Lithium battery)</td>
<td>9.5 - 18 VDC</td>
<td>9.5 - 18 VDC</td>
</tr>
<tr>
<td><strong>Current consumption</strong></td>
<td>30mA (at stand-by) 4mA (max.)</td>
<td>35mA max.</td>
<td>40mA max.</td>
</tr>
<tr>
<td><strong>Alarm output</strong></td>
<td>Selectable-Solid N.C./N.O. State Switch 10 VDC 0.01A (max)</td>
<td>Form C 28 VDC 0.2A max.</td>
<td>Form C 28 VDC 0.2A max.</td>
</tr>
<tr>
<td><strong>Tamper indication LED</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Day/night mode</strong></td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>International protection</strong></td>
<td>IP55</td>
<td>IP55</td>
<td>IP55</td>
</tr>
<tr>
<td><strong>Operating temperature</strong></td>
<td>-20 to +60°C</td>
<td>-20 to +60°C</td>
<td>-20 to +60°C</td>
</tr>
<tr>
<td><strong>Environmental humidity</strong></td>
<td>95% max.</td>
<td>95% max.</td>
<td>95% max.</td>
</tr>
<tr>
<td><strong>Dimensions (H x W x D mm)</strong></td>
<td>197.5 x 93 x 286</td>
<td>205 x 99 x 266</td>
<td>205 x 99 x 266</td>
</tr>
</tbody>
</table>
### PRODUCT SPECIFICATIONS

<table>
<thead>
<tr>
<th>BX-80N</th>
<th>BX-80NR</th>
<th>FTN-ST/AM</th>
<th>FTN-R/PT/RT/PT</th>
<th>HX-80N</th>
<th>HX-80NAM</th>
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<tbody>
<tr>
<td>P28</td>
<td>P29</td>
<td>P30</td>
<td>P31</td>
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<tr>
<td>—</td>
<td>—</td>
<td>FTN-AM: ✓</td>
<td>FTN-AM: ✓</td>
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</tr>
<tr>
<td>24m Narrow (12m on each side)</td>
<td>24m Narrow (12m on each side)</td>
<td>5 x 1m</td>
<td>5 x 1m</td>
<td>24 x 2m narrow</td>
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<tr>
<td>4 zones (2 on each side)</td>
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<td>20</td>
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<tr>
<td>0.8 - 1.2m</td>
<td>0.8 - 1.2m</td>
<td>0.8 - 1.2m</td>
<td>0.8 - 1.2m</td>
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<td>— —</td>
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</tr>
<tr>
<td>H / M / L</td>
<td>H / M / L</td>
<td>STD/LOW</td>
<td>STD/LOW</td>
<td>H / M / L</td>
<td>H / M / L</td>
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<td>✓ ✓</td>
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<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>10 - 28VDC</td>
<td>9.5 - 18VDC</td>
<td>3 - 9VDC (Lithium or Alkaline battery)</td>
<td>3 - 9VDC</td>
<td>3 - 9VDC</td>
<td>3 - 9VDC</td>
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<tr>
<td>38mA max.</td>
<td>10mA at stand-by</td>
<td>3mA max.</td>
<td>3mA max.</td>
<td>35mA max.</td>
<td>35mA max.</td>
</tr>
<tr>
<td>2 Outs: N.O./N.C. 28V 0.2A max.</td>
<td>Form C solid state switch 10VDC 0.01A max.</td>
<td>Selectable N.C./N.O. 28VDC 0.1A (max)</td>
<td>Selectable-Solid N.C./N.O. State Switch 10VDC 0.01A (max)</td>
<td>Selectable-Solid N.C./N.O. State Switch 10VDC 0.01A (max)</td>
<td>Selectable-Solid N.C./N.O. State Switch 10VDC 0.01A (max)</td>
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<td>✓ ✓ ✓ ✓</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓ ✓ ✓ ✓</td>
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</tr>
<tr>
<td>N.C.</td>
<td>Form C</td>
<td>N.C.</td>
<td>N.C.</td>
<td>N.C.</td>
<td>N.C.</td>
</tr>
<tr>
<td>— —</td>
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<tr>
<td>-20 to +50°C</td>
<td>-20 to +50°C</td>
<td>-20 to +60°C</td>
<td>-20 to +60°C</td>
<td>-20 to +50°C</td>
<td>-20 to +60°C</td>
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<tr>
<td>95% max.</td>
<td>95% max.</td>
<td>95% max.</td>
<td>95% max.</td>
<td>95% max.</td>
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<td>155 x 70 x 425.5</td>
<td>197.5 x 93 x 286</td>
<td>197.5 x 93 x 286</td>
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<table>
<thead>
<tr>
<th>HX-40RAM</th>
<th>QXI-5/DT</th>
<th>QXI-R/DT</th>
<th>LX-402</th>
<th>LX-602N</th>
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<tbody>
<tr>
<td>P35</td>
<td>P36</td>
<td>P37</td>
<td>P38</td>
<td>P38</td>
</tr>
<tr>
<td>PIR</td>
<td>QXI-ST: PIR</td>
<td>QXI-R: PIR</td>
<td>PIR</td>
<td>PIR</td>
</tr>
<tr>
<td>✓ ✓</td>
<td>✓ ✓</td>
<td>✓ ✓</td>
<td>✓ ✓</td>
<td>✓ ✓</td>
</tr>
<tr>
<td>12m 85° wide</td>
<td>12m 85° wide</td>
<td>12m 120° wide</td>
<td>12 x 15m</td>
<td>24 x 2m</td>
</tr>
<tr>
<td>2.5 - 3.0m</td>
<td>2.2 - 2.7m</td>
<td>2.2 - 2.7m</td>
<td>Multi-Level:2.5m max Pet Alley: 1.2-1.5m</td>
<td>Multi-Level:2.5m max Pet Alley: 1.2-1.5m</td>
</tr>
<tr>
<td>— —</td>
<td>— —</td>
<td>— —</td>
<td>— —</td>
<td>— —</td>
</tr>
<tr>
<td>STD/Immunity</td>
<td>STD/Immunity</td>
<td>STD/Immunity</td>
<td>— —</td>
<td>— —</td>
</tr>
<tr>
<td>Seal</td>
<td>Seal</td>
<td>Seal</td>
<td>— —</td>
<td>— —</td>
</tr>
<tr>
<td>H / M / L</td>
<td>H / M / L</td>
<td>H / M / L</td>
<td>H / M / L</td>
<td>H / M / L</td>
</tr>
<tr>
<td>✓ ✓</td>
<td>✓ ✓</td>
<td>✓ ✓</td>
<td>✓ ✓</td>
<td>✓ ✓</td>
</tr>
<tr>
<td>3 - 7.2VDC</td>
<td>9.5 - 16VDC</td>
<td>CR123A (3V DC)</td>
<td>10.8 - 13.2VDC</td>
<td>10.8 - 13.2VDC</td>
</tr>
<tr>
<td>4mA (max) 30µA (stand by)</td>
<td>20mA max. at 12VDC 30mA max. at 12VDC 9µA max. at 12VDC 16µA max. at 12VDC</td>
<td>25mA max.</td>
<td>25mA max.</td>
<td>25mA max.</td>
</tr>
<tr>
<td>Form C solid state switch 10VDC 0.01A max.</td>
<td>Form C 28VDC 0.1A max.</td>
<td>Form C 3VDC 0.01A max.</td>
<td>Form C 28VDC 0.02A max.</td>
<td>Form C 28VDC 0.02A max.</td>
</tr>
<tr>
<td>✓ ✓</td>
<td>✓ ✓</td>
<td>✓ ✓</td>
<td>✓ ✓</td>
<td>✓ ✓</td>
</tr>
<tr>
<td>IP54</td>
<td>IP54</td>
<td>IP54</td>
<td>IP54</td>
<td>IP54</td>
</tr>
<tr>
<td>-20 to +60°C</td>
<td>-20 to +60°C</td>
<td>-20 to +50°C</td>
<td>-20 to +50°C</td>
<td>-20 to +50°C</td>
</tr>
<tr>
<td>95% max.</td>
<td>95% max.</td>
<td>95% max.</td>
<td>95% max.</td>
<td>95% max.</td>
</tr>
<tr>
<td>205 x 99 x 266</td>
<td>144.5 x 78 x 59</td>
<td>144.5 x 78 x 83.5</td>
<td>141 x 74.8 x 53.5</td>
<td>141 x 74.8 x 57.5</td>
</tr>
</tbody>
</table>
CDX-AM/DAM

PIR DETECTOR COMPLIES WITH EN50131-2

CDX series is a flagship Optex product and carries on typical features such as quad zone logic, microwave area shaping technology (CDX-DAM only) and digital anti-masking technology.

- **CDX-AM** - active IR anti-masking model
- **CDX-DAM** - dual technology model with active IR anti-masking
  - CDX-DAM-X5: 10.525 GHz
  - CDX-DAM-X8: 10.587 GHz

### FEATURES

- Complies with EN50131-2-2 (CDX-AM only)
- Complies with EN50131-2-4 (CDX-DAM only)
- Digital quad zone logic
- Active IR digital anti-masking
- Tough microwave module (CDX-DAM only)
- Sharply-directed microwave technology
- Interchangeable main unit

### DIMENSIONS

CDX series is a flagship Optex product and carries on typical features such as quad zone logic, microwave area shaping technology (CDX-DAM only) and digital anti-masking technology.

- **CDX-AM** - active IR anti-masking model
- **CDX-DAM** - dual technology model with active IR anti-masking
  - CDX-DAM-X5: 10.525 GHz
  - CDX-DAM-X8: 10.587 GHz

### FEATURES

- Complies with EN50131-2-2 (CDX-AM only)
- Complies with EN50131-2-4 (CDX-DAM only)
- Digital quad zone logic
- Active IR digital anti-masking
- Tough microwave module (CDX-DAM only)
- Sharply-directed microwave technology
- Interchangeable main unit

### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>CDX-AM</th>
<th>CDX-DAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Passive Infrared</td>
<td>Passive Infrared &amp; Microwave</td>
</tr>
<tr>
<td>Detector standard</td>
<td>EN50131-2-2 (Grade 3)</td>
<td>EN50131-2-4 (Grade 3)</td>
</tr>
<tr>
<td>Masking detection method</td>
<td>AIR type</td>
<td>AIR type</td>
</tr>
<tr>
<td>PIR Coverage</td>
<td>15m x 15m</td>
<td>15m x 15m</td>
</tr>
<tr>
<td>(Detection zones)</td>
<td>85° wide (82 zones)</td>
<td>85° wide (82 zones)</td>
</tr>
<tr>
<td>Power supply</td>
<td>9 to 18 VDC</td>
<td>9 to 18 VDC</td>
</tr>
<tr>
<td>Current consumption</td>
<td>17mA (normal) / 20mA (max.) at 12 VDC</td>
<td>19mA (normal) / 26mA (max.) at 12 VDC</td>
</tr>
<tr>
<td>Alarm output</td>
<td>N.C. 28 VDC 0.2A max.</td>
<td>N.C. 28 VDC 0.2A max.</td>
</tr>
<tr>
<td>Tamper switch</td>
<td>N.C. opens when cover is removed or the wall tamper switch operates</td>
<td>N.C. opens when cover is removed or the wall tamper switch operates</td>
</tr>
<tr>
<td>Trouble output</td>
<td>N.C. 28 VDC 0.1A max.</td>
<td>N.C. 28 VDC 0.1A max.</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>10°C to +50°C</td>
<td>10°C to +50°C</td>
</tr>
<tr>
<td>Environmental humidity</td>
<td>95% max.</td>
<td>95% max.</td>
</tr>
<tr>
<td>RF interference</td>
<td>No alarm 180°m</td>
<td>No alarm 180°m</td>
</tr>
<tr>
<td>Mounting height</td>
<td>1.8 to 2.4m</td>
<td>1.8 to 2.4m</td>
</tr>
<tr>
<td>Weight</td>
<td>150g</td>
<td>180g</td>
</tr>
<tr>
<td>Dimensions (LxWxH)</td>
<td>140 mm x 70 mm x 52.3 mm</td>
<td>140 mm x 70 mm x 52.3 mm</td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.
CDX-NAM

PIR DETECTOR COMPLIES WITH EN50131-2-2

CDX-NAM is a Grade 3 narrow-focus PIR with a range of 2 x 24 meters. Both include many of the Optex tried-and-trusted features such as double conductive shielding and digital anti-masking technologies. Newly, it can support plug-in EoL (PEU) unit. This option can be compatible with a wide variety of control panels.

- CDX-NAM – long range model with anti-mask

**FEATURES**

- Complies with EN50131-2-2
- Digital quad zone logic
- Active IR digital anti-masking
- Double conductive shielding
- Interchangeable main unit

**DIMENSIONS**

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>CDX-NAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Passive infrared</td>
</tr>
<tr>
<td>Detector standard</td>
<td>EN50131-2-2 (Grade 3)</td>
</tr>
<tr>
<td>Masking detection method</td>
<td>AIR type</td>
</tr>
<tr>
<td>PIR Coverage (Detection zones)</td>
<td>24m x 2m</td>
</tr>
<tr>
<td>Power supply</td>
<td>9 to 18 VDC</td>
</tr>
<tr>
<td>Current consumption</td>
<td>17mA (normal) / 20mA (max.) at 12 VDC</td>
</tr>
<tr>
<td>Alarm output</td>
<td>N.C. 28 VDC 0.2A max.</td>
</tr>
<tr>
<td>Tamper switch</td>
<td>N.C. Opens when cover is removed or the wall tamper switch operates. 28 VDC 0.1A max.</td>
</tr>
<tr>
<td>Trouble output</td>
<td>N.C. 28 VDC 0.2A max.</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-10 to +50°C</td>
</tr>
<tr>
<td>Environmental humidity</td>
<td>95% max.</td>
</tr>
<tr>
<td>RF interference</td>
<td>No alarm 10V/m</td>
</tr>
<tr>
<td>Mounting height</td>
<td>1.8 to 2.4m</td>
</tr>
<tr>
<td>Weight</td>
<td>150g</td>
</tr>
<tr>
<td>Dimensions (HxWxD)</td>
<td>140 mm x 70 mm x 52.3 mm</td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.
The CX-702 series is designed to give extremely stable long-range detection performance in a variety of internal commercial and industrial applications.

- CX-702 – standard model
- CX-702MKII – double detection zones model

**FEATURES**
- Multi-focus technology
- Double conductive shielding
- Temperature compensation
- Sealed optics
- Spherical lens design
- Dual purpose optics: wide-angle or long-range
- 3-step lens angle adjustment

**DIMENSIONS**

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>CX-702MKII</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIR coverage</td>
<td>Wide: 21m x 21m 85° 68 zones, Long: 2.4m x 45m 22 zones</td>
</tr>
<tr>
<td>Detection zones</td>
<td>Wide: 136 zones, Long: 44 zones</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>1.6°C at 0.6m/sec, at 2.4m mounting height</td>
</tr>
<tr>
<td>Detectable speed</td>
<td>0.3 to 1.5m/sec</td>
</tr>
<tr>
<td>Power supply</td>
<td>9 to 16 VDC</td>
</tr>
<tr>
<td>Current consumption</td>
<td>11mA (max.) at 12 VDC</td>
</tr>
<tr>
<td>Alarm period</td>
<td>Approx. 2.5 sec</td>
</tr>
<tr>
<td>Alarm output</td>
<td>N.C, 28 VDC 0.24 max</td>
</tr>
<tr>
<td>Alarm interval</td>
<td>—</td>
</tr>
<tr>
<td>Tamper switch</td>
<td>N.C, opens when cover is removed 28 VDC 0.1A max</td>
</tr>
<tr>
<td>Pulse count</td>
<td>Approx. 20 sec. 2 or 4</td>
</tr>
<tr>
<td>Warm-up period</td>
<td>Approx. 60 sec</td>
</tr>
<tr>
<td>LED indicator</td>
<td>Alarm condition</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-20 to +30°C</td>
</tr>
<tr>
<td>Environmental humidity</td>
<td>95% max</td>
</tr>
<tr>
<td>RF interference</td>
<td>No Alarm 30V/m</td>
</tr>
<tr>
<td>Mounting height</td>
<td>1.5 to 3.6 m</td>
</tr>
<tr>
<td>Weight</td>
<td>200 g</td>
</tr>
<tr>
<td>Dimensions (H x W x D)</td>
<td>140 mm x 100 mm x 69 mm</td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.

- CA-1W: Multi-angle wall mounting bracket
- CA-2C: Multi-angle ceiling mounting bracket
The CX-702 series is designed to give extremely stable long-range detection performance in a variety of internal commercial and industrial applications.

- CX-702RS – low current battery operated model

**FEATURES**

- Multi-focus technology
- Double conductive shielding
- Temperature compensation
- Sealed optics
- Spherical lens design
- Dual purpose optics: wide-angle or long-range
- 3-step lens angle adjustment

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>CX-702RS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIR coverage</td>
<td>Wide: 21m x 21m x 21m 68 zones</td>
</tr>
<tr>
<td></td>
<td>Long: 2.4m x 45m x 22 zones</td>
</tr>
<tr>
<td>Detection zones</td>
<td>Wide: 68 zones, Long: 22 zones</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>1.6°C at 0.6m/sec. at 2.4m mounting height</td>
</tr>
<tr>
<td>Detectable speed</td>
<td>0.3 to 1.5m/sec.</td>
</tr>
<tr>
<td>Power supply</td>
<td>3 to 9 VDC alkaline battery or lithium battery</td>
</tr>
<tr>
<td>Current consumption</td>
<td>10mA (standby), 10mA (walktest, LED on)</td>
</tr>
<tr>
<td>Alarm period</td>
<td>Approx. 2.5 sec.</td>
</tr>
<tr>
<td>Alarm output</td>
<td>Form C 10 VDC 0.01A max.</td>
</tr>
<tr>
<td>Alarm interval</td>
<td>Succeeding signals are not output even though detection occurs within 2 min. after the first alarm.</td>
</tr>
<tr>
<td>Tamper switch</td>
<td>Form C 28 VDC 0.1A max.</td>
</tr>
<tr>
<td>Pulse count</td>
<td>Approx. 20 sec. 2 or 4</td>
</tr>
<tr>
<td>Warm-up period</td>
<td>Approx. 90 sec.</td>
</tr>
<tr>
<td>LED indicator</td>
<td>Alarm condition</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-20 to +50°C</td>
</tr>
<tr>
<td>Environmental humidity</td>
<td>95% max.</td>
</tr>
<tr>
<td>RF interference</td>
<td>No Alarm 20V/m</td>
</tr>
<tr>
<td>Mounting height</td>
<td>1.3 to 3.6 m</td>
</tr>
<tr>
<td>Weight</td>
<td>200 g</td>
</tr>
<tr>
<td>Dimensions (H x W x D)</td>
<td>140 mm x 100 mm x 69 mm</td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice. Batteries and wireless transmitters are not included in these products.
The MX series combines state-of-the-art micro-wave and PIR technologies in attractive, easy-to-install units and underlines Optex’s absolute commitment to provide detectors with unprecedented reliability and detection performance at very reasonable prices.

### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Feature</th>
<th>MX-40QZ/40PT</th>
<th>MX-50QZ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coverage</td>
<td>12m x 12m 85° wide</td>
<td>15m x 15m 85° wide</td>
</tr>
<tr>
<td>Detection zones</td>
<td>78 zones (PIR)</td>
<td></td>
</tr>
<tr>
<td>Sensitivity</td>
<td>2°C at 0.6m/sec.</td>
<td></td>
</tr>
<tr>
<td>Detectable speed</td>
<td>0.3m - 1.5m/sec.</td>
<td></td>
</tr>
<tr>
<td>Power supply</td>
<td>9.5 - 10V DC</td>
<td></td>
</tr>
<tr>
<td>Current consumption</td>
<td>18mA (max.) at 12V DC</td>
<td>20mA (max.) at 12V DC</td>
</tr>
<tr>
<td>Alarm period</td>
<td>Approx. 2.5 sec.</td>
<td></td>
</tr>
<tr>
<td>Alarm output</td>
<td>N.C., 28V DC 0.2A max</td>
<td></td>
</tr>
<tr>
<td>Tamper switch</td>
<td>N.C., opens when cover is removed N.C., 28V DC 0.1A max</td>
<td></td>
</tr>
<tr>
<td>Pulse count</td>
<td>Approx 20 sec. 2 or 4</td>
<td></td>
</tr>
<tr>
<td>Warm-up period</td>
<td>Approx. 60 sec.</td>
<td></td>
</tr>
<tr>
<td>LED indicator</td>
<td>Alarm condition</td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-10 - +55°C</td>
<td></td>
</tr>
<tr>
<td>Environmental humidity</td>
<td>95% max.</td>
<td></td>
</tr>
<tr>
<td>Micro-wave frequency</td>
<td>2.45GHz (FCC, IC, ETS300-440 approval)</td>
<td></td>
</tr>
<tr>
<td>RF interference</td>
<td>No Alarm 20V/m</td>
<td></td>
</tr>
<tr>
<td>Mounting height</td>
<td>1.5 m - 2.4 m</td>
<td>1.8 m - 2.4 m</td>
</tr>
<tr>
<td>Weight</td>
<td>110 g</td>
<td></td>
</tr>
<tr>
<td>Dimensions (H x W x D)</td>
<td>115 mm x 62 mm x 50 mm</td>
<td></td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.

### FEATURES

- Quad zone logic
- Spherical lens design
- Anti-crosstalk technology (micro-wave)
- Noise reduction circuit

### OPTIONS

- FA-3: Wall and ceiling mounting bracket
FMX-ST/DST/DT

PIR DETECTOR COMPLIES WITH EN50131-2

FMX series is high performance PIR indoor detector for high-end residential and light commercial installation. OPTEX new plug-in end of line unit (PEU) helps you for easy and quick installation.

- **FMX-ST** – standard model (Grade 2)
- **FMX-DST** – standard model with double conductive filter (Grade 2)
- **FMX-DT** – dual technology model (Grade 2)
  - FMX-DT-X5 – 10.525 GHz
  - FMX-DT-X8 – 10.587 GHz

**FEATURES**

- Complies with EN50131-2-2 (FMX-ST/DST only)
- Complies with EN50131-2-4 (FMX-DT only)
- Double conductive filter (FMX-DST only)
- Digital quad zone logic
- Silent output
- Advanced sealed optics
- Advanced temperature compensation logic
- Remote LED control
- Selectable plug-in end of line unit (option)
- Microwave area shaping technology

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>FMX-ST/DST</th>
<th>FMX-DT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Passive infrared</td>
<td>Passive infrared</td>
</tr>
<tr>
<td>Detector standard</td>
<td>EN50131-2-2 (Grade 2)</td>
<td>EN50131-2-4 (Grade 2)</td>
</tr>
<tr>
<td>Coverage</td>
<td>15 m x 15 m 85˚wide</td>
<td></td>
</tr>
<tr>
<td>Detection zones</td>
<td>78 zones</td>
<td></td>
</tr>
<tr>
<td>Mounting height</td>
<td>2.2 to 3.6 m</td>
<td></td>
</tr>
<tr>
<td>LED alarm indicator</td>
<td>Switchable ON/OFF</td>
<td></td>
</tr>
<tr>
<td>Alarm period</td>
<td>Approx. 2.5 sec</td>
<td></td>
</tr>
<tr>
<td>Alarm output</td>
<td>N.C., 24 VDC 0.2 A max.</td>
<td></td>
</tr>
<tr>
<td>Tamper switch</td>
<td>N.C., Open when cover is removed</td>
<td></td>
</tr>
<tr>
<td>Tamper output</td>
<td>28 VDC 0.1 A max.</td>
<td></td>
</tr>
<tr>
<td>PIR Sensitivity/range</td>
<td>Switchable LOW/MID/HI</td>
<td>Switchable LOW/MID/HI</td>
</tr>
<tr>
<td>Microwave sensitivity/range</td>
<td>Switchable LOW/SHORT</td>
<td>Switchable LOW/SHORT</td>
</tr>
<tr>
<td>Warm-up period</td>
<td>Approx. 60 sec LED blinks</td>
<td></td>
</tr>
<tr>
<td>Power input</td>
<td>9.5 to 16 VDC</td>
<td></td>
</tr>
<tr>
<td>Current draw</td>
<td>8 mA (normal), 11 mA (max.) at 12 VDC</td>
<td>12 mA (normal), 15 mA (max.) at 12 VDC</td>
</tr>
<tr>
<td>Dimensions (H x W x D)</td>
<td>117.7 mm x 61.4 mm x 50.0 mm</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>100 g</td>
<td>120 g</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-20 to +150˚C</td>
<td>-20 to +45˚C</td>
</tr>
<tr>
<td>Environmental humidity</td>
<td>95% max.</td>
<td>No alarm 10°/min</td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.
RX-CORE series successfully take over a leadership position built by authentic RX-40 series and is now with newly implemented technologies in pursuit of higher satisfaction.

- **RXC-ST** – standard model (Grade 2)
- **RXC-DT** – dual technology model (Grade 2)

  - RXC-DT-X5 : 10.525 GHz
  - RXC-DT-X8 : 10.587 GHz

**FEATURES**
- Complies with EN50131-2-2 (RXC-ST only)
- Complies with EN50131-2-4 (RXC-DT only)
- Digital quad zone logic
- Silent output
- Multi angle bracket
- Advanced sealed optics
- Spherical lens design
- Advanced temperature compensation logic

**COVERAGE**

**DIMENSIONS**

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>RXC-ST</th>
<th>RXC-DT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Passive infrared</td>
<td>Passive infrared &amp; Microwave</td>
</tr>
<tr>
<td>Coverage</td>
<td>12m x 12m 80° wide</td>
<td></td>
</tr>
<tr>
<td>Detection zones</td>
<td>78 zones</td>
<td></td>
</tr>
<tr>
<td>Mounting height</td>
<td>1.5 to 2.4m</td>
<td></td>
</tr>
<tr>
<td>LED alarm indicator</td>
<td>Switchable ON/OFF</td>
<td></td>
</tr>
<tr>
<td>Alarm period</td>
<td>Approx. 3 sec</td>
<td></td>
</tr>
<tr>
<td>Alarm output</td>
<td>N.C., 24 VDC 0.2A max.</td>
<td>N.C., 28 VDC 0.2A max.</td>
</tr>
<tr>
<td>Tamper switch</td>
<td>N.C., open when cover is removed.</td>
<td>N.C., open when cover is removed.</td>
</tr>
<tr>
<td>Tamper output</td>
<td>24 VDC 0.1A max.</td>
<td></td>
</tr>
<tr>
<td>PIR sensitivity/range</td>
<td>Switchable LOW/MED/HI</td>
<td></td>
</tr>
<tr>
<td>Microwave sensitivity/range</td>
<td>Switchable LONG/SHORT</td>
<td></td>
</tr>
<tr>
<td>Warm up period</td>
<td>Approx. 30 sec</td>
<td>Approx. 60 sec</td>
</tr>
<tr>
<td>Power input</td>
<td>9.5 to 16 VDC</td>
<td></td>
</tr>
<tr>
<td>Current draw</td>
<td>8mA(normal), 11mA(max) at 12 VDC</td>
<td>2mA(normal), 15mA(max) at 12 VDC</td>
</tr>
<tr>
<td>Current consumption</td>
<td>12mA (normal), 15mA (max) at 12 VDC</td>
<td></td>
</tr>
<tr>
<td>Dimensions (H x W x D)</td>
<td>93.4mm x 61.4mm x 46.0mm</td>
<td>93.4mm x 61.4mm x 46.0mm</td>
</tr>
<tr>
<td>Weight</td>
<td>Approx. 70g (with bracket: 90g)</td>
<td>Approx. 90g (with bracket: 110g)</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>20 to +50°C</td>
<td>20 to +45°C</td>
</tr>
<tr>
<td>Environmental humidity</td>
<td>95% max.</td>
<td></td>
</tr>
<tr>
<td>RF interference</td>
<td>No alarm 10W/m</td>
<td></td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.
RXC-R series is designed for wireless peripheral device adapting to wireless network. This series is unequipped for transmitters. You utilized this motion sensing solution once you put an existing radio transmitter into RXC-R series.

- **RXC-RST** – battery operated model
- **RXC-RDT** – battery operated dual technology model

- **RXC-RDT-X5** : 10.525 GHz

**FEATURES**
- Can accommodate most wireless transmitters available on the market
- Digital quad zone logic
- Tough MW module (RXC-RDT only)
- Long battery life CR123A (3 VDC, 1300mAh)
- Approx. 5 years
- Can accommodate most wireless transmitters available on the market

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>RXC-RST</th>
<th>RXC-RDT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Passive Infrared</td>
<td>Passive Infrared and Micro Wave</td>
</tr>
<tr>
<td>Coverage</td>
<td>12 m x 12 m (40 ft x 40 ft) 85° wide</td>
<td>12 m x 24 m (40 ft x 79 ft) 85° wide</td>
</tr>
<tr>
<td>Detection zones</td>
<td>78 zones</td>
<td>78 zones</td>
</tr>
<tr>
<td>Mounting height</td>
<td>1.5 to 2.4 m (5 to 8 ft)</td>
<td>1.5 to 2.4 m (5 to 8 ft)</td>
</tr>
<tr>
<td>Alarm period</td>
<td>Approx. 2.5 sec</td>
<td>Approx. 2.5 sec</td>
</tr>
<tr>
<td>Alarm output</td>
<td>0.01 A max. (Operating voltage)</td>
<td>0.01 A max. (Operating voltage)</td>
</tr>
<tr>
<td>Tamper switch</td>
<td>Switchable OFF/OFF</td>
<td>Switchable LOW/MID/HI/SuperHI</td>
</tr>
<tr>
<td>Tamper output</td>
<td>-</td>
<td>Switchable LONG/SHORT</td>
</tr>
<tr>
<td>PIR sensitivity/range</td>
<td>12m (normal), 15mA (max.) at 12 VDC</td>
<td>12m (normal), 15mA (max.) at 12 VDC</td>
</tr>
<tr>
<td>Microwave sensitivity/range</td>
<td>97.2 mm x 65.2 mm x 78.5 mm (HWD)</td>
<td>97.2 mm x 65.2 mm x 78.5 mm (HWD)</td>
</tr>
<tr>
<td>Weight</td>
<td>Approx. 145 g</td>
<td>Approx. 160 g</td>
</tr>
<tr>
<td>Environment humidity</td>
<td>95% max.</td>
<td>95% max.</td>
</tr>
<tr>
<td>RF interference</td>
<td>No alarm 100 m</td>
<td>No alarm 100 m</td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.
The RX series gives extremely high false alarm protection with excellent tolerance to spot temperature changes from curtains, small animals, and pet.

- RX-40QZ – small animal immunity model
- RX-40PT – Pet Tolerance model

**FEATURES**
- Quad zone logic
- Spherical lens design
- Temperature compensation
- Sealed optics
- Selectable pulse count (2 or 4)

**DIMENSIONS**

- **Model:** RX-40QZ/PT
- **PIR coverage:** 12m x 12m 85˚ wide
- **Detection zones:** 78 zones
- **Sensitivity:** 2˚C at 0.6m/sec.
- **Detectable speed:** 0.3m - 1.5m/sec.
- **Power supply:** 9.5 - 16 VDC
- **Current consumption:** 1mA (max.) at 12 VDC
- **Alarm period:** Approx. 6.5 sec.
- **Alarm output:** N.C. 28 VDC 0.2A max.
- **Tamper switch:** N.C. opens when cover is removed
- **Pulse count:** Approx. 30 sec. 2 or 4
- **Warm-up period:** Approx. 30 sec.
- **LED indicator:** Alarm condition
- **Operating temperature:** -20˚C to +50˚C
- **Environmental humidity:** 95% max.
- **RF interference:** No Alarm 20V/m
- **Mounting height:** 1.5 m - 2.4 m
- **Weight:** 70 g
- **Dimensions:** 97 mm x 62 mm x 44 mm
- **Coverage:** 18 m x 1.8 m long range

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>RX-40QZ/PT</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIR coverage</td>
<td>12m x 12m 85˚ wide</td>
</tr>
<tr>
<td>Detection zones</td>
<td>78 zones</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>2˚C at 0.6m/sec.</td>
</tr>
<tr>
<td>Detectable speed</td>
<td>0.3m - 1.5m/sec.</td>
</tr>
<tr>
<td>Power supply</td>
<td>9.5 - 16 VDC</td>
</tr>
<tr>
<td>Current consumption</td>
<td>1mA (max.) at 12 VDC</td>
</tr>
<tr>
<td>Alarm period</td>
<td>Approx. 6.5 sec.</td>
</tr>
<tr>
<td>Alarm output</td>
<td>N.C. 28 VDC 0.2A max.</td>
</tr>
<tr>
<td>Tamper switch</td>
<td>N.C. opens when cover is removed</td>
</tr>
<tr>
<td>Pulse count</td>
<td>Approx. 30 sec. 2 or 4</td>
</tr>
<tr>
<td>Warmp-up period</td>
<td>Approx. 30 sec.</td>
</tr>
<tr>
<td>LED indicator</td>
<td>Alarm condition</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-20˚C to +50˚C</td>
</tr>
<tr>
<td>Environmental humidity</td>
<td>95% max.</td>
</tr>
<tr>
<td>RF interference</td>
<td>No Alarm 20V/m</td>
</tr>
<tr>
<td>Mounting height</td>
<td>1.5 m - 2.4 m</td>
</tr>
<tr>
<td>Weight</td>
<td>70 g</td>
</tr>
<tr>
<td>Dimensions (H x W x D)</td>
<td>97 mm x 62 mm x 44 mm</td>
</tr>
<tr>
<td>Coverage</td>
<td>18 m x 1.8 m long range</td>
</tr>
<tr>
<td>Detection zones</td>
<td>20 zones</td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.
SX-360Z

360˚ CEILING-MOUNT PIR DETECTOR WITH 276 HIGH DENSITY DETECTION ZONES

The SX-360 series ceiling-mount detector, with its unique zoom function and highly dense, triple-element detection pattern, provides unsurpassed detection performance at any ceiling height up to 5 meters.

- **SX-360Z** – standard model with double conductive shielding

**FEATURES**
- Double conductive shielding
- Multi-focus optics
- Highly dense coverage (276 zones)
- Zoom function/ pattern adjustment
- Temperature protection
- Noise reduction circuit
- LED remote control terminal

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>SX-360Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIR coverage</td>
<td>ø18 m 360˚ zoom</td>
</tr>
<tr>
<td>Detection zones</td>
<td>276 zones</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>1.6 °C at 0.6 m/sec. at 2.4 m mounting height</td>
</tr>
<tr>
<td>Detectable speed</td>
<td>0.3 m to 1.6 m/sec.</td>
</tr>
<tr>
<td>Power supply</td>
<td>185 VDC</td>
</tr>
<tr>
<td>Alarm period</td>
<td>2.0 ± 0.5 sec.</td>
</tr>
<tr>
<td>Alarm output</td>
<td>N.C., 28 VDC, 0.2 A max.</td>
</tr>
<tr>
<td>Tamper switch</td>
<td>N.C., opens when cover is removed: 30 VDC, 0.1 A max.</td>
</tr>
<tr>
<td>Pulse count</td>
<td>20 ± 5 sec. 1, 2 or 4</td>
</tr>
<tr>
<td>Warm-up period</td>
<td>Approx. 20 sec. (LED blinks)</td>
</tr>
<tr>
<td>Alarm condition</td>
<td>Approx. 20 sec. (LED blinks)</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-20°C to +50°C</td>
</tr>
<tr>
<td>Environmental humidity</td>
<td>95% max.</td>
</tr>
<tr>
<td>RF interference</td>
<td>No alarm 30 V/m</td>
</tr>
<tr>
<td>Mounting height</td>
<td>2.4 to 5.0 m</td>
</tr>
<tr>
<td>Weight</td>
<td>224 g</td>
</tr>
<tr>
<td>Dimensions (H x W x D)</td>
<td>ø128 mm x 67 - 73 mm</td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.
The FX-360 ceiling-mount detector with its unique, highly durable spherical lens offers unparalleled 360° detection performance.

FEATURES
- Spherical Lens design
- RFI protection
- Temperature protection
- Noise reduction circuit
- Selectable pulse count (2 or 4)
- LED remote control terminal

COVERAGE

N.B. For ceiling mounting only

DIMENSIONS

SPECIFICATIONS

- Specifications and design are subject to change without prior notice.
OPTIONS

**FA-3**

Mult Angle Wall & Ceiling Mount Bracket
For
- CDX-DAM/NAM/AM
- FMX-DT
- RXC-RST
- RX-40QZ
- MX-40PT

**FA-1W**

Mult Angle Wall Mount Bracket
For
- CDX-DAM/NAM/AM

**CA-1W**

Mult Angle Wall Mount Bracket
For
- CX-702/702RS/702MKII

**CA-2C**

Mult Angle Ceiling Mount Bracket
For
- CX-702/702RS/702MKII

**BA-70**

Transmitter Backbox
For
- CX-702RS

**FL-60N LENS**

Long Range Lens
For
- RXC-ST
- RXC-RST
- RX-40QZ

**PEU-B/C/D/E/F/G/H/I/J/K**

Selectable plug in end of line unit for
- CDX-DAM/NAM/AM
- FMX-ST/DST
- FMX-DT

<table>
<thead>
<tr>
<th>Item</th>
<th>Trouble</th>
<th>Alarm</th>
<th>Tamper</th>
<th>Panels</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEU-B</td>
<td>6.0K</td>
<td>4.7K</td>
<td>4.7K</td>
<td>Old GE/Kitech</td>
</tr>
<tr>
<td>PEU-C</td>
<td>12.0K</td>
<td>1.0K</td>
<td>1.0K</td>
<td>Honeywell Galaxy (U.K.)</td>
</tr>
<tr>
<td>PEU-D</td>
<td>3.0K</td>
<td>1.0K</td>
<td>1.0K</td>
<td>Honeywell Galaxy (Belg.)</td>
</tr>
<tr>
<td>PEU-E</td>
<td>15.0K</td>
<td>1.0K</td>
<td>1.0K</td>
<td>Satel</td>
</tr>
<tr>
<td>PEU-F</td>
<td>5.6K</td>
<td>5.6K</td>
<td>5.6K</td>
<td>DSC</td>
</tr>
<tr>
<td>PEU-G</td>
<td>8.2K</td>
<td>8.2K</td>
<td>8.2K</td>
<td>Guardall</td>
</tr>
<tr>
<td>PEU-H</td>
<td>2.2K</td>
<td>4.7K</td>
<td>2.2K</td>
<td>Old Texecom, Cooper, Scantronics etc.</td>
</tr>
<tr>
<td>PEU-I</td>
<td>1.0K</td>
<td>3.3K</td>
<td>3.3K</td>
<td>New Texecom, Network, Itron</td>
</tr>
<tr>
<td>PEU-J</td>
<td>12.0K</td>
<td>6.8K</td>
<td>4.7K</td>
<td>Risco ProSYS</td>
</tr>
<tr>
<td>PEU-K</td>
<td>2.2K</td>
<td>1.0K</td>
<td>1.0K</td>
<td>Siemens SPC</td>
</tr>
</tbody>
</table>

No warranty is given as to the fitness of this option with noted above manufacture's product.
Please check on specifications of a control panel before you buy this option.
Some models do not have a trouble output.
## PRODUCT SPECIFICATIONS

<table>
<thead>
<tr>
<th>CDX-DAM</th>
<th>CDX-AM</th>
<th>CDX-NAM</th>
<th>CX-702</th>
<th>CX-702MKII</th>
<th>CX-702RS</th>
<th>MX-40QZ</th>
<th>MX-40PT</th>
</tr>
</thead>
<tbody>
<tr>
<td>P46</td>
<td>P46</td>
<td>P47</td>
<td>P48</td>
<td>P48</td>
<td>P49</td>
<td>P50</td>
<td>P50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Detection method</th>
<th>PIR &amp; MW</th>
<th>PIR</th>
<th>PIR</th>
<th>PIR</th>
<th>PIR</th>
<th>PIR &amp; MW</th>
<th>PIR &amp; MW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coverage</td>
<td>15 x 15m</td>
<td>15 x 15m</td>
<td>24 x 2m</td>
<td>21 x 21m</td>
<td>21 x 21m</td>
<td>21 x 21m</td>
<td>12 x 12m</td>
</tr>
<tr>
<td>Dual purpose lens / long range</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>45 x 2.4m</td>
<td>45 x 10m</td>
<td>45 x 2.4m</td>
<td>—</td>
</tr>
<tr>
<td>Optional lens / Detection range</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Detection zones</td>
<td>82</td>
<td>82</td>
<td>20</td>
<td>Wide : 68</td>
<td>Wide : 136</td>
<td>Wide : 68</td>
<td>78</td>
</tr>
<tr>
<td>Mounting height</td>
<td>1.8 to 2.4m</td>
<td>1.8 to 2.4m</td>
<td>1.8 to 2.4m</td>
<td>1.5 to 3.6m</td>
<td>1.5 to 3.6m</td>
<td>1.5 to 3.6m</td>
<td>1.5 - 2.4m</td>
</tr>
<tr>
<td>Wall mount bracket</td>
<td>FA-3 / FA-1W</td>
<td>FA-3 / FA-1W</td>
<td>FA-3 / FA-1W</td>
<td>CA-1W</td>
<td>CA-1W</td>
<td>CA-1W</td>
<td>FA-3</td>
</tr>
<tr>
<td>Ceiling mount bracket</td>
<td>FA-3</td>
<td>FA-3</td>
<td>FA-3</td>
<td>CA-2C</td>
<td>CA-2C</td>
<td>CA-2C</td>
<td>FA-3</td>
</tr>
<tr>
<td>Multi-focus optics</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>—</td>
</tr>
<tr>
<td>Quad zone logic optics</td>
<td>✓ Digital</td>
<td>✓ Digital</td>
<td>✓ Digital</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>3</td>
</tr>
<tr>
<td>Zoom function</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>PIR sensitivity adjustment</td>
<td>H / ST</td>
<td>H / ST</td>
<td>H / ST</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>MW sensitivity adjustment</td>
<td>H / M / L</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Distance selector switch</td>
<td>Short/Long</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>Short/Long</td>
</tr>
<tr>
<td>Double conductive shielding</td>
<td>—</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>—</td>
</tr>
<tr>
<td>Temperature compensation circuit</td>
<td>✓ Advanced</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>3</td>
</tr>
<tr>
<td>Pulse count</td>
<td>STD / SP</td>
<td>STD / SP</td>
<td>STD / SP</td>
<td>2 / 4</td>
<td>2 / 4</td>
<td>2 / 4</td>
<td>2 / 4</td>
</tr>
<tr>
<td>Power supply</td>
<td>9 to 18 VDC</td>
<td>9 to 18 VDC</td>
<td>9 to 18 VDC</td>
<td>9.5 to 16 VDC</td>
<td>9.5 to 16 VDC</td>
<td>9 to 9V alkaline or lithium battery</td>
<td>9.5 - 16VDC</td>
</tr>
<tr>
<td>Current consumption</td>
<td>26mA max.</td>
<td>20mA max.</td>
<td>20mA max.</td>
<td>11 mA (max.) at 12 VDC</td>
<td>11 mA (max.) at 12 VDC</td>
<td>5 μA (standby)</td>
<td>18mA max.</td>
</tr>
<tr>
<td>Alarm output</td>
<td>N.C. 28 VDC 0.2A max.</td>
<td>N.C. 28 VDC 0.2A max.</td>
<td>N.C. 28 VDC 0.2A max.</td>
<td>N.C. 28 VDC 0.1 A max.</td>
<td>N.C. 28 VDC 0.1 A max.</td>
<td>Form C 28 VDC 0.1 A max.</td>
<td>N.C. 28 VDC 0.2A max.</td>
</tr>
<tr>
<td>Anti-masking function</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Self test</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Trouble output</td>
<td>N.C. 28 VDC 0.2A max.</td>
<td>N.C. 28 VDC 0.2A max.</td>
<td>N.C. 28 VDC 0.2A max.</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Tamper</td>
<td>—</td>
<td>✓</td>
<td>✓</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Remote LED control</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Alarm memory</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Initial alarm memory</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-10 to +50°C</td>
<td>-10 to +50°C</td>
<td>-10 to +50°C</td>
<td>-20 to +50°C</td>
<td>-20 to +50°C</td>
<td>-10 to +50°C</td>
<td>-10 to +55°C</td>
</tr>
<tr>
<td>Environmental humidity</td>
<td>95% max.</td>
<td>95% max.</td>
<td>95% max.</td>
<td>95% max.</td>
<td>95% max.</td>
<td>95% max.</td>
<td>95% max.</td>
</tr>
<tr>
<td>Dimensions (H x W x D mm)</td>
<td>140 x 70 x 52.3</td>
<td>140 x 70 x 52.3</td>
<td>140 x 70 x 52.3</td>
<td>140 x 100 x 69</td>
<td>140 x 100 x 69</td>
<td>140 x 100 x 69</td>
<td>115 x 62 x 50</td>
</tr>
</tbody>
</table>

For residential ✓ ✓ ✓ ✓ 3 3
For light commercial ✓ ✓ ✓ ✓ 3 3
For commercial ✓ ✓ ✓ ✓ ✓ ✓ — —
For industrial ✓ ✓ ✓ ✓ ✓ ✓ — —
For wire security system ✓ ✓ ✓ ✓ ✓ ✓ — —
<table>
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<th>MX-50QZ</th>
<th>FMX-ST/DST</th>
<th>FMX-DT</th>
<th>RXC-ST</th>
<th>RXC-DT</th>
<th>RXC-RST</th>
<th>RXC-RDT</th>
<th>RX-40QZ/PT</th>
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**PRODUCT SPECIFICATIONS**

**OUTDOOR PROTECTION**

**INDOOR PROTECTION**

**REDWALL**

**ACCESS CONTROL**

**TECHNICAL INFORMATION**
**SIP-3020/4010/404**

**SYNTHESIZED INTELLIGENT PIR**

The SIP-3020, SIP-4010, and SIP-404 detectors in the REDWALL-V Series are designed for use in small and mid-sized outdoor areas. They have an intelligent detection system that uses data on the ambient environment, such as temperature and illuminance conditions, to automatically adjust the sensitivity.

**FEATURES**

- Intelligent PIR Detection System
  - Detection of ambient temperature and illuminance for automatic sensitivity management
  - Advanced detection algorithm
  - Three dual pyro-elements with Double Conductive Shielding
- Anti-vandalism functions
  - Anti-rotation function with 3-axis accelerometer
  - Anti-masking function with photo-beam
  - Reinforced polycarbonate housing
  - Max. 4m (13ft.) installation height
- Independent sensitivity selector for near/far areas
- Detection logic selector
- Detection range selector
- Independent N.C. and N.O. outputs
- Adjustable alarm interval time

**SPECIFICATIONS**

| Model      | Detection method         | PIR coverage (main area) | PIR coverage (creep zone) | Sensitivity selector | Range selector | Detection logic selector | Alarm interval period | Power input                  | Current draw                  | Alarm period                  | Warm-up period              | Alarm output         | Trouble output | Temper output | Operating temperature | International protection | Mounting height | Weight      |
|------------|--------------------------|--------------------------|---------------------------|----------------------|------------------|--------------------------|------------------------|---------------------------|------------------------------|----------------------------|------------------------|-----------------|---------------|-------------------|--------------------------|----------------|-------------|
| SIP-3020   | Passive infrared         | 30 x 20 m                | -                         | Far, SH/H/M/L        | Near, SH/H/M/L   | AND/ OR                  | Off/15, 30, 60 sec      | 11-26VDC, 22-26VAC, 22-26VDC/AC with optional heating unit | 40mA max (12VDC) 75mA max (24VAC) 415mA max (24VAC) with optional heating unit | Off/15, 30, 60 sec      | Approx. 60 sec     | N.C., 28 VDC O.2A max | -25 to +60°C with optional heating unit | Main unit: IP65, Chassis: IP55 | 2.3 to 4 m (7.6 to 13 ft) | 1.2 kg (42 oz) |
| SIP-4010   |                          | 40 x 10 m                | -                         | Far, SH/H/M/L        | Near, SH/H/M/L   | AND/ OR                  | Off/15, 30, 60 sec      | 11-26VDC, 22-26VAC, 22-26VDC/AC with optional heating unit | 40mA max (12VDC) 75mA max (24VAC) 415mA max (24VAC) with optional heating unit | Off/15, 30, 60 sec      | Approx. 60 sec     | N.C., 28 VDC 0.2 A max | -25 to +60°C with optional heating unit | Main unit: IP65, Chassis: IP55 | 2.3 to 4 m (7.6 to 13 ft) | 1.2 kg (42 oz) |
| SIP-404    |                          | 40 x 4 m                 | -                         | Far, SH/H/M/L        | Near, SH/H/M/L   | AND/ OR                  | Off/15, 30, 60 sec      | 11-26VDC, 22-26VAC, 22-26VDC/AC with optional heating unit | 40mA max (12VDC) 75mA max (24VAC) 415mA max (24VAC) with optional heating unit | Off/15, 30, 60 sec      | Approx. 60 sec     | N.C., 28 VDC O.1 A max | -30 to +60°C with optional heating unit | Main unit: IP65, Chassis: IP55 | 2.3 to 4 m (7.6 to 13 ft) | 1.2 kg (42 oz) |

Specifications and design are subject to change without prior notice.

**OPTIONS**

- AWT-3 : Area walk tester
- AVF-1 : Area view finder
- SIP-HU : Heating unit
- SIP-AT : SIP adjustment tools (AWT-3 + AVF-1)
- SIP-MINIHUI : Sun/Snow shield
The SIP-3020WF, SIP-4010WF and SIP-404WF are designed for use where a reliable low current detector is required.

**FEATURES**

- Low power consumption (3-9VDC, 40 mA (standby) 5mA max.)
- Low battery signal
- Intelligent PIR Detection System
  - Detection of ambient temperature and illuminance for automatic sensitivity management
  - Advanced detection algorithm
  - Three dual pyro-elements with Double Conductive Shielding
- Anti-vandalism functions
  - Anti-rotation function with accelerometer
  - Anti-masking function with photo-beam
  - Reinforced polycarbonate housing
- Max. 4m (13 ft.) installation height
- Independent sensitivity selector for near/far areas
- Detection logic selector
- Detection range selector
- Independent N.C. and N.O. ALARM output
- Adjustable N.C. and N.O. ALARM interval time

**DIMENSIONS**

<table>
<thead>
<tr>
<th>Side</th>
<th>Top View</th>
<th>Side View</th>
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<tbody>
<tr>
<td>SIP-3020</td>
<td>10m 20m 30m 40m 50m</td>
<td>4m</td>
</tr>
<tr>
<td>SIP-4010</td>
<td>10m 20m 30m 40m 50m</td>
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<tr>
<td>SIP-404WF</td>
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**SPECIFICATIONS**

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<thead>
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<th>Detection method</th>
<th>PIR coverage (main area)</th>
<th>PIR coverage (sleep zone)</th>
<th>Sensitivity selector</th>
<th>Range selector</th>
<th>Detection logic selector</th>
<th>Alarm interval period</th>
<th>Alarm output</th>
<th>Trouble output</th>
<th>Tamper output</th>
<th>Operating temperature</th>
<th>International protection</th>
<th>Mounting height</th>
<th>Weight</th>
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</thead>
<tbody>
<tr>
<td>SIP-3020WF</td>
<td>Passive infrared</td>
<td>30 x 20 m</td>
<td>30 x 20 m</td>
<td>Near, SH/M/L</td>
<td>Far: On/Off</td>
<td>AND/OR</td>
<td>5 sec, 60, 150 sec</td>
<td>N.C. 10VDC 0.01A max</td>
<td>N.C. 10VDC 0.01A max</td>
<td>N.C. 10VDC, 0.01A max</td>
<td>-25 to +60°C (-13° to +140°F)</td>
<td>IP65/55</td>
<td>2.3 to 4 m (7.6 to 13 ft.)</td>
<td>1.2 kg (42 oz)</td>
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<tr>
<td>SIP-4010WF</td>
<td>Passive infrared</td>
<td>40 x 10 m</td>
<td>40 x 10 m</td>
<td>Near, SH/M/L</td>
<td>Far: On/Off</td>
<td>AND/OR</td>
<td>5 sec, 60, 150 sec</td>
<td>N.C. 10VDC 0.01A max</td>
<td>N.C. 10VDC 0.01A max</td>
<td>N.C. 10VDC, 0.01A max</td>
<td>-25 to +60°C (-13° to +140°F)</td>
<td>IP65/55</td>
<td>2.3 to 4 m (7.6 to 13 ft.)</td>
<td>1.2 kg (42 oz)</td>
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<td>SIP-404WF</td>
<td>Passive infrared</td>
<td>40 x 4 m</td>
<td>40 x 4 m</td>
<td>Near, SH/M/L</td>
<td>Far: On/Off</td>
<td>AND/OR</td>
<td>5 sec, 60, 150 sec</td>
<td>N.C. 10VDC 0.01A max</td>
<td>N.C. 10VDC 0.01A max</td>
<td>N.C. 10VDC, 0.01A max</td>
<td>-25 to +60°C (-13° to +140°F)</td>
<td>IP65/55</td>
<td>2.3 to 4 m (7.6 to 13 ft.)</td>
<td>1.2 kg (42 oz)</td>
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Specifications and design are subject to change without prior notice.

**OPTIONS**

- AWT-3 : Area walk tester
- AVF-1 : Area view finder
- SIP-HU : Heating unit
- SIP-MINIHOOD : Sun/Snow shield
- SIP-AT : SIP adjustment tools (AWT-3 + AVF-1)

**TECHNICAL INFORMATION**

**OUTDOOR PROTECTION**

**INDOOR PROTECTION**

**REDWALL**

**ACCESS CONTROL**
SIP-3020/5 SIP-4010/5 SIP-404/5

SYNTHESIZED INTELLIGENT PIR WITH CREEP ZONE

The SIP-3020/5, SIP-4010/5 and SIP-404/5 are designed for detection applications outdoors to trigger video transmission systems and PTZ camera control.

FEATURES

- Intelligent PIR Detection System
  - Detection of ambient temperature and illuminance for automatic sensitivity management
  - Advanced detection algorithm
  - Three dual pyro-elements with Double Conductive Shielding for main area
- Built-in creep zone detector (Double dual pyro-elements)
- Anti-vandalism functions
  - Anti-rotation function with 3-axis accelerometer
  - Anti-masking function with photo-beam
  - Reinforced polycarbonate housing
  - Max. 4m (13ft.) installation height
- Independent sensitivity selector for creep/near/far areas
- Detection logic selector
- Detection range selector
- Independent N.C. and N.O. outputs
- Adjustable alarm interval time

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>Detection method</th>
<th>PIR coverage (main area)</th>
<th>PIR coverage (creep zone)</th>
<th>Sensitivity selector</th>
<th>Range selector</th>
<th>Detection logic selector</th>
<th>Alarm interval period</th>
<th>Power input</th>
<th>Current draw</th>
<th>Alarm period</th>
<th>Warm-up period</th>
<th>Alarm output</th>
<th>Trouble output</th>
<th>Operating temperature</th>
<th>International protection</th>
<th>Mounting height</th>
<th>Weight</th>
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<tbody>
<tr>
<td>SIP-3020/5</td>
<td>Passive infrared</td>
<td>30 x 20 m</td>
<td>3 x 5m (10 x 16 ft.) installed at 2.3m (7.6 ft.) height, 6 x 9m (20 x 30 ft.) installed at 4m (13 ft.) height</td>
<td>Far: SH/H/M/L Near: SH/H/M/L</td>
<td>Creep zone: SH/H/M/L</td>
<td>AND / OR</td>
<td>Off/15, 30, 60 sec.</td>
<td>11-26VDC, 22-24VAC, 22-26VAC with optional heating unit</td>
<td>45mA max. (12VDC), 85mA max. (24VAC)</td>
<td>425mA max.</td>
<td>Approx. 2 sec</td>
<td>Approx. 60 sec</td>
<td>(main area) N.O., N.C. 28VDC 0.2A max. (creep zone) N.O., N.C. 28VDC 0.2A max.</td>
<td>-25 to +60°C, -40 to +60°C with optional heating unit (-13 to +140°F, -40 to +140°F with optional heating unit)</td>
<td>2.1 to 4 m (7.6 to 13 ft.)</td>
<td>1.4 kg (48 oz)</td>
<td></td>
</tr>
<tr>
<td>SIP-4010/5</td>
<td>Passive infrared</td>
<td>40 x 10 m</td>
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<td></td>
<td>11-26VDC, 22-24VAC, 22-26VAC with optional heating unit</td>
<td>45mA max. (12VDC), 85mA max. (24VAC)</td>
<td>425mA max.</td>
<td>Approx. 2 sec</td>
<td>Approx. 60 sec</td>
<td>(main area) N.O., N.C. 28VDC 0.2A max. (creep zone) N.O., N.C. 28VDC 0.2A max.</td>
<td>-25 to +60°C, -40 to +60°C with optional heating unit (-13 to +140°F, -40 to +140°F with optional heating unit)</td>
<td>2.1 to 4 m (7.6 to 13 ft.)</td>
<td>1.4 kg (48 oz)</td>
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<td>SIP-404/5</td>
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<td>11-26VDC, 22-24VAC, 22-26VAC with optional heating unit</td>
<td>45mA max. (12VDC), 85mA max. (24VAC)</td>
<td>425mA max.</td>
<td>Approx. 2 sec</td>
<td>Approx. 60 sec</td>
<td>(main area) N.O., N.C. 28VDC 0.2A max. (creep zone) N.O., N.C. 28VDC 0.2A max.</td>
<td>-25 to +60°C, -40 to +60°C with optional heating unit (-13 to +140°F, -40 to +140°F with optional heating unit)</td>
<td>2.1 to 4 m (7.6 to 13 ft.)</td>
<td>1.4 kg (48 oz)</td>
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</table>

Specifications and design are subject to change without prior notice.

OPTIONS

- AWT-3 : Area walk tester
- AVF-1 : Area view finder
- SIP-HU : Heating unit
- SIP-AT : SIP adjustment tools (AWT-3 + AVF-1)
- SIP-MINIHOOD : Sun/Snow shield
SIP-5030/100
SYNTHESIZED INTELLIGENT PIR WITH CREEP ZONE

The SIP-5030 offers wide angle-detection for large areas outside. It has an intelligent detection system that uses data from the ambient environment, such as temperature and illuminance conditions, to automatically adjust the sensitivity.

**FEATURES**
- Intelligent PIR detection system
  - Detection of ambient temperature and illuminance for automatic sensitivity management
  - Advanced detection algorithm
- Double Dual/One Quad pyro-elements with Double Conductive Shielding for main area SIP-5030
- Double Quad pyro-elements with Double Conductive Shielding for main area SIP-100
- Built-in creep zone detector (Double dual pyro-elements)
- Anti-vandalism functions
  - Anti-rotation function with 3-axis accelerometer
  - Anti-masking function with photo-beam
  - Reinforced polycarbonate housing
- Max. 4m (13 ft.) installation height
- Independent sensitivity selector for creep/near/far areas
- Independent N.C. and N.O. output for main area SIP-5030
- 2 x N.C. and N.O. independent output for main areas (Near and Far areas) SIP-100
- Adjustable alarm interval time

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>SIP-5030</th>
<th>SIP-100</th>
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<tr>
<td>Detection method</td>
<td>Passive-infrared</td>
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<tr>
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<td>22-26 VAC/DC/AC</td>
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<td>Current draw</td>
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<td>Warm-up period</td>
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<td>Operating temp.</td>
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<td>Operating temp.</td>
<td>(-13 to +140°F)</td>
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<td>N.C., 28 VDC 0.2 A max.</td>
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<tr>
<td>Tamper output</td>
<td>N.C., 28 VDC 0.1 A max.</td>
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<tr>
<td>International</td>
<td>Main unit: IP65 Chassis: IP55</td>
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<tr>
<td>Mounting height</td>
<td>2.3 to 4 m (7.6 to 13 ft.)</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>1.6 kg (56 oz)</td>
<td></td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.

**DIMENSIONS**

**OPTIONS**
- AWT-3 : Area walk tester
- AVF-1 : Area view finder
- SIP-HU : Heating unit
- SIP-AT : SIP adjustment tools (AWT-3 + AVF-1)
- SIP-MIDIHOOD : Sun/Snow shield

**COVERAGE**

<table>
<thead>
<tr>
<th>Model</th>
<th>SIP-5030</th>
<th>SIP-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIR coverage (main area)</td>
<td>3x 5m (10 x 16 ft.)</td>
<td>50 x 30 m</td>
</tr>
<tr>
<td>PIR coverage (creep zone)</td>
<td>2x 5m (10 x 16 ft.)</td>
<td>106 x 3 m</td>
</tr>
<tr>
<td>PIR coverage (Far area)</td>
<td>6 x 9m (20 x 30 ft.)</td>
<td></td>
</tr>
<tr>
<td>PIR coverage (Near area)</td>
<td>6 x 9m (20 x 30 ft.)</td>
<td></td>
</tr>
<tr>
<td>PIR coverage (creep zone)</td>
<td>6 x 9m (20 x 30 ft.)</td>
<td></td>
</tr>
</tbody>
</table>

**COVERAGE**

<table>
<thead>
<tr>
<th>Model</th>
<th>SIP-5030</th>
<th>SIP-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIR coverage (main area)</td>
<td>3x 5m (10 x 16 ft.)</td>
<td>50 x 30 m</td>
</tr>
<tr>
<td>PIR coverage (creep zone)</td>
<td>2x 5m (10 x 16 ft.)</td>
<td>106 x 3 m</td>
</tr>
<tr>
<td>PIR coverage (Far area)</td>
<td>6 x 9m (20 x 30 ft.)</td>
<td></td>
</tr>
<tr>
<td>PIR coverage (Near area)</td>
<td>6 x 9m (20 x 30 ft.)</td>
<td></td>
</tr>
<tr>
<td>PIR coverage (creep zone)</td>
<td>6 x 9m (20 x 30 ft.)</td>
<td></td>
</tr>
</tbody>
</table>

The detection angle of the creep zone can be adjusted ±135° horizontally as shown in gray.
RLS-3060L/SH
LASER SCAN DETECTOR

The RLS-3060 series is a laser scan detector that identifies a moving object’s size, speed and distance from the detector. It processes that information with a unique algorithm, resulting in a highly reliable detection system with minimal false alarms.

**FEATURES**
- 30m radius for 190 degrees range
- Vertical and horizontal mounting
- Unique detection algorithm
- Automatic area setting function
- 4 independently adjustable detection areas and 4 dry contact outputs for PTZ control or
- 8 independently adjustable detection areas and REDWALL Event Code for Network
- Integration to external devices and applications with REDWALL Event Code
- Changeable Dry-contact Alarm Output type N.O. to N.C.
- Fog cancellation algorithm (Patent listed)

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>RLS-3060L</th>
<th>RLS-3060SH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Infrared Laser Scan</td>
<td>Max. 60 m (Approx. 200 ft.) at 10% reflectivity / Detection range expansion enable max. 100 m (Approx. 330 ft.)</td>
</tr>
<tr>
<td>Laser protection class</td>
<td>Class 1</td>
<td>Radius:30m (Approx. 100 ft.), Arc:190° at 10% reflectivity</td>
</tr>
<tr>
<td>Coverage</td>
<td>Vertical area: Max. 60 m (Approx. 200 ft.) at 10% reflectivity</td>
<td>Vertical area: Max. 100 m (Approx. 330 ft.) at 10% reflectivity / Detection range expansion enable radius:50 m (Approx. 165 ft.), Arc:190°</td>
</tr>
<tr>
<td></td>
<td>Horizontal area: Radius:30m (Approx. 100 ft.), Arc:190° at 10% reflectivity</td>
<td>Horizontal area: Radius:50m (Approx. 165 ft.), Arc:190°</td>
</tr>
<tr>
<td>Detection resolution</td>
<td>0.25°</td>
<td>0.25°</td>
</tr>
<tr>
<td>Communication port</td>
<td>Ethernet, RJ-45, 1BASE-T/10BASE-TX</td>
<td>Ethernet, RJ-45, 1BASE-T/10BASE-TX</td>
</tr>
<tr>
<td>Power input</td>
<td>24 VDC, 24 VAC</td>
<td>24 VDC, 24 VAC</td>
</tr>
<tr>
<td>Current draw</td>
<td>400mA max. (24VDC)</td>
<td>400mA max. (24VDC)</td>
</tr>
<tr>
<td>Heater current draw</td>
<td>400mA max. (24VDC)</td>
<td>400mA max. (24VDC)</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-40 to 60 °C (-40 to 140° F)</td>
<td>-40 to 60 °C (-40 to 140° F)</td>
</tr>
<tr>
<td>Mounting height</td>
<td>Vertical area: 0.7m (28in.) recommended</td>
<td>Vertical area: 0.7m (28in.) recommended</td>
</tr>
<tr>
<td></td>
<td>Horizontal area: 15m (50ft.) max.</td>
<td>Horizontal area: 15m (50ft.) max.</td>
</tr>
<tr>
<td>Target object selector</td>
<td>S / M / L</td>
<td>S / M / L</td>
</tr>
<tr>
<td>Sensitivity selector</td>
<td>H / M / L</td>
<td>H / M / L</td>
</tr>
<tr>
<td>Camera control output</td>
<td>N.O. 28 VDC, 0.2 A x 4 outputs / Can be changeable to N.C. with RSM ver.8.</td>
<td>Form C, 28 VDC, 0.2 A max.</td>
</tr>
<tr>
<td>Master alarm output</td>
<td>Form C, 28 VDC, 0.2 A max.</td>
<td>Form C, 28 VDC, 0.2 A max.</td>
</tr>
<tr>
<td>Tamper output</td>
<td>Form C, 28 VDC, 0.2 A max.</td>
<td>Form C, 28 VDC, 0.2 A max.</td>
</tr>
<tr>
<td>Environmental disqualification circuit</td>
<td>Approx. 3 sec., Off delay timer</td>
<td>Approx. 3 sec., Off delay timer</td>
</tr>
<tr>
<td>Alarm period</td>
<td>Approx. 3 sec., Off delay timer</td>
<td>Approx. 3 sec., Off delay timer</td>
</tr>
<tr>
<td>Operating temperature with heater</td>
<td>20 to 60 °C (68 to 140°F)</td>
<td>20 to 60 °C (68 to 140°F)</td>
</tr>
<tr>
<td>IP rating</td>
<td>IP66</td>
<td>IP66</td>
</tr>
<tr>
<td>Dimensions (W x H x D)</td>
<td>334 x 144 x 155 mm (13.2 x 5.7 x 6.1 in.)</td>
<td>334 x 144 x 155 mm (13.2 x 5.7 x 6.1 in.)</td>
</tr>
<tr>
<td>Weight</td>
<td>2.4kg (85 oz.)</td>
<td>2.4kg (85 oz.)</td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.
The RLS-2020 series is a compact and highly customizable laser scan detector that helps protect in an unobstructed way, houses, buildings, flat roofs, controlled areas and assets by creating an invisible laser wall or plane and detecting any intrusion breaching it.

**FEATURES**
- 20m x 20m (65ft. x 65ft.), 95 degree detection area
- Vertical and Horizontal detection modes
- Multi-angle Adjustment Shell Structure (M.A.S.S.)
- Unique detection algorithm
- Automatic area setting function
- Advanced area setting
- 4 adjustable detection areas on IP connection
- Total 3 outputs can be assigned for analog connection
- Integration to external devices and applications with REDWALL Event Code.
- Supporting multiple network protocols, e.g. TCP/IP, UDP/IP, DHCP, DNS, HTTP, HTTPS, FTP, SNMPv1/v2c/v3, ICMP, ARP.

**COVERAGE**
- **Vertical**
- **Horizontal**

**OPTIONS**
- **RLS-AT**: RLS area Adjustment Tool Kit
- **LAC-1**: Laser Area Checker
- **RLS-PB**: Recess mount bracket
- **RLS-LW**: Laser Window

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>RLS-2020I</th>
<th>RLS-2020S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation location</td>
<td>Indoor</td>
<td>Indoor/Outdoor</td>
</tr>
<tr>
<td>Detection method</td>
<td>Infrared Laser Scan</td>
<td></td>
</tr>
<tr>
<td>Laser protection class</td>
<td>Class 1</td>
<td></td>
</tr>
<tr>
<td>Power input</td>
<td>10.5 to 30 VDC, PoE (IEEE802.3 af/at compliant)</td>
<td></td>
</tr>
<tr>
<td>Current draw</td>
<td>500 mA max. (12 VDC), 250 mA max. (24 VDC), 6W max. (PoE)</td>
<td></td>
</tr>
<tr>
<td>Mounting method</td>
<td>Ceiling mount, Wall mount, Tripod mount, Pole mount (Option), Recess mount (Option)</td>
<td></td>
</tr>
<tr>
<td>Detection area</td>
<td>20 x 20 m (approx. 66 x 66 ft.), 95 degrees</td>
<td></td>
</tr>
<tr>
<td>Detection range</td>
<td>Radius 1 to 21 m (approx. 3.3 to 68 ft.) at 10% reflectivity</td>
<td></td>
</tr>
<tr>
<td>Detection resolution/Response time</td>
<td>0.25 degrees / within 75 ms to 15 minutes</td>
<td>0.25 degrees / within 75 ms to 15 minutes (for indoor mode and outdoor mode)</td>
</tr>
<tr>
<td>Mounting height (Vertical mode)</td>
<td>2 m (6.7 ft.) or higher</td>
<td>2 m (6.7 ft.) or higher (Recommended)</td>
</tr>
<tr>
<td>Communication port</td>
<td>Ethernet RJ-45 10BASE-T/100BASE-TX (Auto negotiation)</td>
<td></td>
</tr>
<tr>
<td>Network protocol</td>
<td>TCP/IP, UDP/IP, DHCP, DNS, HTTP, HTTPS, FTP, SNMPv1/v2c/v3, ICMP, ARP</td>
<td></td>
</tr>
<tr>
<td>Output</td>
<td>3 outputs, 28 VDC 0.2 A max. RED/I/O/C Selectable (from Master alarm, Zone outputs, Trouble, Tamper)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 outputs, 28 VDC 0.2 A max. N.O./N.C. Selectable (from Master alarm, Zone outputs, Trouble, Tamper, D.Q.)</td>
<td></td>
</tr>
<tr>
<td>Input</td>
<td>1 Non-voltage contact input</td>
<td></td>
</tr>
<tr>
<td>Alarm period</td>
<td>Approx. 2 sec. delay timer</td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-40 to 50 C degrees (-40 to 122 F degrees)</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>0.9 kg (2.0 lb)</td>
<td></td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.
PIE-1 is an encoder that converts analog relay outputs to original ASCII code (Redwall Event Code) for Redwall and Fiber SenSys detectors. Detectors can be connected to Video Management Software platforms with PIE-1 and control IP cameras.

PIE-1 is generating Redwall Event Code using the analog alarm inputs from the Redwall and Fiber SenSys detectors. Video Management Software receives the event code and sends a command to reposition to a pre-set and/or start recording with a camera.

PIE-1 is compatible with Power over Ethernet (PoE). IEEE802.3 af/at making it possible to supply power using a PoE hub or switch. Only one LAN cable is needed to connect PIE-1 to a PoE hub or switch reducing your installation time and cost.

### FEATURES

- Change Analog to IP
- PIE-1 changes analog relay output signals (N.C.) to original ASCII code.

- Compatible with Power over Ethernet
- PIE-1 can supply power to detector using a PoE hub or switch.

### DIMENSIONS

![Dimensions Diagram](image)

### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>PIE-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>PoE (IEEE802.3af/at compliant)</td>
</tr>
<tr>
<td>Power output</td>
<td>24 VDC 800 mA max, 12 VDC 50 mA max</td>
</tr>
<tr>
<td>Signal input</td>
<td>5 input for dry contacts (N.C. only)</td>
</tr>
<tr>
<td>Place of use</td>
<td>Outdoor (Inside of the waterproof case)</td>
</tr>
<tr>
<td>Alarm output</td>
<td>Redwall Event Code (UDP/TCP)</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-40 to +60°C (-40 to +140°F)</td>
</tr>
<tr>
<td>Operating humidity</td>
<td>95%RH max</td>
</tr>
<tr>
<td>Operating LED (Normal)</td>
<td>Green light is ON when the power is supplied by PoE</td>
</tr>
<tr>
<td>Operating LED (Warning)</td>
<td>Yellow light blinks during communication</td>
</tr>
<tr>
<td>Switch</td>
<td>Ethernet converter / LAN through</td>
</tr>
<tr>
<td>Function setting</td>
<td>Use web browser</td>
</tr>
<tr>
<td>Dimension</td>
<td>67.5 mm x 94.7 mm x 33 mm (2.66” x 3.73” x 1.30”)</td>
</tr>
<tr>
<td>Weight</td>
<td>270 g (9.8 oz: including all parts) Main unit: 90 g (3.2 oz)</td>
</tr>
<tr>
<td>Supported protocols</td>
<td>IPv4, ARP, UDP, TCP, XMP, HTTP</td>
</tr>
<tr>
<td>Accessories</td>
<td>Power output cable x2, Alarm input cable x3, Installation instruction, Mounting plate for a Double Gang Box, Gasket sheet for Gang Box, Mounting Screws x6</td>
</tr>
</tbody>
</table>

Specifications and design are subject to change without prior notice.
POE IP ENCODER

DIMENSIONS
(Specifications and design are subject to change without prior notice.)

<table>
<thead>
<tr>
<th>Model</th>
<th>Power supply</th>
<th>Power output</th>
<th>Signal input</th>
<th>Place of use</th>
<th>Alarm output</th>
<th>Operating temperature</th>
<th>Operating humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIE-1</td>
<td>PoE (IEEE802.3af/at compliant)</td>
<td>24 VDC 800 mA max, 12 VDC 50 mA max</td>
<td>5 input for dry contacts (N.C. only)</td>
<td>Outdoor (Inside of the waterproof case)</td>
<td>Redwall Event Code (UDP / TCP)</td>
<td>-40 to +60°C (-40 to +140°F)</td>
<td>95%RH. max</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Switch</th>
<th>Function setting</th>
<th>Dimension</th>
<th>Weight</th>
<th>Supported protocols</th>
<th>Accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>67.5 mm x 94.7 mm x 33 mm (3.66&quot; x 3.73&quot; x 1.30&quot;)</td>
<td>270 g (8.8 oz: including all parts)</td>
<td>Main unit: 90 g (3.2 oz)</td>
<td>IPv4, ARP, UDP, TCP, ICMP, HTTP</td>
</tr>
</tbody>
</table>

FEATURES
PIE-1 is an encoder that converts analog relay outputs to original ASCII code (Redwall Event Code) for Redwall and Fiber SenSys detectors. Detectors can be connected to Video Management Software platforms with PIE-1 and control IP cameras.

PIE-1 is generating Redwall Event Code using the analog alarm inputs from the Redwall and Fiber SenSys detectors. Video Management Software receives the event code and sends a command to reposition to a pre-set and/or start recording with a camera.

PIE-1 is compatible with Power over Ethernet (PoE). IEEE802.3 af/at making it possible to supply power using a PoE hub or switch. Only one LAN cable is needed to connect PIE-1 to a PoE hub or switch reducing your installation time and cost.

OPTIONS

REDWALL

- **AWT-3**
  - Area walk tester for SIP series

- **AVF-1**
  - Area view finder for SIP series

- **SIP-HU**
  - Heating unit for SIP series

SIP-AT

- **SIP-MINIOOD**
  - Sun/Snow shield for SIP-3020/4010/404

- **SIP-MIDIHOOD**
  - Sun/Snow shield for SIP-5030/100

REDSCAN

- **RLS-PB**
  - Pole mount bracket for all SIP series and all RLS series

- **RLS-SB**
  - Adjustable angle mounting bracket for RLS-3060 series

- **RLS-LW**
  - Laser Window for RLS-2020 series

LAC-1

- **RLS-RB**
  - Recess mount bracket for RLS-2020
### PRODUCT SPECIFICATIONS

<table>
<thead>
<tr>
<th>SVP-3020</th>
<th>SVP-4010</th>
<th>SVP-404</th>
<th>SVP-3020WF</th>
<th>SVP-4010WF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Detection method</strong></td>
<td>Passive infrared</td>
<td>Passive infrared</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PIR coverage (main area)</strong></td>
<td>30 x 20 m</td>
<td>40 x 10 m</td>
<td>40 x 4 m</td>
<td>30 x 20 m</td>
</tr>
<tr>
<td><strong>PIR coverage (creep zone)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sensitivity selector</strong></td>
<td>Far: SH/N/L Near: SH/N/L</td>
<td>Far: SH/N/L Near: SH/N/L</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Range selector</strong></td>
<td>Far: On/Off</td>
<td>Far: On/Off</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Alarm period</strong></td>
<td>Off/15, 30, 60 sec.</td>
<td>Off/15, 30, 60 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Current draw</strong></td>
<td>40mA max. (12VDC) 75mA max. (24VAC), 415mA max. (24VAC) with optional heating unit</td>
<td></td>
<td>40μA(Standby) 5mA max. (Operating LED ON) N.C. 10VDC, 0.01A max. N.O. 10VDC, 0.01A max.</td>
<td></td>
</tr>
<tr>
<td><strong>Alarm output</strong></td>
<td>N.O., N.C. 28VDC 0.2A max.</td>
<td></td>
<td>N.C. 10VDC, 0.01A max.</td>
<td></td>
</tr>
<tr>
<td><strong>Trouble output</strong></td>
<td>N.C. 28VDC 0.2A max.</td>
<td>N.C. 28VDC 0.2A max.</td>
<td></td>
<td>N.C. 10VDC, 0.01A max.</td>
</tr>
<tr>
<td><strong>Operating temperature</strong></td>
<td>-25 to +60°C (-13°F to +140°F) (-13 to +140°F, -40 to +140°F with optional heating unit)</td>
<td>-25 to +60°C (-13°F to +140°F)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>International protection</strong></td>
<td>Main unit: IP65 Chassis: IP55</td>
<td>Main unit: IP65 Chassis: IP55</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mounting height</strong></td>
<td>2.3 to 4 m (7.6 to 13 ft.)</td>
<td>2.3 to 4 m (7.6 to 13 ft.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>1.2 kg (42 oz)</td>
<td>1.2 kg (42 oz)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### RLS-3060L

<table>
<thead>
<tr>
<th><strong>Detection method</strong></th>
<th>Infrared Laser Scan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Laser protection class</strong></td>
<td>Class 1</td>
</tr>
<tr>
<td><strong>Coverage</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Vertical area</strong></td>
<td>Max. 60 m (Approx. 200 ft.) at 10% reflectivity</td>
</tr>
<tr>
<td><strong>Horizontal area</strong></td>
<td>Radius: 30m (Approx. 100 ft.), Arc: 190° at 10% reflectivity</td>
</tr>
<tr>
<td><strong>Detection resolution</strong></td>
<td>0.25°</td>
</tr>
<tr>
<td><strong>Communication port</strong></td>
<td>Ethernet RJ-45, 10BASE-T/100BASE-TX</td>
</tr>
<tr>
<td><strong>Protocol</strong></td>
<td>UDP, TCP/IP, <em>Redwall Event Code</em></td>
</tr>
<tr>
<td><strong>Power input</strong></td>
<td>24VDC, 24VAC</td>
</tr>
<tr>
<td><strong>Current draw</strong></td>
<td>400mA max. (24VDC) 600mA max. (24VAC)</td>
</tr>
<tr>
<td><strong>Heater current draw</strong></td>
<td>24VDC, 24VAC</td>
</tr>
<tr>
<td><strong>Mounting height</strong></td>
<td>15m (50ft.) max.</td>
</tr>
<tr>
<td><strong>Target object selector</strong></td>
<td>S / M / L</td>
</tr>
<tr>
<td><strong>Camera control output</strong></td>
<td>N.O. 28VDC, 0.2 A x 4 outputs / Can be changeable to N.C. with RSM ver.8.</td>
</tr>
<tr>
<td><strong>Master alarm output</strong></td>
<td>Form C, 28VDC, 0.2A max.</td>
</tr>
<tr>
<td><strong>Trouble output</strong></td>
<td>Form C, 28VDC, 0.2A max.</td>
</tr>
<tr>
<td><strong>Tamper output</strong></td>
<td>N.C. 28VDC, 0.1A max.</td>
</tr>
<tr>
<td><strong>Environmental disqualification circuit</strong></td>
<td>Form C, 28VDC, 0.2A max.</td>
</tr>
<tr>
<td><strong>Alarm period</strong></td>
<td>Approx. 2 sec., Off delay timer</td>
</tr>
<tr>
<td><strong>Operating temperature with heater</strong></td>
<td>-40 to 60°C (-40 to 140°F)</td>
</tr>
<tr>
<td><strong>IP rating</strong></td>
<td>IP66</td>
</tr>
<tr>
<td><strong>Dimensions (H x W x D)</strong></td>
<td>334 x 144 x 155 mm (13.2 x 5.7 x 6.1 in.)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>2.4kg (85 oz.)</td>
</tr>
</tbody>
</table>
### PRODUCT SPECIFICATIONS

#### SIP-404WF
- **Weight**: 1.2 kg (42 oz)
- **Dimensions (H x W x D)**: 30 x 20 x 15.5 cm (12 x 8 x 6.1 in)
- **Alarm period**: Approx. 2 sec.
- **Input**: 
  - 1 Non-voltage contact input
- **Output**: 3 outputs, 28 VDC
  - 0.2 A max. N.O./N.C. Selectable
  - (3 from Master alarm, Zone outputs, Trouble, Tamper)
- **IP rating**: IP69
- **Protocol**: TCP/IP, UDP/IP, DHCIP, DNS, HTTP, HTTPS, FTP, SNMPv1/v2c/v3, ICMP, ARP
- **Power output cable**: x2, Alarm input cable x2, Installation instruction, Mounting plate for a Double Gang Box, Gasket sheet for Gang Box, Mounting plate for Various Mounts

#### SIP-3020/5
- **Weight**: 1.2 kg (42 oz)
- **Dimensions (H x W x D)**: 30 x 20 x 15.5 cm (12 x 8 x 6.1 in)
- **Alarm period**: Approx. 2 sec.
- **Input**: 
  - 1 Non-voltage contact input
- **Output**: 3 outputs, 28 VDC
  - 0.2 A max. N.O./N.C. Selectable
  - (3 from Master alarm, Zone outputs, Trouble, Tamper)
- **IP rating**: IP69
- **Protocol**: TCP/IP, UDP/IP, DHCIP, DNS, HTTP, HTTPS, FTP, SNMPv1/v2c/v3, ICMP, ARP
- **Power output cable**: x2, Alarm input cable x2, Installation instruction, Mounting plate for a Double Gang Box, Gasket sheet for Gang Box, Mounting plate for Various Mounts

#### SIP-4010/5
- **Weight**: 1.2 kg (42 oz)
- **Dimensions (H x W x D)**: 30 x 20 x 15.5 cm (12 x 8 x 6.1 in)
- **Alarm period**: Approx. 2 sec.
- **Input**: 
  - 1 Non-voltage contact input
- **Output**: 3 outputs, 28 VDC
  - 0.2 A max. N.O./N.C. Selectable
  - (3 from Master alarm, Zone outputs, Trouble, Tamper)
- **IP rating**: IP69
- **Protocol**: TCP/IP, UDP/IP, DHCIP, DNS, HTTP, HTTPS, FTP, SNMPv1/v2c/v3, ICMP, ARP
- **Power output cable**: x2, Alarm input cable x2, Installation instruction, Mounting plate for a Double Gang Box, Gasket sheet for Gang Box, Mounting plate for Various Mounts

#### SIP-404/5
- **Weight**: 1.2 kg (42 oz)
- **Dimensions (H x W x D)**: 30 x 20 x 15.5 cm (12 x 8 x 6.1 in)
- **Alarm period**: Approx. 2 sec.
- **Input**: 
  - 1 Non-voltage contact input
- **Output**: 3 outputs, 28 VDC
  - 0.2 A max. N.O./N.C. Selectable
  - (3 from Master alarm, Zone outputs, Trouble, Tamper)
- **IP rating**: IP69
- **Protocol**: TCP/IP, UDP/IP, DHCIP, DNS, HTTP, HTTPS, FTP, SNMPv1/v2c/v3, ICMP, ARP
- **Power output cable**: x2, Alarm input cable x2, Installation instruction, Mounting plate for a Double Gang Box, Gasket sheet for Gang Box, Mounting plate for Various Mounts

#### SIP-5030
- **Weight**: 1.6 kg (56 oz)
- **Dimensions (H x W x D)**: 60 x 30 x 15 cm (24 x 12 x 6 in)
- **Alarm period**: Approx. 2 sec.
- **Input**: 
  - 1 Non-voltage contact input
- **Output**: 3 outputs, 28 VDC
  - 0.2 A max. N.O./N.C. Selectable
  - (3 from Master alarm, Zone outputs, Trouble, Tamper)
- **IP rating**: IP69
- **Protocol**: TCP/IP, UDP/IP, DHCIP, DNS, HTTP, HTTPS, FTP, SNMPv1/v2c/v3, ICMP, ARP
- **Power output cable**: x2, Alarm input cable x2, Installation instruction, Mounting plate for a Double Gang Box, Gasket sheet for Gang Box, Mounting plate for Various Mounts

#### SIP-100
- **Weight**: 1.0 kg (2.2 lb)
- **Dimensions (H x W x D)**: 146 x 160 x 160 mm (5.8 x 6.3 x 6.3 inch)
- **Alarm period**: Approx. 2 sec delay timer
- **Input**: 
  - 1 Non-voltage contact input
- **Output**: 3 outputs, 28 VDC
  - 0.2 A max. N.O./N.C. Selectable
  - (3 from Master alarm, Zone outputs, Trouble, Tamper)
- **IP rating**: IP60
- **Protocol**: TCP/IP, UDP/IP, DHCIP, DNS, HTTP, HTTPS, FTP, SNMPv1/v2c/v3, ICMP, ARP
- **Power output cable**: x2, Alarm input cable x2, Installation instruction, Mounting plate for a Double Gang Box, Gasket sheet for Gang Box, Mounting plate for Various Mounts

### Technical Information
- **Network protocol**: TCP/IP, UDP/IP, DHCIP, DNS, HTTP, HTTPS, FTP, SNMPv1/v2c/v3, ICMP, ARP
- **Power output cable**: x2, Alarm input cable x2, Installation instruction, Mounting plate for a Double Gang Box, Gasket sheet for Gang Box, Mounting plate for Various Mounts
- **Power supply**: PoE (IEEE802.3af/at compliant)
- **Power output**: 24 VDC, 800 mA max, 1.2 VDC 50 mA max
- **Signal input**: 5 input for dry contacts (N.C. only)
- **Alarm output**: Redwall Event Code (UDP / TCP)
- **Operating temperature**: -40 to +140°F (-40 to +140°C with optional heating unit)
- **Humidity**: 95%RH max.
- **Operation LED (Normal)**: Green light is ON when the power is supplied by PoE
- **Operation LED (When communicating)**: Yellow light blinks during communication
- **Switch**: Ethernet converter / LAN through
- **Function setting**: Use web browser
- **Dimension**: 67.5 mm x 94.7 mm x 33 mm (2.66” x 3.73” x 1.3”)
CONCEPT FOR ACCESS SECURITY [Secured Entry]

The security of a site can be compromised if an unauthorised person manages to access a secured area either by ignoring a “no entry” sign or by following an authorised individual without his or her knowledge. OPTEX offers a range of solutions that add a layer of security to access control systems. The first one detects people walking in the wrong direction, the second one identifies tailgating situations and the others combine our LiDAR technology together with access control and security systems to detect people jumping over turnstiles or accessing controlled areas from the ceiling.

Application Examples

Reverse Detection

In airports, and other applications where one-way systems need to be enforced, it is critical to detect the individuals walking in the opposite direction. Refer to p.72, reverse detection system.

Tailgating Detection

An unauthorised person can follow an authorised individual without being noticed. The breach cannot not be identified by the access control system alone, it requires a tailgating detection system. Refer to p.71, anti-tailgating system.

Turnstile Security

Our LiDAR sensor can be connected to an access control system to detect a person going through a turnstile without swiping his/her access card. This solution is perfectly suited for large office buildings. Refer to p.65, RLS-2020 Series.

Ceiling Protection

Ceilings and skylights can be used as intrusion access points into a building. Our LiDAR technology can create a customisable virtual plane to protect ceilings, and detect any intrusion from above. Refer to p.65, RLS-2020 Series.
**ANTI-TAILGATING SYSTEM**

Unique algorithm for anti-tailgating detection
[Vector focal method]

The Accuracy OV-102 grasps and tracks a shape of human sterically by a unique image sensing technology. The system can recognize complicated movement and the number of people at high rate and accuracy.

### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Items</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection Method</td>
<td>Vector Focusing Method</td>
</tr>
<tr>
<td>Detection Accuracy</td>
<td>&gt; 95% (by own criteria)</td>
</tr>
<tr>
<td>Supply Voltage</td>
<td>Power over Ethernet IEEE 802.3 af</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>Control box 10 W max. Detection unit 10 W max.</td>
</tr>
<tr>
<td>Indicator</td>
<td>Control box Green / Red Tailgating (lit) / Multiple detections (blinking)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>Control box 265 × 135 × 31 mm Detection unit 193 × 85 × 34 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>800 g                           220 g</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0 to 50°C</td>
</tr>
<tr>
<td>Operating Humidity</td>
<td>&lt; 80% RH</td>
</tr>
<tr>
<td>Operating Illuminance</td>
<td>100 lux or more only the outline of an object is shown</td>
</tr>
<tr>
<td>Applicable Door Type</td>
<td>Indoor Manual Swing Door/Automatic Slide Door</td>
</tr>
<tr>
<td>Installation location</td>
<td>Ceiling Control box Stationary Detection unit</td>
</tr>
<tr>
<td>Mounting Height</td>
<td>2.5 to 4.0 m *2 Indoor Detection unit</td>
</tr>
<tr>
<td>LAN wiring</td>
<td>CAT5e or larger Indoor Ethernet</td>
</tr>
<tr>
<td>Authorization</td>
<td>N.O./N.C. no voltage Wiegand</td>
</tr>
<tr>
<td>Input terminal *3</td>
<td>Door open Use supplied magnet switch when disable to get</td>
</tr>
<tr>
<td>Disable output *4</td>
<td>N.O./N.C. no voltage In Tailgating 1/2 and Multiple detections</td>
</tr>
<tr>
<td>Output terminal *3</td>
<td>N.O./N.C. no voltage in Tailgating 1/2 and Multiple detections</td>
</tr>
<tr>
<td>Authorization number</td>
<td>Continuous output during multiple detections *5</td>
</tr>
<tr>
<td>Multiple detections</td>
<td>Continuous output during multiple detections *5</td>
</tr>
<tr>
<td>Error</td>
<td>Continuous output during multiple detections *5</td>
</tr>
</tbody>
</table>

---

**FEATURES**

- **Door cancel function**
  Ignore door movement on installation side of detection unit.

- **Workability**
  Install on existing door

- **Detection area adjustability**
  Detection area can be adjusted after installation of detection unit.

- **Sensitivity adjustability**
  Sensitivity can be adjusted after installation

---

* OV-102 always requires 100 lux or more.
* Minimum width of door opening is 2 m when mounting at 2.5 m high.
* Input/output relays can be selected N.O./N.C. by the dipswitch.
* "Disable output" is recommended to use for an entrance with carriage or luggage. They may make a false detection.
* Multiple detections must be ON by the dipswitch settings.
* Specifications and design are subject to change without prior notice.
**FEATURES**

- **Accurate detection**
  An unique detection method (Vector Focal Method) grasps and tracks a shape of human stierically.

- **Reverse detection**
  Grasp all human movements and detect only backward movement

- **System corporation**
  Enable to be connected with an upper layer system by using no-voltage output from the control box.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Items</th>
<th>Specifications</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Detection Method</strong></td>
<td>Vector Focusing Method</td>
<td></td>
</tr>
<tr>
<td><strong>Detection Accuracy</strong></td>
<td>&gt; 95% (by own criteria)</td>
<td></td>
</tr>
<tr>
<td><strong>Supply Voltage</strong></td>
<td>Power over Ethernet IEEE 802.3 af</td>
<td></td>
</tr>
<tr>
<td><strong>Warm-up time</strong></td>
<td>Approx. 45 sec</td>
<td></td>
</tr>
<tr>
<td><strong>Power Consumption</strong></td>
<td>10 W max.</td>
<td></td>
</tr>
<tr>
<td><strong>Indicator</strong></td>
<td>Control box: Green, Power [R]; Red, Reverse detection [R]; Warm-up [R] / Trouble (blinking); Communication trouble (alternative blinking)</td>
<td></td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>Control box: 265 x 135 x 31 mm (W x H x D); Detection unit: 193 x 85 x 34 mm (W x H x D)</td>
<td></td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>Control box: 1000 g; Detection unit: 220 g</td>
<td></td>
</tr>
<tr>
<td><strong>Operating Temperature</strong></td>
<td>0 to 50°C</td>
<td></td>
</tr>
<tr>
<td><strong>Operating Humidity</strong></td>
<td>&lt; 80% RH</td>
<td>only under no condensation</td>
</tr>
<tr>
<td><strong>Operating Illuminance</strong></td>
<td>100 to 20,000 lux *1</td>
<td>only under no condensation</td>
</tr>
<tr>
<td><strong>Installation location</strong></td>
<td>Control box: Wall / stationary; Detection unit: Ceiling Indoor</td>
<td>Indoor</td>
</tr>
<tr>
<td><strong>Mounting Height</strong></td>
<td>2.5 to 4.0 m</td>
<td>It may be limited by environmental conditions.</td>
</tr>
<tr>
<td><strong>LAN wiring</strong></td>
<td>CAT5e or larger</td>
<td></td>
</tr>
<tr>
<td><strong>Ethernet</strong></td>
<td>100Base-T(X)</td>
<td>Protocol : TCP/UDP/IPv4, ARP, ICMP or HTTP</td>
</tr>
<tr>
<td>*<em>Input terminal <em>2</em></em></td>
<td>Disable output; Disable reverse detection (1) and (2)</td>
<td></td>
</tr>
<tr>
<td>*<em>Output terminal <em>2</em></em></td>
<td>Reverse detection (1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MOS FET relay</td>
<td>Variable timer 0.2 to infinity</td>
</tr>
<tr>
<td></td>
<td>N.O./N.C. no voltage</td>
<td>Pulse output for the number of reverse detection by unit [1]</td>
</tr>
<tr>
<td></td>
<td>30 V DC 0.2 A or less (Resistivity load)</td>
<td>Pulse output for the number of reverse detection by unit [2]</td>
</tr>
<tr>
<td></td>
<td>Number of reverse detections</td>
<td>Pulse output for the number of reverse detection by unit [3]</td>
</tr>
<tr>
<td></td>
<td>Output when disable to detect</td>
<td></td>
</tr>
</tbody>
</table>

*1: R1002 always requires 100 lux or more.
*2: Input/individual relays can be selected N.O./N.C. by the dipswitch.
Specifications and design are subject to change without prior notice.
By utilizing our unique detection logic and optical technique, OPTEX provides high performance against false and missed alarms.
Sunshine Protection Technology & Double Modulation Beam

Appropriate models | SL-200QDM/350QDM/650QDM, SL-200QDP/350QDP/650QDP

Sunshine Protection Technology

The sunshine protection technology has a triple layer construction to give better performance against external light sources (e.g. the sun, mercury-vapor lamps, and fluorescent lights).

1. The front cover with special filter materials to remove visible lights.
2. The photodiode devices with IR bandpass filter to transmit only the same wavelength of the IR beams.
3. The light disturbance compensation circuit differentiates original double modulated beams from other external light sources.

Double Modulation Beam

The SL-QDM and SL-QDP offer double modulation beams that differ in pulse patterns. This can enhance signal discrimination against potential noise interference such as sunlight or other external light sources, resulting in a reduction of missed alarms. Together with OPTEX triple layered sunshine protection technology, it ensures high reliability under the severe outdoor security environment.

Automatic Transmit Power Control

Appropriate models | SL-200QDM/350QDM/650QDM

Automatically controls, adjusts and optimizes the power of the beam and maintains optimal performance. It decreases false and missed alarms caused by fog, frost, cross talk, signal saturation.
Lightning surges are a constant source of problems for electronic equipment that is used outdoors.

There are two types of lightning surge: 1) direct strike and 2) induced surge. In a direct lightning strike, the amount of energy dissipated is so great that there is currently no means of protecting electrical equipment from damage. A lightning induced surge may be caused by the movement of charged clouds or a nearby lightning strike. Either of these causes can induced surge voltages in electrical wiring. It is possible to provide some degree of protection against lightning induced surges by installing surge absorbers at appropriate locations as shown in the diagram.

Our Smartline series and AX series can withstand a lightning surge up to 14kV without damage resulting in faulty operation (IEC801-5 lightning surge noise is the maximum level of our test).

---

### Quad Beam & United Appearance


By employing quad beam, it dramatically reduces false alarm caused by birds and falling leaves. Moreover, it is also important that the housing design of both long and short beams are united. 60m (200ft.) range models, SL-200QN/SL-200QDP/SL-200QDM with a wide beam pitch is now available.

---

### Lightning & Surge Protection


Lightning surges are a constant source of problems for electronic equipment that is used outdoors. There are two types of lightning surge: 1) direct strike and 2) induced surge. In a direct lightning strike, the amount of energy dissipated is so great that there is currently no means of protecting electrical equipment from damage. A lightning induced surge may be caused by the movement of charged clouds or a nearby lightning strike. Either of these causes can induced surge voltages in electrical wiring. It is possible to provide some degree of protection against lightning induced surges by installing surge absorbers at appropriate locations as shown in the diagram.

Our Smartline series and AX series can withstand a lightning surge up to 14kV without damage resulting in faulty operation (IEC801-5 lightning surge noise is the maximum level of our test).
Sniper Viewfinder


X2 MAGNIFICATION LENS

The new telescope lens has a high level of visibility for optical alignment work. Even over long distances, a perfect installation and stable performance can be achieved in a short period.

How to look into the viewfinder

From right side

From left side

Viewfinder

X2 magnification lens

Conventional model

Beam Alignment Unit: BAU-4 (Option)


The BAU-4 beam alignment unit automatically and accurately adjust the optical axis. This allows peak performance and gives one technician the ability to install the 200 m (650 ft.) Smartline detector by himself.

LED Indicator and Sound Assist

Appropriate models: SL-200QDM/350QDM/650QDM, SL-200QDP/350QDP/650QDP

The alignment level indicators have 5 LEDs, each LED represents the level of alignment, ranging from poor to excellent. The optical alignment level can also be checked by sound.
Beam Power Control Selector

The beam power control selector allows you to manually adjust beam power from NORMAL to LOW or VERY LOW. This function is effective for the following purposes:

- For countermeasure against crosstalk due to reflection of wall or floor by reducing beam power.
- For countermeasure against interference due to unstable S/N (signal / noise) ratio when using multiple photo beams for long distance or beam stacking applications.
- To reduce beam power when using the detector for a distance shorter than the rated distance.
- To search the peak value when making optical alignment to support perfect alignment.

### Maximum Arrival Distance, Maximum Detection Range & Sensitivity Tolerance


### Maximum Arrival Distance & Maximum Detection range

Maximum arrival distance means theoretical distance which the beam arrives without counting external factor as a product specification. Maximum detection range is rating distance of detection range in use.

### Sensitivity Tolerance

Sensitivity tolerance can be calculated from maximum arrival distance and detection range. Distance tolerance is a distance allowance value against the reduction of the beam by external factor.

\[
\text{Distance tolerance} = \left(\frac{\text{Maximum arrival distance}}{\text{Detection range}}\right)
\]

\[
\text{Sensitivity tolerance} = \left(\text{Distance tolerance}\right)^2
\]

- e.g.) In case of using SL-350QFR at the distance of 100m
  - (Maximum arrival distance: 1000m)
  - Distance Tolerance = 10 times
  - Sensitivity Tolerance = 100 times

A certain amount of sensitivity tolerance is required for the stable operations of outdoor photoelectric detectors without false alarms, because the beam power is reduced under severe outdoor environments, e.g. dense fog, rain, snow or dust storms. The following figures are the general indications. All Optex outdoor photoelectric detectors have sensitivity tolerance of 100 times at a rating distance.

#### General recommended indication

<table>
<thead>
<tr>
<th>Type of photoelectric detector</th>
<th>Sensitivity tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indoor photoelectric detector</td>
<td>4 to 25 times</td>
</tr>
<tr>
<td>Outdoor photoelectric detector (up to 50 m)</td>
<td>25 to 100 times</td>
</tr>
<tr>
<td>Outdoor photoelectric detector (upward of 50 m)</td>
<td>More than 100 times</td>
</tr>
</tbody>
</table>
By using the beam interruption time potentiometer, it is possible to increase the time the beam must be broken in order to generate an alarm. This will reduce the chance of false alarms being caused by falling leaves, blowing debris or animal or bird movement within the protected area. Refer to the diagram before making any adjustments. If you make the beam interruption time too long, quickly moving intruders may be able to pass through the beams undetected. After performing this adjustment be certain to do a walk-thru test and confirm that the detector will provide a satisfactory level of protection.

### Adjustable Beam Interruption Time

<table>
<thead>
<tr>
<th>Appropriate models</th>
<th>Adjustable Beam Interruption Time</th>
</tr>
</thead>
</table>

- 35-50msec.  
- 65-100msec.  
- 200-250msec.  
- 500msec.

### Against Environmental Changes

<table>
<thead>
<tr>
<th>Appropriate models</th>
<th>Against Environmental Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>[A.G.C.Circuit] AX-100TFR/200TFR, AX-70TN/130TN/200TN, AX-100TF/200TF, BX-100PLUS</td>
<td></td>
</tr>
</tbody>
</table>

**A.G.C. (Automatic Gain Control) circuit**

The A.G.C. circuit continually monitors for gradual changes in the signal’s strength caused by changing weather conditions. It gains the sensitivity accordingly to maintain weather conditions.

**D.Q. output (environmental disqualification)**

D.Q. output will send a trouble signal when the beam strength is below acceptable levels, for more than 20-40 seconds, due to rain, snow, or heavy rain.
TECHNICAL INFORMATION

Battery Operated Technology

By using the beam interruption time potentiometer, it is possible to increase the time the beam must be broken in order to generate an alarm. This will reduce the chance of false alarms being caused by falling leaves, blowing debris or animal or bird movement within the protected area. Refer to the diagram before making any adjustments. If you make the beam interruption time too long, quickly moving intruders may be able to pass through the beams undetected. After performing this adjustment be certain to do a walk-thru test and confirm that the detector will provide a satisfactory level of protection.

Adjustable Beam Interruption Time


Appropriate models

35-50msec. 65-100msec. 200-250msec. 500msec.

Back box for wireless transmitters and batteries


Back box can conceal wireless transmitter. Especially, AX-100/200TFR allows you to easily replace the batteries without opening the front cover. Not necessary to do the optical alignment.

Intermittent output function

Appropriate models | SL-100TNR/200TNR, SL-350QFR/350QNR, AX-100TFR/200TFR

Alarm signals are sent periodically to avoid missed alarm while the beam is broken. Its function is effective for wireless systems which do not recognize "Restore" status.

Battery saving timer function

Appropriate models | SL-100TNR/200TNR, SL-350QFR/350QNR, AX-100TFR/200TFR, HX-40RAM, VXI-R/RAM/RDAM, HX-80NRAM, BX-80NR

Alarm output activation are limited by a timer to 5 to 120 seconds. Even if there are continuous alarm events, the alarm output operates only once in the timer period. It prolongs the battery life of a wireless transmitter.

Low Battery Output and LED

Appropriate models | SL-100TNR/200TNR, SL-350QFR/350QNR, AX-100/200TFR, HX-40RAM, HX-80NRAM

When the battery capacity becomes low, the unit automatically outputs fixed time transmission to call attention. When low battery signal is output, Anti-masking function will be canceled in order to extend the battery life. When low battery signals is output, replace all the batteries with new ones.
At a higher ambient temperature, the temperature difference between the background and a human body will be reduced. In this case the PIR could fail to readily detect a human body. With conventional temperature compensation functions, the sensitivity of detector must be set higher at 35˚C than the sensitivity at 25˚C (normal temperature) in order for the detector to offer a stable performance. However, with this setting, the sensitivity of the detector is excessively high at 40˚C or over, which could lead to various problems. To overcome this drawback, Optex’s advanced temperature compensation function allows the detector’s sensitivity to automatically drop at 40˚C or higher so that the detector can perform more reliably within a wider ambient temperature range.

### Summer Night Compensation Logic

During summer evenings and nights, areas which are in shade can create an environment where the difference between human body and the surrounding ambient temperature can be at its lowest point. This logic addresses this issue by measuring the luminance levels and the changes in the environment.

The integration of temperature and additional luminance analysis provides the product the ability to more accurately assess true environmental conditions and sharpens the sensitivity as the environmental conditions require. This combination greatly reduces the potential for missed alarms, while maintaining stability.
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**Advanced Temperature Compensation**

**Appropriate models**

<table>
<thead>
<tr>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>HX-80N/80NAM/80NRAM, HX-40/40AM/40DAM/40RAM</td>
</tr>
</tbody>
</table>

During summer evenings and nights, areas which are in shade can create an environment where the difference between human body and the surrounding ambient temperature can be at its lowest point. This logic addresses this issue by measuring the luminance levels and the changes in the environment.

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**Summer Night Compensation Logic**

**Appropriate models**

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<tr>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>HX-80N/80NAM/80NRAM</td>
</tr>
</tbody>
</table>

---

**Sensitivity**

<table>
<thead>
<tr>
<th>Ambient temperature (˚C)</th>
<th>Human body temperature(˚C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25˚C (59˚F)</td>
<td>40˚C (94˚F)</td>
</tr>
</tbody>
</table>

**Temperature compensation sensitivity of Optex detectors**

---

**B-ZONE**

**Size Judging function**

The size judging function virtually eliminates false alarms due to small animals and other moving objects like car.

**Double-Layered Detection Patterns**

**Appropriate models**

<table>
<thead>
<tr>
<th>Model</th>
</tr>
</thead>
</table>

OPTEX’s outdoor PIR detectors utilize the multiple detection pattern technology, two double-layered detection patterns (upper and lower) both have to be activated to generate an alarm condition. This reduces false alarms, particularly those caused by temperature changes, light reflection and small animals.

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**Intelligent AND detection Logic**

**Appropriate models**

<table>
<thead>
<tr>
<th>Model</th>
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<tbody>
<tr>
<td>HX-80N/80NAM/80NRAM, HX-40/40AM/40RAM/40DAM</td>
</tr>
</tbody>
</table>

By utilizing originally developed pyro-elements, it creates a configuration area consisting of 94 high density detection zones. Also the AND detection pattern technology requires both detection areas have to be activated in order to generate an alarm condition making it more tolerant to false alarms caused by small animals or pets.
OPTEX has 2 different detection logics, digital quad zone logic and multi-focus optics. Each logic creates high vertical density detection zones by original optical technology to prevent false alarms.

### High Vertical Density Detection Zones of Quad Zone Logic and Multi-Focus Optics

Normally, a detector uses twin elements create two detection zones but Optex’s detectors create an extremely high vertical zone density, two or three times the size of that in conventional PIRs. These taller zones capture the entire body mass of a person and enable detection of the smallest temperature contrast between them and the background.

**Detection Logics**

**— Multi-Focus Optics**

If a person is hidden from the PIR detector, he or she is not detected. In ordinary residences and offices, there are desks, shelves and other furniture. When these objects hide a part of the body, it may make detection difficult.

Multi-focus optics provides taller detection areas, which can be raised 1.5 to 2.0 times than ordinary optics and improve the detection ability to eliminate most dead spots regardless of the presence of furniture or other obstacles.

**— Digital Quad Zone Logic**

OPTEX’s indoor detectors have from 78 to 82 zones to cover the hole detection area. At any spot within the detection area more than 4(quad) zones are utilized to verify if it should generate alarm or not. Also the CORE platform enables the quad zone logic to evolve to the next step. Providing digital quantification of infrared energy, digital quad zone logic enhanced accuracy in both human detectability and pet immunity.
Spherical Fresnel Lens Design

Spherical lens provides a precise focal length to each of the multiple lens segments (uniform distance between each lens segment and the pyroelectric elements). This enables each lens segment to face precisely towards its detection area, and creates detection zones without distortion, achieving a new level in lens design precision.

Conventional flat lenses inevitably create sensitivity distortion problems when they are bent to fit a curved housing. Optex’s spherically designed lens will obtain sharp detection because no bending is required.

The spherical fresnel lens differs from the conventional flat fresnel lens in that the distance between the lens and the pyro-electric elements is the same across the entire lens (the focal length is always the same). It therefore collects infrared rays more efficiently.

Each focused image (detection zone) has sharply defined edges (=accurate sensitivity) and it produces the maximum signal contrast against the background (=high detection performance). This sharp focus provides the maximum signal power to the detector, compared to a weak, sluggish signal created by a poorly focused zone.

Each focused image (detection zone) has poorly defined borders (=Inaccurate sensitivity) and does not produce sufficient contrast against the background (=low detection performance). Because the IR energy is poorly focused, objects entering these low contrast border areas produce weak, poorly defined electrical signals within the detector.
Visible Light Protection

Visible light disturbance protection will prevent a false alarm when a 60W halogen lamp is turned on close to the detector. No false alarm is triggered even when a car flashes its headlights at the detector at a distance of 30cm (If a car passes through the detector range, of course, the exhaust heat of the car will trigger the alarm). Also no false alarm will be triggered by sunlight up to an illumination of 100,000 lux. False alarms are most likely caused when early morning or evening sunlight pours into the room, and enters the field of view of the PIR either directly or by reflection. In such a case, however, the illumination reaches only about 50,000 lux. This prevents false alarm, due to double conductive shielding.

RFI Protection

RFI protection has been improved to 20V/m and 30V/m or more by utilizing the double conductive shielding. A field strength of 20V/m means that even if a 10W transmitter is placed within 1 meter of the detector and interference is produced, it will not cause false alarm. With a field strength of 30V/m, a 10W transmitter can be placed within 30-35cm of the detector and not cause a false alarm.

Digital Anti-Masking Technology

Digital processing circuit guarantees reliability in a practical way by adapting to any changes detected in the environment.

By using our double conductive shielding, the visible light disturbance and RFI can be blocked.
The pyroelectric element’s field of view is fully enclosed by the sealed optics mechanism of the lens, cover and the sealed optics foam. This mechanism prevents insects from crossing in front of the pyroelectric element. The sealed optics also protect against draft through wiring holes. Easy knockouts reduce extra space between holes and cables, further enhancing the sealing of the entire housing.

**Sealed Optics**

![Sealed Optics](image1)

![Advanced Sealed Optics](image2)

**Detected area shape of PIR and microwave are not the same**

**Ideal detection area of Optex combination detector**

**Microwave Area Shaping Technology**

![Microwave Area Shaping Technology](image3)

When microwave and PIR detection are used together, the detection areas of each must be the same in order to make accurate detection. But traditionally this can be a problem because...:
- Firstly, microwaves are not always limited by objects such as wall, windows and partitions, whereas PIR detection is.
- Secondly, the distances at which microwaves can detect movement tend to be far greater than those required by internal intruder detection applications.

Microwave area shaping technology overcomes these problems by matching the microwave detection area to that of the PIR and by limiting it to the room being covered. Long or short distance can be set roughly, by selecting the range using the switch and more precise adjustment is obtained. By doing this, false alarms from beyond the required coverage area or outside the room in question are avoided.

Since the detection area has uniform sensitivity, which minimizes false activation’s caused by spot movement in the detection area e.g. small animals.
Optex uses parts that meet various requirements of international standards in order to meet strict rules for putting safety markings on our products. These standards often require that devices meet or surpass certain ratings specified by IP (International Protection) code.

IP tests have been done based on the standard, IEC529 which is required for our all products. IP codes are often required even for parts or partially assembled products.

Following is a brief explanation on the meaning of each number of the IP code.

**Arrangement of the IP code**

<table>
<thead>
<tr>
<th>Degree of protection against solid object</th>
<th>Degree of protection against water</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Non-protected</td>
</tr>
<tr>
<td>1</td>
<td>Solid object such as human fist (diameter of 50mm or more) shall not penetrate into product.</td>
</tr>
<tr>
<td>2</td>
<td>Solid object such as human fingers (diameter of 12.5mm) shall not penetrate into product.</td>
</tr>
<tr>
<td>3</td>
<td>Solid object such as tool (diameter of more than 2.5mm) shall not penetrate into product.</td>
</tr>
<tr>
<td>4</td>
<td>Solid object such as wire (diameter of more than 1.0mm) shall not penetrate into product.</td>
</tr>
<tr>
<td>5</td>
<td>Ingress of dust shall not deteriorate performance and safety of product.</td>
</tr>
<tr>
<td>6</td>
<td>Dust-tight, No ingress of dust</td>
</tr>
<tr>
<td>0</td>
<td>Non-protected</td>
</tr>
<tr>
<td>1</td>
<td>Vertically falling water drops shall have no harmful effect on installed product.</td>
</tr>
<tr>
<td>2</td>
<td>Vertically dripping water on installed product that is tilted up to an angle of 15°shall have no harmful effect.</td>
</tr>
<tr>
<td>3</td>
<td>Sprayed water to installed product at any angle up to 60°from the vertical shall have no harmful effect.</td>
</tr>
<tr>
<td>4</td>
<td>Water splashing against the enclosure from any direction shall have no harmful effect.</td>
</tr>
<tr>
<td>5</td>
<td>Water protected by a nozzle against enclosure from any direction shall have no harmful effect.</td>
</tr>
<tr>
<td>6</td>
<td>Water protected in powerful jets against enclosure from any direction shall have no harmful effect.</td>
</tr>
<tr>
<td>7</td>
<td>Water protected. Protected against the effect of temporary immersion in water.</td>
</tr>
<tr>
<td>8</td>
<td>Waterproof. Protected against the effect of continuous immersion in water.</td>
</tr>
</tbody>
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OPTEX Company Introduction

The Japanese manufacturer Optex was founded in 1979 and is now becoming a world-leading company in the area of security detectors with its unique infrared detection technology.

In addition to providing highly reliable detectors developed with our unique technology, Optex also upholds environmental policies that strive to make eco-friendly products through the entire process from design and development. In 1997, Optex was certified for complying with ISO 14001 international environmental management standards amid the growing interest in environmental protection on the global level.

Product procurement in over 80 countries worldwide led Optex to implement strategies for achieving global standards for quality at an early stage. The company has also received certification for ISO 9001.

As a pioneer in infrared technology, Optex will continue to meet the needs of customers worldwide by further striving to advance quality control with precision and efficiency along with building systems for global-standard quality.
Optex aims to usher in a brighter future with a focus on safety, security, and comfort through the use of sensing technology.

Proprietary Technologies for a Wide Range of Business Fields
Using not only various reliable sensing and communication technologies but also solution-based proprietary ideas, Optex helps customers realize the best solutions to improve business activities.

OPTEX Sensing Technologies

Reliable Sensing Technology
Even in environments with numerous factors—including sunlight, small animals, and radio waves—that may interfere with sensor-based detection, Optex utilizes proprietary sensing algorithms to ensure reliable, stable detection.

Application-Based Sensor Equipment Development
Optex introduces sensors capable of accurate detection by incorporating not only knowledge of various sensor features found throughout the globe but also a comprehensive understanding of factors such as detection targets, installation environments, and applications.

Smart Data
Optex sensors work as a type of edge computing device that transmits only the necessary data (smart data), which is created by filtering out unnecessary data from large amounts of sensor data to ensure only the essential data is transmitted.

Global Expansion
Taking advantage of a global network that includes more than 20 bases, Optex provides products and services in 80 countries and regions around the world.

Global Niche Market Leader
Optex is dedicated to meeting the needs of niche markets for special-application sensors and currently boasts the leading share of the global niche market.