SX-360Z is Listed to both UL and ULC.
SX-360ZV is not Listed to UL nor ULC.

FEATURES
- Ceiling Mount 360° PIR Detector
- Zoom Area Adjustment: 360ft Detection Area can be obtained at any installation height between 8 to 16ft. (318m at H: 2.4 to 5.0m)
- High Density Detection Area with 276 zones.
- Selectable Sensitivity (High, Medium or Low)
- Selectable Pulse Count (1, 2 or 4)
- Initial Alarm Memory (SX-360ZV)
- LED Remote Control Terminal

I. INSTALLATION HINTS

1. Avoid direct sunlight.
2. Avoid looking directly at air conditioning or heating vents.
3. Avoid vapor or high humidity that can cause condensation.
4. Avoid curtain, screen, etc. blocking detection area.
5. Do not install outdoors.
6. Install within 8~16ft (2.4~5m) height from floor.

II. DETECTION AREA

TOP VIEW

SIDE VIEW

ZOOM "A" Position (See Section VII.)

ZOOM "C" Position (See Section VII.)

ZOOM "E" Position (See Section VII.)
I. DESCRIPTION AND OPERATION

II. INSTALLATION METHOD

1. Remove the ZOOM-Unit from the Sensor-Body by loosening "fastening screw" and turning the ZOOM-Unit counter-clockwise.
2. Mount the Sensor-Body and wire according to Section V. Full up the mounting holes with the sponge.
3. Adjust "ZOOM (Section VII), Sensitivity (Section VI)," according to the required installation height.
4. Replace the ZOOM-unit by turning it clockwise, and supply power to unit. When LED stops blinking, the warm-up period is complete (approx. 20 sec.).
5. Conduct a Walk Test.
6. Select pulse count (See Section IX) according to your coverage needs and environmental conditions. Fasten cover with fastening screw.

NOTE: When the warm-up period is over, alarm may be given once. This is an electric characteristic of SX-360Z and not a mal-function.

III. WIRING

<table>
<thead>
<tr>
<th>WIRE SIZE</th>
<th>VOLTAGE</th>
<th>SX-360Z</th>
<th>SX-360ZV</th>
</tr>
</thead>
<tbody>
<tr>
<td>AWG22 (0.33mm²)</td>
<td>12V</td>
<td>1090 (320m)</td>
<td>1700 (510m)</td>
</tr>
<tr>
<td></td>
<td>14V</td>
<td>1240 (650m)</td>
<td>3400 (1300m)</td>
</tr>
<tr>
<td>AWG20 (0.50mm²)</td>
<td>12V</td>
<td>1270 (510m)</td>
<td>3400 (1300m)</td>
</tr>
<tr>
<td></td>
<td>14V</td>
<td>1270 (510m)</td>
<td>3400 (1300m)</td>
</tr>
<tr>
<td>AWG18 (0.83mm²)</td>
<td>12V</td>
<td>2700 (820m)</td>
<td>5000 (1600m)</td>
</tr>
<tr>
<td></td>
<td>14V</td>
<td>5000 (1600m)</td>
<td>1900 (570m)</td>
</tr>
</tbody>
</table>

- When using two or more units on one wire, the maximum length is obtained by dividing the above length by the number of units used.
- UL requires SX-360Z to be connected to a UL listed power supply capable of providing a nominal input of 12VDC (6-18VDC) 18mA (max.) [SX-360ZV], and battery standby time of 4 hours.

IV. SENSITIVITY ADJUSTMENT

Select the sensitivity "H (High)", "M (Medium)", or "L (Low)". The following chart shows recommended setting for diameter of detection area.

<table>
<thead>
<tr>
<th>SENS.</th>
<th>L</th>
<th>M</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIAMETER OF</td>
<td>4.30-4.40&quot;</td>
<td>4.40-4.50&quot;</td>
<td>4.50-4.60&quot;</td>
</tr>
<tr>
<td>DETECTION AREA</td>
<td>(109-112mm)</td>
<td>(112-118mm)</td>
<td>(118-128mm)</td>
</tr>
</tbody>
</table>

Before making adjustments, determine the mounting height and detection area. (See Section VI.)
VI. ZOOM AREA ADJUSTMENT

The SX-360Z series detection pattern can be adjusted for installations at any height, between 8 to 16ft (2.4~5m).

<table>
<thead>
<tr>
<th>MOUNTING HEIGHT</th>
<th>ZOOM LOOP SCREW</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>16ft (4.9m)</td>
<td></td>
<td>460 (148)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14ft (4.2m)</td>
<td></td>
<td>452 (141)</td>
<td>460 (148)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12ft (3.66m)</td>
<td></td>
<td>458 (143)</td>
<td>450 (145)</td>
<td>460 (148)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10ft (3m)</td>
<td></td>
<td>437 (131)</td>
<td>440 (133)</td>
<td>450 (145)</td>
<td>460 (148)</td>
<td></td>
</tr>
<tr>
<td>8ft (2.4m)</td>
<td></td>
<td>430 (130)</td>
<td>434 (131)</td>
<td>440 (132)</td>
<td>448 (134)</td>
<td>460 (148)</td>
</tr>
</tbody>
</table>

<ADJUSTING THE ZOOM UNIT>

Loosen the black Zoom Lock screw.

<DETECTION AREA CHART>

VII. INITIAL ALARM MEMORY & ALARM MEMORY (SX-360ZV)

The SX-360ZV has an “initial alarm memory function.” When several detectors are connected in one alarm loop, this function will indicate, by LED, memories which of the detectors was triggered first.

1. Wiring of Alarm Memory

Connect control voltage signal terminal of control panel to A.M. terminal.

<table>
<thead>
<tr>
<th>System armed</th>
<th>System disarmed</th>
</tr>
</thead>
<tbody>
<tr>
<td>0~1VDC (grounded)</td>
<td>Open</td>
</tr>
</tbody>
</table>

“grounded” = AM terminal is electrically connected with power supply terminal (ground).

2. Wiring of Initial Alarm Memory

Connect I.A. terminals of the detectors in one loop. (Parallel Connection)

NOTE: Maximum 40 detectors can be connected in one loop for initial alarm memory.

3. LED Indications

If the unit is triggered during an armed period, when the system is disarmed, its LED condition will indicate that it reported the alarm.

Ⅷ. PULSE COUNT ADJUSTMENT

Adjust pulse count as follows.

★ Pulse Count 1 (Instant alarm mode)
Select this position for walk test only.

★ Pulse Count 2 (Standard position)
Select this position for most applications.

★ Pulse Count 4
For bad environments, changing temperatures etc.

★ When the initial alarm memory is used:
Initial alarm memory is indicated by a flickering LED. Other memories (from the second detection on) are indicated by a continuously lit LED.

★ When the initial alarm memory is not used:
All alarm memories are indicated by flickering LED.

4. Reset
Alarm memory resets automatically when system is re-armed.

5. NOTES
Alarm Memory will operate whether the LED is disabled or not.
Alarm Memory will not latch while system is disarmed. LED operation and alarm output are not affected by alarm memory when system is armed.

A compatible control panel is required for alarm memory.
1. LED On/Off Switch (Models SX-360Z)

Use switch to enable or disable LED.

⋆ LED Enabled: Connect DL terminal to common ground (with detector).
⋆ LED Disabled: No ground to DL terminal (open circuit).

2. DL Terminal

⋆ Controls operation of LED only; does not affect Alarm Memory function.
⋆ LED can be enabled/disabled remotely or at the detector.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Probable Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED does not light</td>
<td>Incorrect power supply voltage. (disconnection, or low voltage)</td>
<td>Correct supply voltage to 6~18V DC.</td>
</tr>
<tr>
<td></td>
<td>Incorrect detection area.</td>
<td>See Section II and Section VII.</td>
</tr>
<tr>
<td></td>
<td>Incorrect polarity to detector.</td>
<td>Switch positive and negative at terminal.</td>
</tr>
<tr>
<td></td>
<td>LED switch is OFF</td>
<td>Turn on the Switch. See Section X.</td>
</tr>
<tr>
<td>LED lights even though no person within area.</td>
<td>Moving object within area. (curtain, wall hanging, etc.)</td>
<td>Remove object from detection area.</td>
</tr>
<tr>
<td></td>
<td>Rapid temperature changes (heater, air-conditioner, etc.) within area.</td>
<td>Remove the sources from detection area.</td>
</tr>
<tr>
<td>LED continues to light</td>
<td>Poor connection of alarm memory. (SX-360ZV)</td>
<td>Reconnect wire.</td>
</tr>
<tr>
<td></td>
<td>Wrong control voltage from panel. (SX-360ZV)</td>
<td>Must be 0~1VDC. (grounded)</td>
</tr>
<tr>
<td>LED lights but signal is not sent.</td>
<td>Relay contact is stuck or damaged due to overloading.</td>
<td>Check load of output. The unit needs repair or replacement.</td>
</tr>
<tr>
<td></td>
<td>Faulty Wiring.</td>
<td>Wire correctly.</td>
</tr>
</tbody>
</table>

Conduct a walk test at least once per year.

XI. TROUBLE SHOOTING AND MAINTENANCE

III. SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>SX 360Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Passive Infrared</td>
</tr>
<tr>
<td>Coverage</td>
<td>ø60L ( ø1.89), 360 ZOOM</td>
</tr>
<tr>
<td>Detection zones</td>
<td>276 zones</td>
</tr>
<tr>
<td>Mounting</td>
<td>Ceiling : Height 8<del>16ft (2.4</del>5mn)</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>3° (1.6°C) at 24/sec. (0.6°sec./sec.) See Sect V.</td>
</tr>
<tr>
<td>Detectable speed</td>
<td>1<del>50/sec. (0.3</del>1.5/sec.)</td>
</tr>
<tr>
<td>LED indicator</td>
<td>LED is blinking during warm-up period.</td>
</tr>
<tr>
<td>Alarm period</td>
<td>Alarm condition</td>
</tr>
<tr>
<td>Alarm output</td>
<td>2.0 ±0.3 sec.</td>
</tr>
<tr>
<td>Tamper switch</td>
<td>N.C., 30VDC 0.1A max, Opens when cover removed.</td>
</tr>
<tr>
<td>Pulse Count</td>
<td>20±5 sec.</td>
</tr>
<tr>
<td>Warm up period</td>
<td>Approx 20sec. (LED blinks)</td>
</tr>
<tr>
<td>Power input</td>
<td>6~18VDC</td>
</tr>
<tr>
<td>Current draw</td>
<td>13mA (normal), 18mA (max)</td>
</tr>
<tr>
<td>Weight</td>
<td>7.90oz. (224g)</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-4°F ~+122°F (-20°C ~+50°C)</td>
</tr>
<tr>
<td>Environment humidity</td>
<td>95% (max)</td>
</tr>
<tr>
<td>RF interference</td>
<td>No Alarm 30W/m</td>
</tr>
</tbody>
</table>

V Version (Alarm Memory)

<table>
<thead>
<tr>
<th>Model</th>
<th>SX-360ZV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alarm memory</td>
<td>Amned : 0~1VDC. See Sect. VIII.</td>
</tr>
<tr>
<td>Initial Alarm memory</td>
<td>Max: 40 detectors. See Section. VIII.</td>
</tr>
<tr>
<td>Current draw</td>
<td>12mA(normal), 18mA(max)</td>
</tr>
<tr>
<td>Weight</td>
<td>8.09oz. (227g)</td>
</tr>
<tr>
<td>RF interference</td>
<td>No Alarm 30W/m</td>
</tr>
</tbody>
</table>

Optex Corporation

NOTE

This unit is designed to detect movement of an intruder and activate an alarm control panel. Being only a part of a complete system, we cannot accept responsibility for any damages or other consequences resulting from an intrusion. This Product conforms to the EMC Directive, 89/336/EEC. The UL products are installed in accordance with the Canadian Code as per Section 4.3 of ULC-5306.

© 2004 Optex Co. Ltd.

Optex Corporation

Optex Europe Ltd.

Optex Canada Inc.

Optex Australia

Optex China

Optex Korea

Optex Thailand

Optex Turkey

OptexBrazil

Optex Mexico

Optex Korea (Certified by KOSHA)

Optex China (Certified by CCM)

Optex Thailand (Certified by TCS)

Optex Turkey (Certified by TSE)

Optex Brazil (Certified by ANATEL)

Optex Mexico (Certified by SAT)

Optex Korea (Certified by KOSHA)

Optex China (Certified by CCM)

Optex Thailand (Certified by TCS)

Optex Turkey (Certified by TSE)

Optex Brazil (Certified by ANATEL)

Optex Mexico (Certified by SAT)