10 LED ON-OFF

The LED can be enabled or disabled by using the LED ON/OFF switch or by using D.L. terminal.

1 LED ON/OFF Switch (SX-360Z only)

- Use this switch to enable or disable LED.
- This switch has priority to over DL terminal.

2 DL Terminal (for LED remote control)

- LED can be enabled or disabled remotely by using DL terminal.

	Remote operation
LED Enabled	Connect DL terminal to common ground.
LED Disabled	Open DL terminal circuit.

Note>>
- LED operation does not affect the alarm memory functions.
- DL terminal common line is same as terminal of POWER INPUT.

11 TROUBLE SHOOTING AND MAINTENANCE

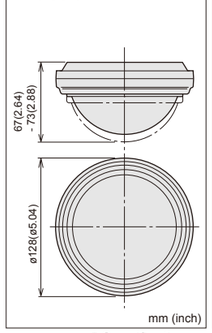
PROBLEM	PROBABLE CAUSE	REMEDY
LED does not light.	Incorrect power supply voltage. (disconnection, or low voltage)	Correct supply voltage to 9.5 - 18 VDC.
	Incorrect detection area.	See section 2 and section 7.
	Incorrect polarity to detector.	Switch positive and negative at terminal.
	LED switch is OFF	Turn on the Switch. See section 10.
LED lights even though no person within area.	Moving object within area. (curtain, wall hanging, etc.)	Remove object from detection area.
	Rapid temperature changes (heater, air-conditioner, etc.) within area.	Remove object from detection area.
LED continues to light	Poor connection of alarm memory. (SX-360ZV)	Reconnect wire.
	Wrong control voltage from panel. (SX-360ZV)	Must be 0 to 1 VDC. (grounded)
LED lights but signal is not sent.	Relay contact is stuck of damaged due to overloading.	Check load of output. The unit needs repair or replacement.
	Faulty Wiring.	Wire correctly.

12 SPECIFICATIONS

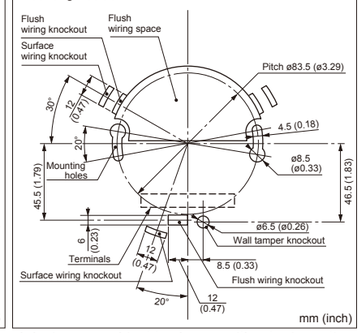
Model	SX-360Z
Detection method	Passive Infrared
Detection zones	276 zones
Mounting location	Ceiling
Coverage / Mounting height	ø18 m (ø60 ft.) at 2.4 –5 m (8 –16 ft.)
Optical design	360° ZOOM
LED indicator	LED is blinking during warm-up period.
	Alarm condition
Alarm period	2.0 ±0.5 sec.
Alarm output	N.C., 28 V DC 0.2 A (max.)
Tamper switch	N.C., Opens when cover removed.
Tamper output	30 V DC 0.1 A (max.)
Pulse Count	20 ±5 sec. 1, 2 or 4
Warm up period	Approx. 20 sec. (LED blinks.)
Power input	9.5 to 18 V DC
Current draw	16 mA/(normal), 18 mA/(max.) at 12 V DC
Weight	224 g (7.90 oz)
Operating temperature	–20°C to +50°C (–4°F to +122°F)
Environment humidity	95% (max.)
RF interference	No Alarm 30 V/m

Model	SX-360ZV
Alarm memory	Armed : 0 to 1 V DC. See section 8.
Initial Alarm memory	Max. 40 detectors See section 8.
Current draw	16 mA/(normal), 28 mA/(max) at 12 V DC
Weight	227 g (8.00 oz.)
RF interference	No Alarm 30 V/m

Dimensions



Mounting Position



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

EU contact information

Manufacturer:
OPTEX CO., LTD.
5-8-12 Ogoto, Otsu, Shiga, 520-0101 JAPAN
Authorised representative in Europe:
OPTEX (EUROPE) LTD. / EMEA HEADQUARTERS
Marandaz House 1 Cordwallis Park, Clivemont Road,Maidenhead, Berkshire, SL6 7BU U.K.

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.
- The ULC products are installed in accordance with the Canadian Code as per Section 4.3 of ULC-S306.

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OPTEX INC./AMERICAS HQ (U.S.)
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www.optex.co.th

No.59-2796-0 1904-16
UL 59-0527-6 0908-31

INSTALLATION INSTRUCTIONS

EN CE

360° CEILING MOUNT PASSIVE INFRARED DETECTOR

SX-360Z, SX-360ZV

FEATURES

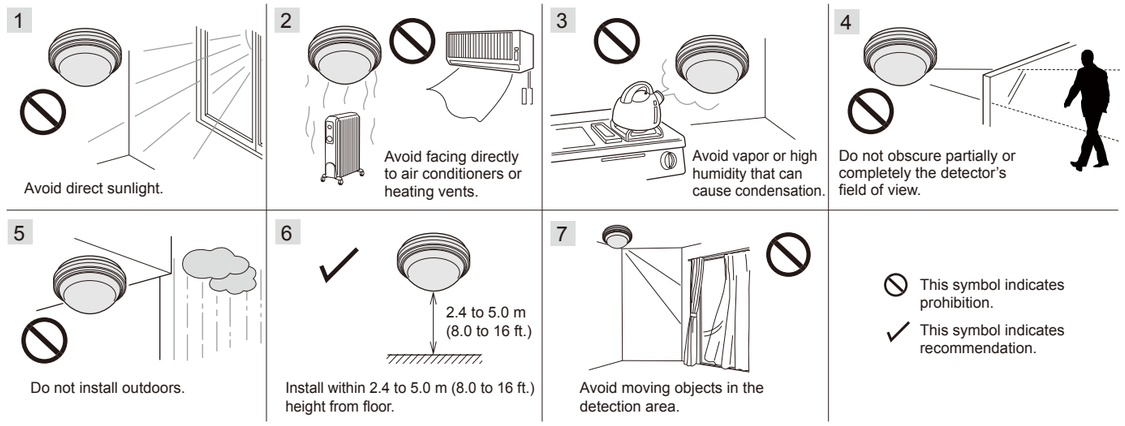
- Ceiling mount 360° PIR detector
- Zoom area adjustment : ø18 m (ø60 ft.) at 2.4 –5.0 m (8 –16 ft.)
- High density detection area with 276 zones
- Selectable sensitivity (High, Medium or Low)
- Selectable pulse count (TEST, 2 or 4)
- Initial alarm memory (SX-360ZV)
- LED remote control terminal

COMPLIANCE

- UL / c-UL Listed
- PD 6662 : 2010
- larm klass 2, miljö klass II, SSF 1014

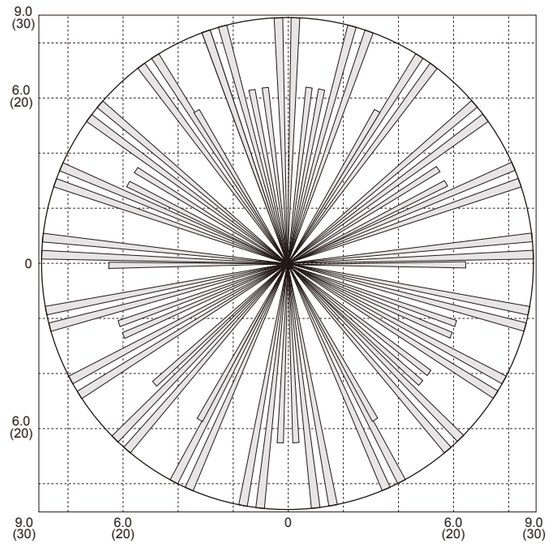
- (SX-360Z)
  EN 50131-1 Grades and Environmental Class Security Grade 2, and Environmental Class II
  EN 50131-2-2
  Tested and certified by Telefication

1 INSTALLATION HINTS



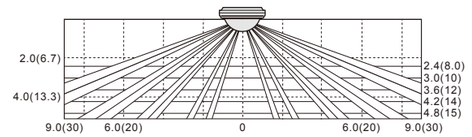
2 DETECTION AREA

TOP VIEW



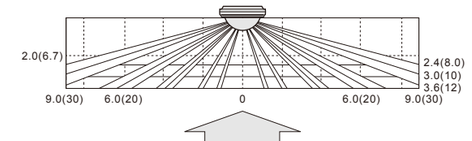
SIDE VIEW

ZOOM "A" Position (See Section 7.)



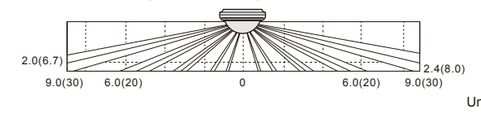
ZOOM

ZOOM "C" Position (See Section 7.)



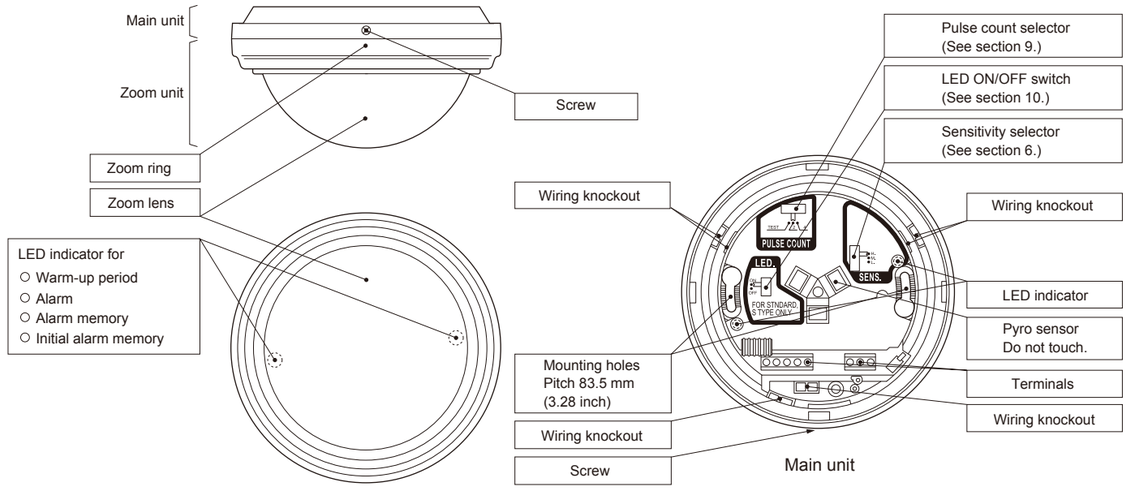
ZOOM

ZOOM "E" Position (See Section 7.)



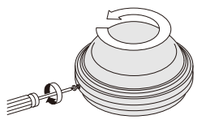
Unit: m (ft)

3 PARTS IDENTIFICATION



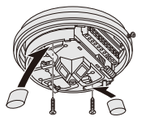
4 INSTALLATION METHOD

1



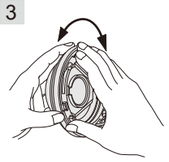
Remove the Zoom-unit from the Main unit by loosening the screw and turning the Zoom unit counter-clockwise.

2



Mount the Main unit and wire according to section 5.
Full up the mounting holes with the sponge.

3



Adjust Zoom (section 7) and Sensitivity (section 6) according to the required installation height.

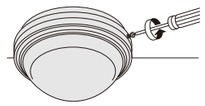
4

Install the Zoom unit by turning it clockwise. And supply power to the detector.
When LED stops blinking, the warm-up period is expired (approx. 20 sec.).

5

Conduct a walk test.

6

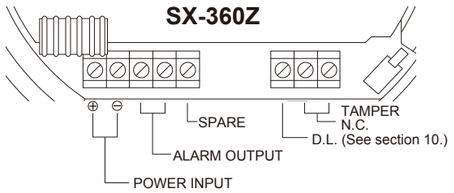


Select pulse count (see section 9.) according to your coverage needs and environmental conditions. And then fasten the screw.

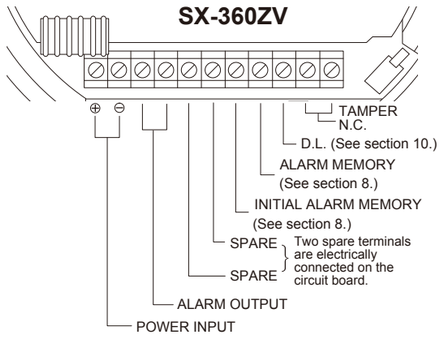
Note>>
- When the warm-up period is expired, alarm is generated once. This is an electric characteristic of SX-360Z and not a mal-function.
- Conduct a walk test at least once a year.

5 WIRING

SX-360Z



SX-360ZV



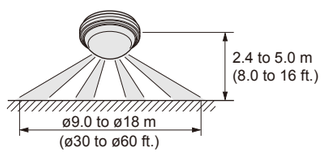
Power wires should not exceed the following lengths.

WIRE SIZE \ VOLTAGE	SX-360Z 12V	SX-360Z 14V	SX-360ZV 12V	SX-360ZV 14V
AWG22 (0.33 mm²)	320 m (1070 ft)	650 m (2140 ft)	230 m (770 ft)	460 m (1530 ft)
AWG20 (0.52 mm²)	510 m (1700 ft)	1020 m (3400 ft)	360 m (1200 ft)	730 m (2400 ft)
AWG18 (0.83 mm²)	820 m (2700 ft)	1600 m (5300 ft)	570 m (1900 ft)	1150 m (3800 ft)

- 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 12 VDC and battery standby time of 4 hours.

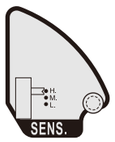
6 SENSITIVITY ADJUSTMENT

1



Before making adjustments, determine the mounting height and detection area. (See section 7.)

2



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

SENS.	L	M	H
DIAMETER OF DETECTION AREA	ø9.0 to ø12 m (ø30 to ø40 ft.)	ø12 to ø15 m (ø40 to ø50 ft.)	ø15 to ø18 m (ø50 to ø60 ft.)

INCERT SX-360Z: For T031 compliance this switch should be set to “LOW”.

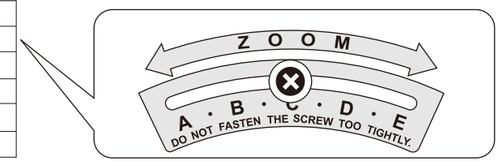
EN SX-360Z: For EN 50131-2-2 compliance this switch should be set to ”LOW”.

7 ZOOM AREA ADJUSTMENT

The SX-360Z series detection pattern can be adjusted for installations at any height, between 2.4 to 5.0 m (8.0 to 16 ft.)

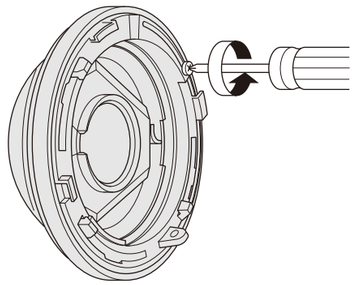
≪DETECTION AREA CHART≫ Unit: m (ft.)

MOUNTING HEIGHT	ZOOM-LOCK SCREW A	B	C	D	E
5.0 m (16 ft.)	ø18 (ø60)	-	-	-	-
4.3 m (14 ft.)	ø16 (ø52)	ø18 (ø60)	-	-	-
3.7 m (12 ft.)	ø14 (ø48)	ø15 (ø50)	ø18	-	-
3.0 m (10 ft.)	ø11 (ø37)	ø12 (ø40)	ø15	ø18	-
2.4 m (8.0 ft.)	ø9.0 (ø30)	ø10 (ø34)	ø12	ø15	ø18



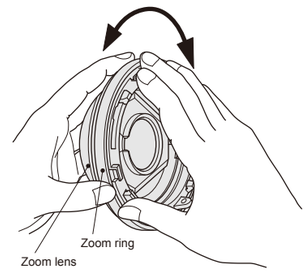
≪ADJUSTING THE ZOOM UNIT≫

1



Loosen the black Zoom Lock screw.

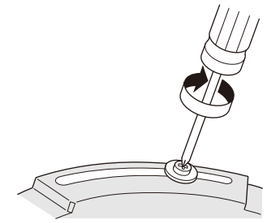
2



Turn Zoom ring for adjustment.

For higher installations, turn counter-clockwise.
For lower installations, turn clockwise.

3



Fasten the black Zoom lock screw at the marked point of the required installation height.

Note>>
- Do not fasten the screw too tightly.

8 INITIAL ALARM MEMORY & ALARM MEMORY (SX-360ZV)

The SX-360ZV can indicate an alarm history during armed period by wiring ALARM MEMORY terminal (A.M.) shown in the following section. It indicates on the LED after the system is disarmed. In case that several detectors are connected in one loop, it can indicate which one detected intrusions. In addition, by wiring INITIAL ALARM MEMORY terminal (I.A.), detectors can indicate which one detected intrusion first.

1 System status

The detector recognizes whether the system is armed or disarmed by detecting the voltage of control panel output through the A.M. terminal.

Status	Control panel output
System armed	0 - 1 VDC (grounded)
System disarmed	Open

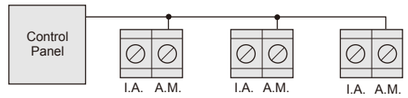
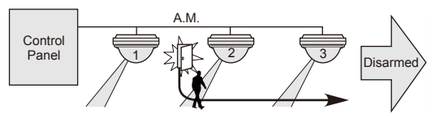
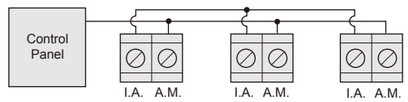
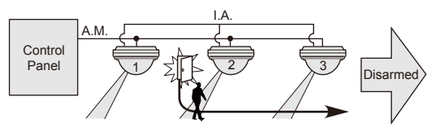
“grounded”= A.M. terminal is electrically connected with ⊖ power supply terminal (ground).

2 Reset

Alarm memories are reset automatically when the system is armed again.

Note>>
- A suitable control panel is required for alarm memory.
- Alarm memory is operated whether the LED is disabled or not.
- Alarm memory is not latched while system is disarmed.
- LED operation and alarm output are not affected by the status of alarm memory function while system is armed.

3 Wiring and LED indications

Function	Wiring	LED indications
Alarm memory		All alarm memories are shown by blinking LED. 
Initial alarm memory	 *Note>>* • Up to 40 detectors can be connected in one loop for initial alarm memory.	Initial alarm memory is shown by a blinking LED. Other memories (from the second detection on) are shown by a lighting LED. 

No.	LED
1	OFF
2	Blinking
3	Blinking

No.	LED
1	OFF
2	Blinking
3	Lighting

9 PULSE COUNT ADJUSTMENT

Adjust pulse count as follows.

PULSE COUNT	TEST	2	4
USAGE	Instant alarm mode Select this position for walk test only.	Factory default position Select this position for most applications.	For bad environments, changing temperatures etc.