

8 TROUBLE SHOOTING

CX-702RS

PROBLEM	PROBLEM CAUSE	REMEDY
Alarm is not activated although someone is walking in the detection area.	Detection area is improper.	Conduct a walk test. See section 2 and 7-3.
	Transmitter is not connected to PIR.	See section 5.
	Wireless transmitter has not arrived at a receiver.	Check the transmitter.
	Battery is dead.	Change battery.
	Walk test switch is OFF.	Turn the walk test switch ON. See section 7-3.
	Polarity of the detector is improper.	Replace the polarity of a terminal. See section 5.
Alarm condition when no alarm is activated although nobody is in the area.	Power supply voltage is improper. (disconnection or low voltage)	Check the wiring is correct or not. Or there is not a battery in the detector.
	Moving object within detection area. (curtain, wall hanging, etc.)	Remove the object from the detection area.
LED does not light up at the time of walk test.	Temperature of object within area is changing rapidly. (heater, air conditioning, etc.)	Remove the heat sources from the detection area or relocate the detector.
	Walk test switch is OFF.	Turn the walk test switch ON.
	Battery is dead.	Change the battery.

CX-702S

PROBLEM	PROBLEM CAUSE	REMEDY
LED does not light.	Power supply voltage is improper. (disconnection or low voltage)	Correct supply voltage to 9.5 - 16 V DC. See section 5.
	Detection area is improper.	See section 5.
	LED switch is OFF.	Turn ON the switch. See section 7-1.
	Polarity of the detector is improper.	Switch positive and negative at terminal. See section 5.
LED lights even though no person within area.	Moving object within detection area.(curtain, wall hanging, etc.)	Remove the heat sources from the detection area.
	Temperature of object within area is changing rapidly. (heater, air conditioning, etc.)	Remove the object from the detection area.
LED lights but signal is not sent.	Relay contact is stuck or damaged due to overloading.	Check load of output. The unit needs repair or replacement.

9 MAINTENANCE

Conduct a walk test at least once a year to confirm proper operation. When using CX-702RS and a transmitter in common, the battery life will be shortened depending on the transmitter type (current draw). The assumption battery life is shown bellow. The battery life will change depending on the temperature.

Battery life (CX-702RS only)	Approx. 3 years/ 9 V Alkaline battery (560 mAh)
	Approx. 7 years/ 3.6 V Lithium battery (850 mAh)
	Approx. 10 years/ 9 V Lithium battery (1,200 mAh)

10 SPECIFICATIONS

Model	CX-702RS	CX-702S
Detection method	Passive infrared	
Coverage/ Detection zones	Wide angle 85° 21 m x 21 m (70 ft. x 70 ft.)/ 68 zones Long range 45 m x 2.4 m (150 ft. x 8 ft.)/ 22 zones	
Mounting height	1.5 to 3.6 m (5 to 12 ft.)	
Sensitivity	1.6°C at 0.6 m/s 2.4 m mounting height (3°F at ft./s 8 ft. mounting height)	
Detectable speed	0.3 to 1.5 m/s (1 to 5 ft./s)	
Alarm period	Approx. 2.5 s	
Pulse count	Approx. 20 s, 2 or 4	
Power input (Operation Voltage)	3 to 9 V DC Alkaline or Lithium battery (2.3 to 10 V DC)	9.5 to 16 V DC
Current draw	Normal 5 µA (stand-by)	15 mA
	Max. 10 mA (Walk test, LED ON) at 9 V DC	20 mA at 12 V DC
Alarm output	Form C-solidstate switch 10 V DC, 0.01 A max.	Form C 15 V DC, 0.2 A max.
Tamper switch	Form C	-
Warm-up period	Approx. 90 s	Approx. 60 s
LED indicator	Disable during normal operation Alarm indicator optional (walk test)	Alarm condition
RF interference	No alarm 20 V/m	No alarm 30 V/m
Operation temperature	-10°C to +50°C (+14°F to +122°F)	-20°C to +50°C (-4°F to +122°F)
Environment humidity	95% max.	
Weight	200 g (7.0 oz.)	

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

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.



EN



PASSIVE INFRARED DETECTOR CX-702RS, CX-702S

Battery operated (CE)

Form C Relay

FEATURES

- Selectable "WIDE ANGLE" and "LONG RANGE" detection patterns
- Double conductive shielding of the pyroelectric element, extremely high light
- Multifocus optics design (Patent listed)
- Sealed optics
- Easy installation

OPTIONS

- CA-1W: Wall mount bracket/ CA-2C: Ceiling mount bracket;
Adjustable ±45° (Horizontally), 0 to 20° (Vertically downwards)
- BA-70: Backbox for wireless transmitter

CX-702RS only

- Low current draw: 5µA (Normal in standby)
- Battery operated
- Form C alarm output and tamper switch

CX-702S only

- Form C alarm output relay
- LED ON/OFF switch

1 INSTALLATION HINTS

1 Avoid direct sunlight.

2 Avoid mounting detector where movement of Fans or Air Conditioning Fans can be detected.

3 Avoid vapor or high humidity that can cause condensation.

4 Avoid Curtain, Screen, etc. blocking detection area.

5 Do not install outdoors.

6 **WARNING**
Never repair or modify product. It may cause accident, fire hazard or electric shock.

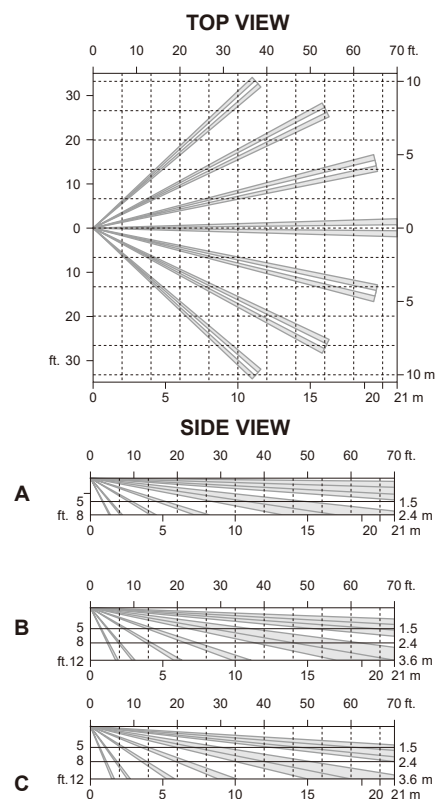
7 **WARNING**
When damage has occurred to the product, i.e. water logged, abnormal things inside product, overheating or smoking, strange smells etc., immediately stop using product and contact your supplier. Otherwise, continued use in such condition may cause electric shock or fire hazard.

8 **CAUTION**
Mount securely. A falling product may cause injury.

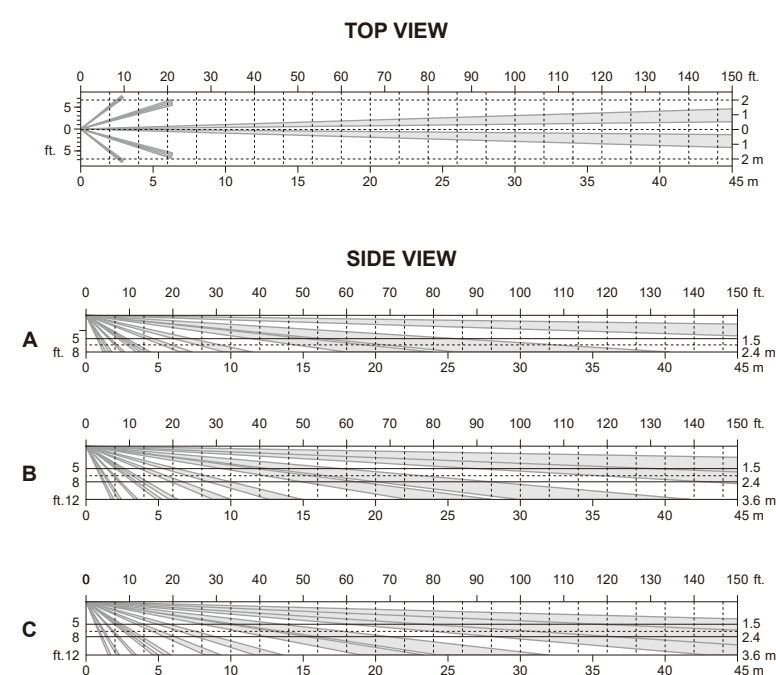
⊘ This symbol indicates prohibition.

2 DETECTION AREA

WIDE ANGLE



LONG RANGE



ATTENTION

The specified detection area can be achieved by mounting the unit at a height of 2.4 m (8 ft.). Mounting at a lower or higher height may reduce the area of coverage

EU & UK contact information



<https://navi.optex.net/cert/contact/>



OPTEX INC./AMERICAS HQ (U.S.)
www.optexamerica.com

OPTEX (EUROPE) LTD./EMEA HQ (U.K.)
www.optex-europe.com

OPTEX SECURITY B.V.
(The Netherlands)
www.optex-europe.com/nl

OPTEX CO., LTD. (JAPAN)
www.optex.net

OPTEX SECURITY SAS (France)
www.optex-europe.com/fr

OPTEX SECURITY Sp.z o.o. (Poland)
www.optex-europe.com/pl

OPTEX PINNACLE INDIA,
PVT., LTD. (India)
www.optexpinnacle.com

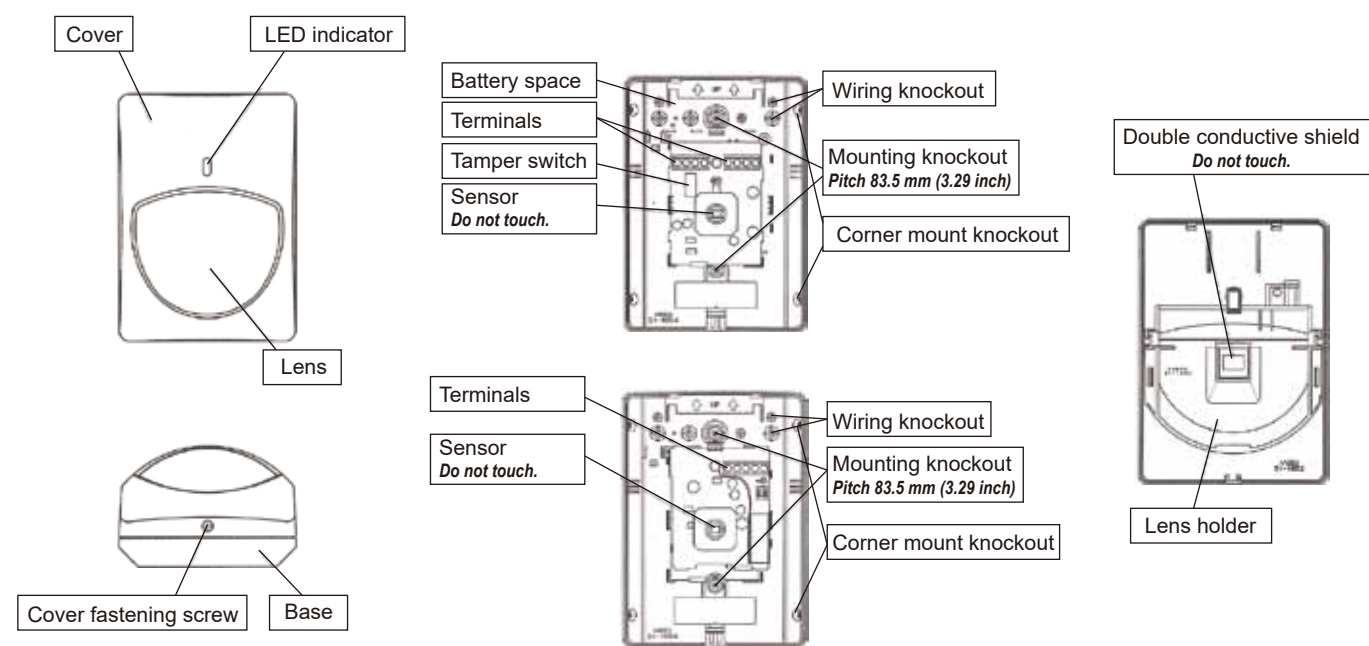
OPTEX KOREA CO.,LTD. (Korea)
www.optexkorea.com

OPTEX (DONGGUAN) CO.,LTD.
SHANGHAI OFFICE (China)
www.optexchina.com

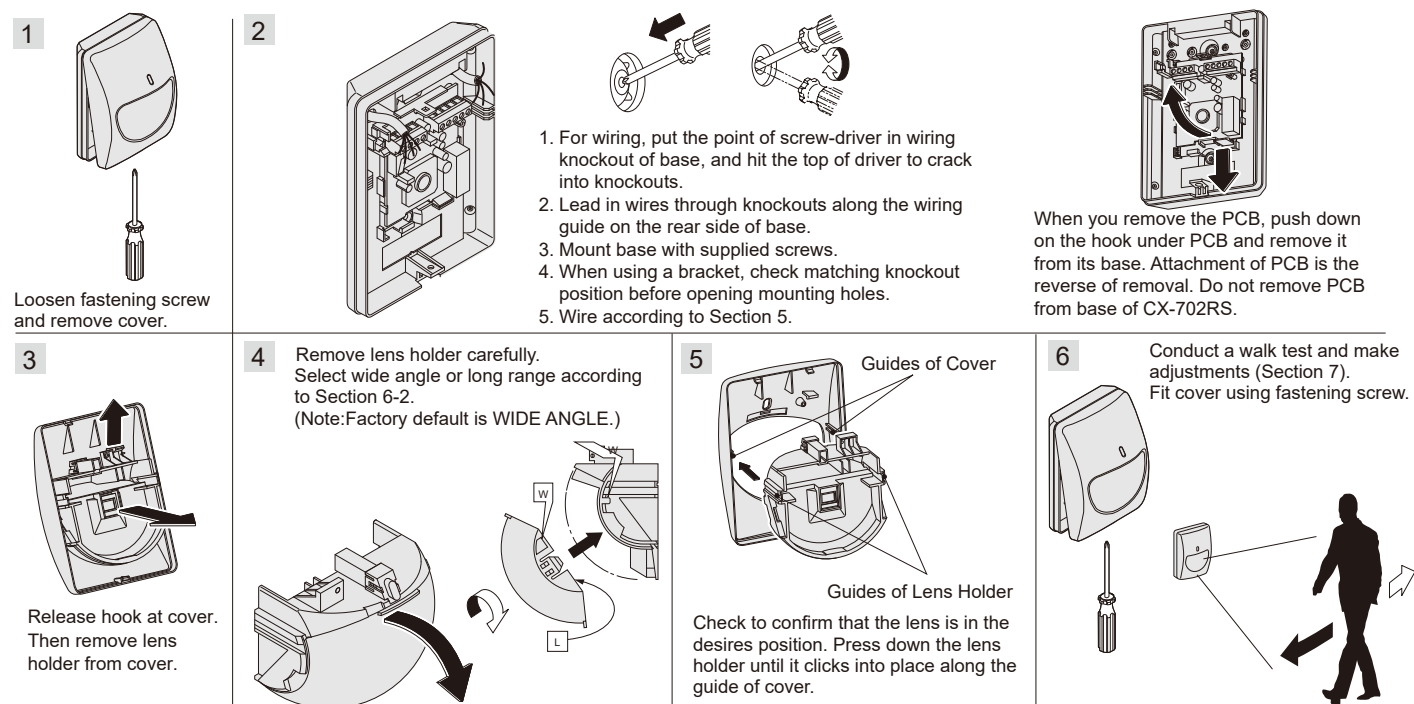
OPTEX (Thailand) CO., LTD. (Thailand)
www.optex.co.th

Copyright (C) 2016-2021 OPTEX CO.,LTD.

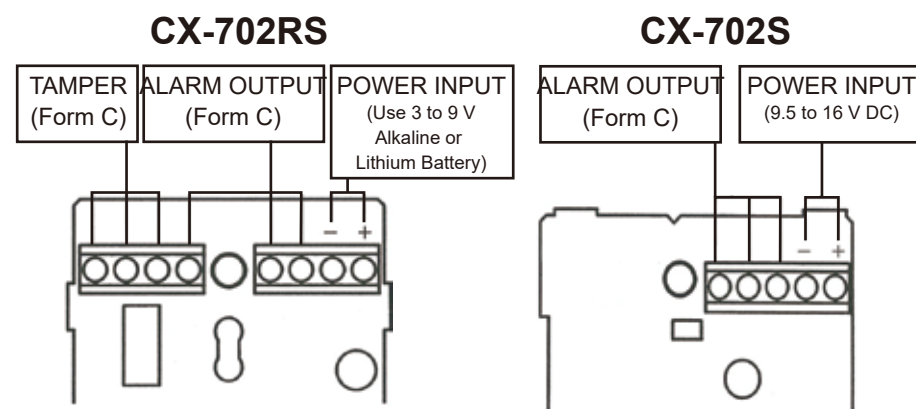
3 DESCRIPTION AND OPERATION



4 INSTALLATION



5 WIRING



[Connect tamper terminals to a 24 hour supervisory loop.]

Power wires should not exceed the following lengths.

CX-702S

WIRE SIZE	12 V	14 V
AWG 22 (0.33 mm ²)	300 m (990 ft.)	650 m (2,150 ft.)
AWG 20 (0.52 mm ²)	470 m (1,560 ft.)	1,030 m (3,390 ft.)
AWG 18 (0.83 mm ²)	760 m (2,500 ft.)	1,650 m (5,410 ft.)

When using two or more units on one wire, the maximum length is obtained by dividing the maximum wire length listed above by the number of units used.

6 ADJUSTMENTS FOR REQUIRED AREA PATTERN

The CX-702 is designed to provide ideal detection areas for different patterns ranging from 12 m (40 ft.) to 21 m (70 ft.) Wide Angle, and 24 m (80 ft.) to 45 m (150 ft.) Long Range. The following adjustments will provide ideal detection areas for each of these requirements.

1 DETERMINE THE AREA PATTERN

Before making adjustments, determine the pattern area, detection range mounting height.

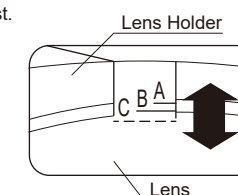
2 SELECTING WIDE ANGLE OR LONG RANGE DETECTION

1. Inverting the lens will select either the Wide Angle or Long Range detection patterns.
2. Please note markings "W (Wide Angle)" and "L (Long Range)", on each side of lens.
3. For Wide Angle, "W" will be on top of lens.
4. For Long Range, "L" will be on top of lens.

3 VERTICAL ADJUSTMENT OF DETECTION AREA

Adjust the vertical angle according to the desired detection range and mounting height.

1. Set the upper edge of the lens at either the "A", "B" or "C" position.
2. The following chart illustrates the different position setting.
3. Confirm the detection area by conducting a walk test.

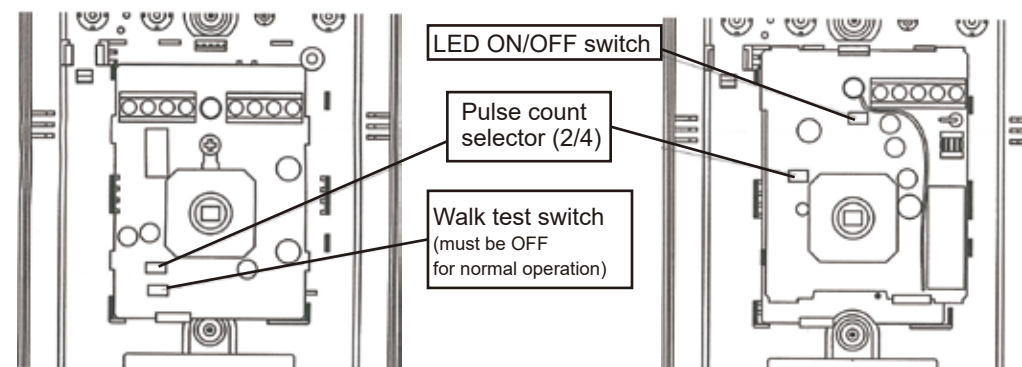


		W : WIDE ANGLE				m (ft.)
		DISTANCE				
HEIGHT	1.8 (6)	B	A	A	A	
	2.4 (8)	C	C	C	C	
	3.6 (12)	C	C	C	C	
		L : WIDE ANGLE				
		DISTANCE				
HEIGHT	1.8 (6)	24 (80)	30 (100)	36 (120)	45 (150)	
	2.4 (8)	B	B	A	A	
	3.6 (12)	C	C	C	C	

7 FUNCTIONS

CX-702RS

CX-702S

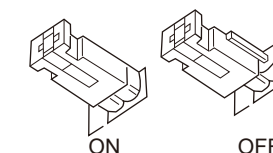


CAUTION

Always conduct a walk test after changing the position of this switch to ensure the detector is still providing optimum coverage.

1 LED ON / OFF (CX-702S Only)

Jumper Pin Switch
The Alarm LED indicator can be switched either "ON" or "OFF".

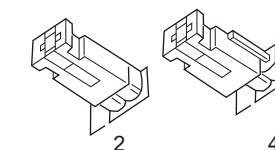


2 PULSE COUNT

The Detection Mode can be switched to either "2" or "4" mode depending on the environmental conditions of the installation.

- 2 : For normal applications.
- 4 : For use in hostile areas where there may be movement of small animals or other objects such as fax machines or curtains.

When the "4" is selected, the detector's sensitivity may seem sluggish. It is therefore important to always conduct a walk test to ensure that the desired coverage is given.



CAUTION

Do not use pulse count 4 for Long Range detection.

3 WALK TEST SWITCH (CX-702RS Only)

WALK TEST

- 1) LED lights up when the unit has detected.
- 2) An alarm signal is outputted whenever it detects.

NORMAL: Normal Operation (Battery Saving Mode)

- 1) LED does not lights up even though the unit detects.
- 2) The succeeding signals are not outputted even though it detects within 2 minutes after the first alarm is outputted. This is in order to save the battery consumption.

