8.TROUBLE SHOOTING

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

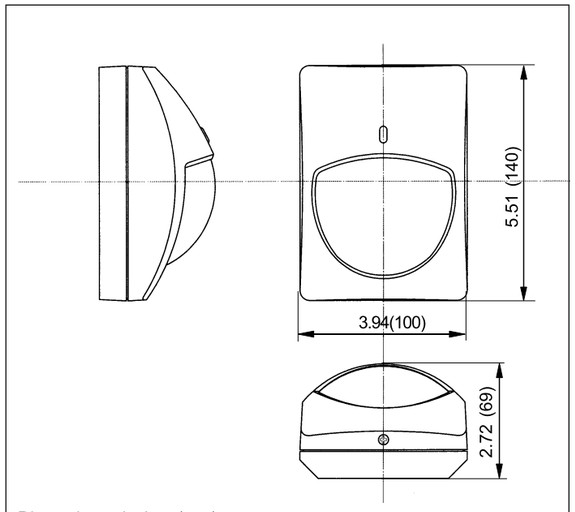
9.MAINTENANCES

Conduct a walktest 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 in the right table. The battery life will change depending on the temperature.

Battery Life (CX-702RS Only)	Approx. 3 years / 9V Alkaline Battery (560mAH)
	Approx. 7 years / 3.6V Lithium Battery (850mAH)
	Approx. 10 years / 9V Lithium Battery (1200mAH)

10.SPECIFICATIONS

Model	CX-702RS	
Detection method	Passive infrared	
Coverage	Wide Angle 85°wide 70ft. × 70ft. (21m × 21m)	Long Range 150ft. × 8ft. (45m × 2.4m)
Detection zones	68 zones	22 zones
Mounting height	5 - 12ft.(1.5 - 3.6m)	
Sensitivity	3°F at 2ft./sec., 8ft. mounting height (1.6°C at 0.6m/sec., 2.4m mounting height)	
Detectable speed	1- 5ft. / sec. (0.3 - 1.5m/sec)	
Power input	3 - 9VDC Alkaline Battery or Lithium Battery	
Operating Voltage	2.3 - 10VDC	
Current draw	5μA (normal : In Standby) at 9VDC	
	10mA (max. : In Walktest, LED on) at 9VDC	
Alarm period	Approx. 2.5 sec.	
Alarm output	Form C-Solid State Switch 10VDC 0.01A max.	
Alarm interval	Alarm output is inactive until there is a 2minute period of inactivity in the pattern area.	
Tamper switch	Form C	
Pulse count	Approx. 20 sec. 2 or 4	
Warm-up period	Approx. 90 sec.	
LED indicator	Disabled during normal operation	
	Alarm indicator optional (Walktest)	
RF interference	No alarm 20V/m	
Operating temperature	+14°F - +122°F(-10°C - +50°C)	
Environment humidity	95% max.	
Weight	7.0oz (200g)	



Dimensions : inches (mm)

*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 part of a complete alarm system,we cannot accept responsibility for any damages or other consequences resulting from an intrusion.
This product confirms to the EMC Directive 89/336 EEC.

OPTEX

OPTEX CO., LTD. (ISO 9001 Certified by LRQA)
4-7-5 Nionohama Otsu, 520-0801 Japan
TEL (077)524-6047 FAX (077)522-9022

OPTEX INCORPORATED
1845W. 205th Street Torrance, CA 90501-1510 U.S.A.
TEL (310)533-1500 FAX (310)533-5910

OPTEX (EUROPE) LTD. (ISO 9002 Certified by NQA)
Clivemont Road, Cordwallis Park, Maidenhead, Berkshire, SL6 7BU U.K.
TEL (01628)631000 FAX (01628)636311

OPTEX

INSTALLATION INSTRUCTIONS
No.59-0974-0 0102-17

PASSIVE INFRARED DETECTOR

CX-702RS

BATTERY OPERATED

CE

■ FEATURES

This Passive Infrared Detector is powered by a 3 - 9 Alkaline Battery or Lithium Battery and is designed to be used with a transmitter of a wireless security system.

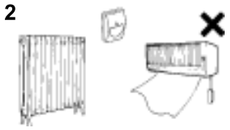
- ●Low Current Draw : 5μA (In Standby)
- ●Selectable "WIDE ANGLE" and "LONG RANGE" detection patterns.
- ●Double Conductive Shielding of the pyroelectric element - Extremely High Light
- ●Multifocus Optics Design (Patent listed)
- ●Sealed Optics
- ●Easy Installation
- ●Battery Oparated
- ●Form C Alarm Output and Tamper Switch

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

1.INSTALLATION HINTS

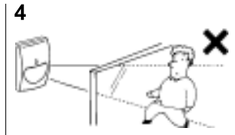
1

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 blocking detection area with curtain, screen, etc.

5

Do not install in the outdoors.

6

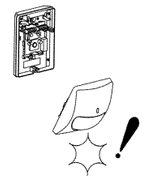
⚠WARNING
Never repair or modify product. It may cause accident, fire hazard or electric shock.

7

⚠WARNING
When damage has occured 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

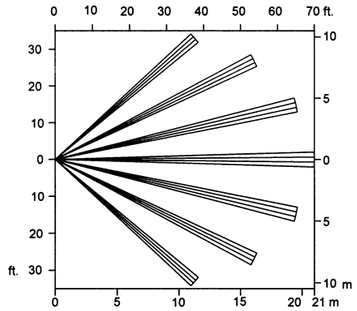
⚠CAUTION
Mount securely. Fall of A product may cause injury.



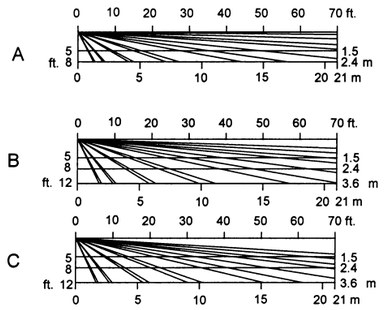
2.DETECTION AREA

WIDE ANGLE

TOP VIEW

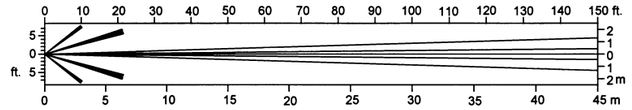


SIDE VIEW

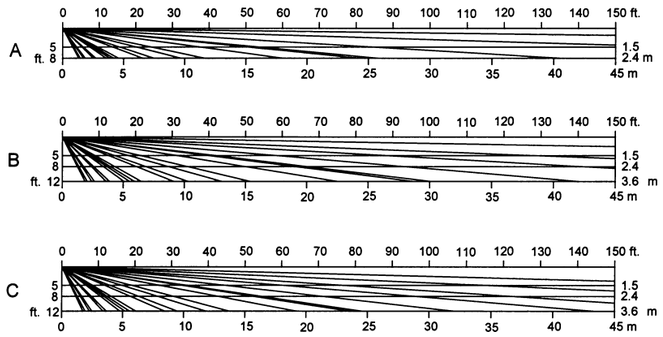


LONG RANGE

TOP VIEW

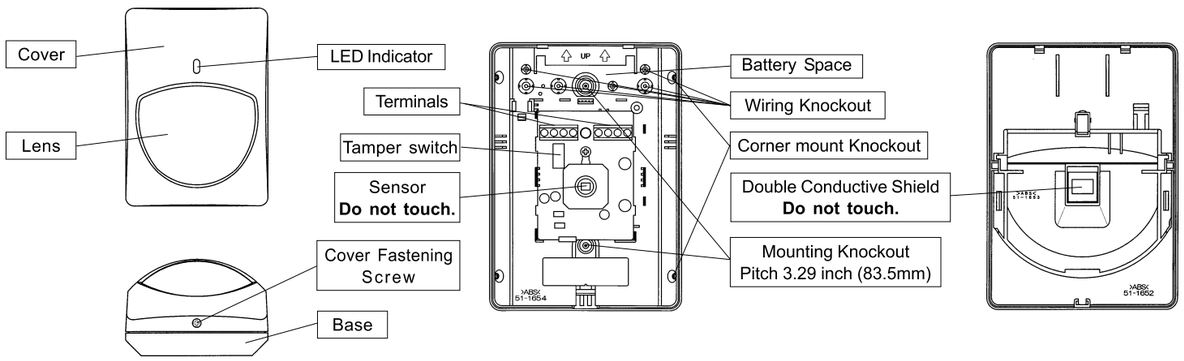


SIDE VIEW



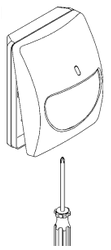
ATTENTION
The specified detection area can be achieved by mounting the unit at a height of 2.4m. Mounting at a lower or higher height may reduce the area of coverage.

3.DESCRIPTION AND OPERATION



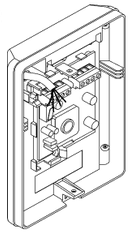
4.INSTALLATION

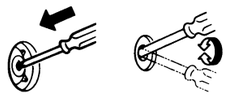
1



Loosen fastening screw and remove cover.

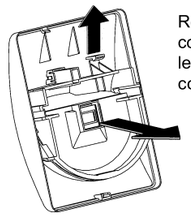
2





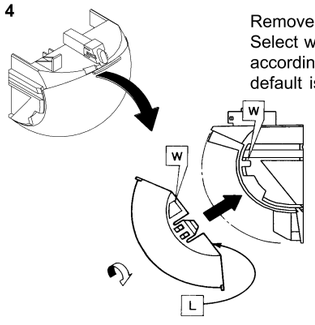
Lead in wires through knockouts along the wiring guide on the rear side of base. Mount base with supplied screws. When using a bracket, check matching knockout position before opening mounting holes.Wire according to Section 5.

3



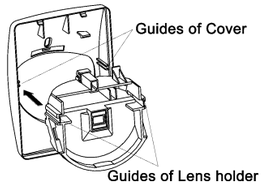
Release hook at cover. Then remove lens holder from cover.

4



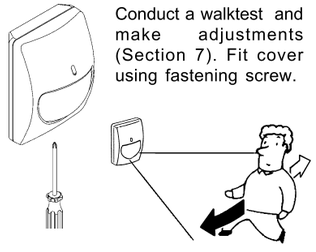
Remove lens holder carefully. Select wide angle or long range according to 6-2. (Note: Factory default is wide area)

5



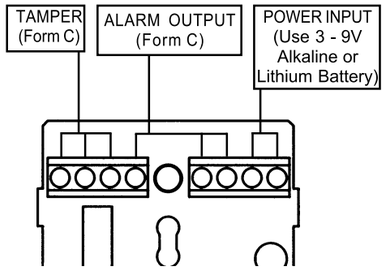
Check to confirm that the lens is in the desires position.Press down the lens holder until it clicks into place along the guide of cover.

6



Conduct a walktest and make adjustments (Section 7). Fit cover using fastening screw.

5.WIRING



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

6.ADJUSTMENTS FOR REQUIRED AREA PATTERN

The CX-702RS is designed to provide ideal detection areas for different patterns ranging from 40ft.(12m) to 70ft.(21m) Wide Angle, and 80ft.(24m) to 150ft.(45m) 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 area pattern - detection range mounting height.

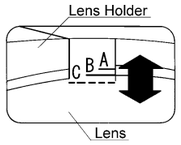
2.SELECTING WIDE ANGLE OR LONG RANGE DETECTION

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 accrding 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 walktest.

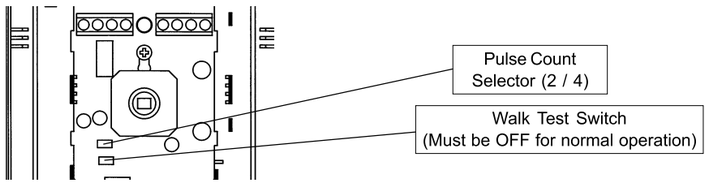


ft.(m)

W : WIDE ANGLE		DISTANCE			
		40 (12)	50 (15)	60 (18)	70 (21)
HEIGHT	6 (1.8)	B	A	A	A
	8 (2.4)	C	C	C	C
	12 (3.6)	C	C	C	C

L : LONG RANGE		DISTANCE			
		80 (24)	100 (30)	120 (36)	150 (45)
HEIGHT	6 (1.8)	B	B	A	A
	8 (2.4)	C	C	C	C
	12 (3.6)	C	C	C	C

7.FUNCTIONS



CAUTION!

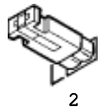
Always conduct a walktest after changing the position of this switch to ensure the detector is still providing optimum coverage.

2. PULSE COUNT

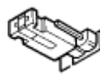
The Detection Mode can be switched to either “2” or “4” mode depending on the environmental conditions of the installation.

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 walktest to ensure that the desired coverage is given.



2



4

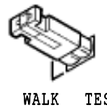
CAUTION!

Do not use pulse count 4 for Long Range detection.

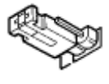
3. WALK TEST SWITCH

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 light 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.



WALK TEST



NORMAL