OUTDOOR PASSIVE INFRARED DETECTOR

LX-402, LX-802N
120° wide   Long Range

N219
1 YEAR WARRANTY
C CE

FEATURES
· LX-402 :40ft.(12m) 120° Wide Angle
· LX-802N:80ft.(24m) Long Range
· Selectable Detection Area Patterns
· Day/Night Mode
· Waterproof (IP Rating:IP54)

FUNCTION
· Selectable Pluse Count (TEST or 2)
· Selectable Sensitivity (H , M or L)
· Form C Relay Output
· Tamper Switch

OPTION
· Ceiling Mount Bracket : CA-2C
· Multi-Angle Wall Mount Bracket :CA-1W
  Adjust ±45° (Horizontally)
  Adjust 0 - 20° (Vertically downwards)

—— Safety-Related Precautions ——
· Before installation, make sure to read this instruction manual carefully for safe and effective propduct operation.
· After reading this installation instructions, make sure to keep it in a conveninet place for future use.

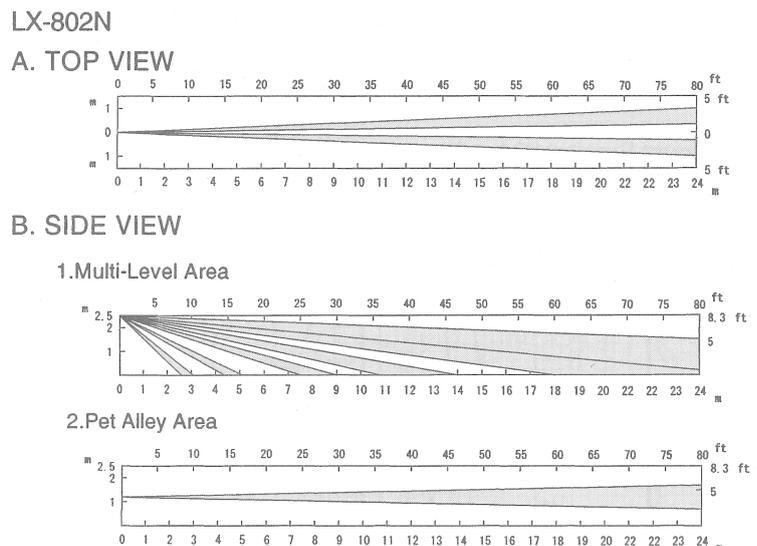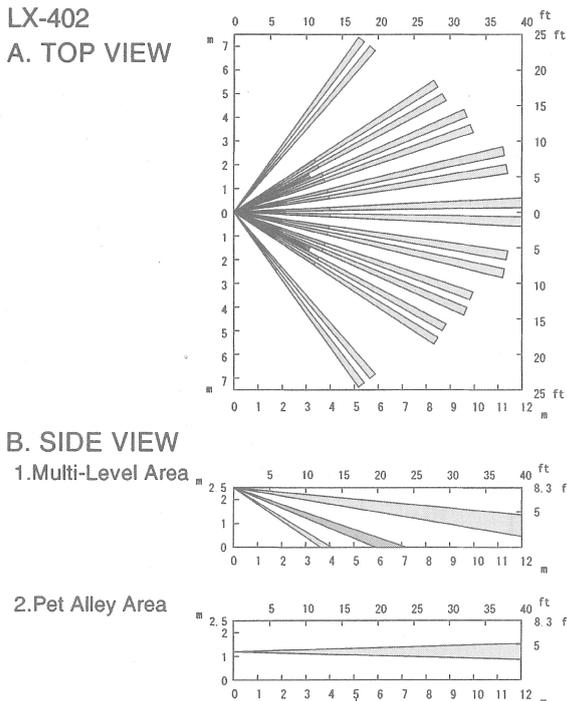| ⚠ Warning	This icon denotes a situation involving the risk of serious injury or even death, if the warning given is ignored.	⚠ Caution	This icon denotes a situation involving the risk of serious injury or damage to property if the warning given is ignored.

🚫	This icon indicates actions to be avoid. Details of the actions to be avoided are written beside or near icon.	❗	This icon indicates instructions that should be strictly followed.

⚠ Warning

Never use this product for any application expect purpose for detecting moving object such as human or car. In addition, never use for any activation for a shutter or other. It may cause hazards.	🚫	To avoid the risk of electric shock, never touch the main body of the product with wet hands (Also, if the product is wet after rain, do not touch it).	❗ ⚡
Never attempt to disassemble or modify the product, which increases the risk of fire or damage of the product.	🔧	Never connect the terminal with higher power supply or current draw over the specification. It increases the risk of fire or damage to the product.	🚫

⚠ Caution

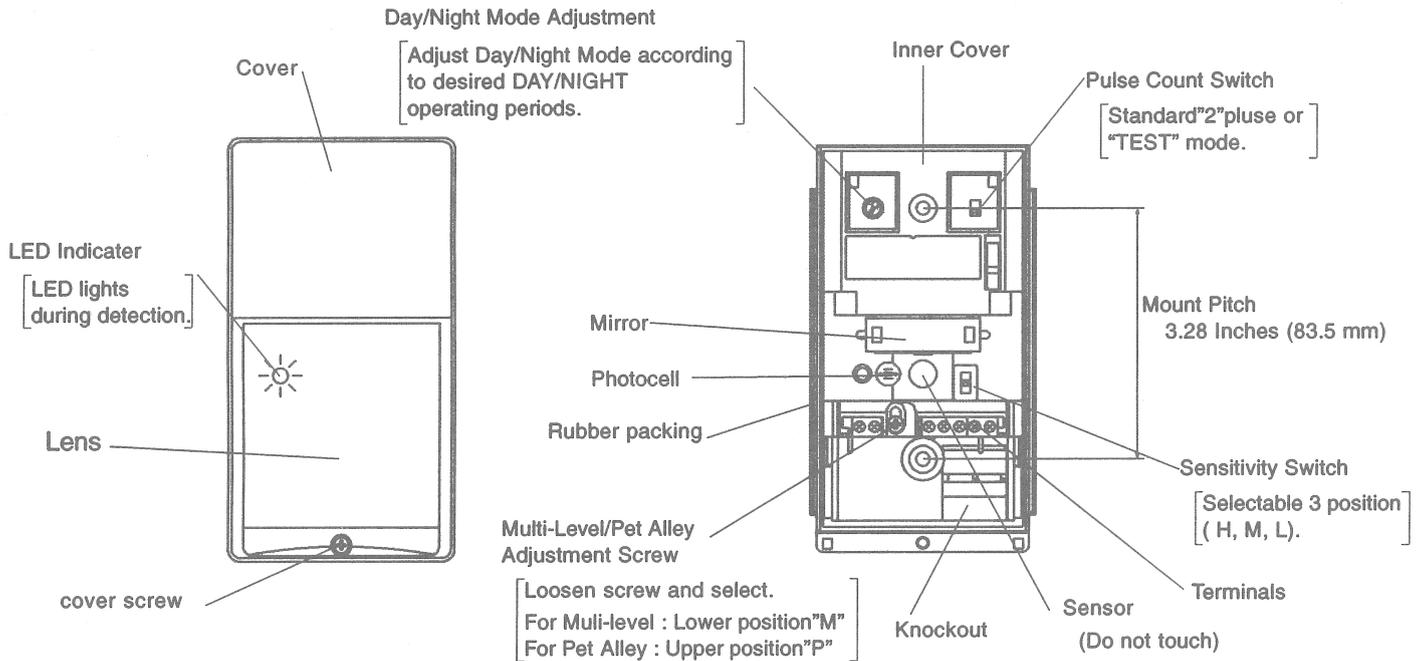| Avoid applying water directly from brackets, houses, or otherwise splashing water directly onto the product. It increases the risk of damaging the product.	🚫	Clean and inspect the device periodically for safe operation. If any defect is detected, ask your local shop to repair the device.	❗

1.INSTALLATION HINTS

8.3 ft. (2.5m) max

Maximum mounting height is 8.3ft.(2.5m).

Mount the detector directly to a wall or ceiling with the optional bracket(model CA-1W or CA-2C).

Avoid moving objects in the detection area (i.e.swaying trees, bushes, etc.).

Aim the detector at wall or the ground, to aviod unwanted detection.

4-5 ft. (1.2-1.5m)

When using the pet alley area, the mounting height should be between 4-5ft.(1.2-1.5m).

Avoid looking directly at air conditioning or heating vents.

Avoid vapor or high humidity that can cause condensation.

2.DETECTION AREA PATTERNS

LX-402
A. TOP VIEW

LX-802N
A. TOP VIEW

B. SIDE VIEW
1.Multi-Level Area

2.Pet Alley Area

B. SIDE VIEW
1.Multi-Level Area

2.Pet Alley Area

This product detects temperature differences between the moving object and the background temperature in the detection area. So, if the object dose not move, the detector can not detect it, and changing of the temperature differences may affect the detector's detection range.
Additionally, since this product has directional characteristic it is difficult to detect the target that is approaching the detector.

3.DESCRIPTION AND OPERATION

Cover

LED Indicater
[LED lights during detection.]

Lens

cover screw

Day/Night Mode Adjustment
[Adjust Day/Night Mode according to desired DAY/NIGHT operating periods.]

Inner Cover

Pulse Count Switch
[Standard"2"pluse or "TEST" mode.]

Mirror

Photocell

Rubber packing

Multi-Level/Pet Alley Adjustment Screw
[Loosen screw and select.
For Muli-level : Lower position"M"
For Pet Alley : Upper position"P"]

Knockout

Sensor
(Do not touch)

Mount Pitch
3.28 Inches (83.5 mm)

Sensitivity Switch
[Selectable 3 position (H, M, L).]

Terminals

4.INSTALLATION PROCEDURE

Installation on wall

1 Loosen cover screw and remove cover.

If angle adjustment is required, use the optional "CA-1W" mounting bracket

2 Pull wire throgh the back of the detector.

Installation on ceiling

1 Install the bracket "CA-2C" on ceiling and pull wire.

Use optional ceiling mount bracket "CA-2C".

2 Attach the LX-402/802N to the bracket and pull wire.

3 NOTE !
If you have problems of wiring through the back of the detector, remove adjustment screw and remove the PCB from the base.(see illus.)

4
NO Output
⊕ ⊖ | NC COMNO | TAMPER
Input 12V DC | NC Output

Connect wires to terminals, as shown.

Power supply wires should not exceed the following lengths.

wires size		
AWG22 (0.33 mm²)	1070ft	(320m)
AWG20 (0.52 mm²)	1700ft	(510m)
AWG18 (0.83 mm²)	2700ft	(820m)

5
PHOTOCELL
NIGHT DAY — DAY

Set the Day/Night mode adjustment to the "24HR" setting(DAY).

PULSE COUNT
2 TEST — TEST

Set Pulse Count to "TEST"mode. Adjust sensitivity setting (see section 6-2 and 3).

6
Replace the cover and supply power to unit.
After the warmup period is complete (approx. 60 sec.) , conduct Walk Test.
The LED Indicator lights when the unit detects moving object.

7 After conducting Walk Test.
PHOTOCELL — NORMAL
NIGHT DAY

Set the Day/Night modeadjustment to the NORMAL position(·). (If night only operaton is required , see section 6-1)

PULSE COUNT
2 TEST — 2

Set Pulse Count to the "2" position. (see section 6-1 and 2).

8
After wiring , pack the provided sponge into the opening between each wires and the knockout hole.

Select **HIGH**, **MEDIUM** or **LOW** sensitivity(H,M,L). Fasten cover with the cover screw. (see section 6-3)
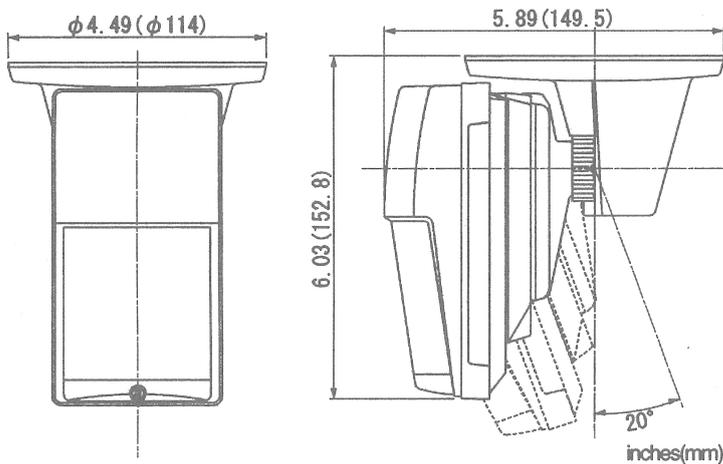
5.OPTIONAL BRACKETS

Note ! Maximum mounting height is 8.3 ft (2.5m)

1. Ceiling Mount Bracket "CA-2C"
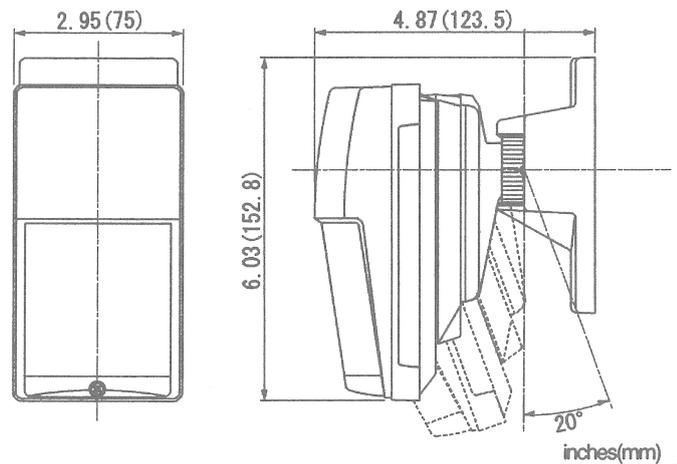
Adjust Horizontally : ±45°

Adjust Vertically : 0° to 20° downward

φ4. 49 (φ114)

5. 89 (149. 5)

6. 03 (152. 8)

20°

inches(mm)

2. Multi-Angle Wall Mount Bracket "CA-1W"

Adjust Horizontally : ±45°

Adjust Vertically : 0° to 20° downward

2. 95 (75)

4. 87 (123. 5)

6. 03 (152. 8)

20°

6.SETTING AND ADJUSTMENT

1. Day/ Night Mode

Adjust the Day/Night Mode switch of the detector according to the brightness of the surrounding area.

NORMAL Position

: To have the standard detector function only during evening/night time, set the dial to the reference position (·).

NIGHT   DAY

: To have the detector begin to function while the surrounding area is lighter, turn the dial gradually to the DAY side.

NIGHT   DAY

: To have the detector function only after it has become dark, turn the dial gradually to the NIGHT side.

NIGHT   DAY

: To have the detector function at all time, or to perform a walk test, set the dial to the DAY position.

NIGHT   DAY

Unit is pre-set at "NORMAL" position.

2. Pulse Count Swich

"2" mode : Select "2" for normal applications. (STANDARD Position)

"TEST" mode : Select "TEST" mode when conducting WALK TEST , or for use in extremely stable environments.

Unit is pre-set at "2" position.

3. Sensitivity Switch

M : Use "M" position for normal applications. (STANDARD Position)

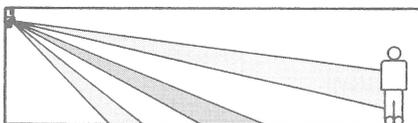H : Use "H" Position when you need high sensitivity. (ex.Pet Alley Area)

L : Use "L" position in areas that may be unstable.

Unit is pre-set at "M" position.

7.DETECTION AREA ADJUSTMENT

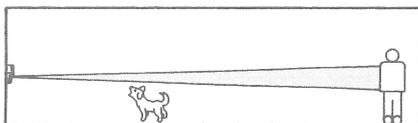### Changing vertical detection area

1.Multi-Level Area

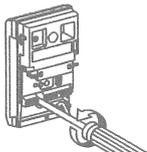Use this area for normal applications.

Unit is pre-set at "Multi-Level" setting.
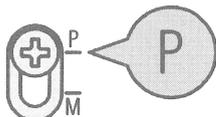
2.Pet Alley Area

Provide a horizontal detection pattern with no declination of zones, allowing pets to move through the area.
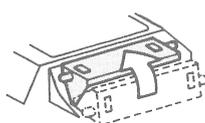
Selecting Pet Alley Pattern

Carefully loosen the adjustment screw.

Slide the cover down and fasten the screw at the "P" position.

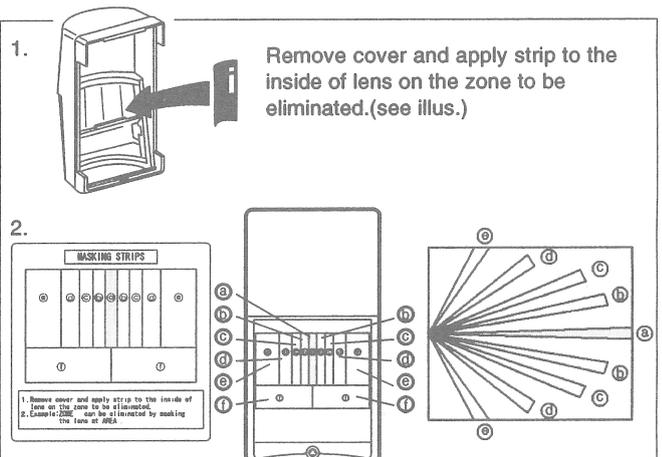Flip the Mirror to the upper position.

NOTE !   Sensitivity setting must be one step higher position when pet alley area is selected.

NOTE !   Pet Alley Area will not function if two changes are not performed.

Eliminating unwanted detection zones
(LX-402 only)

Unwanted detection zones can be eliminated by simply masking the lens with the provided masking strip, as follows:

1. Remove cover and apply strip to the inside of lens on the zone to be eliminated.(see illus.)

2.

MASKING STRIPS

1.Remove cover and apply strip to the inside of lens on the zone to be eliminated.
2.Example:ZONE   can be eliminated by masking the lens at AREA

Example :ZONE "a" can be eliminated by masking the lens at area "a" (see illus.).
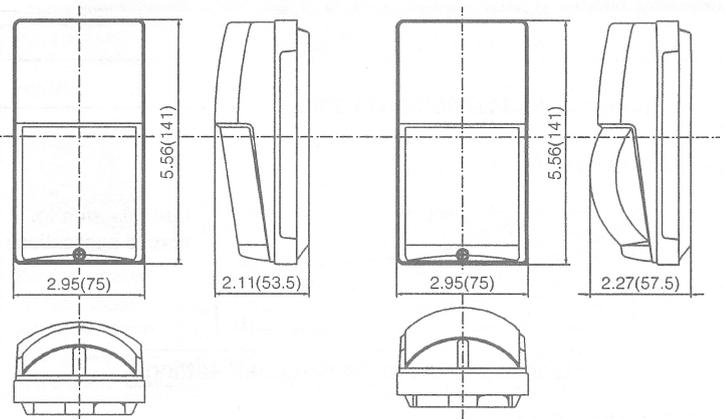
8.TROUBLE SHOOTING

PROBLEM	PROBABLE CAUSE	REMEDY
LED does not light up.	Improper power supply voltage. (disconnection, low voltage)	Confirm the power supply is under specification.
	Wrong polarity	Switch positive and negative at terminal.
	The detector is in warm up period.	Wait for.(approx. 60 sec.)
	The Day/Nigth Mode Adjustment knob setting is inappropriate.	See section 6-1. Confirm the adjustment knob.
	Incorrect detection area.	See section 2.
LED lights up even though no one is in detection area.	Moving object within area. (curtain, wall hanging, etc.)	Remove the object from the detection area.
	Improper power supply voltage.	Confirm the power supply is under specification.
	The unit is detecting presons, cars or other objects beyond the set area.	Check the detection area.
	Temperature of object within area is changing rapidly (heater, air conditioning, etc.)	Remove the heat sources from the detection area.
The LED lights up, but there is no relay output	Relay contact is stuck or damaged due to overloading.	Check load of output. The unit needs repair or replacement.
	Faulty wiring.	Wire correctly.
	Alarm output connects to other devices as follows. when NC output is used :connect in parallel. when NO output is used :connect in series.	when NC output is used :connect in series. when NO output is used :connect in parallel.

9.SPECIFICATIONS

Model		LX-402	LX-802N
Detection method		Passive Infrared	
Detection area		40ft×50ft(12m×15m) 120°wide	80ft×6.6ft(24m×2m) Long range
Coverage	Multi-Level Area	40 zones	12 zones
	Pet Alley Area	18 zones	4 zones
Mounting height	Multi-Level Area	8.3ft (2.5m) max	
	Pet Alley Area	4-5ft (1.2-1.5m)	
Detection speed		1-3.3ft/sec. (0.3-1.0m/sec.)	
Sensitivity adjustment		Selectable 3 position (H,M,L)	
LED indicator		LED lights during detection	
Alarm period		2±1 sec.(Delay timer)	
Alarm output		NC.NO.28V DC 0.2A max	
Tamper switch		Opens when cover removed.	
Pulse count		2 (20±5 sec.) or TEST(1 pulse)	
Day/Night Mode adjustment		Approx. 10 to 100,000 lux	
Warm up period		Approx. 60 sec.	
Power input		10.8-13.2VDC	
Current draw		25 mA max	
Mounting		Wall (Indoor/Outdoor)	
Operating temperature		-4°F - +122°F(-20℃ - +50℃)	
Environment humidity		95% max	
Weight		6.0oz (170g)	6.8oz (190g)
IP Rating		IP54	
Accessory		Masking strips (LX-402 only),Mounting screw,Sponge	

※ Specifications may be changed without prior notice for improvements.

10.DIMENSIONS

LX-402

5.56(141)
2.95(75)   2.11(53.5)

LX-802N

5.56(141)
2.95(75)   2.27(57.5)

inches(mm)