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OPTEX

INSTALLATION INSTRUCTIONS

No.5909614-000-05 2503-06

OUTDOOR PASSIVE INFRARED DETECTOR

LX-402,LX-802N

120°wide Long Range

1 YEAR WARRANTY

FEATURES

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

FUNCTION

- Selectable Plus Count (TEST or 2)
- Selectable Sensitivity (H, M or L)
- Form C Relay Output
- Tamper Switch

OPTION

- Celing Mount Bracket: CA-2C
- Multi-Angle Wall Mount Bracket: CA-1W
  Adjust ±45° (Holizontally)
  Adjust 0° to -20° (Vertically downwards)

Safety-Related Precausions

- Before Installation, make sure to read this instruction manual carefully for safe and effective product operation.
- After reading this installation instructions, make sure to keep it in a conveninet place for future use.

⚠Warning	This icon denotes asituation 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 stricity followed.

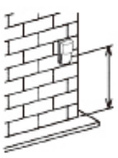
⚠ Warning

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 erectric shock, never touch the main body of the product with wet hands (Also, if the product is wet after rain, do not touch if).
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 increase the risk of fire or damage to the product.

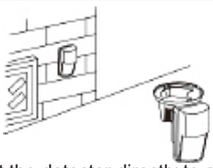
⚠ Caution

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



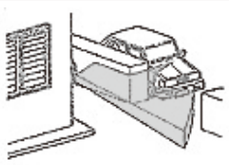
Maximum mounting height is 2.5 m (8.3 ft.).



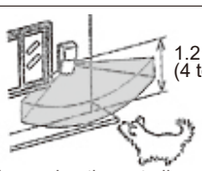
Mount the detector directly to awall or celling with the optional bracket (Model CA-1W or CA-2C).



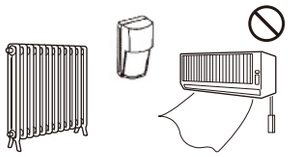
Avoid moving objects in the detection area (i.e.swaying trees, bushs, etc.).



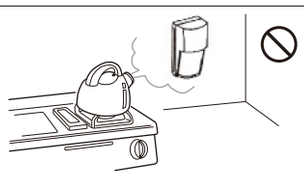
Aim the detected at wall or the ground, to avoid unwanted detection.



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



Avoid looking directly at air conditioning or heating vents.

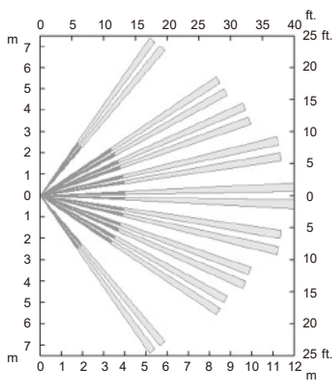


Avoid vapor or high humidity that can cause condensation.

2.DETECTION AREA PATTERNS

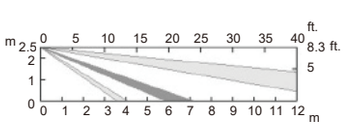
LX-402

A. TOP VIEW

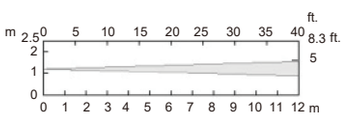


B. SIDE VIEW

1.Multi-Level Area

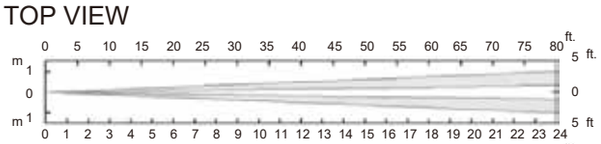


2.Pet Alley Area



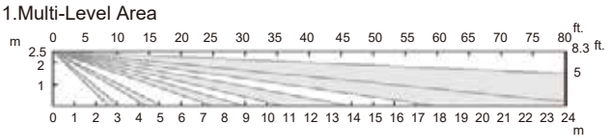
LX-802

A. TOP VIEW

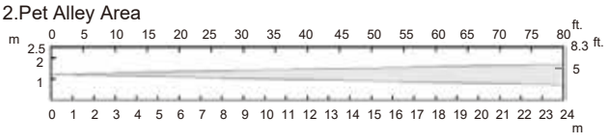


B. SIDE VIEW

1.Multi-Level Area



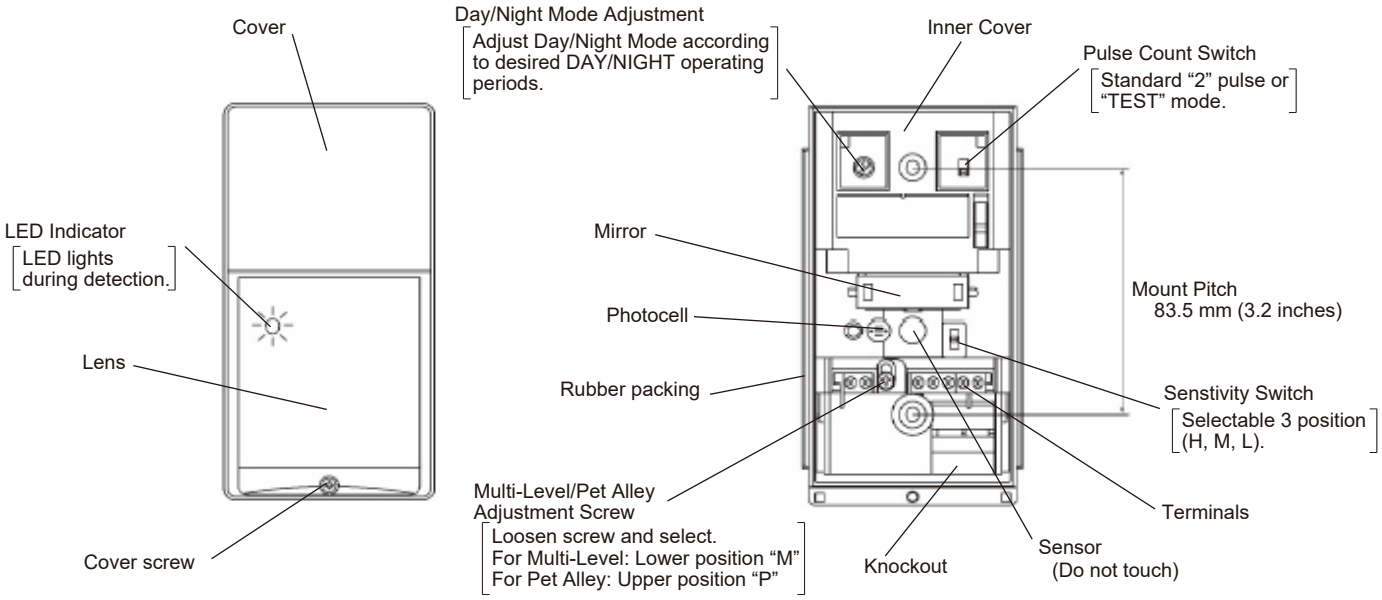
2.Pet Alley Area



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.

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3.DESCRIPTION AND OPERATION



4.INSTALLATION PROCEDURE

Installation on wall

1



Loosen cover screw and remove cover.

2



Pull wire throgh the back of the detector.

If angle adjustment is reruired, use the optional “CA-1W” mounting bracket.

Installation on ceiling

1



Install the bracket “CA-2C” on ceiling and pull wire.

2



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

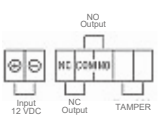
Use optional ceiling mount bracket “CA-2C”.

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 illustration.)

4



Connect wires to terminals, as shown.

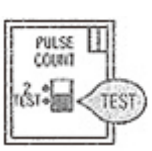
Power supply wires should not exceed the following lengths.

Wires size	Wiring distance
AWG22 (0.33 mm²)	320 m (1070 ft.)
AWG20 (0.52 mm²)	510 m (1700 ft.)
AWG18 (0.83 mm²)	820 m (2700 ft.)

5



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



Set Pulse Count to “TEST” mode. Adjust sensitivity setting.
(See section 6-2 and 3.)

6



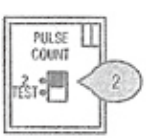
Replace the cover and supply power to unit.
After the warmup period is complete (apporx. 60 s), conduct Walk Test.

The LED Indicator lights when the unit detects moving object.

7 After conducting Walk Test

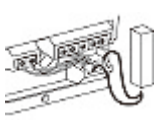


Set the Day/Night mode adjustment to the NORMAL position(-).
(If night only operation is required, see section 6-1.)



Set Pulse Count to the “2” position.
(See section 6-1 and 2.)

8



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



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

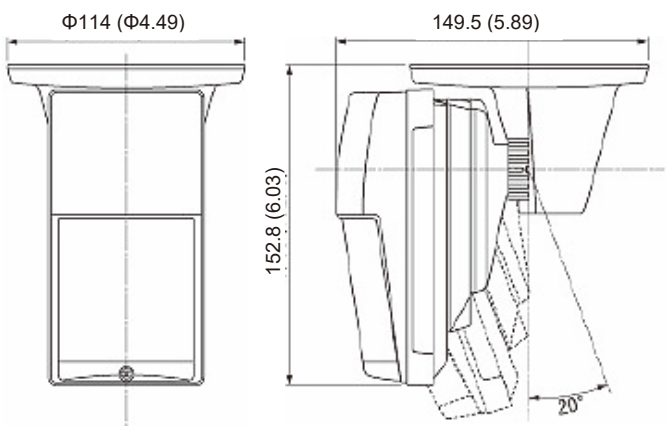
5.OPTIONAL BRACKETS

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

1. Ceiling Mount Bracket “CA-2C”

Adjust Horizontally: ±45°

Adjust Vertically: 0° to 20° downward

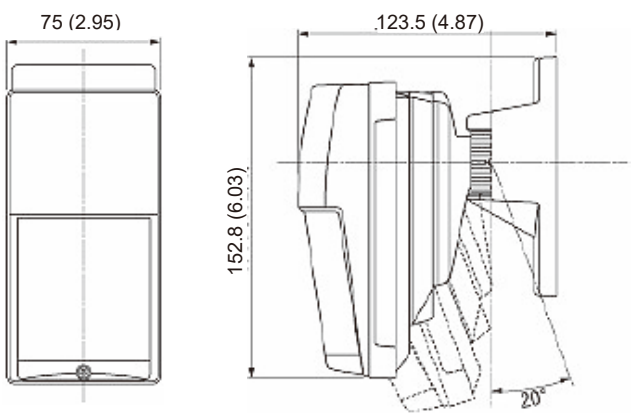


mm (inches)

2. Multi-Angle Wall Mount Bracket “CA-1W”

Adjust Horizontally: ±45°

Adjust Vertically: 0° to 20° downward



mm (inches)

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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.



NOMAL Position

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



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



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



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

Unit is pre-set at “NORMAL” position.

2. Pulse Count Switch



“2” mode : Select “2” for nomal applications. (STANDARD Position)



“TEST” mode : Select “TEST” mode when counducting WALK TEST, or for use in extremely stable environments.

Unit is pre-set at “2” position.

3. Sensitivity Switch



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



: Use “H” position when you need high sensitivity. (ex. Pet Alley Area)



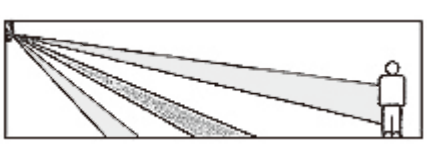
: Use “L” position in areas that may be unstable.

Unit is pre-set at “M” position.

7.DETECTION AREA ADJUSTMENT

Changing vertical detection area

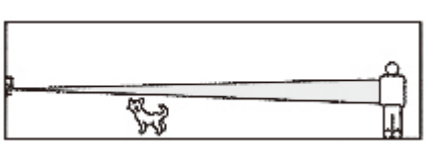
1.Multi-Level Area



Use the area for normal appications.

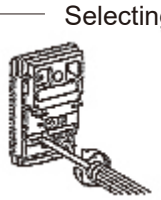
Unit is pre-set at “Multi-Level” setting.

2.Pet Alley Area

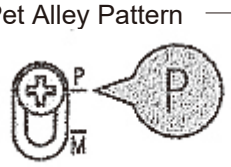


Provide a horizontal detection pattern with no declination of zones, allowing pets to move through the area.

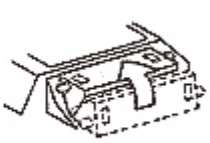
Selecting Pet Alley Pattern



Carefully loosen the adjustment screw.



Slide the cover down and fasten the screw at the “P” position.



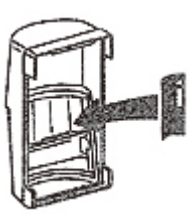
Flip the Mirror to the upper position.

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

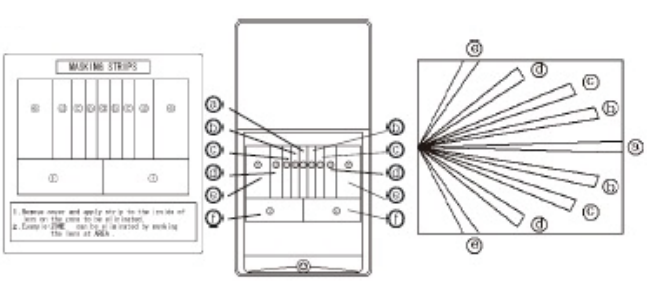
NOTE ! Pet Alley Area will not function if two changes are not performed.

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 illustration.)

2. 

Example: Zone “a” can beeliminated by masking the lens at area “a”. (See illustration.)

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8.TROUBLE SHOOTING

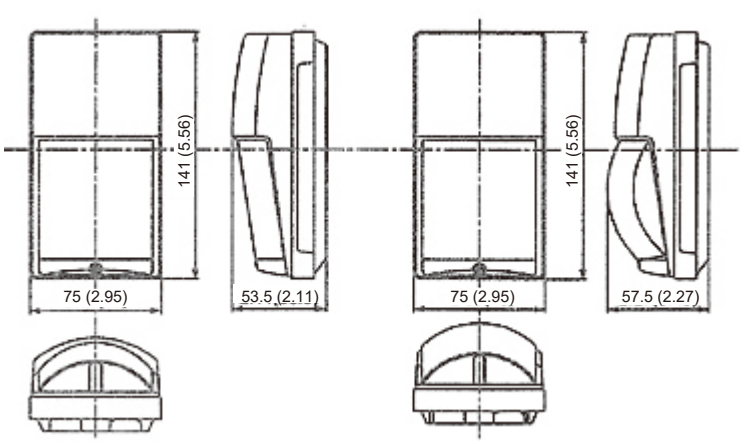
PROBLEM	PROBABLE CAUSE	REMEDY
LED does not light up.	Improper power supply voltage. (Disconnection, Low voltage)	Confirm the power supply is under specification.
	Wrong polarity.	Switch positive and negative at terminal.
	The detector is in warm up period.	Wait for. (Approx. 60 s)
	The Day/Night Mode Adjustment knob setting is inappropriate.	See section 6-1. Confirm theadjustment 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 thepower supply is under specification.
	This unit is detecting presons, cars or other objects beyond the set area.	Check the detection area.
	Tenmperature of object within area is changing rapidly. (Heater, Air conditioning, etc.)	Remove the heat sources from thedetecton area.
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 series. when NO output is used :connect in parallel.

9.SPECIFICATIONS

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

mm (inches)

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