

## CONFIRMATION OF OPERATION

After completing the installation and adjustments, confirm normal operation by conducting a walk test. Refer to the LED indication shown on the right during walk test. Ensure the operation of tamper switch is normal, then replace the front cover and fasten the locking screw properly.

| Sensor      | Condition    | Indication       |
|-------------|--------------|------------------|
| Transmitter | Transmitting | Green LED is on  |
| Receiver    | Stand-by     | Alarm LED is off |
|             | Alarming     | Alarm LED is on  |

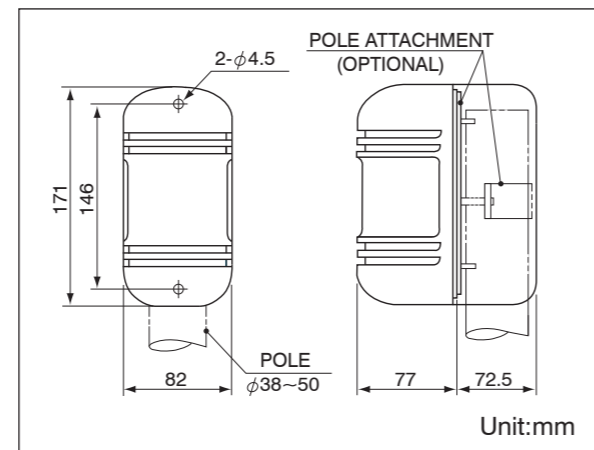
## TROUBLE SHOOTING GUIDE

| Symptom   | Possible cause   | Remedy  |
|---|--|---|
| POWER LED does not light.                                     | Improper power supply  | Check power supply and wiring   |
| ALARM LED does not light even when the beams are intercepted. | * Infrared beams are reflected on other object and sent into receiver.<br>* Two beams are not intercepted at the same time.<br>* Blocking time is shorter than that set on the unit. | * Remove the reflecting objects and change the installation site.<br>* Block two beams at the same time.<br>* Adjust blocking time.   |
| ALARM LED is on, but alarm system does not respond.           | * Wires broken or short on the signal wires.<br>* Melted bridge on the signal connection.  | * Check the wire.<br>* Repair may be required.  |
| ALARM LED (Rx) stays on                                       | * Inadequate optical axis alignment.<br>* Shading objects between Tx and Rx.<br>* Dirty cover or reflecting mirror of Tx and/or Rx.  | * Readjust the optical axis.<br>* Remove the shading objects.<br>* Clean the objects with soft cloth.   |
| Intermittent alarm  | * Poor wiring connection.<br>* Unstable power supply.<br>* Unstable sensor mounting.<br>* Inadequate optical axis alignment.<br>* Flying objects intercept the beams occasionally.   | * Check the wiring connection.<br>* Check the power supply voltage.<br>* Mount the sensor firmly.<br>* Readjust the optical axis.<br>* Readjust the blocking time or relocate the detector. |

## SPECIFICATIONS

| Product No.             | PX-D30                         | PX-D60   | PX-D100   |
|-------------------------|--------------------------------|----------|-----------|
| Detection range (in)    | 5~90 m                         | 90~180 m | 180~300 m |
| Detection range (out)   | 5~30 m                         | 30~60 m  | 60~100 m  |
| Maximum distance        | 420 m                          | 840 m    | 1,400 m   |
| Current drain           | 35 mA                          | 40 mA    | 60 mA     |
| Beam source             | 2 x IR LED                     |          |           |
| Detection method        | Dual-beam simultaneous cut-off |          |           |
| Response time           | 50 ~ 700 msec.                 |          |           |
| Alarm output            | Form C, 30 VAC/DC, 0.5 A       |          |           |
| Tamper protection       | N.C. cover open activate       |          |           |
| Optical axis adjustment | 180° horizontal, 20° vertical  |          |           |
| Power supply            | 12 ~ 28 VDC                    |          |           |
| Temperature             | -25°C~55°C (-5.5°F ~ 130°F)    |          |           |
| Dimensions              | 171 x 82 x 77 mm               |          |           |

Specifications are subject to change without prior notice



# IR-TEC

## Infraline

### Dual Photoelectric Beam Detector

PX-D30

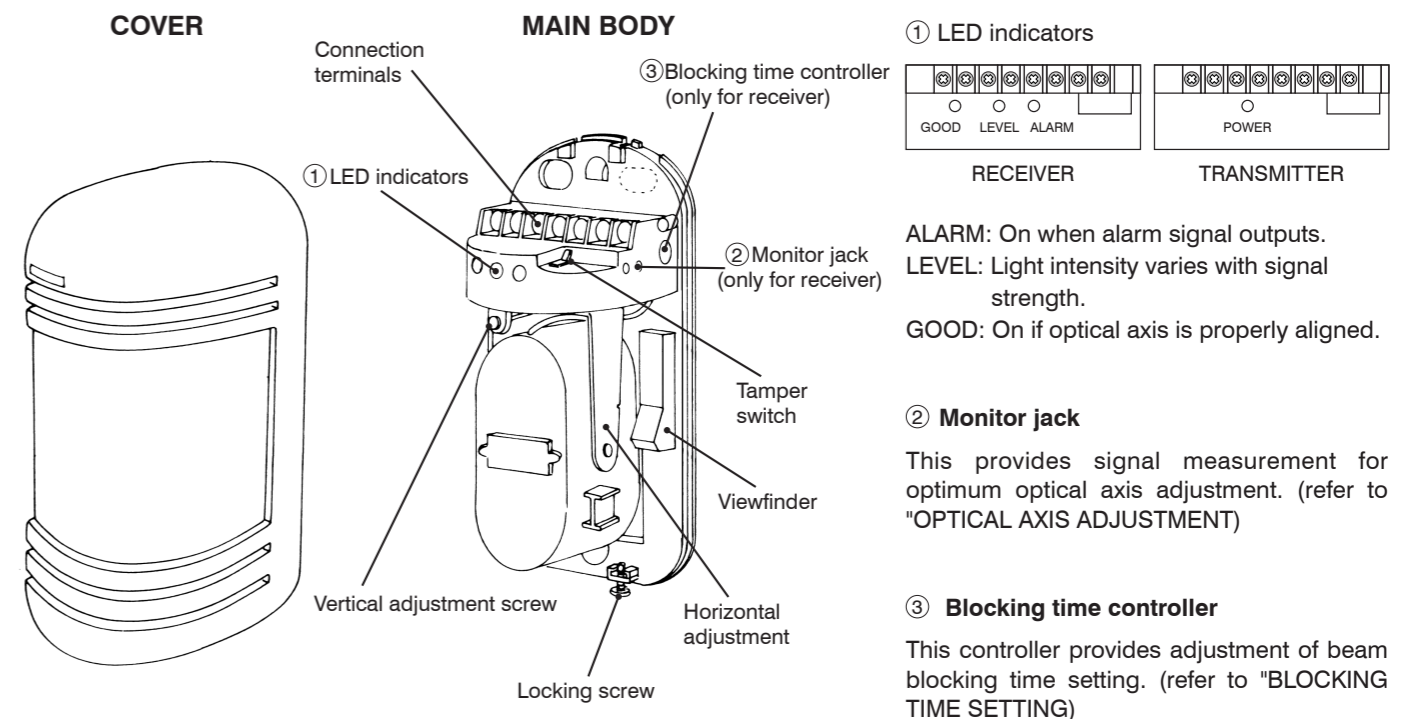
PX-D60

PX-D100

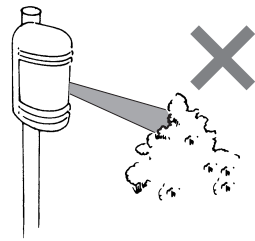
## INSTALLATION INSTRUCTIONS

To ensure optimum performance of this product, please carefully read all the instructions before installing. Improper installation or alignment may result in inferior operation or false detection.

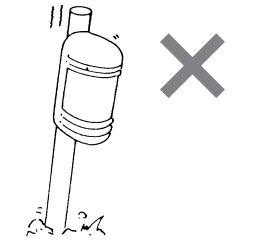
## PARTS DESCRIPTION



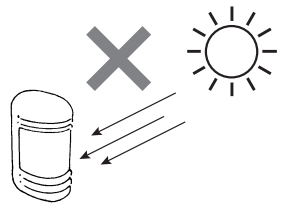
## INSTALLATION HINTS



Ensure the line of sight between transmitter and receiver is free from any false alarm sources such as bushes, trees, flags, banners...etc. Pay attention to the trees nearby as they may change seasonally.



Ensure the sensor unit is mounted on solid wall or firm fixing pole. Vibration or moving surface are not available.



Ensure the receiver does not directly face strong sunshine or car head lights. Within 2 degree from the optical axis should be avoided.

## WIRING DISTANCE TABLE

| Model No.                | PX-D30 |       | PX-D60 |      | PX-D100 |      |
|--------------------------|--------|-------|--------|------|---------|------|
| Wire \ Power             | 12V    | 24V   | 12V    | 24V  | 12V     | 24V  |
| 0.3mm <sup>2</sup> D0.6  | 280m   | 240m  | 250m   | 210m | 190m    | 160m |
| 0.5mm <sup>2</sup> D0.8  | 500m   | 440m  | 430m   | 380m | 350m    | 300m |
| 0.75mm <sup>2</sup> D1.0 | 780m   | 700m  | 680m   | 610m | 540m    | 490m |
| 1.25mm <sup>2</sup> D1.2 | 1120m  | 1000m | 980m   | 870m | 780m    | 700m |

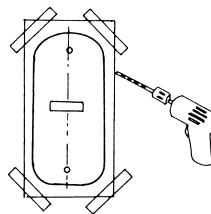
## INSTALLATION

### WALL MOUNT

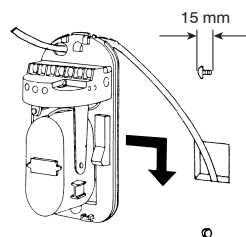
1. Loosen the locking screw for about 1 cm. Hold the cover and remove it from the main body by holding the locking screw with one hand.



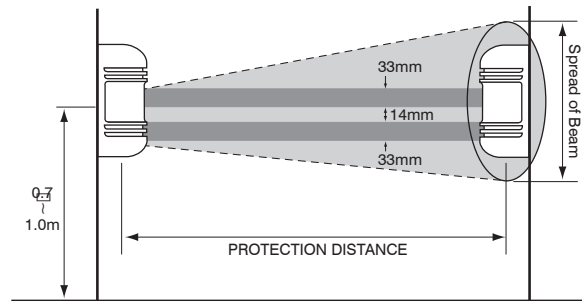
2. Attach the mounting pattern paper to the wall, mark and drill the mounting holes.



3. Lead the cable through the hole and mount the main body on the wall.



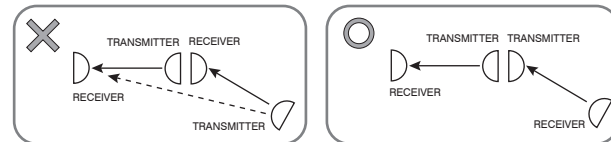
### DETECTION DISTANCE



| Model   | Detection distance | Spread of beam  |
|---------|--------------------|-----------------|
| PX-D30  | 30 m (100 ft)      | 0.9 m (3.0 ft)  |
| PX-D60  | 60 m (200 ft)      | 1.8 m (6.0 ft)  |
| PX-D100 | 100 m (330 ft)     | 3.0 m (10.0 ft) |

### MULTIPLE PAIRS INSTALLATION

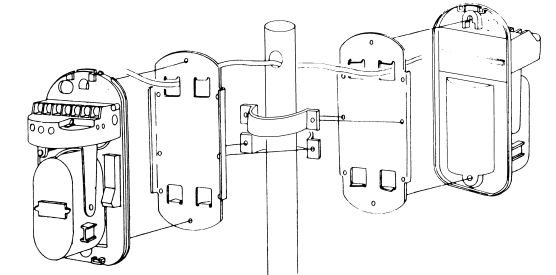
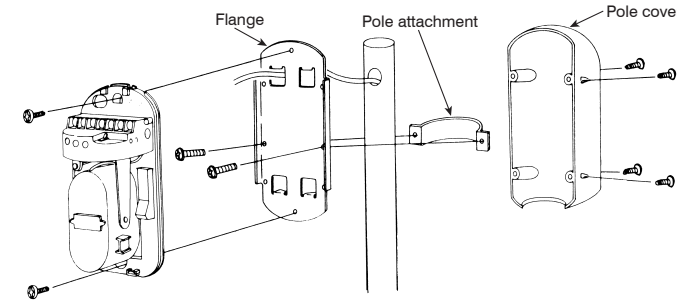
In multiple pairs installation for long distance protection, cross-talk may occur between different pairs of transmitter and receiver. Should this happen, change the disposition of transmitter and receiver to the following pattern.



### POLE MOUNT (Pole diameter 38 ~ 48mm)

1. Lead the cable through the wiring hole on the pole.

2. Attach the mounting plate to the pole with the pole attachment.

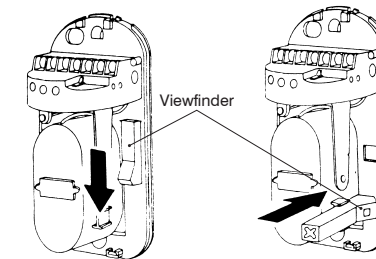


## ADJUSTMENTS

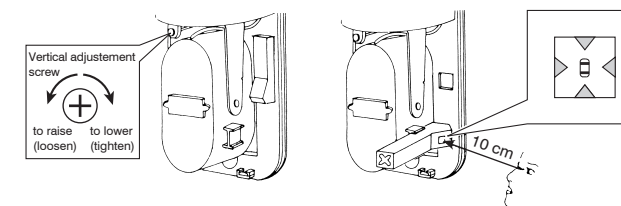
### OPTICAL AXIS

It is absolutely necessary to ensure optical axis between transmitter and receiver is properly aligned. Improper alignment may result in poor operation.

- Apply the power supply after installation completed.
- Place the viewfinder on either the right or left hand side of the lens whichever makes viewing easier.



- Adjust the direction or lens via the horizontal and vertical angle adjustment screws, so that the other unit can be seen at the center of viewfinder. This adjustment should be carried out on both the Transmitter and Receiver units.

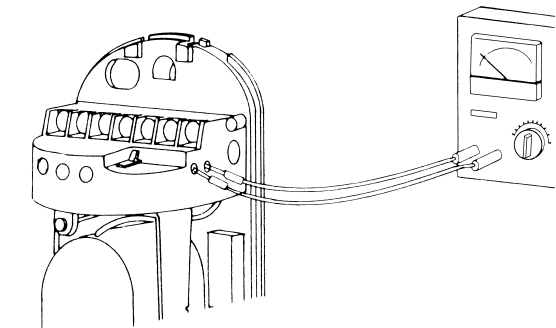


Note: The green LED (GOOD) will light on if the alignment is properly done. If not, realignment will be necessary.

The best way to align the optical axis is reading the voltage of output signal from monitor jack.

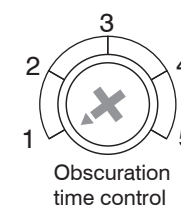
Insert the probes of voltage meter into the monitor jack. Ensure the polarity is correct.

The minimum voltage reading should be 2.3 V to ensure optimum performance.



### BLOCKING TIME

Blocking response time of PX-D series can be set by adjusting the blocking time controller. The following figures provide basic reference for adjustment. Smaller number stands for shorter response time (higher sensitivity). However, the environmental factors should be taken into consideration while setting. The blocking time may be set longer (bigger number) to ignore interference generated by birds flying or wind blown material.



| Scale 1                              | Scale 2                            | Scale 3                  | Scale 4                   |
|--------------------------------------|------------------------------------|--------------------------|---------------------------|
|                                      |                                    |                          |                           |
| fast running at full speed (6.9 m/s) | walking with quick steps (1.2 m/s) | normal walking (0.7 m/s) | slow action (0.3-0.5 m/s) |

**Caution:** Blocking time setting exceeding 70 msec. do not comply with the requirements in UL 639.