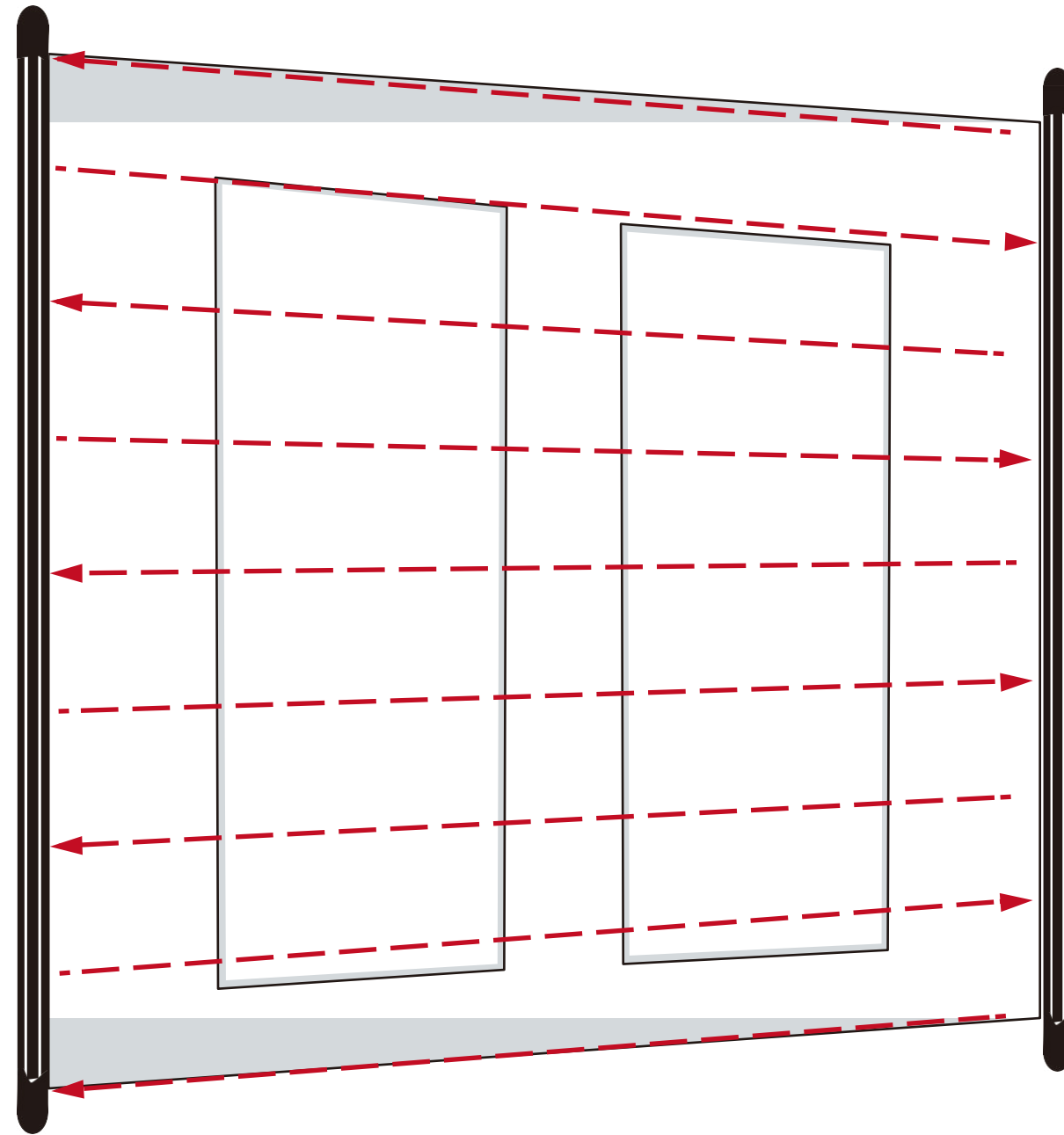# PHOTOELECTRIC BEAM BARRIER

IRB SERIES

FEATURES

- Bi-directional infrared beam barriers for the protection of industrial buildings, long balconies, corridors and windows.
- 4 channel selectable beam frequencies to eliminate cross talk.
- It is made up of two microprocessor logic circuits mounted with the SMD technique which manages up to 12 pairs of optical circuits and up to 2 meters aluminium pillars. Optics are multiplexed, and the alarm sounds when two optics are obscured (AND function).
- Patented technology completely eliminates false alarm caused by small animals, falling leaves, blowing debris or other changes in the installation site, weather proof feature suitable for heavy fog, snow, dusty, rainy conditions.
- White light immunity: excellent performance under headlight or sunlight, perfect for any harsh environment.
- Cover tamper protection
- Simple beam alignment with LED and indication and buzzer
- UV protected polycarbonates IR filter cover and aluminum alloyed rail
- Intelligent heating(optional)

DESCRIPTION

Technology: Active Infrared beams
Beams: 4, 8
Range: From 5m to 100m
Height: From 48cm to 172cm (48cm, 76cm,108cm,140cm,172cm,)
Alarm type: Contract Relay
Application: Commercial, Governmental, Industrial, Residential, ect.

SPECIFICATION

Model	IRB30-Q4	IRB60-Q4	IRB60-DQ8	IRB100-DQ8
Range	30m	60m	60m	100m
Pillar height	76cm	76cm	140cm	140cm
Maxmum of beams	10			
Optical lens	Polycarbonate Fresnel lens (18 mm diameter)			
Detection Method	Bi-directional + Synchronous (by wire)&Asynchronous			
Interruption Period	50, 100, 250, 500msec (4steps)			
Alarm Period	2sec(±1)			
Alarm output	Form C Relay (C/NC/NO) + 1 Tamper Switch (C/NC)			
Power supply	9-16VDC			
Current consumption	≤95mA (Transmitter + Receiver)			
Alignment angle	Horizontal 180°(±90°)			
Water-proof	IP55			
Terminals	TX: GND,VCC,RT. RX: GND,VCC,RT,NO,NC,COM			
Operating Temperature	-25 - +55℃(-40 - +55℃Intelligent heating)			
Housing	Aluminium alloyed			
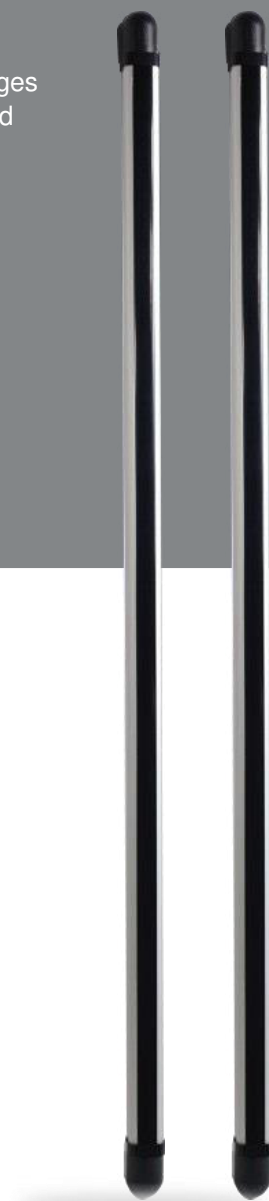
◇ Thanks for buying this Digital Multi-beam barrier.
◇ Please read this manual carefully before using.
⚠ Do not disassemble for non-professionals!

DIGITAL MULTI-BEAM WINDOW/DOOR BARRIER
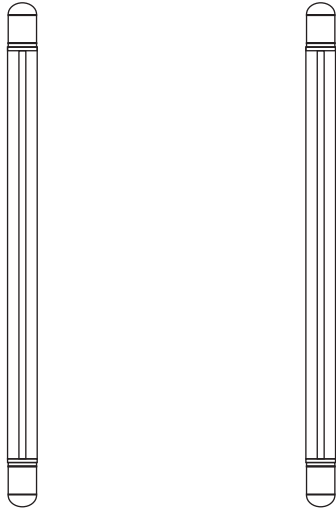
1. Description

The infrared multi-beam barrier uses updated intelligent high technology which can be used in outdoor and indoor. The features is easy installation and adjustment, pretty appearance, widely used in important places which need to be protected at fence, such as, institution, school, villa, and factory, etc. It could be installed at fence, door & window, balcony for perimeter protection purpose, it is available to avoid property loss and make property safety.

2. Features

(1) Utilizing multi-infrared beam and dual beam identification method.
(2) Distinguishing the size of intruder, make instant alarm when there is intruder.
(3) High reliability with anti-cut off function and anti-interference function.
(4) Waterproof construction.
(5) High quality aluminum alloy cases with plastic sprayed.
(6) The transmitter and receiver could make 180°(± 90° rotation after the installing seat is fixed.
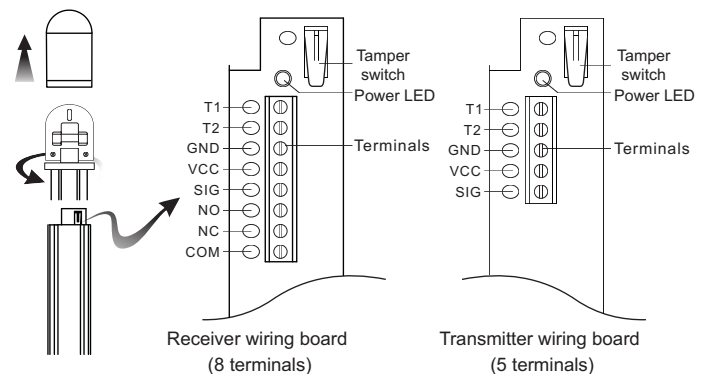
+90° -90°
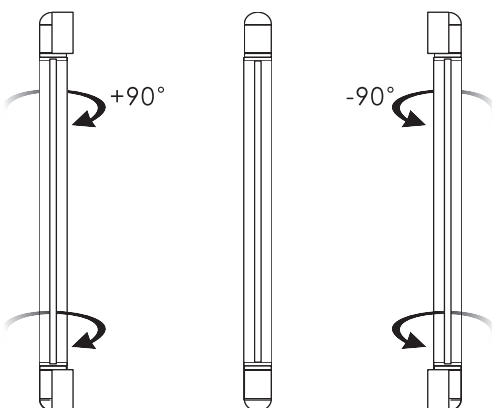
3. Parts Instruction

Receiver   Transmitter
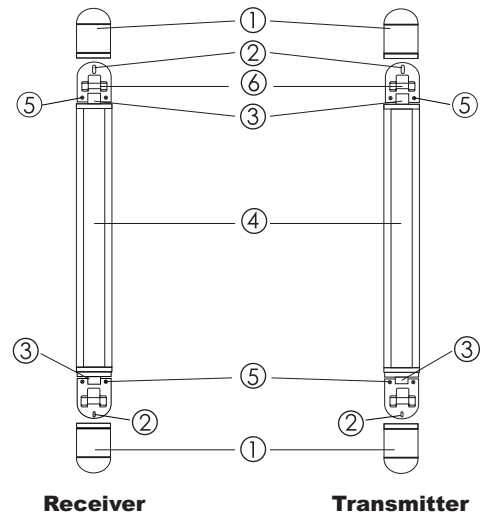
① Waterproof cover   ④ Aluminum Tube
② Installation hole   ⑤ Fixed rotation axis
③ Rotation axis   ⑥ Wiring outlet

4. Installation

(1) Choose installation position to make sure the receiver and transmitter paralleled and aligned in effective distance.
(2) Drill installation hole by Φ6mm drill bit, drive into rubber and fix it by screw.
(3) Connect the power and alarm output line through the rubber on the top of the product.
   (refer to **Terminal instruction)**
(4) Adjust the receiver and transmitter to make them paralleled.
(5) Power up the transmitter and receiver, if the receiver self checks successfully, then it works. Or else, adjust the angle and clear the obstacle between them.
   (refer to **Usage instruction**)

5. Terminal Instruction

Remove the waterproof cover, take out the rotation axis from the top this product and the terminal board.

Tamper switch
Power LED
T1
T2
GND
VCC
SIG
NO
NC
COM
Terminals

Tamper switch
Power LED
T1
T2
GND
VCC
SIG
Terminals

Receiver wiring board
(8 terminals)

Transmitter wiring board
(5 terminals)

T1、T2：Tamper switch output
VCC：Positive pole
GND：Negative pole
SIG：Signal output terminal
NO ：Normal open
NC：Normal close
COM：Common terminal

6. Usage Instruction

(1) When power up, product turns to test status. If the transmitter aims at the receiver, it turns into normal monitoring status. If not, buzzer chirps"DiDi", and power LED flashes until the beam adjust aiming.

(2) In normal monitoring, two adjacent beams are blocked, it will alarm and the buzzer chirps "DiDi".

(3) The receiver will alarm in any following cases

    A. When two or more adjacent beams are blocked simultaneously.

    B. When power of the receiver or transmitter is cut off;

    C. The beams of transmitter or receiver is altered.

(4) The power LED will be off if it work normally more than 30 minutes to save energy, and back on when alarm triggered.

(5) JP3 Cap is to select buzzer on or off function. Please turn it off after debugging.

(6) Under normal working, the terminal SIG and GND of the receiver should be connected to the terminal SIG and GND of the transmitter; JP4 of the receiver and JP5 of the transmitter are both on S(as defaulted).When in good detection environment, such as in door, it is possible to not connect these signal lines for easy installation, while the JP4 of the receiver and JP5 of the transmitter will both jump to A.

> ⚠️ **Attention**
>
> 1. In order to avoid false-alarm caused by electricity failure, UPS power is suggested to use. When with AC power, the battery will recharge by itself. While AC power fails, it can supply backup power. Low-quality non-linear battery is prohibited.
> 2. Please choose the distance according to the actual protection range.
> 3. Avoid shinning direct by light source, such as sunlight, or other strong light.
> 4. Keep the cases clear.
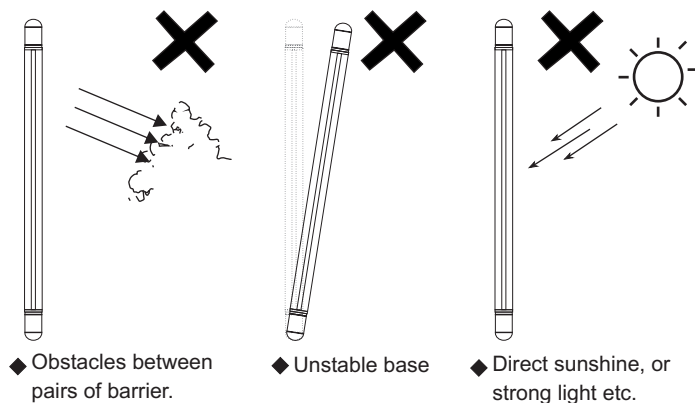> 5. Please connect the power with earth to increase the anti-interference performance.

7. Notes for Installation

(1) When install several barriers
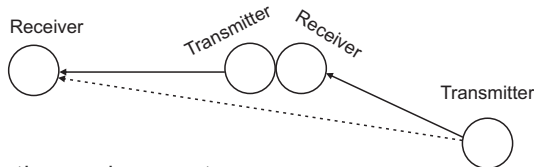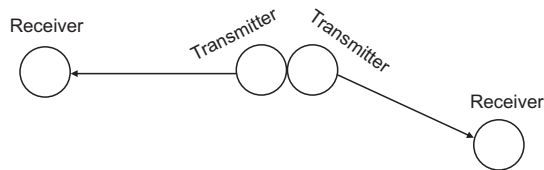
(1) Installation environment

  No installation under following situations:

◆ Obstacles between pairs of barrier. ◆ Unstable base ◆ Direct sunshine, or strong light etc.

8. Technical Parameter

Working temperature	-25℃~+55℃
Working voltage	DC9-16V
Current	Transmitter: ≤100mA，Receiver: ≤60mA
Trigger alarm time	≥0.7s
Alarm time	≥2s
Alarm output	C type relay24V DC, 1A Max
Axis rotation angle	horizontally 180°(±90°)
IP Grade	IP55
Distance	5m\10m\30m\40m\60m
Beam	2beams\4beams\6beams\8beams\10beams
Height*4.1*4.5(cm)	58.7 \88.7 \113.7 \143.7\173.7

9. Troubleshooting

Status	Reason	Treatment
Receiver or transmitter LED indicator off	Power voltage is not normal(short circuit or power off)	Check power and see if the power wiring is correct.
Beams of receiver are blocked, but alarm LED is not on.	There are objects reflect -ing infrared beam to the receiver. or receiver is nol working normally	Move away the objects, change installation position. check the wiring of the receiver
The receiver always alarms	Axis is not well adjusted, there are objects between transmitter and receiver, or the cover is too dirty	Adjust the axis well, remove objects, clear the cover with soft cloth.
False-alarm	Wrong wiring connection, unstable power voltage and detector installation, axis is not adjusted in the best status. Affected by other light sources.	Check the wiringand power, stable the power supply, fix the installation and adjust axis. Remove other light sources

10. List

Name	Amount
Transmitter	1
Receiver	1
Instuction Manual	1
Screws	4
Rubber	4