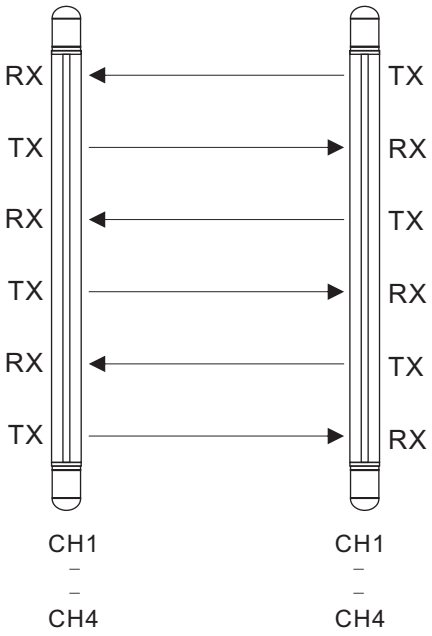
BI-DIRECTIONAL PHOTOELECTRIC BARRIER

WITH 4 CHANNEL SELECTABLE FREQUENCIES
AND INTELLIGENT DSP HEATING SYSTEM

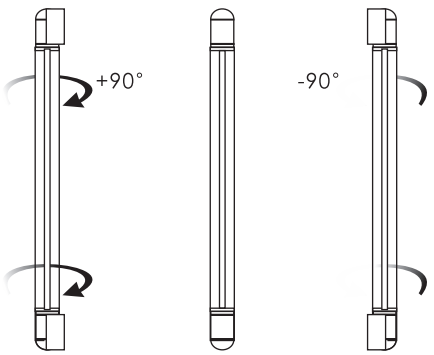


1. Description

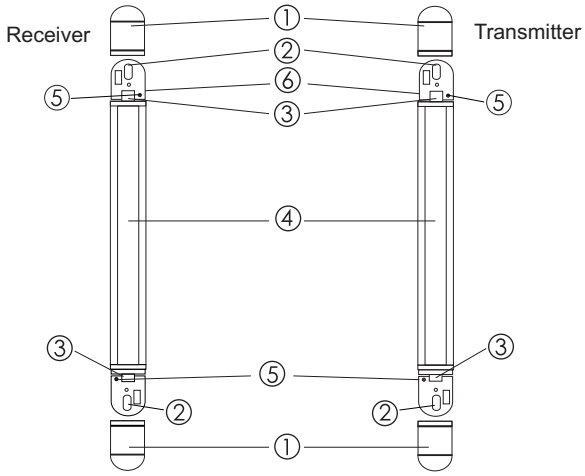
PBX series photoelectric infrared barrier adopts latest bi-directional transmission and digital frequencies technology, which can be applied to outdoor or indoor location without interference by the strong sunlight and similar IR light. It features with easy installation and pretty appearance, which is widely used in important places to be protected, such as, school, villa, shops, institution and factory, etc. It could be installed at fence, door & window, balcony for perimeter protection purpose to avoid property loss and make property safer, superior in cold area after adding the intelligent DSP heating system.

2. Features

(1) 4 channel selectable digital frequencies
(2) Bi-directional transmitters and receivers
(3) Intelligent DSP heating system
(4) Electrostatic protection more than 10K Volts
(5) Adjacent twin beam identification method
(6) Waterproof construction
(7) High quality aluminum alloy cases with plastic sprayed
(8) 180°(± 90°) rotation after the installing seat is fixed
(9) LED Display and Buzzer Warning
(10) Wide Voltage Power Input: 10-18V DC



3. Parts Instruction



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

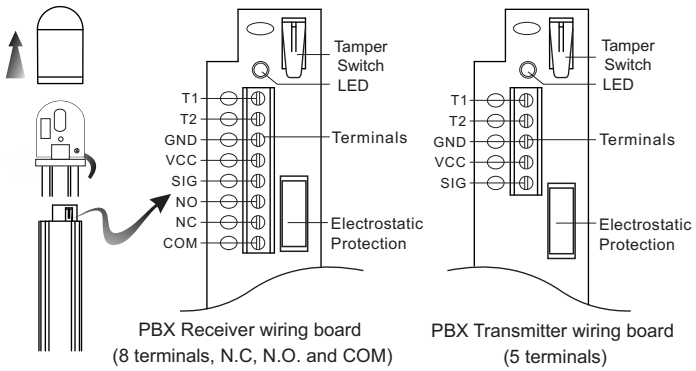
Note: The part with N.C, N.O and COM is defined as the receiver.

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 by Φ4mm screws.
(3) Connect the power and alarm output line through the hole 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 **Operation Instruction**)

5. Terminal Instruction

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



T1 / T2：Tamper switch output
GND：Negative pole
VCC：Positive pole
SIG：Synchroniztion terminal
NC ：Normally close
NO ：Normally open
COM：Common terminal

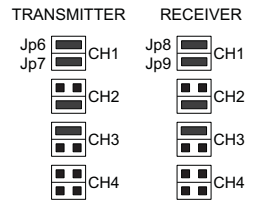
6. Operation Instruction

(1). When power up, product turns to test status. If the transmitter aims at the receiver after alignment, it turns into normal monitoring status, the red LED of the receiver and transmitter are ON. If not, buzzer "DiDi" with LED display ON, until the beams are well aligned.

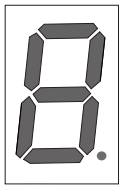
(2).The receiver triggers alarm in any following cases:

A. When the frequencies on the receiver and transmitter is not on the same channel. In this case, please check if the frequency of the transmitter and receiver are on the same channel as follows:

BEAMS FREQUENCIES



LED DISPLAY



LED Display is used for discrimination of incompetent beams or blocking beams. For sample, beam 1 is blocked, 1 is shown on the screen. If more beams are blocked at the same time, beams numbers are switched on the LED Display. 0 means no SIG line. A is the 10 beam, B is for the 11 beam and C is for the 12 beam.

B. Two or more adjacent beams are blocked in mode of adjacent 2 beams activation.

C. The power of the transmitter or/and receiver is cut off.

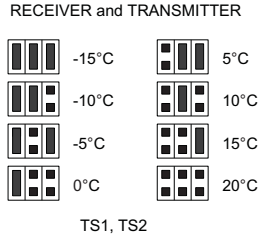
D. The receiver cannot receive enough infrared signal or the system is not well aligned.

E. The SIG terminal of the receiver and the transmitter is not connected.

NOTE **You must connect the terminals SIG of the PBX transmitter and receiver for the barrier.**

(3). Make the setting of optional heating startup temperature and the setting of buzzer according to the environment condition.

TEMPERATURE STARTUP

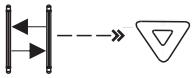


BUZZER

The function of heating system is optional. If the heaters are installed inside the detector, there are 1 pair of heaters (PB-H04) for 4 beams, 2 pairs of heaters (PB-H06) for 6 and 8 beams, and 3 pairs of heaters (PB-H10) for 10 and 12 beams.

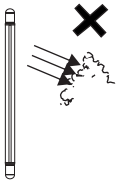
NOTE **Please use our provided PB-H04/06/10 series of heaters. The heaters of other types or other companies may be not well compatible with our system, which probably cause system burned or damaged.**

(4). Optional wireless alarm output transmission directly to the wireless alarm strobe for on site alarm or door bell as follows:



7. Precautions

Installation environment



Do not install the unit where objects moved by the wind.

Mount unit only on a solid surface.

8. Specifications

Beam	PBX-4B\6B\8B\10B\12B Series Beams
Current Draw	≤160mA (TX: ≤100mA，RX: ≤60mA)
	Heater: PB-H04: ≤340mA，PB-H06: ≤680mA
	PB-H10: ≤1020mA
Response Time	≤40mS
Alarm Period	≥1.5S
Alarm Output	Form C relay24V DC, 0.5A max
Alignment Angle	Horizontally 180°(±90°)
Weatherproof	IP54
Range	30m \ 60m \ 80m \ 100m
Power Input	10-18VDC
Operating Temperature	-45℃ ~+75℃
Height*3.6*3.9(cm)	76 \108 \ 140 \172 \ 204

9. Trouble shooting

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 no alarm triggered.	There are objects reflect -ing infrared beam to the receiver, or receiver is not working normally	Move away the objects, change installation position or 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. Checking List

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