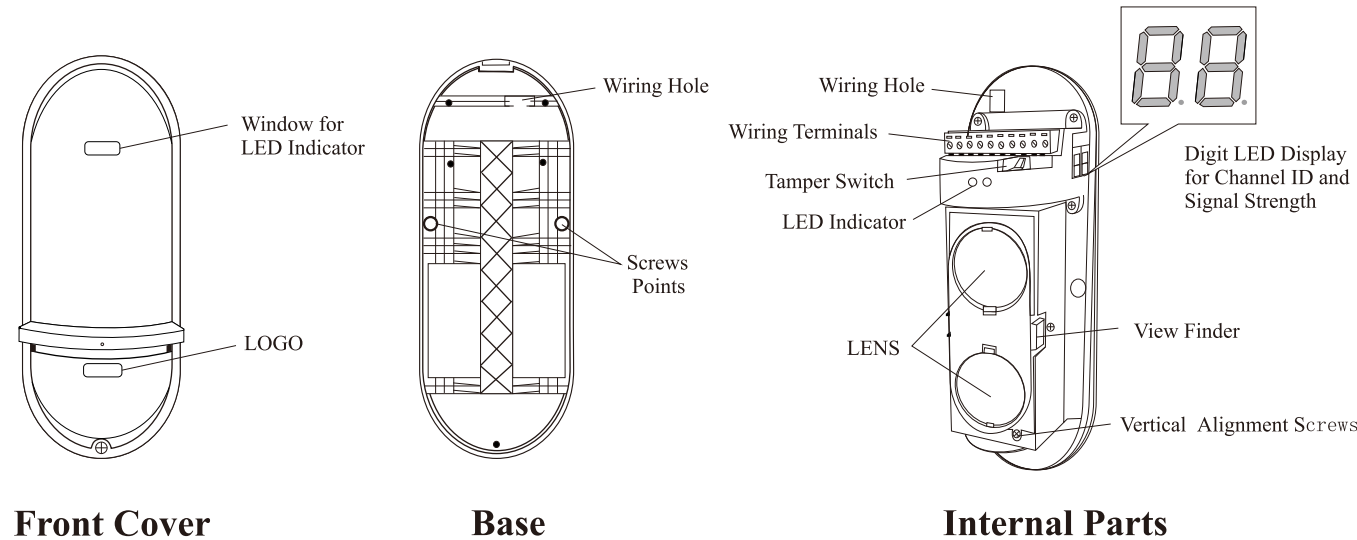# MANUAL

TWIN PHOTOELECTRIC BARRIER

8-Channel Frequencies IR Beam Detector
Model: 40m / 60m / 80m / 100m

1 PARTS DESCRIPTION

Window for LED Indicator

LOGO

Front Cover

Wiring Hole

Screws Points

Base

Wiring Hole
Wiring Terminals
Tamper Switch
LED Indicator
LENS
Digit LED Display for Channel ID and Signal Strength
View Finder
Vertical Alignment Screws

Internal Parts

2 WIRING TERMINALS & LED INDICATORS

RECEIVER (RX)									
POWER IN		ALARM OUT			FOG ALARM		TAMPER	POWER OUT	
+	−	COM	NC	NO	NC	COM	NC	+	−
⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘
1	2	3	4	5	6	7	8	9	10

TRANSMITTER (TX)									
POWER IN		/					TAMPER	POWER OUT	
+	−	/					COM	NC	+	−
⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘
1	2	3	4	5	6	7	8	9	10

RECEIVER

POWER   ALARM

Terminal 1, 2:   Power Input, DC 10−36V / AC 8−24AC
Terminal 3, 4, 5: Alarm Output, N. C. / N. O.
Terminal 6, 7:   Fault or Environment Alarm, N. C. (optional)
When signal strength decrease slowly to 0.8v, the detector will activate the fault alarm output
Terminal 7, 8:   Tamper Switch Alarm, N. C.
Terminal 9, 10:   Power Output, for connecting heater or wireless module
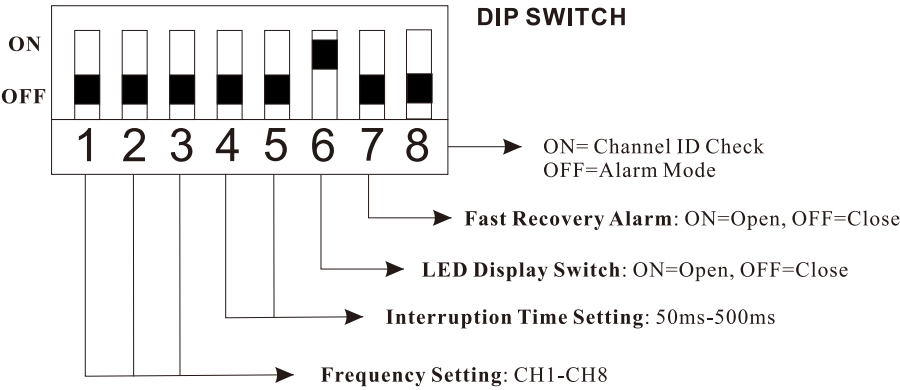**LED Indicator**: Power LED is always ON after power on and the Alarm LED is ON in alarm
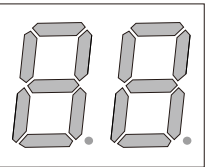
TRANSMITTER

POWER

Terminal 1, 2:   Power Input, DC 10−36V / AC 8−24AC
Terminal 3, 4, 5, 6: Reserve
Terminal 7, 8:   Tamper Switch Alarm, N. C.
Terminal 9, 10:   Power Output for connecting heater or wireless module
The power voltage is the same as the power input
LED Indicator: Power LED is always ON after power on

3 DIP SWITCHES & LED DISPLAY

RECEIVER

DIP SWITCH

ON
OFF
1 2 3 4 5 6 7 8

→ ON= Channel ID Check OFF=Alarm Mode
→ Fast Recovery Alarm: ON=Open, OFF=Close
→ LED Display Switch: ON=Open, OFF=Close
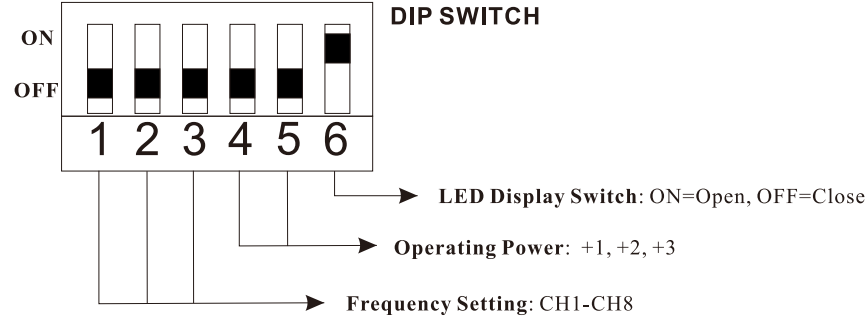→ Interruption Time Setting: 50ms-500ms
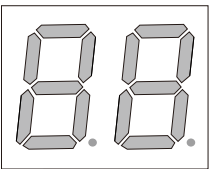→ Frequency Setting: CH1-CH8

RECEIVER LED DISPLAY

1) **Alignment Voltage**
0.0-1.5 REALIGN
1.5-2.0 FAIR
2.0-2.5 GOOD
2.5-3.5 BEST

2) **Frequency Channel ID**
CH 1, 2, 3 ...8

TRANSMITTER

DIP SWITCH

ON
OFF
1 2 3 4 5 6

→ LED Display Switch: ON=Open, OFF=Close
→ Operating Power: +1, +2, +3
→ Frequency Setting: CH1-CH8

TRANSMITTER LED DISPLAY

Frequency Channel ID
CH 1, 2, 3 ...8

1) Switch 1-3 (Receiver & Transmitter): Frequency Setting
To avoid interference with each other in multiple pairs of installation, please select different frequency channel in each pair of beam detector.

CH 1   CH 2   CH 3   CH 4   CH 5   CH 6   CH 7   CH 8
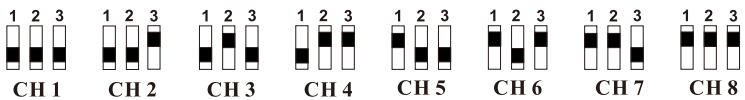
NOTE: The frequency channel ID of the receiver and the transmitter should be the same in operation. Otherwise, the system does not work.

2) Switch 4-5 (Receiver): Interruption Time Setting
Please make interruption time to detect different movement speed (refer to Part 6 Interruption Time Adjustment). 50ms is the most sensitive mode.

50ms   150ms   300ms   500ms
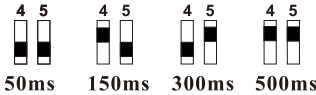
Switch 4-5 (Transmitter): Operating Power
In severe environment condition, operating power mode+1, +2 or +3 makes IR beam to achieve the longest protection distance.

+1   +2   +3

3) Switch 6 (Receiver & Transmitter): LED ON / OFF
Close the LED Display after installation for energy saving operation.

LED SW   6
ON=OPEN

4) Switch 7 (Receiver):
When Switch 7 is ON, the alarm output is in Fast Recovery Mode. The relay opens and closes instantly when the IR beams are blocked or aligned. This function is designed for parking sensor or automatic door. When the Switch 7 is OFF, the standard alarm output period is 2 seconds.

5) Switch 8 (Receiver):
ON is for quick frequency channel ID checking. In this mode, there is no alarm output if the beam is triggered. Switch 8 OFF is for alarm mode and the LED display shows the signal strength value 0.0-3.5.
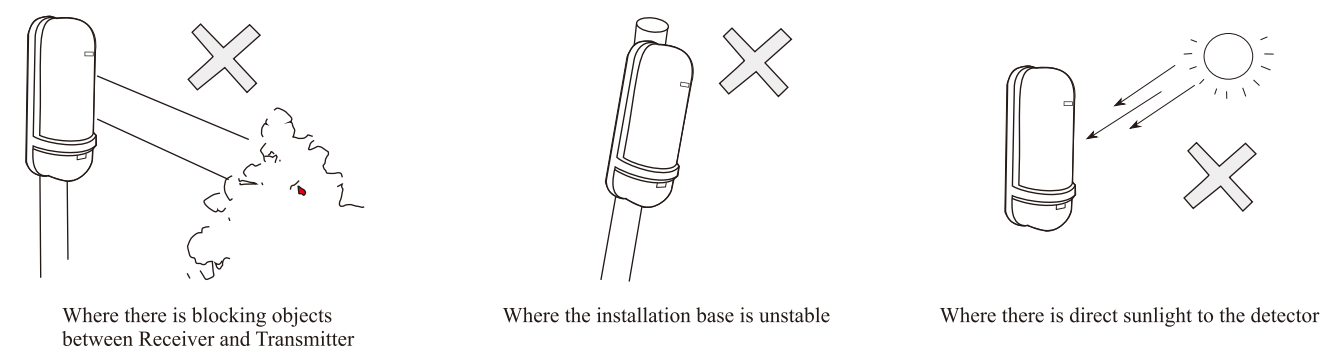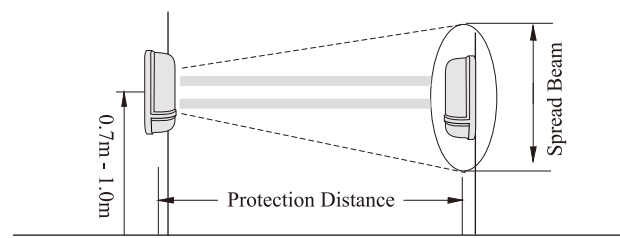
NOTE: Switch 8 ON is for checking the frequency channel ID, please set the switch OFF in protection. Otherwise, there is no alarm output in protection.

6) Digit LED Display (Receiver & Transmitter)
The LED Display of the receiver shows the frequency channel ID numbers at the first 2 seconds after power on. Then the LED display shows the signal strength. If it shows the value less than 0.8, please realign the IR beam. The value 2.0-3.5 is highly recommended for the best performance in real working status. The LED Display of the transmitter shows the operating frequency channel ID only.

4 PRECAUTIONS

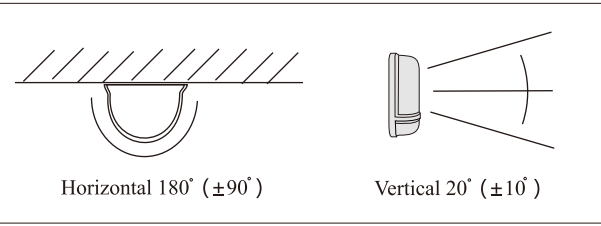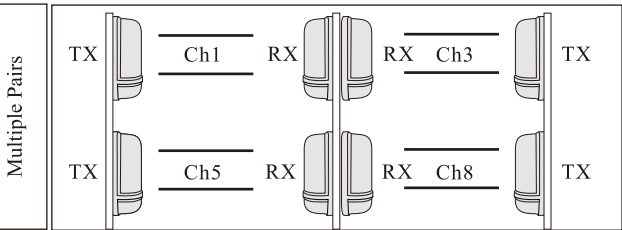**1) Please do not install the system to the following location:**

Where there is blocking objects between Receiver and Transmitter

Where the installation base is unstable

Where there is direct sunlight to the detector

2) Installation Height

0.7m ~ 1.0m

Protection Distance

Spread Beam

3) Protection Distance

Model	Distance	Spread Beam
40	40M	1.2M
60	60M	1.6M
80	80M	2.2M
100	100M	2.8M

3) Alignment Angle

Horizontal 180° (±90°)   Vertical 20° (±10°)

5) Stacking Installation

Multiple Pairs

TX   Ch1   RX   RX   Ch3   TX

TX   Ch5   RX   RX   Ch8   TX

5 INSTALLATION GUIDE

Wall Mount

1) Loose the screw and open the cover

3) Wiring the terminals from the hole and replace waterproof rubber

Base Height 218MM   218MM   6MM   Screw Distance 55MM

Wire Hole

Screw Mount Hole

2) Drill the mounting holes on the wall and fix the base by the screw

4) After setting, replace the cover and tighten the screw

Pole Mount

Ø3.5CM ~ 5.0CM

1) Pull out the wires from the pole hole

Make the wires U type to keep water drops out of the detector

U Bracket

2) Wiring the terminals and fix the base on the pole by the U Bracket

3) Make back to back installation on the same pole

4) After setting, replace the cover and tighten the screw

6 INTERRUPTION TIME ADJUSTMENT

6.9m/s   4m/s   1.2m/s   0.7m/s   0.4m/s

① High Speed: 50ms   ② Fast Running: 50ms   ③ Fast Walking: 150ms   ④ Normal Walking: 300ms   ⑤ Slow Walking: 500ms

7 SPECIFICATION

Model	40	60	80	100
Distance (Outdoor)	40m	60m	80m	100m
Distance (Indoor)	120m	180m	240m	300m
Detection System	Simultaneous blocking of 2 infrared beams			
Response Time	50msec, 150mse, 300mse, 500msec selectable			
Power Input	DC 10-36 / AC 8-24V			
Current Consumption	50mA	50mA	55mA	55mA
Alarm Output	Form C, Contact capacity: AC / DC30V, 0.5A or less			
Tamper Switch	N.C. open when cover is removed			
Fault Alarm	N.C. Fault Output when the signal is incompetent			
LED	Red LED Alarm (receiver), Digit LED Display			
Alignment Angle	±10° vertical, ±90° horizontal			
Ambient Temperature	-25°C to 55°C			
Relative Humidity	95% or less			
Mount Method	Wall or Pole			
Weight	900g			

8 DIMENSION

7.5cm   8cm

22cm

Ø3cm~5cm