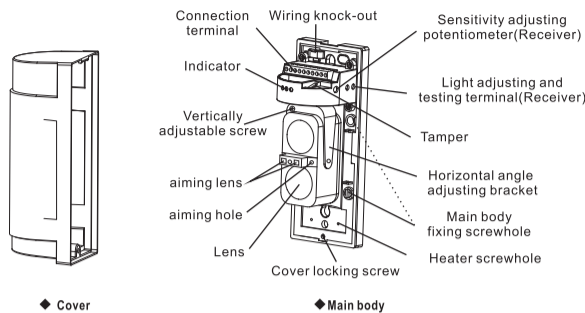


Dual Beam Detector

20D-IN(outdoor 20m Indoor 60m) 30D-IN(outdoor 30m Indoor 90m)
 40D-IN(outdoor 40m Indoor 120m) 60D-IN(outdoor 60m Indoor 180m)
 80D-IN(outdoor 80m Indoor 240m) 100D-IN(outdoor 100m Indoor 300m)

1 Parts description



(1) Indicator



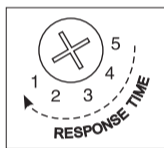
- LEVEL indication lamp (green) Brightness varies, depending on incident level.
- ALARM indication lamp (red) is on when indicating alarm.
- GOOD indication lamp (green) is ON when beams are aligned, is OFF when beams are not aligned.
- POWER indication lamp (green) is on when the light beam transmitting.

(2) Arming lens

Use it when adjust the precision of the optical axi (Refer to the operation instruction 4. Optic axis adjusting)

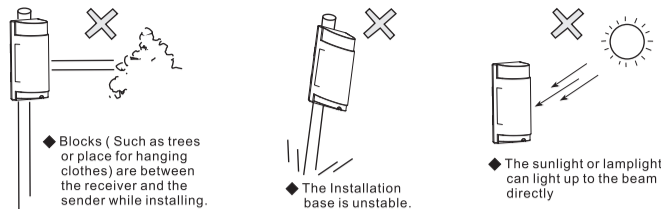
(3) Sensitivity adjusting potentiometer

We adjust the interrupting period by setting the sensitivity level. Level 1 is the highest sensitivity. And level 5 is lowest sensitivity. The factory default setting is level 1.



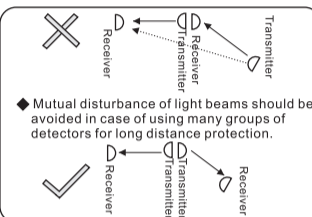
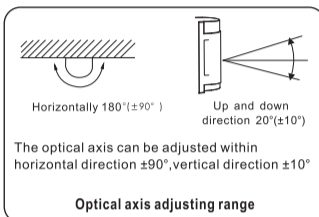
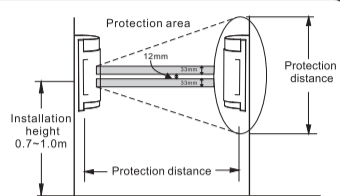
2 Setting Notice

Don't mount the detector at following areas.



Installation height and Protection distance

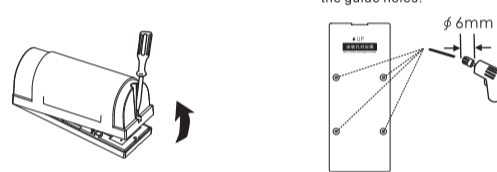
Model	Protection distance	Detecting angle
20D-IN	20m	0.6m
30D-IN	30m	0.9m
40D-IN	40m	1.2m
60D-IN	60m	1.8m
80D-IN	80m	2.4m
100D-IN	100m	3.0m



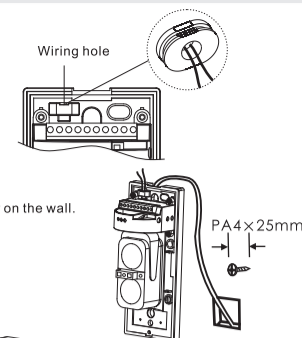
3 Mounting Method

Wall Mounted

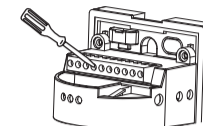
- Loosen the fixed screw and remove the cover.
- Attach the mounting pattern paper to the wall, mark the installation holes, and drill the guide holes.



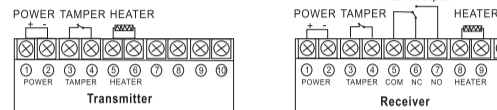
- Remove the oval waterproof rubber seal and drill the knock-out and pull wire through. Then install the waterproof rubber seal.



- Connecting wires to the terminal.



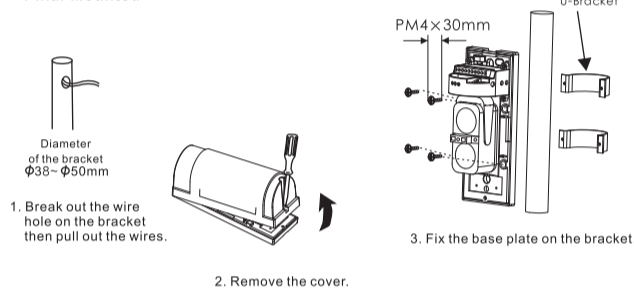
Terminal connection diagram:



The wired distance

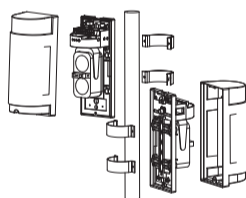
The diameter of line	Length	Voltage	
		DC12V	DC24V
0.5mm ² (Φ 0.8)		300m	1500m
0.75mm ² (Φ 1.0)		400m	2300m
1.0mm ² (Φ 1.2)		600m	3500m
1.5mm ² (Φ 1.4)		1000m	5000m

Pillar Mounted



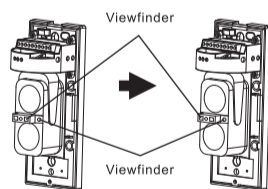
PHOTOELECTRIC DUAL BEAM DETECTOR MANUAL ACTIVE INFRARED SENSOR

- ◆ Back to back installation (Refer to the figure below)

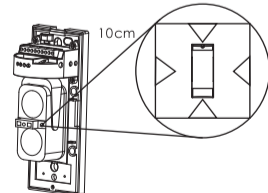


4 Beam Alignment

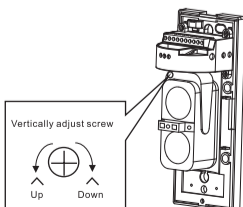
- Remove the cover, put through power.



- Look down the angled viewfinder alignment hole from a distance of approximately 10 cm. The detectors are properly aligned when the beam is in the center of the four alignment markers.

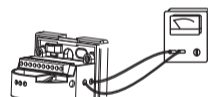


- Adjust the horizontal angle adjusting screw and bracket to let the opposite detector in the center of sight lens. The GOOD indication lamp should be on. (Adjust the light axis continuously if the indication lamp is not on.)



The brighter is green LEVEL indicator light, the higher of the precision of the light axis.

- ◆ To achieve the best optical alignment it is advised to use a volt meter connected to the output test point



- Insert the multimeter probes in to the test point. (Pay attention to the polarity.)
- Adjust the horizontal and vertical angles to obtain the maximum voltage from the test point.
- The test point voltage must be above 1.5 volts.

5 Troubleshooting

Name	Status	Indication
Transmitter	Transmitting	Green LED is ON
Receiver	Watching	GOOD/LEVEL indication is ON
	Alarm	Alarm indication lamp is ON

Operate the block test after installation:
 ① on the front of the transmitter
 ② on the front of the receiver
 ③ In the middle of the transmitter and the receiver.
 Please refer to the table on the left.

NOTE: When finishing the adjustment, the detector enters the default state of alert. In order to save power, the GOOD and LEVEL LED will turn off after 15 minutes if there is on alarm signal.

6 Operation confirmation

Symptom	Possible Cause	Remedy
Transmitter LED doesn't light	Improper voltage supplied.	Check the power supply and wiring.
Receiver LED doesn't light	Improper voltage supplied.	Check the power supply and wiring.
Alarm LED doesn't light, even when beams are blocked	1. Beams are reflected to the receiver by other objects. 2. 2 beams are not blocked. 3. Interruption time is too long.	1. Remove the reflecting object or change the optional axis direction. 2. Shade 2 beams. 3. Shorten the interruption time.
When the beams are blocked, the receiver LED is on, but not causing an alarm.	1. Wiring short circuit. And disconnection. 2. Contact missing. 3. Low power voltage.	1. Check the wiring. 2. Check the junction. 3. Check the power supply.
The alarm indication lamp on the receiver is always on	1. Optical axis is not properly adjusted 2. There are blocks between the transmitter and the receiver. 3. The detector cover is dirty.	1. Adjust the optical. 2. Remove the blocks. 3. Polish with soft cloth.
The alarm LED on the receiver flashes.	1. The single line doesn't connect well 2. There are some troubles on the receiver board	1. Fasten the wiring. 2. Get in touch with distributor
Intermittent Alarm	1. Bad wiring 2. Fluctuating power supply 3. Movable blocks between the transmitter and the receiver 4. The installation base is unstable 5. Optical axis is not properly adjusted 6. Blocked by other objects	1. Check wiring 2. Check the power supply 3. Remove the blocks for relocate 4. Fix the mounting base 5. Adjust interruption time or 6. Change installation position 7. Adjust the optical axis

NOTE: If you check your problem as above, it doesn't work. Please get in contact with our after-sale service personnel and distributor.

7 Technical parameter

Model	20D-IN	30D-IN	40D-IN	60D-IN	80D-IN	100D-IN
Detecting distance	Outdoor	20m	30m	40m	60m	100m
	Indoor	60m	90m	120m	180m	300m
Longest distance	250m	350m	450m	650m	900m	1100m
Beams	2 beams					
Detection Method	2 beams detecting at the same times.					
Light Source	Infrared LED					
Interruption Period	50~250m sec					
Alarm Period	2S					
Alarm Output	Relay junction standard: 1C; AC/DC: 0.5A, 30V max.					
Power Voltage	DC 12~24V					
Current Consumption	35mA max	40mA max	45mA max	55mA max	60mA max	65mA max
Operating Temperature	-25°C~70°C					
Dimension	Look at the outside drawing					
Tamper Output	NC. When moving the shell, the tamper output open.					
Optical axis adjustment(Horizontal)	180°(±90°)					
Optical axis adjustment(Vertically)	20°(±10°)					
Waterproof rote	IP55					
Material	PC engineering plastic					
Weight	300g(Transmitter and Receiver)					

8 Attachment List

Name	Number	Specification
U-Frame	2	70.4*37.5*21.5mm, Thickness 1.5mm, Black sanding
Screw	4	Pole mounted: PM 4 * 30mm
	4	Wall mounted: PA 4 * 25mm
Bulged tube	4	Φ 7 * 27mm, Green
Paper	2	W 105 * H215mm
Heater	2	Optional; Current: 200Ma max

NOTE: When the temperature is below -20°C please use the heater. There is no polarity requirement for HEA terminal.

9 Dimension

