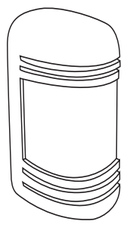
ACTIVE INFRARED DETECTOR
Usage manual

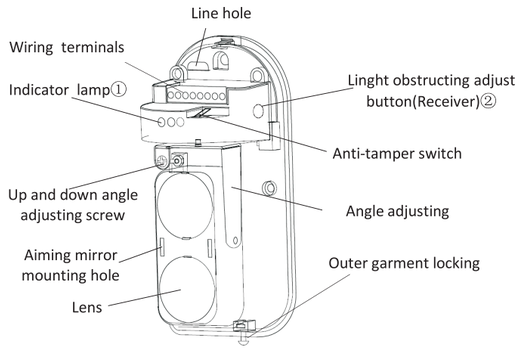
Double beam -20 Double beam -30 Double beam -60

Double beam -80 Double beam -100 Double beam -150

1 Part name

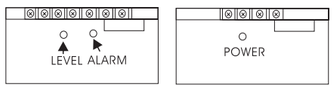


Outer garment



The body

① Indicator Lamp



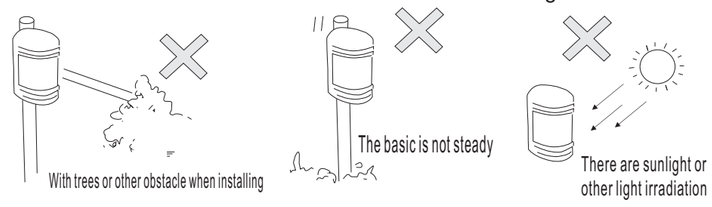
Receiver Transmitter

- LEVEL :Indicator lamp (Green) The brightness will be changed according to the different precision of the light shaft
- ALARM: The light will be on when alarming
- The lamp will be on when connecting power

② Use it when set light obstructing time (Please refer to the using instruction)

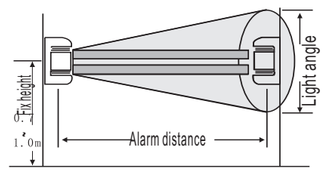
2 Attention

- Please don't install the sensor in the following situations



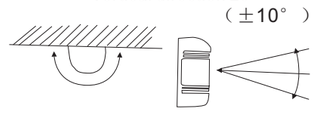
- The fix height and the alarm distance

Model	Alarm distance	Light angle
20	20m	0.8m
30	30m	0.9m
60	60m	1.8m
80	80m	2.4m
100	100m	3.0m
150	150m	3.6m



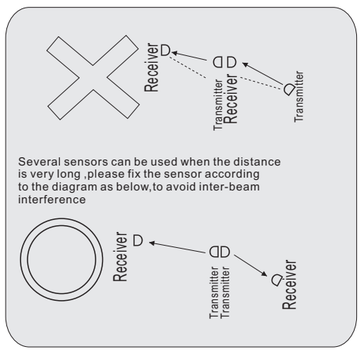
- Light adjusting scope

Vertical direction 20° (±10°)



Horizontal direction 180° (±90°)

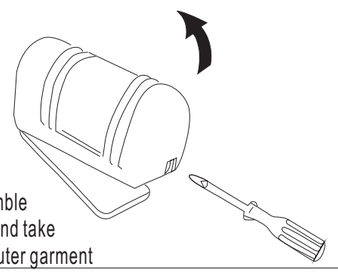
The light shaft can be adjusted by±90° in the horizontal direction and by±10° in the vertical direction



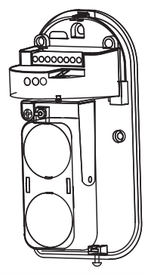
3 Fixing way

- Wall fixing way

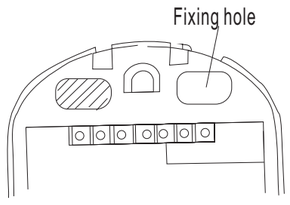
1.Disassemble the screw and take down the outer garment



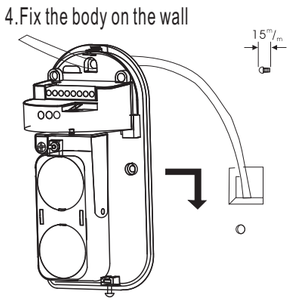
2.Fix the body and make holes on the wall



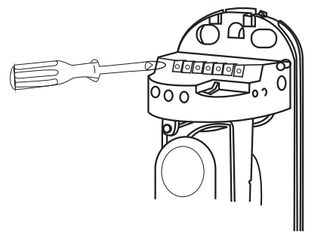
3.Pierce the electric wire through the line hole



4.Fix the body on the wall



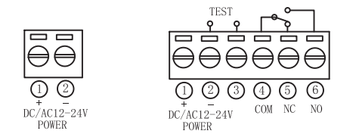
5.Connect the electric wire to wiring terminals



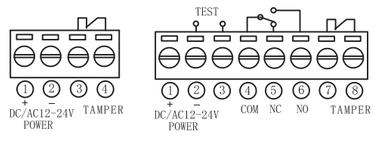
6.Fix the outer garment after finishing adjusting the light shaft obstructing time

Line distributing terminals

Without anti-tamper switch wire connection diagram

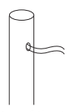


With anti-tamper switch wire connection diagram



- The way to fix the steady trestle

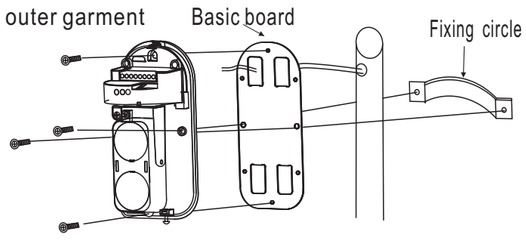
1.Make holes in the trestle and pierce the line through it .



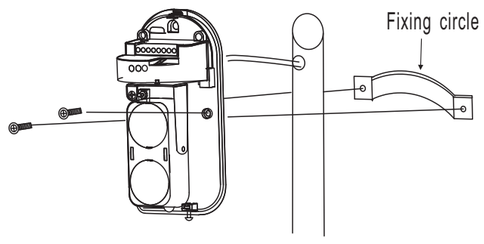
Outer diameter of the trestle ϕ38~ϕ50mm

2.Take down the outer garment

3.Fix the basic board on the trestle



- Refer to the following mounting picture of beam detector without iron plate

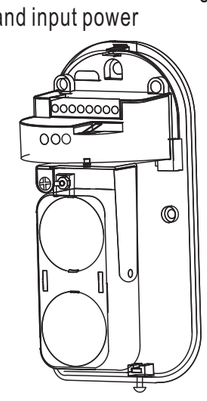


The line distributing distance from detector to signal receiving instrument

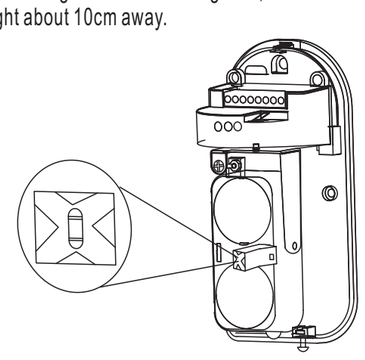
Voltage / The line distributing distance / Line diameter	DC12V	DC24V
0.5mm² (ϕ0.8)	300m	600m
0.75mm² (ϕ1.0)	400m	800m
1.25mm² (ϕ1.2)	700m	1400m
2.0mm² (ϕ1.6)	1000m	2000m

4 Adjust the lights

1.Take down the outer garment and input power

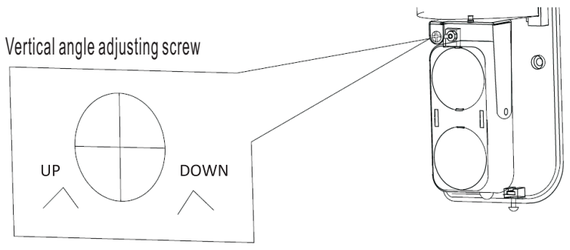


2.First put aiming mirror in mounting hole,then check the effect from the mirror on the right about 10cm away.



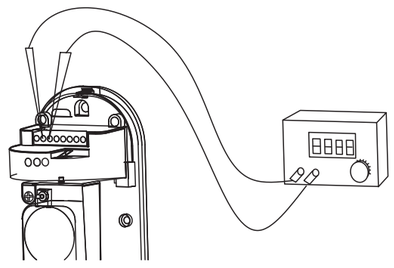
3.Adjust the up and down angle adjusting screw and horizontal adjusting rack, make the opposite detector image into middle of the aiming mirror.Meanwhile the LEVEL indicator lamp will be on (otherwise please keep adjusting the light axis)

The brighter of Green LED,the higher precision of the light shaft aiming .



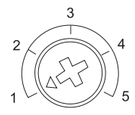
- The best light adjusting way-measurement test hole output

1.Plug the test pen into the test hole
2.First adjust horizontal angle,until reach the maximum output voltage of the test hole,then adjust vertical direction,the way is the same with horizontal angle.
3.If can't get the voltage of 3.8V or higher,then need to adjust the transmitter and receiver again.



5 Adjust the time of obstructing light

The obstructing time of receiver can be adjusted according to the picture.Generally setting time should be a little less than the invading time.



Adjust the light obstructing time

1.	2.	3.	4.
			
Fast run(6.9m/s)	Fast walk(1.2m/s)	Ordinary walk(0.7m/s)	Slow motion(0.3~0.5m/s)

6 Test

After fixing the detector, the walking test should be taken. Please process motion confirmation according to the chart.

	Condition	Display
Transmitter	Working state	Green LED light on
Receiver	Alert state	LEVEL light on
	Alarm state	Red Alarm light on

7 Check the unusual condition

Trouble	Reason	Countermeasure
The transmitter indicating lamp is not bright	Unsuitable power voltage (break or short circuit)	Check the power line
The receiver indicating lamp is not bright	Unsuitable power voltage (break or short circuit)	Check the power line
The receiver alarm indicating lamp is not bright when beams interrupted	1.Reflected or other transmitter light enter into receiver 2.Two beams of light are not interrupted at the same time 3.Interrupting time is too short	1.Remove reflected object or change light axis direction 2.Interrupt two beams of light at the same time 3.Extend the covering time
After interrupting light,alarm indicator lamp of receiver is bright,but no output of alarm signal	1.The line is break or short circuit 2.The line point is insensitive	Check line and line point
The alarm indicator lamp is always bright	1.The light axis is misaligned 2.There are obstacle between transmitter and receiver 3.The outer garment is polluted	1.Adjust the light axis again 2.Get rid of obstacle 3.Clean the outer garment
There are output of alarm signal off and on	1.The line is not good 2.The power voltage is changeable 3.There are moving obstacle between transmitter and receiver 4.Installation base is not stable 5.Light axis coincidence precision is insufficient 6.Other moving object interrupt the light	1.Check the line 2.Check the power 3.Get rid of obstacle or change the installation site 4.Choose well-grounded site 5.Adjust light axis again 6.Adjust obstructing light time or change installation site

8 Technology parameter

Model	ABT-20	ABT-30	ABT-60	ABT-80	ABT-100	ABT-150
Outdoor alert distance	20m	30m	60m	80m	100m	150m
Indoor alert distance	60m	90m	180m	240m	300m	450m
Beam	2					
Induction speed	50-700ms					
Alarm output	NC& NO ; Contact rating: AC/DC 30V/0.5Amax					
Working voltage	DC12-24V					
Working current	40mA	40mA	55mA	65mA	65mA	65mA
Long-life mode	20mA	20mA	30mA	35mA	35mA	35mA
Humidity	5%-95% (RH)					
Tamper output	NC; Contact rating: AC/DC 24V/0.5Amax(Anti-tamper function optional)					
Horizontal angle adjustment	180°±90°					
Vertical angle adjustment	±10°					
Case material	PC					
Mounting iron plate	Optional					
Dimensions	171*82*80mm					

9 The size of outer shape