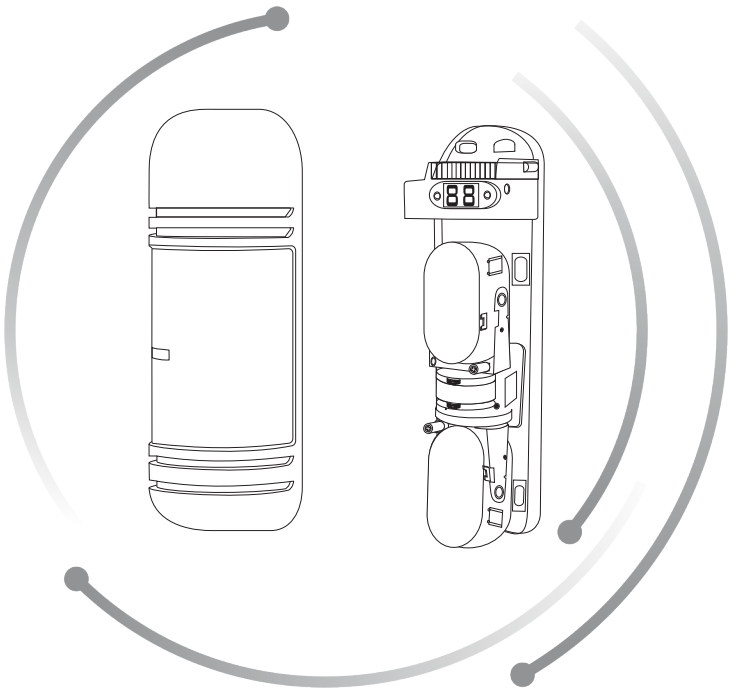
Bus/wired Passive Infrared Intruder Detector
with Four Beams

ABH Series

User Manual

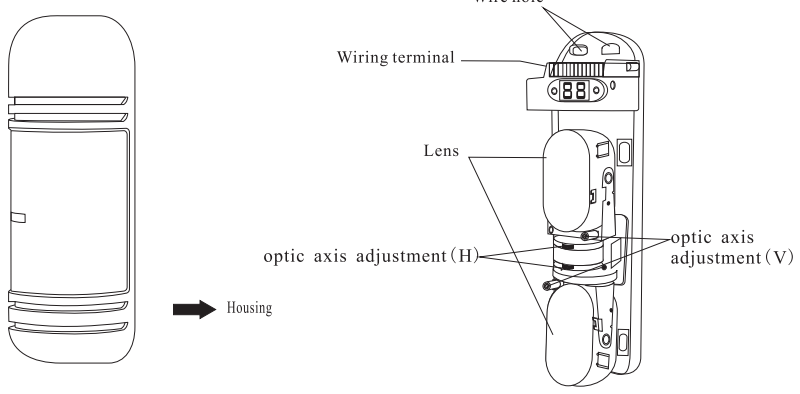


P/N:2014821-4

I Model and specifications

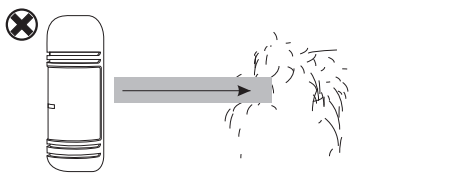
Model		ABH-50	ABH-100	ABH-150	ABH-200	ABH-250
Alert distance	(Outdoor)	50m	100m	150m	200m	250m
	(Indoor)	150m	300m	450m	600m	750m
Number of beams		4 beams				
Detection mode		4 beams blocked simultaneous				
Light source		Infrared digital pulse beam				
Response time		50-240ms (adjustable without degree)				
Alarm output		Relay output, NO-NC,able to connect AC,DC30V 30mA Max				
Power supply		DC13.8V-24V				
Power consumption		95mA	100mA	100mA	100mA	105mA
Operation temperature&humidity		-25℃~55℃ 5%-95%RH (relative humidity)				
Tamper output		NC,able to connect AC,DC24V 0.3A Max				
Optical axis adjustment (H)		180° (±90°)				
Optical axis adjustment (V)		20° (±10°)				
Material		P C resin				
Net weight		2000g (receiver+transmitter)				
Gross weight		2500g				

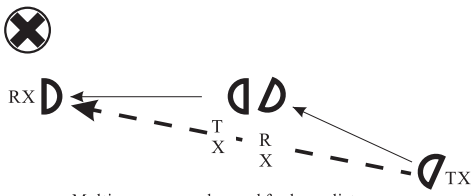
II Part name



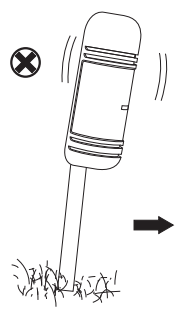
Feature:
1.Under bus connection mode: The digital display of RX synchronize with the TX after the RX receive the signal from bus.
2.Anti-fog function: when signal strength decrease slowly to 0.8V the detector will active anti-fog alarm (TBL out put), when signal decrease to 0.4V, will active alarm. When signal get back to 1.2v cancel alarm.

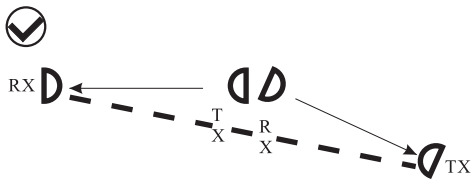
III Precautions for installation



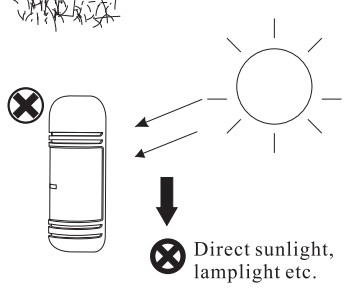


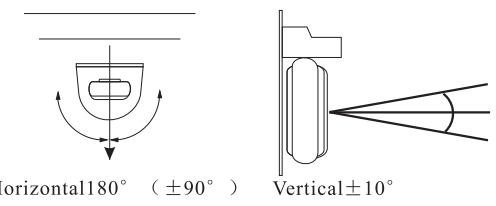
Multi sensors may be used for long-distance guarding.Please install according to the below diagram to avoic interference between beams.

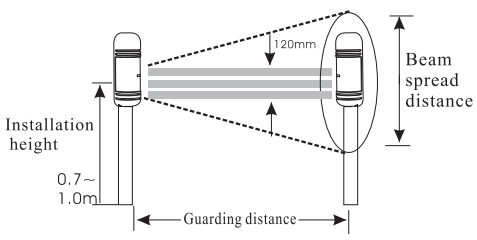




●Adjustable angle:horizontal±90°
vertical±10°



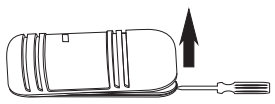




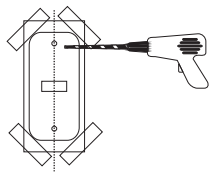
Model	Distance	Beam diameter
ABH-50	50m	0.8m
ABH-100	100m	1.6m
ABH-150	150m	2.4m
ABH-200	200m	3.2m
ABH-250	250m	4.0m

IV. Setting procedure

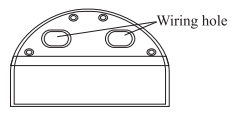
1、Remove the cover



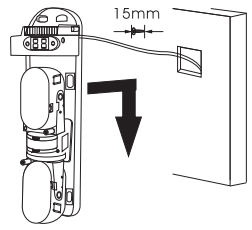
2、Attach the paper stencil onto the location where the equipment is to be mounted,and drill the holes in the positions on its mark.



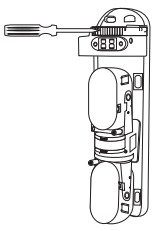
3、Put the cable through the hole for wiring.

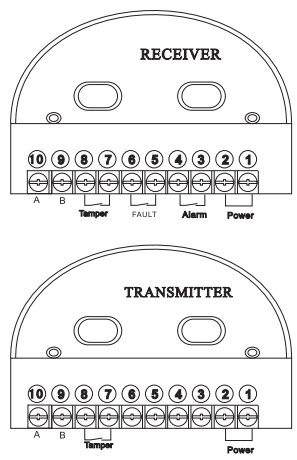


4、Fix the main body onto the wall.



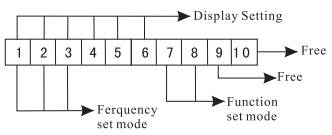
5、Connect the cable to the wire terminal.



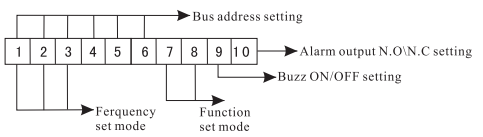


6、DIP switch

Transmitter



Receiver



Frequency / DIP	1	2	3	4	5	6	7	8
1	OFF	ON	OFF	ON	OFF	ON	OFF	ON
2	OFF	OFF	ON	ON	OFF	OFF	ON	ON
3	OFF	OFF	OFF	OFF	ON	ON	ON	ON

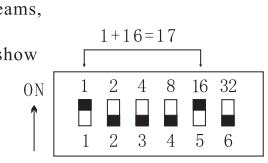
Table1

Mode / DIP	Signal strength display mode	Set frequency	Set address of BUS	Address and frequency alternating display mode
7	ON	ON	OFF	OFF
8	ON	OFF	ON	OFF

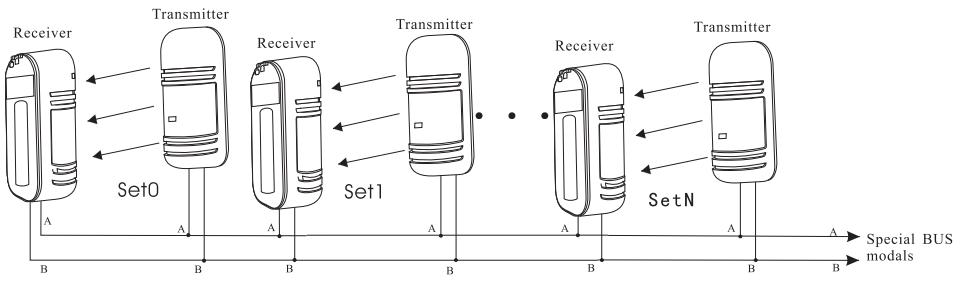
Table2

Function setting(table 2)

1.Set frequency mode:the digital shows the frequency, set it on DIP 1,2,3,refer to table 1.
2.Setaddress of bus:the digital display shows the address number,set it at DIP 1,2,3,4,5,6,
3.Set signal strength display mode:the digital display shows the signal stength of beams, the DIP 1,2,3,4,5,6 under this mode is free.
4.Address and frequency alternating display mode:the digital display take turns to show the address and frequency.The DIP 1,2,3,4,5,6 under this mode is free.
Zone address setting:first enter the address setting mode, refer to table 2)
under address setting mode,switch the DIP 1-6 to set the detector's zone address, first set the DIP at ON,the number, Example this is zone 18(17+1)



7. BUS Wiring ：

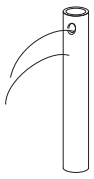


Note:it is possible for transmitter not to connect the bue wire ,but if in this case,it will not display the strength of signal and can not adjust the transmitting frequency automatically according to signal strength.

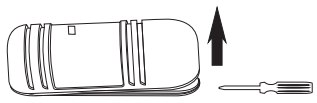
8、Take back the cover after the adjustment of the response time.

● Installation of fixed bracket

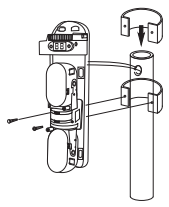
1、Drill a hole on the bracket and extend out the cable from it.

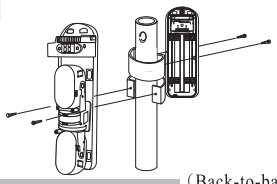


2、Take off the cover.



3.Fasten the base-plate to the bracket.





⚠ Note:please insert wateproof stopper into the hole of screw.

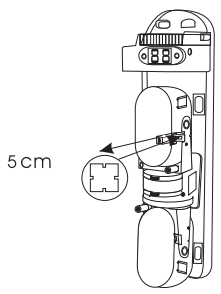
(Back-to-back installation guiding dirgram.)

Wiring from power and bus

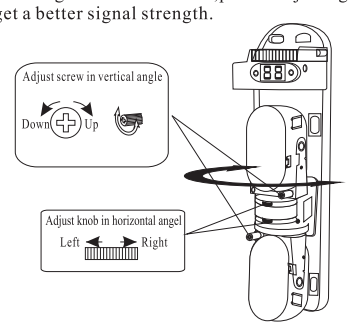
Wire \ Distance \ Voltage	DC13.8V	DC24V
0.5mm² (Diameter Φ0.8)	300m	600m
0.75mm² (Diameter Φ1.0)	400m	800m
1.25mm² (Diameter Φ1.2)	700m	1400m
2.0mm² (Diameter Φ1.6)	1000m	2000m

V. Optic axis adjustment

1.Observe the collimation on effect at a distance of 5cm from the view finder,enable the image of detector shown in the view finder.

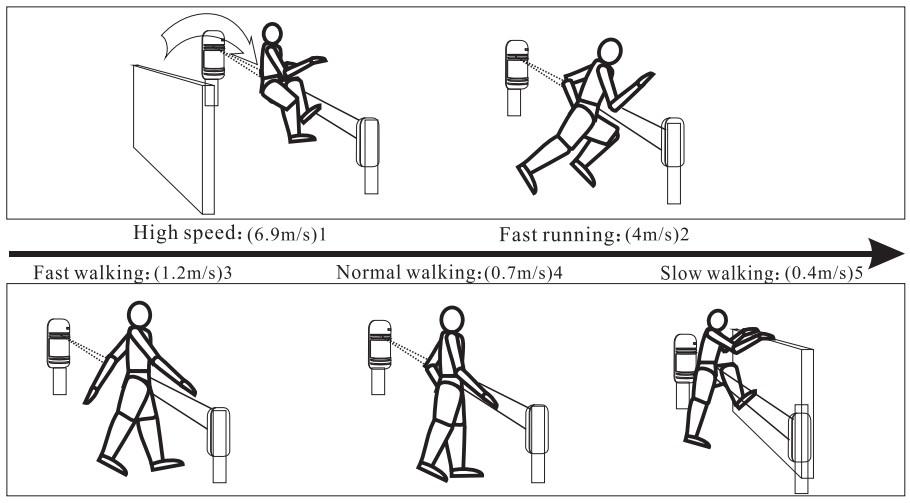


2.Adjust the vertical and horizontal optic axis following the picture below in order to get a best signal strength. If the signal is less than 1.8,please adjust again to get a better signal strength.



VI. Beam response time adjustment

Please see the diagram to adjust the response time of the receiver.Usually,the time set shall be less than the time when the intruder corsses the grarding area. The MIN point is the shortest time.
Time:50-240m sec without degree

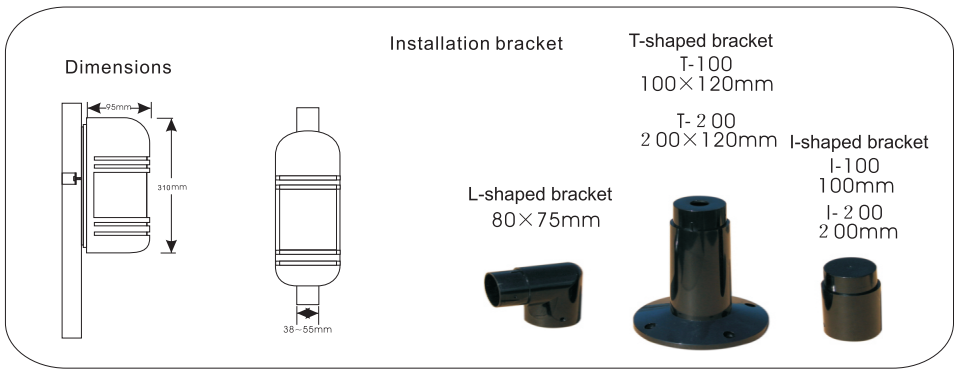


VI. Physical test

Walking test required after the setting, accordance to below diagram

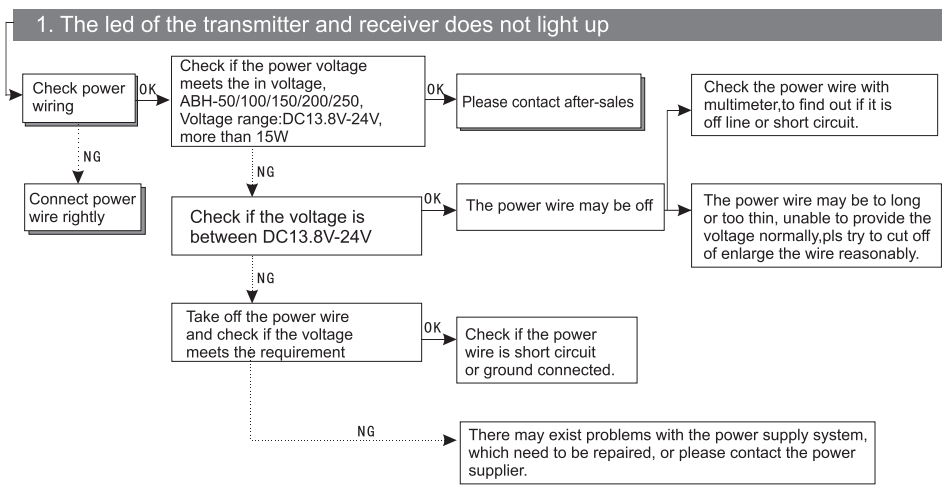
	State	Signal
Transmitter	Transmitting	The indicators of green LED light up
Receiver	Guarding	SIG LEVEL indicators light up
	In alarm	The red ALARM indicator lignt up

VII. Structures & dimensions

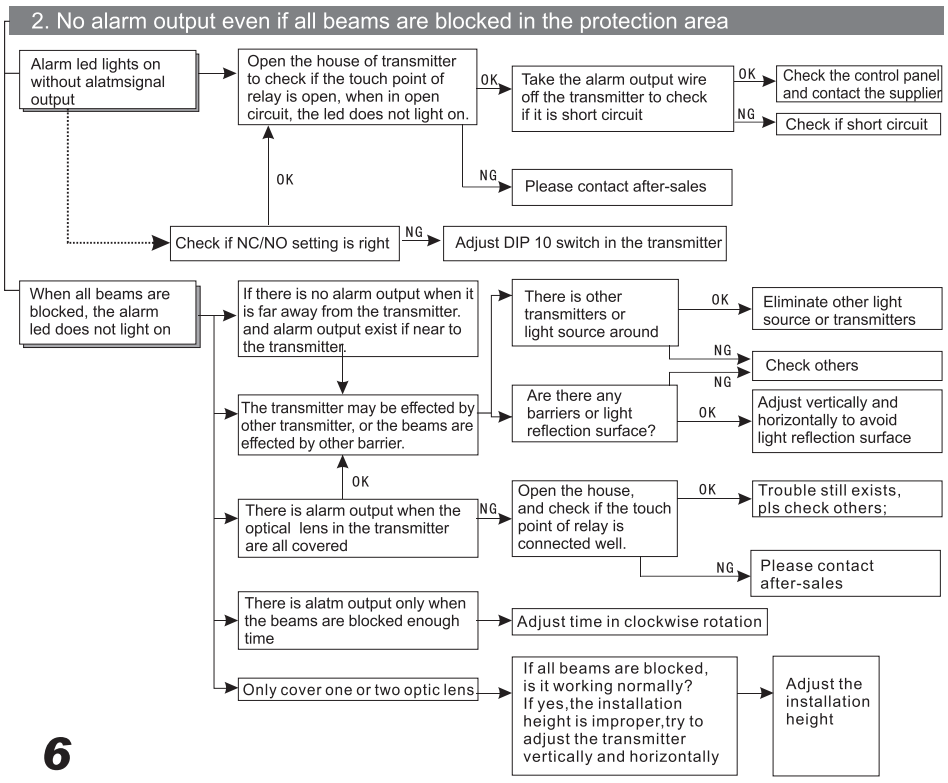


Trouble Checking ABH series

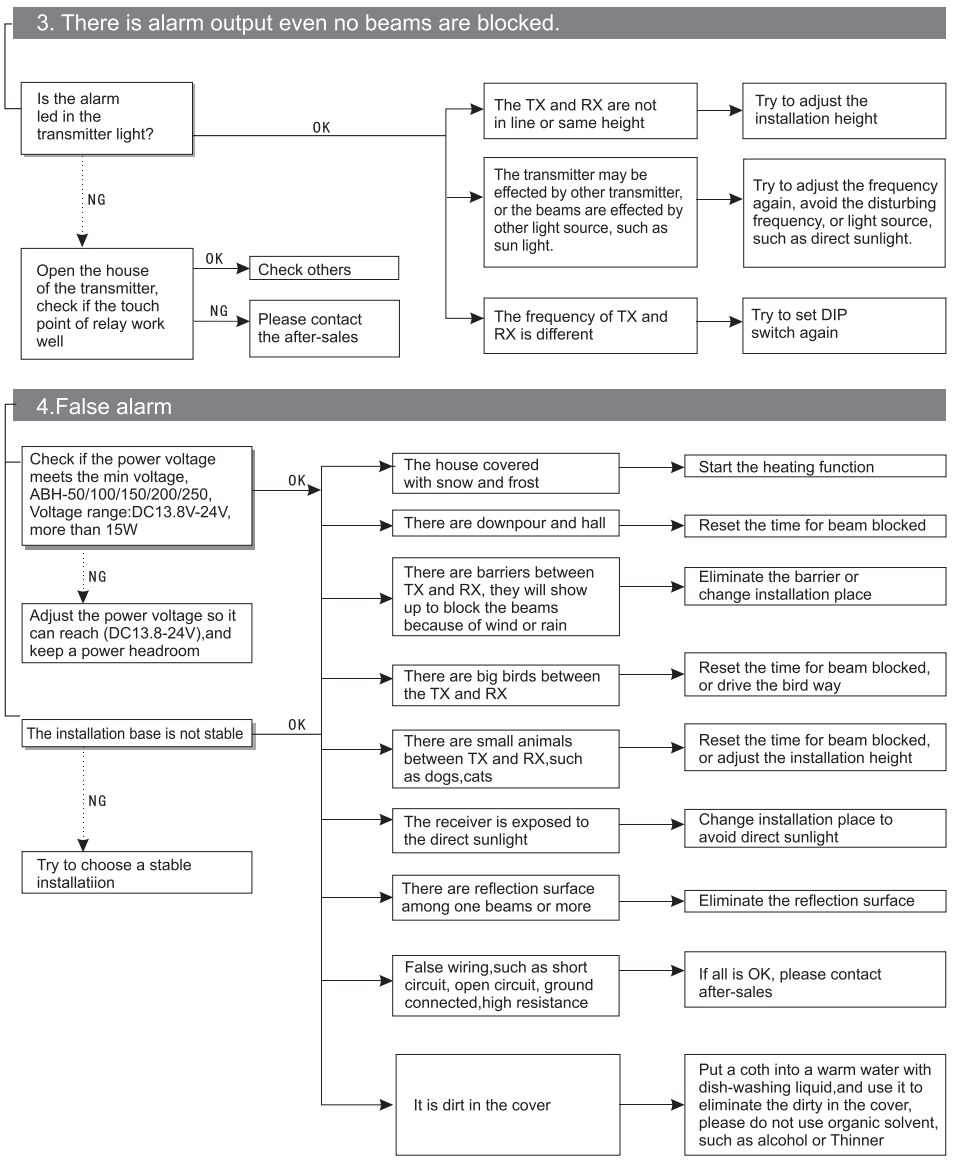
1. The led of the transmitter and receiver does not light up



2. No alarm output even if all beams are blocked in the protection area



3. There is alarm output even no beams are blocked.



4.False alarm