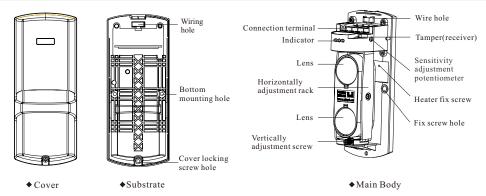
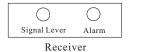
# Photoelectric dual beam detector User Manual ABT-40 ABT-60 ABT-80 ABT-100 ABT-100P

# 1. Parts Description



#### (1) Indicator



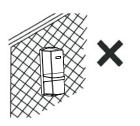
• Signal lever indication lamp: (Red & Greeen)



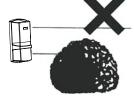
- No signal, Red and Green off Weak signal, Red on slightly Strong signal, Red on Aligned, Green on
- Power indicator(Greeen): When beams transmitting, green on.
- Alarm indicator(Red): Red on when alarm triggered.

#### 2. Setting notice

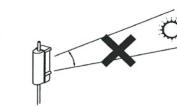
(1) Do not mount the detectors in following conditions:



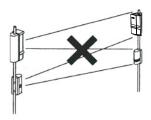
1) Where installation base is not stable



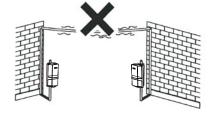
2) Where there are blocks between the receiver and transmitter



3) Where sunlight shining directly



4) Where there are other infrared detectors works

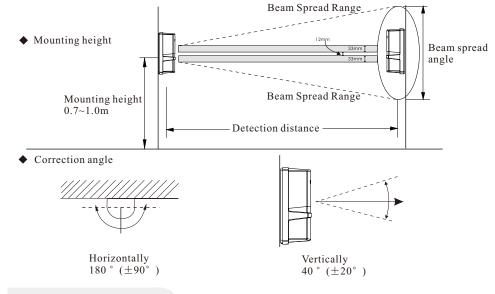


5) Do not let the wires in the air

#### (2) Normal mounting:

#### ◆ Detection distance

Model	Detection distance	Beam spread angle	
ABT-40	40m	1.1m	
ABT-60	60m	1.2m	
ABT-80	80m	1.8m	
ABT-100	100m 2.4m		
ABT-100P	100m	3.0m	



## 3. Setting method

♦ Wall mounting



1). Loosen the screw and remove the cover

00000000 000

4). Wiring hole: Remove the

foam plug, pull wire

foam plug.

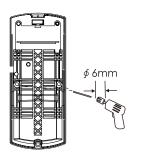
through. And reset the



2). Attach the installation paper to the wall, mark the holes first and then make the guide holes.



5. Connecting wires to the terminals (please refer to "beam alignment")

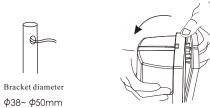


3. Drop into the holes with the expansion pipe, fix it with

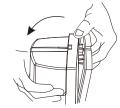


6). Review and reset the cover.

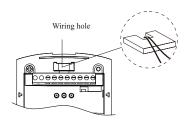
### ◆ Pole mounting



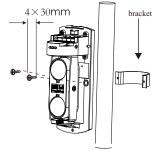
1). Break out the wire hole and pull out the wires



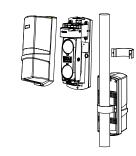
2). Remove the cover



3). Drop into the holes with the expansion pipe, fix it with screws.



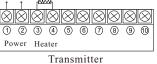
4). Fix the body on the bracket.



5). Back to back mounting method.

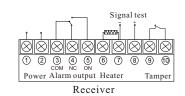
#### 4. Connectors

/[\(\mathbb{Warning}\)): Do not connect to voltage and current which are not normal specification!



Notes: 1. Power voltage input: DC/AC 12V-24V; 2. No heater in the package.

Please order if required.



Notes: 1. Power voltage input: DC/AC 12V-24V;

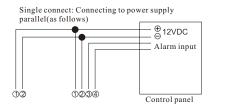
2. Relay connector: 1C 24V 0.5A max

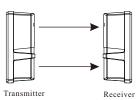
- 3. No heater in the package. Please order if required.
- 4. Signal test is used for testing the optical alignment degree. At least 1.5V signal voltage when testing. 7 is the negative electrode, 8 is positive electrode.
- 5. Tamper is separately from other circuit, works when the cover is removed

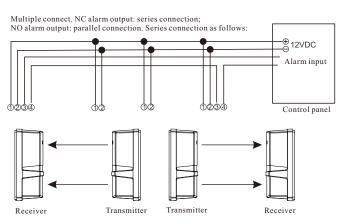
# Photoelectric dual beam detector User Manual ABT-40 ABT-60 ABT-80 ABT-100 ABT-100P

## 5. Connecting wires

#### (1).Examples







Note: Power supply DC12V if works together with the control panel.

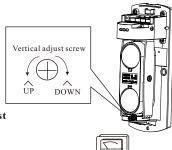
(2). The distance between the power and the detector should not be longer than the following.

_		1	
wire Voltage diameter length	DC12V	DC24V	
0.5mm²(diameter0.8)	150m	800m	
0.75mm²(diameter1.0)	200m	1000m	
1.0mm²(diameter1.2)	300m	1500m	
1.5mm²(diameter1.4)	500m	2500m	

## 6. Beam Alignment

Adjust the vertical angle screw and horizontal angle bracket until the signal lever indicator turn on green.

Note: Brighter the indicator is, better alignment.



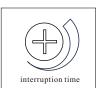
#### The best method of the optical axis adjustment-test the output value of the testing hole.

- 1. Insert the multi-functional plug to the testing hole (pay attention to the polarity)
- 2. Adjust the horizontal angle and vertical angle until the testing hole's voltage raises up to max
- 3. If 1.5V or above voltage can not be acquired, readjusted.

# 7. Beam interruption time adjustment

Adjust the beam interruption time depends on the bodies moving speed.

- When interrupted occasionally by a bird or paper, set longer respond time
- Please double check when finished



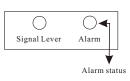
The sensitivity adjust potentiometer works by setting the interruption time:

Clockwise adjust, shorter interruption time, higher sensitivity

Counterclockwise adjust, longer interruption time, lower sensitivity

Note: Do not do the test at 45 degree

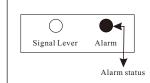
# 8. Operation confirmation











Please make sure the alarm indicator is off before testing. If not, please redo the alignment.

Please do the test at the 3 following positions 1. At the transmitter side

2. At the receiver side 3. In the middle

Alarm indicator turns on when beam is interrupted, test finished successfully.

### 9. Troubleshooting

symptom	Possible cause	Remedy	
Transmitter LED does	Improper power supplied	Check the power supply and wirling	
not light			
Receiver LED does not	Improper power supplied	Check the power supply and wirling	
light			
When the beams are	Beams are reflected by other objects.	1. Remove the reflect object or	
blocked, the receiver	2. 2 beams are not blocked	change optical axis direction	
LED does not	simultaneously	2. Block 2 beams	
light(off)	3. Setting too longer interruption time	3. Shorter the interruption time	
When the beams are	1. Wiring is short circuit	1. Check the wiring and connect	
blocked, the receiver	2. Wiring port is not good	port	
LED is on but do not	3. Lower power supply	2. Check the power supply	
alarm			
The alarm indicator on	Optical axis is not properly adjusted	1. Adjust the optical axis	
receiver is always on	2. There are blocks between the transmitter	2. Remove the blocks	
	and receiver	3. Clean the cover	
	3. The cover is dirty		
Red indicator on	Bad wire connecting	1. Check the wire connecting	
receiver flashing	2. Bad receiver board	2. Back to your supplier	
Intermittent alarm	1. Bad wiring	1. Check wiring	
	2. Fluctuant power voltage	2. Check the power supply	
	3. Movable blocks between the transmitter	3. Remove the blocks	
	and receive	4. Fix the mounting	
	4. The installation base is unstable		

# 10. Specifications

Model	ABT-40	ABT-60	ABT-80	ABT-100	ABT-100P	
Detection distance(Indoor)	120	180	240	300	300	
(Outdoor)	40	60	80	100	100	
Maximum detection distance	250	350	500	600	600	
Detection method	2 beams blocked inspection					
Interruption time	12-250m (adjustable)					
Power supply	DC12-24V					
Current	70mA max	80mA max	90mA max	100mA max	110mA max	
Alarm cycle	1/2/3adjustable					
Alarm output	Relay output 1C, AC/DC 30V,0.5A max					
Tamper	NC, works when the cover is removed					
Operation temperature	-25℃-55℃					
Operation humidity	Maximum5%					
Correction angle	Horizontally 0° Vertically 20°					
Mounting	Indoor/outdoor, wall/pole					
Weight(pair)	800g					

#### 11. Dimensions

