

User Manual

FBL200/300 Flap Barrier

Date: March 2021

Doc Version: 1.1

English

Thank you for choosing our product. Please read the instructions carefully before the operation. Follow these instructions to ensure that the product works correctly. The images shown in this manual. They are for illustrative purposes only.

table of Contents

1	GENERAL DESCRIPTION.....	2
1.1	YINTRODUCTION.....	2
1.2	FCHARACTERISTICS.....	2
1.3	tEQUIPMENTPARAMETERS.....	3
2	PRODUCT DIMENSIONS.....	3
3	PRODUCT STRUCTURE AND OPERATING PRINCIPLE.....	6
3.1	CHANNELGRAMATEMETERECHANICALYessYSTEM.....	6
3.2	CHANNELGRAMATEmyELECTRICCONTROLYessYSTEM.....	6
3.3	YessYSTEMW.ORDERPPRINCIPLE.....	6
4	INSTALLATION AND COMMISSIONING OF EQUIPMENT.....	8
4.1	dVICEYOFACILITY.....	8
4.2	myEQUIPMENTFUNCTIONdeBUGGING.....	9
5	EQUIPMENT OPERATION INSTRUCTIONS.....	13
6	COMMON FAULTS AND ANALYSIS.....	14
7	WIRING DIAGRAM.....	18

1 General description

1.1 Introduction

Channel Gate is an intelligent channel management equipment developed and produced by our company for many years. The device organically integrates mechanical, electronic,

microprocessor control and various reading and writing technologies. By setting up a variety of

Different reading and writing equipment, adopting reliable security protection devices, in real time

Alarm systems and direction indicator interface, intelligent control and management

The channel can be done together in coordination.

The appearance of the equipment is stamped and formed by stainless steel plate, which is

Beautiful in appearance, rust-proof and durable, and adopts standard electrical interfaces for the

outside. You can easily integrate barcode cards, ID cards, IC cards and other card readers into the

equipment to provide access to personnel. Civilized and orderly traffic while preventing illegal traffic.

entry and exit of staff. Furthermore, the system is also specially designed to meet

fire protection requirements to ensure unobstructed passages and facilitate timely

personnel evacuation.

1.2 Characteristics

1. Illegal entry has an alarm prompt function.
2. Anti-shock function, when the opening signal is not received, the telescopic deflector will be automatically locked.
3. Infrared/mechanical double anti-pinch function, when the retractable deflector is in process
Upon reset, the motor will automatically stop running within the specified time, and the
The force is very small and an alarm signal will be issued at the same time.
4. It has an automatic restart function. After a pedestrian reads a valid card, if the pedestrian
does not pass within the specified time, the system will automatically cancel the
pedestrian permission to pass this time.
5. A unified standard external electrical interface, which can be connected to a variety of
card readers, and can be controlled and managed remotely through management
computer.

6. With a fire extinguishing function, it will automatically open the door when it receives the fire signal.
sign of fight. At the same time, the door is equipped with a battery and the door
It opens automatically when the power is off.
7. The entire system runs smoothly and has low noise.

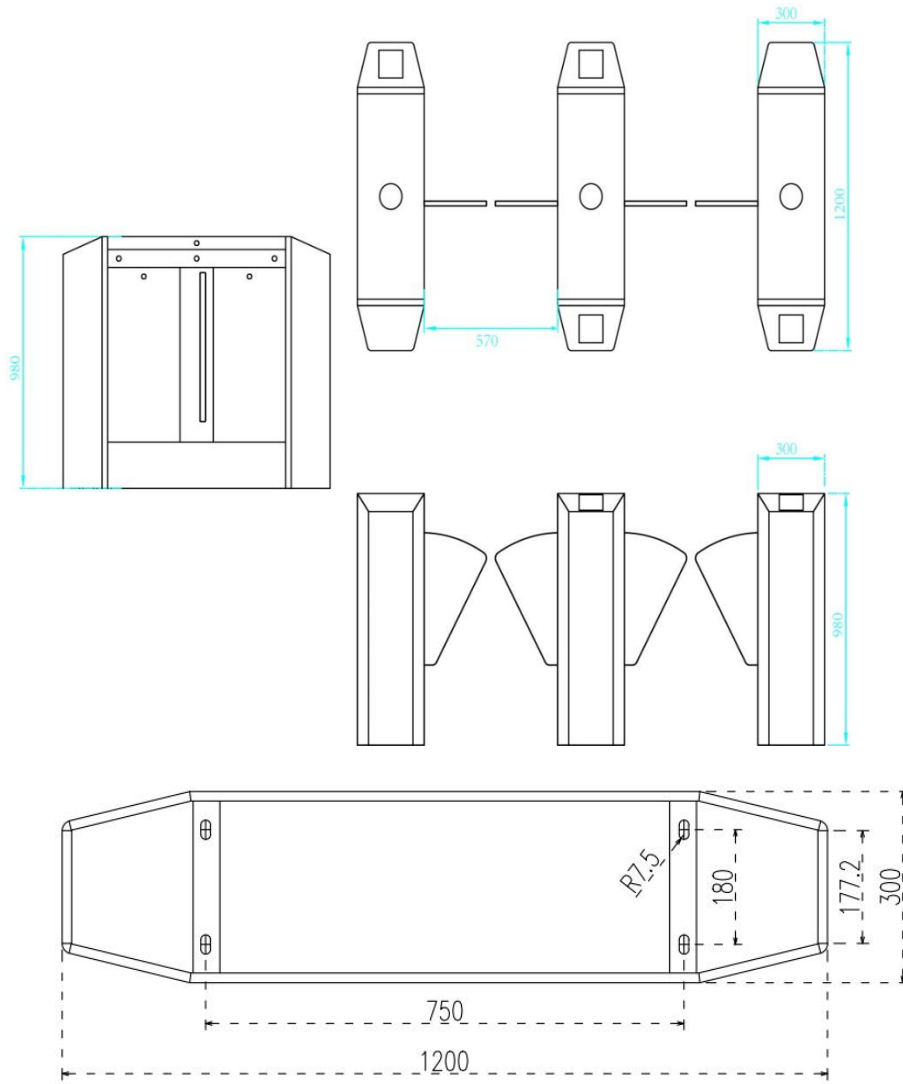
1.3 Technical parameters

1. Supply voltage: AC220 \pm 10%V, 50Hz
2. Drive motor: DC motor 24V/40W.
3. Working ambient temperature: -15_{oh}C-60_{oh}C
4. Relative humidity: relative humidity \leq 90%, no condensation
5. Input interface: 12V level signal or pulse width $>$ 100ms
6. Communication interface: RS232 communication, relay opening signal
7. Channel width: wing door 580mm, wing plate 260mm
8. Step speed: 30 people/minute (normally open mode), 20 people/minute (normally closed mode)
9. Door opening and closing time: 0.8 seconds for swing door

2 Product dimensions

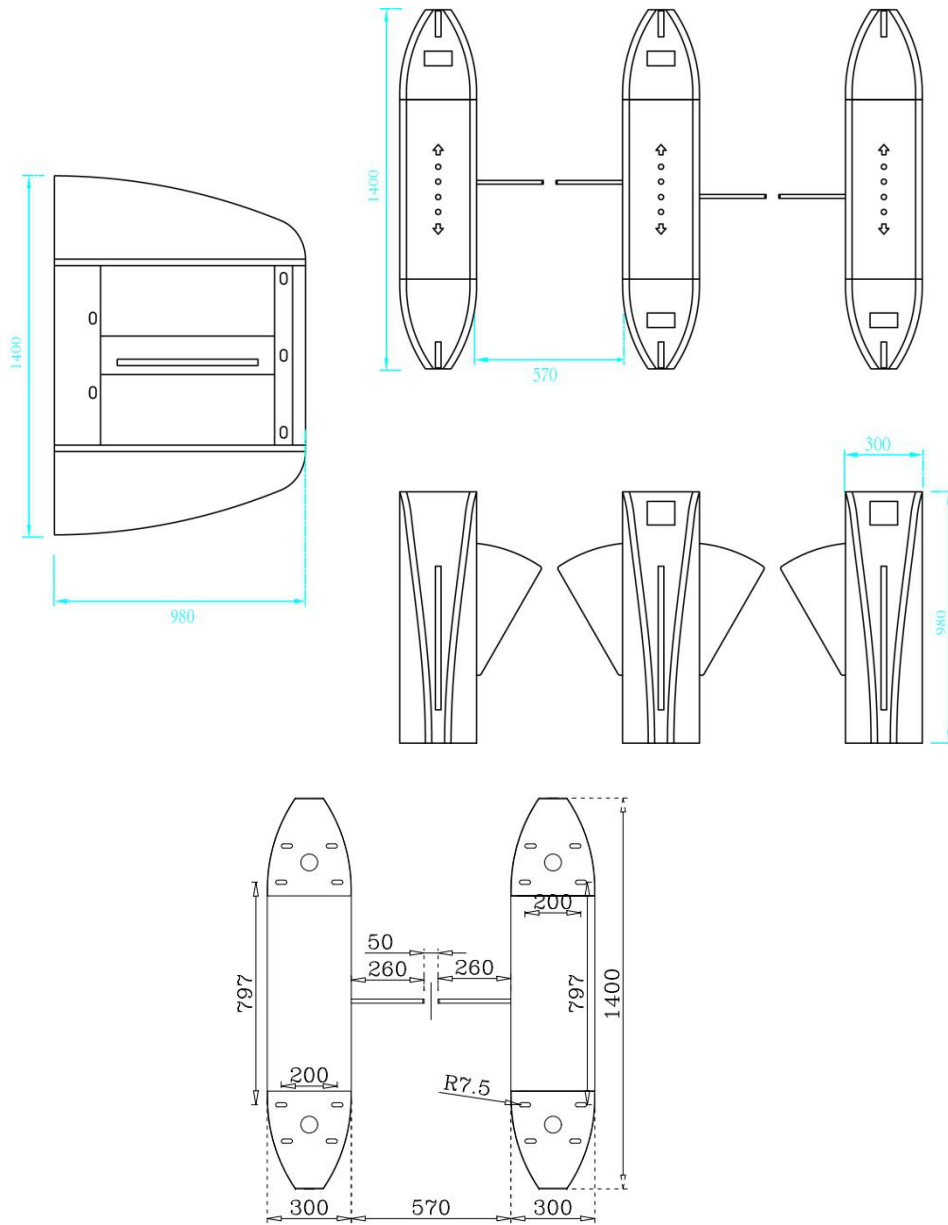
Reference drawing of wing door equipment outline dimensions:





FBL200 Bridge Angle Wing Door (1200x300x980)





FBL300 Bridge Angle Wing Door (1400x300x980)

3 Product structure and working principle.

3.1 Mechanical channel door system

The mechanical system of the channel gate is divided into two parts: the chassis and the movement.

As a carrier, the briefcase is equipped with direction indicators, reading and writing devices, infrared sensors, etc.; The main movement components include motors, drive shafts, gates, etc.

3.2 Channel door electric control system

The electrical control system is composed of a card reader, main control board, infrared sensor, Direction indicator board, alarm, limit switch, switching power supply, etc.

Card reader (self-provided): After reading the card information and after judging and processing, sends an application step signal (switch signal) to the main control board.

- Main control board: The system control center, which receives signals from the card reader and infrared sensor, and after logically judging and processing these signals, Sends execution commands to direction indicators, motors, counters and alarms.
- Infrared sensor: detects the position of pedestrians and plays a role in safety protection.
- Direction Indicator: Shows the current status of the passing signal and guides pedestrians. pass through the passage safely and orderly.
- Alarm: When the system detects that a pedestrian enters the crossing illegally, it will give a signal alarm.
- Limit switch: Controls the rotation position of the door.

3.3 System working principle

1. Turn on the power and the system will enter working status after 3 seconds.
2. When the card reader reads a valid card, the doorbell will make a pleasant sound to remind pedestrians that the card reading was successful; at the same time, he will judge and process the information read from the card and send a request approval signal to the main control board.
3. The main control board receives the signals from the card reader and infrared sensor, and after complete processing, send effective control signals to the address

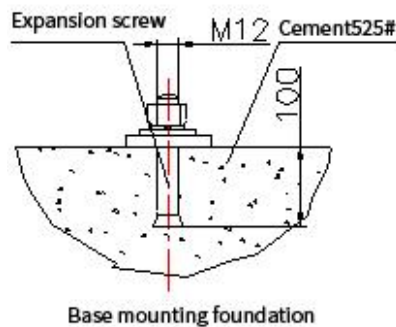
indicator and motor to convert the direction indicator signal into a green arrow step signal, and the gate sends a configuration. With voice, the main control board controls the operation of the motor, the limit switch controls the rotation angle of the motor and the door. It opens to allow pedestrians to pass.

4. After the pedestrian passes the crossing according to the direction indicator sign, the infrared sensor detects the entire process of the pedestrian passing through the passage and continuously sends signals to the main control board until the pedestrian has passed the passage.
5. If a pedestrian forgets to read the card or reads an invalid card and enters the hallway, the system will prohibit pedestrian crossing and issue a voice alarm (illegal intrusion, swipe card). The alarm will not be canceled until the pedestrian leaves the path; Re-read the valid card before allowing passage.

4 Installation and Commissioning of Equipment

4.1 Device installation

- Prepare the tools to install the equipment and check the accessories according to the packing list.
- After clarifying the composition of the system and work methods, carry out general planning and prepare to start the installation.
- After finishing the foundation surface for installing the equipment, arrange the equipment.
- After locating the holes, drill the holes and drive in anchor bolts or M12 expansion bolts.



- Route the high current wire and low current wire with 3/4" PVC pipes and bury them in the corresponding positions with cement.
- Move each chassis to the corresponding installation position, first align the anchor bolt positions one by one.
- Check whether the system composition and working method are correct, and then
Please continue to the next step after the verification is successful.
- Open the cabinet door, choose one of the devices as reference (preferably choose the middle one as reference), align the bolt holes of the machine base with the corresponding anchor bolts, and previously tighten the nuts.
- Open the door of an adjacent chassis, align the bolt holes on the machine base with the anchor the bolts and align the set reference equipment, pre-tighten the nuts; Yes there are more more than one need to install etc.
- Refer to the wiring diagram, connect the power line and control line, and connect the System protection ground line.

-Please tighten the anchor nut after the state inspection and function debugging are qualified.



Warning:

1. The depth of buried PVC pipe should be more than 60mm, the height of the
The exposed ground must be greater than 50mm and the socket must be bent back to
Prevent the pipe from entering the water.
2. When installing channel doors, the left and right doors of each channel must be aligned.
3. Connect the system protective ground wire.
4. If the equipment is used outdoors, a cement platform with a height of 100 to 200 mm.
It should be constructed at the equipment installation location to prevent moisture, and a roof and
Other sun and rain proof facilities should be added.
5. After the equipment is installed, it can only be put into normal use after the status has been changed.
Function inspection and debugging are qualified.

4.2 Debugging equipment functions

All debugging functions can be carried out after the equipment status has been checked normally!

-Preparation before commissioning.

Check the network wiring according to the wiring diagram. Verify that power wiring and other
The wiring of the entire device is correct. Power on and debug after confirmation! the protector
The equipment ground must be reliably grounded; Otherwise, use will not be permitted.

-Instructions for parameterizing the door.

After turning on the control board, the LCD screen displays the default status, which shows
the "working model" of the control board at this time (swing door, side opening swing door,
and swing gate), as well as parameters such as the number of steps through the entrance and
exit.

There are 5 operation buttons on the control panel, "Menu", "Up", "Down", "OK" and "Cancel".

-Key Description

Menu: Used to enter menu setup items.

Above: Used to move menu items up.

Below: Used to move menu items down.

OK: Used to enter the menu item setting item or confirm the current modified value

Cancel: Used to return to the previous menu or cancel the current operation.

-Menu operation

Press the Menu key to enter the password input interface, the default password is: up, up, down, down, up, down. Enter the 6-bit password and press OK to enter the menu. After entering the menu, press "Up" and "Down" to select a function menu and then press OK to enter the function or value change interface, pressing the plus or minus key to select or adjust the corresponding value.

Example: To change the way the door works: enter the menu, select the menu within "door work mode" - press OK (displays the current work mode) - then press OK to enter the Modified working mode selection interface: press "up" or "down" to select the corresponding Working method - Press "OK" to modify successfully - Press "Cancel" to exit after setting completed (without pressing the cancel key, the system will automatically exit after 15 seconds).

-System Menu Description

1.Input and Output Address Settings

Place the door on the left for entry or exit and on the right for entry or exit.

2.Entry and Exit Pass Settings

Set whether passage is allowed on both sides of the door (entrance and exit).

3.How the door works

Set the opening mode, open the door to receive infrared or slide the door to open it.

4.Setting input memory function

Whether to have memory function when opening or closing the entry or exit pass, it is

It is generally used to open the floodgates, in the event that a person's blow has not been past, whether to remember other people's slipping situation. "Forbidden" is the first swiper To pass, the second person's swipe can be effective, "allowed" for how many people swipe, that is, how many consecutive individuals can pass.

5.The time that the entrance and exit are open.

Set the door opening, no one will pass through, the door will automatically close during the time,

the default 3 seconds.

6.Counter reset

Empty the number of entry/exit passes and count again.

7.device number

The device number of the control board. Generally do not use configuration.

8.Device Information

Displays basic information about the control board, such as type, model number, etc.

9.Door type

Set the door type, a total of three types of "swing door", "swing door" (single swing), "open the gate"; The default value is Wing Gate type.

10.System initialization

Initialize the control board parameters; after initialization is successful, the control board

The parameters resume factory settings.

eleven.left pass voice

Set the voice that the door should play when passing on the left. Such as: when passing

From the left, let the door ring "Welcome."

12.right pass voice

Set the voice that the door should play when passing on the right. Such as: the right side of the passage to allow the door to play "safe travel."

13.voice test

The voice inside the control panel is automatically played in turn and automatically exited

after playback.

14.Engine speed

It is used to set the operating speed of the motor; The lower the value, the slower the speed.

fifteen.Default

sixteen.Maximum engine running time

Set the longest time the motor can run at a time (when the control board fails due to external detection or no signal) to prevent the engine from running idle, default to 10s.

17.Allow infrared overlay time

The configuration allows simultaneous blocking of 2 infrared times, due to the short space between them.

between some infrared door (for example, left infrared and anti-clamp closure), to prevent human

body block 2 false positive infrared voice at the same time.

18.Delayed closing time

It is used to set the normal passage of people through the door after how long the door should be closed.

The unit is "seconds", the default value is 0, no delay, that is, people pass immediately after the door.

19.Default

twenty.door test

Repeatedly open the door test, mainly used to test the stability of the door control board and

Aging test, user does not need to use it.

twenty-one.Shutdown Open Settings

22.Wing Door Infrared Configuration

- 1 about the last pair of infrared doors
- 2 through the door anti-clamp

23.Illegal raid operation

- 1 door
- 2 No door

24.Engine brake adjustment

- 1 Close brake
- 2 open brake

25.The door machine often opens and the opening signal is greater than the value change.

often open

26.Swipe when alarm is set When swipe is allowed or not allowed

strong punch

27.Developer options

Note:

- 1.Peripheral devices cannot be added to the system without permission.
- 2.During the debugging process, if the debugging result is not consistent with what is described function, see the section on common faults and troubleshooting.

5 Equipment operating instructions

1. Before putting the equipment into use, it must pass the debugging function, and it can be put into use after debugging is normal.
2. When the equipment is turned on, it is strictly prohibited to stay in the channel.
3. Pedestrians will not be able to access the passage when the direction indicator signal is off. didn't turn green when reading the cartoon line.
4. When a person passes through the passage, do not stay in the middle of the passage for a long time.
5. When passing through the door, do not crowd and keep a certain distance between each other. person.
6. It is strictly prohibited to pass through the walkway without reading the card.
7. It is recommended to mark the machine instructions in a visible place. where the equipment is operating and guide passers-by to pass through the door channel safely and orderly.
8. The equipment must be managed appropriately when not in operation, and it is strictly prohibited to hit or shake the equipment.
9. When the equipment is closed, it is strictly prohibited to push, pull or hit the gate. hard.



Warning:

1. Do not use the machine when there is thunder and lightning, to avoid damage to the machine.
2. To ensure that the system protected ground is reliably connected to avoid personal injuries.

6 Common faults and analysis

Proximity switch:(The wing brake is used for position control.) There are 3 lines in total, including 2 power inputs, brown + 12V, blue: GND and 1 signal output. When the sensor head touches a Magnet or metal object (sensing distance is 2-4mm), output is +12V; otherwise, it is 0 V.



Engine:The charging current of the 24V DC DC motor is about 300 Ma, and the charging current is less than 1.2 A.



Cylindrical photoelectric switch:(same as alarm and anti-pinch signal detection) is composed of a transmitter and a receiver. The transmitter has 2-wire power input (brown + 12V, blue: GND), and the power indicator is normally on; At the receiving end, there are two line power input (brown + 12V, blue: GND) and one line signal output (black line). When the The area is accessible, that is, when the area is isolated, there is signal output, the indicator lights up and outputs +12V, otherwise it is 0V.



Cylindrical reflective photoelectric switch:(the function is the same as the previous one) there are 3 lines in total, including 2 power inputs, brown + 12V, blue: GND and 1 signal output (black). When a

The person passes through the reflective photoelectric switch (the reflection distance is 10-20mm), the output is +12V, otherwise it is 0V.



1. After power on, the brake arm rotates back and forth or there is no limit after opening

1) Determine whether the photoelectric limit switch is exposed to strong light (usually refers to outdoor installation and debugging).

2) Photoelectric limit switch test:

to. Check whether the limit photocell with zero position, left opening position

And the right open position is on! Check that the docking station is not loose or poor contact.

b. Put a piece of iron on the front end of the photoelectric switch (pay attention to near the sensing surface) to see if the light above the photoelectric switch is in. If not, it means the photoelectric switch is broken. If it is on, adjust the position of the photoelectric switch properly.

3) Check whether the connection between the photoelectric limit switch and the motherboard is reliable.

4) If the photoelectric limit switch and wiring are normal, the motherboard will be damaged.

2. After giving an effective opening signal, the gate has no action.

1) The motherboard indicator light is normal, when the effective opening signal is given, the indicator light will turn into a green arrow and the door will have no action.

Detection method: Check whether the motor connection line is well connected. if the engine

The line is well connected, use a manual model of the motor end to check if the

the engine is turning. If the motor is rotating, it indicates that the motor line is connected in counter. If the motor does not rotate, connect the positive and negative line of the motor. If he

The motor does not rotate, it indicates that the motor is damaged. If the engine turns, indicates that the main motor, there is a problem with the motor controller chip on the board. Please contact us to replace the motherboard.

2) If there is voltage at the 24V terminal of the motherboard, check whether the fuse

The tube is normal. If the fuse tube is damaged, replace it. If the fuse tube is Normal, it indicates that the motherboard is damaged and replace it.

3.The door does not reset after opening nor does it reset immediately after opening when position

When the pedestrian passes, the gate does not resume immediately and the gate closes. after a certain time delay, indicating that the outgoing infrared works abnormally.

Detection method: First detect the cylindrical photoelectric switch and whether it is connected; When there is signal output, the left or right infrared indicator light on the the motherboard will turn on; otherwise it will be damaged; check if the Motherboard parameters are configured with memory.

After opening the door, when the pedestrian enters the channel, the door will reset Immediately, indicating that the left and right infrared are reversely connected. Check the connection with the motherboard.

4.The door is not open after a power outage.

1) Test the dry battery voltage (not lower than DC 9V).

2) Check if the circuit is loose or desoldered and detect the voltage output on both battery terminal ends (not lower than DC 9V); otherwise the control board will be damaged. damaged.

5.The swing arm is not limited after power failure and reverses after power on.

1) Test the dry battery voltage (not lower than DC 9V).

2) Detect the photoelectric switch and the left and right switch main board in place respectively; (see 1)

3) The swing arm is reversed and the motor line is reversed.

6.When used online, the cylindrical photoelectric switch will open

The machine has been switched to infrared ignition mode. Enter the menu to change the Brake operation mode to swipe the card.

7.The two doors are not synchronized when online.

Check whether the line in line is loose or loose and whether the sequence of lines is one to one.
a corresponding one.

8. After you swipe the card to open the door, the door will not open until

The access control panel is closed.

Enter the menu to change the door open signal type to high level open.

9. The door does not close for a long time after opening.

- 1) When there is no communication: check if the opening hours of the entrance and
the output is too long (refer to the system parameter setting operating instructions);
- 2) When someone passes by: check if there is 12V voltage on the black output signal
anti-pinch infrared photoelectric switch terminal (0V under normal conditions),
Otherwise, the transmitting or receiving end of the photoelectric switch will be
damaged.

10. Alarm when a pedestrian passes through the door.

- 1) Check whether the opening time of the inlet and outlet is too short (refer to the
system parameter setting operating instructions).
- 2) Check whether the incoming and outgoing infrared photoelectric switch is incorrectly
connected, that is, the incoming photoelectric switch signal is poorly connected
towards the output direction and the output signal is poorly connected to the
incoming direction, thus causing a false alarm.

7Wiring diagram

Check the circuit according to the following wiring diagram:

