TIMEWATCH®
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Manual

PGate TWLD-SBG1000

Directory

1. Introduction of channel gate products

Channel gate is the intelligent channel management equipment developed and produced by our company for many years. The device integrates mechanical, electronic, microprocessor control and various reading and writing technologies.

The appearance of the equipment adopts stainless steel plate laser welding molding, beautiful appearance, rust proof, durable, and external use of standard electrical interface, can easily bar code card, ID card, IC card and other card readers integrated in the equipment, to provide civilized, orderly way of passage for people in and out, but also put an end to illegal personnel in and out;In addition, the system also specially designed to meet the fire protection requirements of the function, in the event of an emergency, to ensure that the passage is unimpeded, convenient personnel timely evacuation;

2. Function characteristics of channel gate

1) With zero self-check function, convenient for user maintenance and use;

2) Alarm prompt function for illegal entry;

3) Anti-impact function, in the absence of receiving the opening signal, swing door automatically lock or alarm;

4) Infrared anti-clamp function;

5) Automatic reset function with timeout. If the pedestrian does not pass within the specified time after reading the valid card, the system will automatically cancel the permission of the pedestrian;

6) Unified standard external electrical interface, can be connected with a variety of card readers, and can achieve remote control and management through the management computer.

3. Technical parameters of channel gate

3. Technical parameters of channel gate

The body	304 stainless steel	The input	AC220 plus or minus
Working	24V DC	Drive	24V DC motor
Working	-20 ℃ -70 ℃	Relative	Relative humidity ≤
Open the	Relay dry contact signal	Communica	RS232 RS485
Use place	indoor	Traffic speed	30-40 people/minute

4. Electronic control system of channel gate

The electronic control system consists of access control system, main control board, infrared sensor, direction indicator board, alarm, transformer and so on.

◆ Access control system: after processing by swiping card or face recognition, send application signal to the main control board (switch signal).

◆ Master control board: the control center of the system, it receives the signal of card reader and infrared sensor, and does logic to these signals After judgment and processing, the direction indicator, motor, counter, alarm issued execution command

Infrared sensor: detect the position of pedestrians and play a role in safety protection.

Direction indicator light: display the current status of the channel traffic sign, and guide pedestrians through the channel safely and orderly.

◆ Alarm: when the system detects pedestrians entering the channel illegally, it will give an alarm.

The	The name of the	function
1	Entrance guard system	IC/ID card access control, fingerprint machine, face recognition, TWO-DIMENSIONAL
2	Control panel	The control center of the system, it receives the signal of card reader and infrared sensor, and carries on the logical judgment and processing to these signals, and then issues the execution command to the direction indicator, motor, counter and alarm.
3	Infrared	Detect pedestrian traffic position and play a
4	Direction	Display the current status of the access sign
6	Alarm (horn)	When the system detects a pedestrian entering
7	The motor	Drive the movement
8	Switching	Control panel power supply
9	Limit switch	Check and control valve opening and closing

5. System working principle

◆ Turn on the power supply and the system enters the working state after self-check.

◆ When the card reader reads the valid card, the peak buzzer will make a pleasant sound to remind pedestrians to read the card successfully, and judge and process the information read from the card, and send an application signal to the main control board.

◆ The main control board receives the card reader and infrared sensor signal, and after comprehensive processing, to the direction indicator and motor effective control signal, so that the direction indicator sign into the green arrow pass sign, at the same time the gate issued a setting voice, the main control board controls the motor operation, the gate opened, allowing pedestrians to pass.

◆ Pedestrians according to the direction indicator sign through the channel, infrared sensor sensing the whole process of pedestrians through the channel, and constantly send signals to the main control board, until pedestrians have been completely through the channel;

◆ If pedestrians forget to read card or read invalid card into the channel, the system will prohibit pedestrians, and will issue a voice alarm, until the pedestrian exit the channel, to lift the alarm;Reread valid chi-square cleared for passage.

6. Installation and debugging of channel gate equipment

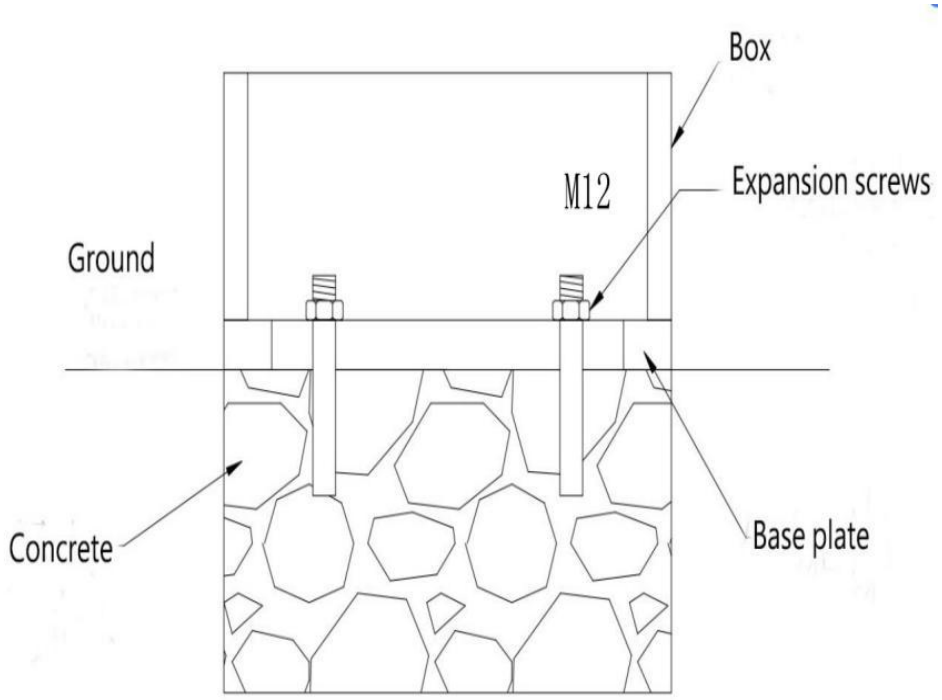
6.1. Installation of channel gate equipment

◆ Prepare tools for installing devices and check accessories according to the

packing list.

- After completing the foundation surface of the installation equipment, arrange the equipment and make sure that the equipment is aligned horizontally.
- After locating the holes, remove the device, drill the holes, and prebury the anchor bolts or expansion bolts of the M12.
- Open a routing trough, put the strong current cable and the factory configured synchronous line through with 3/4 ″PVC line pipe, and bury it in the corresponding position with cement.
- Put the device back to the installation position and secure the brake with the factory configured layering and expansion bolts.
- Refer to the wiring diagram, connect the power cable and signal cable, and connect the system ground cable protection.
- The following functions can be debugged only when the device status is normal.

Check the mains wiring according to the wiring diagram, check that the power supply wiring and other wiring of the whole device are correct, and then power on the device for debugging.



- Secure the brake with expansion

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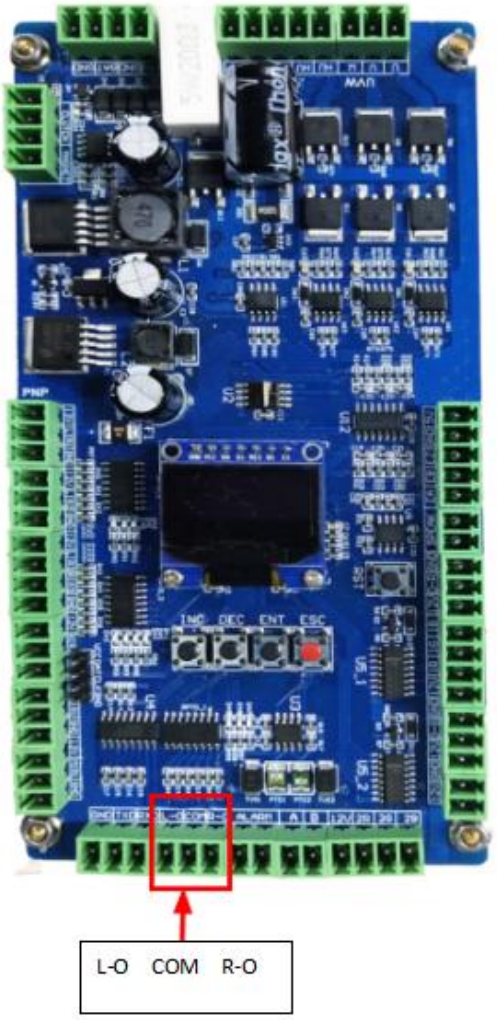

The L-O and COM connection of the motherboard is the left door signal input, and the R-O and COM connection of the motherboard is the right door signal input

6.2. Functional debugging of channel gate equipment

(Note: The gate machine of our company has been adjusted normally in the workshop according to the order requirements before leaving the factory. Now it is installed according to the requirements without debugging. For fine tuning, please refer to the following parameter description and contact after-sales guidance.)

6.2.1 Key Description

The confirm key -- the menu start key -- is also the confirm key.
On key - menu selection, function selection.
Down key - menu selection, function selection.
Cancel key - the menu returns to the previous level, and cancel Settings.

6.2.2 Wake up from the Menu

Press OK to enter the password. The default password is up, down, up. Enter the 6-digit 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 interface for changing functions or values. Press the plus or minus key to select or adjust required parameters, then press "OK" to save the Settings, and press "Cancel" to exit.

6.2.4 Setting Function Parameters

- **Brake machine type**

  0-> wing brake, 1-> swing brake, 2-> three-roll brake, 3-> single swing brake

- **Working mode of brake**

  0-> Left infrared right swipe card, 1-> left swipe card right infrared, 2-> all infrared, 3-> all swipe card.

- **Left hand voice**

  Set the left pass voice of the gate

- **Right hand voice**

  Set the right pass voice of the gate

- **Opening time of entrance and exit (unit: second)**

  Set the holding time after the gate is opened, ranging from 1 to 60

- **Entrance and exit memory function**

  0-> Left - forbid right - forbid 1-> left - forbid right - forbid 2-> All - forbid 3-> All - forbid

- **Access configuration**

  0-> Left allowed right prohibited, 1-> left prohibited right permitted, 2-> all prohibited, 3-> all permitted

- **Delayed closing time**

  After a person passes the door, the time for closing the door ranges from 0 to 60 seconds

- **Operating speed of main motor (Max. % speed)**

  The operating speed of the main motor can be set as a percentage of the maximum speed. For example, 100 is the maximum speed value, ranging from 10 to 100

- **Deceleration Angle of main motor (Angle)**

Adjust deceleration stroke by Angle, range 0-90.

- **Buffer distance of main motor (pulse number)**

  Adjust deceleration stroke in pulse mode, range 0-200.

- **Braking distance of main motor (pulse number)**

  Distance to start braking before position, range 0-200.

- **Zero deviation adjustment (pulse number)**

  When the gate door is not aligned in the middle, adjust the range of -126-+126 according to this parameter.

- **Left door opening Angle position (Angle)**

  Open door left Angle, range 30-100.

- **Right door opening Angle position (Angle)**

  Right door Angle, range 30-100.

- **Change/Speed in place (unit: 10RPM)**

  Speed of change/position of gate door, range 10-90, unit 10rpm

- **Wing brake switch setting**

  0-> over the last infrared shut-off, 1-> over anti-clip infrared shut-off

- **Direction of opening when power is off**

  0-> left, 1-> right

- **Encoder type**

  0-> none, 1->500, 2->720, 3->1000

- **Clutch or not**

  0-> None. 1-> Yes

- **Swipe card setting for infrared blocking**

  0-> Disable, 1-> allow

- **Infrared anti-clipping action setting**

  0-> Stop, 1-> return

- **Set the blocking rebound mode**

  0-> Stop, 1-> return

- **Reverse entry switch setting**

  0-> Do not turn off, 1-> turn off

- **The motor type**

  0-> reverse left (positive polarity), 1-> positive left (positive polarity), 2-> reverse left (negative polarity), 3-> positive left (negative polarity)

- **The biggest strength**

  Adjust the force size of the gate when closing the door. The larger the value is, the greater the closing force and vibration will be; the smaller the value is, the smaller the closing force and vibration will be, ranging from 0 to 50 (unit: 0.1A).

- **Blocked efforts**

  The greater the value, the faster the closing speed and the greater the vibration; the smaller the value, the slower the closing speed and the more stable the closing speed, ranging from 0 to 50.(Unit: 0.1a)

- **Against the strength**

  When the gate door is closed and not working, the size adjustment of the counteracting force when the gate door is forced open by external force.The greater the value, the greater the force, the range of 0-50.(Unit: 0.1a)

- **Infrared number**

  0->3 pairs, 1->4/5 pairs, 2->6/7 pairs (airlocks are odd values of 3, 5, and 7)

- **Clutch and suction time**

  Hold time after clutch and pull-in, range 1-99 (unit: 0.1 seconds)

- **Clutch release time**

  Clutch release action time, range 1-99 (unit: 0.1 seconds)

- **Language selection**

  0-> Chinese, 1-> English

- **System initialization**

  0-> Device parameters (restore factory Settings), 1-> opening times (clear opening Settings)

- **Master/slave Settings**

  0-> Host, 1-> slave

- **Equipment number (**

{0, 31} (device address)

- **Brake machine test**

  Enter test mode

7. Troubleshoot common faults

7.1. After swiping card or face recognition, the pendulum door does not open and there is no reaction;

- Re-check whether the opening signal cable wiring is correct, whether the wiring port is loose, whether the infrared polarity, infrared quantity, infrared cap is correct, manually press the main board button or short-circuit to see whether the switch is open, if the manual does not open the switch needs to replace the main board.

7.2. Swing door does not open after power failure;

- Use a multimeter to measure the battery. 1) check whether the battery voltage is more than 10V, 2) check whether the cable connection is correct, and 3) check whether the terminal is loose. If all the above items are normal, check the motor and mainboard.

7.3. After the card is swiped, one pendulum door opens and the other pendulum door does not;

- Re-check whether the synchronization line is properly connected. Unplug the terminal and reconnect it. Check whether the master/slave mode setting and infrared polarity setting of the corresponding motherboard are correct, and check what prompt is displayed on the display screen of the device that does not turn on.

7.5. After the card is swiped, the gate is opened but not closed;

- Check whether all the infrared sensors are normal. When no one is in the channel, all the infrared indicators on the control board are normal. If any indicator

is off, the infrared is not aligned or faulty.

7.6. The pendulum door swings back and forth when normal reset and automatic restart fail after power-on:

- After confirming that all parameters are correct, 1) check whether the locking screws of the encoder or limit sensor are loose, 2) check whether the encoder indication of the control motherboard is normal and full light, 3) replace the normal control motherboard test, if still not, the motor needs to be replaced.

7.7. When swiping card or infrared induction opening, the swing door will open box;

- 1) Check whether the swing door is loose, 2) the opening Angle is reduced, 3) check whether the motor and the movement assembly lock is loose or displaced, if the above several items are normal, the movement needs to be replaced..

7.8. A quick and a slow situation occurs when swinging the door and closing the door;

- According to the equipment function debugging parameter adjustment, deceleration adjustment, channel speed and other values, check whether the swing door, movement, motor, etc., is loose.

7.9. When the swing door of the brake opens and closes, the swing door restarts automatically;

- If the swing door restarts automatically, it will automatically return to the normal state within 3 minutes. If it is not in position for a long time, it is a fault.