TRIPLO W
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TW-300DC

Gate arm motor

Installation Guide
User Manual

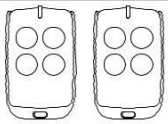
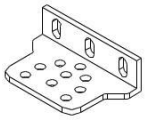
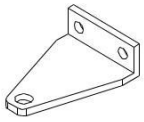
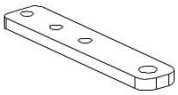
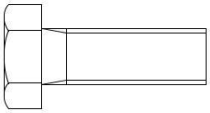
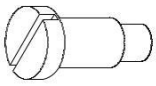
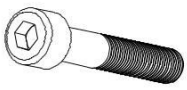
Leia o manual com atenção antes da instalação e guarde-o para uso futuro.

Guarde as chaves mecânicas num local seguro para, em caso de avaria ou emergência, poder abrir a porta mecanicamente.

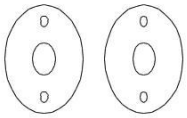
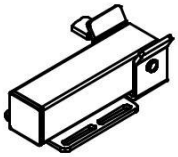
NOTICE:

- Please read this manual carefully before installation, which involves important information about installation, maintenance and safety.
- Any operation not defined in this manual is not permitted, the use Incorrect use may damage the product and even cause injury or property loss.
- To consider the possible danger during the process of installing or using the arm motor installation must strictly comply with the construction standard and the electrical operating procedure.
- Before installation, make sure that the supply voltage used corresponds to the product's supply voltage. Check that the power switch leakage protection is installed and the earthing system is correct.
- Check whether additional equipment or materials are needed to meet specific requirements.
- Do not alter any parts except those defined in this manual. Any unspecified changes may cause malfunctions. Any damage to the product arising from the same will be the responsibility of the company installer.
- Do not allow water or any liquid to spill on the controller or any other open device. Turn off the power immediately if any of the above conditions occur.
- Keep this product away from heat and fire. These can damage components, cause failures, or other hazards.
- Please ensure there are no vehicles、passengers and objects passing through while the gate is in motion.
- Anti-clip devices, such as infrared safety switches, must be installed to prevent injury and property loss. The company is not responsible for any damage or accidents resulting from this.
- Installation, use and maintenance of this product must be carried out by professionals.
- Children should not touch the control devices or remote controls.
- The warning sign must be placed somewhere on the gate.

Package Contents

N.	Image	Name	Amount 2 sheets	Amount 1 sheet
1		Main machine	2	1
2		Control box	1	1
3		Manual release key	2	2
4		Remote control	2	2
5		Wall mount	4	2
6		Front mounting bracket	2	1
7		Connection support	2	1
8		M8X25 screw	4	2
9		Mounting screw (short)	2	1
10		M8×45 screw	2	1
11		M8 self-locking nut	8	4

Package Contents (optional)

N.	Image	Name	Amount
1		Infrared sensor	1
2		Wireless keyboard	1
3		Lamp of alarm	1
4		Electric lock	1
5		Battery of storage	2

Due to the difference in installation environment, our company does not provide accessories. installation guide for attaching and connecting gate motors. Please prepare these accessories installation according to the actual situation of the site.

Technical Specifications

Model	TW-300DC
Power source	220 V/50 Hz; 110 V/60 Hz
Engine power	50W
Gate movement speed	18~22s/ 90°
Maximum weight of a sheet	300 kg
Maximum length of a sheet	3M
Maximum strength	2600N
Maximum piston stroke	32 cm
Remote control distance	⩾30m
Remote control mode	Single/Four Button Mode
Storage battery (optional)	DC24V (4.5Ah or 9Ah)
Noise	⩽⩽58 dB
Recording remote commands	32 pieces
Remote frequency	433.92 MHz
Working temperature	- 20°C - +70°C
Packaging weight	14 kg

Installation Drawing

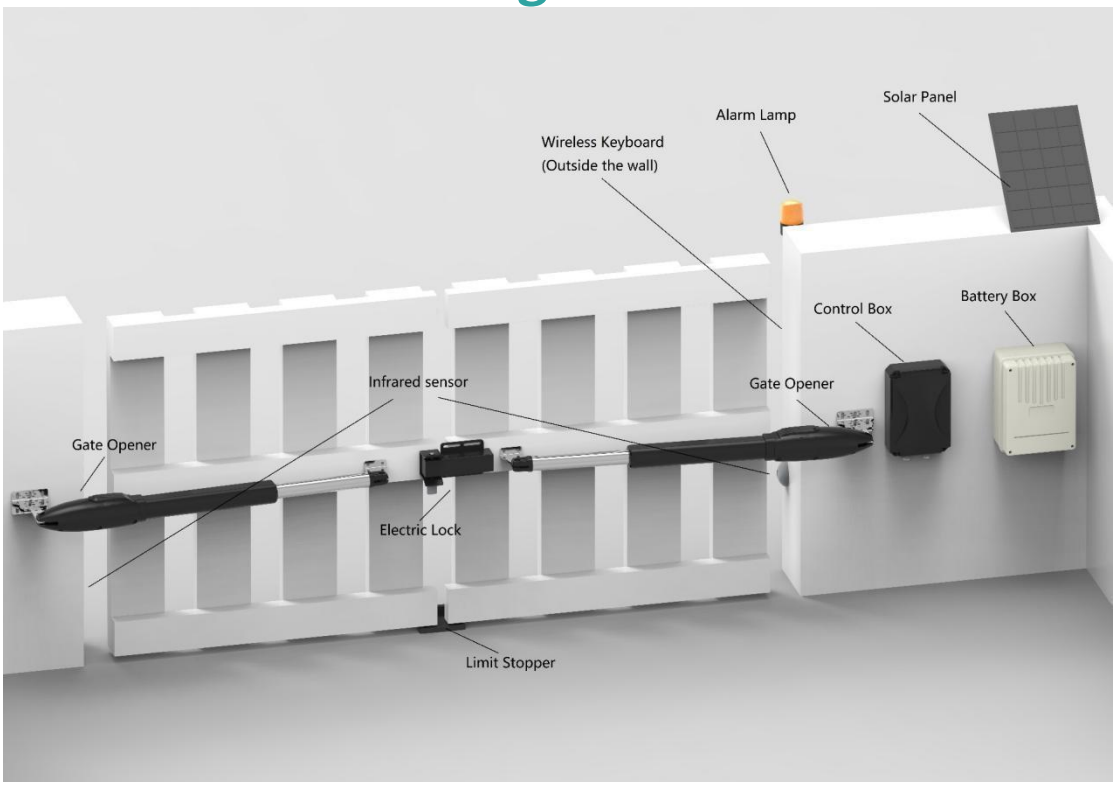
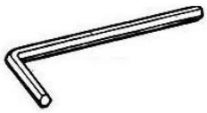
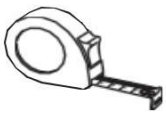


Figure 1

1 gate motor is applicable to single leaf gates weighing less than 300 kg and Length less than 3 m, and must be installed inside the enclosure or yard for protection.

Tools Required for Installation

	Allen No. 6 Hexagonal		Level of Bubble
	Key of Cracks		Tape Measure
	Key Phillips		Key Adjustable X 2
	**Pen**		

Note: Cables must be suitable for outdoor use.

Cable List

	Cable application	Cable material	Length the max.
1	220V control box power cable	3×2.5 mm² (>30m) 3×1.5mm² (<30m)	Unlimited
2	Gate motor power cable	2×1.5mm²	15m
3	Infrared sensor cable	2×0.5mm²	10m
4	Alarm lamp cable	2×0.5mm²	10m
5	Electric lock cable	2×0.5mm²	10m
6	Storage battery extension cable	2×1.5mm²	10m
7	Solar power cable	2×1.5mm²	10m

Due to the different installation environments, the installer needs to prepare the cables power supply for control box and motors.

⚠ **Note: The cable outlet must be facing downwards to prevent rainwater from entering along the cable.**

Gate Opening Direction

The gate opens to the inside

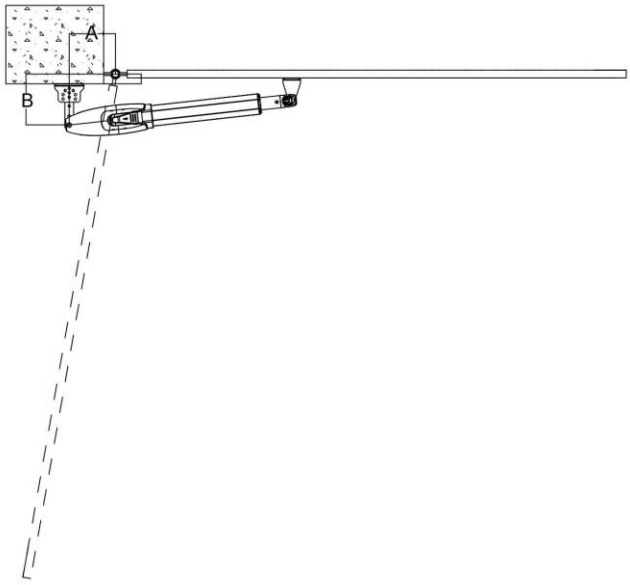


Figure 2

THE / B	100 mm	120 mm	140 mm	160 mm	180 mm	200 mm
100 mm	102°	101st	99°	98°	97°	97°
120 mm	111°	108°	106°	104°	103°	99°
140 mm	118°	115°	112°	102°	93°	96°
160 mm	117°	107°	98°	91°		
180 mm	103°	96°	90°			
200 mm	94°					

Installation Steps

1. Preparation before installing the main machine

a) Before installing the gate motor, please confirm that the gates have been installed correctly, make sure that the gate can be operated manually without any problems, and that the gate safety stop can effectively prevent the gate from continuing to move.
b)Maintain a distance of 45-50 mm between the base of the gate and the ground for installation of the electric lock. If an electric lock is not required, the distance between the base of the gate and the ground should be ⩾20 mm;
w)The recommended mounting height for the two main machines is approximately 300 to 800 mm above the ground. Ensure that there are reliable fixed points for the mounting brackets.

2. Buried cable

To ensure the gate's automatic operation and protect the cable from damage, use two PVC pipes to bury the motor and power cables, and the control cables separately. One PVC pipe for the motor and power cables, and the other for the control cables.

3. Attaching the mounting brackets

To firmly install the TW-300DC main machines, it is recommended to use expansion bolts to fix the mounting brackets.

4. Installing the supports

A) Before installing the main machines, first install the wall bracket on the wall, then fix the connecting bracket, and finally install the front mounting bracket on the gate.
Note: Use a spirit level before attaching to ensure the front mounting bracket and connecting bracket are level.

Connect the connecting bracket and the two wall brackets, see Figure 4.

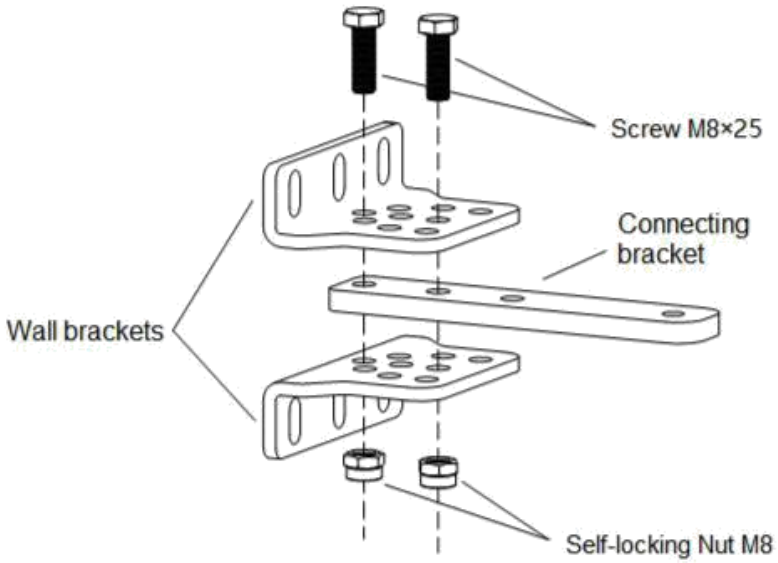


Figure 4

B) The connecting bracket and the wall bracket can be connected according to different conditions, see figure 5.

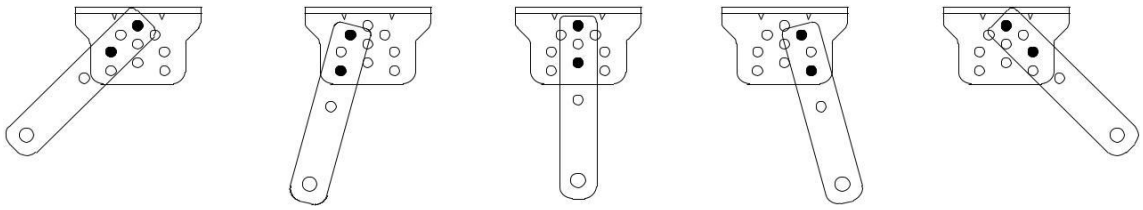


Figure 5

C) Before installation, unlock both main machines. Unlocking method: Open the manual release cap, insert the manual release key, turn the key until it releases, as shown in Figure 6, and rotate the telescopic arm. You will see that it extends easily by hand.

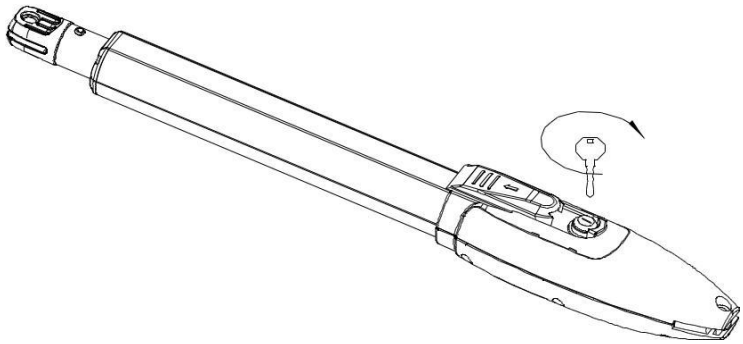


Figure 6

D) Connect the main machine with bolt and nut connection brackets as shown in the Figure 7.

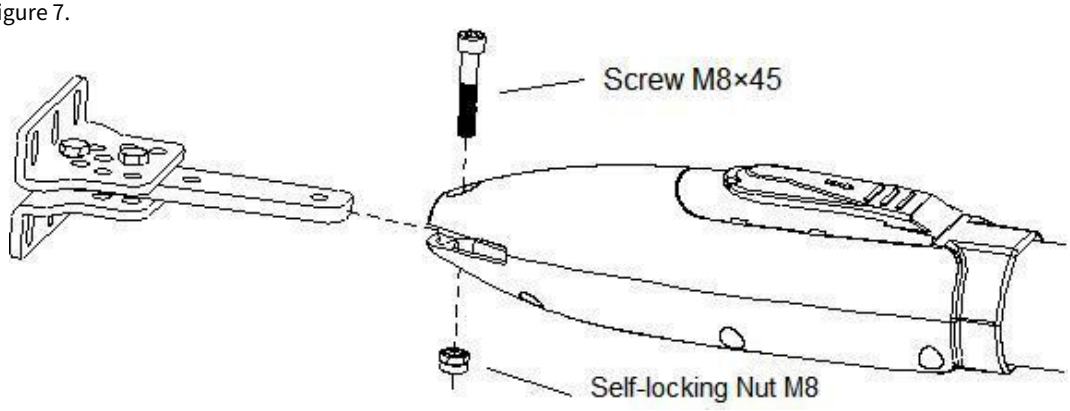


Figure 7

E) As shown in figure 8 below, connect the wall bracket to the wall according to the position marked. Then connect the main machine to the wall bracket with screw and nut. (Use a level bubble to ensure level installation.)

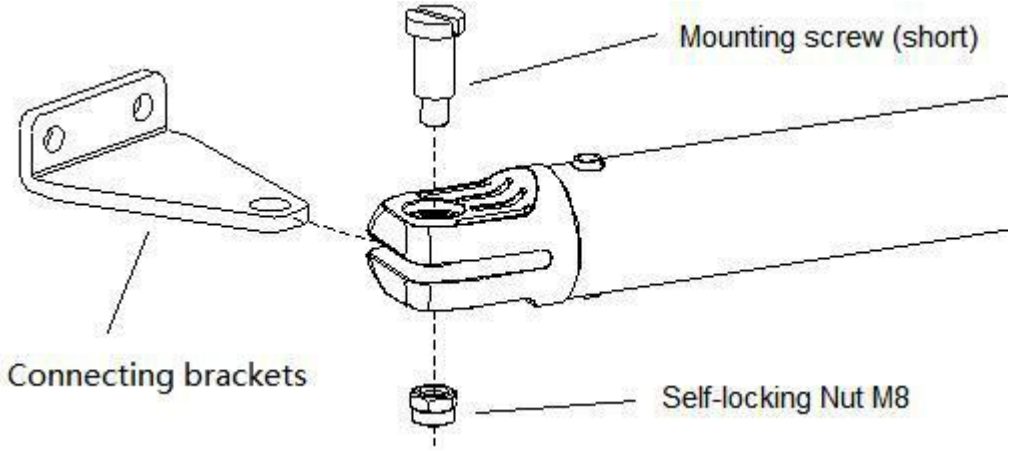


Figure 8

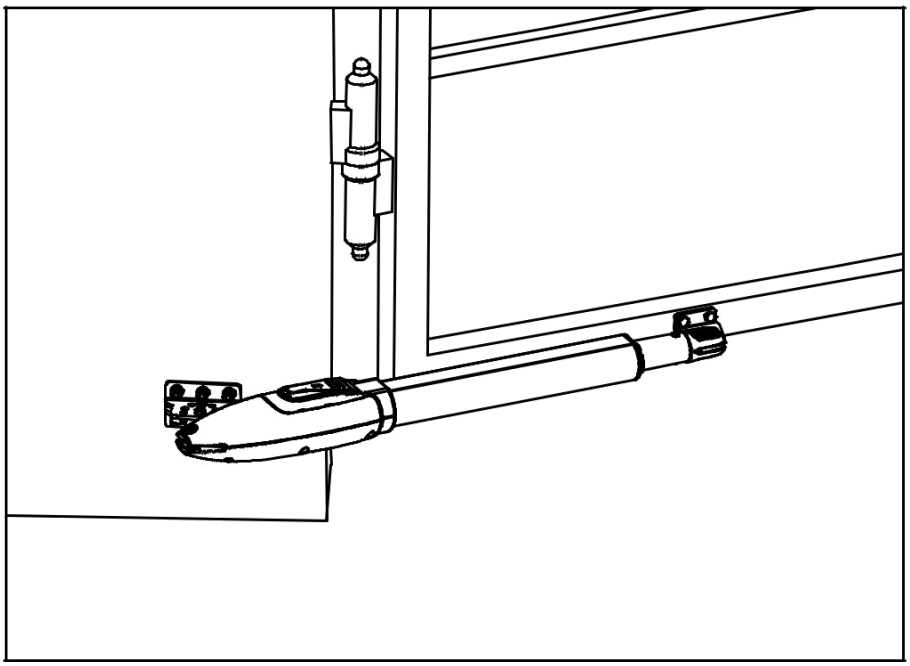


Figure 9

5. Control box size

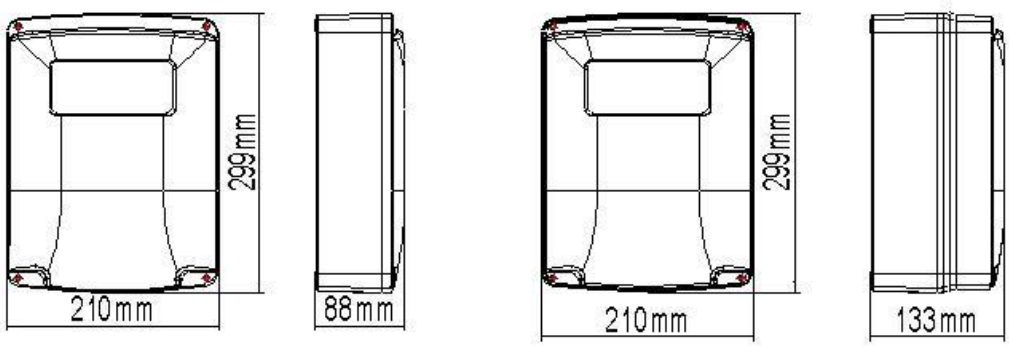


Figure 10

Notice

- To allow both arms to close in the limit position, install the supplied rubber gate stop in the limit closing position (as shown in figure 2). Similarly, when the gate opens inwards, install a gate stop in the limit closing position (as shown in figure 2).

- Before installing the main machine, make sure that the main machine and components are in good mechanical performance and that the gate can be opened manually.

- A control unit can optionally operate one or two machines.

Electrical Diagram

1 Wiring instructions

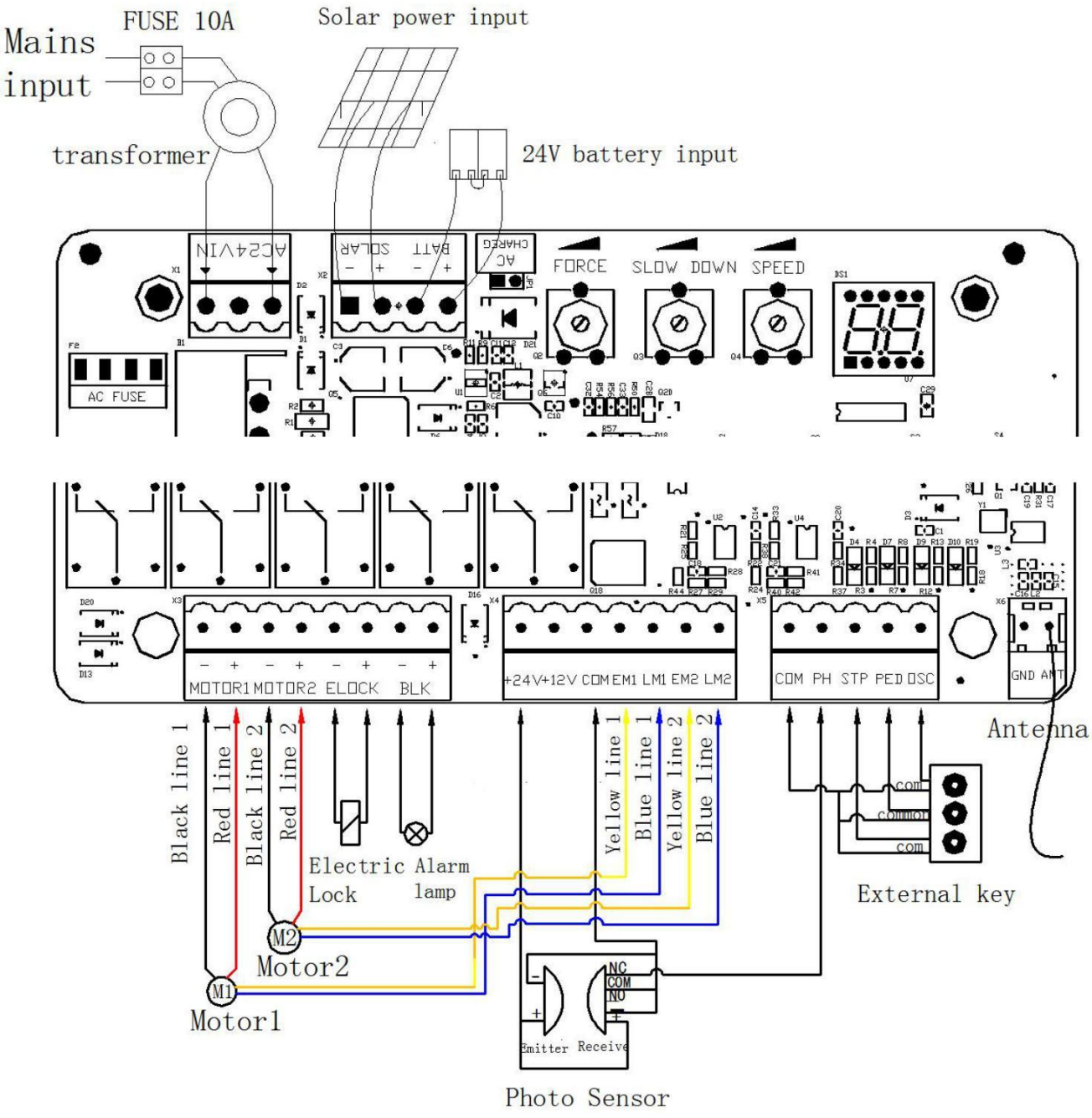


Figure 11

2. Control board drawing and instructions

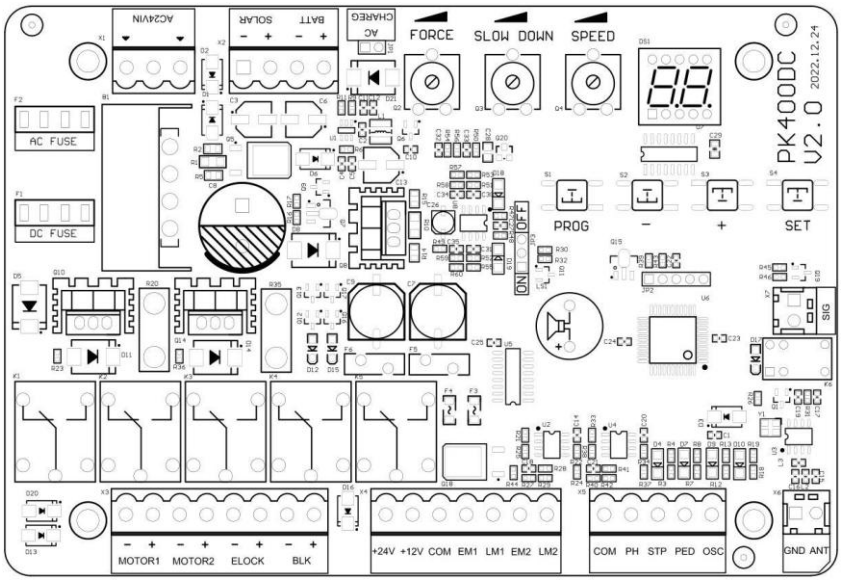


Figure 12

terminal	Description
1. AC24VIN	24V AC power input
2. +SOLAR-	Solar energy input
3. +BATT-	24V battery input
4. STRENGTH	Resistance Force
5. SLOW DOWN	Slow stopping distance
6. SPEED	Movement speed
7. MOTOR1	Motor1 Output
8. MOTOR2	Motor2 Output
9. -ELOCK+	Electric lock output
10. -BLACK+	Alarm lamp output (Note: Pay attention to negative and positive.)
11. +24V	24V Positive Output
12. +12V	12V positive output (no output in idle state)
13th EM1	Motor1 Hall Sensor Power Output
14th LM1	Motor1 Hall Sensor Limit Signal Input
15th EM2	Motor2 Hall Sensor Output Power
16th LM2	Motor2 Hall Sensor Limit Signal Input
17th PH	Active photo sensor input
18th PED	Single gate entry/pedestrian mode active
19th OSC	Single channel input active
20. ANT	Antenna
21st COM	Common
22. GIS	The signal is normally closed only after the door is in place

Photo Sensor Wiring Instructions

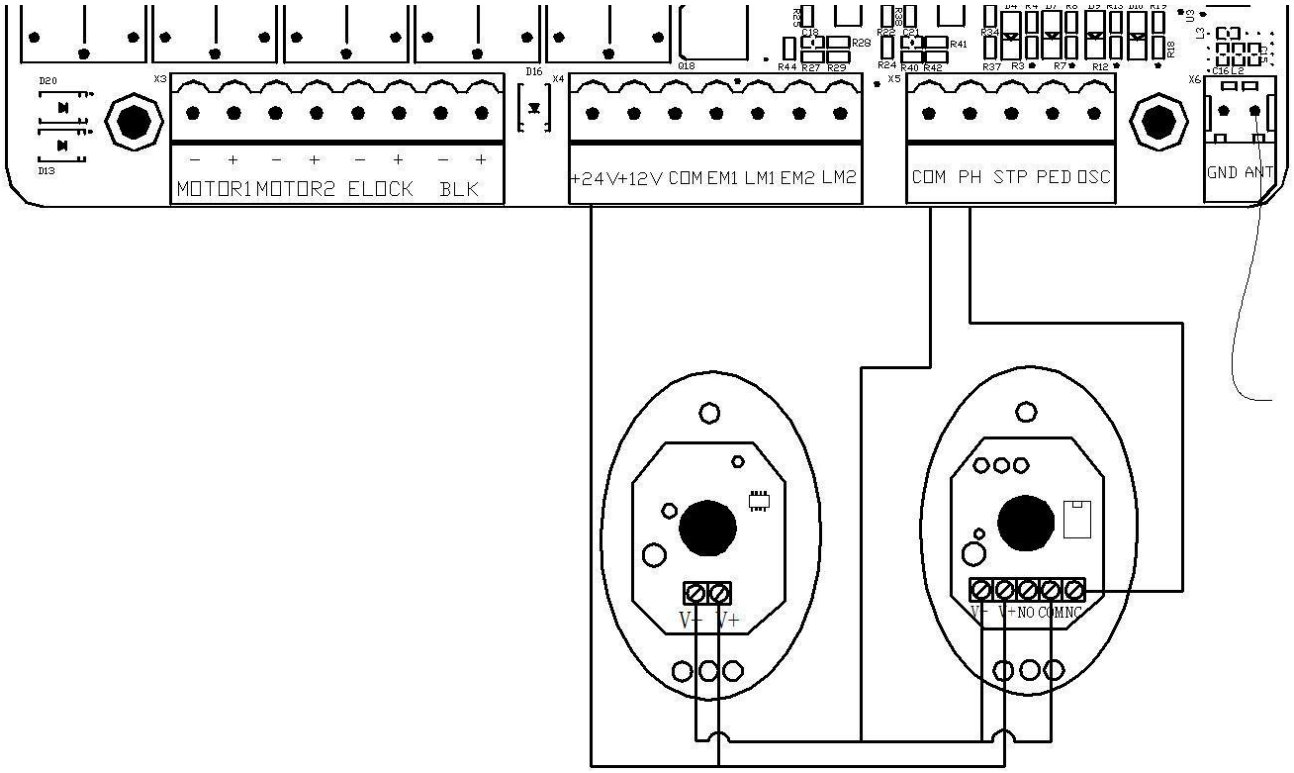
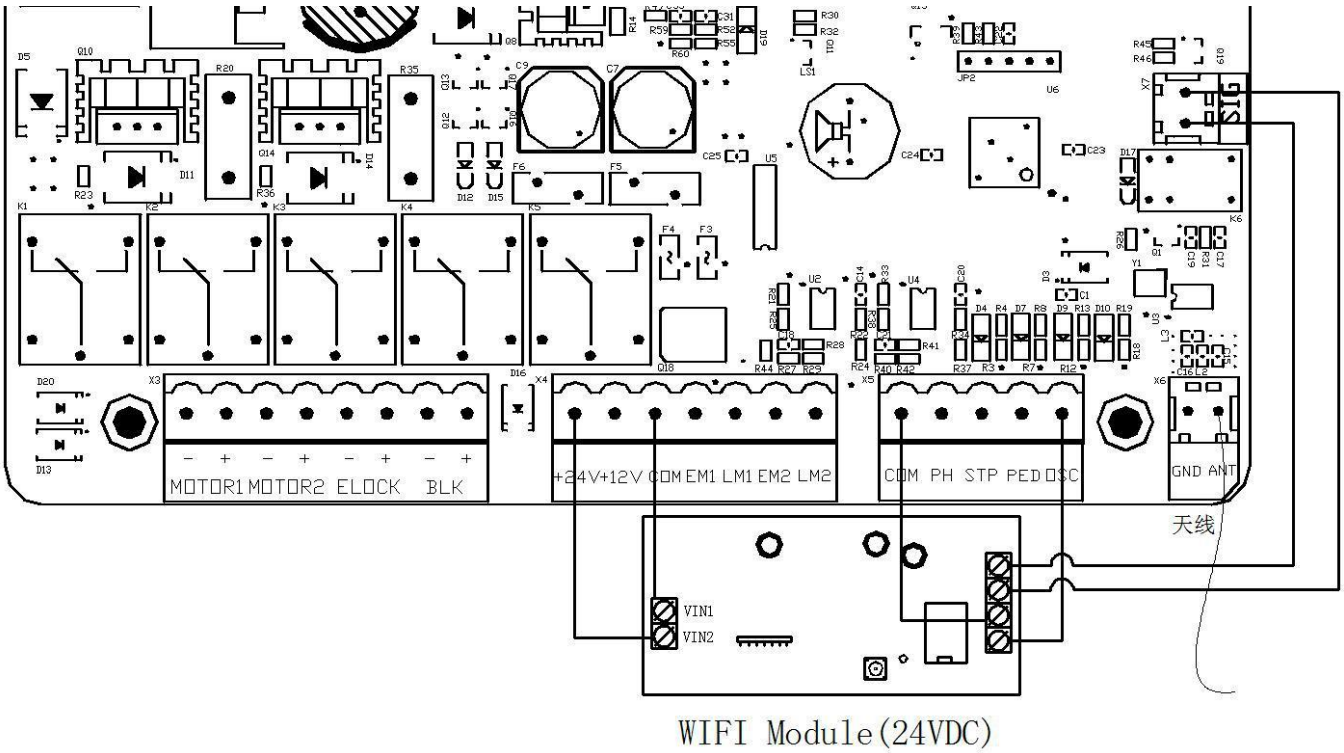


Figure 13

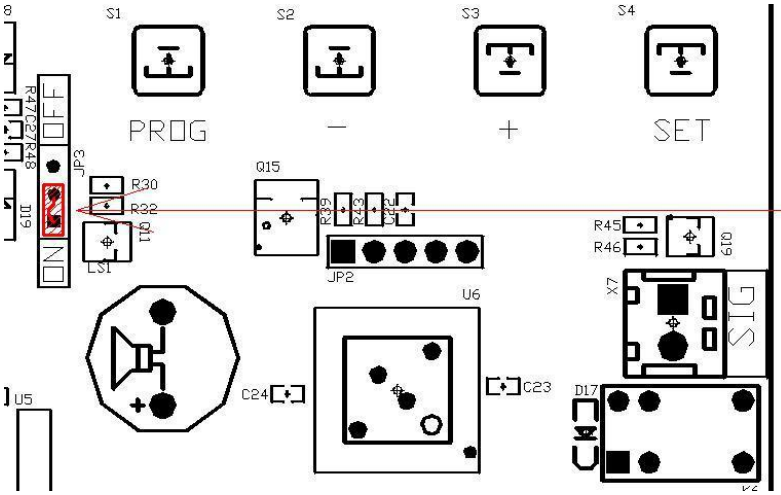
WIFI Module Wiring Instructions



WIFI Module(24VDC)

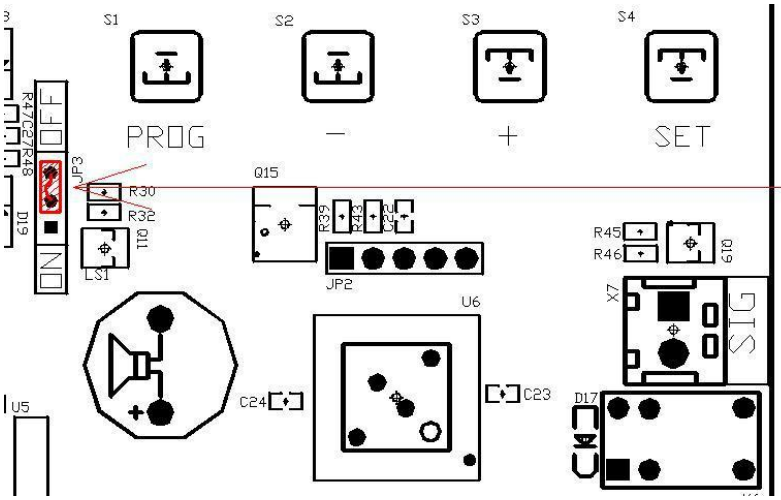
Figure 14

Activate Beep



Insert the jumper cap to ON to enable the buzzer function

Disable Beep

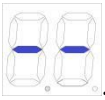


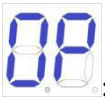
Plug the jumper cap into OFF and disable the buzzer function

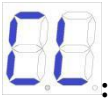
3. Digital screen configuration

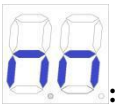
When the control board is working, users can check the status

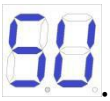
gate motor operation via the digital display on the control board.

 **:no entry;**

 **:in an open state;**

 **: in a closed state;**

 **: manual mode;**

 **: route/displacement scenario;**

4. Route configuration (VERY IMPORTANT)

When installing gate motors for the first time, the installer needs to set the open and closed limit switch positions to execute the stroke.

A) Learn the route in closing mode

Open both sides of the gate, lock the clutch, and then press and hold the "+" button on the control panel until the digital display shows "SU." After this step, the gate will move first in the closing direction and then stop, opening automatically. When both swing gates are fully open, they will automatically close a second time, and the travel setting is complete when the gates are closed. If the gate's slow start distance is not appropriate, adjust the "SLOW DOWN" button to review it. Note:

- Wiring: The black wire of main engine 1 is connected to the left side of MOTOR1; The brown wire of host 1 is connected to the right side of MOTOR1. The black wire of main engine 2 is connected to the left side of MOTOR2; The brown wire of main engine 2 is connected to the right side of MOTOR2.

- In single port mode, the host connects to MOTOR1.

- If the gate stops suddenly during travel adjustment, increase the resistance force.

- If the gate does not stop when encountering obstacles during the path setting, please reduce the resistance force appropriately.

- The installer must redo the displacement setting after modifying the "SPEED" potentiometer.

B) Learning mode in opening path (double door)

1. Wiring: The black wire of main motor 1 is connected to the left side of MOTOR1;
The brown cable from Host 1 connects to the right side of MOTOR1; The yellow cable from Host 1 connects to EM1; The blue cable from Host 1 connects to LM1. The black cable from Main Motor 2 connects to the left side of MOTOR2; The brown cable from Main Motor 2 connects to the right side of MOTOR2; The yellow cable from Host 2 connects to EM2; The blue wire from Host 2 connects to LM2

2. Open both sides of the door body to the center position and lock the clutch, and then long press the "+" button on the control panel until the digital shows "SU" and release.

3. When “A0” is displayed on the digital, enter Step A and press “+” or “-” to move the door 1. Press “-” to move in the door opening direction, press “+” to move in the door closing direction, when the control door 1 is fully open, the digital will display "AK", then quickly press "PROG" to confirm.

4. After completing the previous step, go to “B0” for Step B. Press “+” or “-” to move Door 2, press “-” to move the door and press “+” to move the door. After Door 2 is fully open, “bK” will be displayed on the tip.

5. After the above step is completed, the digital jumps to "c" to enter step C, press "+" or "-" to control the movement of the door 2, short press "+" or "-" the door body moves a short distance, long press "+" or "-" the door body moves the corresponding distance with the length of the key time, after the digital will display the value of the current position of the door. After adjusting to the required closing position, press “PROG” to confirm.

6. After the above step is completed, the digital jumps to "d" to enter step D, press "+" or "-" to control the movement of door 1, short press "+" or "-" the door body moves a short distance, long press "+" or "-" the door body moves the corresponding distance with the length of the key time, after moving the digital will display the value of the current position of the door. After adjusting to the required closing position, press “PROG”.

7. After the digital displays “OK”, the initial interface “--” is entered, indicating the completion of the route learning.

Notice: If you move the door at any point in step A, only "AK" will be displayed. Check that the hall cable for door 1 is connected correctly. Note that only A0 is displayed. Note the installation size of door 1. Check that the door is fully open.
If you move any door in step B and only BK is displayed, check that the hall cable for door 2 is connected correctly. Only B0 is displayed. Note the installation size of door 2. Check that the door is fully open.
When moving the control door, "-" should open the door and "+" should close it. If the direction is wrong, swap the positive and negative poles of the motor's power wire.
In steps C and D, the door travel must be greater than 5 cm; otherwise, the door will not be able to move to the next step.

W) **Opening displacement learning mode (single door)**

1. Wiring: The black wire of main engine 1 is connected to the left side of MOTOR1; The brown wire of host 1 connects to the right side of MOTOR1; The yellow wire of host 1 connects to EM1; The blue wire of host 1 connects to LM1.

2. Open door 1 to the middle position and lock the clutch, then long press the "+" button on the control panel until the digital shows "SU" and release.

3. Digital display "A0" Enter step A, press "+" or "-" to control door 1 to move, press "-" to open the door to move, press "+" to close the door to move, in the door of

control 1 fully open after the digital tube shows "AK", and then short press "PROG" to confirm.

4. After completing the above step, the digital jumps to "b" to enter step B. Press "+" or "-" to control the movement of door 1, short press "+" or "-", the door body moves a short distance, long press "+" or "-" the door body moves the distance corresponding to the length of the key time, after moving the digital will display the value of the current door position. After adjusting to the required closing position, press PROG to confirm.

5. After the digital displays “OK”, the initial interface “--” is entered, indicating the completion of displacement learning.

Notice:

- If you move the door at any time in step A, only "AK" will be displayed. Check that the hall cable for door 1 is connected correctly. Note that only A0 is displayed. Note the installation size of door 1. Check that the door is fully open.

  When moving the control door, "-" should open the door and "+" should close it. If the direction is wrong, swap the positive and negative poles of the motor's power wire.

- In step B, the door travel must be greater than 5 cm, otherwise the door will not be able to proceed to the next step.

5. Setting the potentiometers

Obstacle Sensitivity Potentiometer

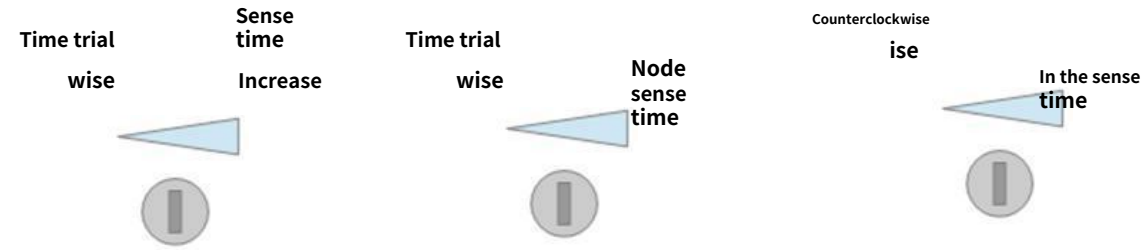
To adjust obstacle sensitivity: turn clockwise to increase sensitivity and counterclockwise to decrease it. If there are environmental influences, such as strong winds, adjust the trimmer accordingly.

Low speed distance potentiometer

To adjust the low-speed distance: clockwise to increase, counterclockwise to decrease. Don't set the low-speed distance too short to avoid colliding with the gate.

Gate movement speed potentiometer

To adjust the gate movement speed: clockwise to speed up, counterclockwise to slow down. The timer can be adjusted to change the opening and closing travel time. This adjustment must be completed before setting the travel.



STRENGTH	SLOW DOWN	SPEED
Obstacle Sensitivity	Low speed route	GateMovingSpeed

Sideboard

Figure 15

6. Program the remote and Erase the remote

Program the remote control

Press and hold the "-" button, the alarm light will continue to flash, and the digital display will display the remote control mode: "PO" — single-channel mode for double-swing gates; "Pd" — single-channel mode for double-swing gates. Press the button on the remote control to be taught, the digital display will display the current remote control number, and then the remote control programming is complete. (The new paired remote control defaults to single-channel mode for double-swing gates.)

Delete remote control

Enter “AE” on the digital screen and then choose “rE” to erase the remote controls.

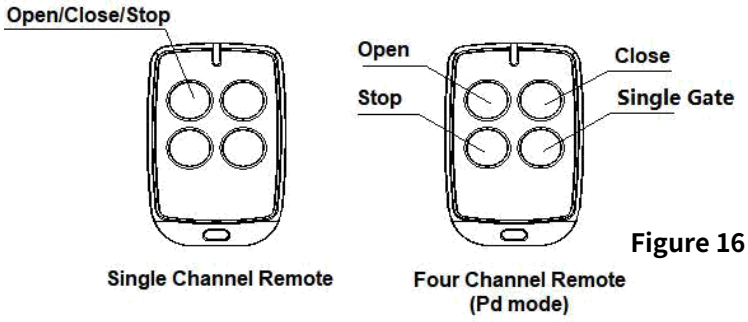


Figure 16

Control Board Configuration

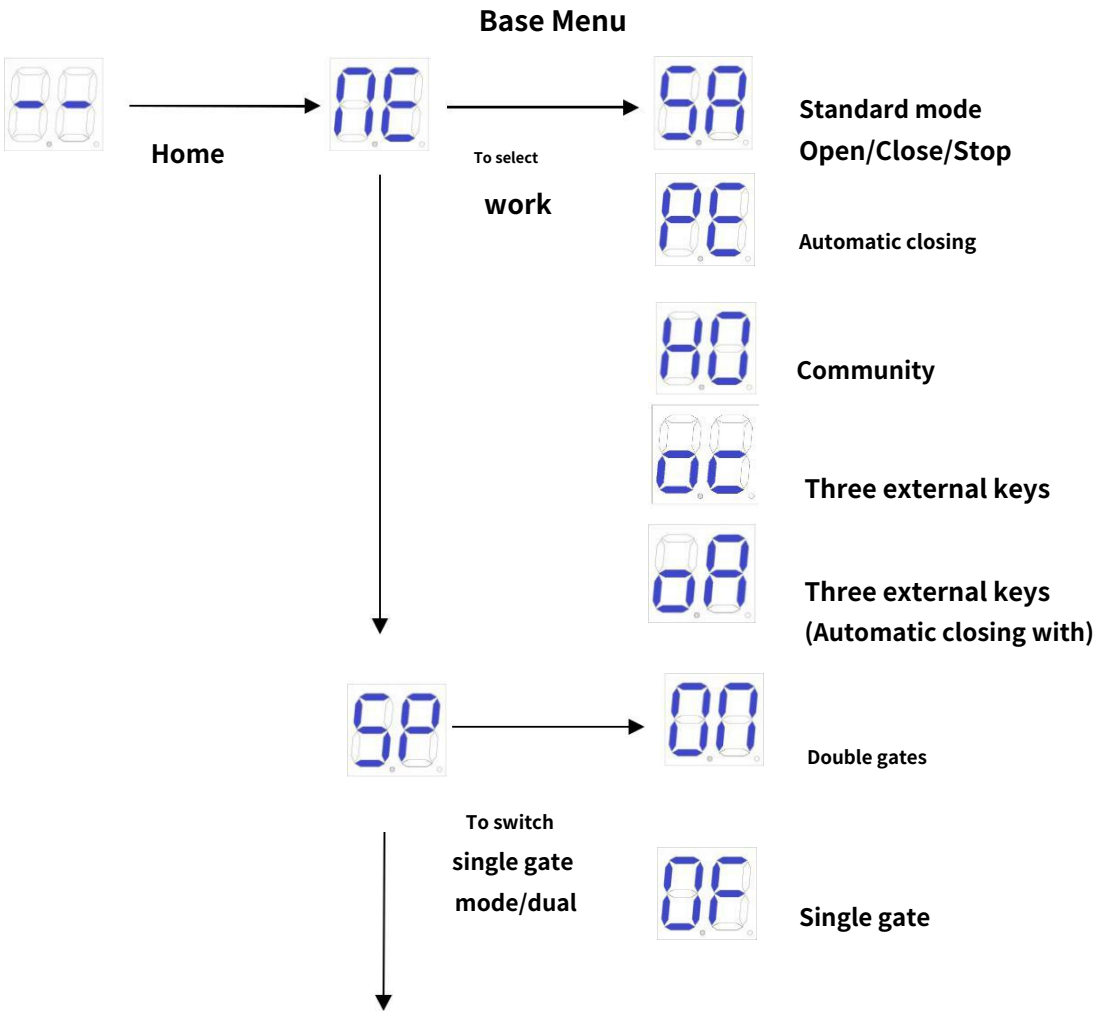
Base Menu

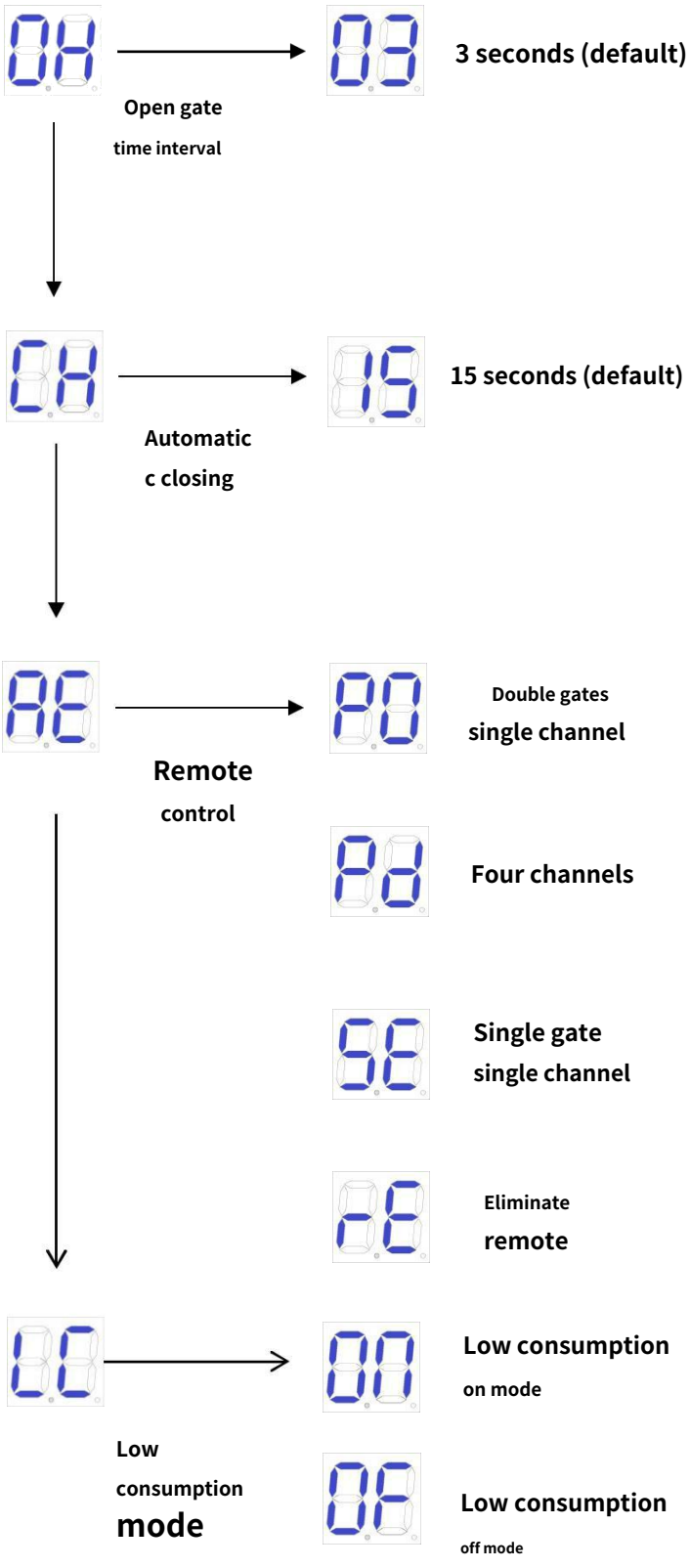
Press "PROG" to enter the base menu;

The digital display shows "NE". Select other functions in this menu with the "+" and "-" buttons. Press "SET" to confirm or to enter the submenu.

To exit the menu, press "PROG".

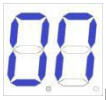
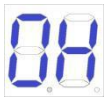
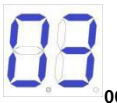
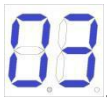
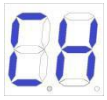
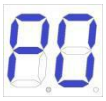
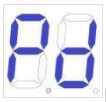
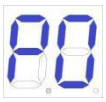
If there is no command for one minute, the menu will exit automatically.

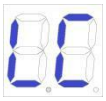
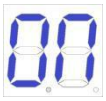
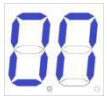



Open gate
time interval
3 seconds (default)
Automatic
c closing
15 seconds (default)
Remote
control
Double gates
single channel
Four channels
Single gate
single channel
Eliminate
remote
Low
consumption
mode
Low consumption
on mode
Low consumption
off mode

Base Menu Instruction

Menu Press "PROG" to enter the base menu.	**Option** Press "+" (up) or "-" (down) to select; Press "SET" to confirm.	Standard/Attention
 Working method	 Standard mode; O/C/S (Open/Close/Stop).  Standard O/S/C mode with Automatic closing function. When the gate opens, it closes automatically after the automatic closing time. If a "close gate" command is sent during the automatic closing timeout, the automatic closing function will be canceled.  Community mode (with Automatic closing function). When the gate opens, no command will be responded to until it closes. Automatically. If the user sends a gate command during the closing process, the gate will reopen. If a gate command is sent during the automatic closing wait time, this time will be recalculated. If the gate is not completely closed more than ten times in a row, the automatic closing function will be canceled and the gate will close when the closing command is resent. Note that in community mode, the gate also has the automatic closing function in case of obstacles.  Three external keys (open/close/stop)	 Standard mode; O/C/S (Open/Close/Stop).

	 Three external o/p/s switches (automatic closing with)	
 Single/double gate Gate Switch	 Double doors mode.  Single port mode (default).	 Single gate mode.
 Gate Opening Hours Interval	 00-10: Open gate time interval is from 0 to 10 seconds (default: 3 seconds). If the interval is less than 2 seconds, the electric lock cannot be used.	 3 seconds.
 Automatic Closing Time	 The automatic closing time can be set to 15 (default), 30, 60, 90 seconds.	 15 seconds.
 Remote control Mode	 Double doors, single channel mode.  Four-channel mode.  Single port single channel mode.  Delete all paired remotes controls	 Simple double gates channel mode.

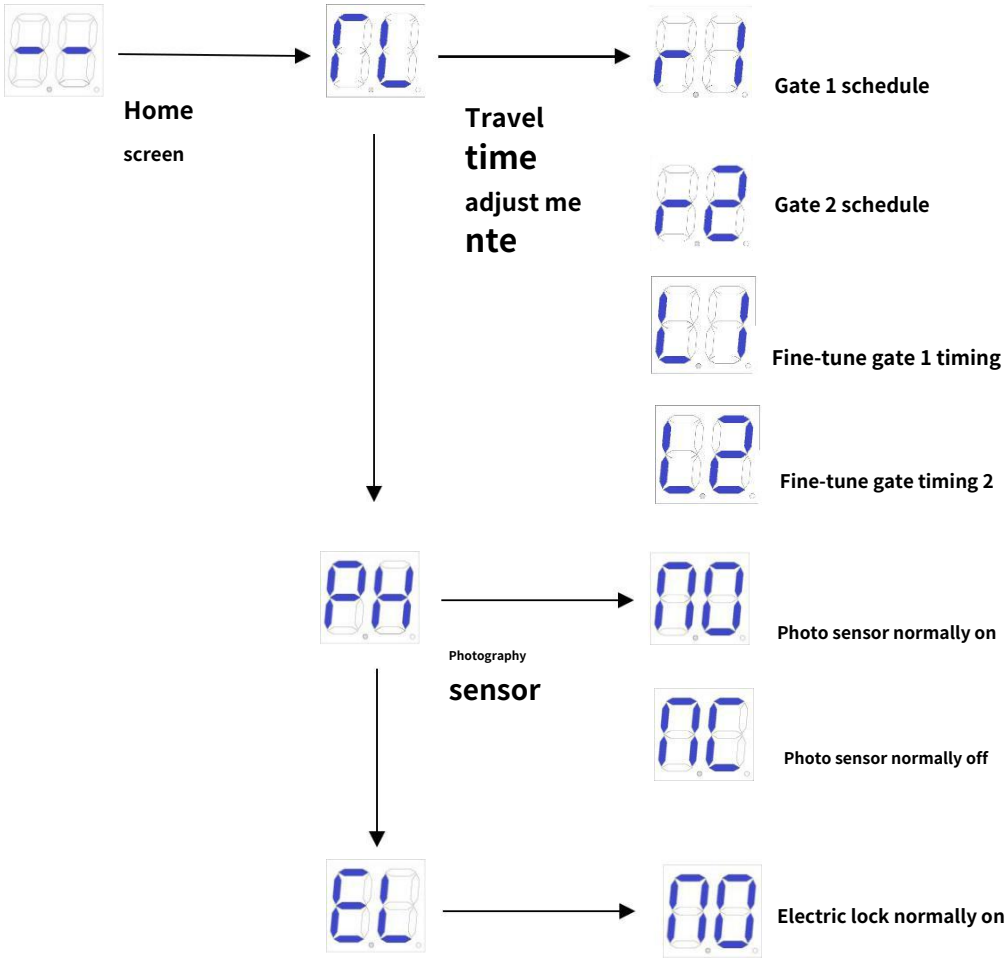
 **Low consumption mode**	 **Low consumption on mode** **(When there is no no operation on home screen, the control The council will**  **Low consumption off mode**	 **Low consumption on mode**

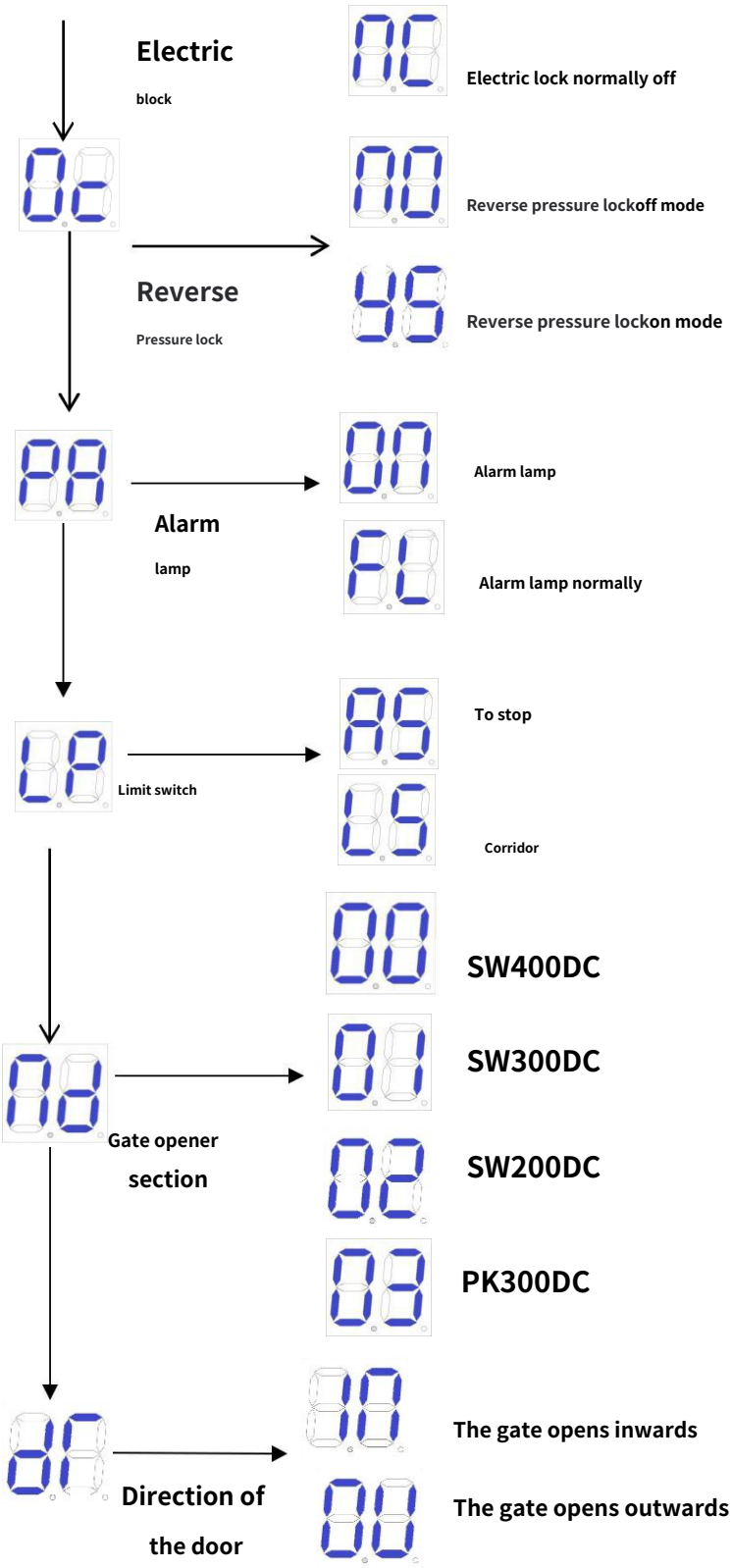
Advanced menu instruction

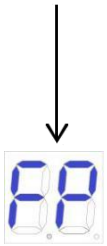
Long press "PROG" for 2 seconds to enter the advanced menu. The digital display displays "TL", press "+" (up) or "-" (down) to select; short press "SET" to confirm or enter the submenu. Short press “PROG” to exit.

If there is no command for one minute, the menu will exit automatically.

Advanced Menu

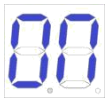



Electric
block
Electric lock normally off
Reverse pressure lockoff mode
Reverse
Pressure lock
Reverse pressure lockon mode
Alarm
lamp
Alarm lamp
Alarm lamp normally
Limit switch
To stop
Corridor
SW400DC
SW300DC
SW200DC
PK300DC
Gate opener
section
Direction of
the door
The gate opens inwards
The gate opens outwards



Factory

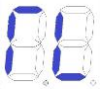
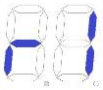
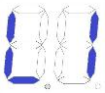
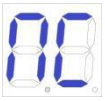
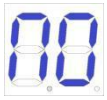
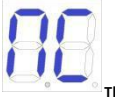
template



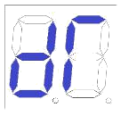
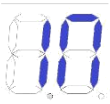
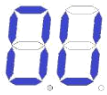
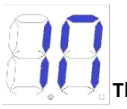
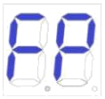
Factory default setting

Canceling the default setting

Advanced menu instructions

Menu Press and hold "PROG" for 2 seconds to enter **base menu.**	**Option** Press "+" (up) or "-" (down) to select; **Press "SET" to confirm.**	**Standard/Attention**
 Travel time adjustment	 Gate 1 schedule  Gate 2 schedule  Fine-tune gate 1 timing  Fine-tune gate timing 2	After machine learning, if the course is not optimal, it can be adjusted manually. The shorter the time below the endurance limit, the greater the deceleration distance. of the door. And in the Hall limit, the shorter the time, the shorter the door travel will be.
 Photo sensor	 N/C; photo sensor is normally on. (Default)  N/O; photo sensor normally off.	 N/O; photo sensor normally on.
 Electric lock	 The electric lock is normally on. (Default)  The electric lock is normally off.	 Electric lock normally in.

 Reverse pressure lock	 Reverse pressure lockoff mode  **Reverse pressure lock on mode (When the electric lock is started, the M1 travels a distance towards the door to prevent the electric lock from getting stuck and cannot be opened.)**	 Reverse pressure lockoff mode
 Alarm lamp	 The alarm lamp is normally lit. Source 24V power supply (Standard)  The alarm lamp flashes normally. Power supply 24 V power supply.	 Alarm lamp normally is on. 24V power supply.
 Limit switch mode	 Stop the block.  **Hall Sensor.(Standard)**	 **Hall sensor.**
 Gate opener Section	 **SW400DC.**  **SW300DC. (Standard)**  **SW200DC.**  **PK300DC.**	 **SW300DC.**

 **Door direction**	 **The gate opens inwards (default)**  **The gate opens outwards**	 **The gate opens inwards**
 **Factory default** **Definition**	 **Cancel factory default setting.**  **Factory default setting is complete.**	

Others

Maintenance

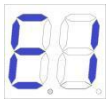
Check that the gate works normally every month.

For security reasons, it is suggested that each gate be equipped with an infrared protector, and regular inspection is also required.
Before installing and operating the gate opener, read all instructions carefully.

We reserve the right to change instructions without notice.

Error message

Errors that may occur when the port is operating correctly.

Wrong Indication	Cause of error	Solution
	**Door 1 Blocked in opening**	**1. Check for obstacles** **when opening the door 1 2. Adjust the resistance sensitivity adequately** **3. Increase the deceleration distance adequately**
	**Port 2 obstructed in opening**	**1. Check for obstacles** **when opening door 2 2. Adjust the resistance sensitivity adequately** **3. Increase the deceleration distance adequately**

	Door 2 is closing with difficulty	1. Check for obstacles when door 1 is closed 2. Adjustment the sensitivity of the resistance adequately 3. Increase the deceleration distance adequately
	Door 2 is closing with difficulty	1. Check for obstacles when door 2 is closed 2. Adjustment the sensitivity of the resistance adequately 3. Increase the deceleration distance adequately
	Infrared disconnection	1. Check the status of the infrared configuration 2. If there are occlusions in the infrared
	Door 1 closes before door 2	1. Relearn your itinerary 2. Adjust the opening time interval
	The engine runs for a long time time	1. Check that you have completed the itinerary 2. Damage to the corridor components
	No study itinerary	Recomplete the trip

Troubleshooting

Problems	Possible reasons	Solutions
The gate cannot open or close normally and The display does not light up.	1. The power is off. 2. The fuse is blown. 3. Power supply wiring of the control board control with problem.	1. Turn on the power supply. 2. Check the fuse, replace it if it is blown. burned. 3. Reconnect the wiring according to with the instructions.
The gate may open, but cannot close.	1. Photocell wiring with problem. 2. Photocell assembly with problem. 3. The photocell is blocked by objects. 4. The sensitivity of the obstacle is very high.	1. If the photocell does not turn on, make sure that 5 and 6, 5 and 7 are short-circuited; if the photocell infrared, make sure the wiring is correct and the photocell is NC 2. Make sure the mounting position of the photocell can be mutually aligned. 3. Remove the obstacle. 4. Reduce the sensitivity of the obstacle.
The remote control does not work.	1. The battery level of the remote control is low. 2. Learning the remote control was not completed.	1. Replace the battery in the remote control distance. 2. Redirect learning by remote control.
Press OPEN, CLOSE button, the gate does not move, the motor makes noise.	The gate movement is not smooth.	According to the actual situation to adjust the motor or gate.
The escape switch has tripped.	Short circuit in the power line or short circuit in the motor line.	Check the wiring.
Remote control working the distance is very short.	The signal is blocked.	Connect an outdoor receiving antenna 1.5 meters above the ground.
The gate moves to the central position to stop or reverse.	1. The motor output power is not enough. 2. The sensitivity of the obstacle is too much high. 3. The gate encounters an obstacle.	1. Check if the power of the transformer is normal, otherwise, replace the transformer. 2. Adjust the TR2. 3. Remove the obstacle.