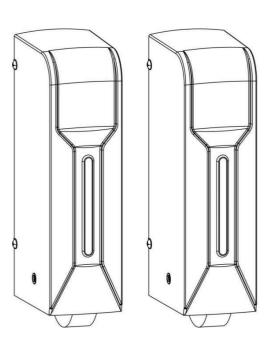
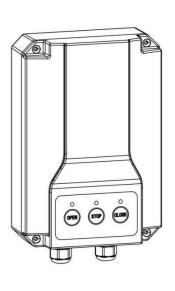


Installation Guide User Manual

TW-600GL

Wheel gate motor set





ATTENTION:

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

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



- Read the Manual: Read this manual carefully before installation, as it contains important information about installation, use, maintenance and safety.
- Unauthorized Operations: Any operations not specified in this manual are not permitted. Incorrect use may damage the product or even cause injuries or material losses.
- Installation standards: To avoid potential hazards during the installation or use of the gate motor, the installation must strictly comply with building codes and electrical operating procedures.
- Voltage check: Before installation, make sure that the supply voltage used corresponds to the supply voltage of this product. Also check that a leakage protection switch is installed and the connection system to the land is correct.
- Additional Equipment: Check whether additional equipment or materials are needed to meet specific requirements.
- Do not modify parts: Do not change any parts other than those specified in this manual. Any unauthorized modifications may cause malfunctions, and any resulting damages of such modifications will not be covered by the warranty.
- Prevent exposure to liquids: Do not allow water or any other liquid to enter the controller or any other open device. If this occurs, immediately turn off the power.
- Keep away from heat: Keep this product away from heat and open flames, as they may damage components, cause failure, or create other hazards.
- Ensure safe passage: Make sure there are no vehicles, pedestrians or objects in the way. pass while the rotating gate is in motion.
- Anti-clip equipment: Install anti-clip equipment, such as a circuit breaker. infrared, to avoid injury or property damage.
- Professional Installation Required: Installation, use, and maintenance of this product must be performed by professionals.

Package Contents

1 40	Rage Contents		
No.	Photography	Name	Amount
1		Wheel Motor	2
2		Control box	1
3		Remote control	2
4		Manual opening key	2
5	(1000000	Left blocker	2
6	9909000	Right blocker	2
7		Expansion screw 8x12mm	12
8		Cable gland Ф16x500mm	2
9		Rubber cap 18mm	4

Technical Specifications

Model	PK600GL
Voltage	220 V/50 Hz; 110 V/60 Hz
Engine power	40W×2
Gate movement speed	15S/90°
Maximum weight of a sheet	600 kg
Maximum length of a sheet	4 meters
Remote control distance	≥30m
Remote control mode	Up to 32 single/four button commands
Working noise	≤58dB
Duty cycle	S2 30 minutes

Before Installing

- Engine of gate
- Box of control
- 3 Cable (RVV)

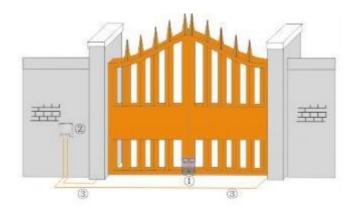


Figure 1

- The TW-600GL automation kit for revolving gates with rolling wheels is suitable for activating the opening and closing movement of swing gates up to 600 kg in weight and length up to 4 m.
- Make sure the swing gate is installed correctly and can be moved gently by hand before installing the gate motor.
- If an electronic lock is required, make sure the distance between the two gates is 15-20 mm; if it does not have an electronic lock, there is no requirement regarding the distance between the two gates. Make sure the power cord is connected to a weather-protected electrical outlet with RCD, next to the motor gates;
- make sure that the height of the control box is more than 1.5 m from the floor to the keep out of reach of children,
 - in order to prevent unintentional activation.
- After the installation is complete, please re-ensure the mechanical functionality. of the gate motor; the smoothness of the gate movement; and correct installation of the infrared sensor (optional).

Cable

To ensure the normal operation of the gate automation and protect the cables against damage, use PVC pipes to install the motor, power cable and communication cables. control. It is recommended to use two separate PVC pipes: one for the motor and power cable and another for the control cable.

Dimensions

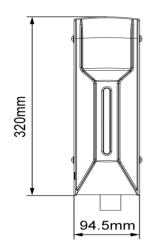




Figure 2

Tools required for installation

	Electric drill	Hatching pen
	Pliers	Punch pin
A CONTRACTOR OF THE PARTY OF TH	Wrench	Allen key
	Phillips screwdriver	Hammer
	Clip	Adjustable wrench
	Screwdriver	Tape Measure

Cable List



Nota: os cabos devem ser adequados para utilização no exterior.

	Aplicação de cabos	Material do cabo	Máx. Comprimento
1	Cabo de alimentação da caixa de controlo de 220 V	3×2,5 mm ² (> 30m) 3×1,5mm ² (<30m)	Ilimitado
2	Cabo de alimentação do motor de portão	2×1,5mm²	15m
3	Cabo do sensor infravermelho	2×0,5mm²	10m
4	Cabo da lâmpada de alarme	2×0,5mm²	10m
5	Cabo de fechadura elétrica	2×0,5mm²	10m
6	Cabo de extensão da bateria de armazenamento	2×1,5mm²	10m
7	Cabo de energia solar	2×1,5mm²	10m

Devido aos diferentes ambientes de instalação, o instalador necessita de preparar os cabos de alimentação para a caixa de controlo e para os motores de portões.

Nota: a saída do cabo deve estar virada para baixo para evitar que a água da chuva entre no fio ao longo do cabo.

Wiring diagram

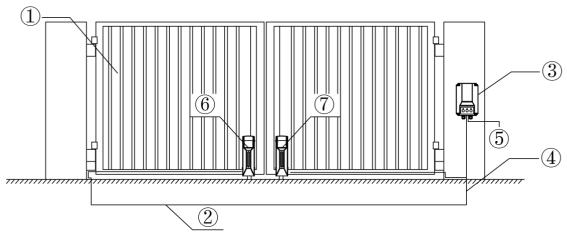


Figure 3

- 2 Cable with a cross-sectional area of not less than 1mm²
- 3 Control box connected with 220V power supply PVC
- 4 tube for wire protection
- © 220V Power Supply Motor 1
- 6
- © Engine 2

Notice

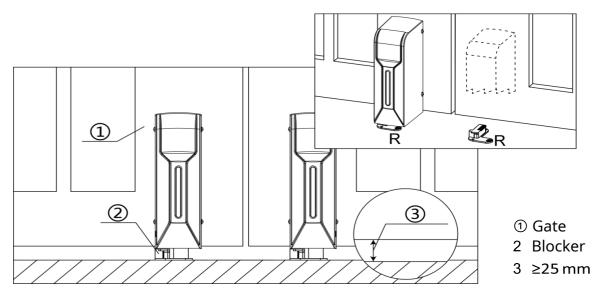
- Use pipes with good strength and toughness to install the power cable.
- Keep low voltage accessories away from the 230 V power cable and use a separate cable layer to avoid interference.
- The pipe must be buried under the closed gate and must not be mixed with the position of the blocker.
- The cross-sectional area of the gate motor cable must be greater than 1 mm²; other cables signal cables can use 0.5 mm² cables.

Check before starting

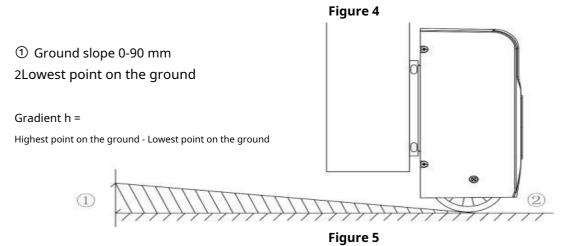
- Before installing the gate motor, make sure the gates have been installed correctly.

Make sure the gate does not bounce when closing and opening.

- The recommended gate height is ≥25mm from the ground (in the closed gate position). If <25mm, the ground requires special treatment (lowering the ground to the distance between the gate and grounding ≥25mm (in the closed gate position). The lowest area of the ground and the remaining land needs to be sloped.



When h≤90mm, the gate opener can be operated correctly.



Control Box Installation

Control Box Installation

- Install the control box (outdoor/indoor) according to the electrician's safety instructions. The installation location should be close to the gate for a shorter wire path and less electrical loss.
- Consider the shielding effect of the metal outer case for the remote control signal if it is

it is necessary to add an outdoor box to the control box. Pull the antenna out.

 The control box must be positioned and placed at an appropriate height. It should be in an open space, away from rain and sunlight, and out of reach of children.

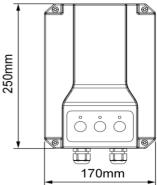




Figure 6

Gate Motor Installation

Gate motor position: choose the best installation position when opening and closing

two gates.

Note: The distance between two gate motors must not be <100 mm to be able to open the gate manually. (VERY IMPORTANT)

- ① Gate
- 2 Mounting plate
- 3 Wire out
- 4 Lowest point on the ground

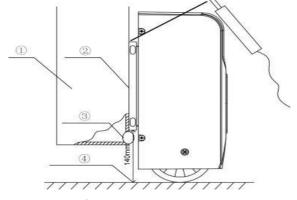


Figure 7

Mounting Plate Installation

Gate motor mounting plate height

- Method 1: Move the gate to the lowest point of its travel range, then place the gate motor vertically against the inside of the gate. Use a tape measure to draw a line from the lowest point.

from the ground up to 140 mm and fix the mounting plate.

- Method 2: Place the gate motor horizontally and vertically (very important) against the inside of the gate, draw a line to mark the position 20mm below the adjustable telescopic mounting plate, and fix the mounting plate.

Wiring Installation

- Drill a hole on both sides at the bottom of the gate frame (input wire and output wire).
 - Soft tubes outside the wires should be used when passing the wires through the holes.
- Secure the gate motor wires and connect them to the control panel.

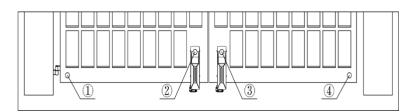


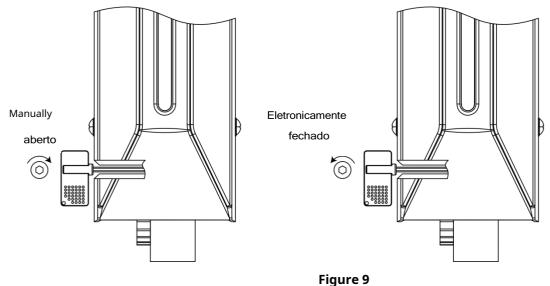
Figure 8

- 1 4 Input wire
- ② ③Output wire

Nota: a placa de montagem necessita de ser mantida a 90° verticalmente durante a instalação. Pode ser corrigido por parafusos ou soldados ao portão.

Manual Mode

Use the manual release key to switch the gate motor to manual mode, pull and push the gate, check if the gate motor is stuck, suspended, lifted off the ground, etc.



riguie

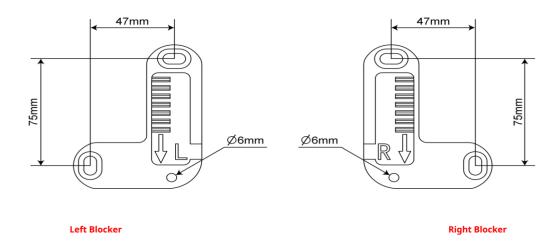
Open manually-insert the manual release key into the lock, turn clockwise counterclockwise 2 to 3 turns until the gear is fully released to manual mode.

Close manually-in manual mode, move the gate to 40mm in front of the blocker, then use the manual release key, turn clockwise 2 to 3 turns until the gear locks completely again, then move the gate to the fully closed position to lock the blocker and manually close the gate.

Installation of the limit switch (blocker)

Use the manual release key to switch the gate motor to manual mode and move the gate to the closed position. (Now the two gates are aligned in the closed position. closed.) Align the blocker with the latch rest (the blocker should be as close as possible parallel as possible to the stroke of the gate motors, which means that the stroke is in line tangent of the blocker, the rack part in the blocker is closed to the tire of eraser, but keep a distance of 2 mm.) Then draw a line for the

mark. Open the gate again. Move the blocker in the direction of gate opening by 10 mm and draw a line to mark it again. Check when the gate motor reaches the closed/open position, make sure the windproof gear close of the rubber tire is aligned with the rack on the blocker. Then do holes and fix them with expansion screws.



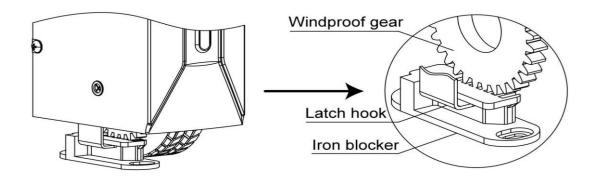
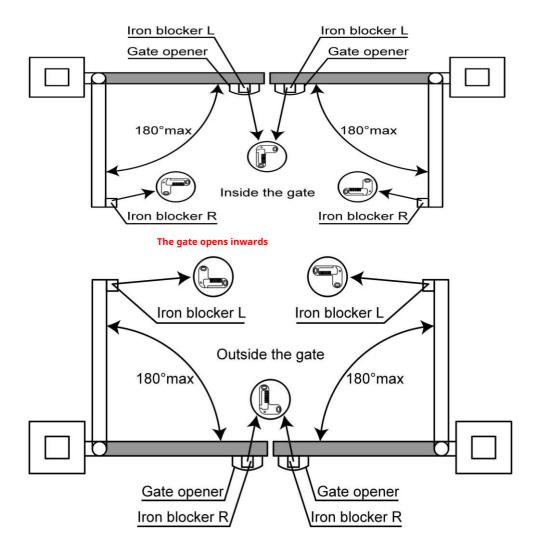


Figure 10



- When one of the gates closes first and has a border strip, the gate blocker with the border strip must be installed first, and then the gate blocker without the border strip installed.
- The floor of the gate motors must be horizontal, with iron blockers when two gates are closed.
- The iron blocker must be firmly fixed, without gaps or displacements during operation.



The gate opens outwards

Figure 11

Use the manual release key to switch the gate motor to manual mode, move the gate to full open or determined position and then move the gate back 20 mm. Align the blocker with the blocking stand, Draw a line for the mark and close the gates. Make sure the gate motor lock bracket is aligned with the center point of the lock bracket, Then drill holes and fix them with expansion bolts.

Testing and Configuration

- Before testing, check the wiring and power supply. Move the gate to the middle of its path, close the gate motor clutch (electronic mode), turn on the power supply, and the gate motors will operate normally.
- Long press "+", the gates move automatically. [The digital display shows from "--" to "SU"], please read the "Course Settings" instruction carefully.
- Press the remote control to operate the gate motor (read the "Programming the Remote Control" instructions carefully). Test the gate operation and adjust the slow stop distance according to your gates.
- If you encounter obstacles, apply a force against the gate during operation.

 (push or pull manually), to stop the gate. This is called reverse

 when encountering obstacles. If the obstacle sensitivity value is too high

 low, the gate motors will be easy to stop; if the value is too high, it will not

 it will be possible to protect the gate during operation.

Electrical Diagram

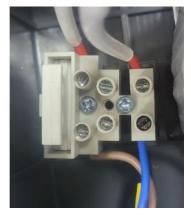
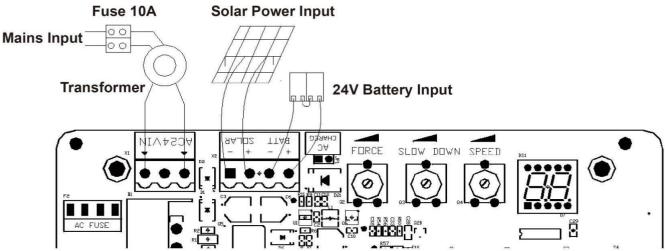
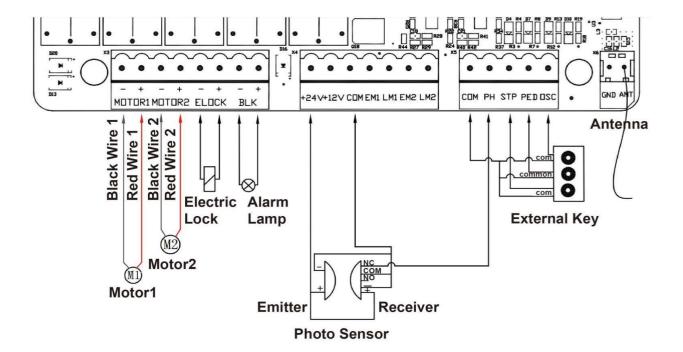


Figure 12





Control Board Drawing and Instructions

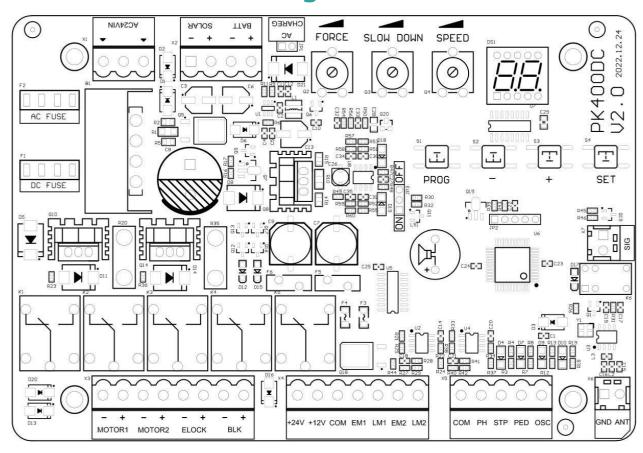


Figure 13

terminal	Description
1. AC24VIN	24V AC power input
2. +SOLAR-	Solar energy input
3. +BATT-	24V battery input
4. STRENGTH	Obstacle Sensitivity
5. SLOW DOWN	Slow stopping distance
6. SPEED	Gate movement speed
7. MOTOR1	Motor1 Output
8. MOTOR2	Motor2 Output
9ELOCK+	Electric lock output
10BLACK+	Alarm lamp output (Note: pay attention to polarity)
11. +24V	24V Positive Output
12. +12V	12V positive output (no output in standby mode)
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 when the gate is fully closed.

Sensor Wiring Instructions (not included)

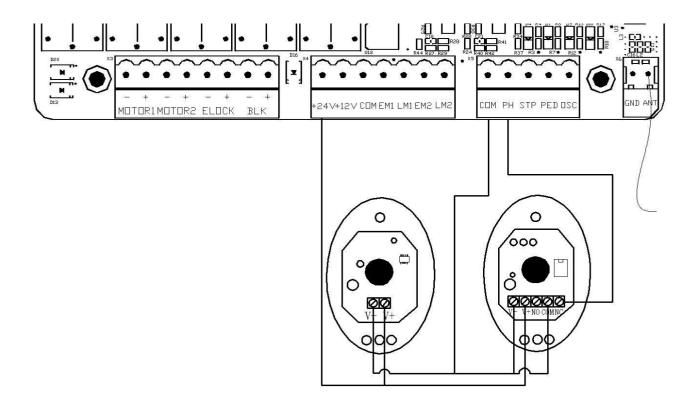


Figure 14

Wi-Fi Module Wiring Instructions (not included)

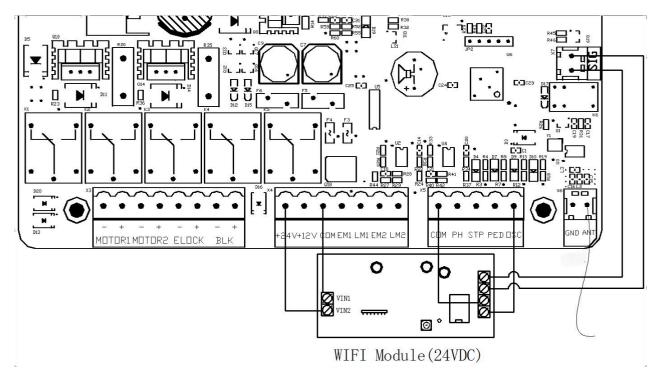


Figure 15

Enable and Disable Beep

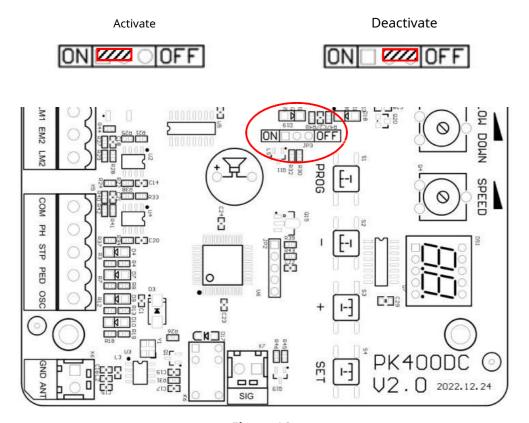


Figure 16

Battery Charging Function

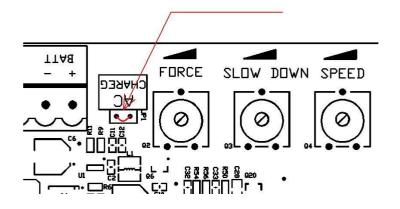
Insert the jumper to activate the charging function of the

battery. Remove the jumper to disable the battery function.

battery charging.

Figure 17

Notice:When using only solar energy, it is recommended to remove the jumper to reduce power consumption.



Digital Display Configuration

When the control board is working, users can check the working status of the gate motor through the digital display on the control board.



Route Configuration (Very Important)

During the initial installation of gate motors, it is necessary to set the travel limits for the open and closed positions.

Open both sides of the gate and lock the clutch. Then press and hold the "+" button on the panel. control until the digital display shows "SU". At this point, the gate will move first in the closing direction until it reaches the closed position and the locks, and then the gate will open automatically. When the two swing gates are fully open, they will automatically close a second time, and the offset setting will be completed when the gates are closed. If the gate's low-speed distance is not appropriate, adjust the turn "SLOW DOWN" button to review the distance.

Notes

- **Wiring**: connect the black wire from gate motor 1 to the left side of MOTOR1 and the brown wire to the right side. For gate motor 2, connect the black wire to the left side of MOTOR2 and the brown wire to the right side.
- **Single port mode**: connect the gate motor to MOTOR1.
- **Sudden stops:**If the gate stops unexpectedly while setting the path, increase the resistance force with the Obstacle Sensitivity knob.
- **Obstacle handling:**If the gate does not stop when encountering an obstacle during travel adjustment, decrease the resistance force appropriately using the Obstacle Sensitivity Adjuster.
- **Speed adjustments:**After adjusting the "SPEED" wheel knob, the installer must redo the displacement setting.
- **Cancel configuration:**During travel setting, you can long press "SET" button to cancel the setting.

Setting the Rotation Buttons (Trimmers)

Obstacle Sensitivity Rotate Button

To adjust obstacle sensitivity: turn clockwise to increase the sensitivity.

sensitivity and in the opposite direction to decrease it. If there are environmental influences, such as winds strong, adjust the knob as needed to match environmental conditions.

Low Speed Distance Run Button

To adjust the distance at a slow speed: turn clockwise to increase and counterclockwise to opposite direction to decrease the distance at a slow speed. Avoid setting the distance too short. low speed to avoid gate collisions.

Po movement speed rotate buttonrtões

To adjust the gate's movement speed: turn clockwise to increase the speed and counterclockwise to decrease it. This setting affects the opening and closing travel time. Complete this adjustment before running the route configuration.

Note: After adjusting the SPEED wheel knob, run the route setup again.

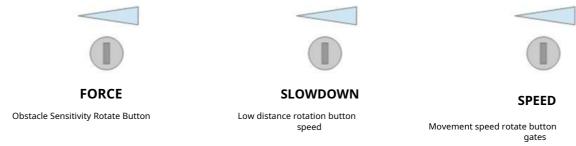


Figure 18

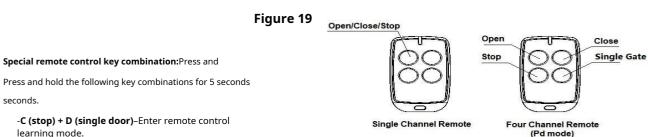
Remote Control Configuration

Press and hold the "-" button, the alarm light will continue to flash and the digital display will show the mode remote control:

- "PO" double swing gate single channel mode
- "Pd" single-port four-channel mode

Press the button on the remote control to be learned, the digital display will show the number of the currently learned remote control, and then the remote control learning is completed. (The default of the new paired remote control is the double swing gate single channel mode.)

To delete the remote control, enter "AE" on the digital screen and select "rE" to delete all paired remote controls.



Control Board Configuration

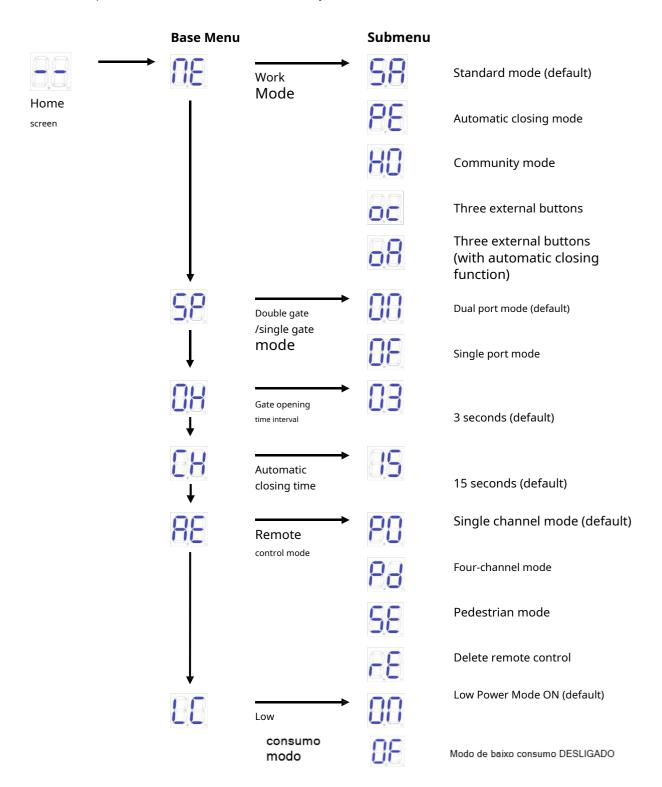
Base Menu

Press "PROG" to enter the base menu.

The digital display will display "NE", select other functions within this menu using the "+" and "-" buttons. Press "SET" to confirm or to enter a submenu.

Press "PROG" to exit the menu.

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



Base Menu Instruction

Menu	Option	
Press "PROG" to	Press "+" (up) or "-" (down) to select;	Template /Attention
enter the base menu	Press "SET" to confirm	Attention
Working method	Default mode; OSC/PED/STP represents dual-port single-channel mode/pedestrian mode/OSC stop dual port single channel mode PED pedestrian mode STP stop PS: Pedestrian mode means that in double gate mode, when both gates are closed, only M1 will open. Standard OSC/PED/STP mode with closing function Automatic. When the gate opens, it will close automatically after the automatic closing time. If a "close gate" command is sent during the automatic closing waiting period, the automatic closing function will be canceled. Community mode (with lock function) (automatic). When the gate opens, no commands will be responded to until it closes automatically. If a gate command is sent during the closing process, the gate will reopen. If a gate command is sent during the automatic closing wait period, the wait time will be recalculated. If the gate fails to close completely for more than ten consecutive attempts, the automatic closing function will be canceled and the gate will close after resending the closing command. Note that in community mode, the gate still maintains the automatic closing function if it encounters obstacles. Three external buttons (OSC/PED/STP represents open/pedestrian/stop) External three buttons: OSC/PED/STP is external three buttons mode (with automatic closing function)	Standard mode; OSC/PED/STP represents dual single gate channel mode/pedestrian mode/stop
58	Dual port mode (default).	Double gate

Double/single gate	Single port mode.	mode.
Gate opening hours Interval	The gate opening time range is 0 to 10 seconds (default is 3 seconds). If the interval is less than 2 seconds, the electric lock cannot be used.	3 seconds.
Automatic Closing Time	Auto close time can be set to 15 (default), 30, 60, 90 seconds.	15 seconds.
Remote control Mode	Single channel mode. Four-channel mode (open/close/stop/pedestrian mode) Pedestrian mode. Delete all paired remotes.	Single channel mode.
Low consumption Mode	Low power mode ON (When there is no operation on the home screen, the control board will automatically enter low power mode after 1 minute.) Low Power Mode OFF	Low consumption mode IN

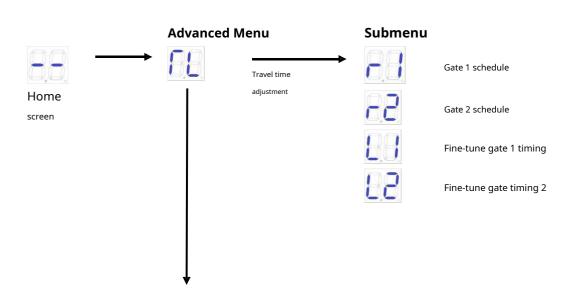
Advanced Menu

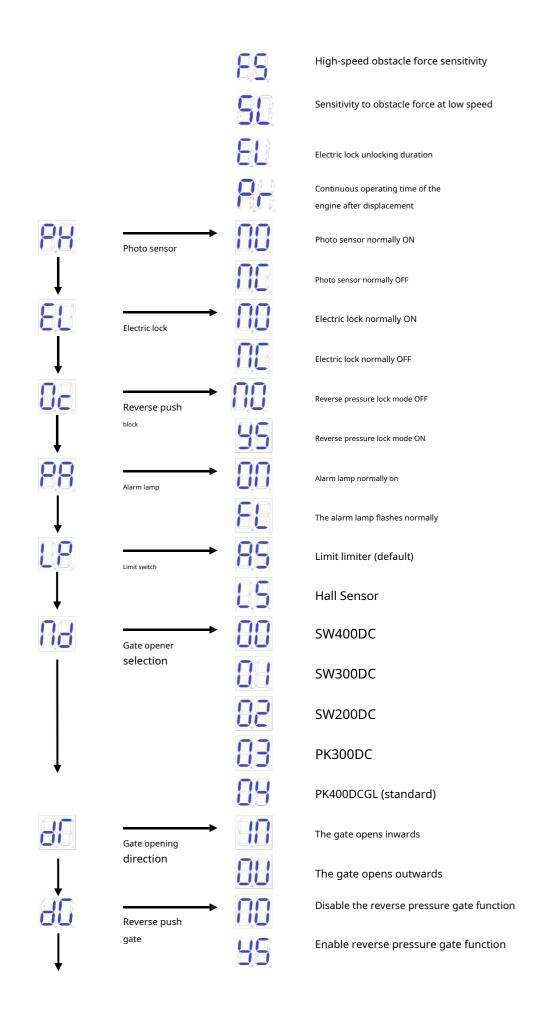
Press and hold "PROG" for 2 seconds to enter the advanced menu.

The digital display will display "TL". Select other functions within this menu using the "+" and "-" buttons. Press quickly "SET" to confirm or to enter a submenu.

Quickly press "PROG" to exit the menu.

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











Canceling the default setting

Factory default setting

Advanced menu instructions

Menu	Option	
Press and hold "PROG"	•	Standard/Attention
for 2 seconds to enter	Press "+" (up) or "-" (down) to select;	Standard/Attention
base menu.	Press "SET" to confirm.	
Travel time adjustment	Gate 1 schedule Gate 2 schedule Fine-tune gate 1 timing Fine-tune gate timing 2 High-speed obstacle sensitivity strength (When the gate is moving at maximum speed, the force sensitivity to obstacles is at its lowest level. If the obstacle sensitivity trimmer rotate to maximum and an error appears on the screen, increase the value; If the trimmer rotates to the minimum and the obstacle sensitivity strength is still too high, decrease the value) Low-speed obstacle sensitivity strength (When the gate is moving at low speed/start and smooth stopping, the strength of sensitivity to obstacles is in the its lowest level. If the obstacle sensitivity setting is at minimum and the gate reaches the stop, but the motor still works, decrease the value. If the sensitivity strength obstacles is at maximum, but the gate stops before reach the stop, increase the value.) Electric lock opening time (duration that the electric lock remains open, the default is 3 seconds) Continuous engine running time after displacement (5S-60S)	After the automatic learning, if the displacement is not ideal, can be adjusted manually. Below the limit stop mode, the the shorter the time, the greater the slowness gate speed distance. In Hall sensor mode, the the shorter the time, the smaller the gate will be travel. Any adjustments to the obstacle sensitivity strength for must be executed fast and slow speeds just for one licensed electrician.
Photo sensor	NO; photo sensor normally ON. (Default) Not applicable; photo sensor normally OFF.	NO; photography sensor normally ON.

Electric lock	Electric lock normally ON. (Default) Electric lock normally OFF.	Electric lock normally ON.
Reverse pressure lock	Reverse pressure lock mode OFF Reverse Pressure Lock Mode ON (When the electric lock is activated, the M1 gate opener will move slightly in the closing direction to prevent the electric lock from jamming and becoming unable to open.)	Reverse push
Alarm lamp	The alarm lamp is normally lit. Power supply 24 V power supply (Standard) The alarm lamp flashes normally. Power supply 24 V.	The alarm lamp is normally ON. 24V power source.
Limit Mode	Limit limiter (default) Hall Sensor	Limit stop (Template)
Gate opener selection	SW400DC SW300DC SW200DC PK300DC PK400DCGL	PK400DCGL
Gate opening direction	The gate opens inwards (default) The gate opens outwards	Gate opens
Reverse push gate	Disable the Reverse Push Gate function Activate the Reverse Push Gate function (When activated, the gate will move slightly to the left). back after reaching the position to avoid getting stuck.)	Disable the Reverse push gate function
Factory default setting	Cancel factory default setting. Factory default setting complete.	

Maintenance

Inspect the gate monthly to ensure it is functioning normally.

For security reasons, it is recommended that each gate be equipped with a sensor.

infrared, which should also be inspected regularly.

Before installing and operating the gate motor, please read all instructions carefully. We reserve the right to modify this user manual without prior notice.

ERRORS

Errors that may occur when the gate is operating correctly.

Error indication	Cause of error	Solution
88	Gate 1 obstructed at opening	Check if there is any obstruction when gate 1 opens Adjust obstacle sensitivity appropriately Increase the distance at low speed appropriately
88	Gate 2 obstructed at opening	Check if there is any obstruction when gate 2 opens. Adjust obstacle sensitivity appropriately Increase the distance at low speed appropriately
88	Gate 1 obstructed at closing	Check if there is any obstruction when gate 1 closes Adjust obstacle sensitivity appropriately Increase the distance at low speed appropriately
88	Gate 2 obstructed at closing	Check if there is any obstruction when gate 2 closes Adjust obstacle sensitivity appropriately Increase the distance at low speed appropriately
8.5	Photo sensor disconnect	Check the status of the photo sensor configuration Check if there is any obstruction in the infrared area
8.8	Gate 1 closes before Gate 2	Relearn the travel scenario Adjust the opening time interval
8.8	The engine runs for a long time	1. Verify that the trip setup is complete 2. Check if the Hall sensor is damaged 3. If the gate does not stop in the low speed state, turn the trimmer counterclockwise to decrease the obstacle sensitivity or reduce the SL value in the travel time setting in the advanced menu.
8.8	Route configuration not completed	Relearn the path

Troubleshooting

Problems	Possible reasons	Solutions
The gate does not open or	1.The power is off.	1. Turn on the power switch.
close normally and the	2. The fuse is blown.	2. Check the fuse and
display does not light up.	3. Problem with the control	replace it if it is burnt out.
	board power wiring.	3.Reconnect the wiring according to the manual.
	4.5.11	1. If the photo sensor is not turned on,
	1. Problem in	make sure that 5 and 6, 5 and 7 are in
	wiring of the	short circuit; if using a sensor
The gate can open,	photosensor.	photographic, make sure that the
but you can't to close.	2nd Assembly problem	wiring is correct and that the mode of
	photosensor.	photo sensor is NC
	3. The photo sensor is blocked	2. Make sure the mounting positions
	by an obstacle.	of the
	4. Sensitivity to	photo sensor are aligned. 3. Remove the obstacle.
	obstacles is very high.	4. Reduce sensitivity to obstacles.
	obstacles is very riight.	i. Reduce sensitivity to obstacles.
	1. Low battery in the	
The remote control does not	remote control.	1. Replace the battery in the remote control.
work.	2. Remote control not	2. ° Relearn how to use the remote control
D. ODEN CLOSE LAND	learned.	distance.
Press OPEN or CLOSE, but the gate does not move.	The gate movement does not	Adjust the motor or gate according to
move, the	it's smooth.	the actual situation.
engine makes noise.		
The circuit breaker tripped.	Short circuit in the power	Check the wiring.
	line or motor line.	
The range of the remote		Connect an external receiving antenna 1.5
control is very short.	The signal is blocked.	meters above the ground.
	1. The output power of the motor is	
The gate stops or	insufficient.	1. ° Check that the power supply is
reverses in position	2. ° Sensitivity to	transformer is normal; if
intermediate.	obstacles is	otherwise, replace the transformer.
	very high.	2. Adjust the STRENGTH setting.
	3. The gate encounters an obstacle.	3. Remove the obstacle.