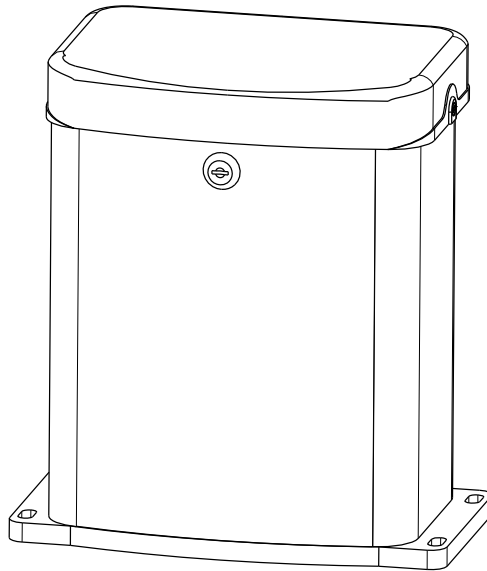


SL300E

Sliding Gate Opener

User Manual



Dear users,

Thank you for choosing this product. Please read this manual carefully before installation and use. Please do not forget to include this manual if you send the product to a third party.

1. Safety Instruction



Please make sure that the power voltage being used matches with the supply voltage of gate opener (AC110V or AC220V); kids are not allowed to touch the control devices or the remote-control unit.

The remote-control unit is single button mode or three button mode (please refer to the instructions of the remote control in accordance with the actual gate opener type). The indicator light on the remote-control unit will flicker when its button is pressed. Main engine and gate can be unlocked with a disengagement wrench and the gate can be manually operated after disengagement.

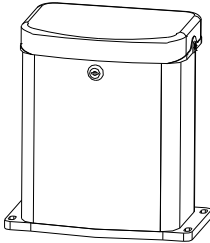
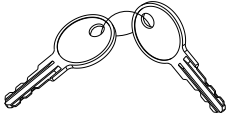
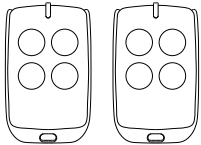

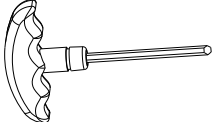
Please make sure that nobody is around the main engine or gate when the switch is operated.

Please temporarily stop using the product if the main engine needs to be repaired or regulated. The installation and maintenance of the product must be carried out by professionals.


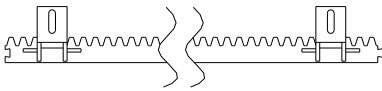
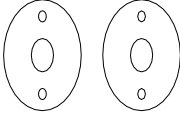
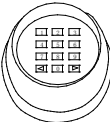
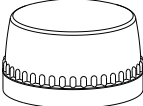


Please read this manual carefully before installing、 using、 maintaining or repairing it. Without following this manual, any injury or property losses caused by improper use or unauthorized modification is out of the responsibility of our company.

2. Packing List (standard)

No.	Picture	Name	Quantity
1		Main engine	1
2		Manual release key	1
3		Remote control	2
4		Accessories box	1
4-1		Manual release bar	1

2. Packing List (optional)

No.	Picture	Name	Quantity
1		Steel gear rack	1m/pc
2		Nylon gear rack	1m/pc
3		Infrared sensor	1
4		Wireless keypad	1
5		Alarm lamp	1

3. Technical parameters

Model	PY300DC
Power supply	220V/50Hz;110V/60Hz
Motor power	100W
Gate Moving speed	13m/min
Maximum weight of gate	300Kg
Remote control distance	≥30m
Remote control mode	Single button mode
Limit switch	Electronic limit switch
Noise	≤60dB
Working duty	S2, 20min
Recording of up remote controls	20
Frequency	433.92 MHz
Working temperature	-20°C ~ +70°C
Storage battery	24V 4.5Ah
Package weight	11.32Kg

4. Installation

PY300DC sliding gate opener is applicable to gate weight less than 300kg, and length of the sliding gate less than 8m. The drive mode adopts the rack and gear transmission. This gate opener must be installed inside the enclosure or yard for protection.

4.1 Installation drawing

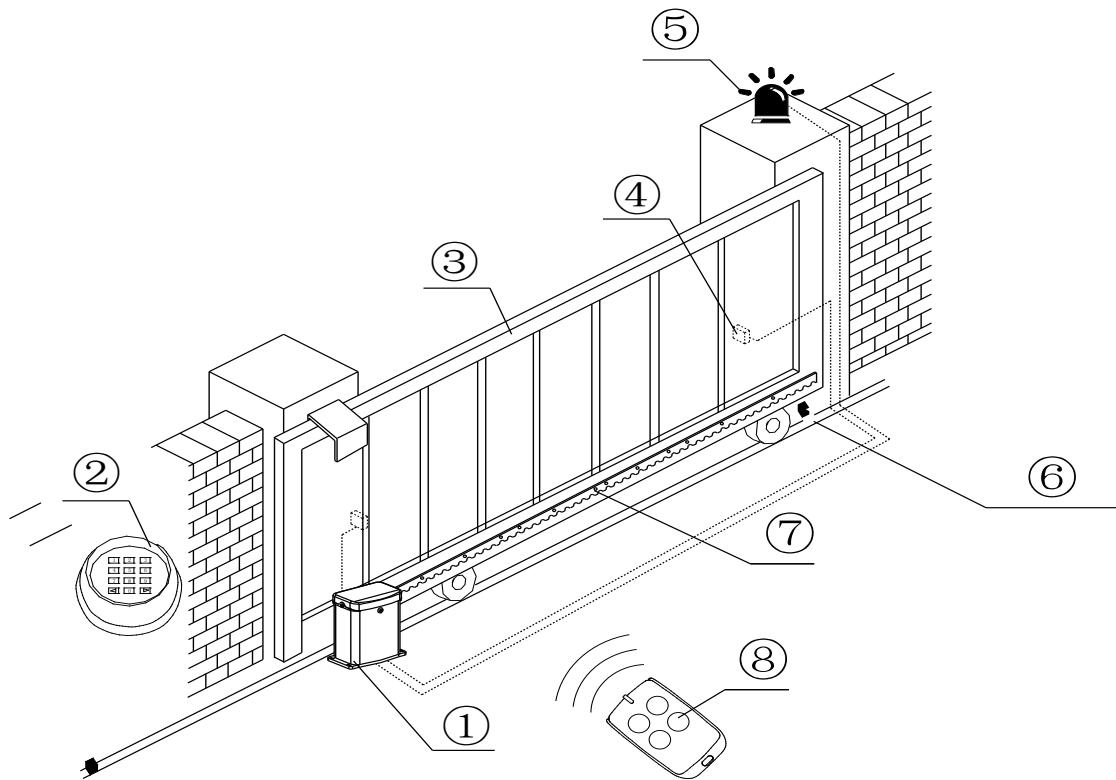


Figure 1

- ① Gate opener; ② Wireless keypad (optional); ③ Gate; ④ Infrared sensor (optional);
⑤ Alarm lamp (optional); ⑥ Safety stop block; ⑦ Gear rack; ⑧ Remote control;

4.2 Size of main engine and accessories

4.2.1 Size of main engine

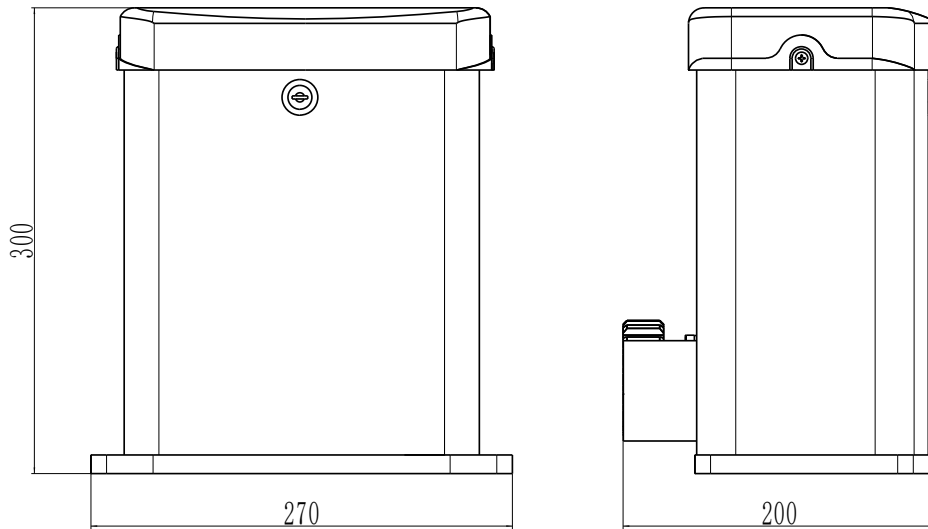


Figure 2

4.2.2 Size of mounting plate

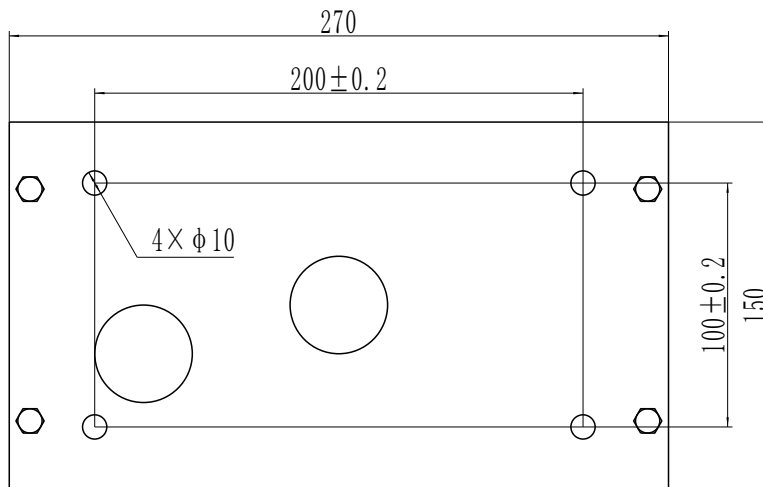


Figure 3

4.3 Installation procedures

4.3.1 Preparation work before installation

Please make sure that the sliding gate is correctly installed, the gate rail is horizontal, and the gate can be manually moved smoothly before installing the gate opener.

Cable installation

In order to guarantee the normal operation of the gate opener and protect the cables from damages, please bury the motor & power cable and controlling cable separately with two PVC tubes.

Concrete pedestal

Please precast a concrete pedestal with the size can be 400mm x 250mm, depth be 200mm in advance, so as to firmly install PY300DC gate opener. **Please make sure the distance between the gate and gate opener is appropriate before casting the pedestal.**

Embedded screws

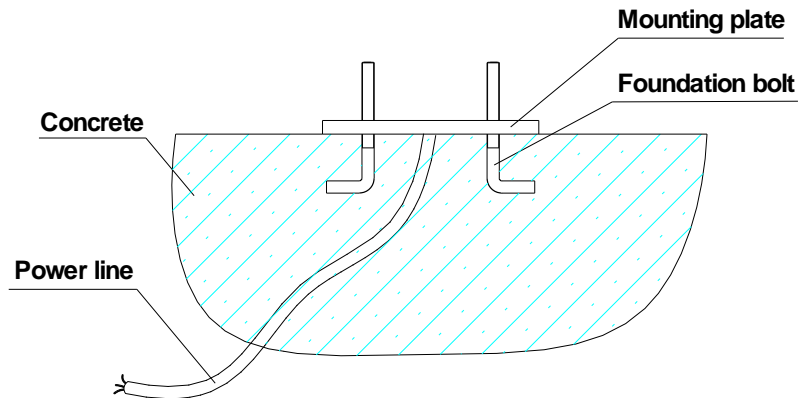


Figure 4

4.3.2 Main engine installation

- Dismantle the plastic housing on the main engine before installation and keep relevant fasteners properly;
- Please prepare the power line for connecting the mounting plate to the main engine (the number of power supply cable cores should not be less than 3 PCS, the sectional area of cable core should be over 1.5mm² and the length should be determined by users according to the situation on installation spot)
- Please unlock the main engine before installation, the unlock method is: first remove the upper cover, and then insert the key to open the shell cover. Insert the manual release bar into the release hole and clockwise rotation till the output gear can be rotated easily, which means the motor has been released.

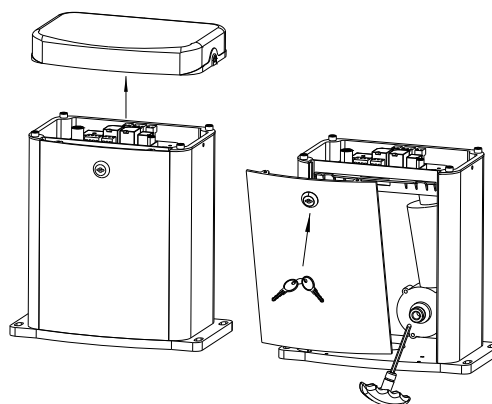


Figure 5

4.3.3 Gear rack installation

- Fix the mounting screws to the rack.
- Put the rack on the output gear, make the rack engage with the output gear then weld the mounting screw to the gate (each screw with one solder joints firstly).
- Manually move the gate (gate should be moved smoothly after motor unlocked) to check whether there is a fit clearance between rack and output gear, as shown in Figure 7.
- Weld all the mounting screws to the gate firmly.
- Make sure that all racks on the same straight line.
- Pull the gate after installed, make sure the entire trip is flexible without any stuck.

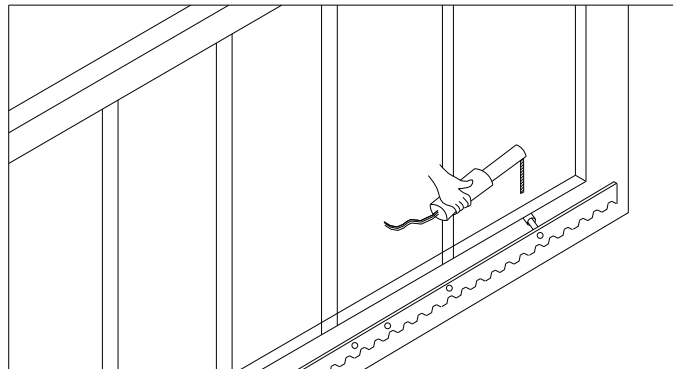


Figure 6

The fit clearance of output gear and rack is shown in Figure 7 below:

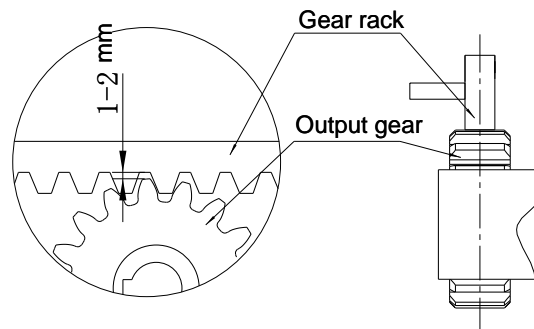


Figure 7



Warnings

- To ensure safety, install safety stop blocks on both ends of the rails to prevent the gate from running out of the rail. Before installing the main engine, make sure that the safety stop blocks are in place and whether it has the function of preventing the gate from running out of the rail or safety range.
- Please make sure that the main engine and its components have good mechanical properties, and the gate can be operated flexibly when manually moved before installing the main engine.
- Please note that for this product, one control can only drive one main engine, otherwise, the control system will be damaged.
- Earth leakage circuit breaker must be installed in where the gate movement can be seen, and the minimum mounting height is 1.5m to avoid being touched by children.
- After installation, please check whether the mechanical property is good or not, whether gate

movement after manual unlocking is flexible or not, whether the installation for infrared sensor (optional) is correct and effective.

5. Control

5.1 Control board

The SL300E sliding gate motor controlled by DC2 control board, which has following features:

- Control one or two 12 or 24V DC motors. For Swing gates, Sliding Gates, Roller shutter doors etc.
- Limit switch inputs, N/C or N/O
- Lock or lights relay output.
- Adjustable timers: auto close time and PE trig auto close time.
- Pedestrian cycle
- Safety control inputs.
- Self-learn soft start and soft stop.

View of Control board

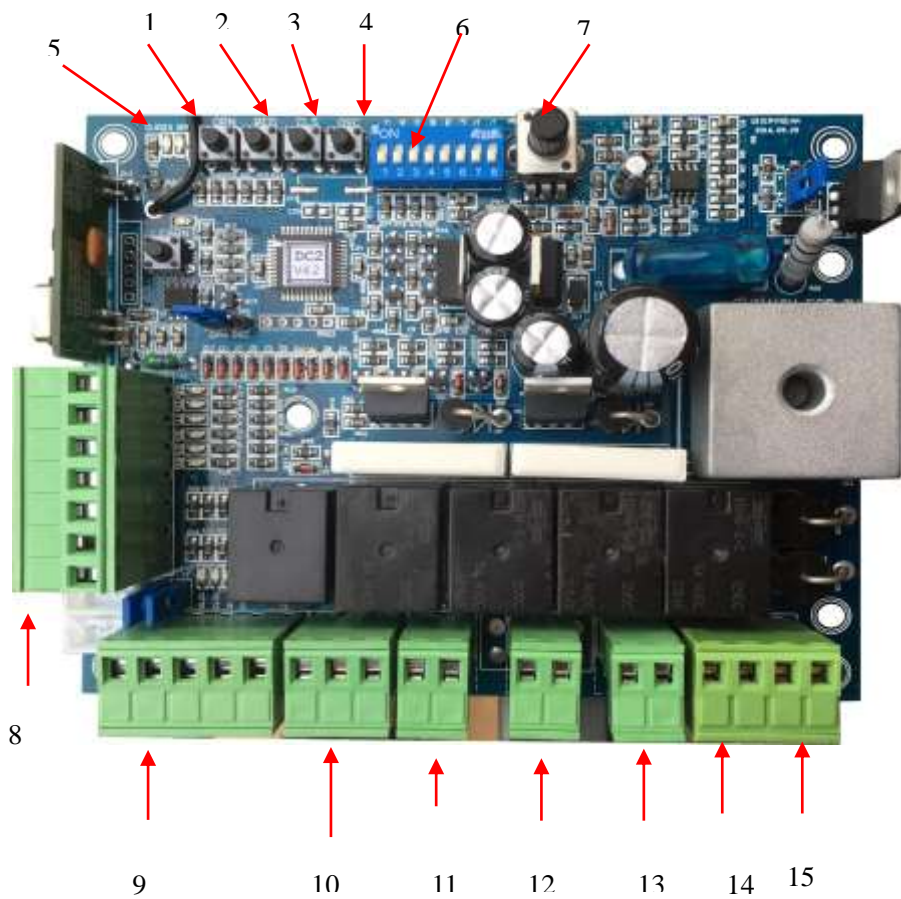
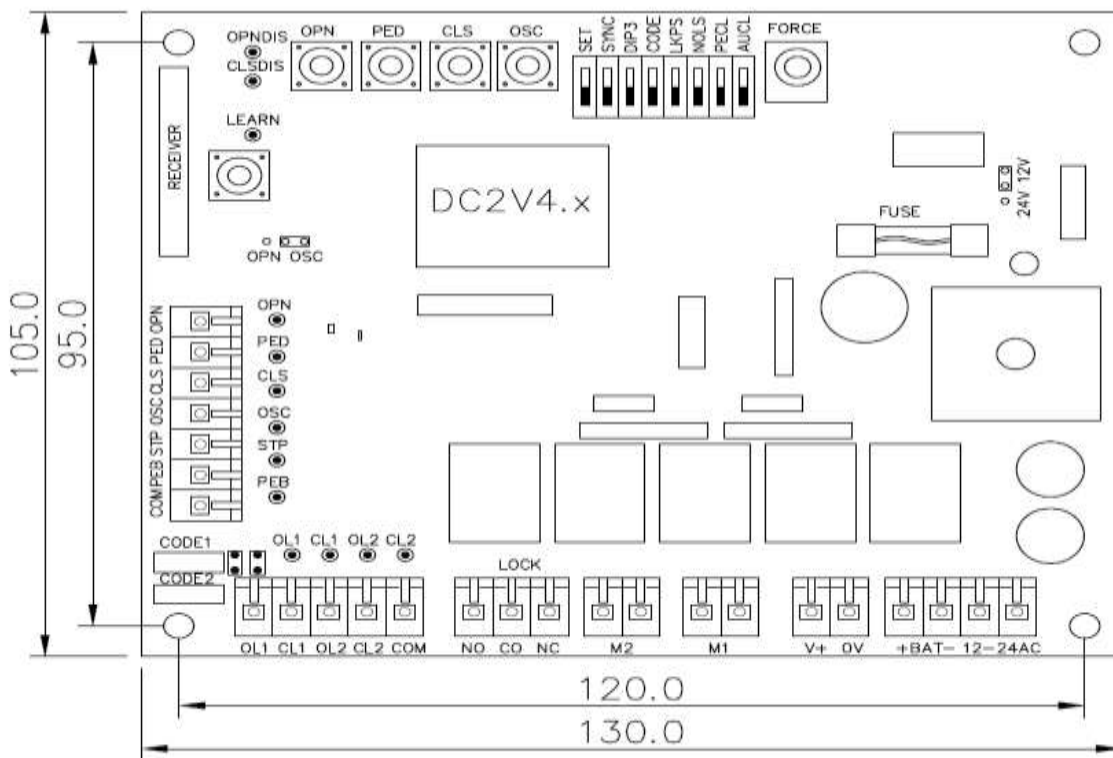


Figure 8

1. OPN open push button
2. CLS close push button
3. PED pedestrian open push button
4. OSC Open, Stop, Close push button
5. Gate status display, open green, close red
6. Mode selection DIP switch
7. Close motor force (reverse power)
8. Control inputs terminals.
9. Limit switch input
10. Lock output relay
11. M2 output
12. M1 output
13. Accessories power 14VDC or 26VDC depending the transformer voltage
14. Battery terminals
15. Power supply 12 V or 24V AC.

5.2 Control inputs



DC2 PCB dimensions and mounting holes

Control Terminals

OPN ----- N/O open input.

PED ----- N/O pedestrian open push button, only open motor-1

PEB ----- N/C photo electrical beams

OSC----- N/O Open – Stop – Close--Open

OL1 ----- Motor 1 open limit switch, N/C or N/O selected by DIP4

CL1 ----- Motor 1 close limit switch, N/C or N/O selected by DIP4

OL2 ----- Motor 2 open limit switch, N/C or N/O selected by DIP4

CL2 ----- Motor 2 close limit switch, N/C or N/O selected by DIP4

Buttons

OPN button ---- Full (M1&M2) open gate and used for settings

PED button ----- Ped (M1) open gate and used for settings

CLS button ----- CLS gate and used for settings

OSC button ----- Open – Stop – Close—Open and for setting

5.3 DIP Switch Settings

DIP1----	SET	ON—set,	OFF – Run
DIP2----	SYNC	ON—SYNC mode,	OFF – No Sync mode
DIP3----	DIP3	Spare for V4.2 and before	
DIP4----	CODE	ON—Encoder control M1 only,	OFF – limit control
DIP5----	LKPS	ON—Lock Pulse Output,	OFF – Lock Presence Output
DIP6----	NOLS	ON—N/O limit switch,	OFF – N/C limit switch
DIP7----	PECL	ON—PE trig Auto Close,	OFF – No PE trig Auto close
DIP8----	AUCL	ON—Auto Close Mode,	OFF – No Auto close

5.4 Motor Force

If any motor current over current setting, both motors will stop in opening cycle or reopen in closing.

If gate(motor) already in low-speed section and nearly closed or opened, controller will not response the overload

5.5 Power input

12 or 24V AC power input. 12VAC for 12VDC motor, 24VAC for 24V DC motor

5.6 Battery Backup

12V battery --- 12VDC motor, 12VAC input.

24V battery --- 24VDC motor, 24VAC input.

Solar regulator output can be direct connected to this terminal if in case of solar application.

5.7 Motor output

M1: Motor 1 output. M2: Motor 2 output

5.8 Power output

Power out for accessories. About 14V----- 12VAC supply, about 26V-----24VAC supply

5.9 Timers setting

Push Buttons functions

Button	SET ON---Setting	SET OFF---Running	Note
OPN	Sync Delay Time	Open gate	
PED	Lock Pulse Time	Lock pulse Time	
CLS	PE Trig Close Time	PE Trig Close Time	
STP	Auto Close Time	Auto Close Time	

Set time settings

Turn SET on, red and green LED flashes a little fast alternatively.

Push and hold on OPN for **Sync Delay Time**

Push and hold on PED for **Lock Pulse Time**

Push and hold on CLS for **PE Trig Close Time**

Push and hold on STP for **Auto Close Time**

Factory setting

Timer	F/Setting	Step	Setting Method	Range
Sync Delay Time	2 sec.	0.1 sec.	SET on + OPN Button	0-25 sec.
Lock Pulse Time	2 sec.	0.1 sec.	SET on +PED Button	0-25 sec.
PE Auto close Time	2 sec.	0.1 sec	SEC on + CLS Button	0-25 sec
Auto Close Time	30 sec.	0.1 sec.	SET on + PRO Button	0-6553 sec

To restore factory setting, turn power off and set DIP1 (SET) on, push and hold CLS button, then power on. While hold CLS button, set SET1 off and then release the CLS button. Now controller restored factory setting from memory.

Special settings

To get into Special Setting: Turn power off and set DIP1 (SET) on, push and hold CLS button, then power on. then release the CLS button. Now controller get into special setting mode

DIP1 On + Special setting.

OPN button---Motor Close Delay Time (Default same to Open Delay Time)

PED button---Spare, CLS button---Spare

OSC button---Spare

Then turn DIP1 off, setting finished

Special setting at the moment only uses OPN bottom to set Close Delay Time. Sometimes Motor Close Delay Time need to be different to Motor Open Delay Time. Reset Motor Open Delay Time will reset Motor Close Delay Time, but reset Motor Close Delay Time will not change Motor Open Delay Time.

6. Sliding gate motor (encoder) set up

6.1 Set up the travel distance (or called set limit switch)

Encoder control (DIP4=ON) only working on M1, M2 does not working at this setting.

- 1) Install motor and mounting rack etc. move gate to the half way and engage the motor
- 2) Push and hold CLS button until CLSLED on and OPNLED off, then release CLS button, now CLSLED slowly flash, OPNLED off, this indicates controller get into closed position set up, push and hold CLS button bring gate to closed position, use OPN and CLS button find right closed position, then push OSC button to confirm. Now OPNLED slowly and CLSLED off, indicate get into opened position set up.
- 3) Push and hold OPN button to open gate. Release OPN button gate stops. Push and release PED button to save current position as pedestrian open position. At fully opened position, push and release OSC button to conform. Setting finished.
- 4) Push remote control or push button to test.

Reset: *remove power and wait 30s, then reconnect.*

6.2 Set the reverse force or called obstacle force

Turn the pot clockwise is increasing obstacle force. Turn the pot anti clockwise is decreasing obstacle force.

For the encoder control sliding gate motor, this force is also used for encoder reference force, which means: if power off and back on, motor running at one direction(opening or closing), when hit post or the obstacle force is over the set limit, gate controller will stop motor and current position will treated as opened(in opening) or closed (in closing) position and recall the memory and reset finished.

7. Others

7.1 Maintenance

Check whether the gate operates normally every month.

For the sake of safety, each gate is suggested to be equipped with infrared protector, and regular inspection is required.

Before installation and operation of the gate opener, please read all instructions carefully.

Our company reserves the right to change the instruction without prior notice.

7.2 Troubleshooting

Problems	Possible Reasons	Solutions
The gate cannot open or close and LED does not light.	<ol style="list-style-type: none"> 1.The power is off. 2.Fuse is burned. 3.Control board power wiring with problem. 	<ol style="list-style-type: none"> 1.Switch on the power supply. 2.Check the transformer input interface fuse, change the fuse if burnt. 3.Re wiring according to instructions.
The gate can open but cannot close.	<ol style="list-style-type: none"> 1.Infrared protection function is disabled, but not connect photocell. 2.Photocell wiring with problem. 3.Photocell mounting with problem. 4.Photocell is blocked by objects. 5.Sensitivity of obstacle is too high. 	<ol style="list-style-type: none"> 1.Connect photocell or disable infrared protection function. 2.If not connect photocell, please make sure that the infrared port and GND short circuit; if connect infrared sensor, please make sure the wiring is correct and the photocell is N.C. 3.Make sure that the photocell mounting position can be mutually aligned. 4.Remove the obstacle. 5.Reduce the sensitivity of obstacle.
Remote control doesn't work.	<ol style="list-style-type: none"> 1.Battery level of the remote control is low 2.Remote control learning is not completed 	<ol style="list-style-type: none"> 1.Change the remote-control battery 2.Re-conduct remote control learning
Press OPEN, CLOSE button, the gate is not moving, motor has noise.	<p>Clutch is not engaged</p> <p>The gaps between rack and drive pinion mismatched</p>	<p>According to the actual situation to adjust the motor or the gate.</p>
RCD switch tripped.	Power supply line short circuit.	Check wiring.
Remote control working distance is too short.	<p>Signal is blocked</p> <p>Need new remote battery</p>	<p>Connect external receiver antenna, 1.5 meters above ground.</p>
The gate moves to the middle position to stop or reverse.	<ol style="list-style-type: none"> 1.Obstruction force is too small. 2.Gate meets obstacle. 	<ol style="list-style-type: none"> 1.According to the instruction to increase the obstruction force.

		2.Remove the obstacle.
Gate opens automatically	Automatic close function has been turned on DIP8=ON but with incorrect opening direction.	Change the running motor direction--- Swap motor wires

Warranty

Warranty Ordinance

1. To repair against this warranty card and invoice during the warranty period.
 2. Warranty period: 1 year after the date of invoice.
 3. Without unauthorized dismantling, any product broken or damage due to quality problem, we'll offer the repair service for free or replace for free.
 4. The malfunction and damaged caused by incorrect use or man fault is not covered by this warranty.
-

Maintenance Record

Check Date	Check Content	Maintained by