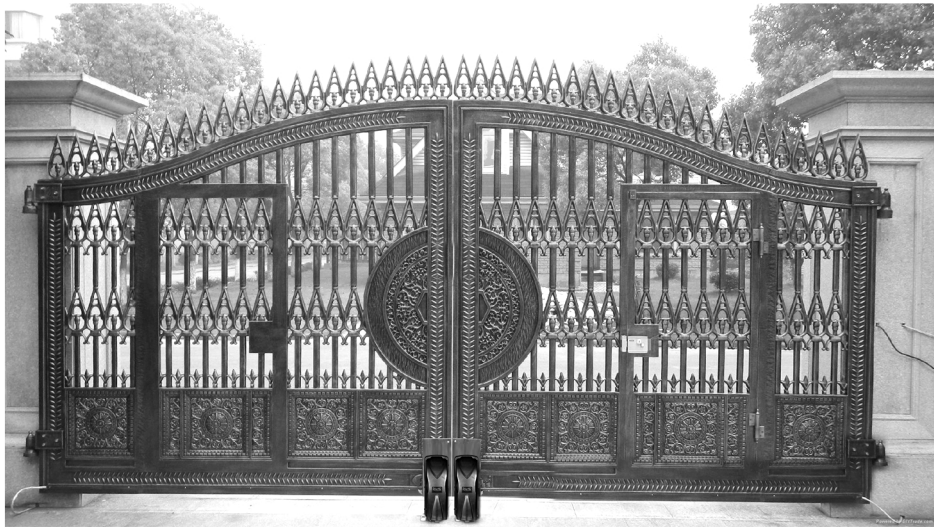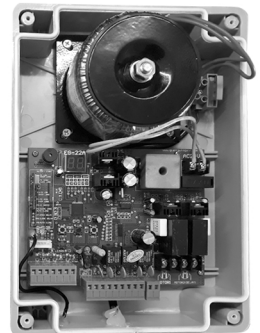# Motorised Swing
Gate Opener

smart gate forever

PRODUCT MANUAL
FT10X

I. General Description

Thank you very much for your purchase of our product. For safe and proper assembly, fully read this manual before installation. If you encounter any problem during use, contact your local dealer.

Roller Style swing gate opener is furnished with an automatic locking mechanism and hence the safe and reliable driving and locking of gates can be realized. With a compact structure and a high starting torque, this gate opener is installed on the far end of the gate away from the hinge and operates in a highly efficient, safe and energy-efficient manner. The characteristic sliding bar, a shock-absorbing device, can automatically rises and lowers to accommodate slightly wavy ground surfaces and there is no need to have any rail. With our products, the gate can be opened to any angle without limitations from the opener. It is suitable for all gates regardless new or old. Gates without causing any damage to the original structure of the gate body and gate posts.

The intelligent remote controller (AC or DC mode) of our dual-circuit two-line gate opener is an electro mechanical product designed and developed independently by ourselves based on ergonomic principles. It has gained extensive popularity since it was launched into the market.
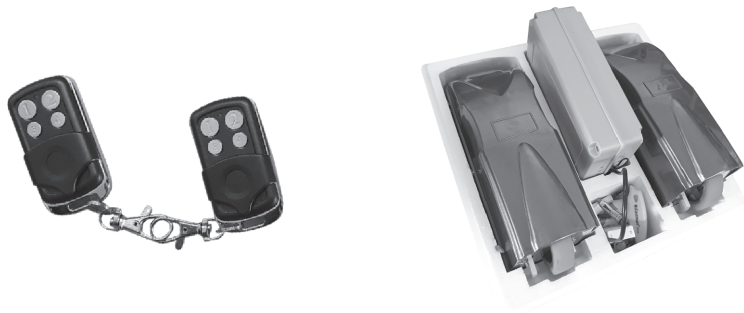
II. Gate opener structure and classification

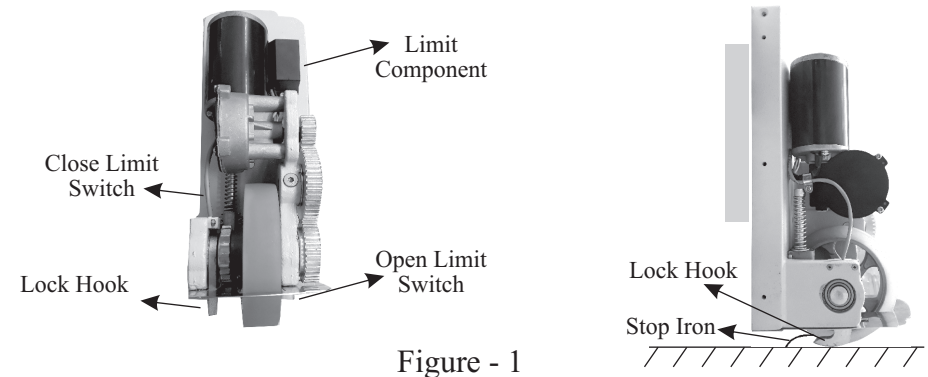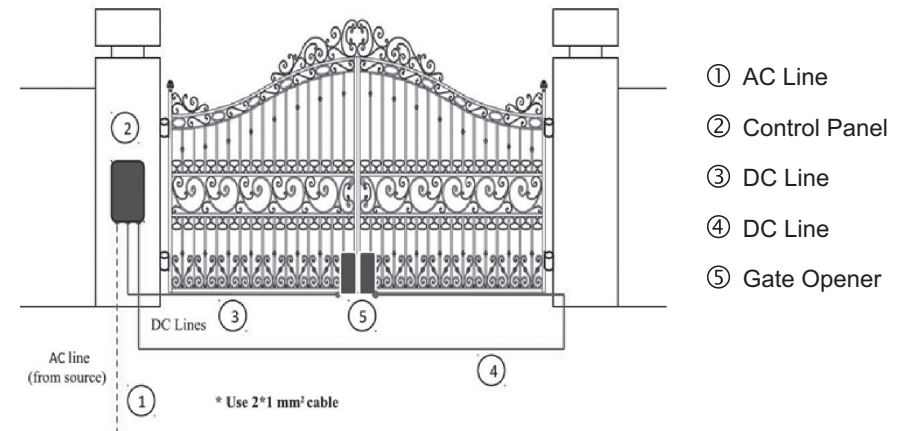1.   Opener structure, as shown in

Figure - 1

2.   Control and power distribution structure, as shown in Figure 2

① AC Line
② Control Panel
③ DC Line
④ DC Line
⑤ Gate Opener

3.   Gate opener classification : inward gate opener and outward gate opener

III. Main technical data

Item	Specification
Mains voltage	230V or DC24V
Tolerance to ground unevenness	100mm
Operating speed	90^0 / 10 S
Ambient temperature	- 40 to +60 degrees Celsius
Motor power	70W x 2
Dimension of Gate Opener	360mm (H) x 130mm (W) x 170mm (D)
Dimension of control panel	255mm (H) x 180mm (W) x 90mm (D)
Gross weight	23kg/box
Remote control distance	80 m

IV. Features

1. Single-leaf or double-leaf opening: The function can be activated by pressing button.

2. Controller locking: To avoid unauthorized opening, the function can be activated with remote controller.

3. Automatic detection and protection: the gate opener will stop automatically if any obstacle is detected during opening; it will automatically return to the original position if any obstacle is detected during closing.

4. Infrared detection and protection: the gate will be automatically re-opened if any passing vehicle or person is detected during closing.

5. Automatic detection and access control: it can be connected to a remote control, number lock, finger scanner, vehicle sensor, GSM, Bluetooth, WIFI mobile application, card reader or any other device for automatic access control. Example; video door phone, wireless switch and wired switch (NOTE: If use wired connection, the wiring should be in proper way; don't wire with AC line, should be in PVC conduit and avoid earthing & leakage. So always prefer wireless switch)

6. Backup power interface: it will be automatically switched to storage battery or solar cell mode upon external power failure.

Please refer to the Instructions Manual of the controller for the' foregoing functions, interfaces and detailed operating and setting methods.

V. Manual Operating method

Manual opening: insert the key into the lock hole and rotate it clockwise to disengage the clutch (the gate opener is in manual mode). Then push the gate open with hands.
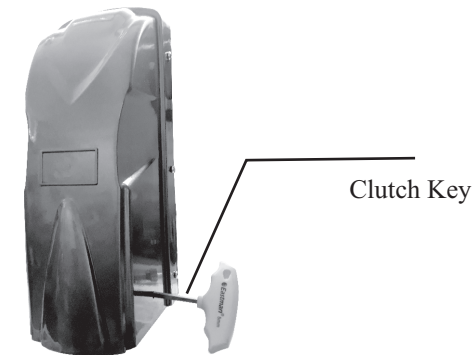

Clutch Key

Figure - 3 Switching between Manual and Electrical Modes

VI. Installing methods and commissioning

(I)   **Preparations**

1.   Check the flexibility of the gate during opening and closing; when the gate is at the close position, the bottom edge of the gate frame shall be at least 25mm above the ground (slightly higher than the stopper plate, as shown in Figure 4). Make special adjustments if the gap is less than 25mm.
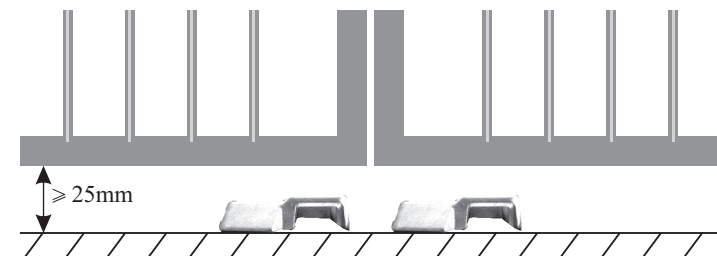

≥ 25mm

Figure - 4 Heights of Gate Frame and Retainer Irons

2. The unevenness of the ground within the working scope of the gate opener

    The fall height of the highest point of the ground difference is 80mm.

3. The gate opener and the controller are connected via two circuits of 1mm two-core flexible power cables. (Separate power cable in each motor)

4. If using infrared and flash light to avoid accidents at time of the obstacles, please connect .5mm three core cables separately.

5. The control panel's all output cables never go through the AC power supply.

(II) Controller installation

1. Install the controller as close to the gate as possible in order to shorten the wires, reduce circuit losses and save electricity.

2. The controller shall be installed at an appropriate position and height and the environment shall be well ventilated. Measures shall be taken to avoid rainfalls, sunshine or child access.

3. Wiring method: please refer to the Instructions Manual of the controller.

(III) Gate opener installation (the pair of gate openers shall be of the same specifications)

1. Determine the installing position of the gate opener: mark the installing positions of the two gate openers on the gate body when the two gate leaves are closed. Note: the distance of the inner edges (outer covers) of both gate openers shall not be less than 70mm for the purpose of convenient manual operation.

2. There are two methods to determine the installing heights

a) Method 1: move the mounting plate up and down until the bottom edge of the mounting plate is 140 to 150mm above the lowest point of the ground. Mark the installing height of the mounting plate.

b) Method 2: keep the gate opener in natural state (the spring is neither compressed nor extended) and against the gate body vertically. Mark the position of the mounting plate on the gate body. Move the mounting plate further downward by 20 to 40mm from this mark and this is the actual installing height of the mounting plate.

In either method, the installing height of the mounting plate shall be appropriately adjusted according to the ground smoothness, gate size and weight, hinge flexibility and other factors.
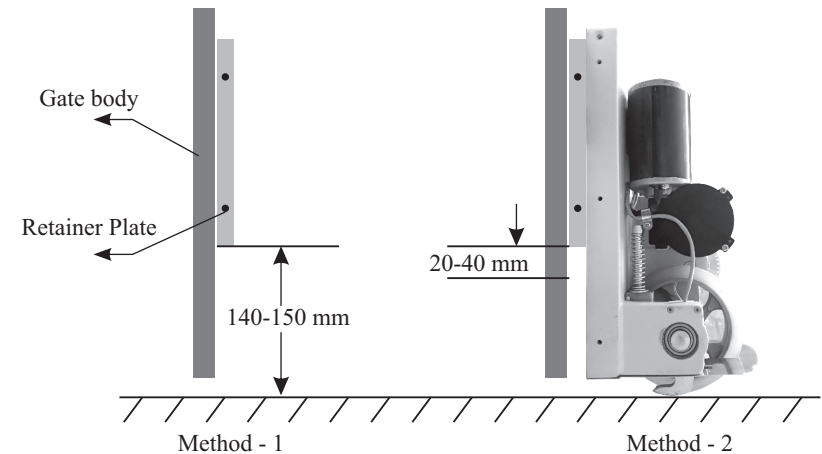
Gate body

Retainer Plate

140-150 mm

20-40 mm

Method - 1

Method - 2

Figure - 5

3. Make one hole on cither of the inner sides of the gate on the bottom frame (for entry and exit of wires) for wires. Or fix a pipe on the bottom frame and bring cable through. One flexible sleeve over the wires shall be used where they go through the holes.

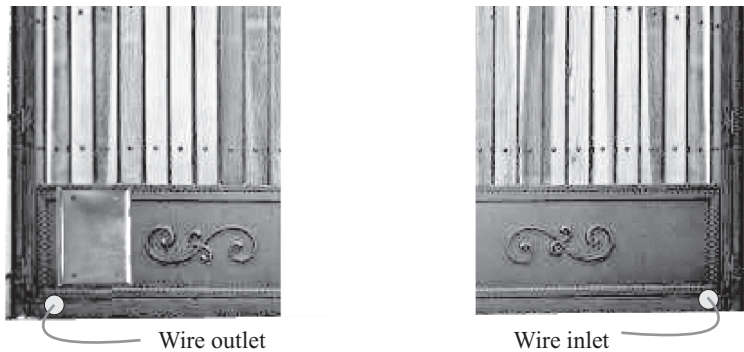

Wire outlet   Wire inlet

Figure - 6 Holes on both the inner sides of the gate on the bottom frame.

4. Installation of stopper plates with gate closed (please refer to the following points):
   When the gate is in the mode of manual operation, move the gate to the close position and install the stopper plate into the lock hook. Move the stopper plate so that the centerline of the lock hole is aligned to the lock hook and mark the position of the stopper plate. Drill a hole on the-ground and fasten the stopper plate with expansion bolts.

Left wing   Right wing
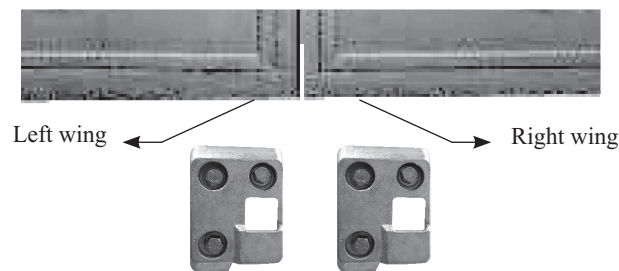
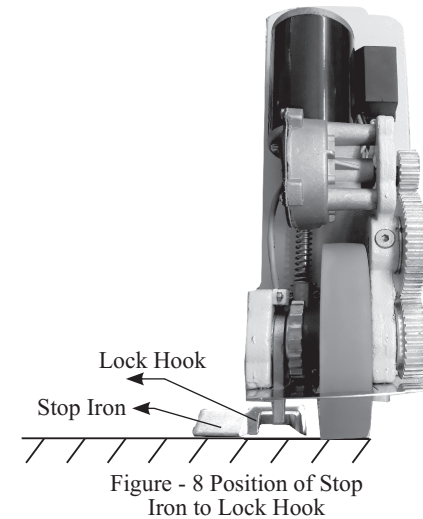Figure - 7 Position of Stop Iron to Gate (Top View)

Lock Hook

Stop Iron

Figure - 8 Position of Stop Iron to Lock Hook

Note

1.   For the better safe locking function of the gate opener, the installing
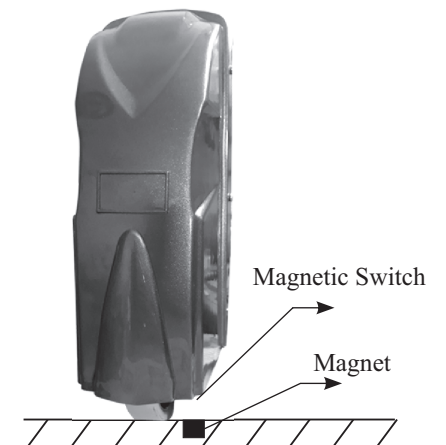

Magnetic Switch

Magnet

Figure - 9 Magnet Position

(IV) Operation and commissioning of the electric control gate

Check if the wiring is properly done. Use the key to disengage or engage the clutch and check if the gate can be properly manually opened and closed. Push the gate to the mid-position and engage the clutch of the gate opener (in electric state). Switch on the mains power and the indicators are in normal condition.

In the time of checking opening light (green) and closing light (red) will be there in control board. If there any change occurs, motor wire poles should be connected in opposite position.

Please follow the controller board Manual for motor torque setting, auto close time setting, motor delay setting, soft start and soft close settings.

VII. Maintenance and services

1. The turning parts of the gate opener shall be kept clean and free of any attachments.
2. Frequently clean away the foreign matters in the grooves of the retainer plates.

VIII. Trouble shooting

Trouble	Cause	Solution
Gate stop on the Middle point	Lack of hinges efficiency	1. Lubricate the hinges 2. Set the motor torque
The gate can't be stopped at the desired position	1. Magnet in the ground is missing 2. Open limit switch or limit component fails	Inspect, repair or replace
Locking function failure	1. stopper plate is loosened or there is any obstacle 2. limit switch failure	Inspect, repair or service

IX. Packing list in standard configurations

Item	Quantity
Motor	2
Control panel	1
Remote	2
Clutch key	1
Front stopper	2
Limit Magnet	2
Expansion bolt	6
Product manual	1
Warranty certificate	1

X. Optional parts

Item	Specifications
Wireless switch	DC12V
Vehicle transmitter	DC12V
Password opener	DC12V
Biometric sensor	DC12V
GSM opener	DC 12V / 24V
Bluetooth opener	DC12V / 24 V
Infrared detector	DC12V / 24 V
Flashlight	DC 12V / 24V
UPS	DC24V, 7Ah

Manual for EG-22A Control Panel

1. Technical Parameters:

1. Control Panel Voltage: AC24V, Available for 24 V back up battery.

2. Applicable Range: Suitable for double arms swing gate opener.

3. Encoder For transmitter: Our own customized rolling code.

4. Support remote control: Can memorize 120PCS transmitters at most

5. Motor character: 24V DC motor x 2
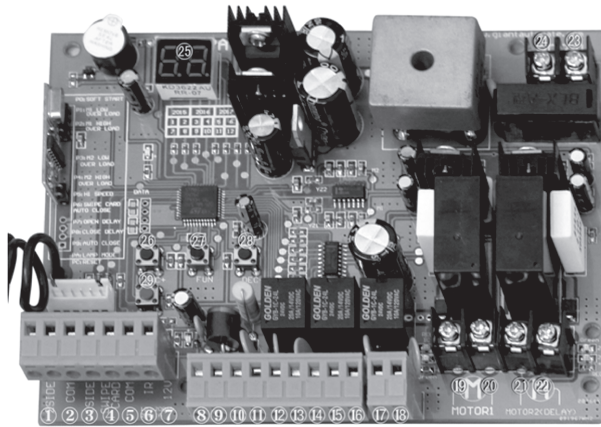
1. 2 SIDE terminal is used for connecting any external device that operates double gate

2. COM terminal is COMMON used for connecting the "ground" of external devices

3. 1 SIDE terminal is used for connecting any external device that operates single gate

4. Swipe Card terminal is used for connecting any external devices that will operate to open the gate

5. COM terminal is COMMON used for connecting the "ground" of external devices

6. Infrared terminal is used for connecting photo electric sensor

7. 12V DC output is used for connecting photo electric sensor (Continuous output current <=200mA)

8. 24V battery output is used for connecting the backup battery +

9. 24V battery output is used for connecting the backup battery -

10. 24V DC output is used for connecting external device. (Such as photo electric sensor, max current output 1A)

11. GND is used for connecting the "ground" of external devices

12. 24V DC lamp output is used for connecting flash light +.

13. 24V DC lamp output is used for connecting flash light -.

14. 24V DC lock output—the NF terminal which used for connecting the electric lock

15. COM is COMMON used for connecting the "ground" of lock

16. 24V DC lock output—the NA terminal which used for connecting the magnetic lock

17. 24V DC alarm output

18. 24V DC alarm output

19. and 20. Motor1 terminal is used for connecting the motor 1 installed on the gate that opens later and close first. This terminal connect 1st red wire (counted from your left hand side to right hand side)

21. and 22. Motor2 Delay terminal is used for connecting the motor 2 installed on the gate that opens first and close later. This terminal connects 1st blue wire (counted from your left hand side to right hand side). NOTE! If for single gate, the gate motor just can connect the Motor2 Delay terminal.

23. AC24V input is used for connecting the transformer

24. AC24V input is used for connecting the transformer

25. Digital display is used for showing you the setting data

26. INC+ is used for figure increase when setting the data

27. FUN is used for store the data
28. DEC- is used for figure decrease when setting the data
29. Learning button is used for program/remove remote

Remote control

Button "1" depressed to operate single gate; button "2" depressed to operate double gate.

Program new remote control:

First step:

Press the LEARN button on the control board for about 1 second, the indicator LED would turn off, then now means have already enter learning

Second step:

Press any button of the new remote control for about 2 second, then digital display would show the remote number while indicator LED on board starts flash four times with one buzzer sound then now means the learning successfully.

Note! After you press LEARN button, if not receive the new remote signal within 5s, indicator LED would turn on and exit learning.

Remove remote control:

Press and hold the LEARN button for about 5 second, if with one buzzer sound and indicator LED light on, then now means remove remote successfully.

Setting of the control board:

After power on, digital display will self-check from 00-99 with buzzer sound. If indicator LED light on, buzzer stops sound, it means the system is normal.

Basic operation method:

Press and hold the [FUN] button until the digital display shows PO. Now you enter the menu setting. You could through adjust the [INC+]

[DEC-] to increase or decrease the serial number or numerical value. After data adjust well then press [FUN] to store the data. With one sound of buzzer, it store successfully. After store the data, the digital display would still on the menu number you just set, if you need to enter next menu setting, please press [INC+] or [DEC-] to choose and confirm with [FUN] to enter the menu number you want to set. Such as after you store the P0 value and press [FUN] to store it, then now the digital display would still show the number P0, and if you want go further to adjust P1, please press one [INC+], then digital display show P1, later press [FUN] to enter the P1 setting. And if you not need to enter next menu setting, you could press [LEARN] button to exit the menu setting.

1. To set the soft start time:

When digital display indicates P0, the gate opener is on the soft start time setting. The soft start time adjustable from 0-6s, 0s means close the soft start time, max soft start time 6s. Each time you press and release the [INC+] button, the figure increase by 1; each time you press and release the [DEC-] button, the figure decrease by 1. Press the [FUN] button to store the data when the soft start time chosen, then the soft start time setting finished (Factory set 2s).

2. To set the level of stall force:

2a-- When digital display indicates P1, the gate opener is on Motor 1 low speed running stall force adjustment. There are 0-20 levels for optional. Each time you press and release the [INC+] button, the figure increase by 1; each time you press and release the [DEC-] button, the figure decrease by 1. Press the [FUN] button to store the data when the stall force level chosen, then the stall force of Motor 1 low speed running stall force adjustment finished. (Factory set level 6)

2b-- When digital display indicates P2, the gate opener is on Motor 1 high speed running stall force adjustment. There are 0-20 levels for optional. (Factory set level 10)

2c-- When digital display indicates P3, the gate opener is on Motor 2 low

speed running stall force adjustment. There are 0-20 levels for optional. (Factory set level 6)

2d-- When digital display indicate P4, the gate opener is on Motor 2 high speed running stall force adjustment. There are 0-20 levels for optional. (Factory set level 10)

3. To set the high speed running time:

When digital display indicates P5, the gate opener is on high speed running time setting. There is 0-33s for optional. 0s means without high speed running, gate opener would keep running in slow speed. Max high speed running time 33s. (Factory set 5s)

4. To set the auto close time after swipe card:

When digital display indicate P6, the gate opener is on auto close time setting (NOTE! this auto close time just means the auto close function which realize through external device-). There is 0-99s for optional. 0 means the gate opener would not auto close after swipe card. Max auto close time after swipe card 99s. (Factory set 10s)

5. To set the interval time:

5a. When digital display indicates P7, the gate opener is on open interval time setting. There is 0-10s for optional. 0s means double gates open simultaneously. "1" means the Motor 2 start to open 1 second before Motor 1 start to open. Max open interval time 10s. (Factory set 0s)

5b. When digital display indicate P8, the gate opener is on close interval time setting. There is 0-10s for optional. 0s mean double gates close simultaneously. "1" means the Motor 1 start to close 1 second before Motor 2 start to close. Max close interval time 10s. (Factory set 0s)

6. To set auto close time:

When digital display indicates P9, the gate opener is on auto close time setting. There is 0-99s for optional. 0s mean the gate opener would not auto close. Max auto close time is 99s. (Factory set 0)

7. To set lamp/alarm output control:

When digital display indicates PA, the gate opener is on lamp/alarm output control setting. There is 0-3 for optional. "0" means the alarm on mono stability model and the lamp without voltage output after the gate total close 30s, other time with voltage output. "1" means the alarm on mono stability model and the lamp would only flash when gate running. (Factory set 0)

8. To reset:

When digital display indicates Po, the gate opener is on rest setting. After enter Po setting, press the [FUN] to store and then now the reset successfully.