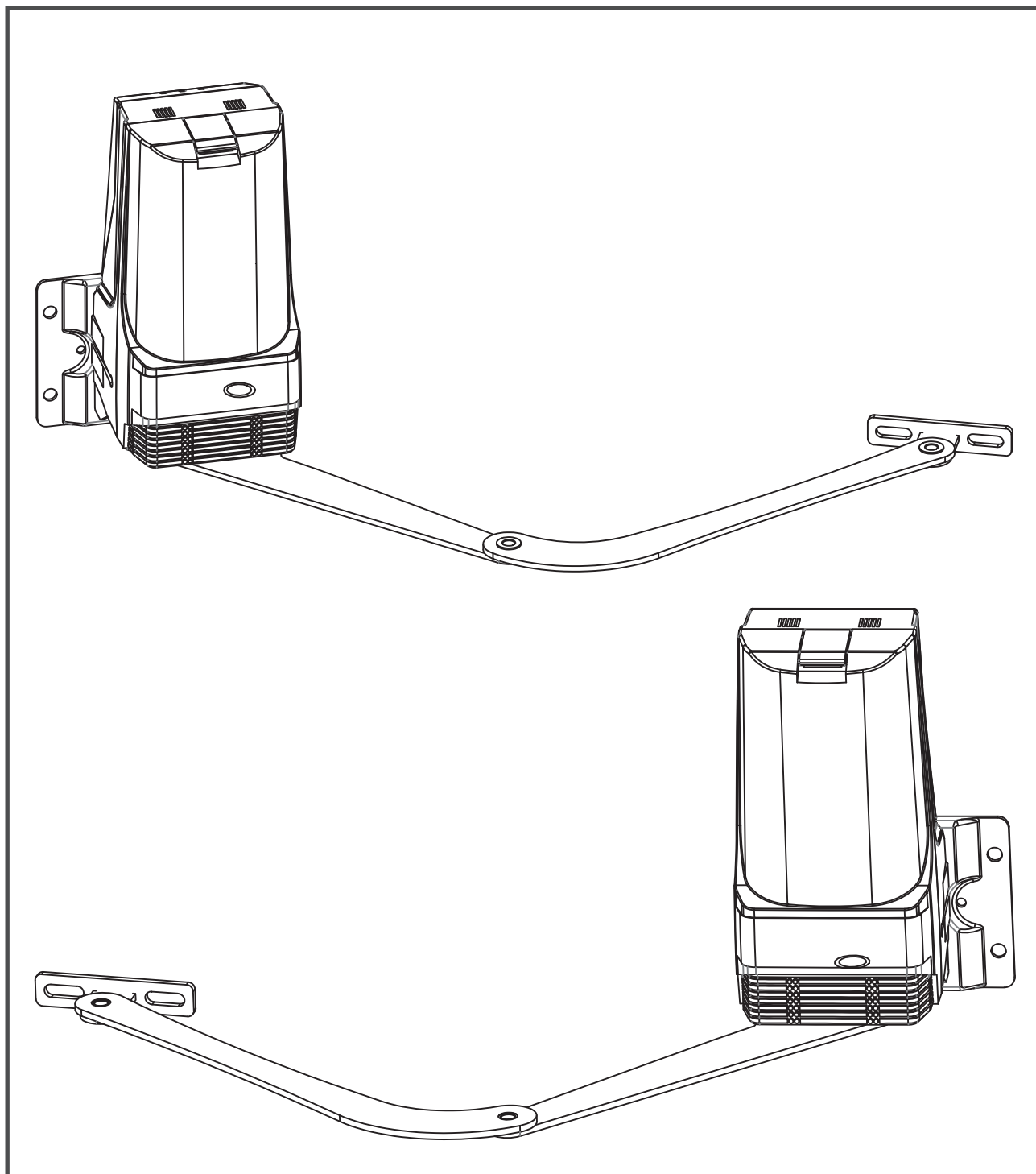


Articulated Arm Swing Gate Opener

USER MANUAL



V15.0.2

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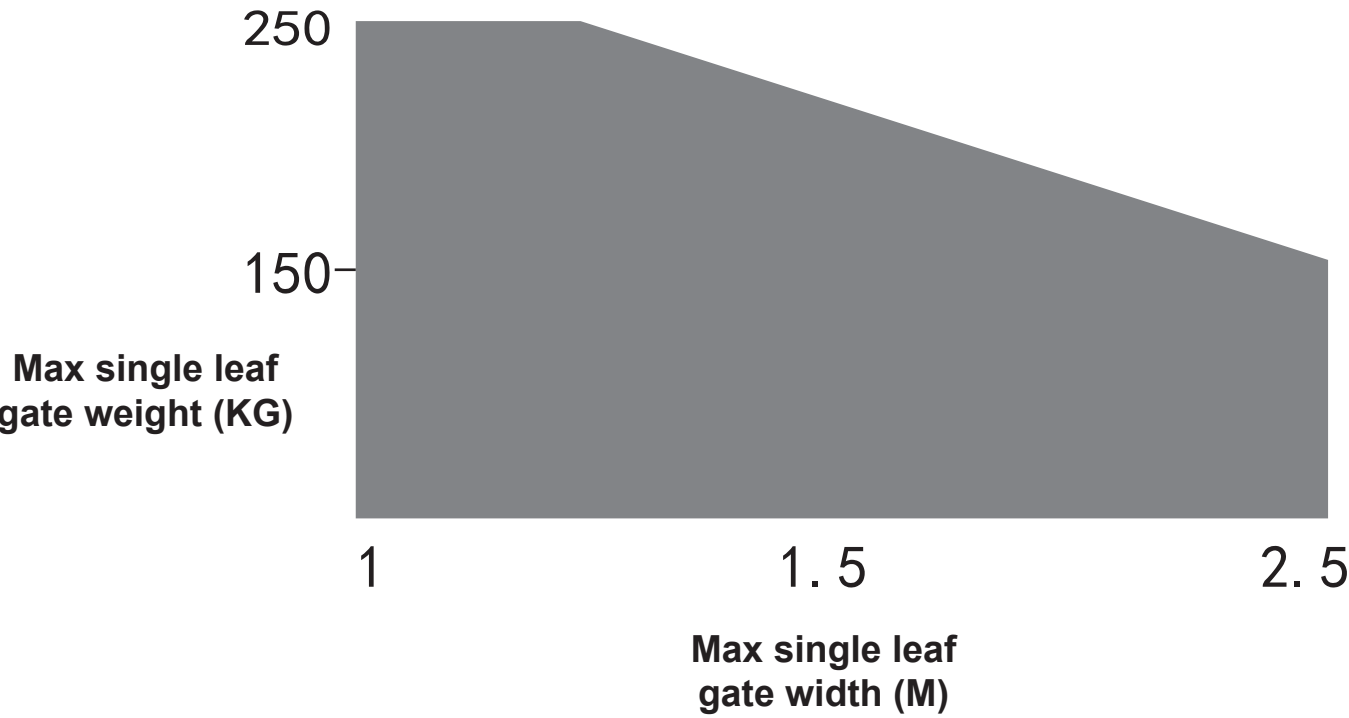
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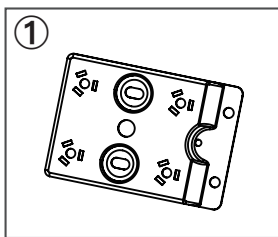
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Parameter

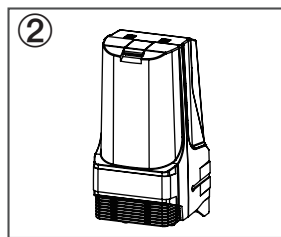
Working Voltage	DC 12V
Rated Frequency	50Hz or 60Hz
Rated Power	25W x2
Max. Single Gate Weight	250KGS
Max. Single Gate Width	2.5M
Working Cycle Time	11 Second (90°opening)
Working Current	1.3A
Max. Opening Angle	110°



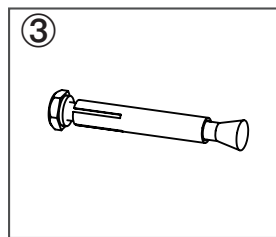
Part List



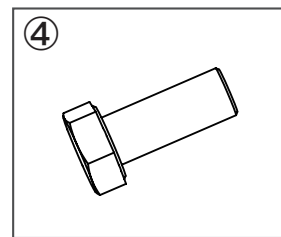
Mounting base
plate x2



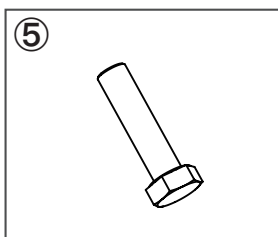
Gate opener x2



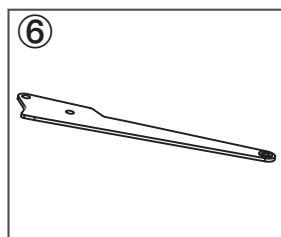
M8*60 floor mounting
expansion bolt x8



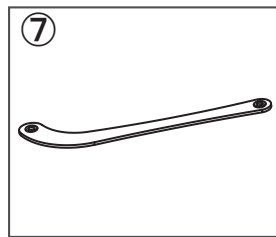
M10*25 hexagonal
screws x4



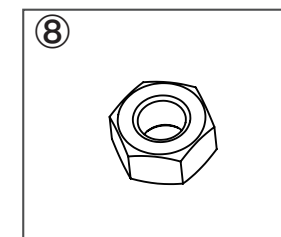
M10*40 hexagonal
screws x4



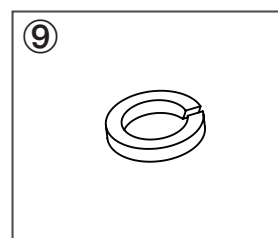
Arm Bracket ①



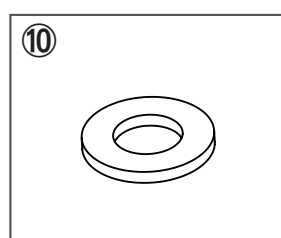
Arm Bracket ②



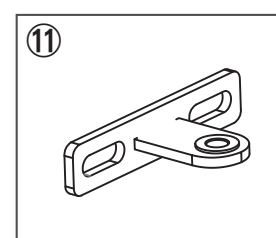
M10 nut x12



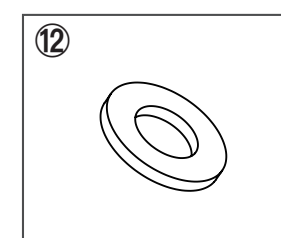
φ10 spring washer x12



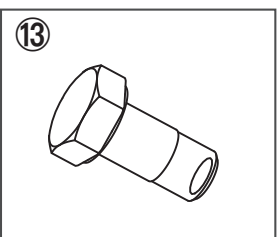
φ10 Flat gasket x12



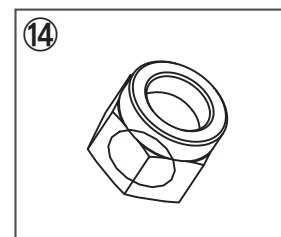
Gate bracketx2



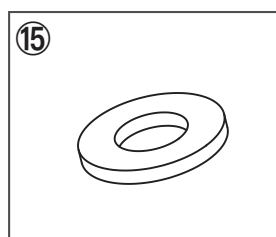
φ10 Nylon gasket x8



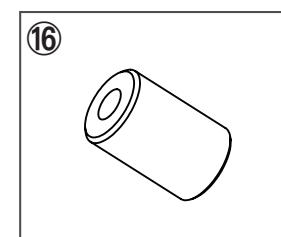
M12*25 external hex
screws x4



M12 nut x4



φ12*φ24*2.5 white nylon
gasket x4

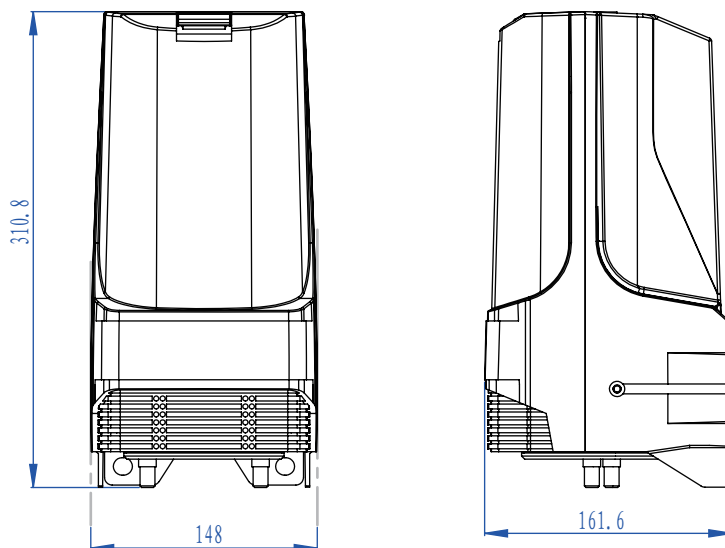


Knurled stud

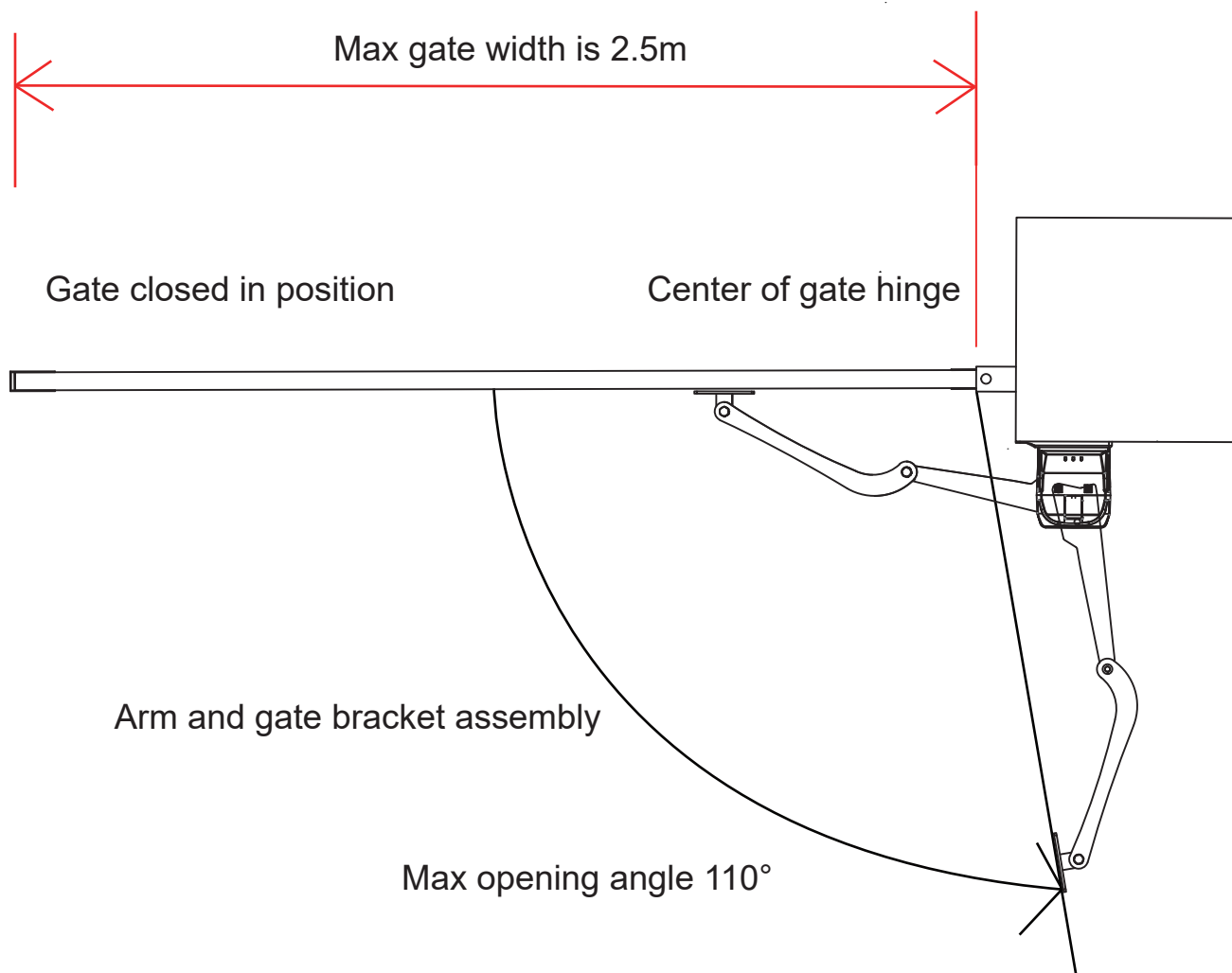
Installation

Its arm bracket has left and right directions, please pay attention to distinguish them when installing.

Gate Opener Dimension



Dual Gate Overview



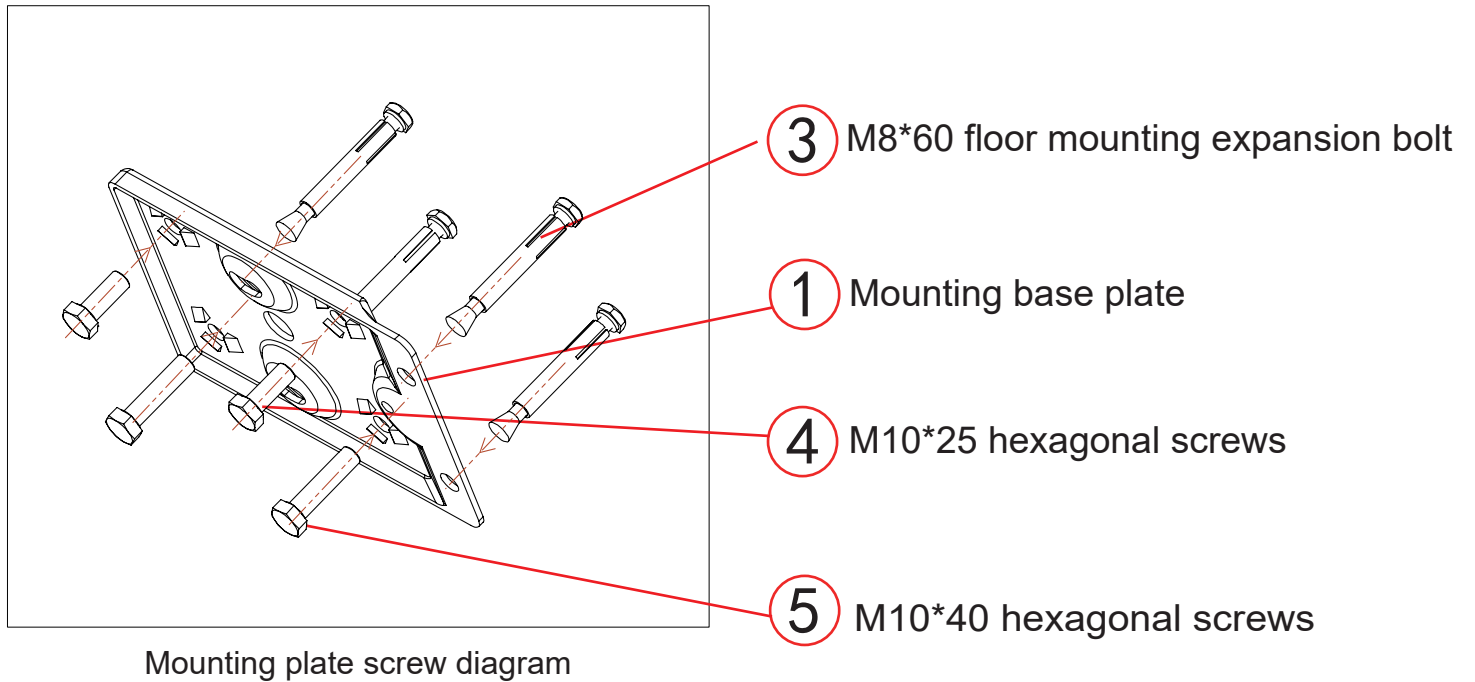
Pull to Open Installation

This means the gate operator is mounted on the inside of the property and pulls your gate in towards the property. Please make sure installation is done by referring the above measurement, otherwise it will cause the inaccurate limit stop.

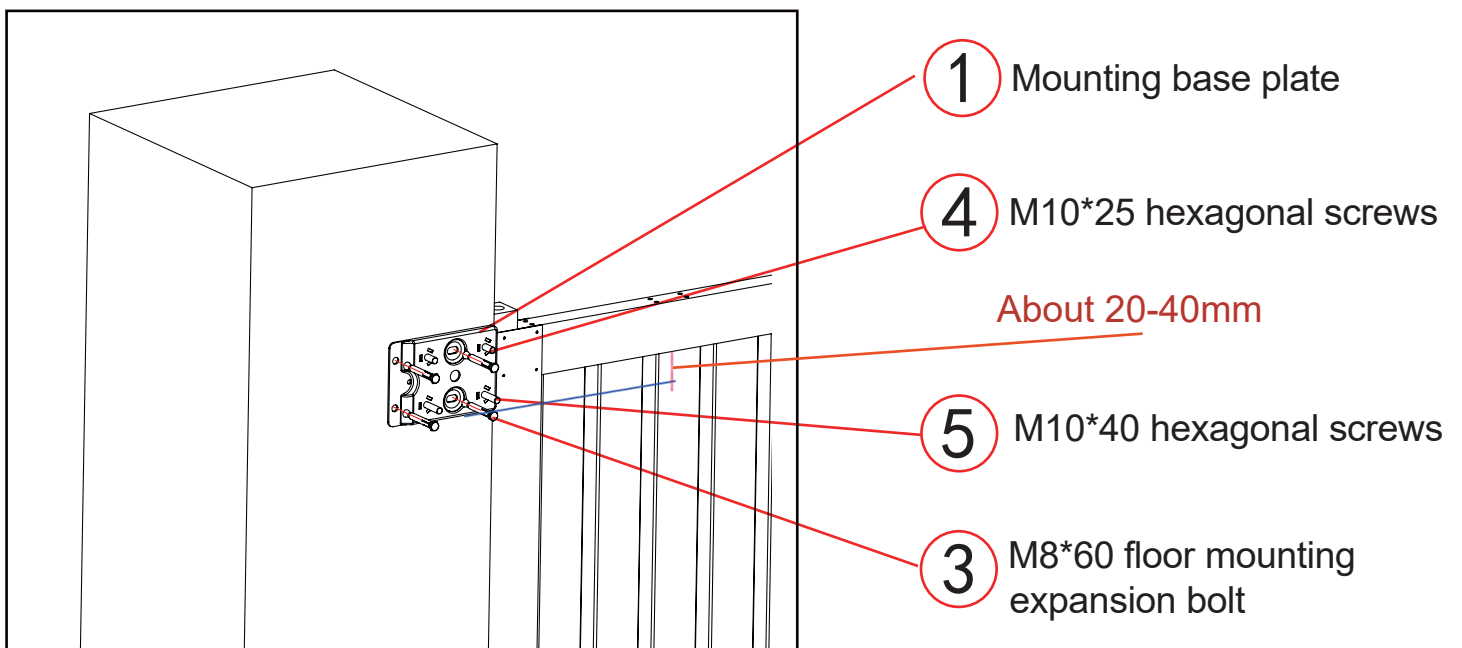
Clockwise Direction is for opening of left gate.

Counter Clockwise Direction is for opening of right gate.

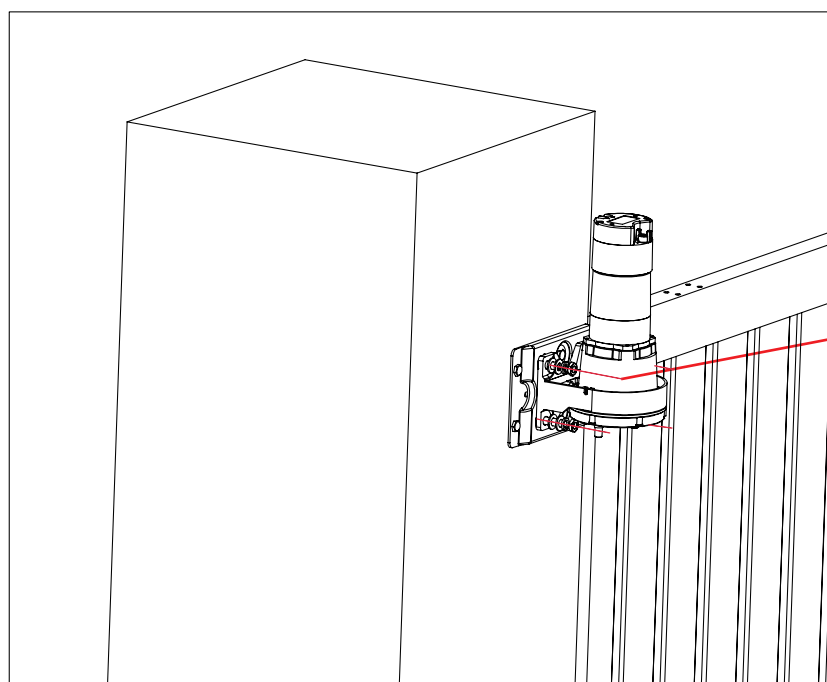
Left Gate Opener Installation as Sample



Step 1. Fixed the mounting plate on the wall by screws.



Step 2. Attached the gate opener into the mounting plate and lock the nut, washer and flat gasket.



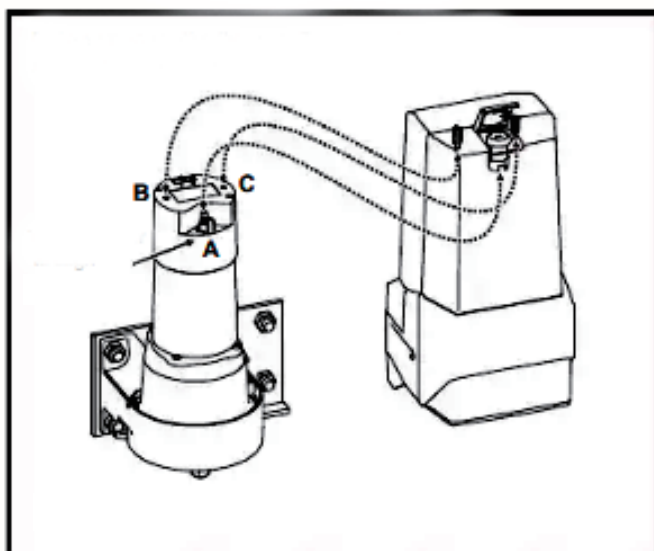
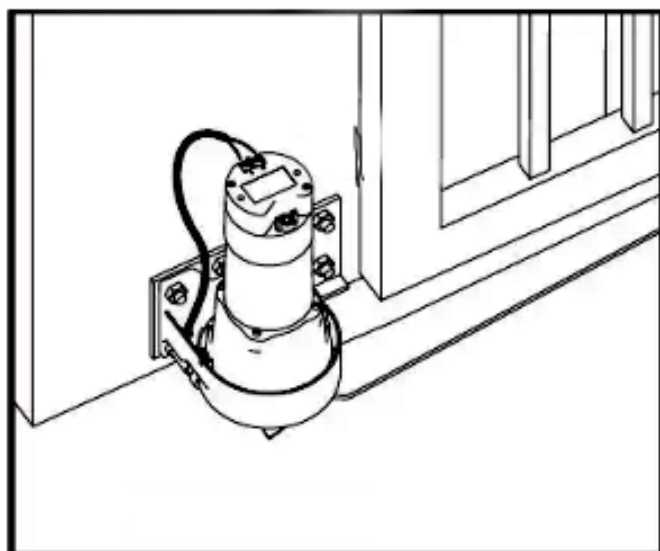
⑫ ϕ 10 Nylon gasket

⑩ ϕ 10 Flat gasket

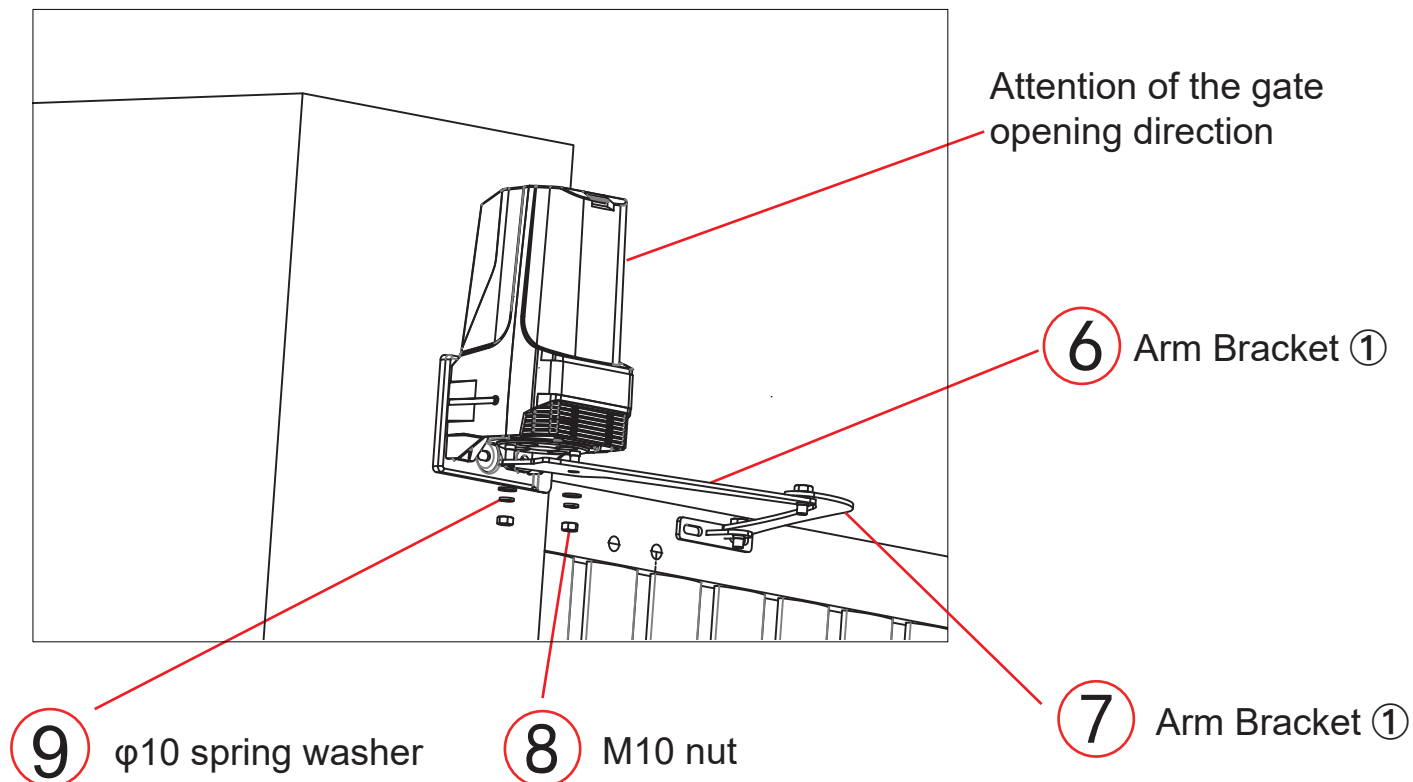
⑨ ϕ 10 spring washer

⑧ M10 nut

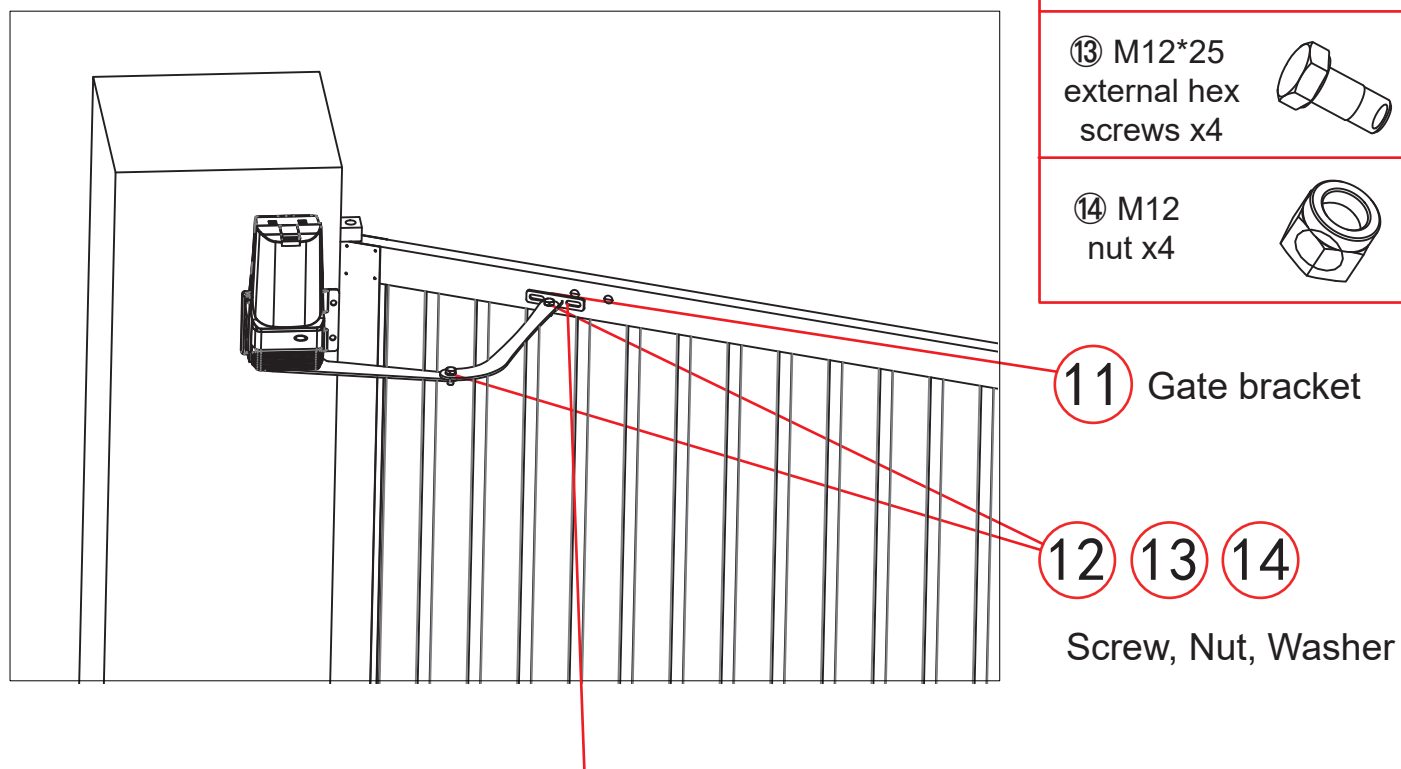
Step 3. Connect with cable and assemble the housing. Note, when you assemble the gate opener housing, please note that there are three points that must be aligned.



Step 4. Attach the arm bracket to the gate opener and fixed on the gate body.

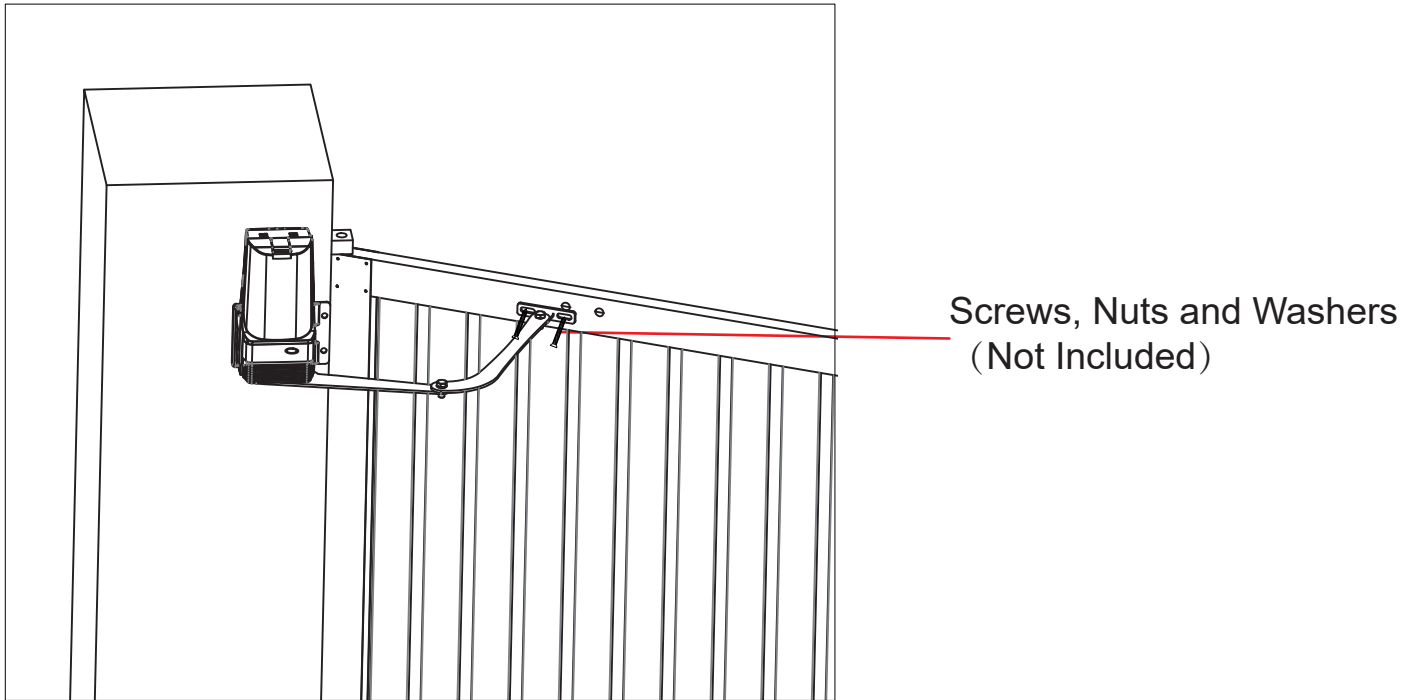


Step 5. Assemble the gate body to the gate body.



Test to opened and closed the gate in position, then mark and fix the gate body bracket.

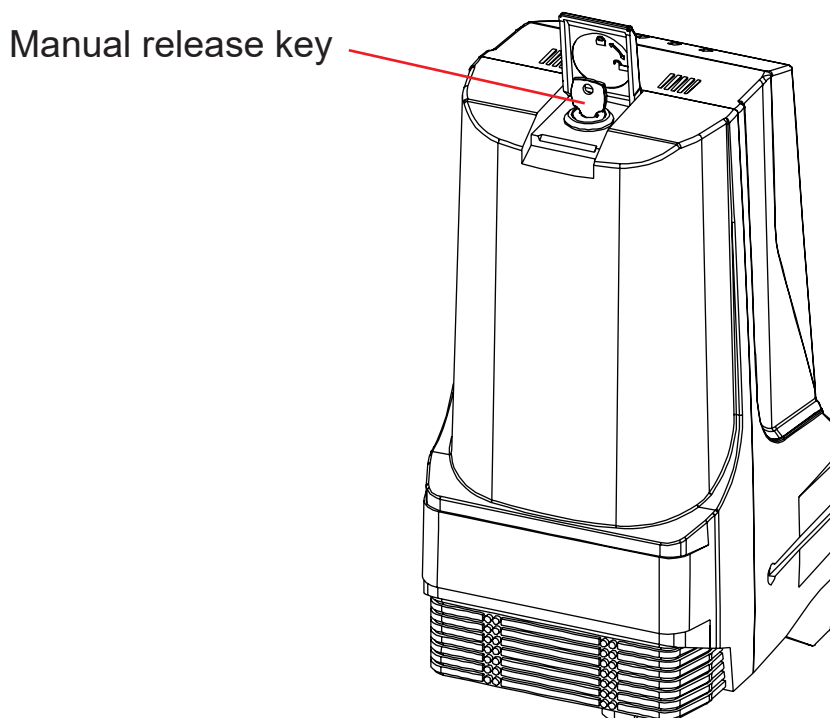
Step 6. Using the screws, nut and washer to fixed the gate bracket on the gate body.
(Factory don't provide screws, nuts and washer for fixed the gate bracket, because the thickness of the installed gate varies.)



Now the gate opener on one side was installed. The above installation steps can be used in pull / push to open gate mode.

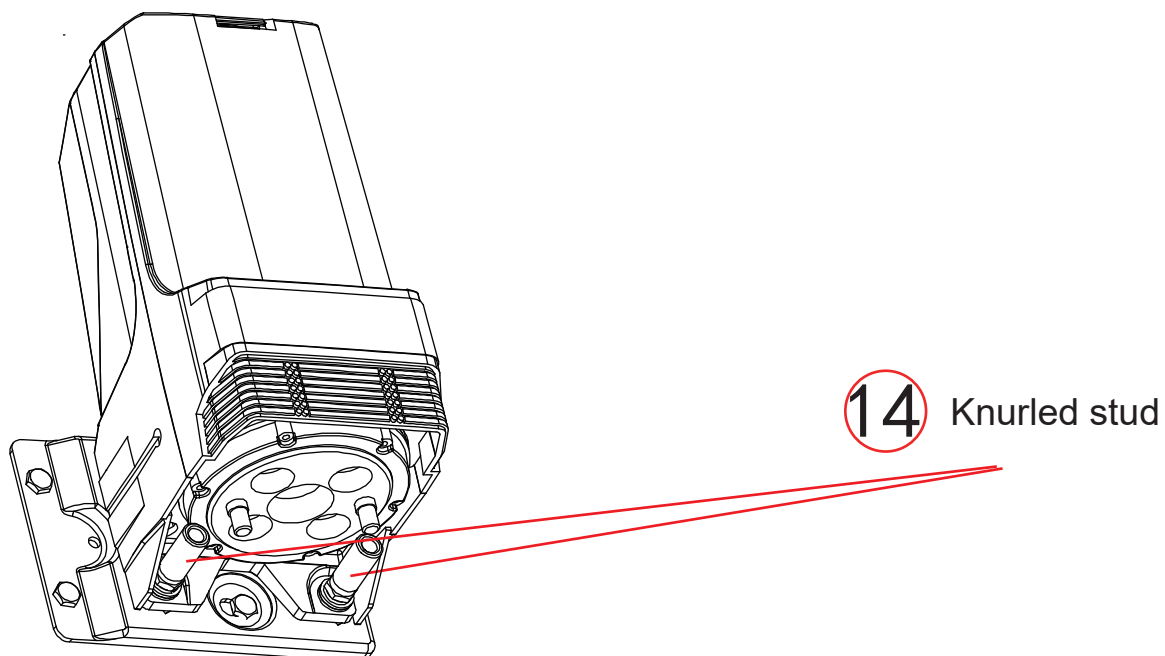
Emergency Manual Release Function

When the power is failure, please use the emergency manual release key to loosen the gate clutch. Then you can open and close the gate manual.



Adjust the Open/close Gate Angle

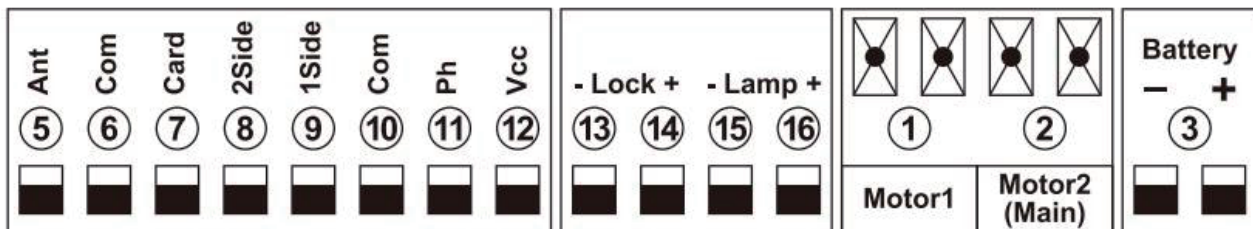
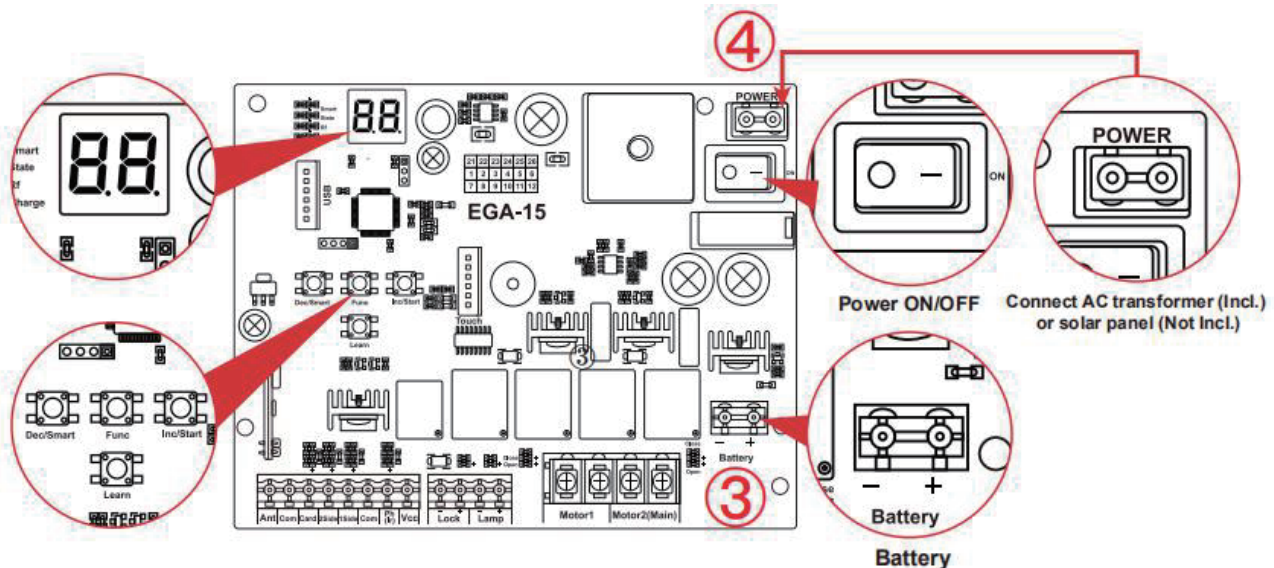
You can adjust the gate opening and closing angle by adjusting the length of the knurled stud. So while the gate opener is opening or closing, and its controller meets obstruction and detect overcurrent, the gate opener will stop right now.



Control Board

• Technical Parameters

- 1.Power Supply: AC 12V , available for adding 12V backup battery.
- 2.Application: Used for double or single DC 12V swing gate opener.
- 3.Encoder For transmitter: Factory owns rolling code.
- 4.Allowed Transmitters Quantity: Up to 128PCS

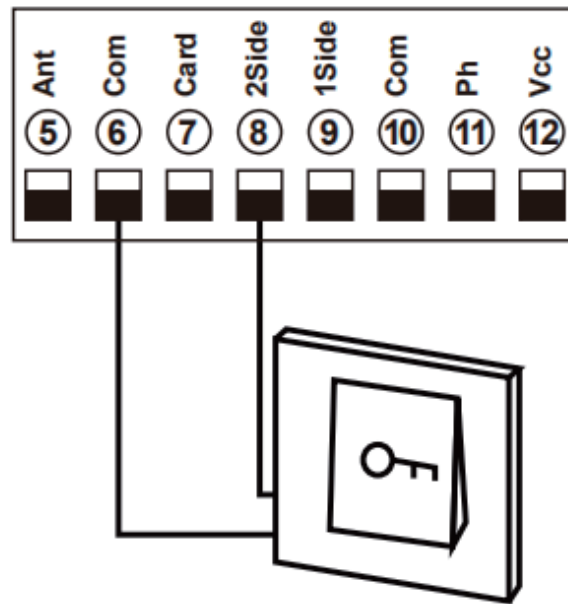


1. MOTOR 1: Slave gate, close first & open last.
2. MOTOR 2(Main): Master gate, open first & close last.
- NOTE! If you only have a single gate, the motor only can connect to the Motor 2 (Main) terminal.**
- 3.BAT +/-: It is for connecting with the DC 12V back up battery.
- 4.Power: It is for connecting with the AC transformer or DC 12V solar panel.
- 5.Ant: Connect with the antenna.
- 6.COM: It is for connecting with the COM or GND.
- 7.Card: It is for connecting to any external devices that will operate to open the gate.
- 8.2 SIDE: It is for connecting with any external devices that operates a double gate.
- 9.1 SIDE: It is for connecting with any external devices that operates the single gate.
- 10.COM: It is for connecting to the COM or GND.
- 11.Ph: Infrared terminal is for connecting with the photocell sensor.
- 12.VCC: The output is for connecting with the photocell sensor, etc devices, continuous output current $\leq 0.5A$.
- 13.Lock -: used for connecting with the "ground" of the lock.
- 14.Lock +: used for connecting with the electric lock.
- 15.Lamp -: It is for connecting with the flash light -.
- 16.Lamp +: It is for connecting with the flash light +.

- 17.Menu: It is a digital display for showing you the setting data.
- 18.Touch: It is for connecting with the touch button, etc devices.
- 19.USB: It is for connecting with a USB device to upgrade the software.
- 20.DEC/Smart: used for figure decreasing of setting the data or operating the smart module.
- 21.FUN: Used for enter the menu setting and confirm the data.
- 22.INC/Start: used for figure increasing of setting the data or operating the single button control mode.
- 23.Learn: It is for programming/erasing the remote control.

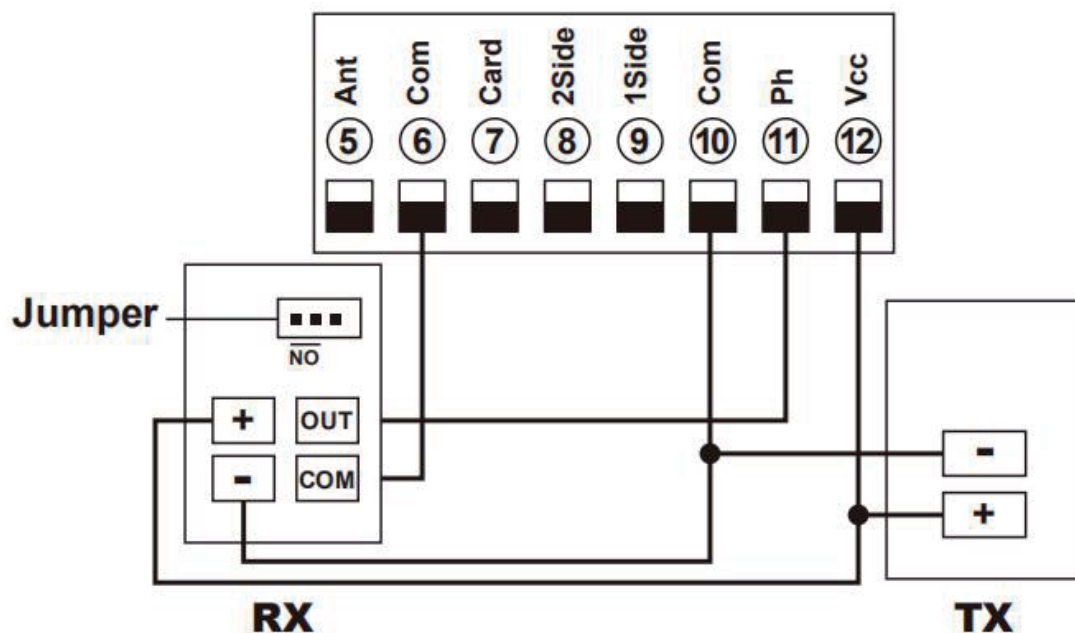
• Control Board Wire Diagram

Connect of push button device



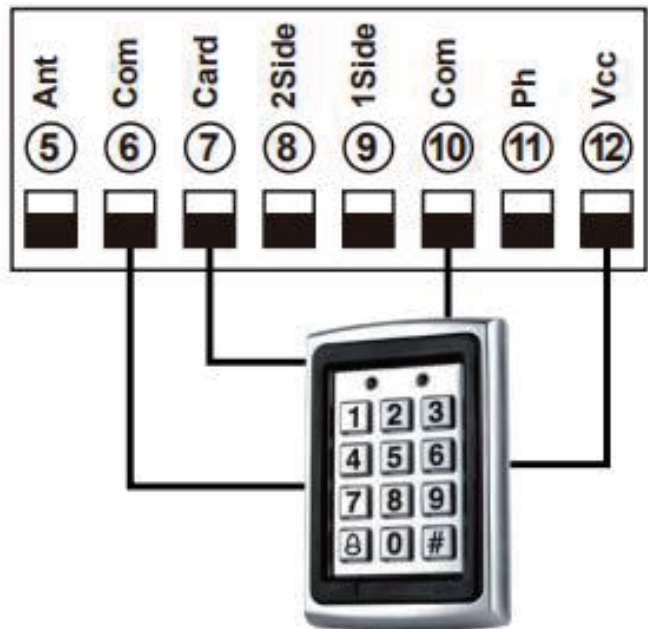
Terminal ⑧ 2SIDE and ⑥ COM are use to connect with push button for controlling dual gates.
 Note! If you connect the wired keypad, etc devices, please also connect with ⑫ Vcc and ⑩ Com to get the power supply.

Connection of safety beam sensor device



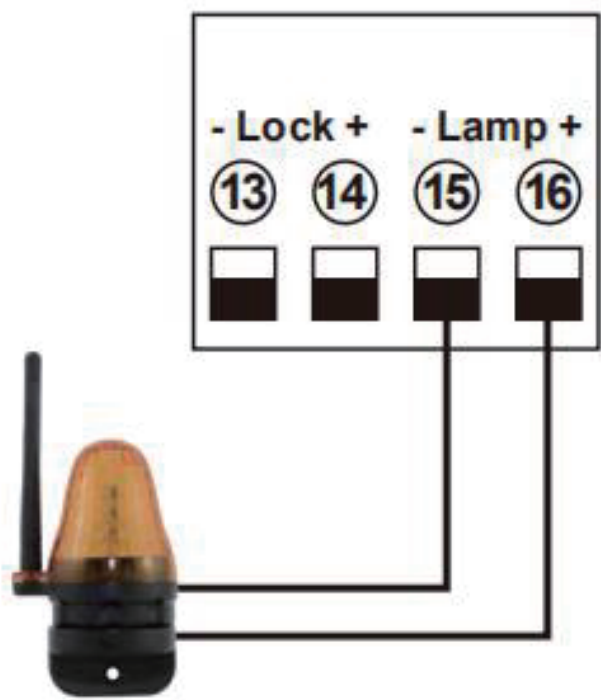
Connect terminal ⑫ VCC with the “+” of the safety beam sensor RX and TX device.
 Connect terminal ⑩ COM with the “-” of the safety beam sensor RX and TX device.
 Connect terminal ⑪ Ph with safety beam sensor “OUT”.
 Connect terminal ⑥ COM with safety beam sensor “COM”.

Connection of safety beam sensor device



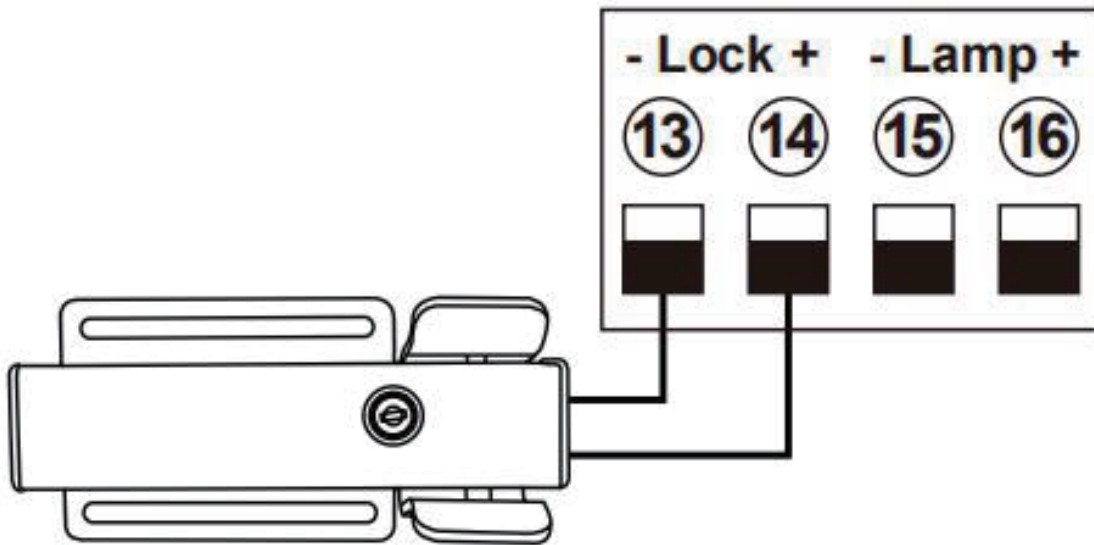
Terminal ⑫ Vcc and ⑩ Com are used to supply power to swipe card device.
 Terminal ⑦ Card and ⑥ Com are use to connect with swipe card to control dual gates

Connection of safety beam sensor device



Terminal ⑫ ⑩ Lamp + / - are used to connect with flash lamp.

Connection of electric lock device



Terminal ⑬ LOCK- is used to connect with electric lock blue wire.

Terminal ⑭ LOCK+ is used to connect with electric lock red wire.

Remote Control

Button “1” is used to operate a single gate Motor 2; button “2” is used to operate a double gate Motor 1 and Motor 2. Button 4 is used to turn auto close off via remote.

Program new remote control:

- Press the Learn button on the control board for about 1 second, and the buzzer will sound with a short beep. The digital display will show the remote's number, which means the programming is successful.
- After you press the Learn button, if the board does not receive the new remote signal within 8s, the indicator LED will turn on and exit programming.
- Note: Due to the digital display only can show two digital numbers, if the controller already learned more than 99pcs remote, from the 100th remote, the digital display will show A to replace the ten and hundred digits. Such as the 100th remote will show A0, and the 101st remote will show A1. If the controller already learned more than 109pcs remote, from the 110th remote, the digital display will show b to replace the ten and hundred digits. Such as the 110th remote will show b0. And the 120th remote will show C0.
- Max capacity: 128pcs remote. If the digital LED shows “-” with a buzzer short beep 5 times, then means can not learn more remotes.

Erase remote control:

- Press and hold the Learn button for about 6 seconds. If the buzzer sound with a long beep, release the button and the digital display will show 00, which means remove all remotes successfully. Press and hold the Learn button for about 6 seconds. If the buzzer sound with a long beep, release the button and the digital display will show 00, which means remove all remotes successfully.

Function Description of the Control Board

Function	State
Power On	The digital display will show EGA-15 and software UX information with a buzzer sound. If the indicator LED light on, means the system is working well.
Setting of 1Side terminal	The digital display menu can set the 1 SIDE terminal control mode by PE. Mode 0: Motor 2 "Open-Stop-Close".....; Mode 1: Open only, open Motor 2 in single gate mode, open Motor 2 in single gate mode. Mode 2: Close only, close Motor 2 in single gate mode, close Motor 2 in single gate mode. Mode 3: Stop only.
Setting of 2Side terminal	The digital display menu can set the 2 SIDE terminal control mode by PD. Mode 0: Motor 1 and Motor 2 "Open-Stop-Close".....; Mode 1: Open only, open both Motor1 and Motor 2 in double gates mode, open motor 2 in single gate mode. Mode 2: Close only, close both Motor1 and Motor 2 in double gates mode, close Motor 2 in single gate mode. Mode 3: Stop only.
High and low speed time setting	The high speed running time of Motor 1 and Motor 2 can be set by the digital display menu P4 and P5. When the high speed running time is completed, the remaining time will be run at slow speed. The slow speed can be adjusted through the menu PH.
Motor overcurrent sensitivity setting	The function can realize to anti crash the car and motor stop while the gate is opened or closed fully. While the gate is moving, it meets obstruction and will stop right now. The motor's overcurrent setting of high speed and low speed can be adjusted by the digital display menu. If the menu PI set 1, while the gate is closing and detecting the obstruction, the gate will rebound to open fully.
Setting gate type	The menu PJ can set the the gate type is common gate or heavy duty gate, factory default is common gate. When the gate weight is heavy in the actual environment, the motor is easy to encounter obstructions and detect an overcurrent. So you need to set menu PJ is heavy duty gate.
Limit mode	The menu PI can adjust the limit mode of the swing gate system. 0 is overcurrent, while the motor runs with low speed and meet the obstacle, then detect the overcurrent, it is judged as a limit. 1 is the limit switch. After the door machine runs in place, the limiter is disconnected. The system detects that the limiter is disconnected and determines that it is a limit.

Time delay with 2 gates for opening and closing	Time delay with 2 gates for opening and closing can be adjusted separately by the menu P7 and P8. If user set 0, means close the delay function. If the delay function is active, when opening the door, motor 2 opens first then motor 1 opens later; while closing the door, motor 1 closes first then motor 2 closes. For the single gate system, this function does not work.
Safety beam mode	The safety beam mode can be selected by menu PF, the default mode is 1, it is normal open mode. 1.While the gate is closing, if the infrared signal meets an obstruction, the gate will rebound to open. 2.If set the auto-closing timer after fully opening, the gate will be auto-closed. 3. If the safety beam signal exists, the gate closing action will not be executed and the countdown time will always be reset.
Auto-closing (Non-swipe card)	1.The auto-closing function only can be triggered when the gate is opened fully. 2.The auto closing starts countdown, the indicator flashes at 1s intervals. 3.Auto closing time can be set through the menu. Cancel the auto-closing function by pressing the fourth button on the remote. Note,only cancel this time. Next time you open the door again, you can still start the auto-closing.
Swipe card to open and auto-close the gate	1.Trigger the function, it will open the double gates. When the gates are opened fully, the user can set the auto-closing function independently. The auto-closing time can be set by the menu. 2.If the gate system is setting the single gate mode, the user swipes the card and only operates to open the single gate.
Lamp mode	The lamp work mode can be selected by menu PA. Mode 0: Flashing lamp and motor will operate and stop at the same time. Mode 1: Flashing lamp will turn off 30 seconds after the motor stop. In addition, regardless of mode 0 or mode 1, the lamp will also light on during the countdown to closing the gate.
Lock mode	1.The lock mode can be switched by menu PC. 0:NC mode,power on when locked, used for electromagnetic lock.1:NO mode,power on when unlocked, used for electric lock. 2. The control output time of the electric lock can be set by menu Pb. If set to 0, it means turning off the function.
Gate mode	1.The gate mode can be switched by menu PG. 0 is dual gates, which is a double gates opener system. 1 is single gate, which is a single gate opener system. 2.If the system is single gate system, all control for the double gates only operate on the main gate(Motor 2) 3.If it is the single gate system, the motor must be connected with motor2 port.

Motor working time protection	1.If the motor works continuously more than 60s, the motor will stop running for protection. 2. If the motor works continuously with low speed more than 30s, the motor will stop running for protection.
Smart charger function for back-up battery	1.The system will automatically identify whether it is a 12V system every time it is powered on. If the power supply voltage is changed, power on again. 2.When the voltage of one battery is less than $13.5V \pm 0.5$, the charging function will automatically start and the charging indicator light will turn on. 3.When the voltage of one battery is greater than $14V \pm 0.5$, the charging circuit is automatically disconnected to prevent overcharging. Note: When the control board connects with the main power (AC power or solar panel) and back-up battery, the battery will be charged.
Battery low voltage protection	1. In the stopped state (when the motor is stopped), when the system detects that the battery voltage is less than $12V \pm 0.5$, the buzzer will sound twice each time the control is performed, and the digital display will show "L1", indicating that the current battery voltage is too low, and the motor will run at a low speed. 2. When the battery voltage continues to drop to $11.5V \pm 0.5$, the buzzer will sound twice each time the control is performed, and the digital display will show "Lb", indicating that the battery is exhausted and the motor can not work.
Upgrade control board system by USB device	1.Before you upgrade the system, please confirm the U disk document is FAT32 or not. If not, please format the U disk as FAT32. 2. Copy the upgrade file into the root directory of the U disk and name it EGB-15.bin. 3. Insert the U disk into the upgrade module, and then connect the upgrade module to the USB port. 4. Completely shut down the system. Make sure the State LED is off before the shutdown is complete. 5. Press and hold the Fun button, then turn on the computer. The digital tube displays UP and the upgrade begins. After the upgrade is completed, it will automatically restart.
Touch port	It can connect the touch switch with the control box, has 2 channels. 1.Cycle control the motor 2 by Open-stop-close-stop cycle... 2.Cycle control the motor 1 and motor 2 by Open-stop-close-stop cycle...

Smart module port	The XH-SG-WIFIBLE smart module can be connected externally to realize functions such as control, information reading, and settings. The smart module includes WiFi, Bluetooth and 2.4G functions. 1.Add the Bluetooth control function on the phone APP: Press and hold the DEC/SMART button for 5s, the buzzer will sound twice. Release the button and the module will enter Bluetooth matching network mode. 2.Add the WiFi control function on the phone APP: Press and hold the DEC/SMART button for 10s, the buzzer will sound with a long beep. Release the button and the module will enter the AP matching network mode. 3.Program the 2.4G USB card transmitter: Press the DEC/SMART button once, the buzzer will sound a beep, and enter the programming mode. Power on the 2.4G USB card, and transmit a signal automatically. If the smart LED flash three times, which means the programming operation is successfully. Otherwise, after 8s exit the programming mode. 4.If you want to remove the 2.4G USB card, please press and hold the Learn button for 6s, until the buzzer sound with a long beep, then release the button. After that, all the remotes and USB cards can not control the gate. 5.When the programmed 2.4G USB card enters the receiving range of the module, it will trigger to open the gate once. WiFi and Bluetooth functions support to connect with the phone app, which can realize functions such as controlling the gate with a mobile phone, adding and managing the remote controls, and menu settings the parameters. Please check the APP instruction manual for detailed functions.
Factory Reset	The factory reset needs to be performed at the factory to restore parameters to the default state; see the table below

Control Board Parameters Setting

- Press and hold the [FUN] button for 3 seconds, and the digital display will indicate "P0", then release the button, now the menu can be set to [INC/START] and [DEC/SMART] for increasing and decreasing numbers or values.
- After adjusting the value, press the [FUN] button to store the data, and the buzzer will beep one time to show the store successfully.
- After the menu setting is finished, press the [LEARN] button to exit the menu setting and close the display.

Item	Function description	Range	Default	Explanation
P0	Motor 1 overcurrent setting in slow speed	0~20 Class	10 Class	Motor overcurrent setting in slow / high speed, the bigger the value is, the harder the motor to stop. Setting value from 0-20
P1	Motor 1 overcurrent setting in high speed	0~20 Class	10 Class	
P2	Motor 2 overcurrent setting in slow speed	0~20 Class	10 Class	
P3	Motor 2 overcurrent setting in high speed	0~20 Class	10 Class	
P4	Setting Motor 1 high speed running time	3~30 s	10 s	Used for setting the high speed running time of Motor 1 and motor 2, gate will run in high speed within this setting, then change to slow speed with its rest travel.
P5	Setting Motor 2 high speed running time	3~30 s	10 s	
P6	Auto-closing timer for swipe card terminal triggering	0~99 s	10 s	0 means No auto-closing for swipe card terminal triggering.
P7	Time delay with 2 gates for opening	0~15 s	2s	0 means No time delay for opening 2 gates
P8	Time delay with 2 gates for closing	0~15s	2s	0 means No time delay for closing 2 gates

P9	Auto-closing timer	0~99 s	0	0 means No auto-closing
PA	Flash Lamp Mode	0: Mode 0 1: Mode 1	0	Mode 0: Flashing lamp and motor will operate and stop at the same time. Mode 1: Flashing lamp will turn off 30 seconds after the motor stop.
Pb	Electric lock working time setting	0~5s	0	Used for setting the working time of electric lock. Setting from 0-5 seconds. 0 means electric lock disabled.
PC	Lock mode	0: NC 1: NO	1	NC mode: power on when locked, used for electromagnetic lock. NO mode: Normal open, power on when unlocked, used for electric lock.
Pd	Setting of 2Side terminal	0~3	0	Please read the details from the table of “function description of the control board”.
PE	Setting of 1Side terminal	0~3	0	
PF	Safety beam mode	0 (NC) ~ 1 (NO)	1 (NO)	0: NC mode, normal close. 1: NO mode, normal open.
PG	Gate mode	0~1	0	0: double gates (Motor 1 and 2). 1: single gate(Motor 2).
PH	Setting speed of slow speed	0~10	6	
PI	Limit mode	0~1	0	0: overcurrent. 1: Limit switch.
Po	Factory Reset	0~10	0	5: Set 5 to trigger the factory reset.