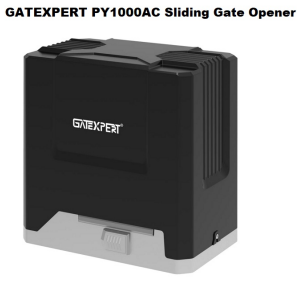


GATEXPERT PY1000AC Sliding Gate Opener User Manual

Contents

GATEXPERT PY1000AC Sliding Gate Opener

Product Information

Specifications

- **Model:** PY1000AC
- **Power Supply:** AC110V
- **Backup:** No DC backup battery or solar power compatibility
- **Warranty:** 1 year

Product Usage Instructions

Default Setting Instruction

Before installation, test the gate opener by plugging it into a power source and pressing the remote.

Follow these steps:

1. Press the opening button: Output gear rotates.
2. Press the stop button: Output gear stops rotating.
3. Press the closing button: Output gear rotates in the opposite direction.

- This will help you understand how the opener moves the gate.
- Ensure the gate opener is unplugged during installation.

Changing Opening Direction

1. Mount the opener on the left-hand side (refer to Figure 3).
2. A qualified electrician should dial the number 4 dip switch (MOT.DIRECTION) to OFF.

Note: Factory default setting is for right-hand opening with the opener mounted on the right-hand side.

Safety Instructions

Any work on the gate opener should be done with the power off and the opener unplugged. Keep fingers away from the motor output gear when it is turning.

FAQ

What should I do if the gate opener malfunctions?

- If there is a malfunction due to a quality problem, refer to the warranty card and invoice for repair or replacement services within the 1-year warranty period.

Can I use a DC backup battery or solar power with this product?

- No, this product is only compatible with AC110V power supply. DC backup battery or solar power is not supported.

WARNING

- Instructions must be read before installation. Please follow these instructions carefully, incorrect installation could affect gate operation.
- When mounting and positioning this product please ensure the power cable is unplugged.
- The motor cover will need to be removed to mount the motor to the mounting plate or directly to the concrete footing.
- Any changes to the settings on this product can only be made by a licensed electrician.
- This product is only powered by an AC110V power supply; a DC backup battery or solar power is not compatible.

WARRANTY

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, if any product is broken or damaged due to quality problems, we'll offer the repair service for free or replace it for free.
4. The malfunction and damages caused by incorrect use or man fault are not covered by this warranty.

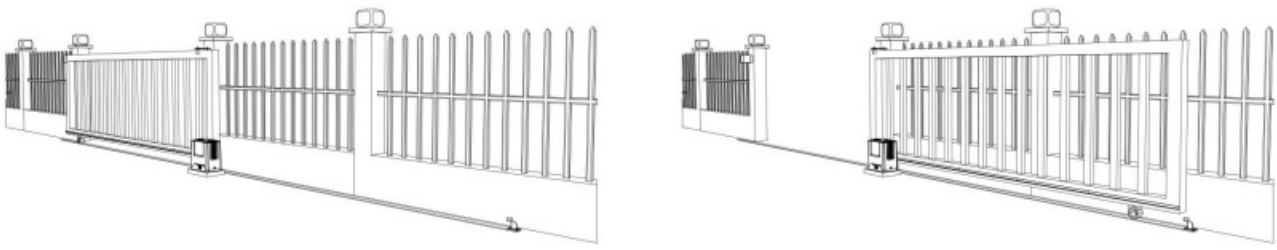
CONTACT US E-mail: **sales@gatexpertstore.com**

- Please fill in the order information in the form below.
- All personal information you provide will be only used for warranty service and kept strictly confidential.
- Refer to this list when contacting GATEXPERT for technical service or assistance with your automatic gate opener.

Order Number	Product Model	Purchase Date	Country / Region
Email Address			
Issue Details			

Default Setting Instruction

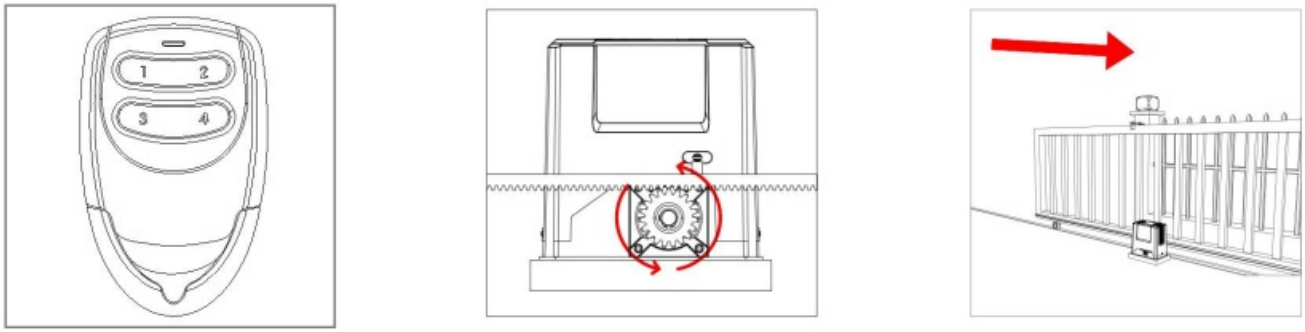
- The gate opener will open the gate to the right-hand side as its default setting. By default, the opener mounts on the right-hand side. (Figure 1)



Gate in closed position **Gate in open position**

Figure 1

- **Before installation:** Test the gate opener by plugging it into a power source and pressing the remote. Press the opening button, and the output gear rotates, then press the stop button, and the output gear stops rotating.
- Finally, press the closing button, and the output gear rotates in the opposite direction. This will give you an understanding of how the opener will move the gate.



Press the first/top button on the remote. **Rotating output gear will drive the gate frame.** **Then the gate will move in the set direction.**

Figure 2

- **Note:** Ensure that the gate opener is unplugged before proceeding with installation. Please keep your fingers away from the motor output gear whilst it is turning.
- If your gate needs to open from the other direction (to the left, refer to Figure 3), your opener needs to be mounted on the left-hand side as shown, and a qualified electrician will need to dial the number 4 dip switch(MOT.DIRECTION) to OFF. (Factory default setting is for right-hand opening: opener mounted on the right-hand side).

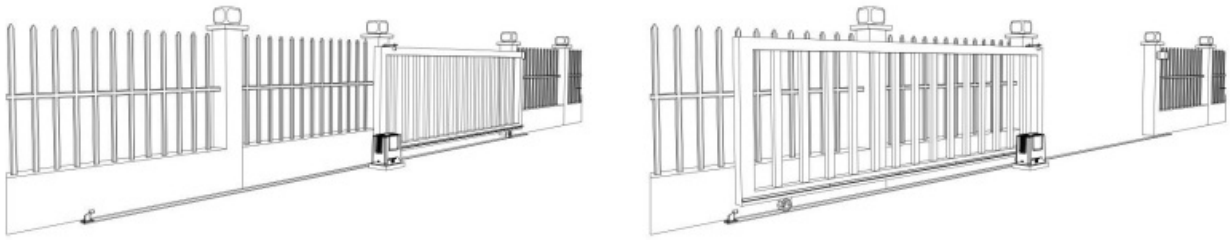


Figure 3

- Any work done to the gate opener must be completed whilst the power is off, and the opener is unplugged.

Safety Instruction

- **Warning:** Incorrect or improper use of this product can cause damage to persons, animals, or properties.
- Please ensure that the input voltage used matches the supply voltage of the gate opener.
- All modifications to wiring or electrics and any adjustment or maintenance to input voltage must be done by a qualified electrician.
- All potential hazards and exposed pinch points of the gate must be eliminated or guarded before installation of this gate opener.
- Never mount any device that operates the gate opener where the user can reach over (under, around, or through) the gate to operate the controls. These must be placed away from any moving range of the moving gate.
- Ensure the power plug is disconnected from the power socket during installation or maintenance.
- Keep remote control and other control devices out of children's reach, to avoid unintentional activation.
- To ensure safety, before installing the motor, mount a Gate End Catch and a Gate Stop at each end of the rail to prevent the gate from traveling off the track.
- If required, install an infrared photocell to detect obstructions and prevent injury to a person or damage to property.
- Instruct all users about the control systems provided and the manual opening operation in case of emergency.
- Ensure that the power cable is connected to an RCD-protected weatherproof power outlet installed by a qualified electrician.
- Do not install this product in an explosive atmosphere or where there is any danger of flooding.
- This product was exclusively designed and manufactured for the use specified in the present documentation. Any other use not specified in this documentation could damage the product and be dangerous.
- Only use original parts for any maintenance or repair operation. Our company declines all responsibility for automation safety and correct operation when other suppliers' components are used.
- Do not modify the automation components, unless explicitly authorized by our company.
- The user must avoid any attempt to carry out any works or repairs on this product, and should always request the assistance of qualified personnel.
- This product is suitable for use on one sliding gate only.
- Anything that is not expressly provided for in these instructions is not allowed and will void the warranty.
- Dispose of all packing materials (plastic, cardboard, polystyrene, etc.) according to current guidelines. Keep plastic bags and polystyrene out of children's reach.
- Save these instructions for future use.

Parts List

Parts List (standard configuration)

No.	Picture	Name	Quantity
1		Motor	1
2		Manual Release Keys	2
3		Remote Controls	2
4		Spring Limit Switch Accessories Box/ Magnetic Limit Switch Accessories Box	1
4-1-1		Spring Limit Switch Stop	1
		Spring Limit Switch Stop Mounting Screw M6X10	4
4-1-2		Magnetic Limit Switch Stop	1
		Magnet Components	2
		Magnetic Limit Switch Stop Mounting Screws M6X16	4
		Nuts M8	4
		Flat Washers φ8	2
		Spring Washers φ8	2

No.	Picture	Name	Quantity
5-1		Nuts M10	8
5-2		Flat Washers φ10	8
5-3		Spring Washers φ10	8
5-4		Foundation Bolts	4

Note: Extra flat washers and spring washers are spare parts.

Parts List (optional)

No.	Picture	Name	Quantity
1		Galvanized Gear Rack	1m/pc
2		Nylon Rack	1m/pc
3		Infrared Photocell	1
4		Wireless Keypad	1
5		Alarm Lamp	1
6		Mounting Plate	1
7		Hexagon Head Bolt M10X50	4

- **Additional remote controls:** Spare/Additional remotes for the automatic gate kit, these will need to be paired to the motor.
- **Infrared photocell:** Detects pedestrians, vehicles, and objects that cross an infrared beam and prevents the gate from closing.
- **Wireless keypad:** Allows secure access through the gate used with a user-set code.
- **Wired control:** Allow users to control the opening and closing of the door through an external push-button.
- **Alarm lamp:** Alerts people near the gate and users that the gate is in operation.

Technical Parameters

Model	**PY1000AC**
Power Supply	110VAC/60Hz
Motor Power	400W
Gate Moving Speed	11-13m/min
Maximum Loading Weight	1000KG
Remote Control Distance	≥30m
Remote Control Mode	Single button mode
Limit Switch	Magnetic limit switch
Working Noise	≤60dB
Working Duty	S2, 20min
Recording of Remote Controls	25
Remote Frequency	433.92 MHz
Working Temperature	-20°C – +70°C

Installation

Before You Start

- PY1000AC Sliding Gate Automation Kit is suitable for powering the opening and closing motion of gates up to 1000kg in weight, up to a length of 12m.
- Gate motion is achieved by the rotating output gear of the gate opener driving the gear rack (sold separately) fitted to the moving gate.
- The gate opener requires you to press the remote control once to open, and once again to close. This is a safety feature to ensure safe operation.
- The gate opener itself must be fitted within private property, never externally to a property's boundary.
- Any work done to the gate opener must be completed whilst the power is off and the opener is unplugged.
- Any modifications/alterations/works to AC power components must only be completed by a licensed electrician.

Tools Required

- Tape measure
- Level
- 12mm concrete drill and hammer (when using expansion screws)
- Phillips head screwdriver
- Straight screwdriver

Example Sliding Gate

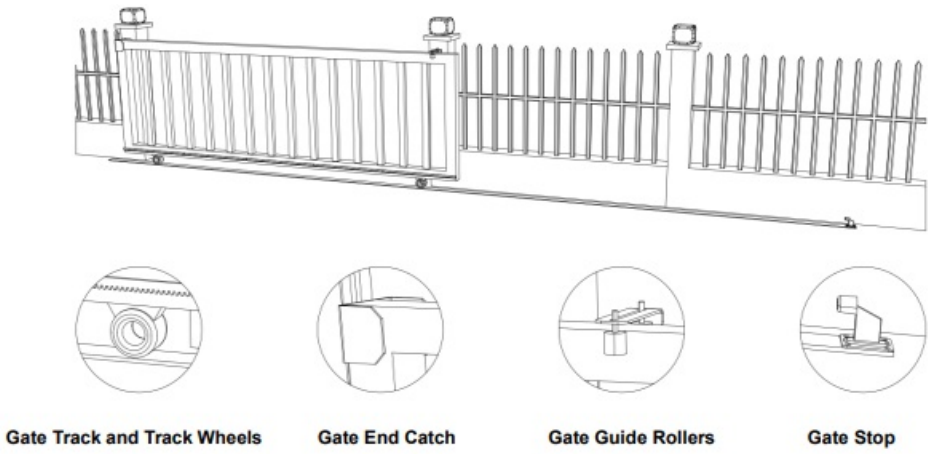
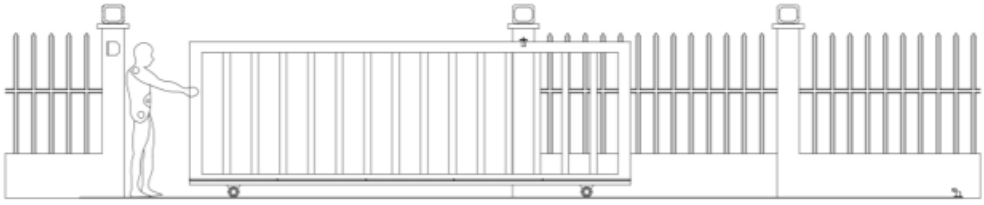


Figure 4

Please ensure that the gate opener power cable is not plugged in at any stage before Step 8.

Step 1 – Gate Preparation

- Ensure that the sliding gate is correctly installed.
- The gate is horizontal and level and the gate can glide back and forth smoothly when moved by hand before installing the gate opener.
- Wheels and guide rollers should rotate easily and be free from dirt or grime.
- The track should be flat, level, and firmly affixed.
- Any misalignment in the gate will affect the performance of the automatic gate opener.



The gate should slide smoothly by hand before attempting to install the gate opener.

Figure 5

Step 2 – Checking Manual Release

- Insert the key and open the manual release bar to enable the motor to get into manual mode and check that the motor output gear rotates freely by hand (Figure 6).

To make the motor into manual mode, insert the key and open the manual release bar as shown.

In manual mode, the gear can turn freely and the gate can be operated by hand.

Figure 6

Step 3 – Removing / Installing Motor Cover

- Unscrew the two cover screws located at each side of the motor cover.
- Remove the rubber grommet below the limit switch (Figure 7).

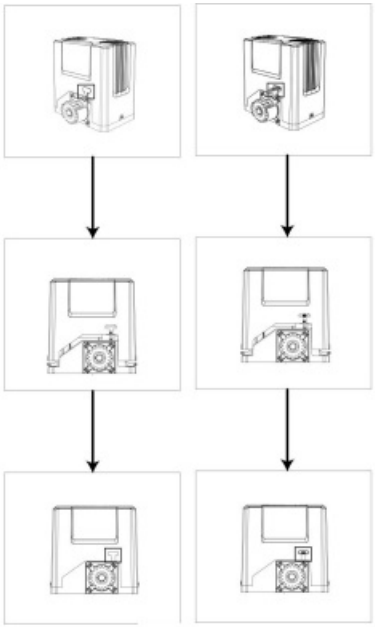


Figure 7

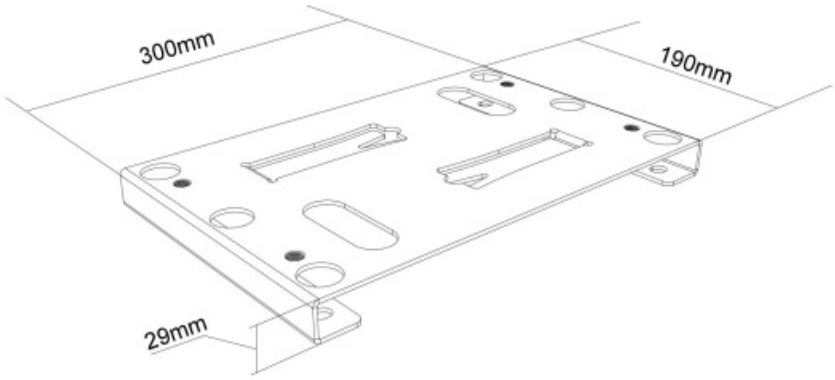
- **Please Note:** the rubber grommet must be fitted back onto the motor cover once the cover has been re-fitted/replaced onto the base of the motor.

Step 4 – Motor Pad Footing

- The motor pad concrete footing requires an area of no less than 450mm long x 300mm wide and a minimum

depth of 200mm (Standard requirement).

- Ensure the surface is level and parallel to the driveway.



Mounting Plate Dimensions

Figure 8

Step 5 – Fitting Mounting Plate and Motor Without Mounting Plate

- Fit anchor bolts according to holes in the motor base (as per Figure 9).
- Bolt motor to its base using the M10 bolts with spring and flat washers provided and tighten as required. (The height can be slightly adjusted by bottom bolts as per Figure 10).

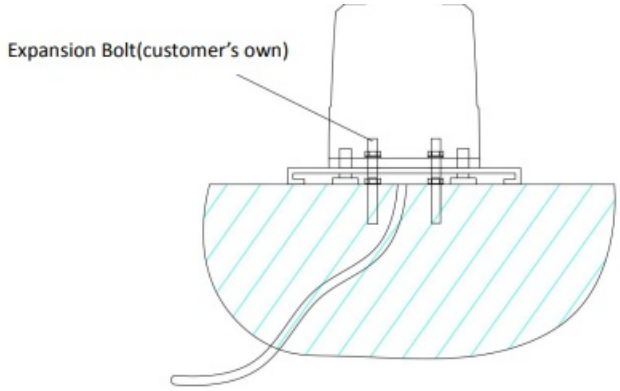


Figure 9

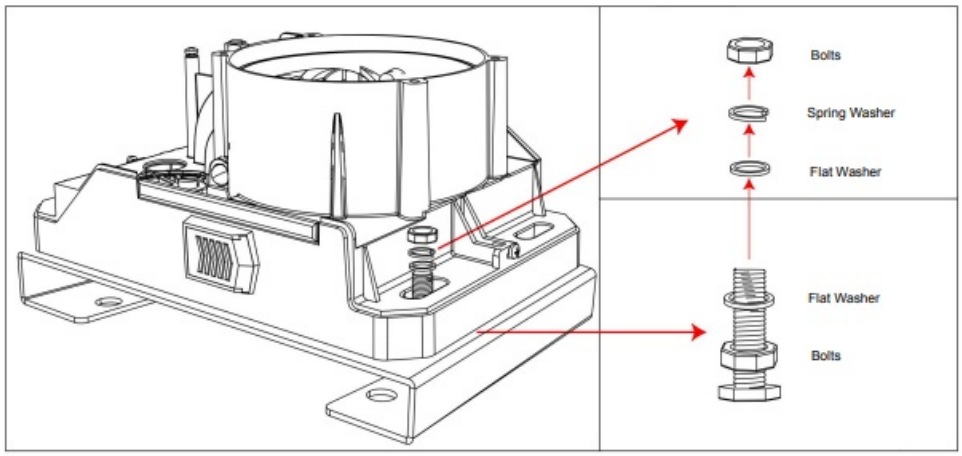


Figure 10

- The bolts and flat washer between the mounting plate and motor base are used for adjusting the height of the motor.

Fitting Motor

- Fit motor and mounting plate(if with) on the concrete footing.
- Ensure the motor output gear and gear rack are correctly aligned. The gear and gear rack should be centered as much as possible.
- Take the motor away from the mounting plate.

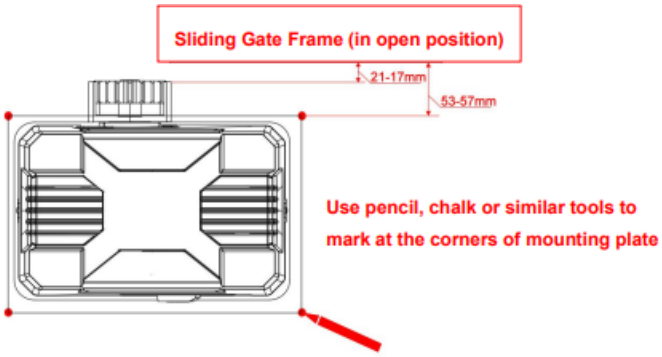


Figure 11

Step 6 – Gear Rack & Motor Alignment

- See Figure 15 for the recommended gear rack mounting height.
- Ensure that the output gear has a minimum clearance of 1-2mm along the entire length of the gear rack fitted to the gate (as per Figure 12)
- Ensure the output gear and gear rack are correctly aligned. Under no circumstances should the gate opener output gear carry any weight of the gate.
- It is the task of the gate castors or wheels to carry the weight of the gate (as per Figure 12).
- If the gate doesn’t slide freely by hand, adjust the height of the gear rack accordingly until the full length of the gate slides freely by hand.

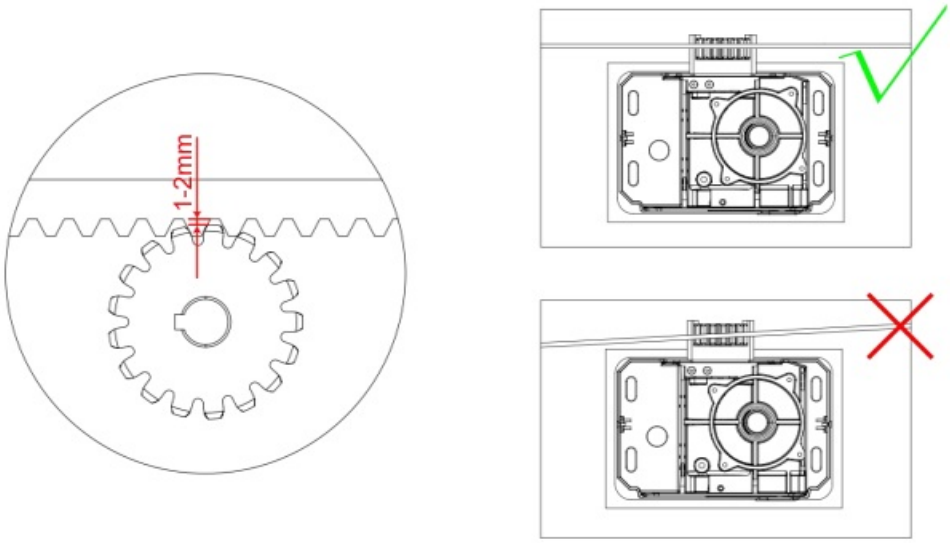


Figure 12

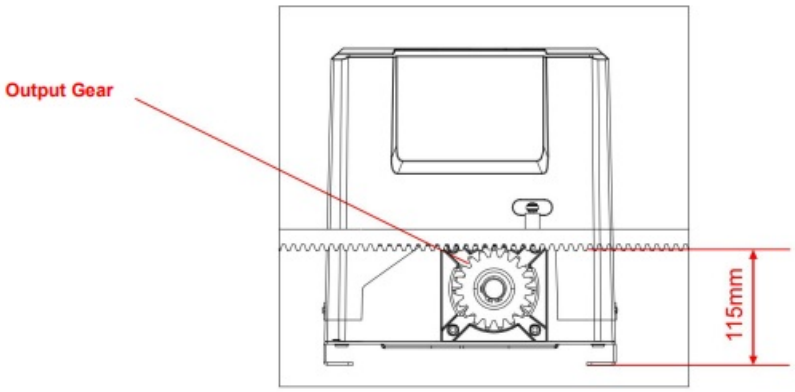
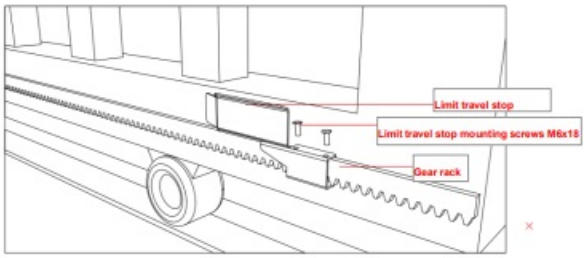


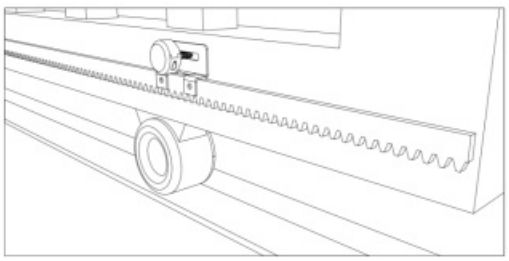
Figure 13

Step 7 – Limit Switch Stops

- Included in your gate opener kit are two limit switch stops which must be fitted to the gear racks on your gate to ensure safe operation.
- The limit switch stops are designed to set the desired opening and closing position of your gate.
- These limit switch stops are designed to come into contact with the spring/magnetic limit switch.

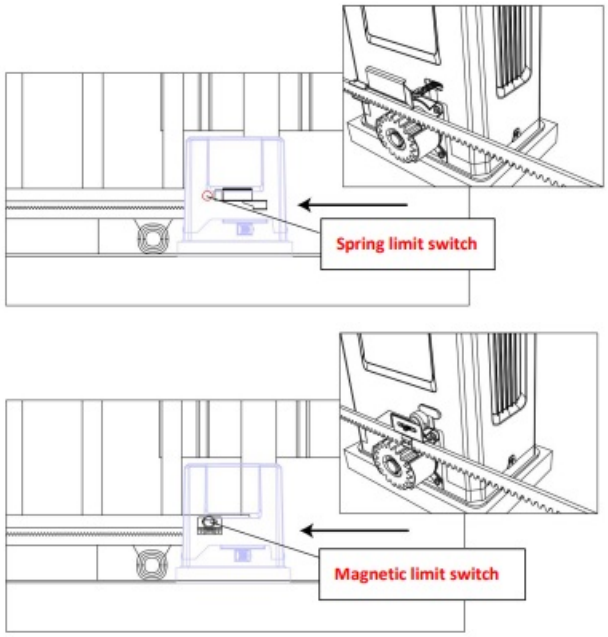


- It is extremely dangerous that incorrect installation of the limit switch stops can cause the crash of the gate, and damage to the internal structure of the motor, moreover, the gate may slide off the guide rail.



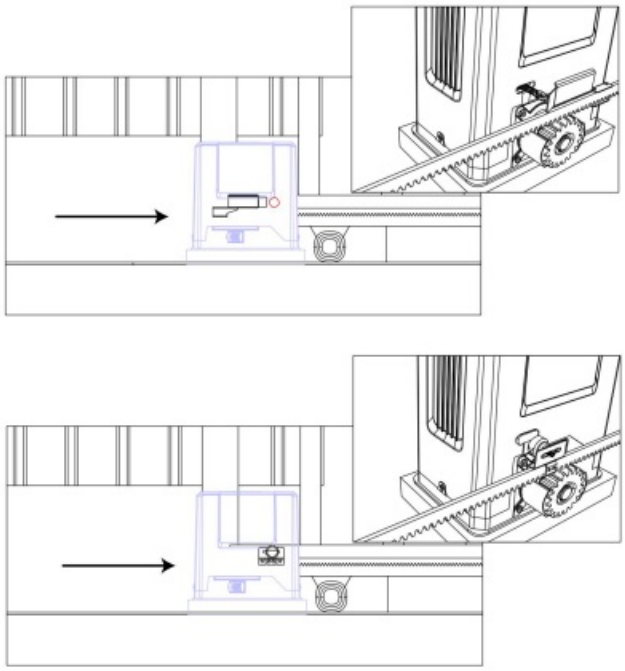
Setting the Limit Switch Stops Closed Position

- Position gate 150-200mm back from the gate end catch closed position.
- This will help in making sure you do not slam the gate into the end stop/catch when setting the closed position under power.
- Fit limit switch stops onto the top of the gear rack at the point where it meets the Spring/Magnetic limit switch on the motor.
- Tighten the locking screws of the limit switch stop.

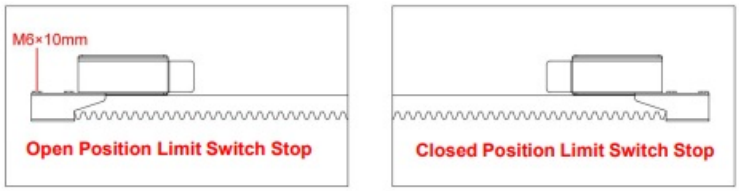


Open Position

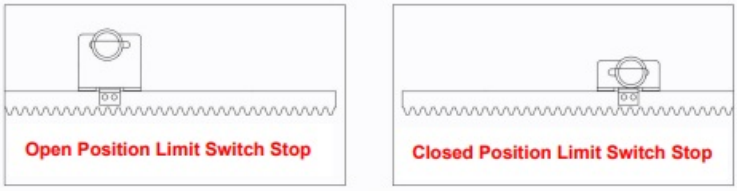
- Position gate 150-200mm back from the gate stop open position. This will help in making sure you do not slam the gate into the end stop/catch when setting the open position under power.
- The fit limit switch stops on the top of the gear rack at the point where it meets the Spring/Magnetic limit switch on the motor.
- Tighten the locking screws of the limit switch stop.



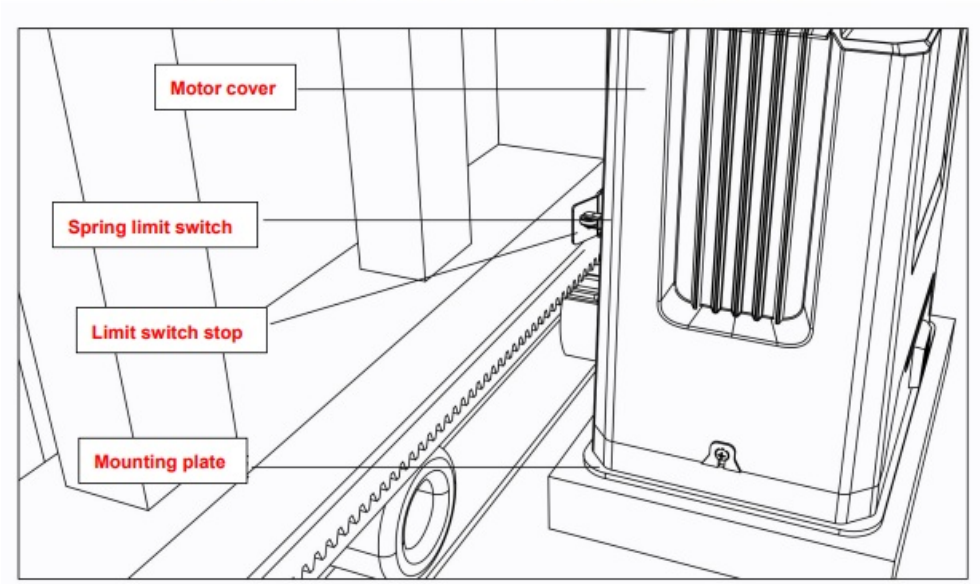
- Test the spring/magnetic limit switch stops by moving the gate manually until you hear a click, making sure contact is made with the spring/magnetic limit switch on the motor.
- **To Reset:** Turning the power off will reset the limit switch stop memory.
- Power on the gate opener again, pressing the remote control or external push button switch to open and then close the gate once, then the new limit switch stop setting is completed.

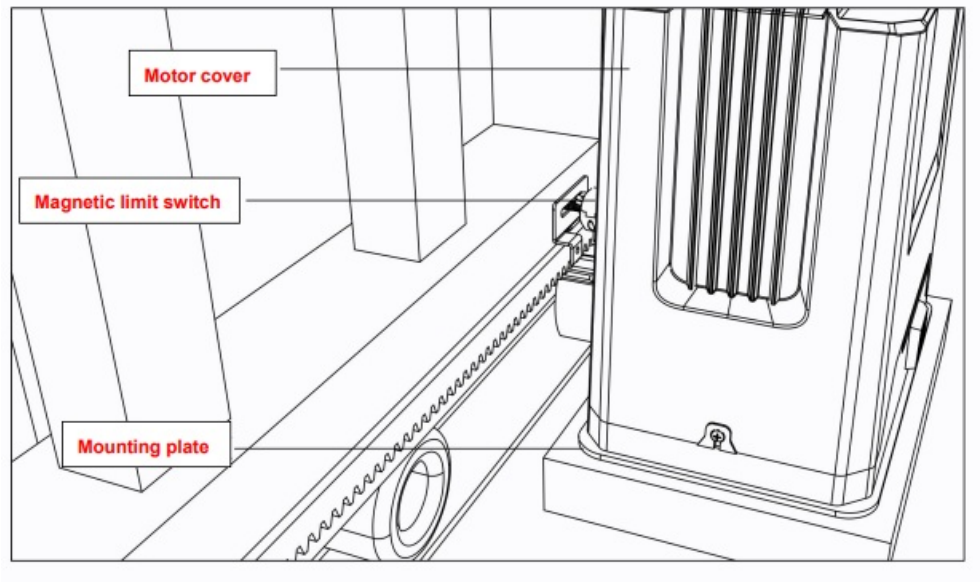


The installation of spring limit switch stops is shown in figure above.



The installation of magnetic limit switch stops is shown in figure above.





Open Position

Step 8 – Powering on

- Ensure that the outer cover has been fitted and fastened back onto the motor base.
- Before powering up the gate opener make sure the gate can travel by hand in manual mode (key unlocked).
- Slide the gate to between the middle of the posts, approximately (see below diagrams).
- Lock the manual release spanner (key locked) in readiness for automatic mode.
- Plug the power cord into an approved RCD-protected weatherproof outlet.
- Remote controls included in this kit are factory-paired paired and ready for use.

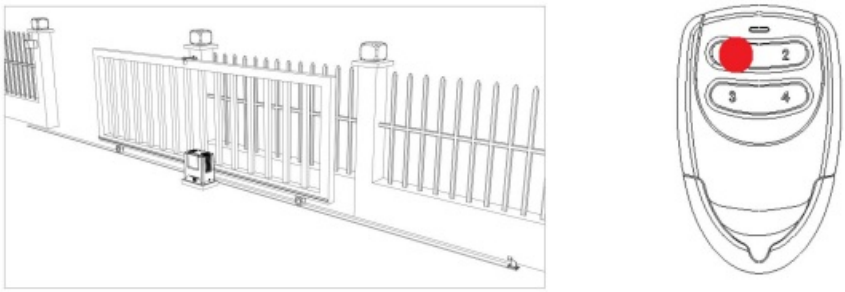


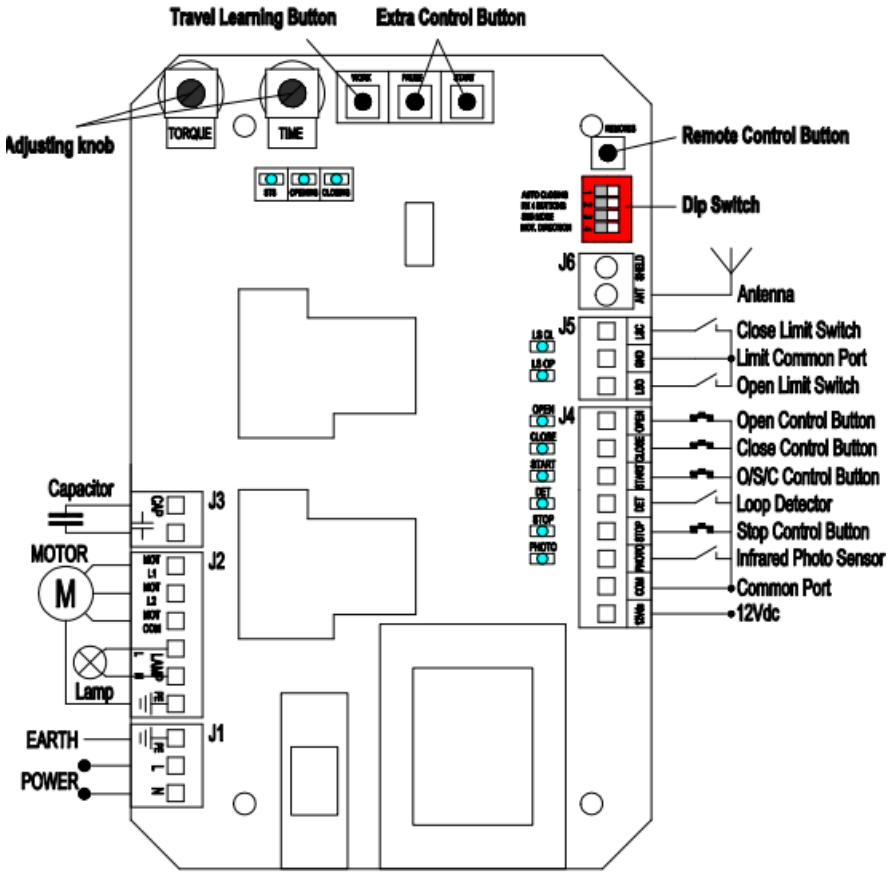
Figure 14

Step 9 – Travel Learning

- **Attention:** The control board must learn the travel limit before it can be used normally.
- Before the travel learning operation, you must ensure that the limit is not triggered. Then press and hold the button WORK. The motor will run closing first and lead to CLOSING flashes.
- After the gate triggers the closing limit, the motor will run opening and led OPENING flashes. When the gate triggers the opening limit, the motor will run closing again. Finally, as the gate triggers the closing limit, travel learning is completed.
- Now the basic open and closed positions are set, for further setting functions and adjusting parameters, please refer to pages 17-22 in this manual.

Control Board Wiring

PY1000AC control board



- **J3Terminal**
  - Connect CAP to the capacitor wire.
- **J4 Terminal** (For the convenience of wiring, this terminal is accompanied by a failure diagnosis light)
  - **OPEN:** Gate open control button (N.O.)
  - **CLOSE:** Gate close control button (N.O.)
  - **START:** Open/Stop/Close/Stop loop control button (N.O.)
  - **DET:** Loop detector (sensor coil) connector (N.O.)
  - In the closing process, once vehicles are detected by the loop detector, the gate will open immediately; when the vehicle passes, the gate will close automatically.
  - When the gate is in a halted state, it will keep this state when vehicles are detected; after the vehicle passes, the gate will close automatically.
  - In the above loop detector function, users can make the gate close automatically some seconds later after the vehicle passes.
  - Change the No.4 key of the dip switch on the circuit board, and the gate will close automatically some seconds later after the vehicle passes.
  - **STOP:** Stop the control button (N.O.)
  - **PHOTO:** Photocell input; NC or NO will be memorized while traveling (4.3.6).
  - **COM:** Common terminal
  - **12Vdc:** Power supply for fittings: +12VDC Electric current ≤100mA
  - **J5 Terminal** (For the convenience of wiring, this terminal is accompanied by a failure diagnosis light)
  - **LSC:** Close limit switch
  - **COM:** Limit switch and other input signal common terminal
  - **LSO:** Open limit switch
- **J6 Terminal**

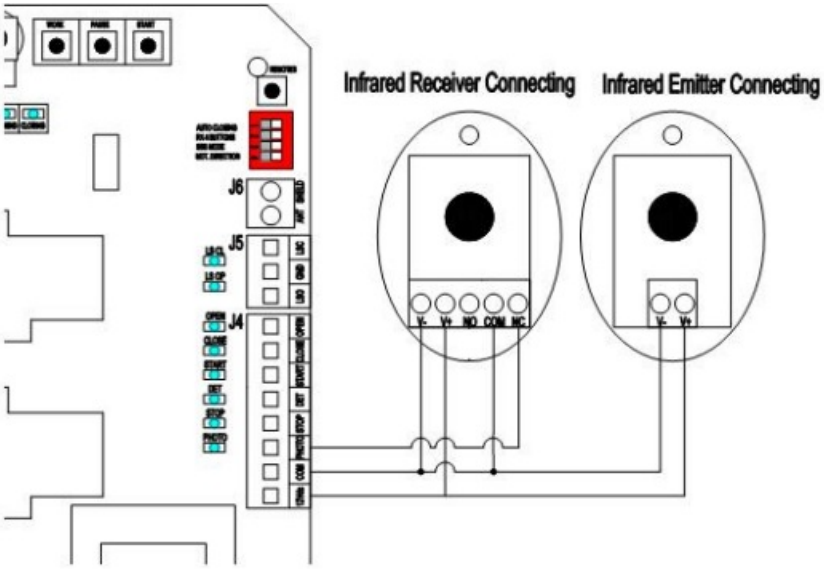
- **ANT:** Antenna
- **SHELD:** GND

- **Extra button**
  - **PAUSE:** This button is used to set the automatic closing time .
  - When the motor is not running, press the button, and then the LED STS flashes. You can press the button again to stop flashing.
  - The automatic closing time (seconds) depends on how many times the LED STS flashes.
  - **START:** This button is equal to J4 TERMINAL's START port
- **Adjusting knob**
  - **TORQUE:** For motor output force adjustment to ensure safety.
  - Clockwise rotation to increase; Counter-clockwise rotation to reduce.
    TIME: For slow stop width adjustment.
  - Clockwise rotation to increase; Counter-clockwise rotation to reduce.
  - Rotate to the minimum to cancel the slow stop function.
    Note: The default setting is TORQUE, TIME is the maximum value, and the user can adjust according to the actual requirement.
  - **Warning:** The motor output force cannot be set too large, just to be able to drive the gate.

Dip switch

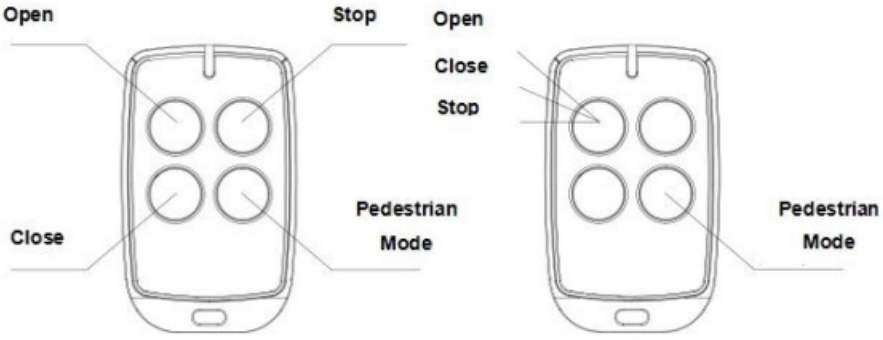
1. **AUTO CLOSING:** OFF– No automatic close function; ON–Automatic close function.
2. **RX 4 BUTTON:** OFF—Single button mode remote control; ON—Three button mode remote control.
3. **SBS MODE:** OFF—Pedestrian mode; ON—No pedestrian mode.
4. **MOT.DIRECTION:** OFF—Left installation; ON—Right installation. Infrared connection

- **Note:** The infrared connection NC or NO will be memorized while Travel Learning.
- **Infrared photocell function: I**n the closing process, when an infrared ray of the photocell is covered by people or objects during its detection range, the gate will open immediately for security protection.
- The distance between the photocell receiver and photocell emitter should be more than 2 meters, otherwise will affect the induction of the photocell.
- The following figure shows the NO infrared connection. If you want to connect to an NC infrared photo, just change to NC port. Then please learn to travel again to Memory the infrared NC connection.



Remote control operation

- **Three-button mode remote control:** OPEN/CLOSE/STOP of the main engine are controlled by three buttons separately on the remote control.
- **Single button mode remote control:** OPEN/CLOSE/STOP of the main engine are controlled by one button circularly on the remote control.



Three Button Mode Remote Control Single Button Mode Remote Control

- Add extra remote control (remote control learning): Remove the main engine housing, then take out the upper cover of the control box, press and hold the learning button REMOTES for 2 seconds, then the indicator light STS will be on; press the button that to be learned on the remote control, the STS will be off; remote control learning complete. A maximum of 25 remote controls can be learned.
- **Delete remote control:** To delete a remote control that has been learned; press and hold the learning button REMOTES until the STS starts flashing, all the matched remote controls will be deleted.
- The fourth button on the remote control is for pedestrian mode, press the button while the door is closed, it will open for 1 meter which is for pedestrians only.
- Note: To disengage gate opener, move the gate to the middle position, then close the clutch and press the open button of the external button switch to open the gate. If the gate opening direction is wrong, you can toggle switch MOT.DIRECTION or exchange the motor phase-sequence lines
- MOT2 and MOT1. If the opening or closing limit is wrong, please exchange limit switch lines which are connected to the corresponding terminal LSC and LSO on the control board.

Maintenance

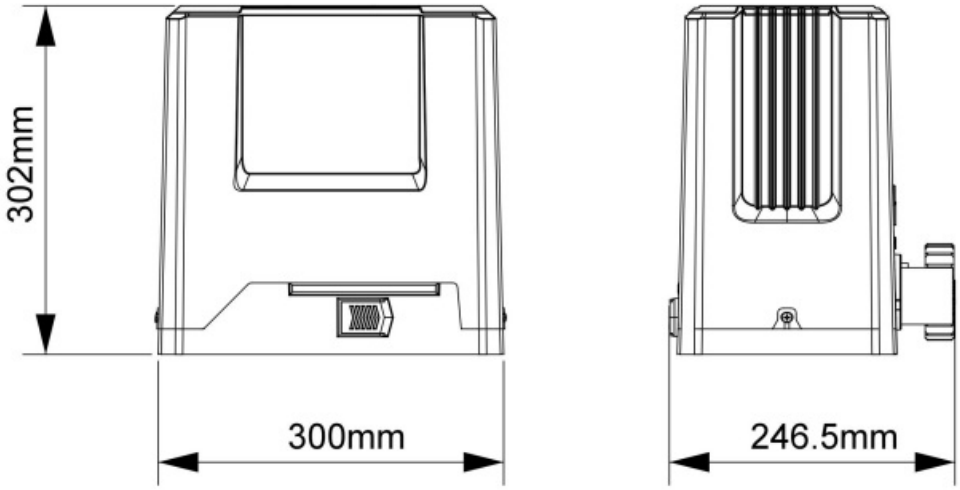
- The gate should be checked every month to make sure it operates normally.
- For the sake of safety, each gate is suggested to be equipped with an infrared protector, and regular inspection is required.
- Before installation and operation of the gate opener, please read all instructions carefully.
- Our company keeps the right to change the instruction without prior notice.

Troubleshooting

Any troubleshooting work below done to the motor must be completed by a licensed electrician and only whilst the power is off and the motor is unplugged!

Problem	Possible Reason	Solution
The gate cannot open or close normally, and the LED does not light.	1. The power supply is disconnected. 2. The fuse is blown. 3. Control board J1 terminal wrongly wired.	1. Connect the power supply. 2. Check the fuse (FU) and replace it if blown. 3. Re-wiring according to the user manual.
The gate can only open, but cannot close.	1. Photocell was wrongly installed. 2. Photocell is blocked by objects. 3. The sensitivity of the obstacle is too high (Intelligent type).	1. Ensure that the photocell mounting position can be mutually aligned. 2. Remove the obstacle. 3. Reduce the sensitivity of obstacles.
Remote control doesn't work.	1. Battery level is too low. 2. Remote control not paired.	1. Change the battery. 2. Pair the remote control to the gate opener.
Press the OPEN and CLOSE buttons, the gate is not moving, motor makes a noise.	1. Capacitor damaged. 2. The capacitor is poorly connected. 3. Gate moving is not smoothly	1. Change capacitor. 2. Check the capacitor wiring. 3. Adjust the motor or gate according to the actual situation.
Not stop when running to the opening or closing limit switch position.	1. The opening or closing limit switch is in opposite. 2. Magnetic limit switch badly installed.	1. Check whether the limit switch wiring is consistent with the motor running direction. 2. Check whether the distance and height between a magnetic limit switch and the motor reach to standard requirement.
The leakage switch tripped.	Power supply cable short circuit or motor wire short circuit.	Check wiring.

Drawing and Measurements



- www.gatexpertstore.com
- **CONTACT US E-mail:** sales@gatexpertstore.com
- **Website:** www.gatexpertstore.com
- **E-mail:** sales@gatexpertstore.com

Documents / Resources

	GATEXPERT PY1000AC Sliding Gate Opener [pdf] User Manual PY1000AC, PY1000AC Sliding Gate Opener, Sliding Gate Opener, Gate Opener, Opener

References

- China Sliding Gate Operator Kit, Swing Gate Operator Kit, Sectional Door Operator Kit Factory - GATEXPERT
- User Manual