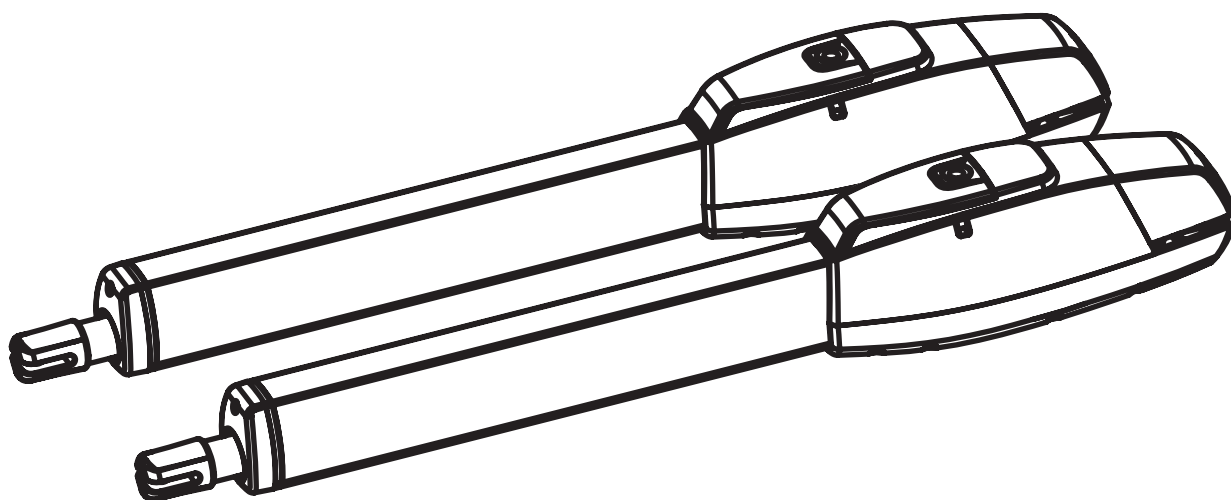


# MASTIFF400/400L

## SWING GATE OPENER

WITH MAGNETIC LIMIT SWITCH  
AND LED INDICATOR



Reuse  
Reduce  
Recycle



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## 1.1 GENERAL PRECAUTION:

### WARNING :

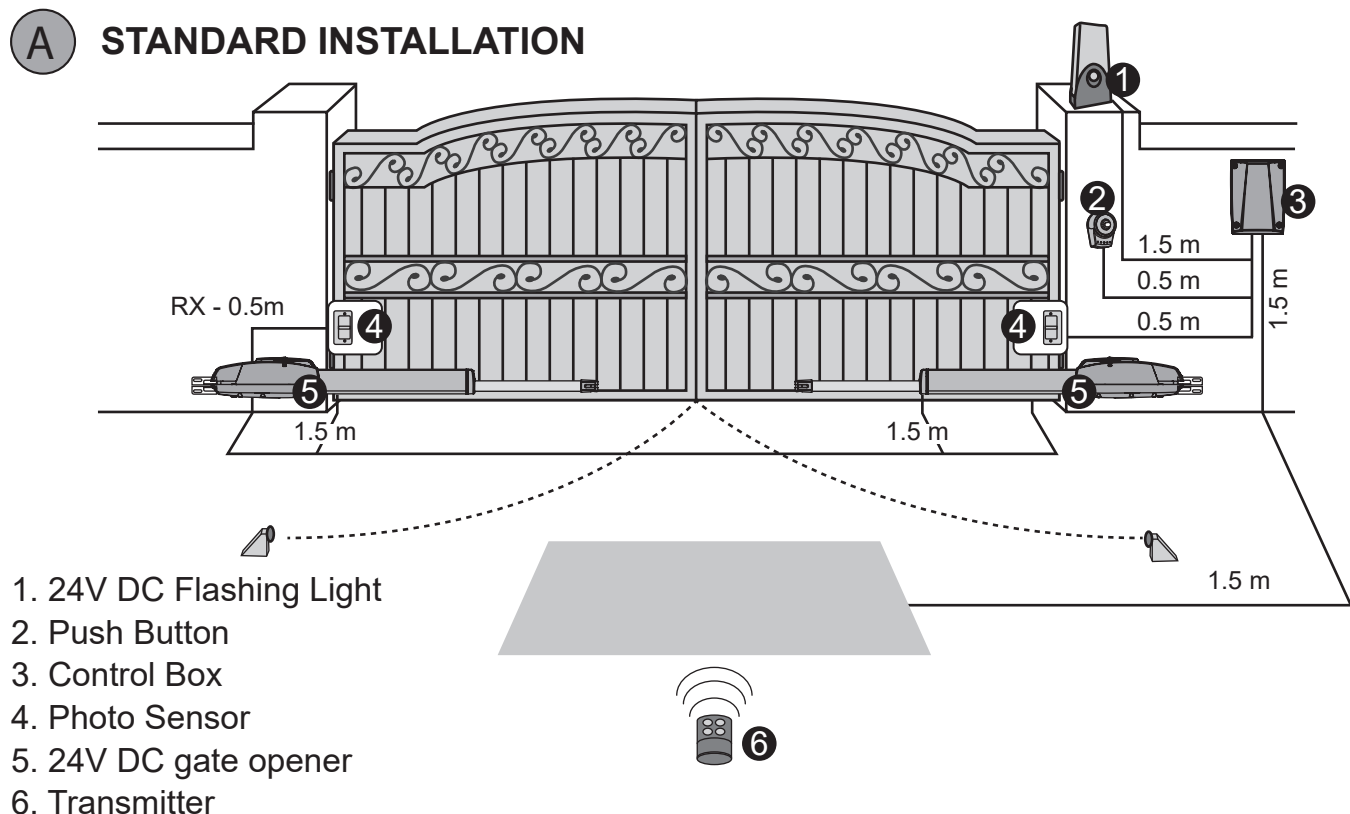
**This user manual is only for qualified technicians who is specialized in installations and automations.**

- (1) All installations, electrical connections, adjustments and testing must be performed only after reading and understanding of all instructions carefully.
- (2) Before carrying out any installation or maintenance operation, disconnect the electrical power supply by turning off the magneto thermic switch connected upstream and apply the hazard area notice required by applicable regulations
- (3) Make sure the existing structure is up to standard in terms of strength and stability
- (4) When necessary, connect the motorized gate to reliable earth system during electricity connection phase.
- (5) Installation requires qualified personnel with mechanical and electrical skills.
- (6) Keep the automatic controls (remote, push bottom, key selectors...etc) being placed properly and away from children.
- (7) For replace or repair of the motorized system, only original parts must be applied. Any damage caused by inadequate parts and methods will not be claimed to motor manufacturer.
- (8) Never operate the drive if you have any suspect with what it might be faulty or damage to the system.
- (9) The motors are exclusively designed for the gate opening and closing application, any other usage is deemed inappropriate. The manufacture should not be liable for any damage resulting from the improper use. Improper usage should void all warranty, and the user accepts sole responsibility for any risks thereby may accrue.
- (10) The system may only be operated in proper working order. Always follow the standard procedures by following the instructions in this installation and operating manual.
- (11) Only command the remote when you have a full view of the gate.

**TMT Automation Inc. shall not be liable for any injury, damage, or any claim to any person or property which may result from improper use or installation of this system.**

Please keep this installation manual for future reference.

## 1.2 STANDARD INSTALLATION



## B DIMENSION CHART

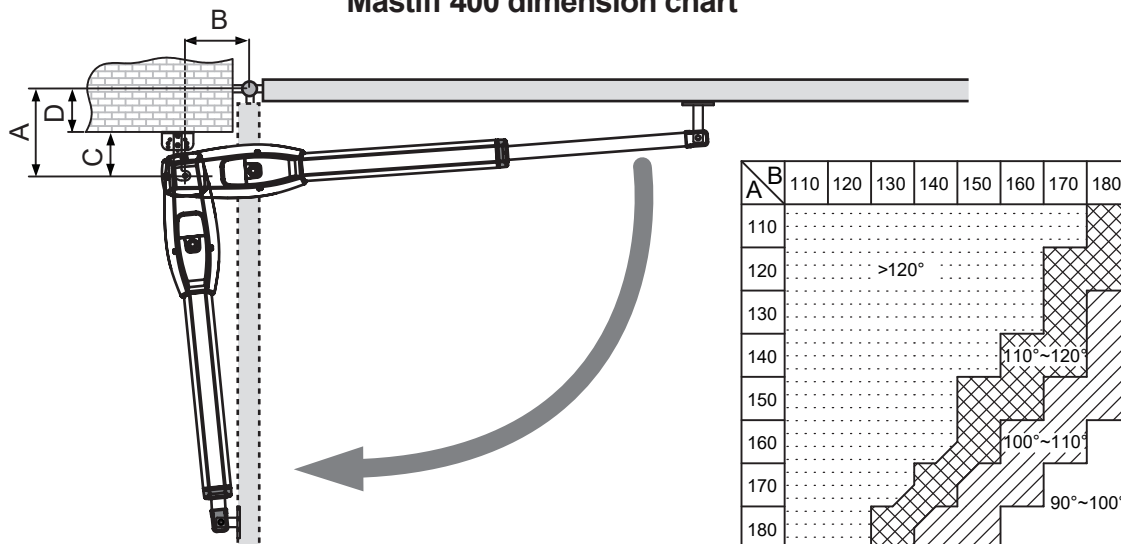
Comply with the measures shown on the chart for proper installation. Adjust the gate structure to fit it for best automation, if necessary.

Before preceding the installation, be sure that gate moves freely and that:

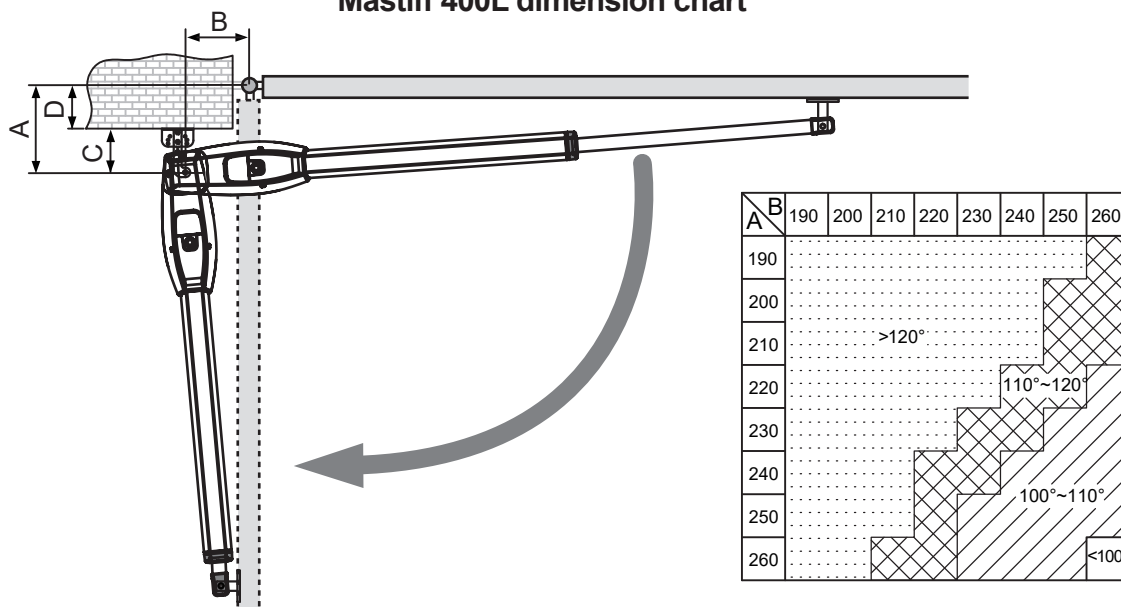
- 1) Hinges are properly positioned and greased.
  - 2) No obstacles in the moving area.
  - 3) No frictions between two gate leaves or with the ground while moving
  - 4). "C" value is 139mm.
  - 5). "D" can be measured from the gate easily.
  - 6). "A" = "C" + "D"
  - 7). The value of "B" can be calculated from the value of "A" and the leaves opening angle.
- Ex. If "A"=160mm with the leaves opening angle of 100 degrees, then the value of "B" is approximate 190mm.

\*\*Please make sure "B" and "A" are similar or the same in value that the leaves can be operated smoothly, also to reduce the burden of the motor.

**Mastiff 400 dimension chart**

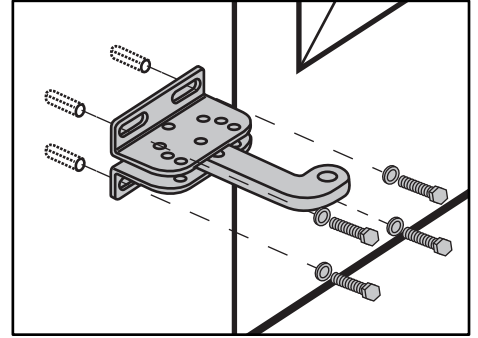
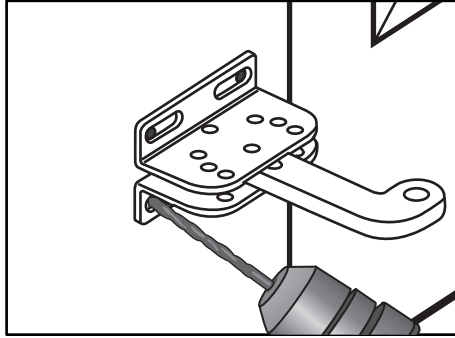
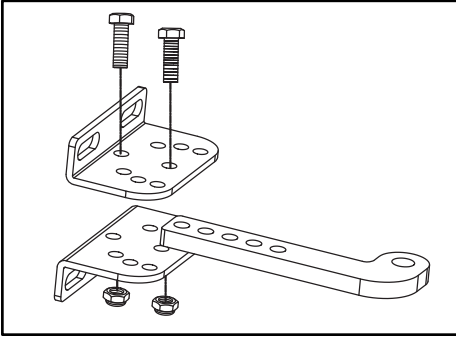


**Mastiff 400L dimension chart**

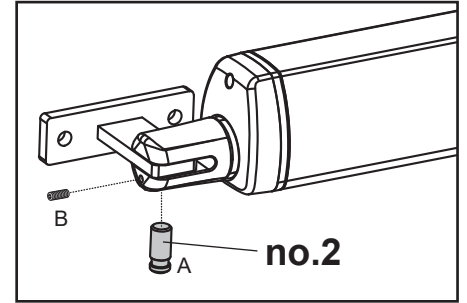
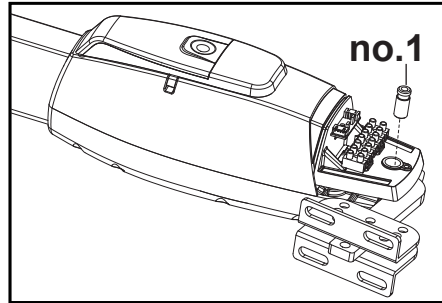
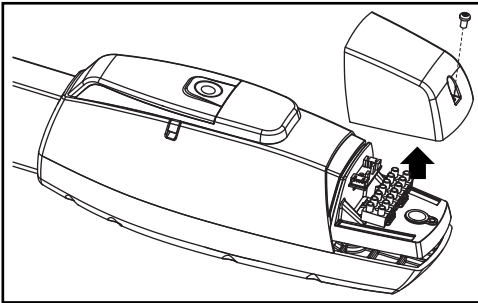


## C MOTOR FIXING

Assemble the rear bracket and fix it on the pillar.



Remove the wire cover and fix the rear bracket with the pin. Release the gate opener and place the pin into the fitting position no.1 and no. 2

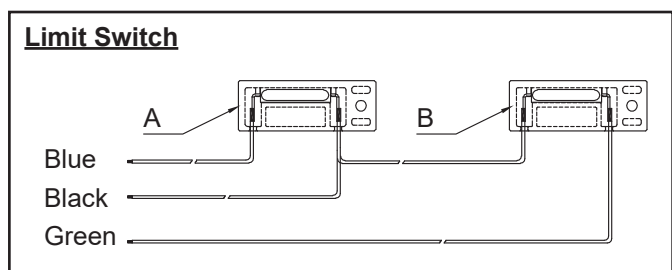
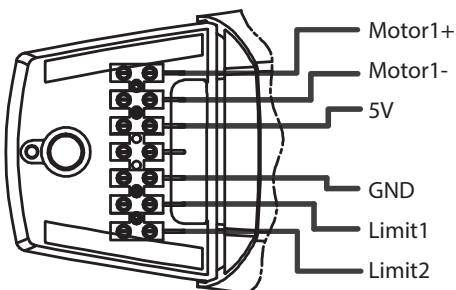


Make sure the gate openers are mounted in horizontal position especially in those positions.

- 1) When gate in CLOSE position
- 2) When gate in OPEN position
- 3) When gate at 45° angle position

Prior to weld the bracket on the gate leaf(if necessary), cover the gate opener to prevent damages from sparks.

## D WIRE CONNECTION:



- (1) Avoid tension in the cable during open and close phase.
- (2) Always connect the grounding wire(GND)

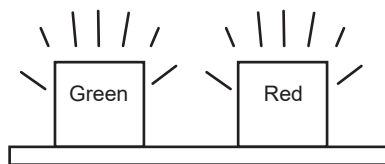
## **E** LED INDICATOR REACTION

E-1 Both LED indicators (red and green) stay on: when front and rear limit switches are not activated.

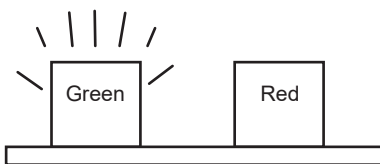
E-2 Red light off: when front limit switch is activated.

E-3 Green light off: when rear limit switch is activated.

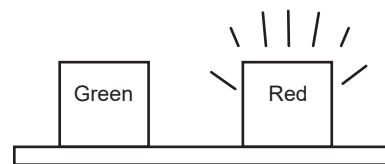
**E-1**



**E-2**



**E-3**



## **F** EMERGENCY RELEASE

In case of power failure, push the lid of release chamber and move forward. Insert the key and turn clockwise to unlock, then turn around the knob to release. To restore the automation, simply reverse the above procedures.

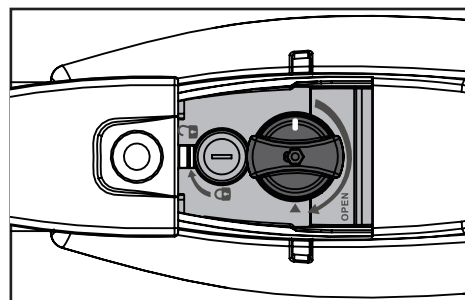
**Step1. Push the lid of release chamber and move forward**

**Step2. Insert the key and turn clockwise to the unlock position**

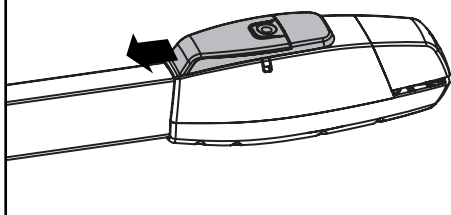
**Step3. then turn clockwise the knob to release the motor.**

Make sure the White bar on the knob is on the position opposite to the triangle indication.

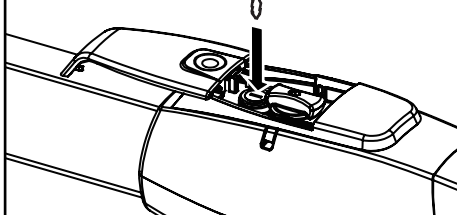
To restore the automation, simply reverse the above procedure.



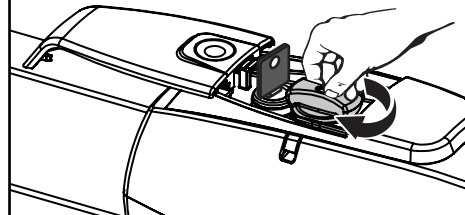
**Step 1**



**Step 2**



**Step 3**



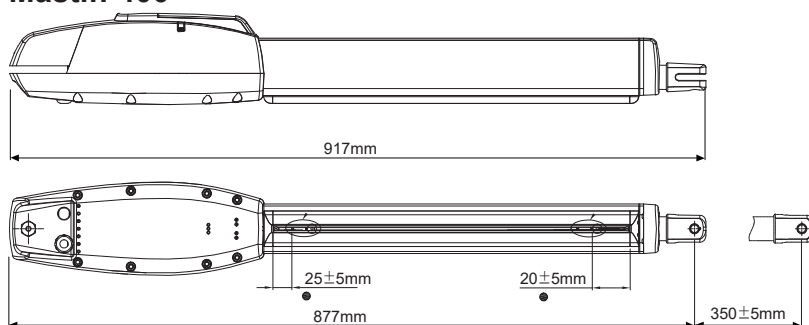
## 1.3 TECHNICAL FEATURES :

### A Technical Feature:

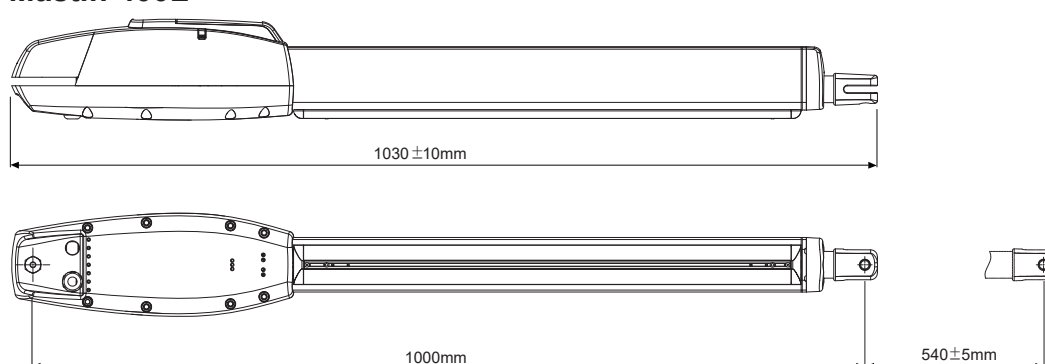
	Mastiff 400	Mastiff 400L
Max gate length	4m	5m
Max gate weight	350kg	450kg
Power Supply	110V/230Vac (50-60Hz)	110V/230Vac (50-60Hz)
Motor Power Supply	24Vdc	24Vdc
Gear type	Worm gear	Worm gear
Peak Thrust	3,500N	4,500N
Normal Thrust	3,000N	4,000N
Operation Stroke	350mm	540mm
Piston extension	25.5mm/sec	25.5mm/sec
Opening time	<14 sec	<14 sec
Duty Cycle	20%	20%
Protection grade (IP)/ Protection class	IP44	IP44
Working temperature/ Operating temperature	-20~50	-20~50
Absorbed current (A)	5.5A for maximum 10secs	5.5A for maximum 10secs
Absorbed power (W)	144W	144W
Manual release	key	key
Enclosure dimensions	917mm * 123mm * 124mm	1030mm * 123mm * 124mm

### B Dimension:

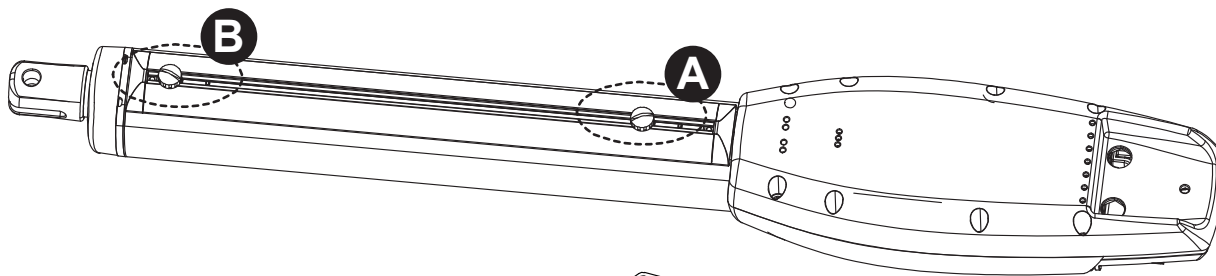
#### Mastiff 400



#### Mastiff 400L



## 1.4 Limit switch adjustment

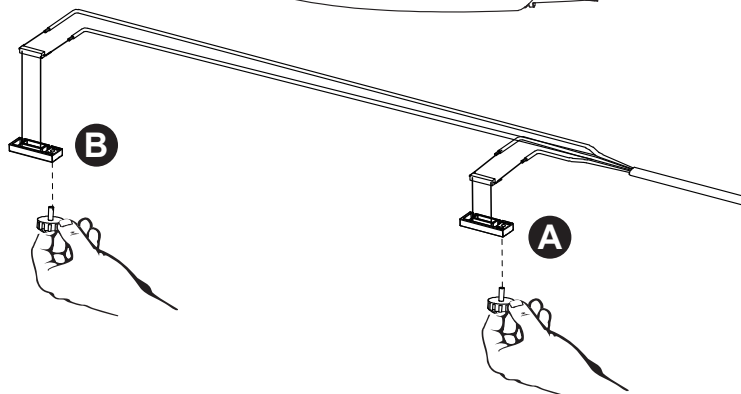


### Opening position:

1. Loosen the screw of limit switch A by hands.
2. Slide the switch to the right position.
3. Tighten up the screw.

### Closing position:

1. Loosen the screw of limit switch B by hands.
2. Slide the switch to the right position.
3. Tighten up the screw.



## 1.5 Maintenance:

Conduct the following operations at least every 6 months. If in high intensity of use, shorten the period in between.

### Disconnect the power supply:

- (1) Clean and lubricate the screws, the pins, and the hinge with grease.
- (2) Check the fastening points are properly tightened.
- (3) Make the wire connection are in good condition.

### Connect the power supply:

- (1) Check the power adjustments.
- (2) Check the function of the manual release.
- (3) Check the function of photocells or other safety device.



24V power supply  
for great safety



Solid material apply  
with lasting usage



Manual release device  
with easy use and  
highly protection



Worm gear application  
give silence operation



Easy installation  
and user friendly  
interface