



## Automatic Gate Opening System

### USER MANUAL



- SWING GATE OPENER
- SLIDING GATE OPENER
- UNDERGROUND GATE OPENER



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# Warnings

Please read this instruction manual carefully before the installation of gate-automated system.

This manual is exclusively for qualified installation personnel. **Autoglide** is not responsible for improper installation and failure to comply with local electrical and building regulations.

Keep all the components of **CABRI-20P** system and this manual for further consultation

- Be aware of the hazards that may exist in the procedures of installation and operation of the gate-automated system. Besides, the installation must be carried out in conformity with local standards and regulations
- If the system is correctly installed and used following all the standards and regulations, it will ensure a high degree of safety
- Make sure that the gates works properly before installing the gate-automated system and confirm the gates are appropriate for the application.
- Do not let children operate or play with the gate-automated system.
- Do not cross the path of the gate-automated system when operating.
- Please keep all the control devices and any other pulse generator away from children to avoid the gate-automated system being activated accidentally.
- Do not make any modifications to any components except that it is mentioned in this manual.
- Do not try to manually open or close the gates before you release the gear motor.
- If there is a failure that cannot be solved and is not mentioned in this manual, please contact qualified installation personnel.
- Do not use the gate-automated system before all the procedures and instructions have been carried out and thoroughly read.
- Test the gate-automated system weekly and have qualified installation personnel to check and maintain the system at least every 6-month.
- Install warning signs (if necessary) on the both sides of the gate to warn the people in the area of potential hazards.

# 1. Product Description and Applications

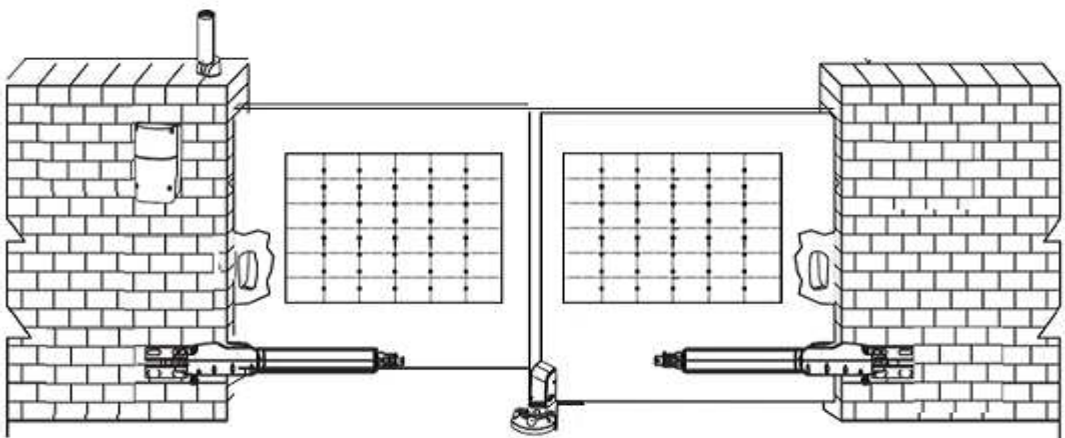
## 1.1 Applications

**CABRI-20P** is applied for residential automation of single or dual leaf gate. CABRI-20P has to be operated with electricity and it's forbidden to be operated by back-up batteries for normal use. Back-up batteries are only allowed for emergent operation when there is a power failure, and the gear motors can be released by special keys to move the gate manually.

## 1.2 Description of the Automation

The following diagram of **CABRI-20P** typical installation describes some terms and accessories of a gate automation system

**Figure 1**



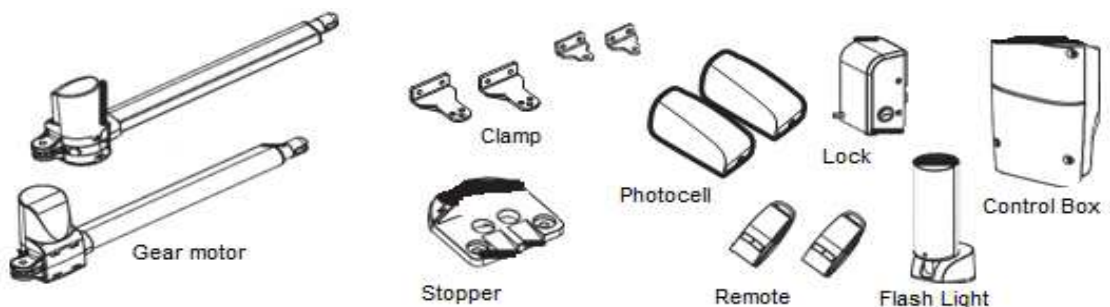
## 1.3 Description of devices

**CABRI-20P** includes the accessories shown in figure 2. Please check the accessories the same as the package provided.

**Attn: some accessories not included due to customization**

- 2 CABRI-20P electromechanical gear motors with mounting brackets
- 1 pair of photocells.(one TX and one RX)

**Figure 2**



- 2 Radio transmitters, Flashing Light, Control Box, Electric Latch and Stopper

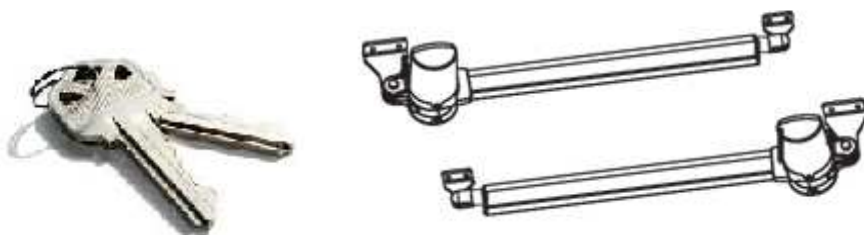
### 1.3.1 CABRI-20P Electromechanical Gear Motors

**CABRI-20P** consists of a worm screw reduction gear and a 24V DC motor.

The gear motor could be released manually by special release keys when there is a power failure.

The gear motor is installed with two post brackets, one rear plate and one front plate for the installation.

**Figure 3**



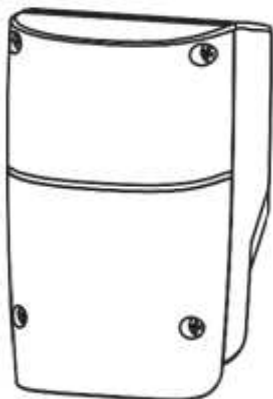
**LIST OF SMALL PARTS CABRI-20P**

Front Plate	2pcs	M8 self-locking nut	4pcs
Rear Plate	2pcs	M12*25L hex bolt	2pcs
Post bracket	4pcs	M12 self-locking nut	2pcs
M8 *25L hex bolt	4pcs	Release key	2pcs

### 1.3.2 Control Box

Control box consists of one control panel with incorporated receiver and one transformer. Provides the complete automation of the gear motors and other accessories of **CABRI-20P** kit. To connect separate terminals on the control panel and activate the gear motors and other accessories, the installation manual has to be carefully read before handling.

**Figure 4**



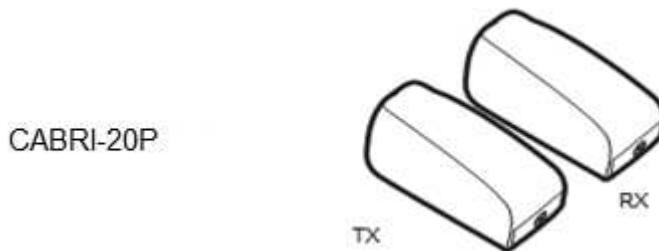
**LIST OF SMALL PARTS CABRI-20P**

5*30 Screw	4pcs
Nylon screw anchor	4pcs

### 1.3.3 Photocells

The pair of Photocells has to be installed on the wall and connected to the control panel. The function of the photocells is to detect the obstacles found on the optical axis between the transmitter (TX) and the receiver (RX).

**Figure 5**



### 1.3.4 Radio Transmitter

Radio transmitter is used for the remote control of the gate movement. To use the transmitter, press and hold the button for 1 second. There are two buttons on the transmitter and (A) button is “open-stop-close mode” and (B) button is “pedestrian mode”.

**Figure 6**



### 1.3.5 Flashing Light

Flashing light is controlled by control box and blinks when the gate is moving. The flashing light stops blinking when the gates finish opening or closing

**Figure 7**

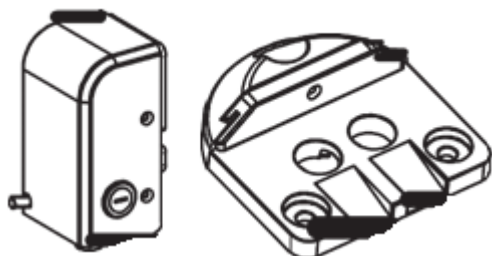




### 1.3.6 Electric Latch and Stopper

Electric latch is used to lock the gate and it has to be used with stopper and installed on the master gate.

**Figure 8**



**LIST OF SMALL PARTS**

M8*25L hex bolt	3pcs
M8 self locking nut	3pcs
Key	2pcs

## 2) Installation:

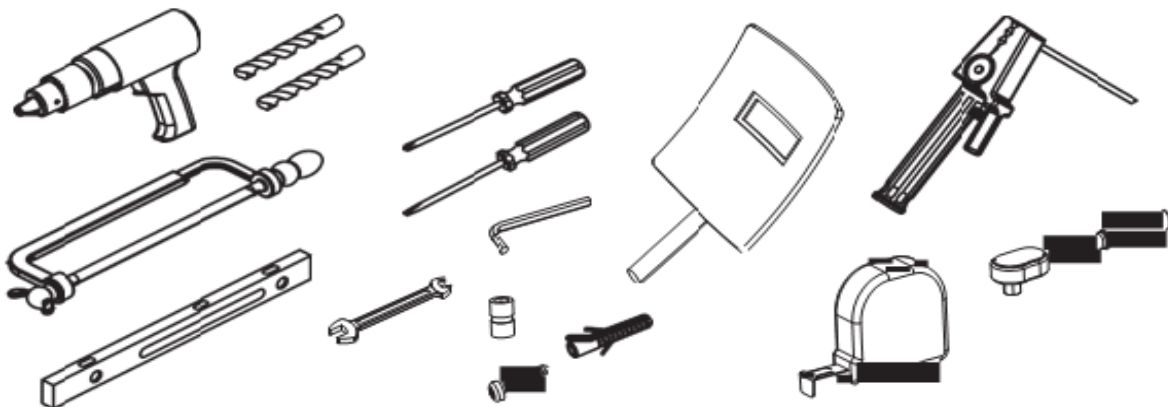
### 2.1 Notes of Motors in Operation

The **CABRI-20P** gate openers are applicable to per leaf of **2.5** meters in width and **200 kg** in weight which can be opened up to 110 degrees primarily for residential use; where the performance shall be influenced by the factors such as gate dimension, weight and climate that the driven torque is necessarily to be adjusted properly.

#### 2.1.1 Tools in Installing

Please make sure all tools and cables are ready and conform to the industrial safety standard before installation. Please refer to **Figure 9**.

**Figure 9**

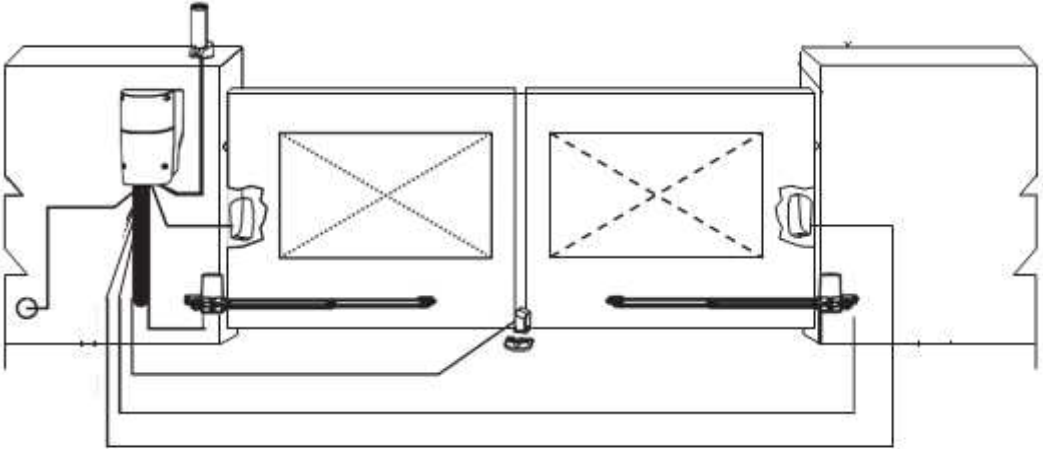


## 2.1.2 Motors, Components and Its Installation in Illustration

The installation procedure of **CABRI-20P** may be changed due to Various accessories and quantities installed. The basic wiring diagram is shown in **Figure 10**.

**No wiring cables for accessories are supplied with CABRI-20P.**

**Figure 10**



## 2.2 Power Connection

**CABRI-20P** is required to connect two cores wires, which requires very low voltage that no professionally trained personnel is required in installation; however, the users are advised to read the installation manual carefully before going for it. After getting to know all accessories and their positions, suggest starting from cable conduit arrangement to prevent the cables from being broken or damaged.

### 2.2.1 Notes for Power Connection

1. The installation of power supply cable to the motor should be carried out by a qualified professional electrician.
2. The power supply cable of the motor should be equipped with short circuit protection and leakage protection.
3. Please make sure to shut off the power before going installation or maintenance.

## 2.3 Installation

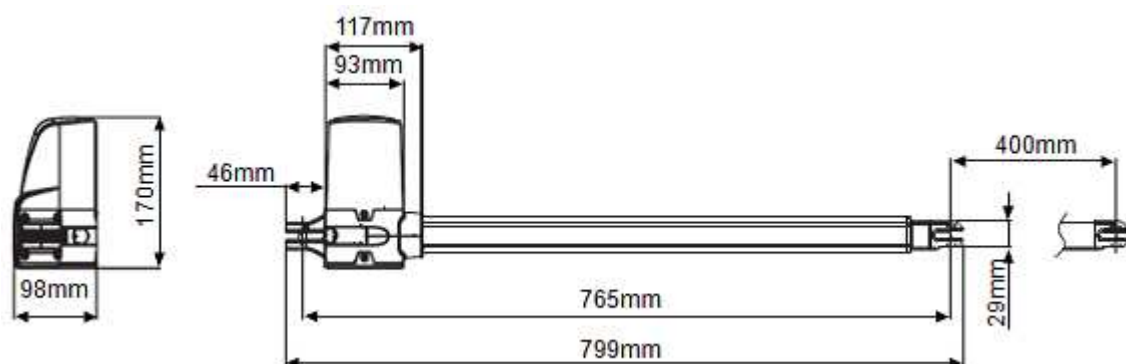
### 2.3.1 Preparation for Motor Installation

**CABRI-20P** is not applicable to a gate which is inefficient or unsafe, neither to solve the defects due to incorrect installation nor poor maintenance.



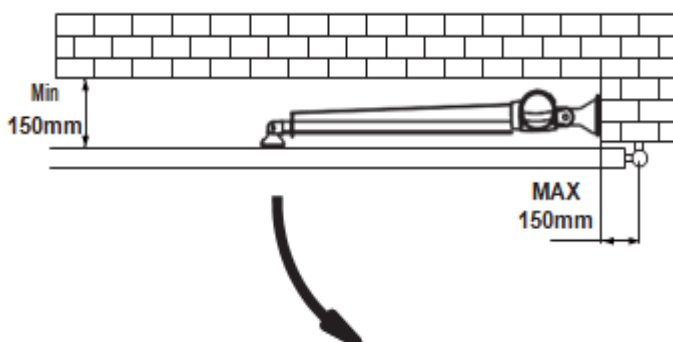
- 1) Make sure the weight and dimensions of the gate conform to the operation range of **CABRI-20P**. Don't use **CABRI-20P** if the specifications do not meet the requirements.
- 2). Make sure the gate structure conform to the criteria of automatic operation and force regulations.
- 3). Make sure there is no serious friction existing in the opening or closing travel of the gate leaves.
- 4). Make sure the gate is at horizontal level that the gate will not move aside at any position.
- 5). Make sure the gate can bear the impact of the motor torque when it is installed on any hole of the bracket which the surface is sufficiently sturdy.
- 6). Make sure the photo sensors are installed on flat surfaces to ensure the two ends of receiving and transmitting corresponded to each other.
- 7). Check the dimensions of the motors as below.

**Figure 11**



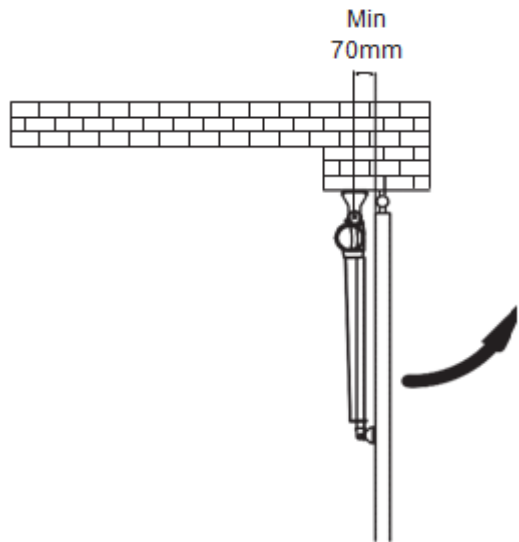
- 8). Make sure to leave enough space when the gate is opening

**Figure 12(Aerial View)**



9). If the gate is OPENED OUTWARD, please leave at least 70mm between the post brackets and the gate.

**Figure 13** (Aerial View)

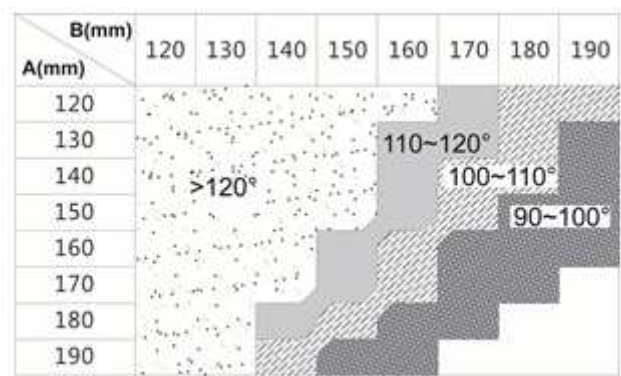


**Figure 14** (Aerial View)



10) Using the leaf-opening angle as criteria to make sure all criteria in **Figure 15** can be met.

**Figure 15**

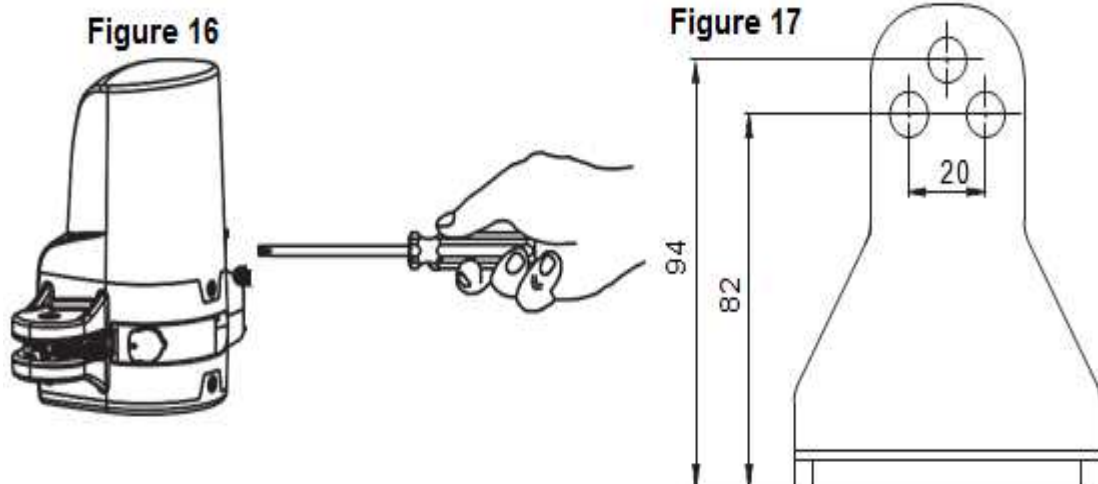


- 11). "C" value is 139mm.
- 12). "D" can be measured from the gate easily.
- 13). "A" = "C" + "D"
- 14). The value of "B" can be calculated from the value of "A" and the leaves opening angle. Ex. If "A"=160mm with the leaves opening angle of 100 degrees, then the value of "B" is approximate 190mm.

**\*\*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.**

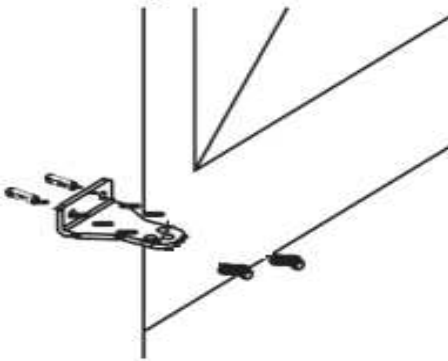
## 2.3.2 Installation of The Gear Motors

1. Choose the correct dimensions of the motors and position to be installed.
2. Check if the mounting surface the brackets to be installed is smooth, vertical and rigid.
3. Arrange the cable conduit for power supply cable of the motors.
4. Loosen the screw and remove the cover of the motor as shown in **Figure 16**.
5. Place the leaves in the closed position.
6. Refer to the distance of "B" in **Figure 17**, place the rear plate in the correct position on the mounting surface. Inspect if the distance is proper as shown in **Figure 22** i.e. the position the front plate of the motor to be installed.

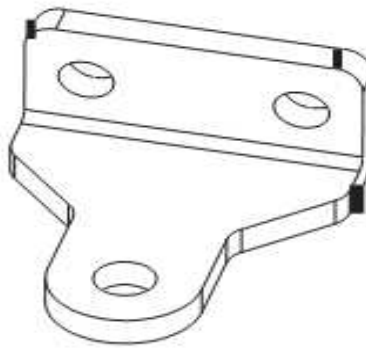


7. Place two post brackets on the surface to be installed and mark the drilling points, then drill minimum diameter of 8mm holes by four on the mounting surface to be installed and fasten up the brackets with screws and washers.
8. Please make sure the front plate is completely installed horizontally.

**Figure 18**

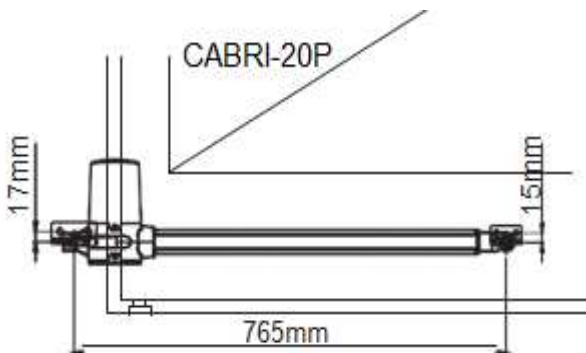


**Figure 19**

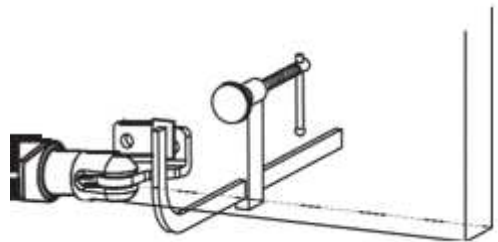


9. Refer to **Figure 20**, the distance between front plate of the motor and rear plate is 798mm (**CABRI-20P**), the difference in height is 15.5mm (**CABRI-20P**).
10. Clamp and fix the motor front plate on the door temporarily.

**Figure 20**

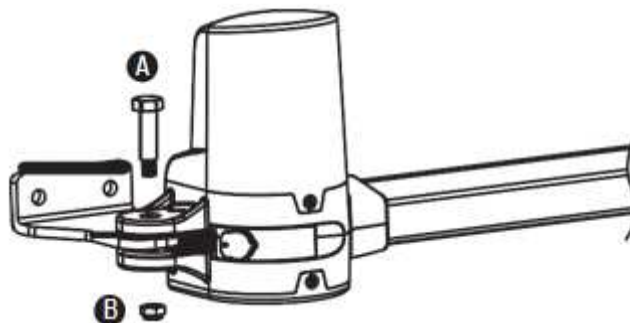


**Figure 21**



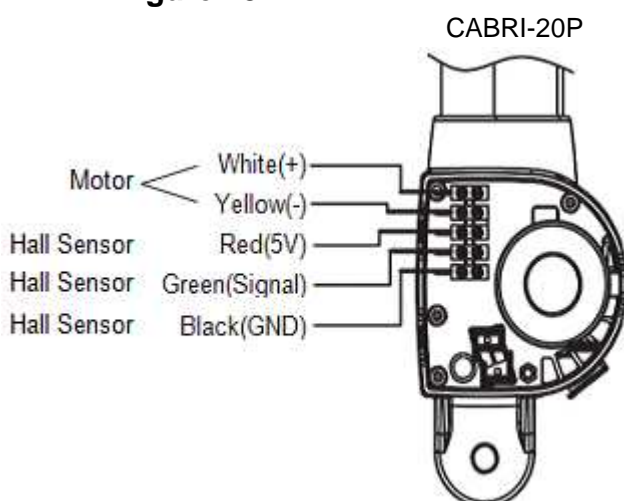
11. Lift up the motor and insert the screws into the front plate.
12. Lift the motor overhead and push the gate to the end until the screw holes of the motor end matches the holes on the rear plate. Fasten the motor to the rear plate with the bolt as shown in **Figure22**.

**CABRI-20P**  
**Figure 22**

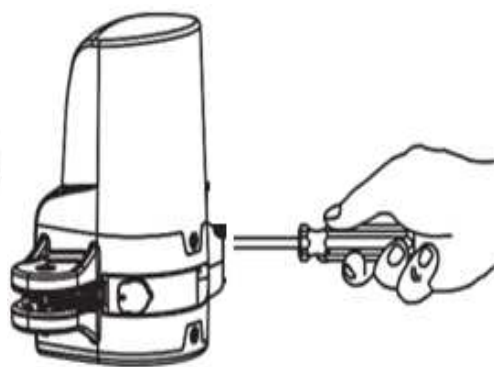


13. Fasten the nut tightly and loosen it for half round for motor supporting in rotating.
14. Fasten the motor front end to the front plate with the bolt (A) and nut (B) tightly.  
Fully tighten the screw.
15. Use appropriate key to release the gear motor.
16. Try to push the released gate and make sure the motor can be manually moved easily.
17. Make sure the motor front plate can be fastened on the gate to be installed permanently.
18. Use appropriate Key to fasten the gear motor again.
19. Loosen the plastic nut under the power cable of the motor end, and penetrate the power cable through the nut and screw it up.
20. Connect the motor power cable as shown in **Figure23**.
22. Close the gear motor cover by tightening the two screws as shown in **Figure24**

**Figure 23**



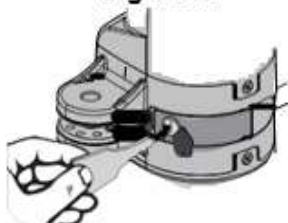
**Figure 24**



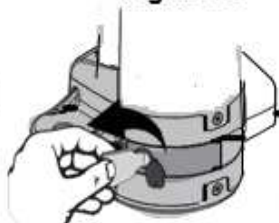
### 23. Gear Motor Release

- 1). Insert the release key to the release slot **Figure25**.
- 2). Turn the release key anti-clockwise **Figure26**.
- 3). Pull out the release bar **Figure27**.
- 4). Turn the release key clockwise to fix the release bar, the release bar has to be in pulled out position when you turn the release key clockwise **Figure28**.
- 5). The turning direction will be reversed for right motor

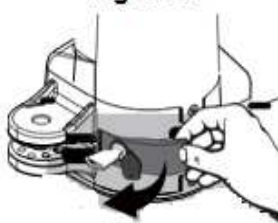
**Figure 25**



**Figure 26**



**Figure 27**



**Figure 28**



### 2.3.3 Flashing Light

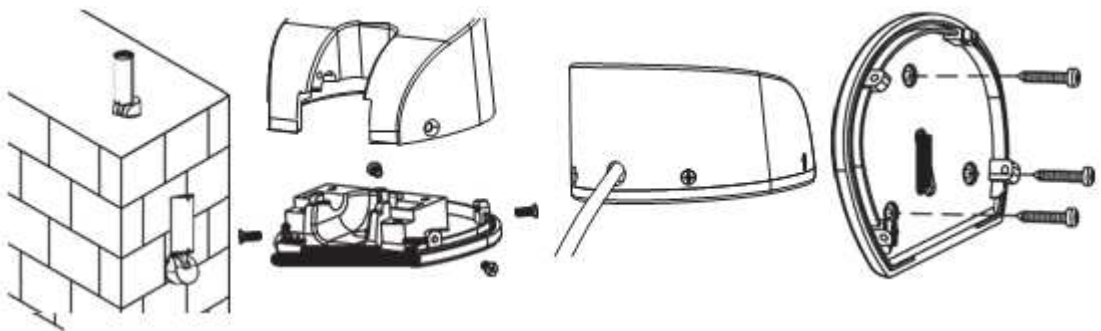
- 1) Decide the installation position of the flashing light. The flashing light has to be installed near the gate and easy to be seen by users and passersby. The flashing light can be installed horizontally or vertically. **Figure 2.3.3 (1).**
- 2) Unscrew the four screws on the light base and separate the base with the bottom as shown in **Figure 2.3.3 (2).**
- 3) Connect the wires and penetrate the wires into the hole of the base. **Figure 2.3.3 (3).**
- 4) Drill the holes in the wall and fix the bottom to the wall by three screws. **Figure 2.3.3 (4)**

**Figure 2.3.3(1)**

**Figure 2.3.3(2)**

**Figure 2.3.3(3)**

**Figure 2.3.3(4)**

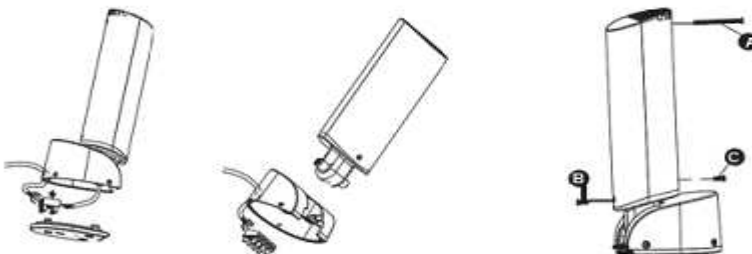


- 5). Connect the two wires of the light to the PCB terminals and place the wires into the conduit if necessary. See **Figure 2.3.3 (5).**
- 6). Tighten the four screws back on the light base. **Figure 2.3.3 (6)**
- 7). Replacing the bulb set. See **Figure 2.3.3 (7)**
- 7.1) Unscrew the flashing light wires from the PCB terminals and make sure the power of the light is off.
- 7.2) Release the three screws (A) (B) (C) of the flashing light cover.
- 7.3) Separate the flashing light cover and replace the bulb set with a new one.
- 7.4) Tighten the three screws (A) (B) (C) of the flashing light cover.

**Figure 2.3.3(5)**

**Figure 2.3.3(6)**

**Figure 2.3.3(7)**

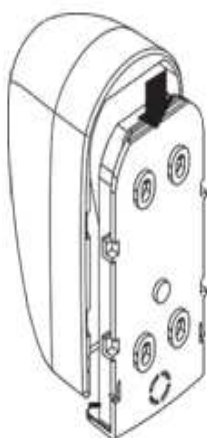




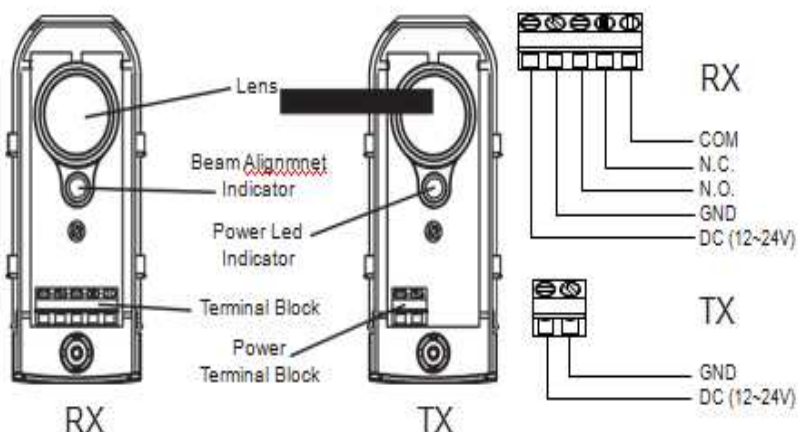
## 2.3.4 Photocells

- 1). Open the cover **Figure 2.3.4 (1)** .and connect wires **Figure 2.3.4 (2)**.
- 2). Mounted the receiver and transmitter on the proper position **Figure 2.3.4 (3)**
- 3). Ensure there are no obstacles between receiver and transmitter. For optimal efficiency, the receiver and transmitter should be properly aligned.
- 4). Power-up the photocells and make sure the LED light on receiver and transmitter are ON

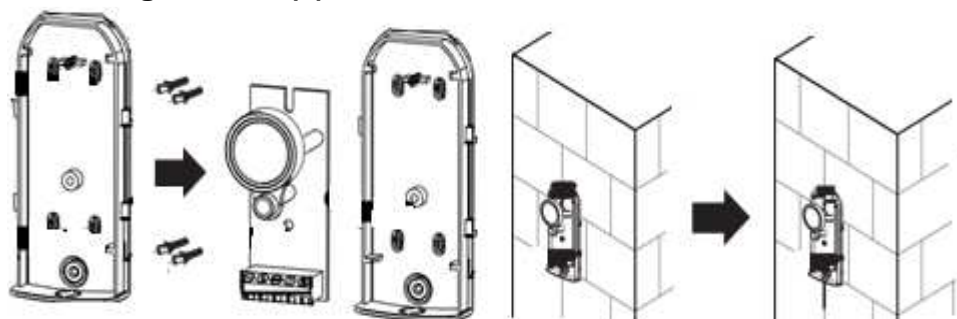
**Figure 2.3.4(1)**



**Figure 2.3.4(2)**



**Figure 2.3.4(3)**

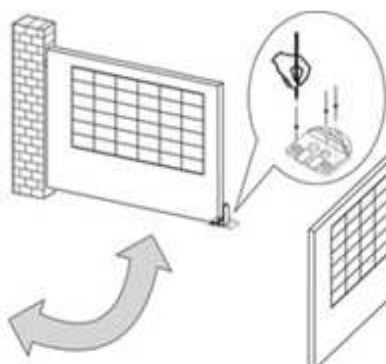


## 2.3.5 Electric Latch and Stopper

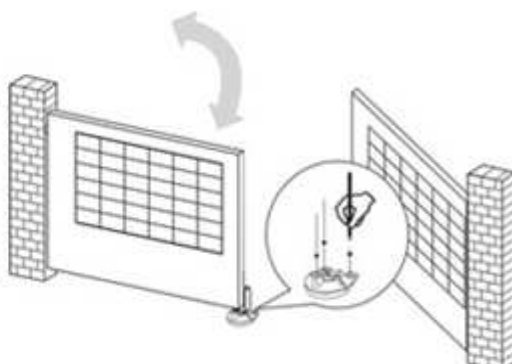
### 1. Stopper:

- 1). Before installing the stopper, please make sure the gates are in close positions and the surface to be installed is flat.
- 2). Place the stopper on the ground using the bottom as reference, and mark the 3 drilling points. See **Figure 2.3.5 (1)** for the gate opened inward.  
See **Figure 2.3.5 (2)** for the gate opened outward.

**Figure 2.3.5(1)**



**Figure 2.3.5(2)**



Note: If the gate is opened outward, place the stopper in opposite direction.

- 3). Drill the 3 marked points, and then securely attach the stopper to the ground with screws and washers. See **Figure 2.3.5 (3)**

**Figure 2.3.5(3)**



## 2. Electric Latch. (If the gate is opened outward)

- 1) If the gate is opened outward, please change the spring inside and screw it in the different place. See **Figure 2.3.5(4)**, **Figure 2.3.5(5)**, **Figure 2.3.5(6)**, **Figure 2.3.5(7)**

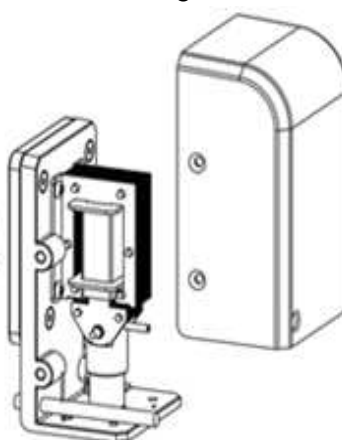
**Figure 2.3.5(4)**

Unscrew the screws



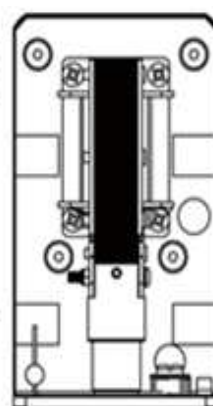
**Figure 2.3.5(5)**

Take the casing off



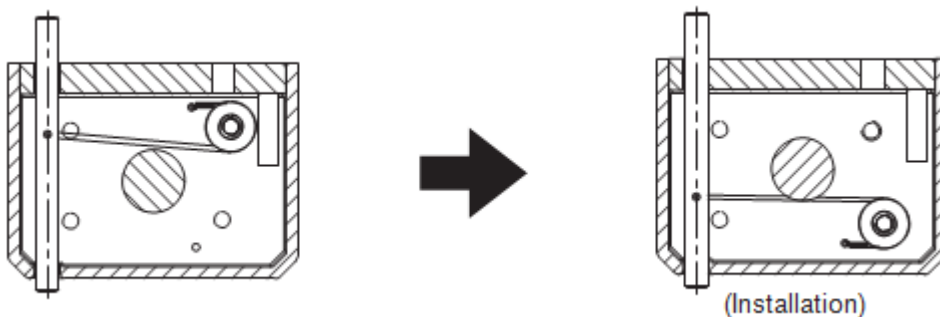
**Figure 2.3.5(6)**

The location of the spring



**Figure 2.3.5(7)**

Change the spring and screw in different place

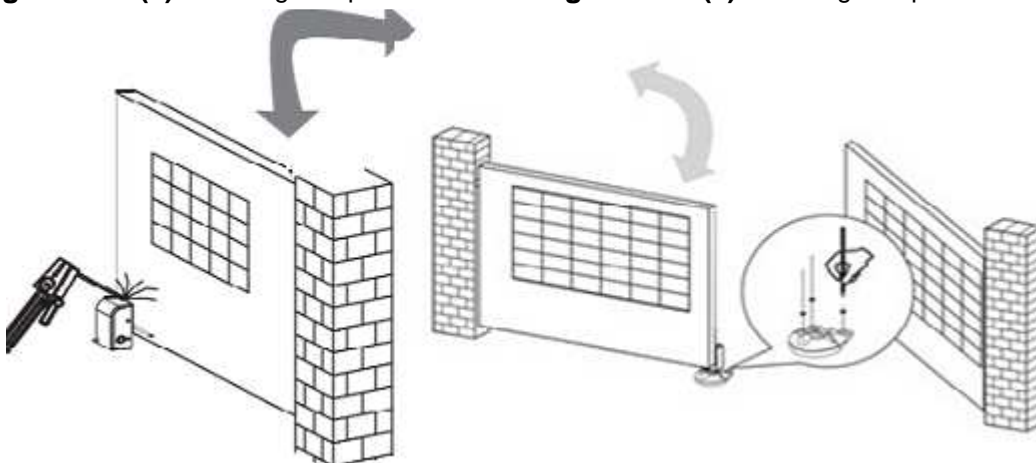


2). Weld the back plate of the electric latch to the surface on the master gate.

See **Figure 2.3.5(8).**

Please avoid melting the wires by the heat of the fixed plate

**Figure 2.3.5(8)** For the gate opened inward **Figure 2.3.5(9)** For the gate opened outward

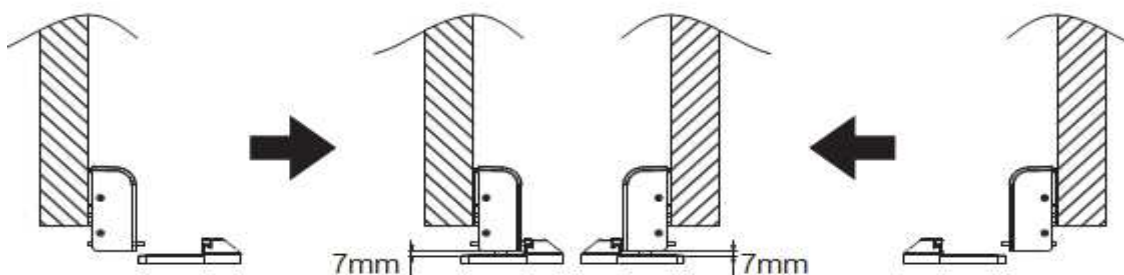


3). The gap between the bottom of electric latch and the stopper should be less than 7mm.

**Figure 2.3.5(10).**

4). Connect the wires of the electric latch to the terminal LAT (+) and LAT (-) on the PCB.

**Figure 2.3.5(10)** For the gate opened inward. **Figure 2.3.5(11)** For the gate opened outward



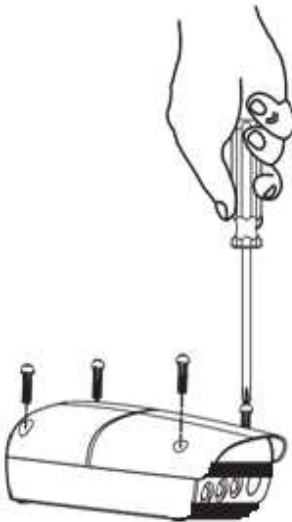
## AUTOGLIDE CABRI-20P

### 3) Control Box

#### Control Box Installation

1. Decide the installation position of control box first, it is suggested to be installed near the gate and should be protected from possible damage. Be aware of the motor cable length before deciding the installation position.
2. Remove the cover by unscrewing the four screws on the cover. **Figure 1(1).**
3. Use a screwdriver to puncture the holes beneath the bottom of the control box. **Figure 1(2).**
4. Secure it on the wall. **Figure 1(3).**

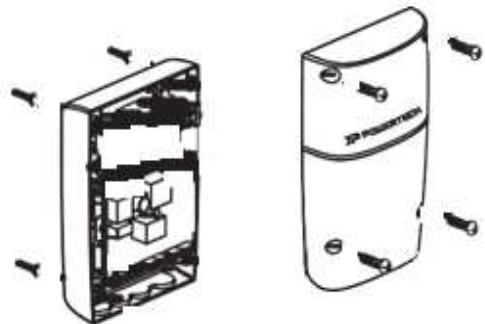
**Figure 1(1)**



**Figure 1(2)**



**Figure 1(3)**



## 5. Wiring Connection:

Prepare all the wires of the accessories beforehand and connect the wires to the gear motors and accessories on the PCB as shown in **Figure 1(4)**. All of the wiring connections of the accessories are not requested to distinguish the positive (+) and the negative (-) polarity.

- 1). Flashing light: Connect the two wires from the flashing light to the terminal L+ and L- on the PCB.
- 2). Electric Latch: Connect the two wires from the electric latch to the terminal Lo + and Lo- on the PCB.
- 3). Gate openers: Refer to **Figure 1(4)** and connect the wires separately to the terminals on the PCB.

**Motor 1:** Connect the motor wire (White +) to the terminals Mo1 +, and (Yellow -) to the Mo1-.

**Motor 2:** Connect the motor wire (White +) to the terminals Mo2 +, and (Yellow -) to the Mo2 -.

**Notes:** For gates opened outward.

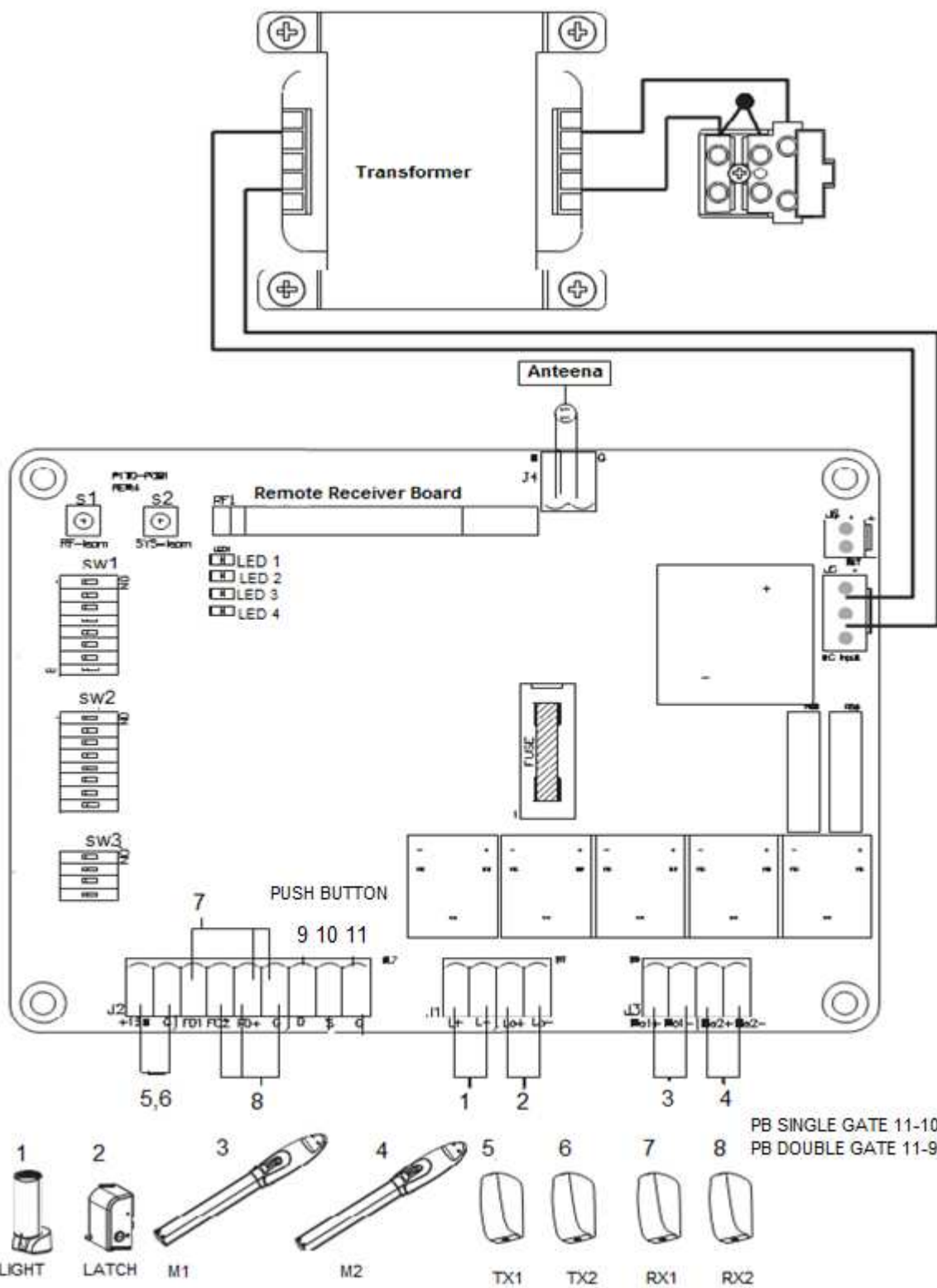
**Motor 1:** Connect the motor wire (Yellow -) to the terminals Mo1 +, and (White +) to the terminals Mo1-.

**Motor 2:** Connect the motor wire (Yellow -) to the terminals Mo2 +, and (White +) to the terminals Mo2 -.

### 4). Photocells: See Figure 1(4)

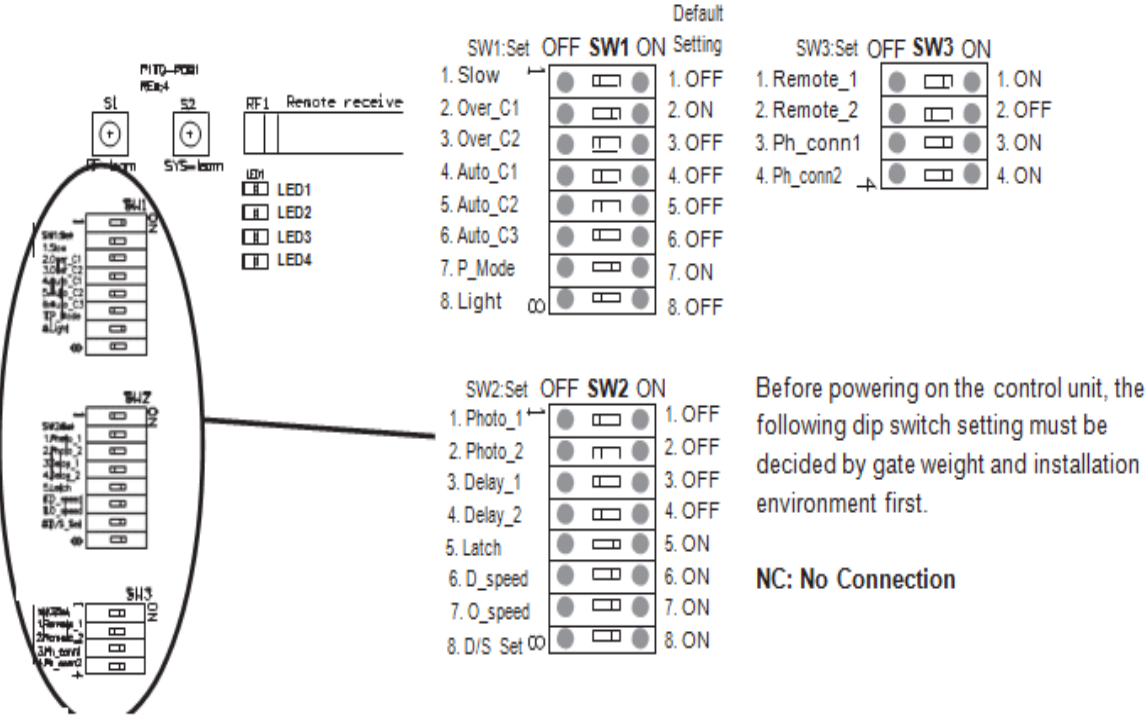
- (A) installed one set Photocell to FO1, SW3 setting as below:  
3. Ph\_conn1 > OFF and 4. Ph\_conn2 > ON
- (B) installed one set Photocell to FO2, SW3 setting as below:  
3. Ph\_conn1 > ON and 4. Ph\_conn2 > OFF
- (C) installed two sets Photocell, SW3 setting as below:  
3. Ph\_conn1 > OFF and 4. Ph\_conn2 > OFF
- (D) No Photocell has been installed, SW3 setting as below:  
3. Ph\_conn1 > ON and 4. Ph\_conn2 > ON

**Figure 1(4)**





4. Settings



4.1 Sw1 Dip Switch Setting

4.1.1 Slowdown Adjustment (Dip 1.Slow)

- ON: The gear motors do not slow down before the gates completely close or open.
- OFF: The gear motors slow down before the gates completely close or open.

4.1.2 Over-current Adjustment (Dip 2.Over C1 & Dip 3. Over C2)

OVER C1		OVER C2	Current (Amp)
Dip Switch 2 OFF	Dip Switch 3 OFF		2A
Dip Switch 2 OFF	Dip Switch 3 ON		3A
Dip Switch 2 ON	Dip Switch 3 OFF		4A
Dip Switch 2 ON	Dip Switch 3 ON		5A

### 4.1.3 Gate Auto close Adjustment

(Dip 4. Auto C1, Dip 5. Auto C2 & Dip 6. Auto C3)

Auto C1	Auto C2	Auto C3	Effect
Dip switch 4 OFF	Dip Switch 5 OFF	Dip Switch 6 OFF	No auto-close
Dip switch 4 OFF	Dip Switch 5 OFF	Dip Switch 6 ON	3 sec.
Dip switch 4 OFF	Dip Switch 5 ON	Dip Switch 6 OFF	10 sec.
Dip switch 4 OFF	Dip Switch 5 ON	Dip Switch 6 ON	20 sec.
Dip switch 4 ON	Dip Switch 5 OFF	Dip Switch 6 OFF	40 sec.
Dip switch 4 ON	Dip Switch 5 OFF	Dip Switch 6 ON	60 sec.
Dip switch 4 ON	Dip Switch 5 ON	Dip Switch 6 OFF	120 sec.
Dip switch 4 ON	Dip Switch 5 ON	Dip Switch 6 ON	360 sec.

Note : Auto-Close mode activates when the gates move to the end position or stopped manually. If the transmitter or push button is activated before the auto-close counting, the gate will close immediately.

### 4.1.4 Pedestrian Mode Adjustment (Dip 7.P Mode)

ON: Press button B on the remote to operate to pedestrian mode by open single gate to 45 degree

OFF: The pedestrian mode is disabled. Single gate will fully open and close.

### 4.1.5 Flashing Light Adjustment (Dip 8.Light)

ON: The flashing light blinks for 3 seconds before the gate moves, and blinks simultaneously during the movement.

OFF: The flashing light blinks and the gate moves simultaneously.

## 4.2 Sw2 Dip Switch Setting

### 4.2.1 Photocell Adjustment (Dip 1.Photo1, Dip 2.Photo2)

1. SW2\_2, SW2\_1: OFF OFF

Position of Gate	When safety devices are activated	
Type of Safety Device	Safety Device2:	Safety Device1 :
	Photocell-OPEN	Photocell-CLOSE
FULLY CLOSED	Open not allowed	No effect
FULLY OPENED	No effect	Reload automatic closing time
STOP DURING MOVING	Open not allowed	Reload automatic closing time
CLOSING	No effect	Open
OPENING	Close	No effect

## 2. SW2\_2, SW2\_1: OFF ON

Position of Gate		When safety devices are activated
Type of Safety Device	Safety Device2 : Safety Edge	Safety Device1 : Photocell-CLOSE
FULLY CLOSED	Open not allowed	No effect
FULLY OPENED	Reload automatic closing time	
STOP DURING MOVING	Locks	Reload automatic closing time
CLOSING	Reverse to open for 2 seconds	Open
OPENING	Reverse to close for 2 seconds	No effect

## 3. SW2\_2, SW2\_1: ON OFF

Position of Gate		When safety devices are activated
Type of Safety Device	Safety Device2: Opening Device	Safety Device1 : Photocell-CLOSE
FULLY CLOSED	Open	No effect
FULLY OPENED	Reload automatic closing time	
STOP DURING MOVING	Open	Reload automatic closing time
CLOSING	Open	Open
OPENING	No effect	No effect

## 4. SW2\_2, SW2\_1: ON ON

Position of Gate		When safety devices are activated
Type of Safety Device	Safety Device2: Photocell-OPEN/CLOSE	Safety Device1 : Photocell-CLOSE
FULLY CLOSED	Open not allowed	No effect
FULLY OPENED	Close not allowed, Open for 2 seconds when auto closing is ON	
STOP DURING MOVING		Close not allowed
CLOSING	Stop	Open
OPENING	Stop	No effect

### 4.2.2 Close Delay of Dual Gate Operation Adjustment (Dip 3.Delay1, Dip 4.Delay2) Close/Open delay of two leaves of gate can be adjusted from 2 to 6 seconds

DIP switch			
Dip3. Delay 1	Dip4. Delay 2	Open Delay	Close Delay
OFF	OFF	2 sec	3 sec
ON	OFF	2 sec	4 sec
OFF	ON	3 sec	5 sec
ON	ON	3 sec	6 sec

### 4.2.3 Electric Latch Adjustment (Dip 5.Latch)

ON: The master leaf will move toward closing direction for 0.25 second once command the remote, then unlock the latch to open the gate.

OFF: Once command the remote, the the latch will be unlocked to open the gate immediately

#### 4.2.4 Decelaration Speed Adjustment of the Gear Motors (Dip 6. D Speed)

ON: The speed is 70% output of the full speed.

OFF: The speed is 50% output of the full speed.

#### 4.2.5 Operation Speed Adjustment of the Gear Motors (Dip 7.0 Speed)

ON: The speed is 100% output of the full speed.

OFF: The speed is 70% output of the full speed.

#### 4.2.6 Single and Dual Gate Operation Adjustment (Dip 8.Ds/set)

ON: Dual Gates operation in system learning and normal operation.

OFF: Single Gate operation in system learning and normal operation.

### 4.3 LED Indication

**LED1 System Learning:** LED1 is always ON when the system learning in not completed.

LED1 blinks once when single-gate learning is completed ;

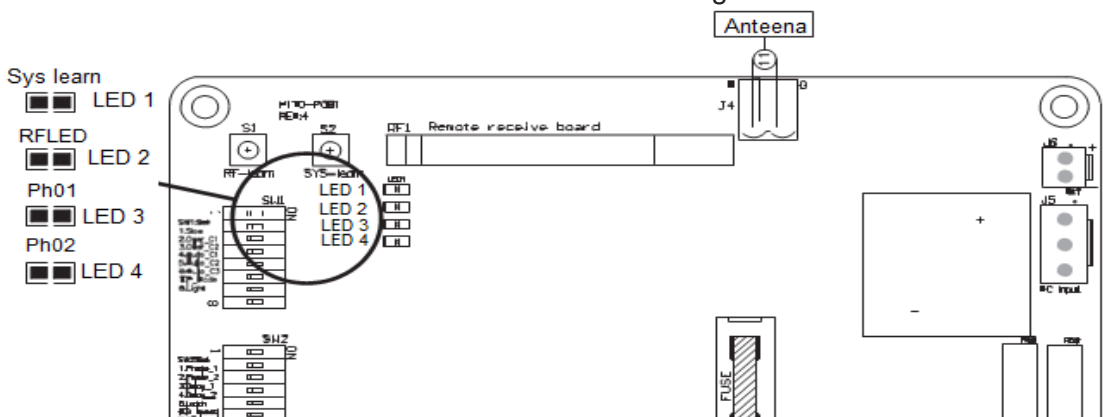
LED1 blinks twice when dual-gate learning is completed.

**LED 2 RF :** If the switch of the transmitter, key selector, or the push button is activated, LED2 will be on.

**LED 3 Photocells 1 :** LED3 will be on when the first pair of the photocells are activated.

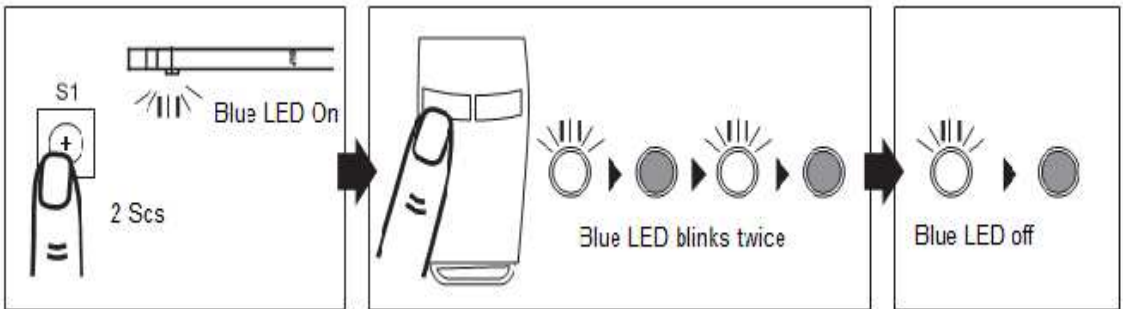
**LED 4 Photocells 2 :** LED4 will be on when the second pair of the photocells are activated.

**LED 5 RF Indicator :** LED5 will be on when RF signal is received.



## 4.4 Transmitter Memorizing Process

Press “RF-learn” button for 2 seconds, and the Blue LED is on; then press the transmitter (A) button; the Blue LED will blink twice and then be off. The system learning is complete.



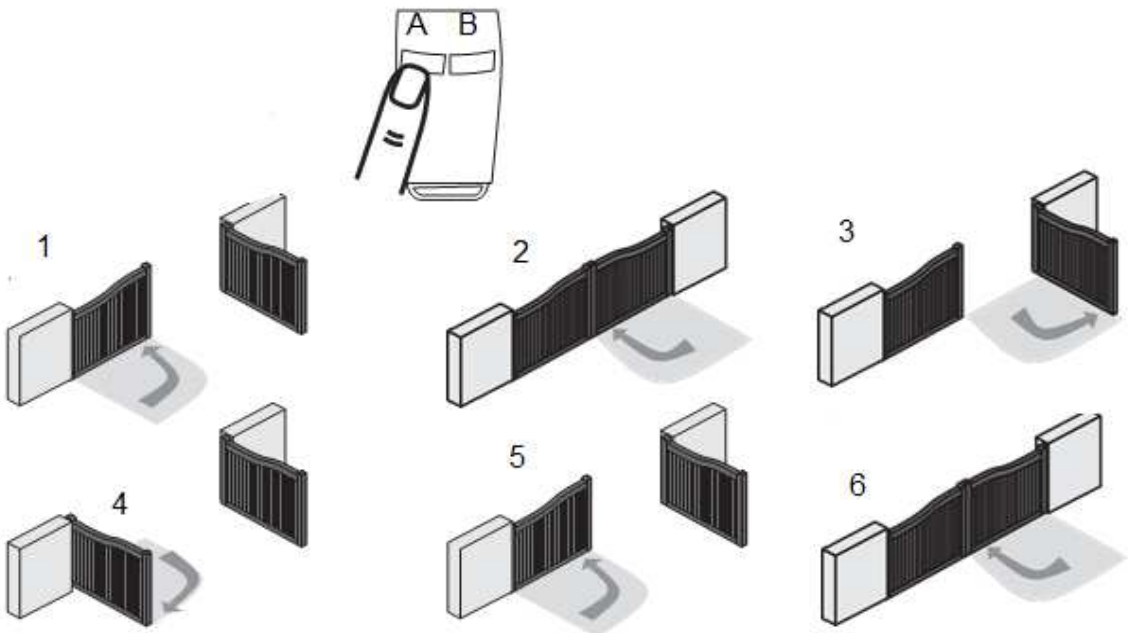
## 4.5 System Learning Process

**! CAUTION:** Before proceeding to system learning, the transmitter memorizing process has to be completed.

Press “SYS-learn” button for 2 seconds, after press button (A) on the remote. System learning will be executed step by step as followings: Wait for the learning process to be completed without any interruption.

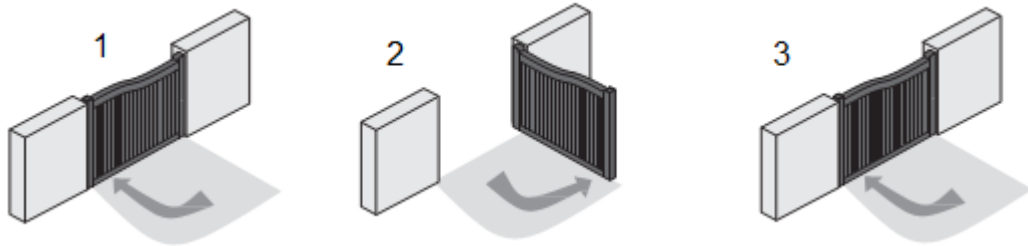
### A. Dual Gate:

- 1 Slave Gate Close → 2 Master Gate Close → 3 Master Gate Open →  
4 Slave Gate Open → 5 Slave Gate Close → 6 Master Gate Close.



## B. Single Gate:

1 Master Gate Close → 2 Master Gate Open → 3 Master Gate Close



**! Beware: The system learning process for single gate takes more than dual gate for around 1 min, wait for the gate to complete the learning process.**

## 4.6 Gate Operation

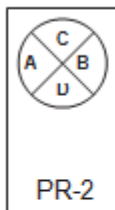
Press the button “A” on the transmitter for dual-gate operation.

Press the button “B” on the transmitter for single-gate operation in either single-gate or dual-gate installation.

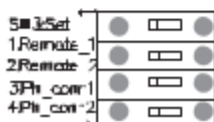
## 4.7 Gate-moving Logic

- (A) In gate-opening phase: The gates stop if the transmitter/push button is activated, and close when the transmitter/push button is reactivated.
- (B) In gate-closing phase: The gates stop if the transmitter/push button is activated, and open when the transmitter/push button is reactivated.
- (C) In gate-opening or gate-closing phase: For safety purpose, the gate stop if encountering obstacles

## 4.8 Advanced Operation of the transmitter (SW3 Dip1/2 Remote1 & Remote 2)



See the following description:  
OFF SW3 ON



**Situation 1: Dip1. Remote 1:ON & Dip2. Remote 2:ON**

Transmitter Button A for single leaf operation

Transmitter Button B for double leaves operation

**Situation 2: Dip1. Remote 1: ON & Dip2. Remote 2:OFF**

Transmitter Button B for single leaf operation

Transmitter Button A for double leaves operation

**Situation 3: Dip1. Remote 1:OFF & Dip2. Remote 2:ON**

Transmitter Button C for single leaf operation

Transmitter Button D for double leaves operation

**Situation 4: Dip1. Remote 1:OFF & Dip2. Remote 2:OFF**

Transmitter Button D for single gate operation

Transmitter Button C for double leaves operation



## 5. Trouble Shooting

Overheated Back-up Batteries	Check the wiring connection of the batteries.
The gate doesn't move when pressing the button of the transmitter	<ol style="list-style-type: none"> <li>1. Check if LED3 or 4 is "ON".</li> <li>2. Check if the voltage of the batteries is below 22V.</li> <li>3. Check if LED1 is "ON".</li> <li>4. Make sure all the wiring connections are firmly connected to the terminals on the PCB.</li> <li>5. Make sure the fuse is workable</li> </ol>
The gate only moves a little distance when pressing the button of the transmitter.	Make sure the wiring connection of the hall sensor is firm.
Transmitting distance is too short	Make sure the connecting terminals of the Antenna is firm.
The gear motors run very slowly	Check the dip switch setting of the speed adjustment.
The Flashing light does not work	if the wiring connection of the flashing light is correct
The leaves shall be closed instead of opening	Change the polarity connection of the positive (+) with the negative (-) of the gear motors.
The leaves suddenly stop during moving	<ol style="list-style-type: none"> <li>1. Check if the "RESET" socket is activated.</li> <li>2. Make sure the wiring connection of the gear motors is firm.</li> <li>3. Make sure the hall sensor wiring connection is firm.</li> <li>4. The GND terminal of the photocells on the PCB must be short-circuited if no photocells installed.</li> <li>5. Make sure the fuse is workable.</li> </ol>
The leaves does not move or only move toward one direction	<ol style="list-style-type: none"> <li>1. Check if the "RESET" socket is activated.</li> <li>2. Make sure the wiring connection of the gear motors is firm.</li> <li>3. Make sure the hall sensor wiring connection is firm.</li> <li>4. The GND terminal of the photocells on the PCB must be short-circuited if no photocells installed.</li> </ol>
The master gate closes to the end first and the slave gate stops, the flashing light blinks fast for five seconds.	Cut off the AC input power and the output of the batteries. Release the master gate and slave gate manually, then open the master to the end and close the slave gate to the end by hand, then power the whole unit by connecting the AC and battery terminals.
The gear motors does not run and the relay is noisy when operating the gate opening and closing	Check if the fuse is burned.

## 6. Technical Characteristics

### 6.1 CABRI-20P

CABRI-20P	
Motor	24Vdc motor with mechanical release
Gear type	Worm gear
Peak thrust	2000N
Nominal thrust	1500N
Stroke length	400mm
Power supply	24Vdc
Maximum operating current	4.2A for maximum 10 seconds.
Maximum gate weight	200 kg per leaf
Maximum gate length	2.5 meters
Duty cycle	20%
Operating Temperature	-20°C~+50°C
Dimension	799mm * 98mm * 170mm
Weight	3.6kg

### 6.2 Control Box

Application	For CABRI-20P power supply
Main power supply	230Vac/110Vac, 50Hz/60Hz
Back-up battery	2pcs of batteries for emergency operation, 1.2A each
Transformer	4.2A, 24V
Receiver board	433.92MHz; 200 transmitters memory
Installation	Wall mounted vertically
Operating Temperature	-20°C~+50°C
Dimension	275mm * 195mm * 102mm

### 6.3 Photocells

Detection type	Through beam
Operating distance	25 meters
Response time	100ms
Input voltage	AC/DC 12~24V
Operating Temperature	-20°C~+60°C
Protection class	IP54
Dimension	96mm * 45mm * 43mm

### 6.4 Flashing Light

Application	For warning purpose during leaves movement
Lamp	24Vdc Halogens bulb
Operating Temperature	-20°C~+50°C
Installation	horizontally or vertically installed
Dimension	205mm * 80mm * 75mm

## 6.5 Radio Transmitter

<b>Application</b>	Radio transmitter for remote control of CABRI-20P
<b>Frequency</b>	433.92Mhz
<b>Coding</b>	Rolling code
<b>Buttons</b>	2, for single-gate or dual-gate operation
<b>Power Supply</b>	3V with one CR2032 button type lithium battery
<b>Operating Temperature</b>	-20°C~+50°C
<b>Dimension</b>	71.5mm * 33mm * 14mm

## 6.6 Electric Latch

<b>Application</b>	For locking the gate.
<b>Power Supply</b>	24Vdc
<b>Operating Temperature</b>	-20°C~+50°C
<b>Operating Current</b>	5A
<b>Dimension</b>	61mm * 55mm * 120mm

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