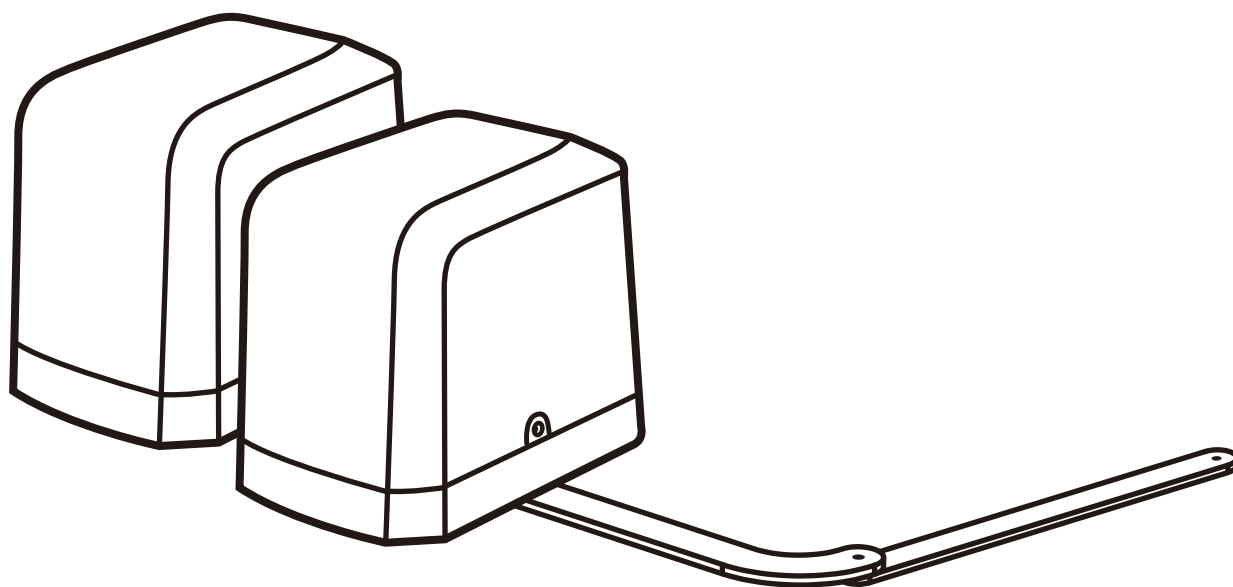


PAPILLON250

ARTICULATED ARM OPENERS

**24V DC MOTOR
FOR RESIDENTIAL
USER MANUAL**



Reuse
Reduce
Recycle



1.2 Installation	1
1.2.1 Standard Installation	1
1.2.2 Dimension Chart	1
1.2.3 Components of Installation	2
1.2.4 Installation of Articulated Arm Opener	2
1.2.5 Emergency Release	3
1.2.6 WIFI Device	3
1.2.7 Photocells	4
1.2.8 Power Supply Connections	4
2.1 Wiring Connection	5
2.1.1 Master Motor is installed at right side	6
2.1.2 Master Motor is installed at left side	7
3. Get Started	8
3.1 Step 1: Remote Memorizing	8
3.1.1 Memorizing	8
3.2 LED Indication	9
3.3 Deleting memory of single command	9
3.3.1 Deleting all memory of all remotes	9
3.3.2 Step 2: System Learning	10
3.4 Gate-moving Logic	11
3.5 Checking the Gate Movement	11
4. Function Setting	11
4.1 Function of The LED Display	11
5. Parameter Modification	12
5.1 Parameter Learning	12
5.2 Parameter	12
5.3 Photocell Adjustment	14
6. Technical Features	15
6.1 Dimension	15
6.2 Technical Feature	15
7. Maintenance	16

1.1 Warnings

WARNING :

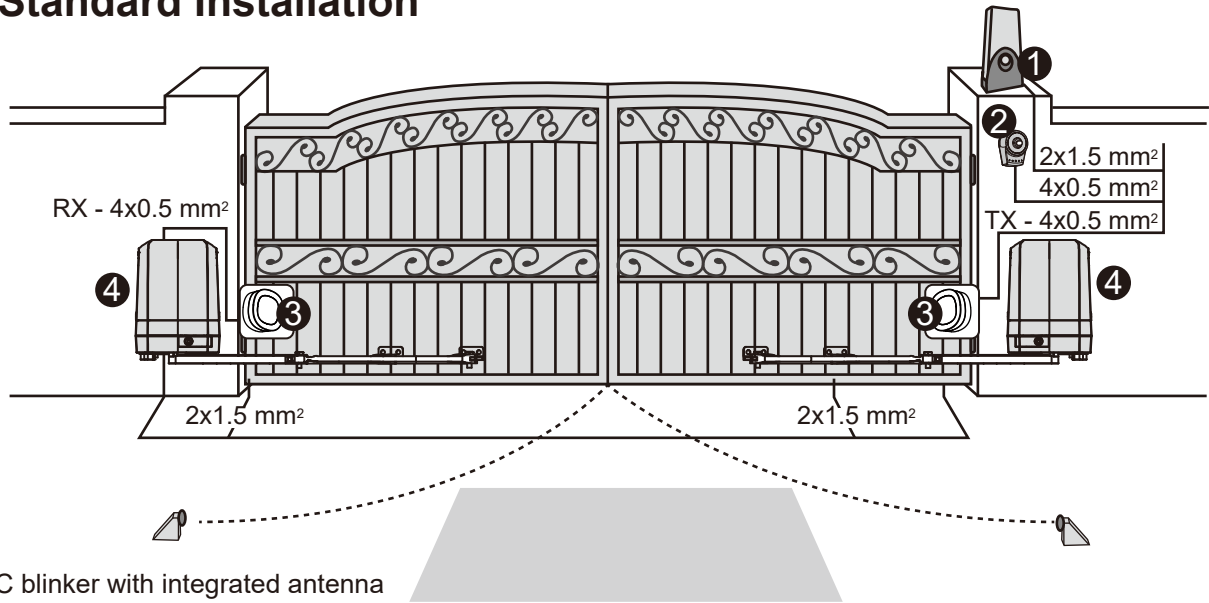
This user manual is only for qualified technicians who is specialized in installations and automations.

- (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.

Please keep this installation manual for future reference.

1.2 Installation

1.2.1 Standard Installation



1. 24V DC blinker with integrated antenna
2. Push Button
3. Photocells
4. 24V DC articulated arm opener
5. TM3 Transmitter



1.2.2 Dimension Chart

Please comply with the measures shown on the chart for proper installation. If necessary, please adjust the gate structure to the best operation.

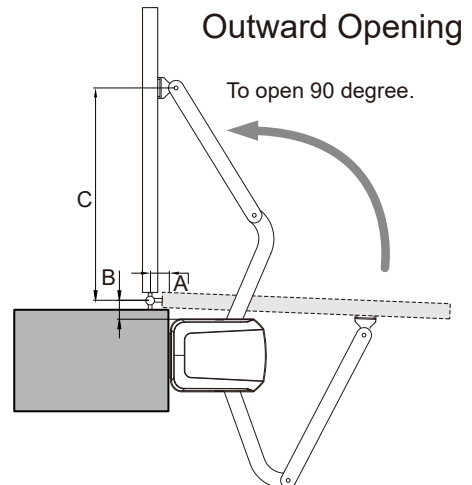
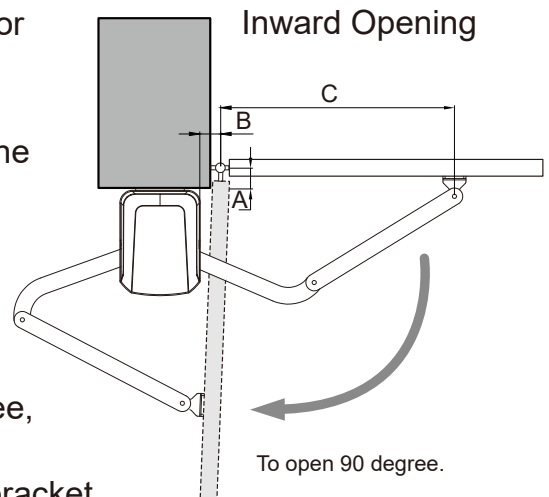
Before starting the installation, please make sure that the gate moves smoothly and that :

- 1) Hinges are properly positioned and greased.
- 2) No any obstacle in the moving area.
- 3) No frictions between two leaf gates and on the ground while moving.
- 4) Installation reference: to open the gate with 90 degree, please refer the data table below:

A: Distance between the gate hinge and the wall bracket.

B: Distance between the gate hinge and the motor side.

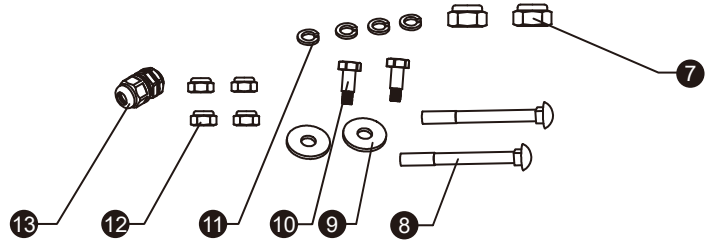
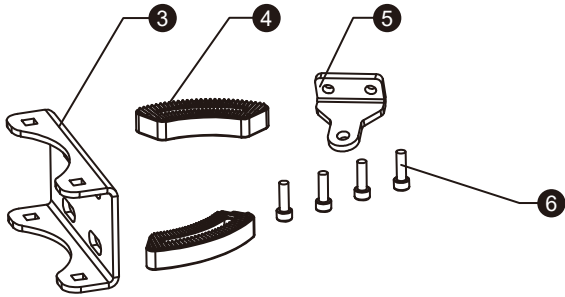
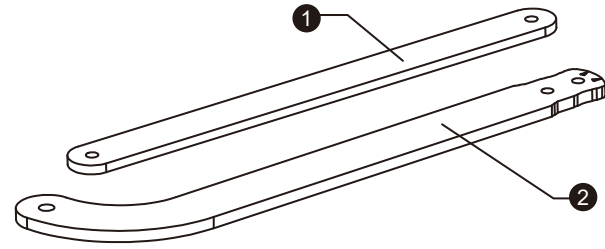
C: Distance between the gate hinge and the fixing point of the arm.



		B		
		50	100	150
A	C ↙			
	50	625	575	545
	100	615	565	540
	150	600	550	/
	200	585	535	/
	250	565	515	/
300	540	/	/	

unit: mm

1.2.3 Components of Installation



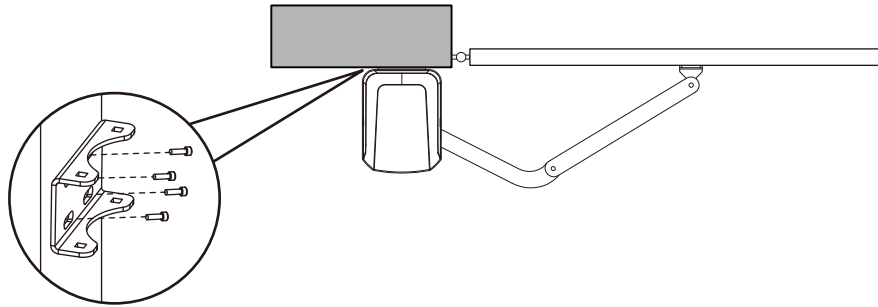
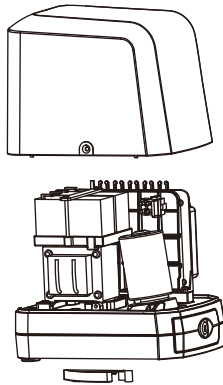
1	Straight arm	1 pce
2	Curved arm	1 pce
3	U-shaped fixing plate	1 pce
4	Mechanical stopper	2 pcs
5	Front-end fixing bracket	1 pce
6	Screw	4 pcs
7	Nut Ø10	2 pcs
8	Screw	2 pcs
9	Gasket	2 pcs
10	Screw	2 pcs
11	Spring washer	4 pcs
12	Nut Ø8	4 pcs
13	Cable gland	1 pce

1.2.4 Installation of Articulated Arm Opener

1. Refer to the Dimension Chart to choose the correct dimensions of the motors and position to be installed.
2. Check if the mounting surface of the brackets to be installed is smooth, vertical and rigid.
3. Arrange the cables for power supply cable of the motors, make sure power supply cable is connected to motor.
4. Motor installation and setting for mechanical stopper in opened and closed position.

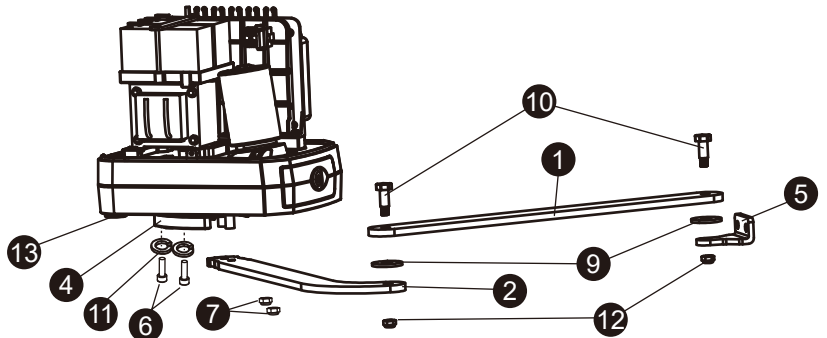
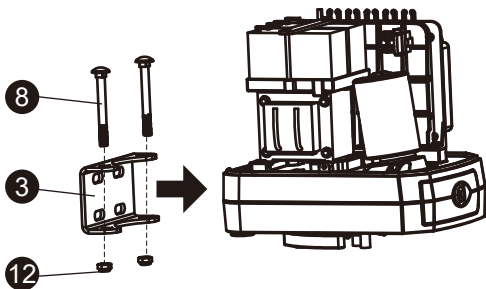
1) Remove the upper cover and mechanical stoppers on the bottom of motor.

2) Place the gate in the full closed position and fix the U-shaped fixing plate on the wall.



3) Install the motor on the U-shaped fixing plate with corresponding screws and nuts.

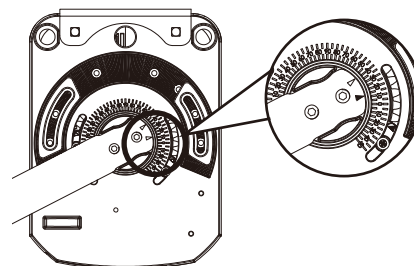
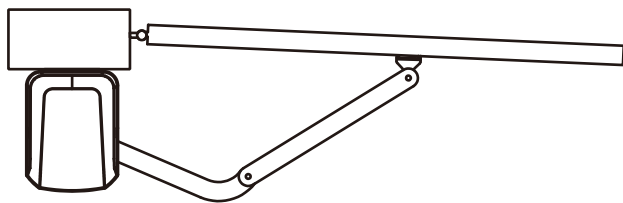
4) After positioning the front of curved arm on the bottom of motor, release the motor and position the straight arm on the end of curved arm and mounting bracket with corresponding screws and nuts.



5) Closed position adjustment :

5.1 After the full closed position decided, fix the corresponding mechanical stopper at the position.

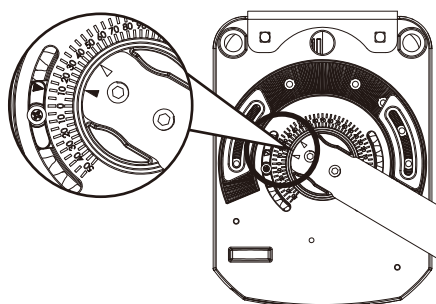
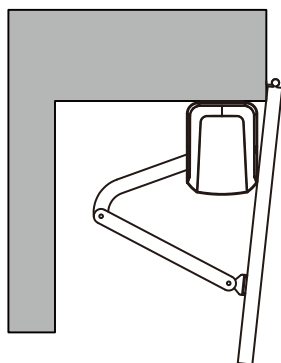
5.2 After the full closed position decided, make the pointer on limit switch aligned with the pointer on the curved arm.
(Red points shown on the figure below indicate the pointers)



6) Opened position adjustment :

6.1 Adjust the gate to full opened position and after the position decided, fixe with corresponding mechanical stopper.

6.2 Adjust the gate to full opened position and after the position decided, make the pointer on the limit switch aligned with the pointer on the curved arm. (Red points shown on the figure below indicate the pointers)



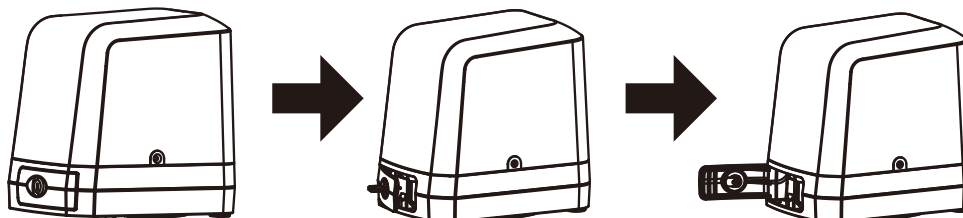
1.2.5 Emergency Release

1) Insert the release key to the release slot

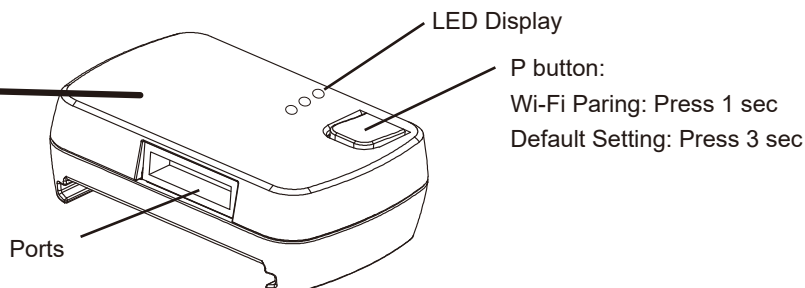
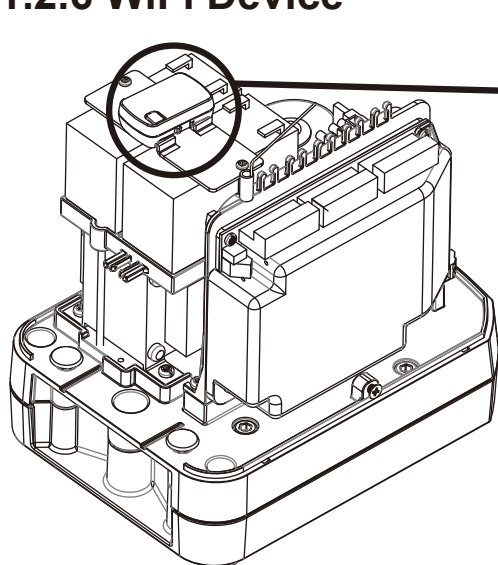
2) Turn the release key anti-clockwise

3) Pull out the release bar

4) Turn the release key clockwise to fix the release bar, the release bar has to be in pulled out position when turning the release key clockwise



1.2.6 WiFi Device



If you want to switch WIFI AP, please press P button and follow Step 5. from App Installation to reset.

• LED description:

Blue: LED will be flashing during WIFI pairing, and be ON when completed.

Green: LED will be flashing if WiFi box receives signal from APP.

If your home WIFI disconnects, the green light will continuously flash, and it will be off until WIFI is connected again.

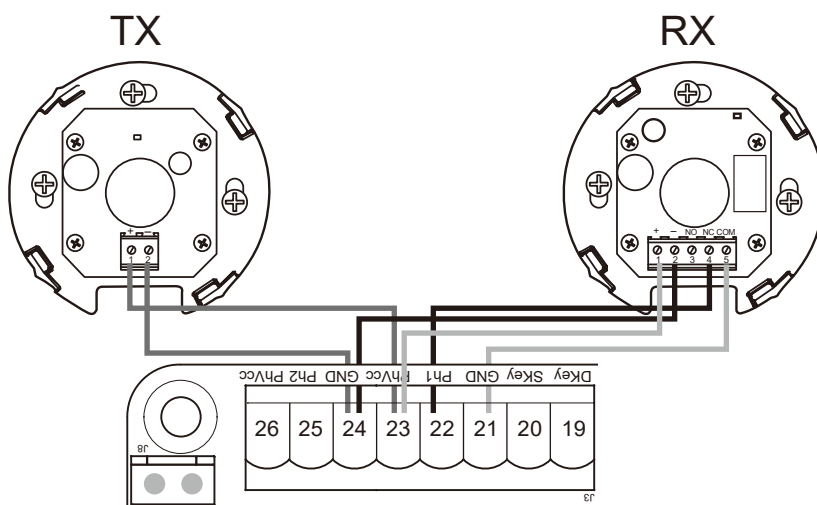
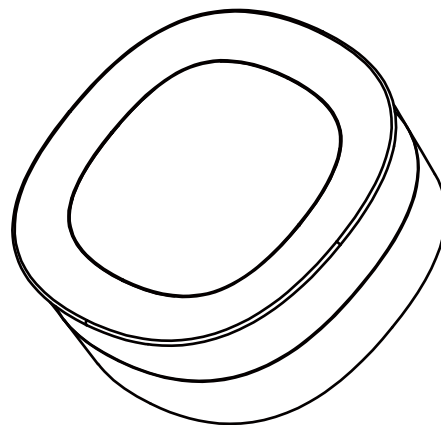
Red: System failure or wrong PIN.

1.2.7 Photocells

The safety photocells are security devices for control automatic gates. Consist of one transmitter and one receiver based in waterproof covers; it is triggered while breaking the path of the beams.

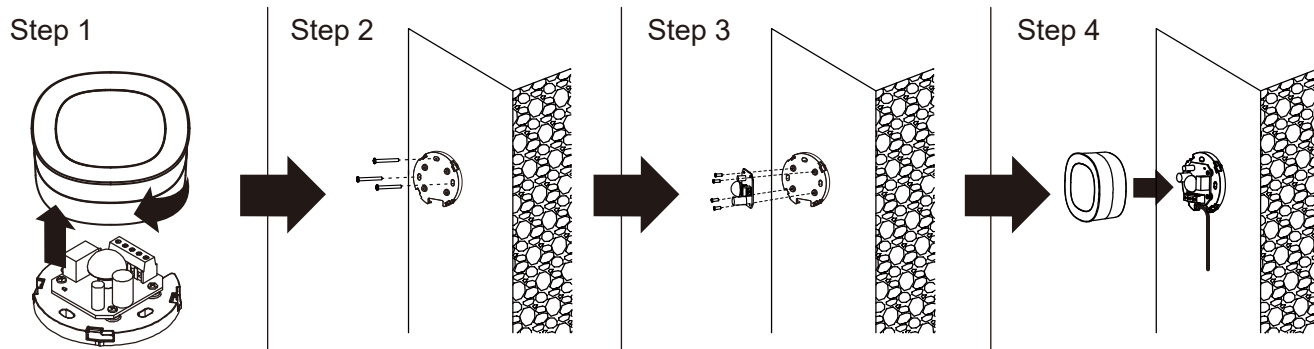
SPECIFICATION:

Detection Method	Through Beam
Sensing Range	MAX~15m
Input Voltage	AC/DC 12~24V
Contact Current	TX: 30mA Max , RX: 25 mA Max
Response Time	<100mS
Emitting Element	Infrared LED/ Wave Length : 940nm
Operation Indicator	RX : Red LED On (beam broken) / Off (beam aligned) TX : Red LED On
Dimensions	63*63*30 mm
Output Method	Relay Output
Current Consumption	Beam aligned : RX<25ma\TX<30ma Beam broken : RX <10ma\TX <30ma
Connection Method	Terminal Block
Housing Material	ABS / PC
Water Proof	IP44
Safety Standard	CE



INSTALLATION:

1. Open the cover and connect wires.
2. Mounted the receiver and transmitter on the proper position.
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.



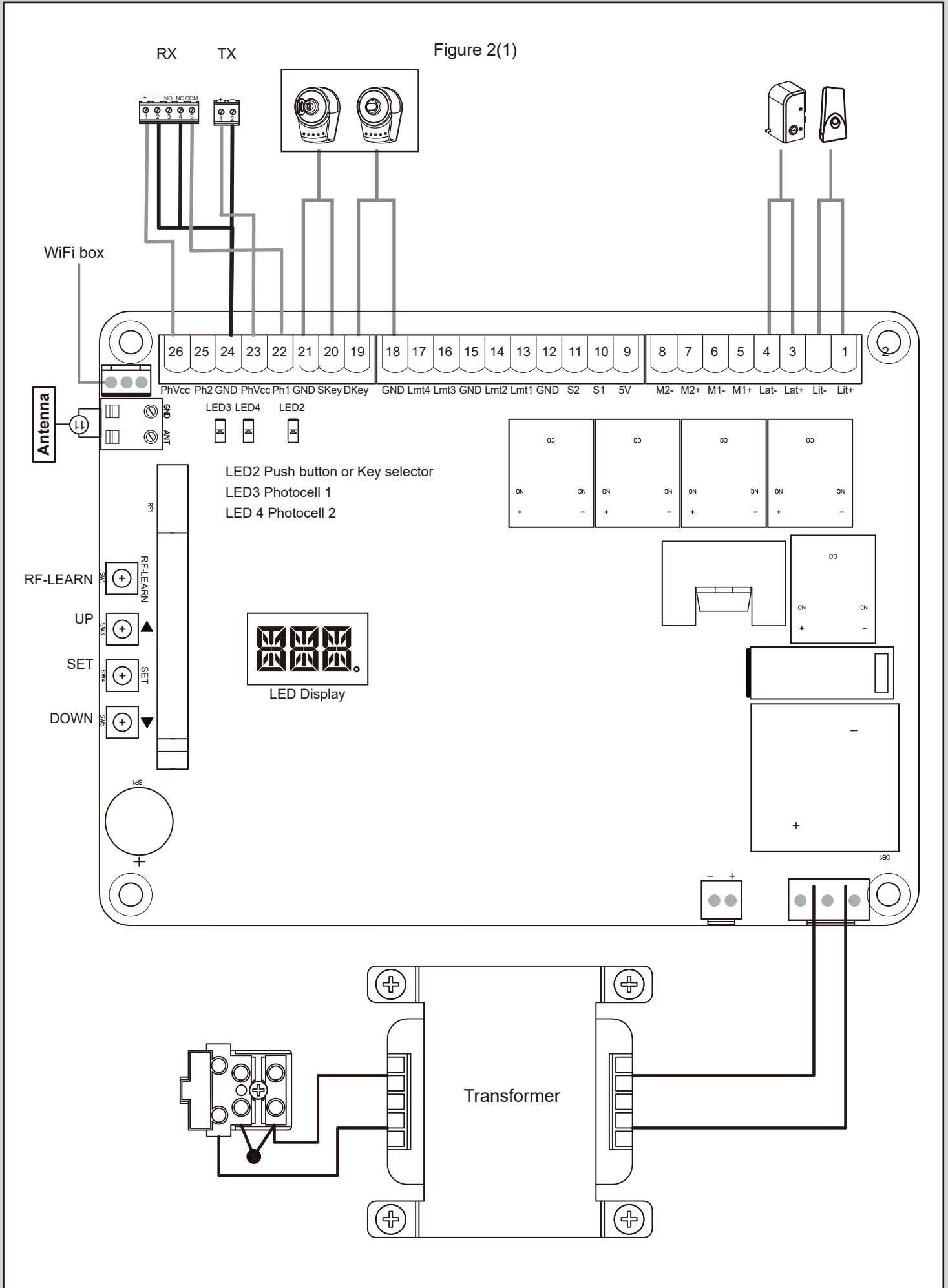
1.2.8 Power Supply Connections

Please kindly notice that the operation of power connection should be carried out by a qualified electrician with following steps:

- 1). Make sure the motor did not connect with power supply before finishing installation.
- 2). Make sure all the wires are firmly connected.
- 3). Then, connect the power with motor.

2.1 Wiring Connection

Figure 2(1)



2.1.1 Master Motor is installed at right side

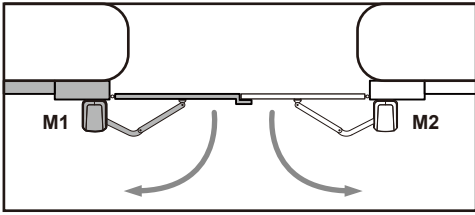
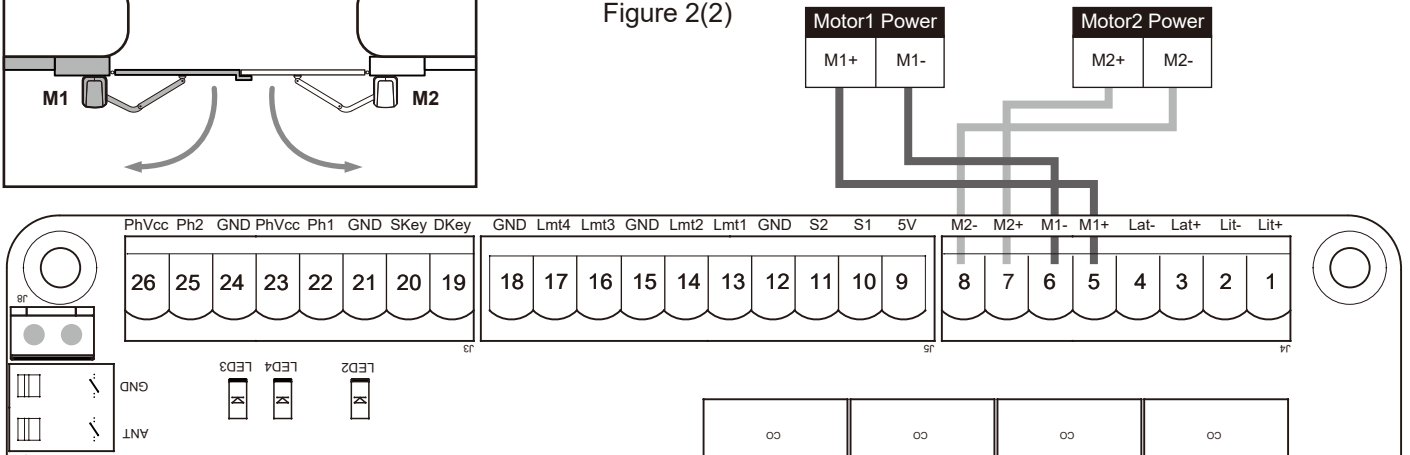
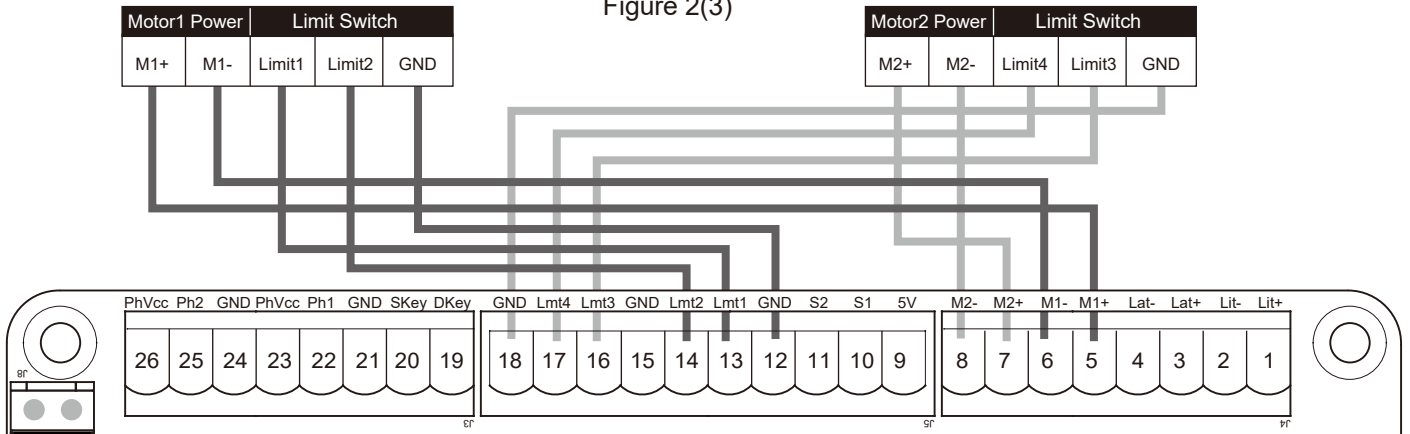


Figure 2(2)



Motor with Limit switch

Figure 2(3)

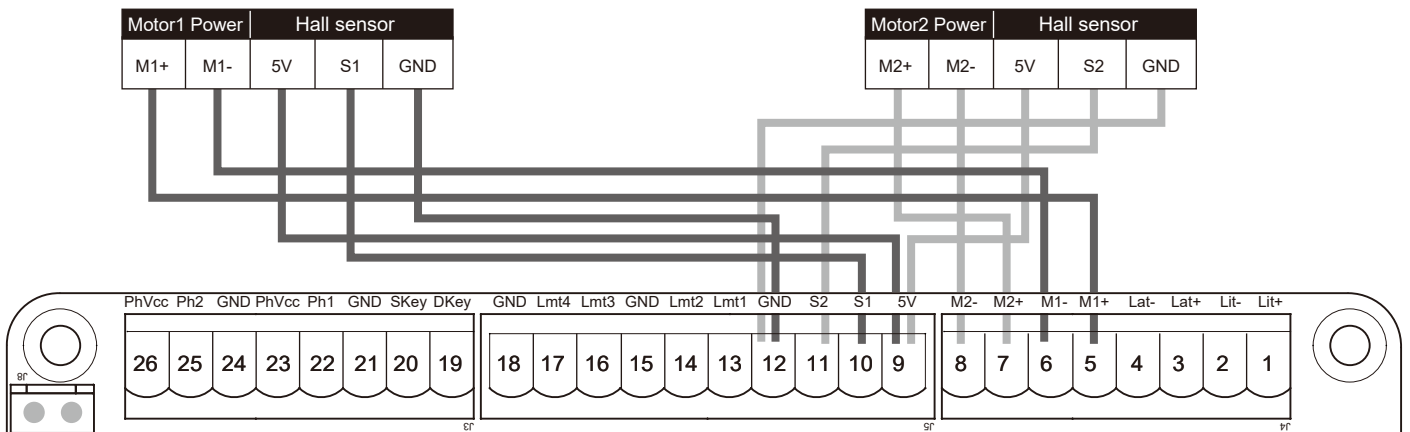


Remark:

- Limit1, Limit3 (Open limit)
- Limit2, Limit4 (Close limit)

Motor with Hall sensor

Figure 2(4)



2.1.2 Master Motor is installed at left side

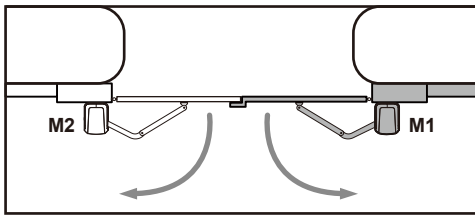
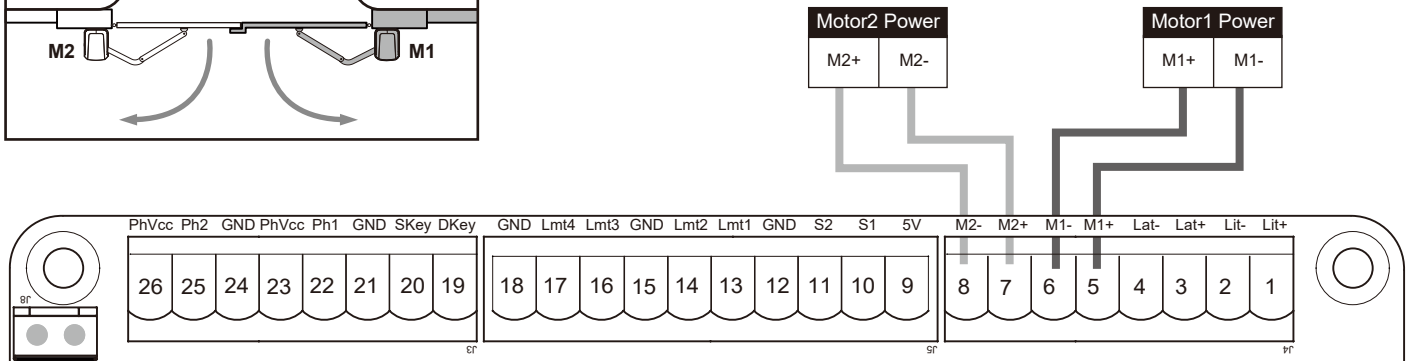
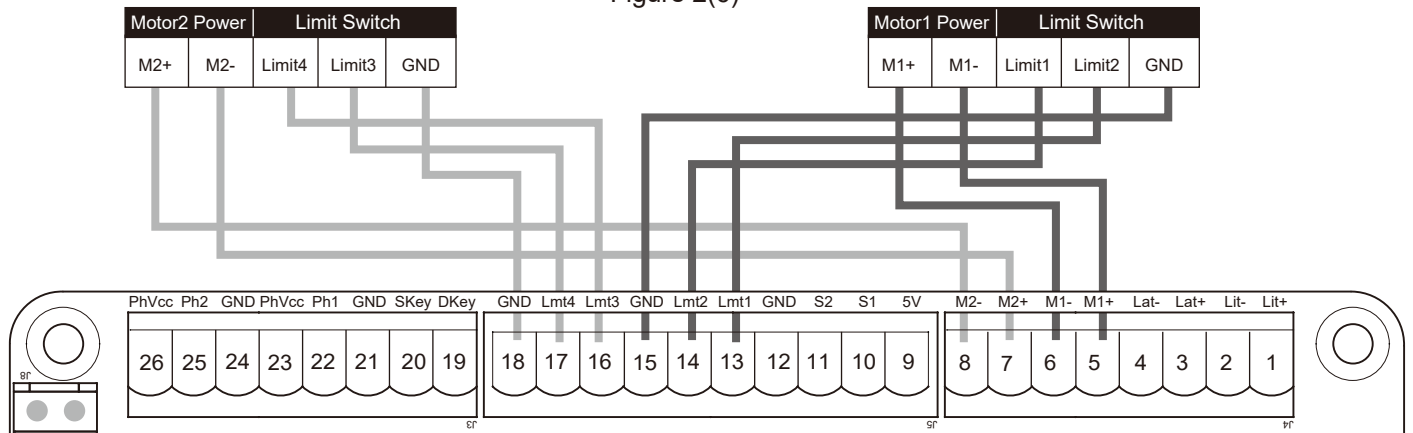


Figure 2(5)



Motor with Limit switch

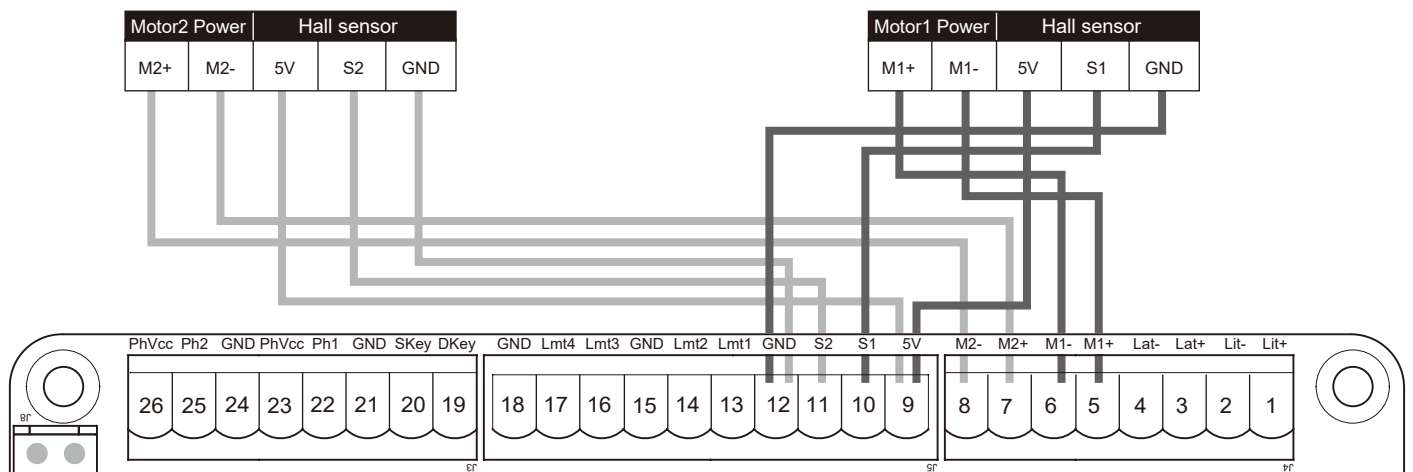
Figure 2(6)



Remark:
Limit1, Limit3 (Close limit)
Limit2, Limit4 (Open limit)

Motor with Hall sensor

Figure 2(7)



3. Get Started

Note:

(A) Remote memorizing must be done before system learning.

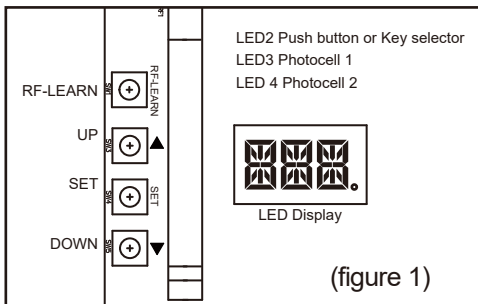
(B) **Verifying the GATE CONDITION.**

- 1) Release the gear with the release key and move the gate to the middle so the gate can move in both opening and closing directions; then lock the gear.
- 2) Operate the gate to opened and closed position several times and make sure the gates touches the limit switch at least 2~3 cm before the mechanical stop.

3.1 Step 1: Remote Memorizing

3.1.1 Memorizing

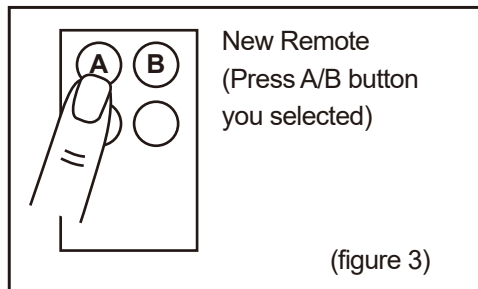
1. Press button RF-Learn on the control board (Figure 1) as many times as the number corresponding to the desired command, according to the following table, Within 10s, press the desired button on the remote that you want it to be memorized (figure 1)



(figure 1)

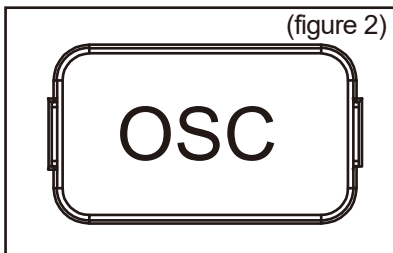
	Command	Message code
Press RF Learn for 1 time	Open-Stop-Close circle	LED display "OSC"
Press RF Learn for 2 times	Pedestrian mode	LED display "PED"

(figure 2)



(figure 3)

2. Make sure that the LED display flash the "OSC" or "PED" three times. The code is corresponding to the selected command. (figure 2)



(figure 2)



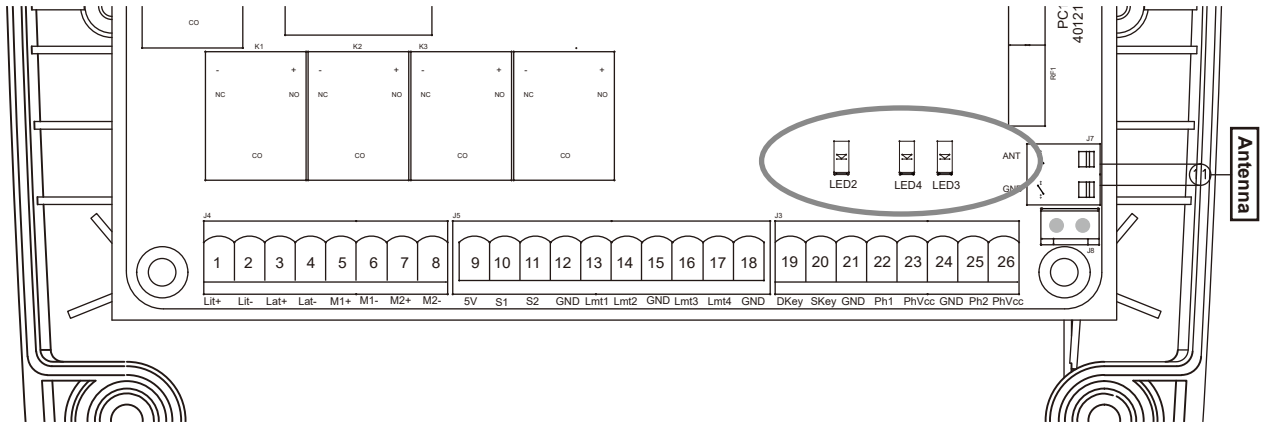
3. Repeat step 1 & 2 within 10s, if there have other remotes to be memorized for the same type of command. No need within 10s, the memorization stage will terminate automatically.

3.2 LED Indication

LED2 D Key/S Key : Key selector, or the push button is activated, LED2 will be on.

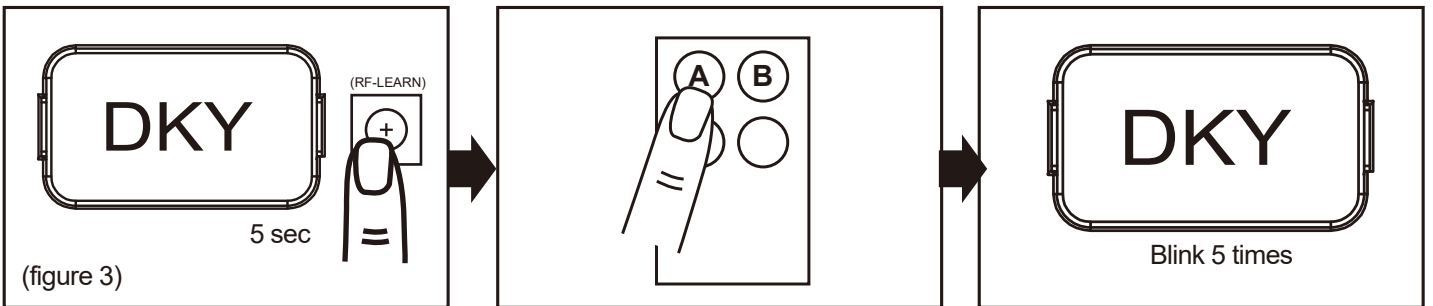
LED4 Ph1 : LED4 will be on when Ph1 are triggered.

LED3 Ph2 : LED3 will be on when Ph2 are triggered.



3.3 Deleting memory of single command:

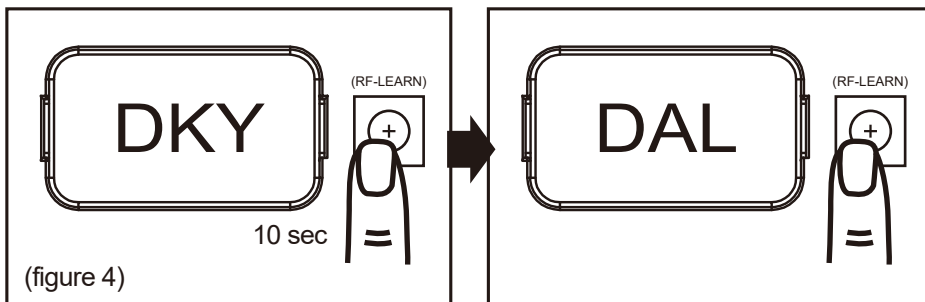
1. Press and hold RF-LEARN button (Figure 3) on the control board for 5 seconds.
2. Wait until the LED display shows “DKY”, then, within three seconds:
3. Press the button on the remote to be deleted. If the command has been deleted, the LED display will flash quickly five times.
4. Repeat above steps if more command to be need.



3.3.1 Deleting all memory of all remotes:

With this operation all the memorized remotes will be deleted.

1. Press and hold down RF-LEARN button (Figure 4) on the control board for 10 seconds.
2. You will see “DKY” first, and Hold the RF-Learn until you see “DAL”. All memory is deleted.



3.3.2 Step 2: System Learning

Step1:

Press and Hold the Press SET button for 3s, When LED shows "LEA" then release SET, then the motor runs the system learning procedure automatically, once learning completed shows "D-G" or "S-G"
(No remote required)

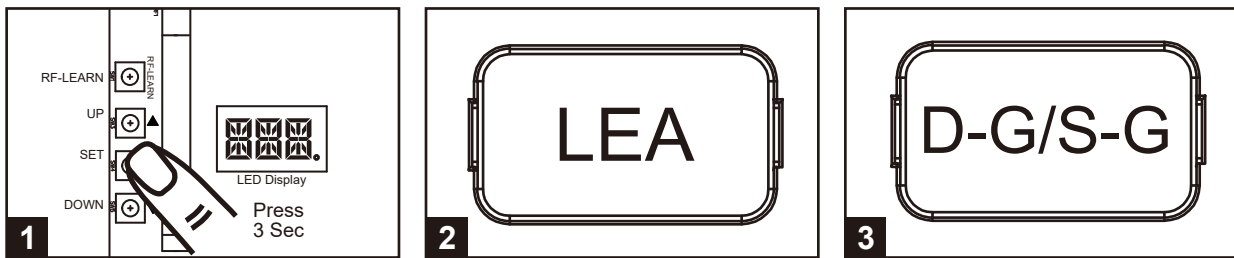
Note: Please check the parameter setting of "FI"(Dual/Single) before going into system learning.

Restore system default setting

Press and Hold the **UP + SET + DOWN** button for **5s** and panel restores back to default setting

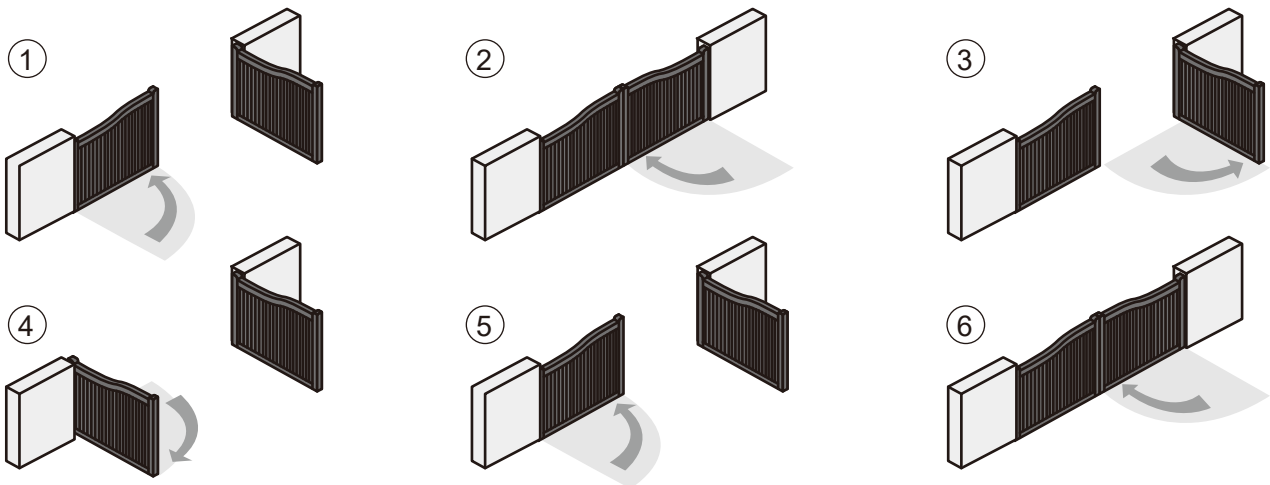
Note:

1. LED Shows "D-G" tells the system learning has be completed for Dual Gate installation
2. LED Shows "S-G" tells the system learning has be completed for Single Gate installation



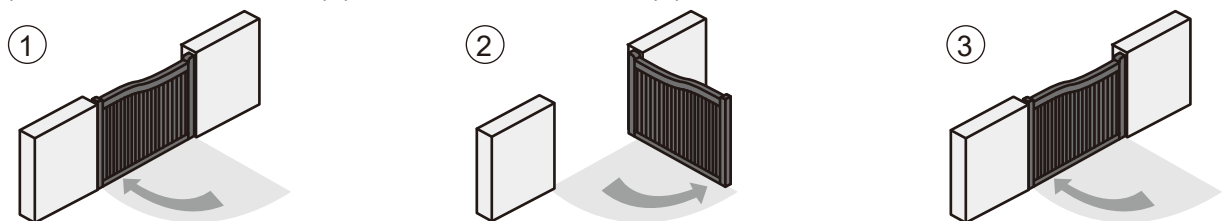
A. Dual Gate:

- (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 Mode :

- (1) Master Gate Close → (2) Master Gate Open → (3) Master Gate Close



3.4 Gate-moving Logic












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

3.5 Checking the Gate Movement

- 1). Release the gear with the release key and move the gate to the middle so that it can move in both opening and closing directions; then lock the gear.
- 2). Operate the gate to opened and closed position several times, and make sure the gates reaches the limit switch at least 2~3 centimeters before the mechanical stop.

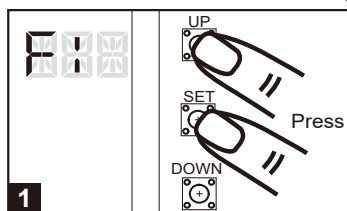
4. Function Setting

4.1 Function Of The LED Display

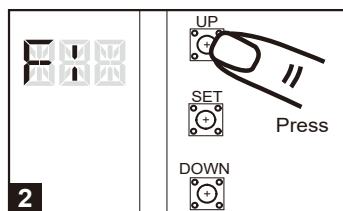
LED Display	Programmable Functions	LED Display	Programmable Functions
	[LEA] means motor into the system learning mode, do not interrupt during this procedure.		When the gate is stopped, the LED Display show 'STP' until next commend has been made, after 10s no further movement, the LED turns to OFF
	[D-G] means motor completed the learning procedure for dual gate installation.		When the gate is closing, the LED Display show 'CLS' for 2s and then change to Amp current indication
	[S-G] means motor completed the learning procedure for single gate installation.		LED display shows "S01" means the panel did not detected the M1+/M1 and M2+/M2 both been connected before the system learning procedure, check for motor wire connection, for dual gate system
	[N-L] means system learning failed.		LED display shows "S02" means the panel did not detected the M1+/M1 but detected M2+/M2 been connected, notice the installer to check the motor wire connection, if this is single gate system, motor wire should connect to M1+/M1 not on M2+/M2
	The memory of the system is all deleted/cleaned by press and hold the UP + SET+ DOWN button together for 5s and the panel will be back to default settings		LED display show "S03" means same button on the remote has been identified for more than 2 functions
	When the gate is opening, the LED Display show 'OPN' for 2s and then change to Amp current indication		

5. Parameter Modification

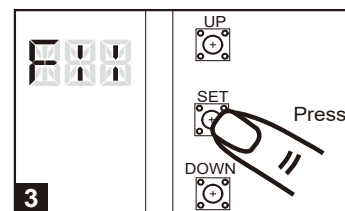
5.1 Parameter Learning



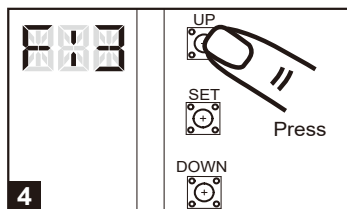
1 Press "UP+SET" for 3 seconds to get into the program setting display from F1.



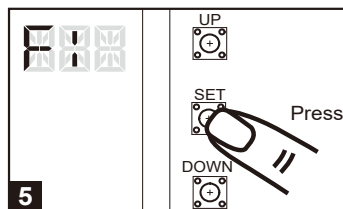
2 Press "UP" or "DOWN" to change setting item from F1 to FJ .



3 Press "SET" button again to get into the sub-settings



4 Press "UP" or "DOWN" to change Push from F1-1 to F1-3.



5 Press "SET" button again to confirm.

5.2 Parameter

LED Display	Definition	Parameter	Table	Description
F1	Motor Type	F1-1 F1-2 F1-3	Overcurrent Limit Switch Hall Sensor	1. The factory setting is "F1-1"
F2	Overcurrent for Gate Opening	F2-1 F2-2 F2-3 F2-4	2A 3A 4A 5A	1. The factory setting is "F2-2".
F3	Overcurrent for Gate Closing	F3-1 F3-2 F3-3 F3-4	2A 3A 4A 5A	1. The factory setting is "F3-2".
F4	Motor Speed for Opening	F4-1 F4-2 F4-3 F4-4	40% 50% 75% 100%	1. The factory setting is "F4-3".
F5	Motor Speed for Closing	F5-1 F5-2 F5-3 F5-4	40% 50% 75% 100%	1. The factory setting is "F5-3".
F6	Deceleration Speed	F6-1 F6-2 F6-3 F6-4	40% 50% 60% 70%	1. The factory setting is "F6-2".
F7	Time Gap b/w Two Gates (Opening)	F7-0 F7-1 F7-2 F7-3 F7-4 F7-5 F7-6 F7-7 F7-8 F7-9	0 sec 2 sec 5 sec 10 sec 15 sec 20 sec 25 sec 35 sec 45 sec 55 sec	1. The factory setting is "F7-1".

LED Display	Definition	Parameter	Table	Description
F8	Time Gap b/w Two Gates (Closing)	F8-0 F8-1 F8-2 F8-3 F8-4 F8-5 F8-6 F8-7 F8-8 F8-9	0 sec 2 sec 5 sec 10 sec 15 sec 20 sec 25 sec 35 sec 45 sec 55 sec	1. The factory setting is "F8-1".
F9	Auto-closing	F9-0 F9-1 F9-2 F9-3 F9-4 F9-5 F9-6 F9-7 F9-8	Function OFF 3 sec 10 sec 20 sec 40 sec 60 sec 120 sec 180 sec 300 sec	1. Auto-close mode activates when the gates move to the end position or stopped manually. If the transmitter, push button, or the key selector is activated before the auto-close counting, the gate will close immediately. 2. The factory setting is "F9-0".
FA	Safety Device Function Mode	FA-1 FA-2 FA-3 FA-4	Mode 1 Mode 2 Mode 3 Mode 4	1. Please see 5-3 photocell adjustment for photocell logic 2. The factory setting is "FA-1".
FB	Pedestrian Mode	FB-0 FB-1	Function OFF Function ON	1. The factory setting is "FB-1".
FC	Flashing Light	FC-0 FC-1	Function OFF Function ON	1. When function FC-1, the light will flash for 3 seconds before the gate operates. If set OFF, the flash light will operate with motor at the same time. 2. The factory setting is "FC-0".
FD	Photocell Activation	FD-0 FD-1	Function OFF Function ON	1. The factory setting is "FD-0".
FE	Photocell 2 Activation	FE-0 FE-1	Function OFF Function ON	1. The factory setting is "FE-0".
FF	Alarm Buzzer	FF-0 FF-1	Function OFF Function ON	1. The factory setting is "FF-0".
FG	Electric Latch Mode	FG-0 FG-1	Standard Gate Opening Release Gate Tension before Opening (Gate Reversing for 0.25s)	1. If the function is FG-1, the motor will be reversed for 0.25 sec. to release the tension. 2. The factory setting is "FG-1".
FH	LED Direction	FH-0 FH-1	When Terminal Block is at Top When Terminal Block is at Bottom	1. The factory setting is "FH-0".
FI	Dual / Single Gate	FI-1 FI-2	Single Gate Dual Gate	1. The factory setting is "FI-2".
FJ	Over Current Reverses Time when Close	FJ-0 FJ-1 FJ-2 FJ-3 FJ-4 FJ-5 FJ-6	Function OFF 0.1 sec 0.2 sec 0.3 sec 0.4 sec 0.5 sec 0.6 sec	1. The factory setting is "FJ-0"

Note(F1-3 over-current setting in Hall sensor mode):

Only in "F1-3" Hall sensor mode, the PCB will record all the current value in learning mode. Please adjust over current value by setting F3 function after learning mode.

The recorded current values will increase according to the value shown on LED display as over current value.

5.3 Photocell Adjustment

The actions of the photocells safety edge loop detector when they detecting obstacles.

FA-1 Photocell OPEN/CLOSE (Standard set up)

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

FA-2 Safety Edge

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

FA-3 Open Only Device (Vehicle detector)

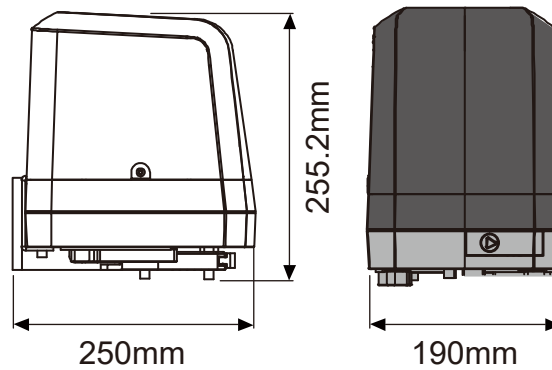
Position of Gate	When safety devices are activated	
Type of Safety Device	Safety Device1 Photocell-CLOSE	Safety Device2 Opening Device
FULLY CLOSED	No effect	Open
FULLY OPENED	Reload automatic closing time	
STOP DURING MOVING	Reload automatic closing time	Open
CLOSING	Open	Open
OPENING	No effect	No effect

FA-4 Double photocell set up

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

6. Technical Features

6.1 Dimension



6.2 Technical Feature:

Model	Papillon250
Motor	24Vdc motor
Gear type	Electromechanical worm gear
Nominal thrust	2500N
Maximum Gate Weight	250 kg per leaf
Maximum Gate Length	2.5 meters per leaf
Operating Temperature	-20°C~+50°C
Dimension	256 x 187 x 267mm
Weight	6 kg

Model	CB19
Main power supply	230Vac/110Vac, 50Hz/60Hz
Back-up battery	2pcs of batteries for emergency operation, 1.3A each
Receiver board	433.92MHz; 200 transmitters memory
Installation	Built-in PCBA
Operating Temperature	-20°C~+50°C
Dimension	275mm x 195mm x 102mm

7. Maintenance

Conduct the following operations at least every 6 months. If you are a high intensity user, please 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) Maintain 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 devise.



**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**