24VDC Swing Gate Operator

CONTROLLER
USER'S GUIDE



PKD1.90K

PLEASE READ THE MANUAL CAREFULLY
BEFORE INSTALL AND USE

WARNINGS:

- Before starting any work on the controller(connections,maintenance,etc.),always cut off power.
- Before installing, read the instruction carefully. Incorrect installation or misuse of the product may cause serious harm on people.
- This product was designed and manufactured strictly for the use indicated in this instruction. Any other not expressly indicated use may damage the product and/or be a source of danger. Keep the instruction in a safe place for future reference
- Frequently examine the installation,in particular check cables,springs and mountings for signs of wear,damage or imbalance.Do not use if repair or adjustment is needed since a fault in the installation or an incorrectly balanced door may cause injury.
- This appliance is not intended for use by persons cincluding children with reduced physical,sensory or mental capabilities,or lack of experience and knowledge,unless they have been given supervision or instnution concerning use of the appliance by a person responsible for their safety.
- If the supply cord is damageed, it must be replaced by the manufacturer,its service agent or similarly qualified persons in order to owoid a hazard.
- Before installing the drive, check that the door is good mechanical conditioncorrectly balan ced and opens and closes properly.
- The drive cannot be used with a door incorporating a wicket door.
- Ensure that entrapment between the door and the surrounding fixed parts due to the opening movement of the door is avoided.
- Do not allow children to play with fixed controls. Keep remote controls away from children After installation,ensure that the mechanism is properly adjusted and that the protection system and manual release function correctly..
- The electrical cord plug must plug in indoor outlet or waterproof cover outlet

1.Technical Specifications:

Power supply	127V 60HZ
Transformer	127V 60HZ
Accessories max loaded	500mA
Environment temperature	-20℃~50℃
Protection fuse	8AX2
24V out protect fuse	2A
Open/Close running time	Programmable(0~99)
Auto close time delay	Programmable(0~99)
Continual run time	5min

2. Main function:

2.1 Opening/Closing Gate, the running time protection for motor can be programmed from 0 to 99s.

2.2 Auto-closing function can be selected. Time delay can be programmed from 0 to 99s. This function is pre-set off.

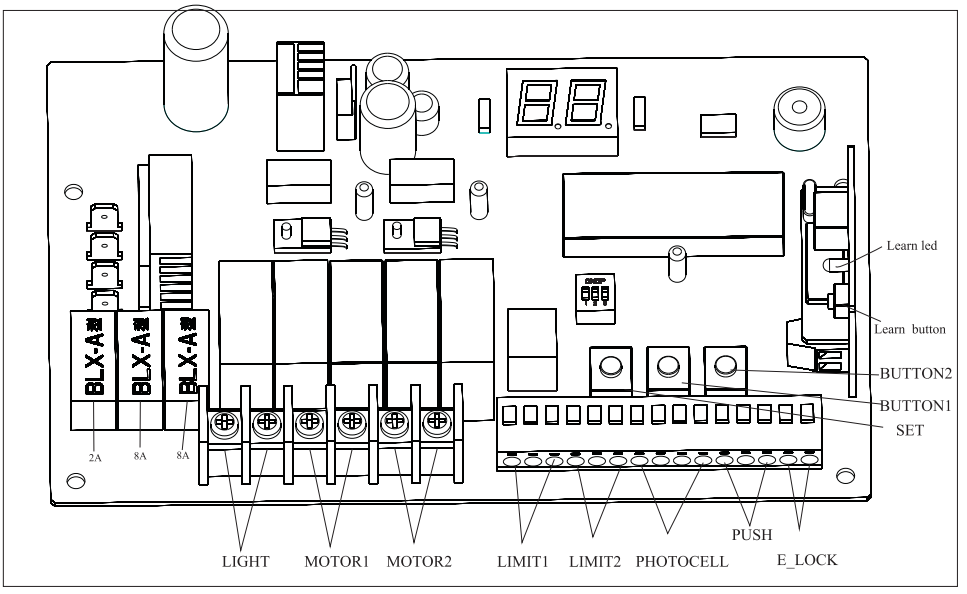
2.3 Auto stop when the running gate meet with resistance.

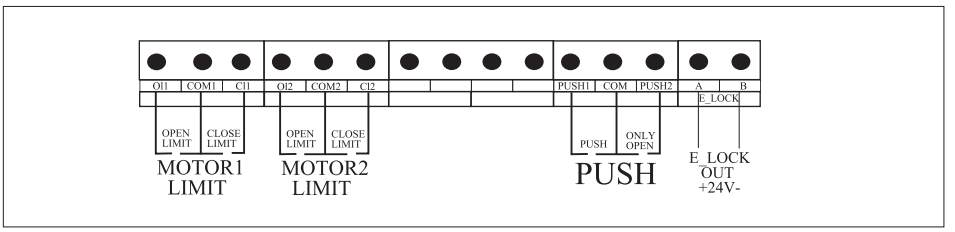
2.4 The force of motor can be programmed.

2.5 It is selectable to control single leaf or double-leaf.

2.6 It can be connected with 24V Back-up battery, Photocell, Flash Lamp, E-Lock, Push Button.

3. Diagram:





(1) "LIGHT" for a Flash lamp,24VDC.

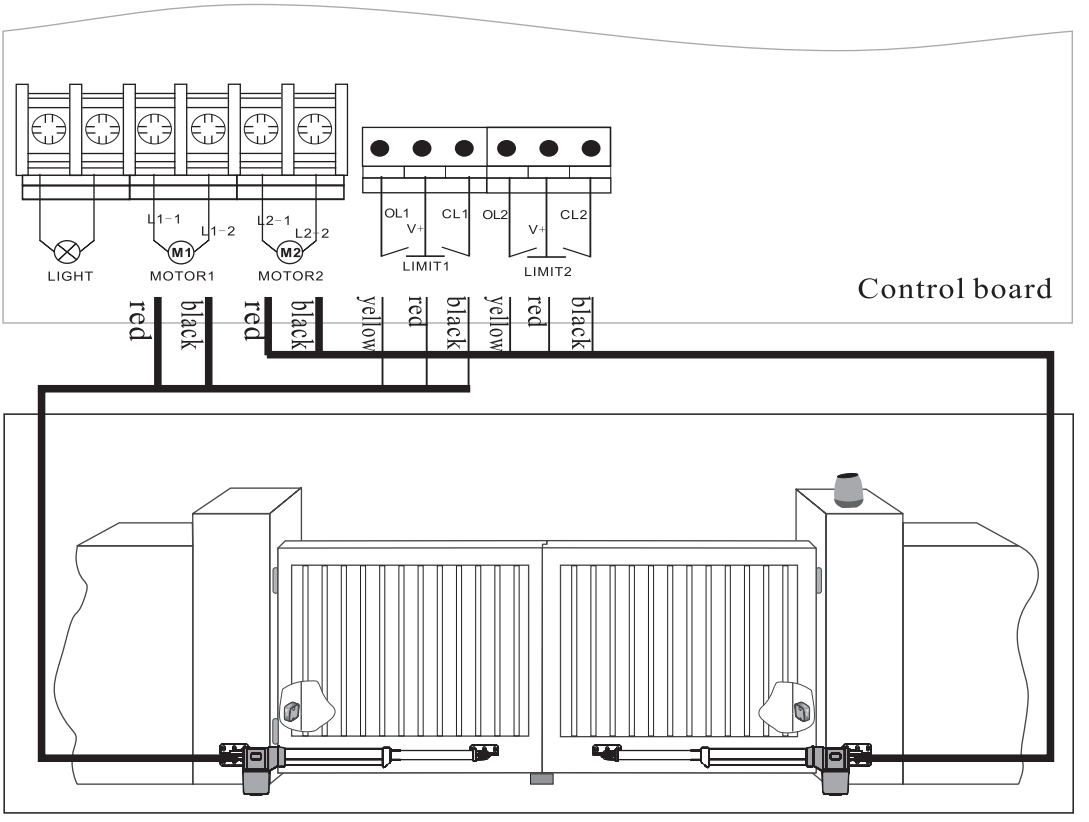
(2) "MOTOR1", "MOTOR2" for 2 motors 24VDC.

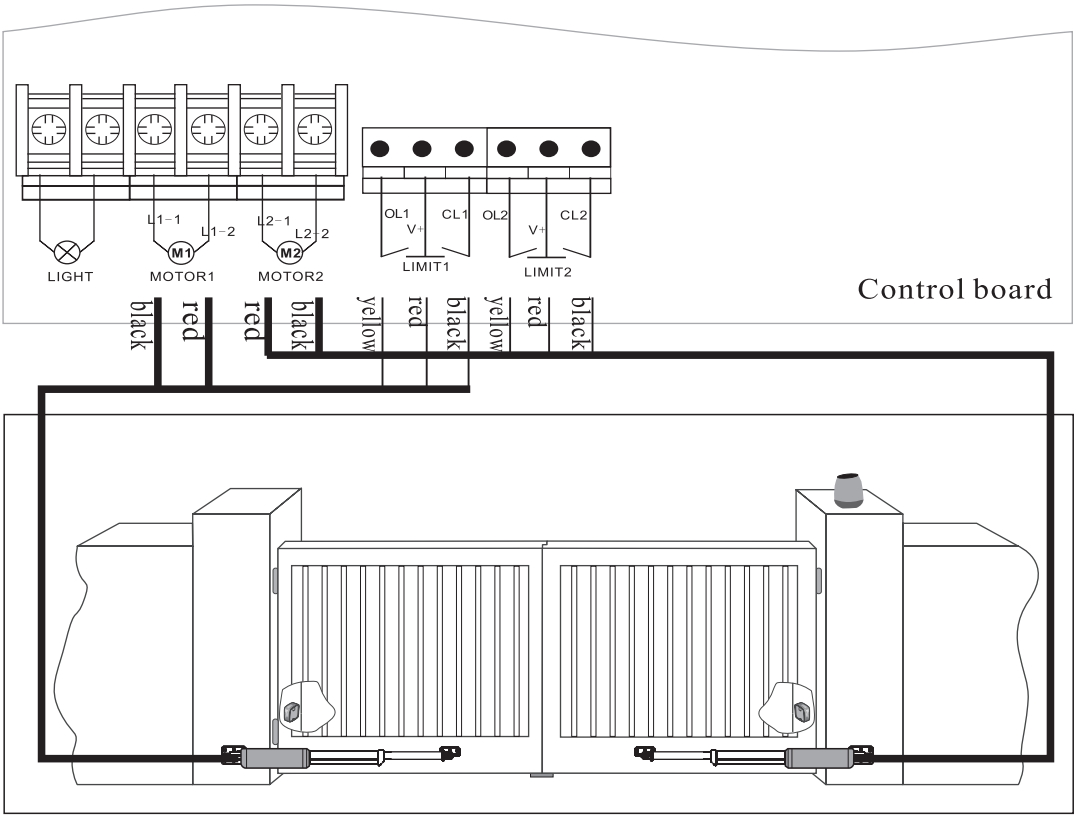
(3) "LIMIT1", "LIMIT2" for the magnetic limit switch on motor1,motor2.
(It is useful only for the motors with magnetic limit switch.)

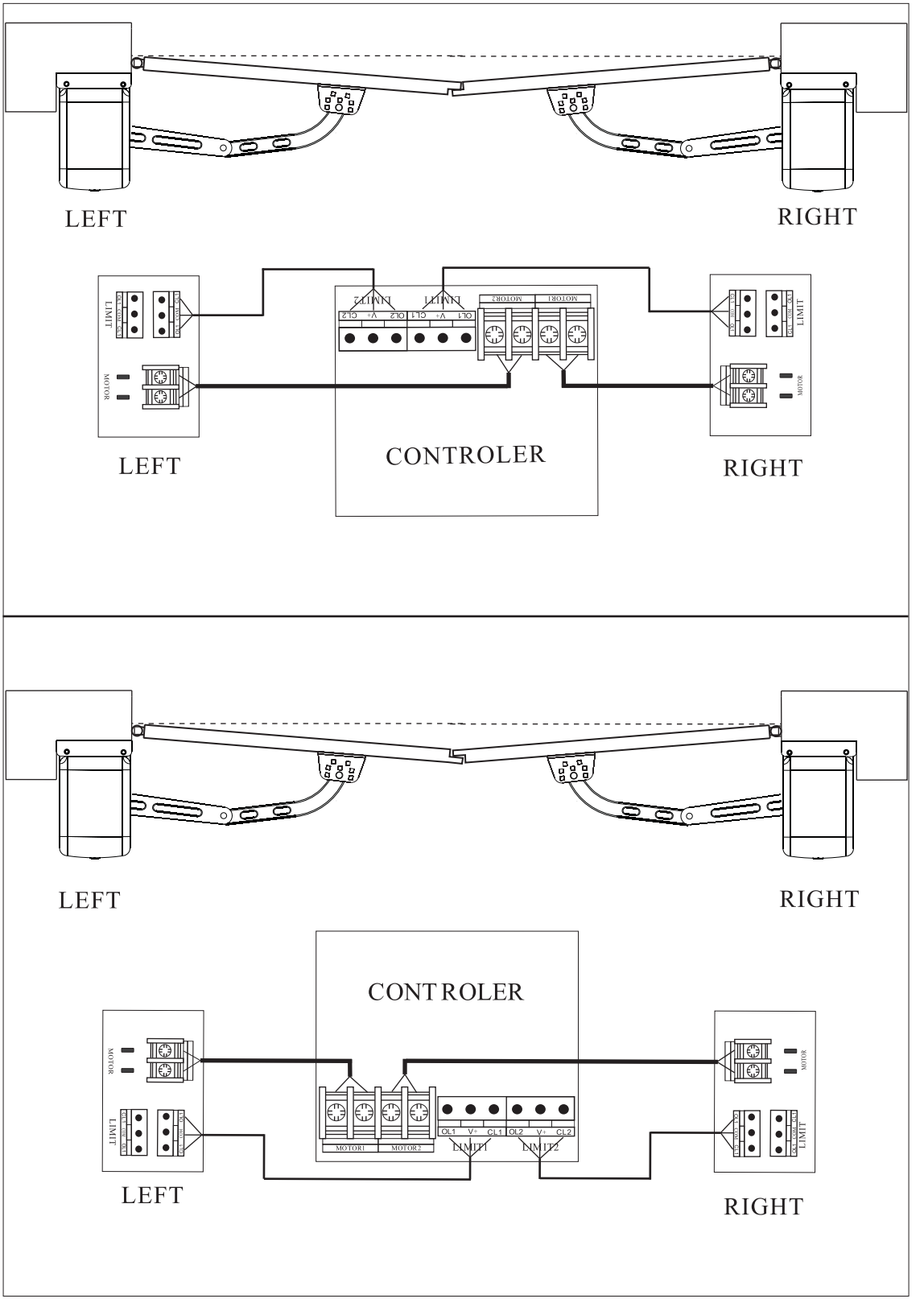
(4) "PHOTOCELL" for infrared protect device.

(5) "BUTTON"for wall switch."PUSH1"control double-leaf gate, step-by-step "PUSH2" control single leaf gate which must be the priority of opening one step-by-step.

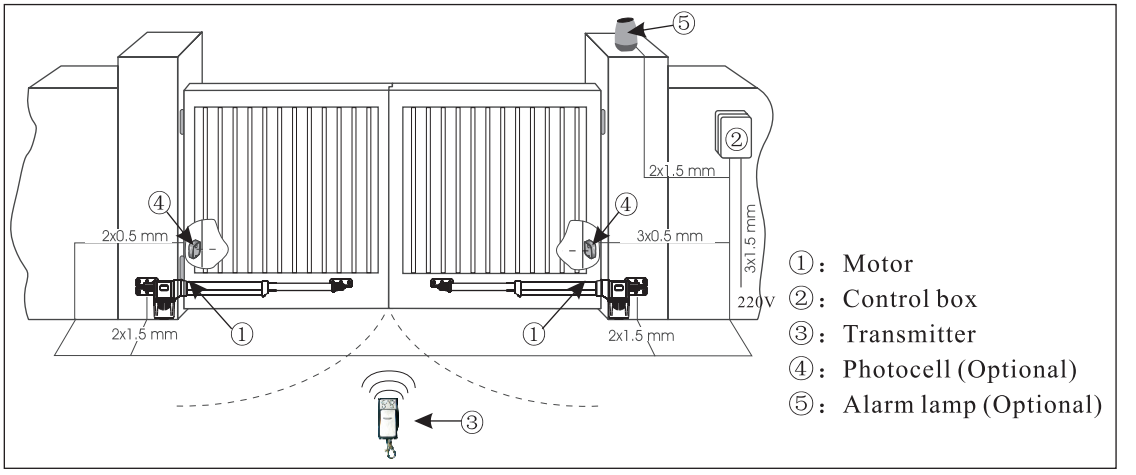
(6) "E_ LOCK" for electronic lock, It can be convected with electronic lock which power is 24VDC.


LIGHT
L1-1
L1-2
MOTOR1
M1
L2-1
L2-2
MOTOR2
M2
OL1
V+
CL1
LIMIT1
OL2
V+
CL2
LIMIT2
Control board
red
black
red
black
yellow
red
black
yellow
red
black

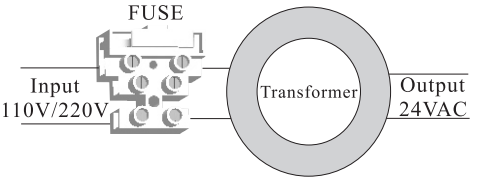

LIGHT
L1-1
L1-2
MOTOR1
M1
L2-1
L2-2
MOTOR2
M2
OL1
V+
CL1
LIMIT1
OL2
V+
CL2
LIMIT2
Control board
black
red
red
black
yellow
red
black
yellow
red
black


LEFT
RIGHT
LIMIT
MOTOR
CONTROLER
LEFT
RIGHT
LEFT
RIGHT
CONTROLER
MOTOR
LIMIT
MOTOR1
MOTOR2
OL1
V+
CL1
OL2
V+
CL2
LIMIT1
LIMIT2
LEFT
RIGHT

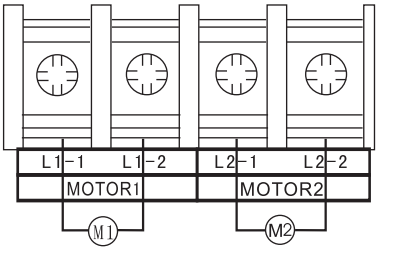
4. Standard installation layout



4.0 Connection of power



4.1 Connection of motors



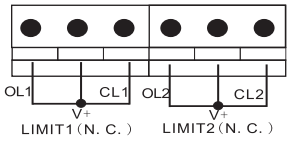
4.1.1 Connection of motor for single-leaf:

If the gate is only 1 leaf, the motor must be connected with ″Motor1″, and the ″dip 2″ on ″S5″ must be ″OFF″.

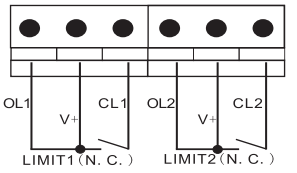
4.1.2 Connection of motors for double-leaf:

If the gate is 2 leaves, first, it must be confirmed which one leaf is the priority openning one. Then , the priority openning leaf must be connected with ″MOTOR1″, the other one is connected with ″MOTOR2″. And the ″dip2″ on ″S5″ must be ″ON″. See ″Parameter setting″.

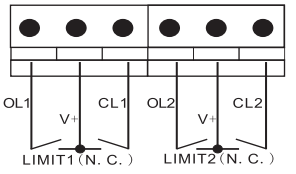
4.2 Connection of Magnetic limit switch



If no limit switch,
the erminals
mush be short connected



For only closing
limit switch



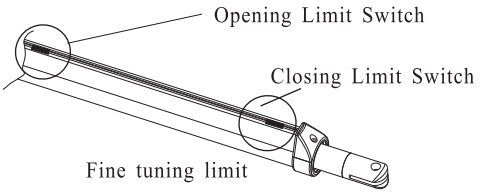
For openning and
closing limit switch

Opening limit OL1, OL2: Yellow wire
Concentration V+: Red wire
Closing limit CL1, CL2: Black wire

Adjust the Limit Switch

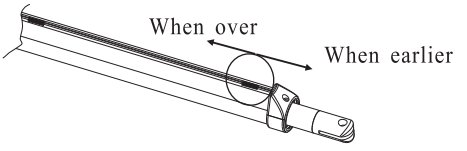
The Sensor Switch for Limit

See the right picture, there are two sensors inside the trough, one is for Opening Limit, the other is for Closing limit. The sensors can be glided.



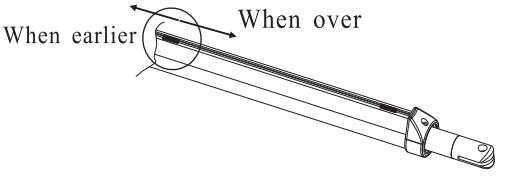
Adjust the Closing Limit

See the right picture , if the Closing Limit is earlier than the needed, the Closing Limit sensor should be glided to right a modicum, if the Closing Limit is over to the needed , the Closing Limit sensor should be glided to left a modicum.

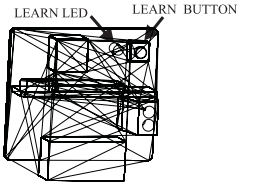


Adjust the Opening Limit

See the right picture, if the Opening Limit is earlier than the needed , the Opening Limit sensor should be glided to left a modicum, if the Opening Limit is over to the needed, the Opening Limit sensor should be glided to right a modicum.



4.3 Setting transmitter code:

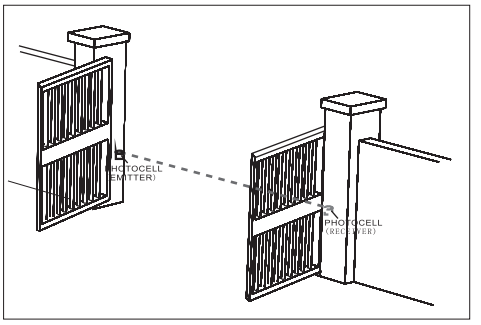


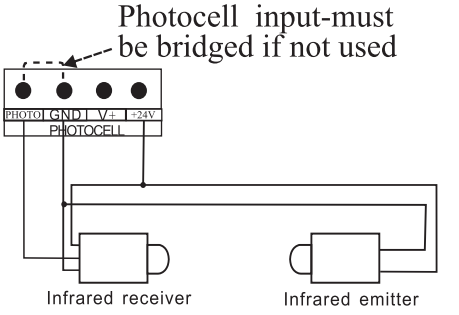
First, press ″LEARN BUTTON″ once , the ″LEARN LED″ light, then, press the button you choose on transmitter till the ″LEARN LED ″ flash and go out , **This button control double-leaf**.
Second , press ″LEARN BUTTON″**twice**, the ″LEARN LED″ light, then, press another button you choose on transmitter till the ″LEARN LED ″ flash and go out, **This button control single-leaf**.
Now , the transmitter is coded, Other transmitters can be coded as this way.

4.4 Erasing transmitter codes:

Press″LEARN BUTTON″ and hold on to make the ″LEARN LED″light till go out. Now, all codes of transmitters which had been learnt are cleared.

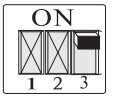
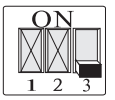
4.4 Connection of Photocell:





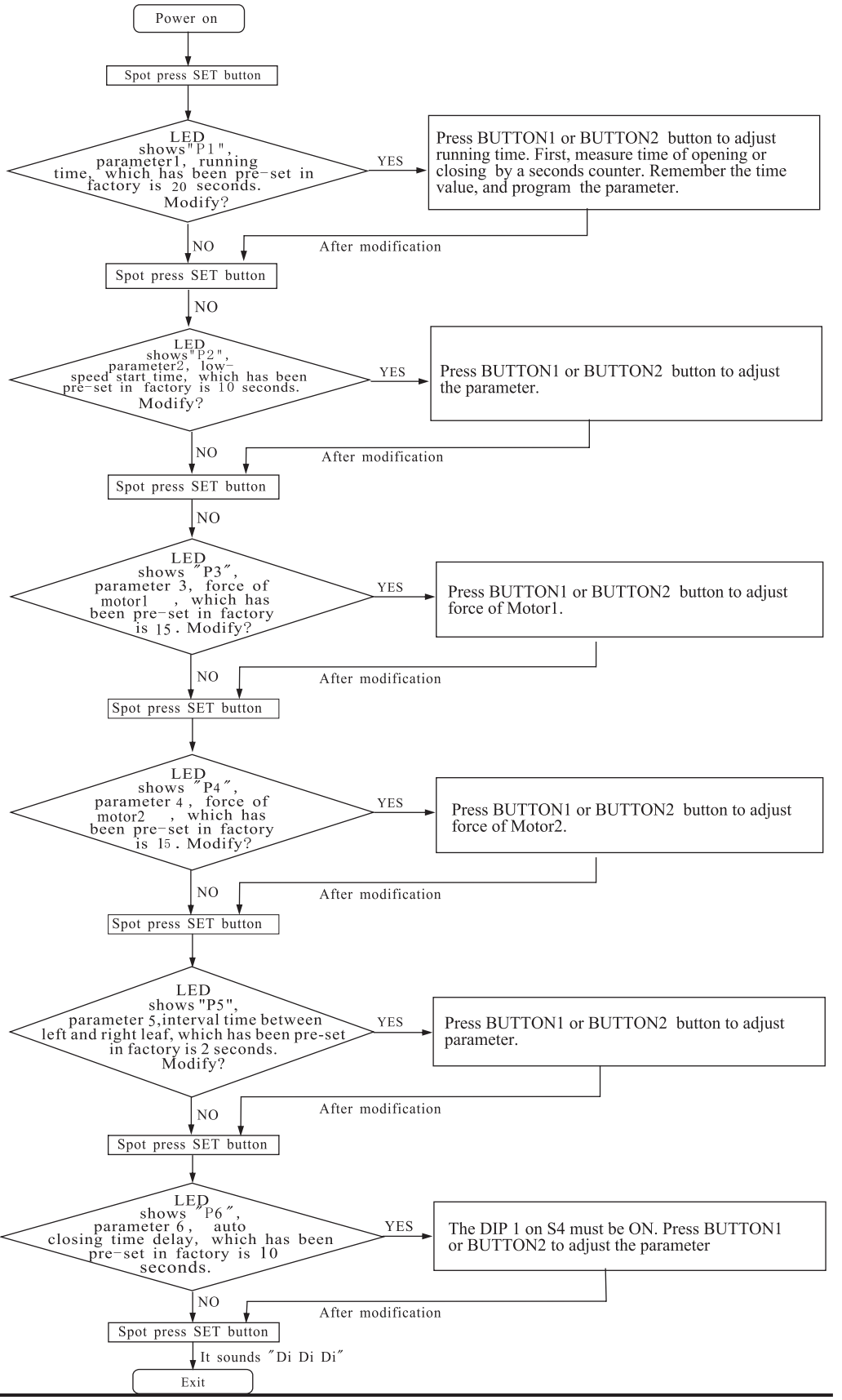
5. Setting

5.1 Dip-switch (S5) setting:

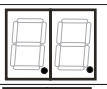
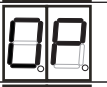
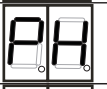
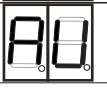
	Single-leaf, No automatic closing function "PUSH1"control single-leaf gate, step-by-step, open-stop-close-stop. "PUSH2"control single-leaf gate "open"
	Single-leaf, with automatic closing function "PUSH1"control single-leaf gate, step-by-step, open-stop-close-stop. "PUSH2"control single-leaf gate"open"
	Double-leaf, No automatic closing function "PUSH1"control double-leaf gate, step-by-step, open-stop-close-stop. "PUSH2"control double-leaf gate "open".
	Double-leaf, with automatic closing function "PUSH1"control double-leaf gate, step-by-step, open-stop-close-stop. "PUSH2"control double-leaf gate "open".
	ELECTRO-LOCK function is available.
	ELECTRO-LOCK function is canceled.

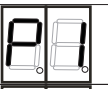
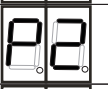
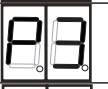
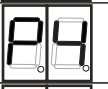
5.2 Parameter setting:

"BUTTON1" :The numerical value displayed on LED will increase 1 every once push.
"BUTTON2": The numerical value displayed on LED will decrease 1 every one push.


Power on
Spot press SET button
LED shows"P1", parameter1, running time, which has been pre-set in factory is 20 seconds. Modify?
YES
Press BUTTON1 or BUTTON2 button to adjust running time. First, measure time of opening or closing by a seconds counter. Remember the time value, and program the parameter.
NO
After modification
Spot press SET button
NO
LED shows"P2", parameter2, low-speed start time, which has been pre-set in factory is 10 seconds. Modify?
YES
Press BUTTON1 or BUTTON2 button to adjust the parameter.
NO
After modification
Spot press SET button
NO
LED shows "P3", parameter 3, force of motor1 , which has been pre-set in factory is 15. Modify?
YES
Press BUTTON1 or BUTTON2 button to adjust force of Motor1.
NO
After modification
Spot press SET button
LED shows "P4", parameter 4, force of motor2 , which has been pre-set in factory is 15. Modify?
YES
Press BUTTON1 or BUTTON2 button to adjust force of Motor2.
NO
After modification
Spot press SET button
LED shows "P5", parameter 5,interval time between left and right leaf, which has been pre-set in factory is 2 seconds. Modify?
YES
Press BUTTON1 or BUTTON2 button to adjust parameter.
NO
After modification
Spot press SET button
LED shows "P6", parameter 6, auto closing time delay, which has been pre-set in factory is 10 seconds.
YES
The DIP 1 on S4 must be ON. Press BUTTON1 or BUTTON2 to adjust the parameter
NO
After modification
Spot press SET button
It sounds "Di Di Di"
Exit

6.Meaning of display:

	Normal display
	ELECTRIC-LOCK working
	Opening
	Closing
	1.Photocell is not connected properly. 2.Photocell team is block off. 3.Photocell is broken.
	Auto-close timing

	Running time
	Slow speed start time of motor
	Force of motor 1
	Force of motor 2
	Delay time between 2 motors operating
	Auto-close time

7.Trouble Shooting

Number	Trouble	Cause	Shooting
1	motor can not work	*No power supply *Break fuse *Motor is damaged	*Check power supply *Change fuse *Change the motor
2	Can open but can not close	*Photocell is not connected properly *Photocell team is block off. *Photocell is broken.	*Connect the photocell properly *Clear out obstacle *Change a new device
3	Can open (close) but can not close (open)	*Position of limit switch is not correct *Limit switch is damaged	*Adjust position *Change limit switch
4	can not locate accurately	*Distance of limit switch is too large *Limit switch is wrong *Magnetic- steel's position is wrong	*Adjust position of limit switch *Change limit switch *Re-adjust the position
5	Release device	*Operating handle is broken *Worm gears are jammed	*Change the handle *Rotate the pinion
6	Led view "OP",but the gate close, or Led view "CL",but the gate open	*Whether "+MOTOR-" wires are connected wrong	*Connect correctly according to wiring diagram
7	Motor can turn but can not work	*Clutch is released	* Use the key to couple the clutch