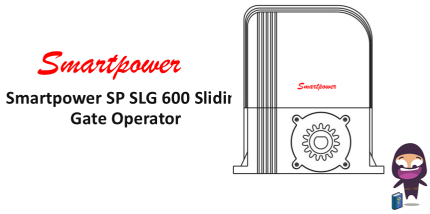
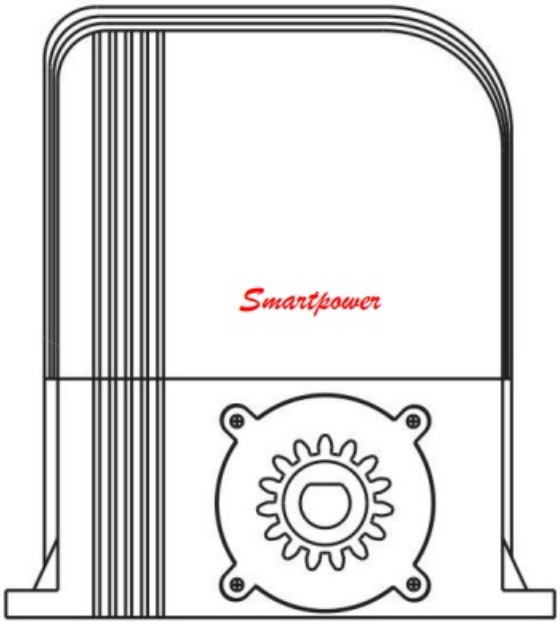


Smartpower SP SLG 600 Sliding Gate Operator Instruction Manual

Contents

Smartpower

Smartpower SP SLG 600 Sliding Gate Operator



Specifications

Model number: SP SLG600

- **Input power supply:** AC 230V
- **Maximum gate weight:** 500KG
- **Rated power:** 370W
- **Colour:** Black/Gray

Product Usage Instructions

Safety Precautions and Precautions
Follow all safety precautions mentioned in the manual. Keep the instructions for future reference.

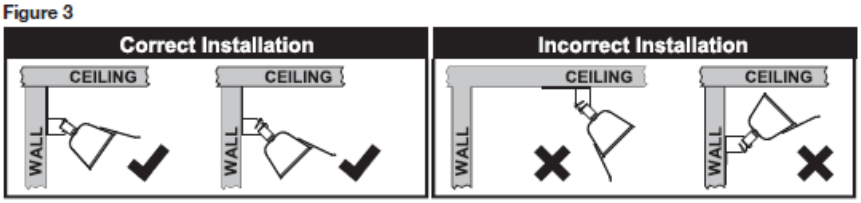
Main Functions and Working Conditions:
The Smartpower Sliding Gate Operator can be installed on the inside or outside of the door, it is small in size, easy to install, and easy to operate.

Installation and Commissioning:

Installation of the Door Opening Machine and Sliding Door:
Refer to Figure 2 for installation guidance. Ensure proper remote control functionality for safety. Install a limiting device to prevent the door from falling off the track. Mount rails horizontally and straight.

Installation of Door Opening Machine:
Follow the steps in Figure 3 for basic installation. Adjust the position according to Figure 4 after cement solidification. Securely tighten the nut on the installation foot for firm connection.

Figure 3



Installation of Bracket:
Weld a cylindrical nut in the appropriate position on the translation door. Bolt the rack on the nut ensuring proper engagement.

Frequently Asked Questions (FAQ):

- **Q: Can the Smartpower Sliding Gate Operator be installed on both sides of the door?**
  A: Yes, the operator can be installed on either side of the door, inside or outside.
- **Q: What is the maximum gate weight supported by the SP SLG600 model?**
  A: The maximum gate weight supported is 500KG.
- **Q: How long does the standby UPS last when power is cut?**
  A: The standby UPS can last for up to 5 days when the power is cut.

Smartpower
Sliding Gate Operator
Model SP SLG 600

Instruction manual
www.smartpower.co.in service@smartpower.co.in Help Line : +91 9831155801 / Toll FREE 8100 400 200

Safety precautions and precautions

DCK series door opening machine needs professional installation

1. Pay attention! Please follow the instructions carefully, which is very important for personal safety; Incorrect installation or incorrect use of the product can result in serious damage to persons and property;
2. Please read the instructions carefully before installing the product;
3. The installation must strictly abide by the relevant national standards, mechanical parts must meet the relevant national standards;
4. The voltage of the power supply should meet the requirements of the machine, and have good grounding, the power supply should be equipped with leakage and short circuit protection;
5. Before system maintenance, the power supply should be cut off to check whether the grounding system is correct;
6. It is strongly recommended to install safety devices (such as infrared beam protection), and should be regularly checked to ensure normal operation;
7. The Company is not responsible for the consequences caused by inappropriate or beyond the prescribed scope of use;
8. If the process requirements of precision components are ignored during construction or the problems caused by deformation of these components, the company will not be responsible;
9. This product is designed and manufactured in strict accordance with the use guidelines shown in this

document, and any use or operation not in accordance with the guidelines may damage the product or cause danger:

10. The company shall not be responsible for safety problems or abnormal operation caused by parts not produced by the company;
11. Do not make any changes to the components of the system;
12. The installer must introduce the operation method and the relevant provisions under the emergency state to the user in detail, and provide the user with the product manual;
13. When installing the product, children and other irrelevant personnel are strictly prohibited near, and the surrounding environment should be safe;
14. Before electric control operation, obstacles within the operating range of the door body should be removed, and vehicles and pedestrians are prohibited during operation;
15. The main control box installation position and height should be appropriate, the environment should be ventilated, avoid rain, sun, children play, operate the remote control and control board switch;
16. If it is necessary to install the outer box, it should be considered that the outer box (metal products) has a shielding effect on the remote control reception, so as not to affect the function of the product to inconvenience you;
17. The remote control is placed in the place where children can not get, in case of accidents;
18. users are strictly prohibited to try to repair or adjust the system, should contact professionals;
19. Keep the instructions for future use.

Main functions and working conditions

This door opener is used on the sliding door, its operating speed is 13 meters per minute AC, 15 meters per minute DC, DCK-300 series of sliding door opener is suitable for 120V-240V AC or 12V or 24V DC. It has the characteristics of strong current when starting and overloading in a short time. When the current overload, the door has the role of protecting the current and the motor, in order to prevent the inconvenience caused by power failure, the special key can also be used to release the door and manually make it operate.
Moreover, the door machine can be installed on the inside or outside of the door, the model is small in size, easy to install and easy to operate.

Main specifications and technical parameters

Technical parameter	
Model number	SP SLG600
Input power supply	AC 230V
Maximum gate weight	500KG
Rated power	370W
Dimension	330×210×380mm
Color	Black, Gray

working principle and main structure, performance

The dimensions of the door engine are shown in Figure 1. The door engine is composed of high-strength aluminum alloy housing, high-quality single-phase motor, overrunning friction clutch, worm gear reducer, tooth

clutch and output gear. When working, the motor spindle drives the reducer and the output gear through the transcendent friction clutch, and then the output gear drives the special rack installed on the translation door, so that the door body moves horizontally to realize the electric opening and closing of the door.
The DC motor can be equipped with spare batteries, and the standby UPS can be automatically started (standby for 5 days). When the power is cut to the battery power is used up or not through, the special key can be used to open, and move the handle to achieve manual opening and closing of the clutch.

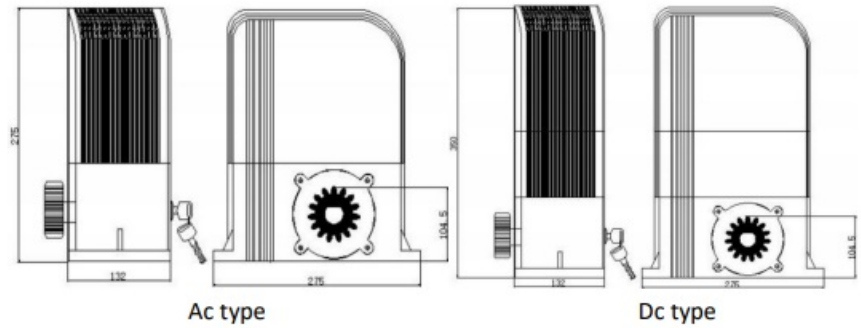


Figure 1

Installation and commissioning

1. The installation of the door opening machine and the sliding door can be referred to Figure. 2, and can be controlled by remote control to ensure safety. We recommend installing a limiting device to prevent the door from falling off the track when moving. The rails must be mounted horizontally and straight.

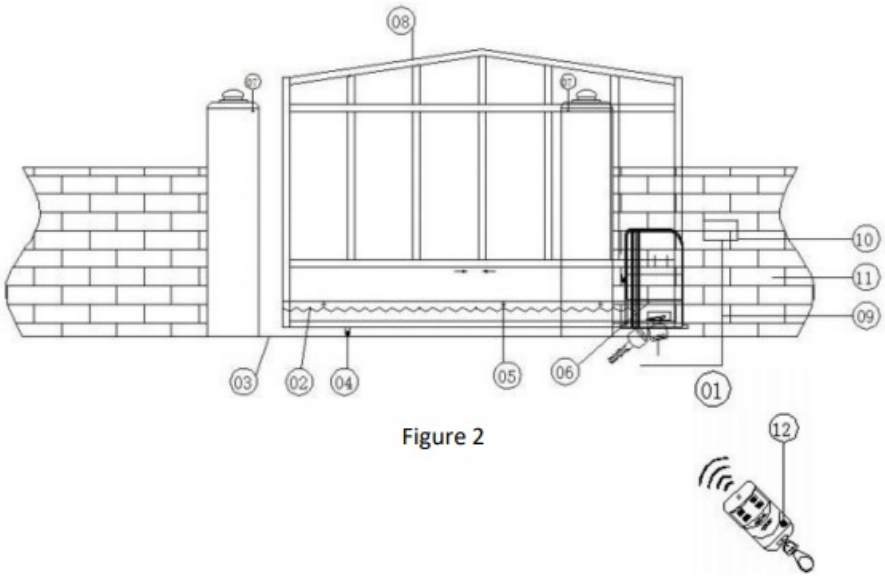


Figure 2

1. Intelligent translation door machine
2. Gear rack
3. Running track
4. Action roller
5. Rack fixation
6. Door engine output gear
7. Goalpost
8. Gate
9. Electric wire

10. Power source
11. wall
12. Remote transmitter

Installation of door opening machine

The basic installation of the door opening machine is shown in Figure 3, and the position relationship between the door opening machine and the translation door is shown in Figure 4. After the cement is solidified, place the door opener on the installation base plate. The installation base plate should be horizontal and adjusted to the appropriate position according to the direction shown in Figure 4. Then, the nut on the installation foot should be tightly protected to make the door opener firmly connected to the base.

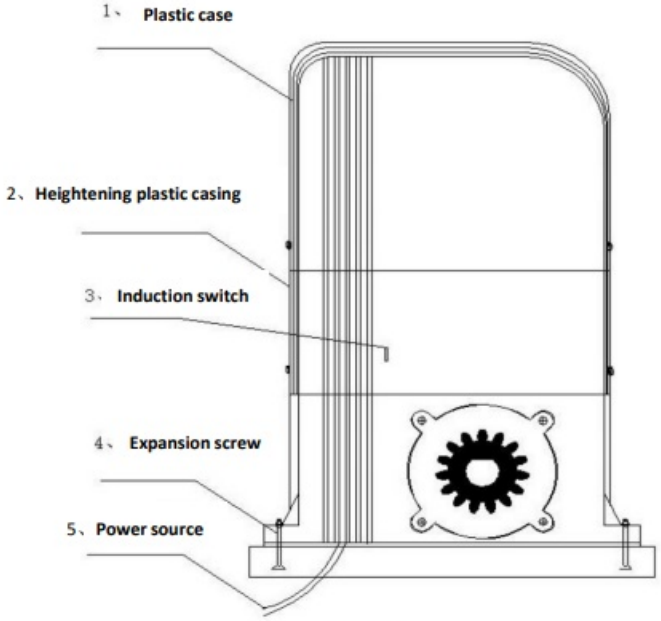


Figure 3

Installation of bracket

1. In the position where the output gear and rack can be reliably meshed, the cylindrical nut is welded in the appropriate position at the lower part of the translation door and then the rack is bolted on the round bolt nut.
2. Adjust the position of the rack to ensure the engagement between the rack and the gear gap, and the engagement gap should be maintained at 1 mm.
3. Install the magnetic switch as shown in Figure 4 and Figure 5. The main engine is equipped with a magnetic induction (or spring) switch. Control the correct position for opening and closing doors. Use the special key to open the clutch control compartment, and then use the clutch handle to unload the clutch of the door opener (make the handle straight to 90 degrees); Push the translation door to the appropriate limit position at both ends manually, and preliminarily fix the assembled translation door limiter on the rack at both ends; (As shown in Figure 5) Please refer to the circuit board manual for details of the circuit installation and debugging.

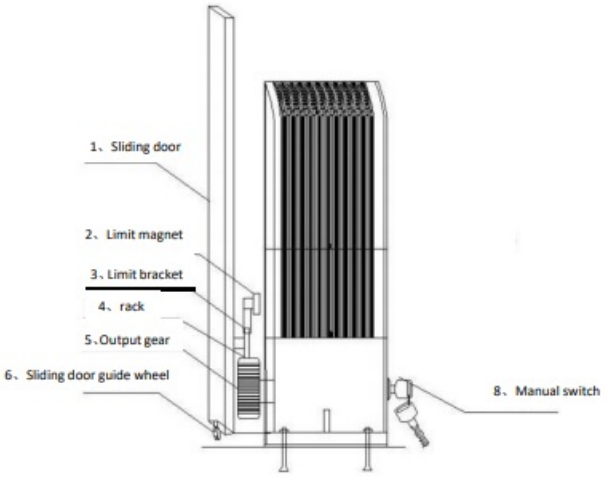


Figure 4

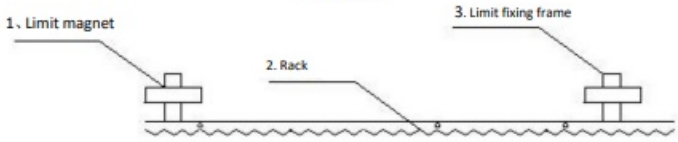
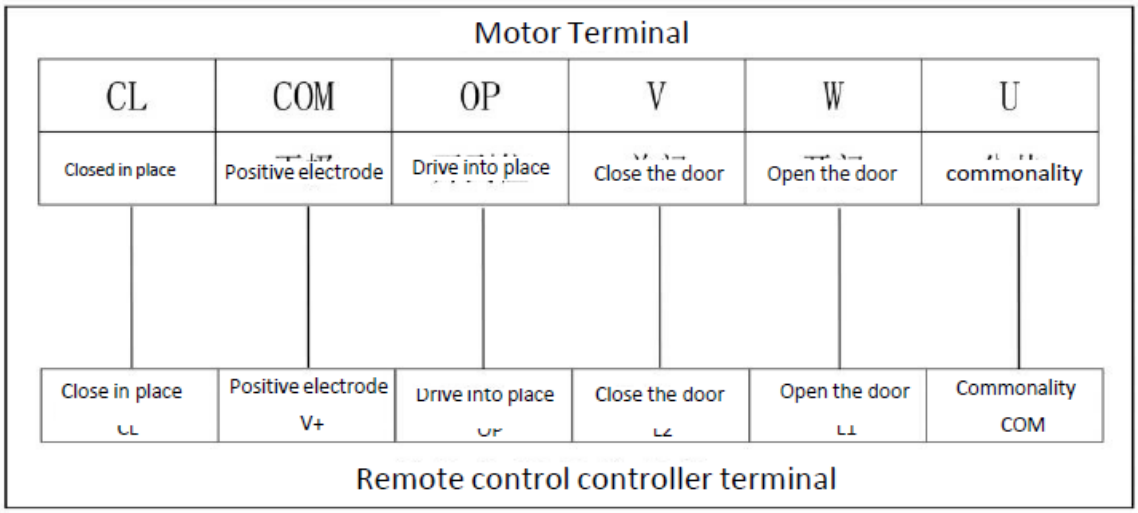


Figure 5

split wiring diagram



Note

1. Open the door, close the door direction is opposed to the adjustment L1, L2.
2. Open or close in place non-stop switching OP, CL.

Main structure of DC motor (as shown below)

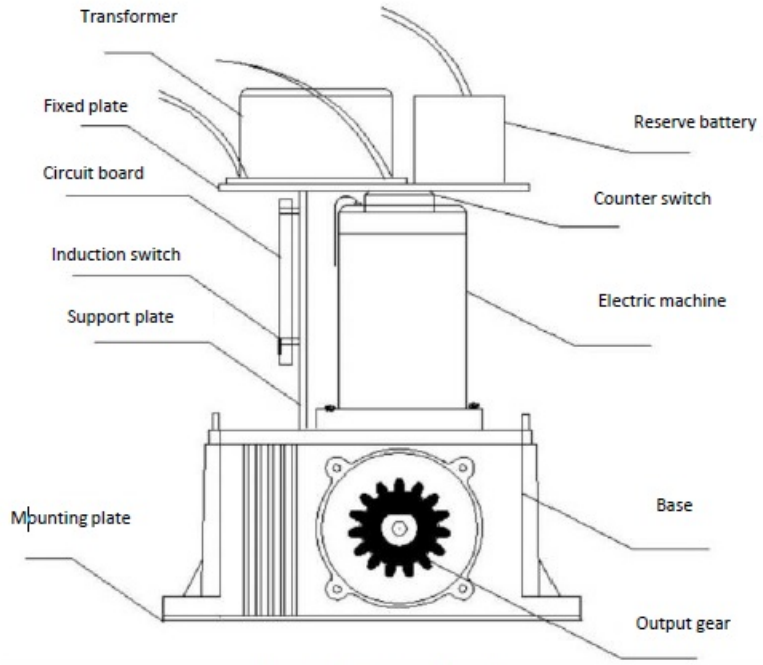


Figure 6: DC motor schematic

Operation

1. Before use, should carefully check whether the power supply voltage, frequency and other data meet the requirements, check whether the grounding is good, electrical wiring is correct;
2. First use the random special key to unlock, and then turn the handle straight to release the clutch, push the translation door, so that the door opening machine idling, if the door opening machine is running normally, and then reset the handle to close the clutch;
3. Turn on the power, start the door opening machine, observe the operation of the translation door;
4. Adjust the position of the magnet until the door opens and closes in accordance with your Settings.

Maintenance and maintenance

1. The connection between the special ejecting rod and the shaft should be covered with a small amount of anti-rust grease to prevent rust;
2. Often check whether the electrical grounding is good;
3. The machine adopts advanced lubrication grease, no need to replace or add lubricating oil.

Possible obstacles and elimination

1. After opening or closing the door machine, the translation door fails to return to the original position;
    1. Please check whether there are obstacles on the gear or door rail.
    2. Check whether the position of the magnetic switch is correct.
    3. Open the manual clutch, push the door back to the original position or adjust the position of the magnetic switch.
2. The door can not be moved under the operation of the control board and remote control: in the case of top death.
    1. Lift the door away from the output gear and push the door back.
    2. Use special tools to unload the fixed motor screws, remove the motor, and push the door back.

Product Name: Sliding Gate Opener
Controller Model: SP SLG 600

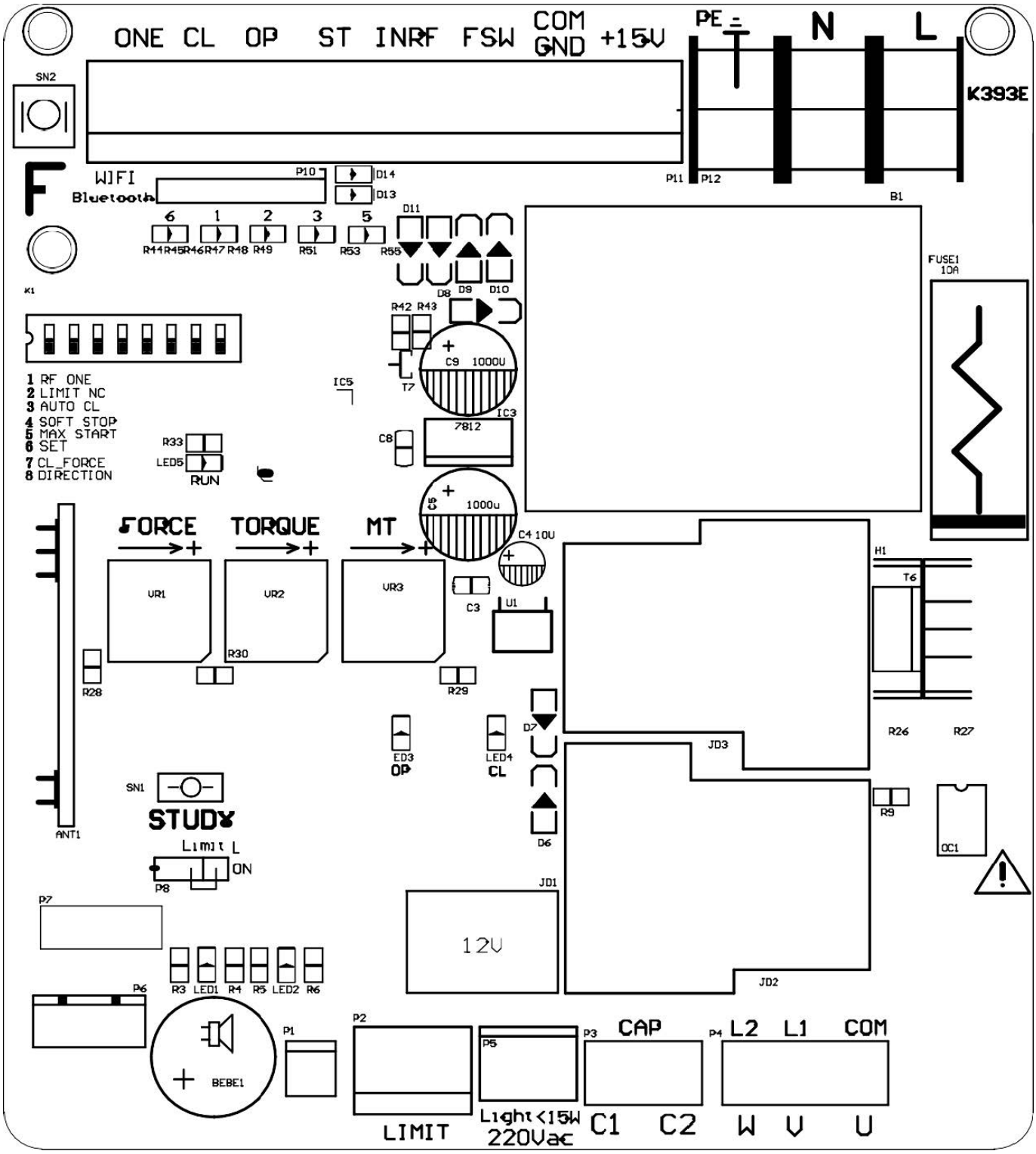
Introduction Of Item Function

In order to enable the installation and testing easier and convenient, we developed the intelligent type of self-study sliding gate opener controller. Which applied the imported micro-computer chip. It features digital control, versatile functions, safety, and simple installation and testing.

Product Features

1. The gate will slowly travel to the limit position at first operation, avoiding the inertial over-limit.
2. Anti-collision design: When the motor travel is completed, only after press the reverse button, the motor can be activated so that the over-travel can be avoided.
   Note: There have power-off hold function when the motor touched the limit , it will be reverse action when power on.
3. Configuring the Hall Element, When magnets are installed, they are divided into the south and north poles (so the magnet can attract each other while being amounted). You can ignore their position. The motor would stop when it should be only if the motor movement and travel input light are same color. If the direction is wrong, you can change the direction via red dip 8.
4. Motor time protection: Avoid long time operation of the motor when travel failure. The controller can automatically learning the motor working time, which is ten seconds longer than the traveling time without set up manually, it will automatically saved after the motor complete working several times.
5. Auto-closing function: The time can be adjusted from 1 to 250 seconds.
6. Motor force adjustment: Available.
7. Motor slow speed adjustment: Can adjust the thrust when motor running at slow speed.
8. Resistance rebound function: Can adjust the obstruction by potentiometer.
9. Top confidentiality k393 controller has remote control function, which keep the long distance and anti-interference. The code number is amount to 400 million combination and impossible to break because of using the most advanced jump coding technology, more safe and confidential than the traditional one.
   - Working power supply 220V±10%
   - Max. Output current: 10 A
   - Fuse: AC220V 10A
   - Remote distance: > 30m
   - Working temperature range: -25°C~+ 75°C, relative humidity: < 60%, no freezing dew

Wiring Diagram



Red Dip Switch Function:

1. Remote single key
2. None
3. Auto close function
4. Soft stop function
5. Max.start force
6. Function setting
7. Resistance rebound function
8. Motor direction ,turn on this switch will change the motor and limit direction at the same time

Add And Delete Remote Control

1. **Add remote control**
   Release your hand after press STUDY key for 1 second , then press any button on remote, finished when you hear a sound then release your hand. Repeated above operation when you need add more remote control.max. remote control you can add is 300 pieces.
2. **Delete remote control**
   Press STUDY key for 8 seconds, release your hand after hear a sound, delete all the remote control.
3. **Remote control single key control:**
   when the Red Dip Switch1 in ON position ,the remote control with single key circulation mode, open -stop-close circulation
4. **Remote control three keys control**
   when the Red Dip Switch1 in OFF position, the remote control is three keys control mode.

Function Operation

1. Remote single key control B1 (Red DIP switch 1)
   Red Dip Switch 1 in ON position the remote control is in single key circulation mode Red Dip Switch 1 in OFF position ,the remote control is in three keys mode
2. Motor direction conversion B2 empty (Red DIP switch 2) 3
   Auto-closing function B3 (Red DIP switch
3. Red Dip Switch 3 in ON position, with auto-closing function. When motor open to the open limit,start closing time counting.
   Auto Close Time setting: Turn on Red Dip Switch 3 and Red Dip 6 to ON, Press function key (F), one time one second, after setting, turn Red Dip Switch 6 to OFF, and Red Dip switch 3 still in ON position.
4. Slow speed function B4 (Red DIP switch 4)
   Red Dip Switch4 in ON position with slow start and slow stop function. For the first time need to make travel setting after installed the motor.
   During setting, motor should completely installed on the door, and the door should in close position (This is very important). Turn Red DIP4 to on, and then press F key of the control board about 5 seconds, motor will auto open to open limit and then close to the limit.Setting of the limit is finished. After setting motor will have soft start and soft stop.
   (Note:It can adjust the slow speed thrust by MT knob if motor thrust not enough. Motor slow position is fixed, about 20cm.)
5. Max.force starting function B5 (Red DIP switch 5)
   Red Dip Switch 5 in ON position with max.force starting. If the door is heavy and can not start by soft start, it can turn on Red Dip switch 5 to on, make the door starting, but this will increase the noise from door starting.
6. Function setting B6 (Red DIP switch 6)
   RED Dip Switch 6 in ON position ,can set the function of the remote single key control and auto closing time and so on ,it needs to turn to OFF after finished the setting.
7. Resistance rebound function B7 (Red DIP switch 7)
   RED Dip Switch 7 in ON position with resistance rebound function.
   Functional optimal adjustment scheme :Set the resistance potentiometer to minimum, then gradually increase clockwise to find a point of appropriate force. The force cant too small and too big.

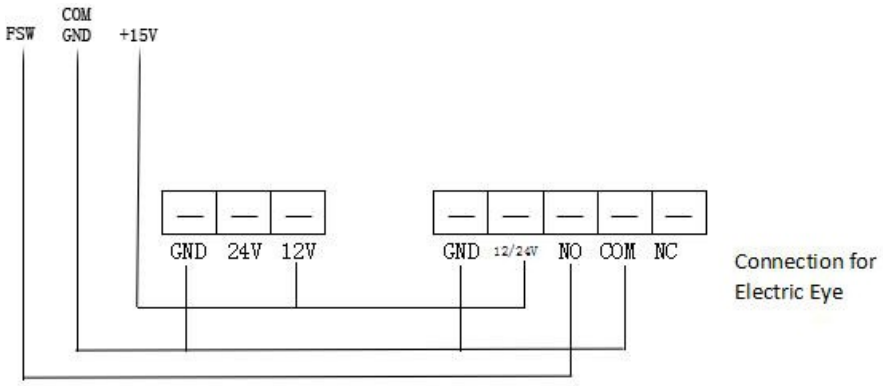
8. Motor direction conversion B8 (Red DIP switch 8)
   When the gate traveling direction and limit are in corresponding position , the gate is not in limit position and do not have movement, just turn red dip switch 8 to change the direction, others do not change.

Loop Detector

Three states of Loop detector input

1. When the gate is closing, there is loop detector signals input. The gate will reverse to the opening position. Then the gate will close after 2 seconds delay
2. When the gate is opening, there is loop detector signals input, the motor continues to running, the gate will close after 2 seconds delay when the opening travel is over.
3. When the motor touched the limit, and the gate will close after loop detector signal input two seconds

Usage of IR sensor



During closing, when IR sensor is interrupted, the motor will stop immediately and reverse to the opening direction.

Hidden settings of the control board

- From left to right it is LED1 LED2 LED3 LED4 LED5
- LED4 ON for cancel motor protection
- LED2 ON for remote control lock key lock the control
- board LED3 ON for pedestrian mode
- LED5 ON for photocell with NC
- Turn Red DIP1, Red DIP6 , Red DIP7 to ON (LED light 4 on) will cancel motor protection (Default with this function)

- Turn Red DIP2, Red DIP 6, Red DIP7 to ON (LED light 2 on)remote control lock key with lock function Turn Red DIP3, Red DIP 6, Red DIP7 to ON (LED light3 on)with pedestrian mode function
- Turn Red DIP5, Red DIP 6, Red DIP7 to ON (LED light5 on)photocell with NC (Default photocell with NO)
- Restore the default settings: Turn all the Red DIP 1 to 8 to on, you will hear DIDI sound, then turn all the Red DIP 1 to 8 to off it will restore default settings.
- Pay attention: all the hidden settings need to press Black F key to start the function, press Black F key again to cancel the function .Photocell NC and NO interchange can only by manual,can not by restore the default setting.

Troubleshooting Methods

Failures	Reasons	Methods
Control board No reaction	1. Is it power on	1. Check power supply
Press the remote but the gate not move	1. If the remote control coded 2. Remote control battery no power	1. Reference the manual of add r emote control 2. Replace the battery with same model.
The remote distance is too short	1. The battery Power shortage 2. The same frequency interfere th e remote control	1. Replace the old battery with the new battery 2. Find out the source of 3. interference, suppress interfere nce

Optional accessory list

Description	Specification	Quantity	Unit
Card reader	DC12V	1	PC
Video doorbell	Color, 4 or 7	1	Set
Coded remote control	With battery	1	PC
Desk-top remote control	AC220V	1	PC
Facial Recognition	DC12V	1	PC
Bluetooth/mobile open gate	DC5V	1	PC
Mobile visual open gate	DC12V	1	Set
Car bluetooth open gate	DC5V	1	PC
Vehicles automatic recognition	DC12V	1	Set
Wireless keypad	DC3V	1	PC
Ground coil	0.5*100 meter	1	volume
Laser Radar/Photocell	DC12V	1	Pair
Alarm lamp	AC220V	1	PC

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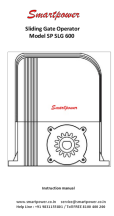
Documents / Resources

	Smartpower SP SLG 600 Sliding Gate Operator [pdf] Instruction Manual SP SLG 600 Sliding Gate Operator, SP SLG 600, Sliding Gate Operator, Gate Operator, Operator

References

- Automatic Door and Gate | Door & Gate Automation - Smartpower Automation
- User Manual