

Rolling Door Operator User's Manual

MODEL: RSI-500KG

Rolling Steel Ind.

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1. Important safety information

Carefully read and follow all safety precaution and warnings before attempting to install and use rolling door operator, incorrect installation can lead to severe injury.

- The rolling door operator should be installed by a qualified technician; otherwise, serious

personal injury or property damage may occur.

- Notify the users that the door operator is never to be operated unless it is in full view.
- Keep remote controls away from children, to prevent the door from being activated involuntarily.
- Before any job on the door operator, cut out electrical power.
- DO NOT in any way modify the components of the rolling door operator, otherwise serious personal injury or property damage may occur. We do not accept responsibility for damage or injury resulting from installing this door operator.
- When opening or closing the door, do not attempt to walk or drive through the door.
- The rolling door operator must be grounded.
- Do not pull the hand chain or release lever during opening or closing the door.
- Do not close the door by pulling the release lever as normal working mode, otherwise, serious personal injury or property damage may occur. (It's only an emergency mode)
- To protect the door from crash, engage the release lever quickly while the door is going to reach the closed position, then pull the release lever again to close the door lightly.
- Regularly check the rolling door operator. If you have any problem, please contact our sales agent.
- Our company reserves the right to change the design and specification without prior notification.

2. Main technical parameters

Power supply	110 × (1±10%)V, 60Hz
Motor speed	1680 r/m
Rated power	370W
Rated current	4A
Max. lift capacity	500kg
Roller diameter	127mm
Transmitting ratio	210:1
Continuous working time	5 minutes
Environment temperature	-20°C to +45°C
Weight of main unit	12kg

3. Introduction

Main features

- Compact design, attractive appearance, safe and reliable performance.
- It has the advantages of light weight, low noise, convenient to install, safe and reliable performance.
- Manual operation in case of power failure.

Main structure (see Fig.1)

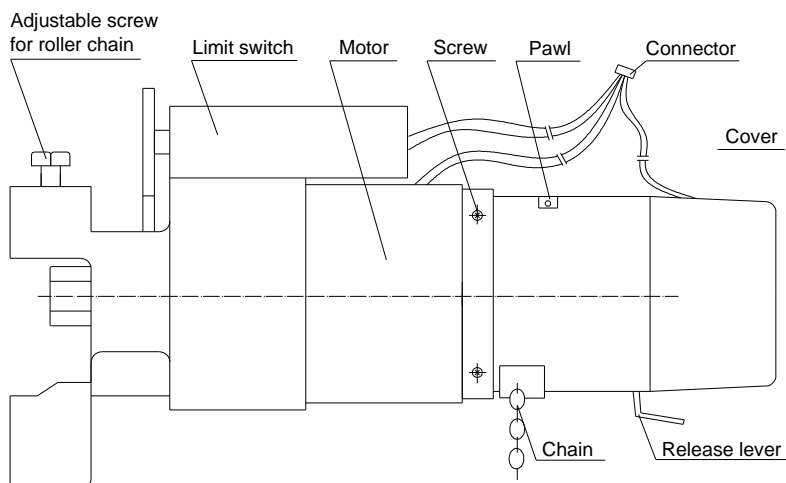


Fig.1

4. Installation and adjustment

Right hand and left hand installation

You may install the rolling door operator to left or right side. Operator is normally delivered right hand. (View from inside the opening), If you need to change it to the left processed as follows: undo the four screws on the housing, then turn the upper housing 180° and ensure the chain hangs vertically, turn the pawl 180° at the same time, finally tighten the screws. Make sure there is no clearance between upper housing and lower housing.

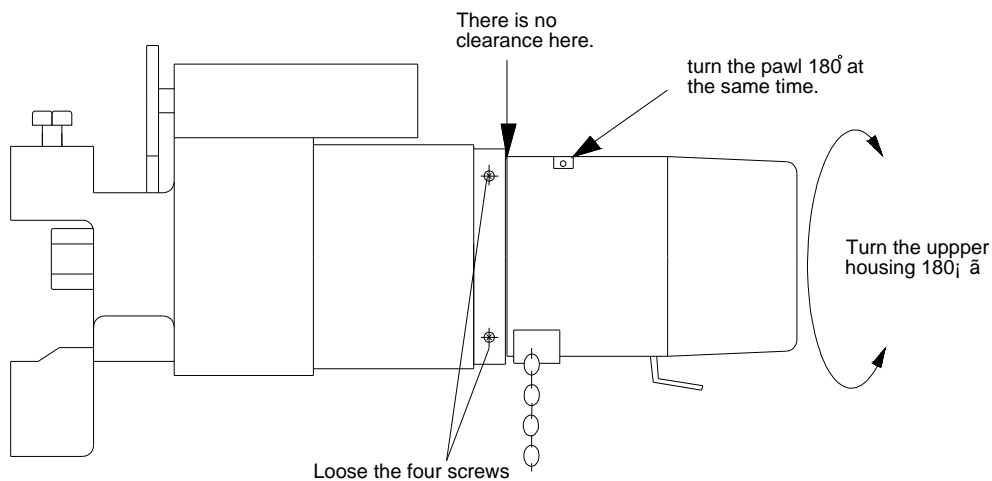


Fig.2

Install the rolling door operator to right side.

Right side sprocket bracket

Install the sprocket bracket on the wall or wall bracket horizontally, if the distance is not sufficient the bracket angle may need to be adjusted (The installation angle can be adjusted to between 0° and 45°, ensure the chain hangs vertically. See Fig.3)

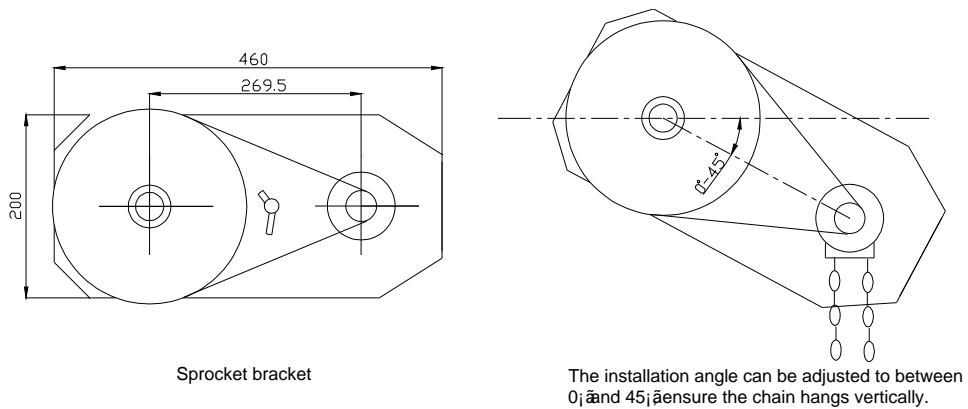


Fig. 3

Left side square plate

Lock the bearing in bracket with screws. Fix the square plate on the wall or wall bracket.

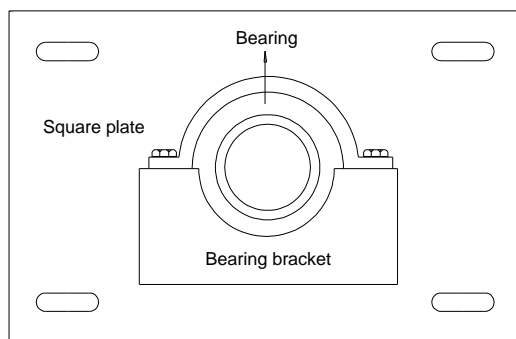


Fig.4

Roller installation

Install the roller as shown in Fig.5.

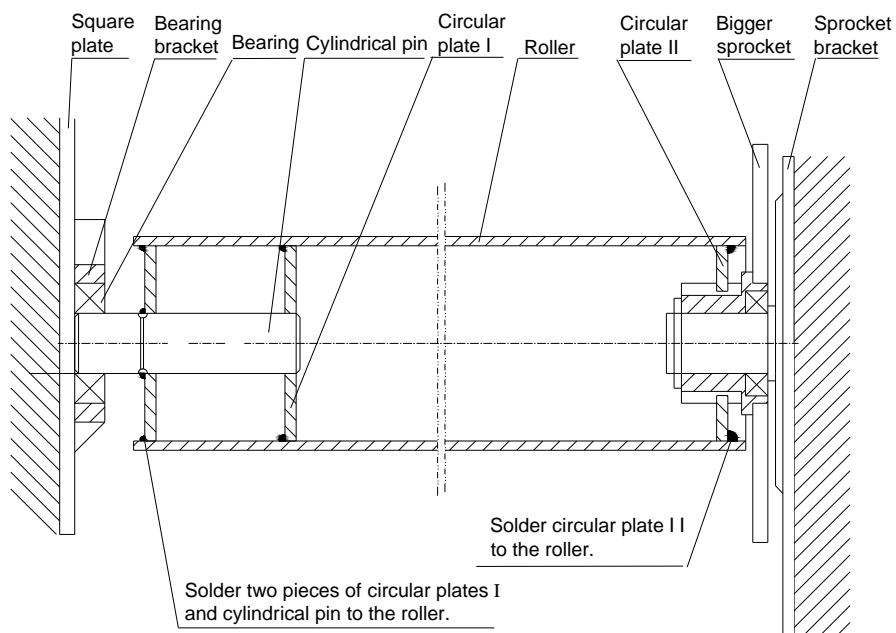


Fig.5

Door operator

Fix the door operator to the sprocket bracket. Make sure that the nuts are securely tightened and the chain hangs vertically. Adjust the screw to tighten the roll chain see Fig.1.

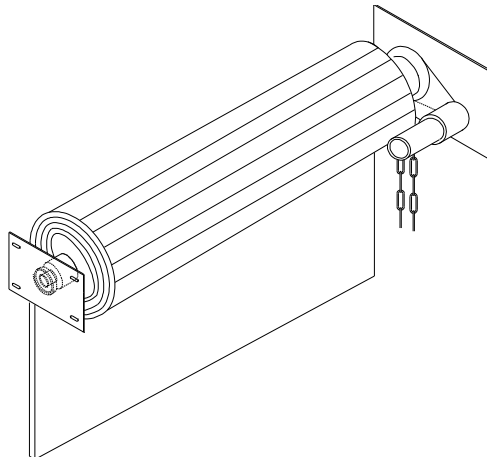


Fig.6

Limit switch

Limit switches are needed to stop the door at the correct opened and closed positions.

Loose the screw, manually open the door to desired position, turn the limit cam wheel until OPEN limit switch clicks, finally tighten the screw.

Loose the screw, manually close the door to desired position, turn the limit cam wheel until CLOSE limit switch clicks, finally tighten the screw.

After adjusting, you can open the door then close the door and observe whether the door has successfully reached the opened and closed positions. If the door does not reach the opened or closed position, fine adjust the limit cam wheel to suit the desired distance. The process is the same as the adjusting as above.

Chain

In case of power failure, you can open or close the door manually by pulling the hand chain. It is important to ensure that the chain is not fitted twisted. If the chain is twisted, malfunctions may occur when the hand chain is used.

Please do not pull the chain during closing or opening the door, otherwise, serious personal injury or property damage may occur.

Release lever

In case of power failure, pull the release lever to disengage the door quickly.

WARNING: When pulling the release lever to disengage the door, do not attempt to walk or drive through the door. Otherwise, serious personal injury or property damage may occur.

Brake

When the operator has been in use for some time, brake block wears off and can not stop the door well, adjusting the brake block could become necessary.

Adjust the brake block can be done by adding spacers. Loose the four screws on the housing, undo the round nut (M8) and brake block, add spacers according to your requirement, ensure the clearance between the brake block and sprocket is 0.6 mm -1mm, then assemble the brake block and nut.

5. Electrical

Installation

Make sure that power is OFF before making any electrical connections.

Fix the control box on the wall and perform the wiring.

Connect power wires (AC110V) to 'L', 'N' and '⏏' (terminal X2).

Connect capacitor wires to 'B' (See terminal X1) and 'A' (terminal X2).

Wiring between control box and rolling door operator (see Fig.7)

Connect Brake solenoid wires to 'E' and 'F' (terminal X1).

Connect motor wires to 'C', 'D', 'A' and 'N'. (Terminal X1 and terminal X2).

Connect earth wire to '⏏' (terminal X2).

Connect limit switch wires to terminal block X10.

Notice: these wires have been connected before delivery. All you need to do is connect the connector comes from the rolling door operator to the control box.

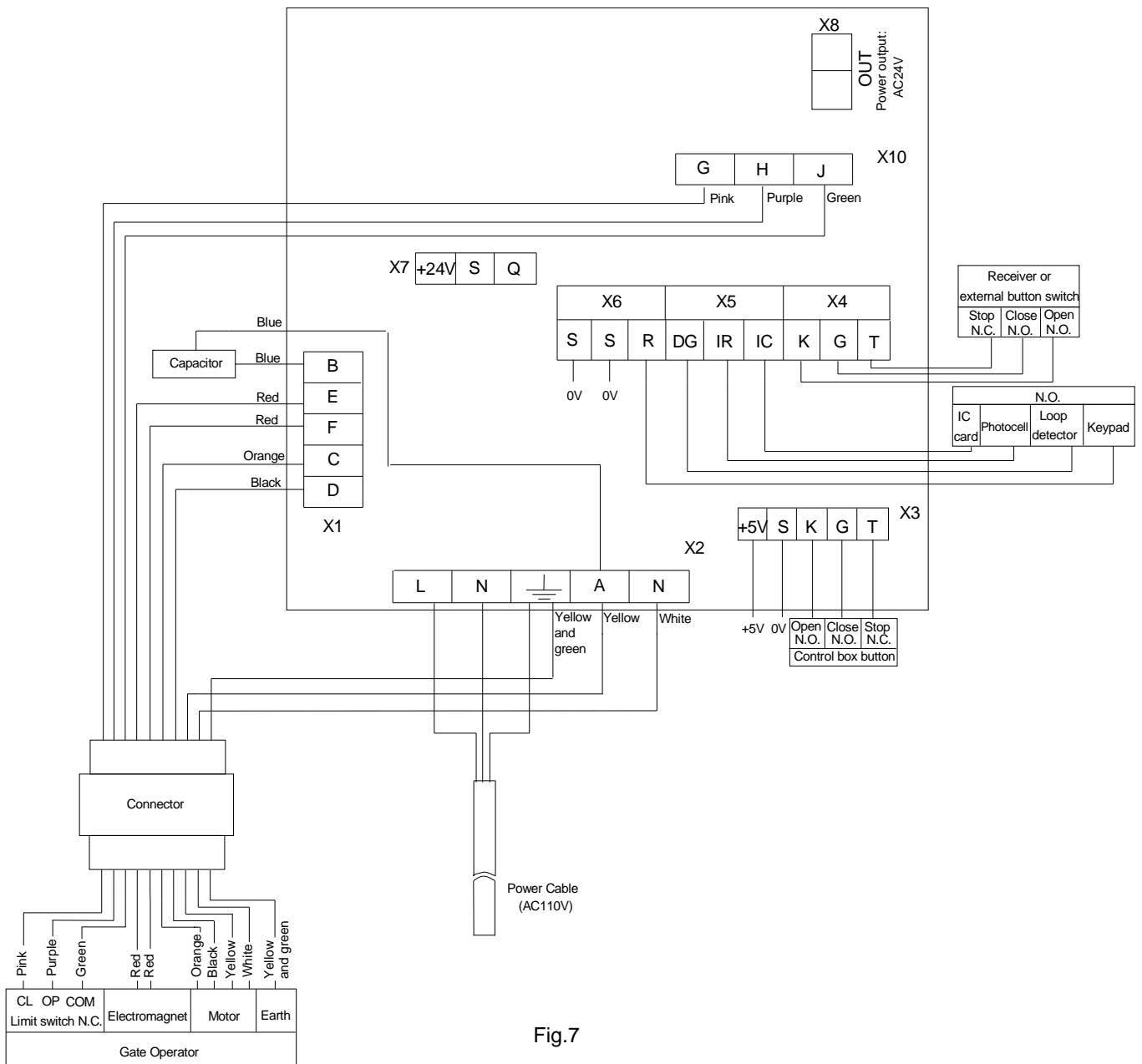


Fig.7

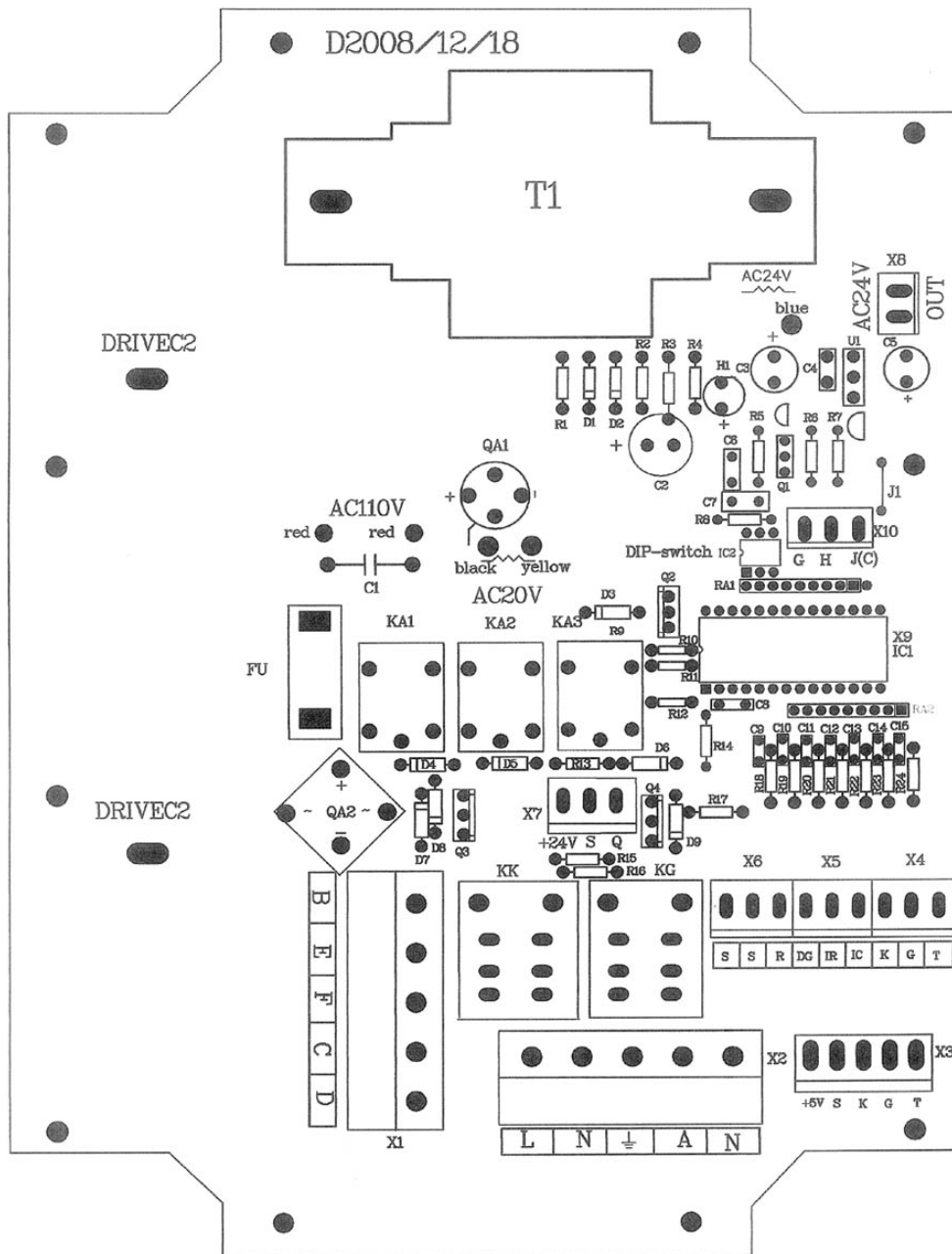


Fig.8

DIP-switch (IC2)

Press 'UP' button, but door runs in wrong direction, slide the first DIP-switch to opposite side.
Set the second DIP-switch to ON position, the door inching moving.

Connecting optional safety device

Note: make sure the control box power switch is OFF before connecting safety device wiring to the terminal blocks.

Loop detector (N.O.)

Connect the power wires of loop detector to terminal block X7, connect the signal wires to terminal block X6 and X5. See Fig.9

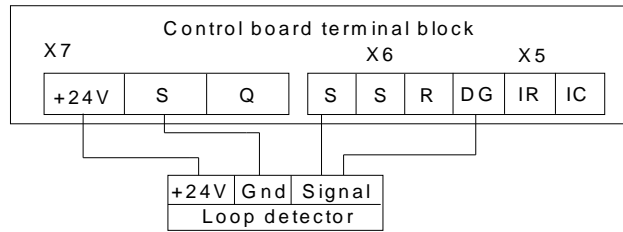


Fig.9

Photocell (N.O.)

Connect the power wires of photocell transmitter to terminal block X7, connect the power wires of photocell receiver to terminal block X7 and signal wires to terminal block X6 and X5. See Fig.10

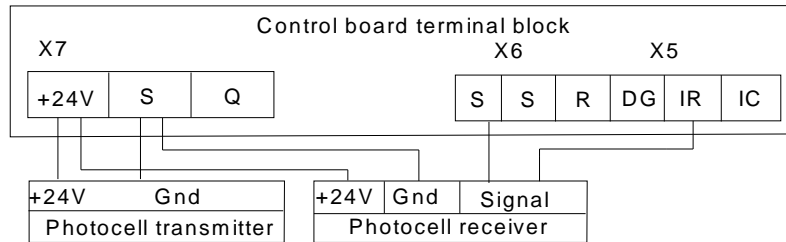


Fig.10

External button switch (three button mode) / Receiver

Connect external button switch or receiver to 'K' (open), 'G' (close), 'T' (stop) of terminal block X4, connect common wire to 'S' of terminal X6.

Notice: the device can be controlled by a transmitter after the remote receiver is connected.

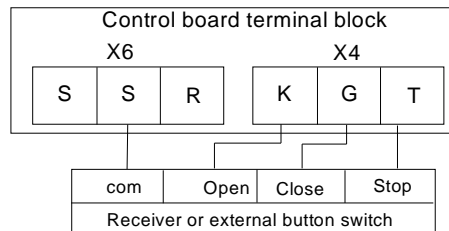


Fig.11

Keypad (single button mode)

Connect signal wire of keypad to 'R' (terminal block X6), connect common wire of keypad to 'S' (terminal block X6).

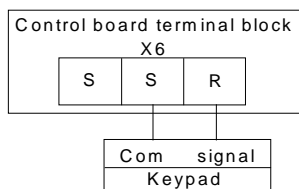


Fig.12

Adjustment

If the photocell beam is interrupted, the door will reverse and go open during closing. If not, exchange the motor wires (i.e. exchange the black wire and orange wire). See Fig.7 terminal block X1.

6.Maintenance

- Check the door once a month. The door must be in good working order.
- Regularly check the limit switch.
- Regularly lubricate the chain.
- For service, call an experienced technician.
- The control box should be installed in cool, dry and ventilated places, kept away from sunlight and rain.
- Periodically test the safety device to make sure they are functioning correctly, if they are not, replace immediately.
- Keep the operator and control box clean at all times.
- Our company reserves the right to change the design and specification without prior notification.

7. Service help

Following this guide may resolve your service problem. If you have any problem, please contact our sales agent.

Motor does not work:

- Check the motor.
- Check the limit switch.
- Check the capacitor, rectifier and relay.

Fuse blown:

- Check the motor.
- Check the relay and brake solenoid.

Fail to open or close the door by chain:

- The chain may be **jammed**.
- Fasten the brake solenoid.

Brake fails to work:

- Check and replace the pawl.
- Clean the oil on the brake block.
- Replace the spring in the brake solenoid.

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