

INDUSTRIAL AND COMMERCIAL ROLLER DOOR OPERATORS

KG100Y/KG120SY/KG200SY

Installation and Users Manual

WARNING

**ONLY QUALIFIED AND EXPERIENCED
TECHNICIANS SHOULD ATTEMPT
INSTALLATION OR SERVICE TO THIS UNIT,
OTHERWISE, SERIOUS PERSONAL INJURY,
DEATH, OR PROPERTY DAMAGE MAY OCCUR.
SAVE THESE INSTRUCTIONS.**



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SAFETY SYMBOL AND SIGNAL WORD REVIEW

This door operator has been designed and tested to offer service provided it is installed, operated, maintained and tested in strict accordance with the instructions and warnings contained in this manual.



When you see these safety symbols and signal words on the following pages, they will alert you to possibility of serious injury or death if you do not comply with the warnings and accompany them. The hazard may come from something mechanical or from electric shock.

When you see this signal word on the following pages, it will alert you to the possibility of damage to your door and /or door operator if you do not comply with the cautionary statements that accompany it.

THESE ARE IMPORTANT SAFETY INSTRUCTIONS. FOLLOW ALL INSTRUCTIONS AS INCORRECT INSTALLATION CAN LEAD TO SEVERE INJURY OR DEATH



The door operator should be installed and put into operation by qualified personnel. Otherwise, serious personal injury or property damage may occur.



Locate any fixed control: within sight of door but away from all moving parts of the door and at a height of more than 1.4m above the ground to avoid children reaching it. Keep remote controls away from children, to prevent the door operator from being activated involuntarily.



The door must be equipped with balance springs, otherwise the operator will be damaged. Before installation of the door operator, the door should be carefully checked for being kept well balance. The door must be in good working order.



The operator should be switched off before repairing it or opening its cover.



Installation and wiring must be in compliance with your local building and electrical codes. Connect the power supply cord only to properly earthed mains.



The operator may only be repaired with the door closed.



When opening or closing the door, do not attempt to walk or drive through the door.



Open and close the door manually, make sure the door can be moved smoothly.



The door should only be operated when it can be observed to avoid accidents.



The door operator must be grounded.



Do not pull the hand chain during opening or closing the door.



It is recommended to install limit devices on door tracks to prevent the door from sliding out of the tracks.

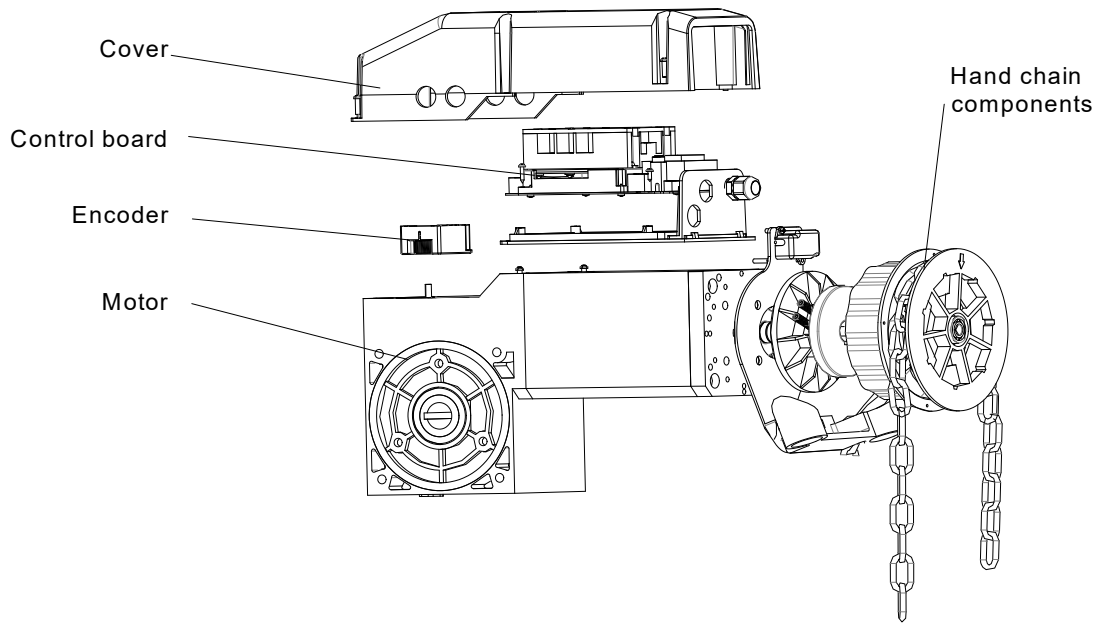


Our company reserves the right to change the design and specification without prior notification.



WARNING: Important safety instructions. It is important for the safety of persons to follow all instructions. **SAVE THESE INSTRUCTIONS.**

IDENTIFYING YOUR OPERATOR



Appearance may vary with different motor, gearbox and controller types

Fig.1

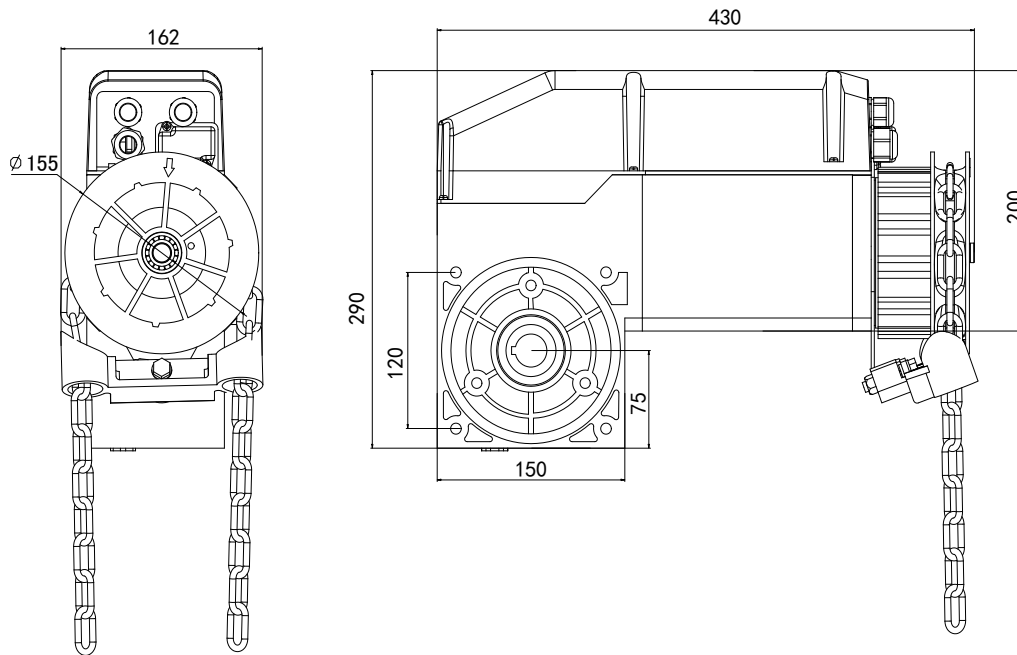


Fig.2

CAUTION

Please remove any locks fitted to the door before operation in order to prevent damage to the door.



WARNING

Make sure that people who install, maintain or operate the door follow these instructions. It is advised that the instruction be kept in a safe place so that you can refer to them quickly when you need to.

GENERAL DESCRIPTION

Identify the type and dimensions of your door. A check of the application is recommended to ensure suitability of the operator model to the door.

The door operator is applied widely to warehouse, industrial or commercial buildings. It is featured with compact structure, safe and reliable performance.

TECHNICAL PARAMETERS

Model	KG100Y	KG120SY	KG200SY	
Power Supply	240V	415V	415V	
Motor Power	750W	1000W	1250W	
Output Torque	100N·m	120N·m	200N·m	
Door Size	≤40m²	≤45m²	≤55m²	
Work Duty	Max. Continuous working time 10min	Max. Continuous working time 15min		
Rotate speed	24rpm			
Max. Travel Distance	34 Cycles			
Output shaft aperture	Φ25.4mm			
Environment temperature	-20°C~+45°C			

INSTALLATION

CAUTION

Before installing the operator, check that the door is in good mechanical condition, correctly balanced and opens and closes properly. We advise to install the operator as right.



WARNING

The door guides must be fitted with mechanical stops that prevent the bottom rail from passing through in the opening direction.

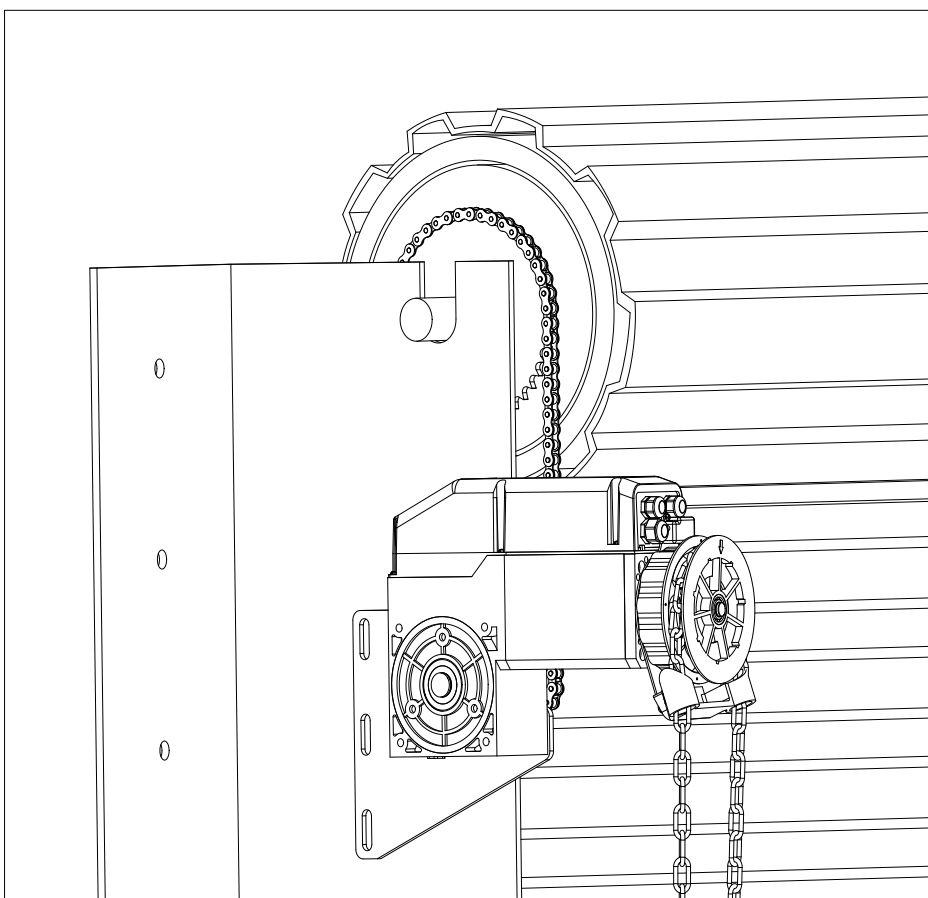


Fig.3

Mounting the unit

The operator mounted below the door drum so that the operator shaft points toward the door opening and lies beneath the sprocket of the door drum. For mounting you will need to either secure the operator to the roller shutter head plate with prepared holes or slots, or use a mounting plate that will need fixing via a wall angle or similar existing structure.

Note: the operator is not designed to be installed upside down. The chain guide must not be repositioned.

Fig.4: When assessing and selecting an appropriate mounting location, the following considerations should be made:

Must have minimum distance of 15mm between mounting plate and door drum sprocket.

Must have minimum distance of 20mm between operator and imposing structure.

Must have minimum overhead clearance of 150mm from the main control housing.

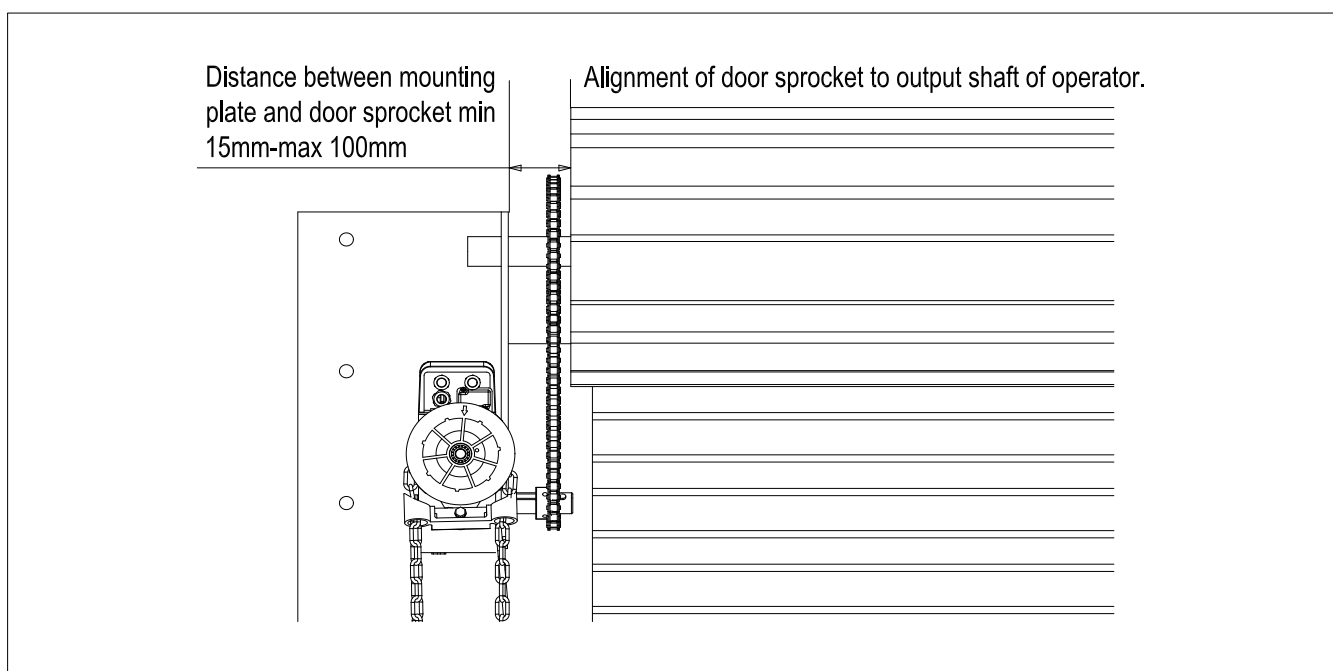


Fig.4

Fig.5: Mounting plate slots allow the chain tension to be adjusted through vertical movement of the operator.

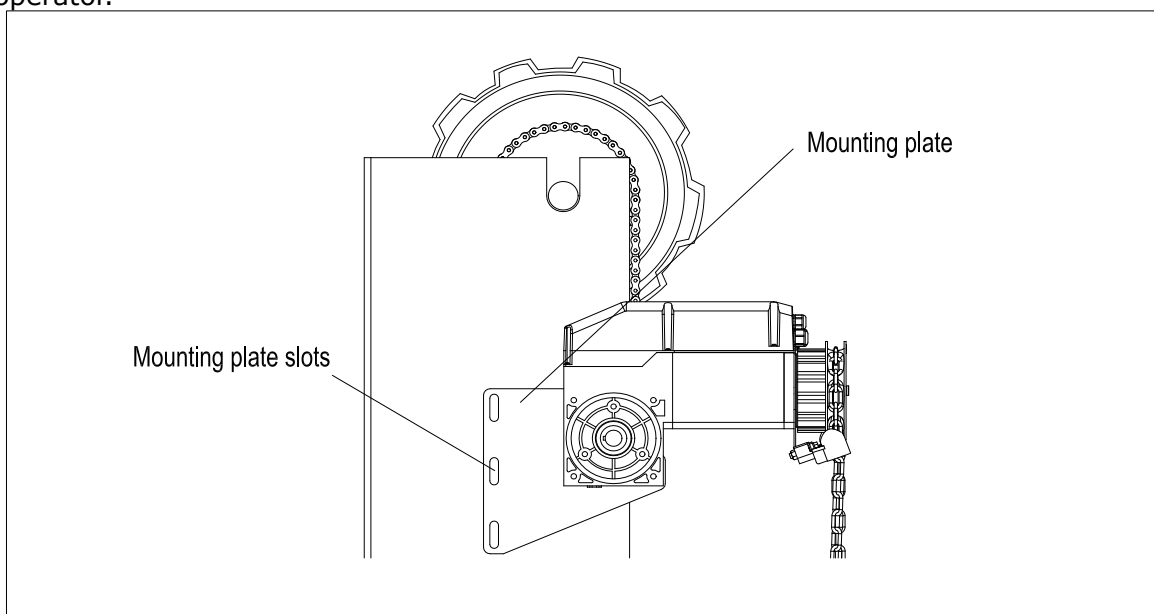


Fig.5

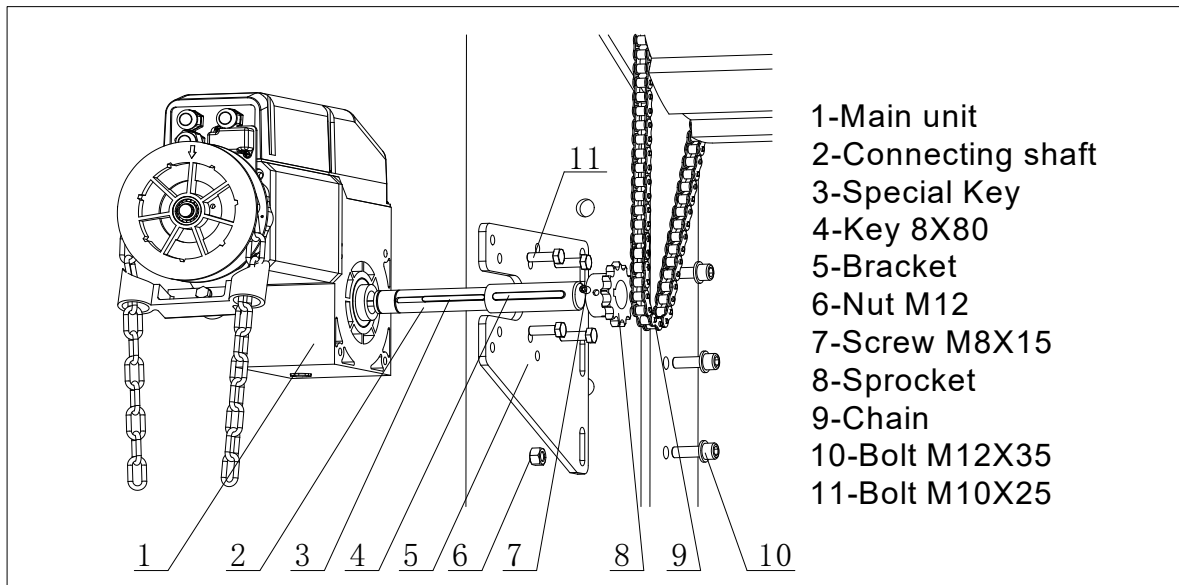


Fig.6

Fig.7: Make sure there are sufficient side room (20mm minimum) and head room (150mm Minimum) to allow servicing, where there is insufficient side room or head room, consider using the other mounting bracket or please contact your local dealer for information.

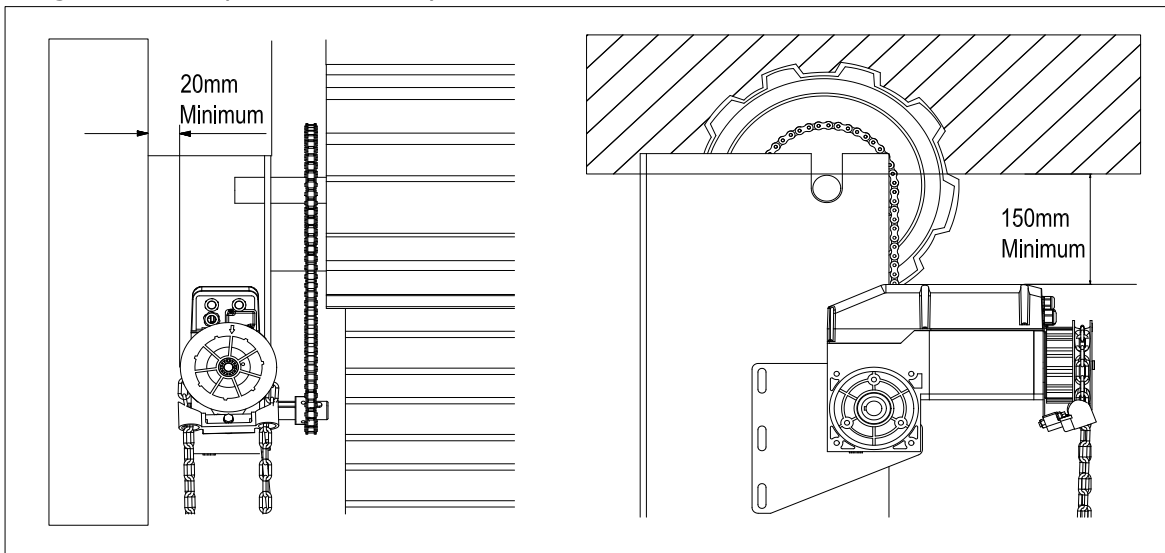


Fig.7

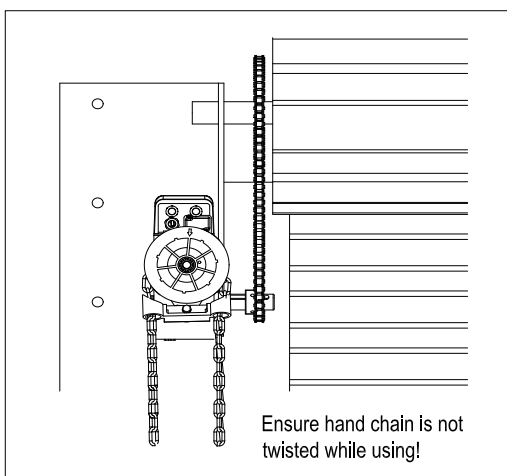


Fig.8

CAUTION

Motor may become hot during operation. Appropriate clearance and /or shielding should be supplied by the installer to ensure any cabling, wiring or other items cannot come in contact with the motor.



ELECTRICAL CONNECTOIN

The operator must:

- Be connected via an approved electrical isolation device.
- Be connected via a suitable circuit breaker that disconnects all live conductors.
- Be connected in accordance with the wiring rules of the country in which it is installed.

Note:

- Locate button switch: within sight of door but away from all moving parts of the door and at a height of more than 1.4m above the ground to avoid children reaching it.
- The operator must be well grounded.
- Wires within the cable shall be protected so that no damage can result from contact with any rough, sharp part.
- Wiring two cables through two holes to the gate operator terminals, then tighten the cable Lock.

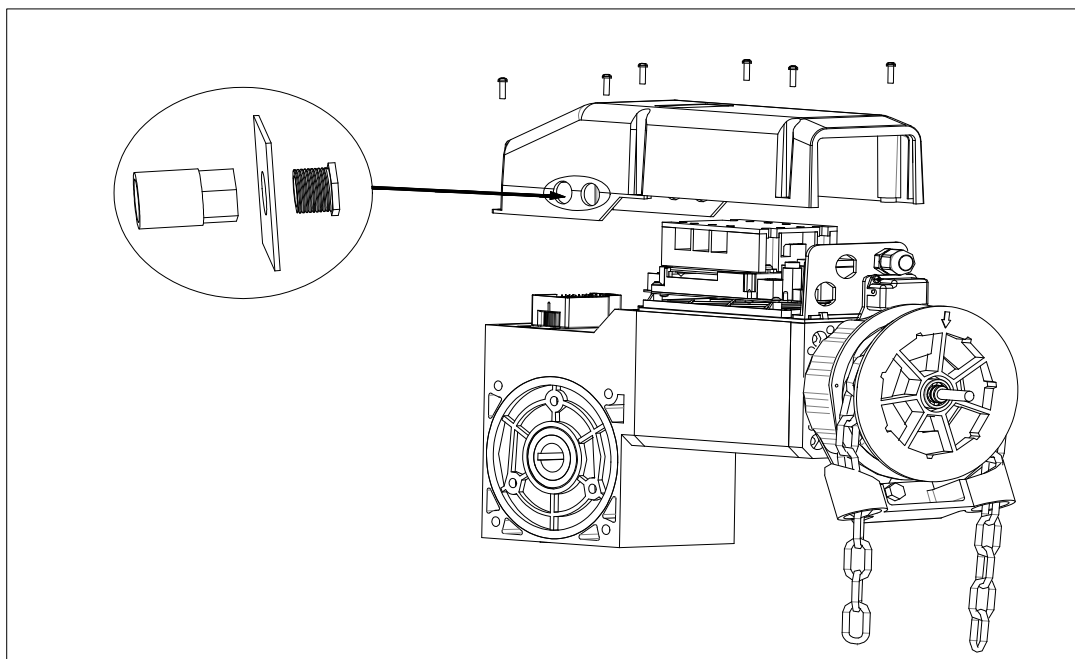


Fig.9



CAUTION

When the door reaches fully closed or opened position, make sure that the limit switches are activated.



WARNING

Please use the button switch to adjust the end positions, DO NOT use remote control.

EAN01 BUTTON SWITCH

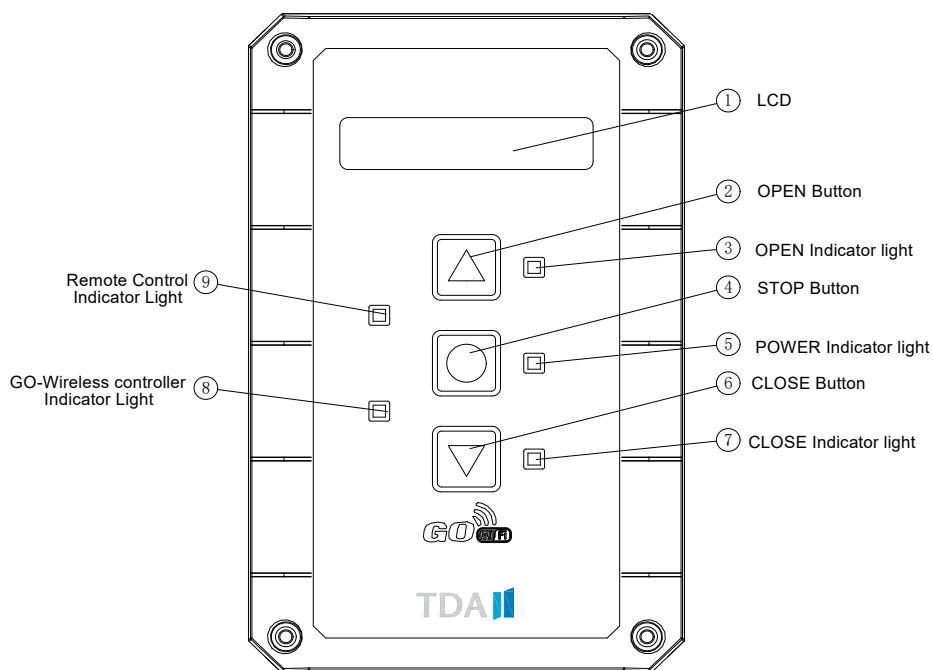


Fig.10

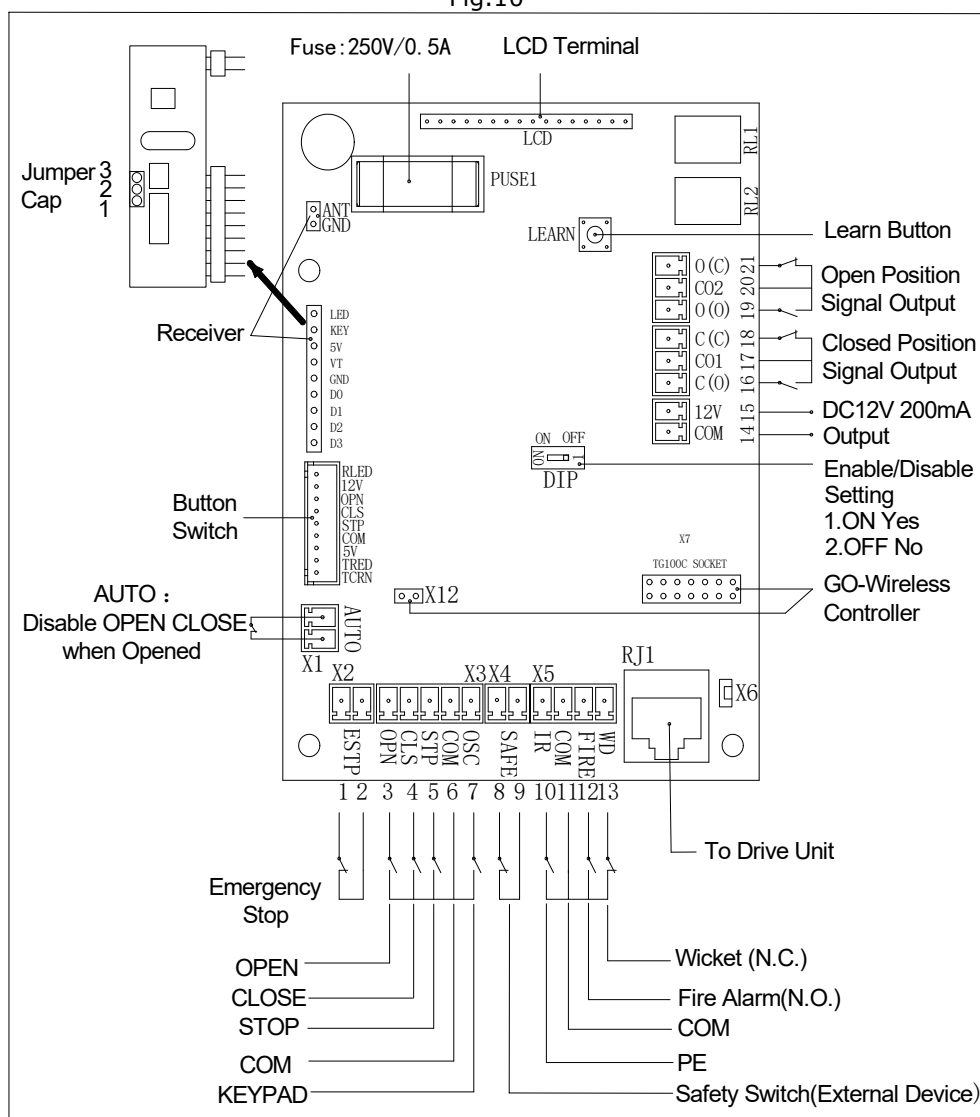


Fig.11 Control board in EAN01 button switch

WIRING

*WARNING



ONLY QUALIFIED AND EXPERIENCED ELECTRICIAN IS PERMITTED TO CARRY OUT THE WIRING.

Wiring in Motor

- Ensure the power supply is switched **OFF** before beginning any wiring work.
- For three-phase power (**415V**):
 - Connect **phase** wires to '**L3**', '**L2**', and '**L1**'
 - Connect the **neutral** wire to '**N**'
 - Connect the **ground** wire to '**PE**'
- Switch the power **ON**. If the LCD displays "**ERR3: Phase Sequence**", Switch Power **OFF**, then reverse **any two phase wires** to correct the phase order.
- For single-phase power (**240V**):
 - Connect the **power** wire to '**L**'
 - Connect the **neutral** wire to '**N**'
 - Connect the **ground** wire to '**PE**'
- Connect the alarm lamp (AC240V) to 'LAMP' or between 'D1' and 'D2'.

Wiring in Button Switch

- Connect **signal** wires of **PE** or **Safety Edge**(N.O.) to '**IR**' and '**COM**', and the **power** wires to '**12V**' and '**COM**'.
- Connect **Wicket Door**(N.C.) to '**WD**' and '**COM**', if not connected, keep the shorting wire between '**WD**' and '**COM**'.
- Connect **External Button Switch** (N.O.) to '**OPN**' (open), '**CLS**'(close) , '**STP**'(stop) and '**COM**'(common).
- '**O**'(N.O.), '**COM**', '**O**'(N.C.): Open limit position signal.
'**C**'(N.O.), '**COM**', '**C**'(N.C.): Close limit position signal.
- '**ESTP**' is emergency stop terminal.
- **AUTO**: If not connected, the OPEN and CLOSE buttons will be disabled, STOP button remains functional.
- **DIP-Switch**: When set to ON, settings adjustments are allowed. When set to OFF, settings are not allowed.
- Connect **keypad** to '**OSC**' and '**COM**'



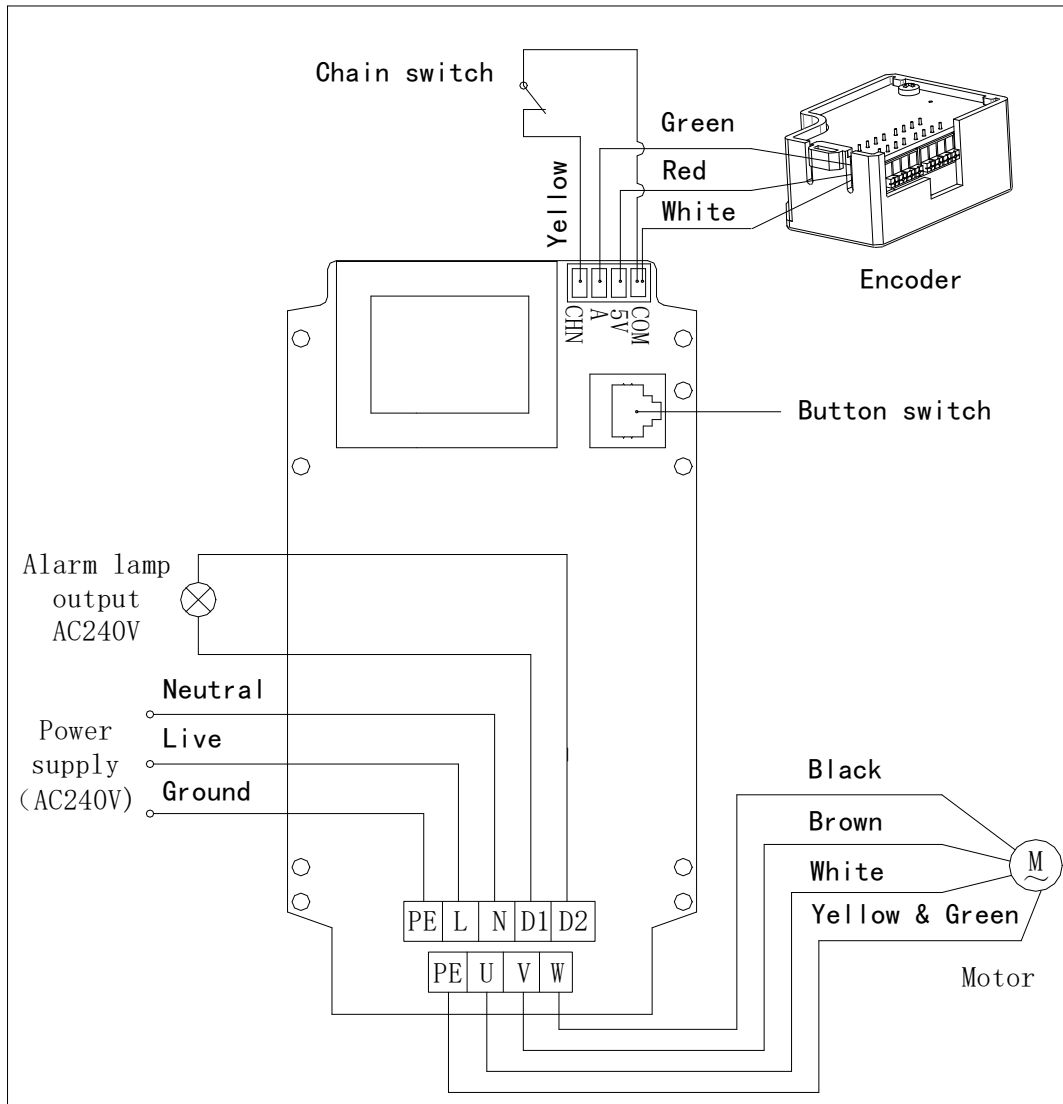
***Warning: An appropriated Entrapment Protection Device must be installed before connecting Keypad. Failure to do so may cause serious injury or death.**

- Connect **Fire Alarm** (N.O.) to '**FIRE**' and '**COM**', When the system receives a Fire Alarm signal, the door will move to the preset position **set in P5**. Once the Fire Alarm signal clears, the door will return to normal operation.

- **Hand chain Safety Switch (External Device, N.C.):** If the safety switch is not connected or an automatic reset is not completed, the LCD will display '**ERR1: Hand Chain!!!**'.
- **Terminals X7 and X12** are for GO-wireless controller, you may control the door operator via smart phone.



***Warning: An appropriated Entrapment Protection Device must be installed before set up the GO- wireless controller. Failure to do so may cause serious injury or death**



WARNING

Before carry out any wiring work, it is essential to **disconnect** the control unit from the mains supply.

If the supply cord is damaged, it must be replaced by its service agent in order to avoid a hazard.

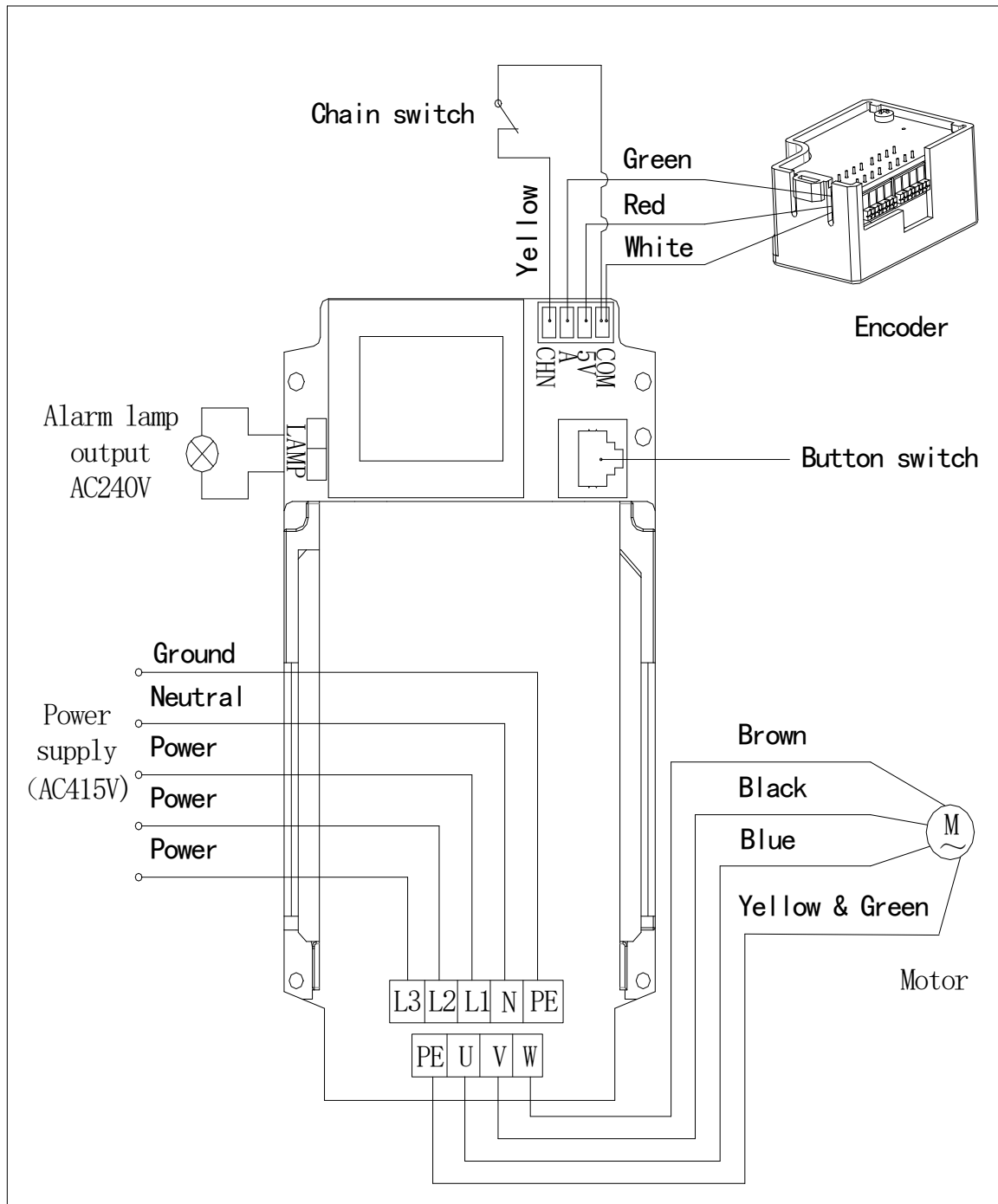


Fig.13 Control board in motor diagram KG120SY/KG200SY-AC415V)



WARNING

Install the button switch in a position where the door is visible. Failure to do so may result in serious injury or death to persons trapped beneath the door. Minimum mounting height is 1.4 meters from floor level.



WARNING

Before carry out any wiring work, it is essential to **disconnect** the control unit from the mains supply.
If the supply cord is damaged, it must be replaced by its service agent in order to avoid a hazard.

OPEN AND CLOSED LIMIT SWITCH SETTING

Verify Opening Direction: If the door does not move in the intended direction when OPEN is commanded, the motor direction is incorrect. This can be corrected by adjusting the '**P6:Motor Direct**' setting.

Open Limit Setting

1. Press and hold '**STOP**' and '**OPEN**' button about 6 seconds.
2. Release the buttons until '**1 ->Opening**' is flashing on the display.
3. Press and hold '**OPEN**' button to move the door toward the desired open position.
If necessary, use the '**CLOSE**' button to make adjustments.
4. Once the door has reached the desired open position, press the '**STOP**' button to confirm the setting.

Closed Limit Setting

1. '**2 ->Closing**' is displayed.
2. Press and hold '**CLOSE**' button to move the door toward the desired close position.
If necessary, use the '**OPEN**' button to make adjustments.
3. Once the door has reached the desired close position, press the '**STOP**' button to confirm the setting.

NOTE:

- If the display shows "**=LMT SET OK=**" and flashes **twice**, it means the **open and close limit positions** have been successfully set.
- If the display shows "**=LMT SET ERR=**" and flashes **twice**, it means there was an error in setting the **limit positions**.
→ Please reset the **open and closed positions** and repeat the process until "**=LMT SET OK=**" appears.
- When the door reaches the fully open or fully closed positions, the display will show "**Open Limit**" or "**Close Limit**" accordingly.

STOP BUTTON STATUS SETTINGS (FOR BUTTON SWITCH)

1. Press and hold the '**OPEN**', '**CLOSE**', and '**STOP**' buttons on the button switch for 6 seconds.
'**S1: StopStatus**' will be displayed.
2. Press the '**OPEN**' button to set the stop button status to Normally Open (N.O.).
3. Press the '**CLOSE**' button to set the stop button status to Normally Closed (N.C.).
4. Press the '**STOP**' to confirm the setting.

ADJUSTMENT AND PROGRAMMING

P1:Running Time (10-240seconds adjustable)

1. Press and hold '**STOP**' button and '**CLOSE**' button for 6 seconds.
'**P1:Run time**' will be displayed.
2. Press '**OPEN**' button to increase running time, or '**CLOSE**' button to decrease time.
3. Press '**STOP**' button to confirm and proceed to the next setting.

P2: Infrared Photocell & Safety Edge Switch

1. After completion of setting P1.
'P2: INFRARED' will be displayed.
2. Press **'OPEN'** or **'CLOSE'** button to **disable** or **enable** the infrared photocell and safety edge function.
3. Press **'OPEN'** button to **disable** the setting (N.O.).
4. Press **'CLOSE'** button to **enable** the setting (N.C.).
5. Press **'STOP'** button to confirm the setting and proceed to the next setting.

P3: Door Operation (Latching/Inching)

1. After completion of setting P2.
'P3: Operation' will be displayed.
2. Press **'OPEN'** button once:
→ Display shows **'OPCL→Latching'**
→ Both Open and Close are in *latching* mode.
3. Press **'OPEN'** button a second time,
→ Display shows **'OP→Inching'**
→ Open is in *inching* mode, Close remains *latching*.
4. Press **'OPEN'** button a third time,
→ Display shows **'CL→Inching'**
→ Open is in *latching* mode, Close is *inching*.
5. Press **'OPEN'** button a fourth time:
→ Display shows **'OPCL→Inching'**
→ Both Open and Close are in *inching* mode.
6. Press **'STOP'** button to confirm your selection and proceed to the next setting.



NOTE: Latching down mode is only possible in conjunction with an Entrapment Protection Device such as an infrared photocell or a safety edge. Failure to do so may result in damage to property or injury or death to person.

Warning: *The door Must Only be set to LATCHING DOWN if there is a suitable Entrapment Protection Device installed. Failure to do so can lead to serious injury or death.

P4: Auto-Close Time (Autoclosetime 0-120seconds Adjustable)

1. After completion of P3.
'P4: Autoclosetime' will be displayed.
2. Press **'OPEN'** button to increase auto-close time, **'CLOSE'** button to decrease time.
3. Press **'STOP'** button to confirm the auto-close time.
4. Set timer to **'0'** to **disable** the automatic close function.
5. Press **'STOP'** button to confirm the setting and proceed to the next setting.



***Warning: An appropriated Entrapment Protection Device must be installed before enabling the Auto close Function. Failure to do so may cause serious injury or death.**

P5: Alarm Height (Height 0%-100%)

This setting determines how high the door will open when a fire alarm is activated.

1. After completion of setting P4.

'P5: Alarm Height' will be displayed.

2. Press **'OPEN'** button to increase the door height in 5% increments (up to a maximum of 100%).
3. Press the **'CLOSE'** button to decrease the alarm open height in 5% increments (down to 0%).
4. Press the **'STOP'** button to confirm the setting and proceed to the next step.

P6: Motor Direct

1. After completion of setting P5.
'P6: Motor Direct' will be displayed.
2. Press the **'OPEN'** button to set the motor rotation to clockwise (CW).
3. Press the **'CLOSE'** button to set the motor rotation to anticlockwise (CCW).
4. Press **'STOP'** button to confirm the setting and proceed to the next setting.

P7: Remote Mode (Single Button or Three Button)

1. After completion of setting P6.
'P7: Remote mode' will be displayed.
2. Press **'OPEN'** button to select Single Button Mode.
3. Press **'CLOSE'** button to select Three button mode.
4. Press **'STOP'** button to confirm and proceed to the next setting.

P8: Count (Open Times)

1. After completion of setting P7.
'P8: Count' will be displayed.
The screen displays the total number of times the door has been opened.
2. Press **'STOP'** button to confirm and proceed to the next setting.

P9: Mode (Factory default/retain current)

To either reset the system to factory defaults or keep the current configuration.

1. After completion of setting P8.
'P9: MODE' will be displayed.
2. Press the **'OPEN'** button to enter **'RESET'** mode (this will reset all parameters to factory defaults).
3. Press the **'CLOSE'** button to enter **'NORMAL'** mode (retain current settings).
4. Press the **'STOP'** button to confirm your selection and exit the settings menu.

ADDING/REMOVE REMOTE CONTROLS

● **Adding Extra Remote Controls (Learn)**

Press **'LEARN'** button on the control board for 1 second until the **'LED'** turns on, press any button on the remote control, the **'LED'** will flash 3 times and then turns off, indicating the learning process is complete.

Up to 100 remote controls can be programmed for use.

● **Remove All Remote Controls**

Press and hold the **'LEARN'** button on the control board. Release the button when the **'LED'** turns ON, then turns OFF, and begins flashing automatically. This indicates all remote controls have been successfully erased.

The remote control included with your operator is provided according to your order specifications.

Additional remote controls can be purchased from authorized dealer.

For any issues or assistance, please contact your dealer directly.

NOTE: Select the operating mode on the receiver by positioning the jumper cap as follows:

Place the jumper cap on pins 1 and 2 for keypad mode. Button 1 Button 2 Button 3 or Button 4 is for Keypad.

Place the jumper cap on pins 2 and 3 for three-button mode. Button 1-open, Button 2-close, Button 3-stop.

Refer Fig.14.

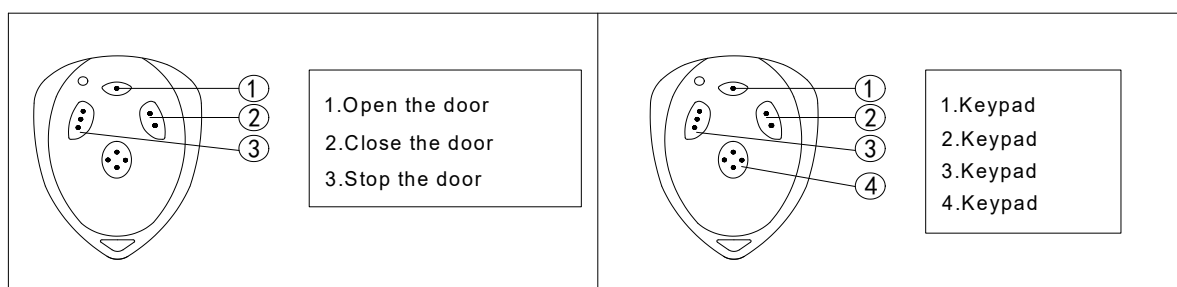


Fig.14



In case of power failure, open or close the door manually by pulling the hand chain. The gate fails to move if pull the release chain, rotate the bolt clockwise by hex wrench.

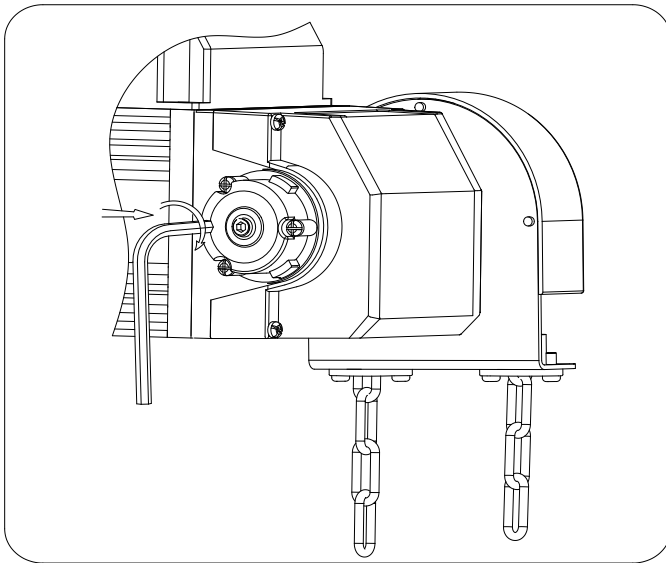


Fig.15

WARNING

After using the hand chain for some time, the knob will become very hot. It is recommended to adjust it with a spanner.

CAUTION

If the 'ERR1: Hand Chain!!!' is indicated on the LCD, this means the operator works in manual operation, pull one side of hand chain lightly until a reset is carried out, the 'ERR1:Hand Chain!!!' disappear, and now the button switch can be used.

Use the hand chain only when the power failure, NOT for normal use. Do not pull the chain during closing or opening the door, otherwise, serious personal injury or property damage may occur.

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. It is essential to screw the hand chain firmly in place as shown in Fig.16 .

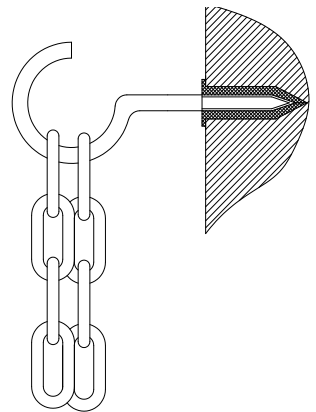


Fig.16

MAINTENANCE

- Ensure the door is in proper working condition and correctly balanced before use.
- All servicing and maintenance should be carried out by qualified technicians.
- Keep the operator clean and free from debris at all times to ensure optimal performance.
- The manufacturer reserves the right to modify the design and specification without prior notification.

TROUBLESHOOTING

Error	Cause for error	Remedies
If the operator does not work electrically and "ERR1: Hand Chain!!!" flashes on the LCD	An automatic reset is not carried out.	Pull the hand chain to carry out an automatic reset. (See Hand chain section)
'ERR2: Wicket Opened' flashes	Wicket door is opened. Check the wire between 'COM' and 'WD'.	1. Close the wicket door. 2. Connect the wire between 'COM' and 'WD'
'ERR3: Phase Sequence' flashes	Phase wires	Check the phase wires or exchange the phase wires.
ERR4: Encoder Error flashes.	Encode	1. Turn the power OFF about 3 seconds then turn power ON. 2. Check the encoder or replace the encoder.
The operator stops working suddenly.	Thermal overload protection in motor is active.	Allow the motor to cool down.
The door cannot stop in desired position.	Check the balance spring of door.	Readjust the balance spring, then reset opened and closed position.
The door cannot be opened or closed.	Check the safety edge or infrared.	Replace the safety edge or PE.
The operator will not work.	1. Power is OFF. 2. The door is obstructed. 3. The wires become loose.	1. Make sure that power is ON. 2. Remove obstructions. 3. Fasten the wires.

PACKING LIST

Upon receiving the product, please perform an unpacking inspection. The standard package should include the following items:

No.	Item	Quantity
1	Door Operator	1
2	EAN01 Button Switch	1
3	Connecting Shaft	1
4	Circlip (25)	1
5	Key (special)	1
6	Key (8X7X80)	1
7	Bolt (M10×25)	4
8	Spring Washer 10	4
9	Plain Washer 10	4
10	Chain Hook	1
11	6m Cable with Registered Jack	2
12	1.5m Power Cable (KG100Y Only)	1
13	Remote Controller 433.92MHz	2
14	Cable Lock	2
15	User's Manual	1