Operational Instructions
For Side-mounted Flat Automatic Door Operator

Model：KMJ 140

目录

Chapter 1 Product Introduction

In order to meet the automation requirements of modern flat-opening door, our company has developed and produced intelligent automatic door opening/closing machine, which adopts microcomputer chip, digital control, powerful function, high safety performance, easy installation and debugging.

Note: In order to use the equipment better and more comprehensively, please read the operation instructions carefully before you install and use it.

Work flow：

open the door→open & slow down→keep in place→close the door→close & slow down→lock the door.

Detailed Work flow :

Step 1: The open signal from external equipment triggers the electromagnetic lock of the door-opener to shut down.
Step 2: Open the door (permissible speed 1 to 10 gears, see Chapter3).
Step 3 : Open & slow down(permissible speed   1 to 9 gears, see Chapter 3).
Step 4: Stop it.
Step 5: Open &hold (permissible time 1 to 99 seconds, see Chapter3).
Step6: Close the door (permissible speed 1 to 9 gears, see Chapter 3).
Step7: Close & slow down(permissible speed   1 to 9 gears, see Chapter 3)
Step8: Electromagnetic lock power on.
Step9: Press door closed.

Note: In the process of closing the door, if there is a trigger signal for opening the door, the action of opening the door will be executed immediately.

Product Characteristics

-Low power consumption, static power 0.5W, maximum power: 25W
-Super quiet, less than 50dB when working
-Small size, easy to install
-The maximum pushable door weight is 140 Kg
-Support relay contact signal
-Motor overcurrent, overload, short circuit protection
-Intelligent protection against obstacles and sliding door reversal
-Accurate adjustment of motor current (thrust) and speed
-Self-learning limit
-Closed shell, rainproof and dustproof

Product Types	KMJ140
Range of application	Various flat-open doors with the width ≤ 1600mm and the weight ≤ 140Kg
Open Angle	90°
Power Supply	DC24V 5A
Rated Power	25W
Static Power	0.5W（no electromagnetic lock）
Open/Close Speed	1-9 gears, adjustable (corresponding opening time 10-3S)
Open Hold Time	1～99 seconds
Operating Temperature	-20℃～60℃
Operating Humidity	30%～95%(no condensation)
Atmospheric Pressure	700hPa～1060hPa
External Size	L 360mm * W 83mm* H 131mm
Net Weight	about 9 kg
Three guarantee period	12 months

Chapter 2 Installation

Installation Notes:

.Considering the influence of wind resistance, force arm and other factors,
.the maximum width of the door for the door opener is 1.6 meters.
.the weight of the door should be less than 90 kg,
.the width of the door should be reduced by 0.1 meters,
.and the weight can be increased by 10 Kg.
.by analogy, the width of the door with 1.1 meters can reach 140 Kg,
.slightly overweight will not affect the life of the door opener.
.But it will affect the opening/closing speed.

Installation must be carried out according to the size provided in the instructions. Improper Installation will directly cause the door opener to fail to work properly and damage the equipment in serious cases.

During installation, it is forbidden to change the structure of the door opener. and no holes can be made in the shell to avoid water and   air entering and causing electronic and electrical components failure.

Installation of mechanical part of door opener .
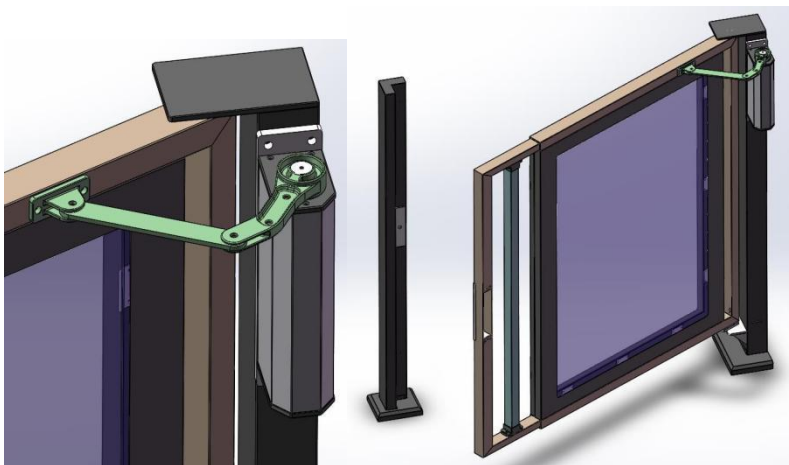
Installation instructions:

Distinction of left/right door opening: Clockwise door opening direction is left door, conversely, counter-clockwise door opening direction is right door .

The door opener should be mounted vertically with the door post. Pay attention to the rotation direction of the connecting rod. Installation is as follows:

Left Open Door:

7
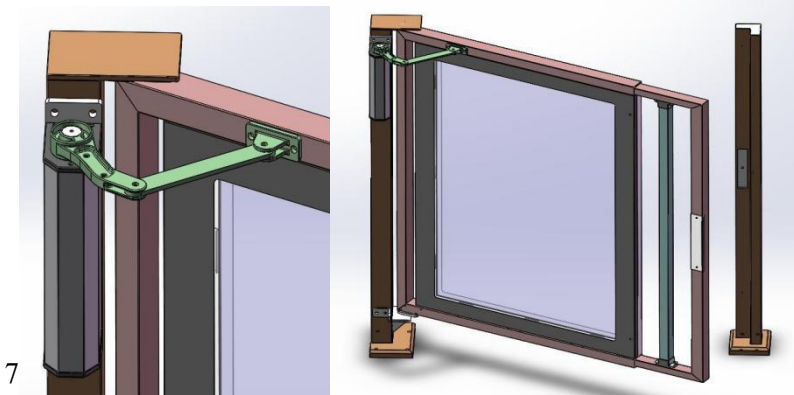
Right Open Door:

Install the main body of the door opener according to the size provided in 2.1.2 and 2.1.3.

Remove the crank fixed screw and gasket from the main shaft of the door opener. Put the perforated end of the crank assembly into the main shaft of the door opener. Remember to make the position of the key way on the hole aligned with the key of the main shaft, next lock the crank with gasket and screw.
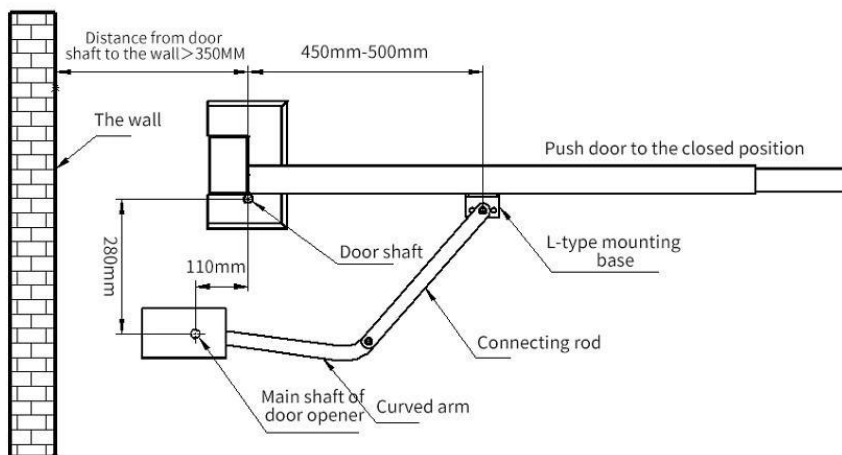
Fix the L-type mounting seat on the crank to the door ,with the fixed screw M8*70 and the flat cushion nut M8.

Note: When installing, the L-type mounting seat, crank and main shaft of the door opener should be on the same horizontal plane. Otherwise, the crank up and down plane will be forced and blocked.

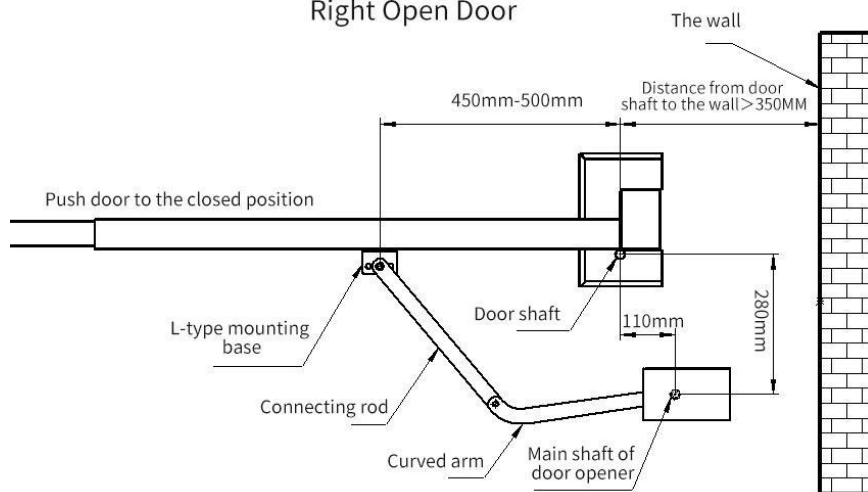Left open door installation method and size.
As follows:

Left Open Door

Right open door installation method and size.
As follows

Right Open Door

Connection of electrical part of door opener
Description of the control por

Warning:

A. When the electrical part is connected, live work is strictly prohibited.Power can be energized after all connections .

B. Do not connect the positive and negative poles of the power supply inverse, otherwise the equipment will be damaged.

Note:

A. Please choose an electromagnetic lock with supply voltage is 12V DC and the power ≤9W or our company's electromagnetic lock.Otherwise it will cause abnormal operation or circuit damage.

B: When leaving factory, the motor wire has been connected, do not take it out without any special case.

C:Opening signal of external access control equipment :

a: When the access control equipment is the output of switch quantity (dry contact), the close switch controls the opening of the door, and the switch should be open usually, without polarity requirements.

b: When voltage output (wet contact), add transfer module.

Name	Open Door Control Signal			Fire fighting linkage		Electromagnetic lock		Power Supply	
door opener	+12 V	NO	GND	FIR	GND	+12V	negative	GND	+24V
Switch Power								COM or -V	+V
Electroma gnetic Lock						red line	black line		
Access Control Machine	+12 V	NO	COM GND						
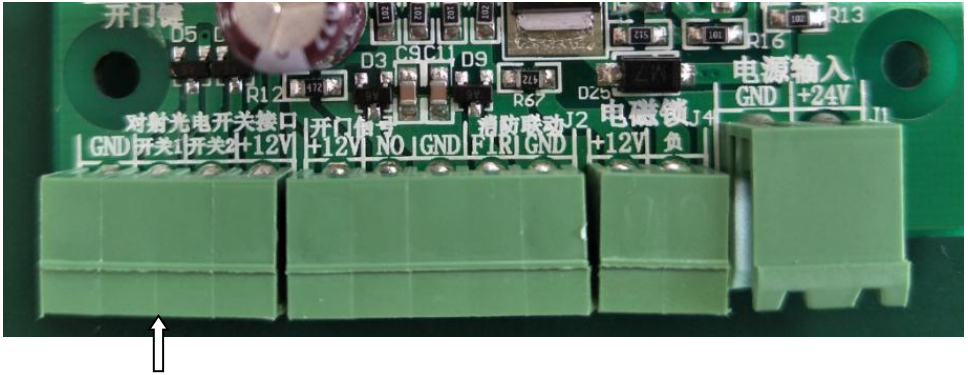
	GND
Infrared photoelectric switch interface (Note: please use NPN normal open type)	photoelect ric switch 1
	photoelect ric switch 2
	+12VDC

Diagram of control signal wiring

Connect power supply, electromagnetic lock and external door opening control equipment according to the diagram. After checking , start the power commissioning.

Exit button switch connects the control signal of door opener:

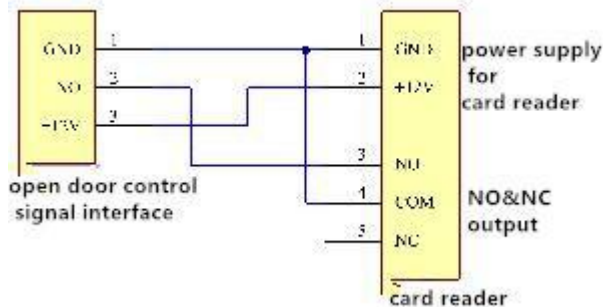open door control signal interface
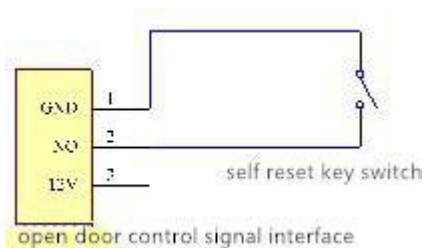
Access Control machine Connects the control signal of door opener: the first

the second connection:
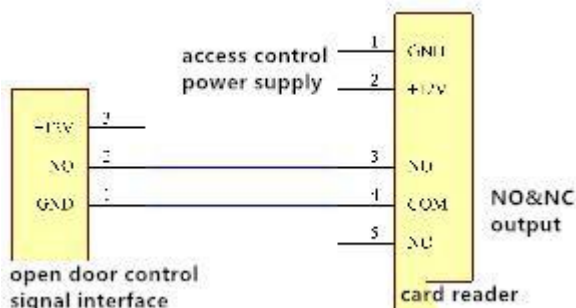
Note: All door opening signals should connect to the same point (GNG, NO)

Chapter 3   Parameter Setting and State Display

3.1 Circuit Board Diagram

The CNC board for door opener uses 3-bit LED digital tube to display and three keys to set parameters.The dial switch is used to select the right and left switches.Jumper selection door opening control signal input is relay or voltage mode. Check each indicator indicating the power supply normally and the Hall state of speed measurement.

Motor terminal

Left & right door opening selection

Encoder signal

Remote control Digital display

Key

External terminal

After installation and wiring , turn on the power and the door opener will enter the learning state of the closing position (digital tube display"H07").

After close and finish learning , it enters the standby state, and the digital tube displays"_ _ _"in the standby state.

Function and corresponding digital tube display

Dis-play	Explain	Default values	Range	Remarks
P01	Closing speed	6	1-10	The numerical value larger, the speed faster.
P02	Closing slow speed	3	1-10	The numerical value larger, the speed faster.
P03	Closing delay	5	1-15	Force the door close in place.
P04	Opening & holding time	5	1-99	Residence time after Opening the door in place.
P05	Closing slow angle	30	5-60	The numerical value larger,the angle larger.
P06	Current Detection (High Speed)	110	20-240	Unit is 0.01A
P07	Wind resistance time	3	1-10	Unit is S
P08	Left & Right open door	3	=1 left open door =2 right open door =3 testing	Default 3: Open the door according to the red dial switch on the circuit board.
P09	Auto-induction open and close position	1	=1 induction =2 non-induction	at1 When the door is not closed in position,it will close again
P10	Open speed	7	1-10	The numerical value larger,the speed faster.

P11	Opening slow speed	3	1-10	The numerical value larger,the speed faster.
P12	Opening slow angle	15	5-60	The numerical value larger,the angle larger.
P13	Open angle	150	50-200	Connecting rod angle
P14	Factory holds			Factory holds
P15	Factory reset	2		66 restore factory value 02 Normal working mode 03 test mode
P16	Factory holds	0	1－20	Factory holds
P17	Factory holds	0	1－60	Factory holds
P18	Delay before opening	2	1－60	1 means 0.1S
P19	Low-speed current	80	20-150	Unit 0.01A
P22	Remote mode selection	1	1－2	1. Remote jog + button jog 2. Remote control interlock + button jog 3. Remote jog + button self-locking 4. Remote control interlock + button self-lock
P23	Factory holds			Factory holds
P24	Selection of Magnetic /Electronic Lock	1	1－2	1 Magnetic lock（power on and lock） 2 Electronic control lock (power on and open）
P25	Factory holds			Factory holds
P26	Coefficient of downwind resistance	7	1－10	0 Maximum wind resistance

State Display Description Work Display H01－H09

Display	Explain	Remarks
- - -	Hold State	Standby without work
H01	High speed open door	Open the door high speed
H02	Open & slow	Open stop & slow down
H03	Open & slow Delay	Open stop & slow down
H04	Open & hold	Open in place & hold
H05	High speed close door	Close the door high speed
H06	Close & slow down	Close stop & slow down
H07	Close door in place Delay	Close door in place
H08	Push-door Protection	If the motor driving current is too high when open/close door,or push the door reverse.
H09	Fast Protection for back-push door	

Error Alarm
Work Display E01－E04

Display	Explain	Remarks
E01	Report error of open door	
E02	Report error of close door	
E03	Close stop error	
E04	Hall detection error	

Chapter 4 Debugging

4.1 Closed position learning
-Normal status: After power on, the digital tube on the circuit board displays "H07", the door automatically moves to the closing direction slowly (in the learning closing position), wait for the door to close in place and the digital tube displays "---"

-Abnormal state: After the power is turned on, the door is repeatedly opened and closed, then set the P15 parameter to 02, and observe whether it enters the normal state A after turning on the power;

-Abnormal state: After power on, the digital tube on the circuit board displays "H07" and the door is moving in the door opening direction, please refer to (3.1) to turn the door opening direction selection dial switch (red) on the circuit board to the opposite direction and observe Whether to enter the normal state A;

Note: Do not block during learning the closing position, otherwise the blocking position will be regarded as the closing position!

4.2 Open door debugging
-Door opening angle: If the door opening angle is not enough, increase the value of P13, if it is too large, decrease the value of P13 to achieve the final desired angle.

-Door opening speed: adjust the value of P10, the larger the value, the faster the speed, the smaller the speed, the slower;

-Door opening hold time: After opening the door stops, adjust the value of P04 (unit: second)

4.3 Closed debugging
-Door closing speed: adjust the value of P01, the larger the value, the faster the speed, the smaller the speed, the slower;

-Door closing buffer angle: adjust the value of P05, the larger the value, the larger the buffer angle, and the smaller the smaller the angle;

4.4 Other debugging
-Adjust the reverse thrust current:
    Set P06, the factory value is 110, that is, set the motor working current to 1.10A.
-If the door is not closed properly, increase the value of P19 or P02.
-If the door closing buffer speed is too fast, reduce the P02 value.
-Please refer to 3.1 for other parameters to be set according to the site conditions.Chapter

Remote control settings

Display	Description	Range	Remarks
P-22	Remote operation mode	1-4	-Remote jog + key jog: the door will be closed after the remote control and key/swipe card open -Remote control interlock + button jog: After the door is opened by remote control, the door is in the normally open state, and the door must be closed by pressing the remote control lock button; the door will be closed after pressing the key/swiping card -Remote jog + button self-locking: the door is closed after the remote control opens; the door is opened by pressing the key/swiping card once and the door is in the normally open state, and the door is closed by pressing the key/swiping card again -Remote interlock + key lock: After opening the door by remote control, you must press the remote lock key to close the door, and you must press the key/swipe card to open the door again to close

Remote learning

In the standby state, long press the "plus" button on the door opener circuit board for 4S, the nixie tube displays "AD", at this time press the lock "" button of the remote control handle to learn, and "AD" disappears after the learning is successful

Remote code clearing

In the standby state, long press the "minus" button on the door opener circuit board for 4S, the nixie tube displays "CL", after 2S, "CL" disappears automatically, at this time all the previously learned remote controls will be cleared

Chapter 5 Common troubles and Removal

Fault phenomena	Fault Judgment		Treatment Measures
No working, and the 3.3v power indicator	Use a universal meter to Check whether there is a 24V voltage at the two points of "power input" on the circuit board terminals.	24V	Check & replace 24V power supply. Check & replace wiring.
and digital tube do not light.		no 24V	Replace the circuit board.
No working, digital tube display"H08"	Set P6 parameters by referring to 3.1.3, increase high-speed current (high-speed torque), and restart the work.	Problem solve	End
		Fault remain	1.Replace the motor. 2.Replace the circuit board. 3.Disconnect the connection from the door to the rocker arm and check whether the door is blocked.
Open not in place	Increase the value of P13 ,increase the angle of open door .		
Open without buffer	Increase the value of P12,increase the buffer angle of open door.		
Close not in Place	Increase the value of P19 , increase the value of low-speed current(low-speed torque), or increase the value of P2， increase the buffer speed.		
Close without buffer	Increase the value of P05,increase the buffer angle of close door.		
When the door is closed, the lock cannot lock the door.	Use a universal meter to Check whether there is a 12V voltage at the two points of "electromagnetic lock" on the circuit board terminals.	12V	Check and adjust the electromagnetic lock , make it flat with the iron plate. Replace the electromagnetic lock. Check and replace the connection.
		no 12V	Replace the circuit board.

Parking List

No.	Part Name	Unit	QTY	Remarks
1	Side-mounted door operator	set	1	
2	Crank components	set	1	
3	Installation screws	bag	1	
4	Switching Power DC24V 5A	piece	1	
5	Operation Instructions, Certificate, Warranty Card.	set	1	