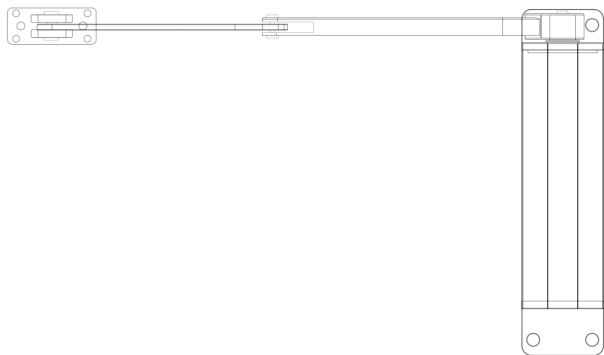


# Smart Door opener

## Installation and User Manual



# 1. Warning

## Installation warning

- Please read the instruction manual and precautions carefully before installation, and then carry out assembly, installation and commissioning operations to avoid unnecessary losses.
- All installation, commissioning and maintenance work must be carried out with the main power supply cut off.
- The power supply of the controller must have safety grounding measures.
- Please be careful to touch this product during installation, avoid bumping, crushing, falling to the ground or contact with any liquid. This product should be kept away from high temperature and open flame.
- The controller of this product is controlled by 24V low voltage, please do not connect directly to 220V high voltage.

## Use Warning

- This product is not suitable for use by children, disabled persons or persons without basic common sense and experience, unless accompanied by professional training and responsible for its safety.
- When debugging the equipment, be sure to keep children or the elderly away from the site, so as to avoid accidental injuries due to large force due to debugging errors.

## Maintenance Warning

- When the equipment fails, please cut off the power supply of the equipment and then disassemble it to check the problem.  
When checking the support arm, please pay attention to placing the no-passing sign to
- prevent the folding arm from squeezing the maintenance personnel's hands and avoid accidents.

# 2. About the product

## 2.1 Product Introduction

The automatic door opener is designed for automatic control of single or double iron doors, villa doors, glass doors, electric small doors, side-hung doors for pedestrian passages, and can be switched automatically through access control equipment, face recognition equipment, mobile phones, and license plate recognition equipment control. The driving motor is driven by a new DC brushless motor, which is sufficiently stable. The controller adopts military motherboard technology, which provides a more humanized operating experience.

## 2.2 Product Features

**Compact:** especially suitable for pedestrian access doors, and can also be installed on small door posts with a width of 5 cm

**Safety:** non-reversible motor, reversing arm, built-in close stop (when using full crank arm)

**Practical:** the crank arm is suitable for installation in various special conditions, such as small door posts or small installation spaces

**Fast:** no waiting, open or close as fast as 3 seconds (under ideal conditions, open 90° with normal crank arm)

Soft start and soft stop function to protect the motor gear to the greatest extent and prolong the service life of the product

## 2.3 Electrical parameters

Scope of application	Width $\leq 2000\text{mm}$ , below 200Kg	Remote control distance	$>15\text{m}$
Power input voltage	DC24V	Motor Speed Ratio	1:200
Motor Power	45W	Ambient temperature	$-35^{\circ}\text{--}+70^{\circ}\text{C}$
Door lock control voltage output	DC12V	Weight	7.4KG
Light control voltage output	DC24V	Package Size	$390 \times 300 \times 100\text{mm}$

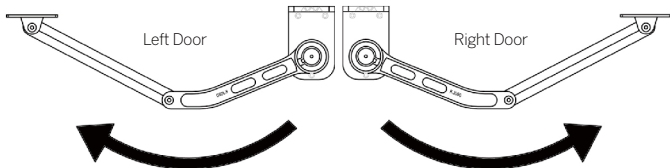
## 3. Product installation

### 3.1 Preparation of tools and materials

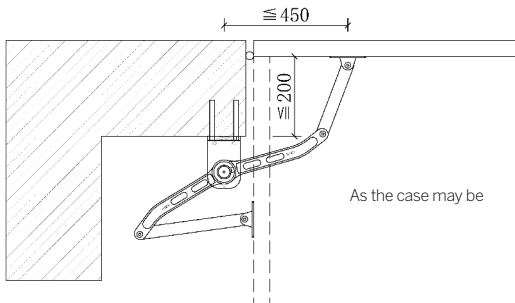
Electric hammer (concrete column structure), electric drill (iron pipe and other structures), Phillips screwdriver, wire stripper, wrapping cloth, wrench.

Power cable RVV2 $\times 1.5\text{mm}^2$ , electric lock cable RVV2 $\times 1.5\text{mm}^2$ , access control cable RVV4 $\times 1.0\text{mm}^2$ /  
Infrared anti-pinch RVV4 $\times 1.0\text{mm}^2$  or HSYV8 $\times 0.5\text{mm}^2$

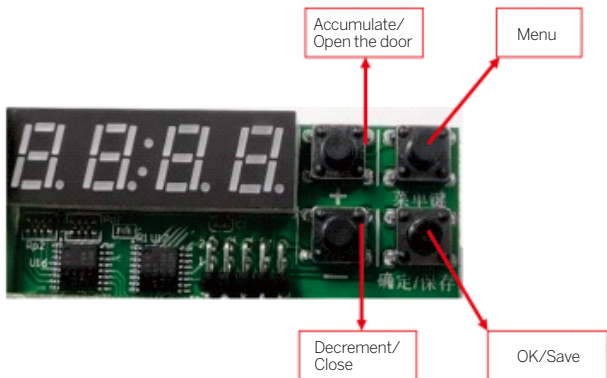
### 3.2 Determine the direction of opening the door



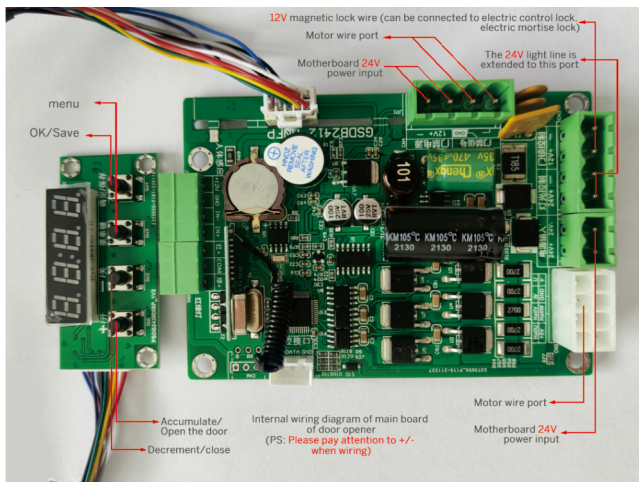
### 3.3 Door Structure



## 4. Equipment Debugging



## 5. Equipment wiring introduction



## 5.1 Door opening angle

**F1:** The larger the value, the larger the door opening angle. The setting range is 10-270 unit degrees

## 5.2 Remote control pairing

**FA:** Press to FA on the main board, press 'OK' and 'PPPP' appears on the display screen, long press the 'stop' button on the remote control, a beep indicates pairing

## 5.3 Door opening direction

**F2:** Value range: 0-1, default: 0. 0 means the door opens from the left, and 1 means the door opens from the right.

## 5.4 Restore factory settings

**FB:** Press FB on the main board, press 'OK' and the display will show LDEF, press and hold the 'OK' button, and the buzzer will sound 5 times, indicating that the initialization is successful

## 5.5 Controller detailed parameter table

### RS140 terminals function

Menu		Descriptions	Range	Unit
F1	Angle Setting	To set the angle for opening door	10-270	°
F2	Open direction	0:Left open 1:Right open	0 or 1	
F3	Open speed	Speed for opening door	2-100	50RPM
F4	Close speed	Speed for closing door	2-100	50RPM
F5	Delay to close	Delay time to close door when door open to target position	0-7000	S
F6	Rebound resistance strength	The door will rebound when there is resistance. This parameter is to set the resistance strength.	6-70	0.1Ap
F7	Rebound resistance sensitivity	To set the time of resistance	1-30	
F9	F9:3 Polarity of opening door signal	0: Low level valid (Connect to COM) 1: High level valid (voltage 3.3-12V) Note:It needs to reboot after setting.	0 or 1	
	F9:B Acceleration of closing door	The larger value,the faster acceleration of closing door	1-20	
	F9:C Deceleration of closing door	The larger value,the faster deceleration of closing door	1-20	
F9:D	Lock selection	0 : Magnetic lock 1 : Positive plug electric lock 2 : Negative plug electric lock	0-2	
FA	Wireless remoter control match	Long press "Stop" Key until beep,then it means matching successfully	PPPP	
FB	Initialize parameter	"Long press ""OK"" key until beep 5 times,then it means initializing successfully. Note:Parameters F2 and FF:E will not be initialized."	LdEF	
FC	Auto running	1:Cyclic open and close the door automatically.It is used for long time testing door	0 or 1	

FE	FE:4	Door open position setting by manual	After homing,enter this parameter,it will release the lock,then open the door to the required position by manual and press "OK" key to set current position as the target position of door open		
	FE:5	Clear remote control	Enter this parameter and long press "OK" key until beep 5 times,then it will clear all match data of remote control		
FF	FF:3	Acceleration of opening door	The larger value,the faster acceleration of opening door	1-100	
	FF:4	Deceleration of opening door	The larger value,the faster deceleration of opening door	1-100	
	FF:b	Rebound resistance dead zone	If it enter the dead zone of rebound resistance when closing door,it will not rebound any more.	12-600	
FH	FH:11	KPP of door open	Proportion gain of position control loop for door open	0-500	
	FH:12	KPP of door close	Proportion gain of position control loop for door close	0-500	
	FH:13	Velocity_FF for door open	Vecolocity feedforward of position control loop for door open	0-256	
	FH:14	Velocity_FF for door close	Vecolocity feedforward of position control loop for door close	0-256	

## 6. Fault code

Error code	Accident details	Cause Analysis	Treatment measures
OE01	Internal error	1. Internal error	Return to controller manufacturers
OE02	Following error exceeded	1. The actual model of the motor does not match the model of the controller motor	Select the matching motor model or replace the motor through the menu FF:E
		2. The motor output shaft is disengaged from the reducer	Check the mechanical structure
OE04	Motor hall signal failure	1. The Hall wire of the motor is not connected or one of the wires is disconnected	Check Hall wiring
		2. Motor Hall plate failure	Return to motor manufacturer for maintenance

OE08	Motor Overload	1. The motor load is too heavy	Check if the machine is stuck
		2. The output capacity of the motor is too small	Replace the motor
		3. The actual model of the motor does not match the model of the controller motor	Select the matching motor model or replace the motor through the menu FF:E
OE10	Controller temperature is too high	1. There are heat sources around the controller, such as hot air fans, etc.	Avoid heat sources
		2. The load continues to be too heavy, and the output power of the motor is too large	Check the mechanical structure or replace the motor
		3. The internal temperature sensor of the controller is faulty	Return to controller manufacturer for maintenance
OE20	The supply voltage is too high	1. The switching power supply is abnormal and the output voltage is too high	Replace the switching power supply
OE40	The supply voltage is too low	1. The switching power supply is abnormal and the output voltage is too low	Replace the switching power supply
		2. The switching power supply is too small	Replace a larger switching power supply, it is recommended that the output current of the switching power supply can be greater than 7A
		3. The line from the switching power supply to the controller is too long, resulting in a part of the voltage drop on the power line	Reduce line length Use a wire with a thicker core Increase the output voltage of the switching power supply
		4. Poor contact between the power cord and the terminal	Good contact again
OE80	Control board short circuit	1. The motor wire is broken and shorted with the casing and other wires	Dealing with broken skin short circuits
		2. The internal short circuit of the motor burnt	Return to motor manufacturer for maintenance
		3. Controller power tube burned out	Return to controller manufacturer for maintenance

## 7 Assembly checklist

Serial Number	Name	Quantity	Remark
1	Door opener body	1	pcs
2	Door opener crank arm	1	Set of
3	Install stickers 1:1	1	zhang
4	letter screw	2	Set of
5	M8*80 expanding wire	4	pcs
6	M8*18 hexagon socket screw	4	pcs
7	Allen wrench	1	pcs
8	Phillips self-tapping screw	22	pcs

9	Top cover fixing small iron piece	1	pcs
10	QR Code Manual	2	copy
11	Certificate	1	zhang
12	Remote control	2	pcs
13	24V DC power supply	1	pcs
14	Metal Surface Mount Adapter Plate	2	pcs