User Manual

Side-mounted Door Opener

Applicable Model(s): ZK-SHD-190L

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English

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The product will be updated from time to time without prior notice. The latest operation procedures and relevant documents are available on http://www.zkteco.com

If there is any issue related to the product, please contact us.

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About the Company

ZKTeco is one of the world's largest manufacturer of RFID and Biometric (Fingerprint, Facial, Finger-vein) readers. Product offerings include Access Control readers and panels, Near & Far-range Facial Recognition Cameras, Elevator/floor access controllers, Turnstiles, License Plate Recognition (LPR) gate controllers and Consumer products including battery-operated fingerprint and face-reader Door Locks. Our security solutions are multi-lingual and localized in over 18 different languages. At the ZKTeco state-of-the-art 700,000 square foot ISO9001-certified manufacturing facility, we control manufacturing, product design, component assembly, and logistics/shipping, all under one roof.

The founders of ZKTeco have been determined for independent research and development of biometric verification procedures and the productization of biometric verification SDK, which was initially widely applied in PC security and identity authentication fields. With the continuous enhancement of the development and plenty of market applications, the team has gradually constructed an identity authentication ecosystem and smart security ecosystem, which are based on biometric verification techniques. With years of experience in the industrialization of biometric verifications, ZKTeco was officially established in 2007 and now has been one of the globally leading enterprises in the biometric verification industry owning various patents and being selected as the National High-tech Enterprise for 6 consecutive years. Its products are protected by intellectual property rights.

About the Manual

This manual introduces the operations of **Side-mounted Door Opener**.

All figures displayed are for illustration purposes only. Figures in this manual may not be exactly consistent with the actual products.

Features and parameters with ★ are not available in all devices.

Table of Contents

1 Warnings and Cautions

1.1 Safety Warning

IMPORTANT! -- This manual contains important safety information. Incorrect installation can lead to serious safety hazards. Read everything in this manual before starting to install any components. If in doubt, stop the installation temporarily and contact the company's technical service.

IMPORTANT! -- This manual contains important instructions, please keep this manual in a safe place for future reference.

1.2 Installation Warning

Before installation, check whether the product meets the requirements of the application (see 3.1 Pre-installation Check). If not, do not install the product.

All installation, commissioning and maintenance work must be carried out with the mains power disconnected.

***Ensure that the unit is securely grounded.**

When installing, please take care not to touch this product and avoid collision, crushing, dropping or contact with liquids. This product should be kept away from high temperatures and open flames. The above conditions may cause damage to the motor. If this problem occurs, stop the installation immediately and contact the company's technical service department. No modifications should be made to any of the components. Failure to do so may result in equipment failure. We cannot be held responsible for any damage caused by modifications to the product.

If the door on which this product is installed has a small door, a control device should be installed in the automatic door system so that the automatic door cannot be operated when the small door is open, to ensure safety.

Waste such as packaging materials of this product should be disposed of in accordance with local regulations.

1.3 Use Warning

This product is not intended for use by children, the disabled or anyone without basic common sense and experience. Except in the presence of a guardian or someone trained and responsible for their safety.

A guardian must be present when children are near the automatic door to prevent them from touching it and causing accidental injury. To prevent children from touching the motor and controls, keep the remote control out of the reach of children.

Facial recognition and devices larger than 1A are prohibited to connect 12V on the motherboard.

Inverted installation is strictly prohibited.

2 Overview

The ZK-SHD-190L is a side-mounted automatic swing door opener designed for smooth, hands-free entry in both indoor and semi-outdoor environments. With a motorized opening and closing mechanism, it ensures effortless accessibility while supporting doors between 680mm and 1500mm wide and weighing up to 260kg. Its windproof functionality and IPX4-rated ingress protection make it suitable for sheltered outdoor areas, providing reliable performance in various weather conditions.

ZK-SHD-190L features an adjustable opening and closing speed (1.5 to 6 seconds) and a hold-open time (1 to 99 seconds) for maximum flexibility. Its low-noise operation (≤45dB) ensures a quiet and comfortable user experience. The encoder-based stroke control guarantees precise and safe door movement, with built-in obstacle detection to prevent accidents.

For enhanced convenience, the ZK-SHD-190L supports smart connectivity via the ZKEasyGo mobile app (coming soon) and remote control, allowing users to remotely control and monitor door operations. It operates on a wide power supply range (95-260V AC, 47-63Hz) and includes auxiliary power outputs (24V DC, 700mA) for additional accessories.

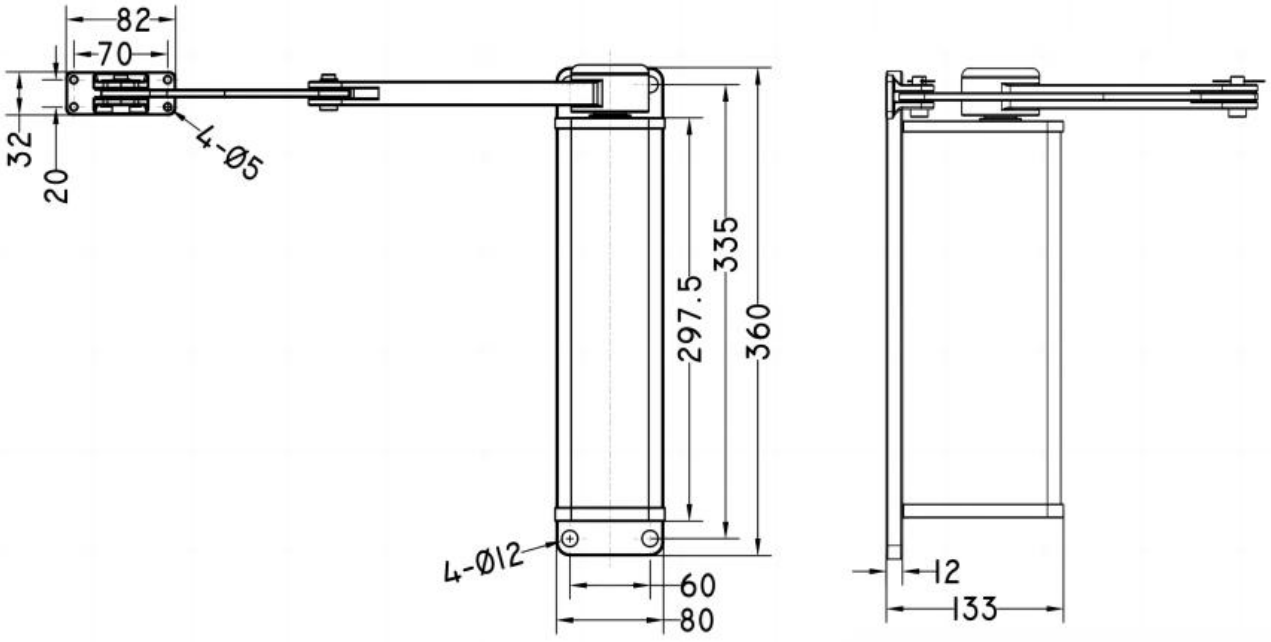
2.1 Accessories

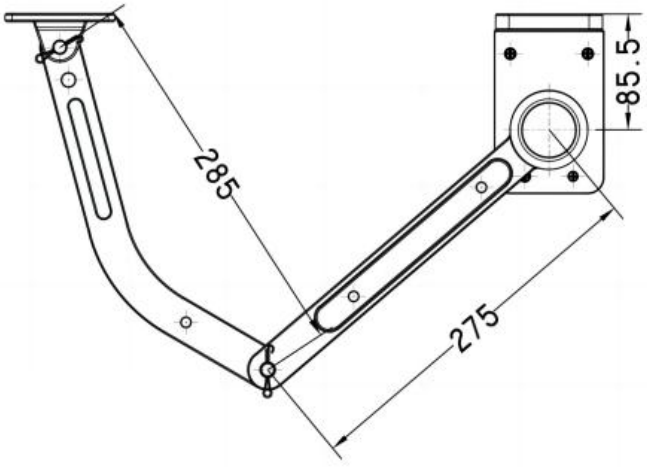
No.	Details	Descriptions
1	Extended Chassis Kit	Suitable for installation in small sized locations
2	Power Supply	Waterproof external power supply
3	Instruction Manuals	Instruction manual, certificate of conformity, installation sticker
4	Fixed Chassis Quick Wire Kit	Suitable for wooden doors, concrete wall fixed material

5	Fixed chassis dovetail kit	Suitable for metal fixing materials
6	Fixed Chassis Rising Wire Kits	Suitable for fixing material of brick structure
7	Maintenance Tool Screw Kit	Necessary screws, screwdriver, spanner, lubricant, terminal wire

2.2 Specification

2.2.1 Dimensions(mm)





2.2.2 Technical Specifications

Model	ZK-SHD-190L
Motor Power	60W
Motor Torque	80N.m
Input Voltage	220V
Working Voltage	24V
Body Size	360×133×80mm
Packing Size	400×350×150mm
Fixed Base Size	360×80mm
Body Weight	8.3kg (Net), 9.5kg (Gross)

3 Pre-Installation Check

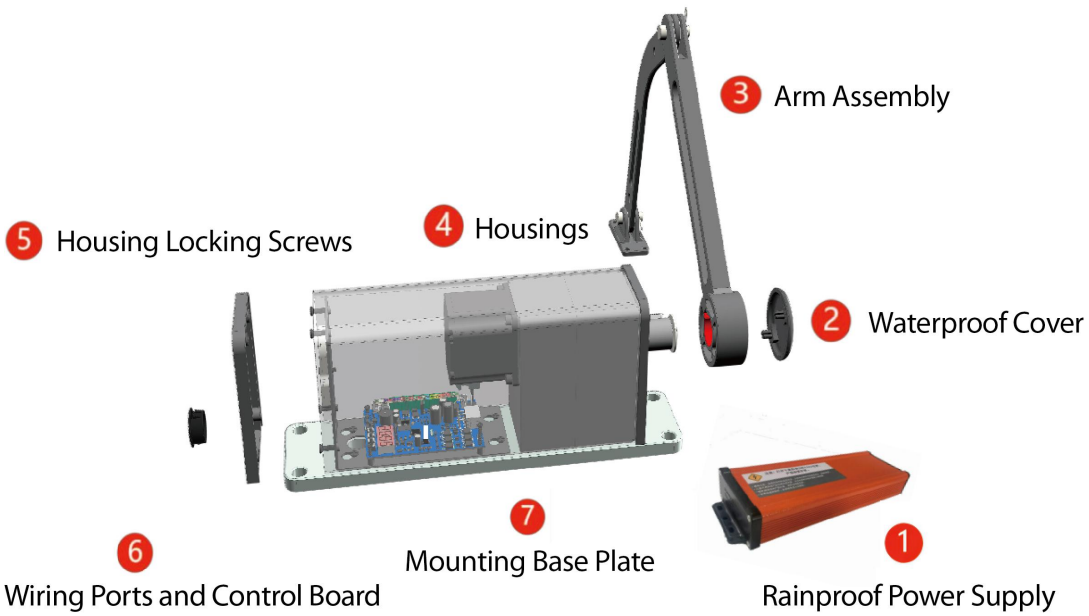
3.1 Suitability Check

Before starting the installation, check that the product components are complete and ensure that the model selected is suitable for the intended use and installation environment.

- Check that all hardware used is in good condition and suitable for the intended use and that the dimensions and weight of the door assembly are within the limits of use.
- Check that the door structure is equipped with the relevant limits (not supplied) in the closed position by manually moving the door leaf to any position, then releasing it and checking that it can remain stationary.
- Check that the mechanical structure of the door is suitable for automated installation (e.g. hydraulic hinges, adjustable floor spring damping). This product must not be used on doors that are in poor condition or present a safety hazard.
- Check that the mounting area matches the dimensions of the door opener installation and ensure that the surface of the mounting area is sufficiently strong and capable of holding securely.
- Ensure that all equipment mounting locations are protected from environments that may cause accidental impact.

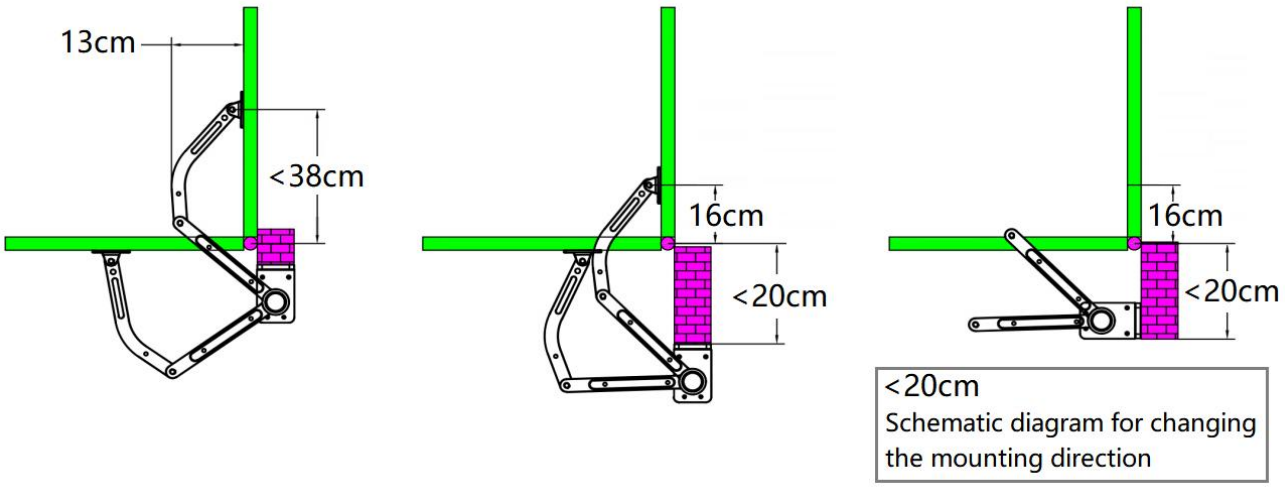
3.2 Installation Instructions

Incorrect installation may cause serious injury to the installer or user. Before starting the installation, please check strictly in accordance with section 3.1 and install only when the conditions are met.



3.3 Installation Diagram with Wall

3.3.1 Push Door Installation Mode



<20cm
Schematic diagram for changing the mounting direction

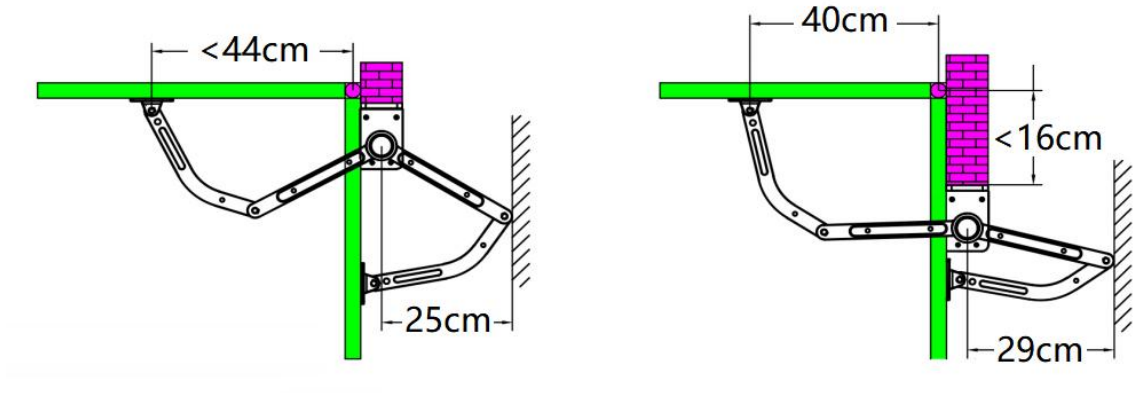
1. The minimum distance between the support arm and the passage width:**13cm**.

2. Crank arm support and door shaft ● installation distance: **16cm-38cm** (lateral translation needs to be subtracted from the translation distance).

3. The distance between motor base plate and door shaft ●: less than **20cm** (more than this size can change the installation direction).

* The shorter the installation distance between the crank arm support and the door shaft, the smaller the weight of the door body pushed by the motor.

3.3.2 Pull Door Installation Method



1. The distance between motor base plate and door shaft ●: less than **16cm**

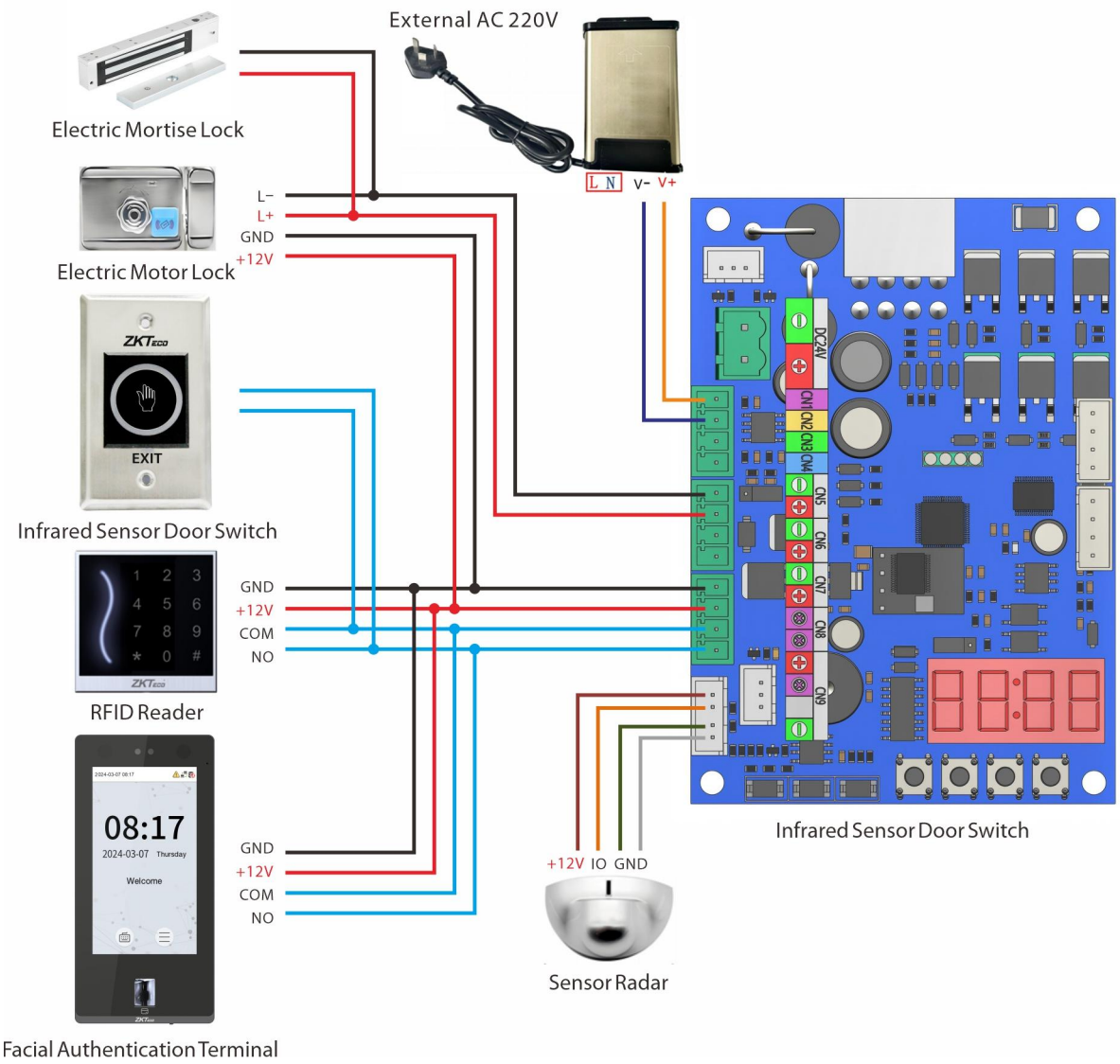
2. Distance between the crank arm support dish and door shaft ● installation: 22cm-44cm (lateral translation needs to be subtracted from the translation distance).

3. Distance from the motor shaft to the shelter: more than **25cm**.

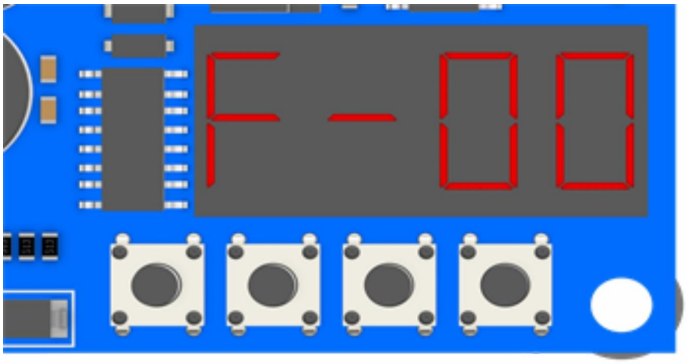
* The shorter the installation distance between the crank arm support and the door shaft, the smaller the weight of the door body pushed by the motor.

4 Operating Instructions

4.1 System Wiring Diagram



4.2 Operation Buttons Description



Operation Buttons Description:

- **OPEN/+:** Press this button to open the door under normal working condition. After entering the setting state you can use this key to add menu items and adjust the setting value upwards. In the parameter setting state, short press adds one each time. Long press will continuously add to the maximum value and then start from the minimum value upwards. If the long press time is longer, the continuous addition will speed up.
- **CLOSE/-:** Pressing this button in normal operation can close the door. After entering the setting state you can use this key to reduce the menu items and adjust the setting value downwards. In the parameter setting state, short press to reduce one each time. A long press will continuously reduce the value to the minimum value and then reduce the value from the maximum value downwards. If the long press time is longer, the continuous reduction will speed up.
- **MENU:** Enter the setting status and confirm the set values.
- **MODE:** Cancel/Stop, In normal operation this key is undefined and the key will beep with a buzzer. In the setup state you can exit the setup state or cancel the set value.

5 Motherboard Parameter Debugging

5.1 Motherboard Parameter Description

Menu	Function	Default	Range	Unit	Remarks
F-00	Opening Speed	32	10-100		The higher the value, the faster the door opens.
F-01	Closing Speed	32	10-100		The higher the value, the faster the closing speed.
F-02	Opening Deceleration Angle	60	45-90	Degree	When opening the door, it starts to decelerate at this angle.
F-03	Closing Deceleration Angle	40	0-60	Degree	When closing the door, start decelerating at this angle.
F-04	Open Door Acceleration Time	100	0-255	0.01sec	When opening the door, accelerate to the opening speed.
F-05	Close Door Acceleration Time	100	0-255	0.01sec	When closing the door, accelerate to the closing speed.
F-06	Door Opening End Speed	15	10-60		Open the door at this speed.
F-07	Door Closing End Speed	15	10-60		Close the door at this speed
F-08	Door Opening Low Speed Angle	90	75-100	Degree	Angle of operation at the end of opening speed
F-09	Closing Low Speed Angle	2	0-30	Degree	Angle of operation at closing speed
F-10	Closing Buffer Angle	0	0-30	Degree	Activate the brake at this angle
F-11	Closing Brake Time	0	0-255		Braking time in 0.01 seconds
F-12	Startup Calibration Speed	10	1-60		Speed of starting to find the closing position on power up
F-13	Learning Remote Control	0	none		Maximum 60 remote controls can be learnt
F-14	Open Door Hold Time	5	0-255		Unit: second, 0 for no automatic door closing
F-15	Swipe Card Delayed Door Opening	1	1-20		Unit: 0.1 second

F-16	Learning Door Position	0			Learning the position of door opening in place
F-17	Closing Force	0	0-30		The larger the value, the stronger the force
F-18	Anti-Collision Sensitivity	20	1-50		Unit 0.05sec
F-19	Anti-Collision Strength	100	10-255		Impact strength
F-23	Version				Software version number
F-24	Restore Factory Settings And Clear Remote Control	5-10	0		5: Clear the remote control 10: Restore out of factory settings
F-25	Automatic Test	0	0-255		Automatic test interval, 0 for normal operation
F-26	Door Opening Direction	0	0-1		0: left on 1: right on
F-27	Light Sensitive Threshold	150	0-200		Turn on the light if the current light sensitivity value is greater than the threshold value
F-28	Delay On	10	0-255		Unit: second
F-29	Delay Off	250	0-255		Unit: second
F-30	Light Sensitive Value				Light sensitivity value at current light level
F-31	Light Box Mode	0	0-1		1: Light sensitivity control
F-32	Stop Buffer Time	50	10-255		Unit: 0.01 second
F-33	Retention	0	0		Retention
F-34	Retention	0	0		Retention
F-35	Lock Motor Power	10	0-20		Dangerous, use with caution! The higher the number the higher the lock motor current
F-36	Lock Motor Switch	0	0-1		0: Close 1: Open
F-37	Pop Open Magnetic Lock Strength	0	0-100		The higher the number, the stronger the force to open the magnetic lock.

F-38	Closed In Place Locking Position	0	0-100		The motor locks for a period of time after being closed in place
F-39	Retention	0	0		Retention
F-40	Lock Type	0	0-3		0: Electromagnetic lock 1: Electric plug lock 2: Electric lock 3: Mechanical lock
F-41	Human Sensor Port 1 Redefinition	1	0-7		Set to different values, the body-sensing port has different functions
F-42	Human Sensor Port 2 Redefinition	1	0-7		Set to different values, the human sensor port has different functions.
F-43	Confrontation Strength	20	0-100		After the door is pushed away from the door position by human, the door returns to the normal opening position with the strength of the door, used with F-44
F-44	Confrontation Offset Angle	5	0-45		When the door is pushed away from the set angle, the motor will start to move to make the door return to the normal position, working with F-43.
F-45	Open Position Lock	0	0-1		0: not locked 1: locked

The closing position is 0 degrees for all angles involved.

***Note:** Menu does not include F20 to F22 functions because they are not compatible with this motherboard parameter debugging.

5.2 Function Details

F-00 Opening Speed

The larger the value the faster the door opening speed. Controls door opening speed. Higher values increase speed linearly. Range represents percentage of maximum speed (10-100). Press the 'Menu' key to enter the setting state shows the current speed being used. You can choose the opening speed according to the actual environment, and the setting will take effect immediately after completion.

F-01 Closing Speed

The higher the value, the faster the closing speed.

Adjusts door closing speed. Higher values increase closing speed. Range represents percentage of maximum speed (10-100).

F-02 Opening Deceleration Angle

Defines the angular position where door opening deceleration initiates. Range: 45-90 degrees.

F-03 Closing Deceleration Angle

Specifies the angular position where door closing deceleration begins. Range: 0-60 degrees.

F-04 Open Door Acceleration Time

Acceleration Duration (Unit: 0.01 seconds). A smaller numerical value results in faster acceleration to the target opening speed. This setting allows precise control of the door's initial movement dynamics, enabling smooth and efficient door operation.

F-05 Close Door Acceleration Time

Unit: 0.01 sec. When closing the door, the time required to accelerate to the closing speed. The smaller the value, the faster the acceleration.

F-06 Door Opening End Speed

Ends the door opening at this speed. The higher the value, the faster the speed. A faster speed may cause the door to swing at the end of the door opening, in which case the value can be reduced.

F-07 Door Closing End Speed

End closing at this speed. The larger the value, the faster the speed. Too fast a speed may cause the door to slam during closing, so reduce the value. If the door does not close, the value needs to be increased.

F-08 Door Opening Low Speed Angle

The parameter defines a low-speed uniform zone at the terminal phase of door opening, where the door transitions to a preset end-speed (F-06) upon reaching a specific angular position. This low-speed zone ensures controlled and smooth door movement during the final stages of opening. The function becomes invalid if the specified angle exceeds 90 degrees or falls below the door's initial deceleration angle (F-02).

F-09 Closing Low Speed Angle

The parameter establishes a low-speed uniform zone during the final stage of door closure, activating when the door reaches a specific angular position. At this point, the door transitions to the preset closing end speed (F-07) and maintains this velocity until fully closed. The function is automatically disabled if the set angle is 0 or exceeds the closing deceleration angle (F-03).

F-10 Closing Buffer Angle

The door is closed at the closing end speed from this position. This value needs to be reduced if the closing vibration is high. If it is 0 there is no braking.

F-11 Closing Brake Time

Braking Time Parameter (Unit: 0.01 seconds)
Defines the braking duration at the initial stage of door closing, serving as a buffer control mechanism. When door closing encounters high inertia or excessive vibration at the stop position, this parameter allows precise deceleration control. The default setting of 0 indicates no braking intervention, while higher values enable gradual speed reduction to minimize mechanical stress and ensure smooth door movement.

F-12 Startup Calibration Speed

When the control board powers on, it starts a homing sequence to determine the door's reference position. This parameter adjusts the speed of the homing movement, with larger values resulting in faster calibration.
Fine-tuning this setting ensures accurate and efficient door positioning, allowing the system to adapt to different mechanical requirements.

F-13 Learning Remote Control

When entering the Remote Control Learning mode, the system displays the current number of learned remote controls. The learning sequence follows a specific order: ON -> OFF -> STOP.

Learning Process:
- Each key must be pressed for one second.
- A single buzzer beep confirms each key's successful learning.
- After successfully learning three keys, the buzzer sounds once.
- The LED display updates to show the total number of learned remote controls plus one.

Additional Learning Guidelines:
- Multiple remote controls can be learned sequentially.
- If a remote control has already been learned, the buzzer will sound three times.
- If no key is pressed within 20 seconds, the system automatically:
- Emits a single buzzer beep.
- Exits the learning mode.
- Returns to normal operation.

F-14 Open Door Hold Time

Range 0-255, unit 1 sec, default 5. Door stays open for specified time and closes automatically. If it is 0, the door will not be closed automatically.

F-15 Swipe Card Delayed Door Opening

Range 1-20, unit: 0.1 sec, default 1. Waiting time for magnetic lock release.

F-16 Learning Door Position

Prerequisites:
Ensure the door is fully closed before accessing this configuration menu.

Position Adjustment Methods:
- Manual Positioning:
Physically adjust the door to the desired calibration position.

- Control Panel Adjustment:
Use 'Open/+' and 'Close/-' buttons to precisely set door position.

Confirmation and Validation:
- Press the 'Menu' button to save the selected door position.
- System performs automatic validation checks.

Error Handling:
If the door opening angle is insufficient:
- Buzzer emits three consecutive beeps.
- LED display shows 'E-01' error message.
- Indicates calibration failure.
- Requires complete re-learning of door position.

F-17 Close Force

Prerequisites:
Manages magnetic lock release timing during door closing sequence. Ensures secure door locking mechanism. (Range 0- 30 and the default value is 0).

0 (Default Setting):
- Magnetic lock opens immediately as door approaches closing position.
- Potential drawbacks:
Increased door closing impact noise.
Prevents door rebound.

Values > 0:
- Magnetic lock releases before door reaches final position.

Advantages:
Reduced closing sound.
Smoother closing mechanism.

- Secondary closing confirmation:
Door closes twice after initial positioning.
Increasing value intensifies secondary closing force.

-Recommended Adjustments:
Incrementally increase parameter value if:
Door fails to lock completely.
Locking mechanism requires additional force.
Seeking optimal closing performance.

F-18 Anti-Collision Sensitivity

Parameter Range: 1-50 (Default: 5)
Unit: 0.05 sec

Description:
Defines the minimum time between an impact (bump) and the system's reaction.

A smaller value increases sensitivity, making the system more responsive but also more susceptible to interference.
A larger value reduces sensitivity, making the system less likely to react to minor disturbances.

F-19 Anti-Collision Strength

Range: 10-255 (Default: 30)

Description:
A higher value corresponds to a higher door speed.

If the opening or closing speed of the door is adjusted, this parameter must be changed accordingly.

This value, together with F-18 Crash Sensitivity, determines whether an impact with a person is detected.
- One parameter controls the force of the impact.
- The other controls the reaction time.

F-23 Version

The software version number.

F-24 Restore Factory Settings And Clear Remote Control

This device has two functions: Clear Remote Control and Restore Factory Settings. To prevent misuse, specific values must be set before pressing the 'Menu' key to initiate the operation.

1. Clear Remote Control:
Set the value to 5 before pressing 'Menu'.

2. Restore Factory Settings:
Set the value to 10 before pressing 'Menu' to reset the settings to default.

Upon successful completion, the buzzer will beep once. If the operation fails, the buzzer will beep three times and the LED will display 'E-00', indicating an invalid setting value.

The default control board parameters are suitable for most scenarios. If any improper settings are made during setup, you can use the Restore Factory Settings function to revert to the original configuration.

F-25 Automatic Test

Parameter Range: 0-255 seconds
Default Value: 0 seconds

Description:
This parameter sets the time interval for the door's auto-test function.

A value of '0' disables the auto-test feature. When enabled, the auto-test is used for door aging tests or other automated diagnostics.

The configured value is retained even when the power is turned off.

Usage:
After completing any auto-test procedures, ensure to set this parameter back to '0' to deactivate the auto-test function.

F-26 Door Opening Direction

Value range: 0-1, default: 0. 0 is left door opening, 1 is right door opening.

F-27 Light Sensitivity Threshold

Default Value: 150

Function: Light Sensitivity Threshold for Automatic Lighting
This parameter determines the light sensitivity value that triggers the lighting system.

The current photo-sensitivity value can be viewed using parameter F-30. When the ambient light level falls below the set threshold, the light automatically activates

Installation Considerations:
Light sensitivity varies due to:
- Installation environment differences.
- Variations in shell light transmittance.
- Specific customer brightness requirements.

Recommendation:
There is no universal, compromise light sensitivity value. Adjust the threshold on-site after installation to match specific environmental conditions and user preferences.

Technical Note:
Precise calibration ensures optimal lighting performance tailored to the specific installation context.

F-28 Delay On

Range 0-255, default: 10, unit: second. Detecting the current photosensitive value exceeding the photosensitive threshold set by the F-27 command and then delaying the set delay time before switching on the light.

F-29 Delay Off

Range 0-255, Default: 250, Unit: sec. Detect the current photosensitive value lower than the photosensitive threshold value set by F-27 command and then delay the set delay time before switching off the lights, to prevent misoperation in case of headlight irradiation and so on.

F-30 Light Sensitive Value

The light sensitivity value under the current illumination level. It can be used as a reference for setting the threshold value for switching off the lights. This command will not time out, you must press the 'Stop/Cancel' button to exit the display, otherwise it will keep displaying.

F-31 Light Box Mode

1: Light sensitive control. (Only light sensitive mode is supported.) At 1, the light is switched on and off by light sensitive control. The switch is turned on when the sky darkens to the set photosensitive value.

F-32 Stop Buffer Time

Buffer time for the door body when pressing the remote control stop button to prevent an emergency stop.

F-33 Reserved

F-34 Reserved

F-35 Lock Motor Power

Range: 0-20, Default: 10, the higher the number, the higher the current of lock motor. Need to use with F-36 command.

F-36 Lock Motor Switch

Range: 0-1, Default: 0, 0: Off, 1: On. Used in conjunction with F-35, if it is 1, then the stop button is pressed during opening or closing of the door and when it is in place. Then the controller locks the motor at the power set by F-35 so that the door does not swing.

F-37 Pop Open Magnetic Lock Strength

Range: 0-100, default: 0, the larger the number, the stronger the force to open the magnetic lock, 0 turns off the function.

This function is used to solve the problem of slow demagnetisation of some magnetic locks, which leads to the magnetic locks keep closing and can not open the door normally. Setting this value can pop open the magnetic lock with the set strength.

F-38 Closed In Place Locking Position

Range: 0-100, unit: second, after closing in place, the motor locks for a period of time, if it is 100 it keeps locking.

F-39 Reserved

F-40 Lock Type

Parameter Range: 0-3
Default Value: 0

Lock Type Modes:
0: Electromagnetic Lock
Locked when powered.
Unlocked when power is removed.
1: Electric Lock

Unlocked when powered.
Locked when power is removed.

2: Electronically Controlled Lock
Locks when powered.
Maintains locked position after automatic door closure.
No action when power is removed.

3: Mechanical Lock
Unlocked when powered.
Requires manual door push to secure (similar to a traditional residential deadbolt).

Technical Note:
Select the appropriate mode to match the specific lock mechanism's operational characteristics, ensuring compatible and secure door control.

F-41 Human Sensor Port 1 Redefinition

Range: 0-7, Default: 1. Parameter Description: Configures human body sensing port IN1 with multiple functional modes.
0: Disable.
1: Immediate door closure when no person is detected.
2: Delayed door closure after hold time expires.
3: Closes in position before receiving external signal; no detection during closing process.
4: Open function- Access control (+/-) active.
5: Open function- Access control - (+/-) active.
6: Off.
7: Stop.

F-42 Human Sensor Port 2 Redefinition

Range: 0-7, Default: 3. Parameter Description: Configures human body sensing port IN2 with multiple functional modes.
0: Disable.
1: Immediate door closure when no person is detected.
2: Delayed door closure after hold time expires.
3: Closes in position before receiving external signal input; no detection during closing process.
4: Open function -Access control (+/-) active.
5: Open function - Access control (+/-) inactive.
6: Off.

7: Stop.

The Gate+ and Gate- ports are disabled when either of the two parameters, F-41 and F-42, is selected to invalidate Gate+ and Gate-.

F-43 Confrontation Strength

Range: 0-100

Default: 20

Function: Door Restoration Mechanism

Determines motor force to return door to original open position.

Activated when door is manually displaced from its set position.

Requires coordination with F-44.

Setting '0' disables restoration function.

F-44: Confrontation Offset Angle

Range: 0-45 degrees

Default: 5 degrees

Function:

Displacement Threshold

- Motor initiates repositioning when door is pushed beyond set angle.
- Works in conjunction with F-43.
- Setting '0' disables repositioning.

F-45: Open Position Lock

Range: 0-1

Default: 0

Function:

Door Stabilization

0: No locking

1: Motor locks door in open position

Prerequisites:

- F-36 lock motor switch must be set to 1.
- F-41 must be set to 1.

Caution:

Continuous motor engagement during extended door-open periods may cause motor and main board overheating.

6 Troubleshooting

No.	Failure Descriptions	Analysis and Solution
1	Wrong direction of door opening	The first time to power on the door to close the direction is correct, if it is to open the door for the direction of the wrong direction, F-26 to adjust the direction of the door.
2	Wrong opening angle	The default value of opening the door may not reach 90°, you need to refer to F-16 to learn the opening angle.
3	Screen off	Check the circuit, whether there is a short circuit
4	Magnetic lock (electronic control lock) does not break the power supply	Check whether F-40 electric lock mode is correct
5	Display E-02	Check if wires are connected or loose
6	Door opening and closing stutters	F-18 and F-19 values are adjusted upwards.
7	Door stays open, won't close	1. Whether the door opening method is correct; 2. Whether the door open signal is a normally closed signal or a voltage signal; if it is a voltage signal then jump cap switching signal; 3. Door open hold time F-14 cannot be 0.
8	Cycle door open/close	Whether F-25 is set to 0, 0 opens the automatic test function.
9	Cannot find the closing position	Power failure restart, re-learn the closing position, automatic learning process, not to encounter obstruction.
10	Controller alarm	Check whether the controller external wiring is short-circuited.

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