

User Manual

Mars-S100 Series

Applicable Model(s): Mars-100, Mars-S120

Date: October 2025

Doc Version: 1.4

English

Thank you for choosing our product. Please read the instructions carefully before operation. Follow these instructions to ensure that the product is functioning properly. The images shown in this manual are for illustrative purposes only.



For further details, please visit our Company's website
www.zkteco.com.

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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 **Mars-S100 Series**.

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.

Document Conventions

Conventions used in this manual are listed below:

GUI Conventions

For Software	
Convention	Description
Bold font	Used to identify software interface names e.g. OK , Confirm , Cancel .
>	Multi-level menus are separated by these brackets. For example, File > Create > Folder.
For Device	
Convention	Description
< >	Button or key names for devices. For example, press <OK>.
[]	Window names, menu items, data table, and field names are inside square brackets. For example, pop up the [New User] window.
/	Multi-level menus are separated by forwarding slashes. For example, [File/Create/Folder].

Symbols

Convention	Description
	This represents a note that needs to pay more attention to.
	The general information which helps in performing the operations faster.
	The information which is significant.
	Care taken to avoid danger or mistakes.
	The statement or event that warns of something or that serves as a cautionary example.

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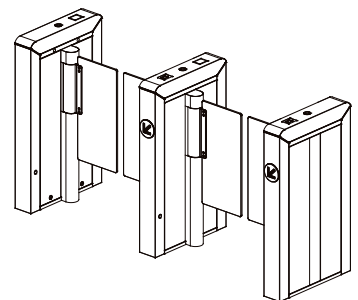
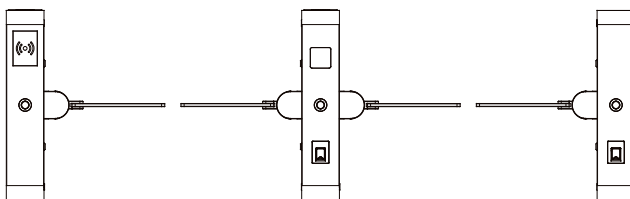
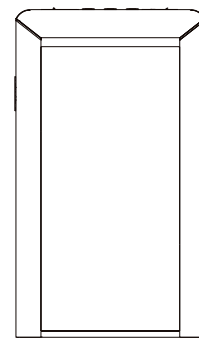
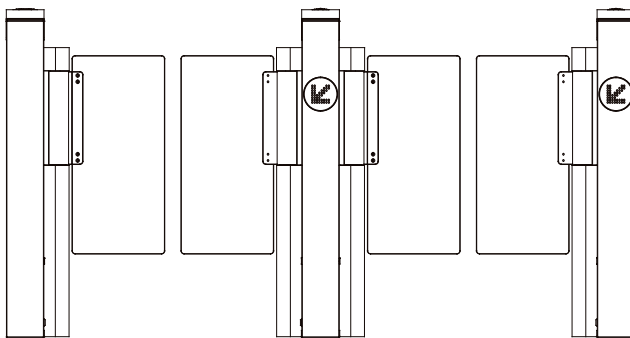
1 Overview

Mars-S100 swing barrier turnstile series from ZKTeco has two models: Mars-S100 and Mars-S120. Mars-S100 series provides single lane or dual lane, and the lane which can be extended up to 900mm for very high-traffic areas such as bus terminals, government institutions and stadiums.

Mars-S100 series has installed four pairs of IR sensors for accurate people counting and to avoid collisions with the barrier. The barriers can be locked in a closed position, and an integrated clutch mechanism engages if the barrier is forced, protecting the turnstile from damage.

Additionally, this compact speed gate can integrate with access control system. Upon a valid verification of user's credentials (Fingerprint / Face / Palm / RFID Card/ QR Code, the barriers automatically swing to the open position, allowing passage.

Essential safety functions include automatic barrier opening in the event of power loss or a fire alarm signal activation, ensuring unimpeded egress in emergencies.



1.1 Features

Reliability

- The powder coating provides a protective finish that helps to prevent the cabinet from rusting.
- Adopt a high-quality DC brushless motor which extends the operation lifespan.

Safety

- Automatically door open during emergency.
- Built-in clutch kit to prevent unauthorized users from forcibly opening the barrier.
- Comprises 4 pairs of infrared sensors that detect the pedestrians status.
- (Optional) Support multiple biometric authentications, including facial recognition/ fingerprint/Palm/ QR code/ RFID card verification for controlled access.

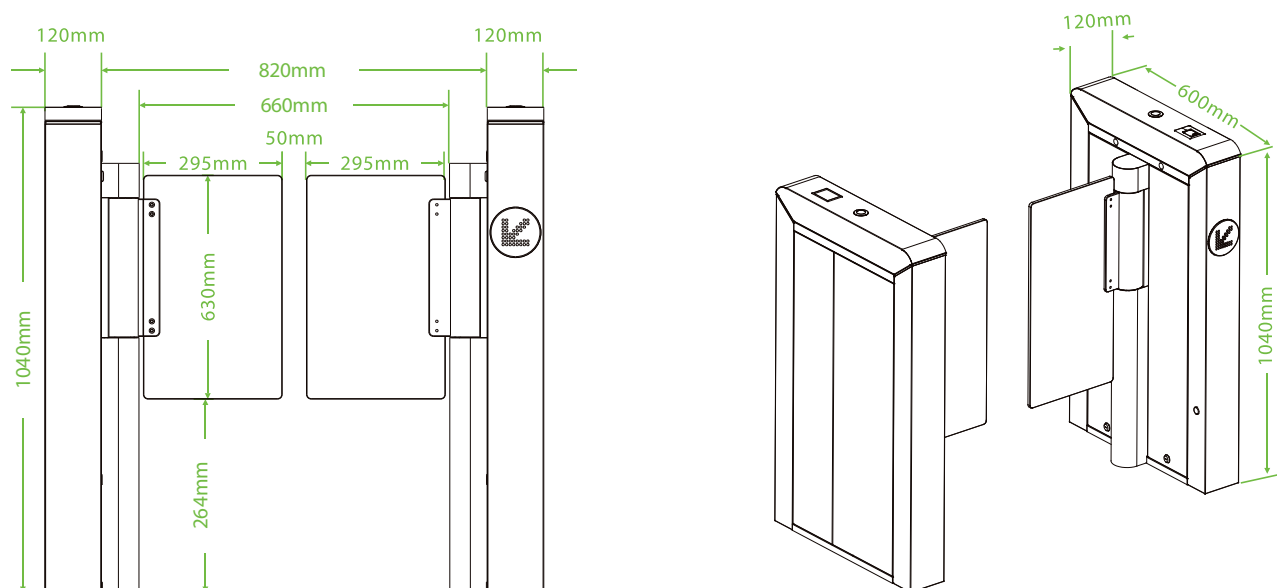
An Ergonomic Design

- Streamlined installation and maintenance.
- Compact design with versatility.

1.2 Appearance and System Components

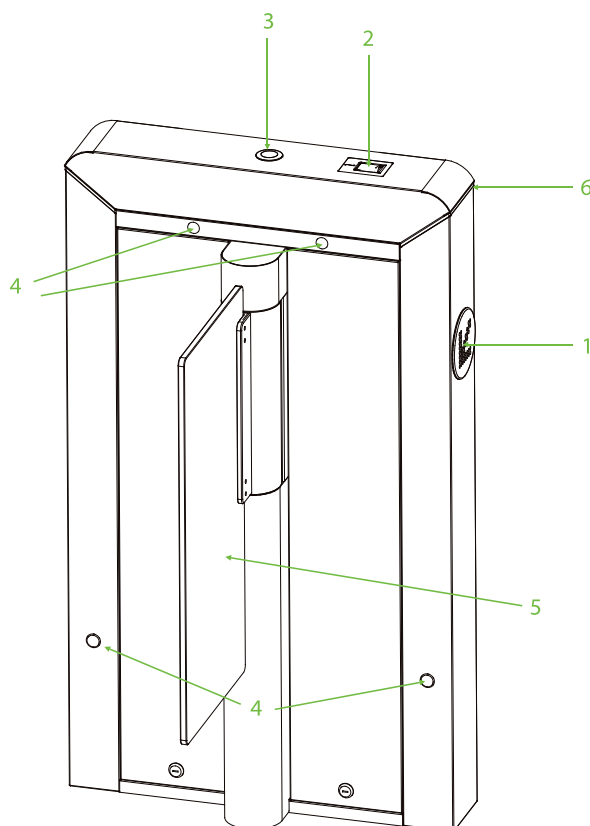
1.2.1 Appearance

The appearance and dimensions of the Mars-S100 series are shown in the figure below:



1.2.2 System Components

The system components of the Mars-S100 series are shown below:



1. Traffic indicator	2. Verification units★
3. Reserved hole for facial authentication device installation	4. Infrared sensor
5. Barrier	6. Pass through indicator

1.3 Mechanical System

The mechanical system of the turnstile consists of the chassis and the core component. The chassis is a carrier where the Traffic Indicator, Reader★, QR code scanner★, Fingerprint reader★, Infrared Sensor and the Door lock are installed. The core component mainly consists of the Motor, Frame, Bearing and Swing Arm.

1.4 Electronic Control System

The electronic control system of a turnstile is mainly composed of the Reader★/QR code scanner★/Fingerprint reader★, Infrared Sensor, Turnstile Control Board, Traffic Indicator and Alarm.

Reader★: The reader reads the data on the card and transmits it to the Access Controller.

Fingerprint Reader★: The device compares the fingerprint that is being pressed onto the fingerprint reader with all the fingerprint data and sends it to the Access Controller.

QR code Reader★: The device compares the acquired QR code with all QR code data registered in the device and sends it to the Access Controller.

Infrared Sensor: It detects the position of the pedestrian and plays a role in ensuring safety and protection.

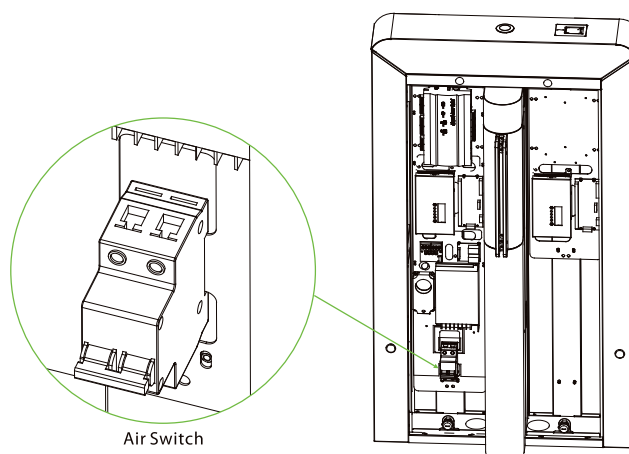
Turnstile Control Board: The Turnstile control board is the system's control center that receives signals from the Card reader★/fingerprint reader★/QR code reader★. The IR performs logical calculation and processing these signals and then sends executive commands to the Traffic Indicator, Electric Motor, and alarm.

Traffic Indicator: When the gate is closed, the system will illuminate the red indicator. However, when someone successfully passes the verification, the system will illuminate the green indicator.

Alarm: The alarm gives the voice and light alarm if the system detects any unauthorized entry to the passage, false direction entry and other violations.

1.5 Working Principle

1. When the device is powered on, it undergoes a Power-On Self-Test (POST). If no issues are detected during the test, the device will operate normally. If a failure is detected, the system will display relevant error messages on the digital tube, allowing the user to quickly identify and resolve the problem.



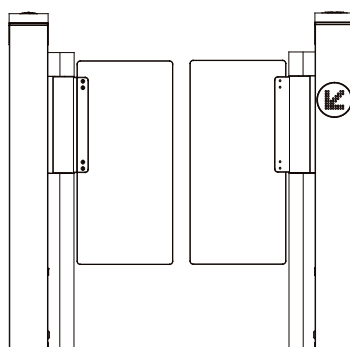
2. When a valid card★/fingerprint★/QR code★, the display will show whether it is successful or not, the buzzer will give a positive audible prompt to the pedestrian, indicating that successfully verified. And then, the card reader★/fingerprint reader★/QR code reader★ sends signals to the Access Controller to request permission to pass through the passage. The Access Controller will send the signal to the Turnstile Control Board.
3. After receiving the signal from the card★/fingerprint★/QR code★ and the Infrared Sensor, the Turnstile Control Board will send valid control signals to the servo motor driver. At this time, if the system is in forbidden passing mode, the mode indicator light will turn red, and the Turnstile Control Board will not accept signals of card★/fingerprint★/QR code★.
4. Once the passenger passes through the channel in accordance with the opening direction of the swing arm, the Infrared Sensor will continuously monitor the pedestrian's movement throughout the passage. It will continue to send signals to the Turnstile Control Board until the pedestrian completes the passage.
5. If the pedestrian enters the passage without verifying their identification or presents an invalid card★/fingerprint★/QR code★ the system will sound an audible alarm to alert the pedestrian to stop. The alarm signal will persist until the pedestrian retreats from the passage. Only after a card★/fingerprint★/QR code★ is successfully verified can the pedestrian process through the passage.

Note: Make sure the ground wire of the system is reliably connected to avoid personal injuries or other accidents.

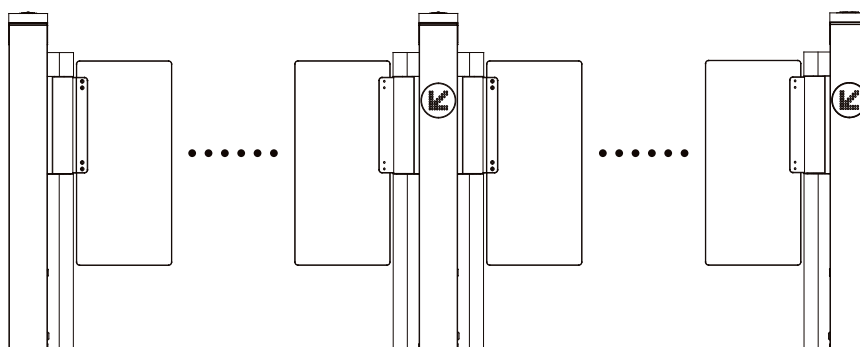
1.6 System Composition

The single-passage management system consists of two single-core speed gates. The multi-passage management system consists of two single-core speed gates and multiple dual-core speed gates.

- **The single-lane management system:**



● **The multi-lane management system:**



1.7 Technical Specifications

Model	Mars -S100	Mars -S120
Visual Indicator	Steady green: normal use Steady red: door closed	
Audio Indicator	Internal buzzer	
Lane Type	Single lane	Dual Lane (Consists of 2 single-core swing barrier turnstile and 1 dual-core swing barrier turnstile)
Lane Width	660mm (optional: 900mm)	
Barrier Movement Type	Swing	
Motor	DC brushless motor	
Movement Speed	0.8s per movement (open/closing timing)	
Movement Accuracy	±2 Degrees	
Clutch	Mechanical clutch for anti-panic/anti-collision	
Lid Material	Cold-rolled steel SPCC (GB700) (optional: SUS304 stainless steel)	
Lid Options Authentication Methods	Streamlined under mount options: Fingerprint/RFID	
Chassis Material	Cold-rolled steel SPCC (GB700) (optional: SUS304 stainless steel) (T=1.2mm)	
Chassis Color	White (standard) / silver-grey (optional)	

Barrier Material	Acrylic, 295*630mm (standard)/Acrylic, 425*630mm (optional)	
IR Sensors	4 Pairs (standard) (high&low position)	
Motherboard Function	System configuration, access mode configuration, anti-pinch configuration, etc.	
Motherboard Communication	Fire alarm port (relay)*1, RS485 port*1	
Controller	C3-200&InBio260 Pro (recommended) other depends on dimensions fitting in (optional)	
Credential Options	Under mount RFID reader: (support model: ProID Series, KR Series) Under mount fingerprint reader: FR1200/FR1500 Facial Recognition: ProFace X, G4 Pro Palm: OmniAC30	
Flow Rate	RFID/QR code: 30 passengers per minute Fingerprint/Palm: 20 passengers per minute	RFID/QR code: 30 passengers per minute Fingerprint/Palm: 20 passengers per minute
Barrier Width	660mm (standard for single pedestrian access) 900mm (optional for trolley or pedestrian with luggage access)	
Power Supply	110V / 220V AC@50 to 60 Hz, DC 24V	
Power Rating	22VA (Standby) 50VA (Operation)	
Fire Signal	Input for voltage free contact	
Noise Level	Less than 60dB	
MTTR	Less than 60 minutes	
MCBF	5 million	
Weight	Gross Weight 32kg (±5kg) (2 boxes) Net Weight 25kg (±5kg) (2 boxes)	Gross Weight 40kg (±5kg) (1 box) Net Weight 30kg (±5kg) (1 box)
Dimension	600*120*1040mm(L*W*H)	
Operating Temperature	-20°C to 70°C	
Operating Humidity	0% to 85% RH (Non-condensing)	
Certifications	CE, FCC, ISO9001	

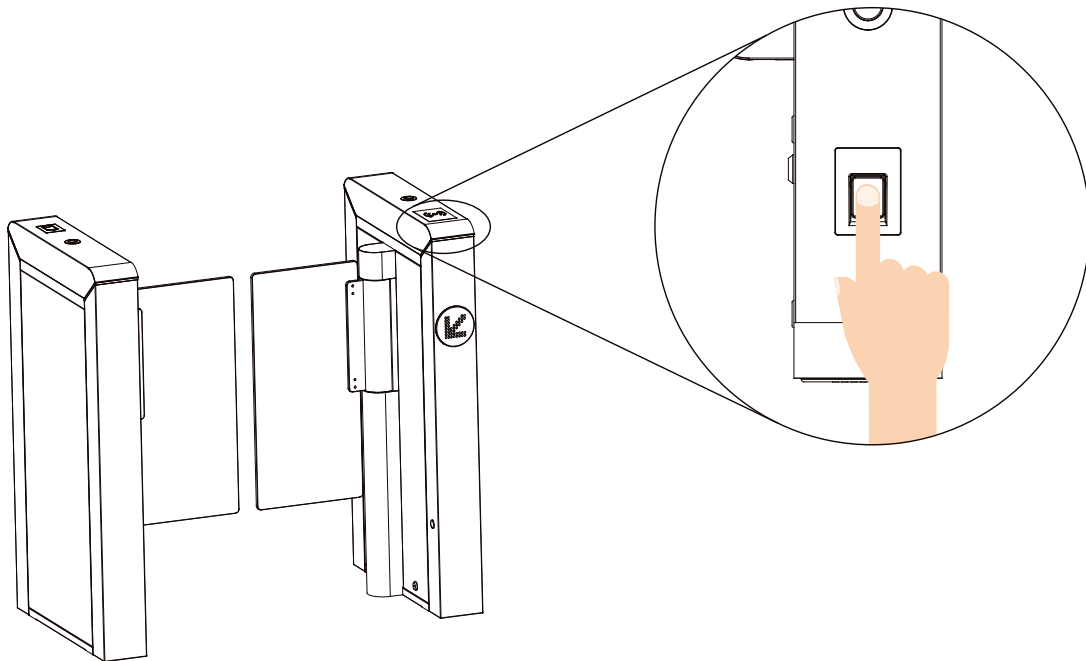
Supported Software	ZKBio CVAccess / ZKBio CVSecurity (depends on equipped access controller)	
Safety Features	Voltage free contact input for fire alarm fail state Automatic drop arm during power off	
Security Features	Infrared Anti-Clamping, Mechanical Anti-Clamping, Power-Off Fail-Safe, Emergency Escape Function	
Product Delivery	Pre-assembled	
Application Environment	Indoor	
Site Preparation	Flat & level finished floor (base plate in options for unfinished floor)	
Dimensions With Packing	762*362*1215mm (L*W*H) (2 boxes)	762*362*1215mm (L*W*H) (1 box)
Security Level	Low	
Emergency Mode	Support (barrier open automatically)	
Packing Material	Wooden (standard)	

2 Functions and Features

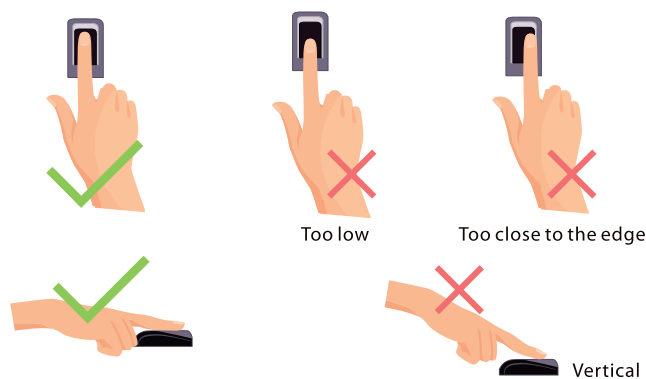
2.1 Fingerprint Verification★

In this verification mode, the device compares the fingerprint that is being pressed onto the fingerprint reader with all the fingerprint data sends and it to the Access Controller.

The device enters the fingerprint authentication mode when a user presses their finger onto the fingerprint scanner.

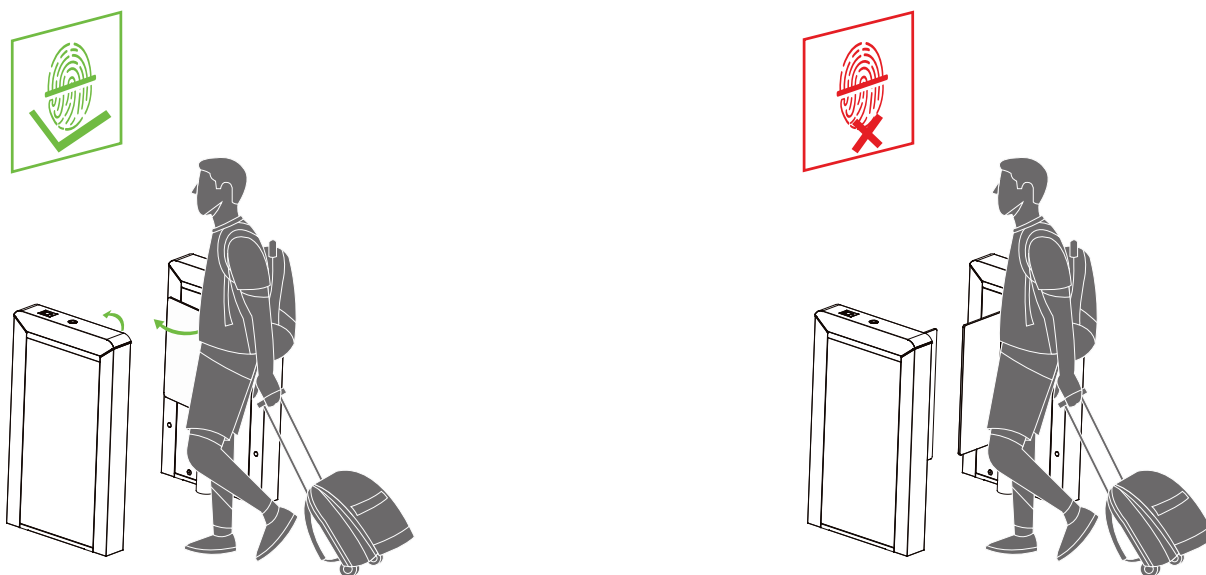


Recommended fingers: It is recommended to use index, middle, or ring finger for registration and avoid using the thumb or little finger, as they are difficult to accurately press onto the fingerprint reader.



Note: Please ensure that you use the correct method when pressing your fingers onto the fingerprint reader for registration and identification. It is important to follow the proper guidelines to avoid any recognition issues. Please note that our company will not be liable for any recognition

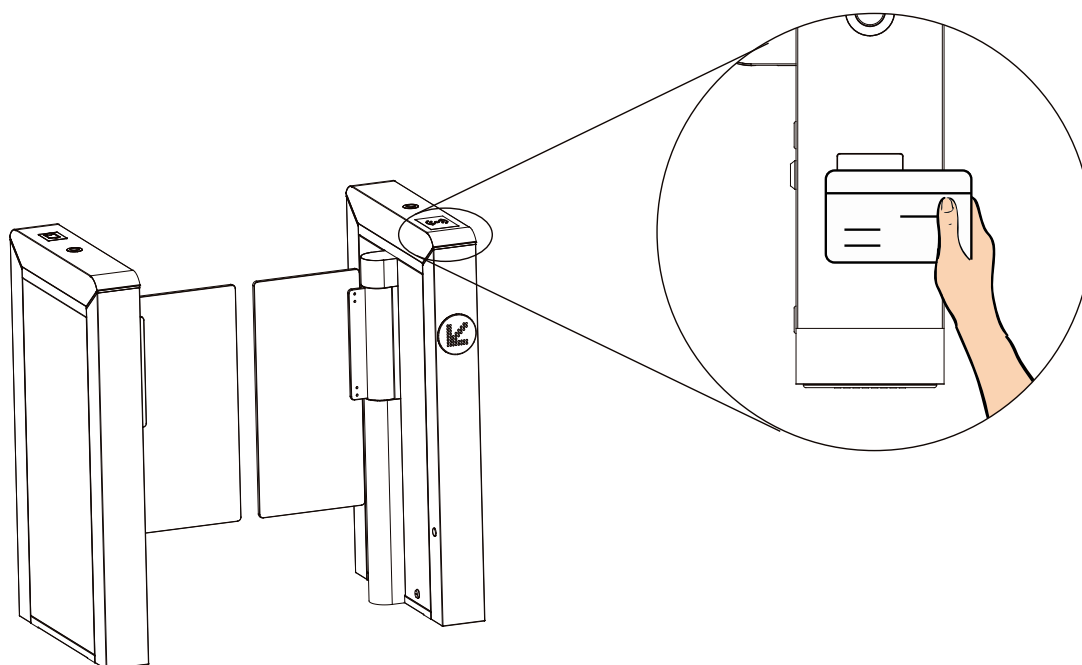
issues that may arise from incorrect usage of the product. We reserve the right to make the final interpretation and modifications regarding this matter.

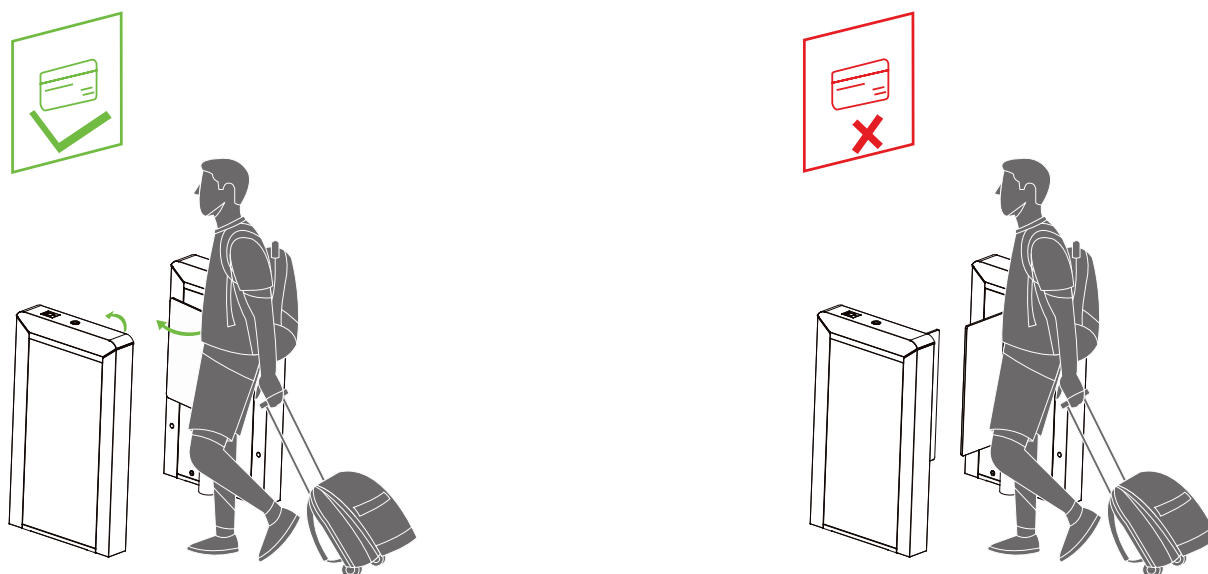


2.2 Card Verification★

In the Card Verification mode, the device compares the card number in the card induction area with all the card number data registered in the device and sends it to the Access Controller.

When a user presses their card on the card reading area, the device enters card authentication mode.

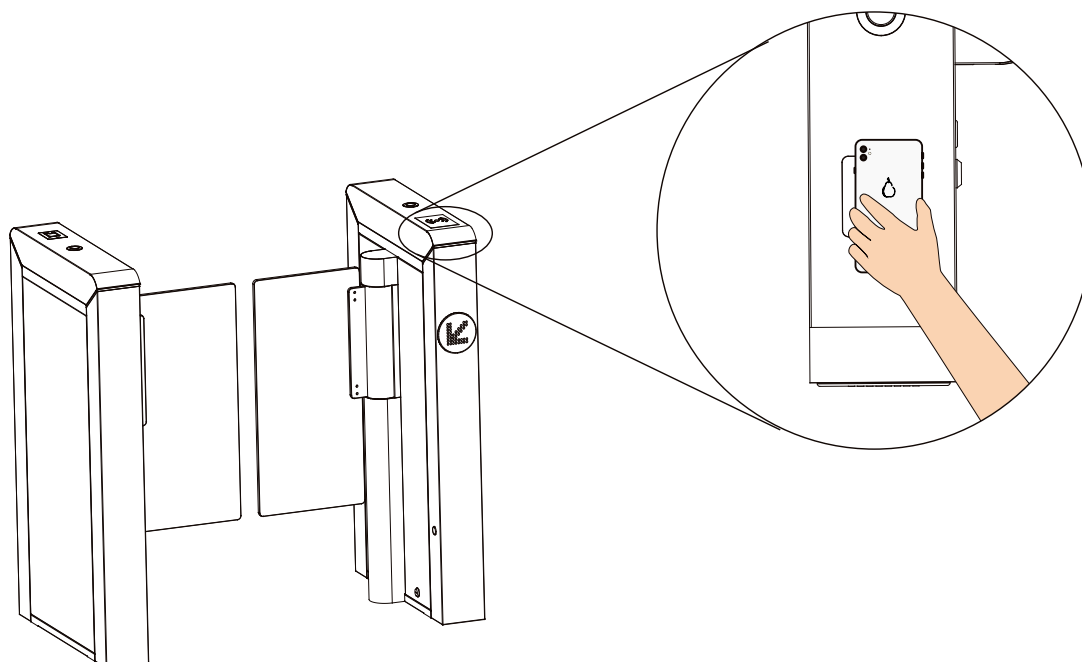


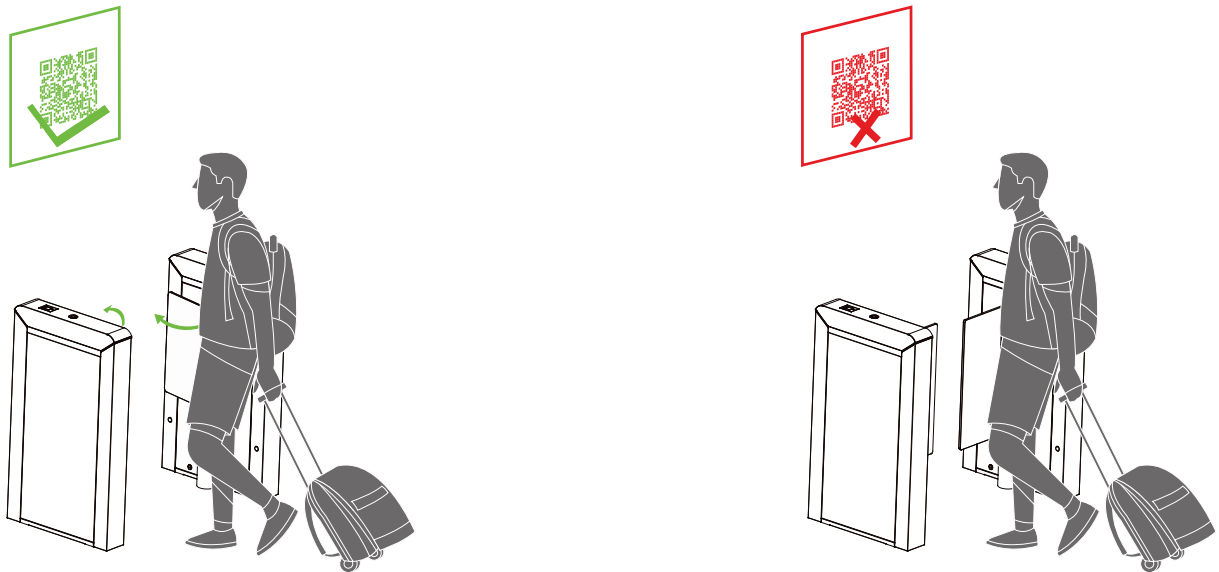


2.3 QR code Verification★

In the QR code Verification mode, the device scans the QR code on the user's mobile phone using the QR code scanner. It then compares the scanned data with the registered QR code and sends the result to the Access Controller.

When the user places the mobile phone displaying the QR code on top of the QR code scanner, the device enters the QR code authentication mode.





2.4 Facial Verification★

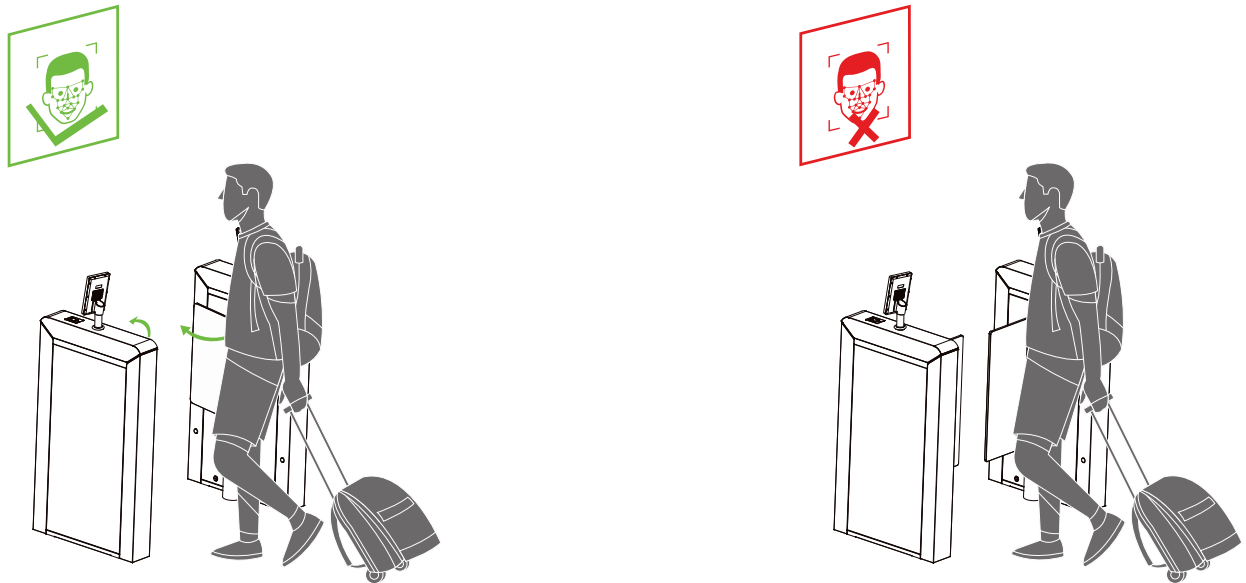
In this verification mode, the device compares the collected facial images with all registered face data in the device and then sends it to the Access Controller.

Please try to keep your face centred on the screen during authentication. When registering your face, ensure that you face towards the camera and remain still.

Recommended Standing Posture and Facial Expression:

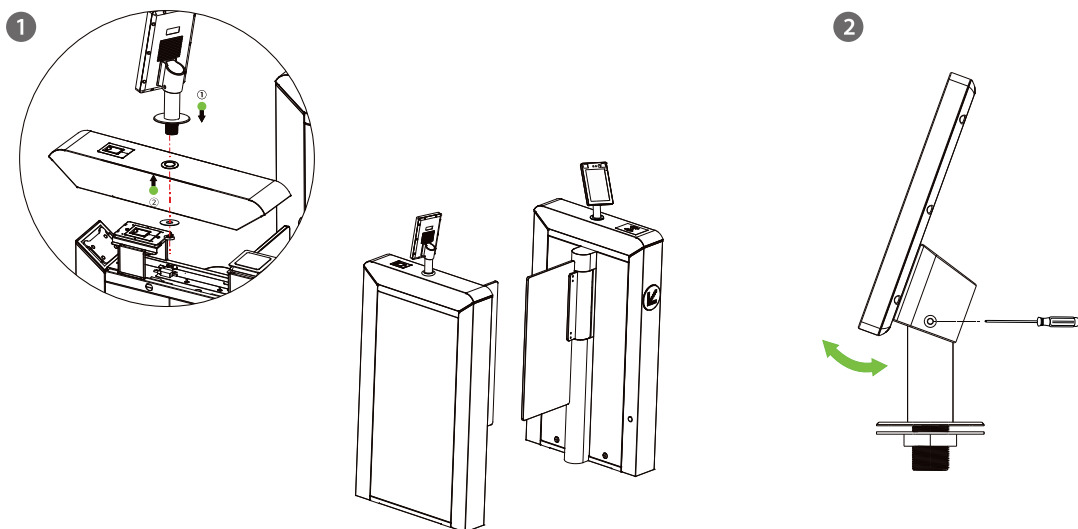


Note: Please keep your facial expression and standing posture natural while enrollment or verification.



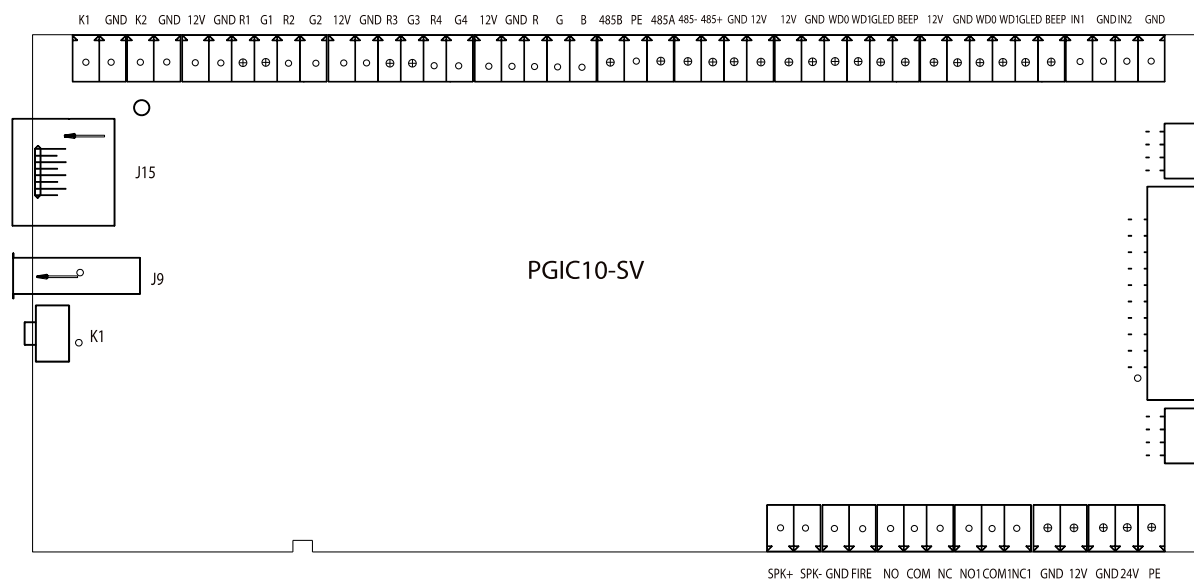
Installation on the speed gate:

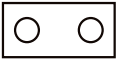
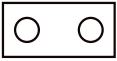
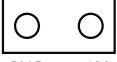
1. Before installation, please pass the wire through the bracket.
2. Insert the bracket into the hole and fix it with a nut.
3. Adjust the angle of the device.

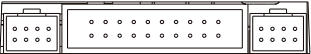
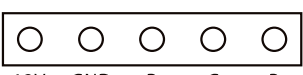
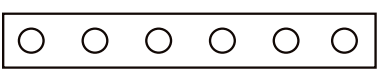
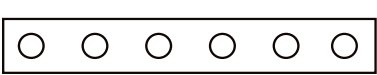
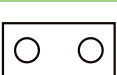
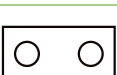


3 Control System Introduction

3.1 PGIC10-SV★

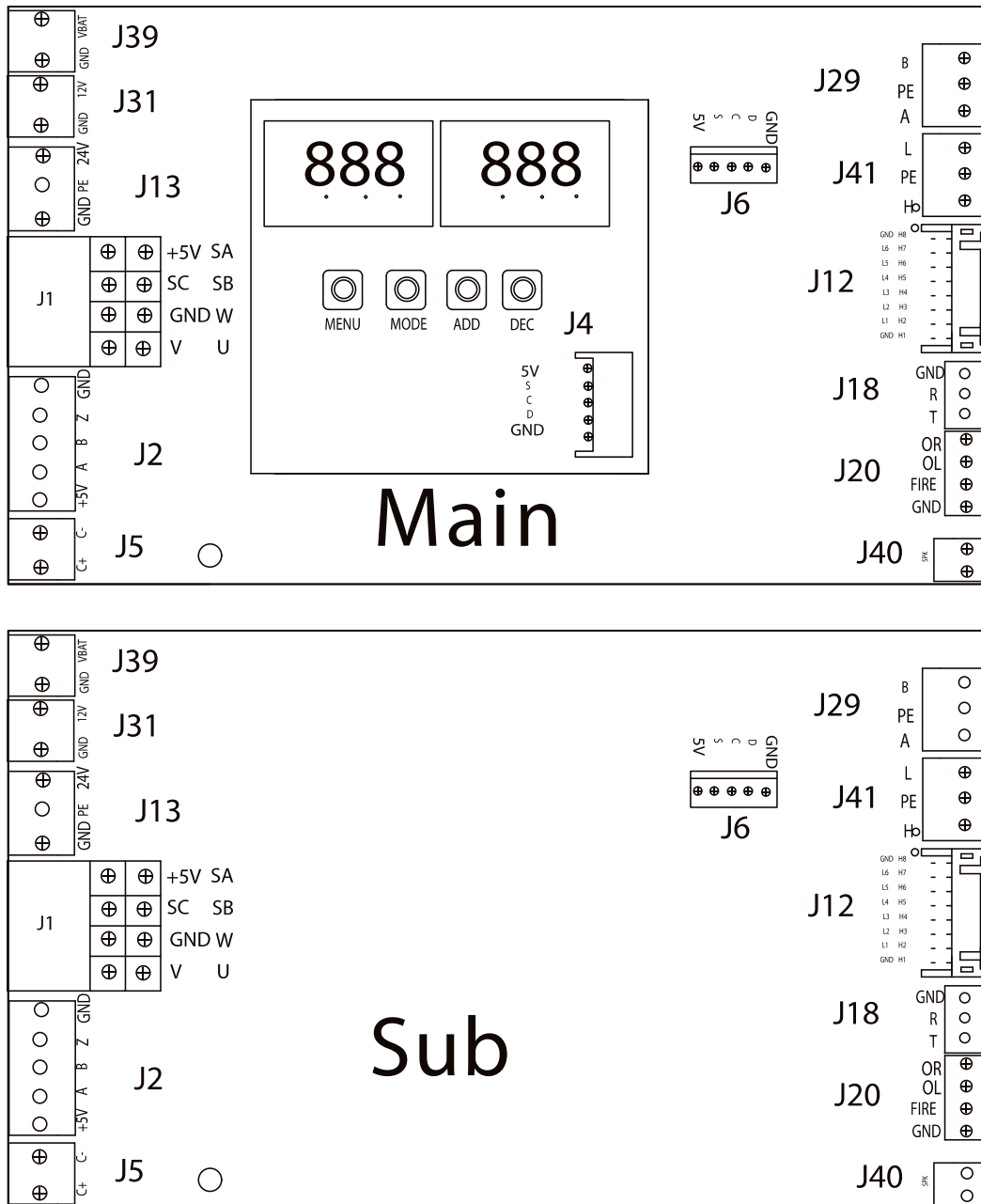


Terminal	Description
J15	Ethernet/PoE interface
J9	USB slot
K1	Reset
 SPK+ SPK-	Speaker
 GND FIRE	Fire signal
 NO COM NC	Auxiliary output
 NO1 COM1 NC1	Auxiliary output
 GND 12V	12V DC power supply

 GND 24V PE	24V DC power supply
	IR sensor
 IN1 GND IN2 GND	Auxiliary input
 12V GND WD0 WD1 GLED BEEP	Wiegand reader
 12V GND WD0 WD1 GLED BEEP	Wiegand reader
 485- 485+ GND 12V	Exit RS485
 485B PE 485A	RS485
 12V GND R G B	Status indicator
 12V GND R3 G3 R4 G4	Exit or entry status indicator
 12V GND R1 G1 R2 G2	Exit or entry status indicator
 K2 GND	Door
 K1 GND	Door

Embedded linux operating system. It has a 2.8-inch touch screen (the display screen) where the parameters can be set via touch screen.

3.2 Main/Sub Motor Driving Controller



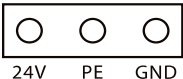
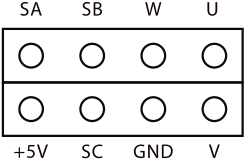
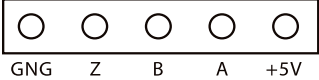
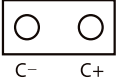
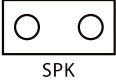
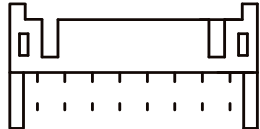
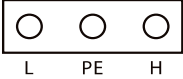
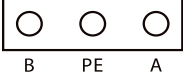
There are 4 keys on the master motor driving controller, "MENU", "MODE", "ADD" and "DEC".

MENU: It is used for enter the Settings menu and to confirm the current modified value.

MODE: It is used to go back to the previous menu and discard the current operation.

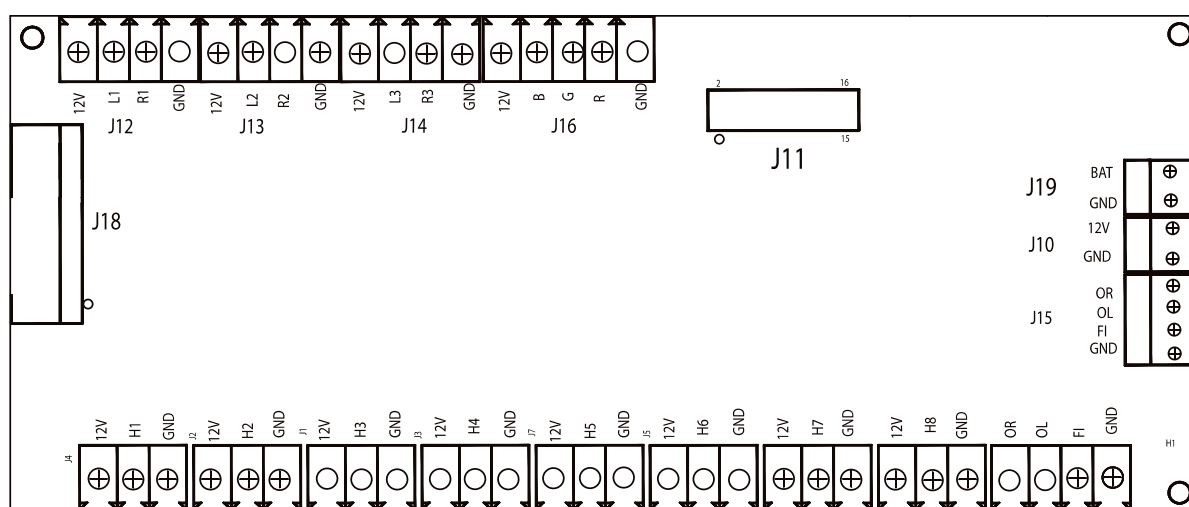
ADD: It is used for navigating to the upper menu item and increasing the value.

DEC: It is used for navigating to the lower menu item and decreasing the value.

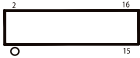
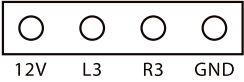
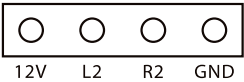
Terminal		Description
 BAT GND	J39	Power out
 12V GND	J31	Power out
 24V PE GND	J13	24V DC power supply
 SA SB W U +5V SC GND V	J1	Motor
 GNG Z B A +5V	J2	Encoder for speed gate
 C- C+	J5	Clutch
 SPK	J40	Speaker
 OR OL FIRE GND	J20	Fire power supply for speed gate
 GND R T	J18	RS232 communication between master and slave drives
	J12	Infrared sensor receiving port
 L PE H	J41	RS485 communication between master and slave drives
 B PE A	J29	RS485 communication

 5V S C D GND J4	Power supply for master motor driving controller display
 GND D C S 5V J6	Power supply for master motor driving controller display

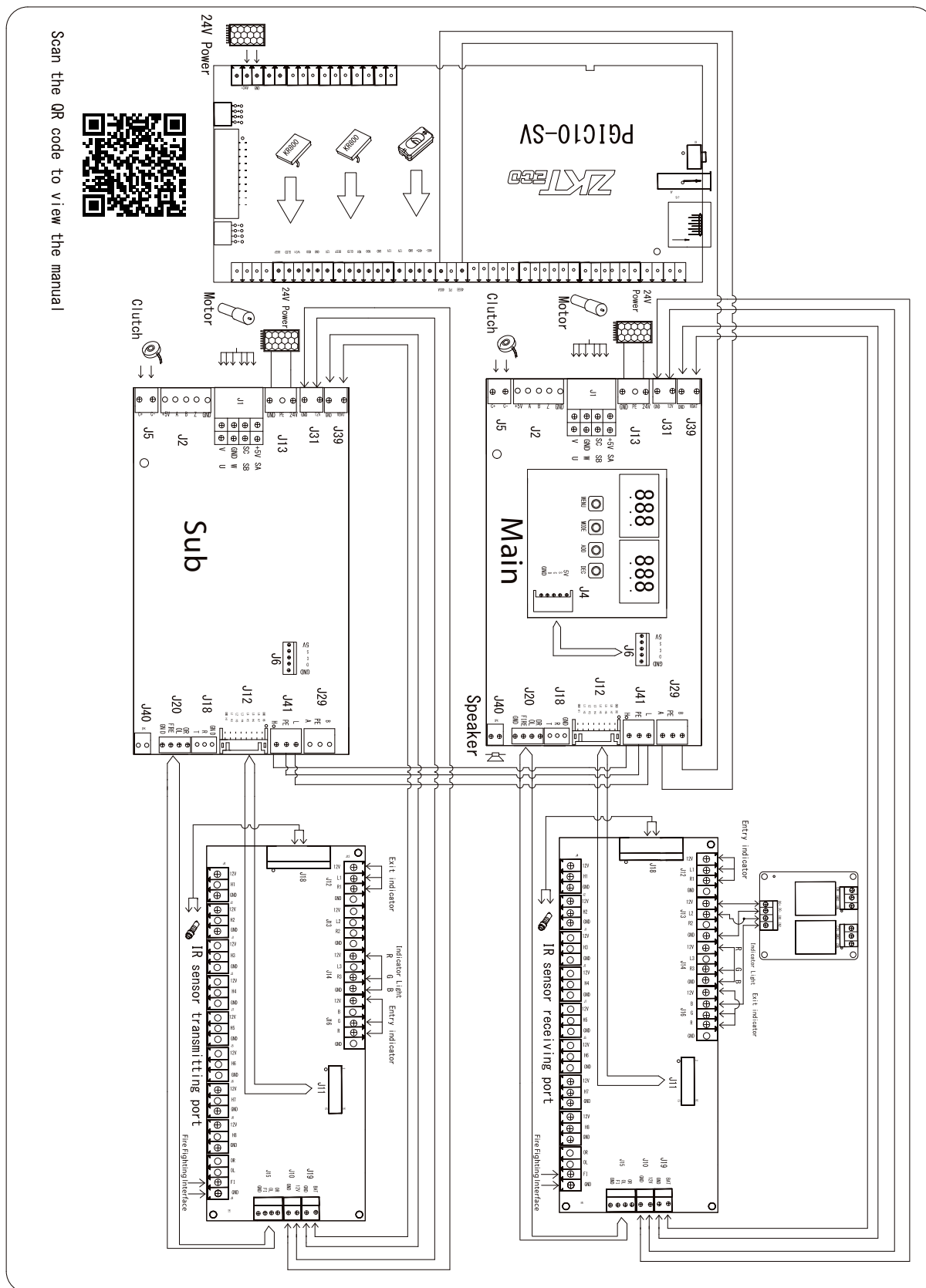
3.3 IR Board



Terminal	Description
 J18	Connecting IR sensor receiving port
 12V H GND x8 J15	IR sensor receiving port
 OR OL FI GND J10	Firefighting interface
 OR OL FI GND J15	Fire power supply for speed gate
 12V GND J10	Power in

 BAT GND	J19	Power in
 2 16 O 15	J11	Infrared sensor transmitting port
 12V B G R GND	J16	Entry indicator
 12V L3 R3 GND	J14	Indicator Light
 12V L2 R2 GND	J13	Reserved
 12V L1 R1 GND	J12	Entry indicator

3.4 Wiring Diagram



3.5 Menu of Speed Gate

Display Mode (01EXXX)

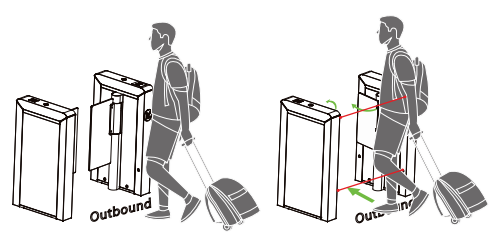
- (01E000) Displays current position of the gate.
- (01E001) Infrared input signal.
- (01E002) Controls input signal.
- (01E003) Test mode (the digital LED displays "---" in the test mode).
- (01E004) Version number. (Default)

Access Control Mode Settings (02EXXX)

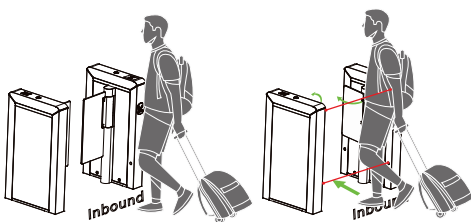
- (02E001) Bidirectional Controlled Access. Entry and Exit requires valid verification (Default).



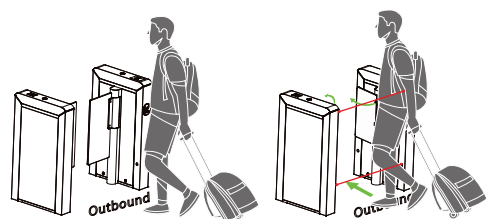
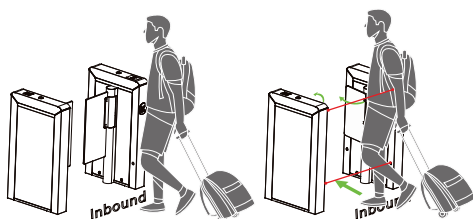
- (02E002) Valid Verification for Entry / Free Exit.



- (02E003) Free Entry / Valid Verification for Exit.



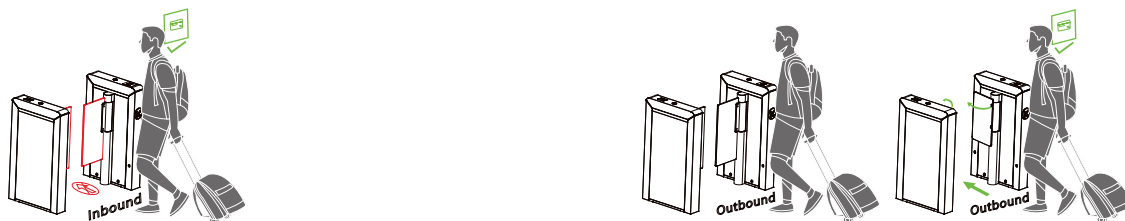
- (02E004) Bidirectional Free Access.



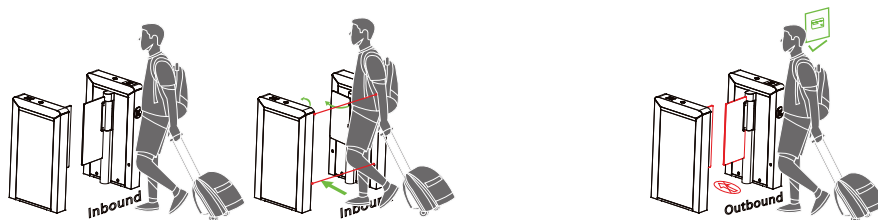
- (02E005) Entry Controlled (Valid Verification Needed) / Exit Prohibited (No Access).



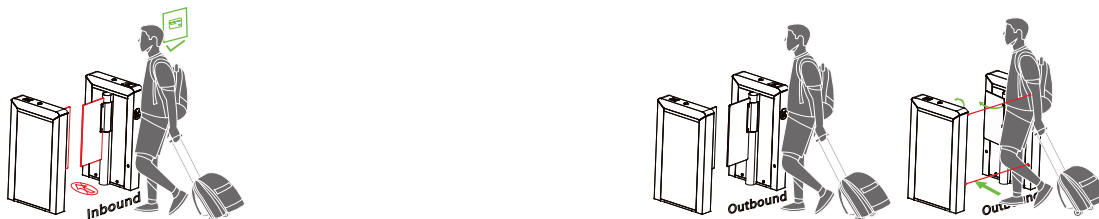
- (02E006) Entry Prohibited (No Access) / Exit Controlled (Verification Needed).



- (02E007) Entry Free / Exit Prohibited.



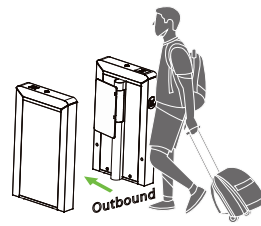
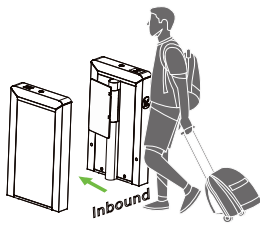
- (02E008) Entry Prohibited / Exit Free.



- (02E009) Bidirectional Prohibited.

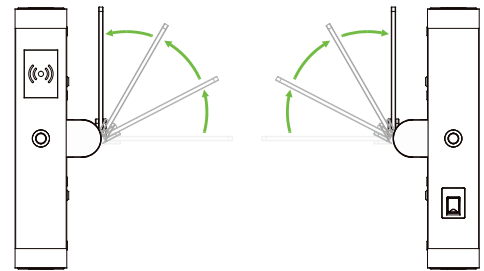
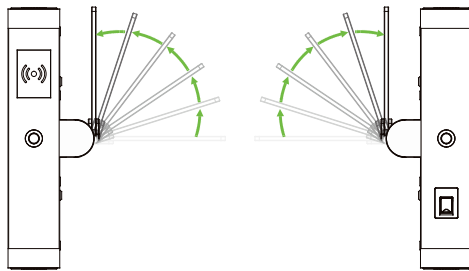
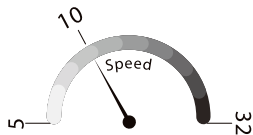


- (02E010) Bidirectional Always Open (Normally Open).



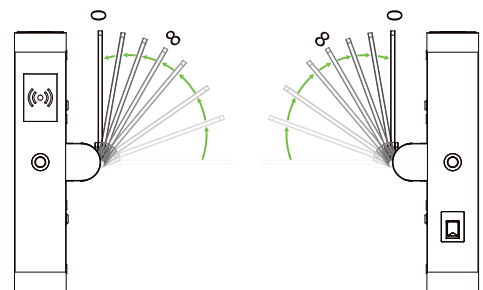
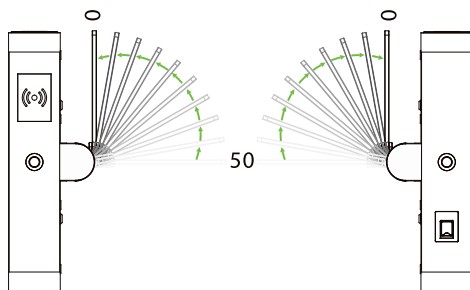
Gate Opening Speed (03EXXX)

To open the gate, you can adjust the gate opening speed. Setting a larger number will result in a faster opening speed. The Gate Opening Speed value can be configured within the range of 5 to 32, and the default value is 24.



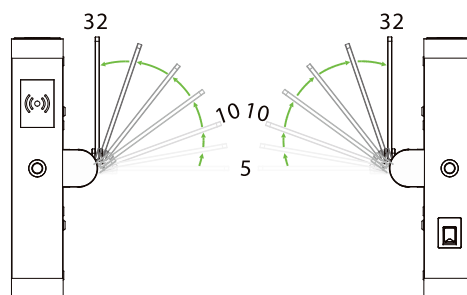
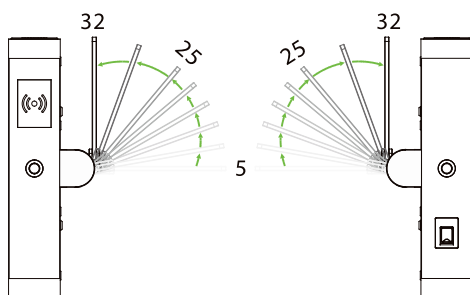
Gate Opening Deceleration Distance (04EXXX)

The larger the number, the longer the deceleration time and the more stable the swing arm operation. The Gate Opening Deceleration Distance can be set between 0 to 50 and the default value is 8.



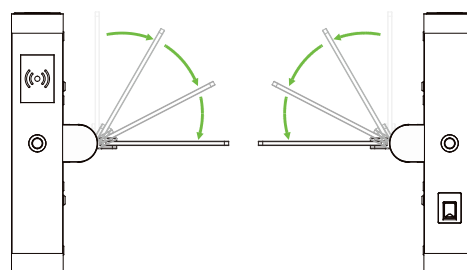
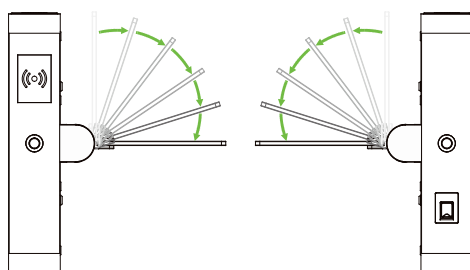
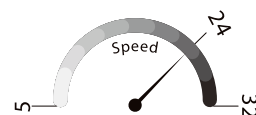
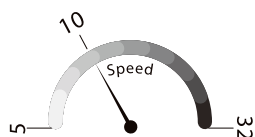
Gate Opening Compensation Speed (05EXXX)

It can be set when the swing arm cannot open to the limit or shakes. The larger the number is set, the faster of the compensation speed. The Gate Opening compensation Speed value can be set between 5 to 32 and the default value is 10.



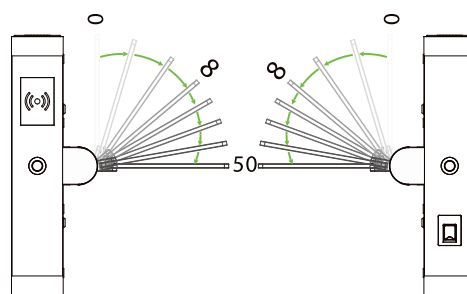
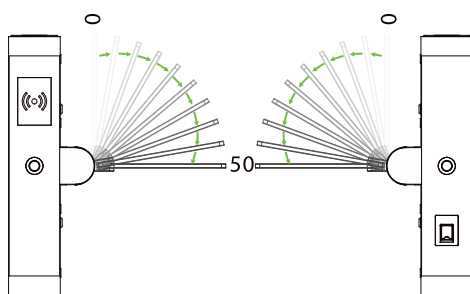
Gate Closing Speed (06EXXX)

Set the gate closing speed to close the gate. The larger the number is set, the faster the speed. The Gate Closing Speed value can be set between 5 to 32 and the default value is 24.



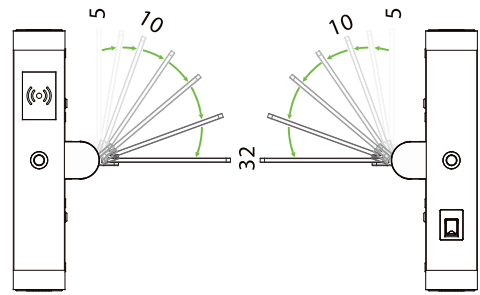
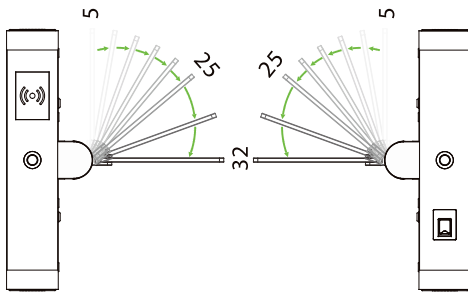
Gate Closing Deceleration Distance (07EXXX)

The larger the number, the longer the deceleration time and the more stable the swing arm operation. The Gate Closing Deceleration Distance value can be set between 0 to 50 and the default value is 8.



Gate Closing Compensation Speed (08EXXX)

It can be set when the swing arm cannot close to the zero position or shakes. The larger the number is set, the faster of the compensation speed. The Gate Closing compensation Speed value can be set between 5 to 32 and the default value is 10.



Main / Sub Setting (09EXXX)

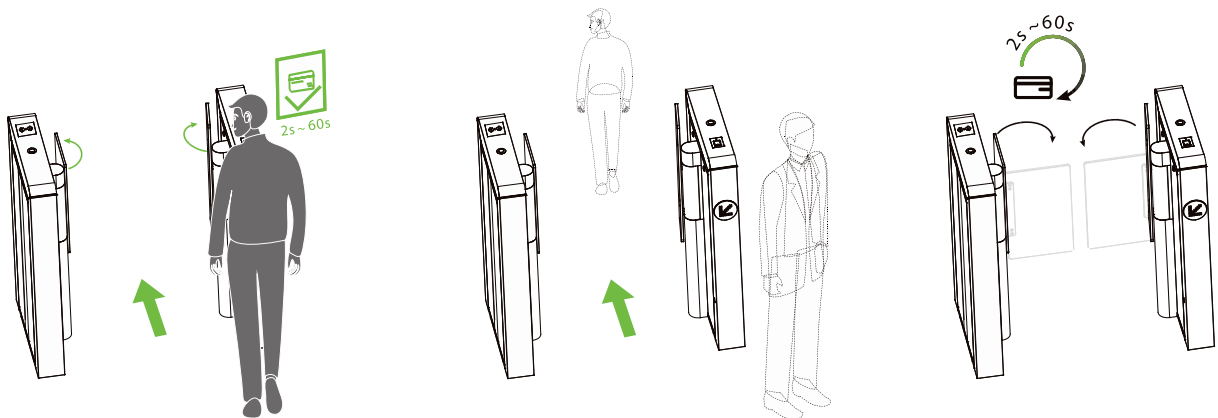
- (09E000) Main
- (09E001) Sub (Default)

RS485 Address (10EXXX)

It can be set between 0 to 254 and the default value is 0.

Open Duration Time (11EXXX)

The valid time period after a successful verification can be configured. Once the set time is reached, the gate will automatically close. The longer the number set, the longer the valid time. The valid value ranges from 2 to 60 seconds, with a default value of 5 seconds.



Gate Closing Delay Time (12EXXX)

Set the delay time of gate closing after passing. The valid value for gate closing delay time can be set between 0 to 60s and the default value is 0s.



Correct Barrier Position Adjustment (13EXXX)

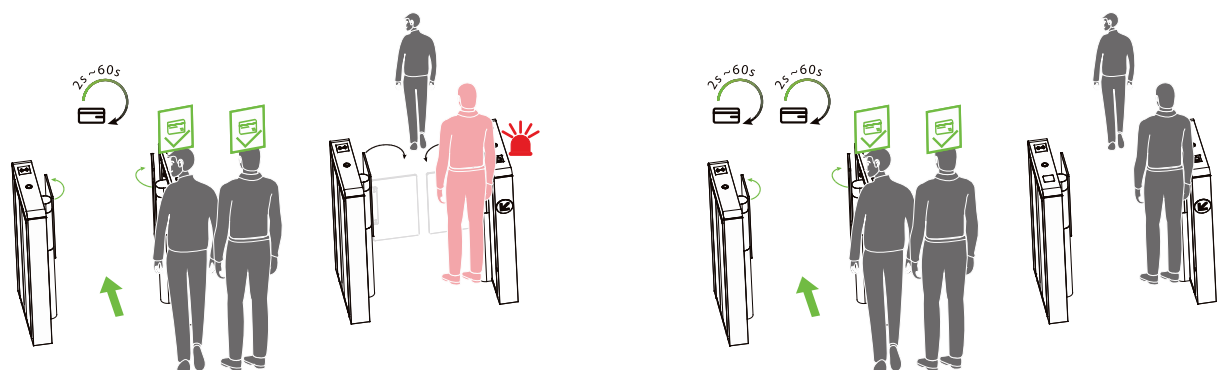
- (13E001) Zero position
- (13E002) Right position
- (13E003) Left position
- (13E004) Sub position

1. Adjust the position only when Mars-S100 series is installed properly.
2. When setting the zero position, you can manually push the swing arm for fine-tuning. If the barrier exceeds a certain angle, it will be invalid. (At this time, the digital LED displays 13E000).

Gate Opening Memory (14EXXX)

- (14E000) Close (Default)
- (14E001) Open

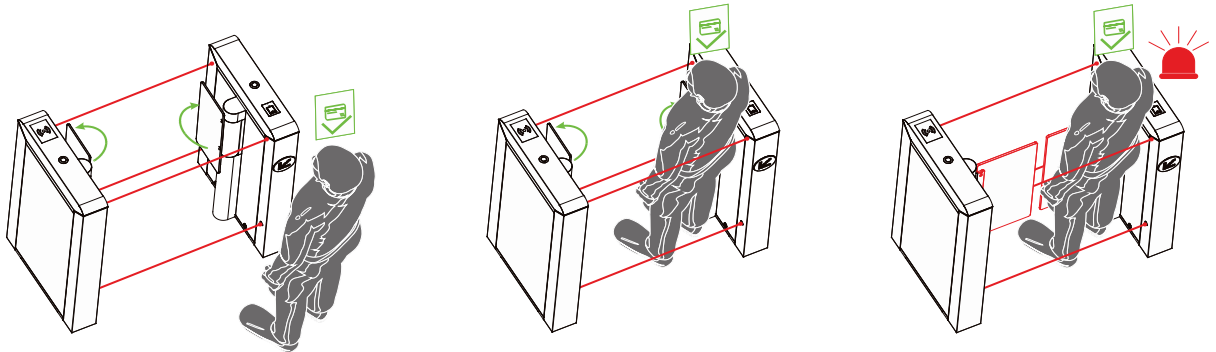
When more than two legal access signals are given at the same time (including the same direction and the opposite direction), the system will remember all pass requests and complete each pass in turn.



Authentication in Lane (15EXXX)

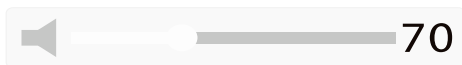
It allows the pedestrian verification during IR sensor triggered.

- (15E000) Allow (Default)
- (15E001) Forbidden



Volume Setting (16EXXX)

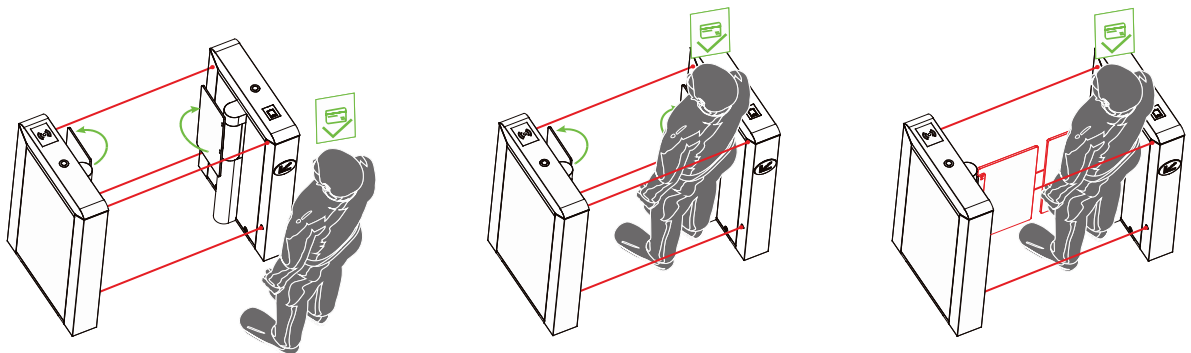
Volume Setting is used for adjusting the volume of the device. The larger the number is set, the louder the volume. The valid value for Volume Setting can be set between 1 to 100 and the default value is 40.



Close Alarm Tone (17EXXX)

When the alarm tone is turned off, the Turnstile will not emit an alarm tone when encountering an alarm situation. The following figure shows an example of the prohibition of authentication in lane:

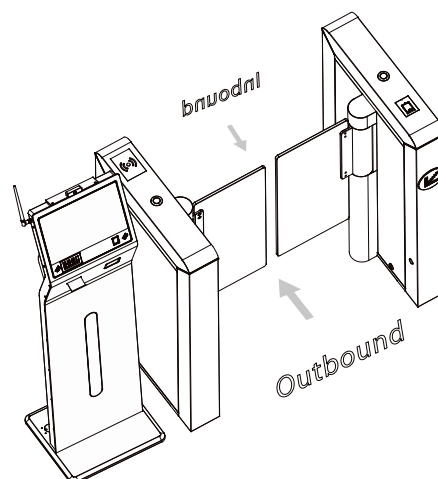
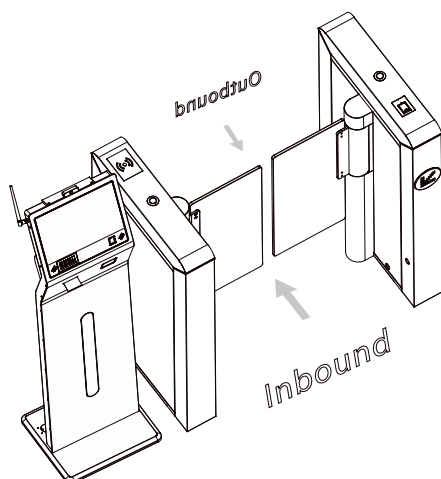
- (17E000) Close
- (17E001) Open (Default)



Exchange Entrance and Exit Voice (18EXXX)

Ordinary alarm sounds do not need to be exchanged.

- (18E000) Right in, left out (Default)
- (18E001) Right out, left in



Stay Duration Time (19EXXX)

Set the duration of stay in the channel after successful verification. The valid value for Stay Duration Time can be set between 5 to 30 seconds and the default value is 10s.



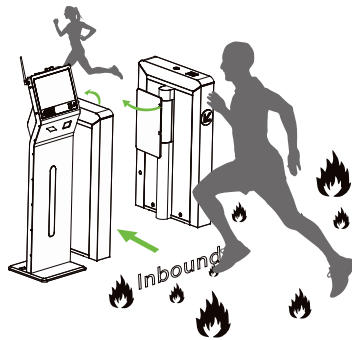
Force Adjustment (20EXXX)

The larger the number, the greater the efficiency of the gate opening and closing force. The valid value for Force Adjustment can be set between 10 to 100 and the default value is 50.

Fire Alarm Response Mode (21EXXX)

Configure gate behavior when fire alarm is triggered:

- (21E000) Gates remain open (Entrance) (Default)
- (21E001) Gates remain open (Exit)



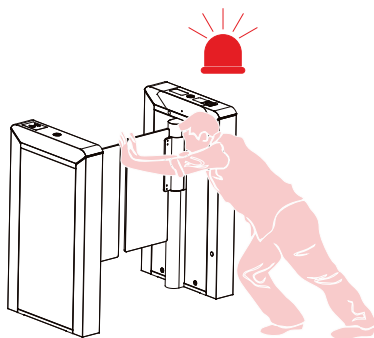
Clutch Start Angle (22EXXX)

Set the angle at which the clutch starts. The larger the number, the bigger the angle. The valid value for Clutch Start Angle can be set between 0 to 99, and the default value is 10.

Clutch Alarm Setting (23EXXX)

When the gate is unlocked in an unauthorized way, the clutch gets locked automatically. The Clutch Alarm Setting can be set as:

- (23E000) Delayed unlock (Default)
- (23E001) Authentication to unlock.

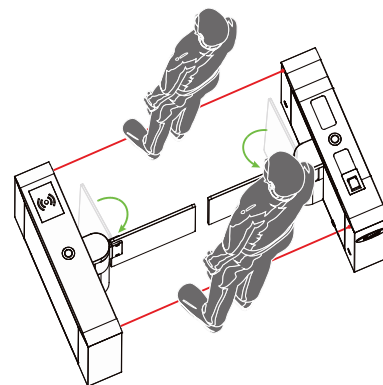
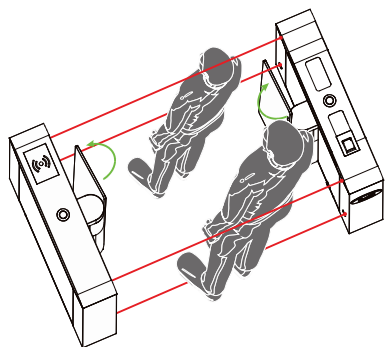


Factory Reset (24EXXX)

- (24E001) Restore factory settings.

Anti-pinch Area Setting (25EXXX)

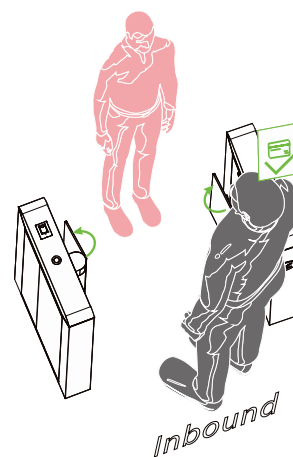
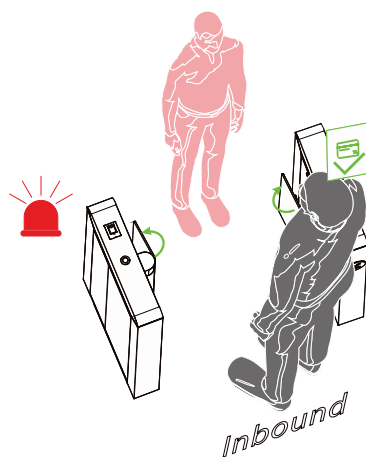
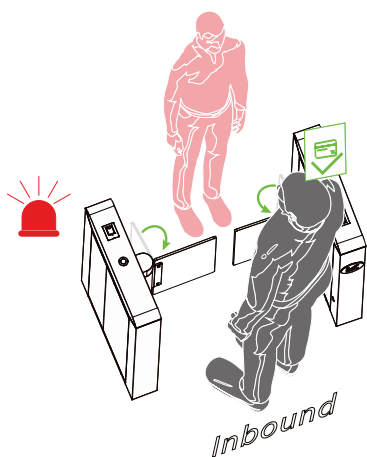
- (25E000) All Infrared anti-pinch (Default)
- (25E001) First and last pair are not anti-pinch.



False Direction Entry (26EXXX)

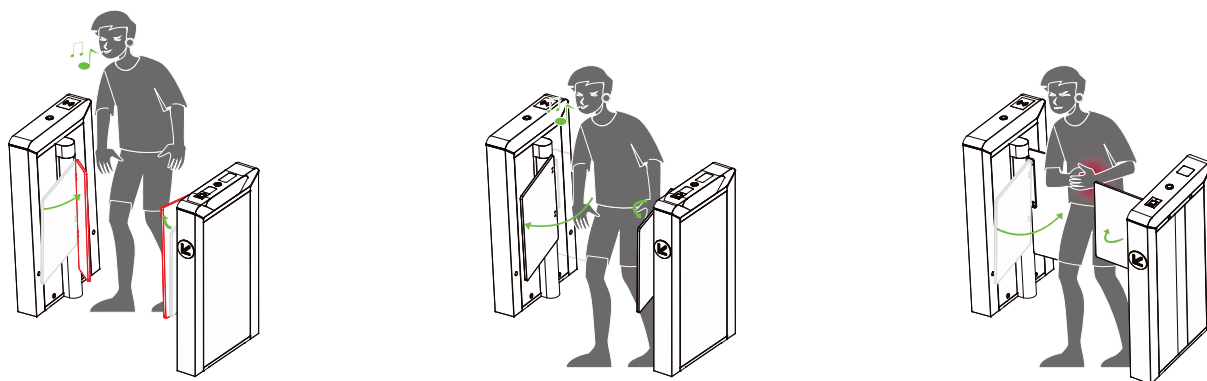
When the Anti-pinch Area Setting needs to be set to (25E001) only, the False Direction Entry (26E000) is effective.

- (26E000) Close
- (26E001) Only alarm (Default)
- (26E002) No detection



Anti-pinch Action Setting (27EXXX)

- (27E000) Stop
- (27E001) Open (Default)
- (27E002) Close the function.



Voice Tone Switching (28EXXX)

- (28E000) Voice playback (Default)
- (28E001) Alarm

Motor Installation Direction (29EXXX)

- (29E000) Inverted
- (29E001) Upright (Default)

Note: First power up is Inverted.

Swing Arm Type (30EXXX)

- (30E000) Ordinary swing door (Default)
- (30E001) Larger swing door

Right Synchronous Adjustment (31EXXX)

You can adjust the synchronization of the Main through this menu, the larger the value, the faster the response of the Main to open the gate, the setting range lies between 30 to 200, and the default value is 100.

Left Synchronous Adjustment (32EXXX)

You can adjust the synchronization of the Sub through this menu, the larger the value, the faster the response of the Sub to open the gate, the setting range lies between 30 to 200, and the default value is 100.

Entrance Direction Voice (33EXXX)

Select the voice to entrance the direction, there are 30 voices to choose from, and the default value is 0. Only Chinese currently supported. Multi-language support planned for future updates.

Exit Direction Voice (34EXXX)

Select the voice to exit the direction, there are 30 voices to choose from, and the default value is 17. Only Chinese currently supported. Multi-language support planned for future updates.

3.6 Error Code for Turnstile

Error Code	Cause
ER0002	Power-on Self-test failure, Hall Limit Detection Error
ER0004	Run Timeout
ER0008	Clutch Locked
ER016	The code disk detection failed.
ER032	Electric Motor Shaft Lock Protection failure

4 Maintenance

4.1 Chassis Maintenance

The chassis is made of cold-rolled steel SPCC (GB700) or SUS304 stainless steel. If it has been used for a long time, the surface may have rust stains. Clean the surface thoroughly with a clean cloth on a regular basis. Coat the surface with anti-rust oil, but do not cover the infrared sensor.

4.2 Movement Maintenance

Before doing maintenance, turn off the power. Open the door, wipe the surface dust, and apply lubricant for smooth movement.

4.3 Power Supply Maintenance

- Switch off the power supply before maintenance.
- Check the power plug connection, if found loose, fix it properly.
- Do not change any connection position randomly.
- Check the external power supply insulation periodically.
- Do periodic check for any kind of leakage.
- Check if the technical parameters of interface are normal.
- Check the service life of the electronic components and replace accordingly.

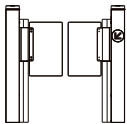
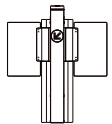
Caution: All the above-mentioned maintenance methods for speed gates are must be carried out by a professional technician, especially the movement and the electric control part. Operational safety is crucial, therefore it is important to deactivate the power supply when the speed gate is not in use.

5 Troubleshooting

No.	Failure Descriptions	Analysis and Solution
1	The mode indicator light does not respond or the indication is incorrect.	Check the control panel mode and the indicator wiring connections.
2	After swiping the card, there is only a speed gate unlocked.	Check the Main / Sub settings and the 8-core, 2-core connection lines. See the wiring diagram for the specific connection circuit.
3	The speed gate doesn't close when the opening delay time is ended.	Check to see if the opening delay time is too long or whether the IR sensor is blocked.
4	When the gate is self-tested, the swing arm is not in the normal closing position!	Please remove any obstacles and then restart the self-test after powering on.

6 Packing List

The package consists of the following items:

	Mars-S100	Main: 1 Sub: 1
	Mars-S120	1
	Card★	1
	Expansion Screw M12*100	8 (Mars-S100)
		4 (Mars-S120)
	Stainless Steel Maintenance Wipes	1
	Hex wrench	1
	Allen Screw	4
	Key	2
	Washer	8 (Mars-S100)
		4 (Mars-S120)

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