

User Manual

Comet Series Speed Gate

Applicable Model(s): Comet-S1000, Comet-S1200

Date: February 2024

Doc Version: 1.1

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.

ZKTeco Headquarters

Address ZKTeco Industrial Park, No. 32, Industrial Road,
Tangxia Town, Dongguan, China.

Phone +86 769 - 82109991

Fax +86 755 - 89602394

For business-related queries, please write to us at: sales@zkteco.com.

To know more about our global branches, visit www.zkteco.com.

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 **Comet Series Speed Gate**.

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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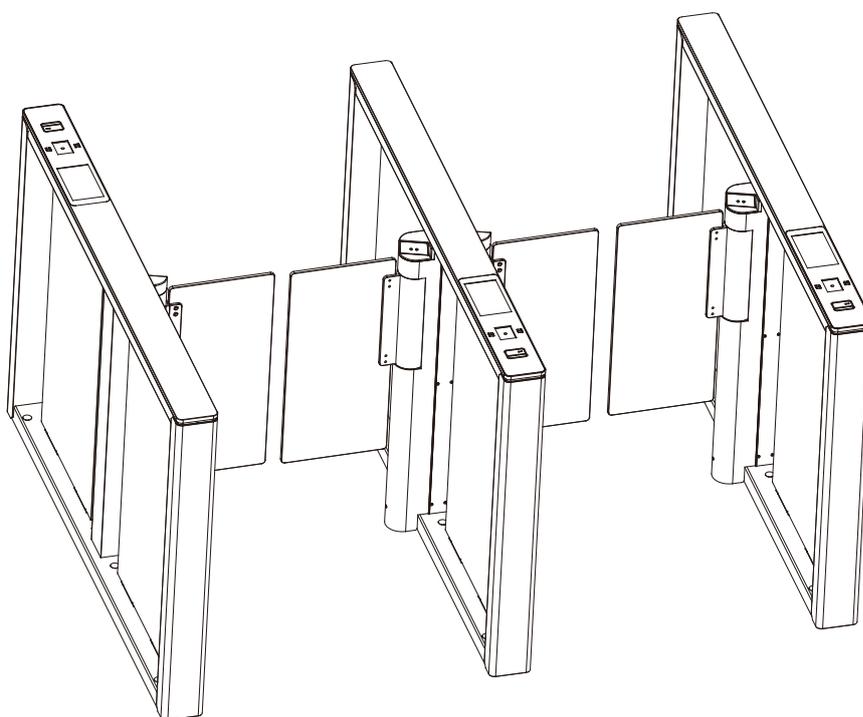
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Revision History

Revision	Date	Author	Reviewer	Description
V1.0	08/09/2023	Yang Kaijin		Original Document
V1.1	02/23/2024	Yang Kaijin		The appearance of the device, wiring diagram and function menu have been changed. Voice playback have been added.

1 Overview

Speed gate Comet series is high-end pedestrian passage gate device developed, produced and sold by ZKTeco, boasting a durable aluminum shell treated for anti-corrosion. Its motor, powered by a precision-type planetary reducer BLDC (Brushless DC) motor. Equipped with high-quality infrared sensors, it delivers accurate detection, and strong anti-interference, and adapts to various environments with multiple logic judgments. Featuring the latest driver technology, it supports multiple mode switching and includes protections against over-current, over-voltage, and over-temperature, making it ideal for office buildings, commercial establishments, and other upscale locations.



1.1 Features

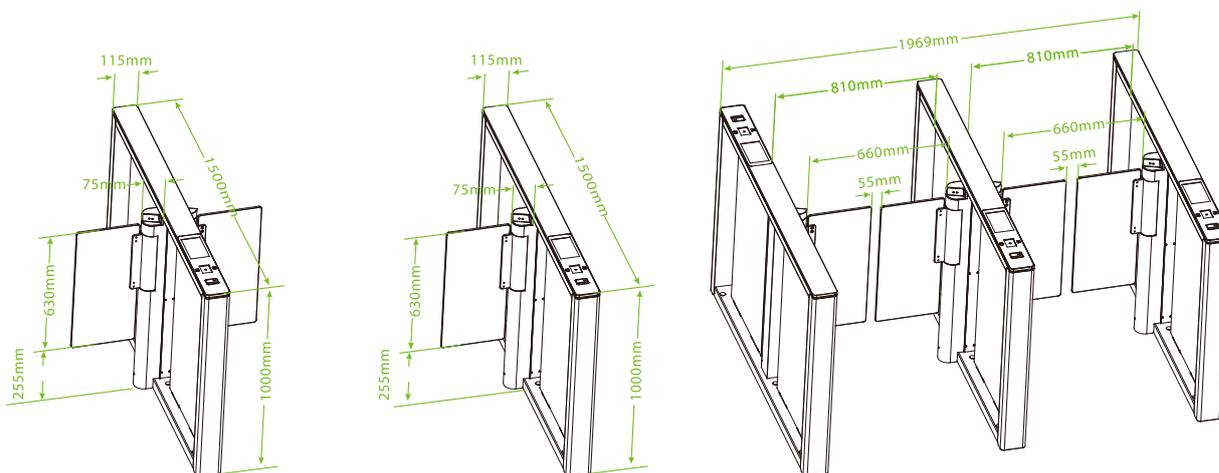
- Long service life, capable of opening and closing the gate more than 6 million times when measured.
- Multi alarm function, such as break-in, wrong direction entry and door open overtime alert.
- Emergency mode automatically opens the gate in case of power failure or fire signal trigger.
- Security function prevents unauthorized entry by engaging a pair of clutches if the barrier is forced, automatically resetting after engagement.
- Self-protection function to prevent strong intrusion, excessive current and other special circumstances, such as damage to the product, death, etc.

- Multiple anti-pinch functions ensure pedestrian safety, including infrared anti-pinch protection and secondary infrared blocking.
- Unload the force when encountering blocking to prevent bruising pedestrians.
- Combined with peripheral verification devices, it supports face, human ID, RFID card, ESD device, sweep code and other verification methods.
- Memory function allows passage of multiple people after several consecutive swipes.
- Development interfaces available for system integration.
- Aluminum alloy case ensures long-lasting durability.
- Operates smoothly, silently, and consumes low power.
- An embedded LED strip is situated along the barrier's side, offering a spectrum of 7 RGB colours and a range of visual effects. This feature is fully customizable to meet our customer's unique preferences.

1.2 Appearance and System Components

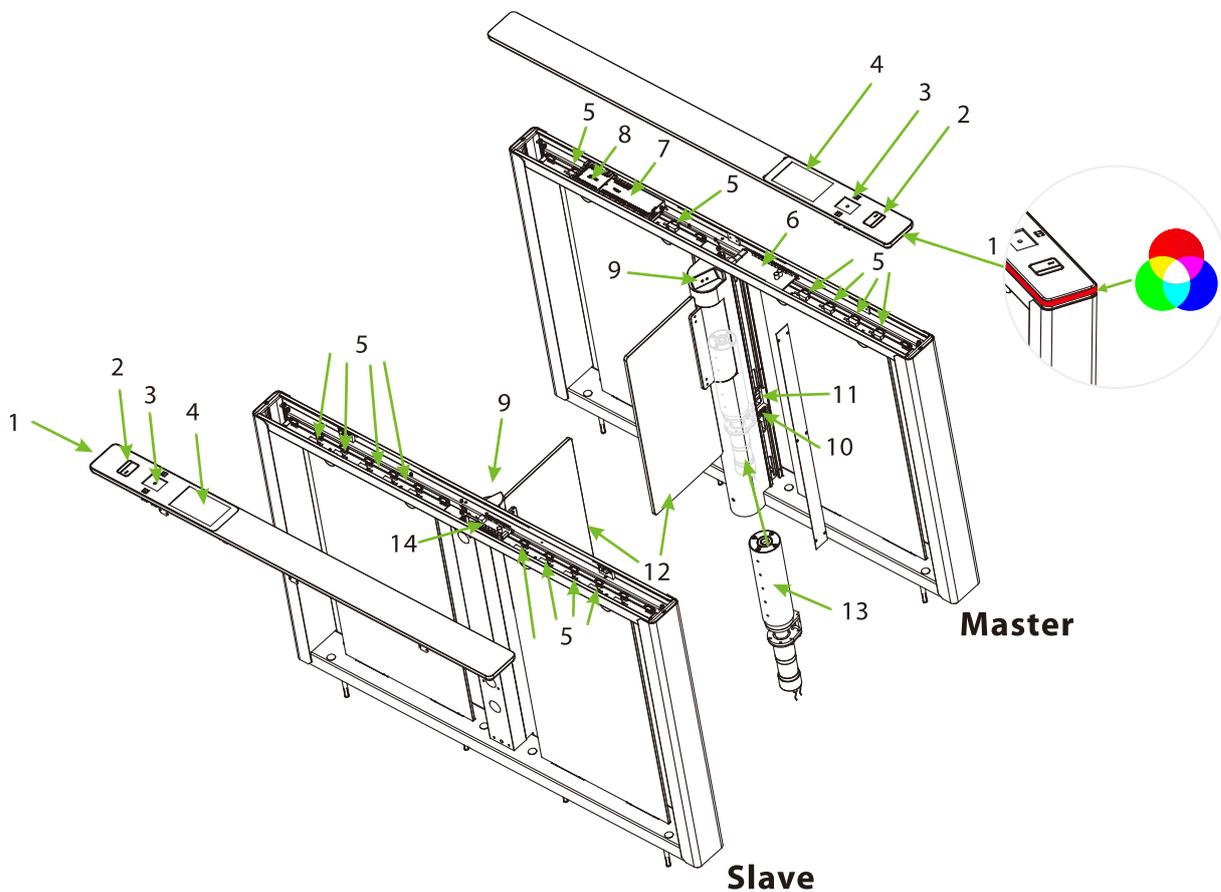
1.2.1 Appearance

The appearance and dimensions of the Comet series are shown in the figure below:



1.2.2 System Components

The system components of the Comet series are shown below:



1. Traffic Indicator	2. Card Reading
3. Verification Units★	4. 7-inch Touchscreens★
5. Infrared Sensor	6. Master Turnstile Controller Board
7. Access Controller Board ★	8. Infrared Expansion★
9. Facial Recognition Machine ★	10. Power Supply
11. Motor Switch	12. Swing Arm
13. Motor	14. Slave Turnstile Controller Board

1.3 Mechanical System

The mechanical system of the turnstile consists of the chassis and the core component. The chassis serves as a carrier where the Traffic Indicator, Reader, QR code scanner/Palm scanner★, Fingerprint reader★, Camera★, 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 mainly consists of the Reader/QR code scanner/ Palm scanner★/Fingerprint reader★/Camera★, 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.

Palm Scanner★: The device compares the palm image collected by the palm module with all the palm data templates in the device 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.

Camera★: The device compares the collected facial images with all of the face data registered in the device and then sends it to the Access Controller.

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

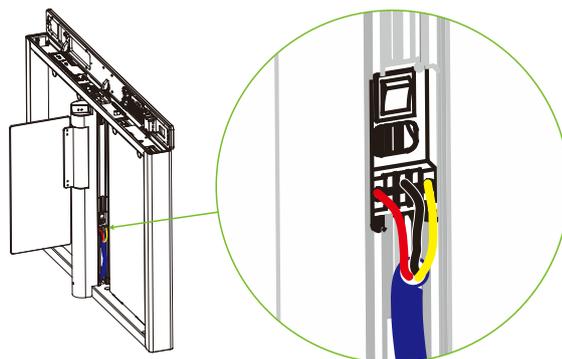
Turnstile Control Board: The Turnstile control board is the system's control center that receives signals from the Card reader/fingerprint reader★/QR code reader/ Palm scanner★/Camera★. The IR performs logical calculation and processing of these signals and then sends executive commands to the Traffic 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, anti-tailgate and other violations.

1.5 Working Principle

1. When the device is powered on, the device 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.



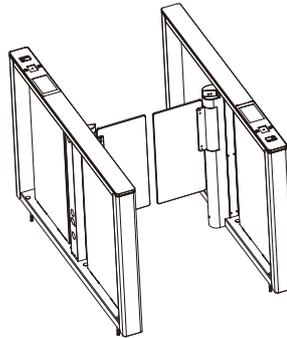
2. When a valid card/fingerprint★/QR code/Palm★/Face★, the display will show whether it is successful or not, and the buzzer will give a positive audible prompt to the pedestrian, indicating that successfully verified. Then, the card reader/fingerprint reader★/QR code reader/Palm scanner★/Camera★ sends 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/Palm★/Face★ 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/Palm★/Face★.
4. After 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/Palm★/Face★ 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/Palm★/Face★ 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.

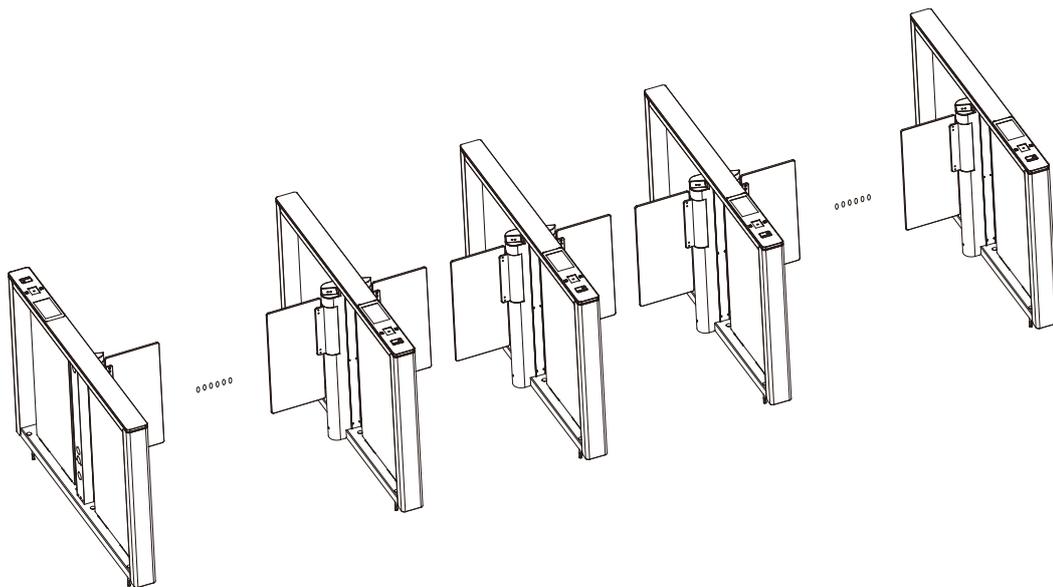
1.6 System Composition

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

Feature	Specification
Communication	TCP/IP, RS485
Input Voltage	AC110V/240V, 50/60Hz
Input Control Signal	Dry contact
Output Voltage	DC 24V
Protection Level	N/A
Time of Gate Opening/Closing	0.8 to 3s
Operating Humidity	5% to 80% (Non-condensing)
Operating Temperature	-28°C to 60°C (Standard)
Throughput Rate	Up to 25 people/min (Using credentials)
Infrared Sensor	8 pairs
LED Indicator	Support (RGB color)
Working Environment	Indoor
Drive Unit	Brushless motor
Barrier Movement	Swing
Lane Width	660mm (Option: 900mm)
MCBF	6 Millions
Dimension (mm) (L*W*H)	1500*115*998.4
Net Weight	50kg*2 (±5kg)

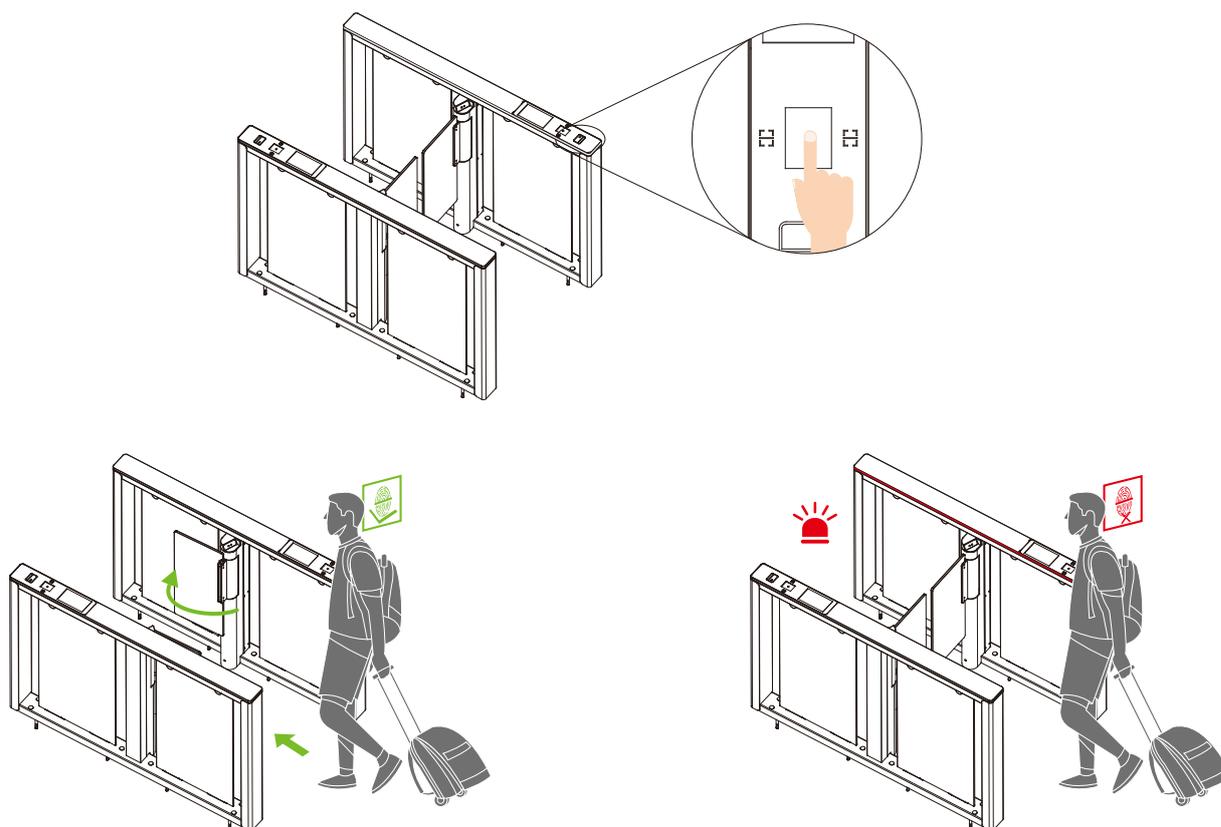
Gross Weight	64kg*2 (\pm 5kg)
Noise	<60dB
Certifications	CE and FCC
Traffic Indicator	Green: Lane available Red: Lane unavailable

2 Function Introduction

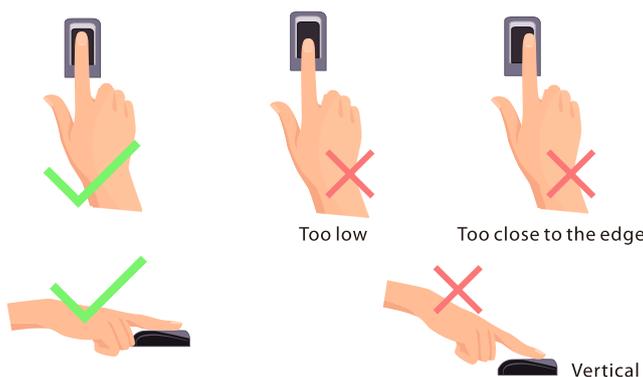
2.1 Fingerprint Verification★

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 the 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.

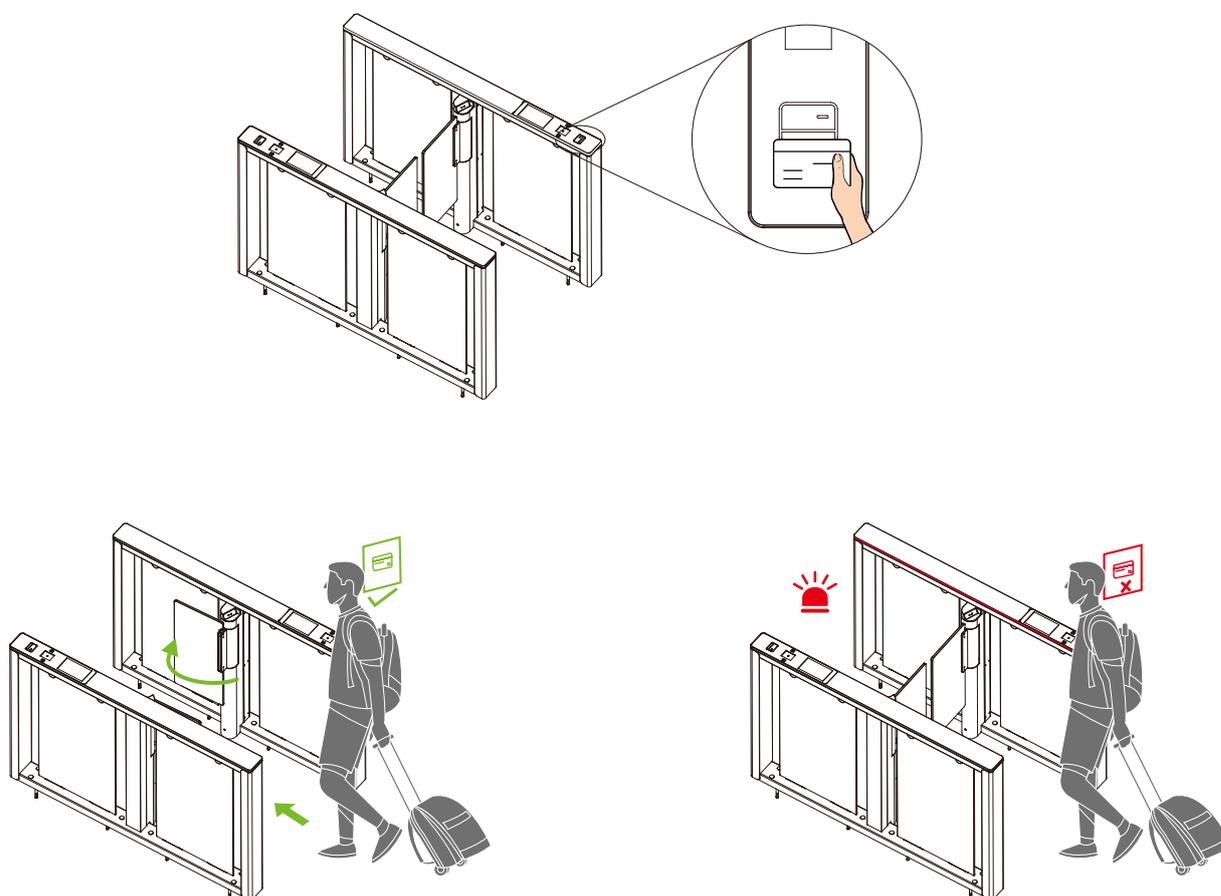


Note: Please ensure that you use the correct method when pressing your fingers onto the fingerprint reader for registration and identification. It is important to follow the proper guidelines to avoid any recognition issues. Please note that our company will not be liable for any recognition issues that may arise from incorrect usage of the product. We reserve the right to make the final interpretation and modifications of 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.

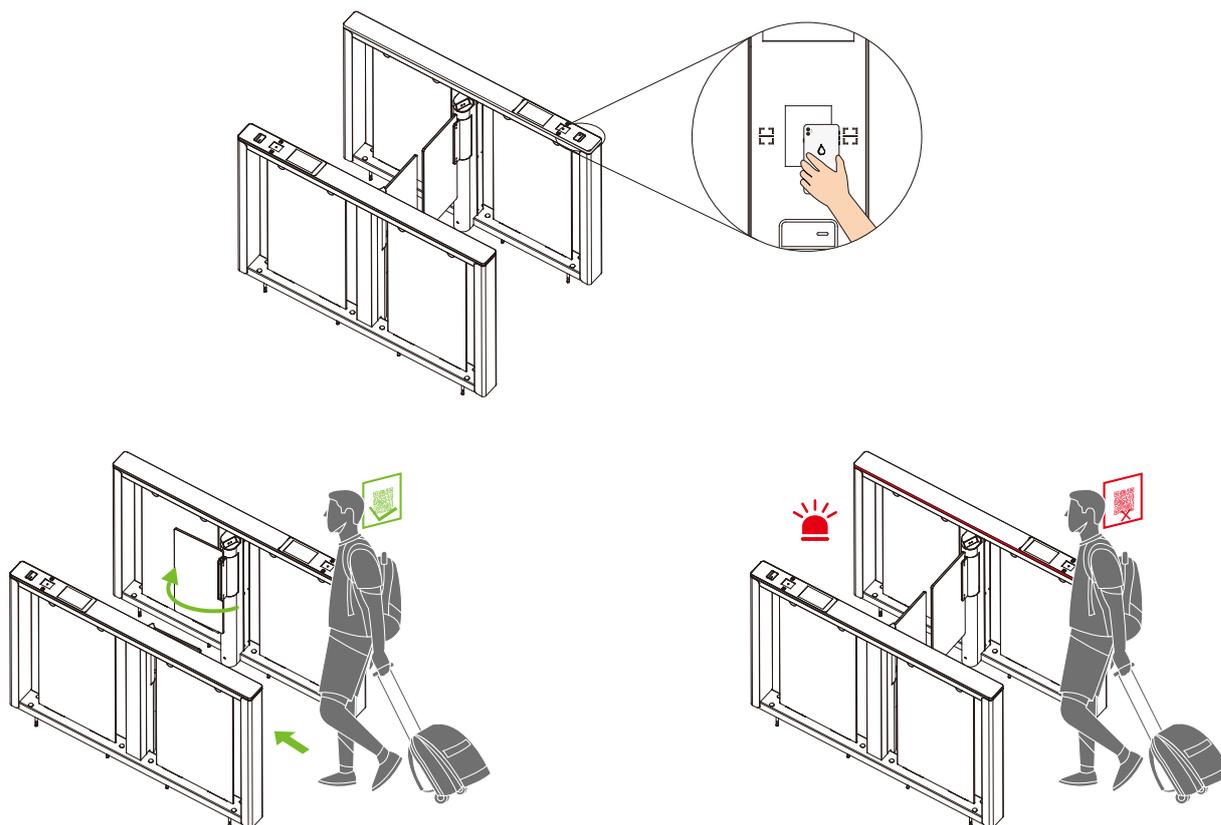
When a user presses their card on the card reading area, the device enters card authentication mode.



2.3 QR Code Verification

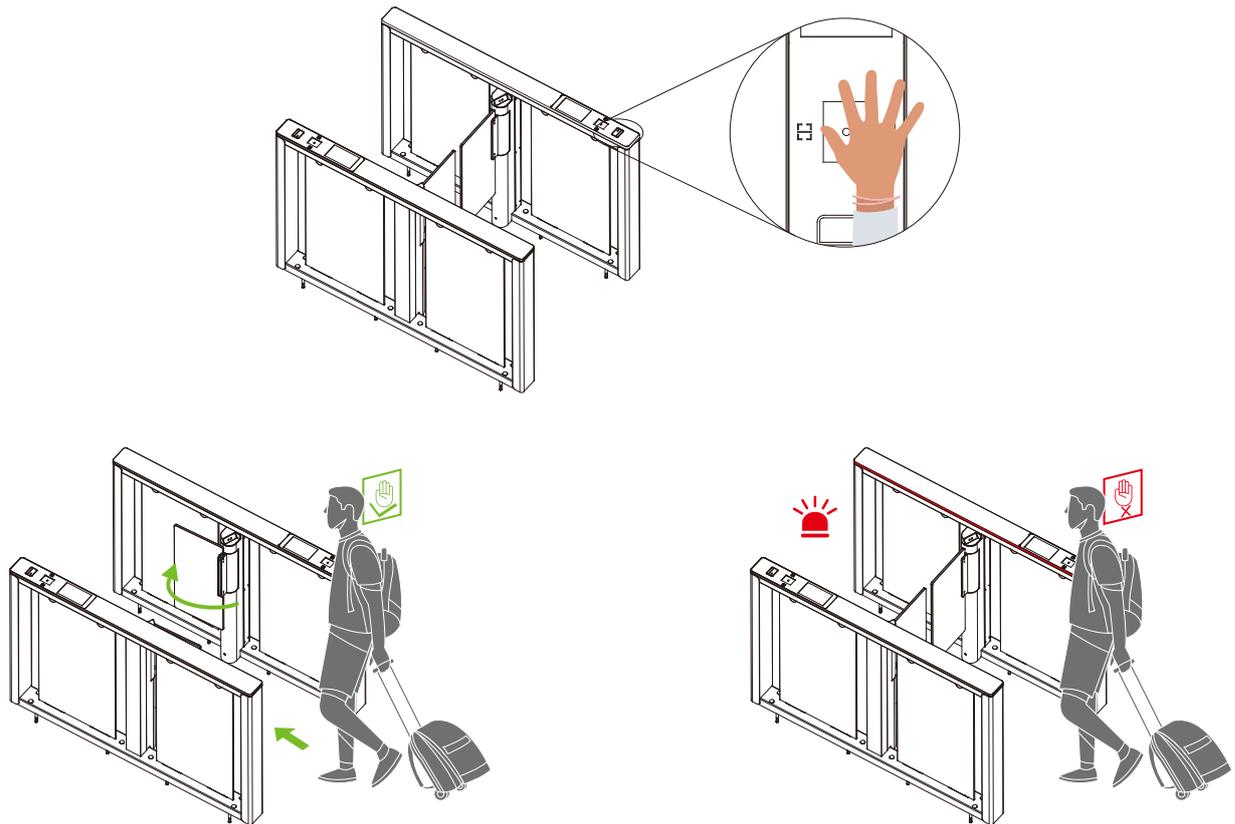
In the QR code Verification mode, the device scans the QR code on the user's mobile phone using the QR code scanner. It then compares the scanned data with the registered QR code and sends the result to the Access Controller.

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 Palm Verification★

This verification mode compares the palm image collected by the palm module with all the palm data templates in the device and sends it to the Access Controller. When the user places his/her palm 20 to 50cm above the palm scanner, the device enters the palm verification mode.

**Note:**

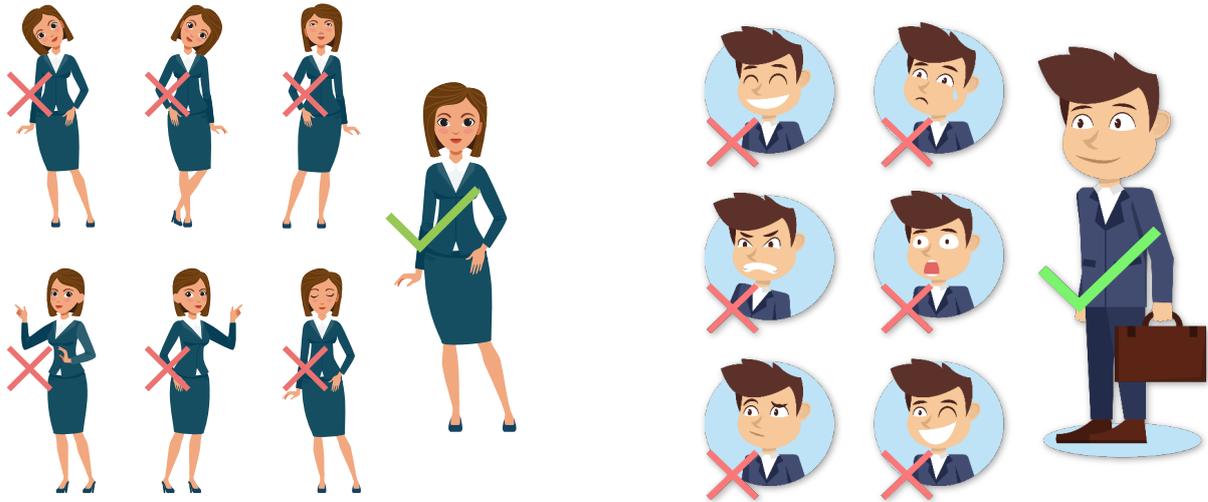
1. Place your palm within 20 to 50 cm of the device.
2. Place your palm in the palm collection area, such that the palm is placed parallel to the device.
3. Make sure to keep space between your fingers.

2.5 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.

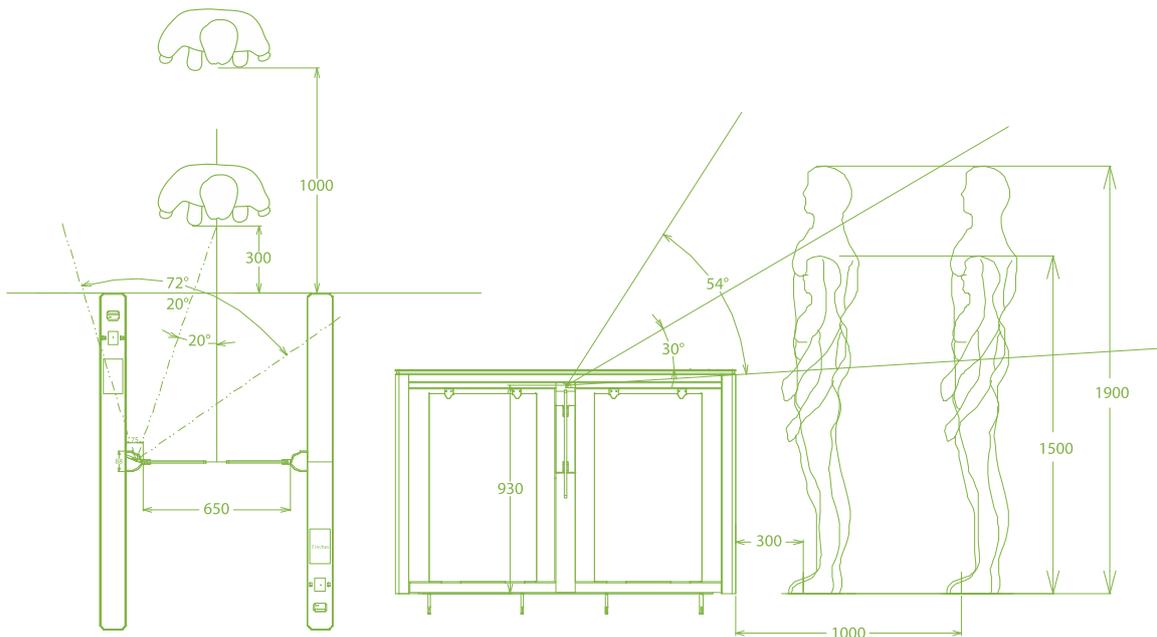
Please try to keep your face centered on the screen during authentication. When registering your face, ensure that you face toward the camera and remain still.

Recommended Standing Posture and Facial Expression:

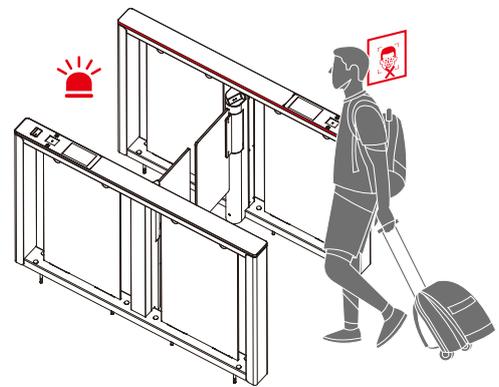
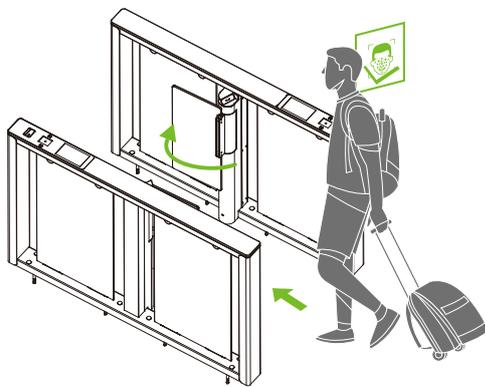


Note: Please keep your facial expression and standing posture natural while enrollment or verification.

Recommended Distance and Angle for Facial Recognition:

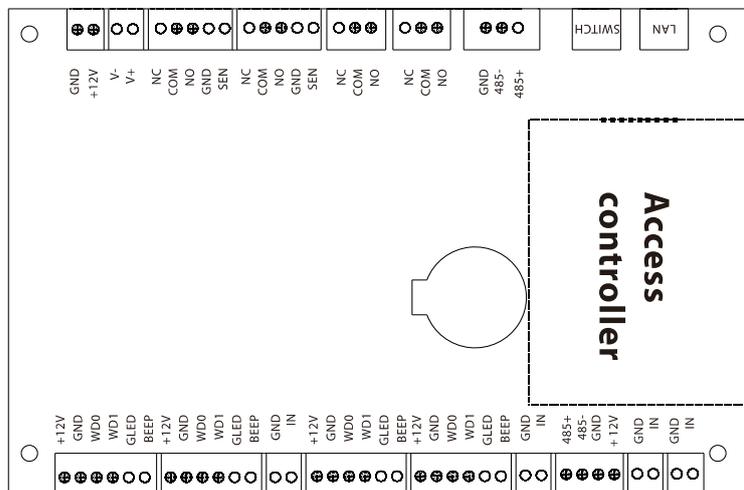


(mm)

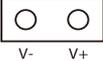
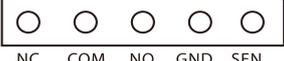
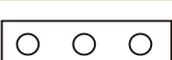


3 Control System Introduction

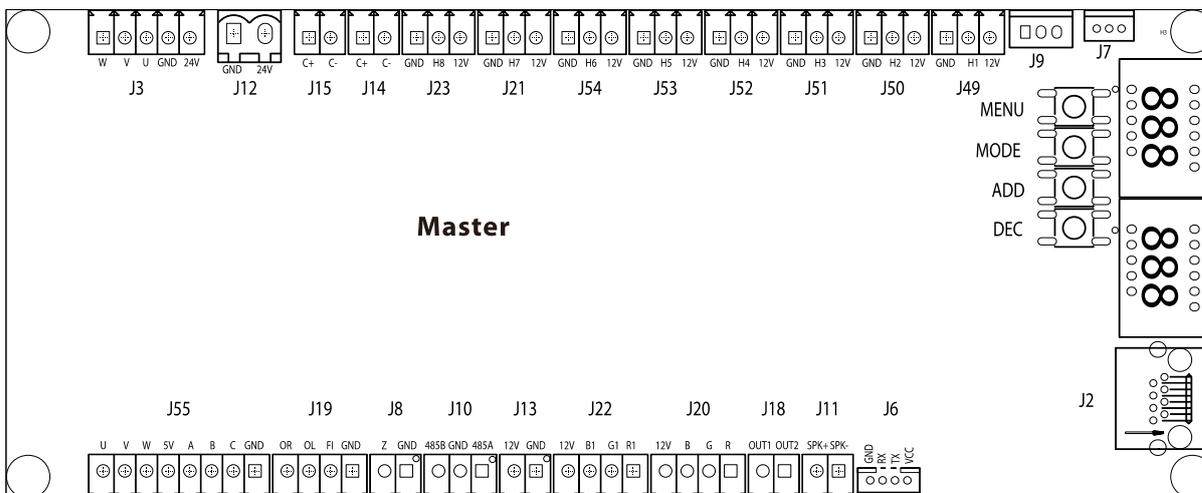
3.1 Access Control Board★



Terminal	Description
	Reader
	Reader
	Button
	Reader
	Reader
	Button
	RS485
	Auxiliary Input

 <p>GND IN</p>	Auxiliary Input
 <p>GND +12V</p>	Power In
 <p>V- V+</p>	Lock
 <p>NC COM NO GND SEN</p>	Lock
 <p>NC COM NO GND SEN</p>	Lock
 <p>NC COM NO</p>	Auxiliary Output
 <p>NC COM NO</p>	Auxiliary Output
 <p>GND 458- 485+</p>	485 Connections
 <p>SWITCH</p>	Switch
 <p>LAN</p>	Ethernet

3.2 Master Motor Driving Controller Board



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

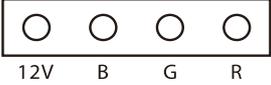
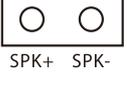
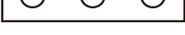
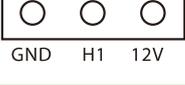
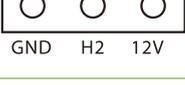
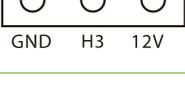
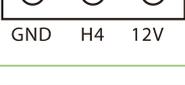
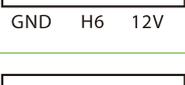
MENU: Used to access the Settings menu and confirm modified values

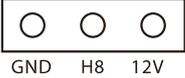
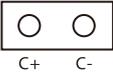
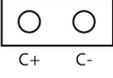
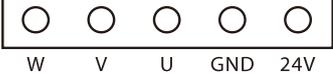
MODE: Returns to the previous menu and cancels the current operation.

ADD: Navigate to the upper menu item and increase the value.

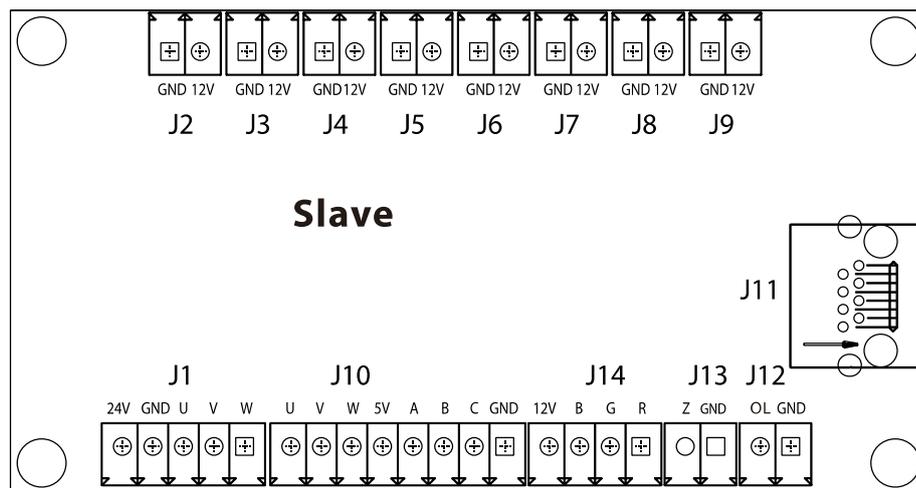
DEC: Navigate to the lower menu item and decrease the value.

Terminal	No.	Description
	J55	Motor
	J19	Open Input and Firefighting Interface
	J8	Reserved
	J10	RS485
	J13	Power in

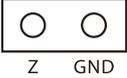
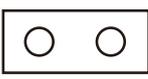
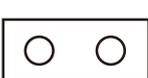
	J22	Indicator light
	J20	Indicator light
	J18	Reserved
	J11	Speaker
	J6	RS232 communication
	J2	Ethernet/POE interface
	J7	IR sensor receiving port
	J9	Reserved
	J49	IR sensor receiving port
	J50	IR sensor receiving port
	J51	IR sensor receiving port
	J52	IR sensor receiving port
	J53	IR sensor receiving port
	J54	IR sensor receiving port
	J21	IR sensor receiving port

	J23	IR sensor receiving port
	J14	Clutch
	J15	Clutch
	J12	24V DC power supply
	J3	Motor line

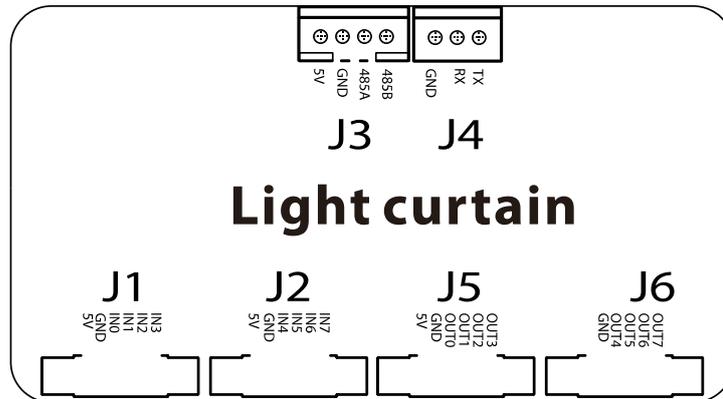
3.3 Slave Motor Driving Controller Board



Terminal	No.	Description
	J1	Motor line
	J10	Motor
	J14	Indicator light

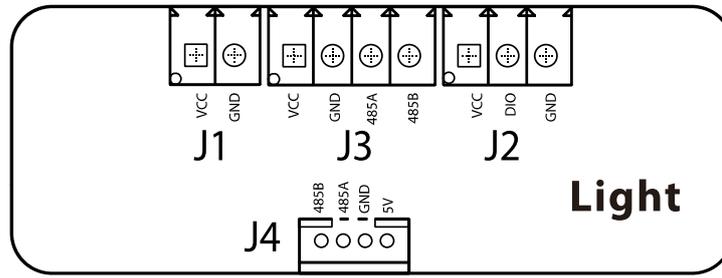
	J13	Reserved
	J12	Open Input
	J11	Ethernet/POE interface
	J9	Infrared sensor transmitting port
	J8	Infrared sensor transmitting port
	J7	Infrared sensor transmitting port
	J6	Infrared sensor transmitting port
	J5	Infrared sensor transmitting port
	J4	Infrared sensor transmitting port
	J3	Infrared sensor transmitting port
	J2	Infrared sensor transmitting port

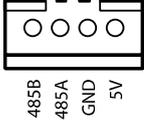
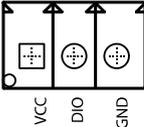
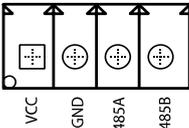
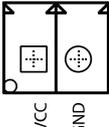
3.4 Light Curtain Control Board



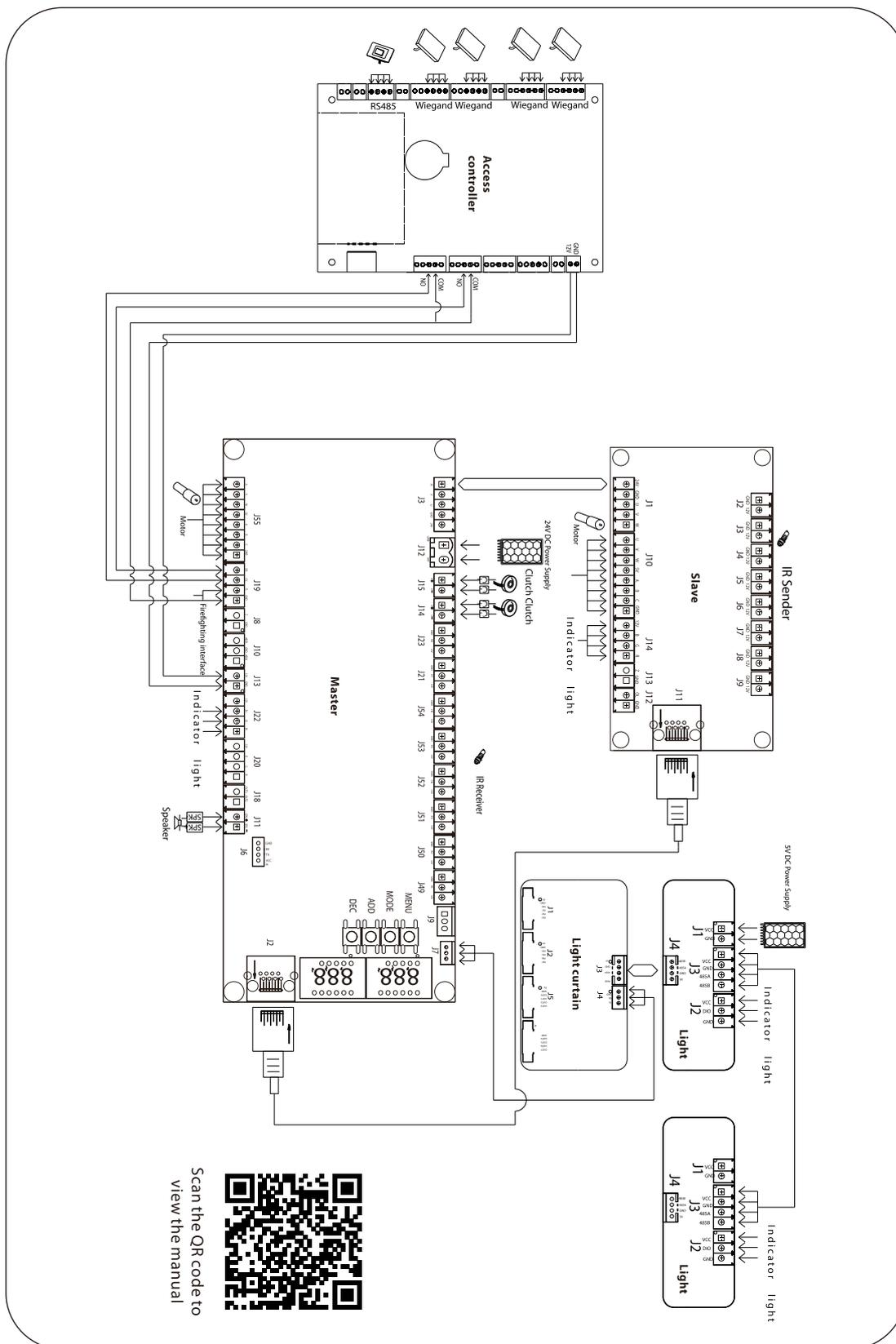
Terminal	No.	Description
	J1	Reserved
	J2	Reserved
	J5	Reserved
	J6	Reserved
	J3	RS485
	J4	Infrared sensor transmitting port

3.5 Light Control Board



Terminal	No.	Description
	J4	RS485
	J2	Indicator light
	J3	Indicator light
	J1	5V DC power supply

3.6 Wiring Diagram



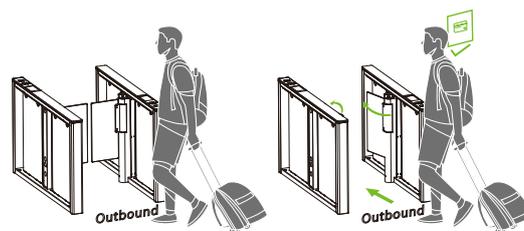
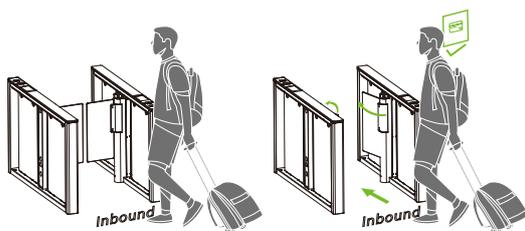
3.7 Menu of Speed Gate

Display Mode (01EXXX)

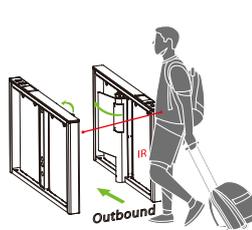
- (01E000) Displays current position of the gate
- (01E001) Infrared input signal
- (01E002) Controls input signal
- (01E003) Test mode (the digital LED displays "---" in the test mode)
- (01E004) Version number (Default)
- (01E005) Master Hall, slave Hall
- (01E006) Slave position
- (01E007) Light curtain infrared status

Opening Mode Setting (02EXXX)

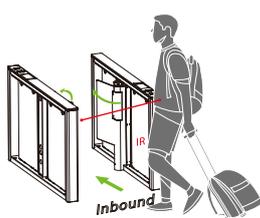
- (02E001) Two-way controlled, both need verification (Default).



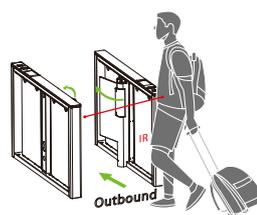
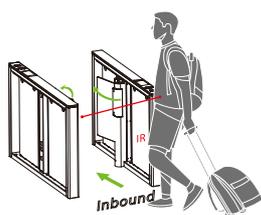
- (02E002) In need verification, out free.



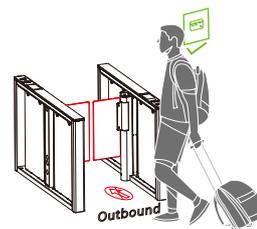
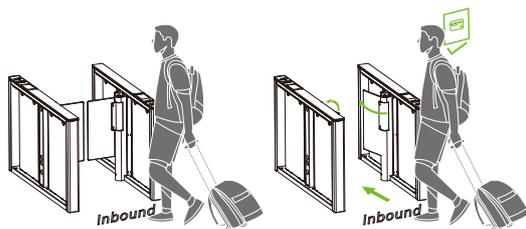
- (02E003) In free, out need verification.



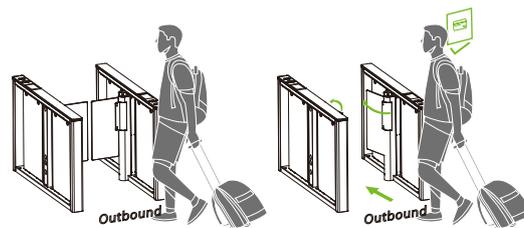
- (02E004) Two-way free.



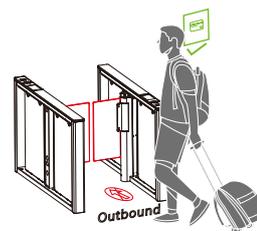
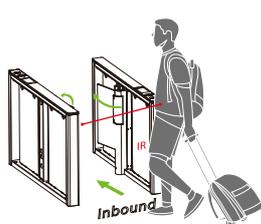
- (02E005) In need verification, out prohibited.



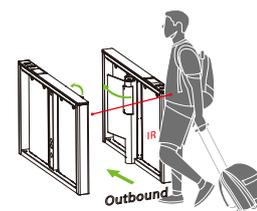
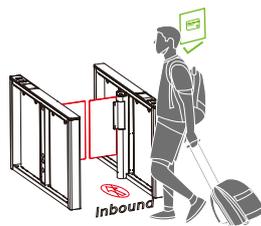
- (02E006) In prohibited, out need verification.



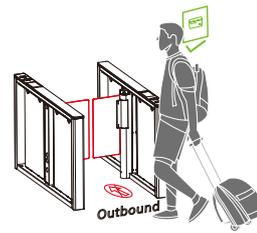
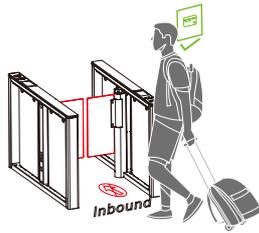
- (02E007) In free, out prohibited.



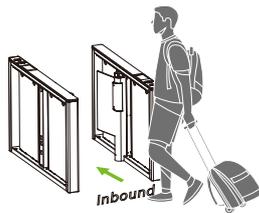
- (02E008) In prohibited, out free.



- (02E009) Two-way prohibited.

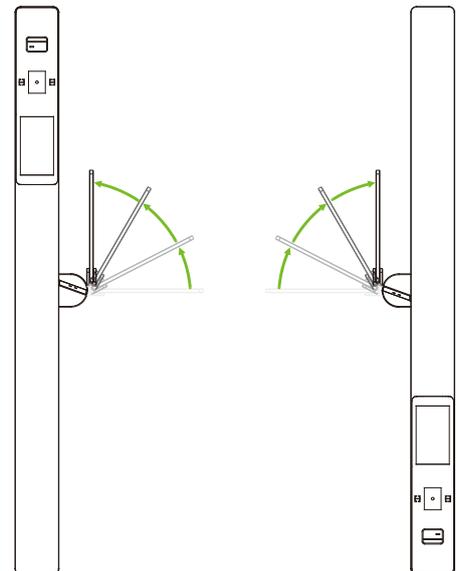
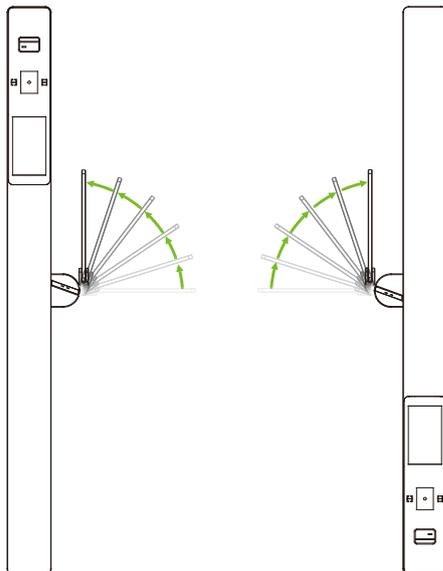
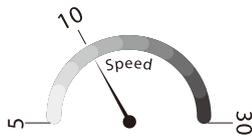


- (02E010) Two-way normally open.



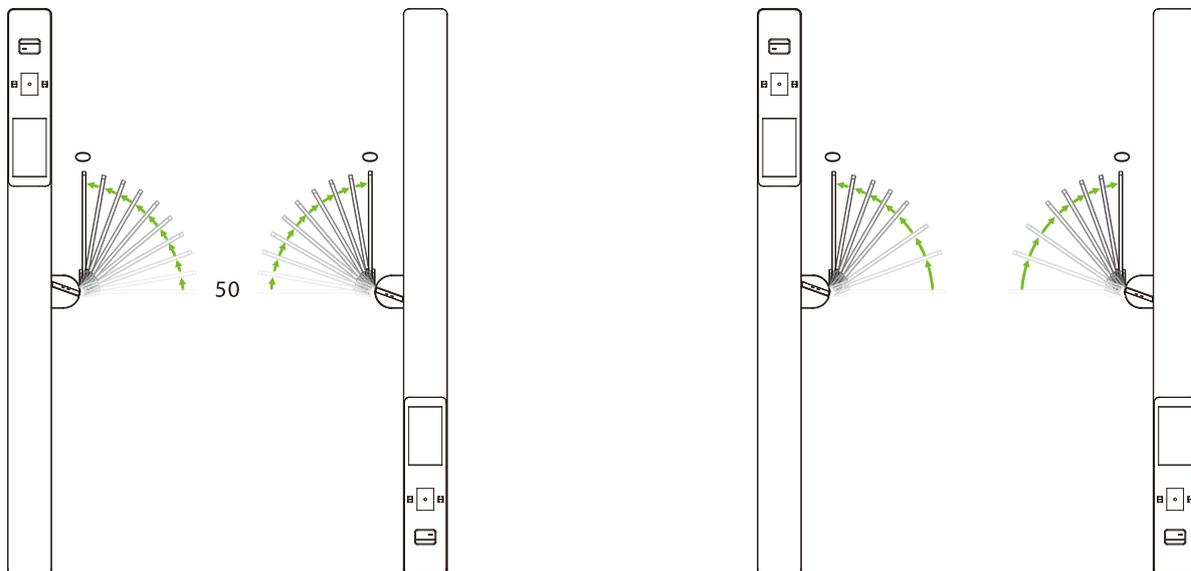
Gate Opening Speed (03EXXX)

To adjust the gate opening speed, you can set a larger number for a faster opening. The Gate Opening Speed can be configured between 5 and 30, with a default value of 22.



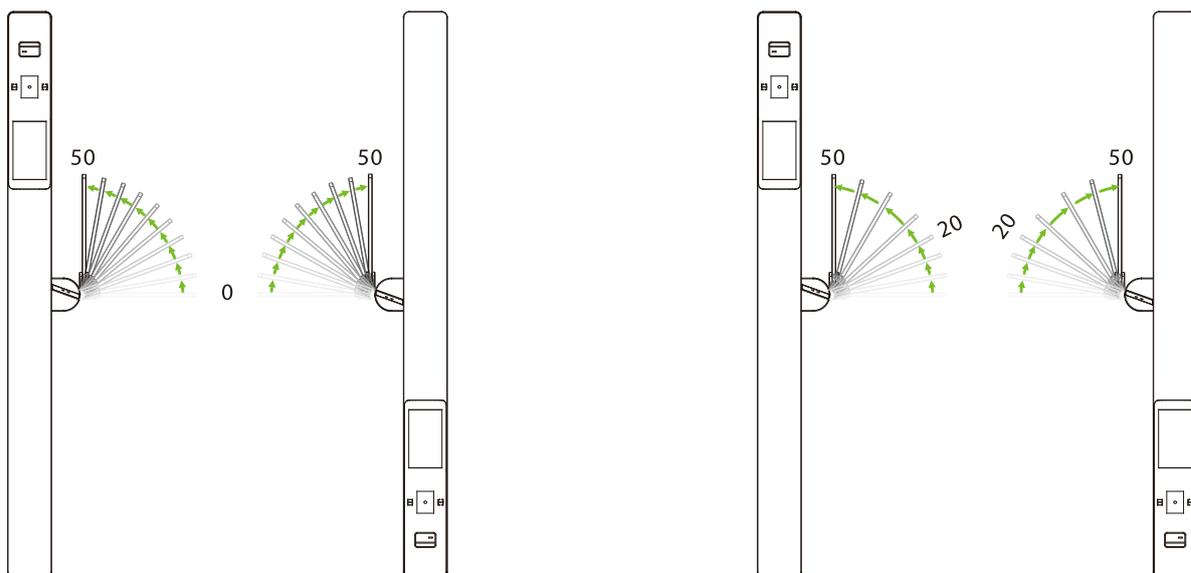
Gate Opening Deceleration Distance (04EXXX)

A larger number increases the deceleration time, enhancing the stability of the swing arm operation. The Gate Opening Deceleration Distance can be set between 0 and 50, with a default value of 15.



Gate Opening Compensation Speed (05EXXX)

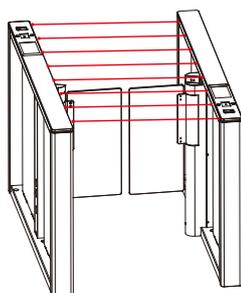
This setting is used when the swing arm cannot fully open or shakes during operation. A larger number results in faster compensation speed. The Gate Opening Compensation Speed can be set between 0 and 50, with a default value of 20.



Infrared Quantity Selection (06EXXX)

Choose the number of pairs of infrared sensors to apply to the device. The normal infrared mode supports a maximum of 8 pairs. If more than 8 pairs are needed, it switches to light curtain mode, requiring the corresponding configuration of the light curtain board.

Note: After selecting the number of logical infrared pairs, the available infrared interfaces are equipped with anti-pinch functionality.



Master Position Adjustment (07EXXX)

1. Adjust the position only when Comet the series is installed properly.
2. During zero position setup, you can manually adjust the swing arm for fine-tuning. If the barrier exceeds a specific angle, the adjustment becomes invalid (indicated by a digital LED displaying 07E000).

Swing Barrier

- (07E001) Zero position
- (07E002) Right position
- (07E003) Left position

Flap Barrier

- (07E001) Zero position
- (07E002) Open position

Slave Position Adjustment (08EXXX)

- (08E001) Zero position
- (08E002) Right position
- (08E003) Left position

Motor Type Selection (09EXXX)

Choose the motor type, which can be set from 0 to 4. Please ensure to set the motor type of this turnstile accurately according to the actual product.

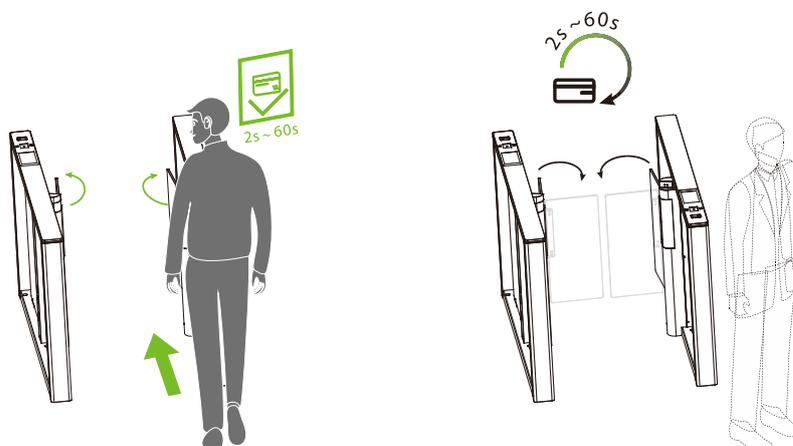
- (09E000) L-shaped swing barrier
- (09E001) Flap barrier
- (09E002) Speed gate
- (09E003) Integrated planetary motors
- (09E004) Split planetary motors

RS485 Address (10EXXX)

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

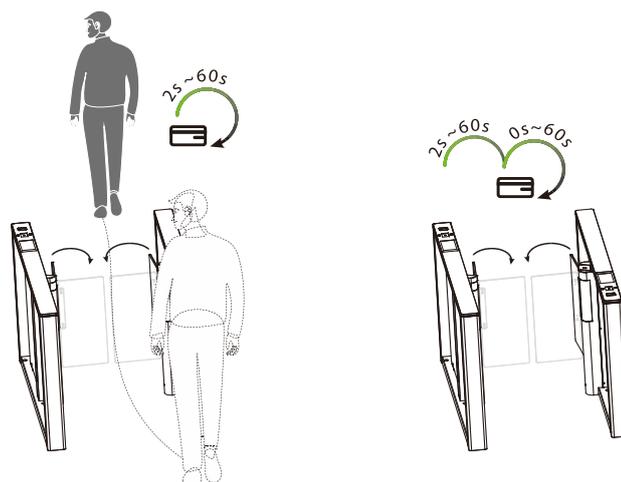
Open Duration Time (11EXXX)

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.



Movement Replacement (13EXXX)

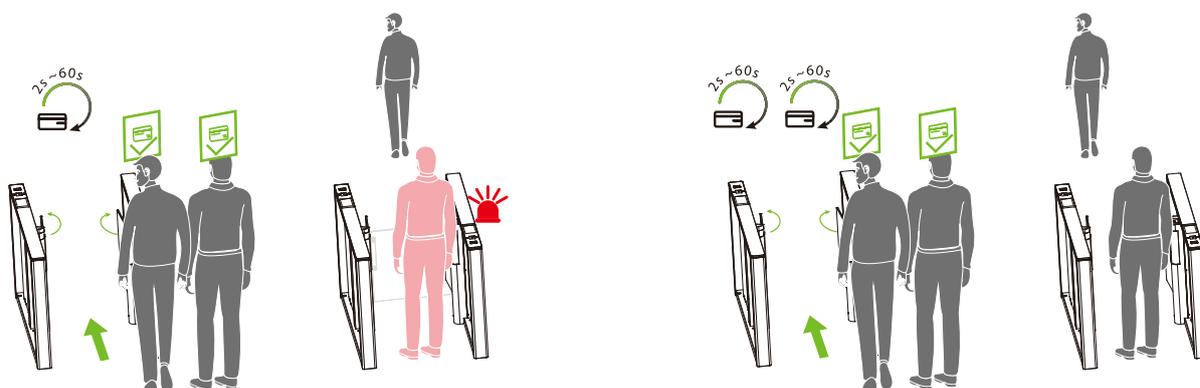
The master motor board is designed to accommodate different turnstiles, and the turnstiles vary in the type of movement.

- (13E000) Swing barrier A (Swing barrier)
- (13E001) Swing barrier B (Swing barrier)
- (13E002) AA (Speed gate)
- (13E003) BB (Flap barrier in the International Zone)
- (13E004) AB (Flap barrier for China)
- (13E005) BA (Flap barrier for China)

Gate Opening Memory (14EXXX)

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.

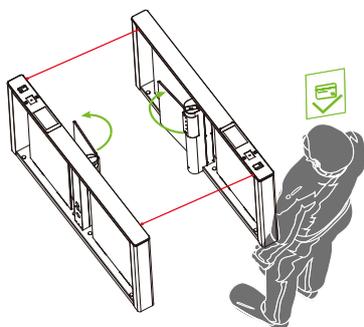
- (14E000) Close (Default)
- (14E001) Open



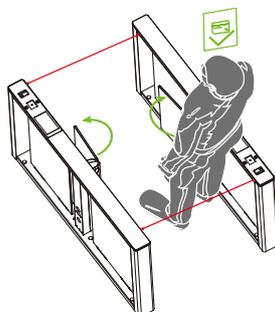
Authentication in Lane (15EXXX)

It allows pedestrian verification during the IR sensor triggered.

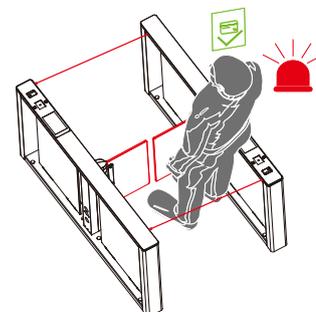
- (15E000) Allow (Default)
- (15E001) Forbidden



Normal mode



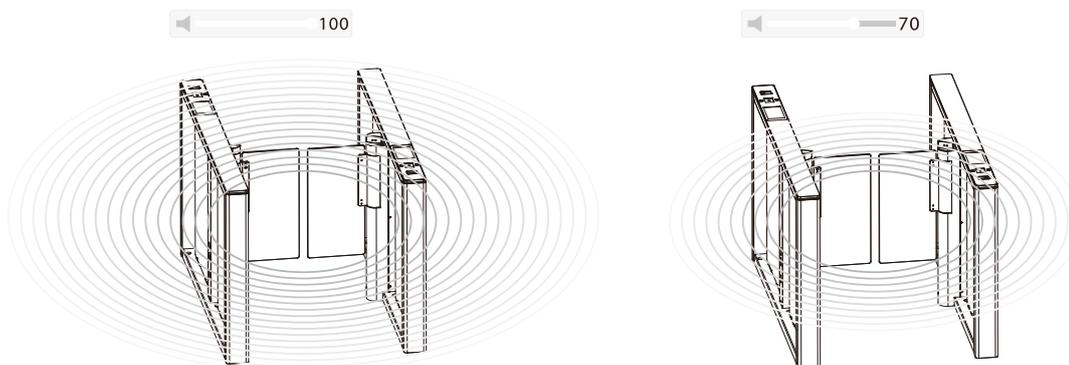
Allow authentication in lane



Forbidden authentication in lane

Volume Setting (16EXXX)

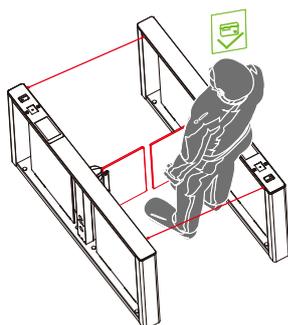
Volume Setting is used for adjusting the volume of the device. The larger the number is set, the louder the volume. The valid value for Volume Setting can be set between 1 to 100 and the default value is 70.



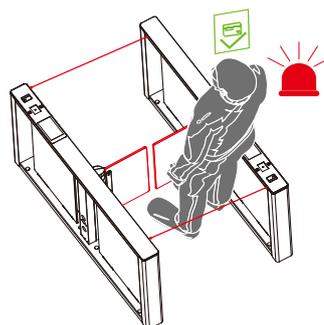
Close Alarm Tone (17EXXX)

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)



Close Alarm Tone



Open Alarm Tone

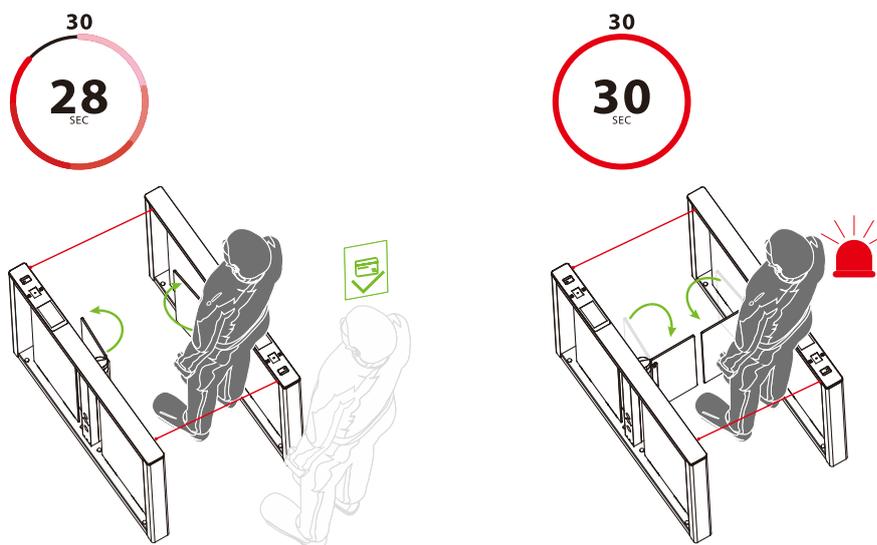
Bluetooth Switch (18EXXX)

Turn on the Bluetooth function to facilitate the device to connect to the cell phone software to use. For security reasons, Bluetooth will be turned off automatically if it is still not successfully connected to the cell phone software after 50 seconds of Bluetooth being turned on.

- (18E000) Close
- (18E001) Open

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.



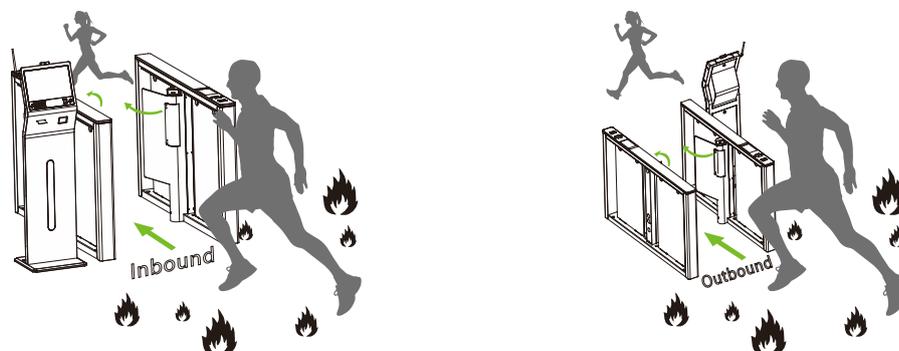
Force Adjustment (20EXXX)

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 60 and the default value is 40.

Fire Opening Direction (21EXXX)

According to the external fire device, select the corresponding type of trigger mode.

- (21E000) Entry direction (Default)
- (21E001) Exit direction



Clutch Locking Stroke (22EXXX)

Set the angle at which the clutch starts. The larger the number, the bigger the angle. The valid value for Clutch Locking Stroke can be set between 0 to 99, and the default value is 0. When setting it to 0 do not lock it, adapting it to movements without a clutch.

Clutch Locking Mode (23EXXX)

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

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

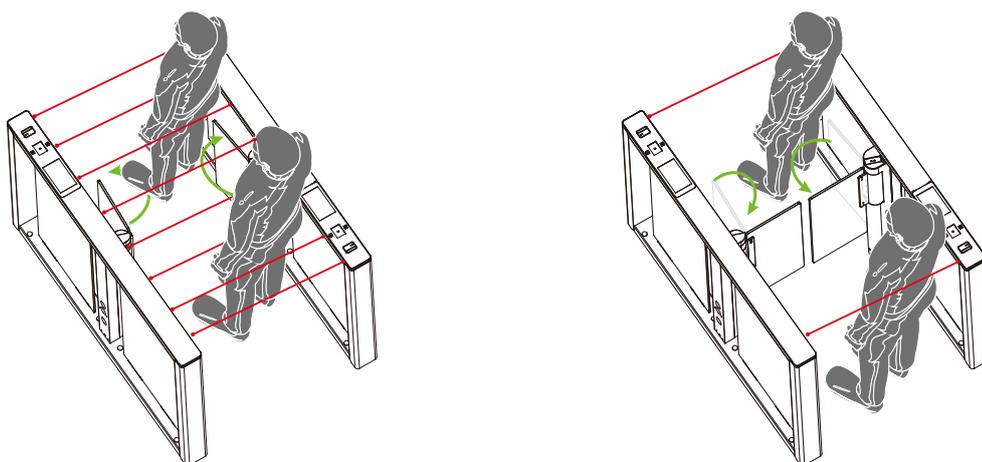


Restore Factory Setting (24EXXX)

- (24E001) Restore factory settings.
- (24E002) Restart the device.

Anti-pinch Area Setting (25EXXX)

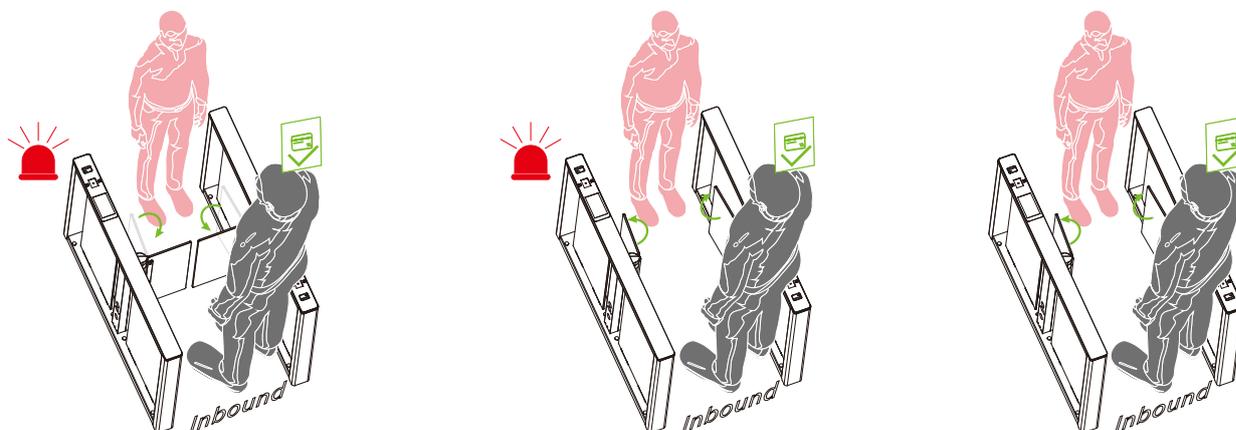
- (25E000) All Infrared anti-pinch (Default)
- (25E001) First and last pair are not anti-pinch.



False Direction Entry (26EXXX)

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

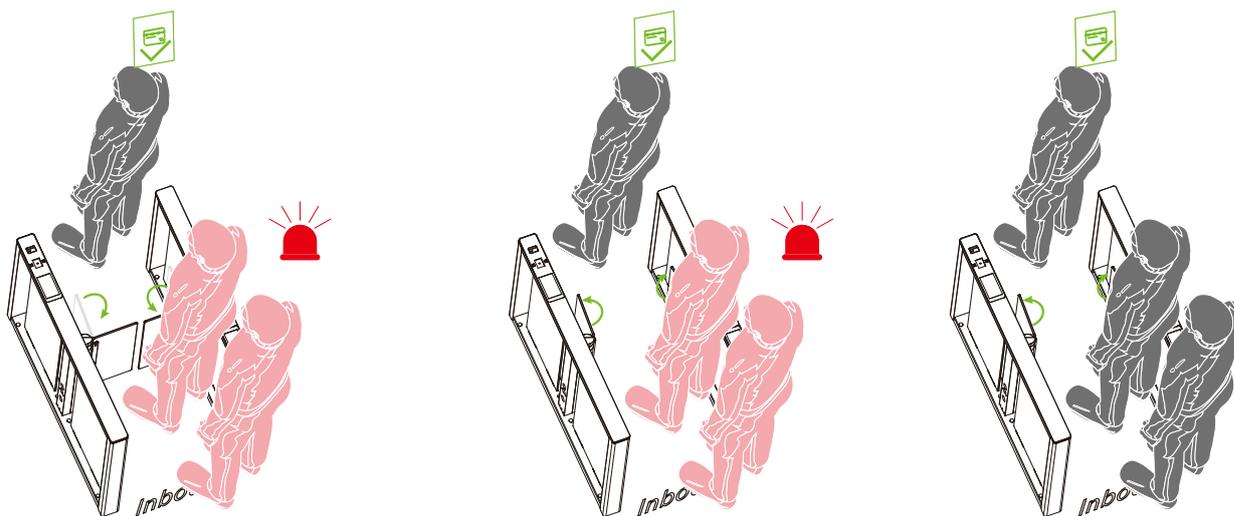
- (26E000) Close (For flap barrier)
- (26E001) Only alarm (Default)
- (26E002) No detection



Anti-tailgate Setting (27EXXX)

When the Anti-pinch Area Setting needs to be set to (25E001) only, the Anti-tailgate Setting (27E000) is effective.

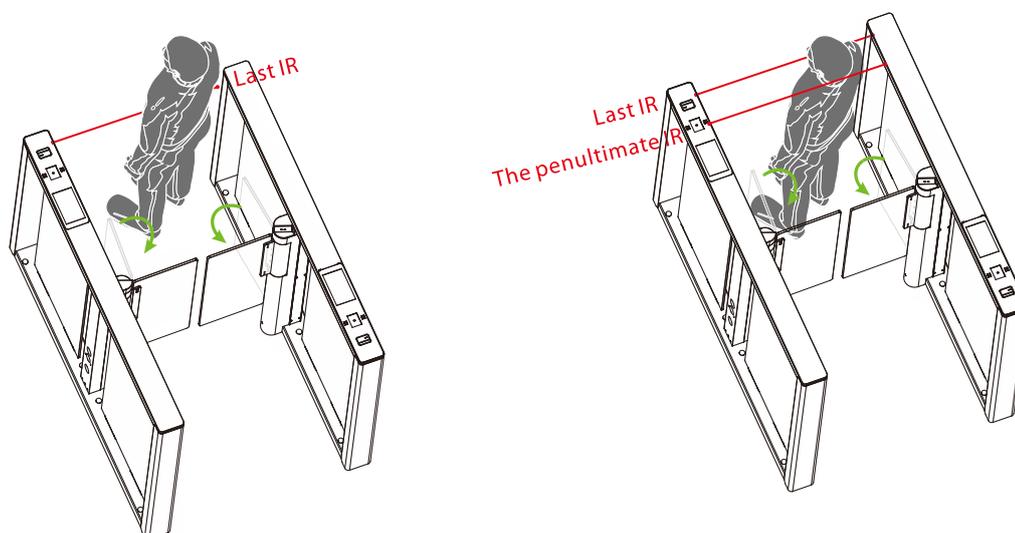
- (27E000) Close (For flap barrier)
- (27E001) Only alarm (Default)
- (27E002) No detection



Gate Closing Position (28EXXX)

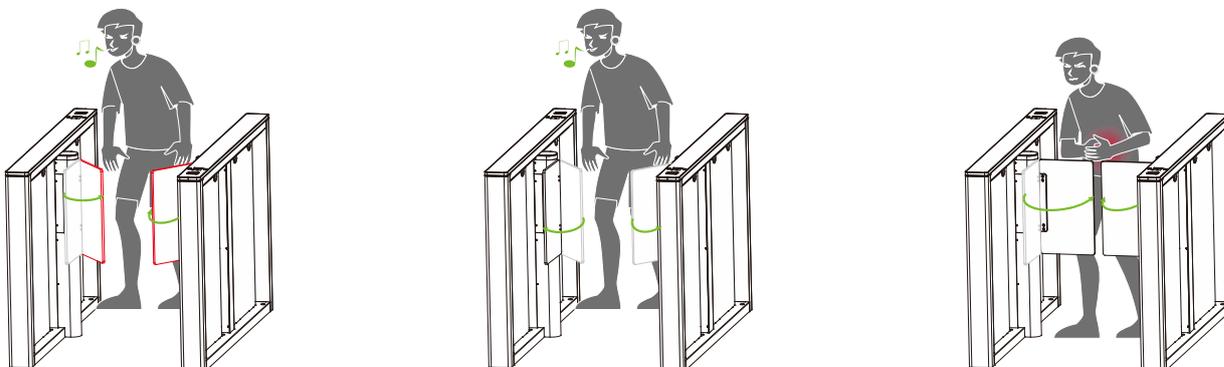
When the Anti-pinch Area Setting needs to be set to (25E001) only, the Gate Closing Position (28E001) is effective.

- (28E000) Last pair (Default)
- (28E001) Penultimate pair



Anti-pinch Action Setting (29EXXX)

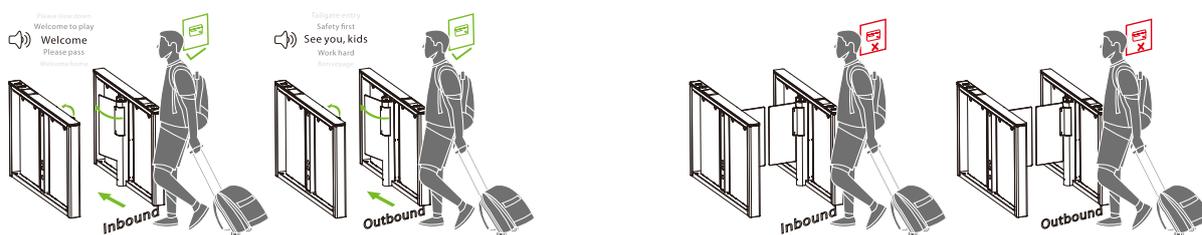
- (29E000) Stop (Default)
- (29E001) Open
- (29E002) Close the function



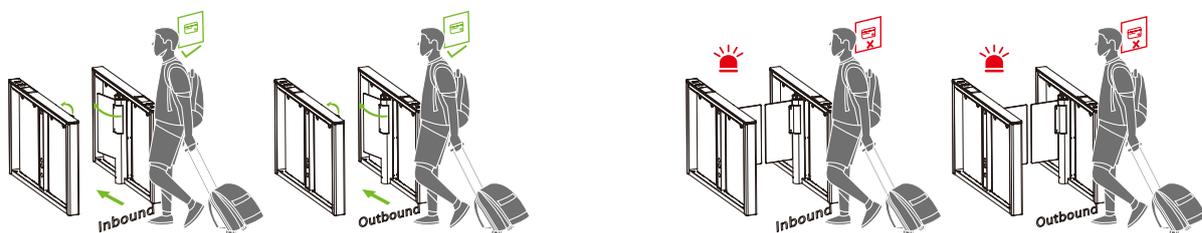
Voice Switching (30EXXX)

Sets whether the device announces a voice or an alarm tone.

- (30E000) Voice playback



- (30E001) Alarm tone (Default)



Swing Arm Type (31EXXX)

- (31E000) Ordinary swing arm (Default)
- (31E001) Larger swing arm

- (31E002) Ultra swing arm

Right Synchronous Adjustment (32EXXX)

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

Left Synchronous Adjustment (33EXXX)

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

Entrance Direction Voice (34EXXX)

Select the voice to enter the direction, the setting range lies between 0 to 60, and the default value is 0.

Exit Direction Voice (35EXXX)

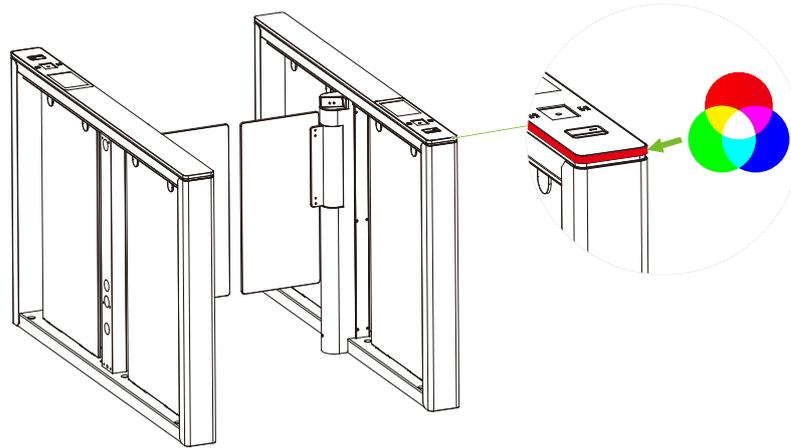
Select the voice to exit the direction, the setting range lies between 0 to 60, and the default value is 17.

Zero Position Strength Adjustment (36EXXX)

Set the strength of the swing arm to return to the zero position, the larger the value, the stronger the strength, the valid value of the zero position strength adjustment is 1 to 10, and the default value is 2.

Standby Colour (37EXXX)

An embedded LED strip is situated along the barrier's side, offering a spectrum of 7 RGB colors and a range of visual effects. This feature is fully customizable to meet our customer's unique preferences.



3.8 Voice Playback Content Correspondence Table

Item	Voice Content		
Control board program failure	System failure!	0001	Not valid
Inbound verification passed	Welcome!	0060	Valid
	Welcome home!	0061	Valid
	Peace be with you!	0062	Valid
	I wish you good health!	0063	Valid
	Please pass!	0064	Valid
	We welcome your patronage!	0065	Valid
	Please be safe!	0066	Valid
	Welcome to play!	0067	Valid
	Have a nice trip!	0068	Valid
	Please slow down!	0069	Valid
	Be safe, please wear a helmet!	0070	Valid

	Successful registration and good luck!	0071	Valid
	Welcome home, and have a good trip!	0072	Valid
	Ticket checks approved. Welcome aboard!	0073	Valid
	Get to work safely and get home safely!	0074	Valid
	Please pass in order!	0075	Valid
	"Dong"	0076	Valid
Outbound Verification passed	Bon voyage!	0080	Valid
	Welcome to the next visit!	0081	Valid
	Safety first	0086	Valid
	Work hard!	0087	Valid
	See you, kids!	0088	Valid
	Please authenticate and pass!	0004	Not valid
	Tailgate entry!	0014	Not valid
False direction entry without authentication	False direction entry!	0016	Not valid
	Prohibited, please use other access!	0007	Not valid
Verify that the stay in the channel at the time of passage exceeds 5s!	Pass quickly and do not linger!	0015	Not valid
Illegal ramming of the swing arm	Forced entry, please be advised!	0008	Not valid

The following abnormal alarms		
Please verify outside the channel	The device is set up to "Prohibit authentication in Lane ", and personnel entering the channel are prompted to exit the out-of-channel verification.	0005
System reboot in progress	System reboot prompts	0006
Fire switch activation	A fire signal is detected and the fire setting is executed.	0011
Infrared anomaly	Infrared anomaly detected	0012
Alarm tone 2	Alarm tone playback in alarm status	0031
	Welcome	0002
	Bon voyage!	0003
	Out-of-channel card swipe	0004
	"Dong"	0029
	Break-in	0009
	Please reboot the system.	0013
	Please correct the zero position	0017
	0030 Sound effect 1	0030

3.9 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 aluminum stainless steel or cold rolled sheet steel. If it has been used for a long time, the surface may have rust stains. Clean the surface thoroughly with a clean cloth regularly. Apply anti-rust oil on the surface, but do not cover the infrared sensor.

4.2 Movement Maintenance

Before performing 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.
- Periodically check the insulation of the external power supply.
- Do periodic checks for any kind of leakage.
- Check if the technical parameters of the interface are normal.
- Check the service life of the electronic components and replace them accordingly.

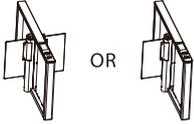
Caution: All maintenance procedures mentioned above for speed gates must be conducted by a professional technician, particularly for the movement and electric control components. To ensure operational safety, always switch off the power supply when the speed gate is not in use.

5 Troubleshooting

No.	Failure Descriptions	Analysis and Solution
1	The mode indicator light does not respond or the indication is incorrect.	Check that the control panel mode indicator wiring is correct or that the contact is poor.
2	After swiping the card, there is only a speed gate unlocked.	Check the mode setting of the master and slave devices and the 8-core, and 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 covered.
4	When the gate is self-tested, the swing arm is not in the normal closing position!	In the process of self-test, there are obstacles, please remove the obstacles, and restart the self-test after power-on!

6 Packing List

The package consists of the following items:

	Comet-Series	1
	Power Cable	1
	Card	1
	Expansion Screw M12*100	6
	Washer	6
	Expansion Screw Washers	6
	Stainless Steel Maintenance Wipes	1
	Hex Wrench	1

ZKTeco Industrial Park, No. 32, Industrial Road,

Tangxia Town, Dongguan, China.

Phone : +86 769 - 82109991

Fax : +86 755 - 89602394

www.zkteco.com

