

Torniquete giratorio (X)

Manual del usuario



Prefacio

General

This manual introduces the functions and operations of the human passage turnstile (hereinafter referred to as the “turnstile”). Read carefully before using the device, and keep the manual safe for future reference.

Safety Instructions

The following signal words might appear in the manual.

Signal Words	Meaning
 DANGER	Indicates a high potential hazard which, if not avoided, will result in death or serious injury.
 WARNING	Indicates a medium or low potential hazard which, if not avoided, could result in slight or moderate injury.
 CAUTION	Indicates a potential risk which, if not avoided, could result in property damage, data loss, reductions in performance, or unpredictable results.
 TIPS	Provides methods to help you solve a problem or save time.
 NOTE	Provides additional information as a supplement to the text.

Revision History

Version	Revision Content	Release Time
V1.0.5	- Actualizar las medidas de seguridad y advertencias. - Actualizar la conexión del cable.	December 2024
V1.0.4	Add stainless steel maintenance.	October 2024
V1.0.3	Update the manual.	December 2022
V1.0.2	Remove battery information in Inner Components chapter.	May 2020
V1.0.1	Add an electrical safety note.	April 2020
V1.0.0	First release.	March 2020

Privacy Protection Notice

As the device user or data controller, you might collect the personal data of others such as their face, audio, fingerprints, and license plate number. You need to be in compliance with your local privacy protection laws and regulations to protect the legitimate rights and interests of other people by implementing measures which include but are not limited: Providing clear and visible identification to inform people of the existence of the surveillance area and provide required contact information.

About the Manual

- The manual is for reference only. Slight differences might be found between the manual and the product.
- We are not liable for losses incurred due to operating the product in ways that are not in compliance with the manual.
- The manual will be updated according to the latest laws and regulations of related jurisdictions. For detailed information, see the paper user's manual, use our CD-ROM, scan the QR code or visit our official website. The manual is for reference only. Slight differences might be found between the electronic version and the paper version.
- All designs and software are subject to change without prior written notice. Product updates might result in some differences appearing between the actual product and the manual. Please contact customer service for the latest program and supplementary documentation.
- There might be errors in the print or deviations in the description of the functions, operations and technical data. If there is any doubt or dispute, we reserve the right of final explanation.
- Upgrade the reader software or try other mainstream reader software if the manual (in PDF format) cannot be opened.
- All trademarks, registered trademarks and company names in the manual are properties of their respective owners.
- Please visit our website, contact the supplier or customer service if any problems occur while using the device.
- If there is any uncertainty or controversy, we reserve the right of final explanation.

Medidas de seguridad y advertencias importantes

This section introduces content covering the proper handling of the Turnstile, hazard prevention, and prevention of property damage. Read carefully before using the Turnstile, comply with the guidelines when using it, and keep the manual safe for future reference.

Transportation Requirement



Transport the device under allowed humidity and temperature conditions.

Storage Requirement



Store the device under allowed humidity (40%–65% (RH)) and temperature (0°C–+40°C) conditions.

Installation Requirements



- Do not connect the power adapter to the Turnstile while the adapter is powered on.
- Do not connect the Turnstile to two or more kinds of power supplies, to avoid damage to the Turnstile.
- Please follow the electrical requirements to power the device.
 - ◇ Following are the requirements for selecting a power adapter.
 - The power supply must conform to the requirements of IEC 60950-1 and IEC 62368-1 standards.
 - The voltage must meet the SELV (Safety Extra Low Voltage) requirements and not exceed ES-1 standards.
 - When the power of the device does not exceed 100 W, the power supply must meet LPS requirements and be no higher than PS2.
 - ◇ We recommend using the power adapter provided with the device.
 - ◇ When selecting the power adapter, the power supply requirements (such as rated voltage) are subject to the device label.



- Install the Turnstile on a stable surface to prevent it from falling.
- Do not place the Turnstile in a place exposed to sunlight or near heat sources.

- Keep the Turnstile away from dampness, dust, and soot.
- Install the device in a well-ventilated place, and do not block its ventilation.
- Use an adapter or cabinet power supply provided by the manufacturer.
- The Turnstile is a class I electrical appliance. Make sure that the power supply of the Turnstile is connected to a power socket with protective earthing.

Operation Requirements



- Make sure that the power supply is correct before use.
- Do not unplug the power cord on the side of the Turnstile when the adapter is powered on.
- Operate the Turnstile within the rated range of power input and output.
- Transport, use and store the device under allowed humidity and temperature conditions.
- Do not drop or splash liquid onto the Turnstile, and make sure that there is no object filled with liquid on the Turnstile to prevent liquid from flowing into it.
- Do not disassemble the Turnstile without professional instruction.
- When the Turnstile is used with access controller and the lock port connects to the K1 or K2 port of the main control board, configure the unlock duration for the access controller as 0.2 seconds.
- Prepare a separate power adapter when install a face recognition access controller.

Maintenance Requirements



- After the installation, remove the protective film and clean the Turnstile.
- Regularly perform maintenance on the Turnstile to ensure that it works properly.
- If the Turnstile is installed near places with poor air, such as a swimming pool entrance, within 50 km of the sea or a construction site, then maintenance must be performed more frequently on the stainless cover.
- Do not use paint thinner or any other organic agent during maintenance.
- When using a face detection component, apply waterproof silicon sealant to the installation position.

Precautions



- Pregnant women, the elderly, and children must be accompanied when passing the Turnstile.
- Children less than the height of 1 m must pass the Turnstile in the arms of or alongside an adult.
- Do not stay or play in the passage.
- Make sure that your suitcase passes in the front or alongside you.

- Only one person can pass through at a time. Do not tailgate a person, linger in the passage or break through the passage.
- Violent impact might damage the machine core and shorten the service life of the Turnstile.
- Make sure that the Turnstile is correctly grounded to prevent personal injury.
- Do not use the Turnstile when thunder occurs.



- When authorizing a person to pass through the Turnstile, there should be no person on the opposite side of the Turnstile, otherwise the barriers will remain unlocked until the person on the opposite side exits.
- Pass through the Turnstile as soon as possible after authorization. If the person does not enter within the specified time, the system will automatically close the barriers.
- When multiple persons are entering, they can pass with continuous authorization when memory mode is enabled. But the interval between continuous authorizations is recommended to be 2 s–5 s.
- Pay attention to the status of the indicator when verifying a person's identity. Red indicates that the identity of the person was not verified. Green indicates that their identity was successfully verified, and that the person can pass through.
- Do not try to forcibly pass through the passage. This Turnstile supports intelligent anti-tailgating and anti-reverse intrusion. If you forcibly break through, the system will automatically lock, closing off the passage. This can result in a person becoming injured.
- The Turnstile will not correctly recognize the authorized card if it is used together with other cards.
- Keep the authorized card well to make sure it works properly.
- Do not pass items through the Turnstile, otherwise the Turnstile will consider the item as unauthorized.
- If the Turnstile is used with the face recognition access controller, when the lock port on the face recognition access controller is connected to the K1 or K2 port on the main control board on the Turnstile, the unlock duration for the face recognition access controller should be configured as 0.2 seconds.
- If the Turnstile is used with the face recognition access control device, the separate power adapter must be prepared.

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1 Descripción general

1.1 Introducción

Human passage turnstile (hereinafter referred to as the “turnstile”) controls human passages of places like railway stations, factories, tourist resorts, libraries, and more.

1.2 Descripciones de productos

3 versions of the turnstile are available.

Table 1-1 Product version description

Version	Description
Card unlock	Unlock with card to enter and exit from a place; an IC card reader and a face recognition access controller are provided.
One-way face unlock & two-way card unlock	Unlock with face or card to enter a place, unlock with card to exit from a place; an IC card reader and a face recognition access controller are provided.
Two-way face unlock & two-way card unlock	Unlock with face or card to enter and exit from a place; an IC card reader and two face recognition access controllers are provided.

1.3 Características

- Configuración de parámetros interactivos hombre-máquina.
- Las barreras se cerrarán automáticamente si nadie entra por el torniquete tras la verificación de identidad. Los parámetros se pueden restaurar a la configuración predeterminada.
- El bloqueo y desbloqueo de las barreras se puede controlar mediante un control remoto (no incluido).
- Dos modos de funcionamiento: normalmente abierto y normalmente cerrado.
- Cuatro tipos de configuraciones de seguridad.
- Al recibir señales de alarma contra incendios, el torniquete estará normalmente abierto y podrá emitir señales de alarma.
- Anti-pinzamiento mecánico y anti-pinzamiento IR.
- Anticolisión: Las barreras no se rompen ni siquiera con una patada fuerte. La velocidad de desbloqueo y bloqueo, la duración del pase y el retardo de bloqueo son ajustables.
- Segundo desbloqueo: Si una persona intenta pasar el torniquete sin verificación de identidad, se activarán las alarmas; si permanece allí y verifica su identidad, las barreras se desbloquearán.
- Verificación de identidad continua: Si se verifican las identidades de varias personas (un máximo de 255), estas podrán pasar el torniquete continuamente.
- El torniquete puede determinar las direcciones de desbloqueo. Solo se puede entrar o salir del lugar donde se pasa la tarjeta; de lo contrario, la barrera permanecerá bloqueada hasta que la persona salga del torniquete.

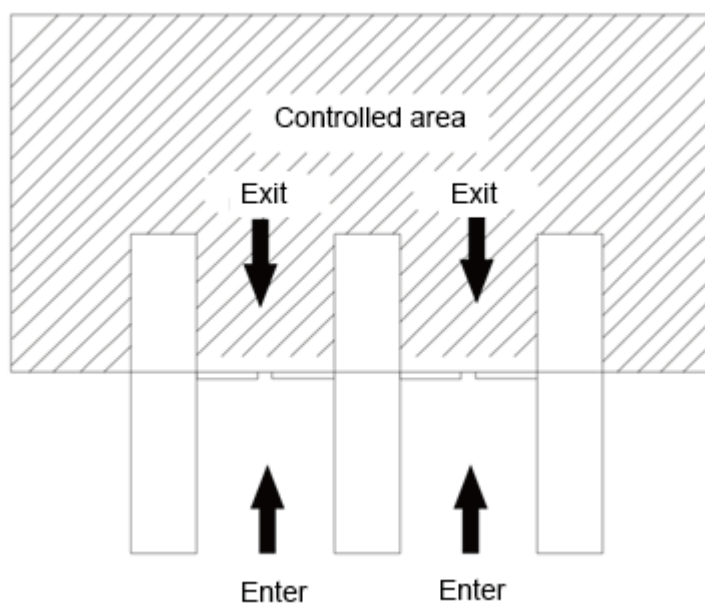
- Admite alarma de intrusión (entrada y salida), alarma de permanencia en el tiempo extra, alarma de seguimiento, alarma de torniquete de escalada, alarma de anomalía de desbloqueo y más; cuando se activan las alarmas, la luz indicadora parpadeará en rojo.
- Nueve modos de paso: entrada y salida autenticadas, entrada autenticada y salida libre, entrada autenticada y sin salida, entrada libre y salida autenticada, entrada y salida libre, entrada libre y sin salida, sin entrada y salida autenticada, sin entrada y salida libre, y sin entrada ni salida.

1.4 Modo de control de paso

Three Passage Control Modes

- Los usuarios pueden desbloquear y pasar el torniquete después de pasar tarjetas o verificar el rostro.
- Los usuarios pueden pasar el torniquete sin verificación de identidad (el sensor IR detecta a la persona y luego desbloquea el torniquete).
- No todos los usuarios pueden pasar el torniquete.

Figure 1-1 Passage control mode



Nine Passing Modes

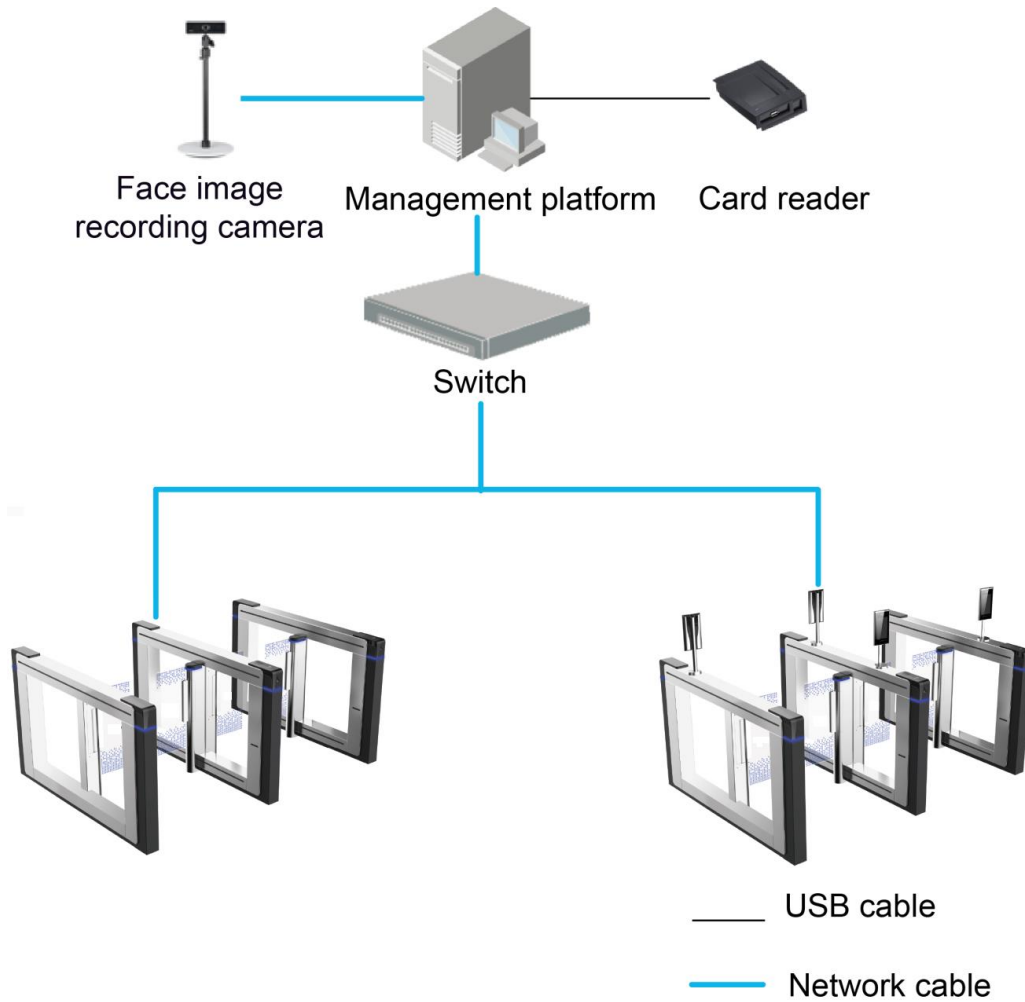
- La verificación de identidad es necesaria al entrar y salir de un lugar.
- La verificación de identidad es necesaria al ingresar a un lugar; y la verificación de identidad no es necesaria al salir del lugar a través del torniquete.
- Se requiere verificación de identidad al ingresar a un lugar; y no está permitido salir del lugar a través del torniquete.
- No es necesaria la verificación de identidad al ingresar a un lugar a través del torniquete; y sí es necesaria la verificación de identidad al salir del lugar a través del torniquete.
- No se requiere verificación de identidad al entrar y salir de un lugar a través del torniquete. No se requiere verificación de identidad al entrar a un lugar a través del torniquete; y no se permite salir de un lugar a través del torniquete.

- No está permitido entrar a un lugar a través del torniquete y es necesaria la verificación de identidad al salir del lugar.
- No está permitido entrar a un lugar a través del torniquete; y no es necesaria la verificación de identidad al salir del lugar.
- No está permitido entrar ni salir de un lugar a través del torniquete.

2 Aplicación

Information of cards and face images can be collected from turnstiles or be imported to turnstiles through network.

Figure 1-2 Application



3 Estructura

3.1 Apariencia

There are two types of turnstiles: One-motor module turnstiles and two-motor module turnstiles. The turnstile in the middle is two-motor module turnstile, and the others are one-motor module turnstiles.

Figure 3-1 Appearance (1)

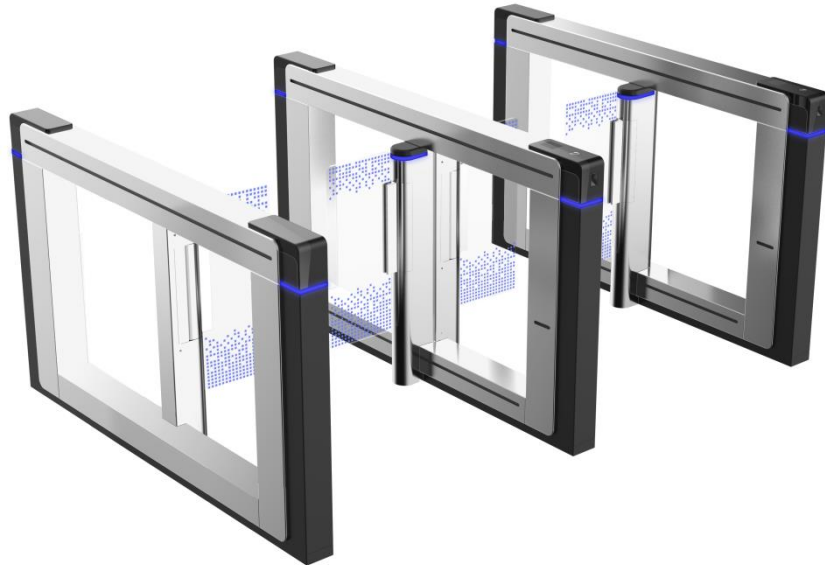
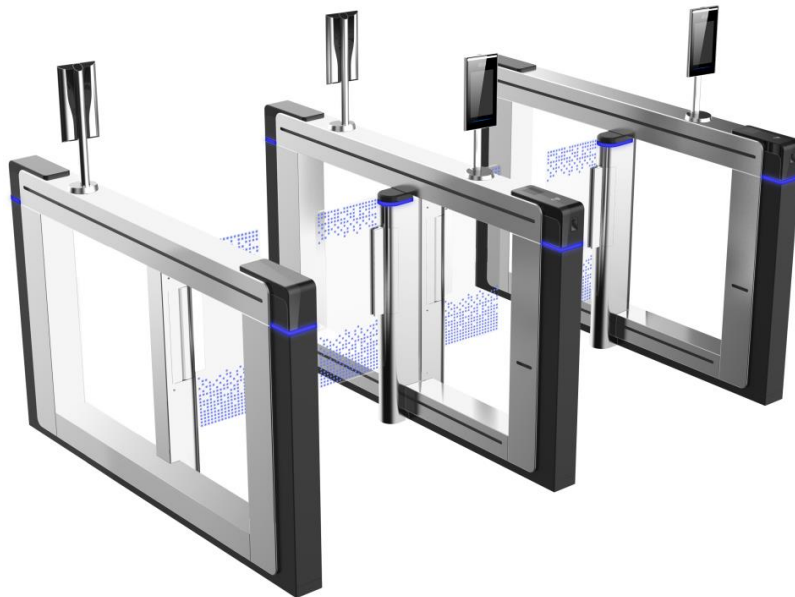
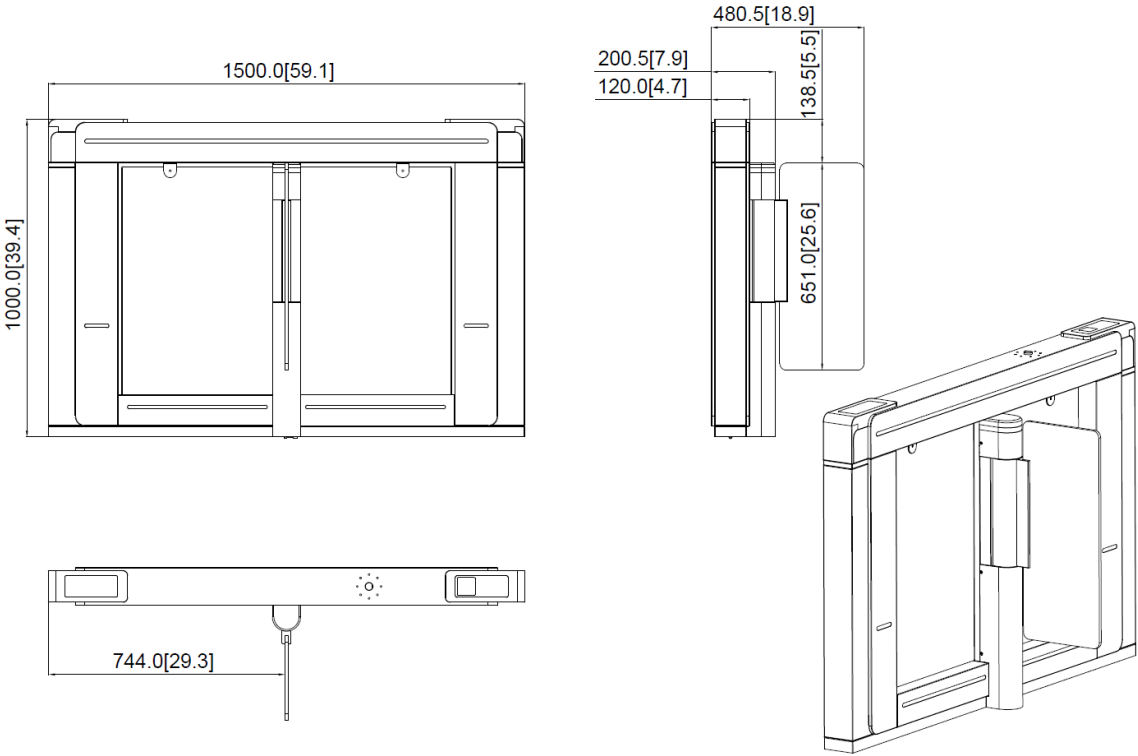


Figure 3-2 Appearance (2)



3.2 Dimensiones

Figure 3-3 Dimensions (mm [inch])



3.3 Componentes internos

Figure 3-4 Inner components

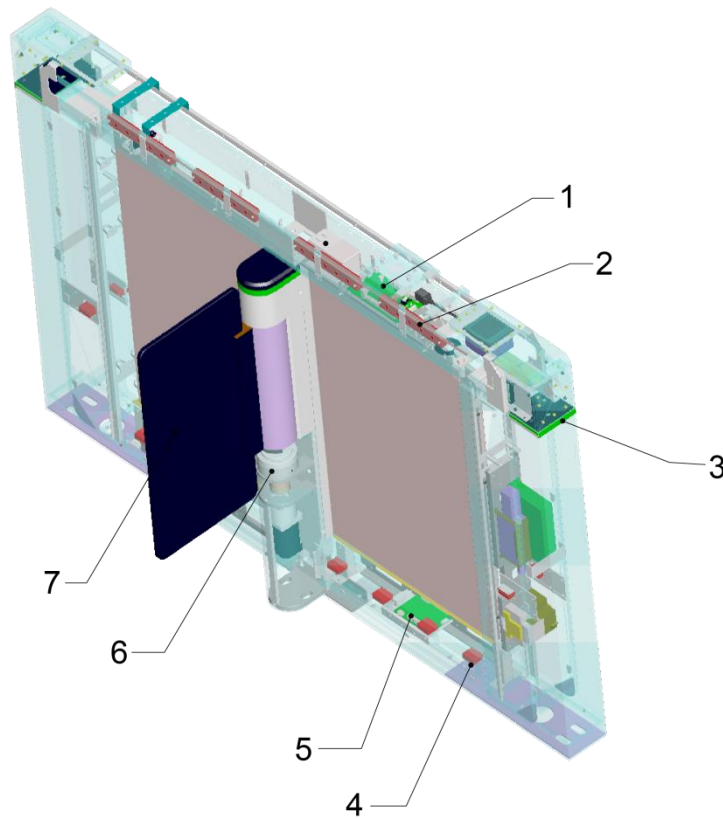


Table 3-1 Inner components description

No.	Name	Description
1	Turnstile control panel	It is the turnstile control center. It receives, judges, and processes turnstile location synchronization signals and firefighting signals, and signals from access control main board and IR sensor; and then sends orders to turnstile indicator lights, electric motors, alarm devices, and counters.
2	Light curtain sensor	Collect the location information of passages.
3	Passage indicator lights	● Green light glows: Authenticated, barriers locked. ● Green light flashes: Passage is allowed. ● Red light flashes: Device anomaly or in alarm status. ● Blue light glows: Standby status.
4	IR sensor	Collect the location information of passages.
5	Motor driver panel	Externally connected with encoder, clutch and motor. Receives signals from the turnstile control panel to control the motor rotation and clutch engagement.
6	Clutch	Used for emergency braking of barriers.
7	Swing barrier	Locks and unlocks the turnstile.

4 Instalación

4.1 Instrucciones de seguridad



WARNING

- Debe confirmar estrictamente los requisitos del manual durante la instalación; de lo contrario, no seremos responsables de ninguna pérdida ocurrida.
- Una instalación o un funcionamiento incorrectos podrían causar daños a personas o cosas. Los dispositivos de seguridad y control utilizados deben cumplir la norma EN12978.
- Antes de instalar, cablear y desmontar el torniquete, primero desconéctelo de la fuente de alimentación.
- El torniquete consta de varios dispositivos mecánicos y eléctricos, cualquier descuido durante la instalación podría causar daños.
- Si sale humo, olor desagradable o ruido extraño, apague el dispositivo, desenchufe el torniquete y luego comuníquese con el distribuidor o el centro de servicio.
- No desmonte la cubierta del torniquete a menos que sea necesario; de lo contrario podrían producirse daños y pérdidas humanas y materiales.

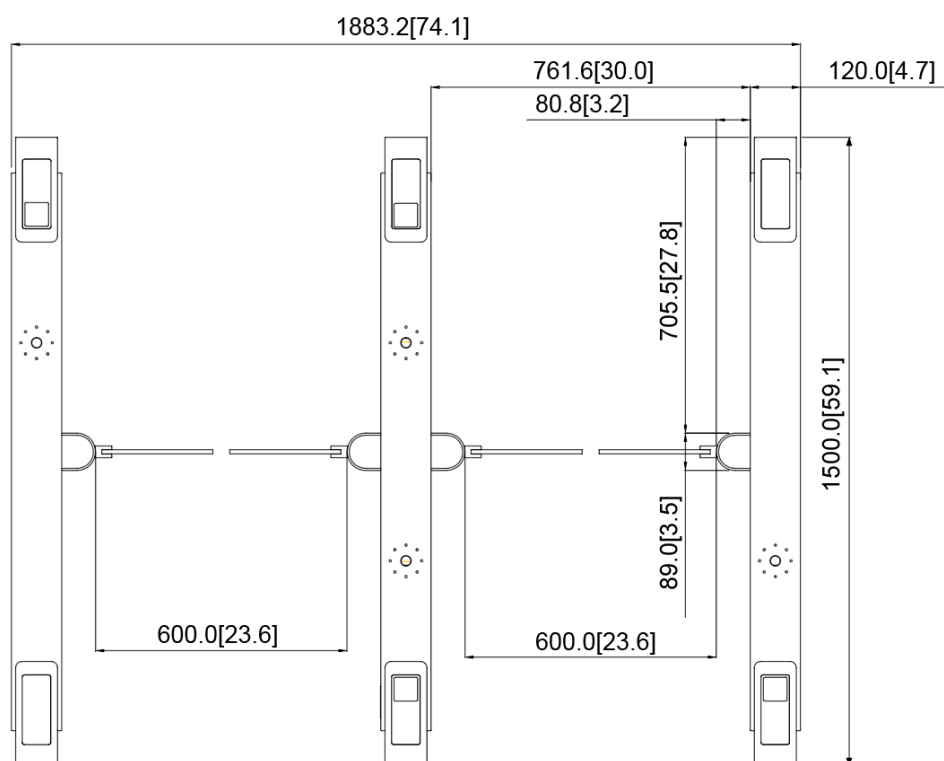


- Instale el torniquete de forma segura.
- Cuando se conecta a una fuente de alimentación de 220 VCA, el cable de tierra debe estar conectado correctamente.
- Antes de operar el torniquete, asegúrese de que tanto los propietarios como los operadores puedan ver su estado. No se permite que las personas se sitúen entre los torniquetes para operarlos una vez que estén encendidos. Después de instalar el torniquete, realice un mantenimiento de acero inoxidable de inmediato.

4.2 Antes de la instalación

- Asegúrese de que el suelo donde se instalará el torniquete sea plano.
- Construya una base de hormigón (de más de 100 mm de altura) si el torniquete se instala en lugares con alta humedad o que se encharcan fácilmente. Aplique sellador de silicona en los huecos entre el suelo y el torniquete para evitar la entrada de agua y condensación.
- Asegúrese de que la tubería de PVC esté enterrada a más de 150 mm de profundidad y que su altura sobre el suelo sea superior a 50 mm. Doble el extremo de la tubería de PVC que sobresale del suelo para evitar fugas de agua. Mantenga seco el suelo donde se instale el torniquete.

Figure 4-1 Installation drawings (mm [inch])



4.2.1 Tools

Tools might vary according to installation surfaces.

- suelo de cemento
Percussion drill, drill No.16, marking pen, tape measure, levelling instrument, hammer, wrench, angle grinder, cutting machine, and screwdriver.
- Suelo de mármol y cerámica
Due to fragileness of marble and ceramic ground, use pistol drill to drill holes on marble and ceramic ground, and then use percussion drill to make the holes deeper.

4.2.2 Cable Connection

- Antes de colocar los cables, compruebe que las etiquetas de los mismos estén claramente marcadas.
- Asegúrese de que el cable de alimentación de CA, el cable de comunicación y el cable de señal estén separados (los cables de alimentación con mayor frecuencia, mayor potencia y corriente y aquellos con menor frecuencia, menor potencia y corriente no deben colocarse en la misma tubería de PVC).
- Entierre las tuberías de PVC a más de 150 mm de profundidad. La longitud de las tuberías de PVC en el suelo debe ser superior a 50 mm.
- Pase los tubos de PVC a través de la entrada de cables en la base de instalación.

Figure 4-2 PVC pipe layout (mm)

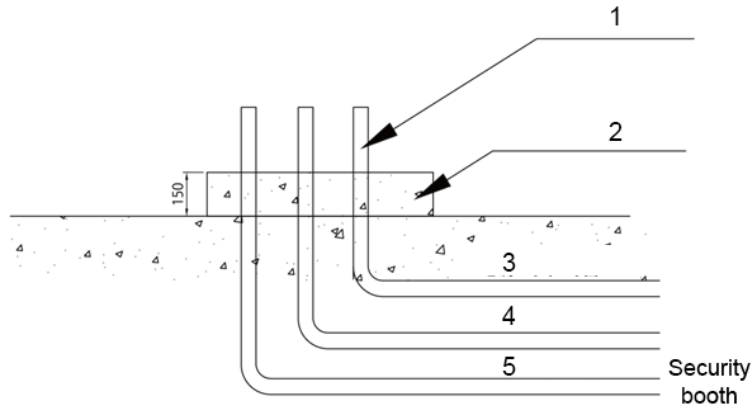


Table 4-1 PVC pipe layout description

No.	Name
1	1" PVC pipe
2	425# cement base
3	Power cable pipe
4	Signal cable pipe
5	Communication cable pipe

Figure 4-3 Cable connection

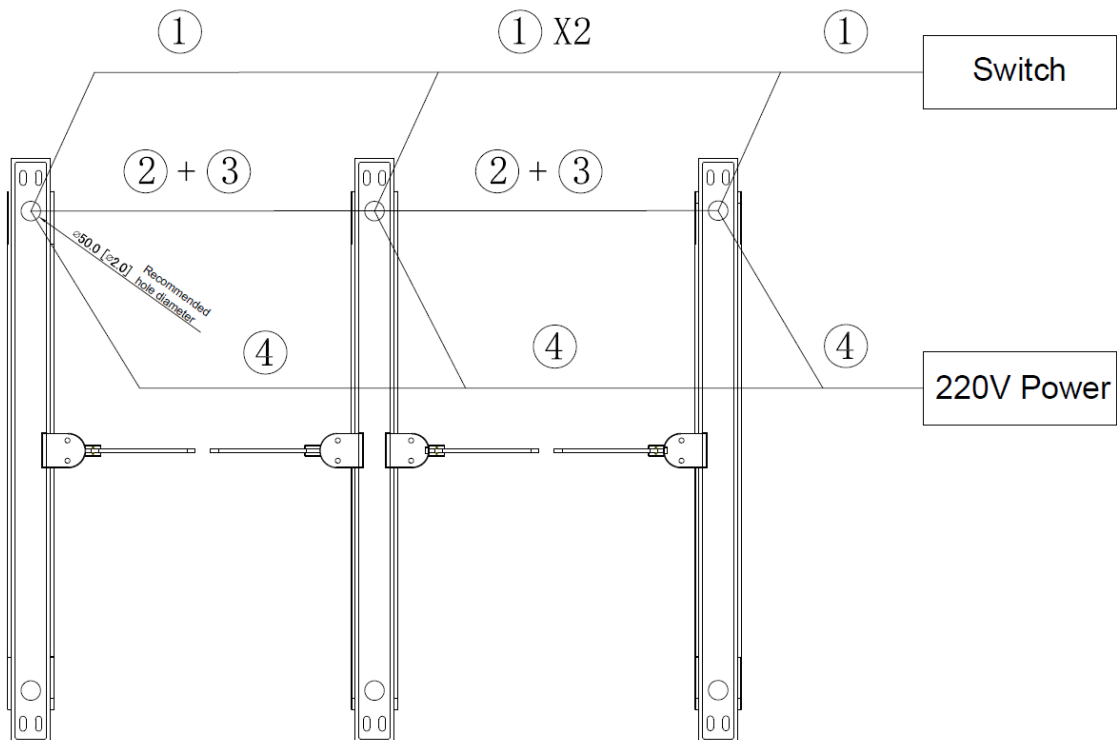


Table 4-2 Cable connection

Cable number	Cable type	Description
1	Network cable (CAT5)	Two-way face unlock turnstile. Connect 1 network cable for the turnstiles on the left and right respectively, and connect two network cables for the turnstile in the middle. Make sure that the cable outside the cable entry is 3 meters long.
2 and 3	Turnstile synchronization cable and light curtain cable	Connect the two turnstiles with 2 cables (one 4-core CAN and RS-485 cable and one light curtain cable). Make sure that the cable outside the cable entry is 2 meters long.  The synchronization cable and light curtain cable are provided.
4	Power cable	Connect 1 network cable for each turnstile, and make sure that the cable outside the cable entry is 3 meters long.

4.2.3 Cable Layout Diagram

For recommended cable layout, see Figure 4-4. If you lay cables incorrectly like Figure 4-5 does, the turnstile might not be firmly installed and cables might be broken when hammering expansion screws.

Figure 4-4 Recommended cable layout (mm [inch])

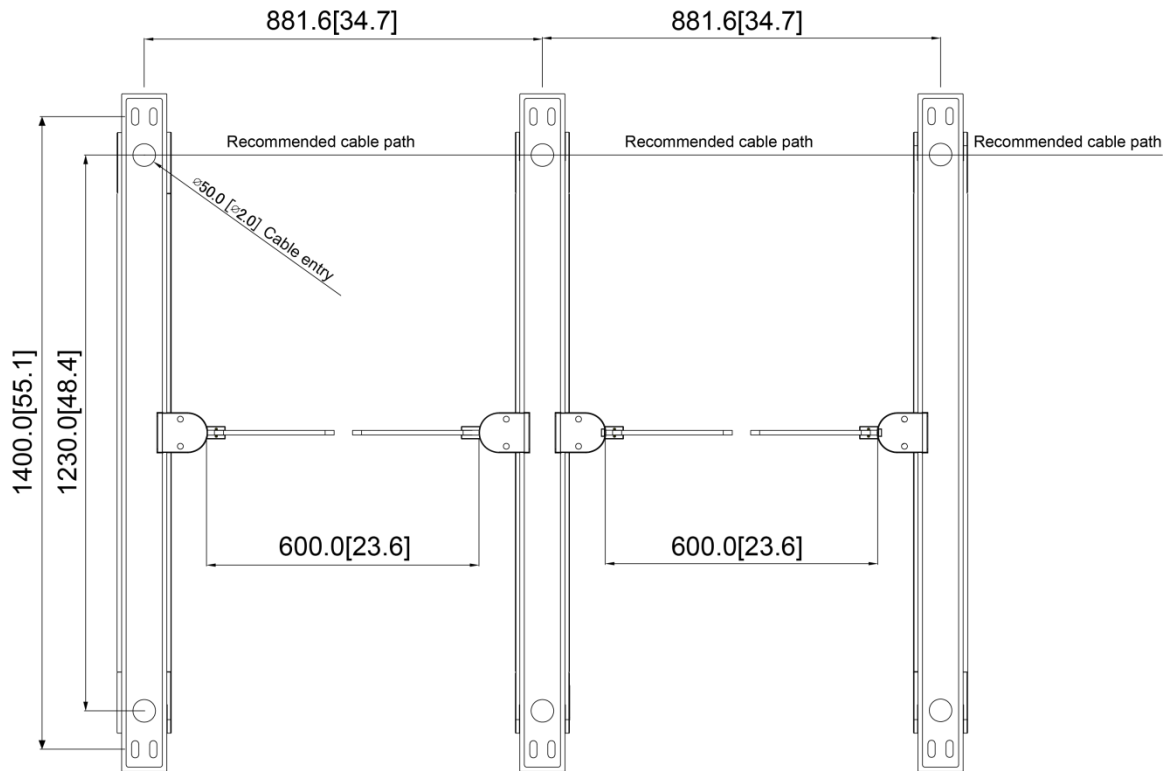
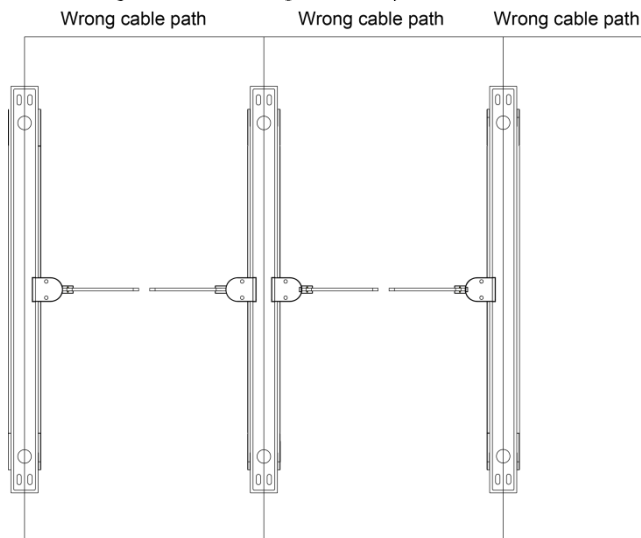


Figure 4-5 Wrong cable layout



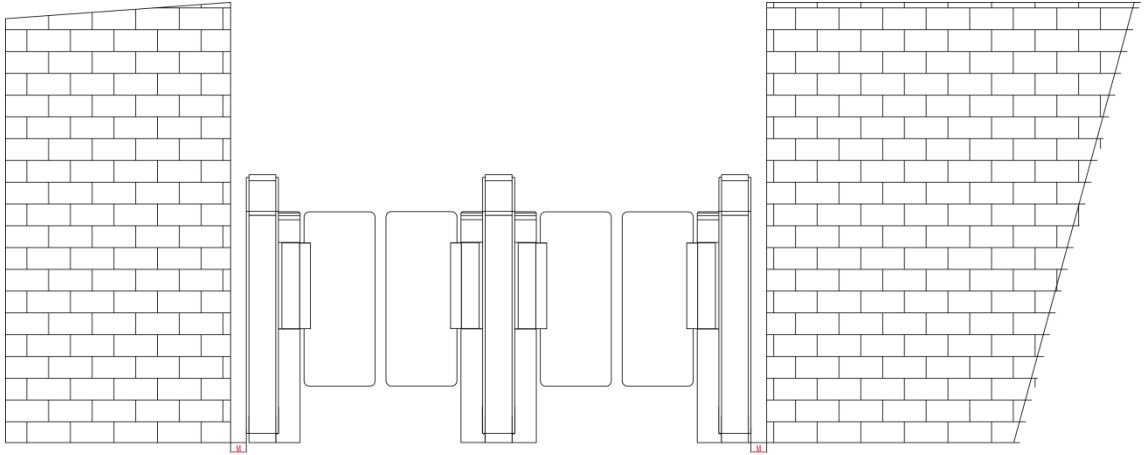
4.3 Procedimiento de instalación

4.3.1 Drilling Holes

Before installing turnstiles next to buildings, leave some space between the turnstiles and buildings.

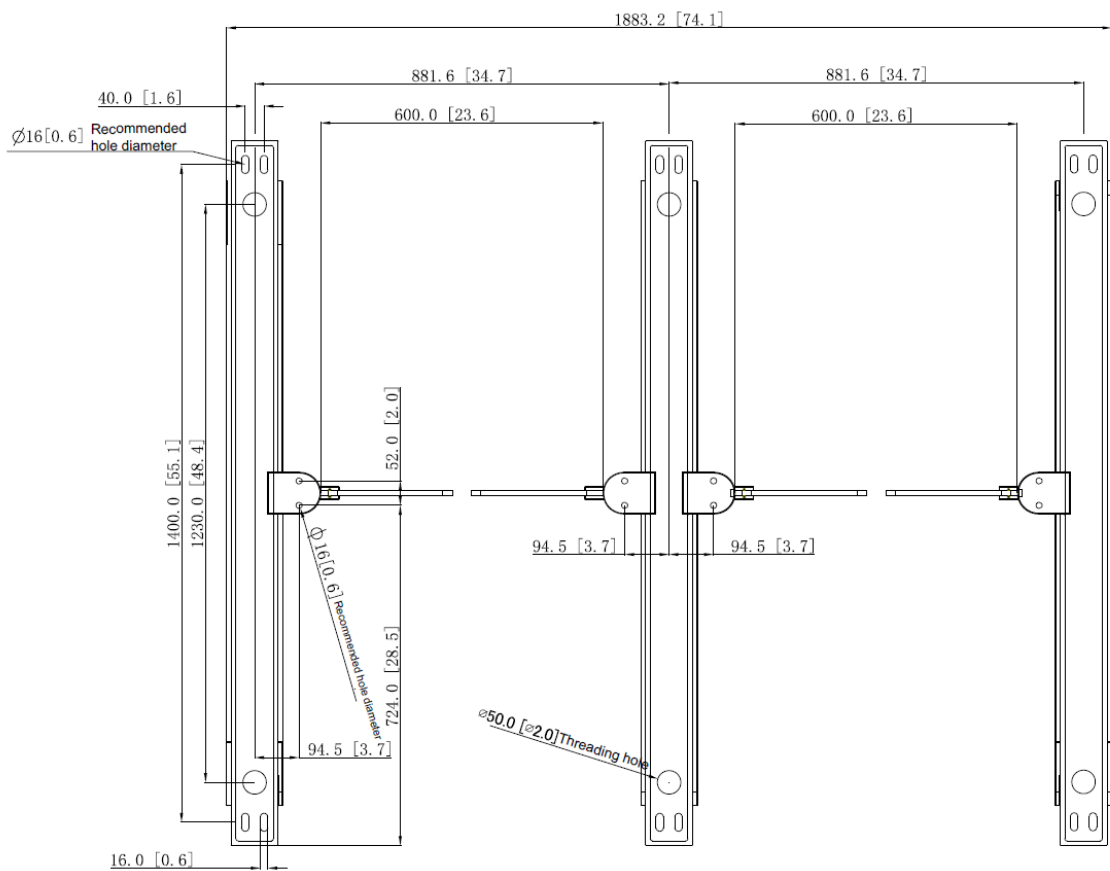
- Las flechas en la cubierta interior del torniquete deben apuntar en la misma dirección.
- Al instalar torniquetes junto a edificios, asegúrese de que su distancia sea entre ellos mínima de 70 mm y máxima de 100 mm. Esta distancia permite abrir la tapa del torniquete durante el mantenimiento e impide el paso de personas por los huecos entre los torniquetes y los edificios.

Figure 4-6 Install turnstiles next to buildings



Step 1 Draw 6 turnstile installation holes. See Figure 4-7.

Figure 4-7 Hole drilling diagram(mm [inch])



Step 2 Drill holes in the installation surface (like cement). For hole diameters, hole depth, and anchor bolt diameters, see Table 4-3.

Table 4-3 Anchor bolt specification

Parameter	Dimensions
Anchor bolt specification	M12×120
Hole depth (mm)	95
Hole diameter (mm)	16

Step 3 Compress air to remove dust in the holes.

Step 4 Hammer the anchor bolt into the hole bottom.

Step 5 Tighten the nut of the anchor bolt with the wrench, and then hammer the bolt again.

4.3.2 Adjusting Turnstile Position

Step 1 Loosen the fixing screws with a hex wrench, and then remove the upper cover and the side panel.



- Before removing the side panel, you need to unplug the LED light cable from the side panel.
- Handle gently to prevent scratches on the surface.

Figure 4-8 Turnstile cabinet doors

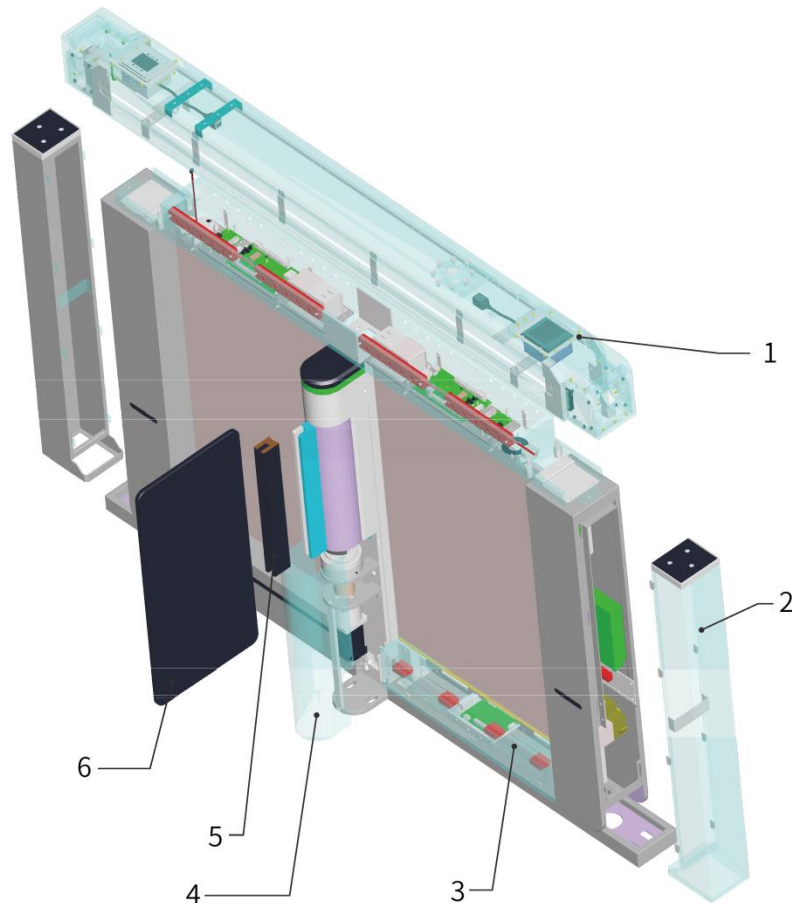
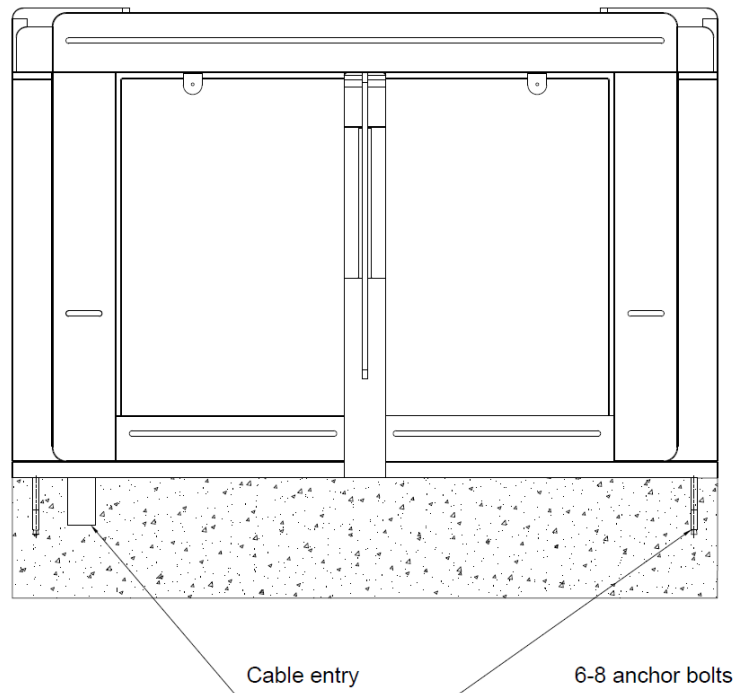


Table 4-4 Turnstile cabinet doors

No.	Name
1	Upper cover
2	Side panel
3	Bottom cover
4	Motor cover
5	Decorative panel
6	Swing barrier

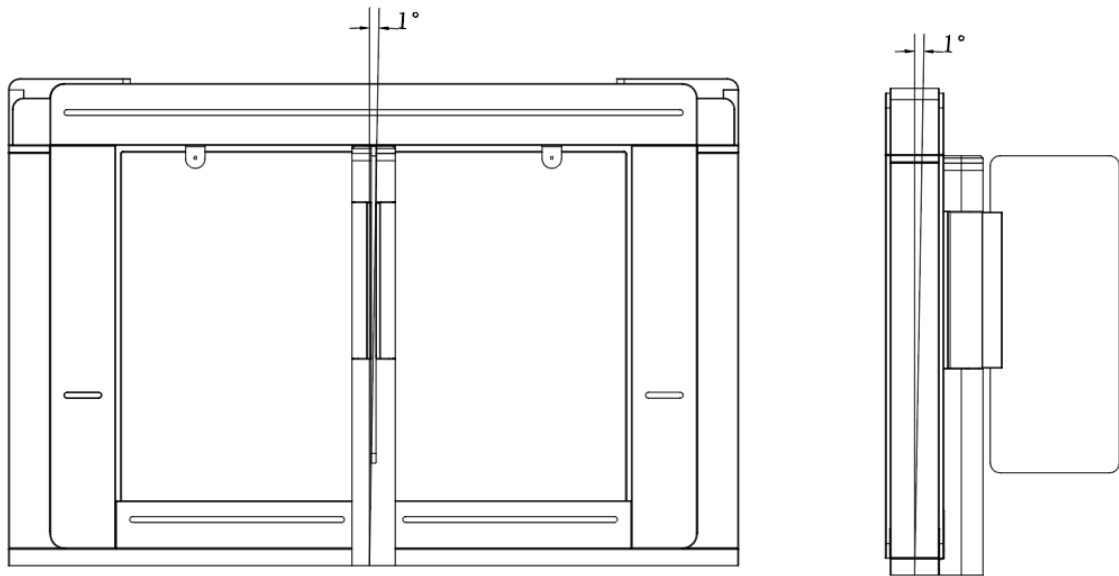
Step 2 Thread cables through the turnstile cable entry, and keep them organized to avoid cable broken.

Figure 4-9 Cable entry



- Step 3 Lift the turnstile, adjust its position, make the holes in the turnstile overlap with the anchor bolt, and then place the turnstile on the ground.
- Step 4 Use a gradienter to measure angles of inclination of the ground where the turnstile is installed. For appropriate flatness tolerance, see Figure 4-10.

Figure 4-10 Ground flatness tolerance



Step 5 Repeat Step 1–Step 4 to install other turnstiles.

- Arrows on the inner cover of the turnstile must point to the same direction.

Figure 4-11 Upper cover direction

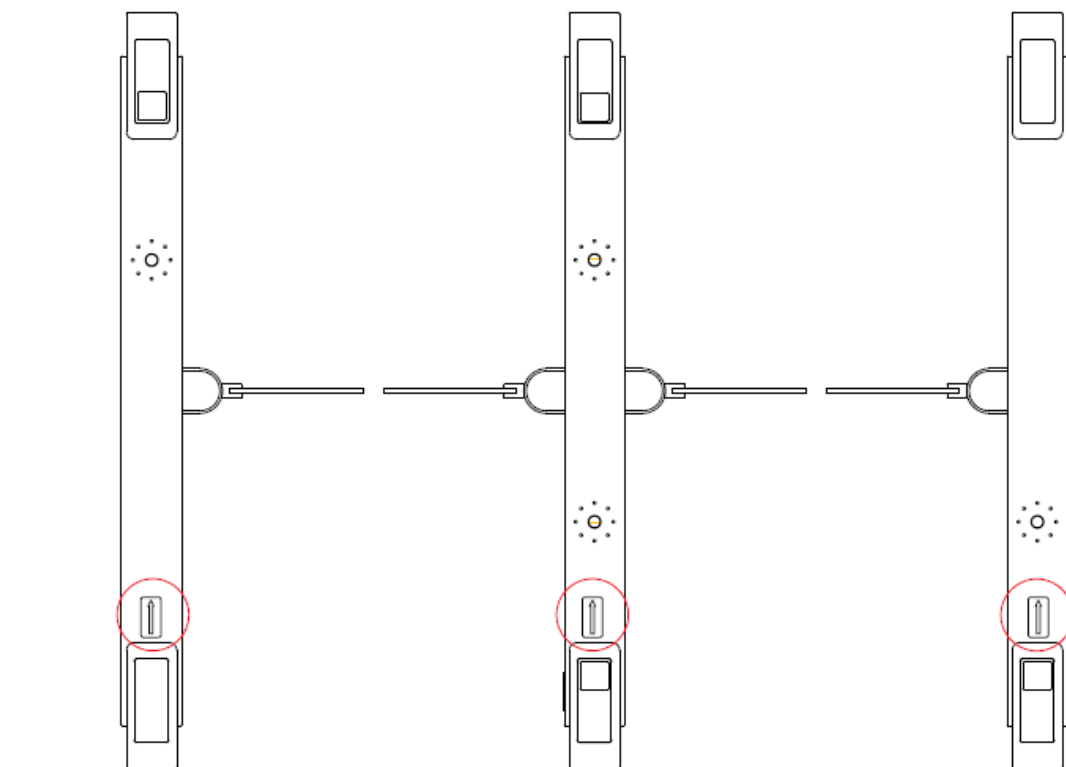
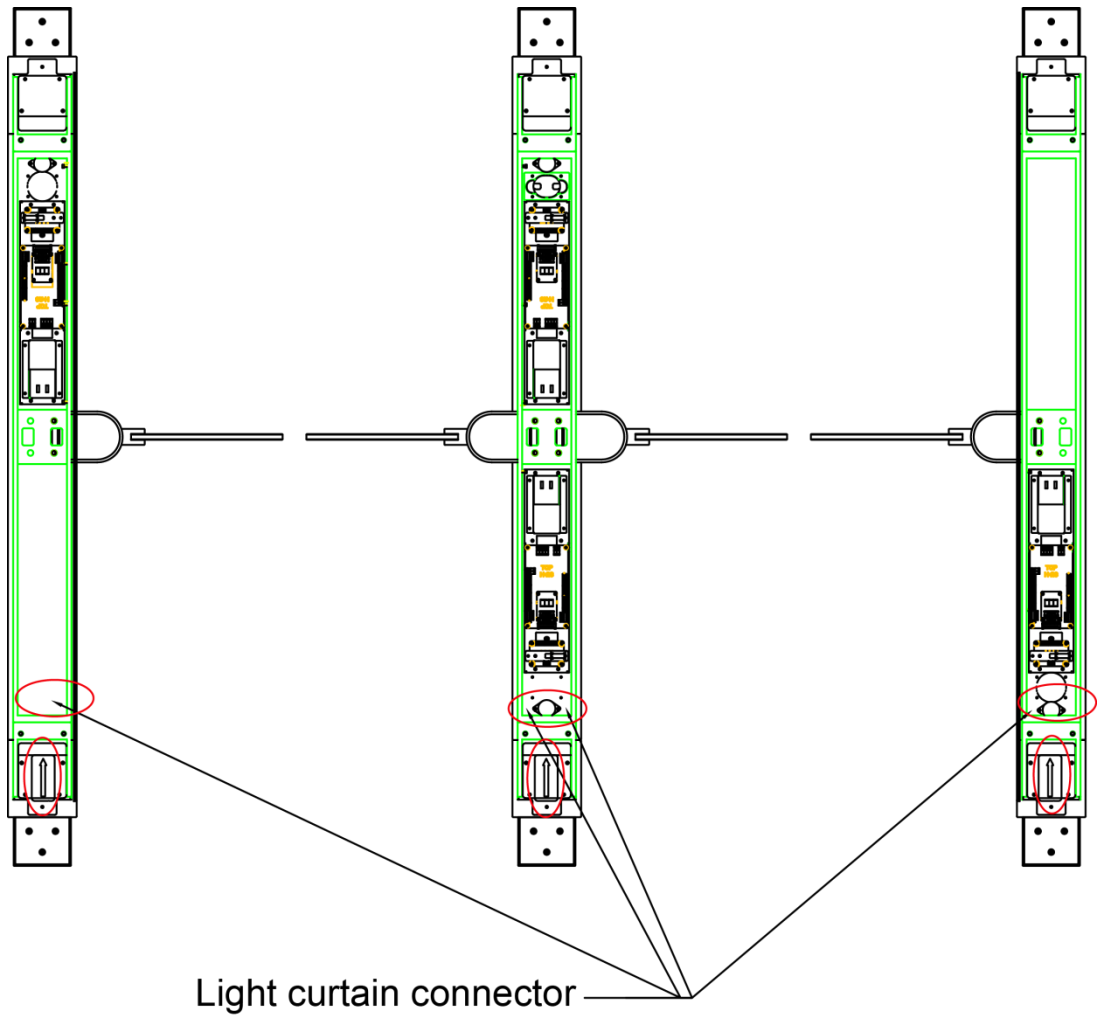


Figure 4-12 Light curtain connector location



- Make sure that height difference and parallelity difference of turnstiles are within the appropriate range.

Figure 4-13 Height difference (mm [inch])

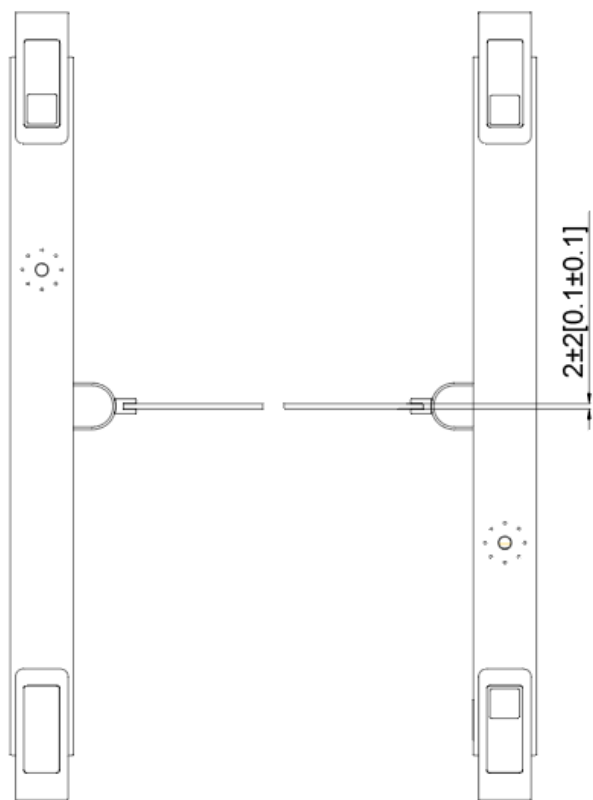
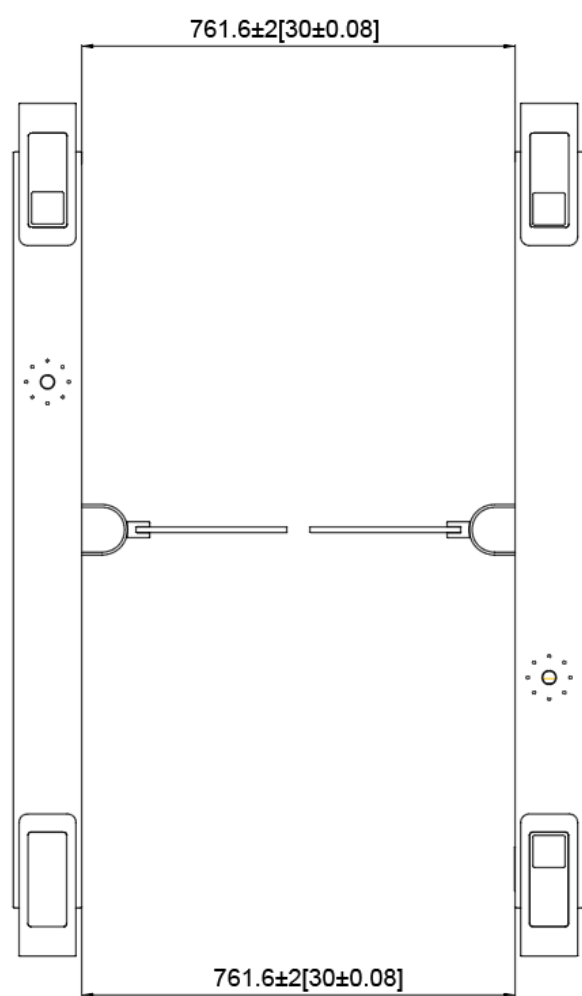


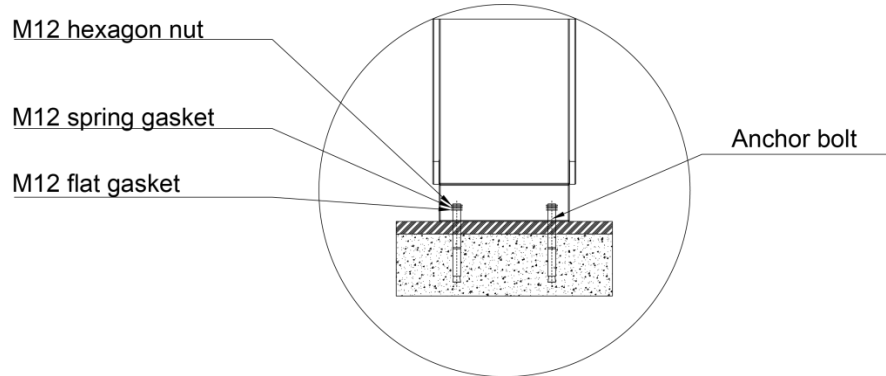
Figure 4-14 Parallelity difference (mm [inch])



4.3.3 Fixing Turnstiles

- Step 1 After adjustment, put M10 surface gasket, M10 spring gasket, and M10 nut on the anchor bolt, and then tighten the nut manually. See Figure 4-15.
- Step 2 Tighten all nuts with the wrench.
- Step 3 Apply silicone sealant to gaps between the turnstile and the ground to avoid water leakage.

Figure 4-15 Fixing turnstiles



4.3.4 Installing Swing Barriers

- Step 1 Loosen and take out the two M3 screws with a screwdriver, and then pull up the decorative panel.
- Step 2 Loosen and take out the three M6 screws, and then take out the door cover.
- Step 3 Place the swing barrier in the proper position and put back the decorative panel. Make sure that the screw position of the door cover and the screw position of the swing barrier are aligned and tightened.
- Step 4 Tighten the two M3 screws to complete the installation.

Figure 4-16 Installing swing barriers

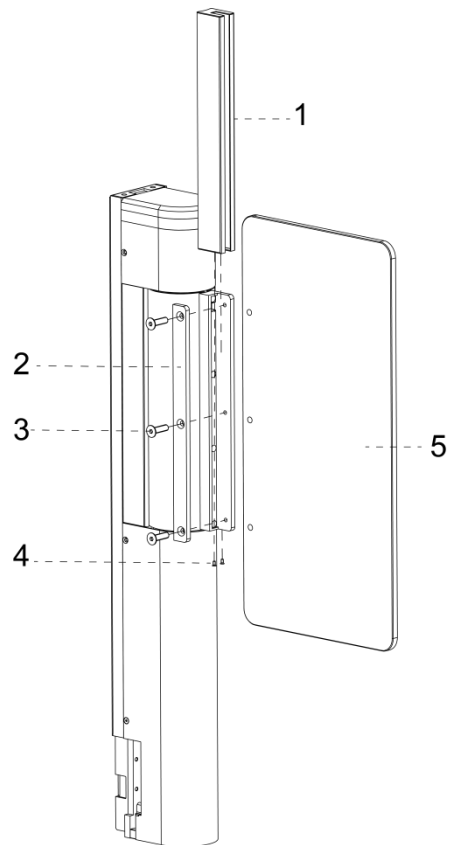


Figure 4-17 Installing swing barriers

No.	Name
1	Decorative panel
2	Door cover
3	M6 screw
4	M3 screw
5	Swing barrier

Conexión de 5 cables

5.1 Descripción del puerto del panel de control del torniquete

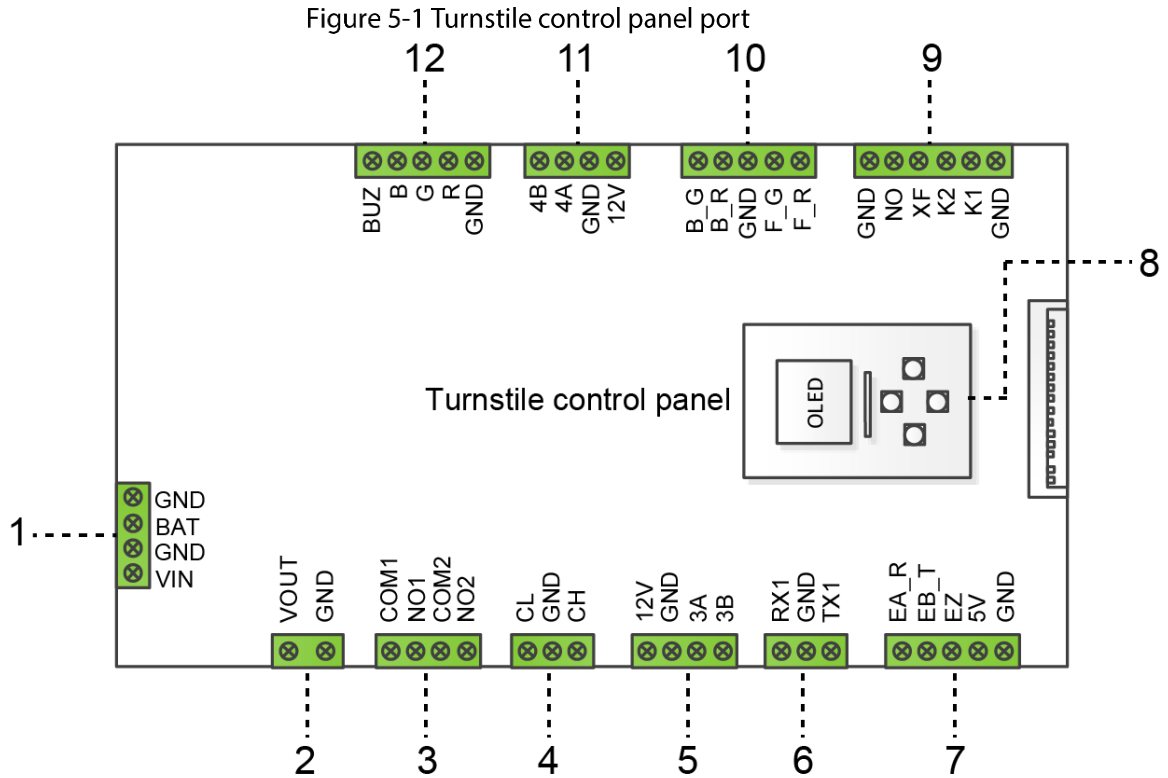


Table 5-1 Turnstile control panel port description

Port No.	Description
1	- GND, +24V: Inputs 24V/6.5A DC power source for the control panel. - GND, BAT: Connected to storage batteries; when AC power is disconnected, storage batteries start to work.
2	VOUT, GND: 24V power output for powering the motor driver board.
3	COM1/NO1 receives entering signals and COM2/NO2 receives exiting signals. The two relays can be configured to output alarm signals or population volume signals.
4	Connects two swaying barriers with synchronization cable to synchronize their movements.
5	12V, GND, 3A, 3B: RS-485 port for program update.
6	RS-232 port for connecting access controller or face recognition terminal.
7	- GND, 5V: Ground port of the power supply and 5V power input port. - EA_R, EB_T, EZ: Communicates with RS-232 port of motor driver board.
8	Display module, for turnstile local configuration.

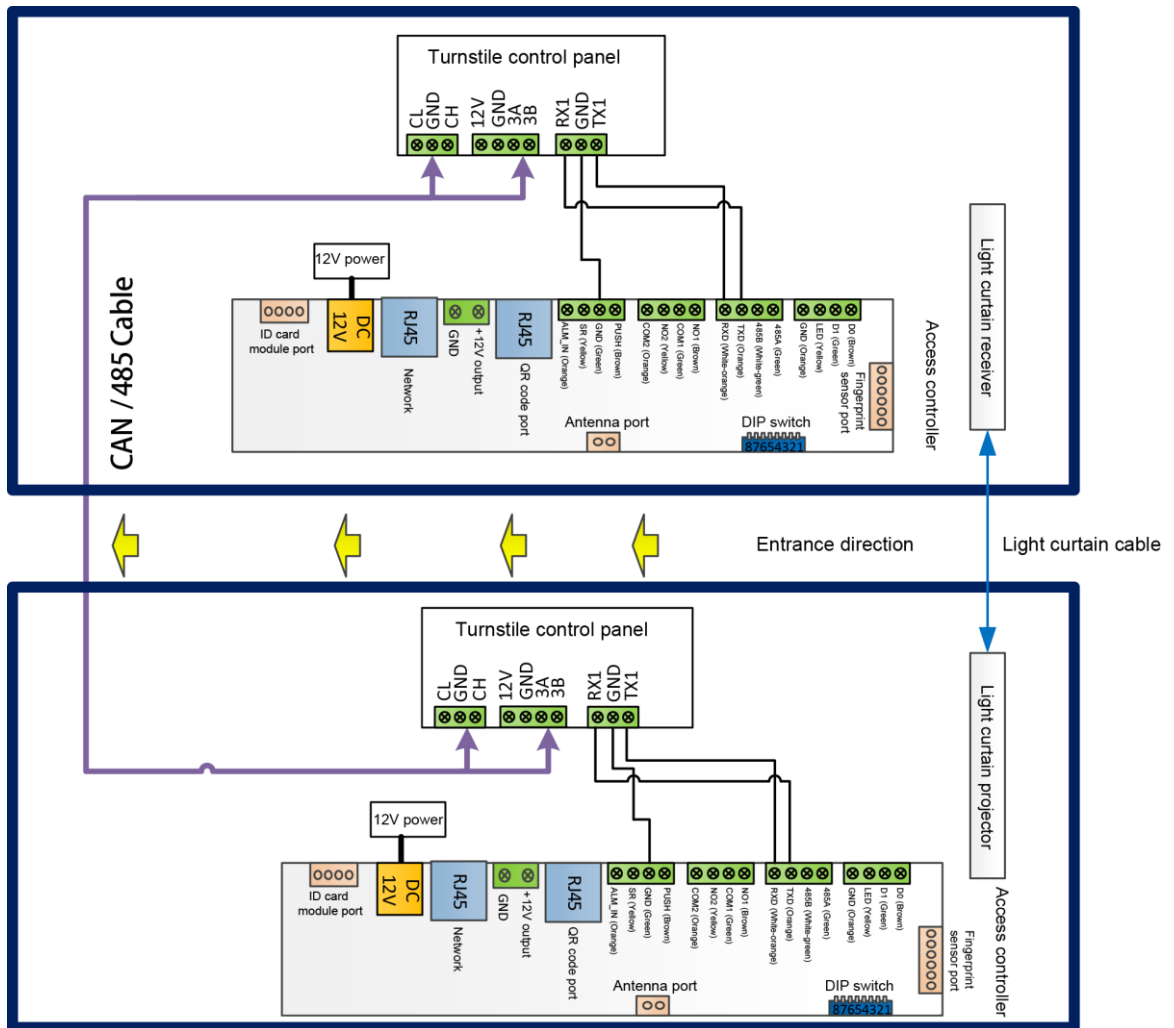
Port No.	Description
9	● K2, GND: Receives exiting unlock signals from turnstile control panel or face recognition terminals. ● K1, GND: Receives entering unlock signals from turnstile control panel or face recognition terminals. ● NO: Input port of signals from the normally open button. The barriers keep unlocked until the second input signal. ● XF: Firefighting signal input port. The barriers will keep unlocked until firefighting signals disappear.
10	Preserved.
11	● GND, 12V: Ground port of the power supply and 5V power input port. ● A4, 4B: Encoder port.
12	GND, R, G, B, BUZ: Connected to turnstile indicator lights.

5.2 Controlador de acceso (desbloqueo de tarjeta bidireccional)



- For two-way card unlock mode, set the DIP switch of the access controller to 00000000.
- The IP address of the access controller is 192.168.1.108 by default; the username is admin, and the password is admin by default.
- A separate power adapter is required when you install an access controller.

Figure 5-2 Access controller (two-way card unlock) cable connection

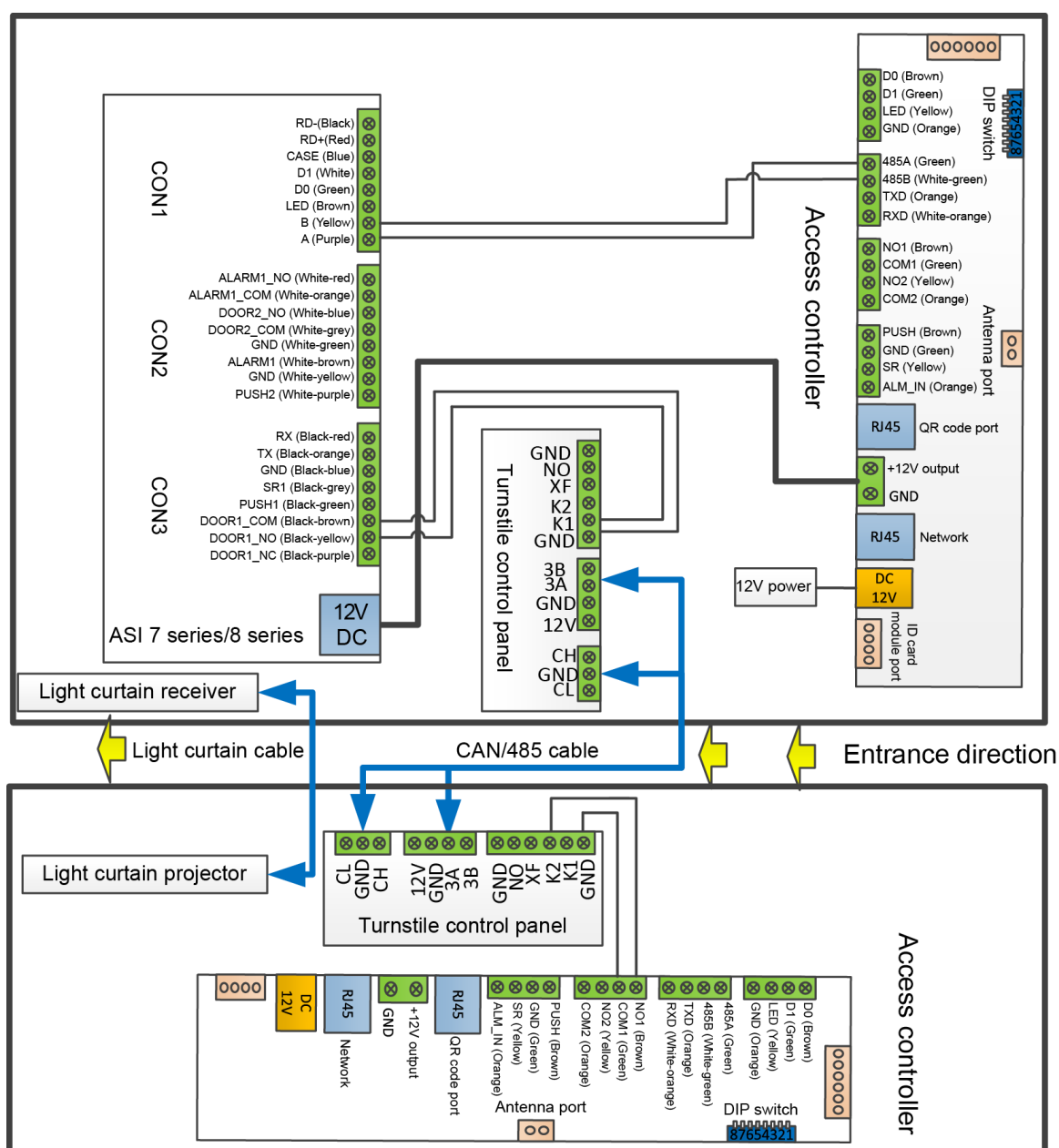


5.3 Terminal de reconocimiento facial de la serie ASI7/8 (desbloqueo facial unidireccional y desbloqueo con tarjeta bidireccional)



- Set the DIP switch of the face recognition access controller to 0000001, and set the DIP switch of the IC card reader to 00000000.
- The IP address of the access controller is 192.168.1.108 by default; the username is admin, and the password is admin by default.
- The unlock duration for the face recognition access controller should be configured as 0.2 seconds.
- A separate power adapter is required when you install a face recognition access controller.

Figure 5-3 Face recognition terminal of ASI7/8 series cable connection (1)

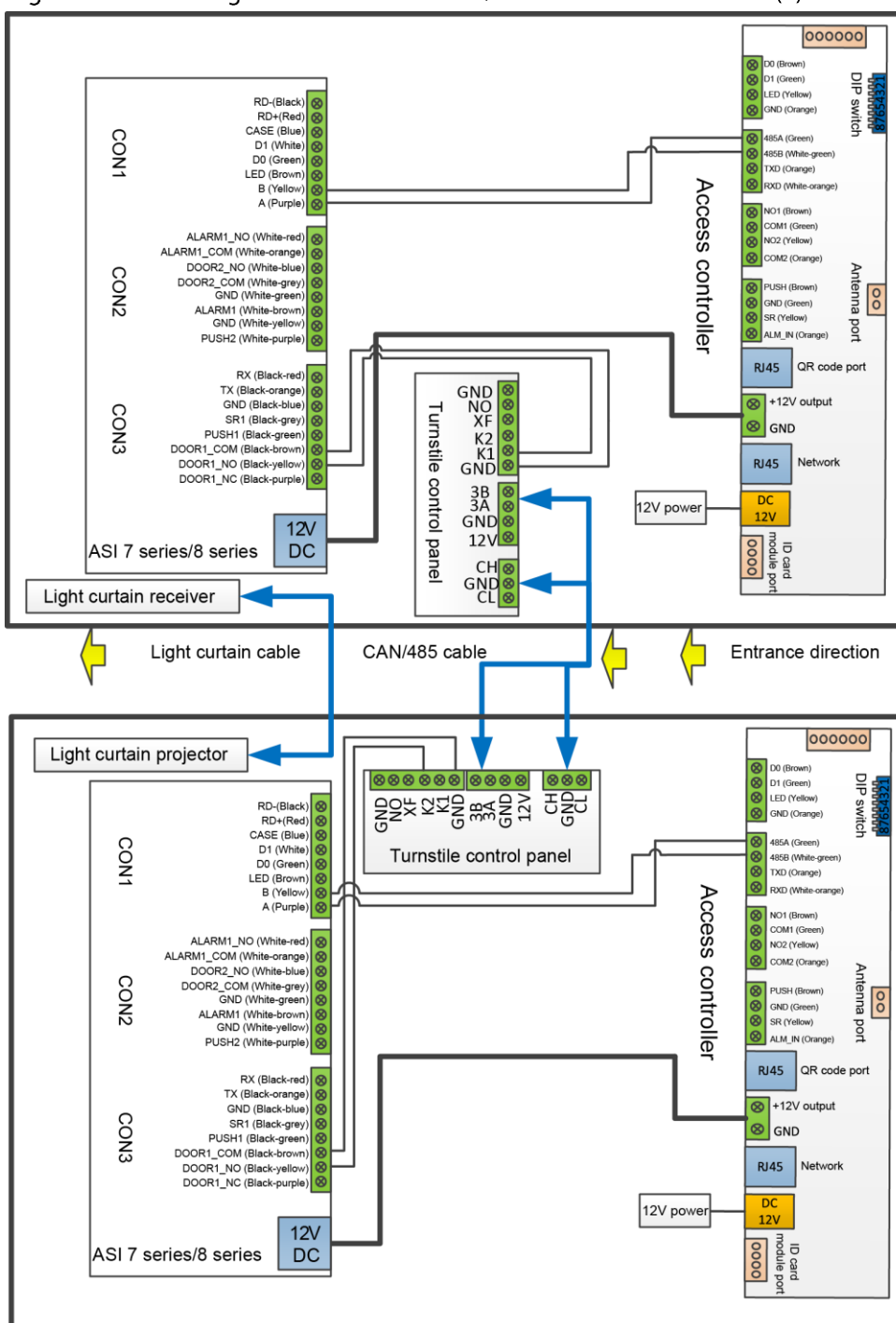


5.4 Terminal de reconocimiento facial de la serie ASI7/8 (desbloqueo facial bidireccional y desbloqueo con tarjeta bidireccional)



- Set the DIP switch of the face recognition access controller to 0000001.
- The unlock duration for the face recognition access controller should be configured as 0.2 seconds.
- A separate power adapter is required when you install a face recognition access controller.

Figure 5-4 Face recognition terminal of ASI7/8 series cable connection (2)



6 Configuración y puesta en servicio

Parameters can be configured through the four buttons on the turnstile. Parameters configured on each turnstile can be synchronized (except barrier origin).

6.1 Operación de la pantalla

Figure 6-1 Display buttons

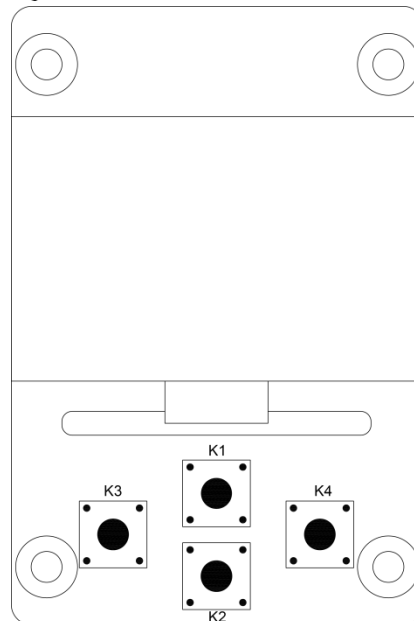


Table 6-1 Button description

Button name	Description
K1: Up	Press the button to move up the menu items or adjust the current parameter value.
K2: Down	Press the button to move down the menu items or adjust the current parameter value.
K3: Exit	Press the button to exit the menu or cancel the current configuration.
K4: Menu/Confirm	Press the button to enter the menu or confirm current configuration.

6.1.2 Working Mode

The turnstile supports 2 working modes:

- Modo normalmente abierto

This mode is applicable when there might be a great number of people passing the turnstile in a certain period.

- Modo normalmente cerrado

When normally closed mode is selected, the turnstile cannot be unlocked by anyone.

6.1.3 Passage Control Mode

The turnstile supports 9 passage control modes:

- Se necesita verificación de identidad al entrar y salir de un lugar (modo predeterminado).
- La verificación de identidad es necesaria al ingresar a un lugar, y no es necesaria al salir del lugar.
- Se requiere verificación de identidad al entrar a un lugar, pero no se permite salir. No se requiere verificación de identidad al entrar, pero sí al salir.
- No es necesaria la verificación de identidad al entrar y salir de un lugar.
- No se requiere verificación de identidad para entrar a un lugar, ni se permite salir de él. No se permite entrar a un lugar, ni se requiere verificación de identidad para salir de él. No se permite entrar a un lugar, ni se requiere verificación de identidad para salir de él. No se permite entrar ni salir de un lugar.

6.1.4 Passing Duration Settings

Passing duration is the maximum duration allowed for passengers to pass the turnstile after identity verification. Passengers need to pass the turnstile within the passing duration; otherwise the stay overtime alarm will be triggered.

The following passing duration options are available:

- 2 segundos
- 5 segundos
- 10 s (predeterminado)
- 15 segundos
- 20 segundos
- 30 segundos
- 45 segundos
- 60 segundos

6.1.5 Lock Delay Settings

Lock barriers a certain period later than the passing duration.

The following lock delay duration options are available:

- 0 s (predeterminado)
- 2 segundos
- 3 segundos
- 5 segundos
- 8 segundos
- 15 segundos
- 30 segundos
- 60 segundos

6.1.6 Security Level Settings

- 1: Se permite seguir a otros y salir por el torniquete cuando otros entran, y se activará la alarma luminosa. La barrera no se bloqueará ni en modo normalmente abierto ni en modo normalmente cerrado.
- 2: No se permite seguir a otros ni salir por el torniquete cuando otros entran. Se activará una alarma sonora y luminosa. La barrera no se bloqueará ni en modo normalmente abierto ni en modo normalmente cerrado.
- 3: No está permitido seguir a otros ni salir por el torniquete cuando otros están entrando.
 - ◇ When visitors with permission have passed the turnstile, sound and light alarm will be triggered before trailing people and people try to take the chance to exit through the turnstile entered the anti-pinch area (IR sensor can detect humans before they enter the anti-pinch area). The barriers will be locked in both normally open mode and normally closed mode.
 - ◇ When visitors with permission and people try to take the chance to exit through the turnstile have not entered the anti-pinch area, the barrier will be locked.
 - ◇ When trailing people and people try to take the chance to exit through the turnstile entered the anti-pinch area, sound and light alarm will be triggered. The barrier will not be locked in both normally open mode and normally closed mode. The barriers will be locked after trailing people and people try to take the chance to exit through the turnstile have passed the turnstile.
- 4: No se permite seguir a otras personas ni salir por el torniquete cuando otras personas entran en un lugar. Cuando los visitantes autorizados hayan pasado el torniquete, se activará una alarma sonora y luminosa dondequiera que se encuentren las personas que siguen a otras personas o que intenten salir por el torniquete. La barrera se bloqueará tanto en modo normalmente abierto como en modo normalmente cerrado.

6.1.7 Second Unlock Settings

After people entered the passing area and alarms are triggered, they do not need to step backwards and can get their identity verified directly. Second unlock is on by default.

6.1.8 Memory Mode Settings

After swiping card once, more than one person can pass the turnstile. Memory mode is off by default.

- Si se permite el paso de varias personas por el torniquete y una de ellas no lo hace en 5 segundos o se queda más tiempo del permitido, las barreras batientes se bloquearán. En ese momento, deberá pasar la tarjeta varias veces para que varias personas puedan pasar el torniquete de forma continua.
- En el modo de memoria, si el intervalo de autorización excede la duración de aprobación, no se acumulará la cantidad de autorizaciones de aprobación.
- El intervalo entre dos verificaciones de identidad debe ser mayor que la duración del desbloqueo del controlador de acceso; de lo contrario, solo se contabilizará una. El tiempo recomendado de verificación de identidad es de 2 a 5 s.
- En el modo de memoria, un máximo de 255 personas pueden pasar por el torniquete de forma continua.

6.1.9 Unlock and Lock Speed Settings

The following unlock and lock speed levels are available:

- 1: El más lento
- 2
- 3
- 4
- 5
- 6: Predeterminado
- 7
- 8: El más rápido



The speed increases from 1 to 8.

6.1.10 Volume Settings

The following volume levels are available:

- 1: Silencio
- 2: El más bajo
- 3
- 4
- 5
- 6: Predeterminado
- 7
- 8: El más alto



The volume increases from 1 to 8.

6.1.11 Unlock Settings After Power-off

The unlock direction after power-off can be set to Exit or Enter. Exit is by default.



The unlock direction cannot be configured when the power-off is triggered by the firefighting signals. The unlock direction after power-off is Exit.

6.1.12 Start Mode

Table 6-2 Start mode settings

Function	Mode
Normal	Normal mode. After setting origin start, you need to set the start mode to normal mode.

Function	Mode
Origin	Original position adjustment mode. You need to adjust original positions of barriers for the first use. 1. After power-on, go to the menu Start Mode, and then select the Origin option. 2. Power off the turnstile, and align the two swing barriers. 3. Power on the turnstile, and wait for the swing barriers stopping swing, and then set the start mode to normal mode.
Aging test	Test mode.  Test mode is indented for developers, and non-developers are prohibited to use this mode.

6.1.13 Origin Settings

There are 2 origin modes are available: Left origin and right origin.

6.1.14 Passage Width Settings

Passage width range is 600 mm–1200 mm. The following passage width options are available:

- 600
- 700
- 800
- 900
- 1000
- 1100 (solo para torniquete Y)
- 1200 (solo para torniquete Y)

You need to adjust the width according to barrier length. For passenger safety, if the passage width is ≥ 900 mm, security level cannot be set.



If the passage width is ≥ 900 mm, it is recommended to choose a speed of unlock and lock below 6. Excessive speed affects the motor life, and it is easy to hit intruder and trailing people.

6.1.15 System Information

Table 6-3 System information

Menu	Information
Version	Software version number and compile date.
Counter	IN: passengers entered. OUT: passengers exited.
Restore	Restore to factory defaults.
Device type	Swing barrier or wing barrier.
Barriers material	Acrylic or stainless steel.

Menu	Information
Light curtain status	Display light curtain status.
Clean passager number	Whether to clean passager number.

6.1.16 Language

Language options: Simplified Chinese and English.

6.2 Prueba de encendido



All turnstiles must be connected to power source.

Before doing the power-on test, make sure that:

- Todos los componentes del torniquete funcionan correctamente. Se ha probado el torniquete, pero la conexión de los componentes aún podría presentar ligeras diferencias.
- El cable está conectado correctamente.
- El cable de sincronización está conectado y las conexiones del cable del panel de control del torniquete en el medio son correctas.
- Las barreras oscilantes se ajustan a la posición central.

Step 1 Perform power-on self-test.

- 1) Power on the turnstile and adjust the start mode to origin mode, and then power off the turnstile.
- 2) Adjust and align the swing barriers to the correct position.
- 3) Restart the turnstile and the turnstile performs self-test automatically.

The swing barriers will swing left and right during the self-test.

After the swing, if the buzzer does not beep, it means that the self-test succeeds.

If the power-on self-test failed, the buzzer beeps, and the corresponding alarm prompts on the display.



Each time the turnstile is disconnected from power source and connected to power again, the turnstile will do power-on self-test. After the power-on self-test, the turnstile will go to normal working status.



During power-on self-test, passengers are not allowed to pass the turnstile, IR sensors cannot be blocked, and barrier movements cannot be interfered.

Step 2 Change the start mode to normal mode.

Step 3 Set passage control mode for the turnstile: Identity verification is not needed when entering and exiting from a place. Observe barrier movements and positions when unlocking and locking the turnstile.

When a person enters the passage, the barriers will automatically open, and when a person exits the passage, the barriers will automatically close.

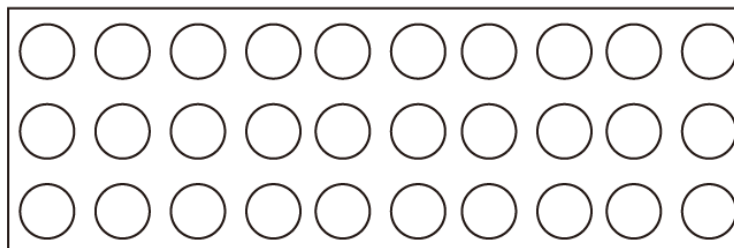


After registering cards and assigning face unlock permissions, you can set passage control mode as identity verification is needed when entering and exiting from a place.

6.3 Determinación de anomalías de luz infrarroja y cortina de luz

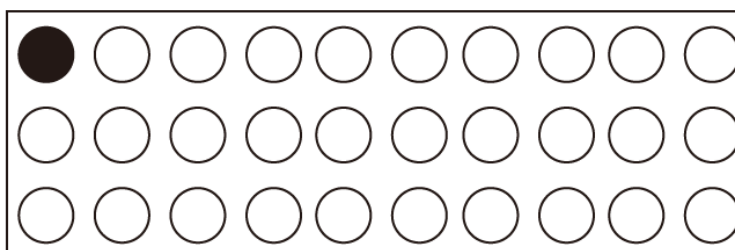
In display module of passage control mode, you can view the status of IR light and light curtain through System Info > Curtain Status.

Figure 6-2 Light curtain status



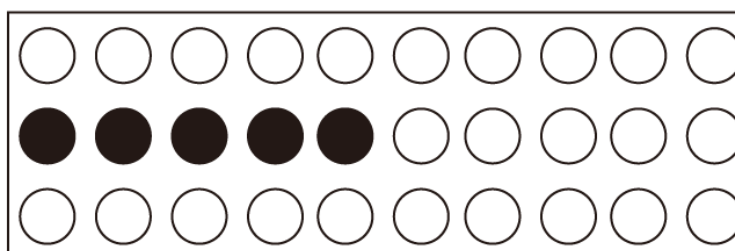
- El círculo hueco indica el estado no activado y el círculo sólido indica el estado activado. La primera fila indica IR. Cada punto corresponde a un IR, de izquierda a derecha: IR 1, IR 2 ... IR 10. La segunda y la tercera filas indican la barrera de luz, y cada 5 puntos corresponden a una barrera de luz.
 - ◇ Light curtain 1: 1-5 dots of row 2.
 - ◇ Light curtain 2: 6-10 dots row 2.
 - ◇ Light curtain 3: 1-5 dots of row 3.
 - ◇ Light curtain 4: 6-10 dots of row 3.
- Para determinar si es anormal:
 - ◇ If there is no block in the passage, the light curtain status is shown as Figure 6-2.
 - ◇ If IR 1 is blocked, the light curtain status is shown as Figure 6-3.

Figure 6-3 Light curtain status: IR 1 is blocked



- ◇ If light curtain 1 is blocked, the light curtain status is shown as Figure 6-4.

Figure 6-4 Light curtain status: Light curtain 1 is blocked



7 preguntas frecuentes

1. After the turnstile is plugged in, power indicator light will not be on.

- 1) Check whether the power adapter works normally.
- 2) Check whether the codes of air switch are correct.

2. After the power-on self-test failed, the buzzer beeps and the power-on self-test error code "E01" is displayed on the numeric display.

- 1) Check whether IR sensors are blocked during power-on self-test.
- 2) Check whether all turnstiles are connected to power source.
- 3) Open the side door of the turnstiles, and then check whether the indicator light on the IR sensor board is red. If the indicator light is red, it means IR sensors are blocked or are not aligned.
- 4) IR sensors are broken. Contact technical support to change new IR sensors.

3. After the power-on self-test failed, the buzzer beeps and the power-on self-test error code "E02" is displayed on the numeric display.

Check whether communication cables of all turnstiles are correctly connected.

4. After power-on self-test failed, the buzzer beeps and the power-on self-test error code "E03" is displayed on the numeric display.

Check whether the barrier movements were interfered during the power-on self-test. If not, contact the technical support.

5. The barrier is disconnected from power source, swing barriers cannot be unlocked.

- 1) Check whether the battery cable is correctly connected.
- 2) Check whether the battery voltage is normal. The normal battery voltage is 12 V.

6. After a visitor swipe an authorized card, the barrier still cannot be unlocked.

- 1) Check whether the card is a valid card.
- 2) Check whether cable connection between data collection board and access controller is correct.

7. After a visitor pass the turnstile with the identity verified, the turnstile barriers cannot lock themselves.

Adjust the lock delay duration.

8. Trailing alarm is triggered when a visitor pass the turnstile with the luggage.

There are gaps between the visitor and the luggage. It is normal that trailing alarm being triggered.

9. Turnstile indicator lights are not on.

Check whether cable connection between passing direction indicator lights and passage indicator lights is correct.

10. Barriers cannot be locked or unlocked during days with heavy rains and passage indicator lights flash in red.

Dry rain drops on the acrylic plate, especially acrylic plate outside the IR sensors.

Appendix 1 Maintenance

Maintain the turnstile regularly; otherwise its lifespan or performance will be influenced.

Turnstile Exterior

- Periodo de mantenimiento (dependiendo del entorno del sitio), para un mejor entorno:
 - ◇ Outdoor, once every half month or after each raining day.
 - ◇ Indoor, once every two months.
- Contenido de mantenimiento: Limpiar el gabinete del torniquete y las barreras batientes.
 - ◇ Dip a piece of soft cloth in a neutral detergent or clean water, and then clean the cabinet surface.
 - ◇ High salinity and humidity environment, acid rain, and sweat will corrode the stainless cabinet surface. Use scouring pad to clean the rust (you can also use rust remover), and then dip a piece of soft cloth in a neutral detergent or clean water to clean the cabinet surface.

Turnstile Interior



Clean the power supply and circuit board. Do not use water to clean the interior to avoid short circuit.

- El torniquete se mantiene cada tres meses. Contenido
- del mantenimiento
 - ◇ Disconnect the turnstile from power source, open the turnstile cover, and then clean the dust inside.
 - ◇ Make sure that the motor, bearing, fastening device, screws, and more are tightened.
 - ◇ Apply lubricants to radius rods and gears.
 - ◇ Check whether there is loose cable connection. If yes, organize and cover bare cables, and then tighten screws. Replace the aged cables (if any).

Appendix 2 Maintenance of the Stainless Cabinet Surface



After installing the Turnstile, make a stainless steel maintenance at once.

Appendix 2.1 Rust Protection and Adhesive Failure

Stainless steel will not get rusty unless it is used inappropriately in harsh environments.

Rust Protection

Do not make the turnstile be close to rust inducing substances; otherwise the turnstile might be more likely to get rusty.

- Iones, óxido de azufre, sustancias ácidas que contienen HCl y H₂ENTONCES₄, o sustancias que producen sustancias ácidas (contienen SO₄, sales y HCLO) después de disolverse en agua.
- Sustancias como el hollín y el polvo impiden que el acero inoxidable produzca una película protectora. El metal con polvo de hierro produce óxido adhesivo en el acero inoxidable.

Adhesive Failure Protection

After sticking protective film on the stainless steel, protect it from UV rays (direct sunlight), heat, pressure, and more to avoid adhesive failure.

Appendix 2.2 Removing Dirt and Rust

Remove Protective Film Mark

Use sponge or cloth dipped with mixed solutions of ethyl alcohol, naphtha, banana oil, methylbenzene, and acetonehunheye to clean the film mark. Clean solutions on the stainless steel surface with clean cloth. You must use clean water to clean the surface at last.

Clean Dirt and Fingerprints

Generally, neutral detergent or soap can remove dirt and fingerprints; otherwise, use organic solutions (ethyl alcohol and naphtha). After cleaning the surface with organic solutions, you should clean the solutions on the surface immediately. Stainless steel cleaner is recommended.

Clean less Rust

Use stainless steel cleaner to clean less rust.

Clean More Rust

If adhesive rust on the stainless steel was not cleaned in time, the stainless steel will get rusty. As time goes by, thick tawny rust or red rust is hard to remove.

Appendix 2.3 Precautions

Cleaning Requirement

- Desconecte la alimentación eléctrica antes de limpiar el torniquete. No moje los componentes internos. Asegúrese de que el detergente que utilice no contenga granulado abrasivo; de lo contrario, la superficie del torniquete se dañará.
- Limpie la superficie a lo largo de las líneas de la superficie.
- Seque la superficie después de usar detergente y agua limpia.

Detergent Requirement

- No utilice acidoides, especialmente ácido sulfúrico, ácido sulfuroso y ácidos que contengan cloro o nitrógeno.
- Si se produce una falla del adhesivo, utilice soluciones orgánicas sin oxidación. Normalmente se utilizan alcohol etílico, dimetilbenceno y acetona.
- En el caso de acero inoxidable cuya superficie haya sido procesada (superficie de espejo o superficie de titanio), asegúrese de que el detergente no contenga granulado abrasivo.

Apéndice 3 Recomendación de seguridad

Account Management

1. Use complex passwords

Please refer to the following suggestions to set passwords:

- The length should not be less than 8 characters;
- Include at least two types of characters: upper and lower case letters, numbers and symbols;
- Do not contain the account name or the account name in reverse order;
- Do not use continuous characters, such as 123, abc, etc.;
- Do not use repeating characters, such as 111, aaa, etc.

2. Change passwords periodically

It is recommended to periodically change the device password to reduce the risk of being guessed or cracked.

3. Allocate accounts and permissions appropriately

Appropriately add users based on service and management requirements and assign minimum permission sets to users.

4. Enable account lockout function

The account lockout function is enabled by default. You are advised to keep it enabled to protect account security. After multiple failed password attempts, the corresponding account and source IP address will be locked.

5. Set and update password reset information in a timely manner

The device supports password reset function. To reduce the risk of this function being used by threat actors, if there is any change in the information, please modify it in time. When setting security questions, it is recommended not to use easily guessed answers.

Service Configuration

1. Enable HTTPS

It is recommended that you enable HTTPS to access web services through secure channels.

2. Encrypted transmission of audio and video

If your audio and video data contents are very important or sensitive, it is recommended to use encrypted transmission function in order to reduce the risk of your audio and video data being eavesdropped during transmission.

3. Turn off non-essential services and use safe mode

If not needed, it is recommended to turn off some services such as SSH, SNMP, SMTP, UPnP, AP hotspot etc., to reduce the attack surfaces.

If necessary, it is highly recommended to choose safe modes, including but not limited to the following services:

- SNMP: Choose SNMP v3, and set up strong encryption and authentication passwords.
- SMTP: Choose TLS to access mailbox server.
- FTP: Choose SFTP, and set up complex passwords.
- AP hotspot: Choose WPA2-PSK encryption mode, and set up complex passwords.

4. Change HTTP and other default service ports

It is recommended that you change the default port of HTTP and other services to any port between 1024 and 65535 to reduce the risk of being guessed by threat actors.

Network Configuration

1. **Enable Allow list**

It is recommended that you turn on the allow list function, and only allow IP in the allow list to access the device. Therefore, please be sure to add your computer IP address and supporting device IP address to the allow list.

2. **MAC address binding**

It is recommended that you bind the IP address of the gateway to the MAC address on the device to reduce the risk of ARP spoofing.

3. **Build a secure network environment**

In order to better ensure the security of devices and reduce potential cyber risks, the following are recommended:

- Disable the port mapping function of the router to avoid direct access to the intranet devices from external network;
- According to the actual network needs, partition the network: if there is no communication demand between the two subnets, it is recommended to use VLAN, gateway and other methods to partition the network to achieve network isolation;
- Establish 802.1x access authentication system to reduce the risk of illegal terminal access to the private network.

Security Auditing

1. **Check online users**

It is recommended to check online users regularly to identify illegal users.

2. **Check device log**

By viewing logs, you can learn about the IP addresses that attempt to log in to the device and key operations of the logged users.

3. **Configure network log**

Due to the limited storage capacity of devices, the stored log is limited. If you need to save the log for a long time, it is recommended to enable the network log function to ensure that the critical logs are synchronized to the network log server for tracing.

Software Security

1. **Update firmware in time**

According to the industry standard operating specifications, the firmware of devices needs to be updated to the latest version in time in order to ensure that the device has the latest functions and security. If the device is connected to the public network, it is recommended to enable the online upgrade automatic detection function, so as to obtain the firmware update information released by the manufacturer in a timely manner.

2. **Update client software in time**

It is recommended to download and use the latest client software.

Physical Protection

It is recommended that you carry out physical protection for devices (especially storage devices), such as placing the device in a dedicated machine room and cabinet, and having access control and key management in place to prevent unauthorized personnel from damaging hardware and other peripheral equipment (e.g. USB flash disk, serial port).

-