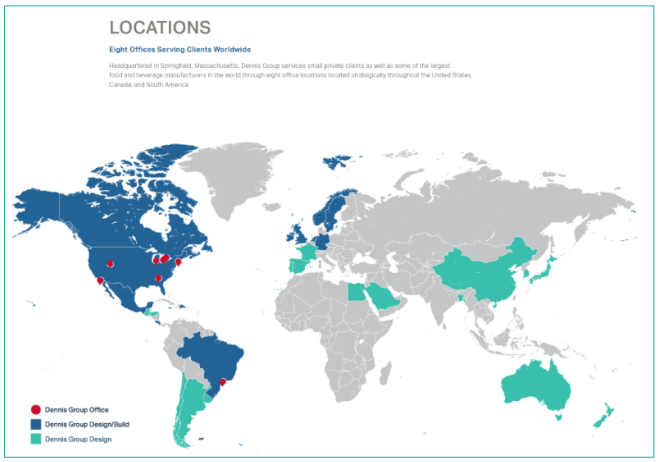
Optical Turnstile Entrances

Optical Turnstile Arrays
Main Entrance and Two Corridors



Dennis Group - Dreyer's Bakersfield, CA

Submitted to:
Dennis Group

Submitted by:
www.TURNSTILES.us, Inc.
January 2024

www.TURNSTILES.us is an organization dealing with the physical and electronic securing of building entrances with Turnstiles, Mantraps, EntraPASS Access Control Hardware, and Software since 1989.

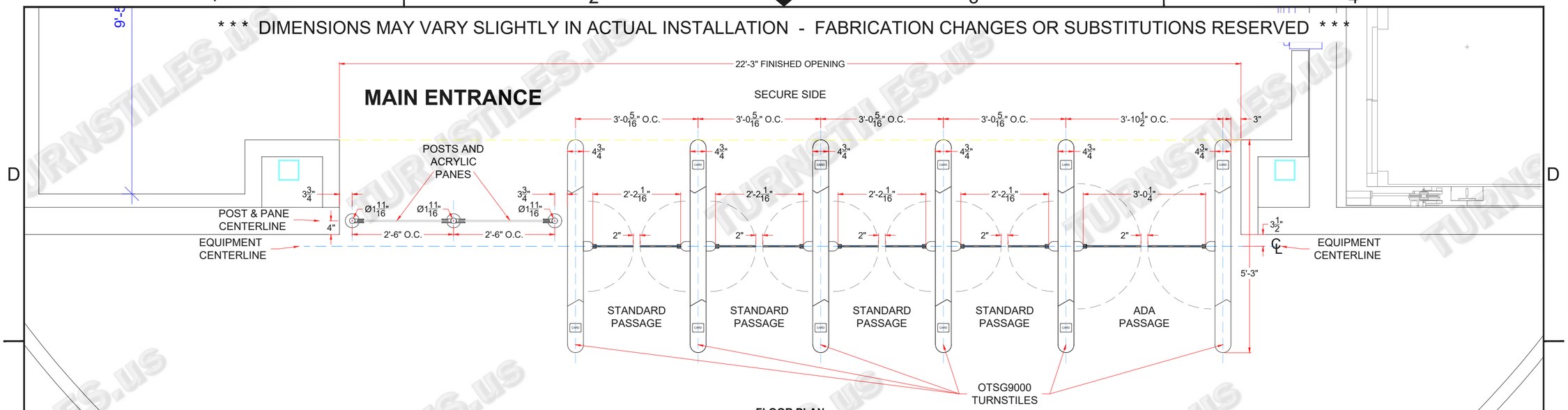
The team at TURNSTILES.us is honored to provide our Optical Turnstiles to the Dennis Group for use at Dreyer's facility in Bakersfield, CA. Please find featured equipment information, photos, and project documentation below. We appreciate the opportunity to secure your facility.

Project Submittal

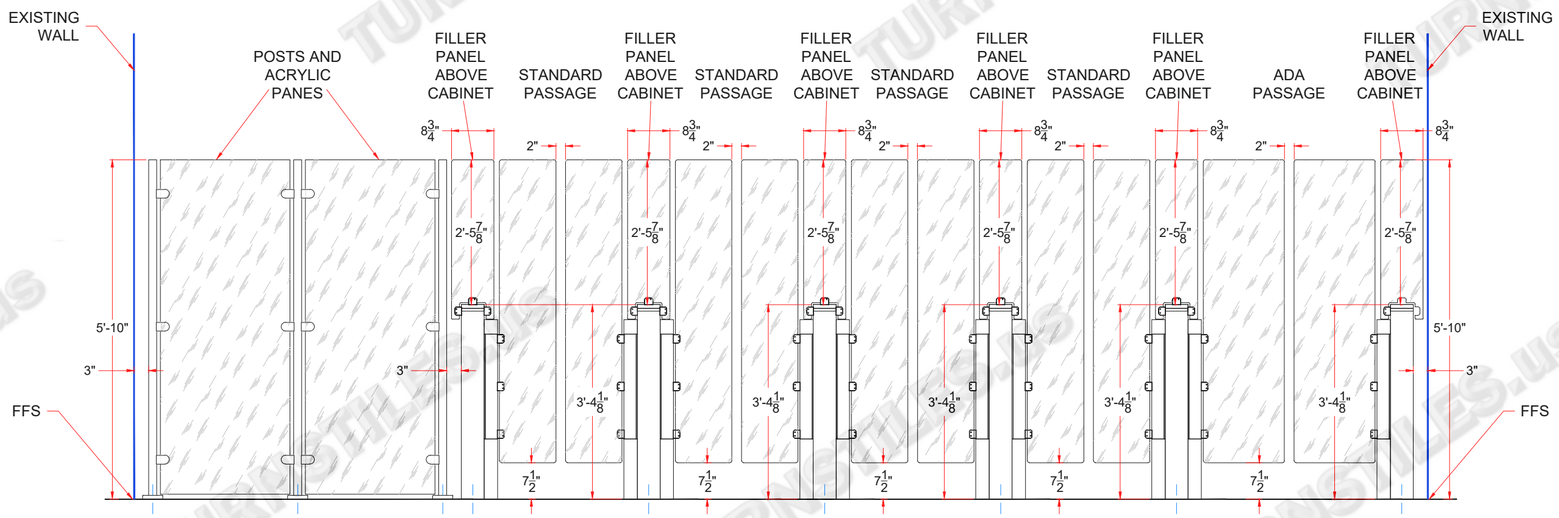
V 3.0

Main Entrance

*** DIMENSIONS MAY VARY SLIGHTLY IN ACTUAL INSTALLATION - FABRICATION CHANGES OR SUBSTITUTIONS RESERVED ***



FLOOR PLAN
FOOT PRINT - NON SECURE SIDE



ELEVATION
OTSG9000 TURNSTILES - POSTS & PANES
EXTERIOR - NON SECURE SIDE

AUTHORIZED SIGNATURE: _____ DATE: ___ / ___ / ___

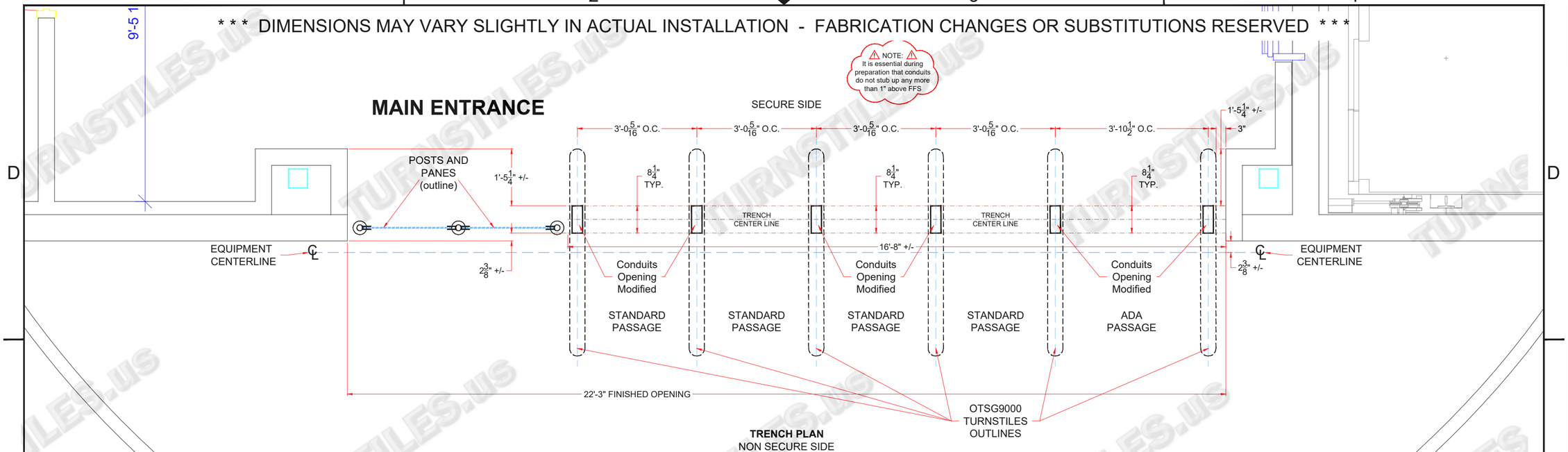
FIRST DRAWN	BY
01-25-24	CJC
REVISED	BY
01-30-24	CJC
01-31-24	CJC

TURNSTILES.us
SECURING THE USA and the GLOBE since 1989
www.TURNSTILES.us
Call: 303-670-1099 | Text: 303-918-9787
patrick.mcallister@turnstiles.us

Equipment Location Detail	
Dennis Group Amy Andolino OTSG9000 Optical Turnstiles Posts & Panes, Filler Panels Above Cabinets Main Entrance	
DRAWING:	
Dennis Group Optical Turnstile Arrays Main Entrance ELD REV A	
DATE:	01-31-24
PAGE:	1 OF 1

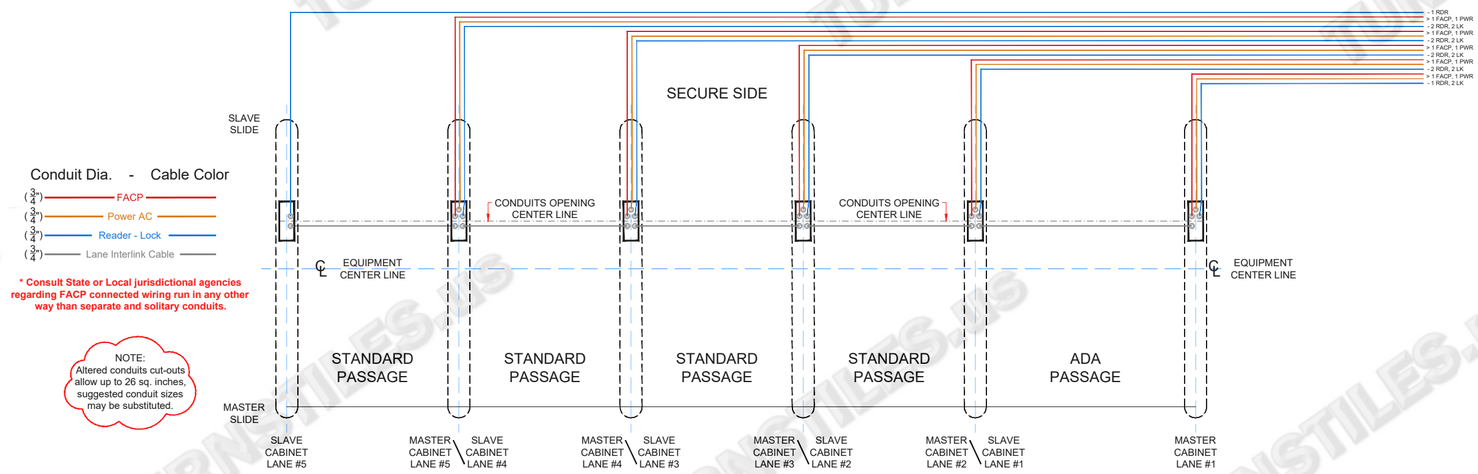
*** DIMENSIONS MAY VARY SLIGHTLY IN ACTUAL INSTALLATION - FABRICATION CHANGES OR SUBSTITUTIONS RESERVED ***

MAIN ENTRANCE



TRENCH PLAN
NON SECURE SIDE

Conduit Layout (typical)



AUTHORIZED SIGNATURE: _____ DATE: ___ / ___ / ___

FIRST DRAWN	BY
02-01-24	CJC
REVISED	BY

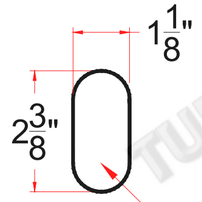
TURNSTILES.us
SECURING THE USA and the GLOBE since 1989
www.TURNSTILES.us
Call: 303-670-1099 | Text: 303-918-9787
patrick.mcallister@turnstiles.us

Equipment Location Detail	
Dennis Group Amy Andolino OTSG9000 Optical Turnstiles 5 Lanes - 4 Standard / 1 ADA Trench, Conduit, and Wiring Recommendation	
DRAWING:	
Dennis Group Optical Turnstile Arrays Main Entrance Trench & Conduits DET	
DATE:	02-01-24
PAGE:	1 OF 1

*** DIMENSIONS MAY VARY SLIGHTLY IN ACTUAL INSTALLATION - FABRICATION CHANGES OR SUBSTITUTIONS RESERVED ***

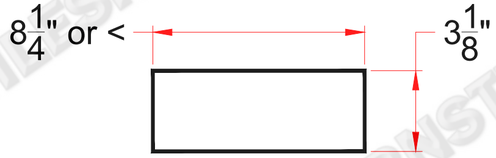
FIRST DRAWN	BY
02-01-24	CJC
REVISED	BY

Bolt Holes
Qty. 8 - Use all
(recommended)

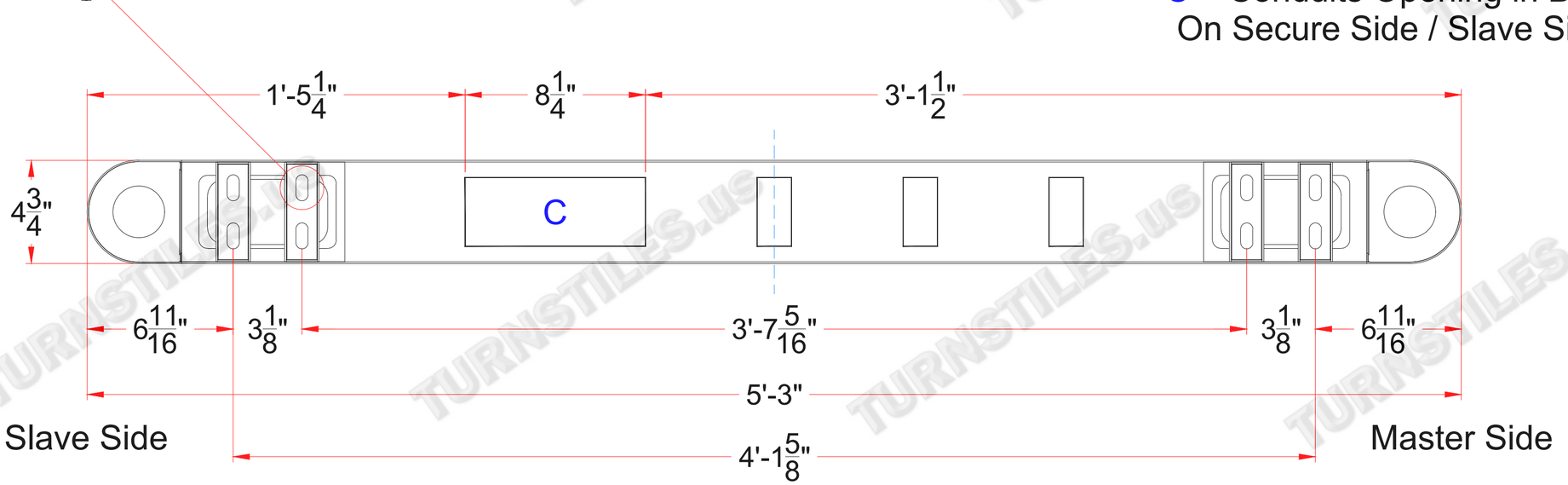


Cabinet Base Template

Modified
Conduits Opening
Dimensions



C = Conduits Opening in Base
On Secure Side / Slave Side



AUTHORIZED SIGNATURE: _____ DATE: ___ / ___ / ___

TURNSTILES.us
SECURING THE USA and the GLOBE since 1989
www.TURNSTILES.us
Call: 303-670-1099 | Text: 303-918-9787
patrick.mcallister@turnstiles.us

Equipment Location Detail
Dennis Group Amy Andolino OTSG9000 Optical Turnstiles 5 Lanes - 4 Standard / 1 ADA Base Detail for Modified Conduits Opening
DRAWING:
Dennis Group Optical Turnstile Arrays Main Entrance BASE DET
DATE: 02-01-24
PAGE: 1 OF 1

FIRST DRAWN	BY
02-096-24	CJC
REVISED	BY

SLAVE Cabinet

MASTER Cabinet

Communication

Slave motor driving controller

Master motor driving controller

Electromagnetic clutch

Motor

Motor control wire

24V power supply

24VDC

IR board

Left indicator light

Right indicator light

IR sensor transmitting port

IR sensor receiving port

8-conductor cable

IR-L: IR1
IR-R: IR4
AP-L: IR2
AP-R: IR3
IR1, IR4 at the bottom
IR2, IR3 on the top

Exit count 00000
Entry count 00000

ZKBZ board

FACP

24V power supply

110VAC by Electrician

Access controller

Reader

wiegand 4

wiegand 1

LOCK1 LOCK2

COM

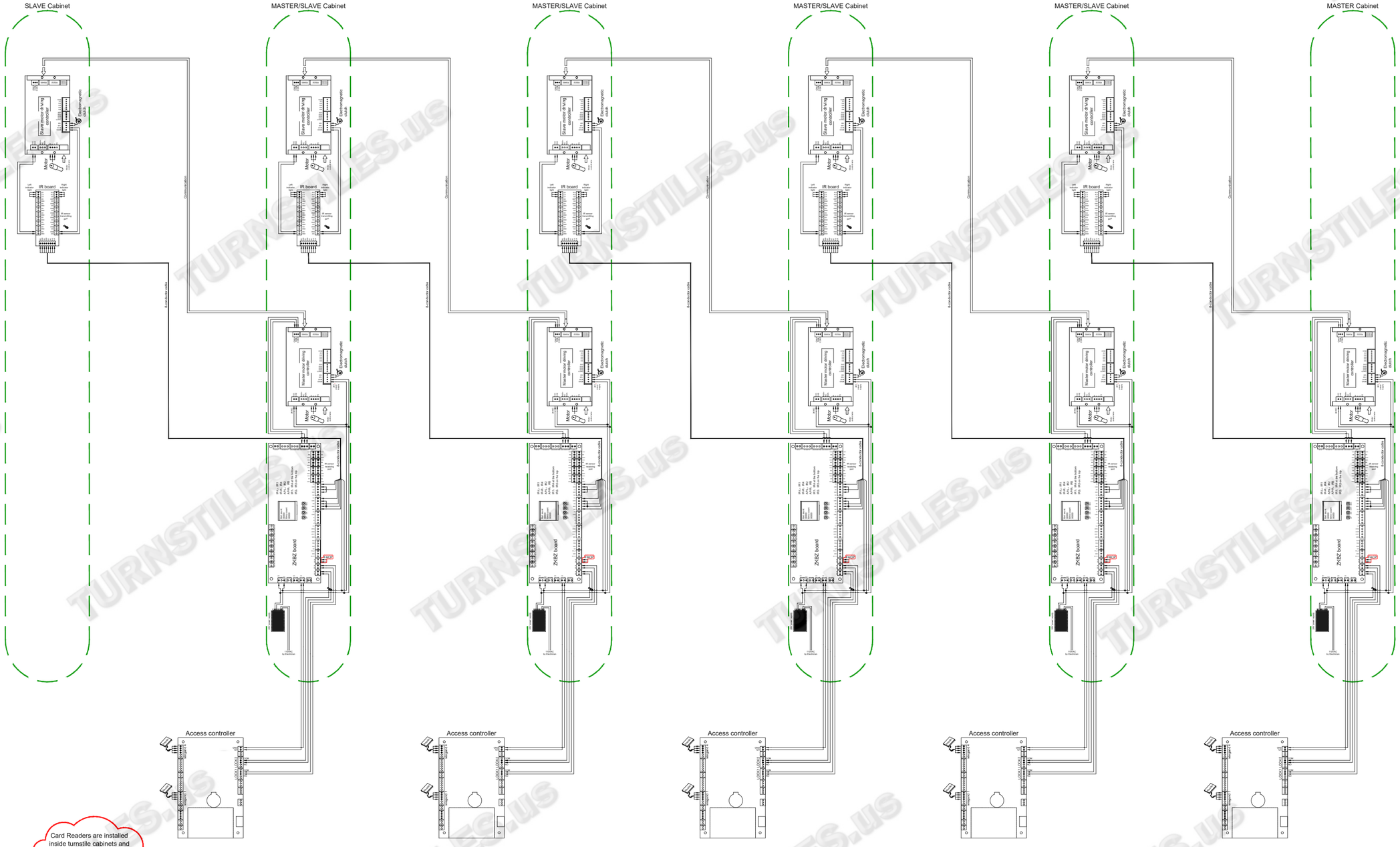
NO

GND

12V

Equipment Location Detail
Dennis Group Amy Andolino OTSG9000 Optical Turnstiles Single Lane Only Wiring Diagram
DRAWING:
Dennis Group Optical Turnstile Array Single Lane Schematic
DATE: 02-09-24
PAGE: 1 OF 1

MAIN ENTRANCE - 5 LANES



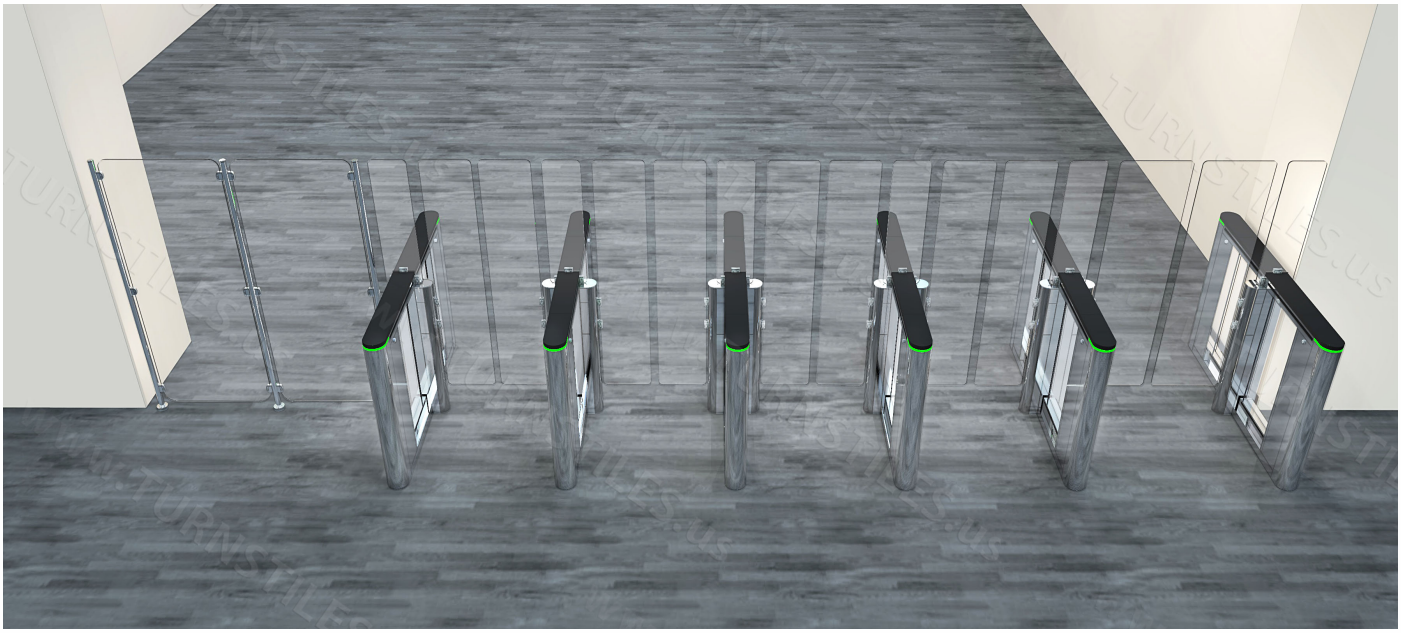
FIRST DRAWN	BY
02-10-24	CJC
REVISED	BY

TURNSTILES.us
SECURING THE USA and the GLOBE since 1989
www.TURNSTILES.us
Call: 303-670-1099 | Text: 303-918-9787
patrick.mcallister@turnstiles.us

Equipment Location Detail
Dennis Group Amy Andolino OTSG9000 Optical Turnstiles Five Lanes, 4 STD - 1 ADA Wiring Diagram
DRAWING:
Dennis Group Optical Turnstile Array Five Lanes Schematic
DATE: 02-10-24
PAGE: 1 OF 1

MAIN ENTRANCE

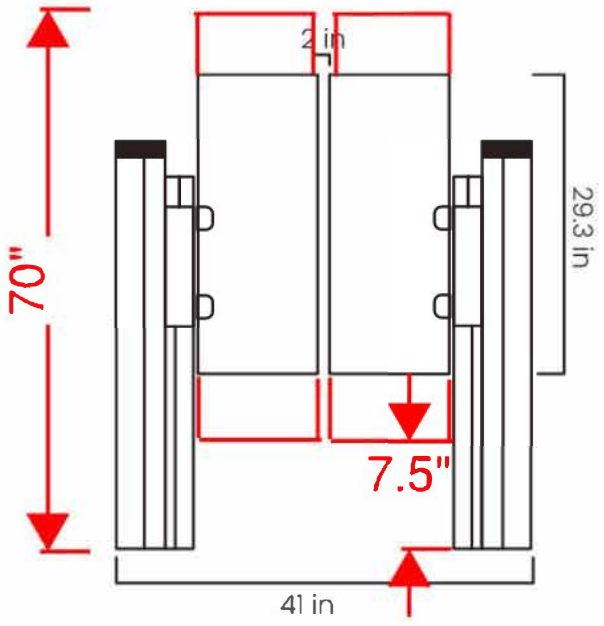
(4) Standard Lanes – OTSG9000 – special glass
(1) ADA Lane – OTSG9000-ADA – special glass
(10) Proximity Card Readers
(6) Custom Pedestal Mount Clear Barriers
(2) 5'10" Tall Clear Barriers



MAIN ENTRANCE

DETAILS

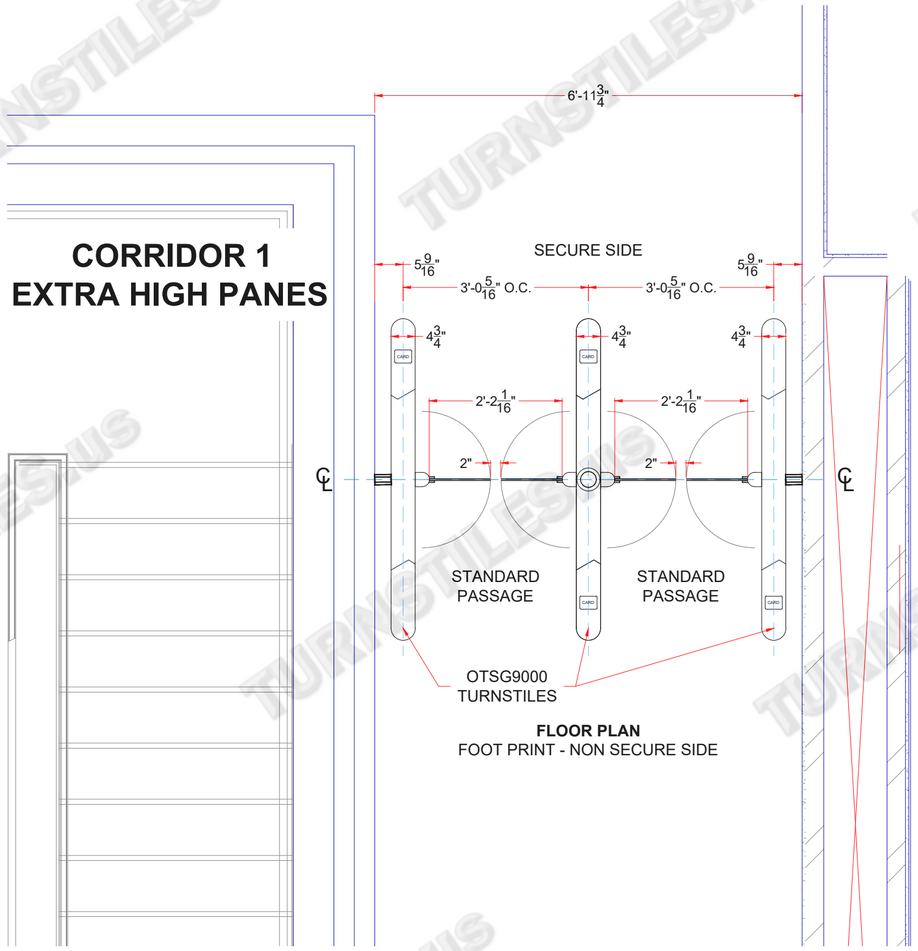
Custom Pedestal Mount Clear Barriers
Tall Clear Barriers to Match Turnstile and Fill Space
Custom High Glass Dimensions



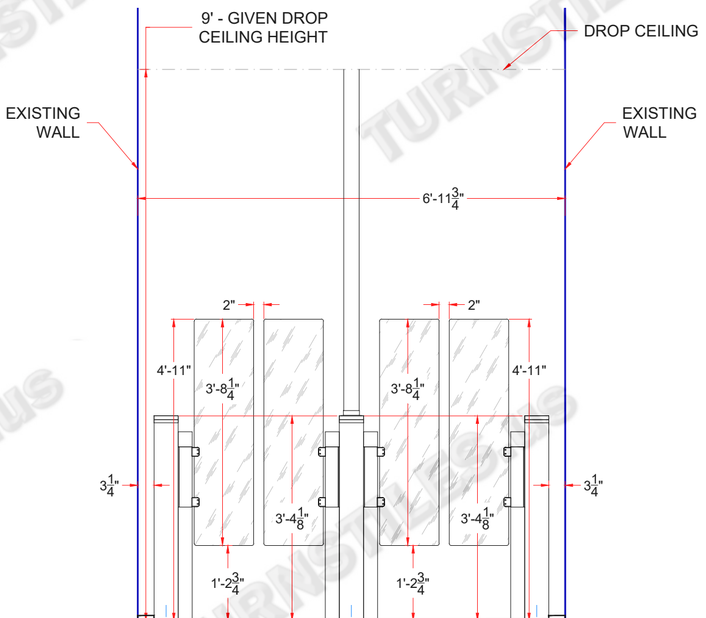
Corridors

*** DIMENSIONS MAY VARY SLIGHTLY IN ACTUAL INSTALLATION - FABRICATION CHANGES OR SUBSTITUTIONS RESERVED ***

CORRIDOR 1
EXTRA HIGH PANES

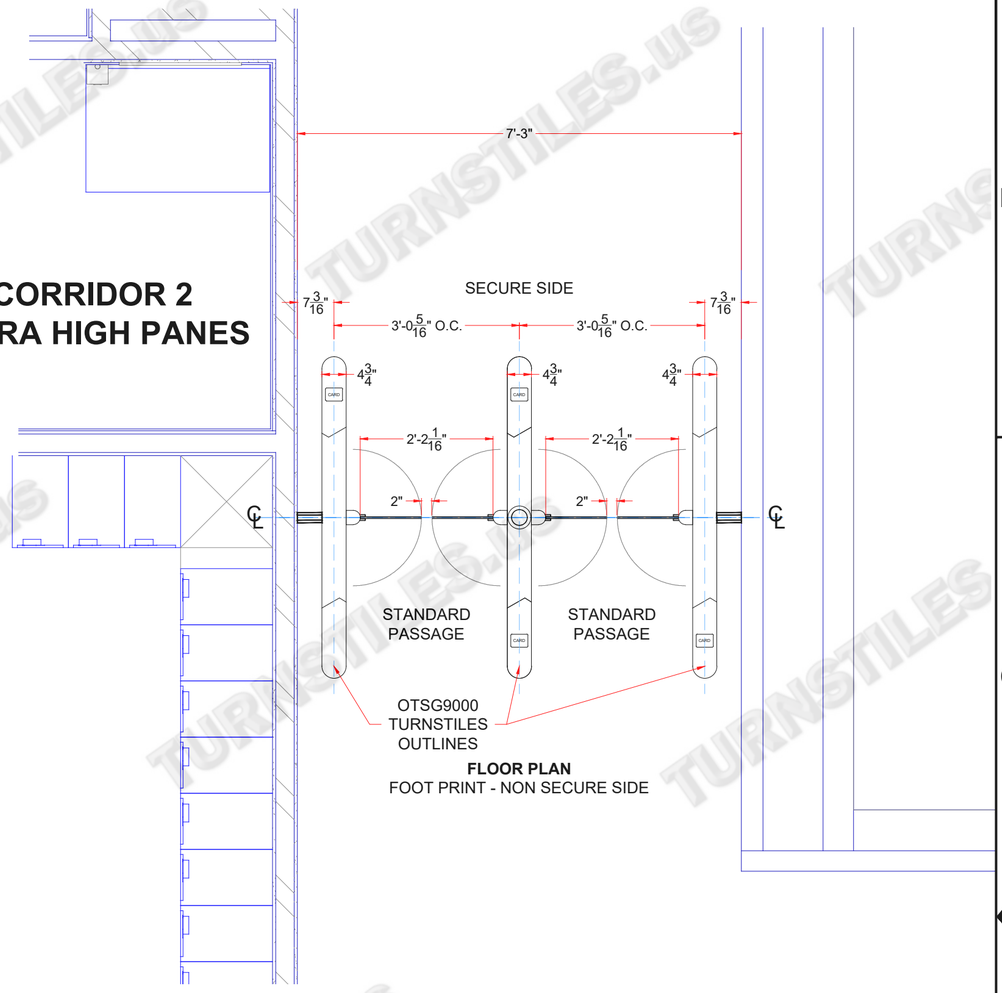


FLOOR PLAN
FOOT PRINT - NON SECURE SIDE

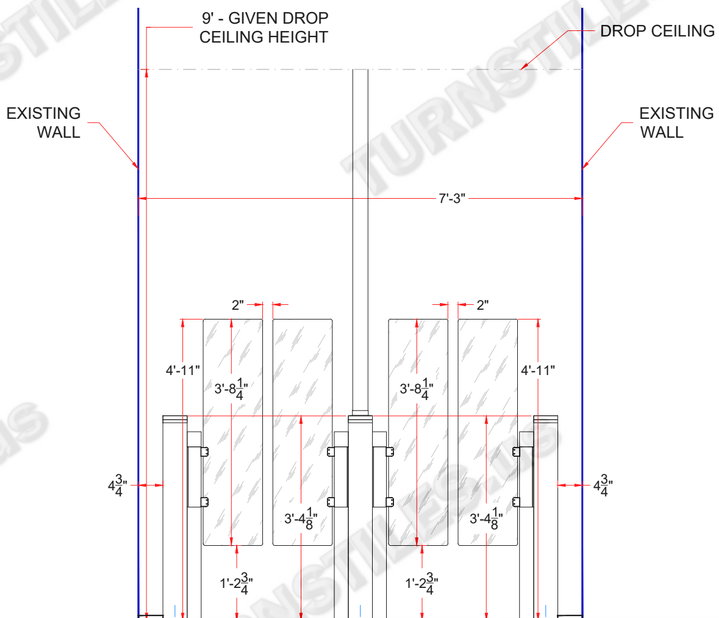


ELEVATION
EXTERIOR - NON SECURE SIDE
(proposed)

CORRIDOR 2
EXTRA HIGH PANES



FLOOR PLAN
FOOT PRINT - NON SECURE SIDE



ELEVATION
EXTERIOR - NON SECURE SIDE
(proposed)

AUTHORIZED SIGNATURE: _____ DATE: ___ / ___ / ___

FIRST DRAWN	BY
02-06-24	CJC
REVISED	BY

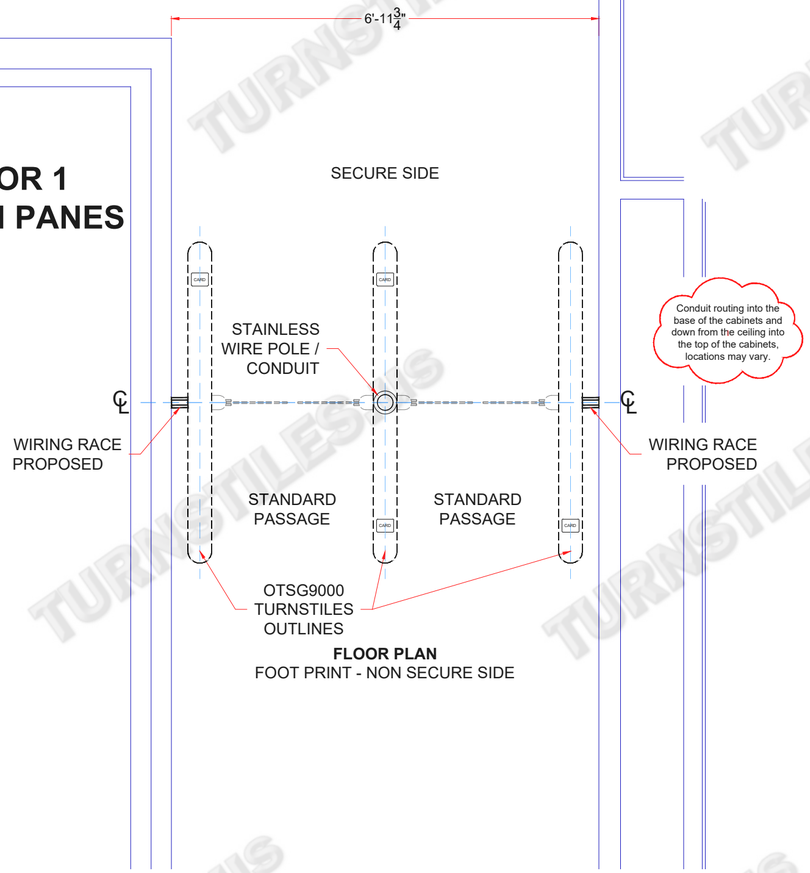
TURNSTILES.us
SECURING THE USA and the GLOBE since 1989
www.TURNSTILES.us
Call: 303-670-1099 | Text: 303-918-9787
patrick.mcallister@turnstiles.us

Equipment Location Detail	
Dennis Group Amy Andolino OTSG9000 Optical Turnstiles Two Corridors 2 - Standard Lanes	
DRAWING:	
Dennis Group Optical Turnstile Arrays Two Corridors Detail	
DATE:	02-06-24
PAGE:	1 OF 2

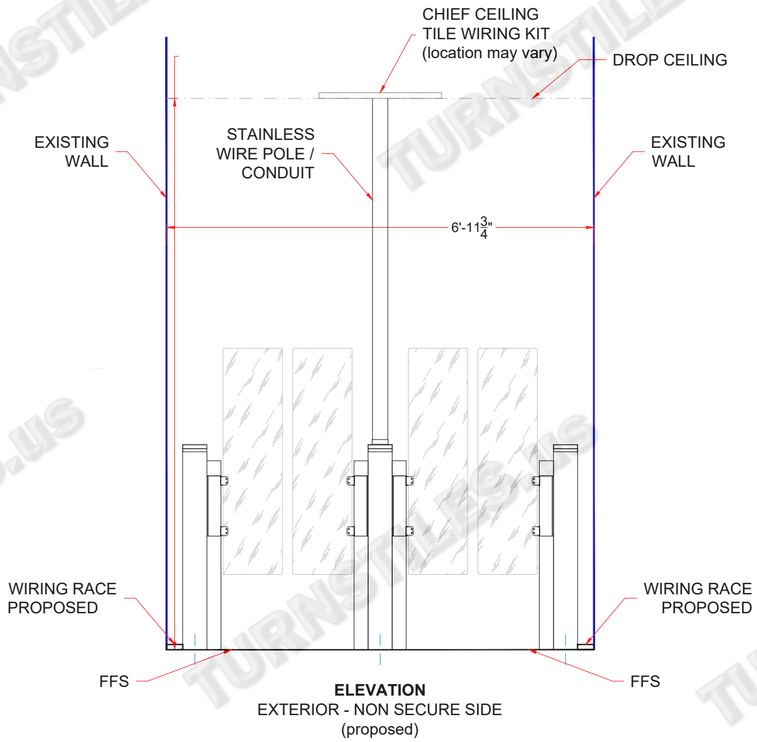
*** DIMENSIONS MAY VARY SLIGHTLY IN ACTUAL INSTALLATION - FABRICATION CHANGES OR SUBSTITUTIONS RESERVED ***

FIRST DRAWN	BY
02-06-24	CJC
REVISED	BY

CORRIDOR 1
EXTRA HIGH PANES

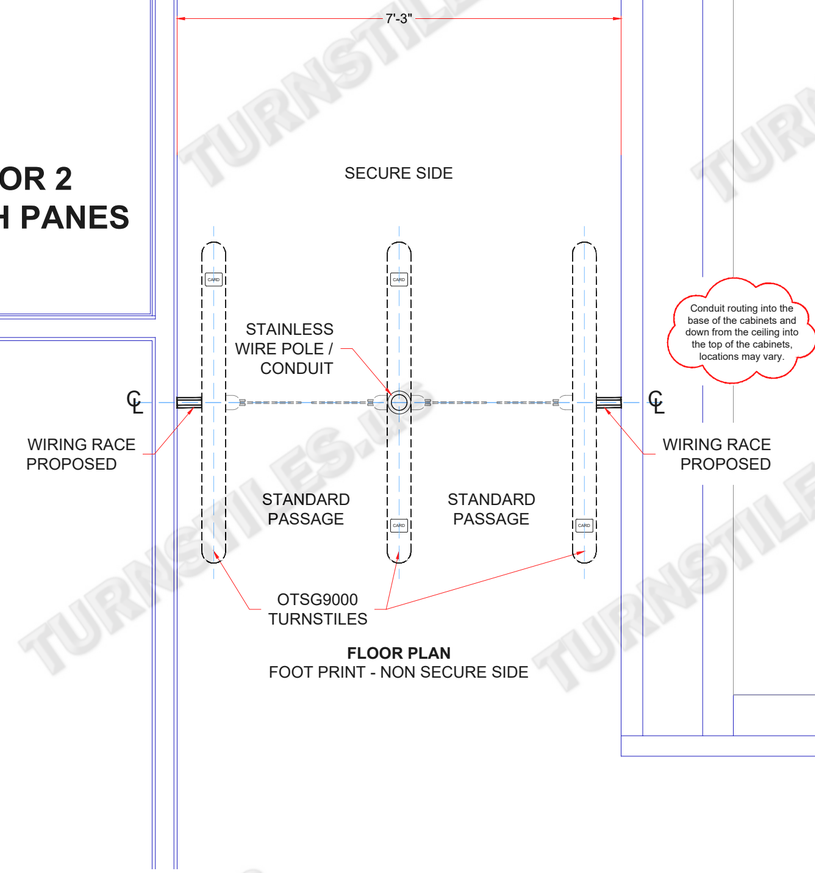


FLOOR PLAN
FOOT PRINT - NON SECURE SIDE

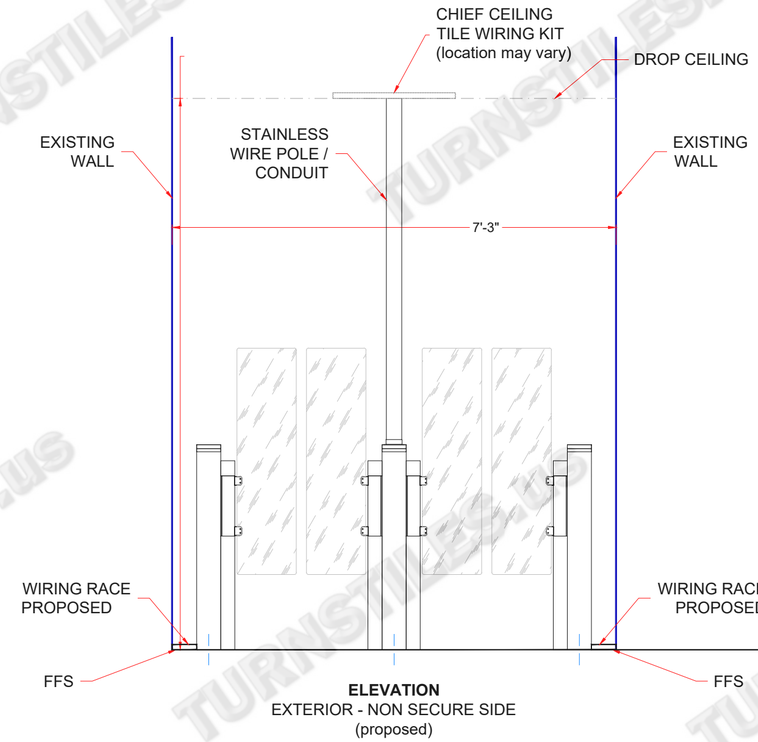


ELEVATION
EXTERIOR - NON SECURE SIDE
(proposed)

CORRIDOR 2
EXTRA HIGH PANES



FLOOR PLAN
FOOT PRINT - NON SECURE SIDE



ELEVATION
EXTERIOR - NON SECURE SIDE
(proposed)

AUTHORIZED SIGNATURE: _____ DATE: ___ / ___ / ___

TURNSTILES.us
SECURING THE USA and the GLOBE since 1989
www.TURNSTILES.us
Call: 303-670-1099 | Text: 303-918-9787
patrick.mcallister@turnstiles.us

Wiring Kit Detail
Dennis Group Amy Andolino OTSG9000 Optical Turnstiles Wiring Kit to Cabinets From Sides & Above
DRAWING:
Dennis Group Optical Turnstile Arrays Two Corridors Wiring Detail
DATE: 02-06-24
PAGE: 2 OF 2

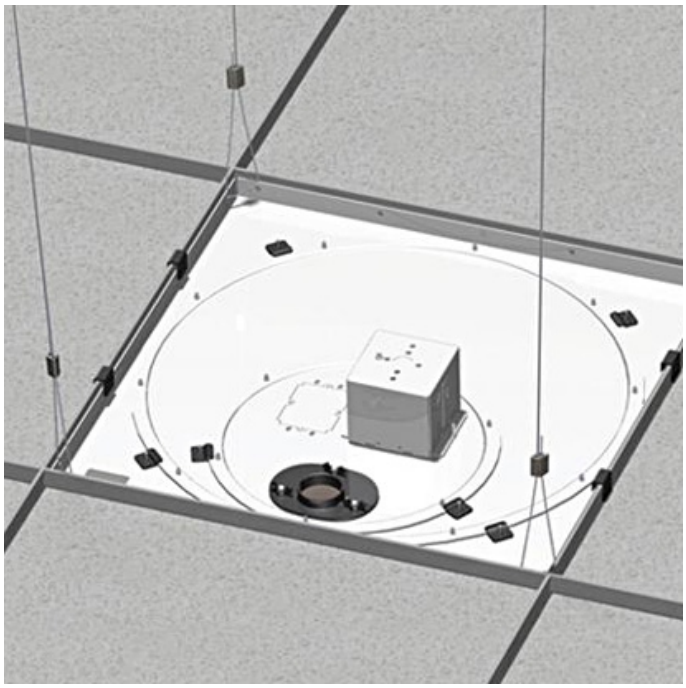
CORRIDOR #1 – 83.75" Hallway
(2) Standard Lanes – OTSG9000 high glass
(4) Proximity Card Readers
(1) Chief Suspended Ceiling Tile Kit
(1) SS Carriage Bolts, Nut and Lock Washer
(1) 316 Grade Stainless Steel 1 7/8" OD Base Flange
(1) 6' SS 3" Sch 80 Seamless 316 Pipe

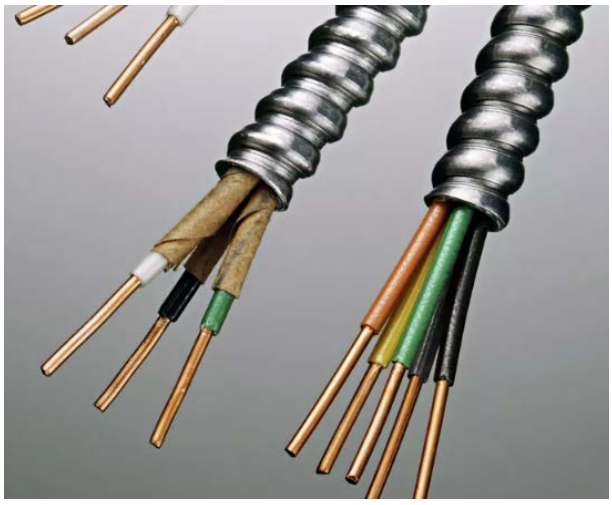
CORRIDOR #2 – 87" Hallway
(2) Standard Lanes – OTSG9000 high glass
(4) Proximity Card Readers
(1) Chief Suspended Ceiling Tile Kit
(1) SS Carriage Bolts, Nut and Lock Washer
(1) 316 Grade Stainless Steel 1 7/8" OD Base Flange
(1) 6' SS 3" Sch 80 Seamless 316 Pipe

CORRIDOR 1 and 2

DETAILS

Chief Suspended Ceiling Tile Kit
Carriage Bolts, Nut and Lock Washer, Flange
6' 316 Stainless Steel Pipe – 3" diameter
Flexible Conduit





Product Data Sheets

OTSG9000 SERIES

OTSG9000 single lane speed gate
OTSG9011 single lane speed gate
(w/controller and RFID reader)
OTSG9022 single lane speed gate
(w/controller and fingerprint & RFID reader)
OTSG9033 single lane speed gate
(w/visible light facial recognition devices)

OTSG9000 is an indoor speed gate series which featured by its modular reader panel design. The modularization of reader panel not only benefits the end user for easy upgrade or switching on reader but also helps relieving middleman's inventory pressure and allows them to have in-time market response.

DESIGN

In order to respond to different market needs, all barrier turnstiles based on different verification methods need to be stocked in warehouse because switching among verification methods requires additional processing on the product, thus, huge inventory and processing cost will be incurred. For overcoming above issue, modularized structure design is used to integrate the reader, conversion board and top over into one modular reader panel, the installation and disassembling are only about pulling the plug and no drilling is needed. Benefited from this revolutionary design one can adopt various types of verification method which relieves inventory pressure from stocking up every type of barrier turnstile.

PERFORMANCE

In order to improve the efficiency of pedestrian access management and user experience, we adopted a new type of servomotor which makes the speed gates have a faster opening speed and lower noise. The test results show that the opening speed is less than 1.2 seconds with the stand barrier panels if assembled the mid-height barrier panels instead, opening speed will be less than 0.8 seconds. The infrared sensors has increased to 10 pairs, which is 160% more than other similar products in order to provide more accurate logical judgment.

QUALITY

Casing of the product is mostly made of superior SUS304 stainless steel for its remarkably high durability. The barrier panels are made of acrylic and have better aging resistance and impact resistance. From raw material procurement to production, a strict quality control and inspection system will be applied.

FEATURES

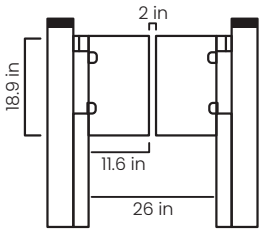
- Modular reader panel - in time market response
- Servomotor - faster opening speed
- 10 Pairs of infrared snsors for stronger tailgate detection
- SUS304 stainless steel casing
- Higher durability for longer product life cycle
- Easy switch, easy installation - RFID, fingerprint, face, etc.
- Bi-directional operation control
- LED passage indicator in both directions
- Convenient installation and maintenance
- Various optional panels

0149 Emergency mode allows free access when power failures or emergency

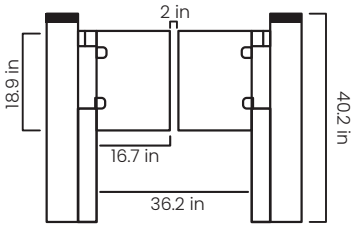
FEATURES

Power Requirements	AC 100 - 120V/200 - 240V, 50/60Hz
Working Temperature	-18.4 to 140ºF
Working Humidity	20% - 95% (Non-Condincing)
Working Environment	Indoor
Speed of throughput	Maximum 40/minute
Lane Width (in)	26
Footprint (in)	63 x 41
Dimensions (in)	63 x 41 x 47.2
Dimensions with Packaging (in)	67 x 23.6 x 44.5
Net Weight	286.6 lbs
Weight with Packaging	330.7 lbs
Cabinet Material	SUS304 Stainless Steel
Lid Material	SUS304 Stainless Steel + Acrylic
Barrier Material	Acrylic
Barrier Movement	Swing
Emergency Mode	Yes

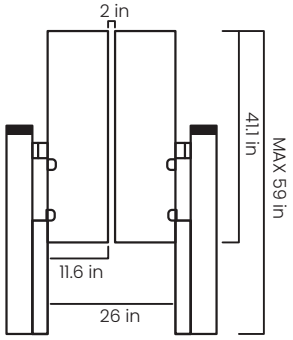
OPTIONAL PANELS



Low Barrier Panels

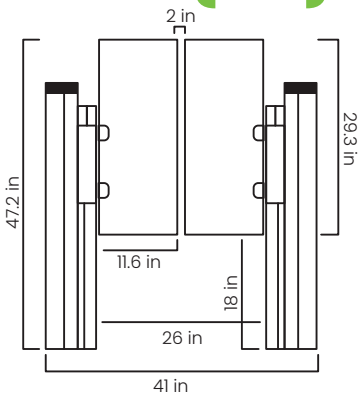


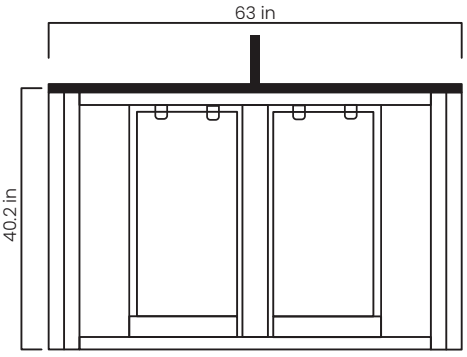
Wide Barrier Panels

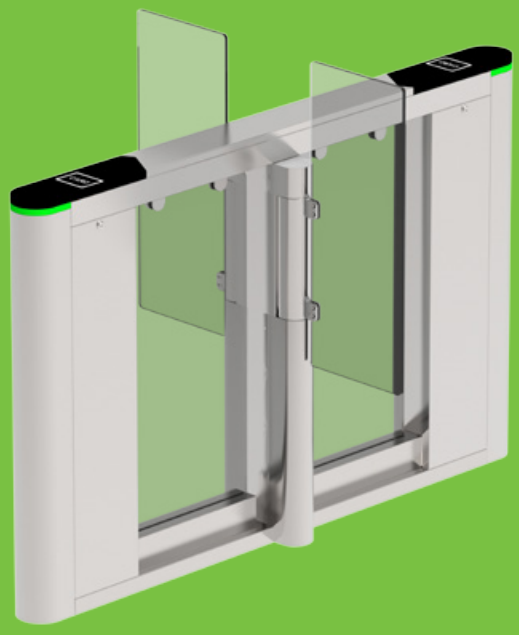


Extra Height Barrier Panels

DIMENSIONS (IN)







OTSG9200 Series

OTSG9200 Speed gates for additional lane

OTSG9211 Speed gates for additional lane
(w/ controller and RFID reader)

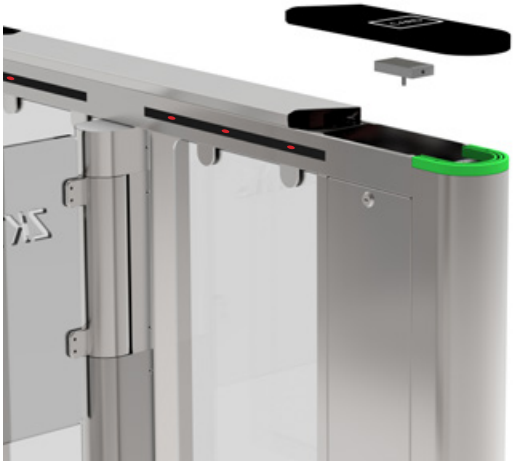
OTSG9222 Speed gates for additional lane
(w/ controller and fingerprint & RFID reader)

OTSG9233 Speed gates for additional lane
(w/ Visible light facial recognition devices)

OTSG9200 is designed to work with OTSG9000 series for forming multiple lanes.

Design

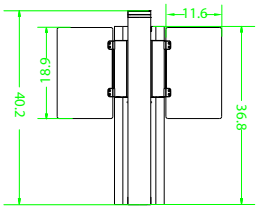
General device needs to have holes in the top cover before installing the reader head. In most cases, in order to quickly respond to the market, various types of barrier turnstiles are required to be in warehouse. In order to solve this problem, modularized structure design is used in the device. We integrate the reader, conversion board and top cover into a modular reader panel. The disassembly and installation of the reader head only need to pull the plug, without drilling holes in the top cover and purchasing new conversion board. Just prepare one model and multiple models of reader panel in warehouse, to meet various market demands.



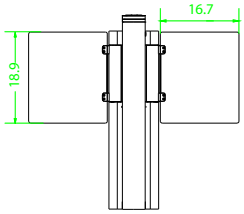
Specifications

Power requirements	AC 100 ~ 120V/200 ~ 240V, 50/60Hz
Working temperature	-28℃~ 60℃
Working humidity	20%-95% (Non-condensing)
Working environment	Indoor
Speed of throughput	Maximum 40/ minute
Lane width(mm)	660
Footprint(mm*mm)	1600*870
Dimensions(mm)	L=1600, W=120, H=1200
Dimension with packing(mm)	L=1700, W=300, H=1130
Net weight(kg)	86kg
Weight with packing(kg)	100kg
Cabinet material	SUS304 Stainless Steel
Lid material	SUS304 Stainless Steel+Acrylic
Barrier material	Acrylic
Barrier movement	Swing
Emergency mode	Y
Security level	Medium

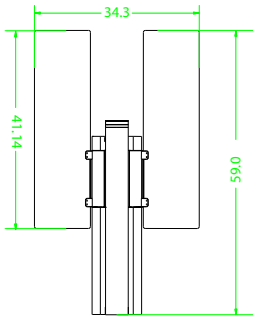
Optional panels (in)



Low barrier panels

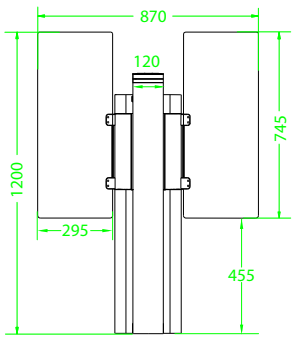


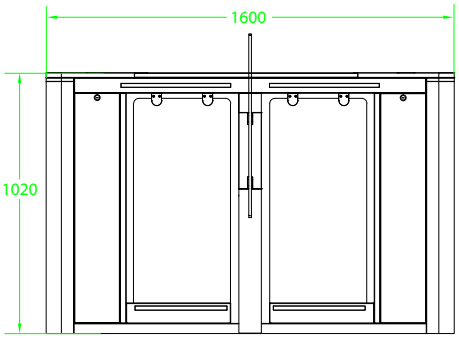
Wide barrier panels



Extra height barrier panels

Dimensions (mm)





TURNSTILES.us
SECURING THE U.S. and the GLOBE since 1989

User Manual

Speed gates OTSG9000 series

Applicable Model(s): OTSG9000, OTSG9011, OTSG9022, OTSG9033, OTSG9200, OTSG9211, OTSG9222, OTSG9233

Version: 1.0

Date: June 2019

Contents

1.1 Model number and access control

Access / Model	None	C3-200 and 2*Wiegand reader	inBio 260 and 2* FR1500/ID reader	2*Facedepot 7B device
OTSG9000	√			
OTSG9011		√		
OTSG9022			√	
OTSG9033				√
OTSG9200	√			
OTSG9211		√		
OTSG9222			√	
OTSG9233				√

Figure 1-1

1.2 Chassis design and dimensions

The SUS304 stainless steel body looks simple and clean and is anti-corrosion. The turnstile grants legal access to the authorized persons and restricts illegal access. In case of an emergency, the lock will release to allow fast evacuation and egress.

Below is the design and dimensions of OTSG9000:

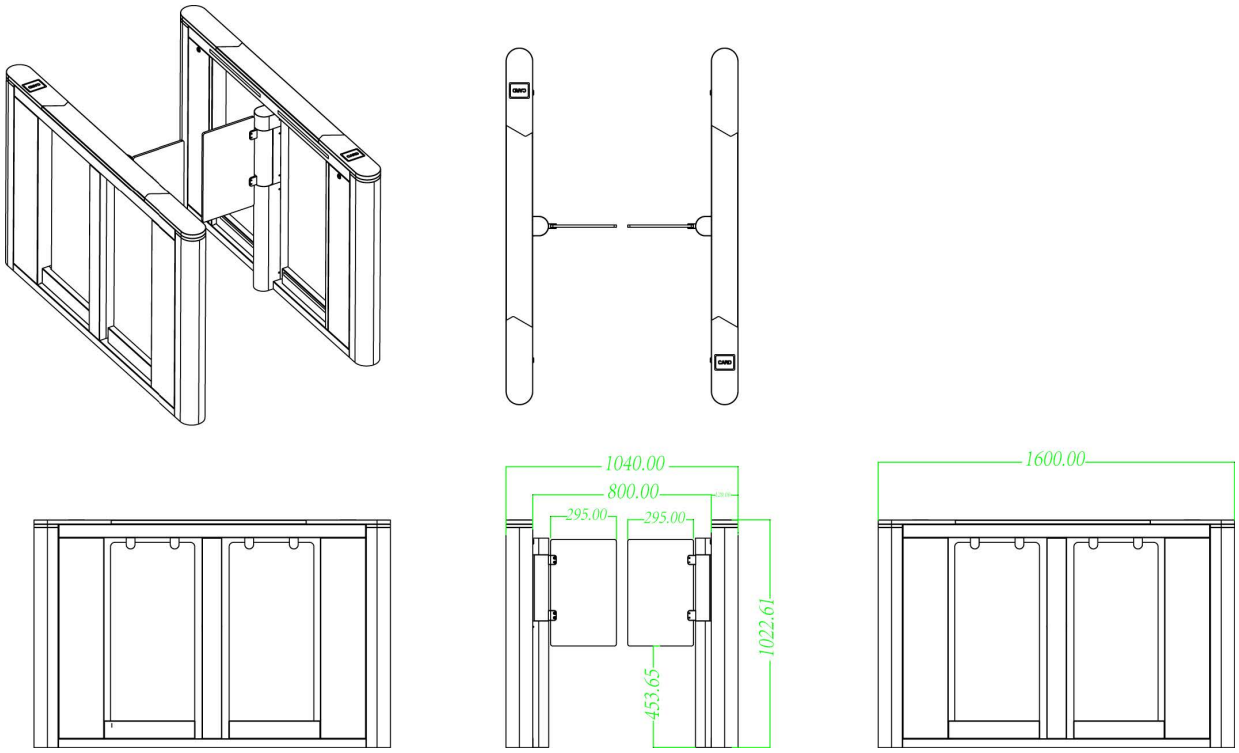


Figure 1-2

1.3 The mechanical system of the speed gates

The mechanical system of the swing turnstile is composed of the cabinet and the core mechanism. The cabinet is equipped with the mode indicator, the infrared sensor, and the locking system. The core mechanism mainly consists of the motor, the chassis, the core, and the swing arm (the glass panel).

1.4 Electric control system

The electric control system of the swing turnstile is mainly composed of the master control panel, the infrared sensor, the mode indicator, and the loudspeaker.

Master control panel: The master control panel is the core part of the control system that receives signals from the photoelectric switch, performs logical judgment and processing of these signals, and issues executive commands to the mode indicator, the servo motor driver and the loudspeaker.

Infrared sensor: It detects the location of the pedestrian and plays a safe protection function.

Mode indicator: This indicator shows the current passing mode status of the channel and guides the passenger to pass the passage orderly and safely.

Loudspeaker: The system will trigger the alarm if it detects any unauthorized entry to the lane.

1.5 Operation principle of the speed gates

- When the device is connected to the power, the system will perform self-check. The device will operate normally if no problem is detected. If a failure is detected, the system will display related messages on the LCD display screen so that the user can have a quick knowledge of and solve the problem.

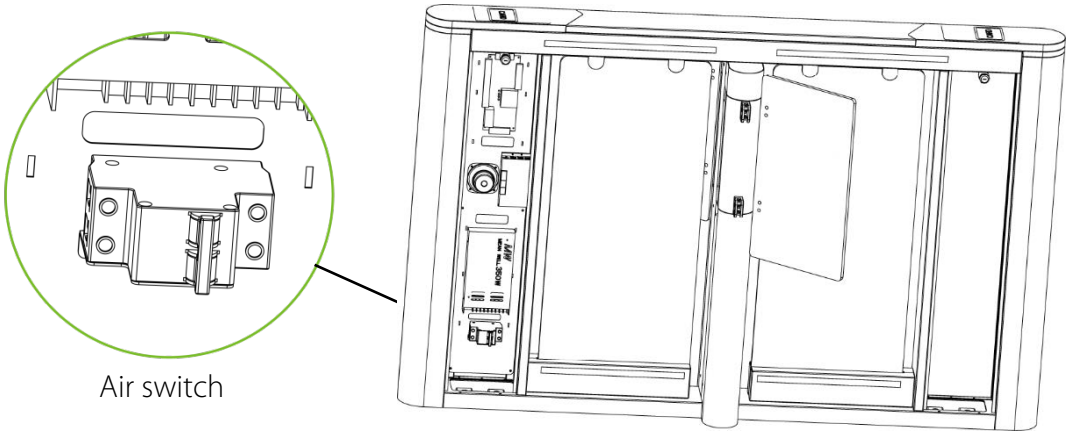


Figure 1-3

- When the reader detects a valid card/fingerprint, the display screen will show whether it is successful or not. And the switch instruction signal is transmitted to the master control panel.
- After receiving the signal from the reader and the infrared sensor, the master control panel 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 master control panel will not accept signals of card swiping/fingerprint scanning.
- After the passenger passes the channel according to the opening direction of the swing arm, the infrared sensor will keep detecting the movement of the pedestrian throughout the passage and continue to deliver signals to the main control panel until the pedestrian passes through the passage.
- If the pedestrian enters the passage but forgets to swipe his/her card, or if the card held by the passenger is invalid, the system will prompt an audible alarm to warn the pedestrian to stop passing. The alarm signal will not be cancelled until the passenger retreats from the passage. A pedestrian can pass through the lane only after successful verification with a valid card read by the card reader.

1.6 System composition of the product

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

Working modes of the system

To meet different needs, this system provides multiple working modes for users, including the normal working mode, normally open mode, normally closed mode, and testing mode.

After supplying power to the device, the LCD screen on the control board will display a default state, which is the current working mode.

1.7 Specifications

Dimension (mm)	H1000: L = 1600, W =120, H = 1022		
Communication	CAN	**Input voltage**	AC110~240V, 50-60Hz
Input control signal	Switching signal	**Output voltage**	DC 24V
Time of opening/closing	0.8 Sec (adjustable)	**Relative humidity**	20% - 95% (Non-condensing)
Temperature	-28℃ to 60℃	**Passage rate**	Maximum 30/minute
Infrared sensor	10	**Working environment**	Indoor

2.1 Installation notes

1) It is recommended that the speed gates must be installed on a horizontal solid platform with a height of 50mm to 100mm.
2) It is also recommended that the swing turnstile should not be used in a corrosive environment.
3) Make sure the protective ground wire of the system is reliably connected to avoid personal injuries or other accidents.
4) The equipment shell is made of stainless steel. You may gently remove any dirt or dust on the surface with a soft and smooth fabric. Do not scrub the surface with hard objects. Do not rinse the device with water, otherwise there may be short circuit or damaging the equipment.
5) After installation, check if the connection is done correctly at the connecting points of the protective ground wire, at the connector assemblies and wiring points of the circuits, as well as at each movable part of the speed gates turnstile. Any loose nuts, screws and other fasteners should be tightened in time to avoid speed gates turnstile failures caused by longer operations.

2.2 Installation position of the speed gates

A distance of 100mm between the speed gates turnstile and the wall needs to be reserved for ease of opening the top cover of the machine to perform maintenance and adjustment. The reference figure is shown below:

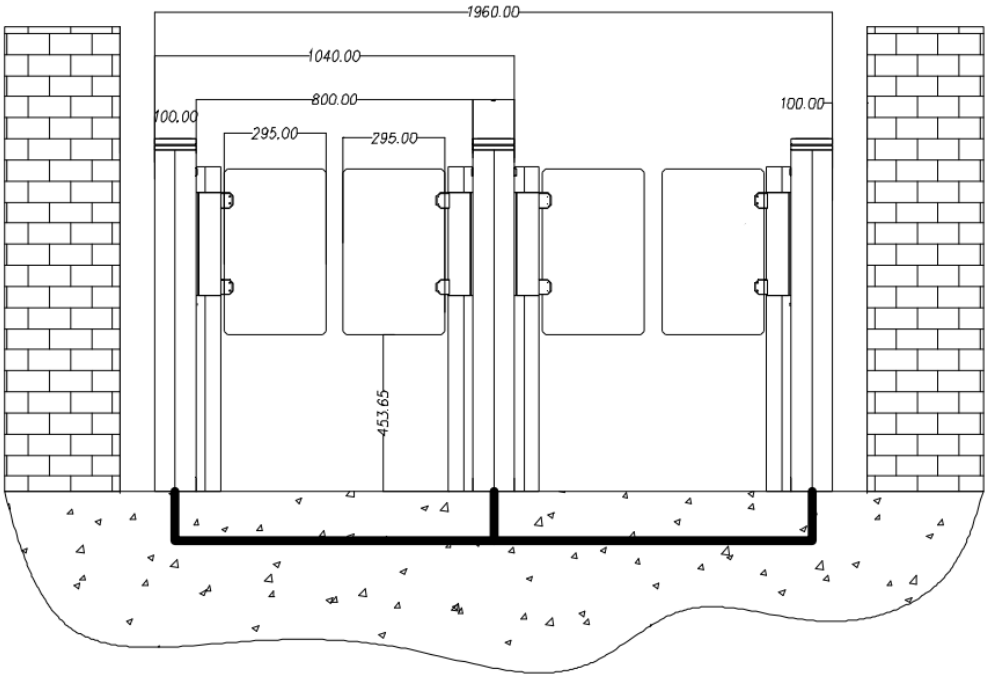
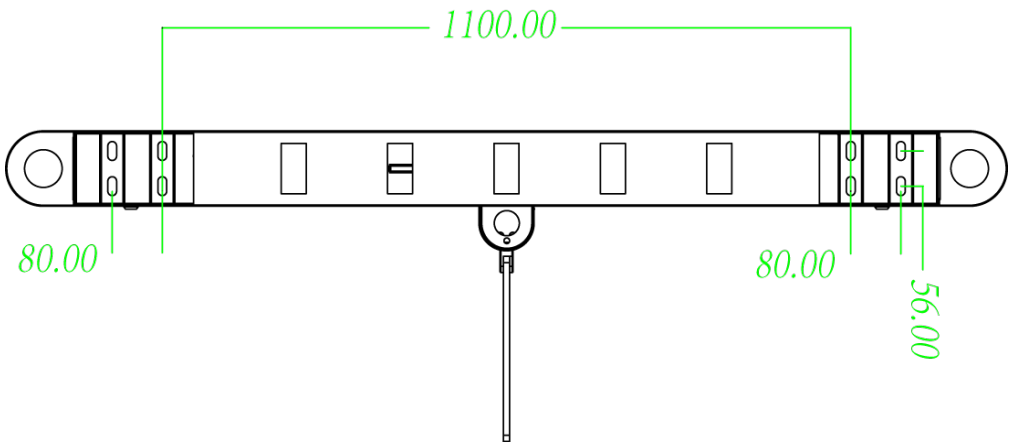


Figure 2-2

2.3 Cables installation and fixing

For the outlets of the concealed cables, please refer to the drawing indicating the mounting holes. The input voltage for this swing turnstile is **AC110-220V**, and its master and slave are connected with an **8-core cable (signal)** and a **2-core cable (power)**. When installing the speed gates turnstile, the user only needs to connect it to the corresponding ports. Note that the PVC conduits are laid **100mm** under the ground, with the height of the exposed part not exceeding **100mm**. In addition, the conduit outlet is bent to prevent the ingress of water into the conduit.

Installation holes and cabling positions are as shown in Figure 2-3a:



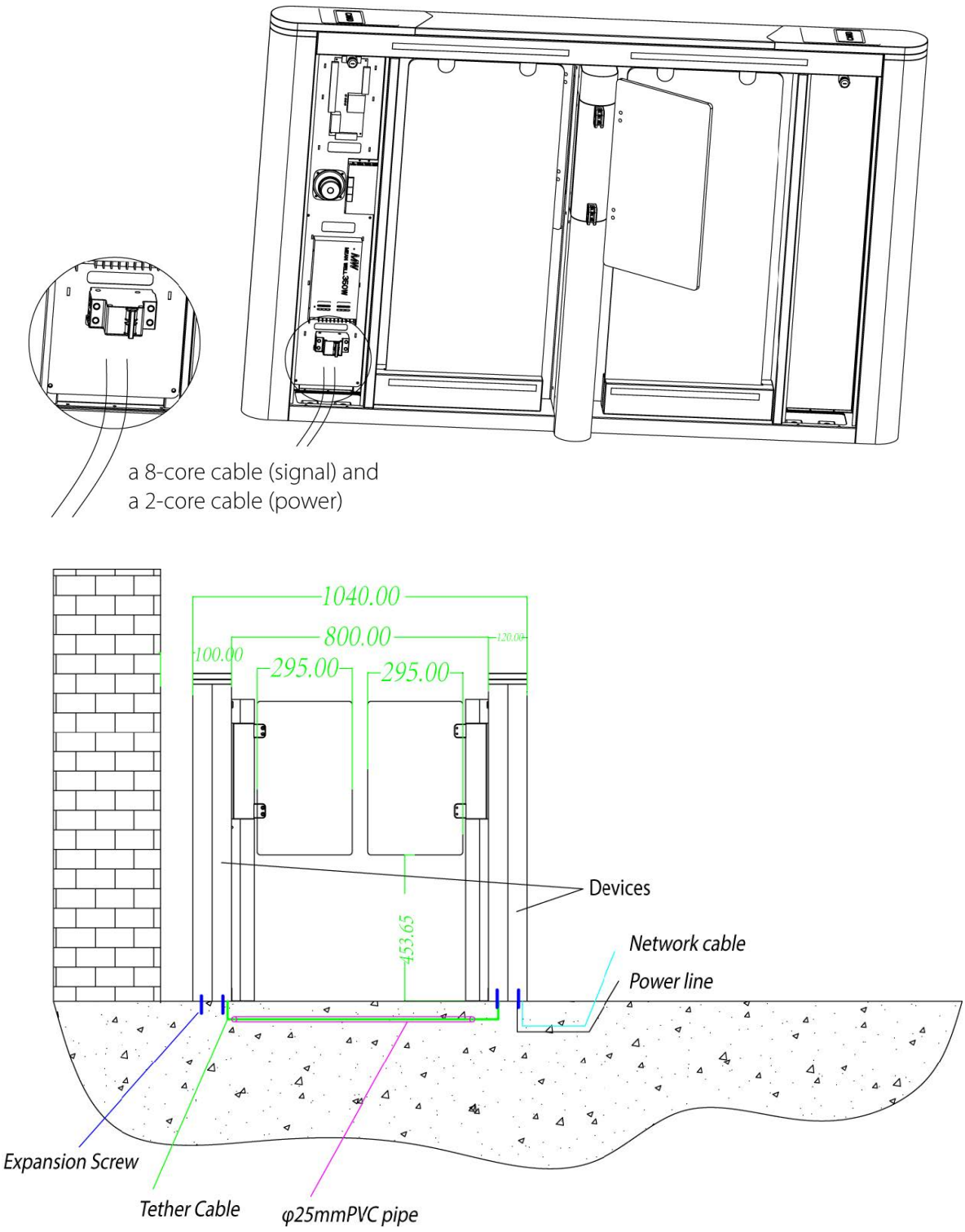


Figure 2-3a

Mark the anchor hole at the centre of the stand, and the edge of the chassis base on the ground according to the size as shown in Figure 2-3a. Use a hammer drill to drill M12 screw holes, then install the screws. Place the swing turnstile according to the size and respective installation position as shown in the figure before installation and fixing. Connect the turnstile to the power supply and

perform a power-on test. If the test is passed, tighten the screws. It is recommended to mark a warning line on the ground, as shown in Figure 2-3b, after installing the device to remind the pedestrian to stand behind the line when swiping the card.

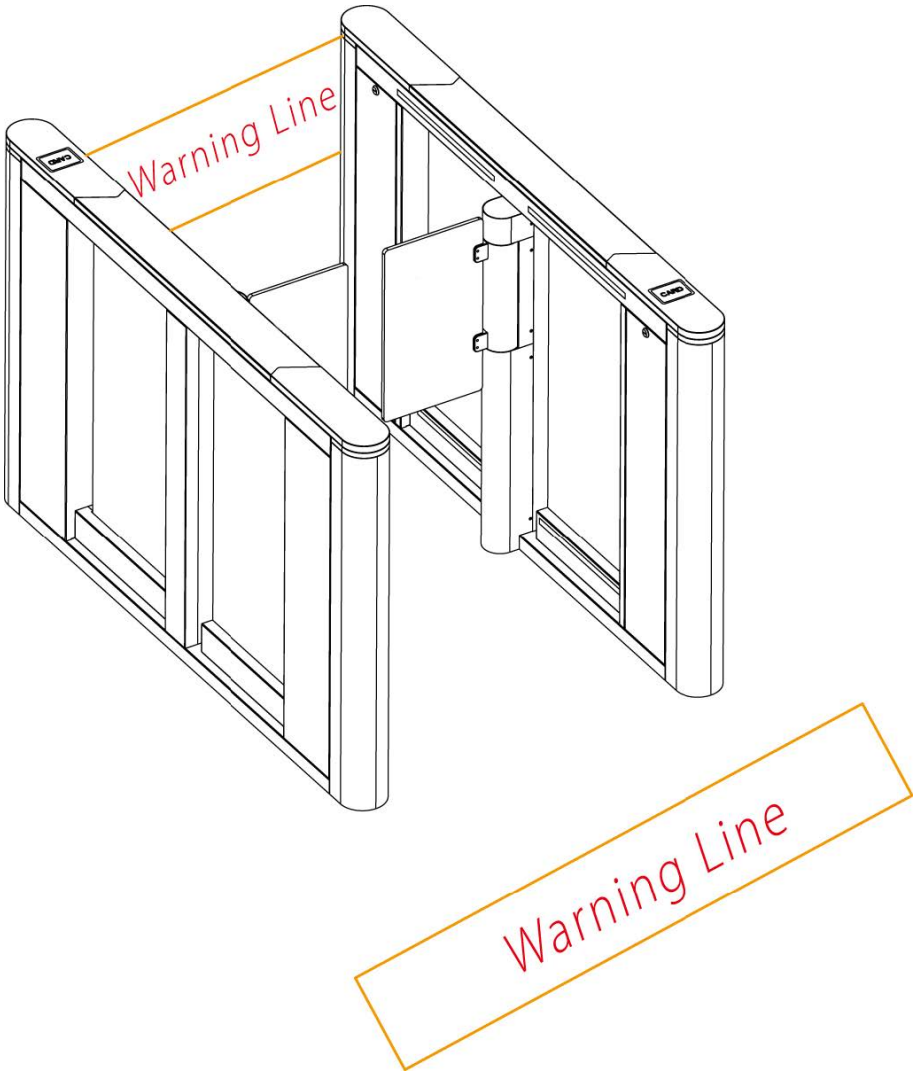


Figure 2-3b

3.1 Menu operations

- Operating instruction

1) After powered on, the LCD screen on the control board will display the default state showing the current working mode.

2) There are 4 buttons on the control board: **UP**, **DOWN**, **ENT**, and **ESC**, as shown in Figure 3-1.

UP: to move upwards or increase the value.

DOWN: to move downwards or decrease the value.

ENT: to enter a menu setting item or confirm the current modified value.

ESC: to return to the previous menu or cancel the current operation.

3) Operation and instruction of menu

Press the **ENT** button and enter the password input interface. The default password is: **UP**, **UP**, **DOWN**, **DOWN**, **DOWN**, **DOWN**. You may press the **ESC** button to erase the last input. After entering the menu, press **UP** or **DOWN** to choose a menu item, then press **ENT** to enter the interface and adjust such function or value.

3.2 Menus

1. **Position adjustment of the swing barrier**
   Type: zero (default)
   Left limit
   Right limit
2. **Passing mode**
   Opening mode: Two-way swipe (default)
   Left free, Right swipe
   Left swipe, Right free
   Two-way free
   Left prohibit, Right swipe

Left swipe, Right prohibit

Left prohibit, Right free

Left free, Right prohibit

Two-way prohibit

3. **Opening duration (Press 'ENT' to modify)**

   After the gate is opened, it will automatically close if no one passes through within a certain time duration. The default value is 5 seconds. The value ranges from 2 to 60.

4. **Reverse intrusion**

   Mode: Close the door and voice alarm

   Voice alarm only (default)

   Turn off reverse detection

5. **Trailing alarm detection**

   Mode: Turn off trailing detection

   Voice alarm only (default)

   Close the door and voice alarm

6. **Opening speed**

   Speed value: 1~20 (default 1)

7. **Closing speed**

   Speed value: 1~20 (default 1)

8. **Swiping mode**

   Method: Allow the card to be swiped in the channel (default)

   Do not allow card swiping in the channel

9. **Reset counter**

   Reset: Out counter (default)

   Into the counter

   All

10. **Gate closing delay time**

    Time: 0~10 (default 0)

11. **Brake unlock mode**

    Mode: Delay unlock (default)

12. Brake starting angle

Angle: 1~10 (default 3)

13. Fire alarm signal

Signal: right open

Left open (default)

Shut down

14. Volume setting

Volume: off

The value ranges from 1 to 16 (default 5).

1 is the minimum value; 16 is the maximum value.

15. Audio prompt for gate opening swift

Enable or not: No (default)

Yes

16. Infrared anti-pinch

Mode: Turn off the anti-pinch feature

Enabling anti-pinch (default)

17. Infrared anti-pinch area

Area selection: Disable during In and out of infrared (default)

All infrared zone anti-pinch

18. Memory opening

Whether to open: No (default)

Yes

19. System working mode

Mode: working mode (default)

Test mode

Restore to factory

20. Version number:

Version: V9.0.0

3.3 Functions introduction of wiring and terminal

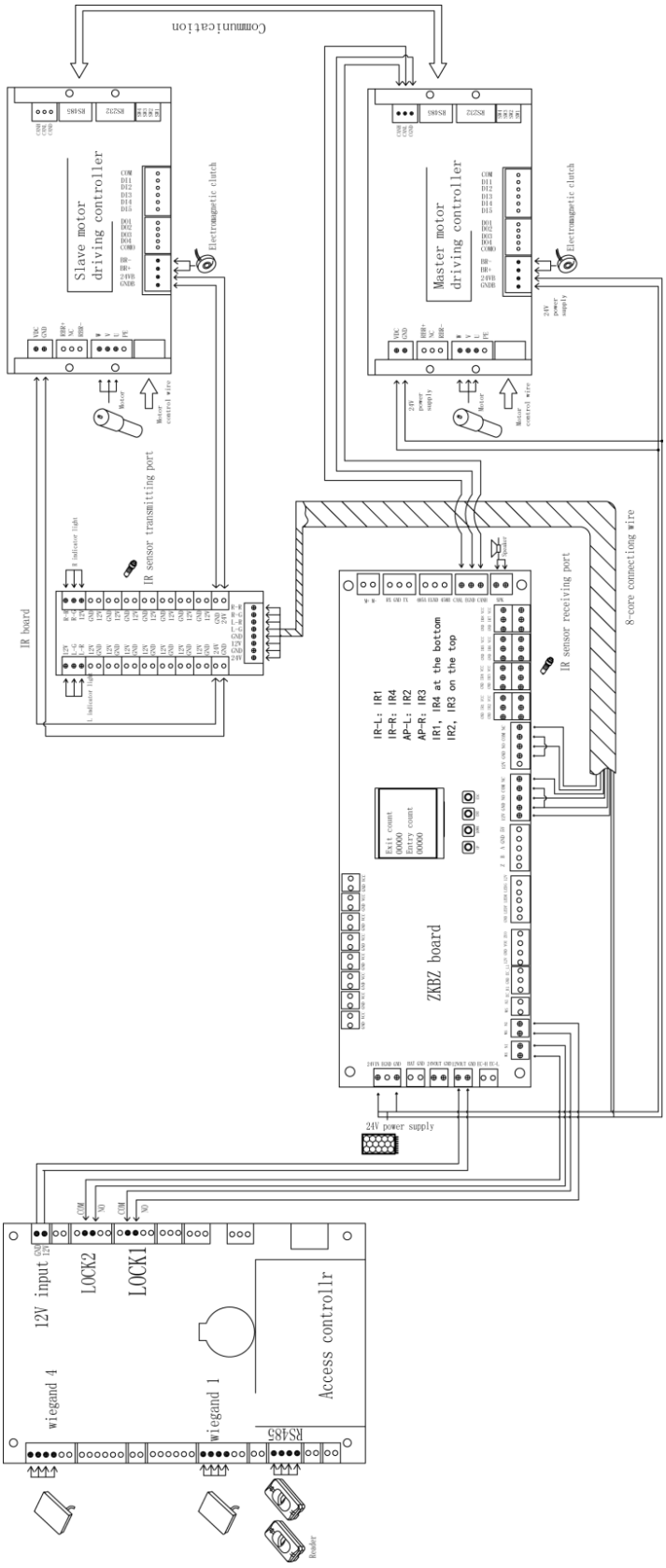


Figure 3-2

Number	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, 2-core connection lines. See the wiring diagram for the specific connection circuit.
3	The barrier 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, restart the self-test after power-on!

5.1 Chassis

The chassis is made of SAE 304 stainless steel. When the device has been used for a long period, there may be rust or stain on the surface of the chassis. Remember to regularly sand the surface along the grain softly and carefully, then coat the surface with anti-rust oil. Avoid covering the infrared sensors.

5.2 Movement

Cut off the power supply before maintenance. Then, open the door, wipe off dust on the surface, and lubricate the transmission mechanism. Check and tighten others connection parts.

5.3 Power

Cut off the power supply before maintenance. Check the plug connection; if anything is loose, fix it. Do not randomly change any connection positioning. Check the external power supply insulation regularly. Do periodic check for any kind of leakage. Check if the technical parameters of each interface are normal. Check the service life of the electronic components.

Caution: The above-mentioned maintenance method of the speed gates, especially the movement and the electric control maintenance, must be carried out by professional personnel. Always remember to cut off the power supply before maintenance and repair.

TURNSTILES.us
SECURING THE U.S. and the GLOBE since 1989

Installation Guide

Speed gates OTSG9000 series

Applicable Model(s): OTSG9000, OTSG9011, OTSG9022, OTSG9033, OTSG9200, OTSG9211, OTSG9222, OTSG9233

Version: 1.0

Date: June 2019

1 Preparation

1. **Tools:** a measuring tape, an adjustable wrench, an impact drill and a small screwdriver (included in the package).
2. **Material:** a PVC anti-fire and insulation tube (diameter≥25mm), standard three-core power extension wire, tether cable (random configuration), M12 expansion screws (included in the package).
3. Thread the connection wire of the device through the tube before assembly.
4. The power and signal wires should be set separately to easily distinguish strong and weak power. Please invite professional personnel to complete the wiring. The device must be connected to the ground.

Below is the outline and dimensions:

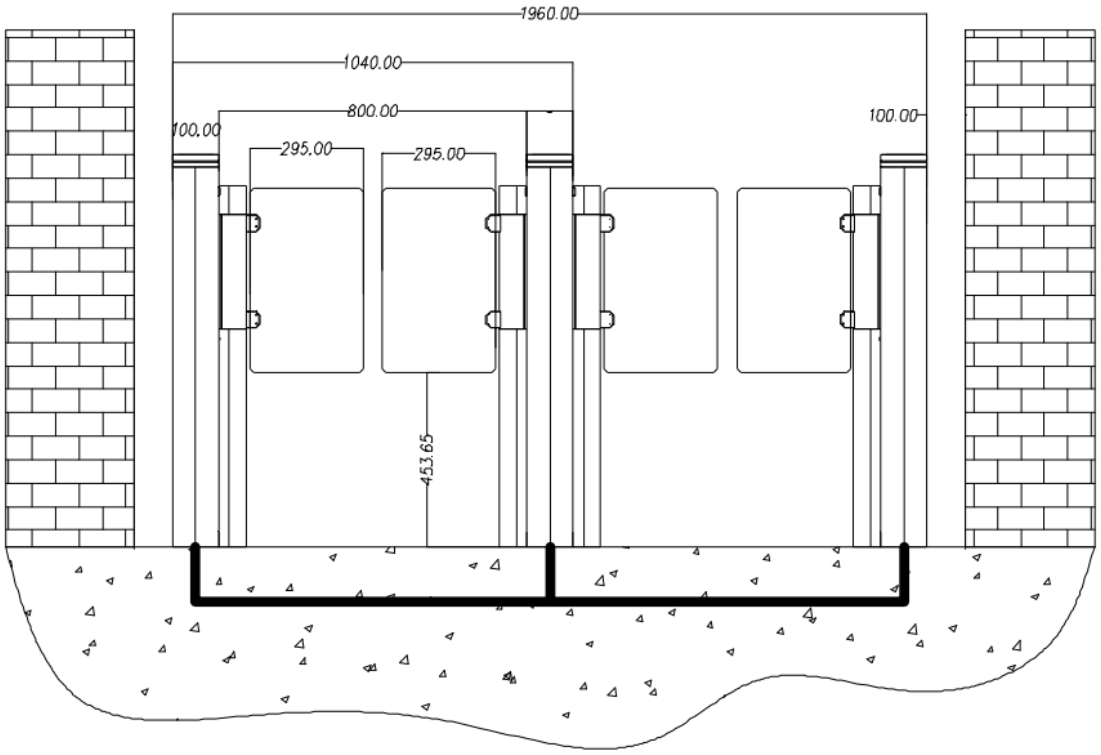


Figure 1-1

2 Installation

1. Prepare the tools for product installation and sort out the auxiliaries according to the packing list.
2. Drill holes after determining the hole positions based on the mounting template as shown in Figure 2-1. Insert the expansion bolt into the holes accordingly.

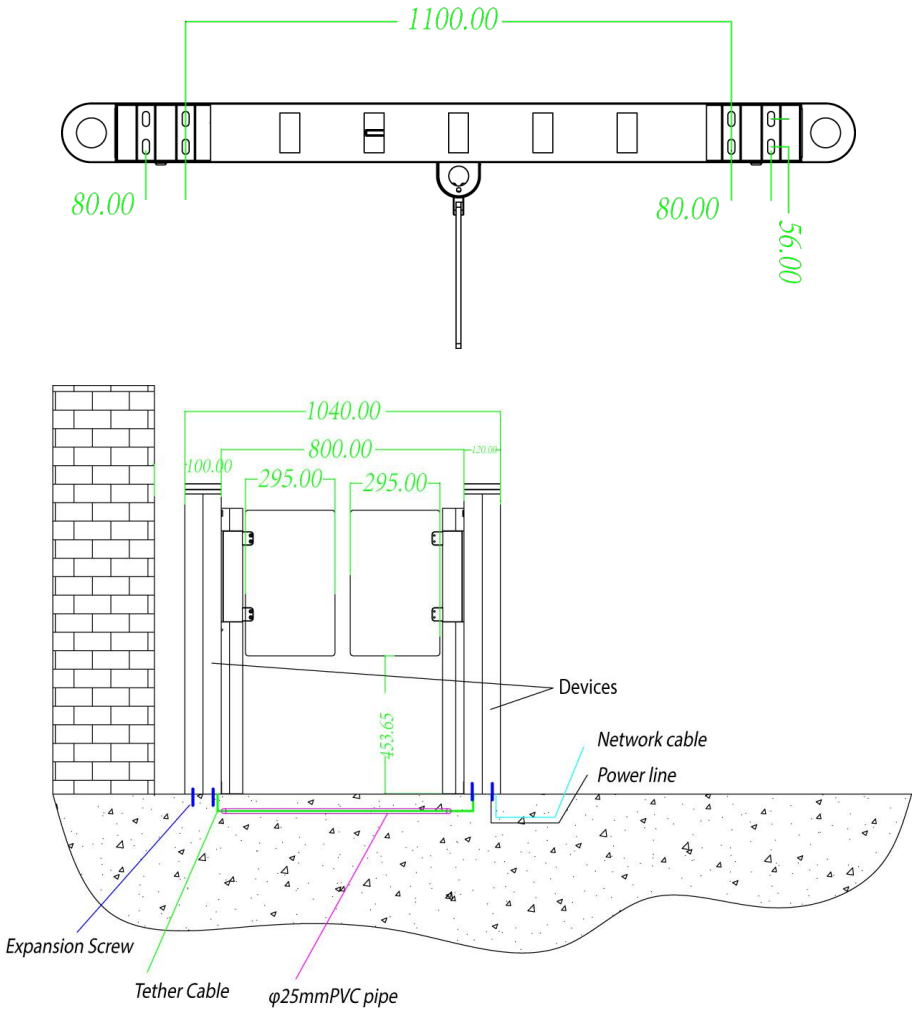


Figure 2-1

3. Tighten the nut preliminarily, then connect the master and slave devices with wires.
4. Test the operations of the device after connecting it to the power supply with the temporary cable. Make sure that the ground wire of AC power is connected to the cabinet of the device.
5. Turn on the air switch to test whether the device is working properly. Wait for 10 seconds for the turnstile to complete the self-test program. At the same time, check if the indicators work properly. If everything works fine, you can fasten the ground screw nuts and fix the device. If an exception occurs, please contact your vendor.

3 Debugging Functions

● Operating instruction

1. After powered on, the LCD screen on the control board will display the default state showing the current working mode.
2. There are 4 buttons on the control board: UP, DOWN, ENT, and ESC, as shown in Figure 3-1.

UP: to move upwards or increase the value.

DOWN: to move downwards or decrease the value.

ENT: to enter a menu setting item or confirm the current modified value.

ESC: to return to the previous menu or cancel the current operation.

● Menus

1. Position adjustment of the swing barrier

Type: zero (default)

Left limit

Right limit

2. Passing mode

Opening mode: Two-way swipe (default)

Left free, Right swipe

Left swipe, Right free

Two-way free

Left prohibit, Right swipe

Left swipe, Right prohibit

Left prohibit, Right free

Left free, Right prohibit

Two-way prohibit

3. Opening duration (Press 'ENT' to modify)

After the gate is opened, it will automatically close if no one passes through within a certain time duration. The default value is 5 seconds. The value ranges from 2 to 60.

4. **Reverse intrusion**

   Mode: Close the door and voice alarm

   Voice alarm only (default)

   Turn off reverse detection

5. **Trailing alarm detection**

   Mode: Turn off trailing detection

   Voice alarm only (default)

   Close the door and voice alarm

6. **Opening speed**

   Speed value: 1~20 (default 1)

7. **Closing speed**

   Speed value: 1~20 (default 1)

8. **Swiping mode**

   Method: Allow the card to be swiped in the channel (default)

   Do not allow card swiping in the channel

9. **Reset counter**

   Reset: Out counter (default)

   Into the counter

   All

10. **Gate closing delay time**

    Time: 0~10 (default 0)

11. **Brake unlock mode**

    Mode: Delay unlock (default)

12. **Brake starting angle**

    Angle: 1~10 (default 3)

13. **Fire alarm signal**

    Signal: right open

Left open (default)

Shut down

14. Volume setting

Volume: off

The value ranges from 1 to 16 (default 5).

1 is the minimum value; 16 is the maximum value.

15. Audio prompt for gate opening swift

Enable or not: No (default)

Yes

16. Infrared anti-pinch

Mode: Turn off the anti-pinch feature

Enabling anti-pinch (default)

17. Infrared anti-pinch area

Area selection: Disable during In and out of infrared (default)

All infrared zone anti-pinch

18. Memory opening

Whether to open: No (default)

Yes

19. System working mode

Mode: working mode (default)

Test mode

Restore to factory

20. Version number:

Version: V9.0.0

4 Troubleshooting

Number	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, 2-core connection lines. See the wiring diagram for the specific connection circuit.
3	The barrier 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, restart the self-test after power-on!

5 Wiring Diagram

Below is the wiring diagram:

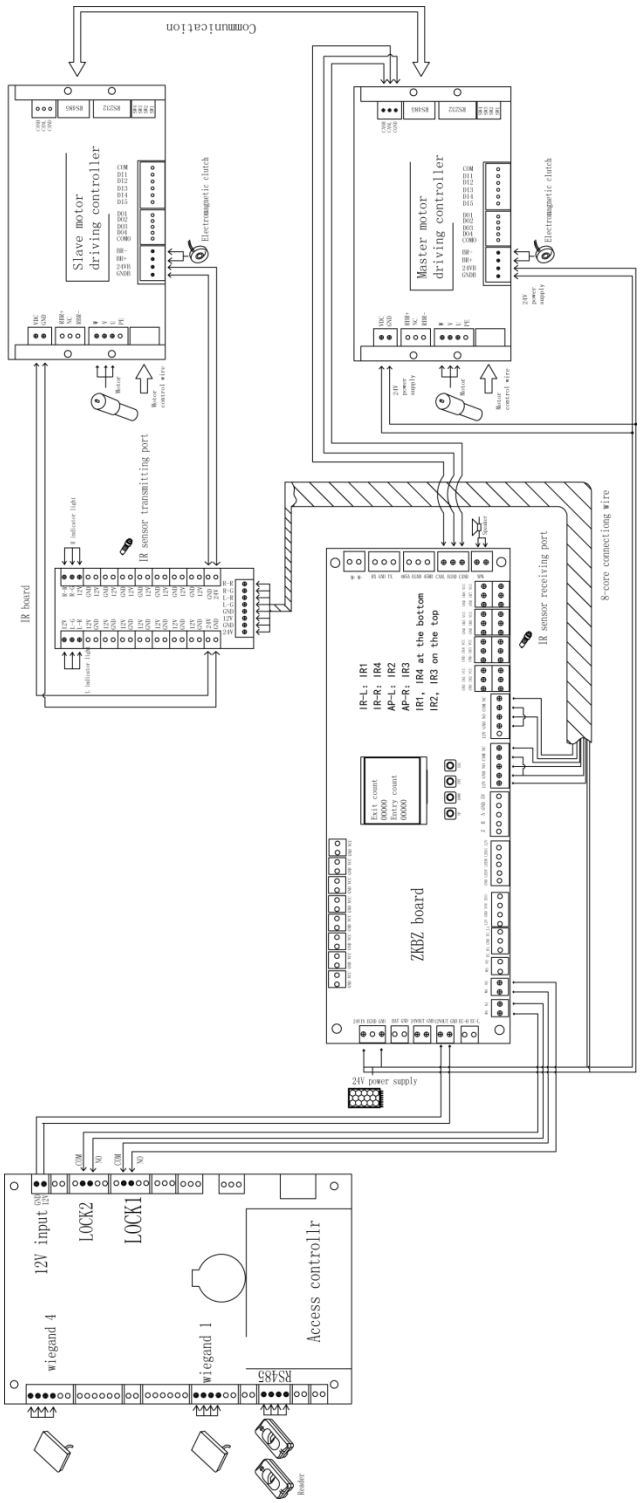
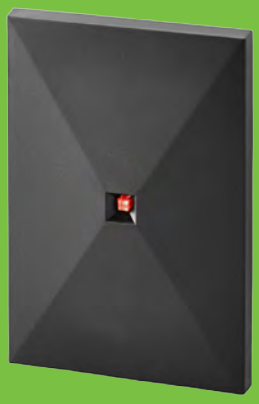


Figure 5-1

TURNSTILES.us
SECURING THE U.S. and the GLOBE since 1989


KR500H


KR502H


KR503H

KR500H SERIES

Multi-technology proximity card readers

KR500H is a series of outdoor IP67-rated tamper-resistant multi-technology proximity card readers capable of reading both HID and ZKAccess 125 kHz 26-bit proximity cards.

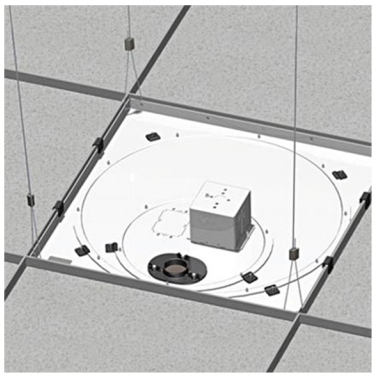
Due to its conveniently small mullion size, KR500H is the ideal card access solution for any metal doors with thin frames, parking gates, fences, turnstiles or any security device having a narrow mounting surface. KR502H and KR503H are designed for single-gang mounting. KR500H Series has a built-in Wiegand-Out port which can be connected to most any access control panel (including ZKAccess C3 and InBio door controllers).

SPECIFICATIONS

Technology	Proximity
Supported Types	HID 125kHz (ZKAccess)
KR500H Mounting	Mullons, including metald doors and window frames
KR502H & KR503H Mounting	Metal or platic US single-gang wall box, and flat surfaces
Indoor & Outdoor Installation	Electronics sealed in weather & temperature-resistant epoxy potting
Keypad	Model KR502H only
LED Indicator	Red, green, amber, & "off" (represent 4 states)
Audio Indicator	Beep
Wiegand Interface	Wiegand-out port
Power Supply	5-16VDC
IP-Rating	67
Operating Temperature	-35 F to 149 F
Operating Humidity	20% - 80%
KR500H Dimensions (HxWxD)	3.2 x 1.7 x 0.7 inches
KR502H Dimensions (HxWxD)	4.6 x 3 x 0.75 inches
KR503H Dimensions (HxWxD)	4.6 x 3 x 0.4 inches
Certifications	FCC, ICC, CE, C-Tick, ETL Listed
KR500H & KR503H Current Draw	35 mA typical, 75mA peak @ 12VDC
KR502 Current Draw	70mA typical, 110mA peak @ 12VDC
Read Range	KR500H up to 5 in / KR502H/KR503H up to 7 in
Cabling	18-AWG minimum, multi-conductor stranded with an overall foil shield

CHIEF CMS445

Speed-Connect Suspended Ceiling Tile Replacement Kit



Specifications

Dimensions & Measurements
Ceiling Tile Size: 2' x 2' (0.61 x 0.61m)
Depth: 23.6 in (59.9 cm)
Height: 1.1 in (2.8 cm)
Overall Dimensions:
1.1" x 23.6" x 23.6" (29 x 600 x 600 mm)
Shipping Weight: 22 lbs (10 kg)
Weight Capacity: 50 lbs (22.7 kg)
Width: 23.6 in (59.9 cm)

Characteristics & Features
Accessory Type: Suspended Ceiling
Application: Ceiling
Ceiling Plate Type: Speed-Connect
Color: White
Column Type: None
Includes Power Outlet: No
Installation Type: Replacement
Special Features: Surge and Filtering

Certifications
TUV
UL Listed

Features

- Easy to install solution for connecting power to drop-ceilings
- Includes power outlet housing that is ready for power outlet installation
- WireVice Cable Suspension System for quick and easy tie-off
- Continuously adjustable mounting slot for infinite placement options
- Flexible solution provides infinite column placement within a 2' x 2' ceiling tile
- Single and dual electrical outlet cutouts
- Exclusive locking hardware at column connection point to protect against theft
- Includes: (4) 25' flexible cables, (4) wood eyebolts and (4) concrete anchors
- Fits 24" (or 600mm) wide ceiling tile grids
- 50 lb weight capacity

Thank You!

TURNSTILES.us

COMPANY BRIEF

wwww.TURNSTILES.us, Inc.
Small Business

CAGE: 36SD8
GSA: GS 07F 9239S
DUNS: 181428611
NAICS: 238990
SIC: 1799

8641 S. Warhawk Rd.
Conifer, CO 80433

Main: 303-569-6776
Direct: 303-670-1099
Patrick.McAllister@TURNSTILES.us
www.TURNSTILES.us

TURNSTILES.us is a professional organization specializing in the physical and electronic securing of building entrances with Turnstiles, Mantraps, EntraPASS Access Control Hardware, and Software since 1989. We are a U.S. Federal Government Contract Holder and are registered with the U.S. Federal Government System for Award Management.

TURNSTILES.us headquarters is located in the Rocky Mountain Region of Colorado. Our team of engineers and sales professionals are strategically located across the United States to enable us to address our clientele. Our expert project team offers turnkey solutions for commercial public sector and private markets including access control system analysis, design, installation, and implementation, and raises the bar for the highest standards in the turnstile security industry.