ARMATURA

ARCHITECTURAL AND ENGINEERING SYSTEM SPECIFICATIONS

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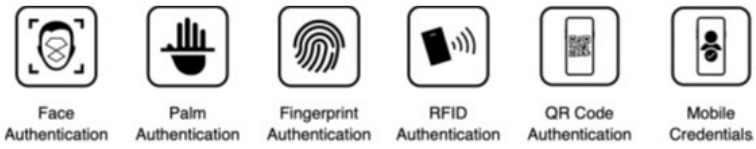
Avalon Series

Aesthetics Swing Barrier

Avalon-S1000 Avalon-S12000



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Date: 5 February 2025

(DRAFTS)Version 1.0

SECTION 1 GENERAL SPECIFICATIONS

1 PURPOSE

The purpose of this architectural and engineering specifications (A&E) document is to provide guidance for the design, implementation, and installation of the Avalon Series Aesthetics Swing Barrier, Avalon-S1000, and Avalon-S1200. This solution integrates advanced Cold Glued Lamination (CGL) assembly technology with precision-engineered access control features.

2 GOALS AND OBJECTIVES

The Avalon Series Aesthetics Swing Barrier, Avalon-S1000 and Avalon-S1200, A&E document shall establish:

2.1 System capabilities and performance requirements

2.2. Technical specifications and standards compliance

2.3. Installation parameters and requirements

2.4. Quality assurance measures

2.5. Warranty and support requirements

3 KEY FEATURES AND REQUIREMENTS

The Avalon Series shall incorporate the following key features:

3.1 Structural Design

a) CGL Assembly System

- Proprietary lamination technology.
- Adopts reduced screw usage for seamless assembly.
- ARMATURA core servo control system for advanced swing arm control.

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3.2 Detection Technology

a) Sensor Array:

- Configuration: 12 pairs of infrared sensors
- Classification: Military-grade.
- Detection: Matrix-style photoelectric 3D field.

b) Security Functions:

- Anti-tailgating system.
- Bi-directional passage control.
- Anti-clamping protection.

3.3 Safety Features

a) Passage Control:

- Independent entrance and exit direction settings.
- Three modes: controlled, free, and prohibited access.

b) Safety Mechanisms:

- Automatic reset and memory for up to 255 requests.
- Multi-layer anti-clamping protection:
  - Infrared detection.
  - Mechanical force sensing.
  - Electric current detection.
- Power-off fail-safe system.
- Emergency escape functionality.
- Rounded edges for user safety.

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3.4 Authentication Methods

a) Standard Authentication Options:

- RFID.
- QR Code.
- Fingerprint Recognition.
- Palm Recognition.
- Facial Recognition.
- Mobile Credentials.
- Multi-factor authentication combinations are available.

4 IMPLEMENTATION REQUIREMENTS

4.1 Site Prerequisites

a) Structural Requirements:

- Platform type: Solid horizontal surface.
- Platform height: 2.0" to 3.9" (50-100mm).
- Maintenance clearance: 3.9" (100mm) minimum.

b) Environmental Conditions:

- Non-corrosive environment
- Temperature range: -4°F to 140°F (-20°C to 60°C)
- Humidity: Maximum 95% non-condensing
- Installation and implementation by manufacturer-certified installers only.

5 EXISTING STANDARDS AND REGULATIONS

5.1 Regulatory Standards

a) The Avalon Series aesthetic swing barrier, Avalon-S1000 and Avalon-S1200, shall comply with the following required certifications:

- CE Standards.
- FCC Standards.

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5.2 Quality Assurance

a) Manufacturer Requirements:

- Minimum 5 years' access control production experience.
- Valid CE and FCC certifications.

b) Documentation Requirements:

- Product data sheets.
- Installation instructions.
- Complete operation manuals.
- Test reports and certificates.

6 WARRANTY AND SUPPORT

6.1 Warranty Coverage

a) The manufacturer shall provide comprehensive 36-month warranty coverage for the Avalon Series Aesthetics Swing Barrier, Avalon-S1000 and Avalon-S1200.

7 DELIVERY, STORAGE AND ON-SITE REQUIREMENTS

7.1 Delivery Requirements

a) Packaging:

- Original manufacturer packaging.
- Protective wrapping.
- Shipping indicators.

b) Documentation:

- Digital installation instructions.
- PDF format manuals.
- Printed quick start guides.

6.2 Storage Requirements

a) Environmental Conditions:

- Temperature: -4°F to 140°F (-20°C to 60°C).
- Humidity: ≤95% non-condensing.

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b) Storage Conditions:

- Elevated storage (off ground).
- Weather-protected location.
- Construction activity protection.
- Debris protection.

8 QUALITY CONTROL

8.1. Testing Requirements

a) Factory Testing

- Functional testing.
- Performance validation.
- Safety systems verification.

b) On-site testing

- Installation verification.
- System integration testing.
- Performance validation.
- User acceptance testing.

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SECTION 2 TECHNICAL SPECIFICATIONS

1 KEY FEATURES AND FUNCTIONS

- The Avalon Series Aesthetics Swing Barrier consists of two models, Avalon-S1000 and Avalon-S1200.

- The standard lid material of Avalon-S1000 and Avalon-S1200 is tempered glass in black and white.

- The chassis material of Avalon-S1000 and Avalon-S1200 are tempered glass and high-carbon steel.

- The standard chassis color of Avalon-S1000 and Avalon-S1200 is white but it can be customized in other colours.

- Avalon-S1000 and Avalon-S1200 adopt a German-made DC brushless motor for reliability and efficiency. This motor operates smoothly and quietly with superior performance and longevity.

- The dimensions of the Avalon Series Aesthetics Swing Barrier, Avalon-S1000 and Avalon-S1200 are as follows:
    i. Standard length: 70.9" (1800mm).
    ii. Standard width: 4.7" (120mm).
    iii. Standard height: 38.6" (980mm).

- The dimensions with packing of Avalon Series Aesthetics Swing Barrier, Avalon-S1000 and Avalon-S1200 are as follows:
    i. Standard length with packing: 74.8” (1900mm).
    ii. Standard width with packing: 12.6” (320mm).
    iii. Standard height: 47.2” (1200mm).

- The standard door leaf material of Avalon-S1000 and Avalon-S1200 are made of acrylic, but it can be customized into tempered glass optionally.

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- The Avalon-S1000 and Avalon-S1200 models are available in the following standard and optional door leaf dimensions:

  Standard Dimensions:

  i. Height: 29.33" (745 mm).
  ii. Width: 11.61" (295 mm).
  iii. Height: 29.33" (745 mm).
  iv. Width: 16.73" (425 mm).

  Optional Dimensions:

  i. Height: 62.99" (1,600 mm).
  ii. Width: 11.61" (295 mm).
  iii. Height: 62.99" (1,600 mm).
  iv. Width: 16.73" (425 mm).

- Avalon-S1000 and Avalon-S1200 can be combined to form a single lane. It should be noted that Avalon-S1200 needs to be used in conjunction with Avalon-S1000.

  Single lane configuration:

  i. lane width: 25.98” (660mm).
  ii. Width: 16.73" (425 mm).

  A wide lane or ADA lane:

  i. lane width: 36.22” (920mm).

  High barrier lane:

  i. lane width: 36.22” (920mm).
  ii. lane width:25.98” (660mm).
  iii. lane width: 35.43” (900mm) (optional).
  iv. high barrier height: 70.87” (1800mm).

- Avalon-S1000 and Avalon-S1200 can be combined to form a dual lane. It should be noted that Avalon-S1200 needs to be used in conjunction with Avalon-S1000.

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Dual lane configuration (symmetrical distribution):

i. Total lane width: 51.18” (1300mm).
ii. Each lane width: 25.59” (650 mm).

- Avalon-S1000 and Avalon-S1200 can be combined to form a dual wide lane and dual ADA lane. It should be noted that Avalon-S1200 needs to be used in conjunction with Avalon-S1000.

  Dual wide lane or dual ADA lane configuration (symmetric distribution):

  i. Total lane width: 72.44” (1840mm).
  ii. Each lane width: 36.22” (920mm).

  The dual wide lane or dual ADA lane are specifically designed to accommodate wheelchair users and individuals requiring additional passage space. This dual wider lane option ensures accessibility compliance by providing increased clearance and maneuverability for people with mobility devices or those needing extra room for safe transit.

- The Avalon-S1000 and Avalon-S1200 are equipped with swing-type barrier movement.

- The barrier movement speed of Avalon-S1000 and Avalon-S1200 ranges from 0.3 seconds to 0.6 seconds per operation (opening or closing), depending on the size of the barrier leaf.

- The barrier movement accuracy is less than or equivalent to 1.5 degree per operation.

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- The lid panel of Avalon-S1000 and Avalon-S1200 features visual indicators for direction and passage status:
    i. Green arrow: barrier open (accessible).
    ii. Red cross icon: barrier close (not accessible).

- The Avalon-S1000 and Avalon-S1200 have an LED strip on the gantry frame which illuminates different colour to indicate the status:
  White breathing light: standby mode.
    i. Green running light: barrier opening.
    ii. Red flashing light: alarm.

- The Avalon-S1000 and Avalon-S1200 provide an advanced access control mechanism with configurable passage modes including controlled authorization, open transit, and complete passage prevention. Avalon-S1000 and Avalon-S1200 operation supports automatic reset and passage memory for a maximum of 255 requests.

- Avalon-S1000 and Avalon-S1200 are equipped with a mechanical clutch system. It is designed to provide anti-panic or anti-collision functions.

- Avalon-S1000 and Avalon-S1200 designed with a power-on self-test feature that automatically checks for any hardware or functional issues when the system starts up. If no problems are detected, the unit will operate normally. If a fault is detected, the system will display a relevant message on the LCD display so that the user can quickly understand and solve the problem.

- Avalon-S1000 and Avalon-S1200 designed with a power-off fail-safe. During the power cut, the swing arms will unlock for emergency evacuation.

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- Avalon-S1000 and Avalon-S1200 are optionally available with integrated facial recognition systems for enhanced security and seamless access control.

- Avalon-S1000 and Avalon-S1200 are enhanced with under mount authentication options:
  Single-factor authentication: RFID / QR Code / mobile credentials / fingerprint / facial recognition / palm recognition.
  Multi-factor authentication: RFID+ QR Code / fingerprint + QR Code / RFID + QR Code + fingerprint or mobile credentials.

- Avalon-S1000 and Avalon-S1200 supports top mount authentication options which is compatible with external facial recognition systems.

- Avalon-S1000 and Avalon-S1200 provides side mount authentication options including RFID / QR Code / RFID + QR Code / mobile credentials.

- Avalon-S1000 and Avalon-S1200 have been equipped with 12 pairs of military-grade IR sensors with matrix-style photoelectric 3D detection.

- Avalon-S1000 and Avalon-S1200 can integrate with the elevator destination control system (DCS) in conjunction with the Armatura One software and the AHDU controller. When the identification module reads a passenger's identity, the system communicates with the elevator via this advanced integration. The designated elevator is displayed on the screen, and the user is automatically directed to the corresponding floor. This fully touchless process eliminates the need for manual input or remote control settings, delivering a highly efficient and advanced user experience.

- The Avalon-S1000 and Avalon-S1200 provides safety sensing and protection to passengers by employing comprehensive anti-clamping technologies, including infrared, mechanical, and electric current detection

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systems. The infrared anti-clamping uses light beam interruption to detect obstacles. It prevents collisions in the swing arm area. While the mechanical anti-clamping detects physical resistance during movement, it helps stop the movement if the swing arm encounters an obstacle. And the electric current detection anti-clamping will monitor the motor load and resistance to ensure the swing arm area operate within a safe range.

- Avalon-S1000 and Avalon-S1200 employs a fail-safe design with automatic opening during power interruptions and includes an emergency escape function that ensures quick, safe passage for users. Additionally, the system features an anti-panic push opening mechanism, allowing users to actively engage emergency access during the swing barrier, operation, thereby maximizing personal safety and mobility.

- The Avalon-S1000 and Avalon-S1200 incorporate precision servo control technology. These models support integration with Armatura's AHDU-1200 and AHDU-1460 control units, enabling customizable system configurations.

- Designed for seamless integration, Avalon-S1000 and Avalon-S1200 supports under-mount readers which provide efficient access authentication using multiple credential types: RFID, QR Code & mobile credentials reader. Avalon-S1000 and Avalon-S1200 are compatible with Armatura EP10C, EP20 Series, and VG10CKQ Series. Also, the Avalon-S1000 and Avalon-S1200 supports ffingerprint reader including Armatura EP30F Series. The Avalon-S1000 and Avalon-S1200 are planned to include future facial recognition and palm recognition terminal capabilities.

- For enhanced accessibility and usability for individuals with disabilities, the Avalon-S1000 and Avalon-S1200 supports side-mounted readers for an alternative credential verification, including RFID, QR Code & mobile credentials reader. The Avalon-S1000 and Avalon-S1200 are ccompatible

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with the Armatura EP10C, EP20 Series, and VG10CKQ Series.The Avalon-S1000 and Avalon-S1200 incorporate with the top-mounted facial recognition terminal, including OmniAC20, OmniAC30 and T10CMQ.

- Avalon-S1000 and Avalon-S1200 provides over force feedback control by detecting excessive force when the barrier swing barrier is obstructed. If too much resistance is sensed, the swing barrier automatically stops or reverses to prevent injury or damage.

- Avalon-S1000 and Avalon-S1200 provides safety force sensing function. The swing barrier continuously monitors the force applied during movement. If an abnormal force is detected, it adjusts or stops operation to ensure user safety.

- Avalon-S1000 and Avalon-S1200 are equipped with lower safety sensors. The sensors positioned close to the ground detect small obstacles like bags, feet, or pets. This prevents accidental tripping or obstruction during swing barrier movement.

- Avalon-S1000 and Avalon-S1200 have accurate presence sensing via advanced sensors to track the position of users to ensure safe passage. Also, the barrier swing barrier stays open until people have fully passed through, preventing sudden closures.

- Avalon-S1000 and Avalon-S1200 offer flexible throughput options to accommodate various credential verification methods and user flow requirements. The RFID, QR code, and mobile credential verification support a flow rate of up to 30 passengers per minute, ensuring efficient and seamless access control for high-traffic environments. While fingerprint recognition maintains a steady flow rate of 20 passengers per minute, providing a balance between security and convenience. As for the advanced biometric solutions, such as facial recognition and palm

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recognition, allow for a throughput of 15 passengers per minute, offering enhanced security measures without compromising on user experience. In emergency situations or during peak hours, the system can be configured to handle up to 60 passengers per minute, ensuring rapid evacuation or crowd management when needed.

- The standard motherboard communication for the Avalon-S1000 and Avalon-S1200 is via an RS232 port, along with a fire alarm port and an RS485 port. Optional communication is available through a TCP/IP interface.

- Avalon-S1000 and Avalon-S1200 operate on 24V DC logic voltage to ensure technical safety. It includes voltage-free contact input for fire alarm fail states and the over force feedback control ensures precise and safe movement.

- Avalon-S1000 and Avalon-S1200 adopt the accessibility design. The barrier swing barrier provides auto opening on power off and anti-panic push opening in operation. Also, the barrier swing barrier provides a wide walkway to accommodate wheelchair users and facilitate easier access.

- Avalon-S1000 and Avalon-S1200 support accessible passage through the under-mounted facial recognition terminal and side-mounted RFID or QR code readers, accommodating wheelchair users and children.

- Avalon-S1000 and Avalon-S1200 feature a versatile power supply that accommodates a wide range of voltages and frequencies, from 100-240 VAC at 50/60 Hz.

- The power rating of Avalon-S1000 and Avalon-S1200 are 40Va in standby mode ; 200VA during operation.

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- A fire signal input for a voltage-free contact is available to Avalon-S1000 and Avalon-S1200.

- The noise level of Avalon-S1000 and Avalon-S1200 are less than 60 decibels (dB), ensuring quiet and unobtrusive performance in indoor environments.

- Avalon-S1000 and Avalon-S1200 are equipped with an internal buzzer as an audio indicator.

- The mean time to repair (MTTR) for Avalon-S1000 and Avalon-S1200 are less than 60 minutes.

- The mean cycles between failure (MCBF) for Avalon-S1000 and Avalon-S1200 are 30 million which indicate the swing barrier can operate for an extended period before experiencing a significant mechanical or operational failure.

- The weight of Avalon-S1000 is 882 lbs. (400kg) and the net weight of the Avalon-S1000 is 661 lbs. (300kg).

- The weight of Avalon-S1200 is 551 lbs. (250kg) and the net weight of the Avalon-S1200 is 441 lbs. (200kg).

- The optimum operating and storage temperature for Avalon-S1000 and Avalon-S1200 ranges from -20℃ to 60℃, which is equivalent to 4℉ to 140 ℉.

- The optimum operating and storage humidity for Avalon-S1000 and Avalon-S1200 are 95% RH (non-condensing).

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- Avalon-S1000 and Avalon-S1200 have achieved CE and FCC certifications, indicating commitment to international safety and quality benchmarks. RoHS, UL325, and UL2593 certifications in progress.

- Avalon-S1000 and Avalon-S1200 attained IP33 protection rating for waterproof and dust proof indoor environment.

- Avalon-S1000 and Avalon-S1200 is compatible with Armatura One software.

2 DOCUMENTATION

The manufacturer shall provide the following documentation for the Avalon Series Aesthetics Swing Barrier, Avalon-S1000 and Avalon-S1200:

i. User manual.
ii. Installation guide.
iii. Technical specifications.
iv. Software release notes.
v. Warranty terms and conditions.

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3 TECHNICAL SPECIFICATIONS

	Avalon-S1000	Avalon-S1200
Audio Indicator	Internal Buzzer	Internal Buzzer
Visual Indicator	Visual Indicators on the Lid Panel: Green (Arrow): Standby, Red (Cross Icon): Door Closing, LED Strip Visual Indicators, White (Breathing Light): Standby, Green (Running Light): Door Opening, Red (Flashing Light): Alarm	Visual Indicators on the Lid Panel: Green (Arrow): Standby, Red (Cross Icon): Door Closing, LED Strip Visual Indicators, White (Breathing Light): Standby, Green (Running Light): Door Opening, Red (Flashing Light): Alarm
Display	Optional (Available with integrated facial recognition systems)	
Lane Type	Single Lane	Dual Lane
Lane width	25.98" (660mm)(Standard), 35.43" (900mm)(Optional)"	25.98" (660mm)(Standard), 35.43" (900mm)(Optional)"
Barrier Movement Type	Swing	
Motor	German-made DC brushless motor	
Movement Speed	0.3-0.6 seconds per movement (open/close timing) (depends on the leaf size)	
Movement Accuracy	≤1.5 Degree per movement	
Clutch	Mechanical clutch for anti-panic/ anti-collision	
Lid Material	Tempered glass (black + white) (standard)	
Lid Options Authentication Methods	Under mount options: RFID /QR Code / Mobile Credentials/ Fingerprint / Facial recognition /Palm recognition /RFID +QR Code / Fingerprint +QR Code / RFID +QR Code+ Fingerprint / Mobile Credentials, Top mount option: Compatible with external facial recognition systems, Side mount option: RFID/QR Code/RFID+QR Code / Mobile Credentials	
Chassis Material	Tempered Glass and High-carbon Steel	
Chassis Color	White (Standard), Customizable	
Door Leaf Material (H x W)	29.33" x 11.61" (745 x 295mm)(Standard), 29.33" x 16.73" (745 x 425mm)	

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	Avalon-S1000	Avalon-S1200
IR Sensors	12 pairs (Military-grade, matrix layout)	
Motherboard Function	System configuration, anti-pinch, anti-tailgating, pass memory, safety logic, and more	
Motherboard Communication	Fire alarm Port(Relay)*1, RS485 Port*1, RS232 Port*1 (Standard), TCP/IP(Optional)	
Controller	Advanced servo controller, Armatura Controller: AHDU-1260/ AHDU-1460 (Optional)	
Credential Options	Under mount RFID, QR code & Mobile Credentials reader: (support model: Armatura EP10C & Armatura EP20 Series & Armatura VG10CKQ Series), under mount fingerprint reader: Armatura EP30CF Series, under mount facial recognition terminal: coming soon, under mount palm recognition terminal: coming soon, Side mount RFID, QR code & Mobile Credentials reader: (support model: Armatura EP10C & EP20 Series & VG10CKQ Series) (For disable people), Top mount facial recognition terminal: OmniAC20 / OmniAC30/ FT10CMQ	
Flow Rate	RFID: 30 passengers per minute QR Code: 30 passengers per minute Mobile Credentials: 30 passengers per minute Fingerprint: 20 passengers per minute Face: 15 passengers per minute Palm: 15 passengers per minute Emergency: 60 passengers per minute	
Accessibility	Under mount facial recognition version: adult, children, disability, Rest of the versions: adult, children (with care), disability (with care)	
Power Supply	100-240VAC, 50/60Hz	
Power Rating	40VA (Stand By); 200VA(Operation)	
Fire Signal	Input for voltage-free contact	
Noise Level	Less than 60dB	
MTTR	Less than 60 minutes	
MCBF	30 million	

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	Avalon-S1000	Avalon-S1200
Weight	882 lbs (400kg) Net Weight: 661 lbs (300kg)	551 lbs (250kg) Net Weight: 441 lbs (200kg)
Dimensions (L x W x H)	70.9" x 4.7" x 36.6" (1800 x 120 x 930mm)(Standard)	
Dimensions with Packing (L x W x H)	74.8" x 12.6" x 47.2" (1900 x 320 x 1200mm) (Standard)	
Operating Temperature	-4°F to 140°F (-20°C to 60°C)	
Operating Humidity	95% RH (non-condensing)	
Certifications	CE, FCC	
Ingress Protection Rating	IP33 (waterproof and dustproof for indoor use)	
Supported Software	Armatura One	
Safety Features	Infrared Anti-Clamping Mechanical Anti-Clamping Electric Current Detection Anti-Clamping Power-Off Fall-Safe Emergency Escape Function Over force Feedback Control Safety Force Sensing Lower Safety Sensors Accurate Presence Sensing Emitter/ receiver infrared sensors technology Logic voltage 24V DC Voltage free contact input for fire alarm fail state Auto opening on power off Anti-panic push opening in operation Wide walkway for wheelchair or easier access Accompanied wheelchair or child passage management (under mount facial recognition & Side mount RFID & QR code reader version)	

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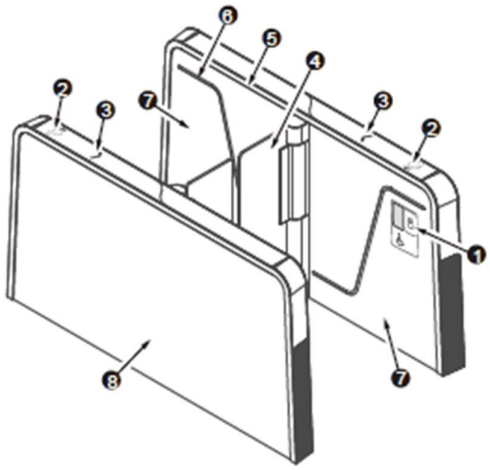
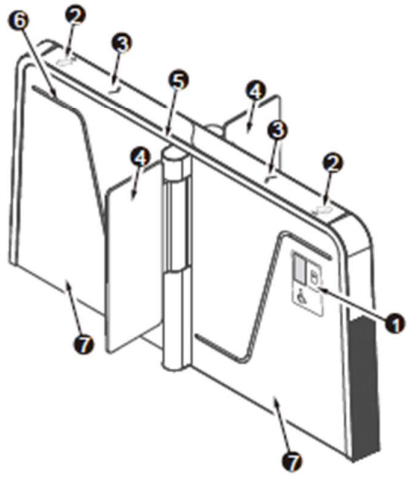
4 PRODUCT DIAGRAM

Avalon-S1000



Avalon-S1200



No.	Components	No.	Components
1	Convenient Verification Area*	5	Status Indicator
2	Verification Area	6	Infrared Sensor
3	Traffic Indicator	7	Maintenance Door
4	Barrier Material	8	Backboard

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5 INSTALLATION AND CONFIGURATION

5.1 The tools required for the Avalon-S1000 and Avalon-S1200 installation and shall be prepared on the site.

- Tapeline
- Marker Pen
- Pencil
- Percussion Drill
- Screwdriver
- Wrench
- Hex Wrench
- Cutting Machine

5.2 Installation Requirements

Avalon-S1000 and Avalon-S1200 installation requirements.

(i) It is recommended that the turnstile must be installed on a horizontal solid platform with a height of 2.0 inches to 3.9 inches (50mm to 100mm).

(ii) It is recommended that the turnstile should not be used in the corrosive environment.

(iii) Make sure that the ground wire of the system is securely connected to avoid personal injuries or other accidents.

(iv) After installation, check if the connection has been done correctly at the connecting points of the ground wire, at the connector assemblies and wiring points of the circuits, as well as at each movable part of the turnstile. Any loose nuts, screws and other fasteners should be tightened in time to avoid any failures caused by long-time operations.

5.3 Installation Environment

(i) Before installation begins, prepare installation tools, check the device and the accessories, and clear the installation base.

(ii) Make sure that the appliance is mounted on a concrete surface or other non-flammable surfaces.

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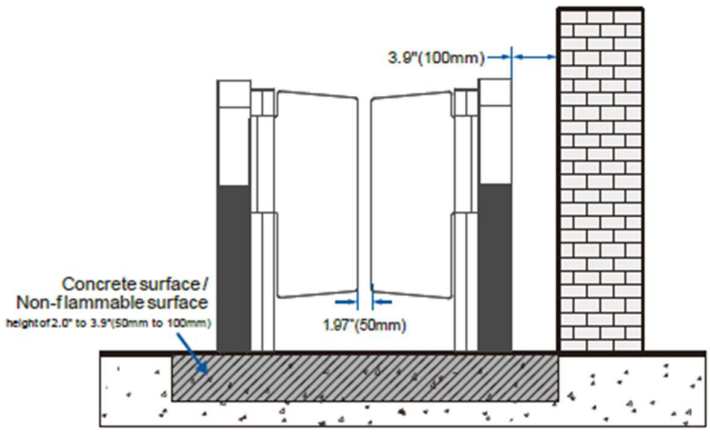
(iii) The installation position of the turnstile depends on its size. A distance of 3.9 inches (100mm) between the turnstile and the wall needs to be reserved for ease of opening the top lid of the turnstile to perform maintenance and adjustment. The reference figure is shown below:



5.4 Installation Cabinet

(i) Determine and mark the mounting positions

- Please refer to the user's manual and complete the power-on self-test operation before installation.
- The first step is to determine the location for the cabinet installation. Once this has been done, the marking template should be placed according to the installation distances shown in the following figure. It is important to ensure that the distance between the inside walls of the cabinet on both sides of the channel inlet and outlet is measured consistently.
- Then use a marker to mark the location of the 10 mounting holes and the outline of the mounting template.

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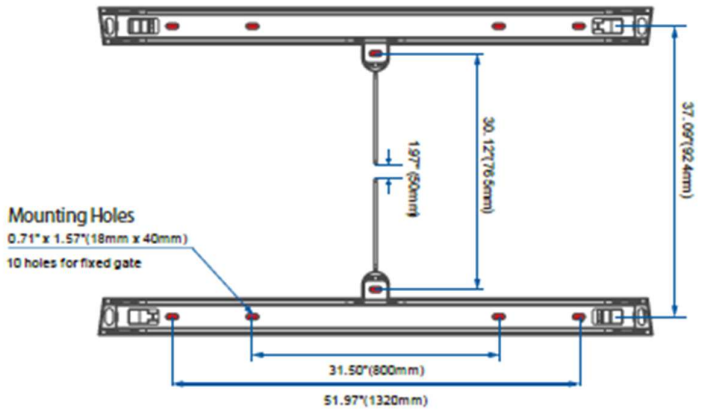
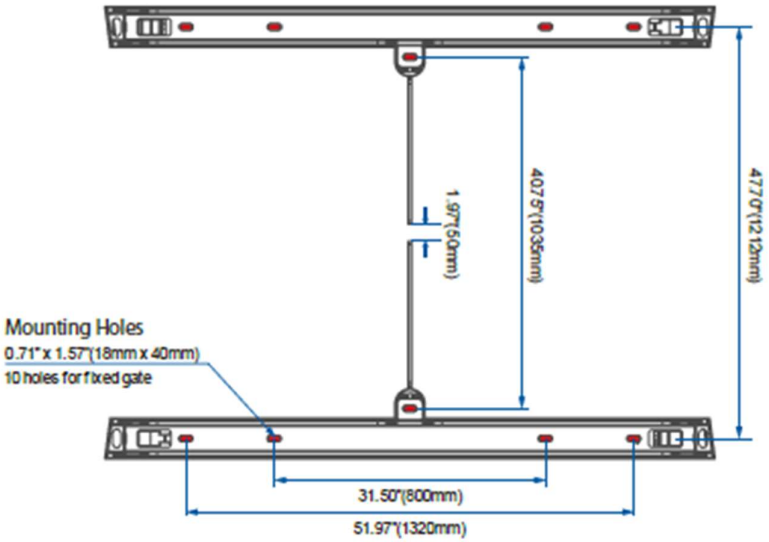
Standard Lane



Wide Lane / ADA Lane



(ii) Foundation and pre-assembled components

- Dig a recess 2.0 inches (50mm) deep with the dimensions shown below. For laying out pre-assembled components.
- Place the pre-assembled components into the recess and pour concrete to fix it in place.

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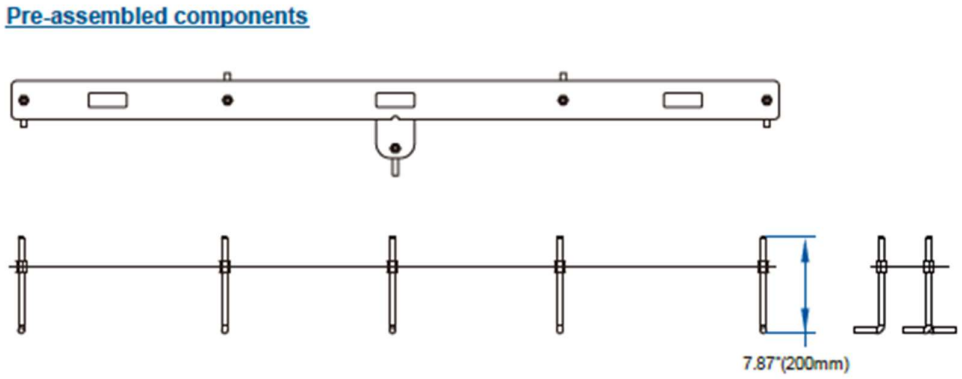
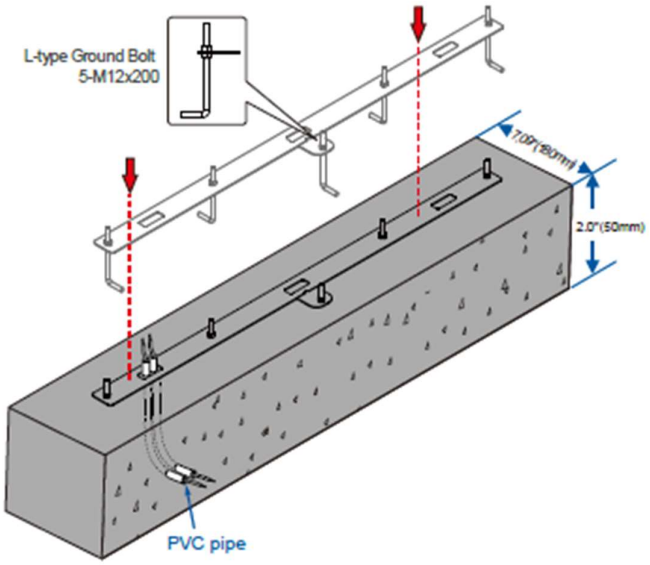
Pre-assembled components



Fixed the pre-assembled components



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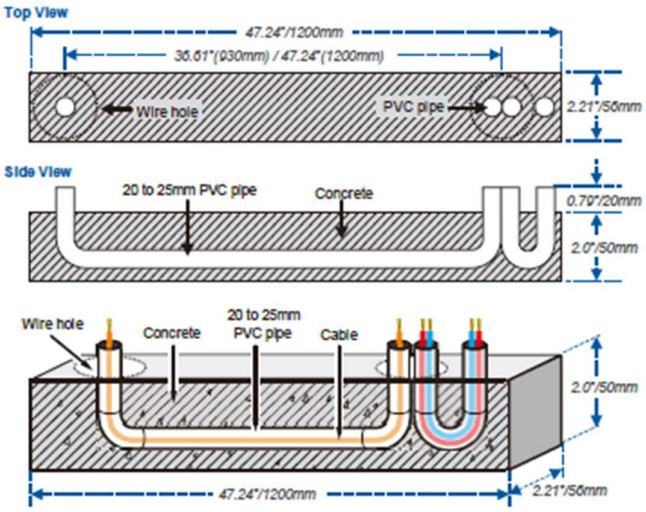
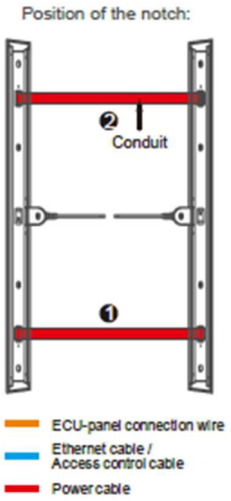
(iii) Wireway laying

- Dig a recess of 2.0" (50mm) depth between the wire holes on both sides of the channel with the dimensions shown below. Recesses can be dug at positions.
- Then lay two 0.8" to 1.0" (20 to 25mm) diameter PVC pipes as shown below.
- After threading the cable out of the PVC pipe, pour concrete into fixing it in place.





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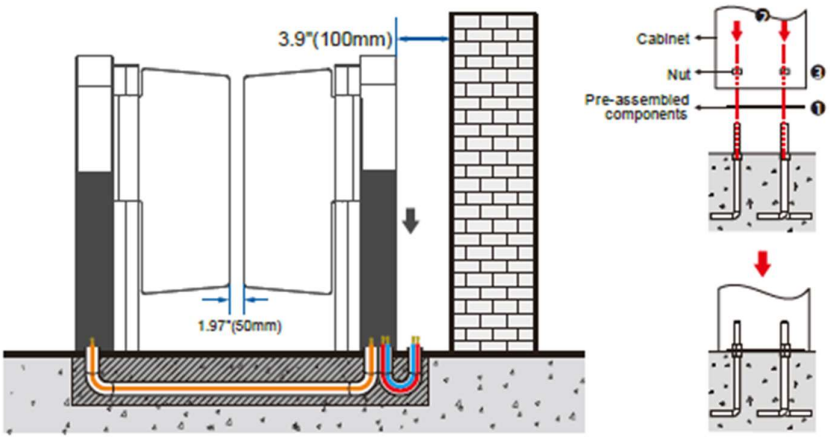
(iv) Fixed Cabinet

- After laying the PVC pipe, place the cabinet alignment bolts back into the mounting position.
- Then insert the nuts into the L-type ground bolts one by one.
- Tighten the nuts to hold the cabinet in place. Don't tighten it completely until after you are sure it won't move anymore. The finished results are shown below:



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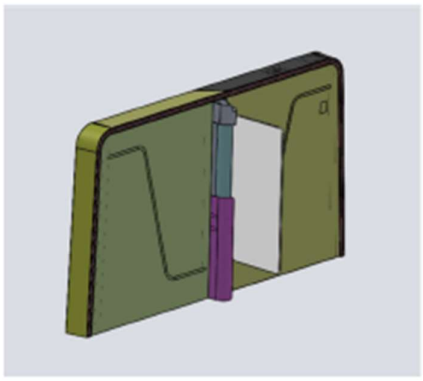
5.5 Detailed Installation Instructions

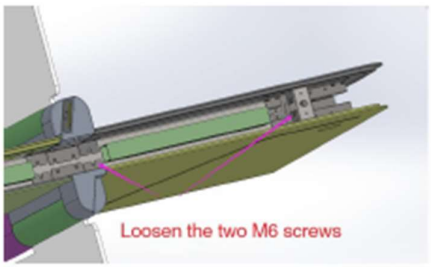
(i) Removal of gantry frames

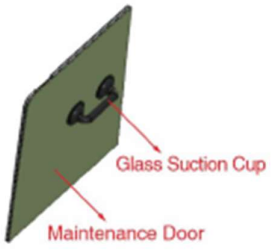
Working in pairs or multiples, lift the gantry frame from each end and remove the gantry frame once it is raised. Take care to maintain balance at both ends. Note: After the frame is raised, unplug electrical connections such as indicator lights and speakers.

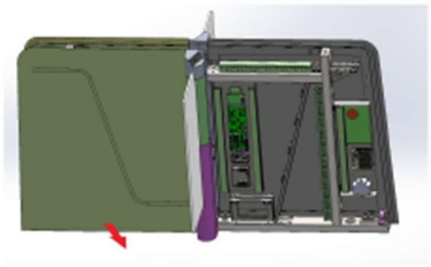


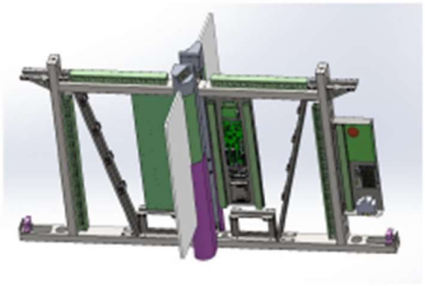
(ii) Disassembly of maintenance door assembly

Remove the maintenance door fixing screws from the top and then remove it with a glass suction cup.









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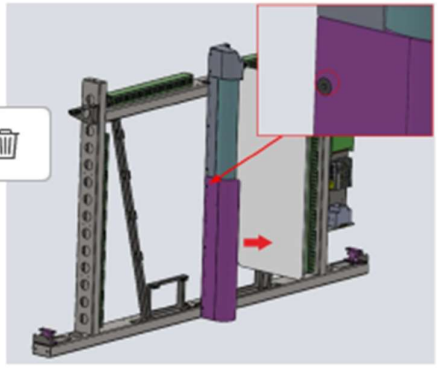
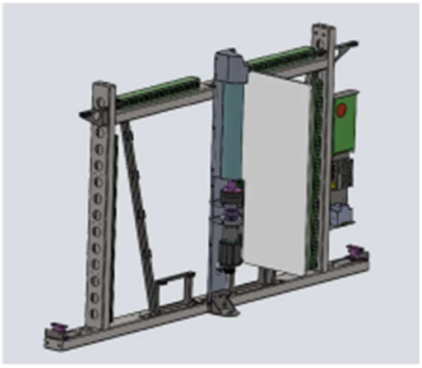
(iii) Removing the movement lower cover

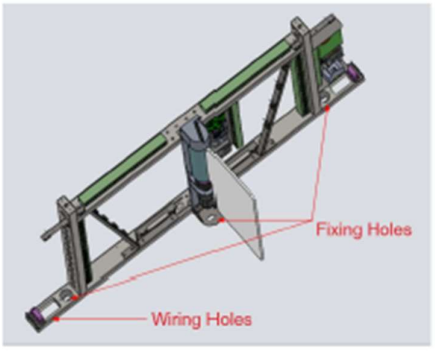
Loosen the screws of the lower movement cover and remove the cover.

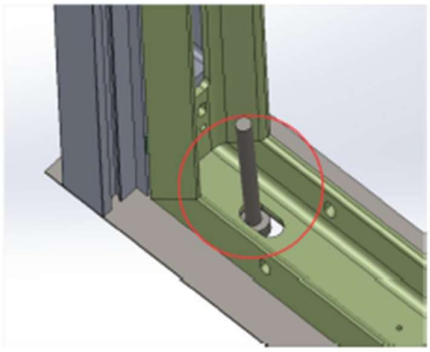




(iv) Mounting Fixing

Place the chassis on the pre-mounted L-type ground screws in accordance with the fixing holes on the bottom of the chassis. Lay the communication cables and 220V power cables at the same time.





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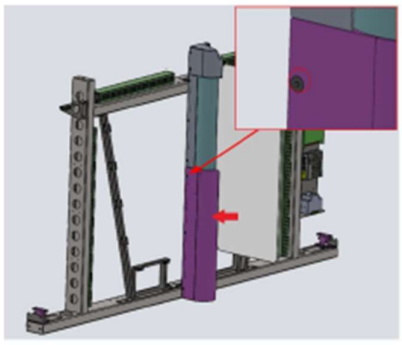
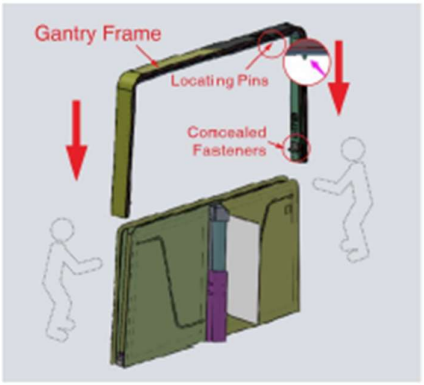
(v) Put the gantry frame back on

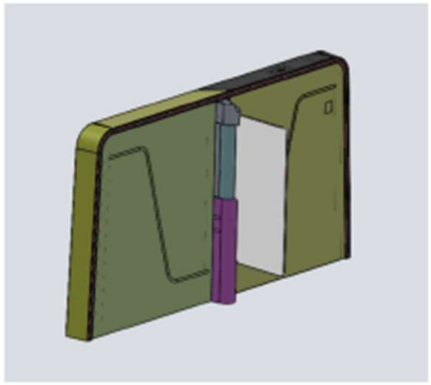
After tightening the chassis, install the lower movement cover and then the maintenance door assembly.



(vi) Installation of gantry frames

Align the locating pins and concealed fasteners on the gantry frame, and with two people working together, insert the frame flush into the gate box body.





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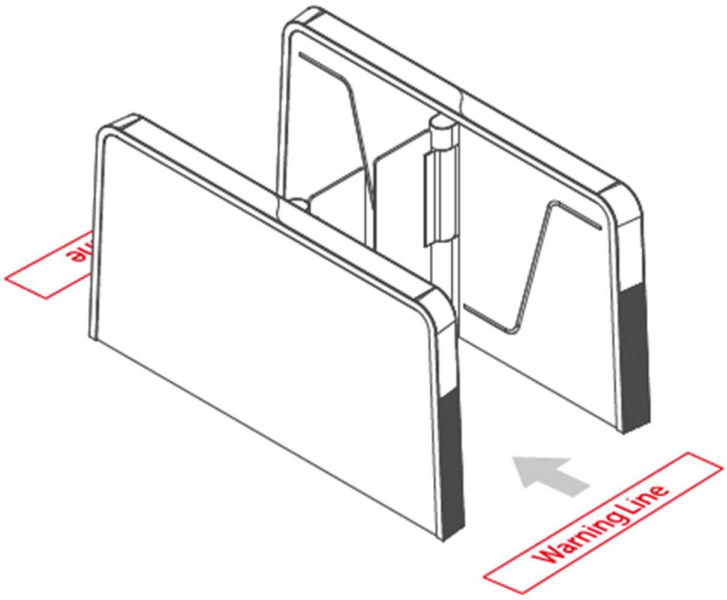
(v) Put the gantry frame back on

- It is recommended that warning lines be marked on the ground and used to alert users.
- A warning line can alert users to wait outside the line until the previous user completes the verification process and passes through the turnstile.



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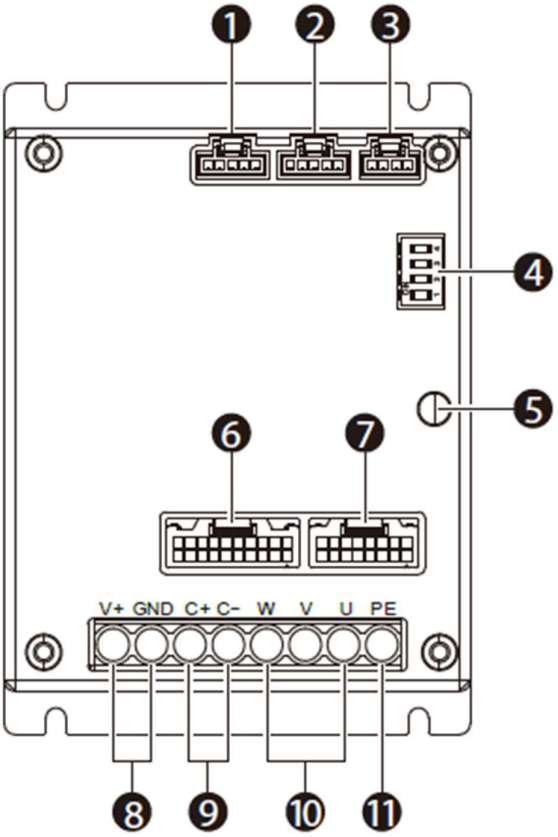
5.6 Main/Sub Device Motor Control Board



No.	Terminal	Descriptions
1/2	RS485/CAN Interface	CAN_H, CAN_L, GND, RS485 B, RS485 A
3	RS232 Interface	NC, TX, RX, GND
4	Dip Switch	1: CONF1 2: CONF2 3: CAN 4: 485 NO: When the dialing code is set to the NO direction, the driver board is the main. When dialed in the direction of numbers, the driver board is the sub.

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5	Operation Indicator	**Normal:** Green light flashes slowly **Programming:** Red light flashing fast
6	IO Interface	
7	Motor Encoder Interface	Encoder and motor hall wire access terminal
8	Power Input	24V-48V DC power supply input
9	Clutch	C+, C-
10	Motor Interface	U, V, W Three-phase power supply for motors
11	PE	PE Shielded Cable

6 WARRANTY AND SUPPORT

The Avalon Series Aesthetics Swing Barrier, Avalaon-S1000 and Avalon-S1200, shall be covered by a minimum of 36-month manufacturer's warranty that covers defects in materials and workmanship. The manufacturer shall provide remote technical support and assistance to the installer and end-user during the installation and operation of the controller.

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7 TRAINING AND DOCUMENTATION

The manufacturer shall provide the following training and documentation for the Avalon Series Aesthetics Swing Barrier, Avalon-S1000 and Avalon-S1200:

- User manuals and technical documentation for installation, configuration, and operation of the reader.
- Online training courses and videos for system administrators and operators.
- On-site or remote training sessions for system integrators and installers.
- Technical support and assistance for system integrators, installers, and end-users.

*Note: Certifications may vary by region and country. Please consult the manufacturer for specific certifications applicable to your location.

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