ARCHITECTURAL SPECIFICATION
TAS12P-EDC Waist High Intelligent Admission Turnstile with Integrated Printer

(NOTE TO SPECIFIER: Select product model depending on desired finish)

AVAILABLE FINISHES
TAS12P-EDC-SS – Stainless Steel
TAS12P-EDC-PF – Powder Coat Finish

SECTION 11 14 00 – Pedestrian Control Equipment
SECTION 28 10 00 – Electronic Access Control and Intrusion Detection

PART I – GENERAL

1.01 SECTION INCLUDES

A. This section covers the furnishing and installation of an electric lock controlled, intelligent admission waist high turnstile that allows patrons to self-scan entry credentials. The turnstile includes an integrated printer.

B. This section covers the furnishing and installation of an electric lock controlled, intelligent admission waist high turnstile that provides patron self-scanning of entry / exit credentials.

C. For further information, contact Alvarado at +1 909.591.8431, or email information@alvaradomfg.com.

1.02 QUALITY ASSURANCE

A. Manufacturer shall be a company specializing in the manufacture of intelligent admission turnstiles for a minimum of 10 years.

B. Installer shall have at least one year of experience installing turnstiles, or shall supply a factory representative during installation of the product.

1.03 SUBMITTALS

A. Submit manufacturer's descriptive literature for specified equipment, including options.

B. Provide, upon request, site specific drawings showing product placement.

C. Provide installation and operation manuals.

1.04 DELIVERY, STORAGE AND HANDLING

A. Deliver materials to job site in manufacturer's packaging undamaged, complete with installation instructions.

B. Store off ground, under cover, protected from weather, construction activities and debris.

C. Use forklift, pallet jack or equivalent equipment for moving.

1.05 PROJECT/SITE CONDITIONS

Install on a level concrete pad.

1.06 WARRANTY

Alvarado warranties its products against defects in material and workmanship for a period of one (1) year from the date of invoicing. The warranty covers defects in materials and workmanship. Obtain full warranty terms from Alvarado.

PART II – PRODUCTS

2.01 MANUFACTURER

Alvarado Mfg. Co., Inc. 12660 Colony Street, Chino, CA 91710.

2.02 PRODUCT

TAS12P-EDC Waist High Turnstile, no substitutions.

2.03 CONSTRUCTION

A. Scan Head

1. The Scan Head assembly shall be #304 stainless steel. The Scan Head assembly includes:
2. A 1D/2D bar code scanner that scans printed and digital bar codes displayed on paper, smart phones and wristbands.
3. A 700 nit 5.7" (diagonal) color TFT Display.
4. An internal speaker that plays audible sounds (.wav files) typically used to provide an audio notification of presented credential status to patrons and attendants.
5. LED lights (yellow/green/red) in the back of the assembly. These lights are typically used to notify attendants of presented credential status. Unique light combinations can be associated with select ticket types to provide notification to attendants of special tickets such as "child", "senior" or "VIP".
6. An Access Controller which communicates to Alvarado's GateLink10 access control software or to third party access control software using Alvarado's *DirectConnect API.*

B. Interior Operating Mechanism:

1. The ratchet assembly shall be cast stainless steel. Laminated steel is not acceptable.
2. Bearings shall be sealed, precision type.
3. Rotation shall be hydraulically dampened and shall self-center using a long-lasting rotational style dampener. The hydraulic dampening shall be of a quality such that when lock arms are disengaged, the turnstile shall rotate only once when spun with force.

C. Cabinet:

1. The cabinet shall be formed and welded 14-gauge stainless steel. Exterior welds are ground smooth and polished. There shall be no exterior fasteners visible on the cabinet.
2. The lid shall be 16-gauge stainless steel, have hinged operation and shall contain two cam lock assemblies (locks keyed alike) to securely attach the lid to the cabinet. The mating between the lid and cabinet shall be flush (not overlapping).
3. The cabinet shall include a high speed, receipt type printer. Printer shall have the capability to print up to 6" per second.
4. The interior portion of the cabinet shall have a splash lip at the point where the lid and cabinet meet to protect the interior portion of the cabinet from water.

D. Head and Arms:

1. The turnstile head shall be a solid piece of aluminum, machined to an attractive conical shape. Finish shall be clear anodized.
2. The turnstile arms shall be 1.5" x 16-gauge stainless steel tubing polished to a #4 satin finish. The visible portion of the arms shall have a welded stainless steel cap with welds polished smooth. The arms shall press fit into the head and be welded from the back for superior holding strength over arms fastened into the head. The arms shall extend 15.5" from the inside edge of the cabinet.
3. There shall be no exterior fasteners visible on the head and arm assembly.

2.04 EQUIPMENT

A. General:

1. The turnstile shall provide electric lock control in the entry direction.
2. Upon validation of a presented credential, the turnstile will unlock and allow a single user to pass through the turnstile in the direction requested. The turnstile will reset after the user has passed through the turnstile or within 20 seconds if passage does not occur.
3. The turnstile shall provide operational instructions to patrons via the color display. This includes instructions for validation as well as the status of presented credentials. The turnstile shall have the capability to provide instructions in the form of graphics and text. Text can be in any language.
4. The turnstile shall provide audio instructions to patrons and attendants.
5. As part of the entry process, the turnstile shall have the capability to print a receipt, seat locator slip or coupon.
6. Graphics, text and audio can be changed, as desired, by uploading files to individual or all turnstiles from a server.

7. Red/green/yellow LED lights in the rear of Scan Head shall provide notification to facility attendants of the status of presented credentials. Unique LED light combinations can be associated with select ticket types to provide notification to attendants when special tickets, such as a “child”, “senior” or “VIP”, have been scanned.
8. In the event that communication to the access control server is not possible, the turnstile shall have the capability to validate credentials “offline”. When communication to the server is restored, tickets validated offline are automatically uploaded to the server.
9. The turnstile shall include a diagnostic utility accessed through the device touchscreen. The utility allows operators to test turnstile functionality and make configuration changes.

B. Mechanical Operation:
   1. Turnstile Locking / Unlocking: A solenoid/spring assembly shall move the lock arms into the "locked" or "unlocked" position. Each lock arm shall be controlled independently. In the event a user places forward pressure on the turnstile arm during activation, once pressure is removed from the arm during the allowed passage time, the turnstile will unlock. This operation is required so that a user does not have to wait for the turnstile to “timeout and reset” or be manually reset by an operator before another activation will be accepted.

C. Electrical Operation:
   1. A UL rated power supply provides power to the turnstile. Turnstile operation to be low voltage 12VDC and 5VDC operation.
   2. The turnstile shall be fail-safe in the electrically controlled direction.
   3. Solenoids shall be continuous-duty rated and shall be activated using a firing current of 12VDC and held in place using a lower holding current of 6VDC. The purpose of the lowered holding current is to reduce overall power consumption of the turnstile and to lengthen the life of the solenoids.
   4. The turnstile shall have key overrides allowing the operating technician to override the access control system and unlock one or both directions of the turnstile.
   5. Electrical operation of the turnstile shall be tested and approved by Los Angeles Testing Laboratories.

2.05 SECURITY EQUIPMENT

A. Reader or Activation Device Integration: The turnstile validates 1D/2D bar coded credentials. Options to validate additional media readers, such as NFC/RFID, are available. See Options section below.

2.06 FINISHES

(NOTE TO SPECIFIER: Select the finish desired)

A. Stainless Steel: The cabinet and lid shall be fabricated from stainless steel with a #4 satin finish.

B. Powder Coat: The cabinet shall be painted in a powder coat color specified by the project requirements. The stainless steel lid, scan head assembly, aluminum head and stainless steel arms shall not be painted.

2.07 OPTIONS

(NOTE TO SPECIFIER: Select the options desired)

A. Alternative Media Readers: Other media readers, such as an NFC/RFID reader or a magnetic stripe reader, can be added to the turnstile.

B. Digital Rotation Counter: A lithium battery powered LCD is installed in the turnstile cabinet. Each rotation of the turnstile generates a count. One counter is required per rotation direction. Counters can be reset to “0” using a provided key.

C. Drop Arm: The horizontal turnstile arm drops down to provide a clear passageway. The mechanism is electro-mechanical. The arm drops when power is removed from the turnstile. No available with battery powered options.

D. Factory Preparation for Additional Scan Head: The turnstile can be factory prepped to allow field installation of a second scan head on the rear of the turnstile lid. A second scan head allows the turnstile to support entry/exit validation or attendant assisted applications.

E. Fail-Safe / Fail-Safe Operation: Both sides of the turnstile will unlock upon loss of power to provide free passage in both directions.

F. Portable (AC Powered): The turnstile attaches to a black powder coated baseplate with a stainless steel guide rail. A rear AC plug is provided to power the turnstile. Wireless communication only.

G. Portable (Battery Powered): The turnstile attaches to a black powder coated baseplate with a stainless steel guide rail. An internal battery supplies power. Wireless communication only.

H. Vinyl Cover: A cover protects the turnstile when not in use. Covers are available in multiple colors.

I. Wireless Communication: Wi-Fi communication (802.11a,b/n)

J. 220VAC: A 220VAC 50-60 Hz UL rated power supply is provided.

2.08 FACTORY TESTING

A. Product shall be fully tested at the factory prior to shipment.

B. Check all electrical connections.

C. Provide factory burn-in testing.

D. Inspect product finish. Touch up prior to shipment.

PART III – EXECUTION

3.01 SITE EXAMINATION

A. Inspection: Installer must examine the installation location and advise the Contractor of any site conditions inconsistent with proper installation of the product. Installation shall not begin until unacceptable conditions are rectified. These conditions include but are not limited to the following:

1. Turnstile must be installed on a level concrete pad.
2. Primary power must be installed prior to turnstile installation.
3. Power and control wiring to come from the ground through conduit stub up locations per manufacturer direction, or via alternative methods if manufacturer is contacted and approves.

B. Installation: Install turnstiles in accordance with manufacturer's instructions.

C. Adjustment: Installer shall adjust turnstiles for proper performance after installation.

D. Instruction: A factory trained installer shall demonstrate to the owner's maintenance crew, or designated representative, the proper operation and the necessary service requirements of the equipment, including exterior maintenance.

E. Cleaning: Clean turnstile and area carefully after installation to remove excess caulk, dirt and labels.

Note: this specification includes recommended options. Alvarado Mfg. Co., Inc. reserves the right to change this specification at any time without notice.