ALVARADO

EDCX
Waist High Turnstile

Technical Specifications

Dimensions	Unit Height:	40.5” (1029 mm)
	Unit Width:	25” (635 mm)
	Unit Depth:	27” (686 mm)

Materials	Cabinet:	Formed and welded 14 gauge cold rolled steel. All exterior welds are ground smooth and polished and there are no exterior fasteners visible on the cabinet. The inside of the cabinet contains two interior mounting tubes that allow the turnstile to be installed without the use of visible anchors, bolts or fasteners.
	Lid:	Formed and welded 14 gauge stainless steel polished to a #4 satin finish. The lid is mounted to the cabinet with two hinge assemblies. When the lid is in the closed position it is secured with two cam locks. The lock assemblies are keyed alike. There are no exterior fasteners.
	Head:	Solid piece of aluminum, machined to an attractive conical shape and drilled to accept the three turnstile arms. The arms are press fit into the head and welded from the back. There are no exterior fasteners.
	Arms:	1.5” OD x 16 gauge stainless steel tubing. The arms are sealed at one end by a stainless steel cap welded and ground smooth. When at rest, the arms create a 90-degree passageway so that the arms do not impair the patron passageway. The arms are polished to a #4 satin finish. The arms extend 15.5” from the inside edge of the cabinet.
	All tubing and sheet metal materials meet ASTM Standard A513.	

Function	The EDCX is a waist high, three arm turnstile designed to control access into and out of corporate and entertainment facilities.
Available Configurations	The EDCX is designed to interface with virtually any access control system or reader to provide the electric locking control required in controlled access facilities. The following configurations of the EDCX are available:
EDCX-4X	Each turnstile has electric lock control in one direction, key lock control in the opposite direction.
EDCX-6X	Each turnstile has separate electric lock controls in both directions.

Interior Components	Ratchet Assembly:	Precision investment cast stainless steel and machined, hardened steel parts.
	Roller Bearing Assembly:	Six precision roller bearings that ride on a precision investment cast stainless steel cam to provide precise and smooth one way or bi-directional rotation.
	Hydraulic Dampening Assembly:	Provides a smooth braking effect during the rotation of the turnstile to eliminate “rumpslap” and over rotation of the turnstile arm. It also automatically self centers the arms to the “home” position. The hydraulic dampening tension is adjustable.
	Mechanical Turnstile Control:	The locking and unlocking of the unit is controlled with stainless steel lock arms that are moved into the appropriate locked or unlocked position by continuous duty rated solenoids and spring assemblies. There is one solenoid and spring assembly per lock arm, and one lock arm per direction, allowing for independent control of each rotational

	direction.
Opto Interrupter Rotation Wheel Assembly:	This assembly consists of two opto-interrupters (small, industrial grade, transmit and receive LEDs), and a rotation wheel. As the turnstile arm is rotated, the rotation wheel passes between the two opto interrupters, signaling the Alvarado Turnstile Controller (ATC) that a turnstile rotation has occurred. The ATC uses this information to re-lock and provide access control functionality without the need for mechanical microswitches.

Electrical Components and Functionality

The following are the electrical requirements and standard functionality of the EDCX:

Power Supply	110 VAC, 60 Hz Low voltage primary power of 10 VAC or 13.5 VDC may also be supplied by connecting power directly to each ATC.
Power Rating	Maximum power consumption is 75 W per turnstile.
Operational Voltage	Primary power is stepped down and rectified for low voltage 12 VDC operation.
On/Off Switch	An on/off switch is located on the power junction box inside the EDCX cabinet. A visible green LED is illuminated on the ATC when the power is “on”.
Power Receptacles	The power junction box inside the EDCX cabinet includes two 110 VAC power receptacles providing a convenient way for installers or technicians to power tools or equipment they may need as they test or maintain the EDCX in the field.
Surge Protection	Each ATC has line to line surge protection for single-phase low voltage AC input to 125 amps. Each ATC also contains a varister that switches to a high impedance state to protect the circuit in the event of a power surge.
Bi-directional Solenoid Drivers	Each ATC provides one solenoid driver per rotation direction.
Activation	Activation for either direction of operation is achieved by supplying a momentary dry contact of any duration to the ATC. A terminal strip connection is provided on the ATC for this purpose.
Key Overrides	A key override allows the operating technician to override the access control system and unlock one or both directions of the EDCX turnstile. Key overrides may be either mechanical or electrical (depending on the operation of the turnstile). Separate key overrides are provided for each direction of travel and are located near the arms on the cabinet fascia. The key override locks are keyed alike.
Timed Delay Auto Re-Lock	An activation signal unlocks the turnstile for one entry. Once the turnstile is unlocked, the user is allowed a maximum of 20 seconds to pass through the turnstile. If the turnstile arms are not rotated within the 20-second time frame allowed, the turnstile automatically relocks.
Field Activation Testing	Each ATC provides a field activation testing button, for each electrically controlled direction. This feature provides a simple way for installers to test the functionality of the EDCX and isolate problems in the field.
Remote Unlocking	Each ATC accepts inputs from a continuous dry contact emitting device to bypass the access control system and allow the EDCX to be remotely unlocked or “opened” in the electrically controlled direction(s). A terminal strip connection is provided on the ATC for this purpose.

Outputs	Terminal strip connections are provided for the following output signals:	
	Feedback / Turnstile Rotation Count	The ATC provides a double pole, single throw, relay in each direction of operation. This allows the ATC to provide a “feedback” signal in the form of a relay output to the access control provider or an external counting system. A terminal strip connection is provided on the ATC for this purpose.
Available Finishes	**Powder Coated**	Available in a wide variety of colors. Sub-assemblies are sand blasted to prepare for the powder coating finish. The powder is electrostatically applied, then baked to assure proper curing and adhesion. Normally the stainless steel lid, the aluminum head, and the stainless steel arms are not powder coated.
	Stainless Steel	The cabinet is fabricated from stainless steel and polished to a #4 satin finish.
Shipping Details	EDCX turnstiles are fully assembled in a solid, fully enclosed, wooden crate. Each EDCX unit includes mounting hardware (anchors, bolts, washers, etc.) to install the turnstile into a concrete base. Alvarado ships products throughout the world.	
Installation Details	All EDCX units must be installed on a firm foundation in a manner that allows the required power and activation signal cabling to be pulled into the cabinet. The recommended platform is 4” deep, level concrete. No embedded fasteners are needed for installation. Installation should be performed by a skilled installer following the manufacturer’s directions and instructions (supplied with the turnstile).	
Approximate Weight	Approximately 175 lb. (79 Kg) per cabinet	

Options

220VAC

A 220VAC 50-60 Hz power supply is provided.

Failsafe Operation

The electrically controlled direction(s) will unlock upon power loss and provide free passage. The EDCX unit is supplied in a fail-lock mode as standard. If power is interrupted to a standard fail-lock EDCX, it will remain locked in the electrically controlled direction(s).

Proximity Reader Mounting

One or more internal bracket(s) can be provided to allow the access control reader(s) to be mounted under a smoked Plexiglas window on the lid of the EDCX turnstile if desired.

Extended Function Turnstile Controller (ATC-FB)

The extended function turnstile controller (ATC-FB) expands the option selection and provides additional functions such as:

- **Adjustable Timed Delay Auto Re-Lock**

  This option allows the operating technician to adjust the duration of the time allowed for the user to pass through the turnstile in each controlled direction. If the turnstile arm is not rotated within the time frame set, the turnstile will automatically re-lock. This option also allows the operating technician to disable the timed delay auto re-lock feature if desired. Adjustments to the timed delay auto re-lock feature can be made in one or both directions for EDCX units configured to provide bi-directional electric lock control.

- **Remote Locking**

  The ATC-FB accepts inputs from a continuous dry contact emitting device to bypass the access control system and allow the EDCX to be remotely locked or "closed" in the electrically controlled direction(s).

Red/Green Card Status Lights (Not Available with the Extended Function Turnstile Controller)

Red and Green LEDs are available for use with the EDCX unit. The red and green LEDs are configured to function in the following manner:

- An illuminated red light indicates the turnstile is locked and ready for card presentation. The red light will remain illuminated if an "unauthorized" card is presented.
- An illuminated green light indicates that the access system has provided the ATC with an activation indicating that an "authorized" card has been presented. When the green light illuminates, the turnstile will unlock.

Red/Green/Yellow Card Status Lights (Available with ATC-FB Turnstile Controller Equipped Units ONLY)

Red, Green, and Yellow LEDs are available for use with the EDCX unit. The red, green, and yellow LEDs are configured to function in the following manner:

- An illuminated yellow light indicates the turnstile is locked and ready for card presentation.
- An illuminated green light indicates that the access system has provided the ATC with an activation indicating that an "authorized" card has been presented. When the green light illuminates, the turnstile will unlock.
- An illuminated red light indicates that the access system has provided the ATC with an activation indicating that an "unauthorized" card has been presented. The turnstile will remain locked. To accommodate this feature an additional terminal strip connection is provided on the ATC for each controlled direction.

Turnstile Open/Closed Lights (Available with ATC-FB Turnstile Controller Equipped Units ONLY)

Large Red and Green lights are also available to indicate whether the EDCX turnstile is open or closed. This option is used in conjunction with the remote locking and unlocking option.

Counter

A lithium battery powered LCD seven digit counter is installed in the turnstile. Each rotation of the turnstile arm generates a count. One counter is required per direction of travel. Counters can be ordered as resettable or non-resettable. Resettable counters can be reset to "0" using a provided key. Non-resettable counters cannot be reset. EDCX model counters can receive the count output from the turnstile circuit board, or from a mechanical micro switch. If count outputs are received from a mechanical micro switch, power to the turnstile is not required to generate counts.

Computerized Counting

Each turnstile rotation outputs a count to GateWatch, Alvarado's Windows based software program that monitors and records real time patron counts. Counts can be transmitted from the turnstile in several ways, including over a standard, in facility, Ethernet network or using wireless RF devices.

Alternative Cabinet Styles

The EDCX is also available in the following cabinet styles:

- **Extended:** Extended cabinets are 34" long.
- **Bullnose:** Rounded ends are added to both ends of the turnstile cabinet. Bullnose cabinets are 36.5" long.
- **Extended Bullnose:** Extended bullnose cabinets are 43.5" long.

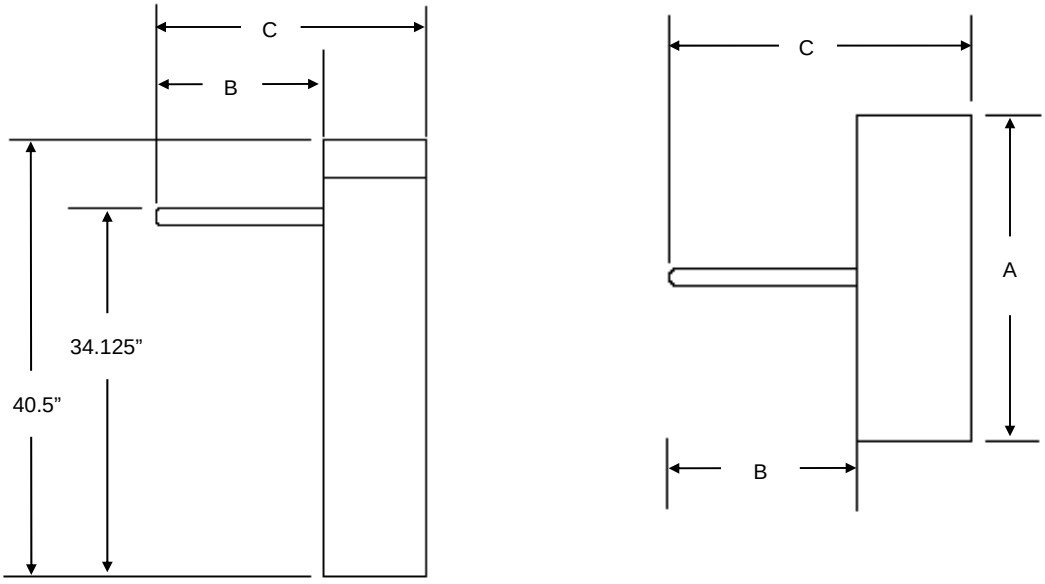
Extended Arms

Longer turnstile arms can be provided on Extended or Extended Bullnose style EDCX cabinets. When used with the extended cabinets, arm lengths may be up to 20.5" long.

Custom Integration

Alvarado can provide custom integration of virtually any access control component including bar code and proximity readers, displays and lights.

EDCX Site Preparation (Standard Model shown)

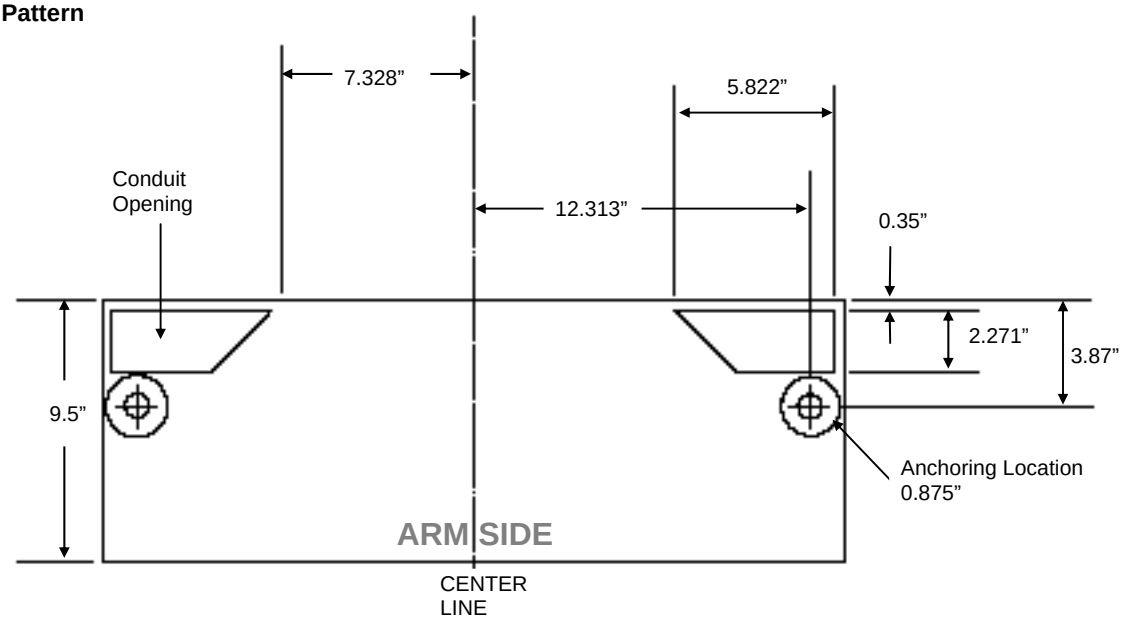


DIMENSIONS:

Model	A	B	C
EDC	27.0”	15.5”	25.0”
EDC Extended	34.0”	20.5”	30.0”
EDC Bullnose	36.5”	15.5”	25.0”
EDC Ext. Bullnose	43.5”	20.5”	30.0”

Note: Allow a 2” clearance gap between the end of the turnstile arm and the next unit or outside barrier.

Anchor Pattern



Note: Anchoring Footprint is the same regardless of the cabinet type.

Slab Requirements

- Minimum thickness: 4” level solid concrete

Warranty

Alvarado Manufacturing Co., Inc. warrants the EDCX, from defects in material or workmanship, for the period of ONE YEAR from date of shipment. Complete details of the warranty are available from Alvarado by request.

Technical Services

Technical information is available from Alvarado Manufacturing Co., Inc., and its representatives, distributors, and dealers.

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