

## EDC

DESCRIPTIVE SPECIFICATIONS



The EDC is Alvarado's most popular waist high turnstile. It is a rugged, multi-purpose turnstile used to provide bi-directional access control, patron flow control and / or patron counting. It is designed for years of trouble-free operation and includes more standard features than competitor models.

### COMMON APPLICATIONS

- Employee and Visitor Access Control
- Pedestrian Traffic Flow Control
- Patron Counting

### TYPICAL INSTALLATION SITES

- Corporate Lobbies & Entrances
- Fitness Clubs
- Colleges & Universities
- Arenas & Stadiums
- Amusement Parks

### FUNCTION

The versatile EDC provides highly reliable bi-directional access control, pedestrian flow control and patron counting. Our turnstiles are installed in thousands of locations worldwide.

Our electric lock model, EDCX-6X, provides bi-directional access control. The turnstile has a robust turnstile controller that allows easy integration with facility access control systems, and devices such as push buttons. Card or biometric readers can be installed on the turnstile lid, or provide lid cutouts for installation of readers inside the turnstile cabinet. Electric lock control models provide a dry contact output upon rotation that can be used either for passage feedback and / or a count passage output.

The manual (non-electric) EDC provides crowd control and patron counting using a mechanical microswitch. Counts can be output to a local counter that is installed in the turnstile cabinet, or to Alvarado's GateWatch automated facility counting software, which provides real time entry, exit and in venue totals and a historic database.

The TAS12-EDC and TAS12P-EDC are our intelligent admission control turnstiles that operate with Alvarado admission control software to provide automated entry at stadiums, arenas, theme parks and other facilities. More information on these turnstiles, including separate descriptive specifications, can be found at <http://www.alvaradomfg.com/gate-admission-systems.htm>.

All Alvarado turnstiles are designed to provide years of service. Our turnstiles have stainless steel internal components, and an adjustable rotary dampener, that slows and cushions the rotation and self-centers the arms to the home position. Our turnstiles also have little touches like a locking stainless steel hinged lid, manual key override controls that allow easy field configuration, and hidden anchoring, which means no exposed bolts or fasteners for a better looking installation.

All waist high turnstiles ship fully assembled for quick and easy installation. Turnstiles are available in satin stainless steel or powder coat finishes.

### AVAILABLE CONFIGURATIONS

#### EDC-3 (manual control)

The EDC-3 can be configured to provide free passage in both directions; free passage in one direction and restricted passage (locked) in the opposite direction; or restricted passage (locked) in both directions. Passage direction may be changed at any time using the included key lock controls recessed into each cabinet.

#### EDCX-6X (electric lock control)

Provides separate electric lock controls for both directions. The EDCX-6X interfaces with virtually any access control system.

See Options for additional cabinet styles.

### AVAILABLE FINISHES

#### POWDER COATED

The cabinet is powder coated. The stainless steel lid, and the head and arms are not powder coated. Powder coating is available in a variety of colors.

### STAINLESS STEEL

The cabinet and lid are fabricated from #304 stainless steel polished to a #4 satin finish.

## MATERIALS

### LID

The Lid is fabricated from 14-gauge stainless steel, regardless of finish. The Lid is mounted to the cabinet with two hinge assemblies and secured with two cam locks.

### CABINET

The Cabinet is fabricated from 14-gauge stainless steel (or cold rolled steel if powder coated). The Cabinet contains the control mechanism and electrical components as well as two internal mounting tubes which allow the turnstile to be installed without the use of visible anchors, bolts or fasteners.

### ROTATING HEAD & ARMS

The rotating Head is fabricated from a solid piece of aluminum, machined to an attractive conical shape and drilled to accept three turnstile arms. The Arms are 1.5" OD x 16 gauge #304 stainless steel tubing sealed at one end by a welded stainless steel cap. The Arms are press fit into the Head and welded from the back allowing assembly without the use of visible exterior fasteners.

## CONTROL, OPERATIONAL MODES & FUNCTIONALITY

### CONTROL MECHANISMS

**Turnstile Control Board** - The Turnstile Control Board (TCB) controls activation and turnstile functions. Activation for either direction of operation is achieved by supplying a momentary dry contact to the TCB. Terminal strips on the board provide access to the available I/O. Communication between the turnstile and access control system is in the form of dry contact inputs and outputs. A primary power to low voltage transformer located in the turnstile cabinet provides appropriate low voltage power to the TCB. The transformer may be bypassed by providing either 10VAC or 13.5VDC directly to the TCB.

**Locking Control** - The locking and unlocking of the turnstile is controlled with hardened steel lock arms that are moved into the appropriate locked or unlocked position by continuous duty rated solenoids and spring assemblies. There is independent control of each rotational direction.

**Opto Interrupter Detection Assembly** - Rotation of the turnstile is detected by an internal opto interrupter assembly. No mechanical microswitches are used.

### RATCHET/ROLLER BEARING ASSEMBLY

The Ratchet is a stainless steel investment casting holding six precision Roller Bearings.

### HYDRAULIC DAMPENING & SELF-CENTERING

This feature provides a smooth, controlled, rotation, smoothly self-centers the turnstile arms and eliminates over travel. The dampener tension is adjustable.

### PASSAGE MODES - ELECTRIC LOCK CONTROL

The electrically controlled EDCX-6X turnstile offers the following user configurable passage modes:

**Controlled Passage** - The arms are locked in place in the home position. Upon receipt of an authorization signal from an access control system, the turnstile unlocks in the appropriate direction, allowing a single passage in the authorized direction. The arms returns to the closed position after the user has passed through the turnstile or the user defined time frame allowed for an entry to occur expires. Controlled passage can be either single direction or bi-directional.

**Free Passage** - An authorization signal is not required for a user to pass through the turnstile. Either rotation direction can be set to free passage using the key locks located on the underside of the cabinet.

**Optional (RKO-3)** - A remote 3-position key switch allows the one direction of the turnstile to be placed in controlled passage mode, free passage mode, or always locked mode (see Options). Use of two switches will control allow remote control of both directions.

### PASSAGE MODES - MANUAL (NO ELECTRIC LOCK CONTROL)

Manual turnstiles offer the following user configurable passage modes:

**Free Passage / No Passage; Free Passage / Free Passage; No Passage / No Passage** - Each rotation direction can be set to either locked or free passage through the use of the key locks located on the underside of Cabinet.

### FUNCTIONALITY - OTHER FEATURES AND TOOLS

**Operational Configuration** - Available configurations are fail-lock / fail-lock (standard) or fail-safe / fail safe.

**Field Configuration Changes** - Our turnstile design makes it very easy to change configurations in the field.

**Adjustable Timed Delay Auto Re-Lock** - This feature adjusts the time a user is allowed to pass through the turnstile, after activation, before the turnstiles automatically relocks. The turnstile ships with a default setting of 20 seconds. There are four separate settings less than 20 seconds, or the timed delay auto relock feature may be disabled.

**Independent Turnstile Testing** - The Turnstile Control Board includes test activation buttons, which allow the unlocking function to be tested independent of the access control system. This is an excellent tool for troubleshooting.

**Junction Box** - The transformer assembly in the turnstile Cabinet includes a junction box with AC plugs to power devices used during installation or to supply power access devices.

### CARD READERS / PHYSICAL ACCESS DEVICES

Installers can mount card readers or access devices directly to the top of the turnstile. Alvarado can also, as an option, provide a 5" x 5" cutout fitted with Plexiglas on either side (or both sides) of the lid to allow installation of an appropriate sized proximity reader under the lid. See options.

### TURNSTILE INTERFACE TO ACCESS CONTROL SYSTEM

There are two types of interfaces to allow an access control system to operate with the turnstile:

#### DRY CONTACT

Single passage activation is achieved by supplying an isolated, voltage free, momentary dry contact (between .5 and 2 seconds in duration) to the appropriate location on the Turnstile Control Board. Various outputs are also available to provide information on operational status and activity. A description of available input and output signals is provided below.

#### SERIAL

Alvarado offers an optional serial interface device that converts an RS-232 computer output to a momentary dry contact. Contact Alvarado for information (see Options).

A description of the available input and output signals from the Turnstile Control Board is provided below:

Input Signal	Entry / Exit
Direction Closed	√
Good Card	√
Bad Card	√
Free Passage	√
No Passage	√

Output Signal	Entry / Exit
Rotational Signal (dry contact)	√

### OPTIONS

#### EXPEDITED MANUFACTURING TIMES

Expedited manufacturing times are available. Contact customer service for current availability.

#### CARD READER CUTOUT

A 5"x5" cutout in the lid is fitted with Plexiglas and allows the mounting of many proximity readers underneath the lid on electrically controlled models. Contact Alvarado for more information.

#### USER NOTIFICATION RED / GREEN ACTIVATION LIGHTS (JS-2)\*

Available for use with the EDCX-6X. A red and green LED array located in the lid under Plexiglas and is configured to function in the following manner:

**Red Light** - An illuminated red light indicates the turnstile is locked and ready for card presentation.

**Green Light** - An illuminated green light indicates the access system has provided the TCB with an activation indicating an "authorized" card has been presented. When the green light illuminates, the turnstile will unlock.

### USER NOTIFICATION RED / GREEN / YELLOW ACTIVATION LIGHTS (JS-3)\*

Available for use with the EDCX-6X. A red, green and yellow LED array located in the lid under Plexiglas and is configured to function in the following manner:

**Red Light** - An illuminated red light indicates the access system has provided the TCB with an activation indicating that an “unauthorized” card has been presented. The turnstile will remain locked.

**Green Light** - An illuminated green light indicates the access system has provided the TCB with an activation indicating an “authorized” card has been presented. When the green light illuminates, the turnstile will unlock.

**Yellow Light** - An illuminated yellow light indicates the turnstile is locked and ready for card presentation.

### FAIL-SAFE / FAIL-SAFE OPERATION

Both sides of the turnstile will unlock upon loss of power to provide free passage in both directions. Fail-lock / fail-lock mode is default.

### 220VAC

A 220VAC, 50 - 60 Hz transformer is substituted for the standard 110VAC transformer.

### RKO-3 (REMOTE TURNSTILE MODE KEYSWITCH)

A loose three-position key switch is provided that allows the turnstile to be placed in one of three operational modes. A key switch is required for each direction of operation.

**Controlled Passage** - The arms are locked in place in the home position. Upon receipt of an authorization signal from an access control system, the turnstile unlocks in the appropriate direction, allowing a single passage in the authorized direction. The arms return to the closed position after the user has passed through the turnstile or the user defined time frame allowed for an entry to occur expires. Controlled passage can be either single direction or bi-directional.

**Free Passage** - An authorization signal is not required for a user to pass through the turnstile. Either rotation direction can be set to free passage using the key locks located on the underside of the Top Channel.

**No Passage (Direction Closed)** - No passage is allowed. The arms are locked in place. Valid electronic credentials are ignored and passage is not allowed.

### PUSH BUTTON ASSEMBLY

A stainless steel push button assembly unlocks the turnstile for one passage.

### DROP ARM

The horizontal turnstile arm drops down to provide a clear passageway on loss of power, or receipt of a fire alarm input located on the TCB.

### BATTERY POWERED COUNTERS

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 key switch integrated into the turnstile cabinet.

\*Photos depicting light options may be found at [www.alvaradomfg.com](http://www.alvaradomfg.com)

### PORTABLE BASEPLATE

The turnstile is mounted to a black powder coated baseplate with a stainless steel guide rail. Smooth-rolling casters and a handle allow for easy maneuverability.

### COMPUTERIZED COUNTING

Each turnstile rotation outputs a count to GateWatch, Alvarado's computerized patron counting software. GateWatch that provides real time entry, exit and in-venue totals in conjunction with Alvarado turnstiles. GateWatch can also often be used with third-party entry devices.

### ALTERNATIVE CABINET STYLES

The EDC is also available in the following cabinet styles:

**Extended Cabinet** - For applications requiring wider passage lanes. Both the cabinet and the arm assembly are extended to create a longer, wider passageway for pedestrians.

**Bullnose Cabinet** - Cabinets have attractive, rounded "bullnose" ends for a highly aesthetic appeal.

### INTELLIGENT ADMISSION TURNSTILES and INTELLIGENT ADMISSION STATIONS

Alvarado manufactures intelligent admission turnstiles and intelligent admission stations that are used to provide admission control at stadiums, arenas, theme parks and specialty venues in conjunction Alvarado admission software. More information about this equipment can be found at <http://www.alvaradomfg.com/gate-admission-systems.htm>. Contact Alvarado for more information.

### CUSTOM INTEGRATION

Alvarado can provide custom integration of other access control components. Contact Alvarado for more details.

## SHIPPING & SITE PREPARATION

### SHIPPING

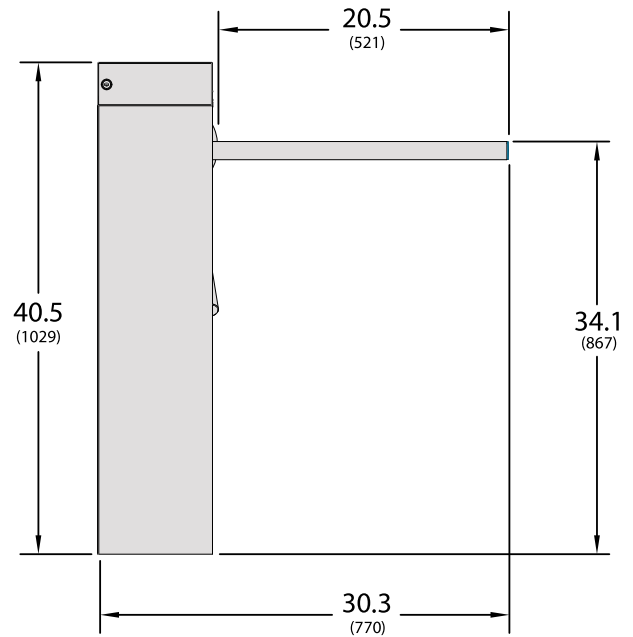
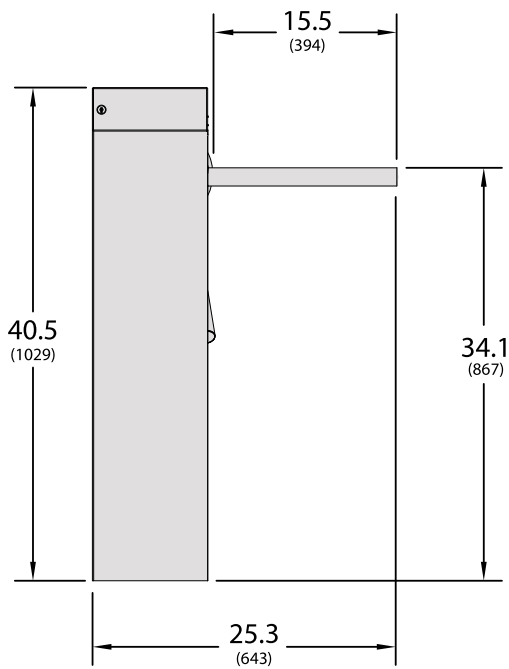
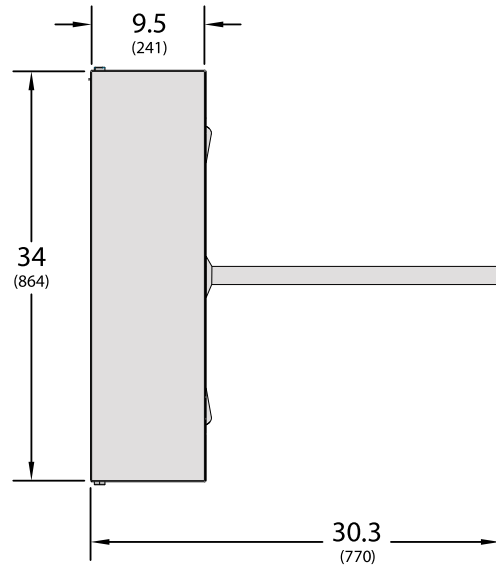
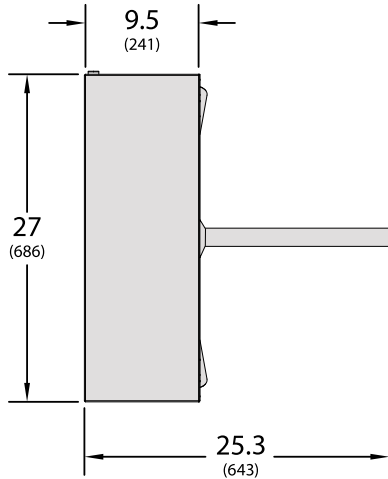
EDC turnstiles are shipped assembled.

### SITE PREPARATION

All turnstiles must be installed on a firm foundation in a manner that allows the required power and activation signal cabling to be pulled into the unit (electrically controlled models). The recommended slab platform should be 4" deep, level concrete. Concrete anchors, bolts and washers are included with each turnstile. Installation should be performed by a skilled installer following Alvarado's directions and instructions. Detailed drawings and installation manuals are available online.



**TECHNICAL DIMENSIONS**



Standard Cabinet  
 Models: EDC-3/EDCX-6X

Extended Cabinet  
 Models: EDC-E-3/EDCX-E-6X

Dimensions shown in inches (mm). All measurements are approximate.



# DESCRIPTIVE SPECIFICATIONS

## WAIST HIGH TURNSTILES



ELECTRICAL		
	DESCRIPTION	
TRANSFORMER	110VAC, 50-60 Hz. Low voltage primary power of 10 VAC or 13.5 VDC may also be supplied by connecting power directly to the TCB.	
POWER REQUIREMENTS	Max power consumption is 75W per turnstile with all available electrical options.	
OPERATIONAL VOLTAGE	Primary power is stepped down and rectified for low voltage 12VDC operation.	
ON/OFF SWITCH	An on/off switch is located on each power junction box inside the Top Channel. A visible green LED is illuminated on the TCB when power is "on."	
POWER RECEPTACLES	The power junction box inside the EDCX-6X Cabinet includes two 110VAC power receptacles providing a convenient way for installers or technicians to power tools or equipment used during installation and maintenance of the EDCX-6X.	
SURGE PROTECTION	Each TCB uses a ceramic varistor for transient voltage suppression up to 80 amps for low voltage AC inputs. Control signal lines are protected by bi-directional transient voltage suppression diodes up to 600W per input. This combination provides superior lightning and surge protection.	
BI-DIRECTIONAL SOLENOID DRIVERS	Each TCB provides one solenoid driver per rotation direction.	
WEIGHT, DIMENSIONS, ENVIRONMENT		
	STANDARD	METRIC
PRODUCT WEIGHT	125 lbs.	57 kg
SHIPPING WEIGHT*	175 lbs.	79 kg <small>*Includes weight of shipping crate(s)</small>
HEIGHT	40.5"	1029mm
WIDTH**	25.3" / 30.3"	643mm / 770mm <small>**Standard / Extended - Includes length of arm</small>
DEPTH***	27" / 34"	686mm / 864mm <small>***Standard / Extended</small>
OPERATING TEMP. RANGE	-20° to 150° F	-29 to 66° C
STORAGE TEMP. RANGE	-30° to 160° F	-34 to 71° C
RELATIVE HUMIDITY	0-90% (non condensing)	--

## WARRANTY

For a period of one year from the date of shipping, Alvarado will replace or repair, at Alvarado's option, any products or parts which are defective in materials or workmanship, provided recommended installation and maintenance procedures are followed. This warranty is void if damage is due to improper installation, maintenance or use. This warranty is limited to parts only, and does not cover labor or shipping charges incurred in connection with the removal or replacement of warranted products or parts.

This warranty is expressly made in lieu of any and all other warranties, expressed or implied, including, but not limited to implied warranties of merchantability and fitness for a particular purpose. Alvarado shall not be liable for any loss or damage, directly or indirectly, arising from the use of purchased products. In no event shall Alvarado be liable to buyer for consequential damages, special damages, incidental damages, loss of use, business interruption, loss of profits, or damages of any kind arising out of the use or inability to use a purchased product. In NO event shall Alvarado be liable for damages which exceed the purchase price of a covered product.

