

# ALVARADO

## **Supervisor 2000-SM** **Optical Monitor Lane for Bi-directional Control**

---



### **Technical Specifications**

<b>Dimensions</b>	<u>Cabinet Length:</u>	17.25" (438 mm)
	<u>Cabinet Height:</u>	37.5" (953 mm)
	<u>Center Cabinet Width:</u>	3.5" (89 mm)
	<u>End Cabinet Width:</u>	3.0" (76 mm)
	<u>Clear Passage Width:</u>	28" (711 mm) or 36" (915 mm)
<b>Materials</b>	<u>Cabinet Frame:</u>	Formed and welded stainless steel. All exterior welds are ground smooth and polished. There are no exterior fasteners visible on the cabinet. The inside of the cabinet contains two interior anchoring tubes that allow the cabinets to be installed without the use of visible anchors, bolts, or fasteners.
<b>Function</b>		The SU2000-SM provides barrier free single or bi-directional card in/card out electronically controlled access.
<b>Method of Operation</b>		<p>Upon receipt of an authorization signal from the access control system a single passage will be allowed in the authorized direction. The turnstile will reset after the user has passed through the turnstile or the time frame allowed for an entry to occur has expired. If an unauthorized user attempts to tailgate or enter from the opposite direction, the unit will recognize the illegal passage and the built in violation alarm will be activated.</p> <p>Multiple infrared sensors mounted inside the turnstile cabinets are used to monitor traffic through the turnstile and determine user position within the passageway.</p>
<b>Status Lights</b>		<p>Red and Green LEDs are configured to function in the following manner:</p> <p><u>Green LEDs:</u> Passage is allowed in the direction indicated.</p> <p><u>Red LEDs:</u> Passage is prohibited in the direction indicated.</p> <p>If neither LED is illuminated, the SU-2000 SM is ready for card presentation.</p>
<b>Violation Alarm</b>		A built in violation alarm will be activated when an unauthorized user enters the turnstile. Alarm duration is user configurable and can be set to sound continuously until manually reset or for a user defined time from 2 to 8 seconds. Alarm settings can be made via dip switches.
<b>Interface</b>		Single passage activation for either direction of operation is achieved by supplying an isolated, voltage free, momentary dry contact of any duration. Separate terminal strip connections are provided for each controlled direction for passage allowed and passage denied input signals.
<b>Aborted Entry (Time Out)</b>		Unit has an adjustable aborted entry (time out) timer. If the user does not pass through the turnstile within the set time, the turnstile will reset and wait for the next activation. If the user attempts to pass through the turnstile after the set time has expired the violation alarm will sound. Timer duration is user adjustable ranging from 5 to 20 seconds. Timer settings can be changed or disabled via dip switches..

**“Open/Close” Inputs**      Activation to “open” or “close” either direction of passage is achieved by supplying a sustained dry contact to the SU2000-SM. Separate terminal strip connections are provided for each controlled direction for both “open” turnstile and “close” turnstile input signals.

**Blocked Sensor Alarm**      The built in alarm will emit a chirping sound if one or more of the infrared sensors remains blocked or obstructed.

**Tailgate Sensitivity**      An alarm output signal is generated if an individual attempts an unauthorized passage by tailgating behind an authorized user. Tailgate sensitivity settings can be changed via dipswitches.

**Outputs**      Terminal strip connections are provided for the following output signals:

Authorized Passage Feedback:      An isolated, voltage free, momentary dry contact output signal is provided for each direction of passage for each authorized user that passes through the turnstile.

Unauthorized Passage Feedback:      An isolated, voltage free, momentary dry contact output signal is provided for each direction of passage for each unauthorized user that passes through the turnstile.

Violation Alarm:      An isolated, voltage free, momentary dry contact output signal is provided each time the violation alarm is activated. This output allows the turnstile to be integrated with an external auxiliary security device such as a facility alarm, CCTV system, or an electric lock controlled door when the turnstile is violated.

Aborted Entry (Time Out):      An isolated, voltage free, momentary dry contact output signal is provided for each direction of passage every time passage is aborted.

**Power Supply**      110 VAC

**Power Rating**      Maximum power consumption is 60 W per lane.

**Operational Voltage**      Primary power is stepped down and rectified for low voltage 12 VDC and 5 VDC operation.

**Installation Details**      SU2000-SM turnstile cabinets are shipped fully assembled. All SU-2000 SM lanes must be installed on a firm foundation in a manner that allows the required power and activation signal cabling to be pulled into lane cabinets. The cabinets must be installed on level concrete. No embedded fasteners are needed for installation.

**Approximate Weight**      Approximately 40 lb. (18 Kg) per cabinet

**Cabinet Types Available**



**Left Cabinet**



**Center Cabinet**



**Right Cabinet**

## Options

### Status Chime

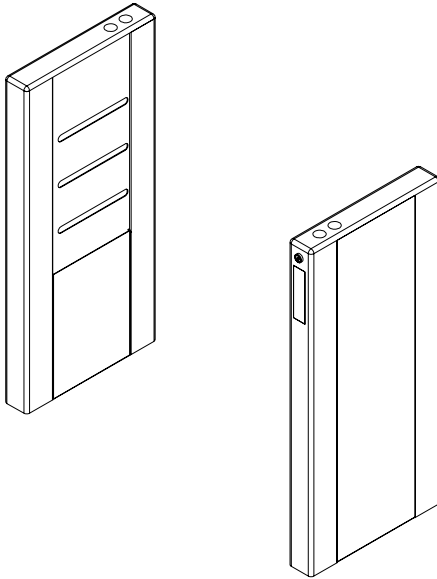
A chime tone indicates that an activation signal has been provided to the turnstile and the user is allowed passage.

### Alternate Power Supply

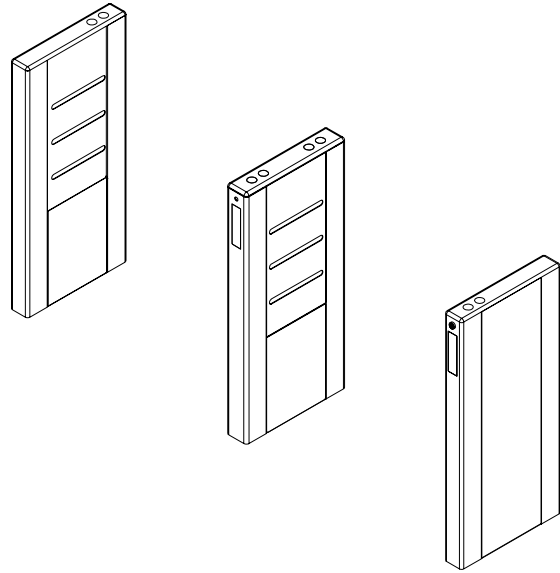
100/240 VAC, 50/60 Hz

## SU2000-SM General Configuration

*Single Lane Configuration*



*Multi Lane Configuration*

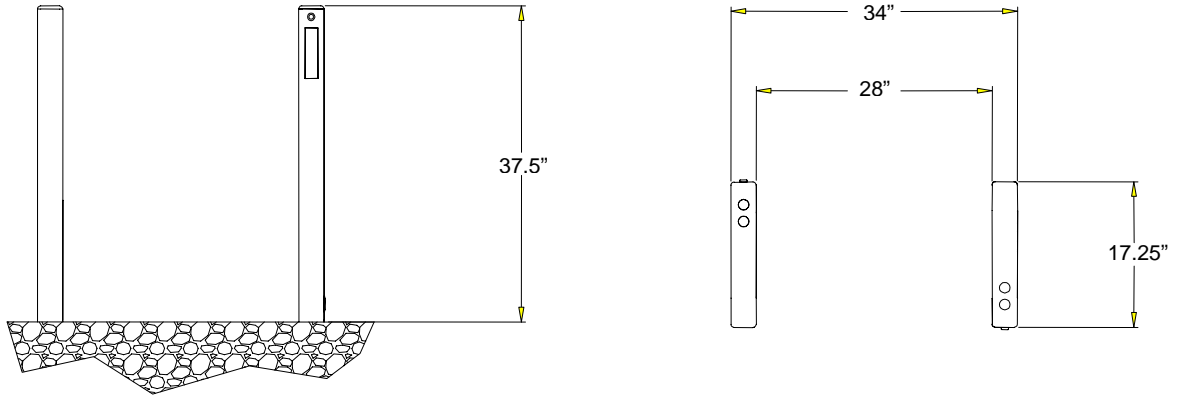


## Alarm Conditions

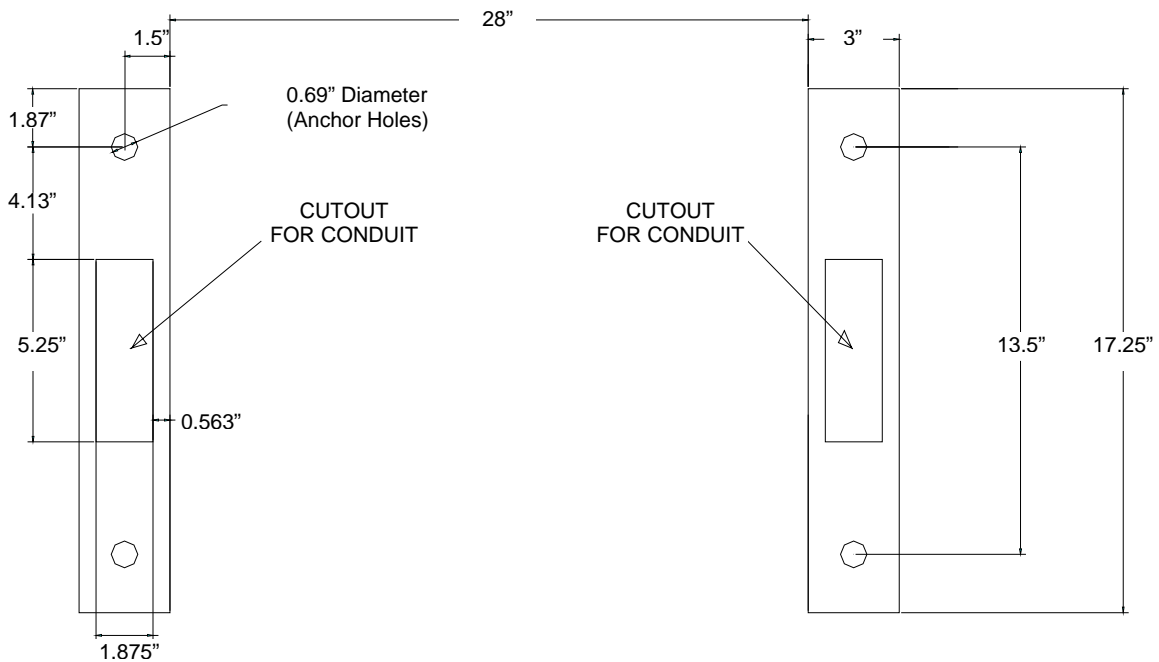
The alarm will be activated in each of the following scenarios:

- Unauthorized Passage
- Premature Entry
- Tailgating
- Delayed Entry
- Loitering

## SU2000-SM Single Lane Site Preparation



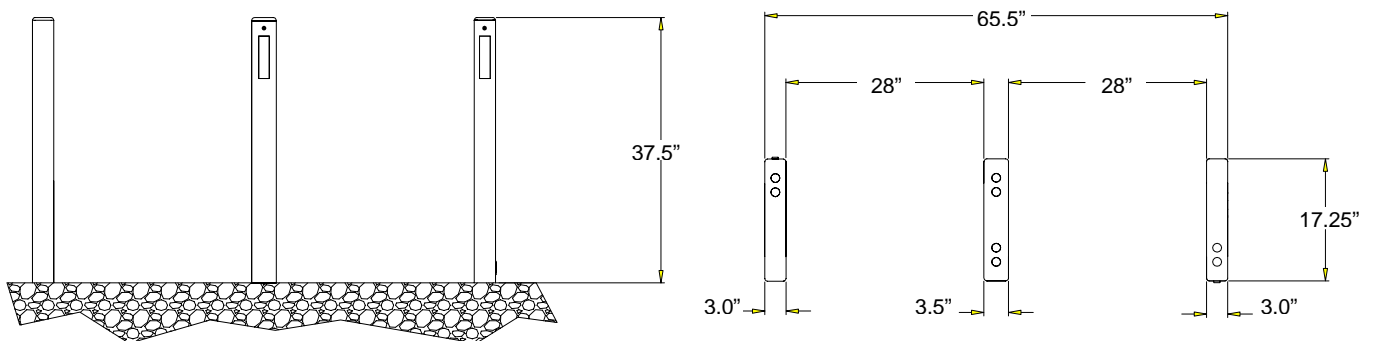
## SU2000-SM Single Lane Footprint Drawing



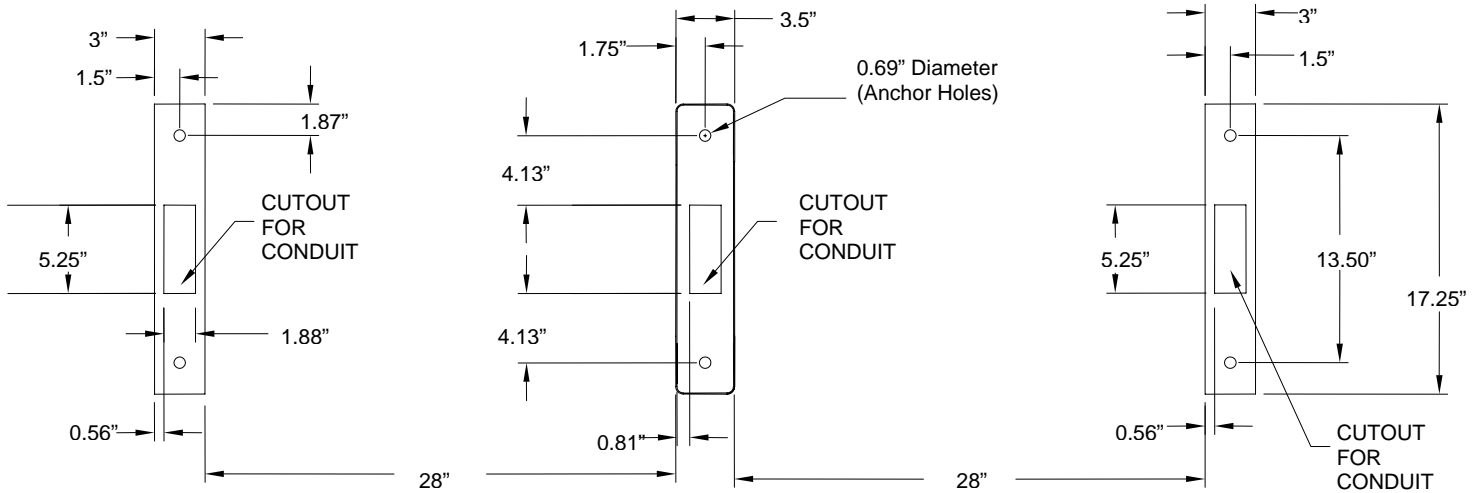
**Notes:**

- The cabinet centerline to centerline dimension for a 28" passage width is 31".
- The cabinet centerline to centerline dimension for a 36" passage width is 39".

## SU2000-SM Multiple Lane Site Preparation



## SU2000-SM Multiple Lane Footprint Drawing



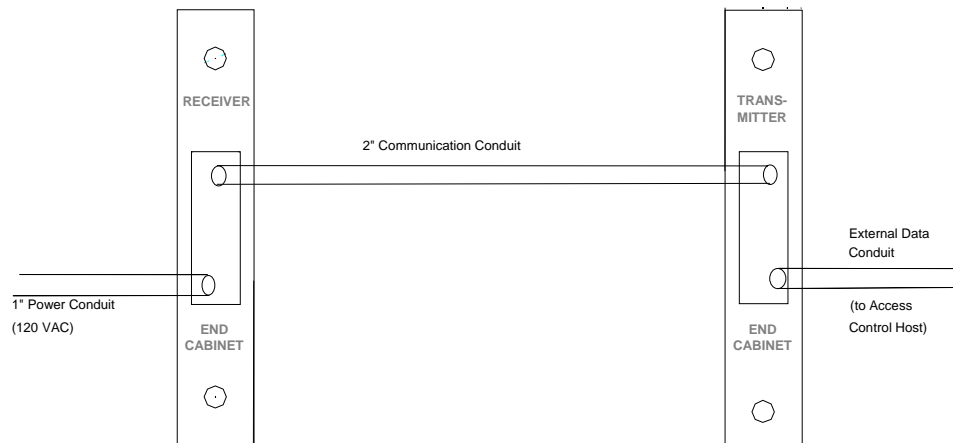
### Notes:

- The end cabinet centerline to the center cabinet centerline dimension for a 28" passage width is 31.25".
- The center cabinet centerline to the next center cabinet centerline dimension for a 28" passage width is 31.50".
- The end cabinet centerline to the center cabinet centerline dimension for a 36" passage width is 39.25".
- The center cabinet centerline to the next center cabinet centerline dimension for a 36" passage width is 39.50".

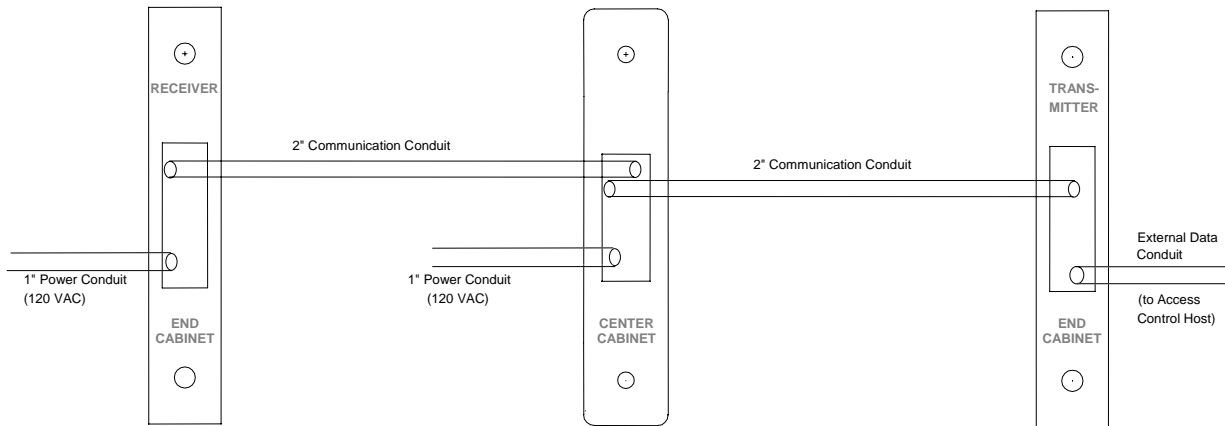
### Slab Requirements

- Minimum thickness 4" (102 mm) level solid concrete pad
- Horizontal conduit runs must be at least 5.5" (140 mm) below the SU2000-SM turnstile

### Single Lane Conduit Requirements



## Multiple Lane Conduit Requirements



### High Voltage Power Conduit

- 1" power conduit for 120 VAC primary power must be run to the Receiver End Cabinet and each Center Cabinet.

### Communication Conduit

- 2" conduit must be run to interconnect the cabinet sets that form each passage lane.
- The ribbon cables required to interconnect the cabinet sets that form each passage lane are provided with the turnstiles.
- 2" conduit should be cut flush to the floor.
- Conduits that interconnect a cabinet set can not exceed 10' in length.

### Access Control System Conduit

- Diagram provided does not specify the conduit requirements for integrating the turnstile with an access control system
- Consult access control system provider for power and communication conduit specifications for integrating card readers or other access control system devices with turnstiles

## Throughput Rates

<u>Card Reader Device</u>	<u>Users per minute</u>
Proximity	40
Magnetic Swipe	25
Magnetic Swipe with Numeric Keypad	20
Omni-directional Barcode Scanner	40

- Figures are approximations
- Flow rates may increase with enhanced user familiarity
- Access control / card reader system response time is assumed to be instantaneous

# ALVARADO

Alvarado Manufacturing Company, Inc  
12660 Colony Street  
Chino, CA 91710

Telephone (909) 591-8431  
Toll Free (800) 423-4143  
Fax (909) 628-1403

[www.alvaradomfg.com](http://www.alvaradomfg.com)