

# Entry Sentry Anti Tailgate



## ES5200 Series Tailgate Detection System

- 1/4" Tailgate detection, helps ensure that only one person enters a secure area per valid authorization
- Compatible with all access control technology
- Mounts easily on standard door frames and hallway walls
- Blends in with architectural styling
- Field configurable for card-in/card-out or card-in/free-exit operation
- High throughput (30-45 people per minute) dependent on the access control system
- Integrated Lock Control Relay helps provide faster throughput
- Integrated door prop alarm
- Encourages employees to maintain access control procedures

### Operation

The **ES5200 Entry Sentry** monitors the entry point into a secured area using proprietary sensing technology that profiles objects as they pass through the device. Unique algorithms process the data allowing people with carts or pull bags to pass without causing alarms. In an effort to reduce wiring cost, Entry Sentry offers an integrated Door Prop Alarm, Lock Relay and the option to install status indicators on the opposite side of the door, making the Entry Sentry the most accurate and cost effective anti-tailgate device in the industry.

### Shown here:

Base model with a 1-gang remote annunciator panel and mullion mount remote annunciator panel.



**ES5200**



**ES5200-R1 ES5200-R2** Optional remote annunciator plates



### Available Models

**ES5200-R0:** Basic Tailgate Detection System

**ES5200-R1:** Base model with a 1-gang remote annunciator panel for use on the opposite side of the doorway. (Shown above)

**ES5200-R2:** Base model with a mullion mount remote annunciator panel to mount on the door frame opposite the tailgate unit. (Shown above)

### Options

**Remote Annunciator Plates**  
**Spacer Mounting Kits**

## **System Design Overview**

The **ES5200 Series Entry Sentry** will utilize the building access control system to grant or deny access to the facility. This system will insure that only one (1) pedestrian enters a secured passageway for each valid card read. The system consists of two (2) components using active modulated proprietary sensing technology, mounted on either side of a doorway or passageway.

The Entry Sentry senses and processes pedestrian direction and head count through the sensing arrays on a cycle basis. The system is designed to allow for multiple valid card reads (card count) and multiple passages without the need to wait for the first person to re-secure a door. The Entry Sentry will also store valid entry card reads and allow pedestrians to free-exit without triggering an alarm or losing the valid entry card read.

The Entry Sentry is truly bi-directional at all times and the system will allow each passageway to be open in both directions at the same time. Selecting a passageway direction is not necessary. This system could be designed as a “Card-in/Free-exit”, or “Card-in/Card-out” system configuration. The access control system outputs can be interfaced to a time and attendance system. The Entry Sentry passageway shall provide high-speed, high-security pedestrian control to the secured area of the facility.

The Entry Sentry design will allow for “one read/one entry” through each passageway. Visual and audible annunciation is provided at each Entry Sentry passageway to provide indication of valid card read, invalid card and alarm conditions. This indication shall be provided by local red and green LEDs on the mullion mount control panel as well as distinctive audible indicators. Unauthorized entry or tailgating latches the system into alarm for local and remote indication, or can provide automatic adjustable time delay reset.

Additional annunciation could be provided utilizing wall mounted vertical graphic arrays (VGA's) on both sides of a door, with terms indicating: “Proceed/Wait”.

A local key switch will allow for bypass of the Entry Sentry and remote indication of the bypass status. The system may also be bypassed from a remote location.

All components and electronic sub-assemblies of the ES5200 Series Entry Sentry including the microprocessor controller (MPU) shall be designed specifically for this security product application and be mounted in the mullion mount units. This greatly reduces the installation costs with regard to man hours, conduit, wire, and cable requirements. All components including the MPU and indicators shall be solid-state design, virtually maintenance free, and manufactured in the USA.

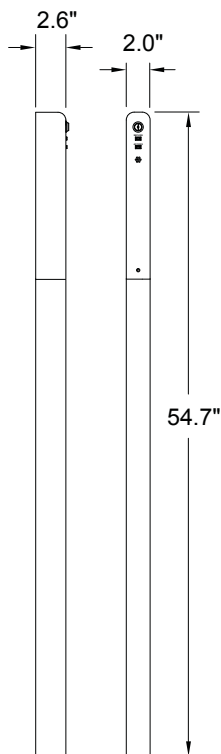
# Entry Sentry Anti Tailgate

## Electrical Specifications

Power:	12-24VDC @ 500mA
Control Inputs:	N/O-Momentary "Valid A card" (max. 1 sec. pulse closure) N/O-Momentary "Valid B card" (max. 1 sec. pulse closure) N/O-Maintained "Bypass" N/C-Maintained "Door contact"
Status outputs:	N/O and N/C Lock contact N/O and N/C Alarm contact status N/O and N/C Door contact status N/O and N/C A passage complete contact status N/O and N/C B passage complete contact status

## Mechanical Specifications

Size:	2.0" W x 54.7" H x 2.6' D
Mounting:	Direct mounting to door frame or wall Optional spacer mounting kit available
Finish:	Black with IR plexiglass cover



**One Card / One Entry Access Control**  
**Control pedestrian traffic at any door**  
**Senses direction and pedestrian count**  
**Tailgating causes local and remote alarms**

## Entry Sentry Anti Tailgate

### 1: UNPACKING AND DISASSEMBLY (see detail drawing in Assembly section)

Remove the two assemblies from packaging. Receiver side has **Key Switch** and **Indicator**.

Remove three(3) **5/64" Allen Screws** at upper, middle, and lower points on each assembly.

Remove the **Upper Cover**. Set Upper Cover aside.

*(NOTE - Unplug wiring from circuit board when removing the Receiver-side Upper Cover)*

Remove the **Lower Cover** and set aside.

Remove the two **1/4" Hex Standoffs** at the top and bottom of each electronics package, then slide package up and lift off of **Mounting Plate**.

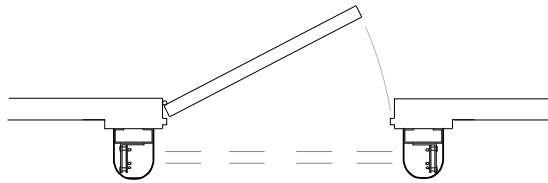
Repeat for opposite assembly.

**CLEANING** - Soft damp cloth, mild soap solution. Dry with soft cloth. Avoid using paper as this may damage the optical surface. DSI recommends: Chemtronics® ES1668 [www.chemtronics.com](http://www.chemtronics.com)



## 2: PHYSICAL INSTALLATION

**Entry Sentry** may be mounted both on a door frame, or onto facing walls of a hallway.



**DOOR MOUNT**

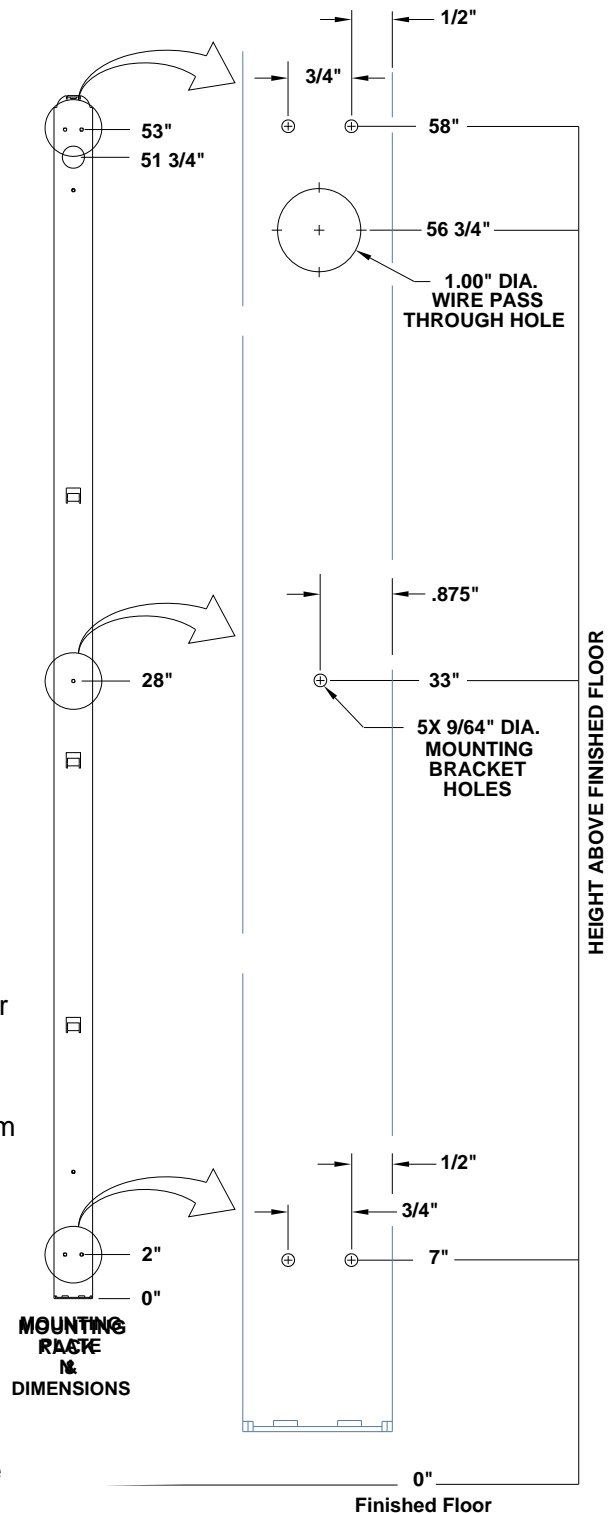
Door mount opposite from the door swing.



**WALL MOUNT**

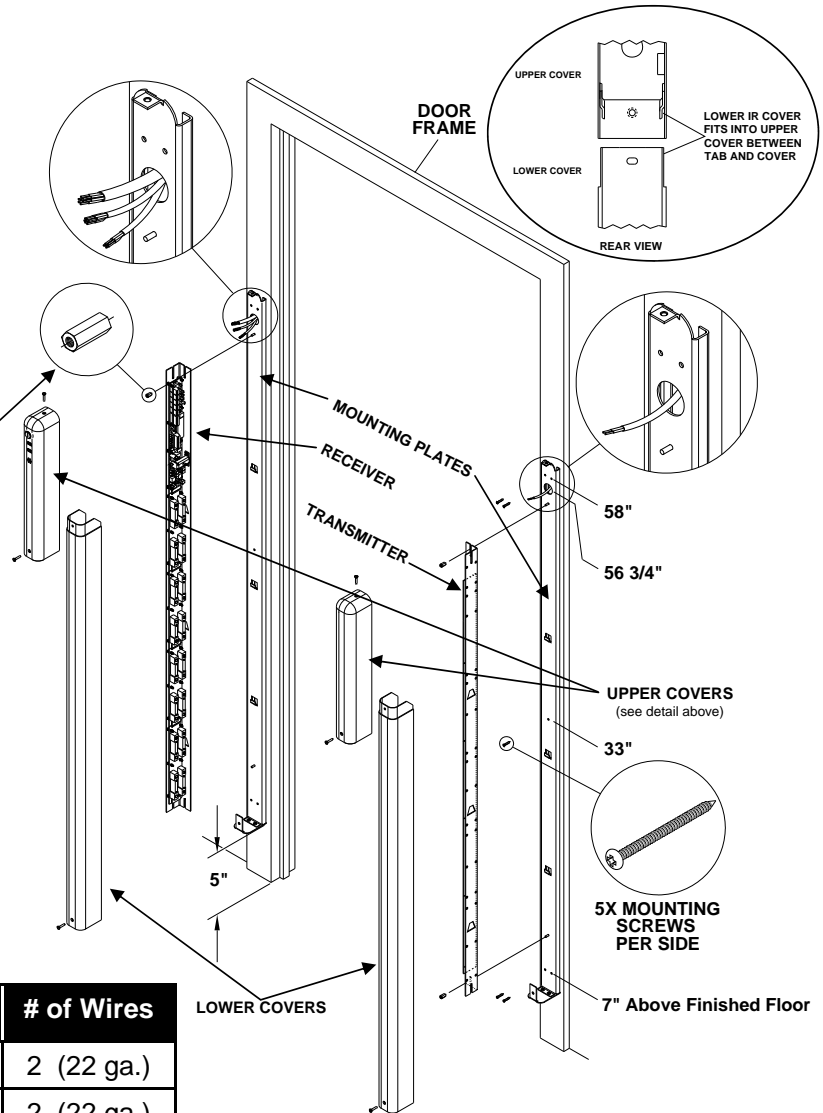
Wall mount on corridor walls.

- See diagram at right for mounting plate detail.
- Hang the Transmitter and Receiver sub-assemblies with LEDs facing across the path of travel. (*Optical Alignment Required:  $\pm 1^\circ$* )
- Door/ Hallway Width 30" min. - 80" max.
- Use mounting plate as Template for holes.
- Set base of mounting plate 5" off floor, check for level and plumb.
- Use a punch or scribe to mark the 5 mounting hole locations on surface at 7", 33", and 58" from floor.
- Mark Wiring Hole center at 56 3/4" from floor.
- Set mounting plate aside.
- Drill 5 mounting holes as needed for your mounting surface. (*max. dia. 9/64"*)
- Drill a 1" wiring hole.
- De-burr Wiring Hole with file to prevent damage to wiring insulation.
- Install mounting plate using appropriate hardware for your mounting surface.
- Repeat for second mounting plate.

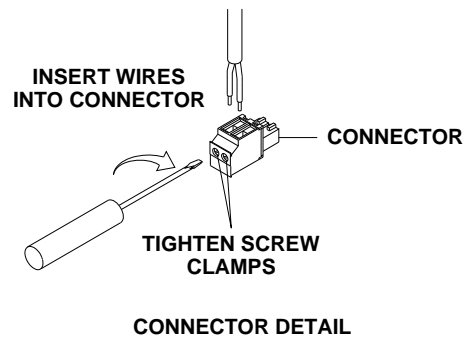


### 3: ASSEMBLY

- Pull Wiring through each mounting plate's hole. (see Connection Planning Table below)
- **Power, Control and Monitoring wires on Receiver side.**
- **Power wires on Transmitter side.**
- Hang **Transmitter and Receiver** electronics on each mounting plate so that **LEDs face each other** across the portal that users will pass through.
- Fasten with a **1/4" Hex Standoff** at top and bottom of each electronics package.
- Install **Lower Covers** and fasten with screws removed during disassembly. (Middle screw will be removed after setup to complete Upper Cover installation)
- Reconnect **Key Switch/LED Connector** from Receiver Upper Cover (Red wire to left)
- Leave **Receiver Upper Cover** off until Wiring and Setup are complete.



CONNECTION PLANNING TABLE	INPUTS (N/O Shared Gnd)		# of Wires
		Valid "A" Card	2 (22 ga.)
		Valid "B" Card	2 (22 ga.)
		Bypass	2 (22 ga.)
		Door Switch	2 (22 ga.)
	Power 12-24 Vd 500mA	Sender	2
		Receiver/Control	2
	OUTPUTS Form C 1 Amp		
		Mag Lock Relay	2
		Alarm Relay	2
	Door Relay	2	
	"A" Passage Complete	2	
	"B" Passage Complete	2	



## 4: WIRING

### Definitions:

**A & B Sides** - If standing between the two units and Facing the unit with the Key, Left is "A" and Right is "B." (see diagram at right for detail)

**Door Prop** function - Monitors Door input for a held open door. Goes into Alarm if door is not closed within 10 seconds, unless another Valid User input is seen.

**ACS** - Access Control System

### Output Relays:

**Mag Lock Relay** - Can be used to control an Electric Lock in response to a Valid User input. Form C (held 5 sec)

**Alarm Relay** - Connect to remote equipment to monitor Alarm conditions. (Alarms Include: Tailgater, Door Prop, Loiter, and Tamper conditions) Changes state to indicate Alarm. Form C (2.5 second minimum duration)

**Door Relay** - Connect to remote equipment to monitor Door Status. Form C (Follows Door Input)

**"A" & "B" Passage Complete** - These relays change state upon valid passage of a user from the A or B side. Used to monitor for Time and Attendance by remote equipment. Form C (held 1 sec)

### Inputs:

**Valid "A" Card** - N/O contact from ACS that momentarily closes to indicate a Valid User approaching from the "A" side.\*

**Valid "B" Card** - N/O contact from ACS that momentarily closes to indicate a Valid User approaching from the "B" Side \*

\* Enable **Free Passage** by shorting input for Valid A or B Card.

**Bypass** - N/O contact that enables Bypass when closed. Resets alarm. Same function as Key Switch.

**Door** - Closed Loop from Door when Door is closed. Optional, used for Door Prop monitoring and enhanced TDS operation.

**Power** - 12-24 VDC@ 500 mA (1 Amp supply suggested)

### REMOTE DISPLAY CONNECTOR:

Optional. Refer to ES5200-R1 or R2 Instructions

## SETUP and TEST

### Switches:

- 1) **Door Prop Enable** - Turns on the Door Prop function when placed in the ON position.
- 2) **Beep Disable** - Turns Off the Valid Card beep when placed in the ON position.
- 3) **Bi-Direction Card Enable** - Allows an A card input to pass in either direction when placed in the ON position.
- 4) **Card Stacking Disable** - Requires a Valid User to pass, or time out, prior to accepting another card input.

**Key Switch on Upper Cover** - Use to Bypass the unit (held) or to Reset an alarm (momentary).

### Pushbuttons:

**To Calibrate** : Install lower covers. Verify clear beam path. Apply Power. Press Calibrate Button.

**Keep beam path clear until Calibrate LED is ON (up to 60 sec).** That's all it takes to set up!

**NOTE:** If Tamper is enabled alarm may sound if cover is removed.

**A & B Card buttons** - Press to simulate an A or B - Card input (respectively) for test and troubleshooting purposes.

### LEDs:

**Calibrate** : **On** - Calibrated. **Flashing** - Beam interruption or Calibration required. **Off** - During Calibration.

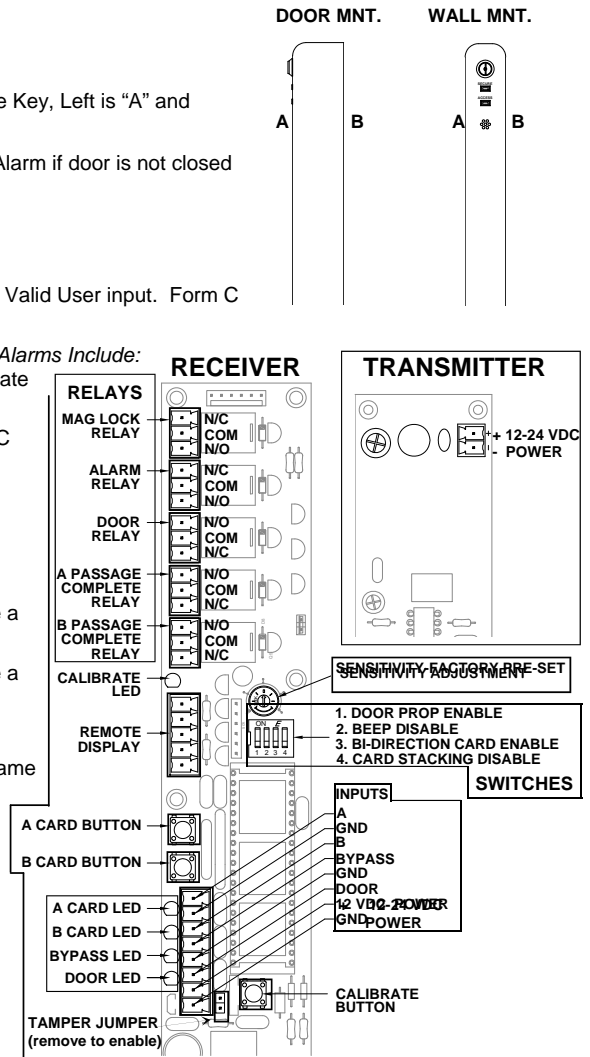
**Inputs** : Respective LED will illuminate when a closure is seen on any Input (A Card, B Card, Bypass, Door)

**Upper Cover** : See "ES5200 ENTRY SENTRY - USER INSTRUCTION"

### Sensitivity:

**Clockwise:** Increase Sensitivity - Reduce loiter time to 3 sec (min), improved step-over/crawl-under detection

**Counter-Clockwise:** Decrease Sensitivity - Increase loiter time up to 10 sec, reduce step-over/crawl-under detection.



(enlarged drawing on insert)