## 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: (Output contact rating: 1 Amp)

**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: (all Inputs share 2 common GNDs on connector)

**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: (as shown on drawing)

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: (as shown on drawing)

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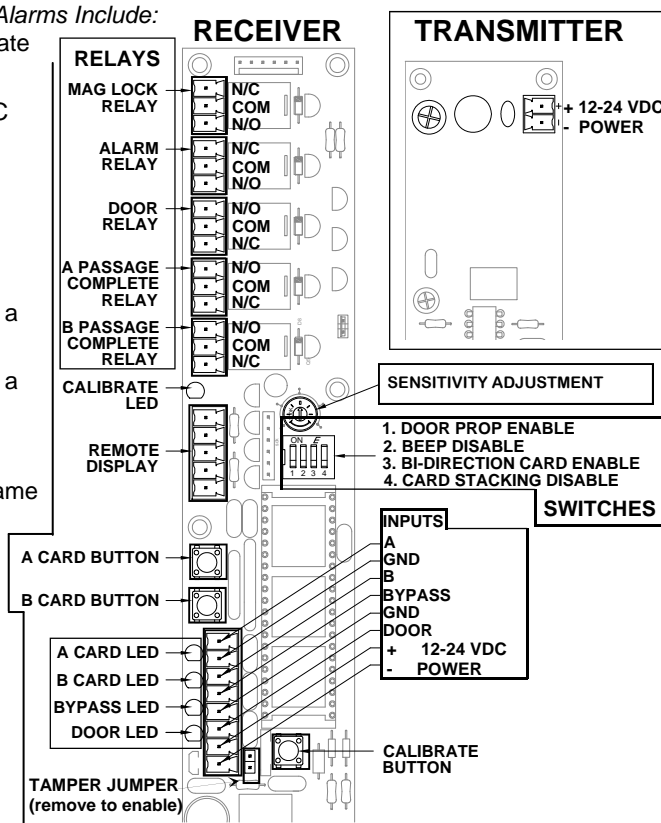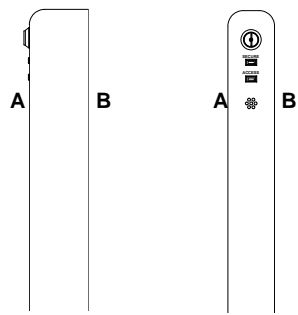
**Upper Cover** : See "ES5200 ENTRY SENTRY - USER INSTRUCTION"

### Sensitivity: (as shown on drawing)

**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

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**DOOR MNT.** **WALL MNT.**

A  B    A  B

---

**RECEIVER** | **TRANSMITTER**

**RELAYS**

**MAG LOCK RELAY** — N/C / COM / N/O

**ALARM RELAY** — N/C / COM / N/O

**DOOR RELAY** — N/O / COM / N/O

**A PASSAGE COMPLETE RELAY** — N/O / COM / N/C

**B PASSAGE COMPLETE RELAY** — N/O / COM / N/C

**CALIBRATE LED**

**REMOTE DISPLAY**

**A CARD BUTTON**

**B CARD BUTTON**

**A CARD LED**
**B CARD LED**
**BYPASS LED**
**DOOR LED**

**TAMPER JUMPER** (remove to enable)

+ 12-24 VDC / - POWER

**SENSITIVITY ADJUSTMENT**

1. DOOR PROP ENABLE
2. BEEP DISABLE
3. BI-DIRECTION CARD ENABLE
4. CARD STACKING DISABLE

**SWITCHES**

**INPUTS**
A
GND
B
BYPASS
GND
DOOR
+  12-24 VDC
-  POWER

**CALIBRATE BUTTON**

*(enlarged drawing on insert)*

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# ENTRY SENTRY

### 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.
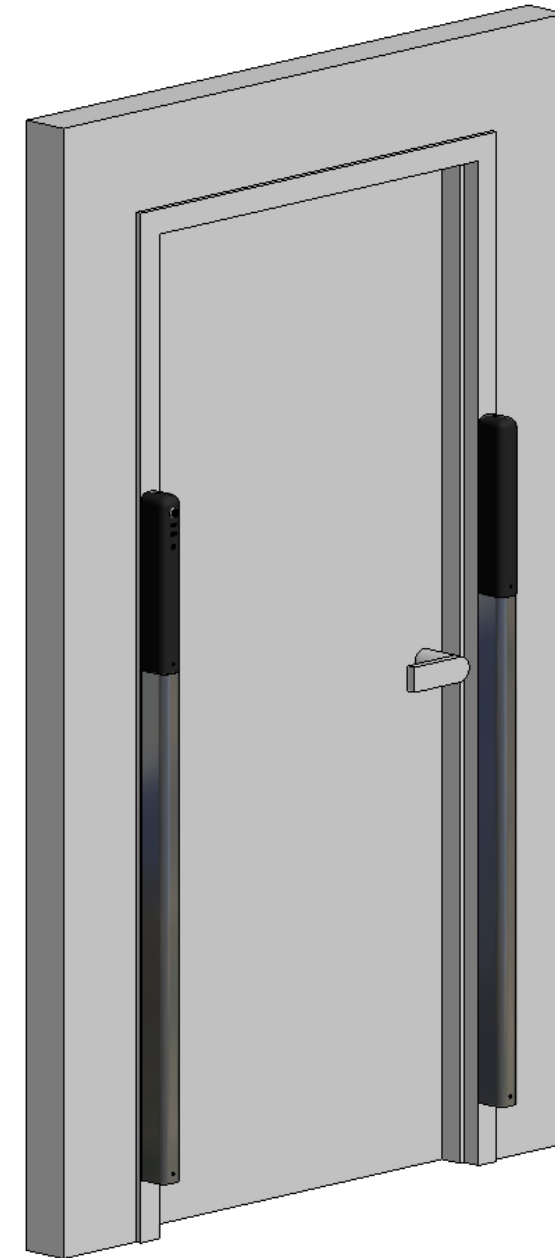
**CLEANING** - Soft damp cloth, mild soap solution. Dry with soft cloth. Avoid using paper as this may damage the optical surface. DSI recommends: Chemtronics® ES1668 www.chemtronics.com
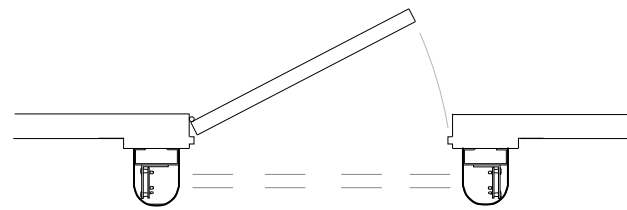
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## 2:  PHYSICAL INSTALLATION

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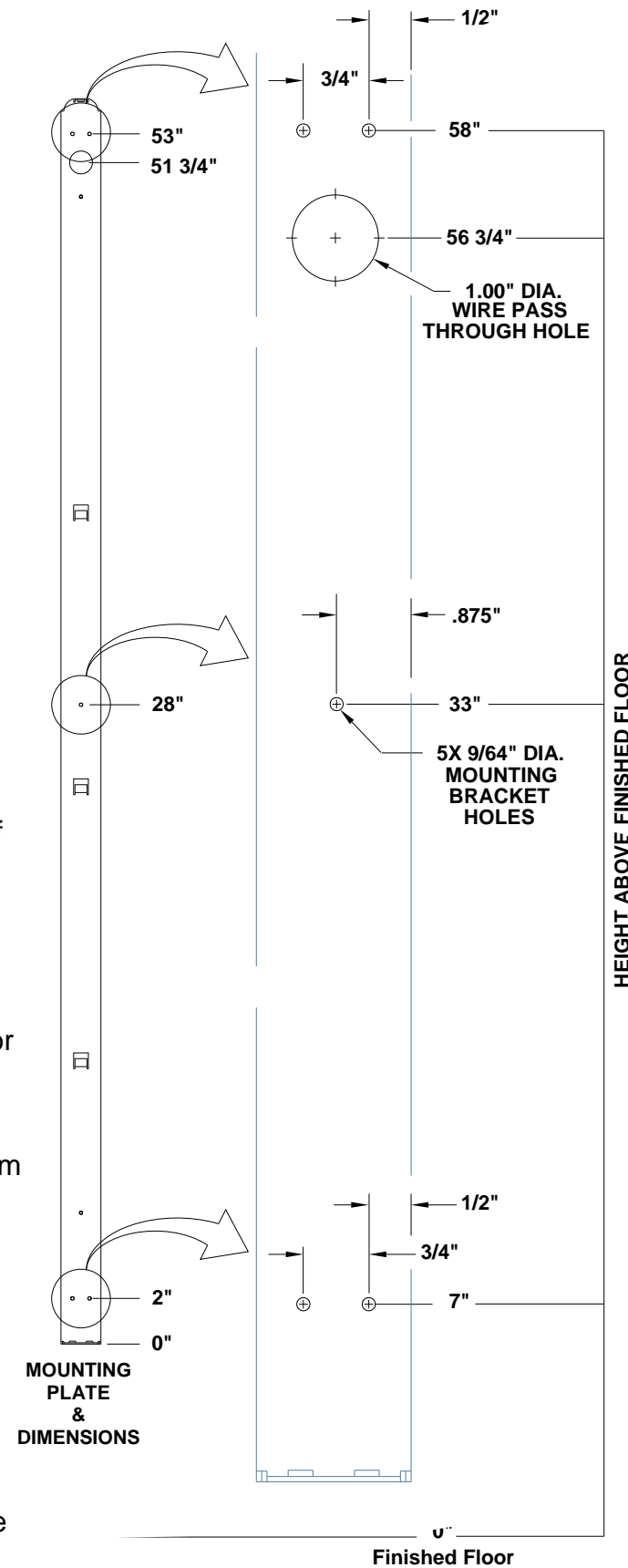
### DOOR MOUNT

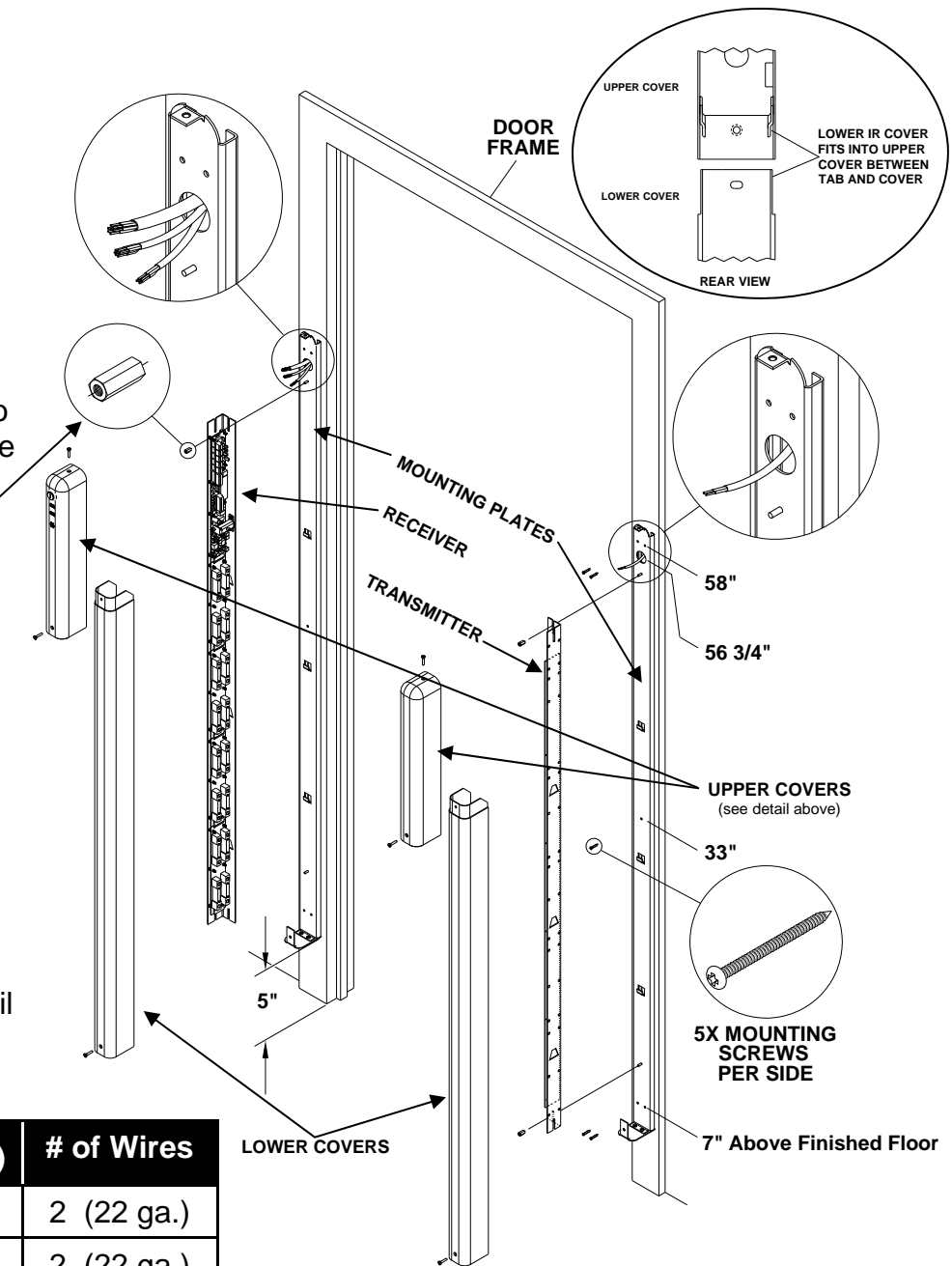Door mount opposite from the door swing.

### 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: ± 1°)*

- 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.

**MOUNTING PLATE & DIMENSIONS**

1/2"
3/4"
53"
51 3/4"
58"
56 3/4"
1.00" DIA. WIRE PASS THROUGH HOLE
.875"
28"
33"
5X 9/64" DIA. MOUNTING BRACKET HOLES
1/2"
3/4"
2"
7"
0"
**Finished Floor**

**HEIGHT ABOVE FINISHED FLOOR**

## 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.

DOOR FRAME
UPPER COVER
LOWER COVER
LOWER IR COVER FITS INTO UPPER COVER BETWEEN TAB AND COVER
REAR VIEW
MOUNTING PLATES
RECEIVER
TRANSMITTER
UPPER COVERS (see detail above)
58"
56 3/4"
33"
5"
LOWER COVERS
5X MOUNTING SCREWS PER SIDE
7" Above Finished Floor

| 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 Vdc @ 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 |

INSERT WIRES INTO CONNECTOR
CONNECTOR
TIGHTEN SCREW CLAMPS
**CONNECTOR DETAIL**