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SERIES DSB DUAL SENSE BAR INSTALLATION and OPERATION INSTRUCTIONS



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SECURITRON SERIES DSB DUAL SENSE BAR INSTALLATION AND OPERATION INSTRUCTIONS

1. INTRODUCTION

The Securitron Dual Sense Bar (Model DSB) is an exit device intended for use on magnetically locked, non-fire rated doors only. The bar will operate via mechanical movement (push) to provide a primary egress function that does not require human touch in addition to function by touch sense. The mechanical function has been included to simplify use and ease exit for personnel with prosthetics or those who may otherwise have their hands occupied (e.g. carrying boxes, manipulating carts, maneuvering wheelchairs, etc.). The assembly consists of an aluminum bar available in lengths to fit standard U.S. door openings: (36", 42", and 48"). The end mounts provide the mounting platform for the bar and house the electronic PC boards and mechanical switching mechanisms within the bar.

2. SPECIFICATIONS

MECHANICAL	ELECTRICAL
Physical Size: Height: 3" [76mm] Depth: 3" [76mm] (from mounting surface) Overall Length: 36" Door = 34-3/16" [868mm] 42" Door = 40-3/16" [1021mm] 48" Door = 46-3/16" [1173mm]	Voltage Input: 12 or 24 Volts DC Current Draw (Base - At Rest): 24mA (DPST) Contact Rating: 1 Amp @ both 12 and 24VDC Illuminated Sign (Option): 20mA Maximum (additional)
Operating Force (Maximum): 15 Lbs. [66.7N]	DSB Connection: 16-Foot [4.88 Meter] Wire Cable with Traditional Connector
Environmental (Recommended): Temperature Range: 32ºF [0ºC] to 120ºF [49ºC] Humidity: 10% to 90% RH	ELDSB Connection: Wiring Harness with ElectroLynx Connector

3. PRODUCT OVERVIEW

Upon unpacking this product, an inventory should be made to ensure that all the required components and hardware have been included. Along with these instructions, the DSB product should include the following items:

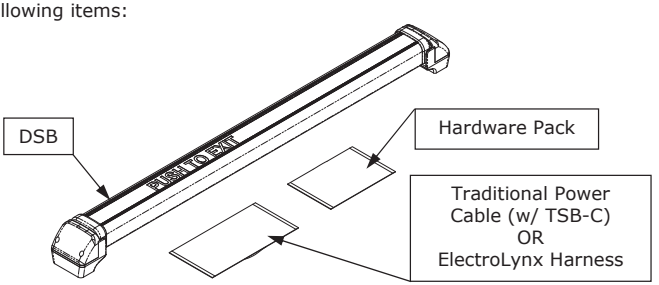


Figure 1

4. HARDWARE (U.S. STANDARD)

 4X	 4X	 4X	 1X
Phillips Truss Head Screw, 1-3/4" Long	Blind Nut	Plastic Flat Washer	Blind Nut Collapsing Tool

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Fasteners for metal doors (aluminum frame and hollow steel) are included. For through door mounting please call Securitron for a no-charge DSB-TDM kit. Note that US standard or metric fasteners are supplied depending on the version of the bar which was ordered. (The metric version part number for a DSB series bar will include the suffix "M").

5. RECOMMENDED TOOLS

Bubble Level
Hammer
Center Punch
Wrenches:
1/2" Box-end (or Adjustable Wrench)
Drill Bits:
3/8" [9.5mm], 11/16" [17.5mm]
Power Drill
Pliers, Vise-grip
Screwdrivers:
#1 and #2 Phillips, 1/8" [3mm] Flat
Standard DSB Hex Wrench: 3/16"
Metric DSB Hex Wrench: 5mm

6. INSTALLATION INSTRUCTIONS

AS THE DSB IS NORMALLY USED TO ALLOW EGRESS ON AN ELECTRICALLY SECURED DOOR, ENSURE THAT ALL APPLICABLE BUILDING AND FIRE CODES ARE BEING FOLLOWED. VERIFY INSTALLATION WITH LOCAL BUILDING AND/OR FIRE PREVENTION CODES AND REGULATIONS.

THE DUAL SENSE BAR MAY NOT BE USED ON A FIRE RATED DOOR THAT REQUIRES A FIRE RATED LATCH! THE DSB HAS NO LATCH. IN SOME INSTANCES HOWEVER, FIRE DOORS ARE ALLOWED ON OPENINGS WHERE A FIRE RATED BARRIER IS NOT REQUIRED. USE OF THE DSB SHOULD ALWAYS BE VERIFIED AND APPROVED THROUGH LOCAL BUILDING CODE AND/OR FIRE PREVENTION DEPARTMENTS.

6.1. BAR POSITIONING AND MOUNTING HOLE MARKING

Using a #1 Phillips screwdriver, remove the screws and the end caps from both ends of the bar. Verify that the bar is the correct length for the door. If it appears that the bar is longer than it should be for the door, see **Section 6.6** for cutting instructions. Take note of which end has the main (touch sense) PC board in it, this end has a ring terminal connecting the PCB to the bar profile. This is the end that should be mounted on the hinge side for the most convenient wire exit from the door.

The DSB, as shipped from the factory, is assembled with shipping clips at each end that temporarily hold the bar together while positioning and mounting the bar to the door (see **Figure 2**).

FOR EASE OF INSTALLATION, DO NOT REMOVE THE SHIPPING CLIPS UNTIL <u>AFTER</u> THE BAR HAS BEEN MOUNTED.

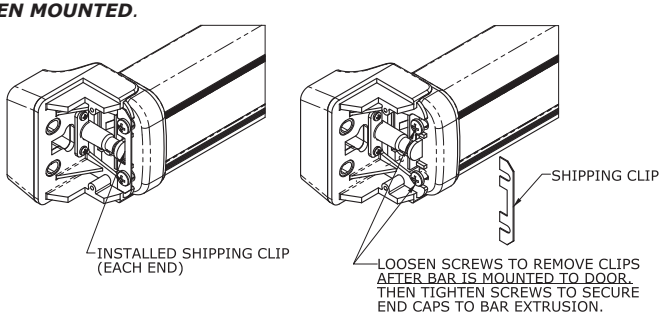


Figure 2

For best results, the assembled DSB itself may be used as a template to locate and mark the mounting holes. When positioning the bar for marking the holes, ensure the following:

- The bar is positioned at the correct height from the floor (see **Figure 3**).
  Generally, US Building Codes require that the bar be located between 30 inches [762mm] and 44 inches [1118mm] from the bottom of the door.

- The bar is level.
- The bar is centered on the door (left to right) between the door frame stops.

By using the assembled bar as a template, the correct separation between the mounting holes will automatically be maintained. After marking the hole locations, verify that the centers of the holes are at the required distance as shown in **Figure 4**.

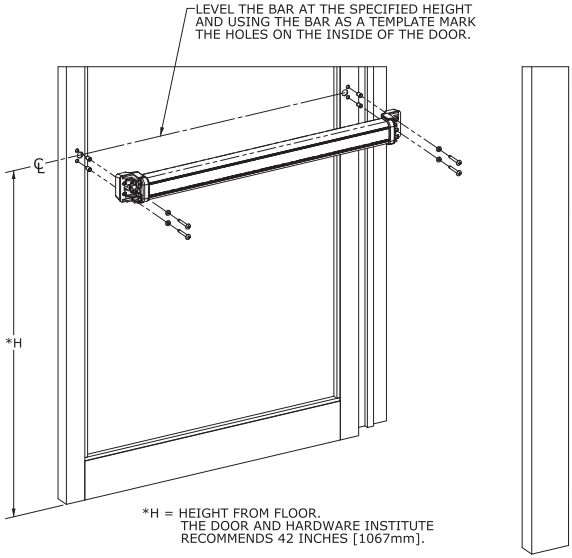


Figure 3

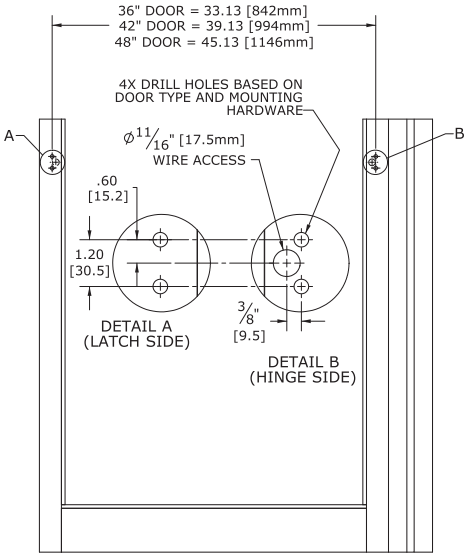


Figure 4

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6.2. HOLLOW METAL DOOR PREPARATION

The bar should be mounted to the door using the blind nuts and screws provided as shown in **Figure 6**. Use the following step-by-step instructions and **Figure 5** for the installation of the blind nuts:

a. Drill the four (4) 3/8" [9.5mm] diameter holes through the interior (mounting) surface of the door at the previously marked hole locations. **DO NOT** drill completely through the door.
b. Insert one blind nut assembled to the installation tool into a mounting hole.
c. While holding the collapsing nut of the tool with a 1/2" box-end wrench, turn the socket head cap screw using a 3/16" (or 5mm) hex wrench. **Note:** Maintain firm pressure toward the mounting surface while collapsing the nut.
d. Once the blind nut is adequately collapsed, remove the tool from the installed nut by backing the cap screw out of the blind nut.
e. Install all blind nuts by using the collapsing tool and repeating the previous steps.
f. After all blind nuts are installed, hold the bar in place over the blind nuts and secure into place with the *plastic washers and mounting screws provided.

THE PLASTIC WASHERS MUST BE INSTALLED UNDER THE SCREW HEADS FOR THE DSB TO FUNCTION PROPERLY. ALSO ENSURE THAT THERE IS 1/32" CLEARANCE BETWEEN EACH BAR END CAP AND THE INNER FLANGE OF THE BASE MOUNT BEFORE FINAL TIGHTENING OF THE MOUNTING SCREWS.

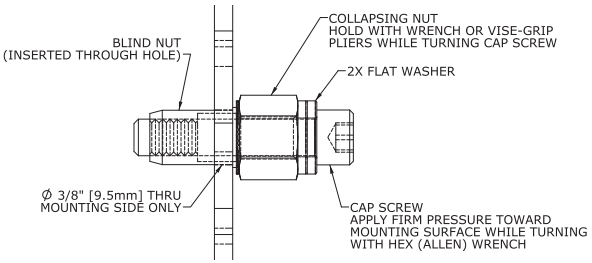


Figure 5

6.3. SOLID WOOD DOOR PREPARATION:

The bar may be mounted using wood screws (not furnished). Four (4) #14 wood (or SMS) screws with a hex head are recommended (see **Figure 6**).

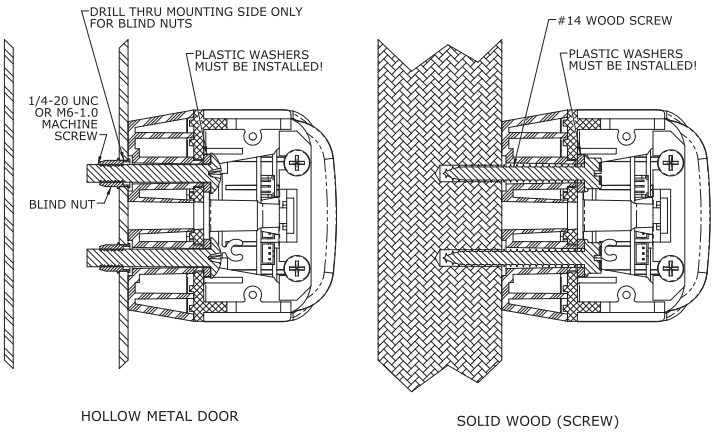
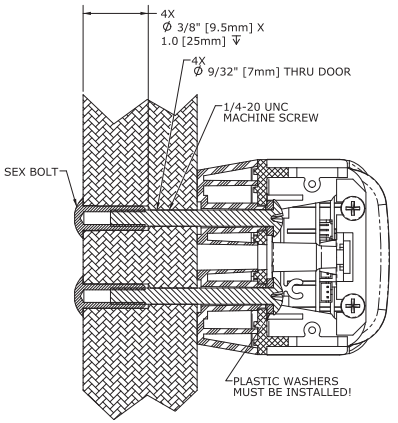


Figure 6

6.4. BOLT THROUGH DOOR PREPARATION:

For through-bolt mounting on various door types a DSB-TDM kit will be required (see **Figure 7**). This product accessory is furnished separately and can be ordered from the factory at no charge. This configuration may be used on solid wood doors, hollow or solid metal doors, or chalk filled *fire doors. Please follow instructions included with the DSB-TDM kit for proper installation.

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SOLID WOOD THROUGH DOOR MOUNT
(DSB-TDM KIT SOLD SEPARATELY)

Figure 7

6.5. WIRE ACCESS HOLES

The DSB connects to a power source and access control systems via either a 16-foot 6-conductor traditional wiring cable assembly (included with the standard DSB series), or an 8-conductor ElectroLynx connector "pigtail" harness (included with the ELDSB series).

All DSB/ELDSB installations require that an 11/16" [17.5mm] diameter wire way hole be located in the hinge side of the door at the position shown (see **Figure 4**). This hole allows either the traditional cable with connector or the ElectroLynx wiring harness connectors to be pulled into the door.

DSB – Traditional Wiring:
Wire routing from a hollow door implementing the traditional wiring method may be achieved using a door cord. The TSB-C (included with the standard DSB) may be mounted toward the top of the door between the door and frame, or mounted directly between the bar end mount and frame (see **Appendix B**). Other commercially available electrical transfer hinges or pivots (such as Securitron's EPT or EPTL Electric Power Transfer) may also be used to route the wiring from the door to the frame in a concealed manner. The following step-by-step instructions may be used for the installation of the armored door cord between the door and frame:

a. Drill a 3/8" [9.5mm] diameter hole in the door and frame (hinge side) as shown in **Figure 8**.
b. Insert one (1) door cord insert into each end of the flexible cord conduit.
c. Run electrical wiring as required through the flexible cord conduit (with inserts) and the holes in the door and frame.
d. Position the door cord caps to completely cover each 3/8" [9.5mm] diameter hole and use the cap mounting holes as a template to mark and then drill two (2) 1/8" [3.2mm] pilot holes for mounting.

e. Insert each end of the (spiral) conduit into the recess of each of the cord caps and mount each cap to the door and frame using a Phillips screwdriver and two (2) #6 X 3/4" long pan head screws provided.

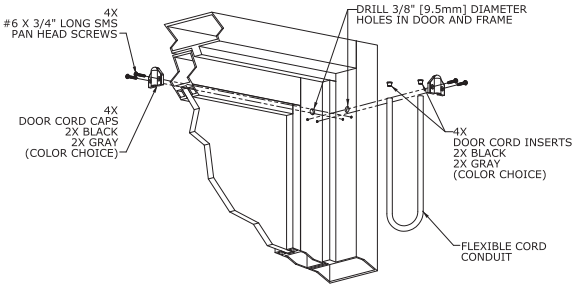


Figure 8

IT IS SUGGESTED THAT WIRE ROUTING FROM A SOLID DOOR USING THE TRADITIONAL WIRING METHOD BE DONE USING AN ELECTRICAL TRANSFER HINGE OR PIVOT (EPT OR EPTL) WHICH WILL SERVE TO ROUTE THE WIRING FROM THE DOOR TO THE FRAME IN A CONCEALED MANNER.

ELDSB - ElectroLynx Wiring:
The ElectroLynx connection is the simplest method of transferring power and signal from the device/door to the frame. Securitron's EL-EPT or EL-EPTL are designed specifically for this purpose.

IN ALL CASES THE BAR SHOULD BE MOUNTED SO THAT THE END MOUNT WHICH HOUSES THE MAIN (TOUCH SENSE) PC BOARD IS ON THE HINGED SIDE OF THE DOOR. DO NOT PULL OR RUN ANY CABLING OR WIRING THROUGH THE BAR, THIS CAN POTENTIALLY CAUSE ELECTRICAL INTERFERENCE WITH THE TOUCH SENSE CIRCUIT AND MAY BLOCK THE MECHANICAL MOTION OF THE BAR.

6.6. CUTTING THE BAR

If it is necessary to shorten the bar to achieve proper installation, the bar can be cut in the field. The bar should always be cut from the end which houses the main (touch sense) PC board. To do this the end mounts must be completely removed from the ends of the bar assembly. The following step-by-step instructions may be used for shortening the DSB:
To determine the cut-to length you may use two measurements; to fit the existing opening or to replace an existing Securitron TSB-3 using the same mount holes. If the TSB-3 length was not altered from the factory your new DSB will fit into the same mounting holes and hardware.

1. **If the bar does not fit the existing holes, measure the center-to-center spacing of the existing holes. Subtract 2-5/8" [66.7mm] from that number and that is the length the new bar must be cut to.**
2. **If the bar does not fit the existing door opening, measure the opening and subtract 4-5/8" [117.5mm] from that number. This is the length that the bar must be cut to. This will provide the minimum recommended clearance of 1/2" [12.7mm] from each end of the bar to the frame.**

a. If not already done, remove the end mount caps from the end mounts using a screwdriver.
b. Completely remove the screws and shipping clips from each end of the bar assembly.
c. Remove the two bar end caps which cover each end of the aluminum bar extrusion.
d. Remove the screw holding the touch sense wire ring terminal to the boss in the bar extrusion.
e. Carefully withdraw the end mount that houses the main (TS) PC board from the end of the bar.
f. Unplug the connectors from the PC board that face toward the inside of the bar.
g. Tuck all connectors and wiring back into the bar, ensuring that the wiring is secured deep enough to be out of the way during the cutting of the bar.
h. Carefully remove the rubber bumper pad from the end of the bar to be cut. (These are glued on at the factory).

i. Mark the bar to indicate the desired cut.
   Note: For a DSB with the illuminated sign option, the bar should always be cut on the end that houses the main (TS) PC board. This will be the end opposite the LED light strip.
j. Using a saw, cut the bar to the desired length.
   Note: It is highly recommended that the cutting of the bar be performed by a band or cut-off saw to produce a neat, straight, clean edge. However, with care, a hacksaw can be used.
k. Using compressed air, blow out any metal shavings that may be inside the bar. Ensure that the switch PC board at the opposite end of the bar is free of shavings. (This may require removal of the end mount at that end).
l. Reinstall the two bar end caps which cover each end of the aluminum bar extrusion.
m. Reinstall the rubber bumper pad to the end of the bar. A small amount of instant adhesive (such as Super Glue® - not included) may be used to permanently reaffix to the bar.
n. Retrieve the wiring from inside the bar. On a standard (non-illuminated) DSB there is only one (1) wire harness. On the "I" (illuminated) version of the bar there are a total of three (3) wire harnesses.
   Note: If more than 4" [102mm] is cut from the bar, then the excess length of the wiring harnesses must be equally shortened. This can be done by folding or rolling the harness wiring back on top of itself and applying a wire tie or electrical tape to secure the loop.
o. Reconnect to the PC boards/base mounts. (The two LED wire harnesses of an illuminated bar are interchangeable and may be plugged into either of the 2-pin connectors on the main (TS) PC board.
p. Reinstall the touch sense wire ring terminal to the boss in the bar extrusion.
q. Insert both of the end base mounts (with their PC boards) into each end of the bar and ensure that there is no interference to the operation of the limit switches at either end of the bar.
r. Reinstall the two shipping clips as they were initially assembled.
s. See **Section 6** for complete bar installation instructions.

7. BAR HANDING

7.1. PUSH TO EXIT SIGN INSERT:

A single reversible face insert has been provided with the standard DSB unit. This insert can be flipped so that the position of the "PUSH TO EXIT" is at the desired end of the bar. To change the orientation, remove one of the bar end covers, slide the insert completely out of the bar face slot, flip it over and reinstall it into the slot (see **Figure 9**).

7.2. ILLUMINATED SIGN INSERT:

Two different face inserts (a left and a right hand version) have been provided with DSB units which include the illuminated sign option. Each one will provide a transparent lettered "PUSH TO EXIT" sign that will cover the LED light strip at either end of the bar. To change the insert, simply remove one of the bar end covers, slide out the existing insert and replace with the alternate insert (see **Figure 9**).

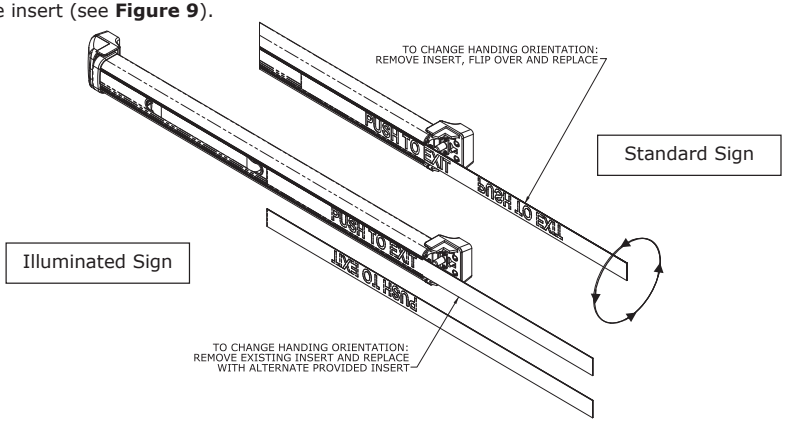


Figure 9

8. ELECTRICAL CONNECTIONS AND WIRING

8.1. DSB WIRING

The DSB is supplied with either a 16-foot [4.88 meter] long cable with traditional wire leads or an ElectroLynx wiring harness. Either of these wiring devices may be used to connect power to the main PC board of the DSB. The following figures and table identify the contact numbers, wire colors and functions assigned for DSB power and DPST relay output:

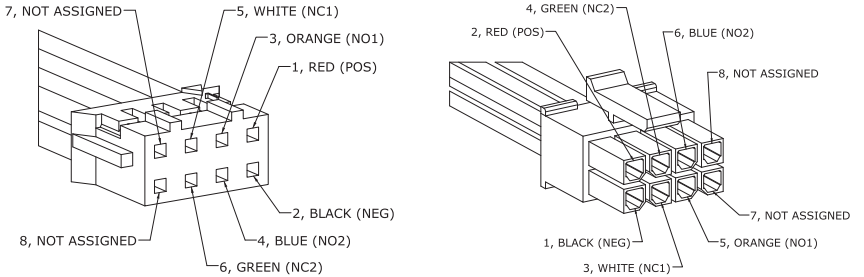


Figure 10

Traditional Wiring Connector			ElectroLynx Wiring Connector		
Connector Contact Number	Wire Color	Function	Connector Contact Number	Wire Color	Function
1	Red	Positive (+)	1	Black	Common (-)
2	Black	Common (-)	2	Red	Positive (+)
3	Orange	Normally Open #1	3	White	Normally Closed #1
4	Blue	Normally Open #2	4	Green	Normally Closed #2
5	White	Normally Closed #1	5	Orange	Normally Open #1
6	Green	Normally Closed #2	6	Blue	Normally Open #2
7	N/A	Not assigned	7	N/A	Not assigned
8	N/A	Not assigned	8	N/A	Not assigned

The male connector of the cable or ElectroLynx wire harness is plugged into the 8-pin female connector on the main circuit board so that the cable routes directly back into the end mount of the DSB.

The DSB is operated by a control relay which changes state when the bar is touched. For additional safety the DSB is a fail safe device. When the DSB receives power, the control relay automatically energizes the lock. When the bar is touched, it changes state. For releasing a magnetic lock, the following wiring diagrams (**Figures 11** and **12**) show typical connections of the dual sense bar, power supply and a fail safe lock in use on single and double door exits **without** an access control unit.

THE WHITE (NC1) WIRE MUST ALWAYS CONNECT TO THE INCOMING (+) POWER WIRE FOR THE BAR TO OPERATE CORRECTLY.

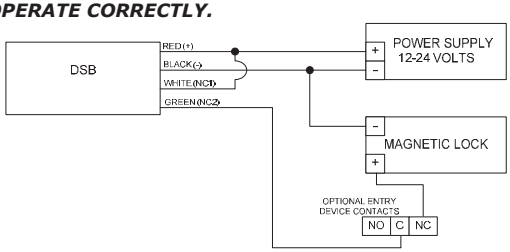


Figure 11 – Single Door (No Access Control Unit)

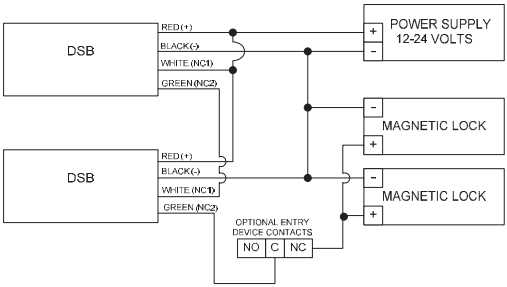


Figure 12 – Double Door (No Access Control Unit)

Fail secure electric locks are normally not permitted for use with the DSB on required exit applications. Normally open contacts, however, are available for special signaling applications and for integration with the Request to Exit (REX) function of an access control installation. The following wiring diagrams (**Figures 13** and **14**) show typical connections of the dual sense bar, power supply and a fail safe lock in use on single and double door exits **with** an access control unit.

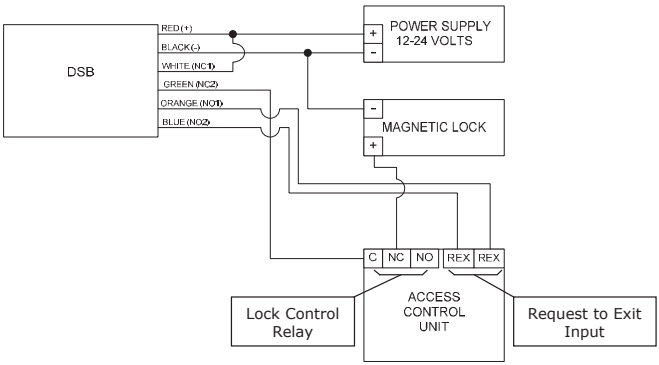


Figure 13 – Single Door with Access Control

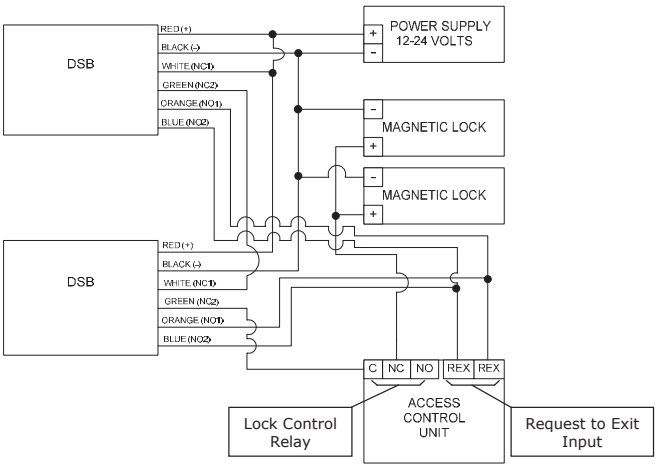


Figure 14 – Double Door with Access Control

Figure 15 shows the installation of an MOV in parallel with the magnetic lock. An MOV is provided with each DSB. It is a black (or blue) disk-like component with two bare wires for connection. The MOV acts to suppress the inductive kickback by a lock, which if left unsuppressed will greatly shorten the life of the relay contacts. The MOV has no polarity, but in order to function properly it should be spliced in to the wiring as close to the electric lock as possible.

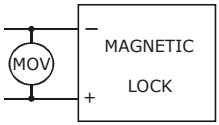


Figure 15

IF A SECURITRON MAGNALOCK IS USED IN THE INSTALLATION, THE MOV IS NOT NECESSARY AS THE MAGNALOCK IS ALREADY INTERNALLY SUPPRESSED.

THE POWER SUPPLY MUST ALWAYS CONNECT DIRECTLY TO THE MAIN DSB PC BOARD.

IN MAKING POWER CONNECTIONS ENSURE THAT PROPER POLARITY IS MAINTAINED.

The DSB operates on 12-24 Volts DC and is normally powered by the same power supply that operates the lock. When connecting power to the unit, ensure that proper polarity is maintained. As an additional safety feature, the DSB includes a low voltage sensing circuit. The unit will keep working normally until input voltage declines to below roughly 9 Volts. At approximately that point, the DSB automatically performs as if all power was removed (i.e. if a lock is being controlled by the DSB, power to it will be cut and it will release).

8.2. DOUBLE BREAK WIRING

Many installations include a controlled access device such as a digital keypad or card reader. Such devices typically have a REX (request to exit) input. When dry contacts close on this input, the entry device will open the lock for the same amount of time that is programmed for entry. Implementation of the REX input for exit can provide timed exiting. Also, for most entry controls, the REX input must be used for exiting to avoid an alarm condition at the door.
If the REX input alone is used for exiting, a safety/reliability problem will exist. If the entry device malfunctions, exit will not be possible and people may be trapped. It is recommended that double break wiring which is supported by the DSB be used because of its two pole relay. The DSB normally closed contacts are used to break power to the fail safe electric lock while the normally open contacts trip the REX input of the controlled entry device. This releases the lock a second time, hence the term, "double break". If the controlled entry device fails for any reason, direct exit is still possible.

8.3. ADJUSTING TOUCH SENSITIVITY

After the wiring is completed the sensitivity of the touch sense must be adjusted. This can be done at any time by removing the end mount cap from the main PC board end of the bar and adjusting the potentiometer using a small flat tip (or Phillips) screwdriver (see **Figure 16**). The potentiometer that controls the touch sense will increase sensitivity when turned clockwise and decrease sensitivity when turned counterclockwise.

For initial setup, turn the pot clockwise without touching the bar with a small screwdriver until you see the red LED illuminate. In this condition, sensitivity is set so high that the bar is "sensing" or in release mode all of the time. Slowly rotate the pot counter-clockwise until the LED goes off and then turn another 10 to 20 degrees counter-clockwise and stop. This is generally a good initial setting. Before replacing the end cap, experiment by touching the bar and observe that the touch sense LED goes on and off. Sensitivity can be increased somewhat, but leaving the DSB set to just below the point of continuous release risks a condition of security failure especially if the unit goes into a constant release mode.

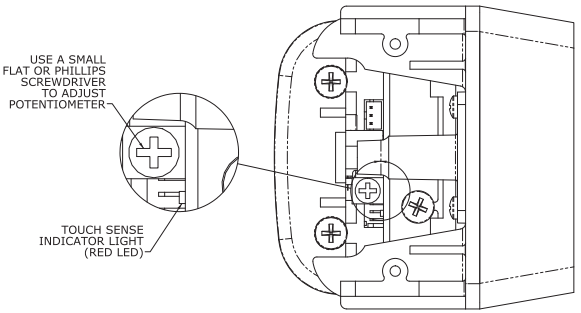


Figure 16

This product was designed for use with Securitron Magnalocks. The Magnalock secures the door with magnetic force only and therefore has no possibility of jamming and thereby denying egress. The Magnalock also has internal electronics which allow it to release very rapidly. When used with the DSB, which is also a fast device, exit is immediate and the impression a person exiting gets is that the door is not locked at all. Other magnetic locks generally operate significantly more slowly than the Magnalock.

9. APPENDICES

A. TROUBLESHOOTING

PROBLEM - The door will not release when the bar is touched.

Monitoring the touch sense operation of the bar can be done by viewing the red LED on the main PC board next to the potentiometer (when the end mount cover is removed), which will illuminate when the bar is touched. If there is no click or illuminated LED, try actuating the mechanical movement of the bar. If the door does not release from the mechanical actuation, it is almost certain that the overall wiring of the installation is at fault. If the door releases from the mechanical actuation, the general wiring is probably correct but the touch sensor is not reading touch. See **Section 8.3** on how to adjust sensitivity. Another problem could be that the touch sensor itself is not receiving 12-24 Volts DC power on the red and black wires. Inspect the power supply and ensure that the input polarity is correct. If power is being applied on the red and black wires it is still possible that power may not be getting to the sensor. Inspect the connector that plugs into the main PC board to ensure that it is fully engaged and check for loose wires. Finally, verify that the ring terminal that connects the sensor to the bar has not come loose.

If the red LED does illuminate when you touch the bar and the door does not release, try to mechanically actuate the door. If the door still does not release, the problem must be in the lock/system installation wiring as it is nearly impossible to have a failed touch sensor relay and mechanical switching circuit at the same time. Please review the wiring to make sure that the DSB is correctly applied in the circuit. If the LED illuminates but only the mechanical function releases the door, call the factory as the defect appears to be in the relay contacts and the main PC board will have to be replaced.

PROBLEM - The door remains released constantly.

If there is LED indication when the bar is touched but the lock remains released, the problem is probably in the system wiring which should be reviewed to be sure the DSB is correctly applied in the circuit. If there is no LED indication, the touch sensor is probably adjusted too high (review **Section 8.3**). Rotate the adjustment pot counter-clockwise while not touching the bar. If this does not lock the door, some effect is probably keeping the relay in the de-energized state all the time. (Remember, the relay is normally energized when the lock is secure to maintain fail safe operation).

- The most likely cause for the relay to remain energized is that the sensor "sees" an overwhelmingly large signal as if someone was continually touching the bar. This will happen if the bar is not properly isolated from a metal door.

- Make sure that the bar is installed with the plastic washers under the head of the mounting screws.
- Make sure there are no foreign objects or material creating a conductive path from the bar to the door (e.g. metal blinds, etc.).
- Make sure the bar is free to move and not stuck in the "exit" position. There should be 1/32" clearance at each end of the bar between the end cap and mount flange. See **Section 6.2**.
- The same effect will occur if the bar is used outside in the rain or if water is flowing down the inside of the door. This moisture overcomes the electrical isolation needed between the bar and door.

PROBLEM - The bar does not move.

If the bar does not move when it is pressed toward the door there are three likely causes.

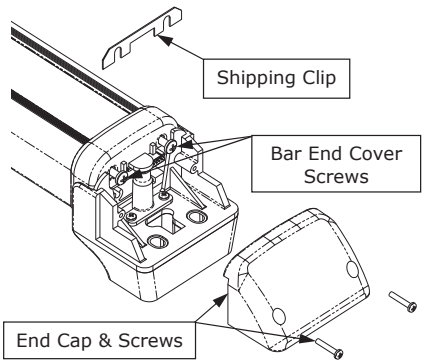
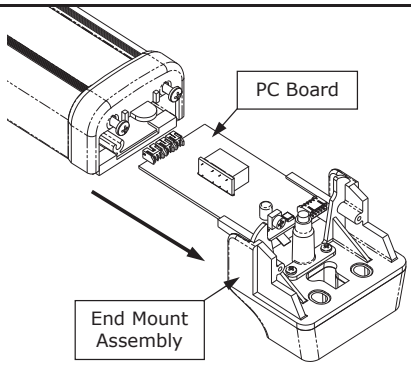
- The shipping clips were not removed. See **Section 6.1**, **Figure 2**.
- There is not enough clearance at the ends of the bar. See **Section 6.2**.
- The end mounts are not installed tightly and they have slipped causing the bar to bind on the ends. Make sure the end mounts are horizontal and the bar end caps are not bound by twisted mounting, tighten the mounting screws securely.

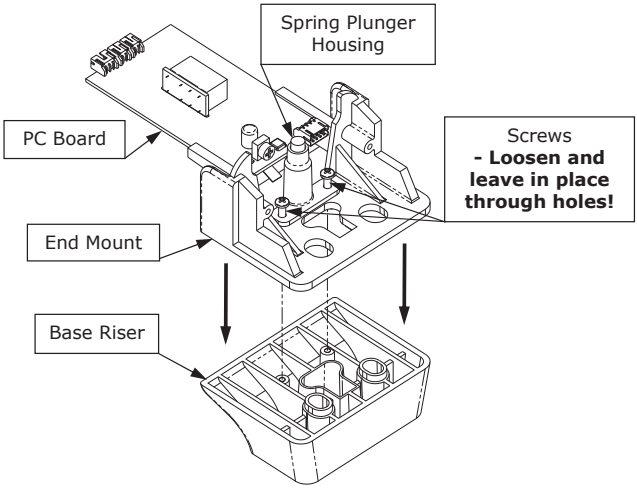
IF YOUR PROBLEM PERSISTS, CALL SECURITRON: 1-800-MAG-LOCK

B. INSTALLATION OF TSB-C BETWEEN DSB END MOUNT AND DOOR FRAME

The following step-by-step instructions may be used to install the included TSB-C door cord directly between the DSB end mount base and the door frame.

1 DISASSEMBLE END OF BAR

<table>
<tr>
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<tr>
<td>1. Using a #1 Phillips head screwdriver, remove the two screws and end cap.
2. Using a #2 Phillips head screwdriver, loosen the bar end cover screws and remove the shipping clip.</td>
<td>3. Carefully withdraw the end mount assembly with the PC board from the end of the bar making sure that the lever of the limit switch (under the PC board) does not get dislodged from the switch.</td>
</tr>
</table>

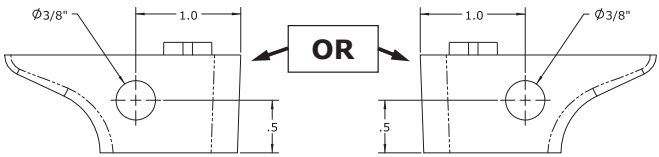


4. Using a #1 Phillips screwdriver, back out the two (2) screws to release the base riser from the rest of the end mount assembly.

NOTE: These screws should remain in place (in the holes of the spring plunger housing and end mount) – This will help keep the plunger housing in place for time of reassembly. (If the PC board and plunger assembly happen to come out of the end mount, see procedure in step 4 for reassembly).

5. Place the end mount (with the PC board, plunger and screws) aside for reuse.

2 DRILL HOLE IN BASE RISER

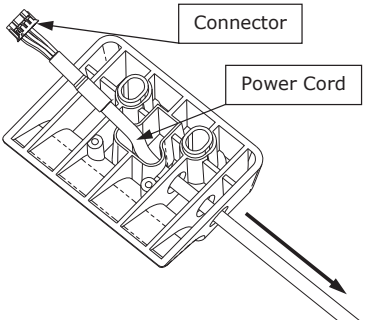


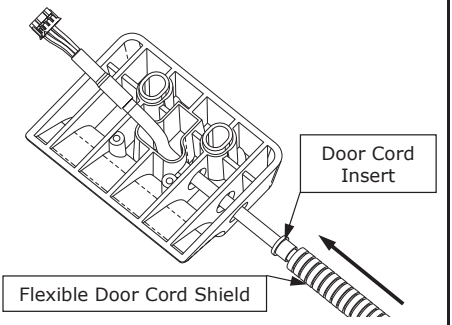
1. Determine which side of the base riser to feed the flexible door cord shield into.
2. Scribe and/or center punch the base riser at location shown.

NOTE: Prior to drilling any holes the riser should be secured in a vise or similar clamping device that will safely hold the part while it is being drilled.

3. Using a drill with a 1/8" diameter bit, create a "pilot" hole at the location shown. Drill through the internal ribs and into the wire feed-thru channel in the center of the base riser.
4. Using a 3/8" diameter drill bit, follow the pilot hole to open up the holes in the part to 3/8".

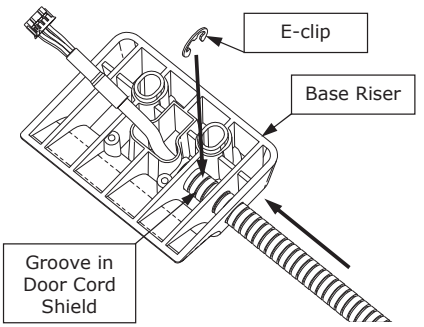
3 INSTALL POWER CORD AND FLEXIBLE DOOR CORD SHIELD

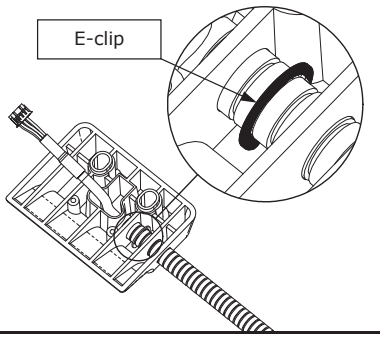




1. Unroll the DSB power cord and feed the non-connector end down through the wire feed-thru channel, the drilled holes and out the side of the base riser as shown.
2. Leave about a 6-inch loop from the hole in the side of the base riser to the end of the connector (to allow for connection to the PC board later).

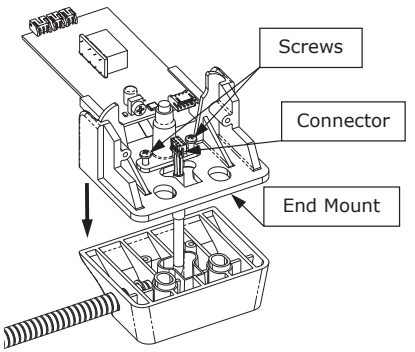
3. Insert the door cord insert into the end of the flexible door cord shield.
4. Slide the flexible door cord shield (door cord insert first) over the power cord from the non-connector end and up to the hole in the side of the base riser as shown.





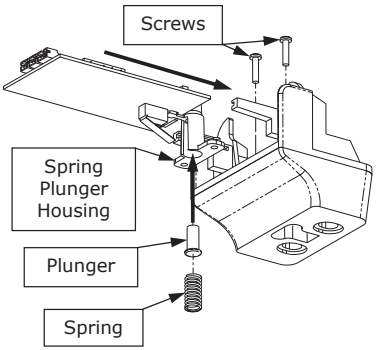
5. Insert the door cord shield through the holes drilled in the part and up to the wire feed-thru channel in the base riser.
6. Using needle-nose pliers, install the E-clip into a groove on the door cord shield between the internal part ribs as shown.

4 REASSEMBLE END MOUNT ASSEMBLY



1. Insert connector of power cord through wire feed thru hole in the end mount and assemble the end mount to the base riser as shown.
2. Using a #1 Phillips screwdriver, reassemble the spring plunger housing to the base assembly as shown. **Do not overtighten screws!** – they may strip the holes in the plastic base riser.

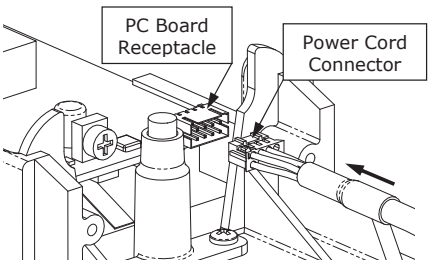
IF **the PC board and plunger slide out of the end mount:**



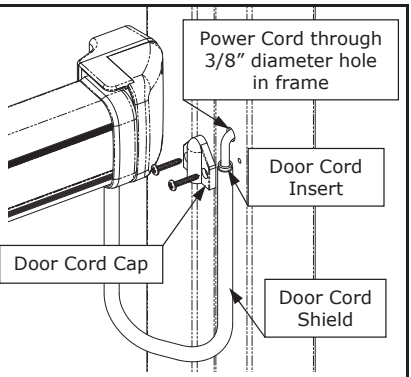
NOTE: The PC Board is glued to the plunger housing which is a spring loaded assembly. If the PC board/plunger ever become dislodged from the end mount assembly:

- Reinstall spring and plunger into the housing.
- Align PC board into slotted rails of end mount.
- Compress spring into housing to clear the base of the end mount while carefully sliding the PC board back into potion.
- Reinstall two (2) screws.

5 ASSEMBLE BAR TO DOOR



1. Plug the power cord connector into the receptacle on the PC board.
2. Insert the end mount assembly with the PC board attached back into the end of the bar.
3. Reinstall the shipping clip if necessary to hold the bar together throughout the remaining installation process.
4. Install the DSB to the door as prescribed in the DSB installation and operation instruction manual. (After the bar has been installed, the shipping clips may be removed).



5. Drill a 3/8" diameter hole in the door frame adjacent to the bar end mount as shown.
6. Install door cord insert over end of power cord and slide up and into the loose end of the flexible door cord shield.
7. Pull power cord through frame and make electrical connections.
8. Install the door cord cap over the power cord and door cord shield as described in the DSB installation and operation manual.

PN# 500-22700
Rev. F, 03/11

10. MAGNACARE® LIFETIME REPLACEMENT WARRANTY

For warranty information visit: www.securitron.com/en/site/securitron/About/MagnaCare-Warranty