

4. (For hollow metal door frames)
 - a. Cut out the rectangular piece of metal as shown on the door template.
 - b. Drill the four holes (two on each end) as shown on the door template.
 - c. Using the included metal screws, mount the mounting tabs.
5. (For wood door frames)
 - a. Rout or cut a 1-3/8-inch (35mm) hole for the cavity of the armature assembly as shown in the door template.
 - b. Rout a 1/4-inch (6mm) hole at each end as shown in the door template.

INSTALLATION — MOUNT THE MAGNET ASSEMBLY AND ARMATURE ASSEMBLY (see Fig. 4)

1. Double-check your work — Make sure the magnet assembly and armature assembly line up properly. Make any adjustments.
2. Using the screws provided, mount the magnet assembly onto the door frame, and the armature assembly onto the door.
3. Use washers or flat pieces of metal to act as shims as necessary to mount the magnet assembly and armature assembly flush with the surface.
4. Close the door, and note the gap between the armature assembly and the magnet assembly. Using the included hex tool, adjust the nickel-plated portion of the armature assembly to make the gap as small as possible without interfering with the opening and closing of the door.
5. **Apply power and test the operation.**

TROUBLE SHOOTING

1. If the shear lock does not activate when the door is closed, it may be because the sensor in the magnet assembly is too far away from the magnet in the armature assembly. You can either:
 - a. Adjust the distance between the magnet and sensor by adding more shims under the black portion of the armature assembly.
 - b. Re-adjust the position of the armature assembly or the magnet assembly.
2. Poor attraction between the magnet assembly and the armature assembly — Check the power supply, and make sure it is according to specifications. If the power supply is adequate, replace the unit.
3. If the magnet assembly pulls the armature assembly, but the door can still be opened, check to make sure the eccentric locking bolt is in the armature assembly's keeper hole when the unit is activated.
4. If the door can be kicked in or pushed in with your shoulder, check to make sure the magnet assembly and armature assembly surfaces are clean and free from dirt. Even a little dirt could reduce the attraction between the two surfaces.
5. For any other problems, replace the unit, and test again. The problem unit can also be substituted for a working unit in another door frame to see if it works there.

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ENFORCER®
SD-993B
Electric Shear Lock



- Concealed security for remote access and exit control of aluminum and steel doors or gates.
- Works with sliding, single-action, and double-action (swing-through) doors and gates.
- Plated steel plugs and magnetic bond holds doors securely in place with approximately 2,700 pounds (1,227kg) of shear holding force.
- Fail-safe operation (unlocks if power is lost).
- Internal adjustable door position switch prevents locking until the door has come to rest.
- Magnet and dry reed contact switch determine door position for positive locking.
- Adjustable door lock delay timer (2 to 6 seconds).
- Armature plate adjusts to compensate for gaps between door and frame.
- Door open/close relay output (NO/C/NC, SPDT, 1.0A@24VDC), for remote lock status monitor.
- Use with an optional digital keypad for keyless high security.
- Easily connects to SECO-LARM's SK-983A Electronic Keypad.
- Magnet housing dimensions (faceplate) — 10-1/2" x 1-3/8" x 1/4" (268 x 35 x 6 mm).
- Magnet housing dimensions (cavity) — 8-5/8" x 1-3/8" x 1-1/16" (219 x 35 x 27 mm).
- Armature assembly dimensions (faceplate) — 10-1/2" x 1-3/8" x 1/4" (268 x 35 x 6 mm).
- Shallow design for use with most metal door jambs.
- Nickel-plated magnet and armature, and black powder coated housings.
- Power — 12VDC (1.8A pull, 500mA to hold), 24VDC (1.0A pull, 350mA to hold).
- Door gap — Max. 1/8" (3mm).

IMPORTANT — IT IS THE RESPONSIBILITY OF THE END USER AND THE DEALER/INSTALLER TO ENSURE THIS UNIT IS MOUNTED IN ACCORDANCE WITH ALL LOCAL FIRE AND OTHER SAFETY REGULATIONS. THIS UNIT IS NOT FIRE-RATED.

IMPORTANT — SOME METHOD, SUCH AS A RELAY, MUST BE USED TO ENSURE DOORS PROTECTED BY THIS UNIT CAN BE OPENED IN CASE OF AN EMERGENCY.

MOUNTING LOCATION (see Fig. 1)

1. Top of door — Mount here for best results, as this allows flexibility against direct attacks against the door. Mount close to the corner opposite the hinges.
2. Middle of door, opposite the hinges — This works well in most situations. If mounting is required here, mount halfway up the door for greatest strength.
3. Bottom of door — Not recommended, as dirt buildup could affect operation.

INSTALLATION NOTE

Install the magnet assembly into the door frame before installing the armature assembly into the door. The magnet assembly requires space to run wires, as well as space for the recessed portion of the unit. However, make sure that the position selected for the magnet assembly leaves enough room on the door to install the armature assembly.

INSTALLATION — CUT THE DOOR FRAME (see Fig. 2)

- Find the center line:
 - Close the door and let it rest naturally.
 - Use a pencil to trace the position of the outside face of the door on the door frame. If mounting on the top of the door, this line should be near the top corner away from the door hinges. Leave enough room to mount the magnet assembly in the door. If mounting on the side of the door, this line should be drawn near the center of the door, but not near any physical locking mechanisms.
 - Measure the width of the door, then draw a line on the door frame parallel to the first line at that distance. These two lines will show where the door rests relative to the door frame when it is closed.
 - Measure and trace a line between these two lines. This is the door frame center line.
 - IMPORTANT** — Make sure the place you choose to mount the magnet assembly is clear of obstructions and door adjustment bolts before making any cuts. Allow enough room inside the door frame at both ends of the magnet assembly to install the mounting tabs.
- Tape the door frame template to the door frame, lining the template's door frame center line with the door center line you just drew.
- (For hollow metal door frames)
 - Cut out the rectangular piece of metal as shown on the door frame template.
 - Drill the four holes (two on each end) as shown on the door frame template.
 - Using the included metal screws, mount the mounting tabs.
 - Run the wires.
- (For wood door frames)
 - Rout or cut a 1-3/8" (35mm) hole for the cavity of the magnet assembly as shown in the door frame template.
 - Rout a 1/4-inch (6mm) hole at each end as shown in the door frame template.
 - Run the wires.

RUN WIRES & PROGRAM BEFORE MOUNTING

- Wiring:
 - (+) — Connect to power supply positive (+12VDC to +28VDC).
 - (-) — Connect to power supply ground.
 - (N.C., COM, N.O.) — Connect to an optional device such as an LED, buzzer, or input to a control panel to show when the door is open or closed.

NOTE — Polarity of the (+) and (-) wires is important. Wrong polarity will burn out the magnet assembly.
- Programming — To set the amount of time between the closing of the door and the locking of the shear lock, remove the small cover off the back of the magnet assembly and turn the small blue potentiometer clockwise or counter-clockwise.

INSTALLATION — CUT THE DOOR

- Determine where to mount the armature assembly in the door. It should line up with the magnet assembly (see Fig. 3).
- Draw a line between the front and back door faces. This is the door center line (see Fig. 2).
- Tape the door template to the door, lining the door template's door center line with the door center line you just drew.

Fig. 1 -Preferred mounting locations

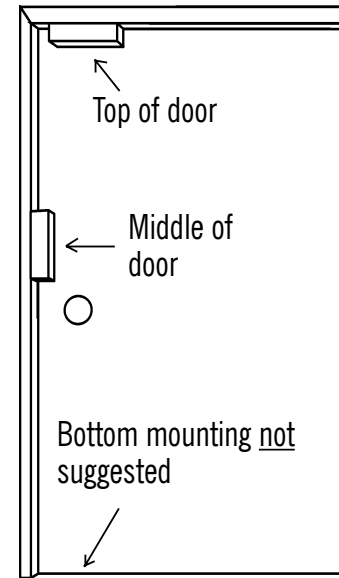


Fig. 2 -Preparing the mounting positions

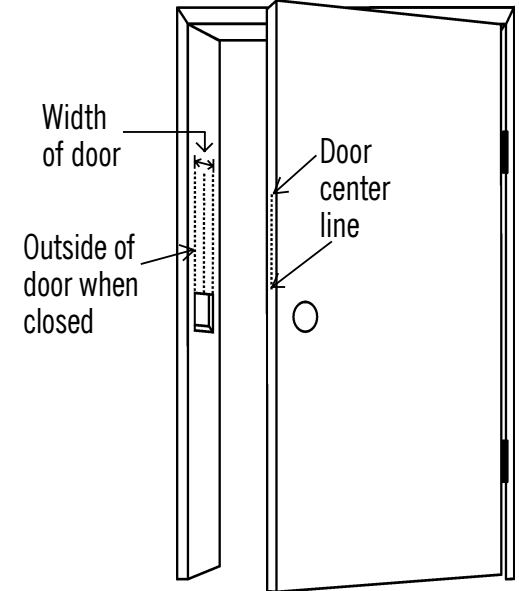


Fig. 3 - Lining up magnet assembly and armature assembly

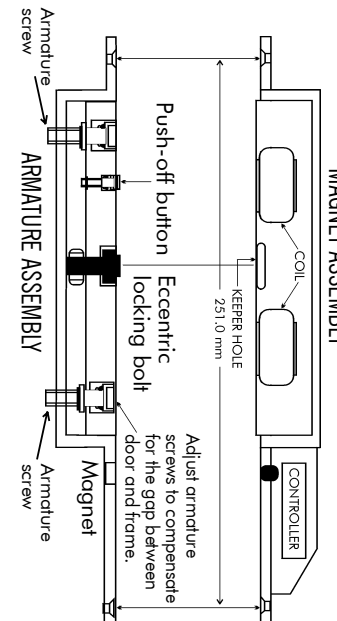


Fig. 4 - Mounting the magnet assembly and armature assembly

