Installation Manual

SECO-LARM®

SD-997A-GBQ - Fail-Secure, 12/24VDC
SD-997BQ - Fail-Safe, 12VDC
SD-997B-GBQ - Fail-Safe, 12/24 VDC

R☑HS CE

SD-997B series shown

Electric Deadbolt

SECO-LARM Electric Deadbolts are designed for hollow metal door frames. They are not recommended for wooden door frames. However, door can be wood or metal.

Features

- Adds concealed deadbolt security to most wood or hollow metal doors, with the convenience of electrical operation.
- Stainless steel bolt, $5/8$" diameter, $5/8$" throw.
- SD-997A-GBQ – Fail-secure operation (locks if power is lost).
- SD-997B Series – Fail-safe operation (unlocks if power is lost).
- Magnetic switch senses door position for positive locking.
- Attempts to relock multiple times if the door is not closed properly (SD-997A-GBQ & SD-997B-GBQ only).
- Door open/close monitor (NO/C/NC).
- Adjustable door lock delay timer - see Specifications.
- Use with an optional digital keypad for high security without a key.
- Easily connects to SECO-LARM's Digital Access Keypad.
- Suitable for office-type applications.
- Optional mounting brackets available.
- Shallow design for use with most metal door jambs.
- Powered by a solenoid.
- Stainless steel for strength and long life.

Fig. 1 - Possible Mounting Locations

Important - For vertical mounting of SD-997B series only, wires must come out the top of the unit.

For single door   For single door   For double doors
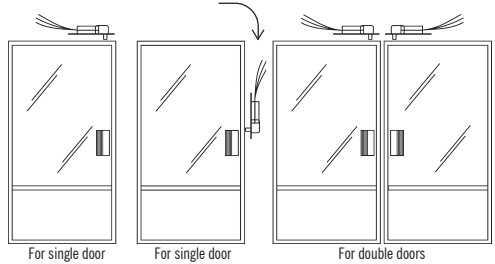
Mounting Location

Can be mounted opposite the door hinges, or on the header or on top of the door away from the hinges. Mounting on the bottom of the door is not recommended because of the possibility of dirt and dust buildup. (see fig. 1)
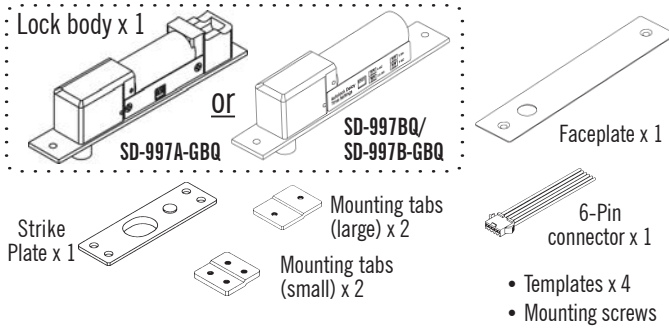

SD-997A-GBQ

SD-997B series

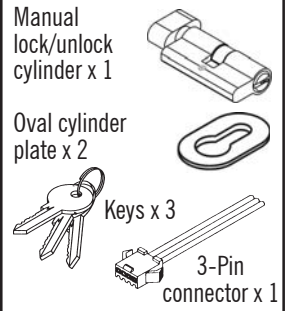Bolt

Sensor Magnet
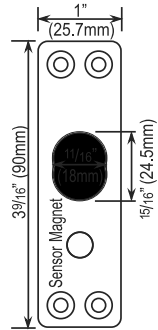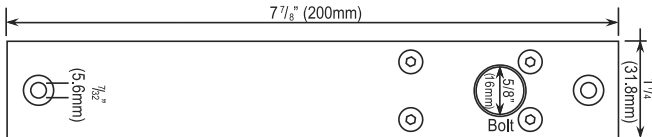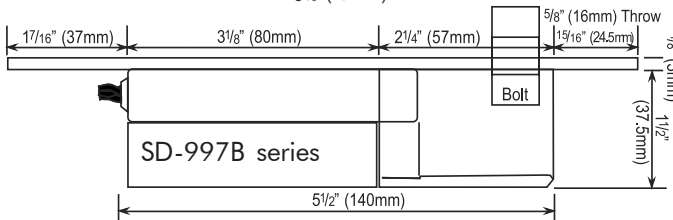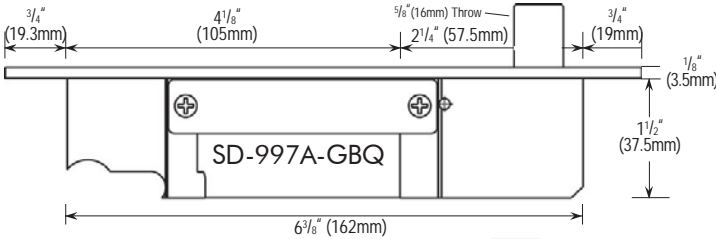
Dimensions:*

*Note: Original measurements taken in millimeters. Inches are closest 1/16" approximation.

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Fig. 2 - Parts List:

Lock body x 1

SD-997A-GBQ

or

SD-997BQ/
SD-997B-GBQ

Strike Plate x 1

Mounting tabs (large) x 2

Mounting tabs (small) x 2

Faceplate x 1

6-Pin connector x 1

• Templates x 4
• Mounting screws

SD-997A-GBQ Also Includes:

Manual lock/unlock cylinder x 1

Oval cylinder plate x 2

Keys x 3

3-Pin connector x 1

Installation

1. Determine where the deadbolt will be mounted (see fig. 1).
2. Tape the templates to the door frame and door (see fig. 3)
   A. Align the templates so that the deadbolt of the lock body template is centered on the deadbolt hole of the strike plate template.
   B. Make sure to leave enough room at the ends of the lock body and strike plate templates for mounting the mounting tabs.
3. Door frame cut (see fig. 4)
   A. Cut out the space for the lock body.
   B. Test the fit. The lock body should fit snugly inside the space.
   C. Drill two 5mm screw holes as shown on the template.
4. Door cut and mount. (see fig. 4)
   A. For wood doors:
      1) Use a chisel to knock out a 3mm ($1/8$-inch) deep space as shown on the template.
      2) Drill the magnet hole, 12mm ($1/2$") wide by 6mm ($1/4$") deep.
      3) Use four wood screws to mount the strike plate in the chiseled space. The magnet should fit in the magnet hole.
      4) Use a drill to drill out the deadbolt hole to a depth of 16mm ($5/8$").
   B. For hollow metal doors:
      1) Cut out the space for the strike plate.
      2) Drill two screw holes for each of the two mounting tabs.
      3) Use screws to fix the mounting tabs inside the hollow metal door.
      4) Use screws to fix the strike plate to the mounting tabs.
5. Door jamb cut and mount (see fig. 4)
   A. Cut out the space for the face of the lock body.
   B. Drill one 5mm hole for each of the two mounting tabs.
   C. Use screws to fix the mounting tabs inside the door jamb.
   D. SD-997A-GBQ only: Insert the lock/unlock cylinder (see fig. 5).
   E. Connect the wires, and insulate them (see fig. 7):
      1) Red — Power input ($+$)
      2) Brown — Power input (-)
      3) Orange — Control wire (ground to release bolt)
      * { 4) Green — Door monitor, COM
          5) Yellow — Door monitor, N.C. (active when door closed)
          6) Blue — Door monitor, N.O. (active when door open) }

   IMPORTANT — Correct polarity of the red and brown wires is critical. Incorrect polarity will burn out the solenoid !

   Connect to an alarm control panel or warning device to show if the door is open or closed.

Fig. 3 - Aligning

Lock body template

Strike plate template

Line up these marks
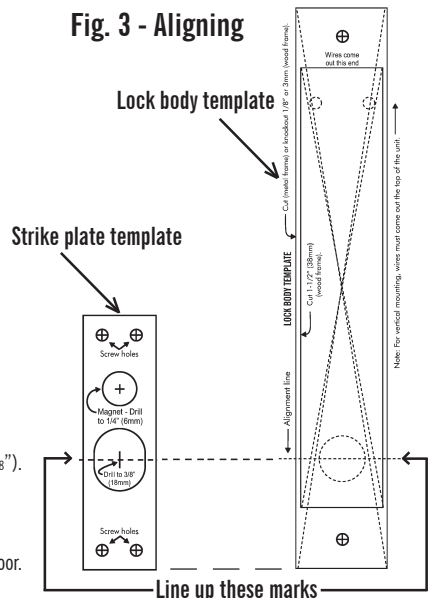
IMPORTANT — Push all the wires into the door frame. If space is a problem, cut away part of the dust catcher inside the frame, or carefully chip away part of the drywall, being careful not to damage the wall.

F. Set the door lock delay timer (see fig. 8). This is the time it takes the deadbolt to automatically lock after the door is closed.

NOTE: For SD-997A-GBQ & SD-997B-GBQ only — The deadbolt automatically relocks 4 seconds after an optional external push button (egress button) is pressed, if the door was not opened.

The lock body has a sensor mechanism wherein it can detect if the strike plate is in close proximity (such as when the door is closed). If the door was closed but somehow the strike plate was not aligned properly, the door monitor indicator may indicate that the

door is closed but the deadbolt remains unlock. During this time the lock body may attempt multiple times to relock the door and if it fails, it will stop to prevent the solenoid from burning out.

However if the lock body and the strike plate are too far apart, the lock body will not attempt to lock the door and the deadbolt will not throw out.

IMPORTANT – **The lock body and strike plate must be properly aligned and next to each other in order for the product to function properly**.

G. Pull the vinyl covering off the faceplate, and place the faceplate over the face of the lock body. Use screws to fix the faceplate and lock body to the mounting tabs.

6. For SD-997A-GBQ only (see figs. 5 and 6)

Because the SD-997A-GBQ offers fail-secure operation, the door locks if power to the unit is cut. For such a situation, a separate manual lock/unlock cylinder is provided for manual operation.

A. Insert the cylinder as shown in Fig. 5, and secure it to the lock body with the provided long screw. Turning the key or the manual knob will unlock the SD-997A-GBQ manually.

B. Two separate templates are included for drilling holes in the door frame for the key and manual knob.

C. A separate 3-pin connector for the SD-997A-GBQ can be connected to an alarm panel or annunciator to alert when the door is locked or unlocked.

Fig. 4 - Door and Frame Cuts

Fig. 5 - Manual Lock/Unlock Cylinder (SD-997A-GBQ only):

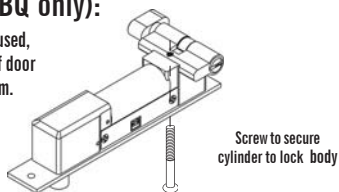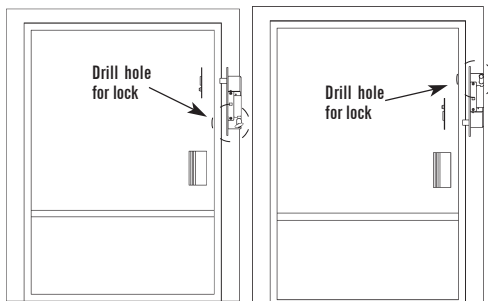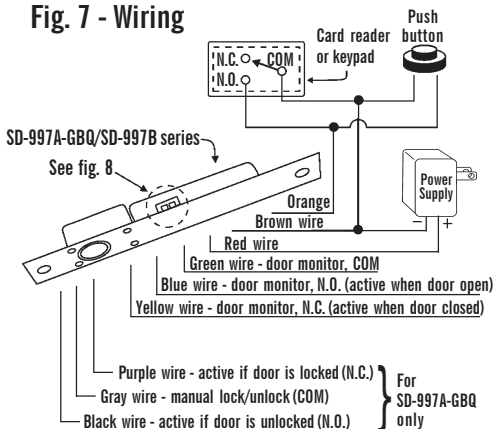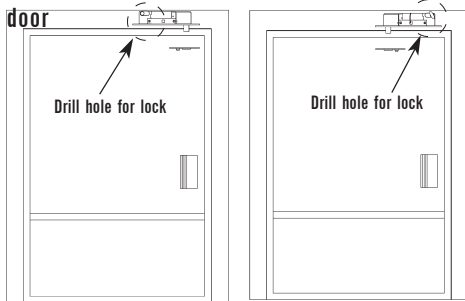Note: If cylinder is used, max. depth of door frame is 50mm.

Screw to secure cylinder to lock body

Fig. 7 - Wiring

IMPORTANT – **Do not cut wires before the plug as warranty will be voided.**

Fig. 8 - Setting Door Lock Delay Timer

SD-997A-GBQ		0.0 sec.		5.0 sec.
		3.0 sec.		9.0 sec.
SD-997BQ / SD-997B-GBQ		0.0 sec.		5.0 sec.
		2.5 sec.		9.0 sec.

Fig. 6 - Installation of Manual Lock/Unlock Cylinder (SD-997A-GBQ only):

Installation at side of door

Drill hole for lock

Drill hole for lock

Installation at top of door

Drill hole for lock

Drill hole for lock

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Specifications		SD-997A-GBQ	SD-997B-GBQ	SD-997BQ
Operation		Fail-secure	Fail-safe	
Operation voltage		12/24 VDC	12/24 VDC	12VDC
Current draw	Standby	330mA@12VDC/205mA@24VDC	340mA@12VDC/180mA@24VDC	
	Active	880mA@12VDC/470mA@24VDC	900mA@12VDC/440mA@24VDC	
Status sensor		SPDT, 250mA @ 12VDC (NO/NC/COM)		
Adjustable delay timer		0/3/5/9 secs.	0/2.5/5/9 secs.	
Weight (approx.)		2-lbs,5-oz (1kg)	1-lb,13-oz (0.8kg)	

Troubleshooting:

Problem:	Possible cause:	Solutions:
Deadbolt does not activate when the door closes.	The sensor in the lock body is too far from the magnet in the strike plate.	• Try adjusting the strike plate, lock body position, or shims.
Deadbolt activates when the door is closed, but does not lock the door.	Deadbolt may not be properly going into the deadbolt hole in the door.	• Make sure the deadbolt is going into the hole and not hitting the strike plate. If not, you must reposition the strike plate. • If the deadbolt is going into the hole, it may be hitting the bottom of the hole (if it is in a wooden door). In this case, drill a deeper hole.
How to reset unit.		• When testing, if necessary, reset the unit by grounding the orange wire momentarily.
For any other problems		• Replace the unit, and test again. A problem unit can also be substituted for a working unit in another door frame to see if it works there.

Optional Mounting Brackets Available for SD-997B Series

Surface-Mount Bracket
SD-997SMB-AQ
• Mount the deadbolt and strike plate on the door jamb instead of in the door frame.

"U" Bracket
SD-997UB-AQ
• Mount the deadbolt and strike plate on glass doors.

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