

Explosion-proof, high-security switches

Application. The explosion-proof, high-security switches have rugged die-cast aluminum housings with conduit fittings. They are UL Listed for hazardous location classes (Class I Group C and D, and Class II Group E, F, and G). These switches are used in high-security applications such as airports, transportation depots, military locations, chemical plants, nuclear power plants, and coal mines.

Installation. To install the 2804T switch (*Figure 100* on page 119), do the following:

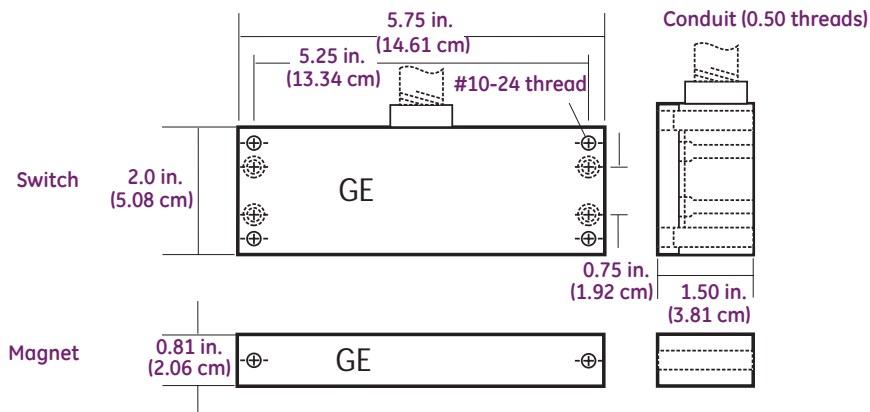
1. Place the bottom of the template provided on the frame approximately 0.25 in. (0.6 cm) from the edge of the door. Mark the mounting holes.
2. Drill the four mounting holes 5/8 in. (1.6 cm) deep using a 5/32 in. drill. Tap the holes for a #10-24 machine screw thread. Mount the contact with the #10-24 x 1.25 in. flathead screws provided.
3. Before running the conduit, attach an ohmmeter to the common and the closed loop terminals. The meter should read *INFINITY* with the magnet away from the switch (wiring diagram provided).
4. The magnet for the unit is contained in two pieces. The master magnet is brown and the submagnet is silver. Place the submagnet housing into the master magnet housing, making sure that the yellow dot on the subhousing is towards the switch.
5. Position the magnet and switch so that the labels read in the same direction and the monogram on the magnet is directly aligned with the monogram on the switch. The setup gap distance is 0.4 in. (1.0 cm). Switches will operate at approximately 0.2 to 0.6 in. (0.5 to 1.5 cm) on closing, and go into alarm at approximately 0.4 to 0.8 in. (1.0 to 2.0 cm) on opening. Maximum gap is 0.1 in. (0.3 cm). However, environmental conditions, such as the thickness of the metal to which the switch and magnet are attached, may cause slight variations in gap distance. Therefore, we recommend the following installation method:
 - Bring the magnet toward the switch until the ohmmeter reads 0 ohms. Mark this point.
 - Continue bringing the magnet towards the switch until the meter reads *INFINITY*. Mark this point.
 - Use the magnet template and mark the mounting holes.

6. Drill the two inside mounting holes 5/8 in. (1.6 cm) deep, using a 9/64 in. drill. Tap the holes for a #8-32 machine screw thread. Drill the two outside mounting holes 5/8 in. (1.6 cm) deep, using a 5/32 in. drill. Tap the holes for a #10-24 machine screw thread.
7. Remove the submagnet housing from the master magnet housing. Mount the submagnet housing first using the two center holes. Use the #8-32 x 1.5 in. machine screws provided. Be sure that the yellow dot faces the switch.
8. Mount the master magnet housing directly over the submagnet housing. Use the #10-24 x 1.75 in. machine screws provided. Be sure that the monogram labels on the switch and magnet read in the same direction.
9. Test (see *Ohmmeter testing* on page 86).
10. Install the conduit.

Note: Other models have unique installation instructions.

Recommended products. 2804T, 2807T, 2814T, 2845T, 2847TH

Figure 100. Explosion-proof, high security 2804T contact



2800T SERIES

Installation Instructions

Models: 2804T, 2807T, 2808T

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

Switch and magnet housings shall be die cast aluminum, coated with brown textured paint. Switch housing dimensions shall be nominally 1.5" (3.81 cm) W x 5.75" (14.61 cm) L x 2.0" (5.08 cm) H. Mounting holes for #10 screws shall be on 5.25" (13.34 cm) x .75" (1.91 cm) centers. Switch housing lid shall be attached on 5.25" (13.34 cm) x 1.5" (3.81 cm) spacing with #10-24 screws. Fitting with .50" threads shall be provided for direct connection to conduit. Magnet housing dimensions shall be nominally 5.75" (14.61 cm) L x .813" (2.06 cm) H x 1.5" (3.81 cm) D. Mounting holes for #10 screws shall be on 5.25" (13.34 cm) centers.

Switch shall comprise three biased reed contacts, wired in SPDT configuration, and include a plunger-type tamper actuated on removal of cover. Connection to switch shall be made by screw terminals.

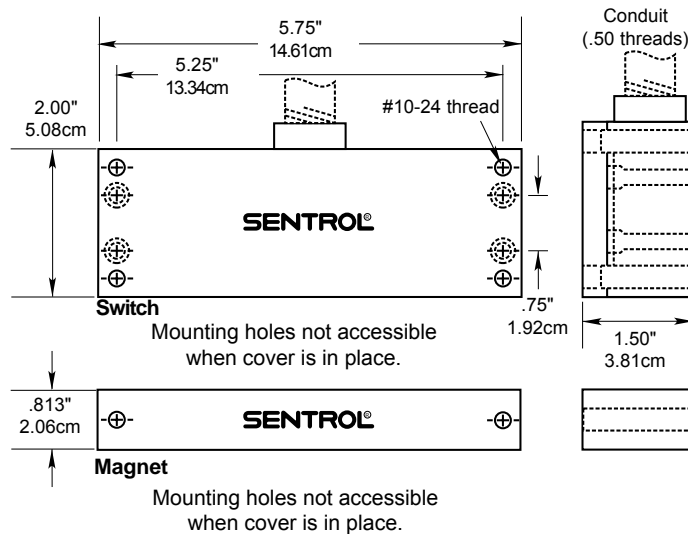
2807T, 2808T

Switch shall include a magnetic tamper switch and an optional pry tamper switch. It shall be fastened to the mounting surface with a pry tamper plate mounted with #6 x .75" flathead screws on 2" centers. Model 2808T shall include a remote test function.

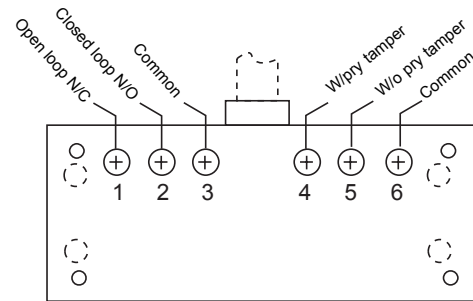
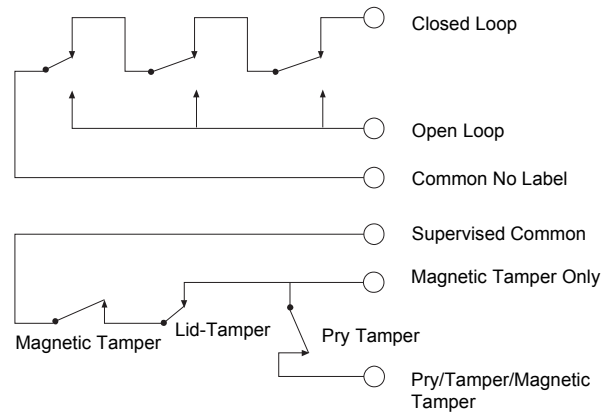
2804T

Switch shall include a magnetic tamper switch and optional circuit breaker-type switch protection at 80% of maximum current. Switch shall also include a tamper resistant, two-piece magnet.

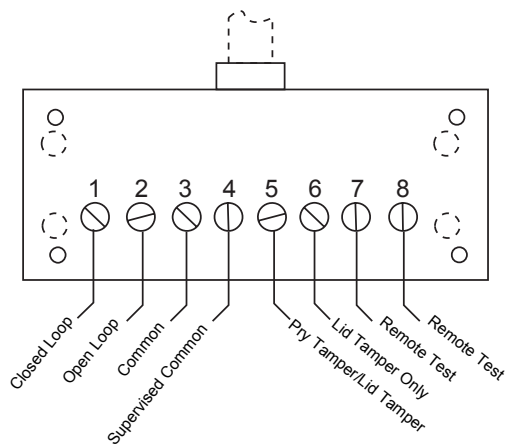
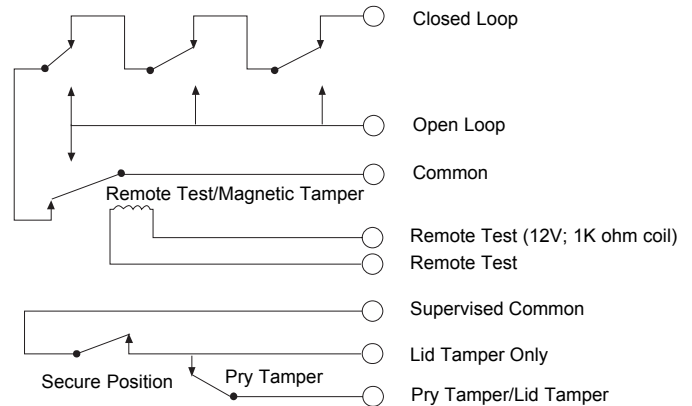
2800 SERIES



2807T, 2804T SERIES



2808T SERIES



INSTALLATION INSTRUCTIONS

2807T, 2808T

Mount switch in desired location. The gap distance is approximately .4". However, environmental conditions, such as the thickness of the metal to which the switch and magnet are attached, may cause slight variations in gap distance. Therefore, recommended installation method is as follows:

Bring magnet toward switch until ohmmeter reads "0" ohms. Mark this point, then continue bringing magnet toward switch until meter reads INFINITY. Mark this point, and position the magnet between these two marks. Once this position is established, use the magnet template and mark the mounting holes. With magnet positioned properly, the switch will trip if an external magnet (67 gauss or greater) is used in an attempt to defeat the switch.

2807T, 2804T

When pry tamper is used, mount pry tamper plate beneath the switch with #6 x .75" flathead screws. Connect terminals 4 and 6 to 24-hour loop. When pry tamper is not used, discard plate and connect terminals 5 and 6 to 24-hour loop. The pry tamper plate is required for the Certified Safe and Vault applications.

2808T

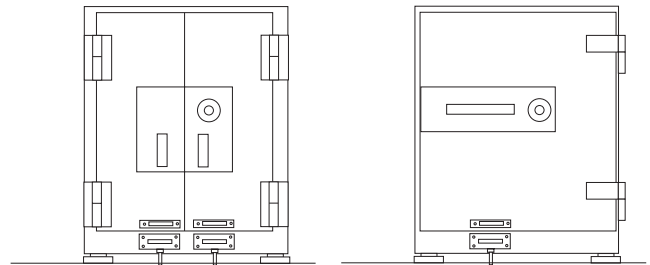
When pry tamper is used, mount pry tamper plate beneath the switch with #6 x .75" flathead screws. Connect terminals 4 and 5 for pry tamper. Use terminals 4 and 6 for use without pry tamper. The pry tamper plate is required for the Certified Safe and Vault applications.

2804T

To install Model 2804T on a safe or vault:

1. Using template included for switch housing, place the bottom of template approximately 1/4" from the edge of the door on the frame. Mark the mounting holes.
2. Drill the four mounting holes 5/8" deep using a 5/32" drill. Tap the holes for a #10-24 machine screw thread. Mount the contact with the #10-24 x 1 1/4" flathead machine screws provided.
3. Before running the conduit attach an ohmmeter to the common and the closed loop terminals. Meter should read INFINITY with magnet away from switch (wiring diagram provided).

4. The magnet for the unit is contained in two pieces. The master magnet is brown, and the sub-magnet is silver. Place the sub-magnet housing into the master magnet housing, making sure that the yellow dot on the sub housing is towards the switch.
5. Position magnet and switch so that the labels read in the same direction, and the Sentrol "S" on the magnet is directly aligned with the "S" on the switch. The set-up gap distance is .4". Switches will operate at approximately .2" to .6" on closing, and go into alarm at approximately .4" to .8" on opening. Minimum gap is .1". However, environmental conditions, such as the thickness of the metal to which the switch and magnet are attached, may cause slight variations in gap distance. Therefore, recommended installation method is as follows:
Bring magnet toward switch until ohmmeter reads "0" ohms. Mark this point, then continue bringing magnet towards switch until meter reads INFINITY. Mark this point, and position the magnet between these two marks. Once this position is established, use the magnet template and mark the mounting holes.
6. First drill the two inside mounting holes 5/8" deep using a 9/64" drill. Tap the holes for a #8-32 machine screw thread. Then drill the two outside mounting holes 5/8" deep using a 5/32" drill. Tap the holes for a #10-24 machine screw thread.
7. Remove the sub-magnet housing from the master magnet housing. Mount the sub-magnet housing first utilizing the two center holes. Use the #8-32 x 1 1/2" machine screws provided. ENSURE THAT THE YELLOW DOT FACES THE SWITCH.
8. Mount the master magnet housing directly over the sub-magnet housing. Use the #10-24 x 1 3/4" machine screws provided. ENSURE THAT THE LABELS ON SWITCH AND MAGNET READ IN SAME DIRECTION.
9. Recheck switch with an ohmmeter to ensure proper continuity.
10. Install conduit.



ORDERING INFORMATION

PART NUMBER	LOOP TYPE	ELECTRICAL CONFIGURATION	GAP DISTANCE (MAKE)*	LEAD TYPE
2804T	Open or Closed	SPDT	3/16" min., 5/8" max.	#6 screw terminal
2807T	Open or Closed	SPDT	3/16" min., 5/8" max.	#6 screw terminal
2808T	Open or Closed	SPDT	3/16" min., 5/8" max.	#6 screw terminal



Form C (2804T, 2807T, 2808T)

Voltage: 30 V AC
Current: .25 A Max.
Power: 3.0 W Max.

Cover Tamper:

At 24 V AC/DC Max.
125 mA Max.
At 6 to 12 V DC
250 mA Max.

*Gap distances are nominal make distance ±20%.



GE Interlogix