Nuclear-Qualified

SOR® Pressure Switches

General Instructions

NOTE: If you suspect that a product is defective, contact the factory or the SOR Representative in your area for a return authorization number (RMA). This product should only be installed by trained and competent personnel.

Installation

Failure to mount the housing on a flat mounting surface may result in torsional forces on the housing that could cause false trips or render the pressure switch inoperative.

The vent connection must be plugged or vented to dry atmosphere as required by application requirements. Test Data Sheet SOR form # 716 is supplied for each serial number and provides switch performance data in the vented and plugged condition.

Process Connection

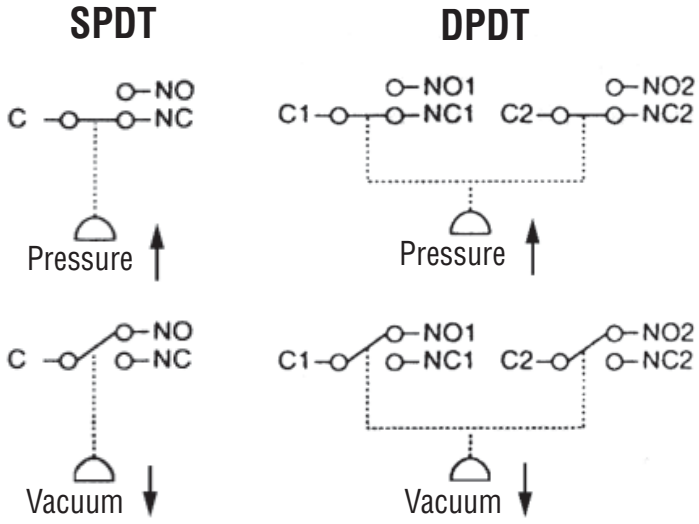
Securely connect process line to pressure port using two wrenches: one to hold hex flats on pressure port, the other to tighten process pipe or tube fitting.

Be certain the process connection is tightened and positioned so bending and torsional forces imposed on pressure switch are minimal. Use care not to loosen pressure port from body or body from housing.

Electrical Connection

Electrical connections are marked on the insulation of the wire leads. Conduit should be installed without applying strain to the housing.

Vacuum switches only



Design and specifications are subject to change without notice.
For latest revision, go to ***www.sorinc.com***

Minimum Bend Radius for Wire	
Permanent Training	1/2”R
Pulling Tension	1”R
Terminating Junction	1/4”R

Site Storage

Store switch in a dry area in the original shipping package. Shelf life is 10 years for a maximum ambient temperature of 80°F, based on aging data in SOR Test Report 9058-102.

Calibration

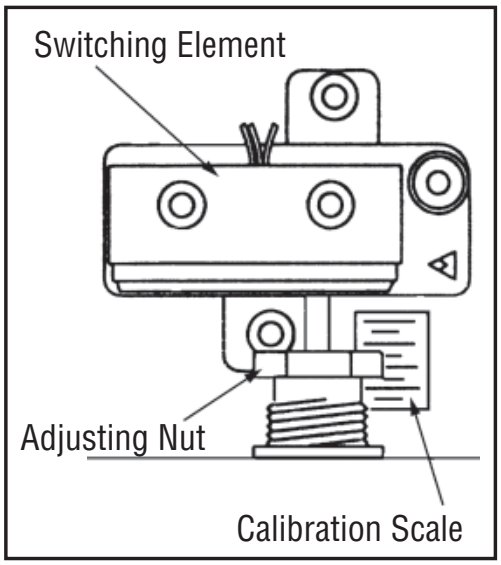
To check the set point of a switch, monitor either the common (C) and normally open (NO) or the common (C) and normally closed (NC) contacts for change of state. Connect the process connection to a regulated hydraulic or pneumatic pressure source. Monitor with an accurate pressure measuring standard. Slowly increase or decrease the pressure to accurately capture the precise moment that the switch changes state. To assure the most accurate and repeatable results, the switch must be tested in an identical manner each time the calibration is checked.

Increasing Set Points

If the normal operating pressure is below the set point, then the pressure should be increased from 0 PSI up to the increasing set point and then back down to the reset point. Repeat this cycle as necessary.

Decreasing Set Points

If the normal operating pressure is above the set point, then the calibration should be checked by first pressurizing to the normal operating pressure, then reducing the pressure to the decreasing set point, and then increasing the pressure to the reset point. Repeat this cycle as necessary.

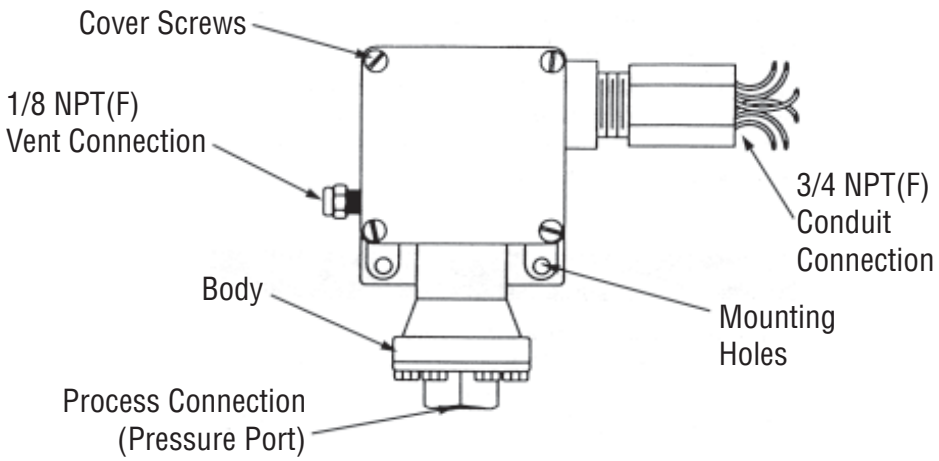


To adjust pressure at which switch will operate, remove cover and tighten the hex head adjusting nut with a 3/4” wrench to increase pressure; loosen to reduce pressure. Sighting across the top of the 3/4-inch hex adjusting nut to the scale gives approximate set point pressure.

After calibration is complete, reinstall the cover with new gaskets or o-rings as required by the Maintenance instructions.

The switching element has been positioned with a dial indicator to a tolerance of ±.002 inches. Do not move this switching element! Its position has nothing to do with the set point adjustment. Any movement can either render the switch inoperative or cause the switching element to be damaged with overpressure.

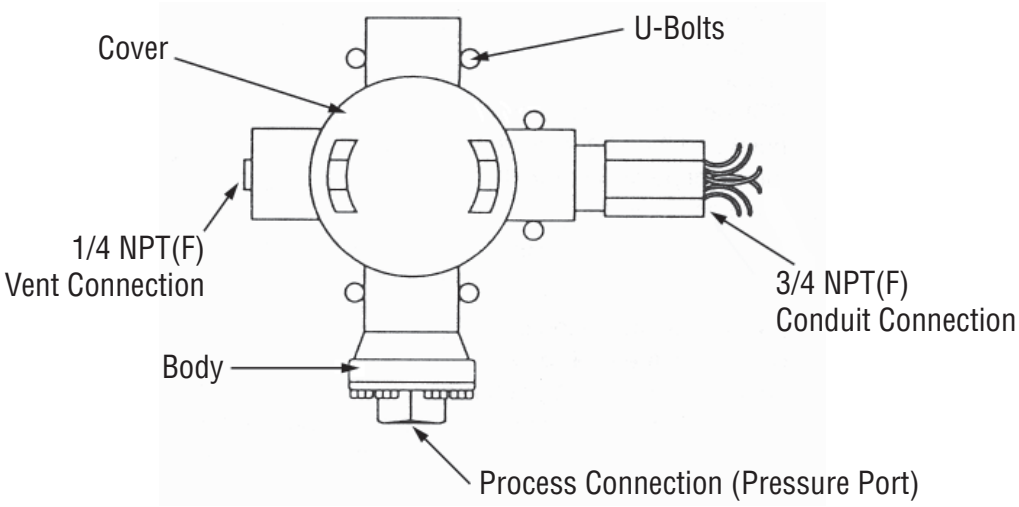
N6 Housing



Mounting Hardware Fasteners per SOR Test Report 9058-102 consist of two 1/4-20, Grade 5 screws (not supplied). Torque screws to 70 to 85 in-lbs.

Maintenance Replace cover gasket (SOR P/N 8923-180) whenever cover is removed or minimum of once every 5 years, whichever comes first. Remove the four cover screws. Remove the old gasket. Place new gasket between housing and cover. Line up holes in cover, gasket and housing. Insert the 4 screws and torque each to 7 to 10 in-lbs.

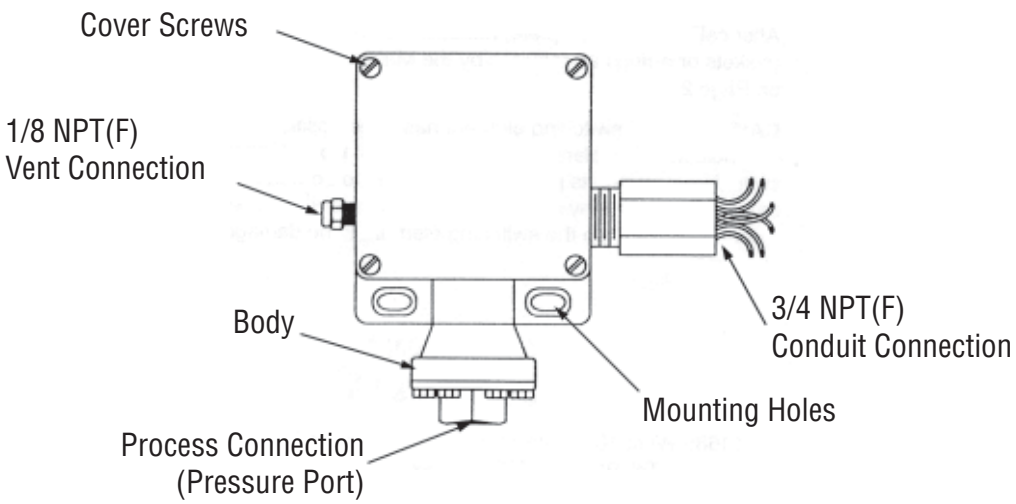
TA Housing



Mounting Hardware Fasteners per SOR Test Report 9058-102 consist of three standard grade 1/4-inch U bolts (not supplied).

Maintenance Replace cover o-rings (SOR P/N 8923-206 and 8923-207) whenever cover is removed or minimum of once every 5 years, whichever comes first. Unscrew the cover. Remove the old o-rings. Place new o-rings in groove of cover. Lubricate o-rings with light film of Krytox 240AC grease (or equivalent fluorinated grease). Tighten cover until the flange of the cover makes contact with the housing.

RT Housing



Mounting Hardware Fasteners per SOR Test Report 9058-102 consist of two 1/4-20, Grade 5 screws (not supplied). Torque screws to 70 to 85 in-lbs.

Maintenance Replace cover gasket (SOR P/N 8923-181) whenever cover is removed or minimum of once every 5 years, whichever comes first. Remove the four cover screws. Remove old gasket. Place new gasket between housing and cover. Line up holes in cover, gasket and housing. Insert the 4 screws and torque each to 7 to 10 in-lbs.

14685 West 105th Street, Lenexa, KS 66215 ■ 913-888-2630 ■ 800-676-6794 USA ■ Fax 913-888-0767