



Pressure Switches for Process Applications

General Instructions

Form 496

General

These instructions provide information for electrical connection, installation, process connection, and calibration. If the switch is a pivot seal sensor type (piston 2 or 3), it is recommended for high-pressure fluid power applications where high-shock pressure and high-cycle rates are expected. Pivot seal sensors are designed specifically for those applications.

NOTE: If you suspect that an instrument is defective, contact the factory or the SOR representative in your area for a return authorization number. If the instrument cannot be returned for service, field work should be performed by a qualified instrument technician using factory-authorized procedures. Contact the factory or the SOR representative in your area for technical support.

Design and specifications subject to change without notice.



Electrical Connection

CAUTION: Electrical power must be disconnected from explosion-proof models before the cover is removed. Failure to do so could result in severe personal injury or substantial plant damage.

Storing excess wire or making wire lead splices inside the pressure switch housing will interfere with pressure switch operation.

Housing Type	Conduit Connection	Contact Termination	Contact Identification
Open bracket	None	Screw terminals	Stamped on insulation
		Wire leads	Color coded and marked
All others	3/4 NPT(F) or M20 x 1.5(F) unless optional adapter is specified	Screw terminals	Stamped on insulation
		Wire leads	Color coded and marked
		Terminal strip	Stamped on insulation

Wire Lead Color Code

SPDT

DPDT (2-SPDT)

DRAWING: 496 SPDT

DRAWING: 496 DPDT

Vacuum Switch

Wiring Schematics for Switching Elements in Compound Vacuum-Pressure Switches

When set point is calibrated to vacuum, use wiring schematic Figure 1.

FIGURE 1

DRAWING: 496 DPDT

When set point is calibrated to positive gauge pressure, use wiring schematic Figure 2.

FIGURE 2

DRAWING: 496 FIG 2

For latest revision, see www.sorinc.com

Installation

1. Secure housing mounting pad to a bulkhead, panel rack or pipe stanchion with two suitable 1/4" bolts.
2. Line mounting by either process connection or electrical conduit connection is **not** recommended.
3. Suggested mounting orientation is electrical conduit connection at 6 o'clock to prevent condensate from collecting in the housing enclosure. However, the device can be mounted in any position.

Ensure that wiring conforms to all applicable local and national electrical codes and install unit(s) according to relevant national and local safety codes.

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.

IMPORTANT: Use care not to loosen pressure port from body or body from housing.

CAUTION: 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.

Calibration

CAUTION: Switching Element has been precisely positioned in the housing and overtravel adjusted at the factory for optimum performance. Any inadvertent movement or replacement in the field will degrade performance and could render the device inoperative, unless factory authorized procedures are followed.

Fixed Dead Band Models

Use 3/4" open-end wrench to turn hex adjusting nut clockwise to increase set point; counterclockwise to decrease Set Point. Approximate set point can be obtained by sighting across top of adjusting nut to calibration scale on interior wall of housing. If precise set point calibration is required, it will be necessary to use a regulated pressure source, a suitable continuity tester, and a 1/4% test gauge.

Adjustable Dead Band Models

Use the fixed dead band procedure (above) to calibrate the desired **decreasing** pressure set point. The **increasing** pressure set point can then be adjusted by turning the white thumbwheel on the electrical switching element. Setting A yields the smallest possible dead band. Setting F yields the widest possible dead band. Settings above E may degrade repeatability.

See SOR Catalog (Form 216) for reference dimension drawings. For certified dimension drawings, contact the factory.

