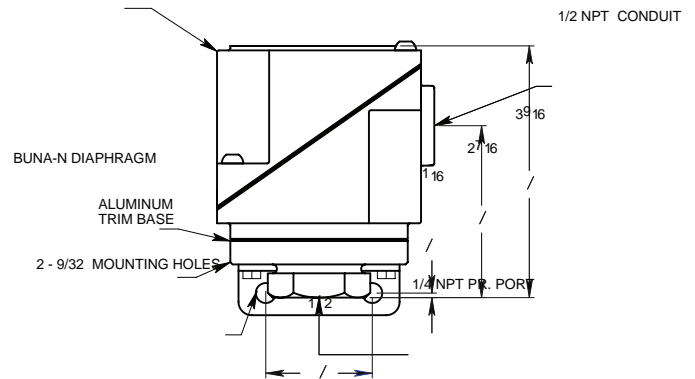
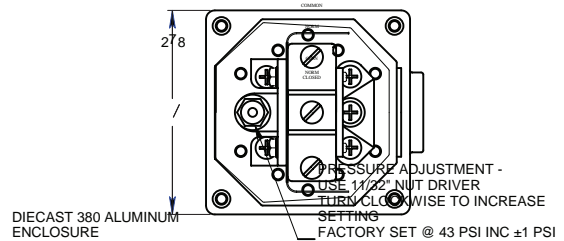
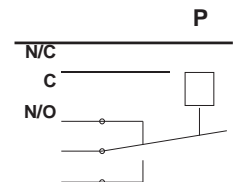


2PS/70 Pressure Switch Diaphragm Sensing Element

Ranges from 0 to 100 PSI
1.9 PSI Deadband max.
250 PSI max. Working Pressure
Rugged NEMA 4X, 12 & 13 Housing
One SPDT Contact
Standard 1/4 NPT Female Connection
Factory Settings at No Charge



Wiring Schematic
One SPDT



GENERAL DESCRIPTION

The 2PS/70 employs Solon's unique, rugged, and sensitive switching mechanism. Unlike most "inline" pressure switch designs, the Solon mechanism is frictionless and amplifies the movement of the sensing element. This results in improved life, repeatability, and lower deadbands. The 2PS mechanism is supplied with one S.P.D.T. electric switch. The unit is enclosed in a rugged die cast NEMA 4X, 12 and 13 housing. With the cover of the enclosure removed, the terminals of the electric switch, and the pressure adjustment(s) are exposed for easy wiring and adjustment of the pressure setting. The die cast cover is equipped with captive stainless steel screws that retain the cover gasket when the cover is removed. Other useful options can easily be specified with this model.

OTHER 2PS MODELS ARE AVAILABLE...

The modular design of pressure-sensing elements used in the 2PS series switches allows a variety of models for different pressure applications. These applications include High Pressure, Differential Pressure, Vacuum, and Vacuum-Pressure models using diaphragms, bellows, and pistons for actuation. See individual information sheets describing these models.

SPECIFICATIONS

Maximum Ambient Temperature: 180°F
Minimum Ambient Temperature: -20°F
Pressure Connection: ¼ NPT
Electrical Connection: 1/2 NPT
Housing: Diecast Aluminum - Painted per ASTM B117
Deadband: Fixed
Sensitivity: 1/2% of range (for SPDT)
Drift: <1% of range (100,000 operations)
Weight: Approx. 1.5 lbs.
Contact Ratings: 15A - 125, 250, 480 VAC
Port Fitting Material: Anodized Aluminum
Trim Material: Anodized Aluminum
Diaphragm Material: Buna N
Set Point Adjustment: Screw type, field adjustable from 10 to 100% of range
No. Contacts: One S.P.D.T.
Contact Listings: UL Recognized, CSA Certified

Solon Manufacturing Company

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2PS/70 Pressure Switch Diaphragm Sensing Element

INSTALLATION

MOUNTING:

The 2PS models will operate satisfactorily in any position; however, mounting the device vertically will allow the easiest adjustability and reduce sediment in the sensing chambers.

PIPING:

While we do not recommend any specific method of piping, provisions for isolating the device for testing should be provided in the pipe system during installation. Switches connected to steam lines should have a "Pig Tail" or condensate trap installed in the line to the switch.

WIRING:

The "Normally Open" (NO) and "Normally Closed" (NC) terminals of the MICRO SWITCH show the position of the contacts in the unactuated position.

CAUTION: When wiring Solon Pressure Switches, avoid large loops of wire between the terminals of the MICRO SWITCH/S and conduit outlet. Wires which contact the movable parts of the pressure switch mechanism will cause a shift in the settings of the pressure switch. Neatly done wiring will produce the desired results. Avoid large diameter wires which are difficult to manipulate in the housing. We recommend the use of No.18 Machine Tool Wire. Avoid the use of a large screwdriver when tightening or loosening the terminal screws of the MICRO SWITCH. Do not push hard against the terminals with the screwdriver or overtorque the screws. Before operation we recommend the inspection of any pre-wired pressure switch, which may be part of an assembly, to insure the wires do not touch any of the movable parts of the mechanism. Further, any time the cover of the pressure switch is removed, the wiring should be inspected to insure that no wires are touching the movable parts of the mechanism.

OPERATION

The pressure switch must be supplied with pressure and electricity before operation. Periodic testing will insure the pressure switch maintains its intended function. Calibration and Test Procedures are addressed in another section of this manual. Solon recommends that the covers of all pressure switches be maintained in place while the pressure switch is in operation.

Set point Adjustment:

Set point adjustments are made by turning the 11/32" hex nut on the spring stud. Use an 11/32" nut driver to reach the adjustment nut. Turn the nut clock-wise to increase the pressure setting.

If unit has been factory set, it will have a tag noting the set point. If no set point was specified by the customer, the set point will be adjusted to approximately 1/3 of the range.

TESTING

TEST EQUIPMENT:

Reliable testing will require the following:

1. An accurate gauge suitable for the range of switch being tested.
2. A sensitive pressure source.
3. A light source to indicate switch action.

Use of Light Source:

Solon recommends that a test light be used to indicate the opening or closing of MICRO SWITCH contacts.

These test lights can be battery operated; however, if testing proceeds with the circuits live, a suitable light must be used which is compatible with the voltage supplied to the pressure switch.

CAUTION: When testing with live circuits, an accidental short circuit across the MICRO SWITCH terminals will burn the contacts of the MICRO SWITCH rendering it useless. A Volt-Ohm-Milliammeter is not recommended for testing the opening or closing of MICRO SWITCH contacts.

Test Lights - For test bench or field testing, an ordinary flash light with test leads is acceptable. For accuracy in testing and calibration, the test lights must be located adjacent to the gauge so they can be seen out of the corner of the eyes while the main focus of the eyes is on the gauge.