

2PS Pressure Switch Diaphragm Sensing Element

Ranges from 2 to 300 PSI
Rugged NEMA 4X, 12 & 13 Housing
One or Two SPDT Contacts
Various Wetted Materials Available

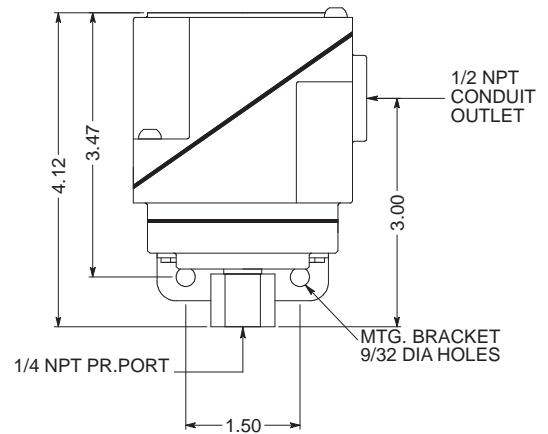
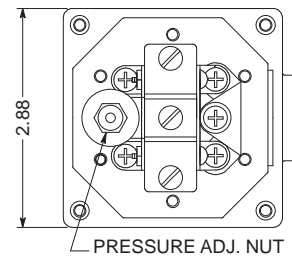


GENERAL DESCRIPTION

The 2PS 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 can be supplied with one S.P.D.T. electric switch or two S.P.D.T. electric switches that are independently adjustable. The unit can be supplied with no housing, or 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(es), 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. See the Special Features section on page 2 for special wetted materials and options for particular applications.

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

PHYSICAL DATA (Standard)

-see back for special features

Maximum Ambient Temperature: 180°F

Minimum Ambient Temperature: -20°F

Pressure Connection: 1/4 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: Brass

Trim Material: Anodized Aluminum

Diaphragm Material: Buna N

Set Point Adjustment: Screw type, field adjustable from 10 to 100% of range

No. Contacts: One or Two S.P.D.T.

Contact Listings: UL Recognized, CSA Certified

Solon Manufacturing Company

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ORDERING A SWITCH

2PS

Pressure Switch

Diaphragm Sensing Element

1. SPECIFY A MODEL NUMBER

2PS **W** **1** **SST** **2**

MODEL SERIES

HOUSING

- '1' - NO HOUSING
- W - WATERTIGHT - NEMA 4X, 12 & 13

NUMBER OF ELECTRIC SWITCHES

- 1 - ONE S.P.D.T.
- 2 - TWO S.P.D.T. - (SWITCH TYPE "5" ONLY)

SPECIAL FEATURES

- M - 1/2 NPT MALE PIPE MOUNTING
- O - HIGH OVERPRESSURE - INCREASES MAX. PRESSURE TO 1000 PSI FOR RANGES 0-2 PSI TO 0-20 PSI; MAX. PRESSURE IS 1500 PSI FOR RANGES 0-50 PSI AND UP
- Q - DOUBLE SNAP ACTING BELLEVILLE SPRING - TO PROVIDE POSITIVE SETPOINT ACCURACY IN HIGH VIBRATION APPLICATIONS
- SS - STAINLESS STEEL WETTED TRIM MATERIAL
- SN - BRASS WETTED TRIM MATERIAL
- SI - TEFLON WETTED TRIM MATERIAL
- SY - PVC WETTED TRIM MATERIAL
- T - TEFLON PROTECTED DIAPHRAGM
- U - ADDITIONAL PAINTING AFTER ASSEMBLY
- V - HIGH TEMPERATURE SERVICE - INCREASED FROM 180°F TO 250°F AMBIENT
- Z - VITON DIAPHRAGM MATERIAL

TYPE OF ELECTRIC SWITCHES

- 1 - LOW DEADBAND
15A - 125, 250, 480 VAC
- 2 - STANDARD DEADBAND
15A - 125, 250, 480 VAC; 0.5A - 125 VDC
- 3 - HIGH DC RATED (MAGNETIC BLOWOUT)
10A - 125 VDC; 3A - 250 VDC
- 5 - SUB MINIATURE SWITCH - 2 S.P.D.T.
5A - 125, 250 VAC; 0.5A - 125 VDC
- 6 - GOLD CONTACT -
1A - 125 VAC

* SPECIAL FEATURES SUCH AS STAINLESS TAGGING, OR SPECIAL WETTED PARTS; KYNAR, KALREZ, HASTELLOY, ETC. ARE AVAILABLE ON REQUEST. CONSULT FACTORY FOR CAPABILITIES AND PRICING FOR ANY FEATURES NOT SHOWN.

2. SPECIFY A RANGE

ADJUSTABLE PRESSURE RANGE	MAXIMUM DEADBAND		MAX. WORKING PRESSURE
	TYPE "2"	TYPE "5"	
0-2 PSI	.25 PSI	.23 PSI	20 PSI
0-5 PSI	.27 PSI	.50 PSI	20 PSI
0-10 PSI	.34 PSI	.90 PSI	50 PSI
0-20 PSI	.50 PSI	1.9 PSI	50 PSI
0-50 PSI	1.6 PSI	6 PSI	250 PSI
0-100 PSI	1.9 PSI	8.3 PSI	250 PSI
0-200 PSI	4.4 PSI	16 PSI	500 PSI
0-300 PSI	5.3 PSI	22 PSI	500 PSI

DEADBAND NOTES

The deadbands listed in the tables are the maximum switch differentials when the standard (Type "2" or Type "5") electric switch is used.

Deadband is affected by the type of electric switch used. Each type of electric switch's effect on deadband is as follows:

Type "1" - Low Deadband - Use ½ TYPE 2 table values.

Type "2" - Std. Deadband - Use table values.

Type "3" - High DC Rated - Multiply TYPE 2 table values by two.

Type "5" - Sub Miniature - 2 S.P.D.T. - Use TYPE 5 table values.

Type "6" - Gold Contact - Use TYPE 2 table values.

INSTALLATION NOTES

Orientation - The 2PS will operate satisfactorily in any position, however, mounting the device vertically will allow the easiest adjustability and reduce sediment in the pressure chamber.

Wiring - Switches may be wired to 'normally open' or 'normally closed' terminals on electric switch(es). Single switch units have screw terminals while dual switch versions use a screw terminal block.

Pressure Connection - 1/4 NPT female is standard. 1/2 NPT male is available ("M" option).

Adjustment - Turn pressure adjustment nut(s) clockwise to increase setpoint. Detailed installation & calibration instructions are provided for every shipment. Factory setting is available at no charge.

Wiring Schematic

