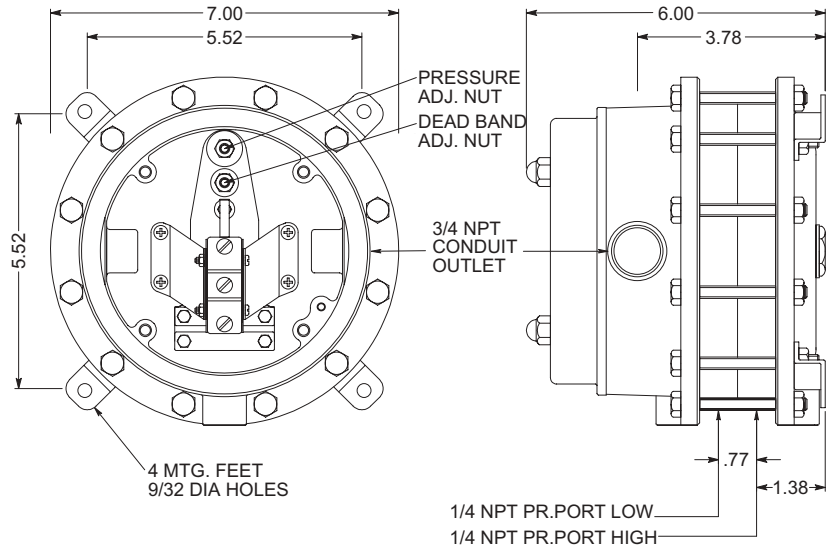




- Ranges 0-6 WC/DP TO 0-200 WC/DP
- Rugged NEMA 4X & 12 Housing Std.
- Class I, Div. I, Gr. C & D Available
- Up to Four SPDT Contacts
- Various Wetted Materials Available

MODEL SERIES 7PSDO Differential Pressure Switch Diaphragm Sensing Element



GENERAL DESCRIPTION

The Model Series 7PSDO Differential Pressure Switch is designed to sense low differential pressures between high pressure sources. The high pressure seals are opposed stainless steel bellows assemblies, while the differential pressure is sensed by a diaphragm clamped between these bellows assemblies. The diaphragm has a large area to accurately sense Low Differential Pressure, and during an over-pressure the diaphragm is fully supported. The design is symmetric such that both the HIGH or LOW pressure sides of the element can withstand the maximum pressure with the opposite side at atmospheric pressure. The rugged cast aluminum housing incorporates Solon's standard "frictionless" switching mechanism, and can be specified 7PSWDO, watertight; or 7PSXDO, explosion proof. The housing is large enough to accommodate up to four full size S.P.D.T. electric switches. The standard differential pressure-sensing element is constructed of a strong aluminum alloy using a Buna N elastomer diaphragm. Other diaphragm and wetted area materials are available. See the Special Features section on page 2 for other materials and other options that are useful for particular applications.

SPECIFICATIONS

PHYSICAL DATA (Standard)

-see page 2 for special features

Maximum Ambient Temperature: 180°F

Minimum Ambient Temperature: -20°F

Pressure Connection: 1/4 NPT

Electrical Connection: 3/4 NPT

Housing: Cast Aluminum

Deadband: Fixed

Sensitivity: 1/2% of range (for one SPDT Switch)

Drift: <1% of range (100,000 operations)

Weight: Approx. 6 lbs.

Contact Ratings: 15A - 125, 250, 480 VAC

Port Material: Aluminum

Diaphragm Material: Buna N

Set Point Adjustment: Screw type, field adjustable

No. Contacts: 1, 2, 3 or 4 S.P.D.T or 1 D.P.D.T.

Contact Listings: UL Recognized, CSA Certified



Underwriters Laboratories, Inc. Listed:
Industrial Controls Equipment Type 4 & 12, File E130423,
Pressure Operated Switch for Hazardous Locations,
Class I, Groups C & D; Class II, Groups E, F, & G File E65371.



Canadian Standards Association Certified:
Industrial Control Equipment Type 4 & 12, LR88975.
Switches Pressure Type for Hazardous Locations,
Class I, Groups C & D; Class II, Groups E, F & G, LR88975.

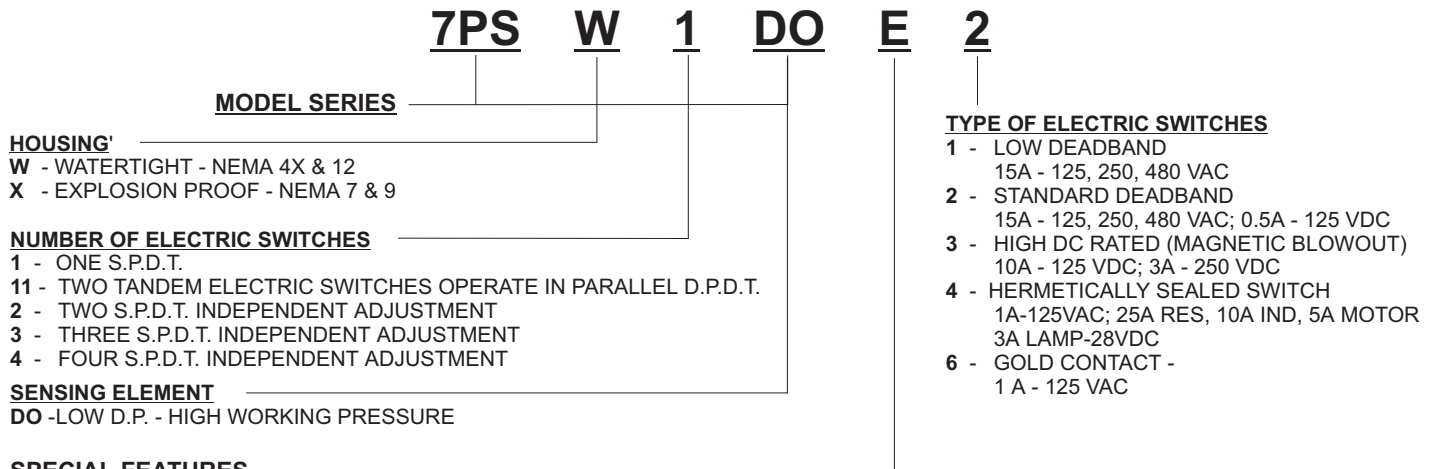
Solon Manufacturing Company

425 Center Street, P.O. Box 207, Chardon, Ohio 44024
(440) 286-7149 800-323-9717 FAX (440) 286-9047
www.solonmfg.com

ORDERING A SWITCH

MODEL SERIES 7PSDO Differential Pressure Switch Diaphragm Sensing Element

1. SPECIFY A MODEL NUMBER



SPECIAL FEATURES

- NO SPECIAL FEATURES
- A** - ADJUSTABLE DEADBAND
- E** - EXTERNAL PRESSURE ADJUSTMENT
- EE** - TWO EXTERNAL PRESSURE ADJUSTMENTS
- L** - ONE INDICATOR LIGHT (NOT ON X HOUSING)
- LL** - TWO INDICATOR LIGHTS (NOT ON X HOUSING)
- M** - MALE PIPE MOUNTING 1/2 NPT
- P** - PANEL MOUNTING
- R>** - MANUAL RESET, SWITCH ON INCR. PR.
- R<** - MANUAL RESET, SWITCH ON DECR. PR.
- SS** - SPECIAL TRIM BASE 316 STAINLESS STEEL
- T** - TEFLON PROTECTED DIAPHRAGM
- U** - ADDITIONAL PAINTING AFTER ASSEMBLY
- V** - HIGH TEMPERATURE SERVICE - NOT A UL OR CSA LISTED FEATURE
- Z** - VITON DIAPHRAGM

* SPECIAL FEATURES SUCH AS STAINLESS TAGGING, OR SPECIAL WETTED PARTS; BRASS, 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 WC		MAX. WORKING PRESSURE
	TYPE "1"	TYPE "2"	
0-6 WC/DP	1.1	2.2	1500 PSI
0-15 WC/DP	1.2	2.3	1500 PSI
0-30 WC/DP	1.2	2.3	1500 PSI
0-60 WC/DP	1.3	2.5	1500 PSI
0-100 WC/DP	1.5	2.9	1500 PSI
0-150 WC/DP	1.7	3.4	1500 PSI
0-200 WC/DP	1.9	3.8	1500 PSI

DEADBAND NOTES

The deadbands listed in the tables are the maximum switch differentials when the Type "1" or Type "2" 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 table values.

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

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

Type "4" - Hermetically Sealed Switch - Multiply TYPE 2 table values by six.

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

For D.P.D.T., 2, 3 or 4 S.P.D.T. switches multiply calculated value from above by 1.5 to 2.

INSTALLATION NOTES

Orientation - The 7PSDO 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).

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

