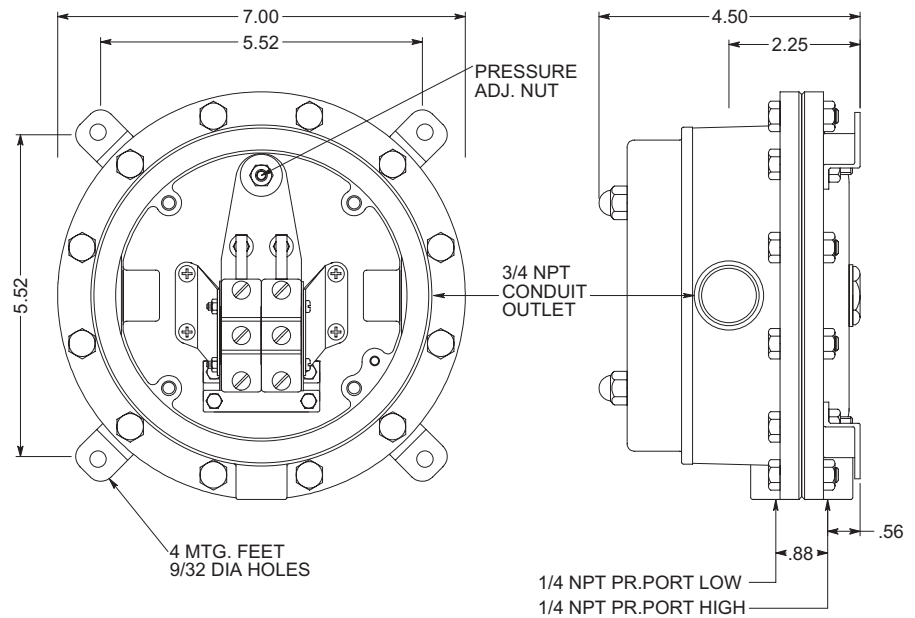




- Ranges 0-1.5 WC/DP TO 0-150 WC/DP
- Rugged NEMA 4X & 12 Housing Std.
- Class I, Div. I, Gr. C & D Available
- Up to Four SPDT Contacts
- Various Wetted Materials Available

MODEL SERIES 7PSD Differential Pressure Switch Diaphragm Sensing Element



GENERAL DESCRIPTION

The Model Series 7PSD Pressure Switch is designed for low differential pressure applications. This device employs Solon's sensitive and rugged switching mechanism. Unlike most "inline" pressure switch designs, the Solon mechanism is frictionless and amplifies the movement of a large area, differential pressure diaphragm assembly. This results in improved life, repeatability, and lower deadbands. The rugged, cast aluminum housing can be specified 7PSW, watertight; or 7PSX, explosion proof. The housing is large enough to accommodate up to four full size S.P.D.T. electric switches. These electric switches are available in a variety of configurations including adjustable switch differential (dead band), D.P.D.T., High-Low operation, and manual reset. In addition many switching configurations can be supplied with electric switches that have:

- Low switch differentials (dead band).
- High direct current ratings.
- Gold contacts.
- Hermetically sealed contacts.

The standard pressure-sensing element uses strong Buna N elastomer diaphragms. Other diaphragm 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.

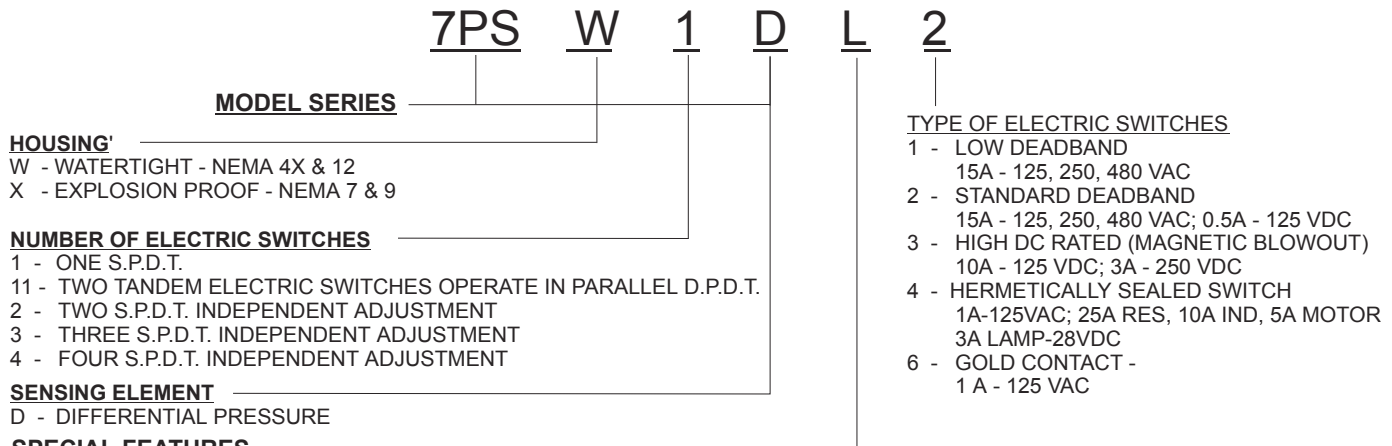
Solon Manufacturing Company

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 7PSD Differential Pressure Switch Diaphragm Sensing Element

1. SPECIFY A MODEL NUMBER



* 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 WC		MAX. WORKING PRESSURE
	TYPE "1"	TYPE "2"	
0-1.5 WC/DP	.17"WC	-	25 PSI
0-3 WC/DP	.18"WC	-	25 PSI
0-6 WC/DP	.23"WC	.45"WC	25 PSI
0-15 WC/DP	.33"WC	.65"WC	25 PSI
0-30 WC/DP	.6"WC	1.2"WC	25 PSI
0-60 WC/DP	.7"WC	1.4"WC	25 PSI
0-100 WC/DP	.8"WC	1.6"WC	25 PSI
0-150 WC/DP	1.2"WC	2.5"WC	25 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 TYPE 1 table values.

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

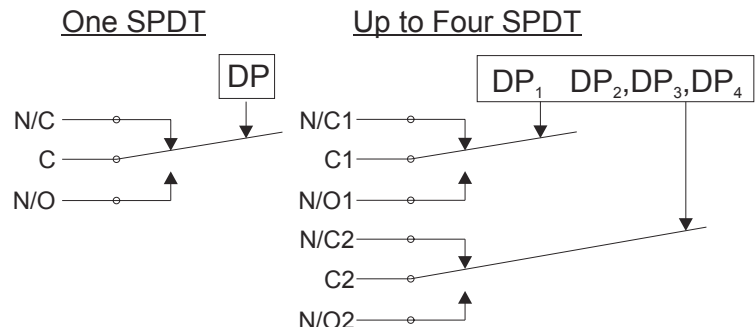
Type "3" - High DC Rated - Multiply TYPE 2 table values by two.

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.

Wiring Schematic



INSTALLATION NOTES

Orientation - The 7PSD 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.

SOLON
800-323-9717