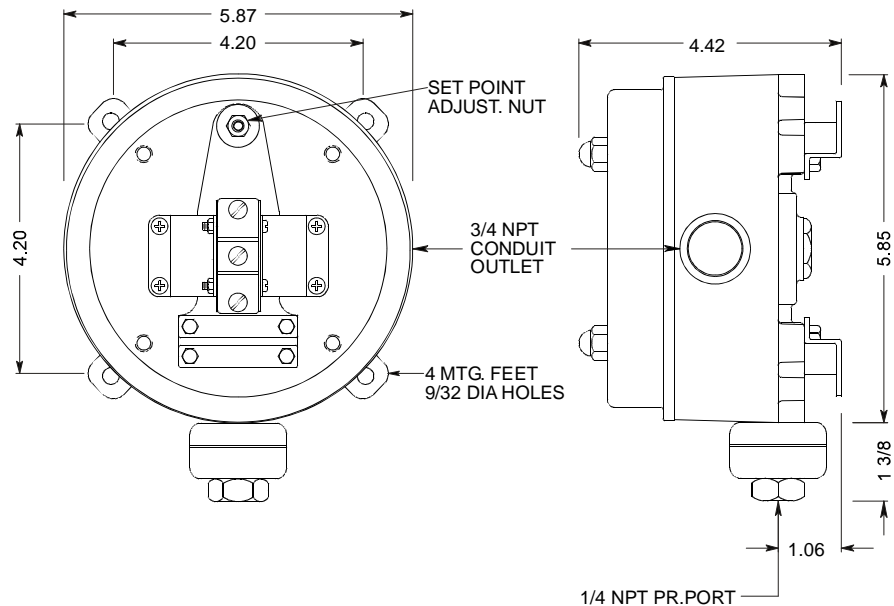




- Ranges 0-30 IN HG and -30/0/30 IN HG
- Rugged NEMA 4X & 12 Housing Std.
- Class I, Div. I, Gr. C & D Available
- Up to Four SPDT Contacts
- 316 Stainless Steel Wetted



MODEL SERIES 6PSB Vacuum Switch Bellows Sensing Element



GENERAL DESCRIPTION

The Model Series 6PSB Vacuum Switch is constructed using a rugged cast aluminum housing that incorporates Solon's standard "frictionless" switching mechanism actuated by a 316 stainless steel bellows assembly. The housing can be specified 6PSWB, watertight; or 6PSXB, 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., 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.

Vacuum-pressure switches are useful when a setpoint very close to zero is needed or if the engineer is not certain whether the switch should have a vacuum or a pressure setting. Note that the 6PSB vac-pr switch should normally either be SPDT or DPDT. Please consult the factory for multiple contact applications. See the Special Features section on page 2 for other 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:** -40°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. 5 lbs.
- Contact Ratings:** 15A - 125, 250, 480 VAC
- Port Material:** Stainless Steel
- Bellows Material:** Stainless Steel
- 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 6PSB

Vacuum Switch

Bellows Sensing Element

1. SPECIFY A MODEL NUMBER

6PS W 1 B U 2

MODEL SERIES

HOUSING

- W - WATERTIGHT - NEMA 4X & 12
- X - EXPLOSION PROOF - NEMA 7 & 9

NUMBER OF ELECTRIC SWITCHES

- 1 - ONE S.P.D.T.
- 11 - TWO TANDEM ELECTRIC SWITCHES OPERATE IN PARALLEL D.P.D.T.
- 2 - TWO S.P.D.T. INDEPENDENT ADJUSTMENT
- 3 - THREE S.P.D.T. INDEPENDENT ADJUSTMENT
- 4 - FOUR S.P.D.T. INDEPENDENT ADJUSTMENT

SENSING ELEMENT

- B - BELLOWS ACTUATED

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
- Q - DOUBLE SNAP ACTION (BELLEVILLE SPRING)
- R> - MANUAL RESET, SWITCH ON INCR. PR.
- R< - MANUAL RESET, SWITCH ON DECR. PR.
- U - ADDITIONAL PAINTING AFTER ASSEMBLY
- V - HIGH TEMPERATURE SERVICE - NOT A UL OR CSA LISTED FEATURE

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
- 4 - HERMETICALLY SEALED SWITCH
1A-125VAC; 25A RES, 10A IND, 5A MOTOR
3A LAMP-28VDC
- 6 - GOLD CONTACT -
1 A - 125 VAC

* SPECIAL FEATURES SUCH AS STAINLESS TAGGING, APPLICATION OF DIAPHRAGM SEALS, 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 PSI		MAX. WORKING PRESSURE
	TYPE "1"	TYPE "2"	
0-30 IN HG	1.0	2.0	50 PSI
-30/0/30 IN HG	1.3	2.6	50 PSI

DEADBAND NOTES

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

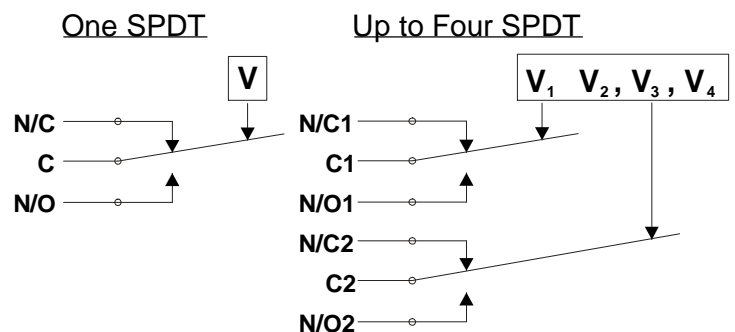
Orientation - The 6PSB will operate satisfactorily in any position, however, mounting the device vertically will allow the easiest adjustability and reduce sediment in the bellows.

Wiring - Switches may be wired to 'normally open' or 'normally closed' terminals on electric switch(es).

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

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

Wiring Schematic



SOLON
800-323-9717

6PSB vac.CDR 3/8/06