

2WPS Series

PRESSURE SWITCH - BELLOWS ACTUATED

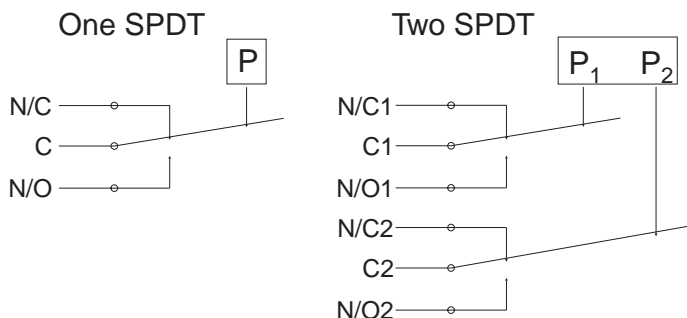


- Ranges from 10 to 3000 PSI
- Rugged NEMA 4X, 12 & 13 Housing
- One or Two SPDT Contacts
- All Metal Sensing Element
- Calibrated Setpoint Scale Available

Description

The Winters' Series 2WPS Pressure Switch (Bellows Sensing) features a rugged, compact, sensitive switching mechanism actuated by a bellows assembly. This mechanism can be supplied with one S.P.D.T. electric switch or two S.P.D.T. electric switches that are independently adjusted. The 2WPS (Bellows Sensing) can be supplied as a basic unit 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/s, and the pressure adjustments 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. A useful feature of the single switch enclosed model is a calibrated pressure adjustment that aligns with a numerical pressure indicating scale showing the set point range. The bellows pressure sensing elements are constructed from stainless steel and are sized for a wide variety of pressure ranges. Other useful options can easily be specified with this model.

Wiring Schematic



Common applications include: Tank and compressor level and precision control, hydraulic systems, pumping controls and hazardous area lift station controls.

INSTALLATION NOTES

Orientation - The 2WPS Bellows 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. Adjustment setting is available at no charge.

Specifications - 2WPS (Bellows Actuated)

Housing:	Diecast Aluminum
Pressure Connection:	1/4" NPT
Electrical Connection:	1/2" NPT
Port Material:	Stainless with Silver Braze
Bellows Material:	Stainless Steel
Deadband:	Fixed
Sensitivity:	1/2% of range (for SPDT)
Drift:	<1% of range (100,000 operations)
Contact Ratings:	15A - 125, 250, 480 VAC
Set Point Adjustment:	Screw type, field adjustable
No. Contacts:	One or Two S.P.D.T.
Contact Listings:	UL Recognized, CSA Certified
Maximum Ambient Temperature:	180°F
Minimum Ambient Temperature:	-40°F
Weight:	Approx. 1.8 lbs.



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U.S.A. Office: 600 Ensminger Road • Buffalo • NY • 14150 • (716) 874-8700 • Fax: (716) 874-8800

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2WPS Series

PRESSURE SWITCH - BELLOWS ACTUATED

How To Order: Specify Product Code

2WPS W 1 B U 2

MODEL SERIES

HOUSING

'-' - NO HOUSING

W - WATERTIGHT - NEMA 4, 12 & 13

NUMBER OF ELECTRIC SWITCHES

1 - ONE S.P.D.T.

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

SENSING ELEMENT

B - BELLOWS SENSING ELEMENT (STANDARD)

SPECIAL FEATURES

M - 1/2 NPT MALE PIPE MOUNTING

Q - DOUBLE SNAP ACTING BELLEVILLE SPRING - TO PROVIDE POSITIVE SETPOINT

ACCURACY IN HIGH VIBRATION APPLICATIONS

U - SPECIAL EPOXY PAINT

V - HIGH TEMPERATURE SERVICE - INCREASED FROM 180°F TO 250°F AMBIENT

TYPE OF ELECTRIC SWITCHES

1 - LOW DEADBAND

15A - 125, 250, 480 VAC

2 - STANDARD DEADBAND

15A - 125, 250, 480 VAC; 0.5A - 125 V

3 - HIGH DC RATED (MAGNETIC BLOW)

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 -

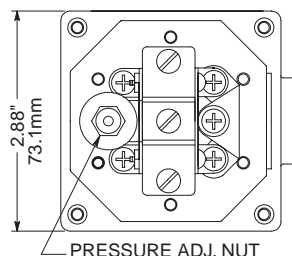
1 A - 125 VAC

Ranges

Bellows Actuated

2 W P S 1 B

Adjustable Pressure Range	Fixed Switch Dead Bands		Maximum Pressure PSI
	Low	STD	
0-10 psi	.40#	.80#	300
0-20 psi	.45	.90	300
0-50 psi	.50	1.0	300
0-100 psi	.75	1.5	300
0-250 psi	3.0	6.0	1500
0-500 psi	4.0	8.0	1500
0-750 psi	8.0	16.0	2500
0-1000 psi	9.5	19.0	2500
0-1500 psi	29.0	58.0	5000
0-3000 psi	33.0	66.0	5000



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 switch used. Each type of switch's effect on deadband is as follows:

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

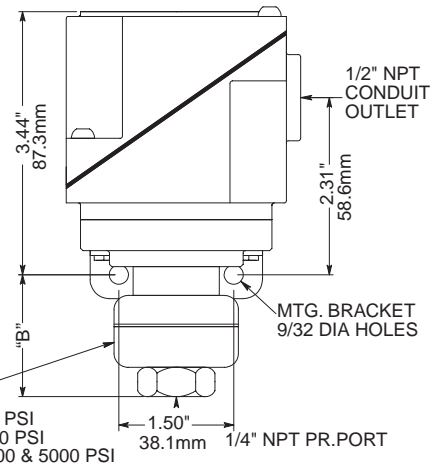
Type "2" - Std. Deadband - Use table values.

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.

Please note that Type "5" is the only available option on 2WPS Switches that requires two Electric Switches.



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