

2WPS Series

PRESSURE SWITCH - DIAPHRAGM ACTUATED



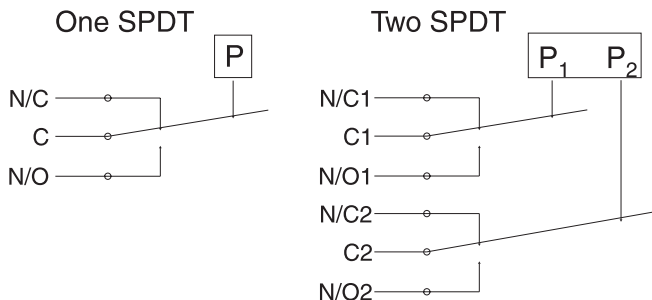
- Ranges from 2 to 300 PSI
- Rugged NEMA 4X, 12 & 13 Housing
- One or Two SPDT Contacts
- Various Wetted Materials Available
- Field Adjustable Set Points

Description

The Winters' Series 2WPS Pressure Switch (Diaphragm Actuated) features a rugged, compact, sensitive switching mechanism actuated by a diaphragm 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 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.

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

Wiring Schematic



INSTALLATION NOTES

Orientation - The 2WPS will operate satisfactorily in any position, however, mounting the device vertically will allow the easiest adjustability and reduce sediment in the pressure chamber. Not recommended for use on diaphragm seals.

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 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 (Diaphragm Actuated)

Housing:	Diecast Aluminum
Pressure Connection:	1/4" NPT female
Electrical Connection:	1/2" NPT
Port Material:	Brass & Aluminum
Diaphragm Material:	Buna N
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 (82°C)
Minimum Ambient Temperature:	-20°F (-20°C)
Weight:	Approx. 1.5 lbs.



2WPS Series

PRESSURE SWITCH - DIAPHRAGM ACTUATED

How To Order: Specify Product Code

2WPS W 1 SST 2

SERIES

HOUSING
 ' - NO HOUSING
 W - WATERTIGHT - NEMA 4X, 12 & 13
 X - EXPLOSION PROOF NEMA 7+9

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
 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 MINIATURTE SWITCH - 2 S.P.D.T.
 5A - 125, 250 VAC; 0.5A - 125 VDC
 6 - GOLD CONTACT -
 1 A - 125 VAC

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

Ranges			
DIAPHRAGM ACTUATED			
Adjustable Pressure Range	Maximum DEADBAND		Maximum Working Pressure
	Type "2"	Type "5"	
PRESSURE			
0-2 PSI	.12	.23	20
0-5 PSI	.27	.50	20
0-10 PSI	.34	.90	50
0-20 PSI	.50	1.9	50
0-50 PSI	1.6	6	250
0-100 PSI	1.9	8.3	250
0-200 PSI	4.4	16	500
0-300 PSI	5.3	22	500
VACUUM			
0-5 IN / HG	.27"	.35"	20
0-15 IN / HG	0.34	0.67	20
0-30 IN / HG	0.45	0.9	20
30P-30V / HG	0.7	1.4	20
HIGH OVER-PRESSURE			
0-10 PSI	.25#	.50#	1000
0-20 PSI	.30	.60	1000
0-50 PSI	1.0	2.0	1500
0-100 PSI	1.2	2.5	1500
0-200 PSI	1.5	3.0	1500
0-300 PSI	1.8	3.6	1500

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 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.

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

