

2WPS Series

DIFFERENTIAL PRESSURE SWITCH - DIAPHRAGM ACTUATED

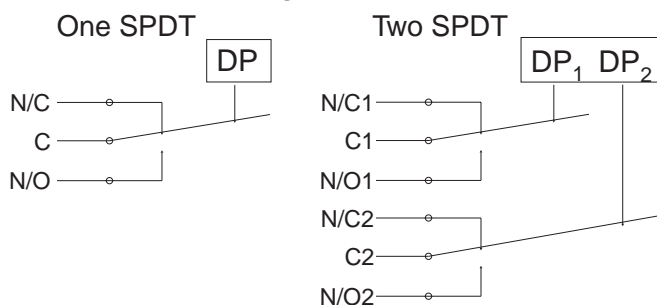


- Ranges from 10 to 100 PSID
- Rugged NEMA 4X, 12 & 13 Housing
- One or Two SPDT Contacts
- Various Wetted Materials Available
- Calibrated Setpoint Scale Available

Description

The Winters' Series 2WPS Differential Pressure Switch features a rugged, compact, sensitive switching mechanism actuated by a differential 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 mechanism, when attached to the differential diaphragm pressure sensing element, can be supplied as a basic unit with no housing, or enclosed in a rugged die cast NEMA 4X, 12 and 13 housing. The enclosed model is designated 2WPS (Differential). With the cover of the enclosure removed, the terminals of the electric switch/s, and the pressure adjustment/s are exposed for easy wiring and adjustment of the differential 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 including the DO option for applications requiring higher working pressures.

Wiring Schematic



Common applications for the 2WPS (Differential) include: pump/compressor activation and filtration processing.

INSTALLATION NOTES

Orientation - The 2WPS Differential 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 Connections - 1/8 NPT female is standard.

Adjustment - Turn differential 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 (Differential)

Housing:	Diecast Aluminum
Pressure Connections:	1/8" NPT female
Electrical Connection:	1/2" NPT
Port Material:	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
Minimum Ambient Temperature:	-20°F
Weight:	Approx. 2 lbs.



Corporate Office: 121 Railside Road • Toronto • ON • M3A 1B2 • (416) 444-2345 • Fax: (416) 444-8979

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

www.winters.com • 1-800-WINTERS (946-8377)

2WPS Series

DIFFERENTIAL PRESSURE SWITCH - DIAPHRAGM ACTUATED

How to Order: Specify Product Code

2WPS W 1 D SST 2

MODEL SERIES _____

HOUSING _____
 ' ' - NO HOUSING
 W - WATERTIGHT - NEMA 4X, 12 & 13

NUMBER OF ELECTRIC SWITCHES _____
 1 - ONE S.P.D.T.
 2 - TWO S.P.D.T. - (SWITCH TYPE "5" ONLY)

SPECIAL FEATURES _____
 O - HIGH OVERPRESSURE - INCREASES MAX. STATIC PRESSURE TO 300 PSI
 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 - SPECIAL EPOXY PAINT
 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, HASTELLO, ETC. ARE AVAILABLE ON REQUEST. CONSULT WINTERS FOR CAPABILITIES AND PRICING FOR ANY FEATURES NOT SHOWN.

Ranges			
DIFFERENTIAL PRESSURE (DP)			
Adjustable Pressure Range	Maximum Deadband	Max. Working Pressure	
	Type "2"	Type "5"	
0-10 PSID	.40	1.0	100
0-20 PSID	.53	2.3	100
0-50 PSID			
DIFF. PR. (DP) HIGH MAX. PR.			
0-10 PSID	.20#	.40#	300
0-20 PSID	.26	.53	300
0-50 PSID	.45	.90	300
0-100 PSID	.70	1.3	300

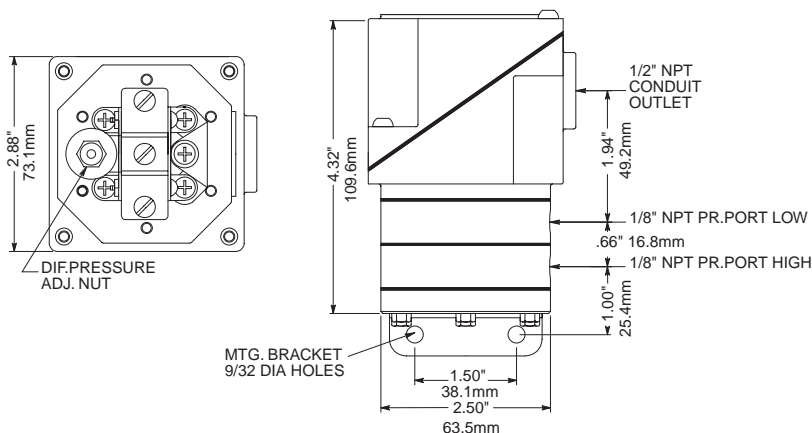
DEADBAND NOTES

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.



Corporate Office: 121 Railside Road • Toronto • ON • M3A 1B2 • (416) 444-2345 • Fax: (416) 444-8979

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

www.winters.com • 1-800-WINTERS (946-8377)