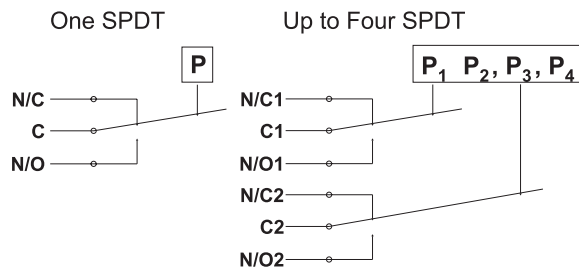**Ranges from 0-6" WC to 0-200" WC**
Rugged NEMA 4X and 12 housing standard
Class I, Div. I, Gr. C and D available
Up to four SPDT contacts
Various wetted materials available

Wiring Schematic

One SPDT   Up to Four SPDT

Installation Notes

Orientation - The 7WPSDO will operate satisfactorily in any position. However, mounting the device vertically will allow the easist 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 and calibration instructions are provided for every shipment. Setting adjustment is available at no charge.

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Viton® is a registered trademark of DuPont Performance Elastomers

Description & Features:

• High pressure seals are opposed stainless steel bellows assemblies, while the differential pressure is sensed by a diaphragm clamped between these bellows assemblies
• Diaphragm has a large area to accurately sense low differen tial pressure. During over-pressure the diaphragm is fully supported
• Design is symmetric such that both the high or low pressure sides of the element can withstand the maximum pressure with the opposite side at atmospheric pressure
• Rugged cast aluminum housing incorporates Winters' standard accurate switching mechanism, and can be specified watertight or explosion proof
• Housing is large enough to accommodate up to four full size SPDT electric switches
• Standard differential pressure-sensing element is constructed of a strong aluminum alloy using a Buna N elastomer diaphragm. Other diaphragm and wetted area materials are available
• 1 year warranty

Applications:

• Designed to sense low differential pressures between high pressure sources

Specifications	
Housing	Cast aluminum
Pressure Connection	$1/4$ NPT
Electrical Connection	$3/4$ NPT
Port Material	Aluminum
Diaphragm Material	Buna N, Teflon® protected Viton®
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	1, 2, 3 or 4 SPDT or 1 DPDT
Contact Listings	UL Recognized, CSA Certified
Maximum Ambient Temperature	180°F (82°C)
Minimum Ambient Temperature	-20°F (-29°C)
Weight	Approx. 6 lbs.

Differential Diaphragm Pressure Switch

Series Number (how to order)

7WPS   W   1   DO   E   2

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

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 ½ NPT
P - PANEL MOUNTING
R> - MANUAL RESET, SWITCH ON INCR. PR.
R< - MANUAL RESET, SWITCH ON DECR. PR.
SS - SPECIAL TRIM BASE 316 STAINLESS STEEL
T - TEFLON PROTECTED DIAPHRAGM
U - ADDITIONAL PAINTING AFTER ASSEMBLY
V - HIGH TEMPERATURE SERVICE
Z - VITON DIAPHRAGM

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

* SPECIAL FEATURES SUCH AS STAINLESS TAGGING, OR SPECIAL WETTED PARTS; BRASS, HASTELLOY, ETC. ARE AVAILABLE ON REQUEST. CONSULT WINTERS FOR CAPABILITES AND PRICING FOR ANY FEATURES NOT SHOWN.

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 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

Ranges			
Low DIFF. PR. (DP) High Max. (7WPSDO)			
Adjustable Pressure Range	Maximum Deadband WC		Maximum Working Pressure
	Type 2	Type 5	
Pressure			
0-6" WC	1.1	2.2	1,500
0-15" WC	1.2	2.3	1,500
0-30" WC	1.2	2.3	1,500
0-60" WC	1.3	2.5	1,500
0-100" WC	1.5	2.9	1,500
0-150" WC	1.7	3.4	1,500
0-200" WC	1.9	3.8	1,500

7.00"
177.7mm
5.52"
140.1mm
5.52"
140.1mm
PRESSURE ADJ. NUT
DEAD BAND ADJ. NUT
3/4" NPT CONDUIT OUTLET
4 MTG. FEET
9/32 DIA HOLES
6.00"
152.3mm
3.78"
152.3mm
.77"
19.5mm
1.38"
35.0mm
1/4" NPT PR.PORT LOW
1/4" NPT PR.PORT HIGH