

7WPS Series

PRESSURE SWITCH - DIAPHRAGM ACTUATED

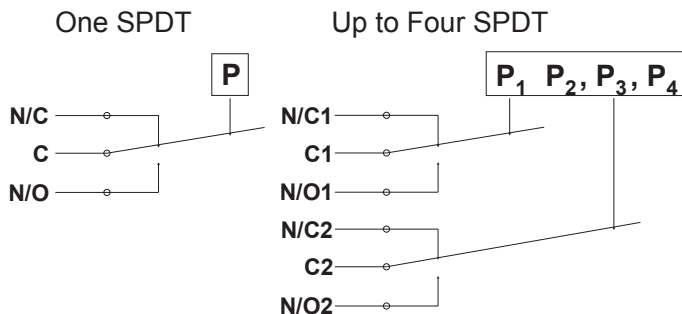


- Ranges from 1.5 W.C. To 0-150 W.C.
- Rugged NEMA 4X & 12 Housing Std.
- Class I, Div. I, Gr. C & D Available
- CSA Certified
- Up to Four SPDT Contacts
- Various Wetted Materials Available

Description

The 7WPS Pressure Switch, diaphragm actuated, is designed for low pressure applications. The rugged cast aluminum housing incorporates standard accurate switching mechanism actuated by a large area diaphragm. The housing can be specified watertight or 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., High-Low operation, 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. The standard pressure-sensing element uses a strong Buna N elastomer diaphragm. Other diaphragm and wetted area materials are available.

Wiring Schematic



INSTALLATION NOTES

Orientation - The 7WPS Diaphragm Actuated 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 Connection - 1/4 NPT female is standard. 1/2 NPT male is available ("M" option).

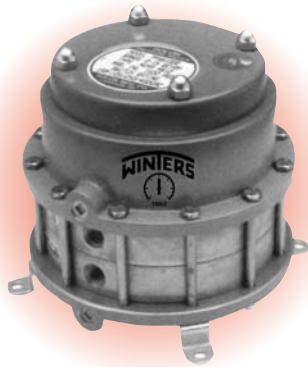
Adjustment - Turn pressure adjustment nut(s) clockwise to increase setpoint. Detailed installation & calibration instructions are provided for every shipment. Setting adjustment is available at no charge.

Specifications 7WPS (Diaphragm Actuated)

| | |
|-------------------------------------|-------------------------------------|
| Housing: | Cast Aluminum |
| Pressure Connection: | 1/4 NPT |
| Electrical Connection: | 3/4 NPT |
| Port Material: | Aluminum |
| Diaphragm Material: | Buna N |
| Deadband: | Fixed |
| Sensitivity: | 1/2% of range (for one SPDT Switch) |
| 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 S.P.D.T or 1 D.P.D.T. |
| Contact Listings: | UL Recognized, CSA Certified |
| Maximum Ambient Temperature: | 180°F |
| Minimum Ambient Temperature: | -20°F |
| Weight: | Approx. 6 lbs |

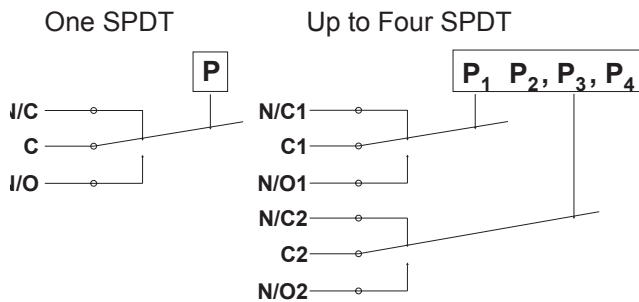
7WPS Series

DIFFERENTIAL PRESSURE SWITCH - DIAPHRAGM ACTUATED



- Ranges 0-1.5 WC/DP TO 0-150 WC/DP
- Rugged NEMA 4X & 12 Housing Std.
- Class I, Div. I, Gr. C & D Available
- CSA Certified
- Up to Four SPDT Contacts
- Various Wetted Materials Available

Wiring Schematic



INSTALLATION NOTES

Orientation - The 7WPSDO 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 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. Setting adjustment is available at no charge.

Description

The Winters 7WPS Differential Pressure Switch is designed for low differential pressure applications. The rugged cast aluminum housing incorporates Winters standard accurate switching mechanism actuated by a large area differential pressure diaphragm assembly. The housing can be specified watertight or 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., High-Low operation, 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. The standard pressure-sensing element uses a strong Buna N elastimer diaphragm. Other diaphragm materials are available.

Specifications - 7WPS Differential (Diaphragm Actuated)

| | |
|-------------------------------------|-------------------------------------|
| Housing: | Cast Aluminum |
| Pressure Connection: | 1/4 NPT |
| Electrical Connection: | 3/4 NPT |
| Port Material: | Aluminum |
| Diaphragm Material: | Buna N |
| Deadband: | Fixed |
| Sensitivity: | 1/2% of range (for one SPDT Switch) |
| 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 S.P.D.T or 1 D.P.D.T. |
| Contact Listings: | UL Recognized, CSA Certified |
| Maximum Ambient Temperature: | 180°F |
| Minimum Ambient Temperature: | -20°F |
| Weight: | Approx. 6 lbs. |



7WPS Series

DIFFERENTIAL PRESSURE SWITCH - DIAPHRAGM ACTUATED

How to Order: Specify Product Code

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 1/2 NPT
- P - PANEL MOUNTING

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, OR SPECIAL WETTED PARTS; BRASS, HASTELLOY, ETC. ARE AVAILABLE ON REQUEST. CONSULT WINTERS FOR CAPABILITIES AND PRICING FOR ANY FEATURES NOT SHOWN.

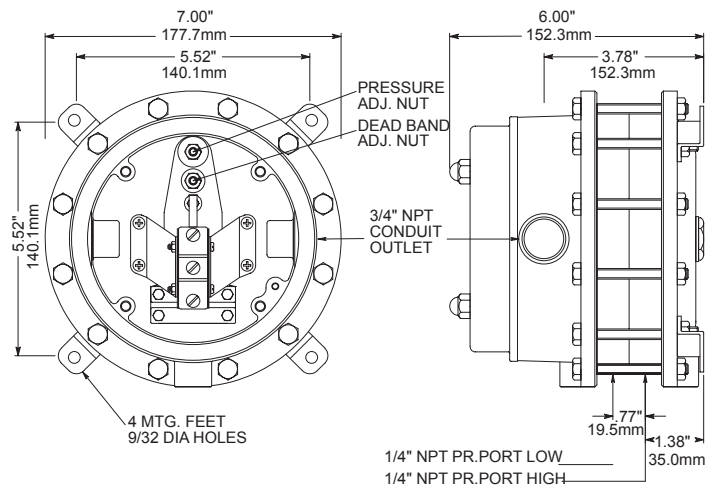
DEADBAND NOTES

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 | | | |
|---------------------------|---------------------|----------|--------------------------|
| DIAPHRAGM ACTUATED | | | |
| Adjustable Pressure Range | Maximum DEADBAND WC | | Maximum Working Pressure |
| | Type "2" | Type "5" | |
| PRESSURE | | | |
| 0-1.5 WC/DP | .17 | - | 50 PSI |
| 0-3 WC/DP | | - | 50 PSI |
| 0-6 WC/DP | .18 | - | 50 PSI |
| 0-15 WC/DP | .23 | .45 | 50 PSI |
| 0-30 WC/DP | .6 | 1.2 | 50 PSI |
| 0-60 WC/DP | .7 | 1.4 | 50 PSI |
| 0-100 WC/DP | .8 | 1.6 | 50 PSI |
| 0-200 WC/DP | 1.2 | 2.5 | 50 PSI |



7WPS Series

PRESSURE SWITCH - DIAPHRAGM ACTUATED

How to Order: Specify Product Code

7WPS W 1 SST 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

SPECIAL FEATURES

- NO SPECIAL FEATURES
- A - ADJUSTABLE DEADBAND
- E - EXTERNAL PRESSURE ADJUSTMENT
- EE - TWO EXTERNAL PRESSURE ADJUSTMENTS
- F - FLANGE BASE MOUNTING
- G - DOUBLE DIAPHRAGM EXTRA SENSITIVE LOW PR
- J - SAFETY SEAL
- 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
- R> - MANUAL RESET, SWITCH ON INCR. PR.
- R< - MANUAL RESET, SWITCH ON DECR. PR.
- SS - SPECIAL TRIM BASE 316 STAINLESS STEEL
- SI - SPECIAL TRIM BASE TEFLON (NOT ON X SWITCHES)
- SY - SPECIAL TRIM BASE PVC (NOT ON X SWITCHES)
- T - TEFLON PROTECTED DIAPHRAGM
- U - SPECIAL EPOXY PAINT
- 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
 - 1A-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; KYNAR, KALREZ, HASTELLOY, ETC. ARE AVAILABLE ON REQUEST. CONSULT WINTERS FOR CAPABILITIES 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 | | | |
|---------------------------|------------------|----------|--------------------------|
| DIAPHRAGM ACTUATED | | | |
| Adjustable Pressure Range | Maximum DEADBAND | | Maximum Working Pressure |
| | Type "2" | Type "5" | |
| PRESSURE | | | |
| 0-1.5 WC | .15 | - | 25 |
| 0-3 WC | .16 | - | 25 |
| 0-6 WC | .2 | .4 | 25 |
| 0-15 WC | .3 | .6 | 25 |
| 0-30 WC | .6 | 1.1 | 25 |
| 0-60 WC | .7 | 1.4 | 25 |
| 0-100 WC | .8 | 1.6 | 25 |
| 0-150 WC | 1.2 | 2.4 | 25 |
| VACUUM | | | |
| 0-1.5 WC /VAC | | .17" | 50 |
| 0-3 WC /VAC | | .18 | 50 |
| 0-6 WC /VAC | .23" | .45 | 50 |
| 0-15 WC /VAC | 0.33 | .65 | 50 |
| 0-30 WC /VAC | 0.6 | 1.2 | 50 |
| 0-60 WC /VAC | 0.7 | 1.4 | 50 |
| 0-100 WC /VAC | .8 | 1.6 | 50 |
| 0-150 WC /VAC | 1.2 | 2.5 | 50 |
| VACUUM-PRESSURE | | | |
| 0-3 WC /VAC-PR | .45" | .87" | 25 |
| 0-6 WC /VAC-PR | .8 | 1.6 | 25 |
| 0-15 WC /VAC-PR | 1.7 | 3.4 | 25 |
| 0-30 WC /VAC-PR | 2.5 | 5.0 | 25 |
| 0-60 WC /VAC-PR | 4.8 | 9.6 | 25 |
| 0-100 WC /VAC-PR | 8.0 | 16.0 | 25 |

