

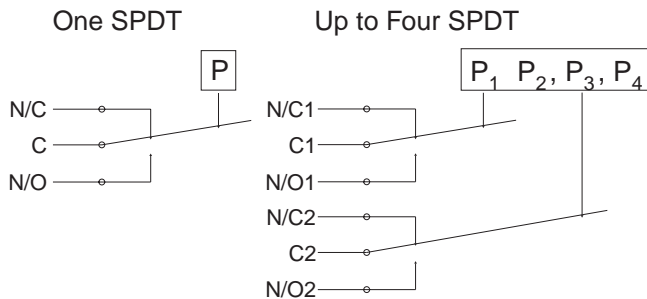
6WPS Series

PRESSURE SWITCH - BELLOWS ACTUATED



- Ranges from 0-15 PSI To 0-5000 PSI
- Rugged NEMA 4X & 12 Housing Std.
- CSA Certified
- Class I, Div. I, Gr. C & D Available
- Up to Four SPDT Contacts
- Various Wetted Materials Available

Wiring Schematic



INSTALLATION NOTES

Orientation - The 6WPS Bellows 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 adjustments available at no charge.

Description

The Series 6WPS Bellows Actuated Pressure Switch is constructed using a rugged cast aluminum housing that incorporates Winter's standard accurate switching mechanism actuated by a stainless steel bellows 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. Bellows assemblies of various areas, when applied to the 6WPS Bellows Actuated model, allow a wide variety of adjustable pressure ranges.

Common applications for the 6WPS would be multiple tank or pump controls and an application requiring alarm systems.

Specifications - 6WPS (Bellows Actuated)

Housing:	Cast Aluminum
Pressure Connection:	1/4 NPT
Electrical Connection:	1/2 NPT
Port Material:	Stainless Steel W/ 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:	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:	-40°F
Weight:	Approx. 5 lbs.



6WPS Series

PRESSURE SWITCH - BELLOWS ACTUATED

How to Order: Specify Product Code

6WPS W 1 B V 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

SENSING ELEMENT
 B - BELLOWS ACTUATED

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
 Q - DOUBLE SNAP ACTION (BELLEVILLE SPRING)
 R> - MANUAL RESET. SWITCH ON INCR. PR.

TYPE OF ELECTRIC SWITCHES
 1 - LOW DEADBAND
 15A - 125, 250, 480 VAC
 2 - STANDARD DEADBAND
 15A - 125, 250, 480 VAC; 0.5A
 3 - HIGH DC RATED (MAGNETIC)
 10A - 125 VDC; 3A - 250 VDC
 4 - HERMETICALLY SEALED SW
 1.A-125VAC; 25A.RES, 10A.IN
 3A.LAMP-28VDC
 6 - GOLD CONTACT -
 1 A - 125 VAC

* SPECIAL FEATURES SUCH AS STAINLESS APPLICATION OF DIAPHRAGM SEALS, ETC. AVAILABLE ON REQUEST. CONSULT WINTÉ CAPABILITES AND PRICING FOR ANY FEAT SHOWN.

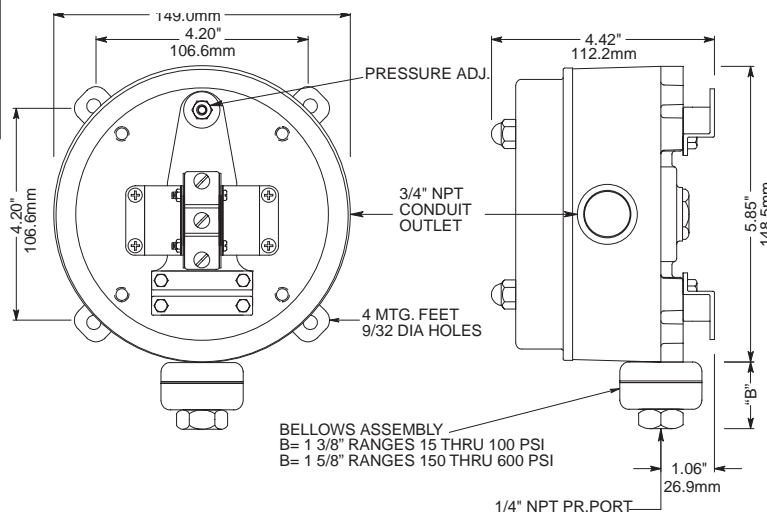
DEADBAND NOTES

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			
BELLOWS ACTUATED			
Adjustable Pressure Range	Maximum DEADBAND Type "2"	Maximum DEADBAND Type "5"	Maximum Working Pressure
0-15 PSI	.7#	1.3#	300
0-30 PSI	.7	1.4	300
0-60 PSI	.8	1.6	300
0-100 PSI	1.0	1.9	300
0-150 PSI	4.0	7.3	1500
0-200 PSI	4.0	7.6	1500
0-300 PSI	4.0	8.2	1500
0-600 PSI	5.0	10.0	1500
0-1000 PSI	12.0	25.0	3000
0-2000 PSI	15.0	30.0	3000
0-3000 PSI	37.0	75.0	7000
0-5000 PSI	45.0	90.0	7000



6WPS Series

DIFFERENTIAL PRESSURE SWITCH - BELLOWS ACTUATED

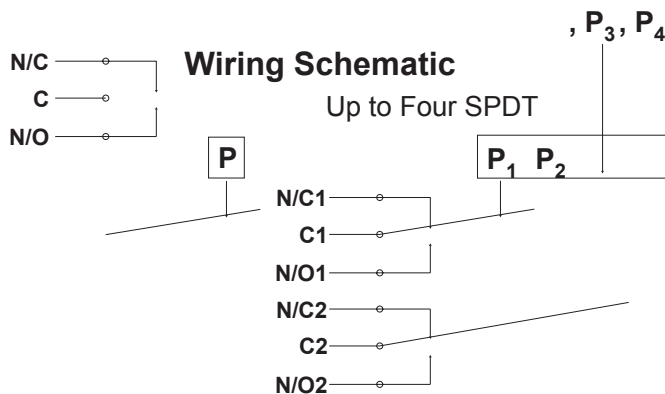


- Ranges from 0-15 PSI To 0-5000 PSI
- Rugged NEMA 4X & 12 Housing Std.
- Class I, Div. I, Gr. C & D Available
- Up to Four SPDT Contacts
- Various Wetted Materials Available

Description

The Series 6WPS Differential Pressure Switch (Bellows Actuated) is constructed using a rugged cast aluminum housing that incorporates Winter's standard accurate switching mechanism actuated by stainless steel differential pressure bellows assemblies. 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. Differential Pressure Bellows Assemblies of various areas, when applied to this 6WPS model, allows a wide variety of adjustable Differential Pressure Ranges.

One SPDT



The 6WPS (Differential) can be utilized in filtration applications, hazardous locations and system level controls.

INSTALLATION NOTES

Orientation - The 6WPS Differential (Bellows) will operate satisfactorily in any position, however, mounting the device vertically will allow the easiest adjustability.

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 - 6WPS (Bellows Actuated)

Housing:	Cast Aluminum
Pressure Connection:	1/4 NPT
Electrical Connection:	1/2 NPT
Port Material:	Stainless Steel 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:	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.	5 lbs.



6WPS Series

DIFFERENTIAL PRESSURE SWITCH - BELLOWS ACTUATED

How to Order: Specify Product Code

6WPS W 1 BD M 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

SENSING ELEMENT
BD - BELLOWS ACTUATED DIFFERENTIAL PRESSURE

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
Q - DOUBLE SNAP ACTION (BELLEVILLE SPRING)
R> - MANUAL RESET, SWITCH ON INCR. PR.
R< - MANUAL RESET, SWITCH ON DECR. PR.
V - HIGH TEMPERATURE SERVICE

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, APPLICATION OF DIAPHRAGM SEALS, ETC. ARE AVAILABLE ON REQUEST. CONSULT WINTERS FOR CAPABILITIES AND PRICING FOR ANY FEATURES NOT SHOWN.

Ranges			
BELLOWS ACTUATED DIFFERENTIAL PRESSURE (DP)			
0-15 PSI	.7#	1.3#	300
0-30 PSI	.7	1.4	300
0-60 PSI	.8	1.6	300
0-100 PSI	1.0	1.9	300
0-150 PSI	4.0	7.3	1500
0-200 PSI	4.0	7.6	1500
0-300 PSI	4.0	8.2	1500
0-600 PSI	5.0	10.0	1500
0-1000 PSI	12.0	25.0	3000
0-2000 PSI	15.0	30.0	3000
0-3000 PSI	37.0	75.0	7000
0-5000 PSI	45.0	90.0	7000

BELLOWS ACTUATED TWO-WAY DIFFERENTIAL PRESSURE			
0-15 PSI	2.6		300
0-30 PSI	6.0		300
0-60 PSI	9.7		300
0-100 PSI	18.0		1500
0-150 PSI	30.0		1500
0-200 PSI	32.0		1500
0-300 PSI	48.0		1500
0-600 PSI	92.0		3000
0-1000 PSI	146.0		3000
0-2000 PSI	400.0		7000
0-3000 PSI	425.0		7000

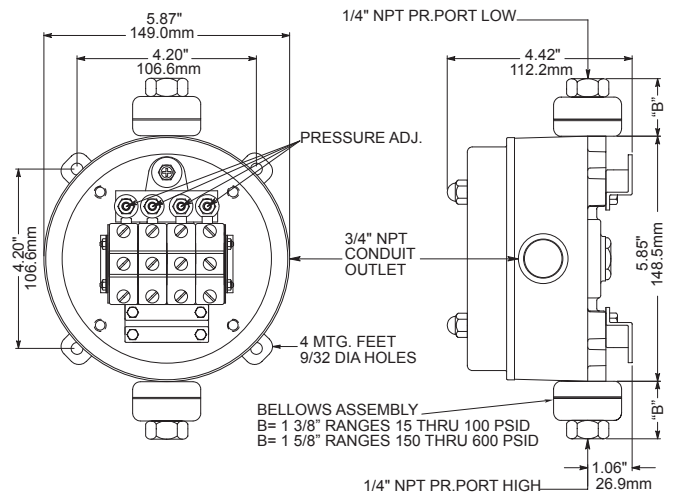
DEADBAND NOTES

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.



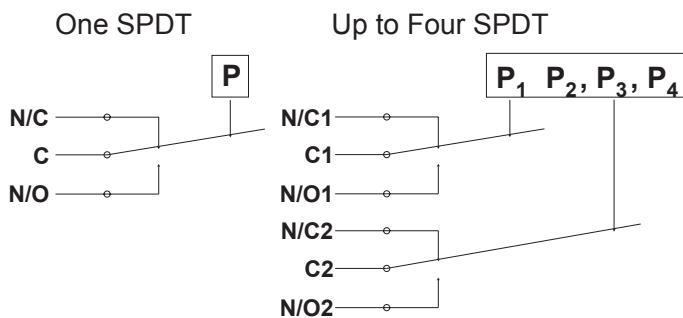
6WPS Series

DIFFERENTIAL PRESSURE SWITCH - DIAPHRAGM ACTUATED



- Ranges from 0-15 PSID & 0-30 PSID
- Rugged NEMA 4X & 12 Housing Std.
- Class I, Div. I, Gr. C & D Available
- Up to Four SPDT Contacts
- CSA Certified
- Various Wetted Materials Available

Wiring Schematic



INSTALLATION NOTES

Orientation - The 6WPS Differential, 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.

Description

The Winters' Series 6WPS Differential Pressure Switch (Diaphragm Actuated) is constructed using a rugged cast aluminum housing that incorporates Winter's standard accurate switching mechanism actuated by a differential 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.

The 6WPS (Differential) can be utilized in filtration applications, hazardous locations and system level controls.

Specifications - 6WPS 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 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 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.	5 lbs.



6WPS Series

DIFFERENTIAL PRESSURE SWITCH - DIAPHRAGM ACTUATED

How to Order: Specify Product Code

6WPS W 1 D R> 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
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 -
 1A - 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

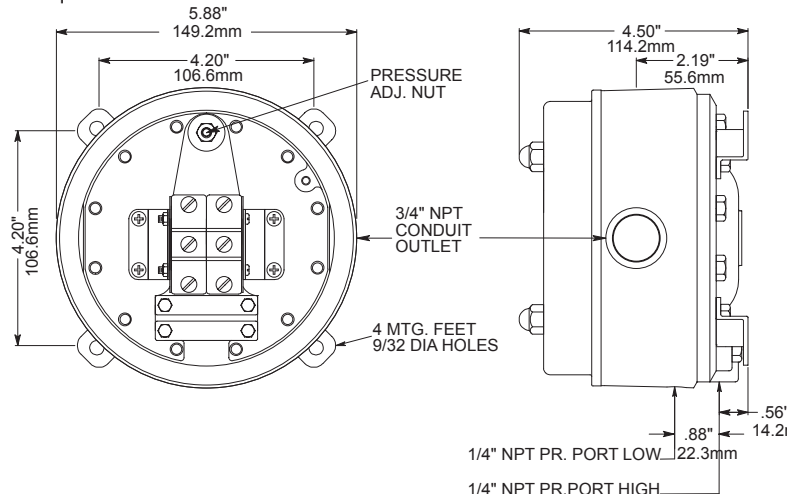
The deadbands listed in the tables are the maximum switch differentials when the standard (Type "2" or Type "5") electric switch is used.

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.

DIFFERENTIAL PRESSURE (DP)			
0-15 PSID	.16#	.32#	100
0-30 PSID	.23	.47	100
TWO-WAY DIFFERENTIAL PRESSURE			
0-15 PSID	.7#	1.5#	100
0-30 PSID	1.2	2.5	100



Canadian Standards Association Certified:
 Industrial Control Equipment Type 4 & 12 Switches Pressure
 Type for Hazardous Locations, Class I, Groups C & D; Class
 II, Groups E, F & G.

