



**Explosion Proof
Hermetically Sealed
(NEMA 7 and 9)**

DESCRIPTION

Versatile Nega-Rate® Belleville disc spring pressure switch for use in hazardous areas. Series 100P (diaphragm sensor) for pneumatic and low impulse hydraulics up to 3000 psig system pressure.

Operating Pressure Data

Adjustable Range Number	Adjustable Set Point Range		Deadband (approximate)	Maximum Recommended System Pressure	Proof Pressure
	Increasing	Decreasing			
1	5 to 75	2.3 to 72.3	2.7	600	1000
2	15 to 150	9 to 144	6	3000	5000
4	50 to 300	36 to 286	14	3000	5000
5	125 to 600	100 to 575	25	3000	5000
7	500 to 1500	440 to 1440	60	3000	5000
8	800 to 2800	675 to 2675	125	3000	5000

All values given in psig.

Standard Specifications

Electrical

Snap action electrical switch listed by Underwriters' Laboratories, Inc., Factory Mutual and CSA Testing Laboratories

Electrical Connection

½" - 14 NPT male conduit connection with PVC insulated 18 AWG leads 18" long

Pressure Connection

Wetted Material 1

¼" - 18 NPT Female

Wetted Material 4,5,9

½" - 14 NPT Female

Temperature Range*

Ambient: -40°F to +180°F
(-40°C to +82°C)

Media: -40°F to +300°F
(-40°C to +149°C)

*Temperature limits change with O-Ring selection

Adjustment

Concealed wrench flat adjustment with range scale

Shipping Weight

Approximately 3 pounds

Ordering Sequence — Select desired option for each category

OPTIONS

Wetted Material

- 1 Aluminum port, Teflon coated polyimide diaphragm and Buna-N O-Ring
- 4 316 stainless steel port, Teflon coated polyimide diaphragm and Buna-N O-Ring
- 5 316 stainless steel port and diaphragm heliarc welded
- 9 Monel port and inconel diaphragm heliarc welded (Except Range 1)

Adjustable Range

- 1 2.3 psig dec. to 75 psig inc. (0.2 bar dec. to 5.2 bar inc.)
- 2 9 psig dec. to 150 psig inc. (0.6 bar dec. to 10.3 bar inc.)
- 4 36 psig dec. to 300 psig inc. (2.5 bar dec. to 20.7 bar inc.)
- 5 100 psig dec. to 600 psig inc. (6.9 bar dec. to 41.4 bar inc.)
- 7 440 psig dec. to 1500 psig inc. (30.3 bar dec. to 103.4 bar inc.)
- 8 675 psig dec. to 2800 psig inc. (46.5 bar dec. to 193.1 bar inc.)

Electrical Form

- C 11 amps and ¼ hp 125 or 250 VAC; 5 amps resistive, 3 amps inductive 28 VDC; .5 amps resistive 125 VDC
- CC 11 amps and ¼ hp 125 or 250 VAC; 5 amps resistive, 3 amps inductive 28 VDC; .5 amps resistive 125 VDC

Enclosure

- 6 Explosion proof • factory sealed • hermetically sealed electrical assembly P/N 057-0030 (C Form); P/N 057-0057 (CC Form). **Underwriters' Laboratories, Inc.** listed (file #E56677) or **Canadian Standards Association** certified (file #34146) for Division 1 and 2; Class I, Groups A, B, C and D; Class II, Groups E, F and G hazardous locations (NEMA 7 and 9)

Miscellaneous

- A Epoxy paint exterior — extra protection for severe environments
- B Viton O-Ring
- C EPR O-Ring
- E 7/16" - 20 SAE port
- F Fire fuse — for fire-tested equipment (Wetted Materials 4 and 5 only)
- I ¾" Conduit box with terminal strip
- J Annealed stainless steel port screws for H₂S environments (Wetted Materials 4 and 5 only) — Consult factory for reduced system and proof pressure
- M Gold electrical contacts for extremely low current applications
- N CENELEC approval
- R 72" Electrical free leads
- S Stainless steel diaphragm (Available in 100P4 only)
- W Stainless steel screws — exterior (Standard with Wetted Materials 4,5 and 9)
- Y 2" NPT Port for viscous medias (Except Range 1)

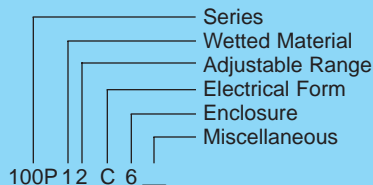
Special (Consult representative or factory)

- Non-catalog adjustable range and/or set point, deadband and proof pressure
- Operating temperature capability from -65°F to +400°F
- Chemical seals installed

Ordering Procedure

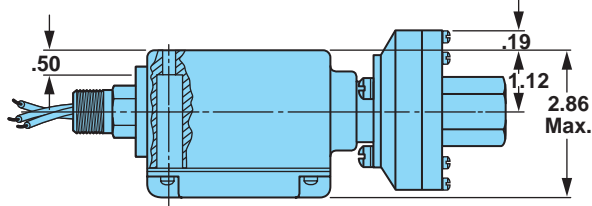
- When factory presetting is desired, stipulate set point, increasing or decreasing
- Insert available option number or letter designation as required

Example

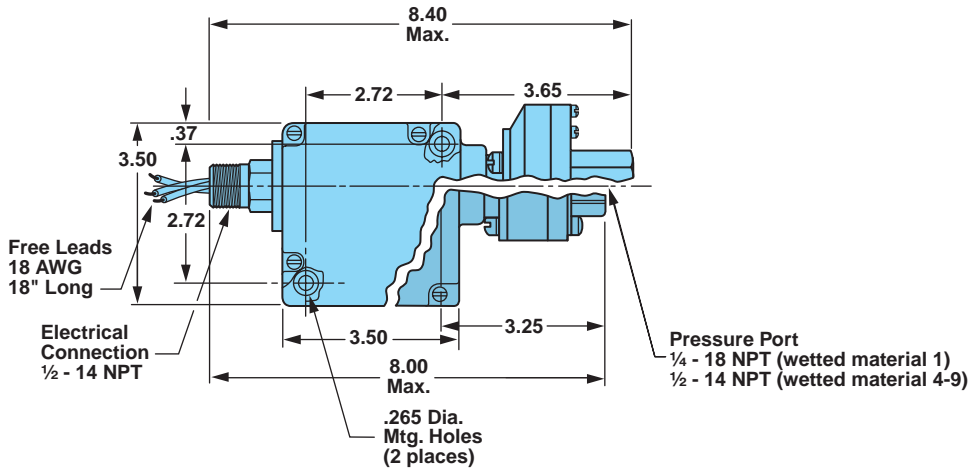
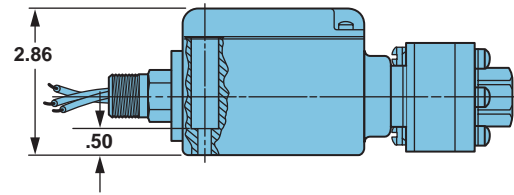


Envelope Dimensions

Adjustable
Range 1

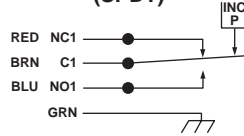


Adjustable
Range 2-8

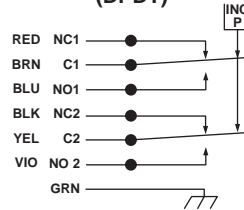


Electrical Form

FORM "C"
(SPDT)



FORM "CC"
(DPDT)



Basic Principles of Design

