



**Explosion Proof
Hermetically Sealed
(NEMA 4X, 7, 9 and 13)**

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 assembly listed by Underwriters' Laboratories, Inc., Factory Mutual and CSA International

Electrical Connection

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

Pressure Connection

Wetted Material 1
¼ NPT Female

Wetted Material 4,5, 7 and 9
½ 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. See Electrical Assembly specification sheet for Temperature Class Ratings.

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
- 7 Hastelloy C port and diaphragm, heliarc welded (Except Range 1)
- 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 amp, ¼ hp at 125 or 250 VAC; 5 amp resistive, 3 amp inductive at 28 VDC
.5 amp resistive at 125 VDC
- CC 11 amp, ¼ hp at 125 or 250 VAC; 5 amp resistive, 3 amp inductive at 28 VDC
.5 amp resistive at 125 VDC

Enclosure

- 6 Explosion proof, hermetically-sealed electrical assembly, leads factory sealed, P/N 057-0770 (C Form) and P/N 057-0771 (CC Form); **Underwriters' Laboratories, Inc.** listed (File E56677), **CSA International** certified (File LR34146), and **Factory Mutual** approval (File J.I.1R5A9.AE) for Division 1 and 2; Class I, Groups A, B, C and D; Class II, Groups E, F and G Hazardous Locations; NEMA type 7 and 9.

Miscellaneous

- A Epoxy paint exterior — extra protection for severe environments
- B Viton O-Ring
- C EPR O-Ring
- E ¼" - 20 SAE Female Port (wetted material 1 only)
- F Fire fuse — for fire-tested equipment (wetted materials 4 and 5 only)
- I ¾" NPT conduit box with terminal strip (Groups C & D only)
- J Annealed stainless steel port screws for H₂S environments (wetted materials 4 and 5 only, Consult factory for reduced system and proof pressures)
- M Gold electrical contacts for extremely low current applications
- N ATEX approval with CE Mark
- R 72" electrical free leads
- S Stainless steel diaphragm (wetted material 4 only)
- W Stainless steel screws — exterior (standard with wetted materials 4, 5, 7 and 9)

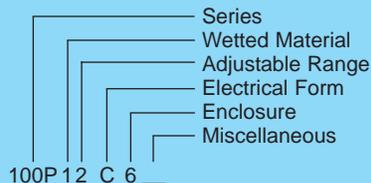
Special (Consult representative or factory)

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

Ordering Procedure

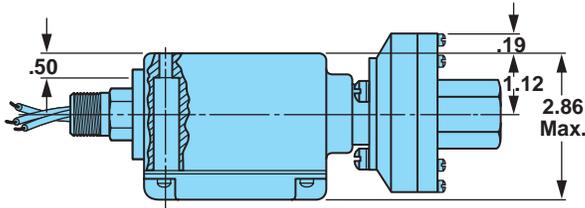
- When factory presetting is desired, stipulate set point, increasing or decreasing
- Insert available option number or letter designation as required

Example

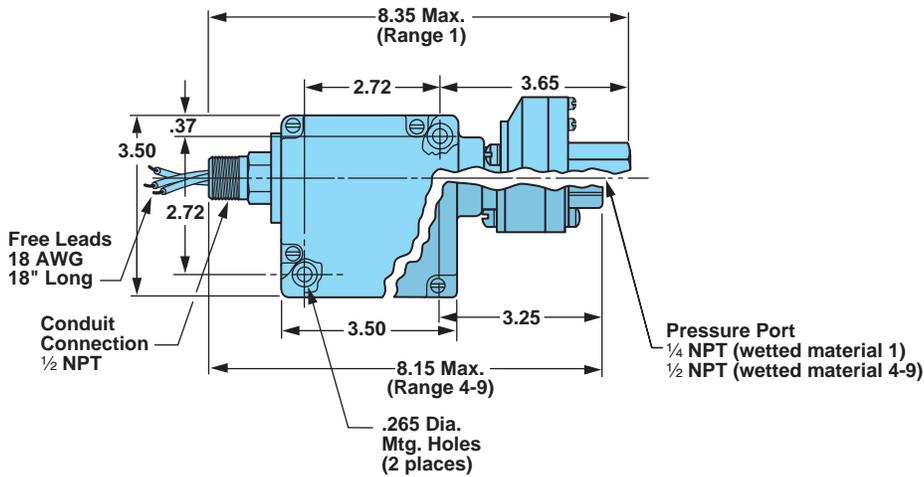
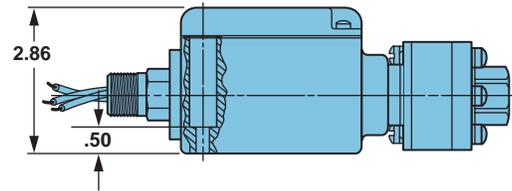


Envelope Dimensions

Adjustable
Range 1

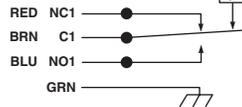


Adjustable
Range 2-8

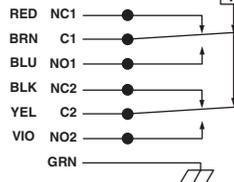


Electrical Form

FORM "C"
(SPDT)



FORM "CC"
(DPDT)



Basic Principles of Design

