Neo-Dyn® Series 100P Pressure Switch/Internal Adjustment

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**

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

All values given in psig.

**Standard Specifications**

**Electrical**

Snap action electrical switch assembly listed by Underwriters’ Laboratories, Inc., Factory Mutual and CSA International

**Connection**

1/2 NPT male conduit connection with PVC insulated 18 AWG, 18” long leads

**Pressure Connection**

Wetted Material 4, 5, 7 and 9
1/2 NPT Female
Wetted Material 4, 5, 7 and 9
1/2 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

**Explosion Proof**

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

**Ordering Sequence** — Select desired option for each category

**OPTIONS**

**Wetted Material**

1. Aluminum port, Teflon coated polycarbonate diaphragm and Buna-N O-Ring
2. 316 stainless steel port, Teflon coated polycarbonate diaphragm and Buna-N O-Ring
3. 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.
2. 9 psig dec. to 150 psig inc.
4. 36 psig dec. to 300 psig inc.
5. 100 psig dec. to 600 psig inc.
7. 440 psig dec. to 1500 psig inc.
8. 675 psig dec. to 2800 psig inc.

**Electrical Form**

C. 11 amp, 1/4 hp at 125 or 250 VAC; 5 amp resistive, 3 amp inductive at 28 VDC
CC. 11 amp, 1/4 hp at 125 or 250 VAC; 5 amp resistive, 3 amp inductive at 28 VDC

**Enclosure**

6. Explosion proof, hermetically-sealed electrical assembly, EX d IIC.

**Miscellaneous**

A. Epoxy paint exterior — extra protection for severe environments
B. Viton O-Ring
C. EPR O-Ring
D. SIL approval and marking, per IEC61508 (includes FMEA report)
E. 7/16 - 20 SAE Female Port (wetted material 1 only)
F. Fire fuse — for fire-tested equipment (wetted materials 4 and 5 only)
I. 3/4 NPT conduit box with terminal strip (Groups C & D only, not available with N option)
J. Annealed stainless steel port screws for H2S environments (wetted materials 4 and 5 only)
M. Gold electrical contacts for extremely low current applications
N. ATEX and IECEx 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)
Y. 2” NPT Female port for viscous medias. Port Material is carbon steel (Wetted Material “3”)

**Ordering Procedure**

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

**Example**

Series
Wetted Material
Adjustable Range
Enclosure
Miscellaneous

100P12 C 6
### Envelope Dimensions

**Adjustable Range 1**

- Adjustable Range 1
- Free Leads 18 AWG 18" Long
- Conduit Connection \( \frac{1}{2} \) NPT

**Adjustable Range 2-8**

- Adjustable Range 2-8
- Pressure Port \( \frac{1}{2} \) NPT (wetted material 1)
- Pressure Port \( \frac{1}{2} \) NPT (wetted material 4-9)

### Electrical Form

**FORM “C” (SPDT)**

- RED NC1
- BRN C1
- BLU NO1
- GRN

**FORM “CC” (DPDT)**

- RED NC1
- BRN C1
- BLU NO1
- BLK NC2
- YEL C2
- VIO NO2
- GRN

### Basic Principles of Design

- All Stainless Steel Construction Electrical Assembly
- Snap Action Electrical Element
- Actuator
- Diaphragm
- Minimum Bearing Points
- O-Ring
- Pressure Plate
- Negative Rate Belleville Disc Spring
- Glass to Metal Sealed Header
- Motion Transfer Arm
- Adjustment

Specifications and dimensions subject to change.