Neo-Dyn® Series 160P Differential Pressure Switch

Mid-range, adjustable differential pressure switch. Efficient Nega-Rate® Belleville disc spring sensing mechanism for stable set points during system pressure changes. Hermetically sealed, explosion-proof electrical assembly well suited for hazardous or explosive environments.

### 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>2</td>
<td>1.1 to 15</td>
<td>.75 to 14.65</td>
<td>300</td>
<td>500 Hi/Low</td>
</tr>
<tr>
<td></td>
<td>Increasing</td>
<td></td>
<td></td>
<td>200 Low/Hi</td>
</tr>
<tr>
<td></td>
<td>Decreasing</td>
<td>.35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1.5 to 18</td>
<td>.3 to 16.8</td>
<td>1.2</td>
<td>500 Hi/Low</td>
</tr>
<tr>
<td></td>
<td>Increasing</td>
<td></td>
<td></td>
<td>400 Low/Hi</td>
</tr>
<tr>
<td></td>
<td>Decreasing</td>
<td>1.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>5 to 60</td>
<td>2 to 57</td>
<td>3</td>
<td>500 Hi/Low</td>
</tr>
<tr>
<td></td>
<td>Increasing</td>
<td></td>
<td></td>
<td>400 Low/Hi</td>
</tr>
<tr>
<td></td>
<td>Decreasing</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>55 to 110</td>
<td>49 to 104</td>
<td>6</td>
<td>500 Hi/Low</td>
</tr>
<tr>
<td></td>
<td>Increasing</td>
<td></td>
<td></td>
<td>400 Low/Hi</td>
</tr>
<tr>
<td></td>
<td>Decreasing</td>
<td>6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

All values given in psid.

### Standard Specifications

**Electrical**

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

**Electrical Connection**

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

**Pressure Connection**

1/4 NPT Female

**Temperature Range**

<table>
<thead>
<tr>
<th>Ambient Temperature</th>
<th>Media Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>-40°F to +180°F</td>
<td>-40°C to +121°C</td>
</tr>
</tbody>
</table>

*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 3.5 pounds

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

**OPTIONS**

**Wetted Material**

1. Aluminum port and body, Teflon coated polyimide diaphragm, Buna-N O-Rings
2. Stainless steel, Teflon coated polyimide diaphragm and Buna-N O-Rings

**Adjustable Range**

2. .75 psid dec. to 15 psid inc. (0.1 bar dec. to 1.0 bar inc.)
4. .3 psid dec. to 18 psid inc. (0.0 bar dec. to 1.2 bar inc.)
6. 2 psid dec. to 60 psid inc. (0.1 bar dec. to 4.1 bar inc.)
7. 49 psid dec. to 110 psid inc. (3.4 bar dec. to 7.6 bar inc.)

**Electrical Form**

C. 11 amp, 1/4 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, EX d IIC. Part Numbers 057-0770 & 057-0772 (Form C) and 057-0771 & 057-0773 (Form CC). Agency listings include Underwriters Laboratories, Inc., CSA International, Factory Mutual, and Inmetro. Division 1 and 2, Class I, Groups A, B, C, and D; Class II, Groups E, F, and G; NEMA 4X, 7, and 9; IP66. Leads are factory sealed and Pressure Switches are Dual Seal Certified.

**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)
I. 3/4 NPT conduit box with terminal strip (Groups C & D only, not available with N option)
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 — No low over high capability (Ranges 2 & 4 and Wetted Material 4 only)

**Special (Consult representative or factory)**

- Non-catalog adjustable range and/or set point, deadband and proof pressure
- Media temperature capability from -65°F to +350°F
- Chemical seals installed
- Optional orientation of Low Pressure Port

### Ordering Procedure

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

### Example

- Series
- Wetted Material
- Adjustable Range
- Electrical Enclosure
- Miscellaneous

Example: 160P46 C 6
**Envelope Dimensions**

- **Free Leads**
  - 18 AWG
  - 18" Long
- **Conduit Connection**
  - ½ NPT
- **.265 Dia. Mtg. Holes (2 places)**
- **Low Pressure Port**
  - ½ NPT
- **High Pressure Port**
  - ½ NPT

**Electrical Form**

**FORM "C"**

- RED NC1
- BRN C1
- BLU NO1
- GRN LOW

**FORM "CC"**

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

**Basic Principles of Design**

- **Adjustable Range 2 and 4**
  - Negative Rate Belleville Disc Spring
  - Low Pressure Port
  - Pressure Plate
  - High Pressure Port
  - O-Rings
  - Diaphragm
  - Adjustment
  - Glass to Metal Sealed Header
  - Motion Transfer Arm
  - Actuator
  - All Stainless Steel Construction Electrical Assembly

- **Adjustable Range 6 and 7**
  - Negative Rate Belleville Disc Spring
  - Low Pressure Port
  - Pressure Plate
  - High Pressure Port
  - O-Rings
  - Diaphragm
  - Adjustment
  - Glass to Metal Sealed Header
  - Motion Transfer Arm
  - Actuator
  - All Stainless Steel Construction Electrical Assembly

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Specifications and dimensions subject to change.