Neo-Dyn® Series 142P8 Ultra Low Vacuum/Pressure Switch

Ultra low pressure and vacuum to pressure crossover switch. Unique construction using efficient Nega-Rate® Belleville disc spring for stable set points and high proof pressure. Explosion proof enclosure and wide range of wetted materials makes this switch especially well suited for hazardous or corrosive atmospheres.

### 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>0</td>
<td>1&quot; to 10&quot; H2O</td>
<td>.75&quot; H2O</td>
<td>30&quot; H2O Vacuum to 30&quot; H2O Pressure</td>
<td>30&quot; H2O Vacuum to +5 psig</td>
</tr>
<tr>
<td>1</td>
<td>2&quot; to 40&quot; H2O</td>
<td>1&quot; H2O</td>
<td>30&quot; H2O Vacuum to +5 psig</td>
<td>30&quot; H2O Vacuum to +15 psig</td>
</tr>
<tr>
<td>2</td>
<td>0&quot; to 40&quot; H2O Vacuum to 0&quot; to 40&quot; H2O Pressure</td>
<td>1&quot; H2O</td>
<td>Full Vacuum to +15 psig</td>
<td>Full Vacuum to 100 psig</td>
</tr>
</tbody>
</table>

*Deadband 50% wider with "CC" (DPDT) Electrical Forms.

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### Standard Specifications

#### Electrical
Snap action electrical switch 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
1/2 NPT Female

#### Temperature Range
Ambient: -40°F to +180°F (-40°C to +82°C)
Media: -50°F to +250°F (-46°C to +121°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 3.5 pounds

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

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### Ordering Specification Options

#### OPTIONS

- **Adjustable Range**
  - 0: .25" H2O (62 mbar) dec. to 10" (24.9 mbar) H2O inc.
  - 1: 1" H2O (2.49 mbar) dec. to 40" (99.6 mbar) H2O inc.
  - 2: 40" H2O (99.6 mbar) inc. vac. to 40" (99.6 mbar) H2O inc. pressure

- **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
  - CC: 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.

- **Miscellaneous**
  - A: Epoxy paint exterior — extra protection for severe environments
  - 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

#### Port Material
- 4: 316 Stainless Steel
- 7: Hastelloy C

#### Diaphragm
- 1: Polyimide
- 4: 316 Stainless Steel
- 6: Tantalum
- 7: Hastelloy C

#### O-Rings
- 2: Kalrez
- 3: Viton
- 5: EPR
- 8: Buna-N

**Special (Consult representative or factory)**
- Non-catalog adjustable range and/or set point, deadband and proof pressure
- Media temperature capabilities from -65°F to +400°F

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### Example

142P 82 CC6 __ 463
Envelope Dimensions

Field Adjustable
40" H₂O vac. to 40" H₂O

Series 142P

Electrical Form

FORM "C"
(SPDT)

FORM "CC"
(DPDT)

Basic Principles of Design

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Specifications and dimensions subject to change.