Diaphragm Operated Pressure Switches
Visible Setpoint, Adjustable Deadband, Hermetically Sealed Snap Switch, Weatherproof and Explosion-proof

Series SA1100

Weatherproof and Explosion-Proof in One Economical Enclosure
Extremely rugged construction assures excellent reliability in chemical, petroleum and industrial plants. New design also provides burst pressure protection to 3000 psi (206 bar). The rolling diaphragm design maintains a constant effective area to minimize friction. This results in a minimum deadband as low as 5% of full scale. Since many applications require higher deadbands, the SA1100 includes a separate adjustment of this when necessary. A pump being used to control liquid level in a tank would be a typical situation where this feature would be important. Both setpoint and deadband adjustments are protected, yet clearly visible behind a clear polycarbonate window and are fully isolated from the electrical components for additional safety. A 7/16˝ open-end wrench is the only tool required to change settings. Terminal blocks are provided for switch wiring connections and both internal and external ground screws are included. Standard housing is weatherproof to NEMA standards 1 through 4X and 13; explosion-proof to NEMA 7, Class I, Groups B, C & D, NEMA 9, Class II, Groups E, F & G. Optional construction adds drain to meet IP54.

Applications
• Chemical, petroleum, food and drug processing industries
• Used indoor, outdoor or in explosion-proof area

SPECIFICATIONS
Wetted Materials: See pressure chamber and diaphragm material in model chart.
Temperature Limits: -30 to 180°F (-35° to 82°C) standard; ATEX compliant at 75°C.
Ambient Temperature: -4 to 167°F (-20 to 75°C); Process Temperature: -4 to 167°F (-20 to 75°C).
Pressure Limit: 1200 psig (82.6 bar).
Enclosure Rating: Weatherproof and Explosion-proof. Listed with UL and CSA for Class I, Groups B, C and D; Class II Groups E, F, and G. ATEX Compliant 0344 II 2 G EEx d IIC T6 Process Temperature 75°C. Weatherproof UL Rated Type 4. Meets NEMA 4X.
Switch Type: SPDT or DPDT snap switch.
Electrical Rating: See model chart.
Electrical Connections: Screw terminal.
Conduit Connection: 3/4˝ female NPT.
Process Connection: 1/2˝ female NPT.
Mounting Orientation: Within 20° of vertical.
Set Point Adjustment: Internal 7/16˝ hex nuts.
Weight: 3.5 lb (1.6 kg).
Deadband: See deadband chart.
Agency Approvals: UL, CSA, CE and ATEX.

Example Construction
SA1113E-A4-K2 Pressure Control, weatherproof NEMA 4X, explosion proof NEMA 7,8; aluminum pressure chamber, Buna-N diaphragm and O-ring; 1/2 inch female NPT process connection; adjustable deadband, automatic reset; SPDT snap acting switch; adjustable range 30-500 psig.

Switch Deadband Chart

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<table>
<thead>
<tr>
<th>Range Number</th>
<th>Adjustable Operating Range</th>
<th>Approximate Minimum Deadband Low</th>
<th>Approximate Minimum Deadband High</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>psig</td>
<td>bar</td>
<td>psig</td>
</tr>
<tr>
<td>11</td>
<td>10-150</td>
<td>0.7-10</td>
<td>4.0</td>
</tr>
<tr>
<td>12</td>
<td>20-250</td>
<td>1.4-17.2</td>
<td>5.0</td>
</tr>
<tr>
<td>13</td>
<td>30-500</td>
<td>2.0-34</td>
<td>8.3</td>
</tr>
</tbody>
</table>
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*Options that do not have ATEX.