Pressure switch, heavy-duty version
For superior industrial applications
Model PSM-550

Applications
- Pumps
- Lubrication systems
- Hydraulic systems
- Autoclaves

Special features
- Non-repeatability ≤ 1 %
- Setting ranges for vacuum, +/- and gauge pressure

Description
The PSM-550 is used in industrial control, monitoring and alarm applications.
The switch point can be specified by the customer on site.

The instrument can switch electrical loads of up to AC 230 V, 10 A.

The PSM-550 pressure switch offers many application possibilities with non-corrosive media like oil, water and air.
Specifications

<table>
<thead>
<tr>
<th>Unit</th>
<th>Setting range 1)</th>
<th>Permissible switch point on rising pressure</th>
<th>Permissible switch point on falling pressure</th>
<th>Adjustable switch differential 2)</th>
<th>Max. working pressure depending on measuring element</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>10 ... 300</td>
<td>0 ... 250</td>
<td>10 ... 50</td>
<td>Bellow, copper alloy</td>
</tr>
<tr>
<td>mbar</td>
<td></td>
<td>0 ... 300</td>
<td>0 ... 250</td>
<td>10 ... 50</td>
<td>Bellow, stainless steel</td>
</tr>
<tr>
<td>bar</td>
<td>0.1 ... 1.1</td>
<td>0.17 ... 1.1</td>
<td>0.1 ... 0.94</td>
<td>0.07 ... 0.16</td>
<td>Diaphragm, NBR</td>
</tr>
<tr>
<td></td>
<td>0.2 ... 3</td>
<td>0.32 ... 3</td>
<td>0.2 ... 2.25</td>
<td>0.12 ... 0.75</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.2 ... 6</td>
<td>0.45 ... 6</td>
<td>0.2 ... 4.8</td>
<td>0.25 ... 1.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 ... 10</td>
<td>1.3 ... 10</td>
<td>1 ... 8.7</td>
<td>0.3 ... 1.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 ... 17</td>
<td>2.3 ... 17</td>
<td>2 ... 15</td>
<td>0.3 ... 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 ... 17</td>
<td>5.2 ... 17</td>
<td>4 ... 13</td>
<td>1.2 ... 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 ... 30</td>
<td>11 ... 30</td>
<td>10 ... 26</td>
<td>1 ... 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-1 ... 0</td>
<td>-0.91 ... 0</td>
<td>-1 ... -0.4</td>
<td>0.09 ... 0.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.8 ... 5+</td>
<td>-0.3 ... 5+</td>
<td>-0.8 ... +3</td>
<td>0.5 ... 2</td>
<td></td>
</tr>
</tbody>
</table>

1) Switch point and reset point have to be within the setting range
2) The difference between the switch point and the reset point is also known as switch hysteresis

Non-repeatability of the switch point
≤ 1 % of span

Switch contact
1 x change-over contact / SPDT 3)

![Terminal assignment diagram]

Terminal assignment
All setting ranges, except for -1 ... 0 bar
1 NC Normally closed
2 COM Common contact
3 NO Normally open
GND Ground connection

Setting range: -1 ... 0 bar
1 NO Normally open
2 COM Common contact
3 NC Normally closed
GND Ground connection

Electrical rating

<table>
<thead>
<tr>
<th>Current consumption 4)</th>
<th>Voltage</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistive load AC-1</td>
<td>AC 230 V</td>
<td>10 A</td>
</tr>
<tr>
<td>Inductive load AC-15</td>
<td>AC 230 V</td>
<td>4 A</td>
</tr>
</tbody>
</table>

4) per DIN EN 60947-1

Operating temperature ranges

<table>
<thead>
<tr>
<th>Condition</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient</td>
<td>-40 ... 70 °C [-40 ... 158 °F]</td>
</tr>
<tr>
<td>Medium</td>
<td>-20 ... 70 °C [-4 ... 158 °F]</td>
</tr>
<tr>
<td></td>
<td>-20 ... 170 °C [-4 ... 338 °F]</td>
</tr>
<tr>
<td>Storage</td>
<td>-20 ... 80 °C [-4 ... 176 °F]</td>
</tr>
</tbody>
</table>

Reference conditions

Relative humidity per BS 6134
< 50 % r. h. at 40 °C [104 °F]
< 90 % r. h. at 20 °C [68 °F]

Electrical connection
Cable gland ½ NPT

Ingress protection per IEC/EN 60529
IP67

Process connections

<table>
<thead>
<tr>
<th>Process connection per</th>
<th>Thread size</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO 228-1</td>
<td>G ¾ B</td>
</tr>
</tbody>
</table>
Materials

Wetted parts

- Measuring element: Bellow, copper alloy CuSn6 per EN 1652
  Process connection: Copper alloy

- Measuring element: Bellow, stainless steel 1.4401
  Process connection: Copper alloy
  - Stainless steel 1.4401

- Measuring element: Diaphragm, NBR
  Process connection: Free cutting steel EN1A per
  EN 10277-3, tin-plated

Approvals

<table>
<thead>
<tr>
<th>Logo</th>
<th>Description</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>![CE logo]</td>
<td>EU declaration of conformity</td>
<td>European Union</td>
</tr>
<tr>
<td>![Low voltage directive logo]</td>
<td>Low voltage directive</td>
<td></td>
</tr>
<tr>
<td>![RoHS directive logo]</td>
<td>RoHS directive</td>
<td></td>
</tr>
</tbody>
</table>

Approvals and certificates, see website
Dimensions in mm [in]

Weight: approx. 1.2 kg [2.65 lb]

Mounting hole Ø 8.5 mm [0.33 in]

Electrical connection

Setting range: 0 ... 300 mbar
Setting range: 0.1 ... 1 bar
Setting range: 0.2 ... 3 bar
Setting range: 0.2 ... 6 bar
Setting range: -1 ... 0 bar
Setting range: 1 ... 10 bar
Setting range: 2 ... 17 bar
Setting range: 4 ... 17 bar
Setting range: 10 ... 30 bar
Setting range: -0.8 ... +5 bar
Mounting

Direct mounting

Panel mounting

Process connections

G ¾ B per ISO 228-1

Dimensions in mm [in]

<table>
<thead>
<tr>
<th>G</th>
<th>D</th>
<th>D1 1)</th>
<th>L1</th>
<th>L2</th>
<th>L3</th>
</tr>
</thead>
<tbody>
<tr>
<td>G ¾ B</td>
<td>Ø 6 [0.236]</td>
<td>SW 24 [0.945]</td>
<td>13 [0.511]</td>
<td>16 [0.63]</td>
<td>19 [0.748]</td>
</tr>
</tbody>
</table>

1) SW = spanner width

Ordering information
Model / Setting range / Material of measuring element / Material of process connection