PS61P – OEM Subminiature Pressure Switch

- 510 to 4,350 psi (35 to 300 bar)
- Exceptional Size-to-Pressure-Range Ratio
- Piston Actuator with Exceptional Overpressure Capability
- Perfect for Demanding Hydraulic and OHV Applications

All new and available with the most popular electrical connector options. These subminiature pressure switches are designed for medium- to high-pressure OEM applications. They are equipped with high proof and burst pressure capabilities for demanding hydraulic applications such as forklifts, scissor lifts, and off road equipment.

Specifications

| Switch* | 100 VA Max. |
|--------------------------------------------------|
| Repeatability | See Table 1 |
| Deadband | See Table 1 |
| Wetted Parts
  Seal | Nitrile (optional EPDM or Viton®) |
  Fitting | Zinc-Plated Steel |
  Bearing | Proprietary plastic resistant to almost all chemicals |
  Piston | Hardened Alloy Steel |
| Temperatures
  Fluid | See Table 2 |
  Ambient | -40°F to +250°F (-40°C to +121°C) |
  Storage | -65°F to +275°F (-54°C to +135°C) |
| Proof Pressure | 7,000 psi (483 bar) |
| Burst Pressure | 22,000 psi (1,517 bar) |
| Vibration
  Sinusoidal | MIL-STD-202G, Method 204D, 173m²/sec, 91-2000Hz, 8 hours/axis |
  Random | MIL-STD-202G, Method 214A, 146m²/sec, 5-2000 Hz, 8 hours/axis |
| Shock, Operating | MIL-STD-202G, Method 213B, 500m²/sec, 18X |
| Salt Spray | ASTM B117, 95°F (35°C) for 96 hours |
| Thermal Shock | -40°F to +250°F (-40°C to +121°C), 1 hour dwells, 1 minute change, 15 cycles |
| Approvals | CE, RoHS |

* Gold contacts (option G) may be required for less than 12 VDC and 20 mA.

Table 1 – Pressure Range Codes

<table>
<thead>
<tr>
<th>Pressure Range Code</th>
<th>Pressure Range</th>
<th>Repeatability*</th>
<th>Average Deadband**</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>510-1,235 psi (35-85 bar)</td>
<td>±30 psi (2.1 bar) +4% of setting</td>
<td>+16% of setting</td>
</tr>
<tr>
<td>20</td>
<td>800-1,960 psi (55-135 bar)</td>
<td>±48 psi (3.3 bar) +4% of setting</td>
<td>+13% of setting</td>
</tr>
<tr>
<td>30</td>
<td>1,835-3,115 psi (127-215 bar)</td>
<td>±110 psi (7.6 bar) +6% of setting</td>
<td>+24% of setting</td>
</tr>
<tr>
<td>40</td>
<td>2,970-4,350 psi (205-300 bar)</td>
<td>±190 psi (13.1 bar) +6% of setting</td>
<td>+20% of setting</td>
</tr>
</tbody>
</table>

* Repeatability and setpoint of units will vary depending on temperature, fluid viscosity and cycle rate. Long term inactuation will lead to a higher initial setpoint reading due to the non-linear behavior of the elastomer seals. Fluids with low and stable viscosities over the expected temperature range will exhibit better performance.

** Deadband values are an approximation at room temperature with a 100 Cp fluid. At lower temperature and/ or higher fluid viscosities the deadband will be much larger than the value shown. At high fluid temperature and a rapid cycle rate, the deadband may be lower than the approximations given. Please consult the factory if specific statistical analysis is required.

Table 2 – Recommended Fluid Temperature Limits

<table>
<thead>
<tr>
<th>Seal Material</th>
<th>Range</th>
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<tbody>
<tr>
<td>Nitrile</td>
<td>15°F to 250°F (-9°C to +121°C)</td>
</tr>
<tr>
<td>Viton®</td>
<td>0°F to 250°F (-18°C to +121°C)</td>
</tr>
<tr>
<td>EPDM</td>
<td>-10°F to 250°F (-23°C to +121°C)</td>
</tr>
</tbody>
</table>

Notes:
1. Switches may function below the cold temperature limit but the set points and deadband will increase. Consult factory for details.
2. Temperature performance is dependent on set point and fluid viscosity (fluids must remain free flowing liquids).
3. Not recommended for use with gases.
Electrical Connectors

<table>
<thead>
<tr>
<th>1/4&quot; Spade</th>
<th>6-32 Terminal Screws</th>
<th>Amp Superseal 1.5</th>
<th>Deutsch DT04-2P</th>
<th>Flying Leads</th>
<th>Flying Leads with Shrink Tubing</th>
<th>Cable</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>0.49</td>
<td></td>
<td>2.3 MAX</td>
<td>1.8 MAX</td>
<td>1.8 MAX</td>
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<tr>
<td></td>
<td></td>
<td>(12.45)</td>
<td></td>
<td>(58.45)</td>
<td>(45.7)</td>
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<td></td>
<td></td>
<td>1.5 MAX (38.1)</td>
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<tr>
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<td>0.49</td>
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<td>2.4 MAX</td>
<td>1.8 MAX</td>
<td>1.8 MAX</td>
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<td></td>
<td>(12.45)</td>
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<td>(62.56)</td>
<td>(45.7)</td>
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Ingress Protection

IP00

IPX7 PER IEC 60529 (1 METER SUBMERGENCE)
IPX9K PER DIN40050-9 (HIGH PRESSURE/HIGH TEMPERATURE WASHDOWN)
IP6XK PER DIN40050-9 (INORGANIC DUST INTRUSION)

How To Order

Use the **Bold** characters from the chart below to construct a product code. Please reference Notes.

**PS61P** **10** **-4MNZ** **-A** **-SP** **-X-X-XX**

**Pressure Range Code**
Insert Pressure Range Code from Table 1, below.

**Pressure Fitting**¹
12L14 Zinc-Plated Steel
-2MNZ = 1/8" NPT Male
-4MNZ = 1/4" NPT Male
-4MGZ = 1/4" BSP G Style Male
-4MSZ = 9/16"-18 SAE J1926-2
-M10Z = M10 x 1.0 ISO 6149-2
-M14Z = M14 x 1.5 ISO 6149-2

**Circuit**
-**A** = SPST/N.O.
-**B** = SPST/N.C.

**Electrical Termination**

-**SP** = 2x 1/4" x 1/32" Spade
-**TS** = 6-32 Terminal Screws
-**SS** = Amp Superseal 1.5 Integral Male
-**DT** = Deutsch DT04-2P Integral Male
-**FLAXX** = 18 AWG Flying Leads, Adjustable²
-**FLFXX** = 18 AWG Flying Leads, Fixed²
-**FLAXXX** = 18 AWG Flying Leads w/PVC Shrink Tubing, Adjustable²
-**FLFXX** = 18 AWG Flying Leads w/PVC Shrink Tubing, Fixed²
-**CABXXX** = 18 AWG PVC Cable³

**Options**

-**V** = Viton® Seals
-**E** = EPDM Seals
-**G** = Gold Contacts
-**WM** = Weather Pack Connector, Male P/N 12010973
-**DE** = Deutsch Connector, Male P/N DT04-2P-E003
-**FA** = Factory Set Specify Value & Rising/Falling

**Notes:**
1. Other fittings available. Consult factory.
2. 18” is standard. Specify lead length in inches (max. 48”). e.g. -FLA18 or -FLF30.
3. 36” is minimum. Specify cable length in inches. e.g. -CAB36 or -CAB120.

Offered by:

![O'Keefe Controls Co.](image)

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