Differential Pressure Transmitters

Series 645 Wet/Wet Differential Pressure Transmitters are designed for use with compatible gases and liquids which can be applied to both the pressure and reference sides. Quick response capacitance sensor delivers a 4 to 20 mA output signal proportional to the pressure ratio. Series 645 transmitters are ideal for process control, filter condition monitoring, refrigeration equipment, pump speed control, HVAC, and bleed screw seals.

**Monitor differential pressure** in air/liquid flow systems, HVAC automation, pneumatics, systems and process control with the Series 647 Wet/Wet Differential Pressure Transmitter. Units are temperature compensated and provide a 4 to 20 mA output signal which can be interfaced with chart recorders, data loggers and computerized monitoring and control systems.

<table>
<thead>
<tr>
<th>Model</th>
<th>Range</th>
<th>Model</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>645-0</td>
<td>0 to 1 psid</td>
<td>647-6</td>
<td>0 to 5 psid</td>
</tr>
<tr>
<td>645-1</td>
<td>0 to 10 psid</td>
<td>647-7</td>
<td>0 to 15 psid</td>
</tr>
<tr>
<td>645-2</td>
<td>0 to 25 psid</td>
<td>647-8</td>
<td>0 to 30 psid</td>
</tr>
</tbody>
</table>

* For optional 3-Valve Manifold Assembly, specify -3V as suffix

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**Wet/Wet Differential Pressure Transmitter**

Ranges from 0 to 1” w.c., ± 1.0% Accuracy, NEMA 4 Enclosure, 2-Wire

**Series 647**

- **± 0.25% Accuracy, Quick Response, 2-Wire Design**
- **Range:** 0 to 100 psid
- **Accuracy:** ±0.10% FS
- **Stability:** ±1.5% FS output/year.
- **Temperature Limits:** 32 to 122°F (0 to 50°C).
- **Pressure Limits:** Ranges 1” w.c. to 5 psi: 20 psi, 15 psi range: 45 psi, 30 psi range: 60 psi.
- **Thermal Effects:** Zero: ±0.05% FS/°F, Span: ±0.05% rdg/°F.

**Specifications**

- **Service:** Compatible gases or liquids on both pressure and reference sides.
- **Wetted Materials:** Brass, vinyl, glass-filled polyester, silicon, and florosilicone.
- **Accuracy:** ±1.0% FS.
- **Stability:** ±1.5% FS output/year.
- **Temperature Limits:** 32 to 122°F (0 to 50°C).
- **Pressure Limits:** Ranges 1” w.c. to 5 psi: 20 psi, 15 psi range: 45 psi, 30 psi range: 60 psi.
- **Thermal Effects:** Zero: ±0.05% FS/°F, Span: ±0.05% rdg/°F.

**Power Requirements:** 18 to 30 VDC. Output Signal: 4 to 20 mA, 2-wire.

- **Zero and Span Adjustments:** Adjustable, ±10%.
- **Loop Resistance:** 400Ω @ 18 VDC, 600Ω @ 24 VDC, 1000Ω @ 30 VDC.
- **Electrical Connection:** Screw terminals, reverse polarity protected.
- **Process Connections:** Two 1/8” female NPT.
- **Housing:** Gasketed steel epoxy painted, NEMA 4 (IP66).
- **Weight:** 14 oz (397 g).

**SPECIFICATIONS**

- **Service:** Compatible gases or liquids on both pressure and reference sides.
- **Wetted Materials:** 17-4 PH stainless steel, 300 Series stainless steel, florosilicone.
- **Accuracy:** ±0.25% FS (RSS).
- **Temperature Limits:** Operating: 0 to 175°F (-22 to 80°C); Storage: -65 to 260°F (-54 to 126°C).
- **Pressure Limits:** (High side) 1 to 5 psi: 20 psi, 10 to 25 psi: 10 psid, 50 psi: 5 psid, 100 psi: 2.5 psid, (low side) 2.5 x FS.
- **Thermal Effects:** (includes zero and span) ±0.02% FS/°F, 30 to 150°F (±1 to 65°C).
- **Power Requirements:** 11 to 30 VDC. Output Signal: 4 to 20 mA, 2-wire.
- **Zero and Span Adjustments:** Adjustable, ±1 mA, non-interactive.
- **Response Time:** 30 to 50 msec.
- **Loop Resistance:** 0 to 1000Ω.
- **Electrical Connection:** Barrier strip terminal block with conduit enclosure and .875” (22 mm) diameter conduit opening.
- **Process Connection:** 1/4”-18 female NPT.
- **Housing:** Stainless steel/aluminum, NEMA 4X (IP66).
- **Weight:** 14.4 oz (0.4 kg).
- **Agency Approvals:** CE, CSA.

**3-Valve Manifold Assembly**

- **Manifold:** Brass.
- **Valve Type:** 90° on/off.
- **Process Connection:** 1/4”-18 female NPT.

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