The Series 707 Micro-PSI is an ultramiaturized 10K psi high-pressure, high-temperature interconnect designed specifically for pipeline inspection applications in Magnetic Flux Leakage and ultrasonic pipeline inspection PIGs. The Micro-PSI insert arrangements feature two high-density micro TwistPin layouts for sensor applications and high-speed Gigabit Ethernet, and a Coax contact layout for 5 GHz performance. Micro-PSI connectors are supplied as discrete plugs, or overmolded plug cordsets with rugged Viton or Polyurethane jacketing. Jam-nut and panel-mount receptacles are 10K psi open-face pressure sealed, and incorporate fused vitreous glass inserts for <1X10⁻⁷ scc He/sec hermetic performance. Serviceable O-rings on plugs and dual piston and face O-rings on receptacles provide high-reliability sealing.

**Series 707 Micro-PSI**

*Microminiature high-pressure connectors and cables*

Series 707 Micro-PSI affords PIG designers the opportunity to design out legacy large form-factor connectors (such as shown in this picture) with a dramatically smaller interconnect solution.

**SERIES 707**

**Special-purpose high density (.050" contact spacing) intelligent inspection (PIG) connector series**

- **3 Amp high-speed Gigabit Ethernet-ready**
- **-20° to +150°C temperature range**
- **High-density, small form-factor**

**INSERT ARRANGEMENTS**

- **E4 Layout**
  - 4 Micro Contacts
- **E1 Layout**
  - 50 Ohm Coax
- **G10 Layout**
  - 10 Micro Contacts
  - High-Speed Ethernet

- Application example shows the 707 Micro-PSI used to interconnect an MFL sensor to on-board PIG data storage.
MICRO PSI HOW TO ORDER, SPECIFICATIONS, MATERIALS AND FINISHES

<table>
<thead>
<tr>
<th>Sample Part Number</th>
<th>Micro-PSI - How To Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>707-0148-E4-Z1-S-N</td>
<td>47</td>
</tr>
</tbody>
</table>

- **Series / Connector Style**: 707-0148 = Receptacle, Square Flange  
  707-0172 = Receptacle, Jam-Nut Mount  
  707-0171 = Plug

- **Shell Size/Insert Arrangement**: E1, E4, E10

- **Shell Material**: Z1 = Stainless Steel  
  TC = Titanium

- **Contact Type (Based on Shell Style Type)**:  
  Plug (707-0171)  
  Receptacle (707-0148 & 707-0172)

- **Clocking Position**: N = Normal, A, B, C (see Key and Keyway Positions table below)

For single-ended cable with overmolded plug (7071-0069), contact factory for How-to-Order information.

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**Performance Specifications**

- **Hydrostatic Pressure**: 10,000 PSI (mated)
- **DWV**: 200 VAC per EIA-364-20
- **Insulation Resistance**: 5000 Megohms at 500 Vdc per EIA-364-21
- **Operating Temperature**: -20°C to +150°C, 200°C options available, consult factory

**Material and Finish**

- **Shell, Coupling Ring/Retaining Ring**: See Part Number Development
- **Contacts**: Plug: Copper alloy, gold plated.  
  Receptacle: Iron alloy, gold plated
- **Cable Jacket and Plug Overmold**: Composite See Part Number
- **Insulator**: Thermoplastic
- **O-rings**: Viton 90 durometer
- **Hermetic Seal**: Glass

**MicroPSI Key and Keyway Positions**

<table>
<thead>
<tr>
<th>Key Position</th>
<th>X°</th>
<th>Y°</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal (N)</td>
<td>150°</td>
<td>210°</td>
</tr>
<tr>
<td>A</td>
<td>75°</td>
<td>210°</td>
</tr>
<tr>
<td>B</td>
<td>95°</td>
<td>230°</td>
</tr>
<tr>
<td>C</td>
<td>140°</td>
<td>275°</td>
</tr>
</tbody>
</table>

**NOTES**

- Plug connectors typically supplied as prewired factory cable assemblies with Viton® overmolding for caustic chemical resistance
- Receptacle connectors commonly supplied as prewired pigtails or flex jumpers for direct connection to printed circuit boards and / or data drives
- High-speed Ethernet up to 1Gbps

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**MICRO-PSI ELECTRICAL PERFORMANCE AT OPERATING TEMPERATURE -20°C TO +150°C**

- 3 Amps per line
- Supports #24AWG water-blocked twisted pair wiring
- Dielectric Withstanding Voltage: 600 VAC
- Insulation Resistance: 5000 megohms at 500VDC
SERIES 707

Micro-PSI

Microminiature, high-pressure connectors and cables

707-0171 MICRO-PSI PLUG

- 10K psi rated, mated condition
- Red alignment indicator for accurate mating
- Serviceable O-ring for reliable sealing and easy maintenance
- Ultra small form-factor

707-0172 MICRO-PSI JAM-NUT MOUNT RECEPTACLE

- 10K psi open-face rated
- Vitreous glass sealed, <1X10^-7 scc He/sec hermeticity
- Operating temperature -20° to +200°C
- Fail-safe piston and mounting face O-rings
- Alignment and full-mate indicators
- Ultra small form-factor
707-0148 MICRO-PSI PANEL MOUNT RECEPTACLE

- 10K psi open-face rated
- Vitreous glass sealed, <1x10^-7 scc He/sec hermeticity
- Operating temperature -20° to +200° C
- Fail-safe piston and mounting face O-rings
- Alignment and full-mate indicators
- Ultra small form-factor

707-0069 MICRO-PSI OVERMOLDED CABLE PLUG

- 10K psi rated, mated condition
- Rugged Viton or Polyurethane overmold and cable jacket
- Operating temperature -20° to +200° C
- Ultra small form-factor

Contact factory for order information