Series RSL0900
Rod End Tension Load Cell

Standard Features
- Ranges From 5K lbs. to 100K lbs.
- In-Line Loading
- Small Diameter
- Variety of Thread Arrangements From Which To Choose
- 0.20% Accuracy
- Welded Stainless Steel
- -50°C to 120°C Operation
- mV/V Output and Amplified Output Available

Standard Specifications

Performance
- Capacities From 5K lbs. FSO to 100K lbs. FSO (see table).
- Output 2 mV/V nominal.
- Linearity 0.20% FSO.
- Hysteresis 0.15% FSO.
- Repeatability 0.05% FSO.
- Compensated Temperature Range 20°C to 76°C.
- Operating Temperature Range -50°C to 120°C.
- Temperature Effect on Zero 0.009% FSO/°C.
- Temperature Effect on Span 0.009% Reading/°C.
- Zero Balance 1% FSO.
- Bridge Resistance 350 Ohms nominal.

Mechanical Characteristics
- Threads See table.
- Calibration 5 Points (0, 50%, 100%, 50%, 0) Tension.
- Max. Overload 150% FSO.
- Construction Welded stainless steel.

Electrical Characteristics
- Excitation 10 Vdc or Vac.
- Insulation Resistance Greater than 5000 megaohms at 50 Vdc.
- Electrical Termination PTIH-10-6P Stainless Steel Connector.
- Connector Pins A +EXE  B +SIG
              C -SIG  D -EXE
              E NC    F NC
**Series RSL0900**

**Specifications**

### Dimensions (mm)

![Diagram of dimensions](image)

<table>
<thead>
<tr>
<th>Capacity (lbs.)</th>
<th>D</th>
<th>Thread</th>
<th>LM</th>
<th>Std. Male Thread Lgth.</th>
<th>Short Male Thread Lgth.</th>
<th>Std. Female Thread Lgth.</th>
<th>LH</th>
<th>LF</th>
<th>Wrench Flats</th>
</tr>
</thead>
<tbody>
<tr>
<td>5K, 10K, 15K</td>
<td>Ø38.1</td>
<td>3/4-16 UNF</td>
<td>44.5</td>
<td>33.6</td>
<td>22.9</td>
<td>22.9</td>
<td>82.6</td>
<td>120.7</td>
<td>31.8</td>
</tr>
<tr>
<td>25K</td>
<td>Ø44.5</td>
<td>1-14 UN</td>
<td>57.2</td>
<td>45.8</td>
<td>31.8</td>
<td>31.8</td>
<td>108.0</td>
<td>152.4</td>
<td>35.1</td>
</tr>
<tr>
<td>50K</td>
<td>Ø63.5</td>
<td>1-1/2-12 UNF</td>
<td>76.2</td>
<td>57.2</td>
<td>44.5</td>
<td>44.5</td>
<td>143.0</td>
<td>210.0</td>
<td>50.8</td>
</tr>
<tr>
<td>100K</td>
<td>Ø88.9</td>
<td>2-12 UN</td>
<td>95.3</td>
<td>76.2</td>
<td>57.2</td>
<td>57.2</td>
<td>190.5</td>
<td>286.0</td>
<td>*50.8</td>
</tr>
</tbody>
</table>

### Available Options

- **Compensated Temperature Range**: Ranges from -50°C up to 200°C.
- **Operating Temperature Range**: Ranges from -50°C up to 200°C.
- **Calibration**: Additional calibration points (in addition to standard 5 points) available (Consult Factory)
- **Bridges**: Dual and triple bridges.
- **Amplifiers**: Internal or In-Line (Consult Factory).
  - Analog (4-20 mA; 0-5 Vdc; 0-10 Vdc).
  - Digital (RS-232; RS-485; CANbus; MODbus).
- **Calibration Range**: Special full scale ranges (eg: 6300 lbs.).
- **Connectors**: Consult factory for available connectors.
  - Standard connectors are all stainless steel, Gold plated pins are sealed with glass to metal.
  - Connector is sealed to load cell with 0-ring seal.
  - Glass to metal hermetic seals available between bolt on connectors and load cell.
  - All welded hermetic connectors available.
  - Connector housing orientation. Consult factory.
- **Thread Sizes**: Special thread sizes and loading ends (clevis and tongue shackles). Consult factory.
- **Cables**: Cable or add a connector to the end of the cable.
  - Consult factory for available connectors and cables.
- **Submersible Operation**: Operations up to 4800m deep.
- **Shock and Vibration**: Special shock and vibration preparation allows use in the most demanding environments.
- **Supplemental Technical Details**: See next page.

### Modifications and Warranty

**MODIFICATIONS**: We realize load cell applications vary greatly and as such our designs are flexible. Choice of electrical termination, material compatibility and performance characteristics are a few of the many options available. Specifications on this datasheet represent the standard configuration only. Product and company names listed are trademarks of their respective companies. Specifications subject to change without notice.

**WARRANTY**: RDP warrants that its product shall be free from defective workmanship and/or material for a twelve month period from the date of shipment, provided that RDP’s obligation hereunder shall be limited to correcting any defective material FOB our factory. No allowance will be made for any expenses incurred for correcting any defective workmanship and/or material without written consent by RDP. This warranty is in lieu of all other warranties expressed or implied.

**Supplemental Technical Details**: See next page.
## Technical Information

<table>
<thead>
<tr>
<th>Capacity (lbs.)</th>
<th>Max.Torque (In-Lb)</th>
<th>Max.Bending (In-Lb)</th>
<th>Ringing Frequency (KHz)</th>
<th>Deflection (Full Scale, micron)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5K</td>
<td>200</td>
<td>100</td>
<td>5500</td>
<td>76</td>
</tr>
<tr>
<td>10K</td>
<td>500</td>
<td>250</td>
<td>7500</td>
<td>102</td>
</tr>
<tr>
<td>15K</td>
<td>1000</td>
<td>500</td>
<td>8000</td>
<td>127</td>
</tr>
<tr>
<td>25K</td>
<td>2000</td>
<td>1000</td>
<td>10,000</td>
<td>127</td>
</tr>
<tr>
<td>50K</td>
<td>6000</td>
<td>3000</td>
<td>8000</td>
<td>127</td>
</tr>
<tr>
<td>100K</td>
<td>15000</td>
<td>8000</td>
<td>5000</td>
<td>152</td>
</tr>
</tbody>
</table>

### Notes

**Note 1:** Standard length threads allow full 1 diameter thread engagement with optional lock nut. Short thread without optional lock nut available on request.

**Note 2:** Ø88.90mm RSL0900 will be supplied with 4 equally spaced Ø6.35mm spanner wrench holes.

**Note 3:** Do not exceed listed maximum torque across load cell (top to bottom). It is permissible to use standard torque values from the nut to the nut mating fixture and the flat to the flat mating fixture.

### Modifications and Warranty

**MODIFICATIONS:** We realize load cell applications vary greatly and as such our designs are flexible. Choice of electrical termination, material compatibility and performance characteristics are a few of the many options available. Specifications on this datasheet represent the standard configuration only. Product and company names listed are trademarks of their respective companies. Specifications subject to change without notice.

**WARRANTY:** RDP warrants that its product shall be free from defective workmanship and/or material for a twelve month period from the date of shipment, provided that RDP’s obligation hereunder shall be limited to correcting any defective material FOB our factory. No allowance will be made for any expenses incurred for correcting any defective workmanship and/or material without written consent by RDP. This warranty is in lieu of all other warranties expressed or implied. Due to the nature of technology, changes are inevitable. For latest technical specifications, see our website.