



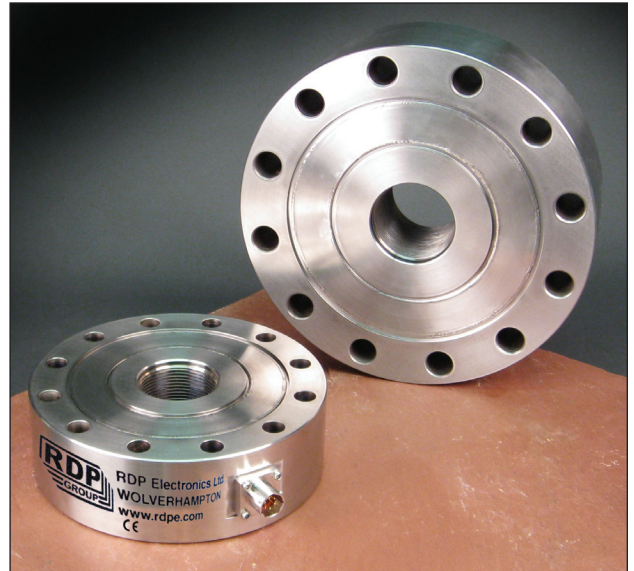
Series RSL0700

Precision, Low Profile Load Cell

RSL0700

Standard Features

- Low Profile
Tension / Compression
Pancake
- All Welded Stainless Steel
- High Accuracy 0.05%
- -50°C to 120°C Operation
- Barometrically
Compensated
- High Off-Axis Capability
- 3 mV/V Operation
and Amplified



Standard Specifications

Performance

| | |
|--------------------------------------|--|
| Capacities | From 100 to 100,000 lbs FSO (see table). |
| Output | 3 mV/V nominal. |
| Accuracy | 0.05% FSO BFSL. |
| Linearity | 0.05% FSO TYP. |
| Hysteresis | 0.05% FSO TYP. |
| Repeatability | 0.02% FSO. |
| Compensated Temperature Range | 20°C to 76°C. |
| Operating Temperature Range | -50°C to 120°C. |
| Temperature Effect on Zero | 0.004% FSO/°C. |
| Temperature Effect on Span | 0.004% Reading/°C. |
| Zero Balance | 1% FSO. |
| Bridge Resistance | 350 Ohms nominal. |

Mechanical Characteristics

| | |
|---------------------------------|--|
| Calibration | 5 Points (0, 50%, 100%, 50%, 0) Tension. |
| Static Overload Capacity | 150% FSO. |
| Construction | Welded stainless steel. |

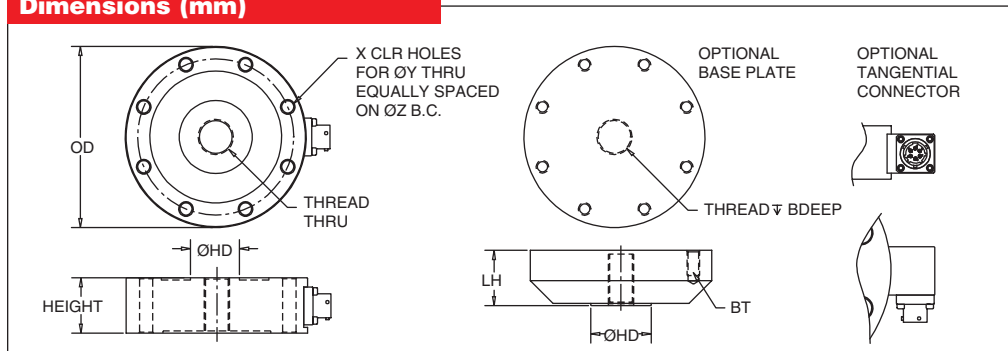
Electrical Characteristics

| | |
|-------------------------------|--|
| Excitation | 10 Vdc or Vac. |
| Insulation Resistance | Greater than 5000 megaohms at 50 Vdc at 20°C. |
| Electrical Termination | PTIH-10-6P, Stainless steel connector with O-ring Seal |
| Connector Pins | A +EXE D - EXE B +SIG E NC C - SIG F NC |

Series RSL0700 Specifications

Baseline Configuration Specs Represented.
Modifications Encouraged - See Below
Custom Designs Available

Dimensions (mm)



NOTES:

1. 100 LB THRU 5000 LB UNITS ARE COUNTER-BORED FOR SOCKET HEAD CAP SCREWS.
2. OPTIONAL THREAD STOPS ADDED IN LOAD CELL WHEN ORDERED WITH BASE KIT.

| Capacity (lbs.) | ØOD | Thread | Height | HD | X | Y | Z | Base LH | Base BDEEP | Base BT |
|-----------------|-------|-------------|--------|------|----|------|--------|---------|------------|---------------------|
| 100, 250 | 76.2 | 3/8-24 UNF | 25.4 | 19.1 | 6 | 7.1 | 63.50 | 25.4 | 12.7 | 1/4-28 X 12.7 DEEP |
| 500, 1000 | 76.2 | 1/2-20 UNF | 25.4 | 19.1 | 6 | 7.1 | 63.50 | 25.4 | 17.2 | 1/4-28 X 12.7 DEEP |
| 2.5K, 5K | 88.9 | 5/8-18 UNF | 25.4 | 23.1 | 6 | 8.6 | 73.03 | 25.4 | 22.8 | 5/16-24 X 12.7 DEEP |
| 10K, 15K | 114.3 | 1-14 UN | 35.1 | 44.7 | 8 | 8.6 | 98.43 | 35.0 | 31.7 | 5/16-24 X 16.0 DEEP |
| 25k, 50K | 165.1 | 1-3/4-12 UN | 50.8 | 76.2 | 12 | 11.9 | 142.88 | 50.8 | 44.4 | 7/16-20 X 22.3 DEEP |
| 75K, 100K | 215.9 | 2-1/4-12 UN | 63.5 | 95.3 | 12 | 16.7 | 187.33 | 63.5 | 57.1 | 5/8-18 X 25.4 DEEP |

Available Options

| | |
|---------------------------------------|---|
| Threads | Metric or Custom. |
| Output | Standardized output. |
| Off-Axis Compensation | Customer specified. |
| Dimensions | Custom dimensions welcome. |
| Compensated Temperature Ranges | From -50°C to 200°C. |
| Operating Temperature Ranges | From -50°C to 200°C. |
| Calibration | Additional calibration points (in addition to standard points). Special and custom calibrations. |
| Amplifiers | Internal and/or In-Line. <ul style="list-style-type: none"> • Analog (4-20 mA; 0-5 Vdc; 0-10 Vdc). • Digital (RS-232; RS-485; CANbus; MODbus). |
| Multiple Bridges | Dual and Triple bridges. |
| Calibration Range | Special full scale ranges (Example: 740 lb). |
| Cables and Cable Length | Various cable types. Specify Cable length. |
| Cable Connector | Add a connector to the end of the cable. |
| Connectors | Mounting Styles. Bolt on: Radial, tangential, axial or custom with O-ring Welded hermetic. Bolt on with back-up hermetic seal. Connectors (PT04, MS3102, etc.). Connector guards. |
| Hermetically Sealed | Hermetic seal, O-ring Seal and combinations. |
| Overload Protection | Compression. Overload stops take up to 10X FSO. |
| Shock and Vibration | Special shock and vibration preparation allows use in the most demanding environments. |
| Submersible | Submersible option to depths of 16,000 feet deep (sea water). |
| Custom Options | Other customer requested options welcome. |



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.

RDP Electronics Ltd. • Grove Street, Heath Town • Wolverhampton WV10 0PY

Tel: 01902 457512 • Fax: 01902 452000

E-mail: sales@rdpe.com • Website: www.rdpe.com



Series RSL0700 Specifications

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Custom Designs Available

The RSL0700 was designed to be the best combination of compact, rugged, stainless steel and cost effective in a low profile load cell.

The load cell includes:

- Large center threads
- All welded stainless steel construction
- Compact size, low profile

Standard features include:

- Shock and Vibration rated
- Stainless steel connector with glass to metal seal for pins. Pins are gold plated.
- Connector is sealed to the sensor with an O-Ring seal. Hermetic Optional
- All bolts holes for connector connection, regardless of connector orientation are Blind Holes that won't allow water or fluids to seep past the seals.
- Full calibration report - never a charge for a full certified data report.

The table listing Maximum extraneous loads pertain to the load cell only.

The user supplied mechanical engagement to the inner hub (typicall a threaded rod) will generally not be as strong as the load cell. We would be glad to help with any questions in determining the best sizes for your application.

MAXIMUM EXTRANEIOUS LOADS (%FS LOAD)

Loads listed may not be applied in combination. For combination loading, please consult factory.

| Capacity (lbs.) | Thread | Bending (In-Lb) | Side Load (Lbs) | Torque (In-Lb) |
|-----------------|-------------|-----------------|-----------------|-----------------|
| 100, 250 | 3/8-24 UNF | 40% | 100% | 50% |
| 500, 1000 | 1/2-20 UNF | 40% | 100% | 50% |
| 2.5K, 5K | 5/8-18 UNF | 35% | 50% | 50% |
| 10K, 15K | 7/8-14 UN | 40% | 50% | 50% |
| 25k, 50K | 1-1/2-12 UN | 40% | 50% | 50% |
| 75K, 100K | 2-12 UN | 50% | 50% | 50% |



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RDP Electronics Ltd. • Grove Street, Heath Town • Wolverhampton WV10 0PY

Tel: 01902 457512 • **Fax:** 01902 452000

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Datasheet P/N: 236782A

E-mail: sales@rdpe.com • **Website:** www.rdpe.com

