STELLAR TECHNOLOGY

Request Quote

A US Manufacturer of:
Pressure, Temperature,
Load/Force/Torque,
and Displacement Sensors

Series RDE900

Rod-End Tension Load Cell

Description

The Series RDE900 load cells are rod-end configurations for in-line tension force applications. Constructed of welded stainless steel, these bonded foil strain gaged force sensors provide reliable performance for demanding applications. Customers can specify a variety of male/female versions for the threaded ends. Additional design features include shock and vibration protection. Customers can also specify optional internal amplifiers for analog (current and voltage) or digital outputs (RS232, RS485, CANbus). Due to the broad range of full scale capacities, the RDE900 load cells are used in many in-line tension applications such as wire-line tension, chain/cable/rope testing, mechanical component testing and many more. Each unit is shipped with a 5 point calibration record traceable to NIST as standard.

(See Series RDE900 Shackle for Tongue Shackle Version)

Standard Features

- **0.20% Accuracy**
- **In-Line Tension**
- **Variety of Thread Combinations**
- **2 mV/V**
- **Welded Stainless Steel**
- **-65°F to 250°F Standard Temperature**
- **Shock and Vibration Resistant**
- **5 Point Calibration Record Traceable to NIST**

Optional Features

- **Multiple Threaded Mounting Configurations**
- **Metric Versions**
- **Special Calibration**
- **Customer Specified Electrical Termination**
- **Subsea/Submersible Versions**
- **Internal Signal Conditioning (Analog or Digital)**
- **Intrinsically Safe (4-20 mA ATEX, IEC, CSA)**
- **-65°F to +400°F Operating Temperature**

Performance

Standard Ranges
5K to 100K lbs.
Output
2mV/V nominal.
Linearity
0.20% FSO.
Hysteresis
0.15% FSO.
Repeatability
0.05% FSO.
Temperature Effect on Zero
0.005% FSO/°F.
Temperature Effect on Span
0.005% Reading/°F.
Zero Balance
1% FSO.

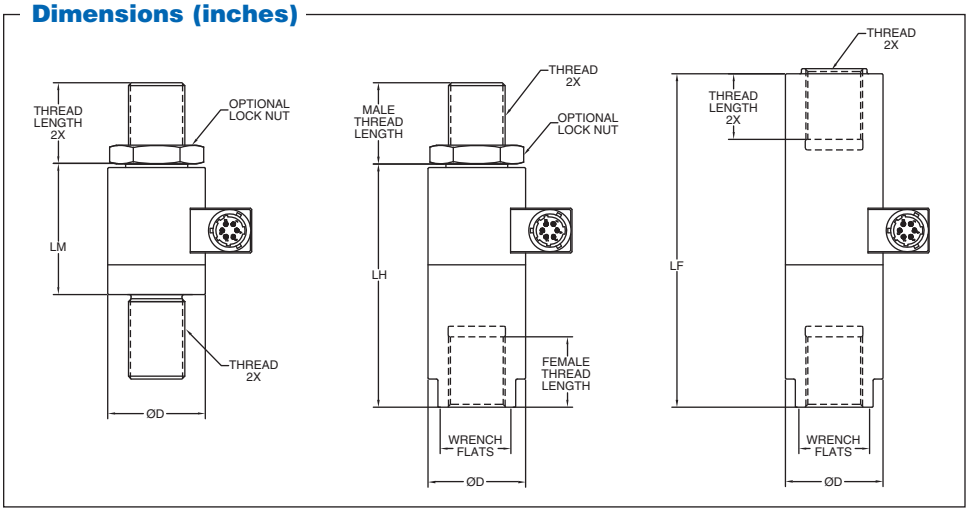
Environmental Characteristics

Operating Temperature Range
-65°F to 250°F.
(-65°F to 400°F optional.)
Compensated Temperature Range
70°F to 170°F.
(-65°F to 400°F optional.)

Series RDE900
Specifications

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

Dimensions (inches)



Capacity (lbs.)	D	Thread	LM	Std. Male Thread Lgth.	Short Male Thread Lgth.	Std. Female Thread Lgth.	LH	LF	Wrench Flats
5K, 10K, 15K	Ø1.50	3/4-16 UNF	1.75	1.32	0.90	0.90	3.25	4.75	1.25
25K	Ø1.75	1-14 UN	2.25	1.80	1.25	1.25	4.25	6.00	1.38
50K	Ø2.50	1-1/2-12 UNF	3.00	2.25	1.75	1.75	5.63	8.25	2.00
100K	Ø3.50	2-12 UN	3.75	3.00	2.25	2.25	7.50	11.25	*2

Mechanical Characteristics

Static Overload Without Damage
150% Range.
Calibration
Standard calibration is 5 pts
(0, 50%, 100%, 50%, 0 Range) tension.
Material
Welded stainless steel.
Threads
See table.

Electrical Characteristics

Bridge Resistance
350 Ohms nominal.
Excitation
10 Vdc or Vac.
Insulation Resistance
Greater than 5000 megaohms
at 50 Vdc.
Electrical Termination
PTIH-10-6P Stainless Steel Connector.

Electrical Characteristics

Connector Pins (Standard)

A	+EXE	B	+SIG
C	- SIG	D	- EXE
E	NC	F	NC

Customer specified wiring codes
are available.

Supplemental Technical Information

Capacity (lbs.)	Max.Torque (In-Lb)	Max.Bending (In-Lb)	Ringing Frequency (KHz)	Deflection (Full Scale,In.)
5K	200	100	5500	0.003
10K	500	250	7500	0.004
15K	1000	500	8000	0.005
25K	2000	1000	10,000	0.005
50K	6000	3000	8000	0.005
100K	15000	8000	5000	0.006

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

Ø3.50 RDE900 will be supplied with 4 equally spaced Ø0.25" spanner wrench holes.

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

CE

Modifications and Warranty

MODIFICATIONS: We realize transducer applications vary greatly and as such our designs are flexible. Choice of pressure port, 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: Stellar Technology 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 Stellar Technology'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 Stellar Technology. This warranty is in lieu of all other warranties expressed or implied.

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ISO 9001/AS9100

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Due to the nature of technology, changes are inevitable. For latest technical specifications, see our website.

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