

# COILED TUBING LOAD CELLS

## INTRINSICALLY SAFE COILED TUBING INJECTOR LOAD CELL

### DESCRIPTION

Coiled tubing (CT) injector load cells are low profile, tension and compression, pancake designs with 4-20 mA output. This CT load cell can be CSA, ATEX and IECEx certified for intrinsic safe operation anywhere in the world.

The load cell transmitter incorporates a threaded-through center hole with dual diaphragms which reduces off-axis sensitivity, increases rigidity, and improves accuracy. Stellar Technology's coiled tubing load cells are constructed of welded stainless steel to meet the demanding requirements of both onshore and offshore oil and gas applications. Features include shock and vibration protection as well as hermetically sealed stainless steel connectors and housings. Load cells can be configured to replace existing hydraulic load cells or other types of electronic load cells without redesigning the injector. Tension and compression setup and calibrations are per the customer's requirements.

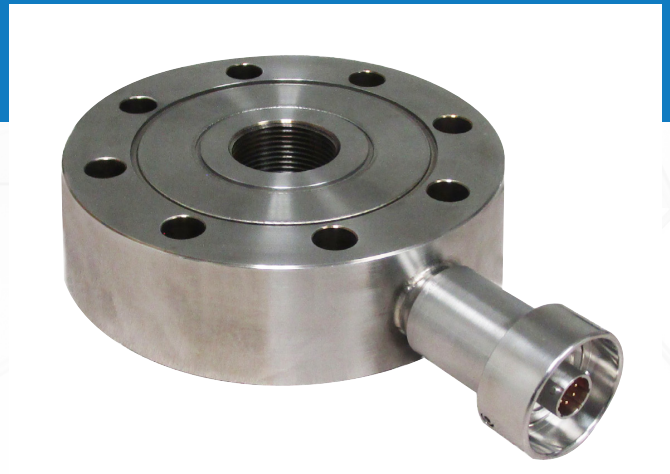
Each unit is shipped with both 5 point tension and 5 point compression calibration records traceable to NIST as standard.

### STANDARD FEATURES

- Standard Ranges from 10,000 lbs. to 200,000 lbs.
- Tension and Compression
- 4-20 mA output
- CSA, ATEX and IECEx Approved for Intrinsic Safety
- Welded Stainless Steel
- -65°F to +185°F Operating Temperature
- Extra Robust Electrical Connectors
- Hermetically Sealed
- Shock and Vibration Resistant

### OPTIONAL FEATURES

- Customer Specified Center Hole and Mounting Holes
- Customer Specified Electrical Termination
- Overload Stops
- Metric Versions
- Special Calibrations



### PERFORMANCE

#### STANDARD RANGES

10,000 lbf. thru 200,000 lbf.

#### OUTPUT

4-20 mA

#### ACCURACY

0.20% FSO BFSL.

#### TEMPERATURE EFFECT ON ZERO

0.005% FSO/°F.

#### TEMPERATURE EFFECT ON SPAN

0.005% Reading/°F.

### ENVIRONMENTAL CHARACTERISTICS

#### OPERATING TEMPERATURE RANGE

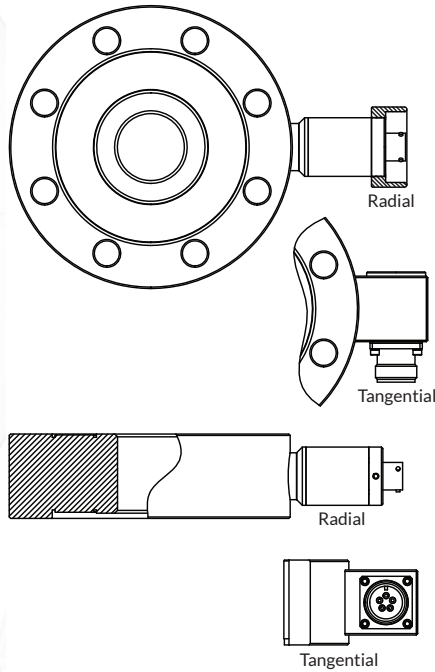
-40° F to 185 F.

#### COMPENSATED TEMPERATURE RANGE

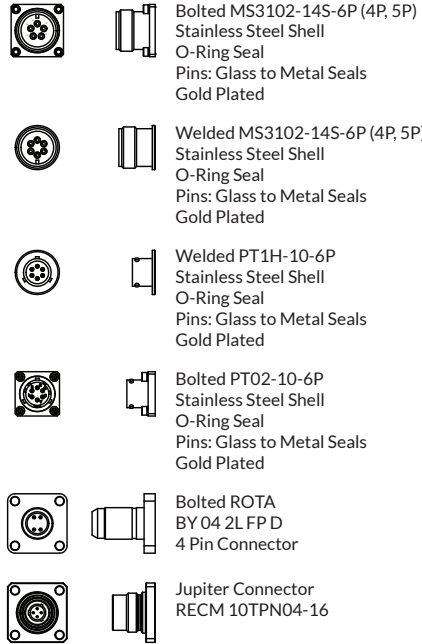
-40° F to 185 F.



Connector Orientations

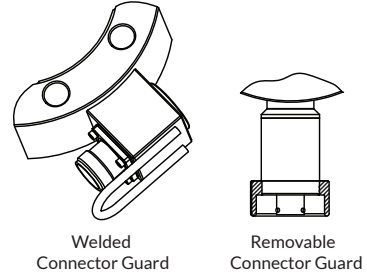


Connectors



Other Options:

Other Options:  
Dust Covers: Available for Most Connectors  
Pots: Zero, Span, or Both  
Connector Guards: Welded or Removable  
Bridges: Single or Dual Bridge



Standard Features:

- Stainless Steel, Welded Construction
- Amplifier/Connector Housing Machined from Solid Bar  
No Thru Holes that might cause Leaks
- Stainless Steel Connectors,  
Pins Gold Plated with Glass to Metal Seals
- Vibration and Shock Resistant
- Bolted Connectors have O-Ring Seal

MECHANICAL CHARACTERISTICS

STANDARD CALIBRATION

5 points  
(0, 50%, 100%, 0 of Range)  
tension and compression

STATIC OVERLOAD WITHOUT DAMAGE

150% Range.

MATERIAL

Welded stainless steel.

ELECTRICAL CHARACTERISTICS

EXCITATION

9 - 28 VDC.

OUTPUT

4-20 mA.

INSULATION RESISTANCE

Greater than 100 megaohms at 50 Vdc.

ELECTRICAL TERMINATION

Hermetic glass to metal sealed connector.

INTRINSICALLY SAFE OPERATION

CSA (NORTH AMERICA)

- Class I, Division 1,  
Group A,B,C and D T4  
(Canada & USA)
- Ex ia IIC T4 Ga (Canada)
- Class I, Zone 0, Aex ia IIC T4 Ga (USA)



ATEX (EUROPE)

- II 1 G Ex ia IIC T4 Ga



IECEx (ALL OTHER)

- Ex ia IIC T4 Ga



Refer to the GT2250 and GT2450 Series data sheets for details about the above certifications and associated specifications.

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

