LORD SENSING
Stellar Technology

Request Quote

Series VLU850

Subminiature Tension and Compression Load Cell

VLU850

Select ranges in stock.

Shown (above) actual size

Description

The Series VLU850 load cells are subminiature sized tension and/or compression load cells designed specifically for applications requiring very small size, very little mass and rugged construction. Designed of all welded stainless steel, these bonded foil strain gaged force sensors provide reliable performance for demanding application conditions. The VLU850 comes in both a single in-line threaded stud or dual in-line threaded stud configurations. Additional features include shock and vibration protection. VLU850 load cells are ideal for applications involving skeletal analysis, filament and fiber testing, force over area pressure measurements, surgical robotics and haptics. Each unit is shipped with a 5 point calibration record traceable to NIST as standard.

Standard Features

- **Small Size**
- **0.50% Accuracy**
- **Tension or Compression**
- **2 mV/V**
- **All Welded Stainless Steel**
- **-40°F to 250°F Operating Temperature**
- **Shock and Vibration Resistant**
- **5 Point Calibration Record Traceable to NIST**

Optional Features

- **Metric Versions**
- **Special Calibration**
- **Special Full Scale Ranges**
- **Customer Specified Cable Lengths**
- **-65°F to +400°F Temperature Ranges**

Performance

Standard Ranges
(Ranges in Bold Type are available in stock)
10, **25**, **50**, 100, 250, 500, 1000 lb.

Output
2mV/V nominal.

Accuracy
0.50% BFSL.

Temperature Effect on Zero
0.01% FSO/°F.

Temperature Effect on Span
0.01% Reading/°F.

Zero Balance
3% FSO.

Environmental Characteristics

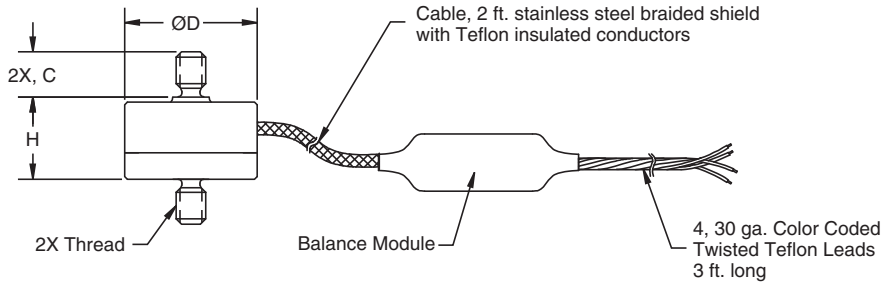
Operating Temperature Range
-40°F to 250°F.
(-65°F to 400°F optional.)

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

Series VLU850
Specifications

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

Dimensions (inches)



Capacity (lbs.)	ØD	Thread	C	H
10, 25, 50, 100	0.50	4-40 UNC	0.17	0.31
250, 500, 1000	0.75	1/4-28 UNF	0.31	0.40

Mechanical Characteristics

Static Overload Without Damage
150% FSO.

Standard Calibration
Tension only:
5 points (0, 50%, 100%, 50%, 0 of FSO).

Optional Calibrations
- **Compression only:**
  5 points (No charge option)
- **Tension and Compression:**
  5 points in each direction
- **Special multipoint calibration (customer specified):**
  in tension or compression or both tension and compression.

Material
Welded stainless steel.

Electrical Characteristics

Bridge Resistance
350 Ohms nominal.

Excitation
5 Vdc or Vac.

Insulation Resistance
Greater than 5000 megaohms at 50 Vdc.

Electrical Termination
Refer to dimensional drawing (above)

Electrical Characteristics

Connector Pins (Standard)

RED	+EXE	GREEN	- SIG
BLACK	- EXE	WHITE	+SIG

Customer specified wiring codes are available.

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

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

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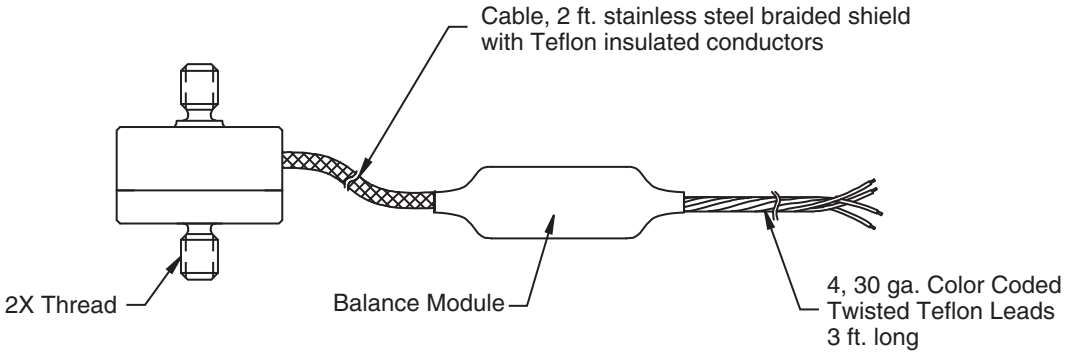
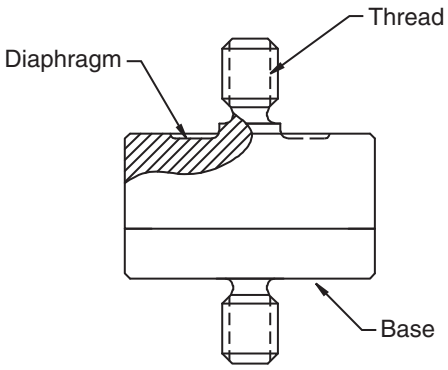
Series VLU850

Installation Guide

INSTALLATION





Installation

1. **CAUTION** - Do not over-torque the threads on installation (See chart, below). Over-torquing may result in damage to the unit.

Capacity	Thread	Max. Torque
10, 25, 50, 100	4-40 UNC	64 In-Oz
250, 500, 1000	1/4-28 UNF	90 In-Lbs

2. **CAUTION** - Do not overload. Low capacity load cells may be damaged if squeezed or handled incorrectly.

3. **CAUTION** - Do not load on diaphragm. Only load utilizing the threads. Damage and/or false readings may occur if the diaphragm is loaded..

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