

# Series LDP990

## Clevis Pin Load Cell



### Description

Stellar Technology's Series LDP990 load cells are designed specifically for applications where clevis pins, shear pins, shear axles, or pulley shafts are carrying the load. These load pins are ideal for real time force monitoring of loads carried by these types of devices. In addition, clevis pin load cells are used for coiled tubing injectors to measuring both the injector forces and the hanging weight of the tubing. STI's clevis pin load cells are constructed of all welded stainless steel and are hermetically sealed to meet the most severe operating conditions. Series LDP990 load pins are available with internal amplifiers providing high level analog outputs and digital outputs. Optional shackle kits consisting of shackle, load positioning roller, and orientation bracket are available. Intrinsically safe (ATEX and CSA) versions are available with 4-20 mA output. All Series LDP990 load pins are manufactured to be shock and vibration resistant. Each unit is shipped with an 5 point calibration record traceable to NIST as standard.

### Standard Features

- Ranges from 3,000 lbs. to 200,000 lbs.
- Tension or Compression
- All Welded Stainless Steel
- -65°F to +250°F Operating Temperature
- Extra Robust Electrical Connectors
- Hermetically Sealed Connectors
- Shock and Vibration Resistant
- 5 Point Calibration Record Traceable to NIST

### Optional Features

- Shackle Kit w/Orientation Bracket
- Tension and Compression
- Customer Specified Electrical Termination
- Internal Amplifiers for High Level Analog/Digital Outputs
- Intrinsically Approved 4-20 mA Output (ATEX and CSA)
- Special Full Scale Ranges
- -320°F to +400°F Operating Temperature
- Special Calibrations
- Submersible to 16,000 Ft. Sea Water

### Performance

#### Standard Ranges

3000 lbs.FSO to 200,000 lbs. FSO.

#### Output

2 mV/V nominal.

#### Accuracy

0.75% FSO BFSL nominal.

#### Linearity

0.75% FSO BFSL nominal.

#### Hysteresis

0.5% FSO typical.

#### Repeatability

0.10% FSO typical.

#### Temperature Effect on Zero

0.008% FSO/°F.

#### Temperature Effect on Span

0.005% Reading/°F.

#### Zero Balance

1% FSO.

### Environmental Characteristics

#### Operating Temperature Range

-65°F to 250°F.  
(-320°F to 400°F optional.)

#### Compensated Temperature Range

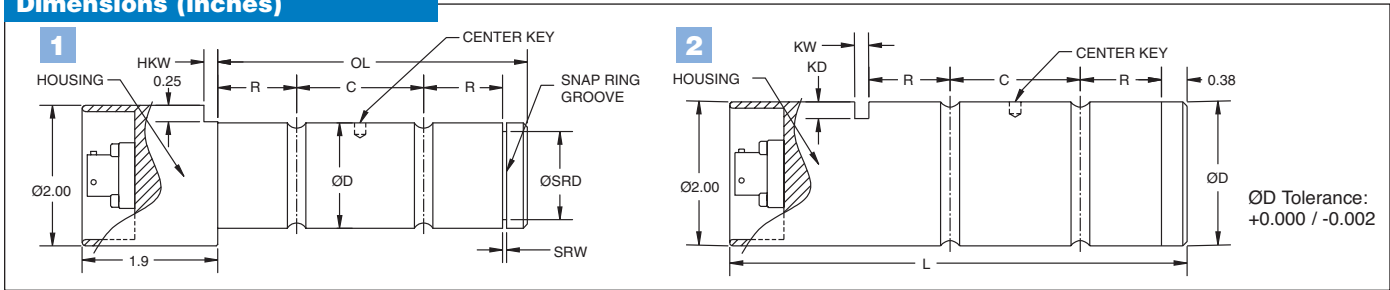
70°F to 170°F.  
(-65°F to 400°F optional.)

**LDP990**

# Series LDP990 Specifications

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

## Dimensions (inches)



Capacity (Lbs)	Sensor ØD	R	C	OL	Snap Ring SRW	ØSRD	Housing HKW	Center ØKey
3000	0.500	0.50	0.75	2.1	0.039	0.468	0.20	n/a
6000	0.750	0.59	1.00	2.6	0.046	0.704	0.20	0.156
12,500	1.000	0.63	1.00	2.8	0.046	0.940	0.20	0.219
18,000	1.250	0.81	1.38	3.7	0.056	1.176	0.27	0.219
30,000	1.500	0.94	1.63	4.0	0.056	1.406	0.27	0.281

Capacity (Lbs)	Sensor ØD	R	C	L	Housing KW	KD	Center ØKey
50,000	2.00	1.00	2.00	6.63	0.266	0.38	0.281
75,000	2.50	1.25	2.50	7.63	0.266	0.50	0.281
100,000	2.75	1.47	2.69	8.38	0.406	0.50	0.406
125,000	3.00	1.44	3.00	8.75	0.406	0.63	0.406
160,000	3.50	1.75	3.50	10.00	0.531	0.63	0.531
200,000	4.00	2.25	4.00	11.75	0.531	0.75	0.531

## 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

5000 Ohms nominal.

### Excitation

10 Vdc or Vac.

### Insulation Resistance

Greater than 5000 megaohms at 50 Vdc.

### Electrical Termination

PTIH-10-6P, Stainless steel connector with O-ring Seal.

## Electrical Characteristics

### Connector Pins (Standard)

A	+EXE	D	- SIG
B	+SIG	E	N/C
C	- SIG	F	N/C

Customer specified wiring codes are available.



NOTES: When using a load cell the user must consider load ratings and fatigue life for long term use and structural integrity. Critical loading applications, especially overhead loading, must always be designed with safety redundant load paths. MODIFICATIONS: We realize load cell applications vary greatly and as such our designs are flexible. 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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