

Precision Tension Load Cells

Models 81 and 82

0.03% NON-LINEARITY

5 TO 20,000 lb.

COMPACT SIZE

HERMETICALLY SEALED OPTION



Models 81 and 82 load cells combine both a compact form and high precision to offer a superior tension force transducer. The one-piece S-shaped design achieves a maximum non-linearity of 0.03% full scale for load ranges from 5 to 10,000 lb. Additional features include minimal temperature effects on zero and span of 0.001% and 0.0008% per degree F respectively. Models 81 and 82 load cells are well suited for steelyard rod conversions. Additional applications include converting mechanical weigh bridges and platform scales into electronic scales.

PERFORMANCE

| | Model 81 (Tension Only) Order Code BL433 | Model 82 (Tension Only) Order Code BL434 |
|-------------------------------|---|---|
| Load Ranges | 5 to 250 lb. | 100 to 10,000 lb. |
| Non-Linearity (max) | ±0.05% F.S. | ±0.03% F.S. |
| Hysteresis | ±0.03% F.S. | ±0.02% F.S. |
| Non-Repeatability (max) | ±0.02% F.S. | ±0.01% F.S. |
| Output | 3mV/V* | 2mV/V |
| Resolution | Infinite | Infinite |

ENVIRONMENTAL

| | | |
|--------------------------------|------------------|------------------|
| Temperature, Operating | 0° F to 130° F | 0° F to 130° F |
| Temperature, Compensated | 30° F to 130° F | 30° F to 130° F |
| Temperature Effect | | |
| –Zero (max) | 0.001% F.S./° F | 0.001% F.S./° F |
| –Span (max) | 0.0008% Rdg./° F | 0.0008% Rdg./° F |

ELECTRICAL

| | | |
|------------------------------------|-------------------|-------------------|
| Strain Gage Type | Foil | Foil |
| Excitation (calibration) | 10VDC | 10VDC |
| Bridge Resistance | 350 ohms | 350 ohms |
| Wiring Code (std) | #1 (See Pg. AP-8) | #1 (See Pg. AP-8) |
| Electrical Termination (std) | Cable (5 ft.) | Cable (5 ft.) |

MECHANICAL

| | | |
|--------------------------------|-------------------|-------------------|
| Static Overload Capacity | 50% over capacity | 50% over capacity |
| Material | | |
| 5 to 250 lb. | Aluminum | Aluminum |
| 500 to 20,000 lb. | N.A. | Stainless Steel |

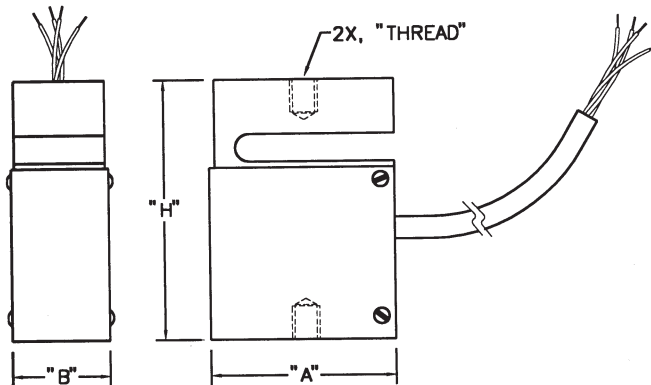
Dimensions

Model 81 (Order Code BL433)

| Available Ranges | H" | A" | B" | Thread |
|------------------------|------|-----|-----|------------|
| 5; 10; 25; 50; 100 lb. | 2.38 | 1.7 | 0.9 | 1/4-28 UNF |
| 250 lb. | 2.75 | 1.7 | 0.9 | 3/8-24 UNF |

Model 82 (Order Code BL434)

| Available Ranges | H" | A" | B" | Thread |
|---------------------------|------|------|------|--------------|
| 100; 250 lb. | 3.00 | 2.00 | 1.00 | 1/4-28 UNF |
| 500; 1000; 2000; 3000 lb. | 3.00 | 2.19 | 0.94 | 1/2-20 UNF |
| 5000 lb. | 3.75 | 2.25 | 1.00 | 3/4-16 UNF |
| 10,000 lb. | 6.00 | 5.00 | 2.00 | 1 1/4-12 UNF |



* 5lb. output is 2mV/V.