

High Accuracy, Miniature, S-Beam Load Cells

- Our smallest S-beam yet!
- High linearity at low capacities
- 5-Point NIST traceable calibration included
- Precision tension and compression force measurement
- Durable, anti-corrosive, stainless steel construction for rugged environments
- Ultra low capacities, down to 10 lbs., and even smaller models coming soon!



Overview

The LC107 series is our smallest s-beam load cell. These load cells are so small, that they are shorter than a paperclip - they are only 1.25"x0.5"x1.1". The LC107 products are compact, lightweight load cells. They are designed to measure ultra low tension and compression forces without sacrificing accuracy. Linearity is often the trade-off made in exchange for the small size of miniature load cells. However, the LC107 has a high linearity of 0.1%, even at the lowest 10lb capacity. They are also temperature compensated, and NIST calibrated in tension for superior performance. They have a 300% overload protection and stainless-steel construction to increase durability and longevity. These miniature s-beam load cells are well suited for space-constrained areas requiring high accuracy. Potential applications include scales, other weigh assemblies, assembly machinery, packaging machinery, test equipment, feedback for machine control, and many more.

Specifications

Output	$\geq 10\text{lbs.}: 2 \text{ mV/V} \pm 10\% \text{ FSO}$ $< 10\text{lbs.}: 2 \text{ mV/V} \pm 25\% \text{ FSO}$
Excitation	5 Vdc Nominal, 15 Vdc Maximum to 5 Vdc Nominal, 12 Vdc Maximum
Linearity	$\pm 0.1\% \text{ FSO}$
Hysteresis	$\pm 0.1\% \text{ FSO}$
Repeatability	$\pm 0.05\% \text{ FSO}$
Zero Balance	$\pm 1.0\% \text{ FSO}$
Operating Temperature Range	$-40 \text{ to } 93^\circ\text{C}$ ($-40 \text{ to } 200^\circ\text{F}$)
Compensated Temperature Range	$15 \text{ to } 71^\circ\text{C}$ ($60 \text{ to } 160^\circ\text{F}$)
Thermal Effects - Zero	$\pm 0.009\% \text{ FSO}/^\circ\text{C}$ ($\pm 0.005\% \text{ FSO}/^\circ\text{F}$)
Thermal Effects - Span	$\pm 0.009\% \text{ FSO}/^\circ\text{C}$ ($\pm 0.005\% \text{ FSO}/^\circ\text{F}$)
Safe Overload	150% of capacity
Ultimate Overload	300% of capacity
Ingress Protection	IP40
Construction Materials	Stainless Steel with Aluminum Side Cover

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Installation Precautions

When handling and installing unit, hold it by the blue side cover to ensure that it is not overloaded. There is a 150% safe overload and 300% ultimate overload built-in as a safeguard. However, these ultra-low capacities still require careful handling to avoid overload.

Calibration

Units are calibrated in tension and come with a 5-Point NIST calibration certificate. They can also be return to the factory for recalibration. Calibration options include tension only (standard) , tension and compression, and compression only. Consult sales for these additional calibration options.

Dimensional Drawing

