LC103B Series

High Accuracy compact Stainless Steel S-Beam Load Cells

- Available in capacities from 25 lb to 20,000 lb and 25 kg to 10,000 kg
- Stainless steel, sealed by adhesive inside, oil-proof, waterproof and anti-corrosion, suitable for all kinds of environments.
- S beam design, tension and/or compression loading possible, easy installation, suitable for crane scale, mechanical conversion scale, hopper scale and other electronic weighing devices.
- Provided with a certificate of conformance and full-scale calibration.

Description

Omega's new LC103B S-Beam load cells are compact and provide superior performance for tension or compression loading. This design provides excellent linearity and temperature performance, meeting OIML R60 C3 accuracy class for legal metrology applications.

Rugged stainless steel construction and precision sealing provide anti-corrosion and IP67 ingress protection suitable for all kinds of environments.

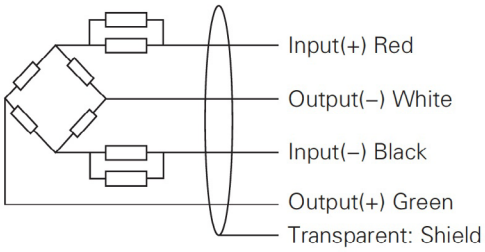
S-Type load cells that receive tension or compression forces. Applications include tank weighing, hoppers, suspended loads and truck scales. S-Type load cells provide superior performance in a compact, versatile package.

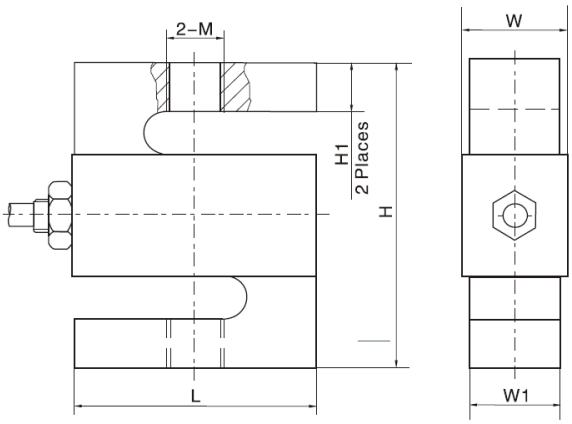
Specifications

5-Point Calibration	0 %, 100 %
Hysteresis	±0.035 %
Linearity	±0.035 %
Repeatability	±0.035 %
Accuracy(>25 lb)	Class C3
Approvals(>25 lb)	OIML R60
Output sensitivity (mV/V)	3.0±0.008 (←25lb 2.0±0.006)
Maximum number of load cell intervals (nLC)	3000
Ratio of minimum LC verification interval (Y=Emax/vmin)	10000
Combined error (%FS)	±0.020
Minimum dead load	0
Safe overload (%FS)	150 %
Ultimate overload (%FS)	300 %
Zero balance (%FS)	±1.0 %
Excitation, recommended voltage (V)	5 dc to 12 dc
Excitation maximum (V)	18 dc

Input resistance (Ω)	430 ± 60
Output resistance (Ω)	351 ± 2
Insulation resistance (MΩ)	≥ 5000 (50 Vdc)
Compensated temperature (°C)	-10 to 40
Operating temperature (°C)	-35 to 65
Storage temperature (°C)	-40 to 70
Element material	Stainless steel
Ingress protection (according to EN 60529)	IP67
Recommended torque on fixation (Thread:lbf.ft)	1/4 " UNF:18 1/2 " UNF:55 3/4 " UNF:330 1 " UNF:550 1 1/8 " UNF:1070
Recommended torque on fixation (Thread:Nm)	M8:25 M12:75 M20:450 M24:750 M30:1450
Nominal full scale deflection range	0.1935 mm to 0.8065 mm

Dimensions and Wiring Diagram





- Shielded, 4 conductor cable.
- Standard cable length: 0.45m
- Shield not connected to element.
- Cable jacket is PVC

Shielded, 4 Conductor Cable

Cable diameter	5 mm
Standard cable length	6 m
Shield not connected to element	

Capacity	L mm (in)	H mm (in)	H1 mm (in)	W1 mm (in)	W mm (in)	M(thread)
25 lbf to 300 lbf	50.8 (2.0)	60.96 (2.4)	8.89 (0.4)	11.96 (0.5)	15.06 (0.6)	1/4-28UNF
500 lbf to 1500 lbf	50.8 (2.0)	60.96 (2.4)	8.89 (0.4)	18.03 (0.7)	21.4 (0.8)	1/2-20UNF
2000 lbf to 2500 lbf	50.8 (2.0)	60.96 (2.4)	8.89 (0.4)	24.38 (1.0)	27.76 (1.1)	1/2-20UNF
3,000 lbf	76.2 (3.0)	99.06 (3.9)	13.97 (0.55)	24.38 (0.96)	27.76 (1.09)	1/2-20UNF
5000 lbf	76.2 (3.0)	99.06 (3.9)	13.97 (0.6)	24.38 (1.0)	27.76 (1.1)	3/4-16UNF
10,000 lbf	74.68 (2.9)	99.06 (3.9)	15.75 (0.6)	30.74 (1.2)	34.12 (1.3)	3/4-16UNF
20,000 lbf	112.8 (4.4)	177.8 (7.0)	39.9 (1.6)	42.93 (1.7)	46.31 (1.8)	1 1/4-12UNF
Metric						
25 kg	76.2 (3.0)	50.8 (2.0)	12.7 (0.5)	16.1 (0.63)	15.7 (0.62)	M8
50 kgf to 100 kgf	50.8 (2.0)	60.96 (2.4)	8.89 (0.35)	11.68 (0.46)	15.06 (0.59)	M8
250 kgf to 500 kgf	50.8 (2.0)	60.96 (2.4)	8.89 (0.35)	18.03 (0.71)	21.4 (0.84)	M12
1,000 kgf	50.8 (2.0)	60.96 (2.4)	8.89 (0.35)	24.38 (0.96)	27.76 (1.09)	M12
2,500 kgf	76.2 (3.0)	99.06 (3.9)	13.97 (0.55)	24.38 (0.96)	27.76 (1.09)	M20 x 1.5
5,000 kgf	74.68 (2.94)	99.06 (3.9)	18.37 (0.72) 15.75 (0.62)	30.74 (1.21)	34.12 (1.34)	M20 x 1.5
7,500 kgf	87.38 (3.44)	139.7 (5.5)	27.5 (1.08)	37.08 (1.46)	40.46 (1.59)	M24 x 2
10,000 kgf	112.78 (4.44)	177.8 (7.0)	39.9 (1.57)	42.93 (1.69)	46.31 (1.82)	M30 x 2