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High Accuracy compact Stainless Steel S-Beam Load Cells



- Available in the capacities from 25 to 20,000 lbs. (11 to 9072 kg)
- Stainless steel, sealed by adhesive inside, oil-proof, waterproof and anti-corrosion, suitable for all kinds of environments.
- S beam design Load cell, 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.

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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:

Accuracy (>25lb): class C3

Approvals(>25lb): OIML R60

Output sensitivity (mV/V): 3.0 ± 0.008 ($\leq 25lb$ 2.0 ± 0.006)

Maximum number of load cell intervals (nLC): 3000

Ratio of minimum LC verification interval (Y=E_{max}/v_{min}): 10000

Combined error (%FS): ± 0.020

Minimum dead load: 0

Safe overload (%FS): 150%

Ultimate overload (%FS): 300%

Zero balance (%FS): $\pm 1.0\%$

Excitation, recommended voltage (V): 5 to 12(DC)

Excitation maximum (V): 18(DC)

Input resistance (Ω): 430 ± 60

Output resistance (Ω): 351 ± 2

Insulation resistance (M Ω): ≥ 5000 (50VDC)

Compensated temperature ($^{\circ}$ C): -10 to 40

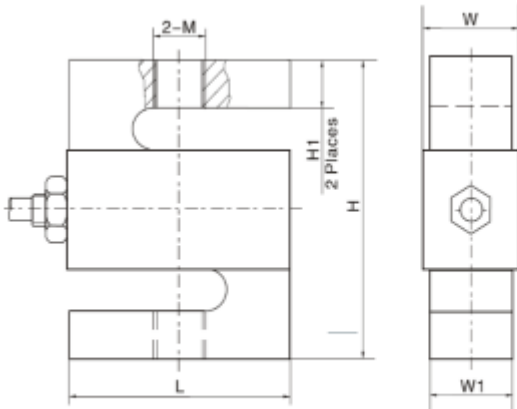
Operating temperature (°C): -35 to 65

Storage temperature (°C): -40 to 70

Element material: Stainless steel

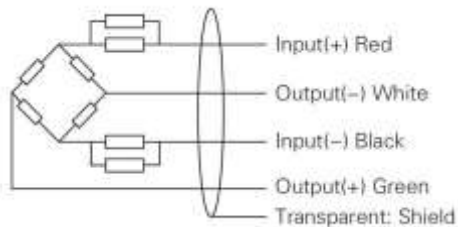
Ingress protection (according to EN 60529): IP67

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



Capacity	L mm(in)	H mm(in)	H1 mm(in)	W1 mm(in)	W mm(in)	M(thread)
25 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 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 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
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)	1-12UNF

Wiring



Shielded, 4 conductor cable

Cable diameter: Ø5mm

Standard cable length: 6m

Shield not connected to element

Part Number

Description

LC103B-25

Capacity; 25 lb., 11 kg Stainless Steel S Beam Load Cell

LC103B-50

Capacity; 50 lb., 23 kg Stainless Steel S Beam Load Cell

LC103B-100

Capacity; 100 lb., 45 kg Stainless Steel S Beam Load Cell

LC103B-200

Capacity; 200 lb., 91 kg Stainless Steel S Beam Load Cell

LC103B-500

Capacity; 500 lb., 227 kg Stainless Steel S Beam Load Cell

LC103B-1K

Capacity; 1000 lb., 454 kg Stainless Steel S Beam Load Cell

LC103B-2K

Capacity; 2000 lb., 907 kg Stainless Steel S Beam Load Cell

LC103B-5K

Capacity; 5000 lb., 2268 kg Stainless Steel S Beam Load Cell

LC103B-10K

Capacity; 10000 lb., 23 kg Stainless Steel S Beam Load Cell

LC103B-20K

Capacity; 20000 lb., 9072 kg Stainless Steel S Beam Load Cell