

Double-Ended Beam Load Cell

FEATURES

- Capacities: 5k to 250k lbs
- Low profile construction
- Nickel-plated alloy steel construction
- Certified to OIML R60 3000d, NTEP CoC—10000d
- Sealing: IP67 (DIN 40.050)
- **Optional**
 - FM approved for use in hazardous locations
 - Atex versions are available for use in potentially explosive atmospheres

APPLICATIONS

- Platform scales
- On-board weighing
- Weighbridges
- Silo hopper weighing

DESCRIPTION

5103 transducers are double-ended, center-loaded shear beam load cells. The 5103 is constructed of nickel-plated alloy steel.

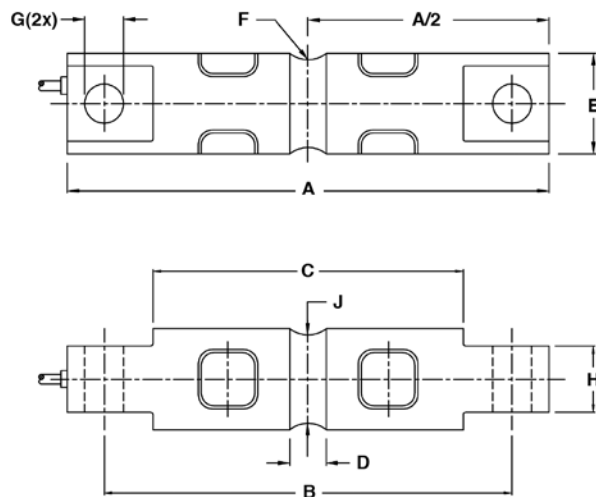


These products are suitable for tank weighing systems, low cost weighbridges, and axle weighers.

A reliable sealing is ensured by the proprietary TRANSEAL potting compound and additional mechanical protection of the strain gage area.

A specially designed mounting arrangement is available, providing the ideal solution for vessel / tank weighing.

OUTLINE DIMENSIONS in millimeters



Capacity (lbs)	5k, 10k	20k	30k-60k	100k	150k	200k, 250k
A	206.2	206.2	260.4	285.8	285.8	406.9
B	174.6	174.6	215.9	241.3	241.3	330.2
C	133.1	133.1	165.1	190.5	190.5	254.0
D	15.7	21.3	25.4	31.8	31.8	33.0
E	43.2	49.5	76.2	88.9	99.1	136.5
F	12.7	12.7	25.4	38.1	38.1	50.8
G	16.7	16.7	26.9	26.9	26.9	39.6
H	28.4	28.4	60.2	63.5	71.1	116.8
J	37.6	37.6	69.3	82.3	92.5	131.4

Cable specifications

Cable length 10m (6m for 5k-20k)

Excitation +	Red
Excitation -	Black
Output +	Green
Output -	White
Shield	Transparent

Double-Ended Beam Load Cell

SPECIFICATIONS				
PARAMETER	UNIT			VALUE
Standard capacities (E _{max})	2.3*, 4.5*, 9.1, 13.6, 18.2, 22.7, 27.2, 45.4, 68*, 91*, 113*			T
Standard capacities (E _{max})	5k*, 10k*, 20k, 30k, 40k, 50k, 60k, 100k, 150k*, 200k*, 250k*			lbs
Accuracy class according to OIML / NTEP	NTEP	Non-Approved	C3	
Max. number of verification intervals (n _{IC})	III L 10000	D3	3000	
Minimum verification interval (v _{min})			E _{max} /10,000	
Rated output (= S)	3.0			mV/V
Rated output tolerance	0.003			±mV/V
Zero balance	1.0			±% FSO
Combined error	0.0200	0.0300	0.0200	±% FSO
Non-repeatability	0.0100	0.0100	0.0100	±% FSO
Minimum dead load output return	0.0250	0.0300	0.0167	±% applied load
Creep error (30 minutes)		0.0300	0.0245	±% applied load
Creep error (20 minutes)	0.030	0.0450	0.0053	±% applied load
Temp. effect on min. dead load output	(0.001)	0.0140	0.0070	±% FSO/5°C (°F)
Temperature effect on sensitivity	(0.0008)	0.0070	0.0050	±% applied load/5°C (°F)
Minimum dead load	0			% E _{max}
Maximum safe overload	150			% E _{max}
Ultimate overload	300			% E _{max}
Maximum safe side load	100			% E _{max}
Deflection at E _{max}	0.5/0.6/1.1/0.5/0.5/0.5/0.6/0.5/0.5/0.9/0.9			mm
Excitation voltage	5 to 12			V
Maximum excitation voltage	15			V
Input resistance	700±7			Ω
Output resistance	700±7			Ω
Insulation resistance	≥5000			MΩ
Compensated temperature range	-10 to +40			°C
Operating temperature range	-40 to +80			°C
Storage temperature range	-40 to +90			°C
Element material (DIN)	Nickel-plated alloy steel			
Sealing (DIN 40.050 / EN 60.529)	IP67			
Recommended torque on fixation bolts	12 to 14			Nm

* Only 20k–100k lbs (9.1–45.4T) capacities are OIML approved.

FSO—Full Scale Output

All specifications subject to change without notice.

Disclaimer

ALL PRODUCTS, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Vishay Precision Group, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay Precision Group"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

The product specifications do not expand or otherwise modify Vishay Precision Group's terms and conditions of purchase, including but not limited to, the warranty expressed therein.

Vishay Precision Group makes no warranty, representation or guarantee other than as set forth in the terms and conditions of purchase. **To the maximum extent permitted by applicable law, Vishay Precision Group disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.**

Information provided in datasheets and/or specifications may vary from actual results in different applications and performance may vary over time. Statements regarding the suitability of products for certain types of applications are based on Vishay Precision Group's knowledge of typical requirements that are often placed on Vishay Precision Group products. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application.

No license, express, implied, or otherwise, to any intellectual property rights is granted by this document, or by any conduct of Vishay Precision Group.

The products shown herein are not designed for use in life-saving or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay Precision Group products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay Precision Group for any damages arising or resulting from such use or sale. Please contact authorized Vishay Precision Group personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.