

## Double-Ended Beam Load Cell

### FEATURES

- Capacities: 5k to 150k lbs
- Low profile construction
- Stainless steel construction
- Certified to NTEP class III, 10000 divisions
- Sealing: IP67 (DIN 40.050)
- **Optional**
  - FM and ATEX certified versions are available for use in potentially explosive atmospheres

### APPLICATIONS

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

### DESCRIPTION

The 9103 is a double-ended, center-loaded shear beam type load cell constructed of stainless steel.

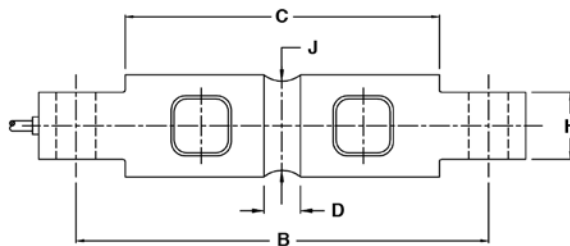
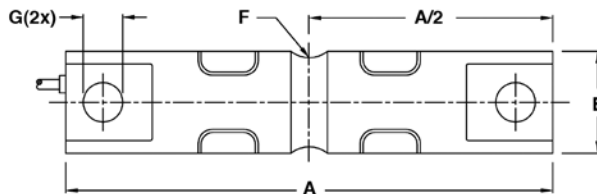


This product is suitable for tank weighing systems, low cost weighbridges and axle weighers.

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



#### Cable specifications

Cable length: 10 m (6 m for 5–20k)

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

Cable screen is not connected to the load cell body.

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

### Double-Ended Beam Load Cell

SPECIFICATIONS			
PARAMETER	VALUE		UNIT
Standard capacities ( $E_{max}$ )	5k*, 10k, 20k, 30k, 40k, 50k, 60k, 100k, 150k*		lbs
Metric equivalents	2.3*, 4.5, 9.1, 13.6, 18.2, 22.7, 27.2, 45.4, 68*		t
Accuracy class according to NTEP	NTEP III L	Non-Approved	
Maximum no. of verification intervals ( $n_{ic}$ )	10000		
Rated output (=S)	3.0		mV/V
Rated output tolerance	0.03		±mV/V
Zero balance	2.0		±% FSO
Combined error	0.0200	0.1000	±% FSO
Non-repeatability	0.0100	0.0200	±% FSO
Minimum dead load output return	0.0300	0.0500	±% applied load
Creep error (30 minutes)		0.0600	±% applied load
Creep error (20–30 minutes)	0.0300	0.0200	±% applied load
Temperature effect on minimum dead load output	(0.0008)	(0.0140)	±% FSO/°F (/5°C)
Temperature effect on sensitivity	0.0010	(0.0070)	±% applied load/°F (/5°C)
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	880±80		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)	Stainless steel		
Sealing (DIN 40.050 / EN60.529)	IP67		
Recommended torque on fixation bolts	12 to 14		N*m

\* Capacities 5k and 150k lbs are not approved by NTEP

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, "VPG"), 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 VPG's terms and conditions of purchase, including but not limited to, the warranty expressed therein.

VPG 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, VPG 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 VPG's knowledge of typical requirements that are often placed on VPG 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. You should ensure you have the current version of the relevant information by contacting VPG prior to performing installation or use of the product, such as on our website at [vpgsensors.com](http://vpgsensors.com).

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

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

Copyright Vishay Precision Group, Inc., 2014. All rights reserved.