

## 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.

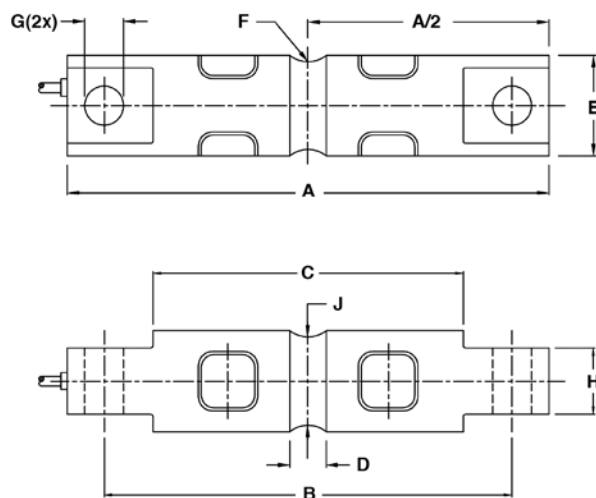


These products are suitable for tank weighing systems, low cost weighbridges, and axle weighers.

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 <sub>max</sub> )	2.3*, 4.5*, 9.1, 13.6, 18.2, 22.7, 27.2, 45.4, 68*, 91*, 113*			T
Standard capacities (E <sub>max</sub> )	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 <sub>IC</sub> )	IIIL 10000	D3	3000	
Minimum verification interval (v <sub>min</sub> )			E <sub>max</sub> /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 <sub>max</sub>
Maximum safe overload	150			% E <sub>max</sub>
Ultimate overload	300			% E <sub>max</sub>
Maximum safe side load	100			% E <sub>max</sub>
Deflection at E <sub>max</sub>	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.

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