

# S-Beam Load Cell



**FEATURES**

- Rated capacities of 25 to 20,000 pounds  
50 kilograms to 10 metric tons
- Designed for single or multiple load cell applications
- Constructed of high quality alloy tool steel
- Nickel plated for outstanding corrosion resistance
- *Sensorgage*™ sealed to IP67 standards
- Trade certified for NTEP Class III: 5000d, IIII: 10000d and OIML R-60 3000d available
- Factory Mutual System Approved for Classes I, II, III; Divisions 1 and 2; Groups A through G. Also, non-incendive ratings (No barriers!).

**OPTIONAL FEATURE**

- Stainless steel version is Model 60050

**DESCRIPTION**

Model 60001 is a tension-compression load cell with a humidity-resistant coating and shielded cables, which enable use in harsh environments while maintaining operating specifications. Additional sense wires compensate for changes in lead resistance due to temperature change and/or cable extension.

Ideally suited for lever conversions, hanging scales, force measurement and a wide range of other industrial applications. Nickel-plated for outstanding corrosion resistance.

**APPLICATIONS**

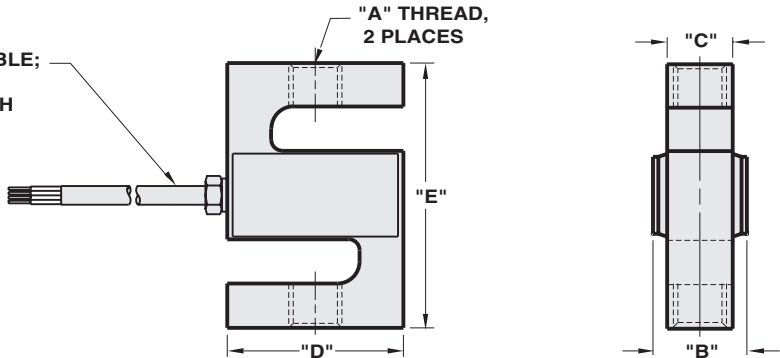
- Tank, bin and hopper weighing
- Level and inventory monitoring
- Truck scale conversions
- Tension and compression measurements

**OUTLINE DIMENSIONS** in inches [mm]

4 CONDUCTOR, 22 AWG CABLE;  
SHIELDED & JACKETED;  
20 FOOT STANDARD LENGTH  
OR PER SALES ORDER.

**Wiring**

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



CAPACITY	A	B	C	D	E	DEFLECTION	WEIGHT
25 - 200	1/4-28 UNF-2B	0.65	0.50	2.00	2.50	0.015 - 0.010	4.0
250 - 300	3/8-24 UNF-2B	0.75	0.50	2.00	3.00	0.010	4.0
500 - 2K	1/2-20 UNF-2B	1.00	0.75	2.00	3.00	0.010 - 0.012	6.5
2.5K - 4K	1/2-20 UNF-2B	1.25	1.00	2.00	3.00	0.012	6.5
5K	3/4-16 UNF-2B	1.25	1.00	3.00	4.25	0.017	6.5
10K	3/4-16 UNF-2B	1.25	1.00	3.50	4.75	0.025	6.5
15K	1-14 UNF-2-B	1.50	1.25	4.00	5.50	0.025	9.0
20K	1-1/4-12 UNF-2-B	2.25	2.00	5.00	7.00	0.025	9.0
[50 - 100kg]	M8.0 x 1.25-6H	[16.5]	[12.7]	[50.8]	[63.5]	[0.03 - 0.004]	[0.8]
[250kg - 1t]	M12 x 1.75-6H	[25.4]	[19.1]	[50.8]	[76.0]	[0.004]	[1.8]
[2.5t]	M20 x 1.5-6H	[31.8]	[25.4]	[76.2]	[108.0]	[0.008]	[2.9]
[5t]	M20 x 1.5-6H	[31.8]	[25.4]	[88.9]	[120.7]	[0.011]	[2.9]
[10t]	M30 x 2.0-6H	[57.2]	[50.8]	[127.0]	[177.8]	[0.011]	[4.0]

Capacities are in pounds [kg/t]. Deflection is ±10%. Certified drawings are available.



### SPECIFICATIONS

PARAMETER	VALUE				UNIT
Rated capacity-R.C. ( $E_{max}$ )	25, 50, 75, 100, 150, 200, 250, 300, 500, 750, 1K, 1.5K, 2K, 2.5K, 3K, 5K, 10K, 15K, 20K				lbs
	50kg, 100kg, 250kg, 500kg, 1t, 2.5t, 5t, 10t*				kg/metric tons
NTEP/OIML Accuracy class	NTEP III	NTEP IIIIL	Standard	OIML R60	
Maximum no. of intervals (n)	5000 single	10000 single		3000*	
$Y = E_{max}/V_{min}$	NTEP Cert. No 86-043A1			6667	Maximum available
Rated output-R.O. lbs	3.0				mV/V
Rated output tolerance lbs	25 - 3K: +25 / -10 5K - 20K: $\pm 0.25$				%
Rated output-R.O. kg	3.0				mV/V
Rated output tolerance kg	50kg -1t: +25 / -10 2.5t - 3t: $\pm 0.25$				%
Zero balance	1.0				$\pm\%$ FSO
Combined error	0.02	0.02	0.03	0.02	$\pm\%$ FSO
Non-repeatability	0.01				$\pm\%$ FSO
Creep error (30 minutes)	0.03	0.025	0.03	0.017	$\pm\%$ FSO
Temperature effect on zero	0.0010	0.0010	0.0015	0.0010	$\pm\%$ FSO/ $^{\circ}$ F
Temperature effect on output	0.0008	0.0008	0.0008	0.0007	$\pm\%$ of load/ $^{\circ}$ F
Compensated temperature range	14 to 104 (-10 to 40)				$^{\circ}$ F ( $^{\circ}$ C)
Operating temperature range	0 to 150 (-18 to 65)				$^{\circ}$ F ( $^{\circ}$ C)
Storage temperature range	-60 to 185 (-50 to 85)				$^{\circ}$ F ( $^{\circ}$ C)
Safe sideload	30				% of R.C.
Maximum safe central overload	150				% of R.C.
Ultimate central overload	300				% of R.C.
Excitation, recommended	10				Vdc or Vac rms
Excitation, maximum	15				Vdc or Vac rms
Input impedance	343 - 450				$\Omega$
Output impedance	349 - 355				$\Omega$
Insulation resistance at 50VDC	>1000				M $\Omega$
Material	Nickel plated alloy tool steel**				
Environmental protection	IP67				

Note: \* OIML approval 100-5Klbs & 50-2500kg only  
 NTEP approval from 25-20Klbs only  
 \*\* Stainless steel available - model number 60050  
 FSO - Full Scale Output

All specifications subject to change without notice.

### VISHAY TRANSDUCERS (VT) SALES OFFICES

**VT Americas**  
 City of Industry, CA  
 PH: +1-626-858-8899  
 FAX: +1-626-332-3418  
 vt.us@vishaymg.com

**VT Netherlands**  
 Breda  
 PH: +31-76-548-0700  
 FAX: +31-76-541-2854  
 vt.nl@vishaymg.com

**VMG UK**  
 Basingstoke  
 PH: +44-125-646-2131  
 FAX: +44-125-647-1441  
 vt.uk@vishaymg.com

**VMG Israel**  
 Netanya  
 PH: +972-9-863-8888  
 FAX: +972-9-863-8800  
 vt.il@vishaymg.com

**VMG Germany**  
 Heilbronn  
 PH: +49-7131-3901-260  
 FAX: +49-7131-3901-2666  
 vt.de@vishaymg.com

**VT China**  
 Tianjin  
 PH: +86-22-2835-3503  
 FAX: +86-22-2835-7261  
 vt.prc@vishaymg.com

**VMG France**  
 Chartres  
 PH: +33-2-37-33-31-20  
 FAX: +33-2-37-33-31-29  
 vt.fr@vishaymg.com

**VT Taiwan\***  
 Taipei  
 PH: +886-2-2696-0168  
 FAX: +886-2-2696-4965  
 vt.roc@vishaymg.com  
 \*Asia except China



## Notice

Specifications of the products displayed herein are subject to change without notice. Vishay Intertechnology, Inc., or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Vishay's terms and conditions of sale for such products, Vishay assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of Vishay products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Vishay for any damages resulting from such improper use or sale.