



**Main Features:**

- Material: Alloy steel, stainless steel optional
- Rated Capacities: 100kg~10t (100lb to 20Klb)
- OIML R60, NTEP HB44, CE and RoHS certified
- IP Rating: IP67, IP68
- Suitable for floor scales, medical bed weighing and other electronic weighing devices.
- High precision by OIML R60 C5, high reliability.

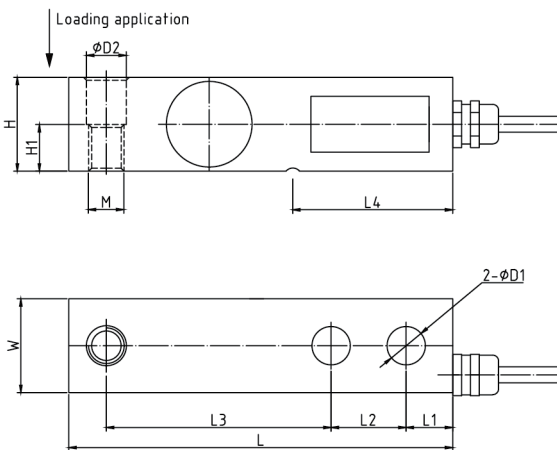


**Product description:**

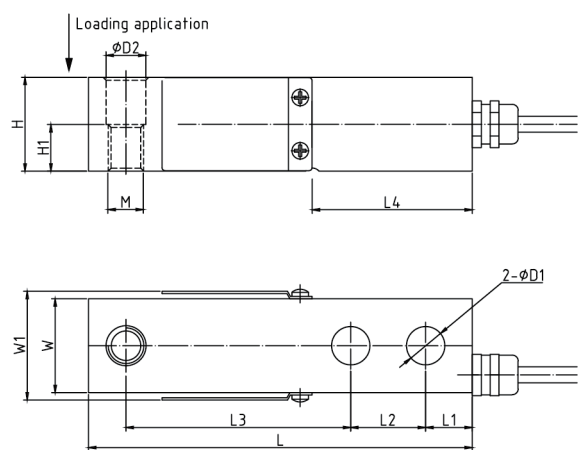
The B510 series are atypical and high precision, low-profile single-ended shear beam load cells, which are available in a wide range of capacities. Full alloy steel or stainless steel (optional) construction and complete hermetic sealing ensures reliable accuracy and robustness in harsh industrial applications. The B510 series are the ideal load cells for high precision weighing platforms with bolts by 2 pcs through-holes firmly at end, meanwhile the force would be applied from the self-aligning feet by the other end vertically.

**Dimensions (mm&inch):**

Capacity: 0.5t-10t / 1klb-20klb



Capacity: 50kg-250kg / 100lb-500lb



Rated Capacity	L	L1	L2	L3	L4	D1	D2	H	H1	W	W1	M
lb/inches												
100-500	5.12	0.62	1.00	3.00	2.13	0.51	0.53	125	0.62	1.25	1.45	1/2-20 UNF-2B
1,000-4,000; 5,000SE	5.12	0.62	1.00	3.00	2.13	0.51	0.53	125	0.62	1.25	-	1/2-20 UNF-2B
5,000-10,000	6.75	0.75	1.50	3.75	3.04	0.77	0.81	150	0.87	1.50	-	3/4-16 UNF-2B
15,000-20,000	8.75	1.00	2.00	4.75	4.00	1.03	1.03	2.00	1.00	2.00	-	1-14 UNS-2B
kg/mm												
50-250	130.0	15.8	25.4	76.2	54.2	13.0	13.5	31.8	15.8	31.8	36.8	M12×1.75
500-2,000	130.0	15.8	25.4	76.2	54.2	13.0	13.5	31.8	15.8	31.8	-	M12×1.75
3,000-5,000	171.5	19.1	38.1	95.3	77.2	19.5	20.6	38.1	22.0	38.1	-	M18×1.50
7,500-10,000	222.3	25.4	50.8	120.7	101.6	26.0	26.0	50.8	25.4	50.8	-	M24×2.00

## B510 Single-Ended Beam Load Cell Specifications

Parameter		Units	Specifications		
Model No.			B510A / B510S		
Rated capacity (E <sub>max</sub> )		lb / klb	100; 250; 500 / 1; 2.5; 4; 5SE <sup>4)</sup> ; 5; 10; 15; 20		
		kg / t	50; 100; 250 / 0.5; 1; 2; 3; 5; 7.5; 10		
Accuracy class <sup>12)</sup>			C3	C5	
Min. dead load		lb / kg	0		
Rated output		mV/V	3.0 ± 0.003		
Zero balance		% of E <sub>max</sub>	± 1		
Repeatability error		% of AL <sup>3)</sup>	< ± 0.010	< ± 0.006	
Creep; 30 minute		% of AL	< ± 0.017	< ± 0.010	
Min. dead load output return (DR); 30 min		% of AL	< ± 0.017	< ± 0.010	
Temp. effect on	Min. dead load output	% of E <sub>max</sub> /°C	< ± 0.0020	< ± 0.0014	
	Rated output <sup>2)</sup>	% of AL/°C	< ± 0.0012	< ± 0.0007	
Temperature range	Compensated		-10 to +40 [+14 to +104]		
	Operating	°C(°F)	-40 to +65 [-40 to +149]		
	Safe storage		-40 to +80 [-40 to +176]		
Excitation voltage	Recommended	V AC/DC	5 ~ 15		
	Maximum		15		
Terminal resistance	Excitation	Ω	384 ± 5		
	Output		350 ± 3		
Insulation resistance @50VDC		MΩ	> 5000		
Breakdown voltage		V AC	> 500		
Seal type / IP rating			Cap. ≤250kg/500lb: Silicon rubber / IP66 Cap. ≥500kg/1Klb: Hermetically welded / IP68		
Load limit	Safe	% of E <sub>max</sub>	140		
	Ultimate		200		
Material	Spring element		Alloy steel / Stainless steel		
	Cable		Φ5.4; 4-wire; PVC		
Cable length		m	Cap. ≤2000kg/5000lb SE: 3.0 Cap. ≥3000kg/5000lb: 5.0		
Weight; approx		kg	≤2t/5Klb SE	3t/5Klb-5t/10Klb	≥7.5t/15Klb
			1.0	1.8	4.0
Fatigue life		cycles @E <sub>max</sub>	> 1,000,000		
Deflection at E <sub>max</sub> ; approx		mm	< 1.0		
Barometric pressure effect on Zero Output		Vmin/kPa	< 1.0		
Mounting screw	Size/Grade	N.m(ft-lb)	M12 (1/2-20UNF)	M18 (3/4-16UNF)	M24 (1-14UNS)
	Recommended torque		98(70)	275(200)	700(500)

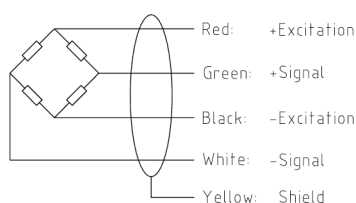
### Notes:

<sup>1)</sup> Error due to the combined effect of non-linearity and hysteresis

<sup>2)</sup> The sum of errors due to Temperature Effect on Output comply with the requirements of OIML R60 and NIST HB44

<sup>3)</sup> AL = Applied Load

Cable Colour Code: (4-wire circuit)



Shield connected to load cell body

### Interchangeable Products:

Manufacturer	Model
Vishay Sensortronics	65023A
Vishay Celtron	SQB
Vishay Tedea-Huntleigh	3411
Zemic	H8C