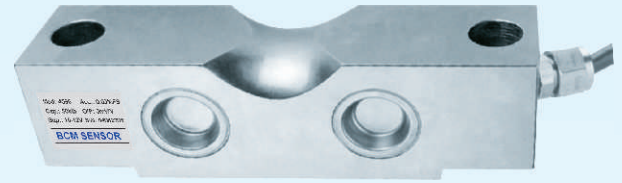


Model 4516/4596 Double-ended Shear Beam Load Cells

Features

- double-ended shear beam
- capacity from 10 klb to 200 klb
- accuracy of 0.03%fs
- mild steel construction with nickel plated treatment (4516)
17-4PH construction (4596)
- environment protection grade up to IP 68 (only for 4596)



Applications

- vehicle scales
- tank and hopper weighing
- catalyst vessels weighing
- batching plant weighing

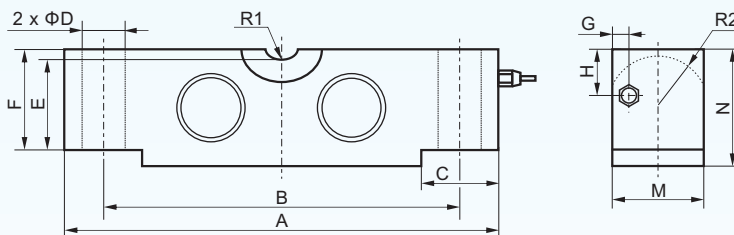
Description

Based on BCM advanced metal foil strain gauge technology, model 4516/4596 load cells are made of double-ended shear-beam working principle. These load cells are produced with center loading configuration, that is, the load cell is supported from both ends and the load is introduced at the center of the load cell.

The capacities of 4516/4596 load cells range from 10 klb to 200 klb with an accuracy of 0.03%fs (fs = full scale). Thanks to BCM leading technology in sealing, 4516/4596 load cells can be made to a higher protection grade of IP68, and fit to harsh industrial conditions.

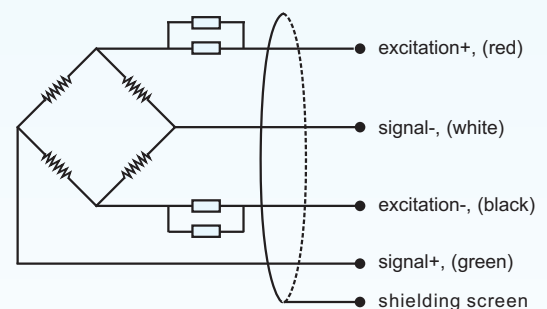
Featuring compact construction and high capacity compared to the single point load cells, 4516/4596 load cells are widely used in applications of vehicle scales, tank and hopper weighing.

Dimensions



cap. (Klb)	A	B	C	D	E	F	G	H	M	N	R1	R2
10, 25	196.9	165.1	35.9	17.3	41.4	43.2	8.8	13.6	42.9	49.3	19.1	22.9
40	260.4	215.9	49.0	20.6	50.8	53.3	9.0	31.0	49.3	62.0	25.1	28.5
50, 75	260.4	215.9	49.0	27.0	64.5	67.3	10.0	37.4	62.0	74.7	25.4	34.8
100, 125	387.4	323.8	79.5	41.0	83.8	87.1	12.0	43.6	73.6	98.0	38.1	45.7
150, 200	489.0	387.4	101.6	41.0	112.8	130.0	12.0	73.6	96.5	147.3	50.8	60.2

Electrical Connection



Model 4516/4596

Double-ended Shear-beam Load Cells



Technical Data

parameters	units	specifications
capacity	Klb	10, 20, 30, 50, 70, 100, 150, 200
safe load limit	%fs	150
ultimate overload	%fs	200
output sensitivity at fs	mV/V	3.0 ± 0.004
zero unbalance	%fso	± 1
non-linearity	%fs	± 0.03
hysteresis	%fs	± 0.03
repeatability	%fs	± 0.02
creep error (30 min.)	%fs	± 0.03
excitation (supply voltage)	Vdc	10
max. excitation voltage	Vdc	15
input resistance	Ω	750 ± 10
output resistance	Ω	700 ± 10
insulation resistance	MΩ	≥ 5000@50 Vdc
storage temp. range	°C	-35 ~ +80
operating temp. range	°C	-35 ~ +70
compensated temp. range	°C	-10 ~ +40
temp. coefficient of sensitivity	%fs/°C	± 0.003
temp. coefficient of zero	%fs/°C	± 0.003
load cell body material		mild steel (4516), 17-4PH stainless steel (4596)
sealing		potted
mechanical interface		refer to the dimensions on the datasheets
electrical interface		Φ 5 mm, 4-conductor shielded PVC cable, 13 m
environment protection		IP 66 (standard), IP 67, IP 68 (only for 4596)
unit weight	kg	2.4, ..., 13.5 (capacity dependent, to be confirmed in case of order)

The listed specifications are subject to change without prior notice.

BCM SENSOR TECHNOLOGIES BVBA

Model 4516/4596

Double-ended Shear-beam Load Cells



Ordering Information

position (pos.) 1: model									
4516: made from mild steel 4596: made from 17-4PH stainless steel									
pos. 2: capacities									
10 klb 100 klb 20 klb 200 klb 30 klb 50 lkb 70 klb									
pos. 3: output sensitivity									
3 mV/V									
pos. 4: non-linearity or accuracy class									
0.03 %fs									
pos. 5: bridge resistance									
700 Ω (Rin = 750±10 Ω, Rout = 700±10 Ω)									
pos. 6: threads									
N = NA **. In case of "NA", pos.6 can be omitted from the ordering code.									
pos. 7: electrical interface									
cable, code = diameter(Φ)/number of conductors/cable jacket/cable length 5/4/PVC/13 = Φ5 mm, 4-conductors shielded, PVC, length = 13* m									
pos. 8: environment protection									
IP 66 IP 67 IP 68 (only for 4596)									
pos. 9: accessories for installation									
N = NA **. In case of "NA", pos.9 can be omitted.									
pos. 10: customized spec's									
When any customized spec's are required, the customer needs to add "C" as the last parameter in the ordering code, and specifies the wished spec's on his order clearly. The customized spec's needs to be confirmed in advance by BCM's sales representative. Code "C" can be omitted if no customized spec's are required.									
pos.1	pos. 2	pos. 3	pos. 4	pos. 5	pos. 6	pos. 7	pos. 8	pos. 9	pos. 10

*: This value can also be a customized value.

** : NA = not available or not applicable

example: 4516-100klb-3mV/V-0.03%fs-700Ω-5/4/PVC/13-IP66-C



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