

Model 4517/4597

Double-ended Shear-beam Load Cells

Features

- double-ended shear beam
- capacity from 10 klb to 70 klb
- accuracy of 0.02%fs
- mild steel construction with nickel plated treatment (4517)
17-4PH construction (4597)
- environment protection grade up to IP 68 (only for 4597)



Applications

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

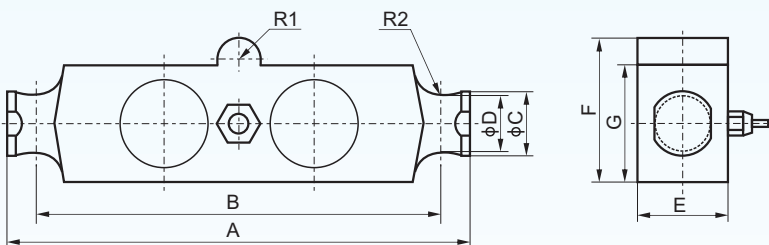
Description

Based on BCM advanced metal foil strain gauge technology, model 4517/4597 load cells are made of double-ended shear-beam working principle. These load cells are produced with center supporting configuration, that is, the load cell is supported from center while the load is suspended from both ends of the load cell.

The capacities of 4517/4597 load cells range from 10 klb to 70 klb with an accuracy of 0.03%fs (fs = full scale). Thanks to BCM leading technology in sealing, 4517/4597 load cells can be made to a higher protection grade of IP68, and fit to harsh industrial conditions.

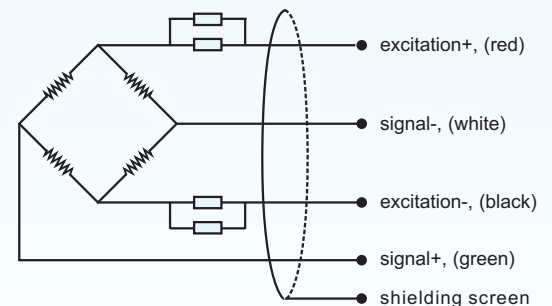
Featuring compact construction and high capacity compared to the single point load cells, 4517/4597 load cells are widely used in applications of vehicle scales, tank and hopper weighing.

Dimensions



cap. (Klb)	A	B	C	D	E	F	G	R1	R2
10 ~ 25	203.2	180.95	25.4	20.32	36.58	58.67	49.28	9.65	9.65
30 ~ 75	215.9	184.15	50.8	44.45	49.53	76.2	62.23	12.7	19.05

Electrical Connection



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Technical Data

parameters	units	specifications
capacity	Klb	10, 20, 30, 50, 70
safe load limit	%fs	150
ultimate overload	%fs	200
output sensitivity at fs	mV/V	3.0 ± 0.003
zero unbalance	%fso	± 1
non-linearity	%fs	± 0.02
hysteresis	%fs	± 0.02
repeatability	%fs	± 0.01
creep error (30 min.)	%fs	± 0.02
excitation (supply voltage)	Vdc	10
max. excitation voltage	Vdc	15
input resistance	Ω	760 ± 30
output resistance	Ω	700 ± 10
insulation resistance	MΩ	≥ 5000@50 Vdc
storage temp. range	°C	-35 ~ +80
operating temp. range	°C	-35 ~ +65
compensated temp. range	°C	-10 ~ +55
temp. coefficient of sensitivity	%fs/°C	± 0.002
temp. coefficient of zero	%fs/°C	± 0.002
load cell body material		mild steel (4517), 17-4PH stainless steel (4597)
sealing		potted
mechanical interface		refer to the dimensions on the datasheets
electrical interface		Φ 6 mm, 4-conductor shielded PVC cable, 13 m
environment protection		IP 66 (standard), IP 67, IP 68 (only for 4597)
unit weight	kg	~ 6

The listed specifications are subject to change without prior notice.

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Ordering Information

position (pos.) 1: model									
4517: made from mild steel 4597: made from 17-4PH stainless steel									
pos. 2: capacities									
10 klb 20 klb 30 klb 50 lkb 70 klb									
pos. 3: output sensitivity									
3 mV/V									
pos. 4: non-linearity or accuracy class									
0.02 %fs									
pos. 5: bridge resistance									
700 Ω (Rin = 760±30 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 6/4/PVC/13 = Φ6 mm, 4-conductors shielded, PVC, length = 13* m									
pos. 8: environment protection									
IP 66 IP 67 IP 68 (only for 4597)									
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: 4597-70klb-3mV/V-0.02%fs-700Ω-6/4/PVC/13-IP67-C



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