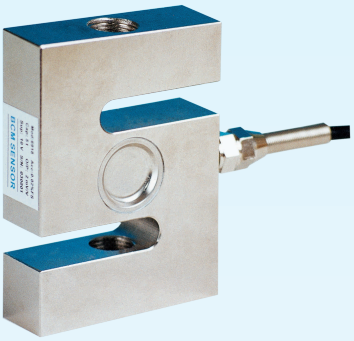
Model 6918/6998
S-Beam Load Cells

Features

- compression & tension load cells
- range from 0.5t to 30t
- accuracy of 0.02%fs (option: OIML C3)
- AISI 4340 construction (6918)
  17-4PH stainless steel construction (6998)
- protection grade up to IP68



option: a pair of eye bolts

Applications

- hanging scales
- hopper scales

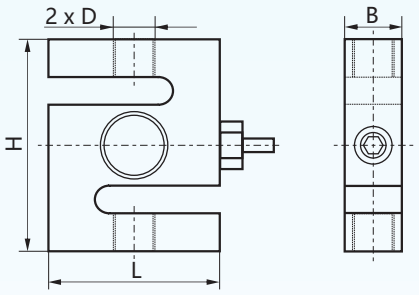
Description

Based on BCM advanced metal foil strain gauges technology, model 6918/6998 S-type load cells are made of shear-beam working principle. These load cells have a compact construction and can measure both compressive and tensile forces. These load cells are widely used in applications where the load cells are suspended from an overhead structure and the object to be measured is hung from the underside.

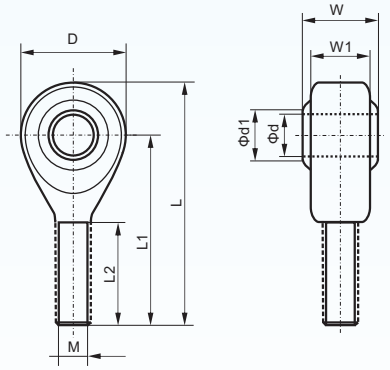
6918/6998 load cells can measure tensile and compressive loads from 0.5t to 30t with an accuracy 0.02%fs (fs=full scale). On request, these load cells can be supplied with OIML C3 certificate. Thanks to BCM leading technology in sealing, 6918/6998 load cells can be made to a higher protection grade IP68, and fit to harsh industrial conditions.

Typical applications of 6918/6998 load cells include hanging-sclaes and hopper-scales weighing systems.

Dimensions



Capacity(t)	L	H	B	D
0.5, 0.75	50.8	76.2	19.1	M12 x 1.75
1	50.8	76.2	25.4	M12 x 1.75
1.5	50.8	76.2	25.4	M16 x 1.5
2, 3	76.2	108	31.8	M20 x 1.5
5	76.2	108	37	M24 x 2
7.5	100	139.7	37	M24 x 2
10	125.5	177.8	50.8	M30 x 2



M	d	d1	L	L1	L2	D	W	W1
M12×1.75	12	15.4	70	54	33	32	16	12
M16×2	16	19.3	87	66	40	42	21	15
M20×1.5	20	24.3	103	78	47	50	25	18
M24×2	25	29.6	124	94	58	60	31	22
M30×2	30	34.8	145	110	71	70	37	25

BCM SENSOR TECHNOLOGIES BVBA

Industriepark Zone 4, Brechtsebaan 2
B-2900 Schoten - Antwerpen, BELGIUM

Tel.: +32-3-238 6469
Fax: +32-3-238 4171

website: www.bcmsensor.com
email: sales@bcmsensor.com

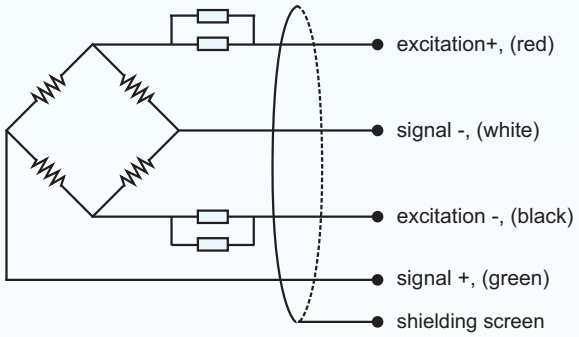
Model 6918/6998
S-Beam Load Cells

Technical Data

Parameter	Units	Specifications	Notes
capacity	t	0.5, 0.75, 1, 2, 3, 5, 7.5, 10, 20, 30	
safe load limit	%fs	150	1
ultimate overload	%fs	200	
output sensitivity at fs	mV/V	2.0 ±0.04 (standard), 3.0 ±0.04	
zero unbalance	%fso	⩽ ±1	
accuracy class according to OIML R60		C3	
max. number of verification interval (n_{max})		3000	
min. load cell verification interval (V_{min})		7500	
combined error	%fs	⩽ ±0.02	
creep error (30 min.)	%fs	⩽ ±0.02	
excitation (supply voltage)	Vdc	10	
max. excitation voltage	Vdc	15	
input resistance	Ω	360 ±10	
output resistance	Ω	350 ±10	
insulation resistance	MΩ	≥ 5000 @50Vdc	
storage temp. range	°C	-35 ~ +80	
operating temp. range	°C	-35 ~ +80	
compensated temp. range	°C	-10 ~ +55	
temp. coefficient of sensitivity	%fso/°C	⩽ ±0.002	2
temp. coefficient of zero	%fso/°C	⩽ ±0.003	2
load cell body material		AISI 4340 (6918), 17-4PH stainless steel (6998)	
sealing		potted	
mechanical interface		refer to the dimensions on the datasheets	
electrical interface		Φ5.7mm,4-conductor shielded PVC cable,3.5m (0.5~2t) or 6m (3~10t)	
environment protection		IP66 (standard), IP67, IP68 (only available for 6998)	3
unit weight	kg	0.7, ..., 3.6 (capacity dependent, to be confirmed when order)	

Notes:
1. "fs" refers to full scale pressure.
2. Calculated as a rate of output change between -10°C and +55°C, and normalized by the output at room temperature (25°C).
3. In case IP68 is selected, one must specify the following test conditions for the transducer in the purchasing order:
   1) How deep under water will the installed transducer be located?
   2) How long will the installed transducer continuously stay under water of that depth?

Electrical Connection



BCM SENSOR TECHNOLOGIES BVBA

Industriepark Zone 4, Brechtsebaan 2
B-2900 Schoten - Antwerpen, BELGIUM

Tel.: +32-3-238 6469
Fax: +32-3-238 4171

website: www.bcmsensor.com
email: sales@bcmsensor.com

Model 6918/6998
S-Beam Load Cells

Ordering Information

position (pos.) 1: model	pos. 2: capacities	pos. 3: output sensitivity	pos. 4: non-linearity or accuracy class	pos. 5: bridge resistance	pos. 6: threads for eye bolts	pos. 7: electrical interface	pos. 8: environment protection	pos. 9: accessories for installation	pos. 10: customized spec's
6918 6998	0.5t 0.75t 1t 2t 3t 5t 7.5t 10t 20t 30t	2 mV/V (standard) 3 mV/V	0.02%fs (standard) OIMLC3	350Ω (Rin = 360±10Ω, Rout = 350±10Ω)	M12: for capacity = 0.5t, 0.75t, 1t M24: for capacity = 5t, 7.5t M20: for capacity = 2t, 3t M30: for capacity = 10t, 20t, 30t	5.7/4/PVC/3.5 = Φ5.7mm, 4-conductor shielded PVC cable, length = 3.5m(#) (6m for capacity > 2t). #: Cable length can be customized on request.	IP66 (standard) IP67 IP68 (only available for 6998)	eyeBolts: one pair of eye bolts (standard) NA: no accessory	"(*)" is necessary only if any customized parameter is required, otherwise it is neglectable.
pos.1	pos. 2	pos. 3	pos. 4	pos. 5	pos. 6	pos. 7	pos. 8	pos. 9	pos. 10

Examples of Ordering Code

- standard load cell:

  6918-5t-2mV/V-0.02%fs-350Ω-M24-5.7/4/PVC/6-IP66-eyeBolts

- customized load cell:

  6918-8t-2mV/V-0.02%fs-350Ω-M24-5.7/4/PVC/6-IP66-NA-(*)

  (*): Customized capacity = 8t.

The listed dimensions, specifications and ordering information are subject to change without prior notice.

BCM SENSOR TECHNOLOGIES BVBA

Industriepark Zone 4, Brechtsebaan 2
B-2900 Schoten - Antwerpen, BELGIUM

Tel.: +32-3-238 6469
Fax: +32-3-238 4171

website: www.bcmsensor.com
email: sales@bcmsensor.com