Model 1415
Column Compression Load Cells

Features

- single ball-ended canister construction
- capacity range from 0.5 to 500 t
- accuracy up to 0.05%fs
- mild steel construction with nickel plated treatment
- IP 67 environment protection grade
- supplied with compression nut

compression nut

Applications

- truck scales
- track scales
- tank and hopper scales

Description

Based on BCM's advanced strain gauge technology, model 1415 load cell is canister type load cell designed to measure compression loads. The single ball-ended construction allows the inclination of the load receptor from the load axis.

Model 1415 compression load cells have very wide load capacities from 0.5 t to 500 t, posses optional accuracies of 0.05 ~ 0.2 %fs (fs = full scale).

1415 load cells are made from mild steel and are rugged in design. Thanks to BCM's leading technology in sealing, these load cells can have high environmental protection grade of IP 67. These load cells are widely used in truck scales, track, tank and hopper scales.

Dimensions

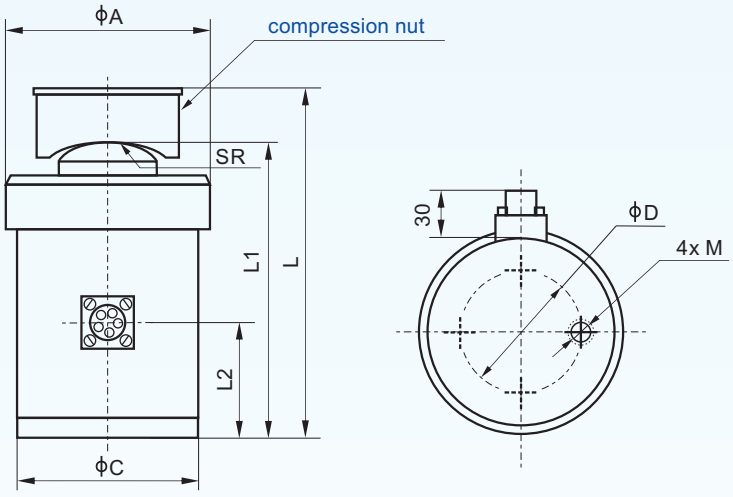

Table 1:

capacity (t)	L	L1	L2	SR	C	D	M	cable length (m)
0.5, 0.7,1, 2	108	88	33	15	60	38	4xM6	6
3, 5, 7	123	97	45	15	60	38	4xM6	6
10	159	108	50	15	60	40	4xM8	8
20	159	120	56	15	75	56	4xM8	8
30	228	130	61	30	75	56	4xM8	8
50, 70	228	178	70	80	118	90	4xM10	8
100	228	178	70	60	125	90	4xM10	12
200, 300	310	255	125	200	183	110	4xM16	12
500	310	255	125	200	193	120	4xM24	12

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Technical Data

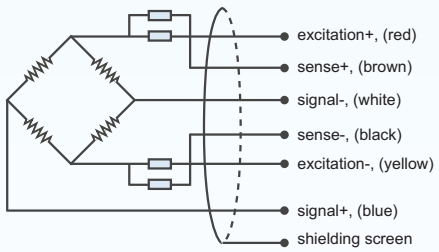
parameters	units	specifications		
capacity	t	0.5, 0.7, 1, 2, 3, 5, 7, 10, 20	30, 50, 70	100, 200, 300, 500
safe load limit	%fs	150		
ultimate overload	%fs	200		
output sensitivity@full scale	mV/V	1.0~2.0		
zero unbalance	%fso	± 1		
non-linearity	%fs	± 0.05	± 0.1	± 0.2
hysteresis	%fs	± 0.03	± 0.1	± 0.2
repeatability	%fs	± 0.01	± 0.05	± 0.1
creep error (30 min.)	%fs	± 0.03	± 0.1	± 0.2
excitation (supply voltage)	Vdc	10 (recommended), 6, ..., 15		
max. excitation voltage	Vdc	16		
input resistance	Ω	560 ± 30 (standard), 1100 ± 30		
output resistance	Ω	500 ± 3 (standard), 1000 ± 5		
insulation resistance	MΩ	≥ 5000@50 Vdc		
storage temp. range	°C	-40 ~ +80		
operating temp. range	°C	-20 ~ +65		
compensated temp. range	°C	-10 ~ +60		
temp. coefficient of ZERO	%fs/°C	± 0.003	± 0.005	
temp. coefficient of SPAN	%fs/°C	± 0.003	± 0.005	
load cell body material		mild steel		
sealing		potted		
mechanical interface		refer to the dimensions on the datasheets*		
electrical interface		Φ6.2mm, 6-conductor shielded cable, PVC jacket, length** (standard)		
		Φ5.7mm, 4-conductor shielded cable, PVC jacket, length**		
environment protection		IP 66 (standard), IP 67		
unit weight	kg			

The listed specifications are subject to change without prior notice.

*: 1415 load cells are supplied with the compression nut.

**: Refer to the dimensions (table 1) for the value of cable length. This value can also be a customized value.

Electrical connections



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Ordering Information

position (pos.) 1: model

1415: made from mild steel

pos. 2: capacities

0.5 t	1 t	10 t	100 t
0.7 t	2 t	20 t	200 t
	3 t	30 t	300 t
	5 t	50 t	500 t
	7 t	70 t	

pos. 3: output sensitivity

1 mV/V, ..., 2 mV/V
(to be confirmed in case of order)

pos. 4: non-linearity or accuracy class

0.05 %fs (cap.≤ 20 t)
0.1 %fs (cap.≤ 70 t)
0.2 %fs (cap.> 70 t)

pos. 5: bridge resistance

500 Ω (Rin = 565 Ω, Rout = 500 Ω), standard
1000 Ω (Rin = 1100 Ω, Rout = 1000 Ω)

pos. 6: threads

4xMd (for value d, refer to the dimensions on datasheets)

pos. 7: electrical interface

cable, code = diameter(Φ)/number of conductors/cable jacket/cable length
6.2/6/PVC/L = Φ6.2 mm,6-conductors shielded, PVC, length = L* m (standard)
5.7/4/PVC/L = Φ5.7 mm,4-conductors shielded, PVC, length = L* m

pos. 8: environment protection

IP 66
IP 67

pos. 9: accessories for installation

NA**. In case of "NA", pos.9 can be omitted.
topPlate
bottomPlate

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

*: Refer to "Technical Data" for standard cable length. This value can also be a customized value.
**: NA = not available or not applicable

example: 1415-10t-1mV/V-0.05%fs-1000Ω-4xM8-6.2/6/PVC/8-IP66-topPlate-C

ISO9001 Certified Company

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