

# Model 1416 Column Compression Load Cells

## Features

- rocker canister construction, self-restoring alignment
- capacity range from 10 to 50 t
- accuracy of 0.05%fs
- mild steel construction with nickel plated treatment
- IP 67 environment protection grade

## Applications

- truck scales
- vessel weighing scales
- tank and hopper scales



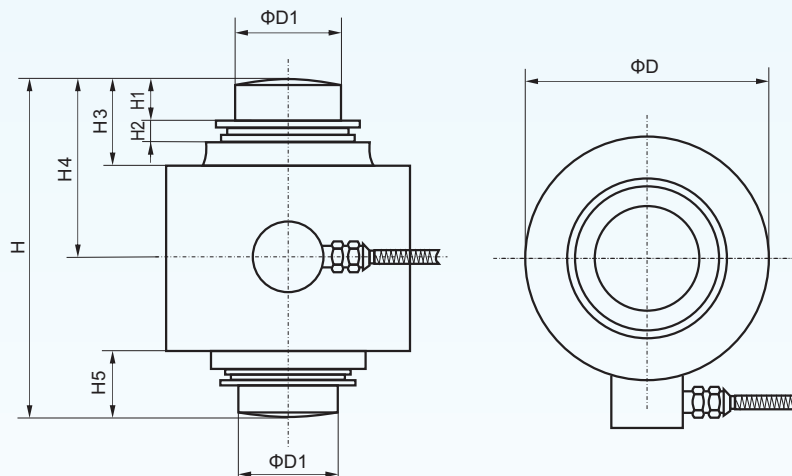
## Description

Model 1416 compression load cell is rocker load cell designed to measure compression loads. These load cells feature self-correction to the load core, fast dynamic reaction, excellent long-term stability.

The capacity of 1416 load cells spans from 10 t to 50 t. The measuring accuracy is 0.05 %fs (fs = full scale).

1416 load cells are made of mild steel with nickel plated treatment. Thanks to BCM's leading technology in sealing, these load cells can have environment protection grade of IP 67. 1416 load cells are widely used in applications such as truck scales, vessel weighing scales and hopper scales

## Dimensions



capacity(t)	H	H1	H2	H3	H4	H5	D1	D
10, 20	89	11	6	23	44	17	28	65
30	140	13	6.5	28	70	26	39	81
50	178	17	8.5	34	89	32	44	99

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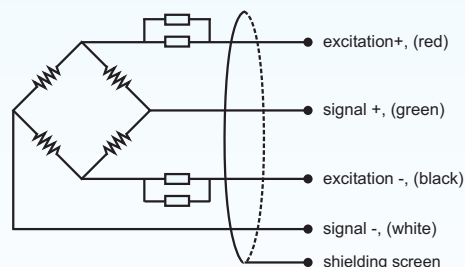
## Column Compression Load Cells

### Technical Data

parameters	units	specifications
capacity	t	10, 20, 30, 50
safe load limit	%fs	150
ultimate overload	%fs	200
output sensitivity at fs	mV/V	2.0 ± 0.04
zero unbalance	%fso	± 5
non-linearity	%fs	± 0.05
hysteresis	%fs	± 0.03
repeatability	%fs	± 0.02
creep error (30 min.)	%fs	± 0.02
excitation (supply voltage)	Vdc	10
max. excitation voltage	Vdc	15
input resistance	Ω	1150 ± 50 (standard), 750 ± 10
output resistance	Ω	1000 ± 5 (standard), 700 ± 10
insulation resistance	MΩ	≥5000@50 Vdc
storage temp. range	°C	-40 ~ +80
operating temp. range	°C	-30 ~ +80
compensated temp. range	°C	-10 ~ +55
temp. coefficient of span	%fs/°C	± 0.002
temp. coefficient of zero	%fs/°C	± 0.003
load cell body material		mild steel, nickel plated surface treatment
sealing		potted
mechanical interface		refer to the dimensions on the datasheets
electrical interface		Φ6.2mm, 4-conductor shielded cable, PVC, 6m (8m for cap.=50t)
environment protection		IP 66 (standard), IP 67
unit weight	kg	~6 (cap. < 50 t), ~8 (cap. = 50 t)

The listed specifications are subject to change without prior notice.

### Electrical connections



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## Column Compression Load Cells



### Ordering Information

<b>position (pos.) 1: model</b>									
1416: made from mild steel									
<b>pos. 2: capacities</b>									
10 t 20 t 30 t 50 t									
<b>pos. 3: output sensitivity</b>									
2 mV/V									
<b>pos. 4: non-linearity or accuracy class</b>									
0.05 %fs									
<b>pos. 5: bridge resistance</b>									
1000 $\Omega$ (Rin = 1150 $\pm$ 50 $\Omega$ , Rout = 1000 $\pm$ 5 $\Omega$ ), standard 700 $\Omega$ (Rin = 750 $\pm$ 10 $\Omega$ , Rout = 700 $\pm$ 10 $\Omega$ )									
<b>pos. 6: threads</b>									
NA*. In case of "NA", pos.6 can be omitted.									
<b>pos. 7: electrical interface</b>									
cable, code = diameter( $\Phi$ )/number of conductors/cable jacket/cable length 6.2/4/PVC/L = $\Phi$ 6.2mm,4-conductors shielded, PVC, length=6**m									
<b>pos. 8: environment protection</b>									
IP 66 (standard) IP 67									
<b>pos. 9: accessories for installation</b>									
NA. In case of "NA", pos.9 can be omitted. loadButton bottomPlate									
<b>pos. 10: customized spec's</b>									
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

\*: NA = not available or not applicable

\*\* : If cap. = 50 t, cable length = 8 m. This value can also be a customized value.

**example:** 1416-10t-2mV/V-0.05%fs-1000 $\Omega$ -6.2/4/PVC/6-IP66-bottomPlate-C



ISO9001 Certified Company

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