

Model 5719/5799

Double-Ended Load Pins

Features

- double-ended shear-beam
- capacity from 10 kN to 1000 kN
- conditioned signal available on request
- accuracy of 0.2%fs
- mild steel construction with nickel plated treatment (5719)
17-4PH construction (5799)
- environment protection grade up to IP 68 (only for 5799)



Applications

- draft sensors
- crane scales
- hopper weighing
- process system
- onboard vehicle weighing

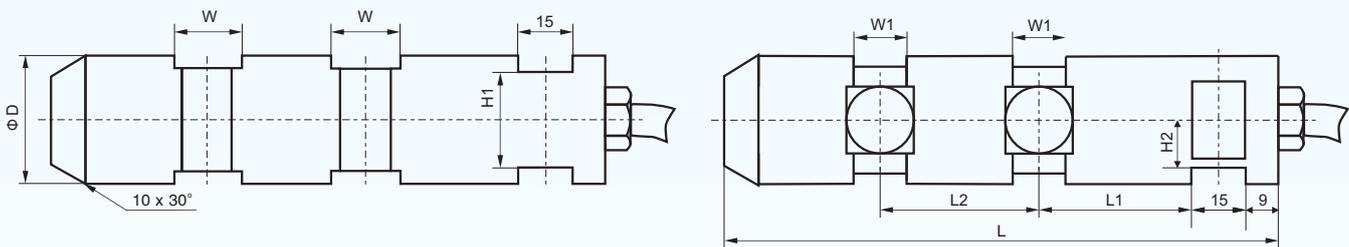
Description

Based on BCM advanced metal foil strain gauge technology, 5719/5799 load pins are made of double-ended shear-beam working principle. 5719/5799 load pin is mostly used as a shaft of sensor function when the middle part of the shaft intends to have a shearing shift corresponding to the rest on the two sides of the shaft, which can be considered as two stationary parts.

5719/5799 load pins can be used to measure the forces ranging from 10 kN to 1000 kN with an accuracy up to 0.2%fs (fs = full scale). Amplified and conditioned output signal such as 4~20mA or 0.5~5V or 0.5~10V are available on request. These load pins can be sealed to high protection grade up to IP 68 so as to be operated under harsh industrial environment.

5719/5799 load pins are often used as traction-force sensors (draft sensors) to be installed in crane system, hopper system, process system, and onboard vehicle system where the single-ended shaft of sensor is necessary to measure the concerned force.

Dimensions



capacity (kN)	D	H1	H2	L	L1	L2	W	W1
10, 20, 30	37	28	14	158	44	46	20	15
50, 75	50	38	18	158	44	46	20	15
100, 200	70	54	25	245	44	121	32	27
300, 500	95	76	37	285	52	145	32	27
750, 1000	108	88	44	285	52	145	32	27

other capacities available on request.

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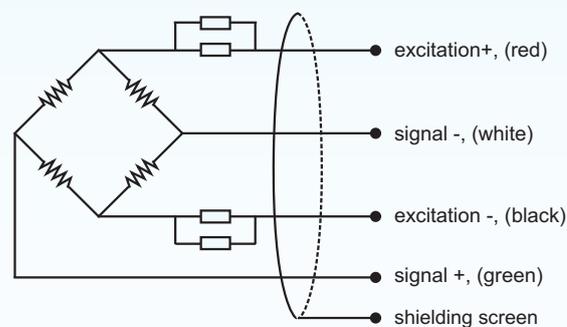
Technical Data

parameters	units	specifications		
capacity	kN	10, 20, 30, 50, 70, 100, 200, 300, 500, 800, 1000		
safe load limit	%fs	150		
ultimate overload	%fs	200		
output sensitivity at fs	mV/V	2.0 ± 0.01		
zero unbalance	%fso	± 1.5		
non-linearity	%fs	± 0.2	± 0.5 (standard)	± 1.0
hysteresis	%fs	± 0.1	± 0.2	± 0.3
repeatability	%fs	± 0.05	± 0.1	± 0.1
creep error (30 min.)	%fs	± 0.02	± 0.02	± 0.02
excitation (supply voltage)	Vdc	10		
max. excitation voltage	Vdc	15		
input resistance	Ω	400 ± 30		
output resistance	Ω	350 ± 10		
insulation resistance	MΩ	≥ 5000@50 Vdc		
storage temp. range	°C	-35 ~ +80		
operating temp. range	°C	-35 ~ +70		
compensated temp. range	°C	-10 ~ +55		
temp. coefficient of sensitivity	%fs/°C	± 0.02		
temp. coefficient of zero	%fs/°C	± 0.02		
load cell body material		mild steel (5719), 17-4PH stainless steel (5799)		
sealing		potted		
mechanical interface		refer to the dimensions on the datasheets		
electrical interface		Φ5.7 mm, 4-conductors shielded, PVC jacket, 5 m		
environment protection		IP 66 (standard), IP 67, IP 68 (5799 only)		
unit weight	kg	to be confirmed when order		

The listed specifications are subject to change without prior notice.

*: mV output can be amplified and configured to either 4~20mA or 0.5~5V or 0.5~10V on request.

Electrical Connection



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Ordering Information

position (pos.) 1: model										
5719: made from mild steel 5799: made from 17-4PH stainless steel										
pos. 2: capacities										
10 kN	100 kN	1000 kN								
20 kN	200 kN									
30 kN	300 kN									
50 kN	500 kN									
70 kN	700 kN									
pos. 3: output sensitivity										
2 mV/V*										
pos. 4: non-linearity or accuracy class										
0.2 %fs 0.5 %fs (standard) 1 %fs										
pos. 5: bridge resistance										
350 Ω (Rin = 410 Ω, Rout = 350 Ω)										
pos. 6: threads										
N = NA **. In case of NA, pos.6 can be omitted.										
pos. 7: electrical interface										
cable, code = diameter(Φ)/number of conductors/cable jacket/cable length 5.7/4/PVC/5 = Φ5.7 mm, 4-conductors shielded, PVC, length = 5*** m										
pos. 8: direction of the cable outlet										
axial: along load pin axis For 5719/5799, pos.8 can be omitted from the ordering code.										
pos. 9: environment protection										
IP 66 IP 67 IP 68 (only for 5799)										
pos. 10: accessories for installation										
N = NA **. In case of "NA", pos.9 can be omitted.										
pos. 11: 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	pos. 11

*: mV output can be amplified and configured to either 4~20mA or 0.5~5V or 0.5~10V on request.

**: NA = not available or not applicable

***: This value can also be a customized value.

example: 5799-70kN-2mV/V-0.5%fs-350Ω-5.7/4/PVC/5-IP66-C



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