

# Model 5716/5796

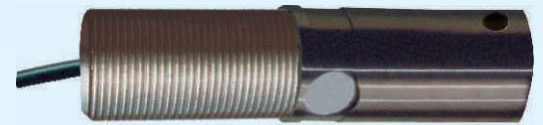
## Single-ended Load Pins

### Features

- single-ended shear beam
- capacity from 10 kN to 300 kN
- conditioned signal available on request
- accuracy of 0.2%fs
- mild steel construction with nickel plated treatment (5716)  
17-4PH construction (5796)
- environment protection grade up to IP 68 (only for 5796)

### Applications

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



cable outlet at the thread end



cable outlet at the load end

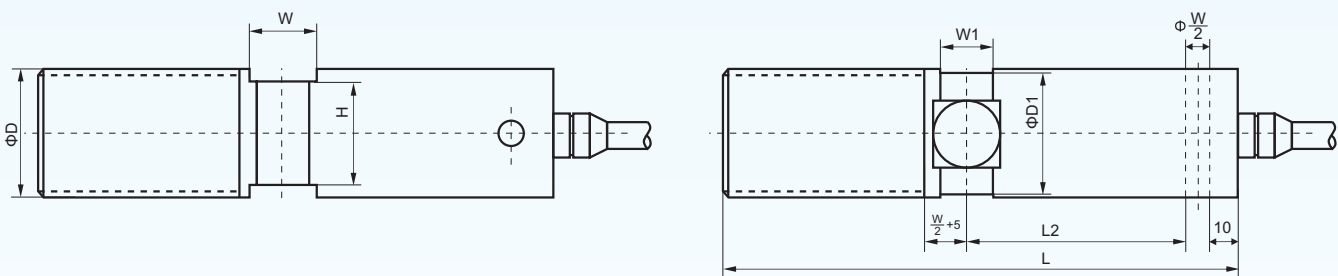
### Description

Based on BCM advanced metal foil strain gauge technology, 5716/5796 load pins are made of single-ended shear-beam working principle. 5716/5796 load pin is mostly used as a shaft of sensor function as the one half of the shaft can be considered as a stationary part while the other half intends to have a shearing shift corresponding to the stationary part.

The 5716/5796 load pins can be used to measure the forces ranging from 10 kN to 300 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 of IP 68 so as to be operated under harsh industrial environment. Depending on the application, the cable outlet can be made either from the thread end of the load pin or the load end of the load pin. In addition to the standard thread, other threads are available, on request, as long as the requested threads match to the diameter of the concerned load pin.

5716/5796 load pins are often served 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	D1	H	L	L2	W	W1
10, 20, 30, 50	37	36	30	178	46	20	15
100	50	48	41	178	46	20	15
200	70	68	57	265	121	32	27
300	95	92	80	305	145	32	27

other capacities available on request.

## BCM SENSOR TECHNOLOGIES BVBA

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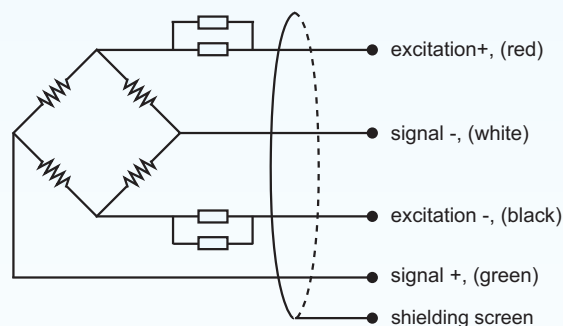
### Technical Data

parameters	units	specifications		
capacity	kN	10, 20, 30, 50, 70, 100, 200, 300		
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	± 0.2	± 0.5	± 1.0
repeatability	%fs	± 0.1	± 0.2	± 0.5
creep error (30 min.)	%fs	± 0.2	± 0.5	± 1.0
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 (5716), 17-4PH stainless steel (5796)		
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 (5796 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

<b>position (pos.) 1: model</b>										
5716: made from mild steel 5796: made from 17-4PH stainless steel										
<b>pos. 2: capacities</b>										
10 kN      100 kN 20 kN      200 kN 30 kN      300 kN 50 kN 70 kN										
<b>pos. 3: output sensitivity</b>										
2 mV/V*										
<b>pos. 4: non-linearity or accuracy class</b>										
0.2 %fs 0.5 %fs (standard) 1 %fs										
<b>pos. 5: bridge resistance</b>										
350 Ω (Rin = 410 Ω, Rout = 350 Ω)										
<b>pos. 6: threads</b>										
D = ΦD**										
<b>pos. 7: electrical interface</b>										
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										
<b>pos. 8: direction of the cable outlet</b>										
tEnd: The cable outlet is at the thread end of the load pin. lEnd: The cable outlet is at the load end of the load pin.										
<b>pos. 9: environment protection</b>										
IP 66 IP 67 IP 68 (only for 5796)										
<b>pos. 10: accessories for installation</b>										
N = NA****. In case of "NA", pos.9 can be omitted.										
<b>pos. 11: 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	pos. 11

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

\*\* : Refer to the dimensions "D" on the datasheets.

This value can also be a customized value (thread) as long as the requested threads match to the diameter of the concerned load pins

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

\*\*\*\*: NA = not applicable or not available

**example:** 5796-50kN-2mV/V-0.5%fs-350Ω-37-5.7/4/PVC/5-tEnd-IP66-C



**BCM SENSOR TECHNOLOGIES BVBA**

ISO9001 Certified Company

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

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

website: [www.bcmsensor.com](http://www.bcmsensor.com)  
email: [sales@bcmsensor.com](mailto:sales@bcmsensor.com)