

Model 5718/5798

Double-ended Load Pins

BCM 5718/5798 load pins are made from alloy steel (5718) or stainless steel (5798) and sealed to IP 66 or IP 67 depending on application conditions. To meet the requirements of operating conditions in harsh industrial area these 57-series load pins can be also made to protection grade IP 68 on request.

Thanks to BCM advanced metal foil strain gauge technology, the sensing elements of these 57-series load pins are BCM strain gauges. These strain gauges form a Wheatstone bridge to sensing the deformation of the load pin. This deformation is induced by the three forces which act vertically to the axis of the 5718/5798 load-pin. So the 5718/5798 load pin is mostly used as a shaft of sensor function and is operated on double-ended shear-beam principle 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. Therefore these load pins serve as traction-force sensors (draft sensors) to be installed in crane system, hopper system, process system, and onboard vehicle system to measure the concerned force.

BCM 5718/5798 load pins can be used to measure the forces ranging from 20 kN to 800 kN, and possess higher accuracy up to 0.2%fso. The output signal is Wheatstone bridge output voltage (mV/V) but can be amplified and configured to either 4~20mA current signal or 0.5~5V or 0.5~10V voltages on request. For connecting of both the output signal and electric excitation of the bridge, the electrical cable can be fixed either along the axial direction of the load pin (type A), or fixed at a side of the end-cap of the load pin (type B), depending on the situation of installation position.



type A:

electrical cable fixed along
the axial direction

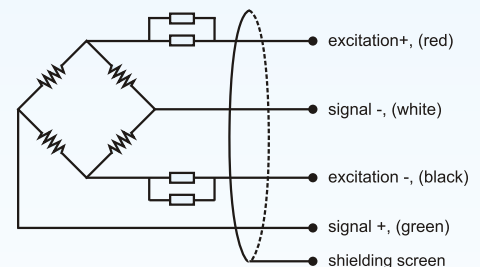


type B:

electrical cable fixed at a
side of the end-cap

- type:** double-ended shear-beam load pins
material: alloy steel (5718); stainless steel (5798)
surface: nickel plated treatment (5718 only)
protection: IP 66, IP 67, or IP 68
construction: rigid and solid
application: draft sensors, cranes, hopper weighing, process weighing and onboard vehicle weighing

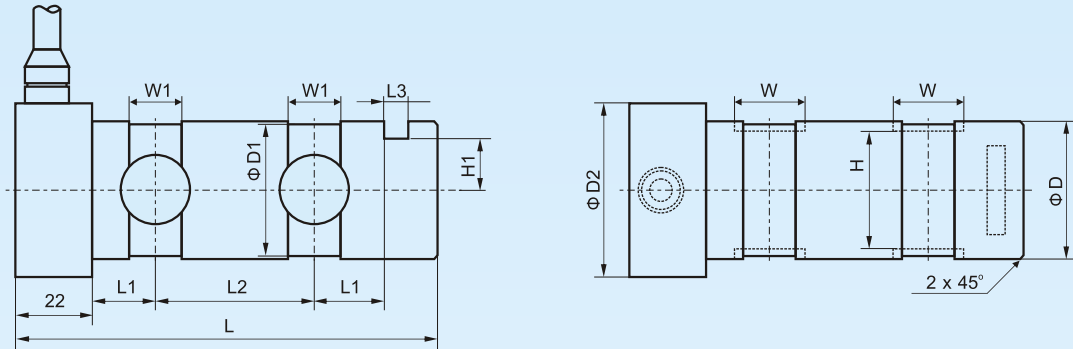
Electrical connection:



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Dimensions: (the dimensions showing below apply to 5718/5798 of either type A or type B)



capacity (kN)	D	D2	D1	H	H1	L	L1	L2	L3	W	W1
20, 30	40	50	39	31	15	112	17.5	45	5	20	15
50	40	50	39	31	15	122	17.5	45	10	20	15
100	50	60	48	41	15	181	44	46	10	20	15
200	70	80	68	57	25	256	44	121	10	32	27
300, 500	95	105	92	80	37	296	52	145	10	32	27
800	108	118	104	92	44	296	52	145	10	32	27

other capacities available on request.

Specifications:

capacity	kN	20, 30, 50, 100, 200, 300, 500, 800		
rated output*	mV/V	2.0 ± 0.01		
accuracy	%FSO	± 0.2	± 0.5	± 1.0
zero unbalance	%FSO	± 1.5		
non-linearity	%FSO	± 0.2	± 0.5	± 1.0
hysteresis	%FSO	± 0.2	± 0.5	± 1.0
repeatability	%FSO	± 0.1	± 0.2	± 0.5
temperature coefficient of SPAN	%FSO/10°C	0.2		
temperature coefficient of ZERO	%FSO/10°C	0.2		
input resistance	Ω	400 ± 30		
output resistance	Ω	350 ± 10		
insulation resistance	MΩ	≥ 5000@50 VDC		
excitation recommended	V	10 DC/AC		
maximum excitation	V	15 DC/AC		
compensated temperature range	°C	-10 ~ +55		
operating temperature range	°C	-35 ~ +70		
safe overload	%FS	150		
ultimate overload	%FS	200		
cable length	m, shield PVC cable	5 (Φ 5.7 mm 4-wire)		

The listed specifications are subject to change without prior notice.

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

How to order: model - capacity - output - accuracy - IP rating - cable length - customer specific requests

ordering code example: 5718(A) - 100kN - 2.0mV/V - 0.5%fso - IP 67 - 5m - no specific requests

BCM SENSOR TECHNOLOGIES BVBA