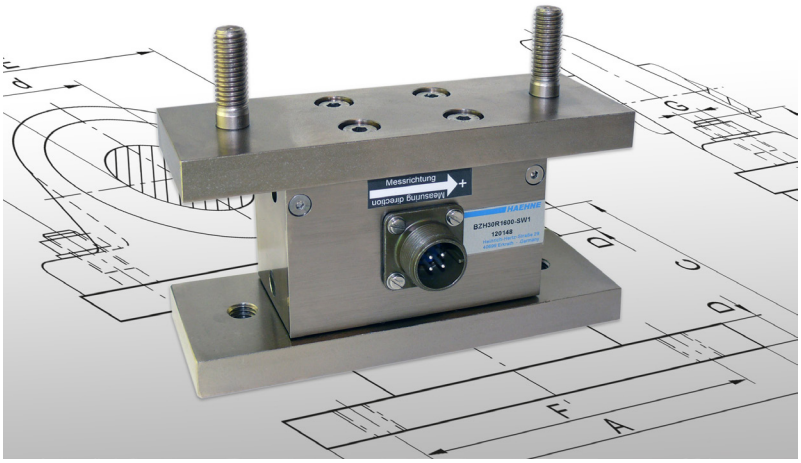
Force Sensor BZH

Scope of Supply
Pillow Block Sensor
with 5 m cable (PVC),
with connection variant T:
cable gland, straight

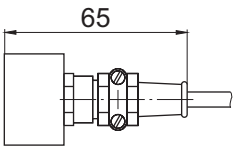
Variants
S: Plug connection, right-angled, MIL

Additional Options
F: For use in explosive areas,
incl. J-Box

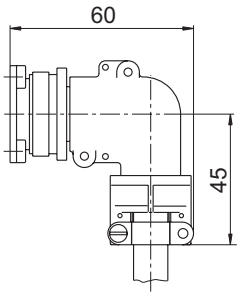


Connections

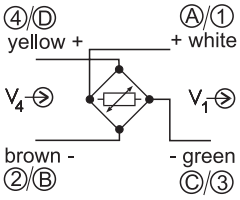
Variant T



Variant S



Wire assignment



V_4: Supply voltage
V_1: Signal voltage

Odering example

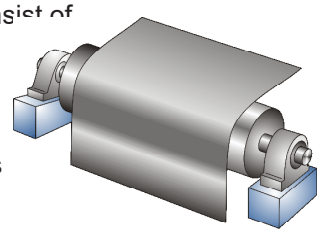
BZH15R160-T

Type
Size
Design
Nominal force
Variants/ Options

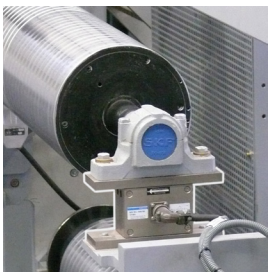
Special Features

- Compact design
- Easy modification to different bearing designs and sizes
- High overload protection utilizing mechanical stops
- High resonant frequency

The web tension sensors BZH series are characterized by a compact pillow block design. They are suitable for a variety of applications, especially for the direct measurement of web tension forces, e.g. in moving webs of paper, textile, plastic, film, or metal.
The pillow block sensors basically consist of two mounting plates which are connected by measuring elements. The mounting plates are designed to accommodate pillow block bearings of the following manufactures: INA, FAG, SKF and NSK.



The measuring elements function according to the double beam principle. The acting forces are captured by strain gauges applied to the measuring elements.
HAEHNE offers for all its sensors a corresponding range of amplifiers to condition the measuring signal and deliver the bridge voltage supply. The signals at the output terminals of the amplifier are proportional to the acting horizontal force. They can be digitally displayed or used as instantaneous values in a closed control loop.



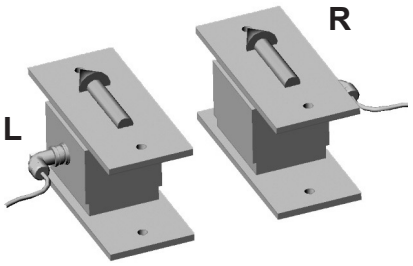
HAEHNE Elektronische Messgeräte GmbH · Heinrich-Hertz-Str. 29 · D-40699 Erkrath Germany · Telefon 0211/9 2591-0 · Fax 0211/9 2591-20
http://www.haehne.de Email: info@haehne.de

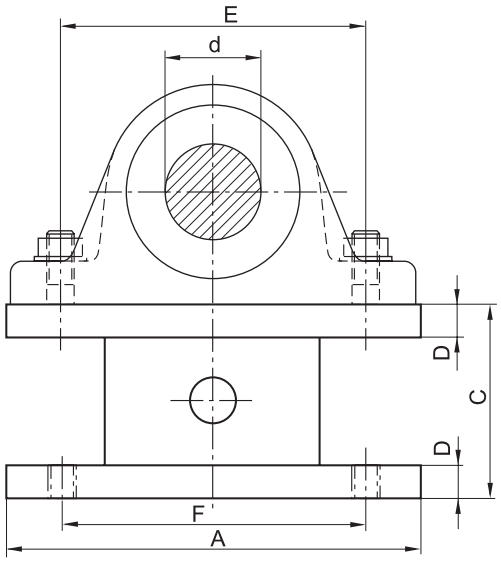
BZH

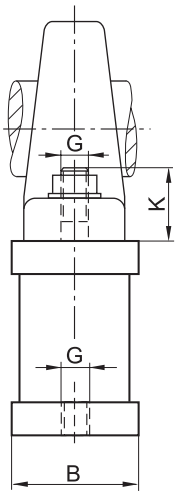
HAEHNE

Technical Data	Values (%) based on nominal force	
Sizes 15 to 40 Sizes 50 to 75	160 N to 1600 N 630 N to 6300	
Max. operating force	160 %	
Absolute max. force	1000 %	
Nominal ratings	1,5 mV / V	
Combined error	0,5 %	
Reproducibility	max. ± 0,1 %	
Non-linearity	max. ± 0,3 %	
Hysteresis	max. ± 0,3 %	
Zero drift	max. 50 ppm / °C	
Nominal ambient temperature	+10 ... +60° C (+50...+140° F)	
Operational temperature range	- 10 ... +70° C (+14... +158° F)	
Nominal resistance of the strain gauge bridge	1000 Ω	
Bridge supply voltage	10 VDC	
Special enclosure protection	IP 67	
Enclosure protection	Standard T IP 52	Option S IP 50

When ordering please specify „L“ (left) or „R“ (right) in order to determin unequivocally the measurement direction and the cable connector exit.







*Examples of suitable bearings
FAG - SG2xxS
INA - ASExx
NSK - P2xx
SKF - SY5xxM
SKF - SYJ5xx

Size	Nominal force F_{nom} [N]	Axis d [mm]	Bearing-typ*	Dimensions [mm] (1 mm = 0.03937 inches)							
				A	B	C	D	E	F	G	K
15	160 250 400 630 1000 1600	12/15/17	xx=03	130	55	80	10	95	115	M10	30
20		20/25	xx=04/05	140	55	80	10	100	120	M10	30
30		30/35	xx=06/07	170	60	90	15	124	124	M12	35
40		40/45	xx=08/09	195	60	90	15	142	142	M12	35
50	630 1000 1600 2500 4000 6300	50	xx=10	210	70	117	16	155	155	M16	35
55		55	xx=11	225	70	125	20	175	175	M16	45
60		60	xx=12	245	70	125	20	185	185	M16	45
70		65/70	xx=13/14	270	80	135	25	205	205	M20	55
75		75	xx=15	280	80	135	25	215	215	M20	55

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