

Ring load cell up to 500 kN Model F6210



WIKA Data sheet FO 51.20

Applications

- Measuring of pretensioning forces
- Plant engineering
- Cutting tools
- Measurement and inspection equipment
- Test setups

Special features

- Force measurements, 2 adapter disks included
- Compact and small dimensions, simple installation
- Very low installation height
- Protection class IP65
- Accuracy 1 or 3 % of full scale value



Ring load cell, model F6210

Description

The load cells in miniature design have been designed specifically for small dimensions. Due to its compactness, this load cell is usable in the widest range of industrial and laboratory applications. Small dimensions enable the load cell to be used where measuring forces are transmitted directly through the load cell.

Load cells of this design type are suitable for the measurement of compressive and pre-tension forces and are available in measuring ranges from 15 kN ... 500 kN.

These load cells are used in applications where simple installation and a large contact surface are decisive factors.

The force introduction is perpendicular to the axis of the load cell.

Notes

In order to avoid overloading, it is advantageous to connect the load cell electrically during installation and to monitor the measured value.

The force to be measured must be applied concentrically and free of transverse force.

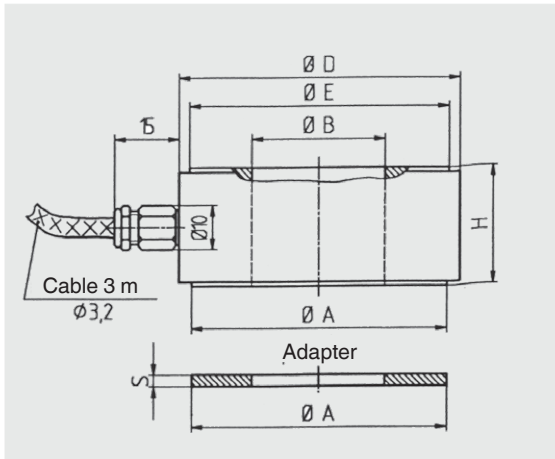
The load cells are to be mounted on a plain surface.

Technical data in accordance with VDI/VDE/DKD 2638

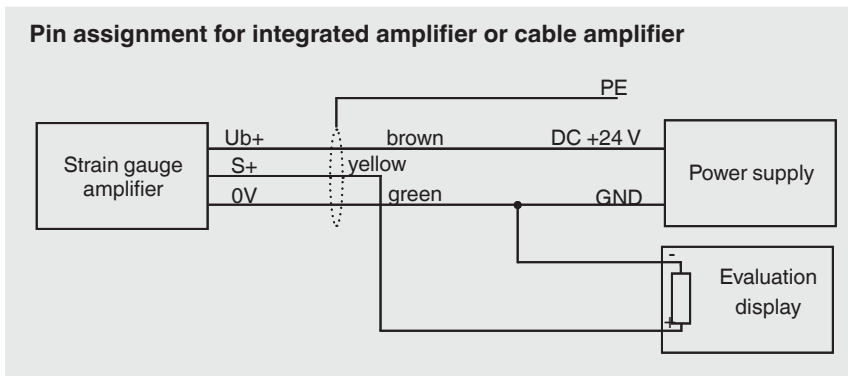
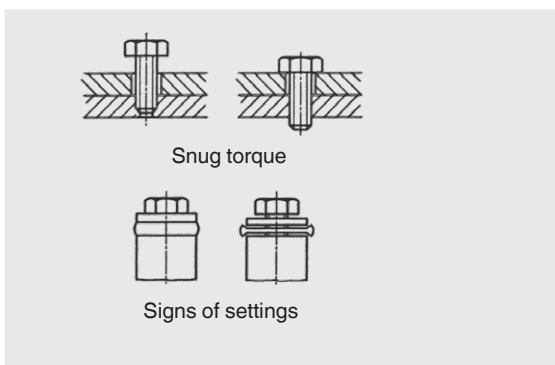
Model F6210								
Nominal load F_{nom} in kN	15	30	60	80	120	160	350	500
For diameter of thread	M6	M8	M10	M12	M16	M20	M24	M30
Limit load F_L	150 % F_{nom}							
Breaking force F_B	> 300 % F_{nom}							
Relative linearity error d_{lin}	$\leq \pm 1$ % of F. S. with compression force measurement $\leq \pm 3$ % with pretensioning force measuring							
Permissible oscillation stress F_{rb}	± 70 % F_{nom} in accordance with DIN 50100							
Relative creep, 30 min. at F_{nom}	$\leq \pm 0.1$ % of F. S.							
Nominal deflection s_{nom}	< 0.1 mm							
Rated temperature $B_{T, nom}$	+5 ... +55 °C							
Operating temperature $B_{T, G}$	-20 ... +70 °C							
Storage temperature $B_{T, S}$	-30 ... +80 °C							
Reference temperature T_{ref}	23 °C							
Temperature effect on								
■ characteristic value TK_C	$\leq \pm 0.3$ % of F. S./10 K							
■ zero signal TK_0								
Protection type	IP65 in accordance with EN/IEC 60529							
Insulation resistance R_{is}	> 2 G Ω at 50 V							
Analogue output								
■ Output signal (characteristic value) C	0.8 ... 1.2 mV/V							
■ Input/output resistance R_e/R_a	350 Ω							
■ Optional	Cable integrated amplifier 0(4) ... 20 mA, DC 0 ... 10 V							
■ Supply voltage	2 ... 8 V (max. 8 V), DC 12 ... 28 V for cable integrated amplifier							
■ Electrical connection	Cable 3 m							
Material of measuring device	Stainless steel 1.4542							
Weight in kg	0.05	0.06	0.07	0.08	0.1	0.12	0.12	0.5

F. S. = full scale value

Dimensions in mm



Nominal load in kN	Dimensions in mm						
	For screws	Ø A	Ø B	Ø D	Ø E	H	S
15	M6	10.5	6.3	18	11	12	2
30	M8	15	8.3	22	16	12	2
60	M10	17	10.3	24	17.8	12	2
80	M12	22.5	12.3	28	22.5	15	2.5
120	M16	27.6	16.3	32	28	15	2.5
160	M20	37.5	20.3	46	38	15	3
350	M24	47	24.5	54	48	22	3
500	M30	59	30.8	65	60	27	3



Electrical connection	
Supply (-)	Green
Supply (+)	Brown
Signal (+)	Yellow
Signal (-)	White
Control	Grey
Screen ⊕	Screen

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We reserve the right to make modifications to the specifications and materials.

