

Miniature compression load cell from 0.5 N Model F1222

WIKA Data sheet FO 51.11

Applications

- Construction of plant and apparatus
- Measurement and control plant
- Test benches

Special features

- For compression measurements
- Ease of force input, easy installation
- Compact and small dimensions, low installation height
- Protection class IP65
- Nonlinearity 1% of F.S.



Miniature compression load cell, model F1222

Description

Miniature compression load cells are especially designed to have small dimensions. Because of their compactness, they can be used in a wide range of industrial and laboratory applications.

They are available in the range between 0.5 N and 5 kN.

The field of application of this force transducer lies in innumerable applications where simple installation is a very important factor.

The force is applied vertically to the load cell axis at the ball-shaped scraper.

Note

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

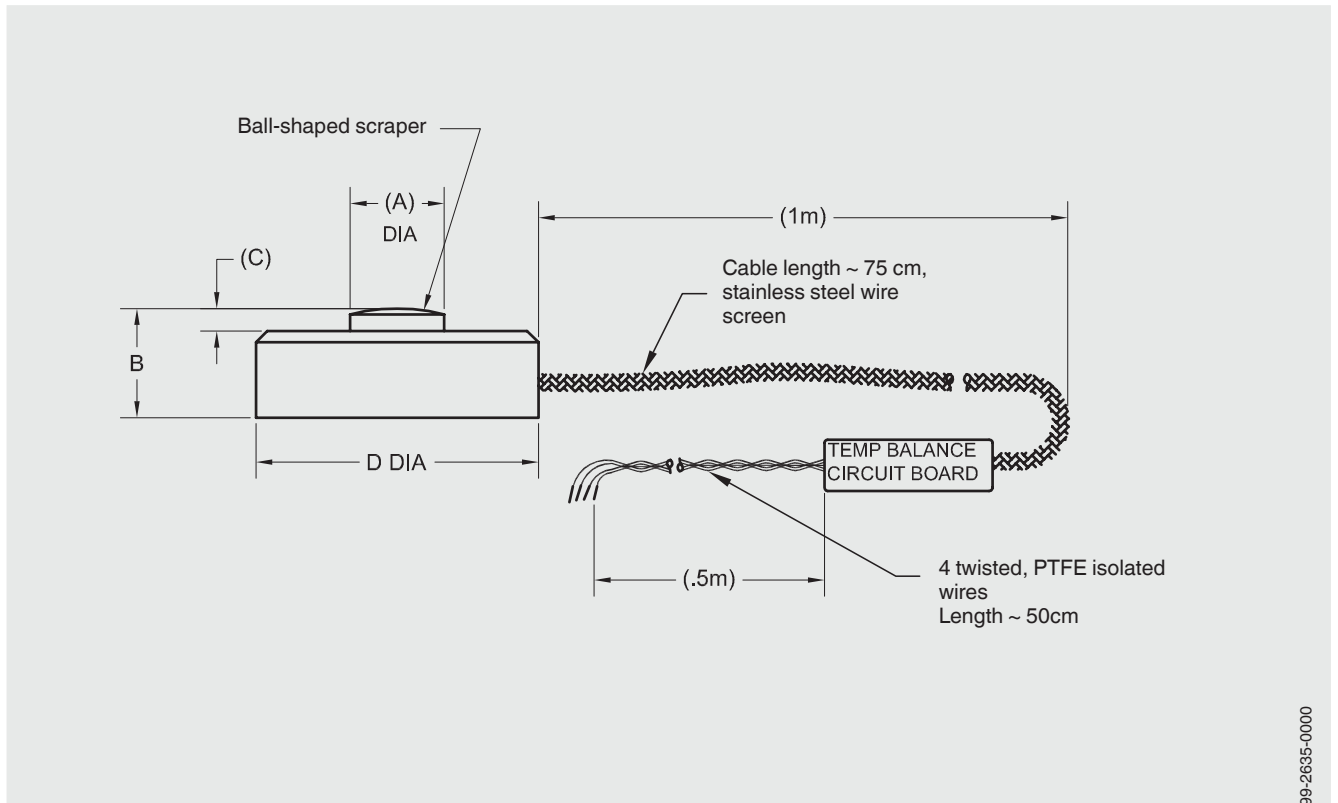
The load cells are to be mounted on a level, grinded and sufficiently hard surface.

Technical data in accordance with VDI/VDE/DKD 2638

Model F1222													
Rated force F_{nom} in N	0.5	1.50	2.50	5	10	20	50	100	200	500	1,000	2,000	5,000
Relative linearity error d_{lin}	±1 % of F.S.												
Relative reversibility error v	±0.5 % of F.S.												
Relative repeatability error in unchanged mounting position b_{rg}	±0.1 % of F.S.												
Force limit F_L	150 % F_{nom}												
Breaking force F_B	> 300 % F_{nom}												
Permissible oscillation stress F_{rb}	±70 % F_{nom} in accordance with DIN 50100												
Nominal deflection s_{nom}	< 0.015 mm												
Rated temperature $B_{T, nom}$	+15 ... +70 °C												
Operating temperature $B_{T, G}$	-54 ... +120 °C												
Reference temperature T_{ref}	23 °C												
Temperatur effect on													
■ characteristic value TK_c	≤ ±0.2 % Reading/10 K												
■ zero signal TK_0	≤ ±0.1 % of F.S./10 K												
Protection type	IP65 in accordance with EN/IEC 60529												
Insulation resistance R_{is}	> 5 GΩ (50 V)												
Analogue output													
■ Output signal (characteristic value) C	0.5 ... 1.5 N: 10 mV/V/N 2.5 ... 5 N: 10 mV/V 10 N: 1.0 mV/V 20 N ... 5 kN: 2.0 mV/V												
■ Relative deviation of zero signal $d_{S, 0}$	± 2% of F.S												
■ Input-/output resistance R_e/R_a	350 Ω (up to 5 N: 500 Ω semiconductor strain gauge)												
■ Option	For cable integrated amplifier 0 (4) ... 20 mA, 0 ... DC 10 V												
■ Supply voltage	5 (max. 5 V), DC 24 V, for cable integrated amplifier												
■ Electrical connection	Cable 1.5 m, open wires, 4-wire, shielded												
Material of measuring device	Stainless steel 17-4 PH												
Weight (incl. cable) in g	1 ... 10 (9 ... 18) depending on nominal load												

F.S. = full scale value

Dimensions in mm



99-2635-0000

Nominal load in N	Dimensions in mm			
	D	A	B	C
0.5 ... 5	9.7	2.3	3.0	0.5
10 ... 200				
500 ... 1,000	12.7	3.0	3.8	
2,000 ... 5,000	19.1	6.4	6.4	

Electrical connection	
Supply (-)	Black
Supply (+)	Red
Signal (+)	White
Signal (-)	Green

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