

Compression Force Transducer Miniature, up to 0.5 N

with electrical output



Description

Miniature force transducers are especially designed to have small dimensions. Because of their compactness, these force transducers can be used in a wide range of industrial and laboratory applications.

They are designed for the measurement of compression forces in the range between 0.5 kN 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 transducer is easy to use due to the simple way force is applied.

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.

Features

- For compression measurements
- Ease of force input
- Compact and small dimensions
- Ease of assembly
- Very low installation height
- Protection class IP 65
- Combined error 0.5% up to 1% of F.S.

Measuring ranges

- 0.5 N ... 5000 N

Applications

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

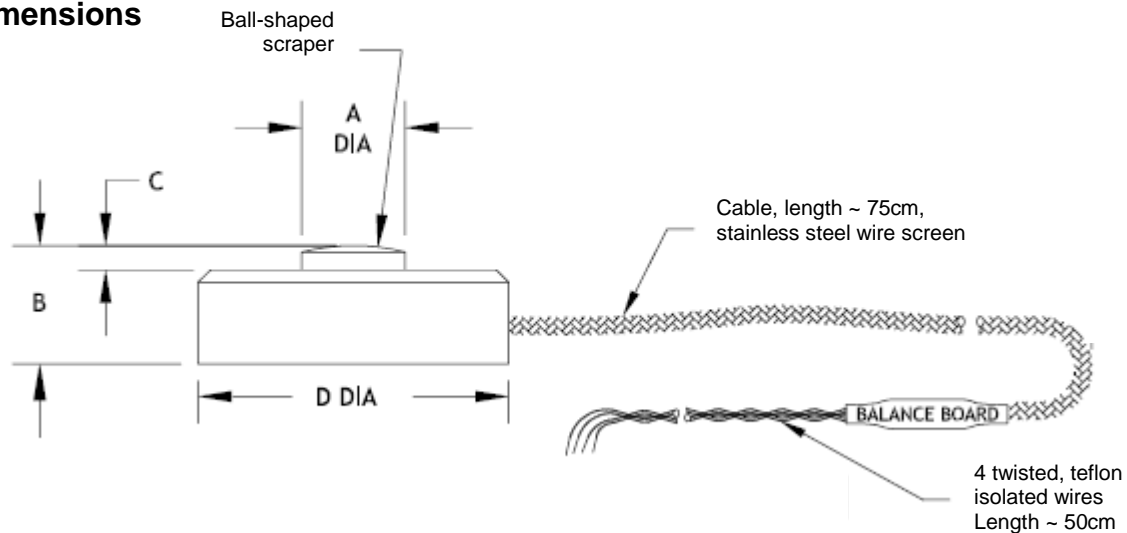
Model: F1222

Technical data

Model	F1222		Options
Nominal load F_{nom} in N	0.5; 1.5; 2.5; 5; 10; 20; 50	100; 200; 500; 1000; 2000; 5000	
Nonlinearity	$\pm 0.5\%$ of F.S.	$\pm 0.25\%$ of F.S.	
Hysteresis	$\pm 0.5\%$ of F.S.	$\pm 0.25\%$ of F.S.	
Repeatability	$\pm 0.1\%$ of F.S.	$\pm 0.1\%$ of F.S.	
Limit load	150% F_{nom}		
Breaking load	$> 300\% F_{nom}$		
Max. dynamic load	$\pm 70\% F_{nom}$ DIN 50 100		
Nominal deflection	< 0.015 mm		
Nominal temperature range	+15 ... +70°C		
Service temperature range	-54 ... +120°C		
Reference temperature	23°C		
Temperature effect	-span	$\leq \pm 0.2\%$ of F.S./10K	
	-zero	$\leq \pm 0.1\%$ of F.S./10K	
Protection type (acc. to EN 60 529/ IEC 529)	IP 65		
Insulation resistance	> 5 G Ω (50V)		
Analogue output			
- Output signal	0.5 N : 5 mV/V 1.5 N up to 5 N: 15 mV/V 10 N: 1.5 mV/V 20 N up to 5 kN: 2.0 mV/V		
- Bridge resistance	350 Ω (to 5 N: 500 Ω semiconductor strain gauge)		
- Option	for cable integrated amplifier 0 (4) ... 20 mA, 0 ... 10 V DC		
- Power requirement	5 (max. 5 V); 24 V DC for cable integrated amplifier		
- Electrical connection	cable 1.5 m, open wires, 4-wire, shielded		
Material of measuring device	Stainless steel 17-4PH		
Weight (incl. cable)	1 up to 10g (9 up to 18g) depending on nominal load		

of F.S. = full scale value

Dimensions



Nominal Load [N]	Dimensions in [mm]			
	D	A	B	C
0.5 ... 5	9.7	2.3	3.0	0.8
10 ... 200	9.7	2.3	3.0	0.8
500 ... 1000	12.7	3.0	3.8	0.8
2000 ... 5000	19.1	6.4	6.4	0.8

Electrical connection	
Supply (-)	black
Supply (+)	red
Sign. (+)	withe
Sign. (-)	green

Subject to technical changes