Compression Force Transducer Miniature, for forces from 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 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 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
- Nonlinearity 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

tecsis GmbH
Carl-Legien Str. 40
D-63073 Offenbach / Main
Tel.: +49 69 5806-0

Sales
Fax: +49 69 5806-8002394

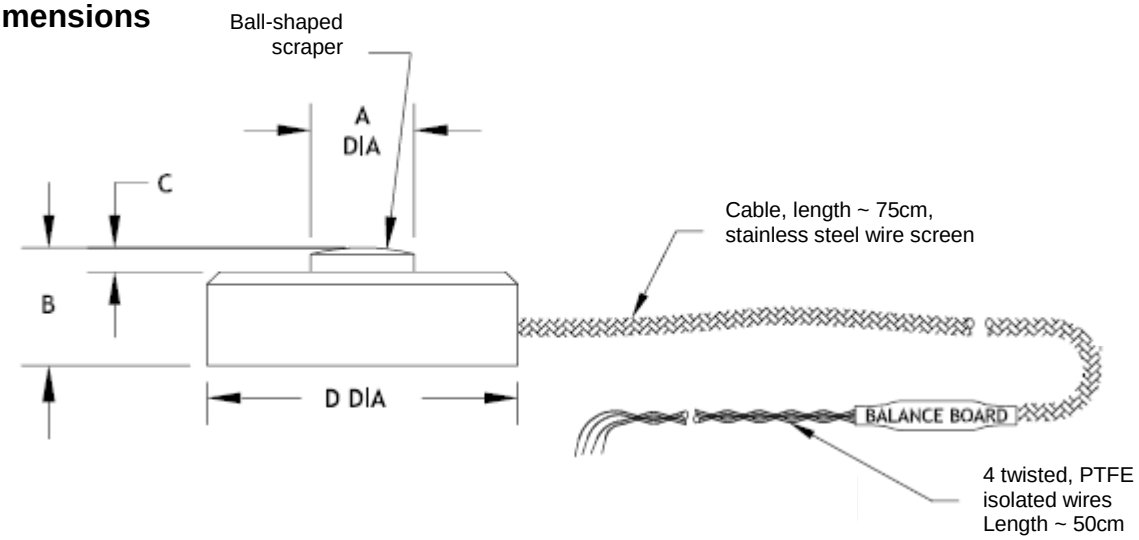
e-Mail: info@tecsis.de
Internet: www.tecsis.de

Technical data

Model	**F1222**	
Nominal load F_{nom} in **N**	**0.5; 1.5; 2.5; 5; 10; 20; 50**	**100; 200; 500; 1000; 2000; 5000**
Nonlinearity	±1% of F.S.	±1% of F.S.
Hysteresis	±0.5% of F.S.	±0.05% of F.S.
Repeatability	±0.1% of F.S.	±0.1% of F.S.
Limit load	150% F_{nom}	
Breaking load	>300% F_{nom}	
Max. dynamic load	±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 -zero	≤±0.2% Reading./10K ≤±0.1% F.S./10K	
Protection type (acc. to EN 60 529/ IEC 529)	IP 65	
Insulation resistance	>5 GΩ (50V)	
Analoque output - Output signal - Zero tolerance - Bridge resistance - Option - Power requirement - Electrical connection	 0.5 N up to 1,5 N: 10 mV/V/N 2.5 N up to 5 N: 10 mV/V 10 N: 1.0 mV/V 20 N up to 5 kN: 2.0 mV/V ± 2% of F.S. 350 Ω (to 5 N: 500 Ω semiconductor strain gauge) for cable integrated amplifier 0 (4) … 20 mA, 0 … 10 V DC 5 (max. 5 V); 24 V DC for cable integrated amplifier 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 nomnial 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	0.5
10 … 200	9.7	2.3	3.0	0.5
500 … 1000	12.7	3.0	3.8	0.5
2000 … 5000	19.1	6.4	6.4	0.5

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

Subject to technical changes