Miniature Bending Beam for forces from 0.25 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 tension and compression forces in the range between 0,25 N and 50 N.

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

The miniature force transducer is mounted on the cable side. The force introduction takes place at the opposite side, vertically to the load cell axis via the provided through-hole.

Note

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

A mechanical overload prevention is integrated.

Features

- For tension or compression force measurements
- With integrated overload protection
- Simple force introduction
- Compact small dimensions
- Ease of assembly
- Protection class IP 65
- Combined error 0.1% of F.S.

Measuring ranges

- 0.25 N ... 50 N

Applications

- Construction of plant and apparatus
- Monitoring of press-in, plug and extraction forces
- Tension force measuring at spooling devices
- Measurement and inspection equipment
- Test benches

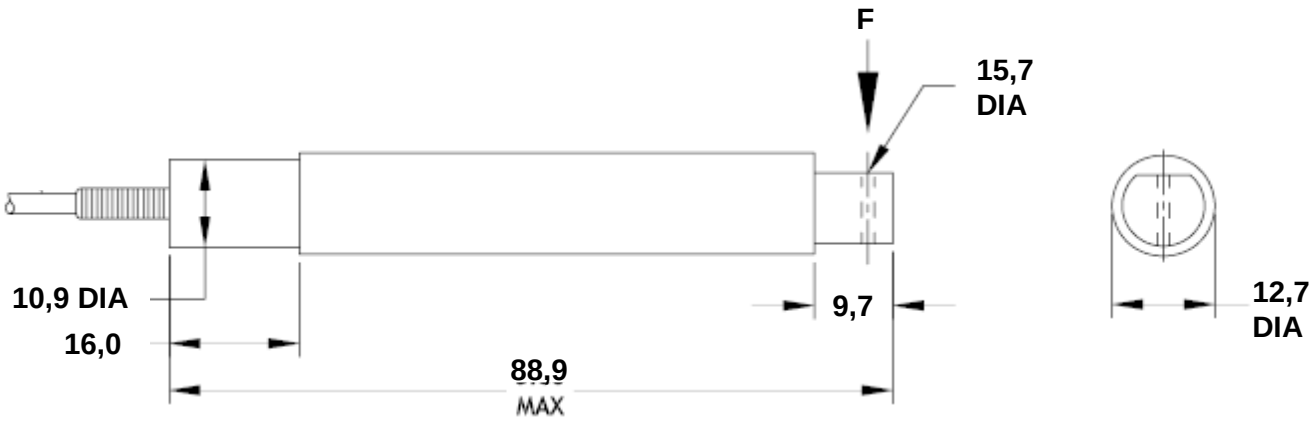
Model: F3223

Technical data

Model	F3223		Options
Nominal load F_{nom} in **N**	**0.25; 10**	**1.5; 50**	
Combined error	±0.10% of F.S.		
Limit load	500% F_{nom}	300% F_{nom}	
Max. dynamic load	±50% F_{nom} DIN 50 100		
Nominal deflection	< 0.15 mm		
Nominal temperature range	+15 ... +70°C		
Service temperature range	-20 ... +80°C		
Reference temperature	23°C		
Temperature effect -span -zero	≤±0.2% of F.S./10K ≤±0.15% of F.S./10K	≤±0.05% of F.S./10K ≤±0.05% of F.S./10K	
Protection type (acc. to EN 60 529/IEC 529)	IP 20		
Insulation resistance	>5 GΩ bei 50V		
Analogue output - Output signal - Bridge resistance - Option	20 mV/V 500 Ω (semiconductor strain gauge)	2 mV/V 350 Ω	
- Power requirement - Electrical connection	Cable integrated amplifier 0 (4) … 20 mA, 0 … 10 V DC 5 (max. 5 V); 24 V DC for cable integrated amplifier Cable1,5 m, open wires, 4-wire		
Material of measuring device	Stainless steel 17-4PH		
Weight (incl. cable)	70 g		

of F.S. = full scale value

Dimensions



Dimensions in mm

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

Subject to technical changes