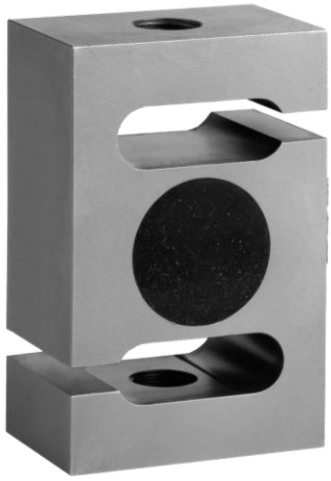
Tension/compression force transducer with internal thread, S-type, highest accuracy



Description

This force transducer's area of application lies both in weighing systems and in numerous industrial applications, where high accuracy, simple installation and favourable price play a decisive role.

It ideally meets the needs of these fields, being available in measuring ranges from 0...100 kg up to 0...5000 kg, suitable for both tensile and compressive force measurements.

This transducer is made of high grade steel, is splash protected and as a result, works reliably even in the harshest of environments.

Note

To prevent overload, it is advantageous to connect up the transducer electrically during installation and to monitor the measured value.

The force must be applied at the centre and without radial stress. Swivel eyes for optimum application of force are available as an option.

Features

- Rated loads: 100 kg to 5000 kg
- High accuracy (0,04% or 0,02%)
- Load cell of high grade steel
- Protection class IP 67
- High input resistance: 1100 Ω
- Simple cable replacement
- A special fitting kit is available

Measuring range

- 100 ... 5000 kg

Applications

- Plant engineering
- Production lines
- Weighing applications
- Measurement and monitoring facilities
- Building of jigs and special purpose machinery
- Testing apparatus
- Manufacturing plant, etc.

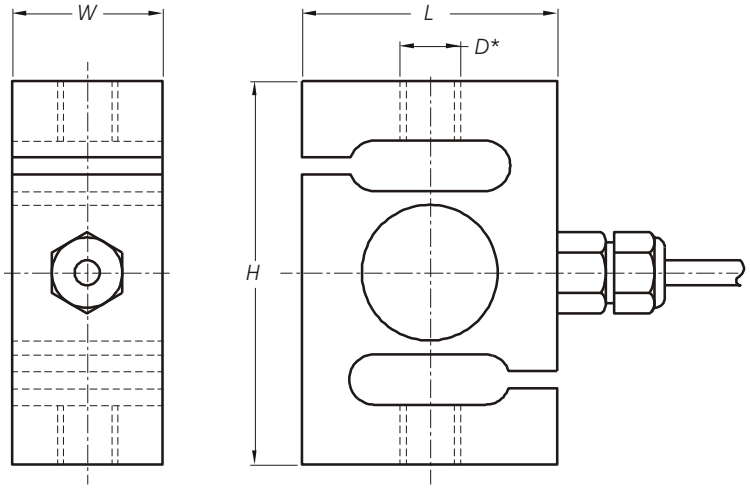
Model: F2270

Technical specifications

Model	F2270	Option
Nominal load F_{nom}	**100 / 200 / 500 / 1000 / 2000 / 3000 / 5000 kg**	
Limit load	200% F_{nom}	
Breaking load	> 300% F_{nom}	
Combined error	≤± 0.04% of F.S.	≤± 0.02% of F.S.
Max. dynamic load	± 70% F_{nom} acc. to DIN 50100	
Creep, 30 min. at F_{nom}	≤± 0.06% of F.S.	≤ ± 0.016% of F.S.
Nominal temperature range	-10...+40°C	
Service temperature range	-40…+80°C	
Storage temperature range	-40…+80°C	
Reference temperature	23° C	
Temperature effect span zero	 ≤± 0.02% of F.S. /10 K ≤± 0.04% of F.S. /10 K	 ≤± 0.010% of F.S. /10 K ≤± 0.011% of F.S. /10 K
Protection type (acc. to EN 60 529/IEC 529)	IP 67	
Insulation resistance	> 2 GΩ	
Analogue output Output signal Bridge resistance Tolerance of span Zero Excitation voltage Electrical connection	 2 mV/V Input: 1100 ± 50 Ω Output: 1000 ± 2 Ω ≤± 0.1% of F.S. ≤± 5% of F.S. 5 … 15 V Cable 6 m / 4-wire	
Encapsulation	Plastic encapsulation	
Cable length	6 m	
Material	Stainless steel 17-4 PH (1.4548)	

of F.S. = full scale value

Dimension



E connector	Colour
Supply (-)	black
Supply. (+)	green
Sign. (+)	white
Sign.(-)	red
Screen	yellow

Nominal load	H	L	W	Thread D-M	UNF Thread D-U	UNF Thread D-H
100kg...500 kg	76.2	49	30	M12 x 1.75	1/2-20	
1000 kg	76.2	49	30	M16 x 2	1/2-20	5/8-18
2000 kg	86.1	76.2	30	M16 x 2	5/8-18	
3000 kg	88.7	88.7	40	M20 x 1.5	3/4-16	
5000 kg	146	91.2	56.4	M24 x 2	1-12	

* 3 different thread versions available: -M / -U / -H.

Dimensions in mm.

Specifications reserved