Tension/compression force transducer
Up to 1,000 N
Model F2812

Applications

- Tension/compression force testing
- Tank weighing
- Load monitoring in industrial plants
- Riveting machine
- Welding machine

Special features

- Measuring ranges 0 ... 50 N up to 0 ... 1,000 N
- Ultra compact design
- Corrosion-resistant stainless steel design
- Protection IP65

Tension/compression force transducer, model F2812

Description

Tension/compression force transducers are designed for static and dynamic measurement tasks in the direct flux of force. They determine the tension and compression forces in a wide scope of applications.

Force transducers of this series are used in weighing technology as well as in countless industrial applications, where high accuracy, simple installation with force introduction via the two internal threads and a favorable price plays a decisive role.

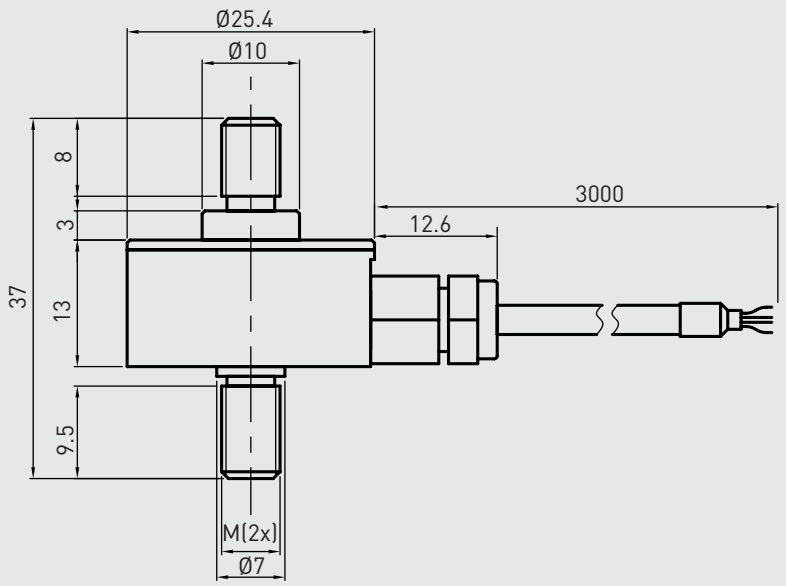
Note
In order to avoid overloading, it is necessary to connect the force transducer electrically during installation and to monitor the measured value.

The force to be measured must be applied concentrically and free of transverse force. The force transducers are to be mounted on a level surface.

Specifications in accordance with VDI/VDE/DKD 2638

Model F2812	
Rated force F_{nom} N	50, 100, 150, 200, 300, 500, 600, 1,000
Relative linearity error d_{lin}	±0.05 % F_{nom}
Relative reversibility v	±0.05 % F_{nom}
Relative repeatability error in unchanged mounting position b_{rg}	±0.25 % F_{nom}
Relative deviation of zero signal $d_{S, 0}$	±2 % F_{nom}
Temperature effect on zero signal TK_0	≤ ±0.2 %/10 °C
Temperature effect on characteristic value TK_C	≤ ±0.2 %/10 °C
Force limit F_L	120 % F_{nom}
Breaking force F_B	200 % F_{nom}
Material	Stainless steel
Rated temperature range $B_{T, nom}$	-10 … +60 °C
Operating temperature range $B_{T, G}$	-20 … +80 °C
Input resistance R_e	700 ± 30 Ω
Output resistance R_a	700 ± 5 Ω
Insulation resistance R_{is}	≥ 5,000 MΩ/DC 100 V
Output signal (rated output) C_{nom}	2.0 ± 10 % mV/V
Electrical connection	Cable Ø 3 x 3,000 mm
Excitation voltage ■ Standard ■ Option	 DC 10 V (max. 15 V) DC 12 … 28 V integrated or cable amplifier 0(4) … 20 mA DC 0 … 10 V DC 0 … 5 V
Protection (acc. to IEC/EN 60529)	IP65
Weight in kg	0.1

Dimensions

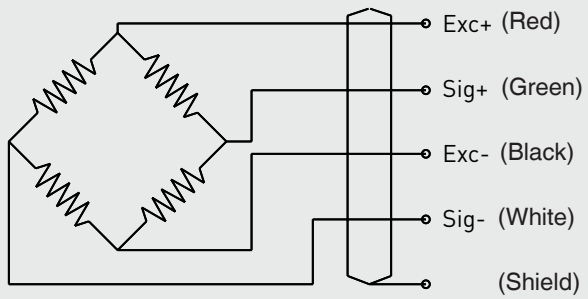


Dimension in mm.

Rated force in N	M
50, 100, 150, 200, 300, 500	M5
600, 1,000	M6

Pin assignment

Electrical connection	
Excitation voltage (+)	Red
Excitation voltage (-)	Black
Signal (+)	Green
Signal (-)	White
Screen ⏚	Screen



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