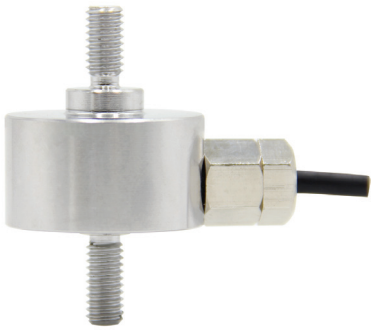
Tension/compression force transducer
To 1,000 N
Model F2812

Applications

- Tension and compression force testing
- Container weighing
- Load monitoring in industrial plants
- Riveting machines



Tension/compression force transducer, model F2812

Special features

- Measuring ranges 0 ... 50 N to 0 ... 1,000 N
- Ultracompact version
- Material: Stainless steel
- Ingress protection IP65

Description

The tension/compression force transducers are suitable for static and dynamic measuring requirements in the direct force flow. They serve for determining tension and compression forces in diverse application areas.

Force transducers of this series are used in weighing technology and also in numerous industrial applications where high accuracy, simple installation with force introduction via the two female threads, as well as an inexpensive price play a key role.

Data sheets showing similar products:

Miniature tension/compression force transducer from 10 N; model F2220; data sheet FO 51.26
Miniature tension/compression force transducer from 10 N; model F2221; data sheet FO 51.16

Specifications per VDI/VDE/DKD 2638

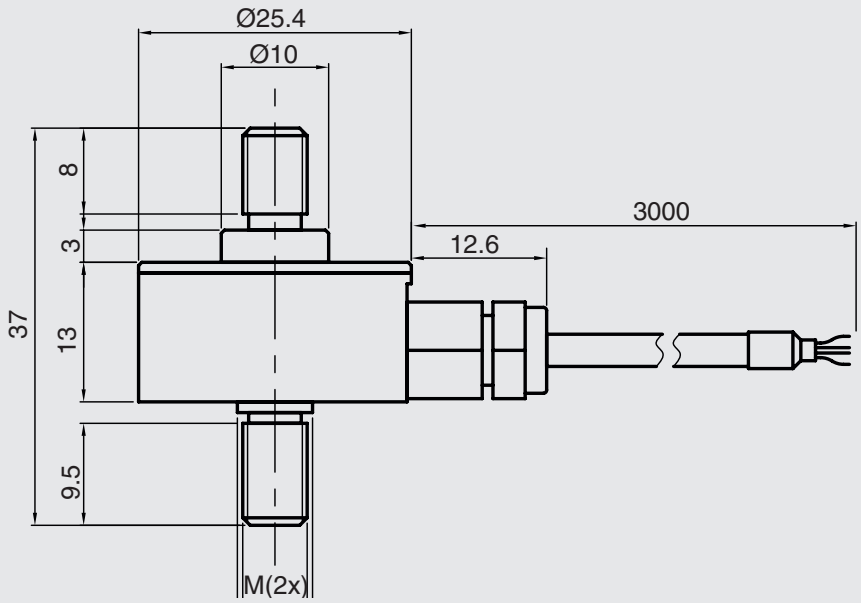
Model F2812	
Rated force F_{nom} N	50 / 100 / 150 / 200 / 300 / 500 / 600 / 1,000
Relative linearity error din_{lin} [1)]	±0.5 % F_{nom}
Relative reversibility error v	±0.5 % F_{nom}
Relative repeatability error in unchanged mounting position b_{rg}	±0.25 % F_{nom}
Relative deviation of zero signal $d_{S,0}$	±2 % F_{nom}
Temperature effect on zero signal TK_0	≤ ±0.2 % / 10 K
Temperature effect on characteristic value TK_C	≤ ±0.2 % / 10 K
Force limit F_L	120 % F_{nom}
Breaking force F_B	200 % F_{nom}
Material of the measuring body	Stainless steel
Rated temperature range $B_{T, nom}$	-10 ... +40 °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 characteristic value) C_{nom}	2.0 ±0.2 mV/V
Electrical connection	Measuring cable Ø 3 x 3,000 mm
Voltage supply	
Standard	DC 5 ... 10 V
Option	DC 12 … 28 V integrated or cable amplifier 0 (4) ... 20 mA DC 0 ... 10 V DC 0 ... 5 V
Ingress protection (per IEC/EN 60529)	IP65
Weight in kg	0.1

[1)] Relative linearity error is specified in accordance with guideline VDI/VDE/DKD 2638 chap. 3.2.6

Approvals

Logo	Description	Region
CE	**EU declaration of conformity**	European Union
	EMC directive	
	RoHS directive	
EAC	**EAC (option)**	Eurasian Economic Community
	EMC directive	

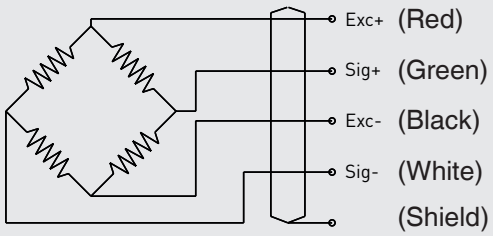
Dimensions in mm



Rated force in N	M
5 / 100 / 150 / 200 / 300 / 500	M5
600 / 1,000	M6

Pin assignment

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



Note for mounting
To avoid overloading, it is necessary to connect the force transducer electrically during assembly and to monitor the measured value. The measuring force must be introduced through the centre and free of transverse force. When assembling the force transducer, a flat support surface must be ensured.

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