Tension/compression force transducer
S-type up to 50 kN
Model F2802

Applications

- Tension and compression force testing
- Vessel weighing
- Load monitoring in industrial plants

Special features

- Measuring ranges 0 ... 0,5 kN up to 0 ... 50 kN
- Corrosion-resistant stainless steel or steel design
- Protection IP65 (< 5 kN), IP67 (≥ 5 kN)

Tension/compression force transducer, model F2802

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.

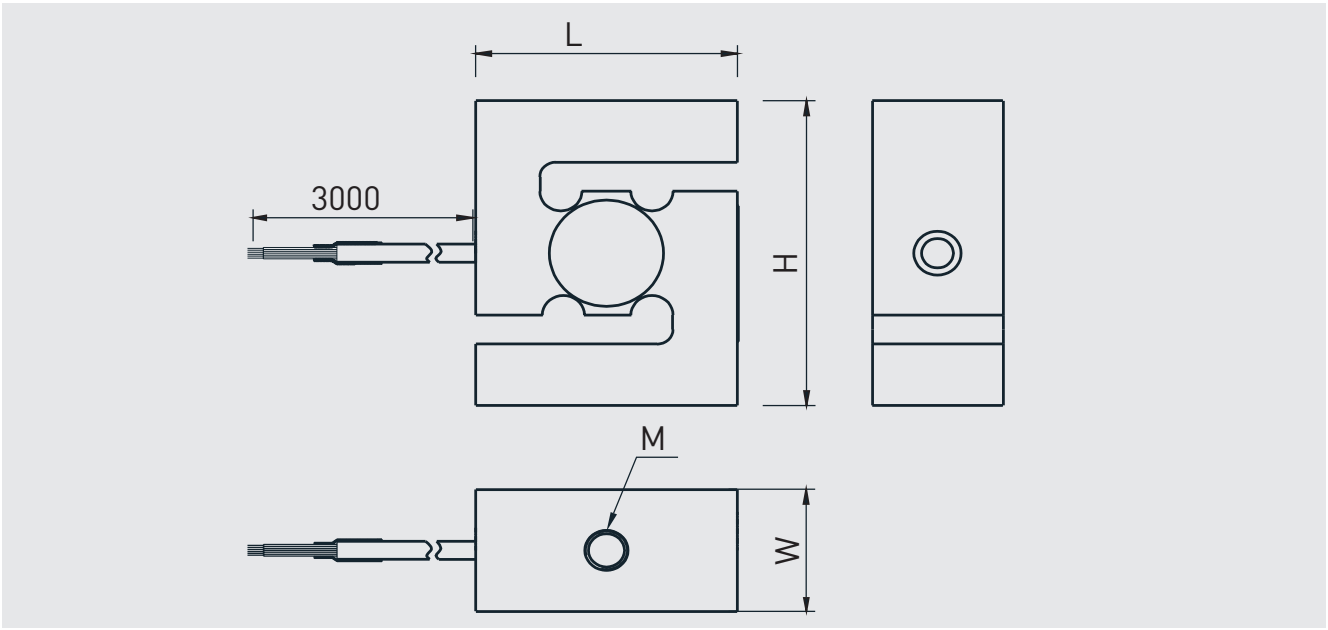
Note
In order to avoid overloading, it is necessary to connect the force transducer electrically during installation and to monitor the measured value.

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 F2802	
Rated force F_{nom} kN	0.5, 1, 2, 5, 10, 20, 30, 50
Relative linearity error d_{lin} ■ Steel ■ Stainless steel	 ±0.03 % F_{nom} ±0.05 % F_{nom}
Relative creep, 30 min. ■ Steel ■ Stainless steel	 ±0.03 % F_{nom} ±0.05 % F_{nom}
Relative reversibility v ■ Steel ■ Stainless steel	 ±0.03 % F_{nom} ±0.05 % F_{nom}
Relative repeatability error in unchanged mounting position b_{rg} ■ Steel ■ Stainless steel	 ±0.03 % F_{nom} ±0.05 % F_{nom}
Relative deviation of zero signal $d_{S, 0}$	±2 % F_{nom}
Temperature effect on zero signal TK_0	≤ ±0.025 %/10 °C
Temperature effect on characteristic value TK_C	≤ ±0.025 %/10 °C
Force limit F_L	150 % 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	385 ± 30 Ω
Output resistance R_a	350 ± 5 Ω
Insulation resistance R_{is}	≥ 5,000 MΩ/DC 100 V
Output signal (rated output) C_{nom}	2.0 ± 5 % mV/V
Electrical connection	Cable Ø 5 x 3,000 m
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 (< 5 kN), IP67 (≥ 5 kN)
Weight in kg ■ 0.5 kN ■ 1, 2 kN ■ 5, 10 kN ■ 20, 30 kN ■ 50 kN	 0.3 0.5 0.5 1.3 1.4

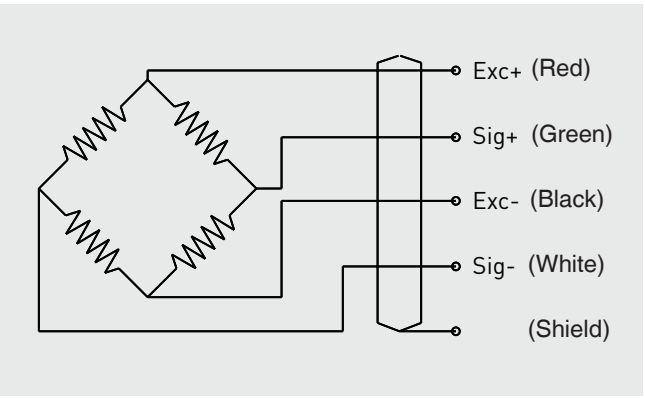
Dimensions



Rated force in kN	Dimensions in mm			
	H	L	W	M
0.5	63.5	50.8	25.4	M8
1, 2	76.2	50.8	25.4	M12
5, 10	87.3	57.2	31	M12
20, 30	100	69.8	36.5	M24 x 2
50	114.3	76.2	36.5	M24 x 2

Pin assignment

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



WIKA Alexander Wiegand SE & Co. KG
Alexander-Wiegand-Straße 30
63911 Klingenberg/Germany
Tel. +49 9372 132-0
Fax +49 9372 132-406
info@wika.de
www.wika.de