

Телефон: +7 (343) 319-51-25 Телефон: +7 (343) 382-32-13 E-mail: info@kip-e.ru

# Miniature tension/compression force transducer Up to 2,000 N Model F2808



WIKA data sheet FO 51.68

# **Applications**

- Pull and push dynamometer
- Hopper scale
- Industrial measuring systems
- Riveting machine
- Welding machine

### **Special features**

- Measuring ranges 0 ... 5 N up to 0 ... 2,000 N
- Tension and compression force transducer with metal foil strain gauge technology and overload protection
- Ultracompact build size
- Stainless steel



Tension/compression force transducer, model F2808

### 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.

Due to their simple installation, the force transducers of this series are used in test technology and countless industrial applications.

#### Note

In order to avoid overloading, it is advantageous 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



# Technical data in accordance with VDI/VDE/DKD 2638

Model F2808	
Rated force F <sub>nom</sub> N	5 / 10 / 20 / 50 / 100 / 200 / 250 / 300 / 500 / 1,000 / 2,000
Relative linearity error d <sub>lin</sub>	± 0.15 % F <sub>nom</sub>
Relative creep, 30 min.	±0.1 % F <sub>nom</sub>
Relative reversibility v	±0.1 % F <sub>nom</sub>
Relative repeatability error in unchanged mounting position b <sub>rg</sub>	±0.1 % F <sub>nom</sub>
Relative deviation of zero signal $d_{S, 0}$	±2 % F <sub>nom</sub>
Force limit F <sub>L</sub>	150 % F <sub>nom</sub>
Breaking force F <sub>B</sub>	300 % F <sub>nom</sub>
Material	Stainless steel
Rated temperature range B <sub>T, nom</sub>	-10 +60 °C
Operating temperature range $B_{T, G}$	-20 +80 °C
Input resistance R <sub>e</sub>	$350 \pm 30 \Omega$
Output resistance R <sub>a</sub>	$350 \pm 5 \Omega$
Insulation resistance R <sub>is</sub>	≥ 5,000 MΩ/DC 100 V
Output signal (rated output) C <sub>nom</sub>	2.0 ± 10 % mV/V
Electrical connection	Cable Ø2 x 3,000 mm (M3, M4), Cable Ø3 x 3,000 mm (M8)
Rated range of excitation voltage B <sub>U, nom</sub>	DC 10 V (max. 15 V)
Protection (acc. to IEC/EN 60529)	IP66
Weight in kg	0.1

### **Dimensions in mm**



#### Note:

The cable will be Ø2 for M3 M4 force transducer, equipped with M4 compression nut. The cable will be Ø3 for M8 force

transducer, equipped with M6 compression nut.

Rated force in N	Dimensions in mm				
	М	Н	Α	В	E
5 / 10 / 20	M3	6	16	19.1	7.5
50 / 100 / 200 / 300 / 500	M4	6	16	19.1	13
250 / 300 / 500 / 1,000 / 2,000	M8	14	26	40	13

# **Pin assignment**

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



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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

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