

Miniature tension/compression force transducer To 2,000 N Model F2808

WIKA data sheet FO 51.68

EAC

Applications

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

Special features

- Measuring ranges 0 ... 5 N to 0 ... 2,000 N
- Overload protection
- Ultracompact version
- Material: Stainless steel



Miniature tension/compression force transducer,
model F2808

Description

The miniature 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.



These force transducers are used in testing technology and also in numerous industrial applications where simple installation and an inexpensive price play a key role.

Specifications per VDI/VDE/DKD 2638

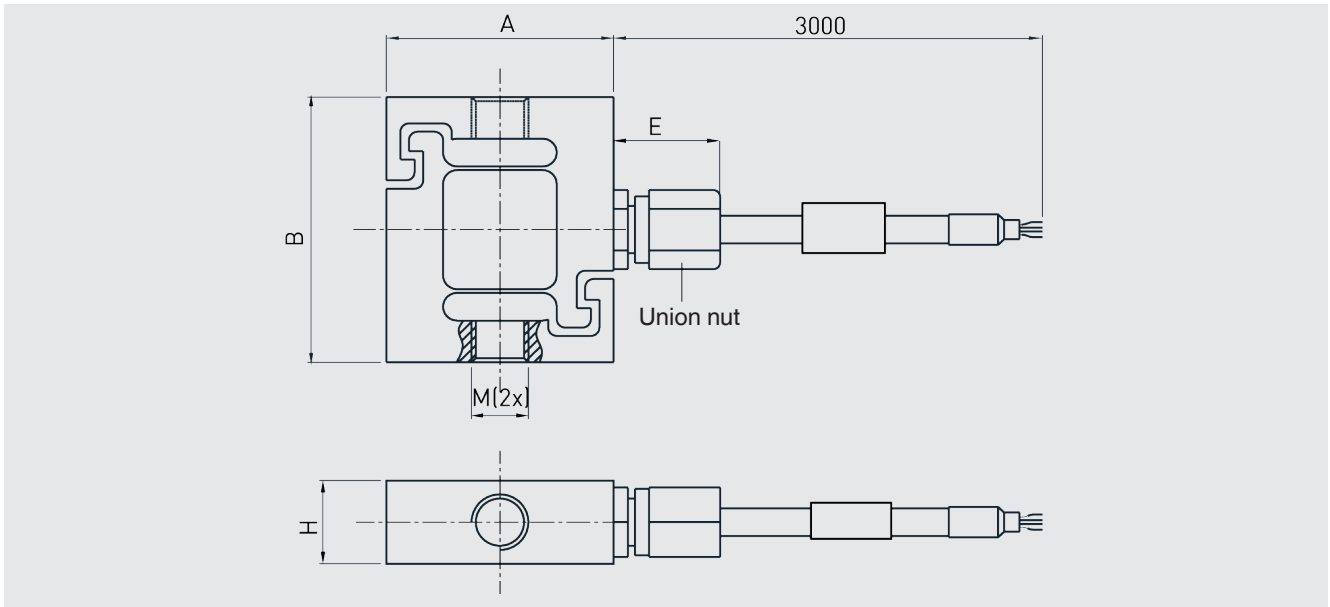
Model F2808	
Rated force F_{nom} N	5 / 10 / 20 / 50 / 100 / 200 / 250 / 300 / 500 / 1,000 / 2,000
Relative linearity error $d_{lin}^{1)}$	$\pm 0.15 \% F_{nom}$
Relative creep, 30 min.	$\pm 0.1 \% F_{nom}$
Relative reversibility error v	$\pm 0.1 \% F_{nom}$
Relative repeatability error in unchanged mounting position b_{rg}	$\pm 0.1 \% F_{nom}$
Relative deviation of zero signal $d_{s,0}$	$\pm 2 \% F_{nom}$
Force limit F_L	150 % F_{nom}
Breaking force F_B	300 % 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	380 \pm 30 Ω
Output resistance R_a	380 \pm 30 Ω
Insulation resistance R_{is}	$\geq 5,000 \text{ M}\Omega/\text{DC } 100 \text{ V}$
Output signal (rated characteristic value) C_{nom}	
5 N	1.5 \pm 0.15 mV/V
$\geq 10 \text{ N}$	2.0 \pm 0.2 mV/V
Electrical connection	
M3, M4	Cable $\varnothing 2 \times 3,000 \text{ mm}$
M8	Cable $\varnothing 3 \times 3,000 \text{ mm}$
Excitation voltage $B_{U, nom}$	DC 5 V (max. 7 V)
Ingress protection (per IEC/EN 60529)	IP66
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
	EU declaration of conformity	European Union
	EMC directive	
	RoHS directive	
	EAC (option)	Eurasian Economic Community
	EMC directive	

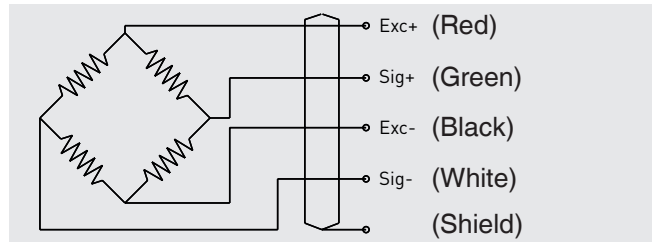
Dimensions in mm



Rated force in N	Dimensions in mm						
	A	B	E	H	M	Ø cable	Union nut
5 / 10 / 20	16	19.1	7.5	6	M3	2	M4
50 / 100 / 200 / 300 / 500	16	19.1	13	6	M4	2	M4
250 / 300 / 500 / 1,000 / 2,000	26	40	13	14	M8	3	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. For the installation of the force transducer the support surface must be flat.

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