

# Tension/compression force transducer

## Up to 1,000 N

### Model F2812

WIKA data sheet FO 51.49

#### 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

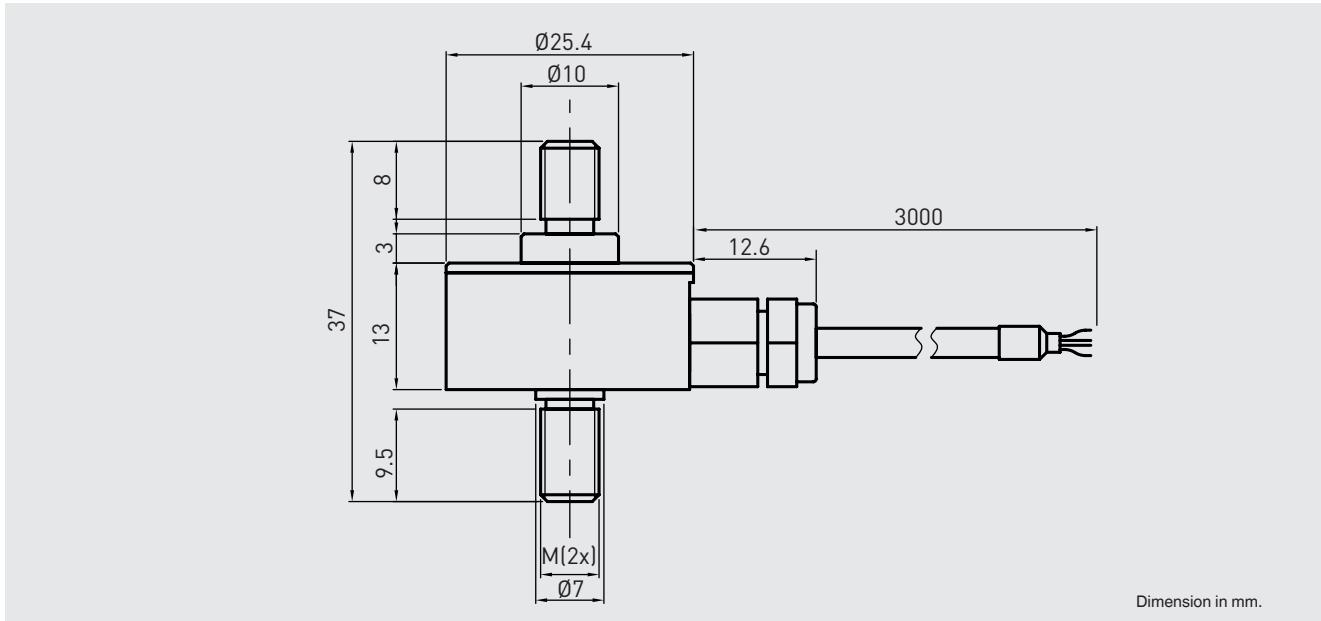
In order to avoid overloading, it is necessary to connect the force transducer electrically during installation and to monitor the measured value.

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

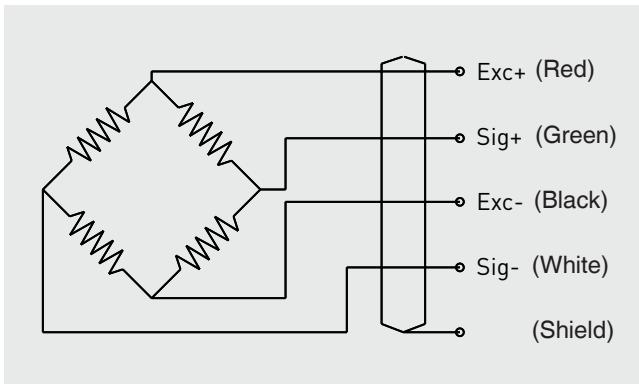
## Dimensions



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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