Compression force transducer
Miniature design up to 20 kN
Model F1818

Applications

- Equipment manufacturing, production lines
- Measuring and control systems
- Automation industry
- Materials testing machinery
- Tooling manufacture

Special features

- Measuring ranges 0 ... 50 N to 0 ... 20 kN
- Relative linearity error 0.5 % F_{nom}
- Material: Stainless steel
- Ingress protection IP65
- Low installation height, easy to install

Miniature compression force transducer, model F1818

Description

The miniature model F1818 compression force transducer is suitable for measuring static and dynamic compression forces up to 20 kN.
The low overall height and small external diameter enable simple installation in machinery or test instruments and they can therefore be used in the widest variety of industrial areas. With this, it is also ideally suited for the measurement of compression forces in areas where installation space is critical.

Fields of application include test rigs for a variety of purposes, monitoring and control of manufacturing processes, in test facilities and laboratories.

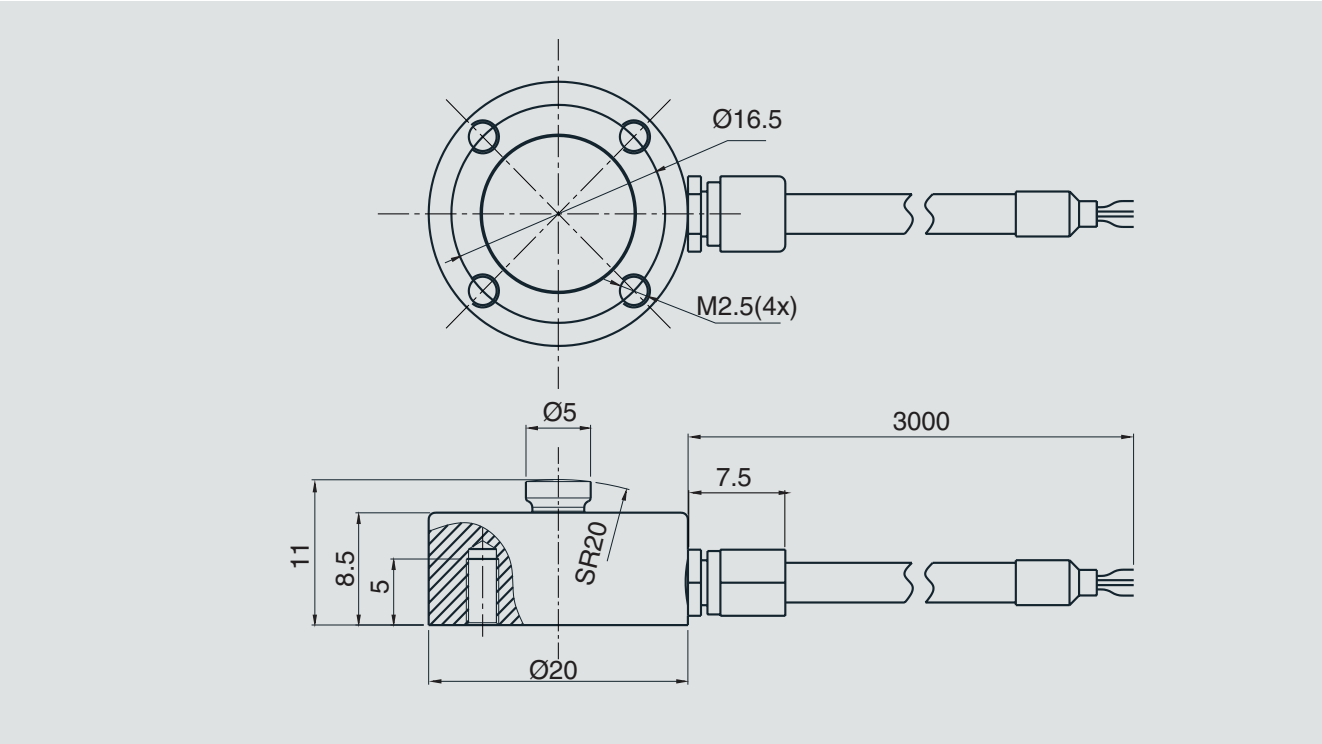
Notes
To avoid overloading, it is advantageous to connect the force transducer electrically during assembly and to monitor the measured value.

The measuring force must be introduced through the centre and free of transverse force. When assembling the force transducer, care should be taken that the support surface is flat.

Specifications per VDI/VDE/DKD 2638

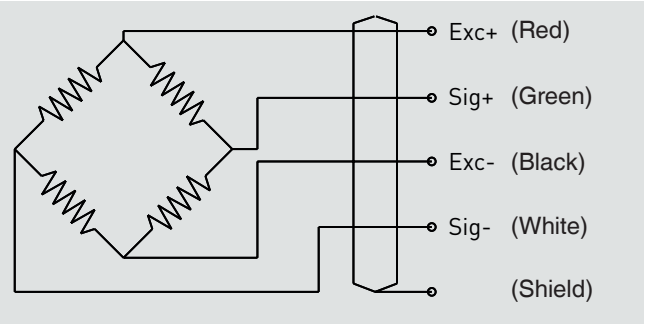
Model F1818	
Rated force F_{nom} kN	0.05, 0.1, 0.2, 0.5, 1, 2, 5, 10, 15, 20
Relative linearity error d_{lin}	0.5 % F_{nom}
Relative reversibility error v	0.5 % F_{nom}
Relative span in unchanged mounting situation b_{rg}	0.1 % F_{nom}
Relative deviation of zero signal $d_{S, 0}$	±2 % F_{nom}
Limit force F_L	150 % F_{nom}
Breaking force F_B	200 % F_{nom}
Material of the measuring body	Stainless steel
Service temperature range $B_{T, G}$	-20 … +80 °C
Input resistance R_e	350 ±10 Ω
Output resistance R_a	350 ±5 Ω
Insulation resistance Ris	≥ 5,000 MΩ/DC 100 V
Output signal (rated characteristic value) C_{nom}	1.5 ±10 % mV/V
Electrical connection	Cable Ø2 × 3,000 mm
Voltage supply	DC 5 V (max. 10 V)
Ingress protection (per IEC/EN 60529)	IP65
Weight	0.1 kg

Dimensions in mm



Pin assignment

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



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