Compression force transducer Miniature design up to 1,000 N Model F1814

Applications

- Equipment manufacturing, production lines
- Measuring and control systems
- Precision engineering
- Materials testing machinery
- Laboratory

Miniature compression force transducer, model F1814

Special features

- Measuring ranges 0 ... 30 N to 0 ... 1,000 N
- Relative linearity error 1 % F_{nom}
- Stainless steel or aluminium version
- IP65
- Low installation height, easy to install

Description

The model F1814 miniature compression force transducer, with measuring ranges up to 1,000 N, is particularly suitable for use in areas where installation space is critical.

Due to its very small dimensions and solid construction, this miniature force transducer, manufactured from stainless steel or aluminium, can be used in the widest range of industrial areas, in test facilities and in the laboratory.

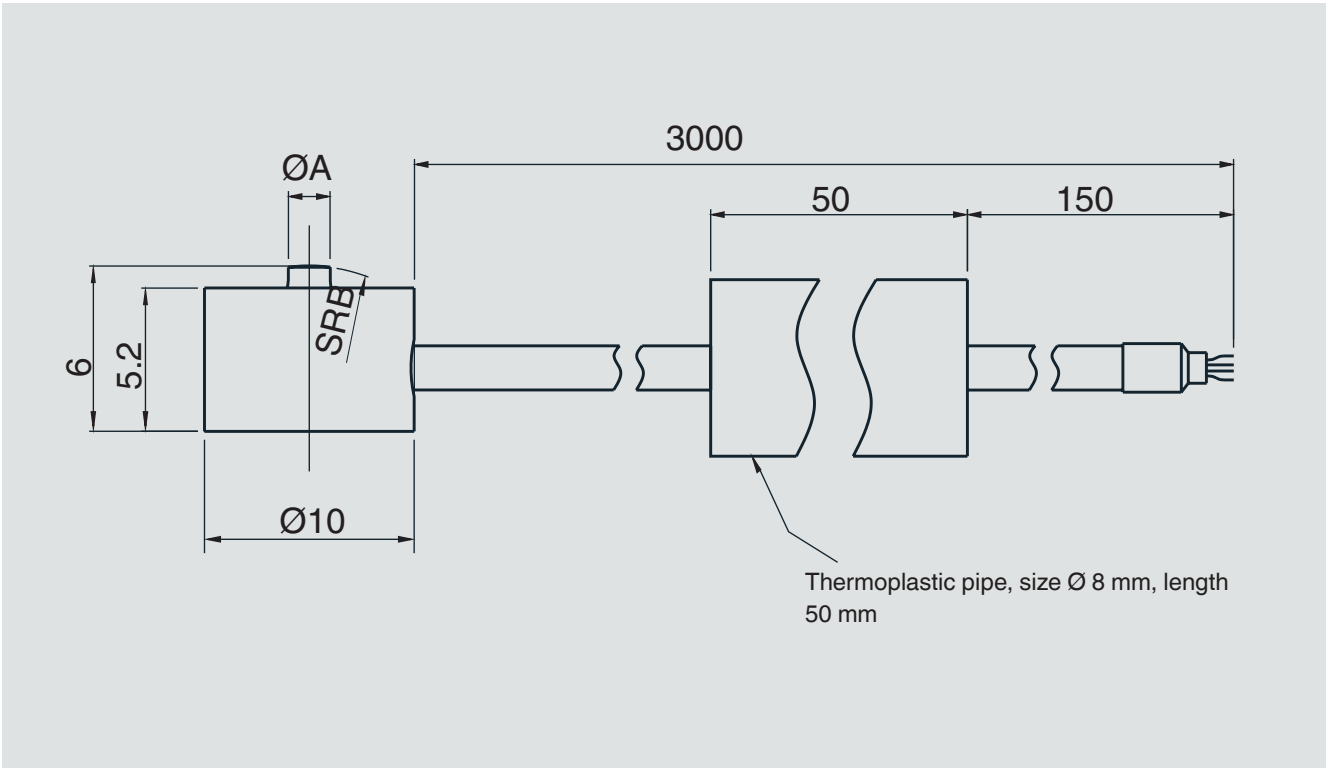
Notes
To avoid overloading, it is advantageous to connect the force transducer electrically during assembly and to monitor the measured value.

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 F1814	
Rated force F_{nom} N	30, 50, 100, 200, 300, 500, 1,000
Relative linearity error d_{lin}	1 % F_{nom}
Relative reversibility error v	0.5 % F_{nom}
Relative span in unchanged mounting situation b_{rg}	0.5 % F_{nom}
Limit force F_L	120 % F_{nom}
Breaking force F_B	150 % F_{nom}
Material of the measuring body ■ 30 N ■ ≥ 50 N	 Aluminium Stainless steel
Service temperature range $B_{T, G}$	-20 … +80 °C
Input resistance R_e	1,030 ±80 Ω
Output resistance R_a	1,030 ±80 Ω
Insulation resistance Ris	≥ 5,000 MΩ/DC 100 V
Output signal (rated characteristic value) C_{nom}	1.0 ±10 % mV/V
Electrical connection	Cable Ø2 × 3,000 mm
Voltage supply	DC 5 V (max. 7 V)
Ingress protection (per IEC/EN 60529)	IP65
Weight	0.1 kg

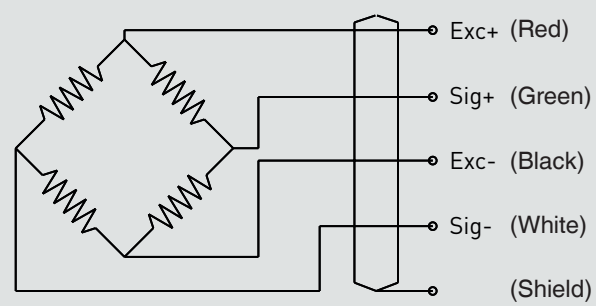
Dimensions in mm



Rated force in N	Dimensions in mm	
	øA	B
30	1	8
50, 100	1.5	5
200, 300	2	8
500, 1,000	2.5	10

Pin assignment

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



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