

Compression force transducer

Miniature design up to 225 kN

Model F1226

WIKA data sheet FO 51.41

Applications

- Plant construction and equipment manufacturing
- Measuring and control systems
- Precision engineering
- Fully-automated machining centres
- Theatre and stage construction

Special features

- Measuring ranges 0 ... 25 N to 0 ... 225 kN [0 ... 5 lbs to 0 ... 50,000 lbs]
- Relative linearity error 0.25 % F_{nom}
- Simple force introduction
- Compact design, low installation height
- Ingress protection IP67



Compression force transducer, model F1226

Description

The model F1226 compression force transducer in miniature design is especially notable for its small diameter and installation height for corresponding rated loads. Due to its compact dimensions and solid construction, this force transducer, manufactured from stainless steel, can be used in the widest range of industrial areas.

This force transducer is easy to handle and enables a relatively uncomplicated installation. Its small dimensions predestine it particularly for use in very narrow installation spaces in which compression forces must be measured.

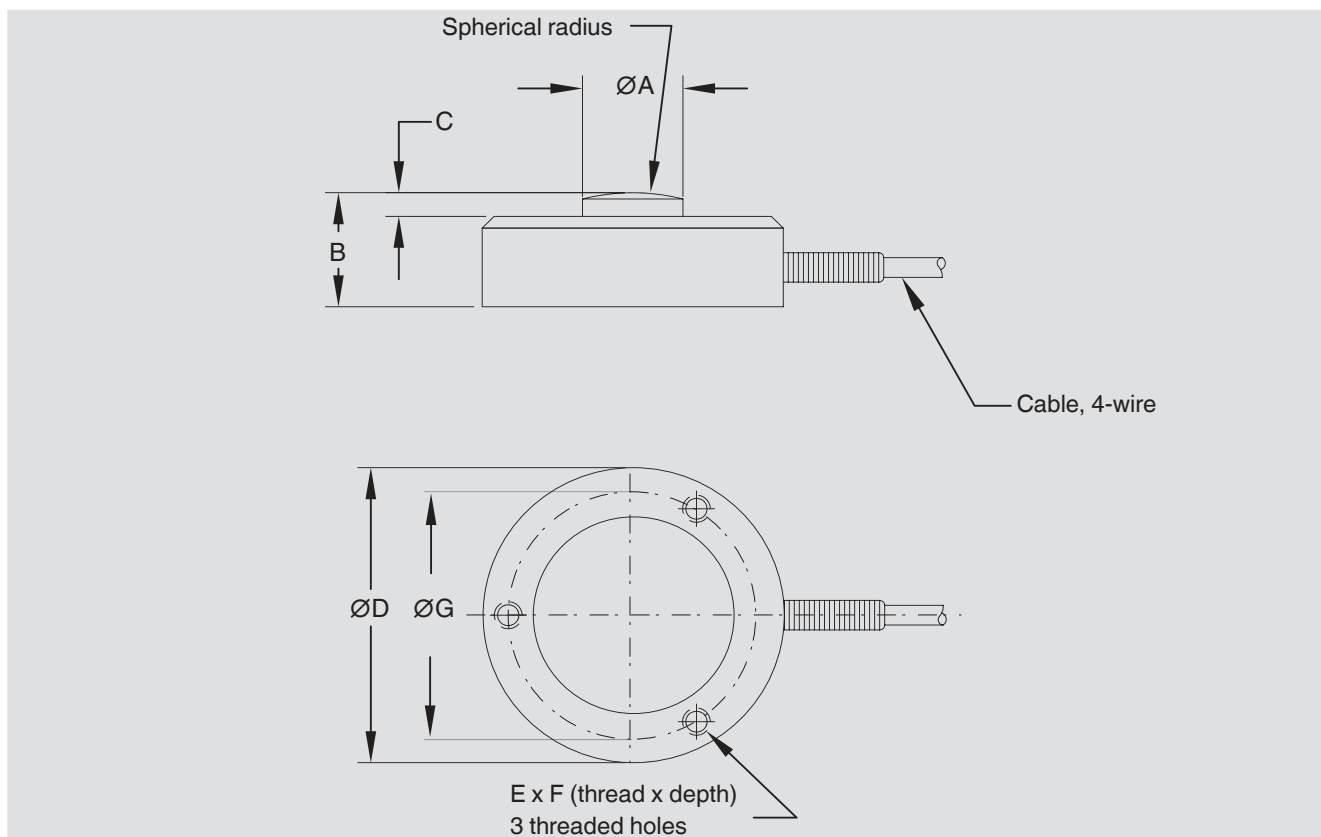
Note

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 F1226	
Rated force F_{nom} kN	0 ... 25 N to 0 ... 225 kN
Rated load F_{nom} lbs	0 ... 5 lbs to 0 ... 50,000 lbs
Relative linearity error d_{lin}	$\pm 0.25 \% F_{nom}$
Relative reversibility error v	$\pm 0.1 \% F_{nom}$
Relative span in unchanged mounting situation b_{rg}	$\pm 0.2 \% F_{nom}$
Temperature effect on the zero signal TK_0	$\leq \pm 0.09 \% / 10 \text{ K}$
Temperature effect on the characteristic value TK_C	$\leq \pm 0.18 \% / 10 \text{ K}$
Limit force F_L	$150 \% F_{nom}$
Breaking force F_B	$> 300 \% F_{nom}$
Material of the measuring body	Stainless steel
Rated temperature range $B_{T, nom}$	+15 ... +70 °C
Service temperature range $B_{T, G}$	-54 ... +120 °C
Electrical connection	
Standard	Measuring cable, PTFE, 1 m, free stranded wires, 4-wire
Option	customer-specific possible Cable amplifier 0(4) ... 20 mA DC 0 ... 10 V
Output signal (rated characteristic value) C_{nom}	2 mV/V ($\pm 2 \%$)
Supply voltage	DC 10 ... 15 V
Relative deviation of zero signal $d_{S, 0}$	$\pm 2 \% F_{nom}$
Bridge resistance	1,000 Ω
Insulation resistance R_{is}	$> 5 \text{ G}\Omega$ for 350 V
Voltage supply	
Standard	DC 2 ... 12 V (max. 15 V)
Option	DC 12 ... 28 V integrated or cable amplifier 0 (4) ... 20 mA DC 0 ... 10 V
Ingress protection (per IEC/EN 60529)	IP67
Electrical safety	Reverse polarity and overvoltage protection and short-circuit resistance

Dimensions in mm



Rated force in kN [Rated load in lbs]	Dimensions in mm [inch]						
	D	A	B	C	E	F	G
0 ... 0.025 to 0 ... 0.445 [0 ... 5 to 0 ... 100]	25.40 [1.00]	5.33 [0.21]	15.75 [0.62]	1.27 [0.05]	M4 [4-40 UNC]	5.59 [0.22]	19.05 [0.750]
0 ... 1.1 to 0 ... 8.9 [0 ... 250 to 0 ... 2,000]	31.75 [1.25]	8.13 [0.32]	9.91 [0.39]	1.78 [0.07]	M4 [6-32 UNC]	4.83 [0.19]	25.40 [1.00]
0 ... 13.35 to 0 ... 22.24 [0 ... 3,000 to 0 ... 5,000]	38.10 [1.5]	10.92 [0.43]	16 [0.63]	2.03 [0.08]	M4 [6-32 UNC]	6.35 [0.25]	31.75 [1.25]
0 ... 33.36 to 0 ... 66.72 [0 ... 7,500 to 0 ... 15,000]	44.45 [1.75]	10.92 [0.43]	16 [0.63]	2.03 [0.08]	M4 [6-32 UNC]	6.35 [0.25]	38.10 [1.50]
0 ... 88.96 to 0 ... 133.45 [0 ... 20,000 to 0 ... 30,000]	50.80 [2.00]	15.24 [0.60]	25.40 [1.00]	3.05 [0.12]	M4 [6-32 UNC]	6.35 [0.25]	41.27 [1.625]
0 ... 222.41 [0 ... 50,000]	76.20 [3.00]	19.81 [0.78]	38.1 [1.50]	4.57 [0.18]	M4 [6-32 UNC]	6.35 [0.25]	60.32 [2.375]

Ordering information

Model / Rated load / Relative linearity error / Temperature range / Output signal / Electrical connection

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