Tension/compression force transducer
With external thread up to 3,300 kN
Model F2226

Applications

- Apparatus construction
- Production lines
- Measuring and inspection equipment
- Special equipment and machinery construction

Special features

- Measuring ranges 0 ... 10 kN up to 0 ... 3,300 kN
- Robust design
- Material stainless steel
- Protection class IP66
- Relative linearity error 0.15 % F_{nom}

Tension/compression force transducer, model F2226

Description

The tension/compression force transducer is used wherever measurements are to be taken directly in the line of force. The actual tension forces in cables and rods can thus, for example, be measured.

With this model, the load is applied via the threaded pins which are located on each side of the cylindrical body. The robust structure, which is manufactured from stainless steel, also allows it to be used in extremely harsh industrial atmospheres.

The tension/compression force transducer are splash water protected and function reliably even under difficult service conditions.

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

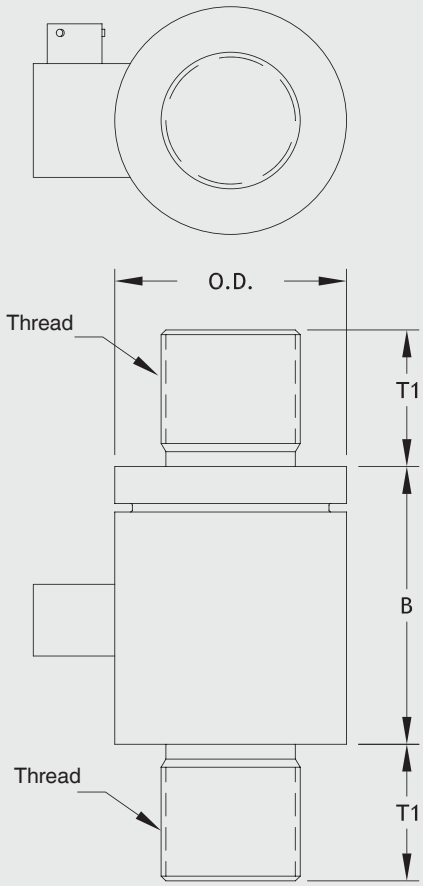
The force to be measured must be applied concentrically and free of transverse force.

Options
- Load input elements
- Built-in amplifier
- Extended compensated temperature range
- Different thread sizes
- Different bridge resistance
- Connector guard
- Cable outlet
- Internal/external thread

Specifications in accordance with VDI/VDE/DKD 2638

Model F2226		
Rated force F_{nom} kN	10, 20, 30, 40, 50, 75, 100, 200	300, 500, 300, 500, 1,000, 1,500, 2,000, 2,200, 3,000, 3,300
Relative linearity error d_{lin}	≤ ±0.15 % F_{nom}	≤ ±0.20 % F_{nom}
Relative creep, 30 min.	≤ ±0.1 % F_{nom}	
Relative reversibility error v	≤ ±0.15 % F_{nom}	≤ ±0.20 % F_{nom}
Relative repeatability error in unchanged mounting position b_{rg}	≤ ±0.05 % F_{nom}	
Relative deviation of zero signal $d_{S, 0}$	≤ ±1 % F_{nom}	
Temperature effect on zero signal TK_0	< ±0.05% of F.S./10 K	
Temperature effect on characteristic value TK_C	< ±0.05% Reading/10 K	
Force limit F_L	150 % F_{nom}	
Breaking force F_B	> 300 % F_{nom}	
Permissible oscillation stress acc. to DIN 50100 F_{rb}	±70 % F_{nom}	
Rated displacement s_{nom}	< 0.4 mm	
Material	Stainless steel	
Operating temperature range $B_{T, G}$	-54 ... +121°C	
Reference temperature T_{ref}	15 ... +71°C	
Output signal (rated output) C_{nom}	2 mV/V	
Input-/output resistance R_e/R_a	350 Ω	
Insulation resistance	> 2 GΩ	
Electrical connection	Connector, 6-pin	
Supply voltage ■ Standard ■ Option	 DC 2 … 12 V (max. 15 V) Integrated or cable amplifier 0 (4) … 20 mA DC 0 … 10 V DC 0 … 5 V	
Protection (acc. to IEC/EN 60529)	IP66	
Option	■ Load input elements ■ Built-in amplifier ■ Extended compensated temperature range ■ Different thread sizes ■ Different bridge resistance ■ Connector guard ■ Cable outlet ■ Internal/external thread	

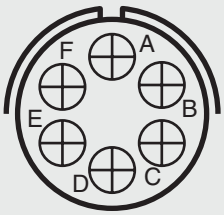
Dimensions



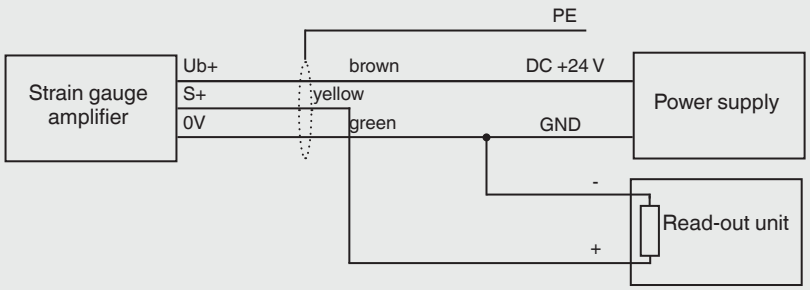
Rated force in kN	Dimensions in mm			
	Thread A	B	T1	Ø O.D.
10, 20	M16 x 2	66.0	24.1	38.1
30, 40, 50	M20 x 1.5	66.0	24.1	44.4
75	M24 x 2	66.0	31.8	44.4
100	M30 x 2	77.5	31.8	63.5
200	M45 x 3	77.5	31.8	63.5
300	M56 x 4	77.5	76.2	88.9
500	M56 x 4	77.5	76.2	88.9
1,000	M100 x 3	139.7	101.6	114.3
1,500	M100 x 3	139.7	114.3	127.0
2,000, 2,200	M120 x 4	146,1	127.0	139.7
3,000, 3,300	M150 x 4	139.7	171.5	168.4

Pin assignment

Electrical connection mV/V	
Excitation voltage (+)	Pin A&B
Excitation voltage (-)	Pin C&D
Signal (-)	Pin E
Signal (+)	Pin F



Pin assignment for integrated amplifier or cable amplifier (output 4 .... 20 mA)



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