

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

WIKA data sheet FO 51.51

## 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.

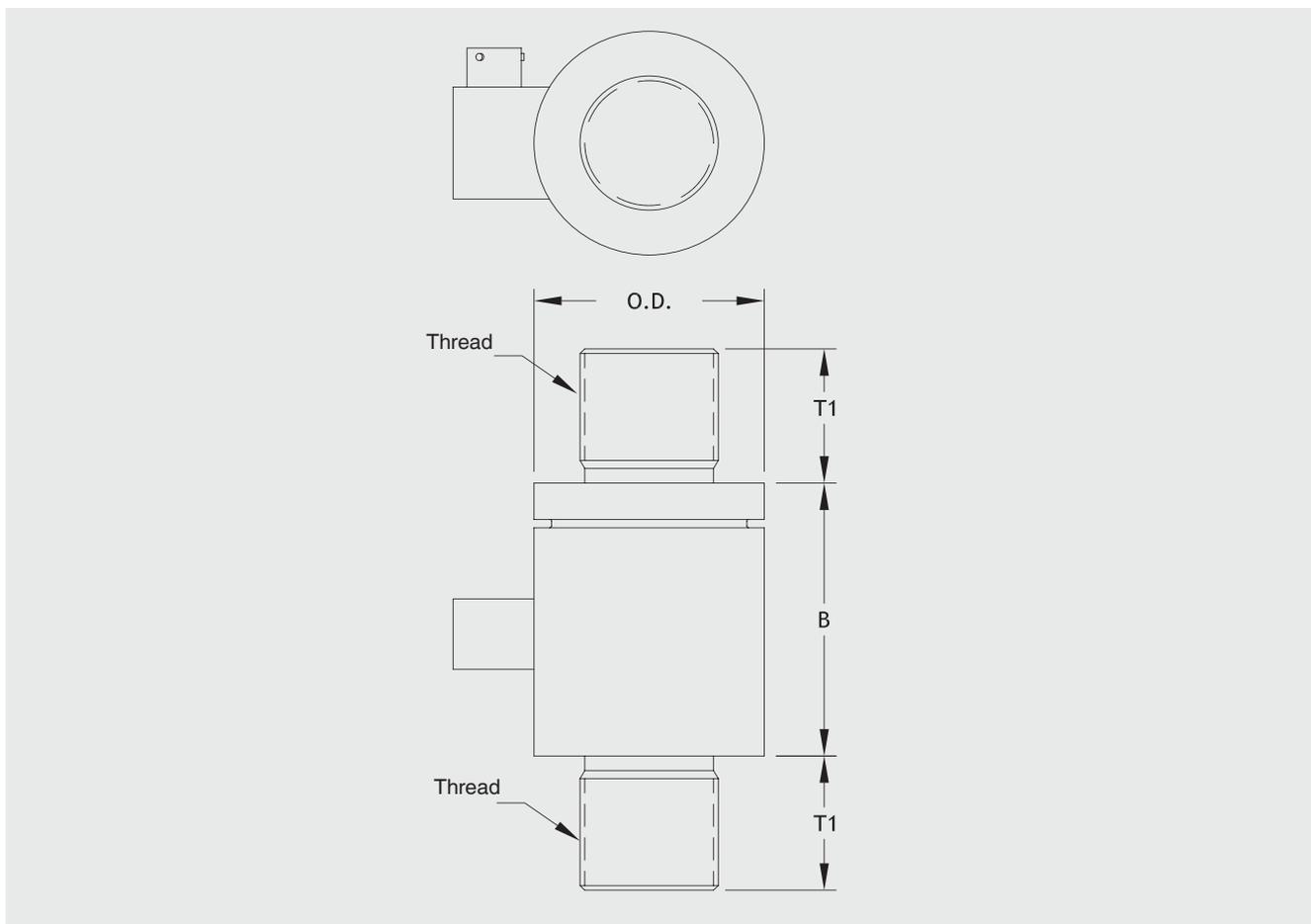
### Options

- 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 $d_{lin}$	$\leq \pm 0.15 \% F_{nom}$	$\leq \pm 0.20 \% F_{nom}$
Relative creep, 30 min.	$\leq \pm 0.1 \% F_{nom}$	
Relative reversibility error $v$	$\leq \pm 0.15 \% F_{nom}$	$\leq \pm 0.20 \% F_{nom}$
Relative repeatability error in unchanged mounting position $b_{rg}$	$\leq \pm 0.05 \% F_{nom}$	
Relative deviation of zero signal $d_{S,0}$	$\leq \pm 1 \% F_{nom}$	
Temperature effect on zero signal $TK_0$	$< \pm 0.05\%$ of F.S./10 K	
Temperature effect on characteristic value $TK_C$	$< \pm 0.05\%$ Reading/10 K	
Force limit $F_L$	150 % $F_{nom}$	
Breaking force $F_B$	$> 300 \% F_{nom}$	
Permissible oscillation stress acc. to DIN 50100 $F_{rb}$	$\pm 70 \% F_{nom}$	
Rated displacement $s_{nom}$	$< 0.4$ mm	
Material	Stainless steel	
Operating temperature range $B_{T,G}$	$-54 \dots +121^\circ\text{C}$	
Reference temperature $T_{ref}$	$15 \dots +71^\circ\text{C}$	
Output signal (rated output) $C_{nom}$	2 mV/V	
Input-/output resistance $R_e/R_a$	350 $\Omega$	
Insulation resistance	$> 2$ G $\Omega$	
Electrical connection	Connector, 6-pin	
Supply voltage <ul style="list-style-type: none"> <li>■ Standard</li> <li>■ Option</li> </ul>	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	<ul style="list-style-type: none"> <li>■ Load input elements</li> <li>■ Built-in amplifier</li> <li>■ Extended compensated temperature range</li> <li>■ Different thread sizes</li> <li>■ Different bridge resistance</li> <li>■ Connector guard</li> <li>■ Cable outlet</li> <li>■ Internal/external thread</li> </ul>	

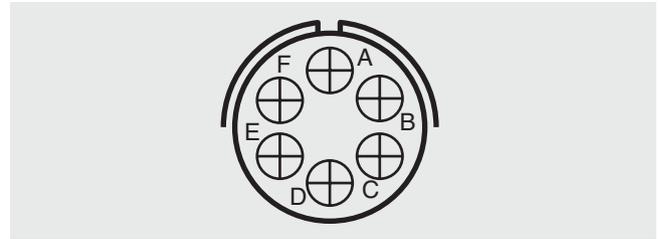
## Dimensions



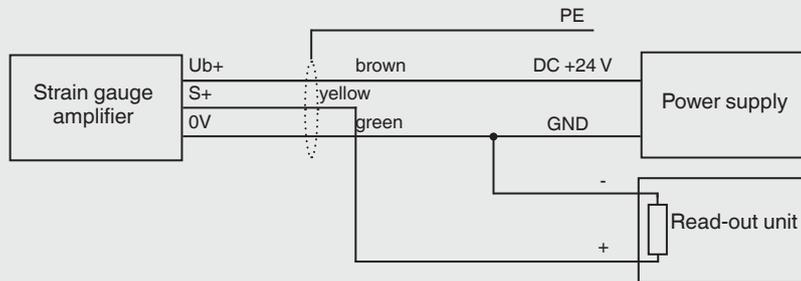
Rated force in kN	Dimensions in mm			
	Thread A	B	T1	Ø O.D.
10, 20	M16 x 2	66.0	24.1	38.1
30, 40, 50	M20 x 1.5	66.0	24.1	44.4
75	M24 x 2	66.0	31.8	44.4
100	M30 x 2	77.5	31.8	63.5
200	M45 x 3	77.5	31.8	63.5
300	M56 x 4	77.5	76.2	88.9
500	M56 x 4	77.5	76.2	88.9
1,000	M100 x 3	139.7	101.6	114.3
1,500	M100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