

Wire rope force transducer up to 40 t

Model F9204

WIKA data sheet FO 51.25



Applications

- Overload protection of cranes or storage and retrieval devices
- Overload protection and measurement tension of wire ropes

Special features

- Measuring ranges 0 ... 1 t up to 0 ...40 t
- Integrated amplifier, output 4 ... 20 mA, 2-wire
- Simple mounting (without opening rope), suitable for retrofits
- Material alloyed steel
- Protection class IP66



Wire rope force transducer, model F9204

Description

The wire rope force transducer have been specially designed to measure the load on existing steel cables. This force transducer is made of alloyed steel.

The wire rope force transducer monitors cost-effectively cable forces. This requires a cable anchor point, because the measurement is taken at the stationary rope. For this purpose, the transducer is clamped to the assembled cable in a few steps.

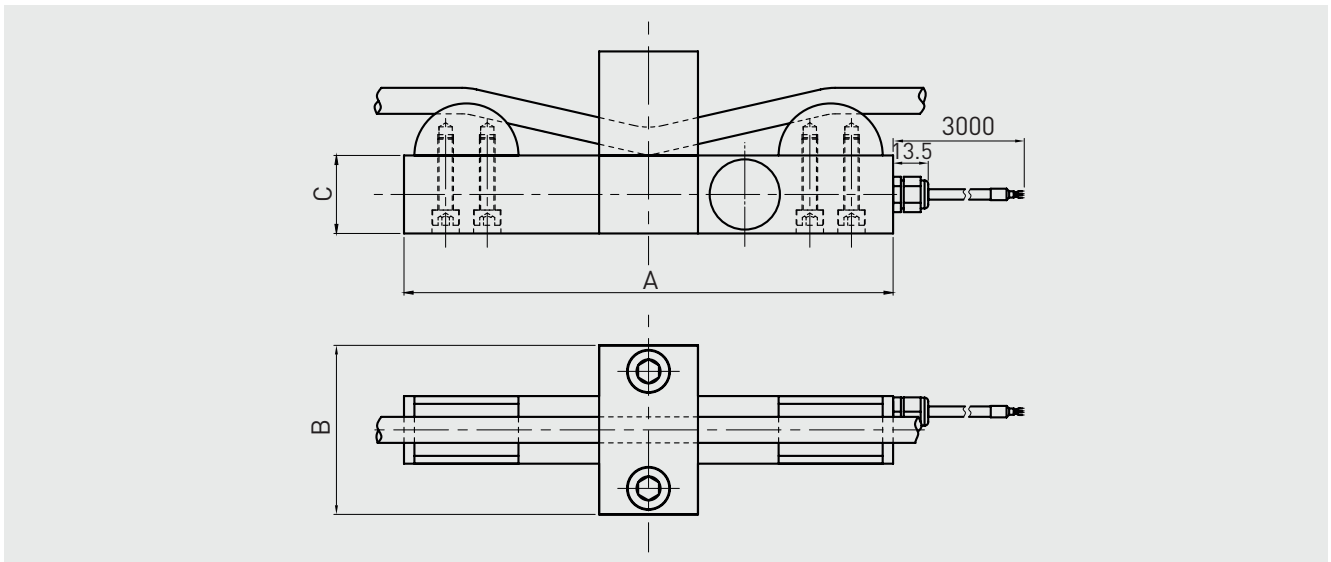
Technical data in accordance with VDI/VDE/DKD 2638

Model F9204	
Nominal load F_{nom} t	1 / 2 / 3,5 / 5 / 10 / 20 / 30-40
Relative linearity error d_{lin}	$\pm 3\% F_{nom}$
Relative repeatability error in unchanged mounting position b_{rg}	$\pm 0,5\% F_{nom}$
Relative reversibility v	$\pm 0,5\% F_{nom}$
Relative deviation of zero signal $d_{S,0}$	$\pm 2\% F_{nom}$
Relative creep, 30 min.	$\pm 0,05\% F_{nom}$
Temperature effect on zero signal TK_0	$\leq \pm 0,25\% / 10\text{ }^\circ\text{C}$
Temperature effect on characteristic value TK_C	$\leq \pm 0,25\% / 10\text{ }^\circ\text{C}$
Force limit F_L	$150\% F_{nom}$
Breaking force F_B	$200\% F_{nom}$
Material	Steel alloy
Rated temperature range $B_{T, nom}$	-10 ... +60 °C
Operating temperature range $B_{T, G}$	-20 ... +80 °C
Input resistance R_e	$780 \pm 10\ \Omega$
Output resistance R_a	$700 \pm 10\ \Omega$
Insulation resistance R_{is}	$\geq 5,000\ \text{M}\Omega / \text{DC } 50\ \text{V}$
Output signal (rated output) C_{nom}	4 ... 20 mA (DC 0...10 V optional)
Electrical connection	Cable $\varnothing 4 \times 3,000\ \text{mm}$
Rated range of excitation voltage $B_{U, nom}$	24 V
Supply voltage	DC 12 ... 36 V
Protection (acc. to IEC/EN 60529)	IP66
Nominal load - weight in kg	
■ 1 t	1.5 kg
■ 2 t	1.8 kg
■ 3.5 t	2.2 kg
■ 5 t	2.4 kg
■ 10 t	3.7 kg
■ 20 t	5.9 kg
■ 30-40 t	11.2 kg

Approvals

Logo	Description	Country
	EU declaration of conformity ■ EMC directive ■ RoHS directive	European Union
	EAC ■ EMC directive	Eurasian Economic Community

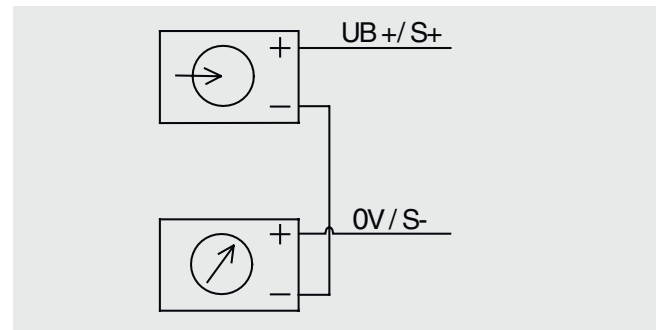
Dimensions in mm



Wire rope (tension) Nominal load in t	Capacity t	Dimensions in mm			
		Wire rope Ø	A	B	C
1	1	6 ... 14	164	60	28
2	1	10 ... 18	164	60	28
3.5	1.8	11 ... 14	188	65	30
		15 ... 17			
5	2.5	17 ... 19	182	68	34
		20 ... 22			
10	5	24 ... 36	200	80	40
20	10	24 ... 36	240	90	45
30 ... 40	15-20	34 ... 48	310	130	52

Pin assignment

Cable assignment	
Cable colour	2-wire
Red	UB+/S+
Black	0V/S-



Ordering information

Model / Nominal load / Relative linearity error / Temperature range / Output signal / Electrical connection / Approvals / Options

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