

## Clamp on sensor 0...1 t up to 0...40 t Model F9204

### Applications

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

### Special features

- Measurement 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



### Description

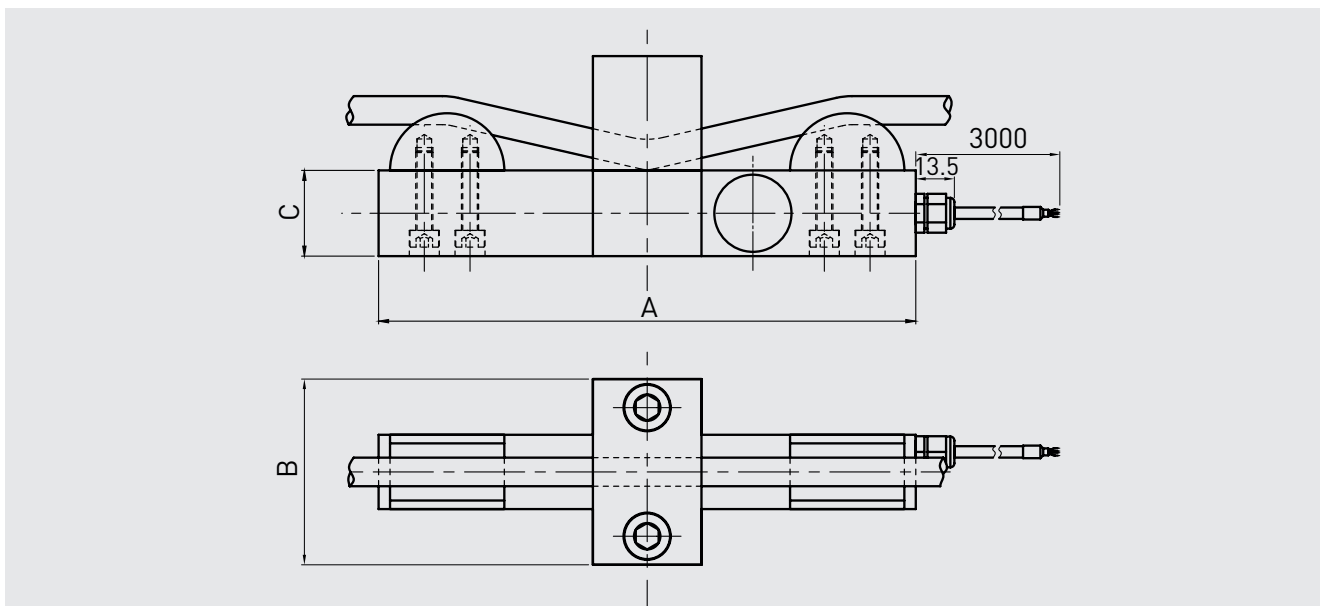
The clamp on sensor have been specially designed to measure the load on existing steel cables. The clamp on sensor is made of alloyed steel.

The mission of this clamp on sensor is simple, robust and cost-effectively monitors cable forces. This requires a cable anchor point, because the measurement is taken at the stationary rope. For this purpose, the sensor is clamped in a few steps to the assembled cable.

## Specifications in accordance with VDI/VDE/DKD 2638

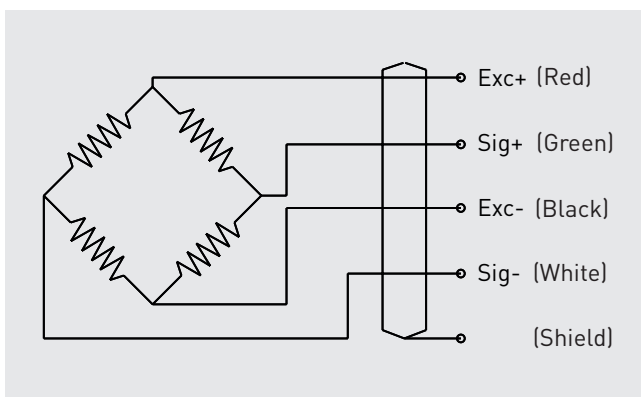
Model series	Symbol	Unit	F9204						
<b>Measurement range</b>									
Nominal load	$F_{nom}$	kg	1	2	3.5	5	10	20	30-40
<b>Accuracy and stability</b>									
Relative linearity error	$d_{lin}$	$\%F_{nom}$	$\leq \pm 0.5$						
Relative reversibility	$v$	$\%F_{nom}$	0.5						
Relative repeatability error in unchanged mounting position	$b_{rg}$	$\%F_{nom}$	0.5						
Relative deviation of zero signal	$d_{s,0}$	$\%F_{nom}$	$\pm 2$						
Relative creep, 30 at min.		$\%F_{nom}$	0.05						
Temperature effect on zero signal	$TK_0$	$\%/10\text{ }^\circ\text{C}$	$\leq \pm 0.25$						
Temperature effect on characteristic value	$TK_C$	$\%/10\text{ }^\circ\text{C}$	$\leq \pm 0.25$						
<b>Mechanical characteristics</b>									
Force limit	$F_L$	$\%F_{nom}$	150						
Breaking force	$F_B$	$\%F_{nom}$	200						
Material			Steel alloy						
<b>Temperature ranges</b>									
Rated temperature range	$B_{T,nom}$	$^\circ\text{C}$	-10...60						
Operating temperature range	$B_{T,G}$	$^\circ\text{C}$	-20...80						
<b>Electrical characteristics</b>									
Output signal (rated output)	$C_{nom}$	mA	4...20 (DC 0...10 V optional)						
Input resistance	$R_e$	$\Omega$	$780 \pm 10$						
Output resistance	$R_a$	$\Omega$	$700 \pm 10$						
Insulation resistance	$R_{is}$	M $\Omega$	$\pm 5,000/\text{DC } 50\text{ V}$						
Excitation voltage		V	24						
Supply voltage		V	DC 12...36						
Electrical connection			Cable $\varnothing 4 \times 3,000\text{ mm}$						
<b>General data</b>									
Protection (acc. to EN/IEC 60529)			IP66						
Weight		kg	1.5	1.8	2.2	2.4	3.7	5.9	11.2

## 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	10-18	188	65	30
5	2.5	16-24	182	68	34
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



### Electrical connection

Excitation voltage (+)	Red
Excitation voltage (-)	Black
Signal (+)	Green
Signal (-)	White
Screen	Screen

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