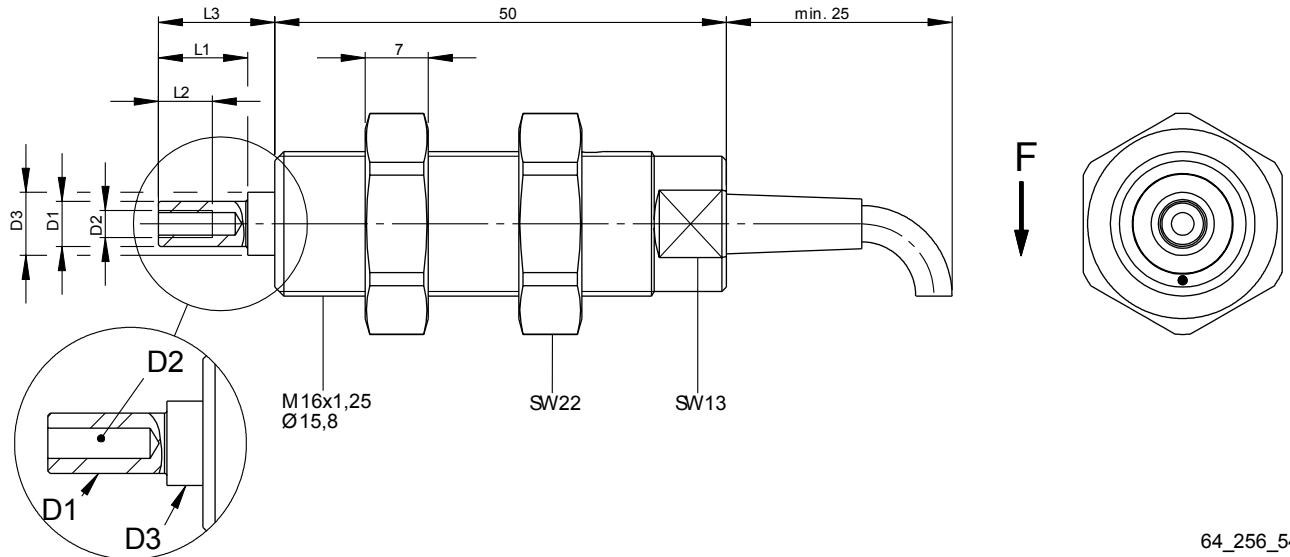


# RFS<sup>®</sup> 100

## Radial force measuring axle

### Scale drawing



64\_256\_546

All dimensions in mm

### Rated measuring ranges

Nominal force [N]							Bearing journal $\varnothing$ [mm]		
1	2	5	10	20	30	40	5	8	10
50	60	100						8	10

### Dimensions

Bearing journal $\varnothing$ [mm]	Dimensions [mm]				
	D1 <sup>-0,06 -0,01</sup>	L1 <sup>+0,02 0</sup>	D2	L2	D3
5	9,9	M3	6	7	12,9
8	11,9	M4	6	10	15,9
10	15,9	M5	8	11	20,9

Non-standard dimensions and execution upon request.

### Order code

RFS <sup>®</sup> 100 - 50 - 10 - 3 - O	
Sensor type	
Nominal force [N]	
Bearing journal $\varnothing$ [mm]	
Cable length [m]	Standard: 3m Option: required length
Cable connection	Standard: O (open ends) Option: S (connector)

### Scope of supply

Sensor with connection cable

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## Radial force measuring axle

### Technical data

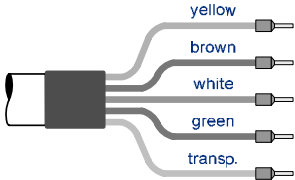
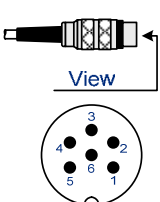
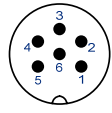
Rated measuring ranges ( $F_N$ )	<b>N</b>	0 - 1 to 0 - 100
Measuring principle		full strain gauge bridge
Rated output	<b>mV/V</b>	1,0
Rated output tolerance	<b>%</b>	$< \pm 0,2$
Accuracy class		0,1
Excitation voltage max.	<b>V</b>	12
Reference excitation voltage	<b>V</b>	10
Input resistance	<b><math>\Omega</math></b>	$350 \pm 3$
Output resistance	<b><math>\Omega</math></b>	$350 \pm 1$
Isolation resistance	<b>G<math>\Omega</math></b>	$> 10$
Rated temperature range	<b><math>^{\circ}\text{C}</math></b>	5 to 50, option: -10 to 70
Operational temperature range		
- sensor	<b><math>^{\circ}\text{C}</math></b>	-10 to 70
- connection cable	<b><math>^{\circ}\text{C}</math></b>	-30 to 80
Storage temperature range	<b><math>^{\circ}\text{C}</math></b>	-30 to 70
Reference temperature	<b><math>^{\circ}\text{C}</math></b>	23
Temperature influence per 10 K		
- on the zero point	<b>% <math>F_N</math></b>	$< \pm 0,1$
- on the calibration	<b>% <math>F_N</math></b>	$< \pm 0,15$
Creep after 30 minutes	<b>% <math>F_N</math></b>	$< \pm 0,05$
Linear output signal up to	<b>% <math>F_N</math></b>	approx. 125
Mech. overload protection takes effect at	<b>% <math>F_N</math></b>	approx. 140
Overload protected <sup>1</sup>	<b>% <math>F_N</math></b>	400 - 800 (depending on nominal force)
Ultimate side load	<b>% <math>F_N</math></b>	200
Typ. deflection at nominal force	<b>mm</b>	$0,04 \pm 20 \%$
Typ. natural frequency of the sensor	<b>kHz</b>	1 - 3, (depending on nominal force)
Weight	<b>g</b>	approx. 400
Connection cable		3m long, flexible, shielded 4 x 0,14mm <sup>2</sup> , total $\varnothing$ 4,5 mm
Sensor housing		stainless steel
Protection class		IP 50

<sup>1</sup> radial incoming force without additional bending or tilting moment

# RFS<sup>®</sup> 100

## Radial force measuring axle

### Connections

Standard: Connection type „O“		Option: Connection type „S“																
	<table border="1"> <tr><td>+ U<sub>Br</sub></td></tr> <tr><td>- U<sub>Br</sub></td></tr> </table>	+ U <sub>Br</sub>	- U <sub>Br</sub>	Excitation	 <p>View</p> 													
	+ U <sub>Br</sub>																	
	- U <sub>Br</sub>																	
	<table border="1"> <tr><td>+ U<sub>Sig</sub></td></tr> <tr><td>- U<sub>Sig</sub></td></tr> </table>	+ U <sub>Sig</sub>	- U <sub>Sig</sub>	Output														
	+ U <sub>Sig</sub>																	
- U <sub>Sig</sub>																		
Shield <i>(not connected to housing)</i>																		
		<table border="1"> <tr><td>1</td><td>+ U<sub>Br</sub></td><td rowspan="2">Excitation</td></tr> <tr><td>2</td><td>- U<sub>Br</sub></td></tr> <tr><td>3</td><td colspan="2">Shield <i>(not connected to housing)</i></td></tr> <tr><td>4</td><td>+ U<sub>Sig</sub></td><td rowspan="2">Output</td></tr> <tr><td>5</td><td>- U<sub>Sig</sub></td></tr> <tr><td>6</td><td colspan="2">Reserved</td></tr> </table>	1	+ U <sub>Br</sub>	Excitation	2	- U <sub>Br</sub>	3	Shield <i>(not connected to housing)</i>		4	+ U <sub>Sig</sub>	Output	5	- U <sub>Sig</sub>	6	Reserved	
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		6/184003																

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