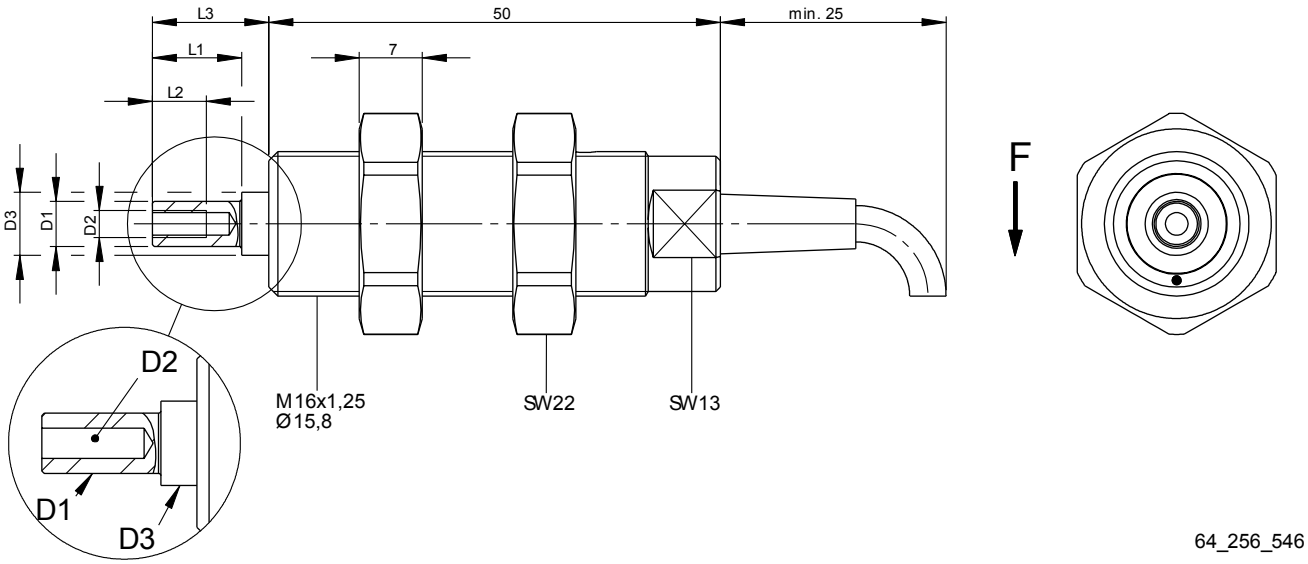
RFS® 100
Radial force measuring axle

Scale drawing



All dimensions in mm

Rated measuring ranges

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

Dimensions

Bearing journal ∅ [mm]	Dimensions [mm]				
D1 $^{-0,06}_{-0,01}$	L1 $^{+0,02}_{0}$	D2	L2	D3	L3
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® 100	- 50	- 10	- 3	- O
Sensor type					
Nominal force [N]					
Bearing journal ∅ [mm]					
Cable length [m]	Standard: **3**m Option: required length				
Cable connection	Standard: **O** (open ends) Option: **S** (connector)				

Scope of supply

Sensor with connection cable

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Technical data

Rated measuring ranges (F_N)	**N**	0 - 1 to 0 - 100
Measuring principle		full strain gauge bridge
Rated output	**mV/V**	1,0
Rated output tolerance	**%**	< ± 0,2
Accuracy class		0,1
Excitation voltage max.	**V**	12
Reference excitation voltage	**V**	10
Input resistance	**Ω**	350 ± 3
Output resistance	**Ω**	350 ± 1
Isolation resistance	**GΩ**	> 10
Rated temperature range	**°C**	5 to 50, option: -10 to 70
Operational temperature range		
- sensor	**°C**	-10 to 70
- connection cable	**°C**	-30 to 80
Storage temperature range	**°C**	-30 to 70
Reference temperature	**°C**	23
Temperature influence per 10 K		
- on the zero point	**% F_N**	< ± 0,1
- on the calibration	**% F_N**	< ± 0,15
Creep after 30 minutes	**% F_N**	< ± 0,05
Linear output signal up to	**% F_N**	approx. 125
Mech. overload protection takes effect at	**% F_N**	approx. 140
Overload protected [1]	**% F_N**	400 - 800 (depending on nominal force)
Ultimate side load	**% F_N**	200
Typ. deflection at nominal force	**mm**	0,04 ± 20 %
Typ. natural frequency of the sensor	**kHz**	1 - 3, (depending on nominal force)
Weight	**g**	approx. 400
Connection cable		3m long, flexible, shielded 4 x 0,14mm², total ∅ 4,5 mm
Sensor housing		stainless steel
Protection class		IP 50

[1] radial incoming force without additional bending or tilting moment

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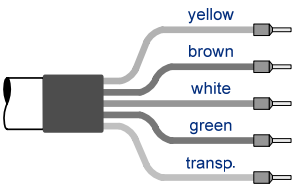
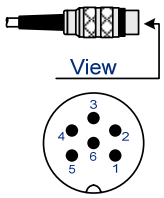
Connections

Standard: Connection type „O“



+ U_{Br}	Excitation
- U_{Br}	
+ U_{Sig}	Output
- U_{Sig}	
Shield *(not connected to housing)*	

Option: Connection type „S“



1	+ U_{Br}	Excitation
2	- U_{Br}	
3	Shield *(not connected to housing)*	
4	+ U_{Sig}	Output
5	- U_{Sig}	
6	Reserved	

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