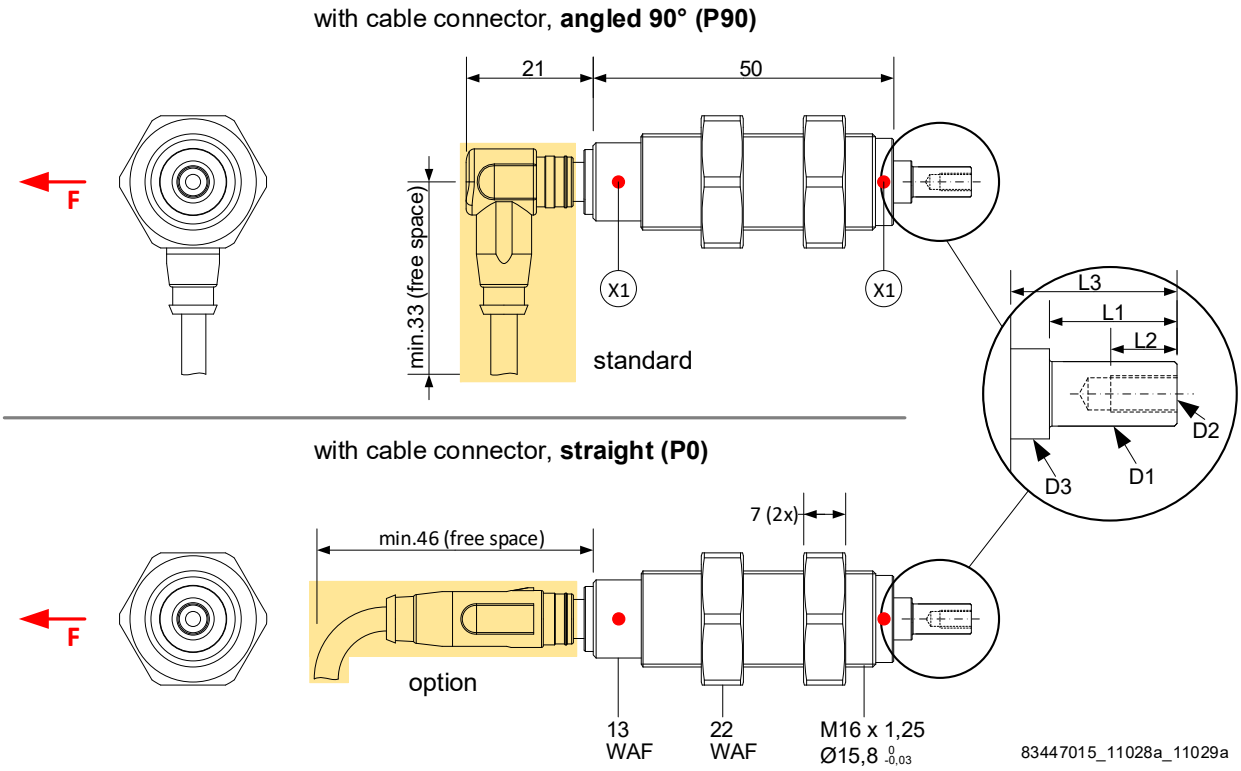
RFS® 100
Radial force measuring axle

Honigmann

Scale drawing



All dimensions in mm
WAF: width across flats
X1: red mark indicates the position of the measuring axis, parallel to the spanner flats WAF13

Rated measuring ranges

Nominal force [N]							Axle journal Ø [mm]		
2*	3*	4*					5	8	10
5*	10	20	30	40			5	8	10
50	60	100**						8	10

The measuring range of the sensor begins at force's zero point.
Nominal forces differing from the list are available.
SR (**S**tandard **R**ange) * Special type LR (**L**ow **R**ange) ** Special type HR (**H**igh **R**ange)

Dimensions

Axle journal Ø					
D1 -0,006 -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

All dimensions in mm
Non-standard dimensions and execution upon request

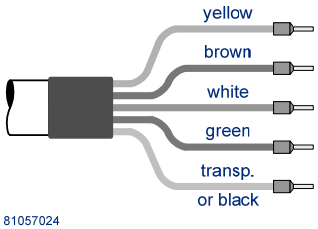
Technical Data

Rated measuring ranges (FN)	**N**	0 - 2 to 0 - 100
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	**°C**	-10 to 70
Storage temperature range	**°C**	-30 to 70
Reference temperature	**°C**	23
Temperature influence per 10 K		
- on the zero point (TK0)	**% F_N**	< ± 0,1
- on the calibration (TKC)	**% 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 to 800 (depending on nominal force)
Ultimate side load	**% F_N**	200
Deflection at nominal force	**mm**	0,04 ± 20%
Typ. natural frequency of the sensor	**kHz**	1 ... 3 (depending on nominal force)
Weight	**g**	approx. 70
Protection class		IP 50
Sensor housing and nuts		stainless steel
electrical connection sensor side		plug, snap-on type ∅ 8mm, 4-pole, gold-plated contacts
Connection cable		3m long, flexible, shielded 4 x 0,14mm², total ∅ 4,5 mm

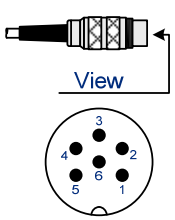
(#1) radial incoming force without additional bending or tilting moment

Terminal assignment cable end

O: open ends (Standard) — **S:** cable plug instead of open ends (Option)



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



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

Order code

	RFS 100	- 50	- 10	- P90	- 3	- O
Sensor type						
Nominal force [N]						
Axle journal Ø D1 [mm]						
Cable connector	Standard: **P90** (angled 90°) Option: **P0** (straight 0°)					
Cable length [m]	Standard: **3**m Option: **5**m or **10**m					
Cable end	Standard: **O** (open ends) Option: **S** (cable connector)					

Scope of supply

- sensor with connection cable
- protection cap

Accessories

The following accessories are available:

- axle journal adapter (custom-specific)
- winding protection
- clamping flange for flange mounting

Options / Special versions

- extended rated temperature range -10 to 70°C
- cylindrical sensor housing (without outside thread)
- custom-specific sensor housing
- vacuum design
- vustom-specific axle journal
- special nominal force, differing from standard
- further enhanced natural frequency (HF)
  increase in the already very high natural frequency for special high-speed applications

Honigmann Industrielle Elektronik GmbH • In den Weiden 20 • D-58285 Gevelsberg • ☎ +49-2332-55115-0 • 🖷 +49-2332-55115-99