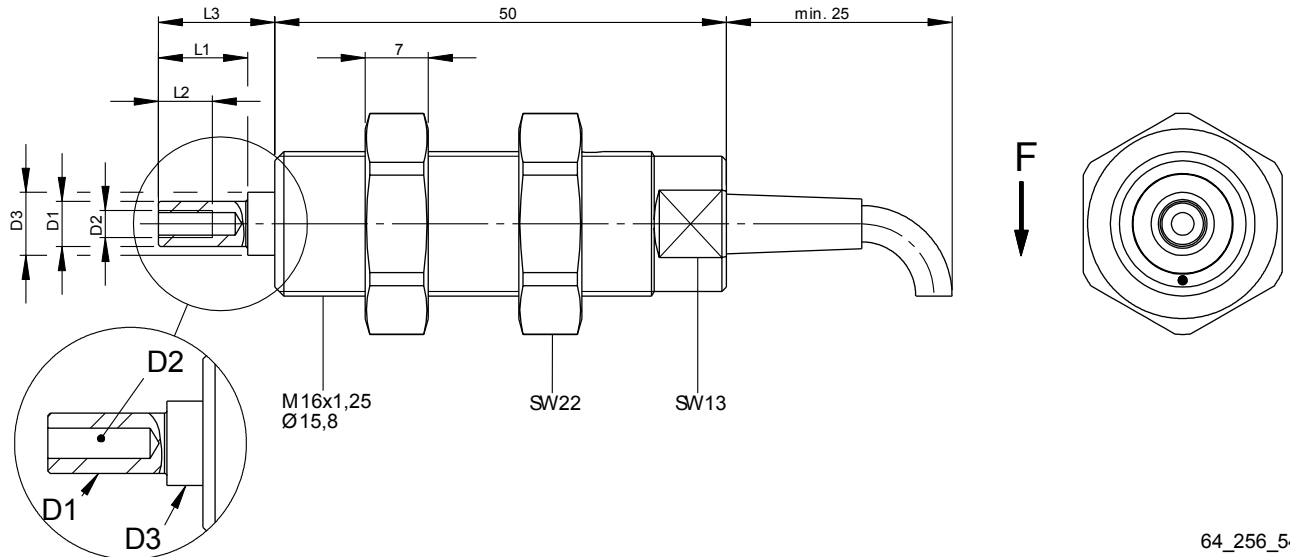


RFS[®] 100

Radial force measuring axle

Scale drawing



64_256_546

All dimensions in mm

Rated measuring ranges

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

Dimensions

| Bearing journal Ø [mm] | Dimensions [mm] | | | | |
|------------------------|-------------------------------|---------------------------|----|----|------|
| | D1 ^{-0,06 -0,01} | L1 ^{+0,02 0} | 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 [®] 100 - 50 - 10 - 3 - O | |
|--|--|
| Sensor type | |
| Nominal force [N] | |
| Bearing journal Ø [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

RFS[®] 100

Radial force measuring axle

Technical data

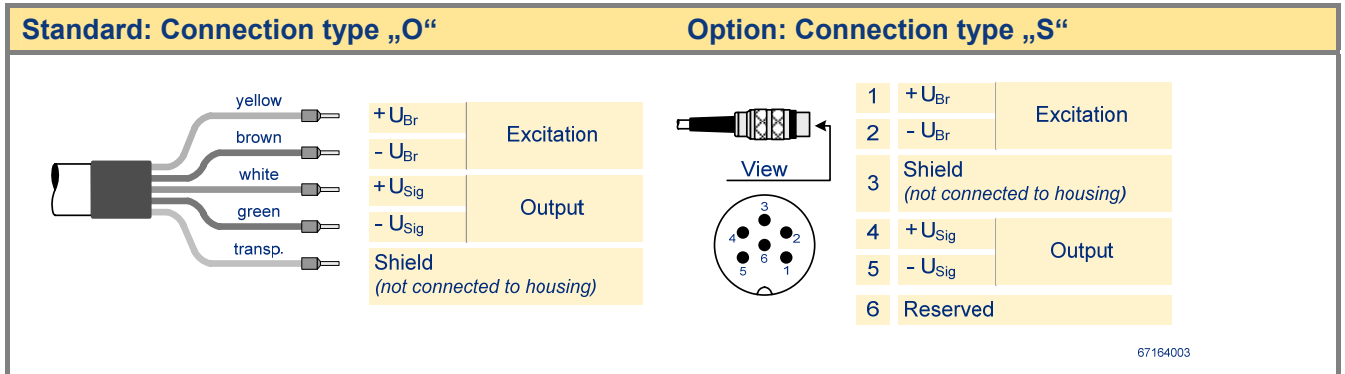
| | | |
|---|--------------------------------------|---|
| Rated measuring ranges (F_N) | N | 0 - 1 to 0 - 100 |
| Measuring principle | | full strain gauge bridge |
| Rated output | mV/V | 1,0 |
| Rated output tolerance | % | $< \pm 0,2$ |
| Accuracy class | | 0,1 |
| Excitation voltage max. | V | 12 |
| Reference excitation voltage | V | 10 |
| Input resistance | Ω | 350 ± 3 |
| Output resistance | Ω | 350 ± 1 |
| Isolation resistance | GΩ | > 10 |
| Rated temperature range | $^{\circ}\text{C}$ | 5 to 50, option: -10 to 70 |
| Operational temperature range | | |
| - sensor | $^{\circ}\text{C}$ | -10 to 70 |
| - connection cable | $^{\circ}\text{C}$ | -30 to 80 |
| Storage temperature range | $^{\circ}\text{C}$ | -30 to 70 |
| Reference temperature | $^{\circ}\text{C}$ | 23 |
| Temperature influence per 10 K | | |
| - on the zero point | % F_N | $< \pm 0,1$ |
| - on the calibration | % F_N | $< \pm 0,15$ |
| Creep after 30 minutes | % F_N | $< \pm 0,05$ |
| 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 | $0,04 \pm 20 \%$ |
| 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 0,14mm ² , total \varnothing 4,5 mm |
| Sensor housing | | stainless steel |
| Protection class | | IP 50 |

¹ radial incoming force without additional bending or tilting moment

RFS[®] 100

Radial force measuring axle

Connections



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