

Torque sensor TS70 2Nm

Item number: 3101

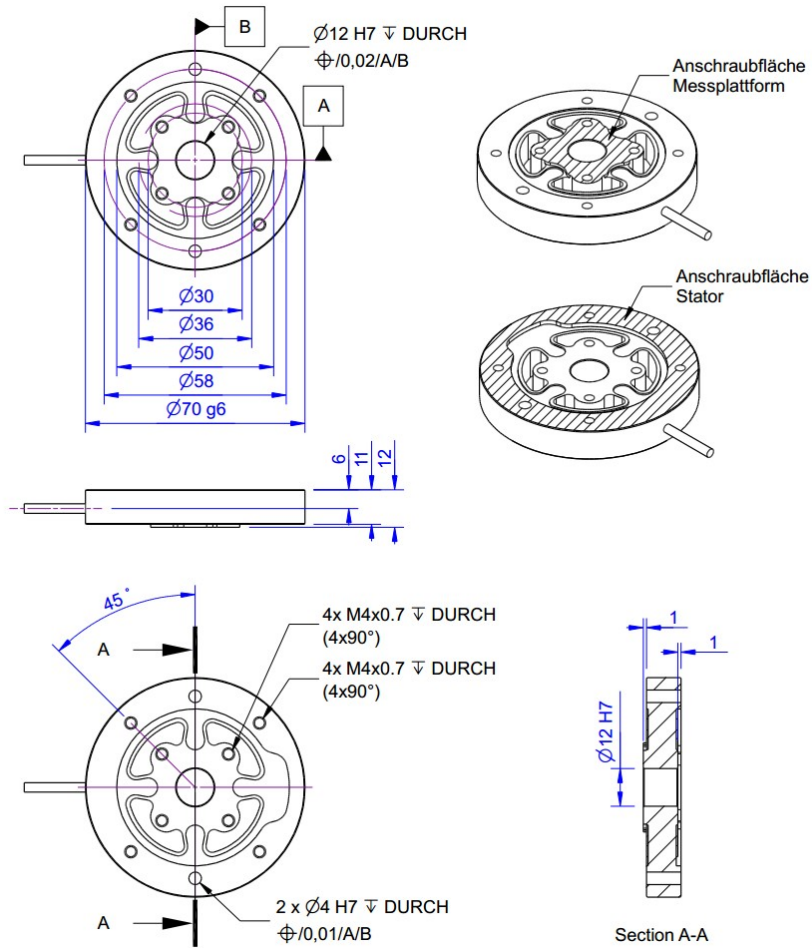


Highlights

- Drive held exclusively by the sensor
- Measurement of the reaction torque

The torque sensor consists of an outer flange and an inner flange which are connected by 4 shear beams. Outer and inner flange have 4 threads M4 each for torque introduction. The sensor is suitable for measurement of reaction moment in drives and teststands.

Technical Drawing



Technical Data

| Basic Data | | Unit |
|---------------------------------|----------------|------|
| Type | Scherbalken | |
| Rated torque | 2 | Nm |
| Bending moment limit | 2 | Nm |
| Maximum operating torque | 150 | %FS |
| Breaking torque | 400 | %FS |
| Rated torsion angle | 0.02 | °/FS |
| Axial force limit | 100 | N |
| Lateral force limit | 100 | N |
| Torque introduction | pitch circle | |
| Dimension (torque introduction) | Ø30 | |
| sensor fastening | pitch circle | |
| Dimension 2 | Ø58 | |
| Diameter | 70 | mm |
| length | 10 | mm |
| Material | aluminum-alloy | |
| Dimensions | Ø 70mm x 10mm | |
| Variants | 2Nm... 10Nm | |

| Electrical Data | | Unit |
|--|------|-----------|
| Input resistance | 2000 | Ohm |
| Tolerance input resistance | 20 | Ohm |
| Output resistance | 2000 | Ohm |
| Tolerance output resistance | 20 | Ohm |
| Insulation resistance | 5 | GOhm |
| Rated range of excitation voltage from | 2.5 | V |
| Rated range of excitation voltage to | 5 | V |
| Operating range of excitation voltage from | 1 | V |
| Operating range of excitation voltage to | 10 | V |
| Zero signal | 0.05 | mV/V |
| Rated output | 0.5 | mV/V / FS |
| Characteristic value range from | 0.3 | mV/V / FS |
| Characteristic value range to | 0.5 | mV/V / FS |

| Accuracy Data | | Unit |
|--|------|-------|
| Accuracy class | 0,1 | |
| Relative linearity error | 0.1 | %FS |
| Relative zero signal hysteresis | 0.1 | %FS |
| Temperature effect on zero signal | 0.01 | %FS/K |
| Temperature effect on characteristic value | 0.01 | %RD/K |
| Relative creep | 0.05 | %FS |

| Environmental Data | | Unit |
|----------------------------------|------|------|
| Rated temperature range from | -10 | °C |
| Rated temperature range to | 60 | °C |
| Operating temperature range from | -10 | °C |
| Operating temperature range to | 85 | °C |
| Storage temperature range from | -10 | °C |
| Storage temperature range to | 85 | °C |
| Environmental protection | IP65 | |

Abbreviation : RD: „Reading“; FS: „Full Scale“;1) The exact nominal sensitivity is indicated in the test report.

Pin Assignment

| Channel | Symbol | Description | Wire color | PIN |
|---------|--------|------------------------|------------|-----|
| | +Us | positive bridge supply | red | |
| | -Us | negative bridge supply | black | |
| | +Ud | positive bridge output | green | |
| | -Ud | negative bridge output | white | |

Pressure load: positive output signal.Shield- transparent.