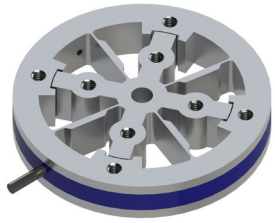
# Torque sensor TD70 25mNm

Item number: 3133



## Highlights

- By using distance pieces the torque sensor is also isolated thermically from the traction unit
- Through the integrated mechanical stopper overload is prevented.

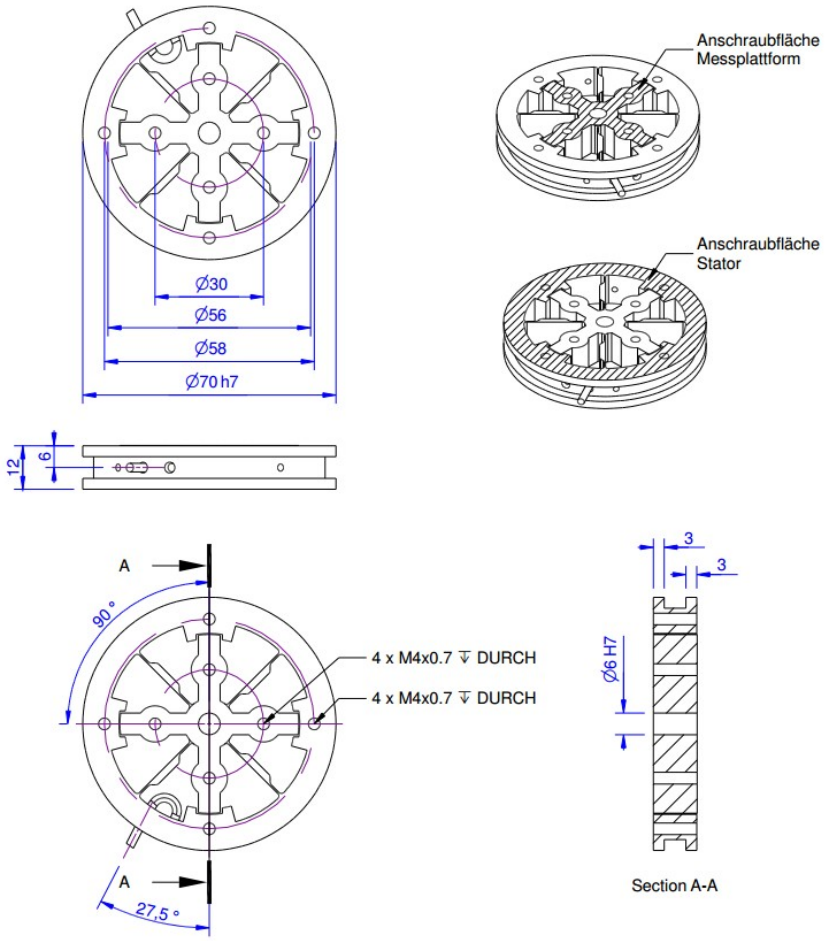
The torque sensor consists of an outer flange and an inner flange which are connected by 4 s-shaped spiral springs. Outer and inner flange have 4 threads M4 each for torque introduction.
The sensor is suitable for measurement of reaction moment e.g. in the clock industry, in wind tunnel weighersor for measurement of frictional forces.
Through the integrated mechanical stopper overload is prevented.
It is recommended to insert distance pieces as shown in the assembly drawing. These can be shock absorbers with M4 threads.
By using distance pieces the torque sensor is also isolated thermically from the traction unit.

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## Technical Drawing




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## Technical Data

| Basic Data | | Unit |
|---|---|---|
| Type | Biegefeder | |
| Rated torque | 25 | mNm |
| Bending moment limit | 5 | Nm |
| Maximum operating torque | 150 | %FS |
| Breaking torque | 400 | %FS |
| Rated torsion angle | 0.7 | °/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 |
| Dimensions | Ø 70mm x 10mm | |

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| Electrical Data | | Unit |
|---|---|---|
| Input resistance | 350 | Ohm |
| Tolerance input resistance | 10 | Ohm |
| Output resistance | 350 | Ohm |
| Tolerance output resistance | 10 | 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 | 0.4 | mV/V / FS |
| Characteristic value range from | 0.2 | mV/V / FS |
| Characteristic value range to | 0.6 | mV/V / FS |

| Accuracy Data | | Unit |
|---|---|---|
| Accuracy class | 0,2 | |
| Relative linearity error | 0.1 | %FS |
| Relative zero signal hysteresis | 0.1 | %FS |
| Temperature effect on zero signal | 0.05 | %FS/K |
| Temperature effect on characteristic value | 0.02 | %RD/K |
| Relative creep | 0.05 | %FS |

| Environmental Data | Unit |
|---|---|

Abbreviation : RD: „Reading“; FS: „Full Scale“;
The characteristic value is indicated in the test report;

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## 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.

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