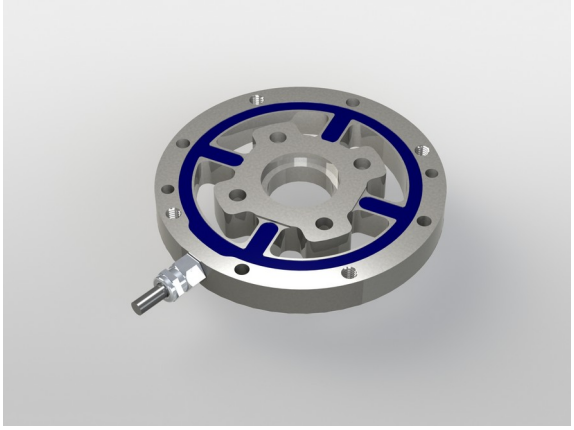
Torque sensor TS110a 20Nm

Item number: 6485



Highlights

- Available in aluminum and spring steel
- From a nominal torque of 100Nm, the inner flange is provided with a blasted surface

The TS110a torque sensor is suitable for measuring the reaction torque (cable-connected, non-rotating).
The torque sensor consists of an outer flange and an inner flange, which are connected to each other via 4 measuring spokes.

The outer flange has 4 M6 threaded holes, the inner flange is equipped with 4 flat countersunk holes for M6 DIN912 screws.

The TS110a torque sensor is used both in torque test benches for quality assurance and in production machines.

The sensor is available in aluminum (20Nm ... 100 Nm) and in spring steel (50 ... 200 Nm).
As the torque is transmitted exclusively via frictional connection, the inner flange must be mounted with sufficient static friction from a torque of 100 Nm.
The use of a (detachable) joint, e.g. Loxeal-8521 or Loctite 630, is recommended.
From a nominal torque of 100Nm, the inner flange is provided with a blasted surface.

Translated with DeepL.com (free version)

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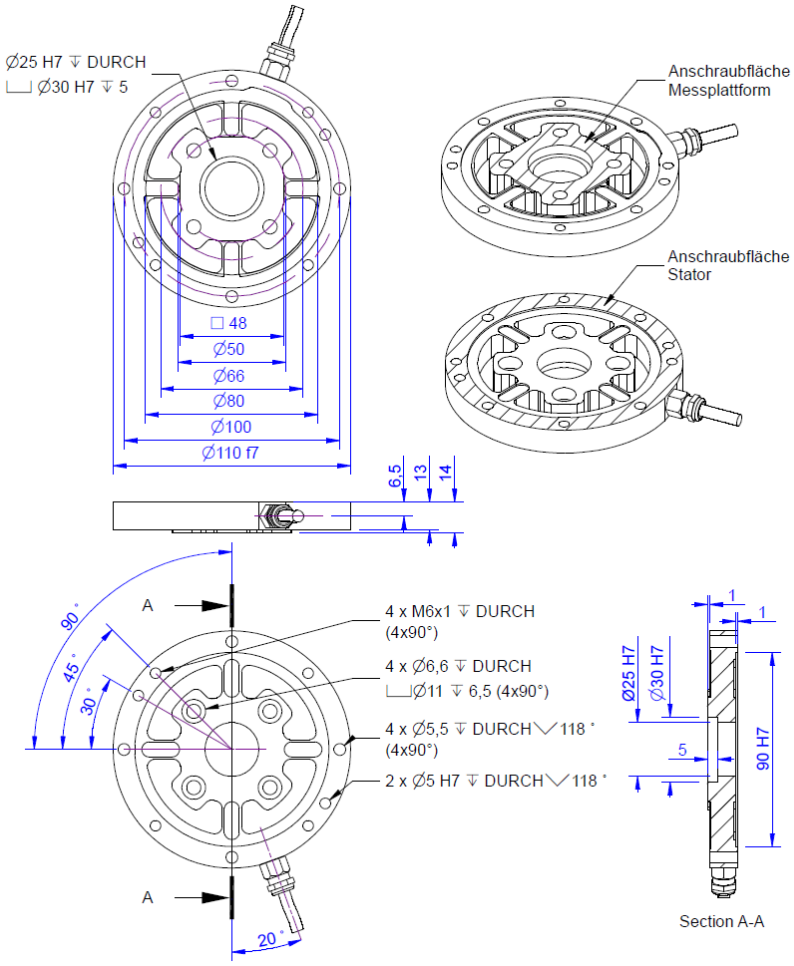
Stand: 02.06.2026

Technical Drawing



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Technical Data

Basic Data		Unit
Type	Scherbalken	
Rated torque	20	Nm
Bending moment limit	20	Nm
Maximum operating torque	150	%FS
Breaking torque	400	%FS
Rated torsion angle	0.02	°/FS
Axial force limit	1000	N
Lateral force limit	1000	N
Torque introduction	pitch circle	
Dimension (torque introduction)	Ø50	
sensor fastening	pitch circle	
Dimension 2	Ø100	
Diameter	110	mm
length	14	mm
Material	alluminum-alloy	
Dimensions	Ø 110mm x 14mm	
Variants	20Nm... 200Nm	

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Electrical Data		Unit
Input resistance	2000	Ohm
Tolerance input resistance	10	Ohm
Output resistance	2000	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	1	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

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

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Pin Assignment

Channel	Symbol	Description	Wire color	PIN
	+Us	positive bridge supply	brown	
	-Us	negative bridge supply	white	
	+Ud	positive bridge output	green	
	-Ud	negative bridge output	yellow	

Pressure load: positive output signal.
Shield- transparent.

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