

Precision Flanged Torque Sensor

Rotary, non-contact

MODEL 8675 **NEW**



Highlights

- Measuring ranges from 0 ... 100 N·m up to 0 ... 5000 N·m
- Low non-linearity ≤ 0.1 % F.S.
- Attractively priced
- Complete system, consisting of rotor and stator
- Flange connection with DIN hole pattern
- Space-saving extremely short design
- Analog output: ± 10 V
- Frequency output (RS 422)
- Configurable via USB
- High limit axial load

Applications

- Mechanical and plant engineering
- End-of-line monitoring
- Quality monitoring for electric motors and gearboxes
- Test bench construction
- Research and development



Rotor with stator



Contactless data transmission



Rotor



Contactless data transmission

Product description

Torque is measured via the torsion of the rotor using strain gages. Transmission is optically and fully contactless. As there is no bearing, the sensor is maintenance free. Signals are digitized directly on the shaft and made available via the stator as a voltage signal, frequency (RS 422) or USB. The direction of rotation is indicated by the polarity of the output voltage: clockwise produces a positive output voltage, anticlockwise negative.

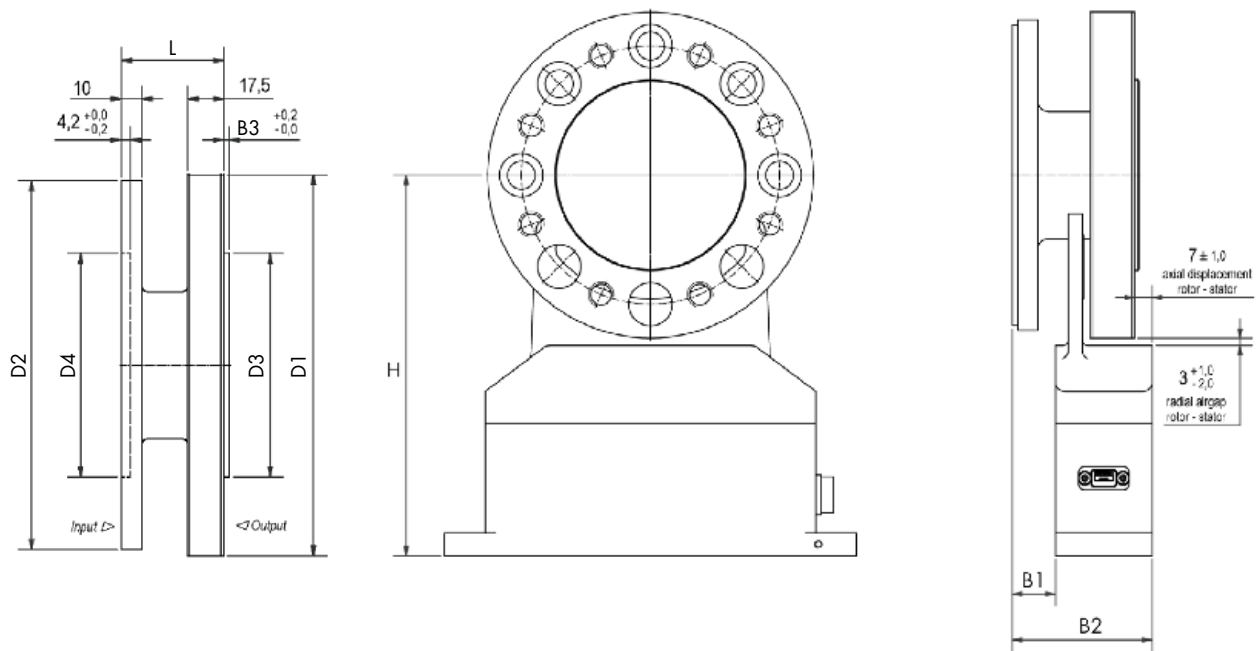
Thanks to its ringless design and extremely compact dimensions, the sensor is easy to integrate. The flange dimensions conform to the DIN standard and are compatible with existing systems.

The rotor characteristics are automatically transmitted to the stator. This means that the rotor can be replaced quickly and easily if necessary.

Technical data

8675	–	5100	5200	5500	6001	6002	6003	6005
Measuring range calibrated in N·m from 0 ...	[N·m]	100	200	500	1000	2000	3000	5000
Accuracy								
Relative non-linearity, including hysteresis		±0.1 % F.S. (optional ±0.1 % F.S.)						
Characteristic value tolerance		±0.1 % F.S.						
Temperature effect on zero		±0.2 % F.S./10 K						
Temperature effect on characteristic value		±0.2 % F.S./10 K						
Electrical values								
Supply voltage		12 ... 26 V DC						
DC power consumption		< 12 W						
Output signals (configurable)		Frequency output (RS-422): 60±20 kHz Analog output: 0 - 5 V, 0 - 10 V, ±5 V, ±10 V						
Ambient conditions								
Rated temperature range rotor/stator		+10 °C ... +80 °C						
Operating temperature range rotor/stator		-20 °C ... +85 °C						
Mechanical values								
Max. operating torque		300 % of rated torque						
Breaking torque		600 % of rated torque						
Max. axial load	[kN]	13	17	26	46	57	89	
Max. radial load	[kN]	3	4	7	11	15	23	
Max. speed	[min ⁻¹]	21000			20000	16000		15000
Spring constant	[kN.m/rad]	152	266	647	1461	1988	3894	
Moment of inertia rotor	[kg*m²]	0.0017			0.0034	0.0085		0.0189
Installation								
Radial distance rotor/stator	[mm]	3 (+1/-2)						
Axial distance rotor/stator	[mm]	7 (±1)						
Miscellaneous								
Weight rotor	[kg]	1.0	1.2	1.6	1.7	2.9		4.5
Weight stator	[kg]	1.0						

Dimensional drawing



8675	-	5100	5200	5500	6001	6002	6003	6005
Measuring range from 0 ...		100	200	500	1000	2000	3000	5000
Geometry								
D1	[mm]	107		128		158		181
D2	[mm]	101		122		152		187
D3	[mm]	57 g5		75 g5		90 g5		110 g5
D4	[mm]	57 H6		75 H6		90 h6		110 H6
H	[mm]	139		149.5		164.5		179
W1	[mm]	14		17		18		19
W2	[mm]	33		55		56		38
W3	[mm]		2			2.5		2.8
Hole circle Ø	[mm]	84		101.5		130		155.5
L	[mm]	45		48		49		50
Balance quality grades ISO 1940		2.5						

For detailed dimensional specifications, please refer to the CAD data and separate technical drawings of the sensor on our website www.burster.de

Accessories

Order code		
9900-K705		Connecting cable, one end open, length 5 meters
9900-K710		Connecting cable, one end open, length 10 meters
9900-K715		Connecting cable, one end open, length 15 meters

Calibration

Test and calibration log		
Is supplied with the sensor		With details of the zero point, full-scale output and shunt calibration.
Standard factory calibration certificate for torque sensors or measurement chains (WKS)		
Optionally available		Calibration of the clockwise and/or anticlockwise torque in steps of 20 % of the measuring range, rising and falling.
Special factory calibration certificate for torque sensors or measurement chains (WKS)		
On request		We are happy to calibrate sensors and measurement chains to the customer's specification.
Calibration certificate with accreditation symbol for 8675 torque sensor		
Optionally available		Calibration is based on the accreditation of calibration laboratory D-K-15141-01-00, for the scope of parameters listed in the annex to the accreditation certificate. Traceability to national standards and wide international recognition is therefore assured (DAkkS is a signatory to the EA, ILAC and IAF Multilateral Recognition Arrangements). Calibration services not covered by the D-K-15141 calibration laboratory may be carried out by an external laboratory that has DAkkS accreditation for the required scope of services.

Order code

Measuring range					Code				
0 ... 100 N·m					5	1	0	0	
0 ... 200 N·m					5	2	0	0	
0 ... 500 N·m					5	5	0	0	
0 ... 1000 N·m					6	0	0	1	
0 ... 2000 N·m					6	0	0	2	
0 ... 3000 N·m					6	0	0	3	
0 ... 5000 N·m					6	0	0	5	