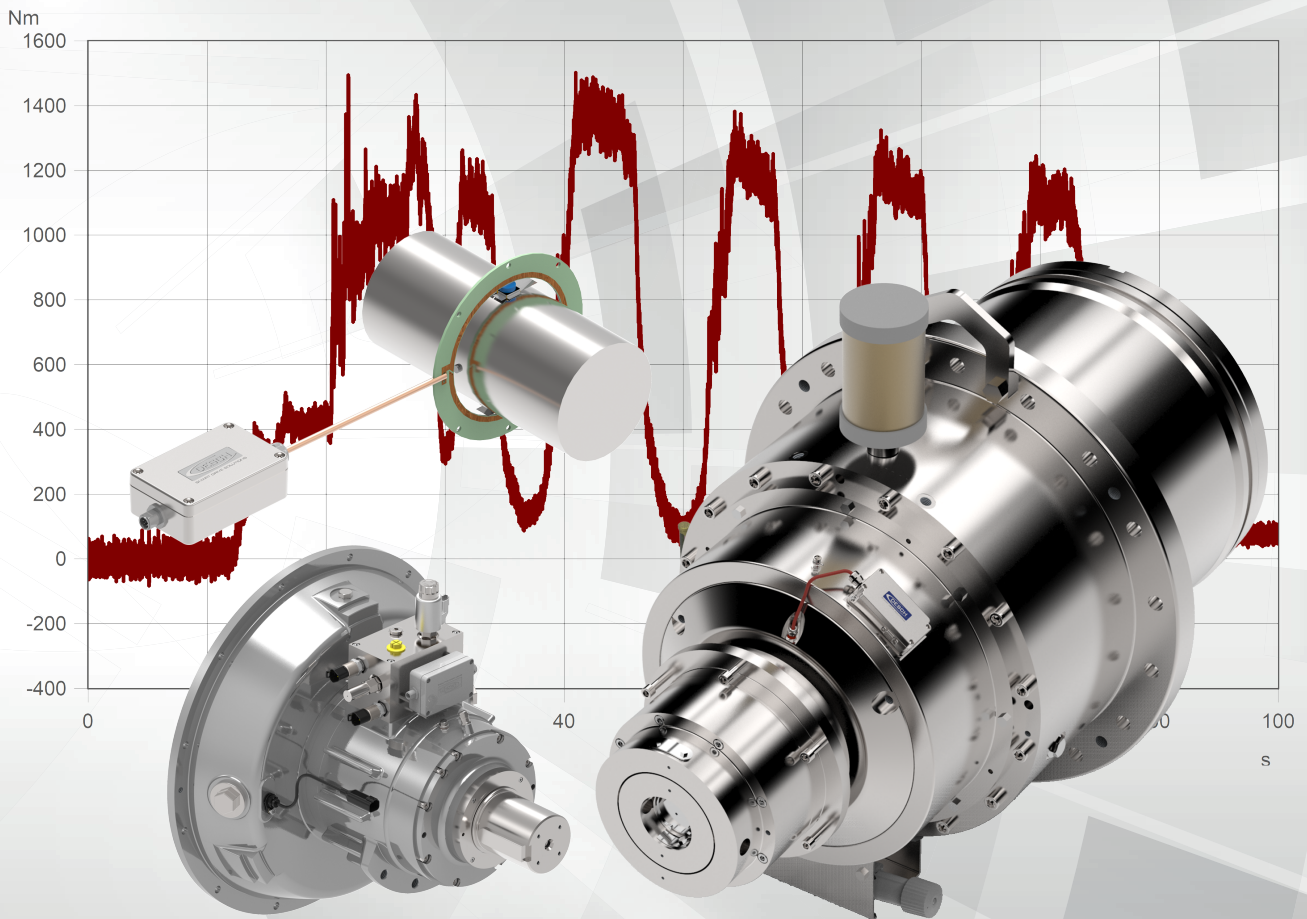


DESCHtorque Torque Measuring System



DESCHtorque



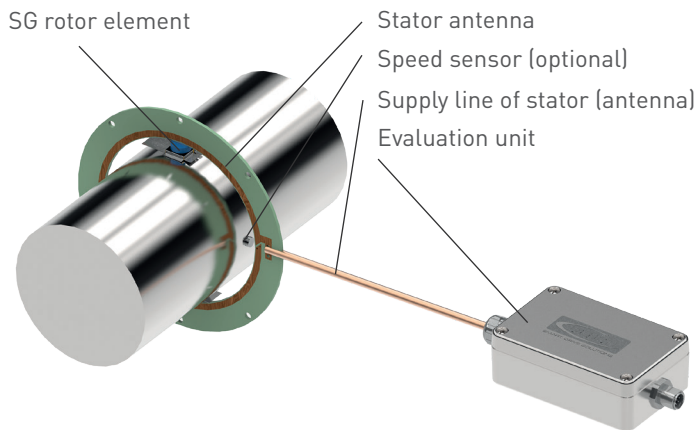
Description

DESCHtorque is a measuring system for static and dynamic torques in the drive train. It is cost-effective and very compact. Equipped with this system the process can be monitored precisely.

Features

- Torque measurement on the rotating shaft based on strain gauges
- Strain gauge elements with integrated electronics and telemetry interface
- High accuracy and resolution
- Analog or digital output signal (current, voltage or CAN)
- Integrated speed measurement
- Digital, contactless signal transmission
- Maintenance-free operation

Technical data

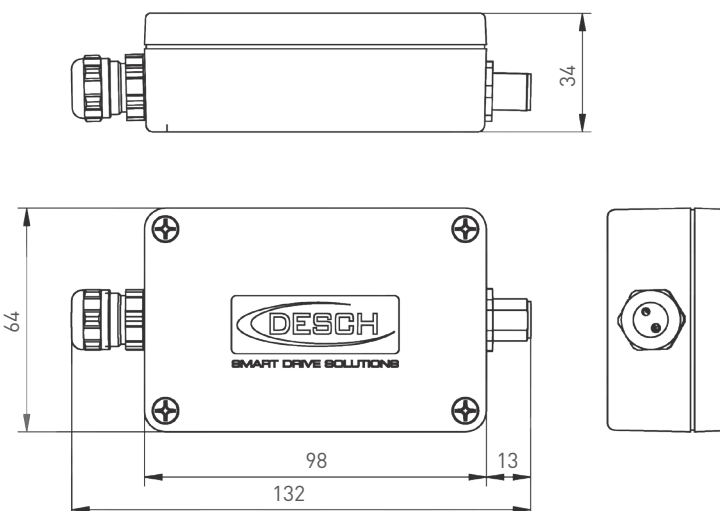


DESCHtorque - element	
Adjustable torsional stress range	8 N/mm ² - 800 N/mm ²
Signal resolution	14 Bit
Speed	max. 10000 rpm
Max. zero drift [electronics]	0,07%/10°K
Max. amplification drift [electronics]	0,07%/10°K
Max. linearity error [electronics]	0,01%
Max. ambient temperature range	-25°C - +120°C (option -45°C - +160°C)

Operating principle

- A strain gauge element is mounted on the shaft to detect torsional stress. If necessary bending forces can be compensated by a second element.
- If torque acts on the shaft, the resistance of the strain gauge changes.
- The change in resistance is detected by the electronics and transmitted contactless via an induction loop to the stator unit for processing.
- The stator unit converts the incoming signals into an electrical voltage or current. This signal can be evaluated in the machine control.

Dimension drawing of the stator unit



Stator unit

Supply	DC 9V - 30V; 250 mA
Output signal (torque)	DC 0,25 - 4,75 V or 4 - 20 mA
Max. ambient temperature range	-25°C - +90°C
Protection class	IP67
Electrical connection	M12 - A 12 pol.
Supply cable induction loop	max. length 0,5 m

Pin assignment M12 - A 12 pol.

Pin 1	Analogue output [V], optional [I]
Pin 2	Analogue GND
Pin 3	KAL signal
Pin 4	Auto zero input
Pin 5	GND power supply
Pin 6	RPM (optional) 0-5V (digital TTL)
Pin 7	Power supply 10-30V external 400 mA slow-blow fuse
Pin 8	Rx/Tx (manufacturer parameterisation only)
Pin 9	Tx Out (manufacturer parameterisation only)
Pin 10	Rx In (manufacturer parameterisation only)
Pin 11	CANL (optional)
Pin 12	CANH (optional)

Contact

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