Torque Sensor

For static and dynamic applications, non-rotary

Model 8627

Code:	8627 EN
Delivery:	4 weeks
Warranty:	24 months

- **Measurement range from 0 ... 500 Nm to 0 ... 5000 Nm**
- **Linearity error 0.1 % F.S.**
- **Reliable and durable**
- **Simple handling and assembly**
- **Output signal standardized**
- **Optional linearity error 0.05 % F.S.**
- **Optional with burster TEDS**

8627 EN

Application

This torque sensor is qualified for static and dynamic measurements on non-rotary applications.

Further the measurement of reaction torques on rotating machine parts is possible. Especially torque sensors with flanges are preferred. They are mounted between motor and stator, e.g. in agitator drives. This enables a maintenance-free torque measurement.
For individual measuring tasks the design of our torque sensors can be adapted to the customer's installation conditions.

Description

The design is optimized regarding overall length, weight and volume, so that axial forces up to relatively high limit values and bending moments of up to 20 % of the measuring range have only a small effect to the influence of the measuring element. Four metal film strain gauges are mounted on the measuring element and connected to form a full bridge. When applying AC or DC voltage on the bridge, the mechanical value torque is converted into electrical voltage. The necessary amplifier either delivers a norm signal (0 … 10 V, 0/4 … 20 mA) or – with indicator module – a torque signal truly corresponding to the measured variable.

The sensor output signal is standardized, so that an exchange of the sensor (spare part) does not require any new adjustment of the measuring chain.

The burster TEDS option (electronic data sheet, memory chip with sensor-specific data) allows rapid configuration of compatible evaluation units (instrumentation amplifier, indicator, ...).

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Technical Data

Order Code	Measuring Range	Dimensions [mm]								Bore Holes		P
		øA	øB	øD	F	G	L	øT	øQ	Number	Pitch	
8627-5500	0 ... ± 500 Nm	20H7	18	100	15	M10	80	82	60	8	45°	39.5
8627-6001	0 ... ± 1000 Nm	20H7	18	100	15	M10	80	82	60	8	45°	39.5
8627-6002	0 ... ± 2000 Nm	75H7	20	130	20	M12	100	100	80	12	30°	45
8627-6005	0 ... ± 5000 Nm	75H7	20	130	20	M12	100	100	80	12	30°	45

Higher measuring ranges upon request.

Electrical values

Resistor bridge (full bridge): foil strain gauge 350 Ω, nominal*
* Deviation from the indicated values are possible.

Excitation voltage: 2 ... 12 V
recommended 10 V

Nominal value: standard, 1 mV/V

Environmental conditions

Operating temperature range: - 15 °C ... + 55 °C

Rated temperature range: - 5 °C ... + 45 °C

Temperature effect:
on zero signal: ± 0.02 % F.S./K
on characteristic value: ± 0.01 % F.S./K

Mechanical values

Relative linearity error: ± 0.1 % F.S.

Relative reversibility error: ± 0,1 % F.S.

Relative repeatability error: ± 0,1 % F.S.

Max. operating torque (static): 150 % of nominal value

Torque limit (static): 200 % of nominal value

Breaking moment (static): > 300 % of nominal value

Dynamic load: recommended ≤ 70 % of nominal value

Rated torsion angle: < 0.1°

Material: steel, 1.2826 res. 1.2738

Degree of protection: acc. EN 60529 IP50

Pins assignment:

	Pin
excitation -	1
excitation +	2
shield	3
signal +	4
signal GND	5
NC	6

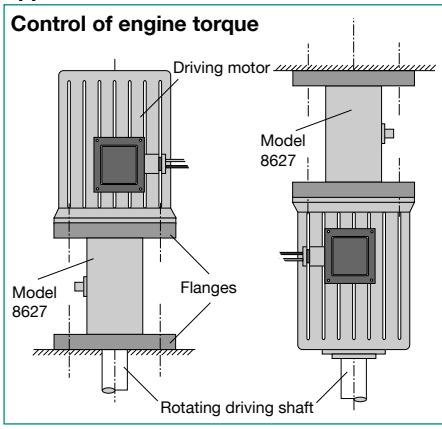
Mechanical connection: both ends with flag

Electrical connection: 6 pins plug connection

Mating: 6 pole model 9953
(included is scope of delivery)

Application

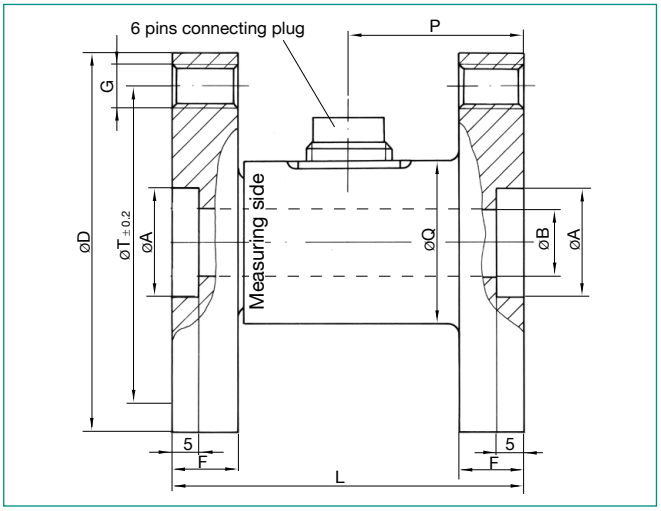
Control of engine torque



Model 8627, with its two flanges on both ends, enables the user to seize reaction torques without any problems and maintenance-free.

The arrangement showed on the left is especially suitable for the measurement of torque on agitators.

Dimension drawing model 8627



The CAD drawing (3D/2D) for this sensor can be imported online directly into your CAD system.
Download via www.burster.com or directly at www.traceparts.com. For further information about the burster traceparts cooperation refer to data sheet 80-CAD-EN.

Order Information

Torque sensor, non-rotary, both ends with flags, burster TEDS, measurement ±500 Nm **Model 8627-5500**

Accessories

Mating connector, 6 pole cable coupling **Model 9953**

Mating connector, 6 pole, 90°- phase shift **Model 9900-V589**

Connection cable with one end free, length 3 m, with connector model 9953 **Model 99553-000A-0110030**

Connection cable, length 3 m
- for burster desktop instruments with 12 pin connectors **Model 99141-553A-0150030**
- for model 9235, model 9311 and model 7281 **Model 99209-553A-0110030**

Amplifier, process indicators, digital displays **see section 9 of the catalog.**

Manufacturer Calibration Certificate (WKS)

Special calibration for clockwise or/and counter clockwise direction torque, in 20 % steps of range up and down.

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