

Torque Sensor

For static and dynamic applications,
non-rotary

Model 8632

Code:	8632 EN
Delivery:	ex stock/4 weeks
Warranty:	24 months



- Measurement range from 0 ... 2 Nm to 0 ... 500 Nm
- Linearity error 0.2 % F.S.
- Reliable and durable
- Simple handling and assembly
- Output signal standardized
- Different mechanical versions
- Optional linearity error 0.1 % F.S.

Application

The 8632 torque sensor is suitable for both static and dynamic measurements in non-rotating torque-transmission systems.

Typical uses include testing and calibrating power screwdrivers and torque wrenches and checking tightening torques in joining technology.

For individual measuring tasks the design of our torque sensors can be adapted to the customer's installation conditions.

More application examples:

- ▶ Test structures in the field of precision mechanics
- ▶ Determination of friction torques
- ▶ Acquisition of breakage moments on screw caps
- ▶ Quality assurance in power screwdrivers

Description

The design has been 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.

Technical Data

Order Code	Measuring Range	Dimensions [mm]						Weight [kg]
		A	B	øD	L	Square V	P	
8632-5002	0 ... ± 2 Nm	8	7.2	15	64	1/4"	22.7	0,1
8632-5005	0 ... ± 5 Nm	8	7.2	15	64	1/4"	22.7	0.1
8632-5012	0 ... ± 12 Nm	8	7.2	15	64	1/4"	22.7	0.1
8632-5025	0 ... ± 25 Nm	12.2	10.4	30	71	3/8"	34.5	0.2
8632-5063	0 ... ± 63 Nm	12.2	10.4	30	71	3/8"	34.5	0.2
8632-5100	0 ... ± 100 Nm	15	15.1	30	76	1/2"	35	0.2
8632-5160	0 ... ± 160 Nm	15	15.1	30	76	1/2"	35	0.25
8632-5200	0 ... ± 200 Nm	15	15.1	30	76	1/2"	35	0.25
8632-5500	0 ... ± 500 Nm	24	22.9	49	100	3/4"	46	0.8

Higher measuring ranges upon request.

Electrical values

Resistor bridge (full bridge): foil strain gauge 350 Ω, nominal
 Excitation voltage: 2 ... 12 V recommended 10 V
 Nominal value: standard, 1 mV/V

Environmental conditions

Operating temperature range: - 15 °C ... + 55 °C
 Nominal temperature of operating range: - 5 °C ... + 45 °C
 Temperature effect on zero signal: ± 0.02 % F.S./K
 Temperature effect on characteristic value: ± 0.01 % F.S./K

Mechanical values

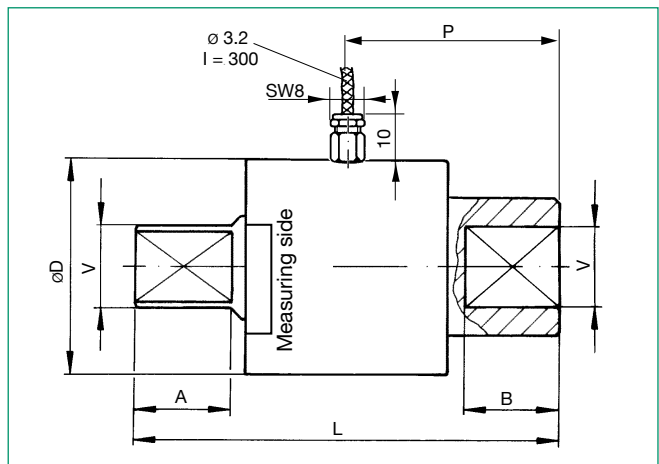
Relative linearity error: ± 0.2 % F.S.
 Relative reversibility error: ± 0.2 % F.S.
 Relative repeatability error: ± 0.1 % F.S.
 Max. operating torque (static): 150 % of nominal value
 Torque limit (static): 200 % of nominal value
 Breaking moment (static): > 300 % of nominal value
 Dynamic load: recommended ≤ 70 % of nominal value
 Rated tension angle: < 0.1°
 Material: steel, 1.2826 res. 1.2738
 Degree of protection: acc. EN 60529 IP50
 Pins assignment:

function	wire color
excitation voltage (-)	brown
excitation voltage (+)	white
signal (+)	yellow
signal (-)	green
shield	shield

Mechanical connection: external square and square drive acc. to DIN 3121 e.g. for the linkage to screwdriver tools

Electrical connection: shielded PVC cable, 3 m
 PVC cable is not suitable for too many bending cycles trailing capable upon request

Dimension drawing model 8628



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 for static application (non-rotary), with internal and external square ends, measurement range ± 12 Nm
Model 8632-5012

Accessories

- Mating connector
 - 12 pins to all burster table housings **Model 9941**
 - 9 pins for e.g. model 9163-V3, model 9235, model 9311, model 7281 **Model 9900-V209 Model 9900-V229**
 - 9 pins with burster TEDS **Order Code: 99004**
- Mounting of a connector to the sensor cable **Order Code: 99002**
- Mounting of a connector to the sensor cable
 - for model 9163 in table housing **Order Code: 99011**
 - for model 7281 with burster TEDS **Order Code: 99011**
- 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.