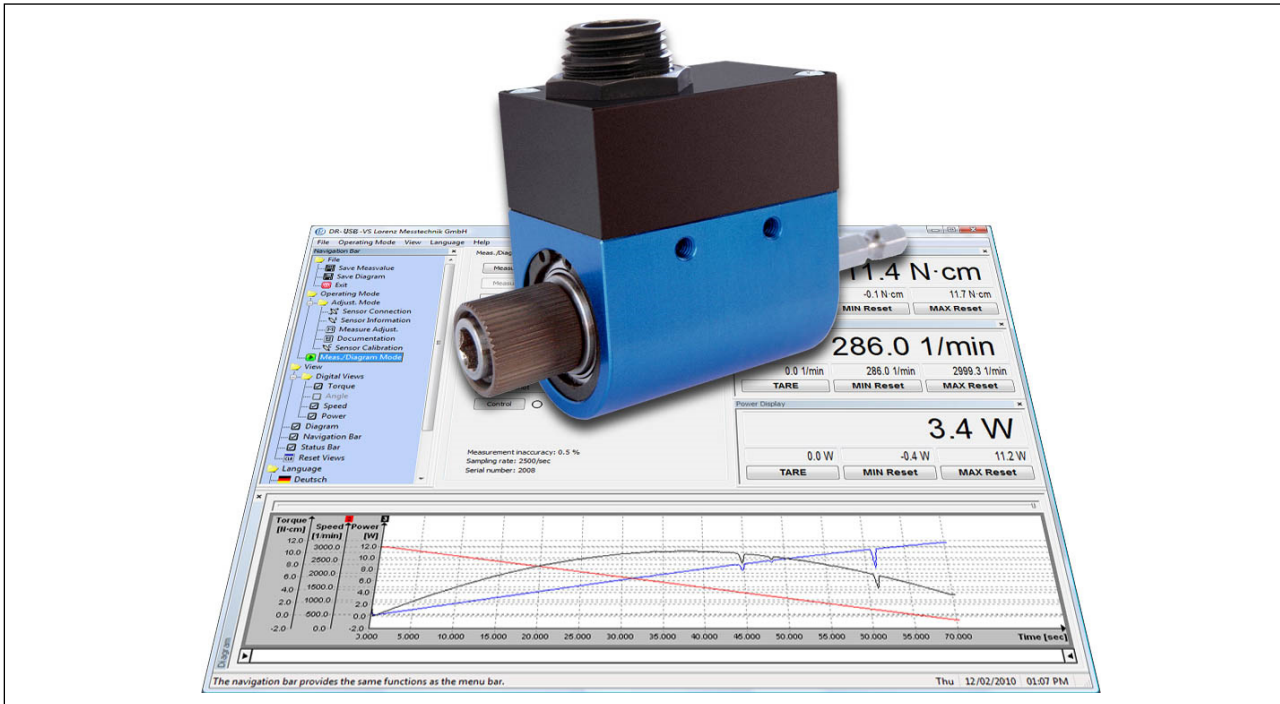


USB - Torque Sensor with Configuration and Evaluation Software**DR-3003**

- Nominal torque from 0.1 N·m ... 20 N·m
- High accuracy 0.1% f. scale
- Up to 2500 Measurements/s
- Feed-in from USB, without ext. power supply
- Very short axial length
- Reliable and durable
- Special versions on request
- Suited for mobile operation with a notebook
- Calibration parameter lodged in sensor
- Calibration control actuation by software
- Integrated speed/angle measurement
- Power computation by software
- High torsional stiffness
- Simple handling and assembly



This sensor has a contactless and digital signal transmission from rotor to stator, which means no signal falsification and maintenance-free.

Specifications

Article-No.	Nominal Torque [N·m]	Limit Speed [min ⁻¹]	Springrate [N·m/rad]	Mass Moment of Inertia [kg·m ²]		Limit Thrust Load [N] ¹	Limit Shear Force [N] ²
				Drive Side	Test Side		
112831	0.1	3000	18	2.6E-06	3.9E-07	43	1.2
112832	0.2	3000	18	2.6E-06	3.9E-07	58	1.6
112833	0.5	3000	112	2.6E-06	3.9E-07	185	1.6
112834	1	4000	112	2.6E-06	3.9E-07	260	2.6
112828	2	4000	285	2.6E-06	3.9E-07	480	6.6
112835	5	4000	457	2.6E-06	4.0E-07	865	17
112836	10	4000	516	2.6E-06	4.2E-07	1150	24
112837	15	4000	516	2.6E-06	4.2E-07	1150	24
112838	20	4000	516	2.6E-06	4.2E-07	1150	24

DR-3003		
Accuracy class torque	% f. s.	0.1
Speed resolution	min ⁻¹	1
Speed accuracy	% f. s.	±1
Angle of rotation resolution	degree	0.25
Repeatability (DIN 1319)	%	±0.02
Feed-in from USB	VDC	4 ... 6
Current consumption	mA	≤250
Output signal torque	digits	±25,000
Output signal speed/ angle of rotation	digits	±32,511
Control signal excitation		per Software
Sample rate	kSample/s	2.5
Reference temperature	°C	23
Nominal temperature range	°C	5 ... 45
Service temperature range	°C	0 ... 60
Storage temperature range	°C	-10 ... 70
Temperature coefficient of sensitivity	% f. s./K	±0.01
Temperature coefficient of zero signal	% f. s./K	±0.02
Service torque (static)	% f. s.	150
Limit torque (static)	% f. s.	200
Ultimate torque (static)	% f. s.	>300
Bandwidth (DIN 50 100)	%	70 (peak - peak)
Level of protection (DIN EN 60529)		IP50
Electrical connection		PX0446 IP68 B Mini USB, incl. 3 m connection cable to PC

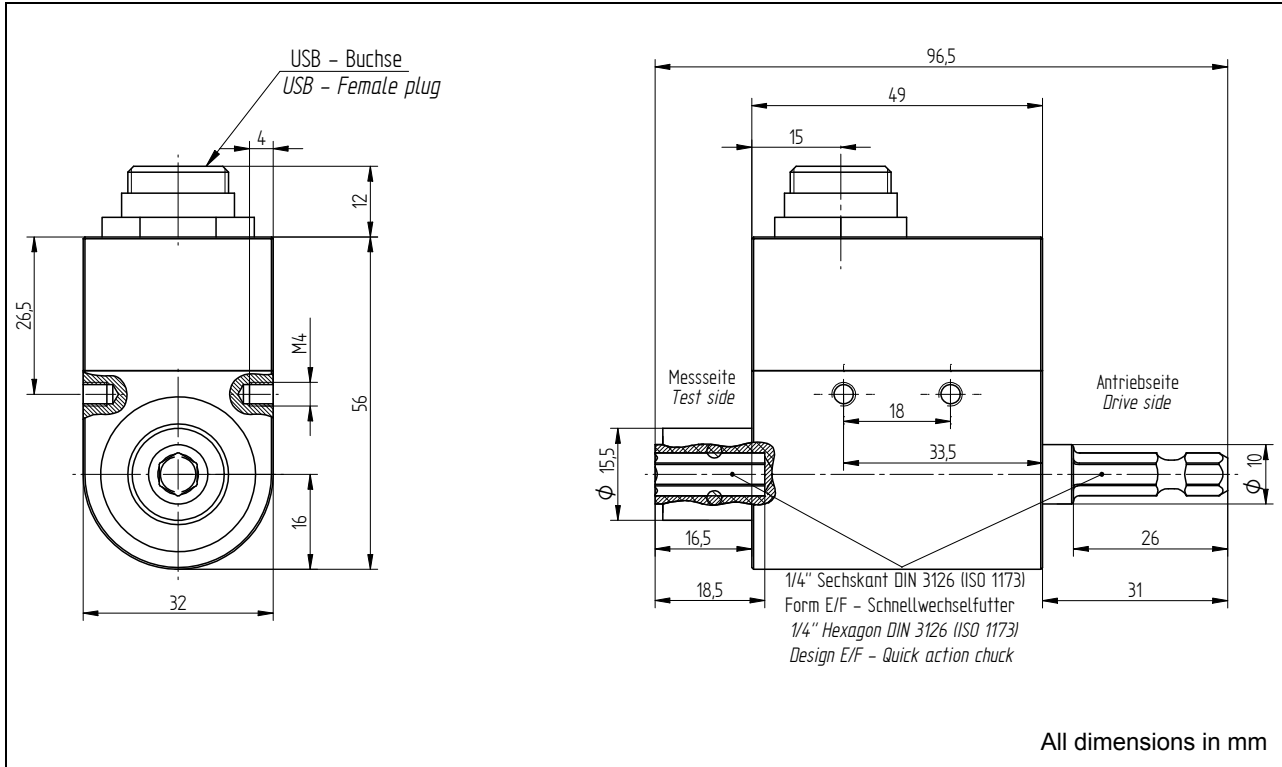
¹ Unsupported shaft

² Unsupported shaft

Option Calibrations

Article-No.	Description	Steps	Norm
400676	Linearity diagram	25%	Factory standard
400664	Linearity diagram	10%	
400961	Proprietary calibration	3	VDI/VDE 2646
400700	Proprietary calibration	5	
400688	Proprietary calibration	8	
	DAkKS- Calibration		on request

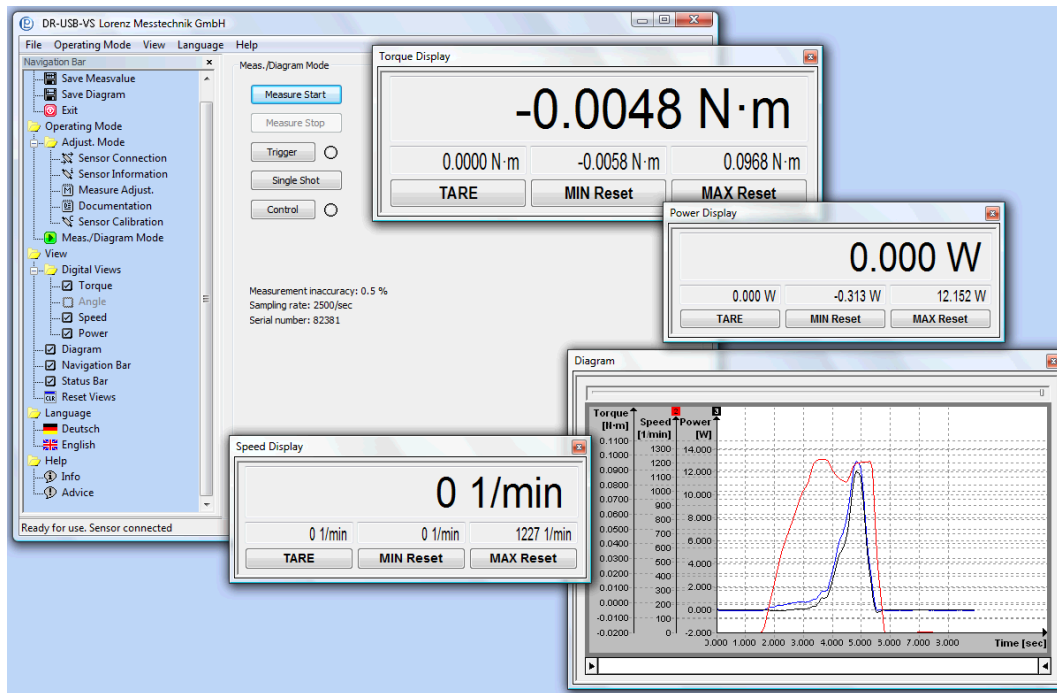
Dimensions



Configuration and Evaluation Software

DR-USB-VS

- Convenient configuration and evaluation software
- Graphic presentation of torque/ speed/ power or torque/ angle of rotation
- Automatic scaling of y-axis
- Simultaneous storage of up to 3 physical values
- Automatic storage function of the measured values as CSV- or BMP-File



Description

Configuration and evaluation software for easy analysis and graphic presentation on a PC.

The software allows direct read in of measured data into a text file in CSV-Format through the USB-Port of a PC. This enables further analyses with a commercially available spreadsheet program at any time.

Specifications

Type	DR-USB-VS
Interface	USB
Protocol	Lorenz standard protocol
System Requirements	Windows® '03/ '08/ Vista/ 7/ 8 32/64 Bit ³ Dual-Core ex 1.8 GHz (with diagram)

Conversion in physical values	✓
Simultaneous measuring	1 Sensor
Graphic presentation of a physical value	✓
Automatic or manual storage in a CSV and BMP file	✓
Mathematical computation of the mechanical power	✓
Calibration function	✓
Resetable minimum value memory for each measured value	✓
Resetable maximum value memory for each measured value	✓
Variable average determination	✓
Tare for each measured value	✓

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