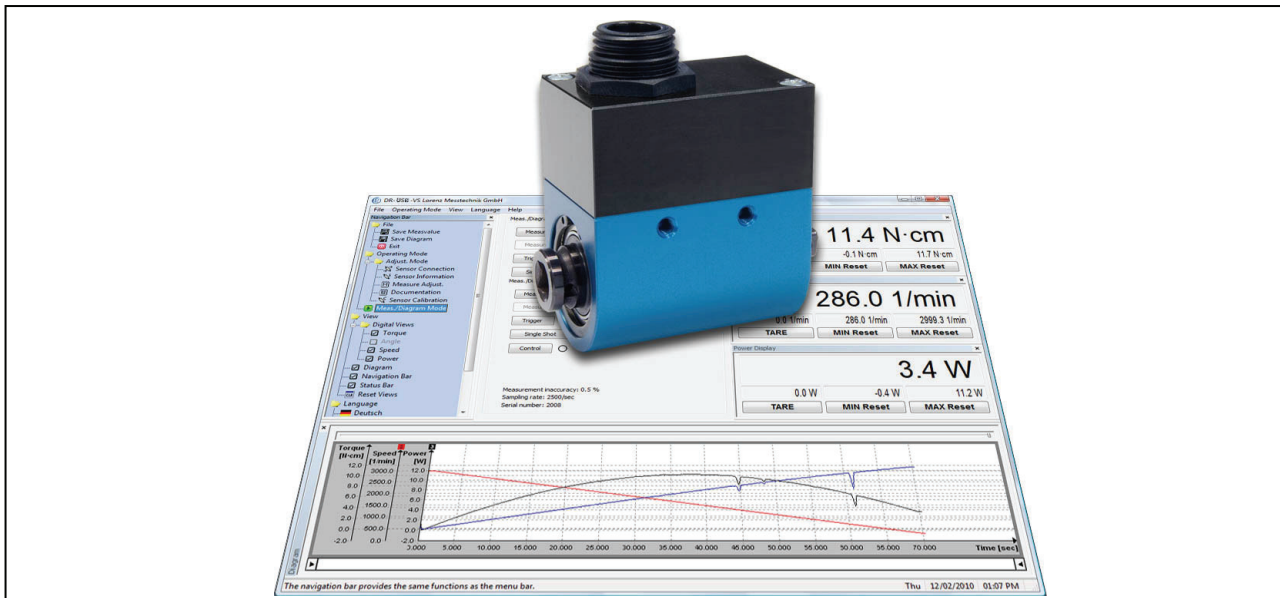


USB - Torque Sensor with Configuration and Evaluation Software

DR-3001

- Nominal torque from 0.1 N·m ... 5000 N·m
- Up to 2500 Measurements/s
- 16-Bit digitalization in sensor directly
- Feed-in from USB, without ext. power supply
- Suited for mobile operation with a notebook
- Calibration parameter lodged in sensor
- Calibration control actuation by software
- Power computation by software



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

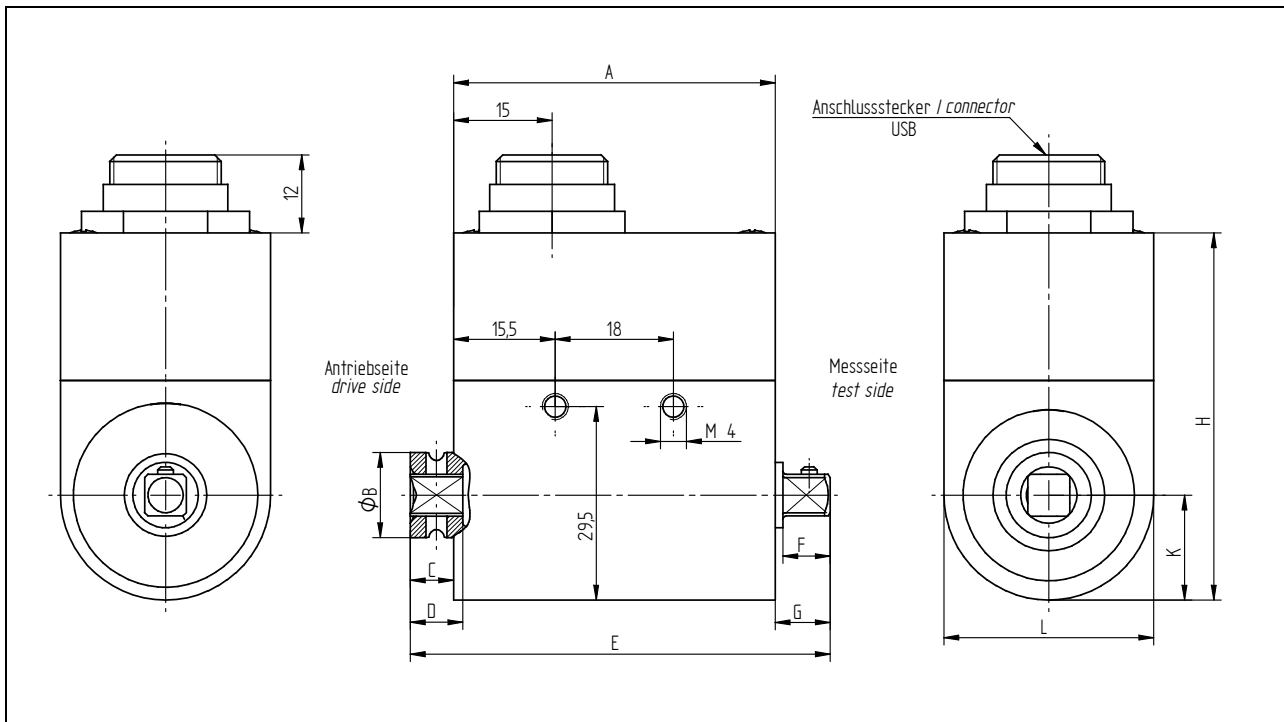
Article Number	Limit Torque [N·m]	Weight approx. [kg]	Square	Limit Speed [min ⁻¹]	Springrate [N·m/rad]	Mass Moment of Inertia [kg·m ²]		Natural Frequency [Hz]	Limit Thrust Load [N]
						Drive side	Test side		
112859	0.1	0.18	1/4"	3000	1.8E+01	2.1E-06	3.3E-07	1.3E+03	43
112861	0.2	0.18		3000	1.8E+01	2.1E-06	3.3E-07	1.3E+03	39
112862	0.5	0.18		3000	1.2E+02	2.1E-06	3.3E-07	3.3E+03	170
112863	1	0.18		4000	1.2E+02	2.1E-06	3.3E-07	3.3E+03	170
112916	2	0.18		4000	3.0E+02	2.1E-06	3.3E-07	5.1E+03	240
112917	5	0.18		4000	5.9E+02	2.1E-06	3.5E-07	7.1E+03	430
112918	10	0.18		4000	7.3E+02	2.1E-06	3.6E-07	7.7E+03	570
112919	15	0.18		4000	7.3E+02	2.1E-06	3.6E-07	7.7E+03	570
112920	20	0.18		4000	7.3E+02	2.1E-06	3.6E-07	7.7E+03	570
112921	35	0.5		3/8"	3000	8.6E+03	1.0E-05	1.1E-05	6.5E+03
112922	50	0.5	3000		1.0E+04	1.0E-05	1.1E-05	7.1E+03	2000
112923	63	0.5	3000		1.1E+04	1.0E-05	1.1E-05	7.3E+03	2400
112924	100	0.5	1/2"	2500	1.2E+04	1.6E-05	1.1E-05	6.8E+03	1900
112925	160	0.5		2500	1.5E+04	1.6E-05	1.2E-05	7.4E+03	2700
112926	200	0.5		2500	1.5E+04	1.6E-05	1.2E-05	7.4E+03	2700
112927	300	1.3	3/4"	2500	8.8E+04	9.9E-05	7.7E-05	7.2E+03	6600
112928	500	1.3		2500	8.8E+04	9.9E-05	7.7E-05	7.2E+03	6600
112929	1000	1.38	1"	1500	1.3E+05	2.1E-04	1.1E-04	6.7E+03	8000
112930	2000	8.15	1 1/2"	1000	2.1E+05	3.5E-03	1.8E-03	2.1E+03	14000
112931	3000	8.15		1000	2.7E+05	3.5E-03	1.8E-03	2.4E+03	26000
112932	5000	8.15		1000	2.6E+05	3.5E-03	1.8E-03	2.4E+03	23000

TECHNISCHE DATEN

Type		DR-3001
Accuracy class torque	% f. s.	±0.1
Speed resolution	min ⁻¹	1
Speed accuracy	% f. s.	±1
Angle of rotation resolution	degree	0.25
Relative spread	%	±0.02
Feed-in from USB	V DC	4 ... 6
Current consumption	mA	max. 250
Output signal torque	digits	±25,000
Output signal speed / angle of rotation	digits	±32,511
Input calibration control actuation		per Software
Sample rate	kSample	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 characteristic value	% 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
Oscillation amplitude (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

Dimensions

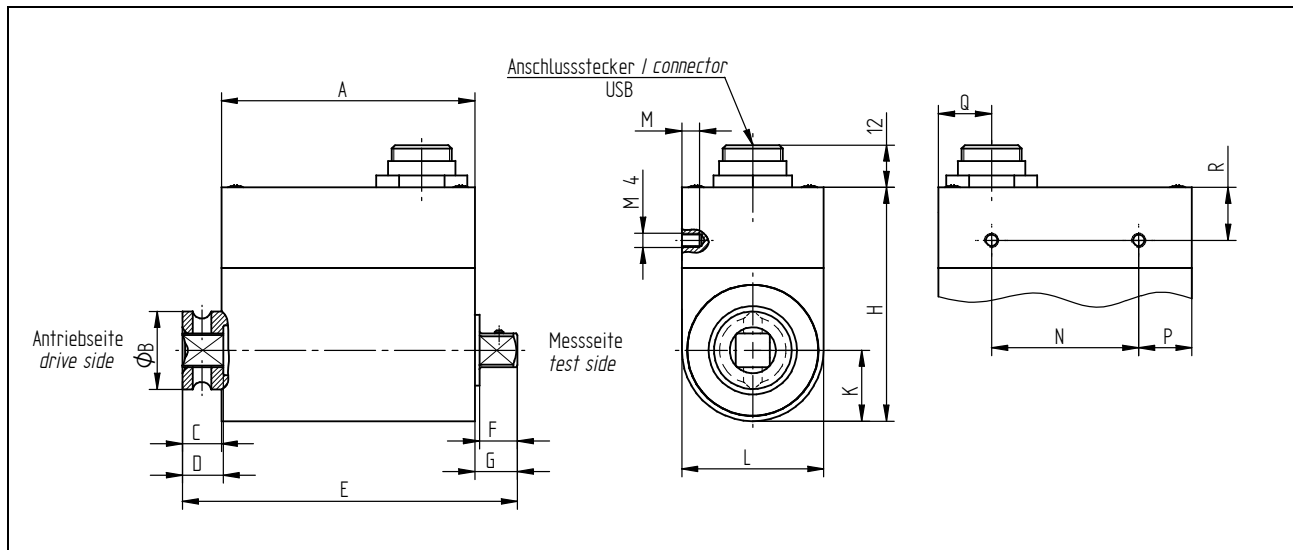
DR-3001



Nominal Torque [N·m]	Square	Dimensions [mm]									
		A	B	C	D	E	F	G	H	L	K
0.1 / 0.2 / 0.5 / 1 / 2 / 5 / 10 / 15 / 20	1/4"	49	13	6.8	8	64	7.5	8.2	56	32	16

Dimensions

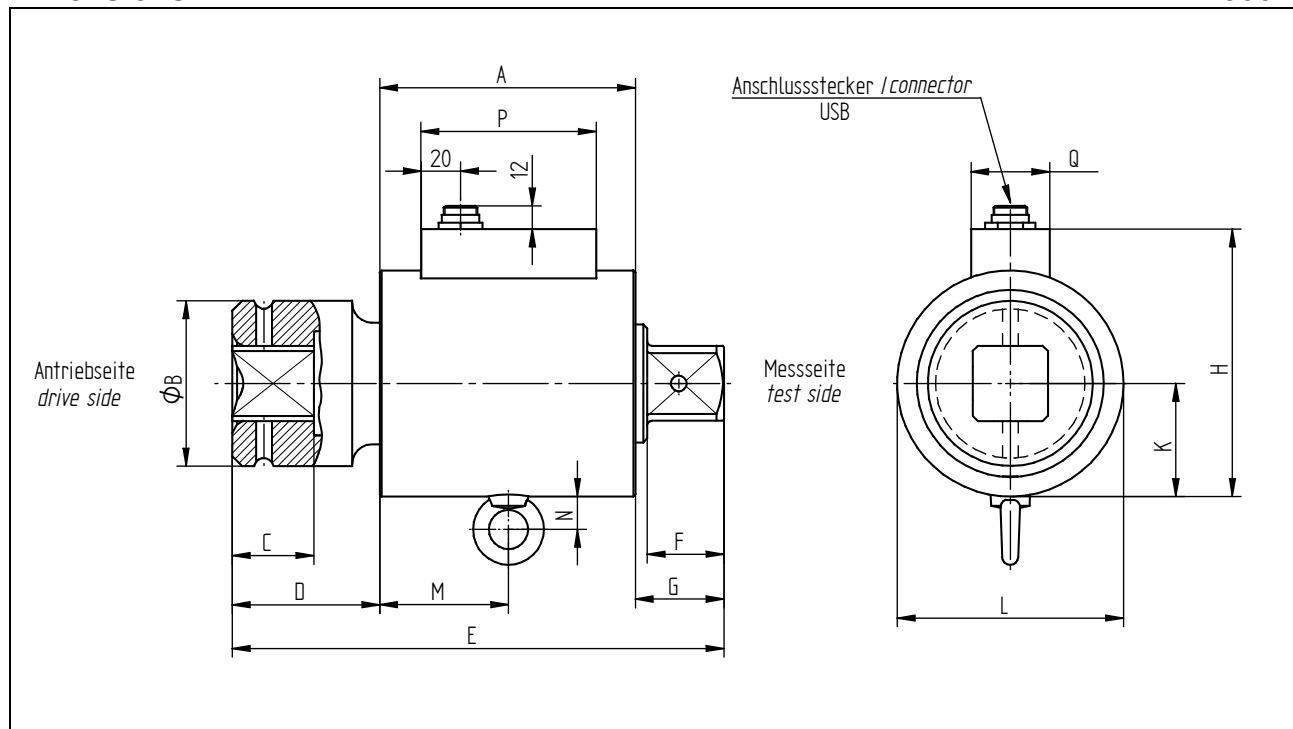
DR-3001



Nominal Torque [Nm]	Square	Dimensions [mm]														
		A	B	C	D	E	F	G	H	L	K	M	N	P	Q	R
35 / 50 / 63	3/8"	71.5	22	11	11.2	94.5	10.7	12	66	40	20	5	41.5	15	15	15
100 / 160 / 200	1/2"	71.5	29.8	13	15.9	100.5	15.4	16	66	40	20	5	41.5	15	15	15
300 / 500	3/4"	72.5	44	19	23.9	115.5	22.9	24	77.8	58	29	6	29.5	22	15	10
1000	1"	72.5	54	28.6	29	130.5	27.6	29	77.8	58	29	6	29.5	22	15	10

Dimensions

DR-3001

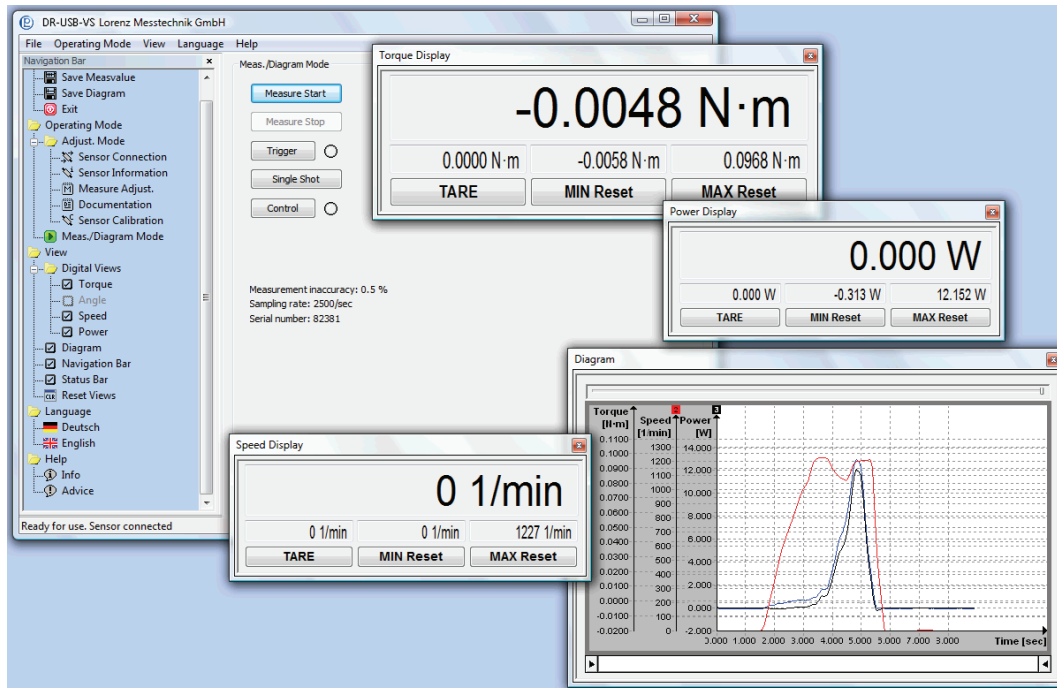


Nominal Torque [Nm]	Square	Dimensions [mm]													
		A	B	C	D	E	F	G	H	L	K	M	N	P	Q
2000/ 3000 / 5000	1 1/2"	130	84	40	75	250	39	45	136	115	57.5	65.5	18	89	40

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	ex Win2000 ^{®1} Single- Core ex 2.0 GHz (without diagram) 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	✓
Resettable minimum value memory for each measured value	✓
Resettable maximum value memory for each measured value	✓
Variable average determination	✓
Tare for each measured value	✓

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