

Type DR-2208

Dual-Range-Torque Sensor with analog output

- active output signal $\pm 5V$
- sample rate 5 k Samples per channel

Type DR-2508

Dual-Range-Torque Sensor with RS485-Interface

- RS485 interface
- auto identification e.g. of: measuring range, serial number, calibration date
- sample rate 3,5 k Samples per channel



This sensor has a contactless, digital signal transmission from rotor to stator, hence without adulteration of signal and it is maintenance-free.

Artikel Nr. (DR-2208)	Artikel Nr. (DR-2508)	Messbereich nominal torque [Nm]	max. speed [min ⁻¹]		spring rate [Nm/rad]	moment of inertia J in [kg m ²]		Axial max. thrust load [N]
			standard	special		drive side	test side	
100911	104176	10 / 1	8000	15000	$8,3 \cdot 10^2$	$1,1 \cdot 10^{-5}$	$9,8 \cdot 10^{-6}$	50
100912	104177	20 / 2	8000	15000	$8,3 \cdot 10^2$	$1,1 \cdot 10^{-5}$	$9,8 \cdot 10^{-6}$	300
100910	104178	30 / 3	6000	15000	$8,3 \cdot 10^2$	$1,1 \cdot 10^{-5}$	$9,8 \cdot 10^{-6}$	1000
100913	104179	50 / 5	6000	15000	$5,4 \cdot 10^3$	$1,3 \cdot 10^{-5}$	$1,1 \cdot 10^{-5}$	1600
100914	104180	100 / 10	6000	12000	$5,4 \cdot 10^3$	$1,3 \cdot 10^{-5}$	$1,1 \cdot 10^{-5}$	2600
100915	109214	200 / 20	6000	12000	$3,4 \cdot 10^4$	$1,1 \cdot 10^{-4}$	$8,4 \cdot 10^{-5}$	3200
100917	109216	500 / 50	5000	10000	$3,4 \cdot 10^4$	$1,1 \cdot 10^{-4}$	$8,4 \cdot 10^{-5}$	7500
100918	109217	1000 / 100	4000	7000	$2,0 \cdot 10^5$	$1,6 \cdot 10^{-3}$	$1,1 \cdot 10^{-3}$	10000
100919	109218	2000 / 200	3500	5500	$5,1 \cdot 10^5$	$5,3 \cdot 10^{-3}$	$4,2 \cdot 10^{-3}$	18000
100921	109220	5000 / 500	3500	5500	$7,2 \cdot 10^5$	$5,3 \cdot 10^{-3}$	$4,3 \cdot 10^{-3}$	32000
107792	109221	10000 / 1000	3000	5000	$3,1 \cdot 10^6$	$4,1 \cdot 10^{-2}$	$3,6 \cdot 10^{-2}$	125000
107793	109212	20000 / 2000	3000	5000	$3,7 \cdot 10^6$	$4,1 \cdot 10^{-2}$	$3,7 \cdot 10^{-2}$	200000

RS485-Interface



Specifications

analog output

Typ – type		DR-2208	DR-2508
accuracy class f.s.	%	0,1	
DIN 1319 - repeatability	%	±0,02	
excitation voltage	VDC	12 ... 28	
current consumption	mA	<60	
output signal		± 0...5 V	16 Bit signed int
output current max.	mA	short circuit resist.	
input calibration control	V	L <2,0; H>3,5	per Software
sample rate	Sample/s	5.000	
baud rates	kBd		115,2 / 230,4
Mode – sample rate Lorenz mode	Sample/s		750 *
Speed Optimized Polling Mode			
sample rate/channel, 1-channel	Sample/s		5.000 *
sample rate/channel, 2-channel	Sample/s		3.500 *
Nenntemp.bereich - nominal temp. range	°C	+5 ... +45	
Gebrauchstemp.bereich - service temp. range	°C	0 ... +60	
temp. coeff. of sensitivity f.s.	% / K	±0,01	
temp. coeff. of zero signal f.s.	% / K	±0,02	
service torque f.s. (static)	%	150	
limit torque f.s. (static)	%	200	
ultimate torque f.s. (static)	%	>300	
bandwidth (DIN 50100)	%	70 (peak - peak)	
level of protection (DIN EN 60529)		IP 50	
connector		12-pin	

* = Baud rate-dependent, see protocol description, document no. 090110

Artikel Nr. Option - options

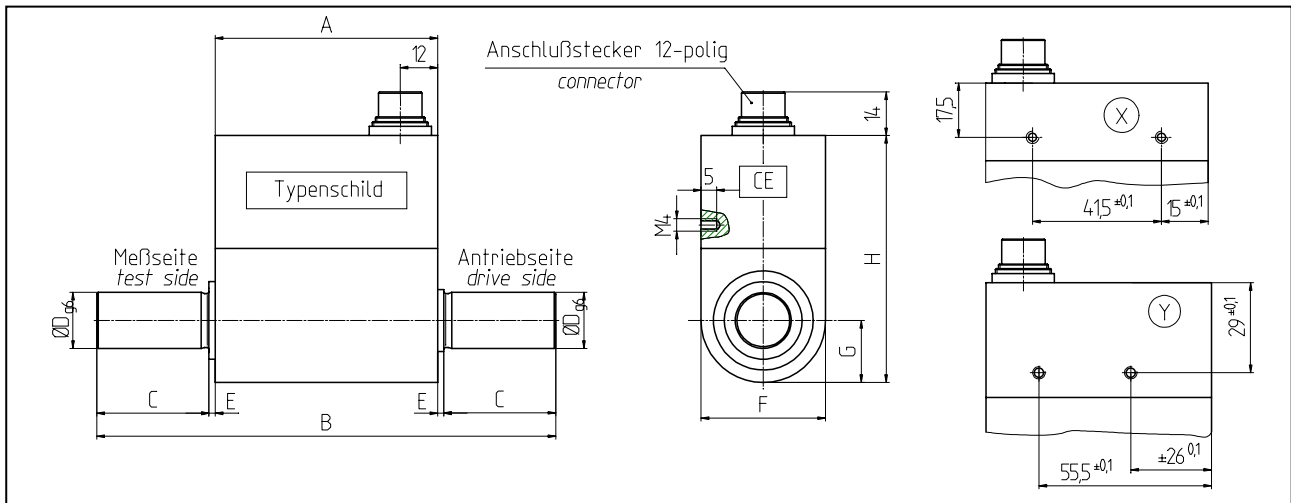
101560	angle/speed-measurement, 360 imp., 2x TTL 90° shifted			CW - turn
104097	≥ 2000/200 Nm speed measurement 60 imp, 1x TTL			CH A  CH B 
103562	output signal	V	± 0 ... 10	

Anschlussbelegung – pin connection

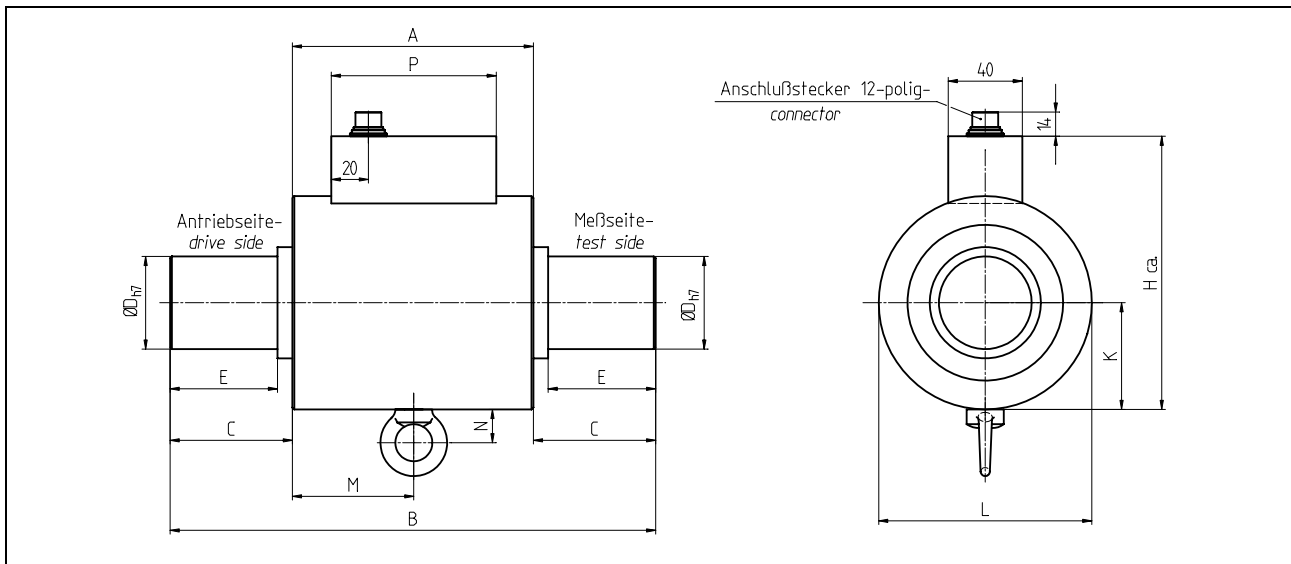
12-pin	DR-2208	DR-2508
Pin A	NC	NC
Pin B	Option angle B	Option angle B
Pin C	signal (+)	NC
Pin D	signal (GND)	NC
Pin E	excitation (GND)	excitation (GND)
Pin F	excitation (+)	excitation (+)
Pin G	Option angle A	Option angle A
Pin H	Sign. 2 (+) - signal 2 (+)	NC
Pin J	NC	RS 485
Pin K	cal. control	NC
Pin L	NC	RS 485
Pin M	housing	housing

dimensions

DR-2208; DR-2508



nominal torque [Nm]	dimensions [mm]									
	A	B	C	D	E	F	G	H	X	Y
1 / 10	71,5	111,5	18	18	2	40	20	68,2	X	
2 / 20	71,5	111,5	18	18	2	40	20	68,2	X	
3 / 30	71,5	111,5	18	18	2	40	20	68,2	X	
5 / 50	71,5	147,5	36	18	2	40	20	68,2	X	
10 / 100	71,5	147,5	36	18	2	40	20	68,2	X	
20 / 200	80,5	159,5	38	32	1,5	61	29	98,2		X
50 / 500	80,5	159,5	38	32	1,5	61	29	98,2		X



nominal torque [Nm]	dimensions [mm]										
	A	B	C	D	E	H	K	L	M	N	P
100 / 1000	130	262	66	50	58	147,5	57,5	115	65,5	18	89
200 / 2000	135	377	121	70	110	172,5	69,5	139	67,5	18	89
500 / 5000	135	377	121	70	110	172,5	69,5	139	67,5	18	89
1000 / 10000	170	450	140	110	120	240,5	104	208	95	18	89