

Reactive Torque Sensor D-2223 with Rated Torque from 2 ... 5000 N·m



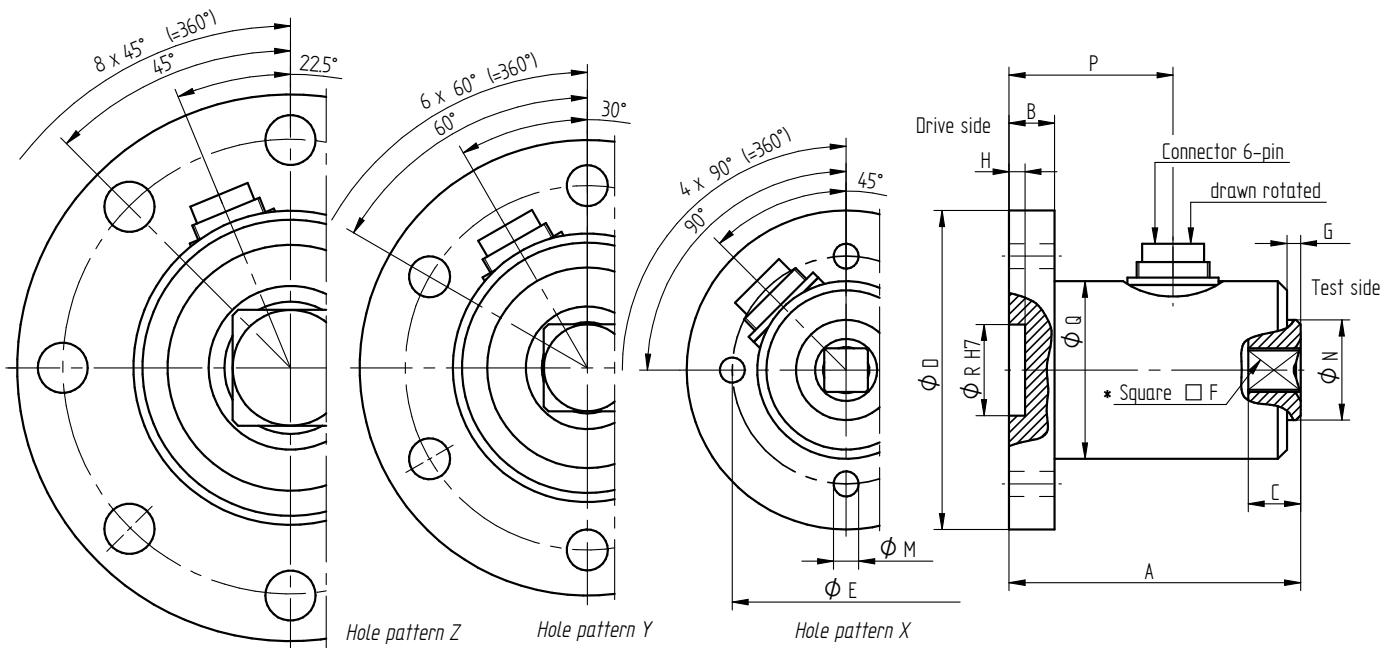
Performance Features

- Torque sensor for survey of assembly tools screws and nuts
- TEDS (Transducer Electronic Data Sheet)
Standard IEEE 1451.4 (optional)
- With flange and standard inside square end
- Very short axial length
- High torsional stiffness
- Simple handling and assembly
- Special versions on request

Application

- Assembly technology
- Process measuring and control technology
- Automotive industry
- Measuring and control devices
- Tool engineering
- Special mechanical engineering

Dimensions in mm



* The position has no reference to the mounting holes.

Rated Torque [N·m]	Dimensions [mm]													Hole Pattern	Weight [kg]
	A	B	C	ØD	ØE	ØF	G	H	ØM	ØN	P	ØQ	ØR		
2/5/12	64	10	8	70	50	1/4"	3	3.5	5.5	22	36	39	20	X	0.5
25/63	64	10	11.5	70	50	3/8"	3	3.5	5.5	22	36	39	20	X	0.5
100/160/200	75	12	16	80	60	1/2"	15	3.5	6.6	29.8	41	45	20	X	0.8
500	88	15	24	100	80	3/4"	3	3.5	9	44	45	59	20	Y	1.7
1000	94	15	28.6	120	100	1"	5	3.5	11	54	45	69	20	Z	2.5
2000	124.5	20	41.5	145	120	1 1/2"	5	3.5	13	76	55	90	20	Z	11.0
5000	129.5	25	41.5	200	170	1 1/2"	5	4	17	95	57	125	105	Z	11.5

Connection Assignment

6-pin	D-2223	Series 723
Pin 1	Excitation (-)	
Pin 2	Excitation (+)	
Pin 3	Shield	
Pin 4	Signal (+)	
Pin 5	Signal (-)	
Pin 6	Control signal or TEDS (option)	

Technical Data acc. to VDI/VDE/DKD 2639

Reactive Torque Sensor D-2223

Rated torque M_{nom}	N·m	2 ... 5000
Accuracy class	% M _{nom}	0.2 (optional 0.1)
Relative repeatability error in unchanged mounting position b'	% M _{nom}	±0.02
Rated characteristic value C_{nom}	mV/V	1 ±0.2%
Bridge resistance R_{Br}	Ω	350
Rated range of excitation voltage	VDC	2 ... 12
Electrical connection		6-pin series 723 ¹
Reference temperature T_{ref}	°C	23
Rated temperature range	°C	-5 ... 45
Operating temperature range	°C	-15 ... 55
Storage temperature range	°C	-30 ... 95
Temperature effect on zero signal TK₀	% M _{nom} /10 K	±0.2
Temperature effect on characteristic value TK_C	% M _{nom} /10 K	±0.1
Maximum operating torque M_G (static)	% M _{nom}	150
Torque limit M_{max} (static)	% M _{nom}	200
Breaking torque M_B (static)	% M _{nom}	>300
Permissible oscillation stress when subjected to torque M_{df}	% M _{nom}	70 (peak-to-peak)
Level of protection		IP50

Article-No.	Rated Torque [N·m]	Springrate [N·m/rad]	Mass Moment of Inertia [kg·m²]		Axial Force Limit [N]	Lateral Force Limit [N]
			Drive Side	Test Side		
102954	2	2.2E+02	2.1E-04	3.0E-06	400	9
102955	5	7.5E+02	2.1E-04	3.0E-06	730	22
102983	12	2.2E+03	2.1E-04	3.1E-06	1300	51
102573	25	5.3E+03	2.1E-04	1.6E-06	2100	120
102984	63	1.4E+04	2.2E-04	2.0E-06	4000	270
102574	100	1.9E+04	4.2E-04	1.4E-05	5000	300
102428	160	3.6E+04	4.2E-04	1.5E-05	7100	500
102958	200	4.9E+04	4.2E-04	1.6E-05	8600	680
102959	500	1.2E+05	1.3E-03	9.1E-05	12000	1600
102767	1000	5.4E+05	2.8E-03	2.4E-04	21000	2900
102429	2000	1.1E+06	8.0E-03	1.3E-03	35000	3900
108514	5000	4.1E+06	3.6E-02	4.0E-03	63000	8500

Options

Article-No.	Description	
100933	Accuracy class	0.1 % M _{nom}
100218	Control signal	100 % M _{nom}
100739	Control signal	80 % M _{nom}
106154	Control signal	50 % M _{nom}
113134	TEDS-standard IEEE 1451.4	
42828	Extended temperature range	-30 °C...100 °C
42829	Extended temperature range	-30 °C...120 °C

¹ Female cable connector in scope of delivery at first delivery

Calibrations

Article-No.	Description	
400676	Linearity diagram in accordance to factory standard	25 % steps
400664	Linearity diagram in accordance to factory standard	10 % steps
400961	Proprietary calibration acc. to VDI/VDE 2646	3 steps
400700	Proprietary calibration acc. to VDI/VDE 2646	5 steps
400688	Proprietary calibration acc. to VDI/VDE 2646	8 steps
	DAkkS-Calibration/Standard on request	

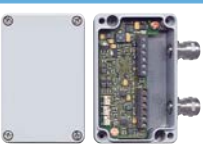
Accessories

Electrical Connection

Article-No.	Description
10301	Female cable connector 6-pin series 581
10315	Female angled connector 6-pin series 682
10266	Connection cable, 3 m, with 6-pin female cable connector series 581 and free strands
10387	Connection cable angled, 3 m, with 6-pin female angled connector series 682 and free strands

Amplifiers

Examples of suitable amplifiers for the torque sensor D-2223:

LCV	GM 78	GM 40	GM 80	SI
				

Further suitable amplifiers you can find on our homepage under <https://www.lorenz-messtechnik.de/english/products/>.