

Reactive Torque Measuring Flange D-2553 with Rated Torque from 10 ... 200 N·m



Data sheet

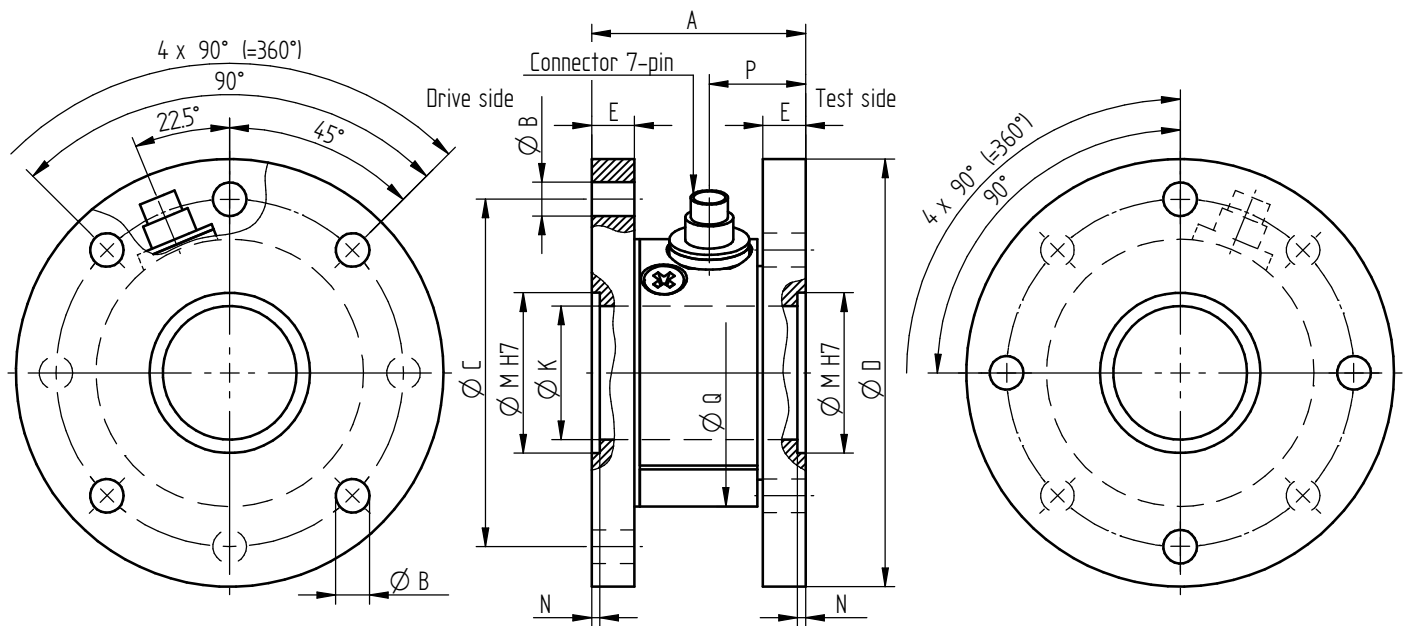
Performance Features

- Torque measuring flange for measurement of e. g. torque reaction or torsion measurement
- TEDS (Transducer Electronic Data Sheet) Standard IEEE 1451.4 (optional)
- Flange-flange-solution
- Through hole
- Very short axial length
- High torsional stiffness
- Simple handling and assembly
- Special versions on request

Application

- Process measuring and control technology
- Fully automated machining centres
- Measuring and control devices
- Tool engineering
- Special mechanical engineering

Dimensions in mm



Rated Torque [N·m]	Dimensions [mm]										Weight [kg]
	A	ØB	ØC	ØD	E	ØM	N	ØK	P	ØQ	
10/20/50	40	6.3	65	80	8	30	1.5	25	18	50	0.3
100/200	40	8.3	65	80	8	30	1.5	25	18	50	0.7

Connection Assignment

7-pin	D-2553	Series 712
Pin 1	Excitation (-)	
Pin 2	Excitation (+)	
Pin 3	Shield / TEDS (GND)	
Pin 4	Signal (+)	
Pin 5	Signal (-)	
Pin 6	Control signal or TEDS Data (+) (option)	
Pin 7	NC	

Technical Data acc. to VDI/VDE/DKD 2639

Torque Measuring Flange D-2553 with Through Hole

Rated torque M_{nom}	N·m	10 ... 200
Accuracy class	% M _{nom}	0.1
Relative repeatability error in unchanged mounting position b'	% M _{nom}	±0.02
Rated characteristic value C_{nom}	mV/V	1 ±0.1%
Bridge resistance R_{Br}	Ω	350
Rated range of excitation voltage	VDC	2 ... 12
Electrical connection		7-pin series 712 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		
108109	10	6.77E+03	1.08E-04	8.83E-05	1100	190
108110	20	1.28E+04	1.08E-04	8.83E-05	1600	380
108112	50	5.15E+04	1.10E-04	8.87E-05	3100	850
108397	100	9.44E+04	2.83E-04	2.56E-04	2500	600
108520	200	1.97E+05	2.84E-04	2.57E-04	4200	1200

Options

Article-No.	Description	
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

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	

¹ Female cable connector in scope of delivery at first delivery

Accessories

Electrical Connection

Article-No.	Description
10294	Female cable connector 7-pin series 712
10367	Female angled connector 7-pin series 712
10316	Connection cable, 3 m, with 7-pin female cable connector series 712 and free strands
103348	Connection cable angled, 3 m, with 7-pin female angled connector series 712 and free strands

Amplifiers

Examples of suitable amplifiers for the torque measuring flange D-2553:

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/>.