

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



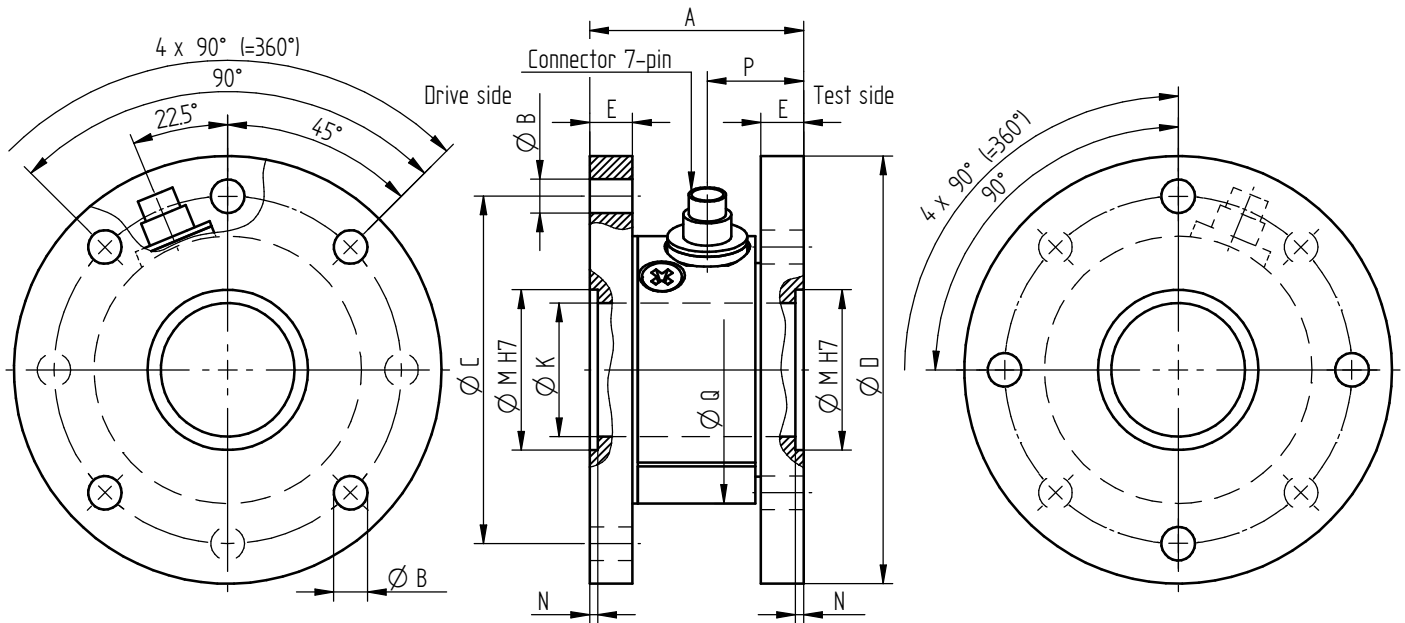
Performance Features

- Torque measuring flange for e.g. measurement of torque reaction or torsion measurement
- 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 of D-2553 in mm



Nominal Torque [N·m]	Dimensions [mm]										Weight [kg]
	A	$\varnothing B$	$\varnothing C$	$\varnothing D$	E	$\varnothing M$	N	$\varnothing K$	P	$\varnothing Q$	
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	
Pin 4	Signal (+)	
Pin 5	Signal (-)	
Pin 6	Control signal (option)	
Pin 7	NC	

Technical Data acc. to VDI/VDE/DKD 2639

Torque Measuring Flange D-2553 with Through Hole		
Nominal 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	$1 \pm 0.1\%$
Bridge resistance R_{Br}	Ω	350
Operating 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
Temperature effect on zero signal TK_0	% $M_{nom}/10$ 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.	Nominal Torque [N·m]	Springrate [N·m/rad]	Mass Moment of Inertia [kg·m ²]		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}
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	SI-USB	GM 40	GM 80	GM 80-PA
				

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