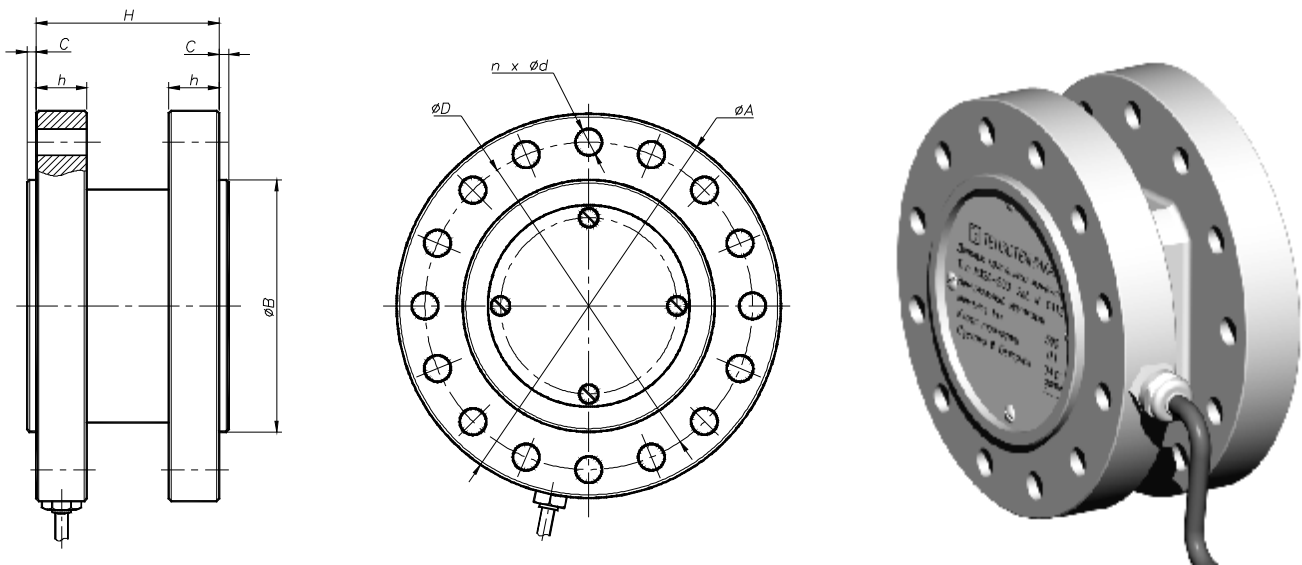


MA20 Reaction Torque Transducers

The MA20 Torque Transducers are used to measure static and dynamic torque in a non-turning mode. They are suitable for use in testing machines as reaction torque transducers or in calibration devices as reference torque transducers.

The MA20 Torque Transducers operate on the strain gauge principle. They are equipped with a built-in amplifier. Due to their design they are insensitive to lateral and axial forces and bending moments.

Dimensions, mm



Type	Nominal torque	ØA	ØB	ØD	C	H	h	Ød	n
MA20-20	20 Nm	60	40g6	50±0.1	2,5	44	10	4.3H12	8
MA20-50	50 Nm	90	60g6	76±0.1	3	54	15	6.4H12	8
MA20-100	100 Nm	90	60g6	76±0.1	3	54	15	6.4H12	8
MA20-200	200 Nm	90	60g6	76±0.1	3	54	15	6.4H12	8
MA20-500	500 Nm	124	80g6	104±0.1	3	58	16	8.4H12	12
MA20-1k	1 Knm	124	80g6	104±0.1	3	58	16	8.4H12	12
MA20-2k	2 Knm	144	90g6	120±0.12	3	62	18	10.5H12	12
MA20-5k	5 kNm	175	110g6	150±0.25	3	78	24	13H12	16
MA20-10k	10 kNm	200	120g6	170±0.25	4	86	28	17H12	12
MA20-25k	25 kNm	230	150g6	198±0.25	4	92	30	17H12	16

Technical data

1. Electrical and metrology parameters

Nominal output signal with positive (right-hand) nominal torque	V	+2
Nominal output signal with negative (left-hand) nominal torque	V	-2
Output signal at torque = zero	V	0
Deviation of the actual output signal at the nominal torque from the nominal value	%	± 0.1
Accuracy class		0.1
Temperature effect on the output signal, related to the actual output value	%/10°C	± 0.05
Temperature effect on the zero signal, related to the nominal output value	%/10°C	± 0.05
Linearity deviation including hysteresis, related to the nominal output value	%	± 0.05
Limit load resistance	kΩ	10
Nominal excitation voltage	V (DC)	12
Current consumption	mA	< 40

2. Parameters of resistance to environment and mechanical exposures

Nominal temperature range	° C	0...+60
Storage temperature range	° C	-10...+70
Vibration resistance:		
Frequency range	Hz	10...55
Duration	h	1
Acceleration	m/s ²	40
Impact resistance:		
Number of impacts	n	1000
Duration	ms	10
Acceleration	m/s ²	400
Degree of protection		IP 54

3. Permissible load limits and mechanical values

Nominal torque M _N	Nm	20	50	100	200	500	1k	2k	5k	10k	25k
Limit torque, related to M _N	%	150									
Lateral limit force	kN	0.2	0.3	0.5	1	2	3	6	10	16	20
Axial limit force	N	0.5	1	2	4	8	16	32	60	80	100
Bending limit moment	Nm	8	20	40	80	150	200	400	600	800	1400
Weight	kg	0.4	1.3	1.3	1.4	2.4	2.4	4.9	7.6	12	18

Scope of delivery

MA20 Torque Transducer	1
Connecting cable MA20.70, 3m length	1
Operating manual	1

Accessories (to be ordered separately)

To prevent from excessive stress due to misalignment and thermal influences the transducer should be fitted between flexible couplings. TILKOM offer such flexible torsionally rigid couplings MK series. For technical specification see data sheet entitled "MK couplings".

Modifications reserved.

TILKOM can produce torque transducers in accordance with Customized specific requirements.

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