

Torque Measuring Flange with integrated Coupling, rotating Series 86-2554

This sensor has a contactless and digital signal transmission from rotor to stator, which means no signal falsification and maintenance-free



86-2554-xxxx

Nominal torque from 50 N·m ... 1000 N·m
High accuracy 0,1% f. scale
Active output ± 5 V (opt. ± 10 V)
Speed up to 13.600min^{-1}
Integrated speed measurement optional
Maintenance-free, since no bearings
Very short axial length
High torsional stiffness
Reliable and durable
Simple handling and assembly
Special version on request
Integrated torsional stiff multi disc clutch, so no extra adapter required

Technical Data Model 86-2554

Type	Coupling Size	Nominal Torque [Nm]	Limit Speed [min-1]	Springrate [N-m/rad]	Mass Moment of Inertia [kg-m ²] ^{[1][2]}		Limit Thrust Load [N]	Axial Displacement [mm]	Angular Displacement [°]	Radial Displacement [mm]
					Drive side	Test side				
86-2554-5050	16	50	13600 (9500) ³	4,90E+04	2,90E-03	1,20E-03	150	0,25	0,4° (0,2° per disc pack)	0,05
86-2554-5100	16	100	13600 (9500) ³	6,20E+04	2,90E-03	1,20E-03	150	0,25		0,05
86-2554-5150	16	150	13600 (9500) ³	6,20E+04	2,90E-03	1,20E-03	150	0,25		0,05
86-2554-5150	25	150	11800 (8200)	1,20E+05	4,30E-03	2,10E-03	190	0,25		0,05
86-2554-5200	25	200	11800 (8200)	1,20E+05	4,30E-03	2,10E-03	190	0,25		0,05
86-2554-5250	25	250	11800 (8200)	1,20E+05	4,30E-03	2,10E-03	190	0,25		0,05
86-2554-5200	40	200	10100 (7000)	1,30E+05	7,30E-03	4,20E-03	250	0,3		0,06
86-2554-5300	40	300	10100 (7000)	1,30E+05	7,30E-03	4,20E-03	250	0,3		0,06
86-2554-5400	40	400	10100 (7000)	1,30E+05	7,30E-03	4,20E-03	250	0,3		0,06
86-2554-5400	64	400	8500 (6000)	3,10E+05	1,20E-02	1,00E-02	450	0,3		0,06
86-2554-5500	64	500	8500 (6000)	3,10E+05	1,20E-02	1,00E-02	450	0,3		0,06
86-2554-5600	64	600	8500 (6000)	3,10E+05	1,20E-02	1,00E-02	450	0,3		0,06
86-2554-5600	100	600	7300 (5100)	4,80E+05	2,20E-02	2,00E-02	600	0,45		0,07
86-2554-5750	100	750	7300 (5100)	4,80E+05	2,20E-02	2,00E-02	600	0,45		0,07
86-2554-6001	100	1000	7300 (5100)	4,80E+05	2,20E-02	2,00E-02	600	0,45		0,07

[1] Mass moments of inertia apply for clamping ring hub at largest bore

[2] Without option speed measurement

[3] Limit speed at clamping ring hub

Technical Data

86-2554	
Accuracy class	0,1 % f. s.
Repeatability (DIN 1319)	±0,02 %
Excitation voltage	12 ... 28 VDC
Current consumption	≤50 mA
Output signal	±5 V
Reference temperature	23 °C
Nominal temperature range	5 ... 45 °C
Service temperature range	0 ... 60 °C
Storage temperature range	-10 ... 70 °C
Temp. coeff. of sensitivity	±0,01 % f. s.
Temp. coeff. of zero signal	±0,02 % f. s.
Service torque (static)	130 % f. s.
Limit torque (static)	200 % f. s.
Ultimate torque (static)	>300 % f. s.
Bandwidth (DIN 50100)	70 (<i>peak - peak</i>) %
Balancing grade (DIN ISO 1940)	6,3
Level of protection (DIN EN 60529)	IP54
Electrical connection	12-pin series 581 ^[4]

Pin Connection

12pin		
Pin A	NC	-
Pin B	NC	-
Pin C	Signal (+)	±5 V (±10V)
Pin D	Signal (GND)	0 V
Pin E	Supply (GND)	0 V
Pin F	Supply (+)	12 ... 28 VDC
Pin G	Option signal speed	5 V TTL
Pin H	NC	-
Pin J	NC	-
Pin K	NC	-
Pin L	NC	-
Pin M	Shield	

Option Calibrations

Article No.	Description	Steps	Norm
400676	Linearity diagram	25%	Factory standard
400664	Linearity diagram	10%	
400961	Proprietary calibration	3	
400700	Proprietary calibration	5	VDI/VDE 2646
400688	Proprietary calibration	8	
	DAkKS-Calibration		on request

Option/Accessories

Article-No.	Size	Description
108807	16	Speed measurement, 1 x 30 impulses, 5V TTL
108808	25	
108809	40	
108810	64	
108811	100	
		Max. Ø dA at additional keyway
108812	16	20 mm
108813	25	28 mm
108814	40	38 mm
108815	64	40 mm
108816	100	50 mm
108817		Output signal V ±10
41382		Female cable connector 12-pin series 581
45598		Female angled connector 12-pin series 682
10270		Connection cable, 3 m, 12-pin series 581, free soldered ends
10345		Connection cable angled, 3 m, 12-pin series 682, free soldered ends

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[4]female cable connector in scope of delivery at first delivery

86-2554 with Double Jointed Coupling and Disk Hub (SR)

Article-No.	Type	Size	Nominal Torque [N·m]
108737	86-2554-16/SR/dA../dS..	16	50
108738	86-2554-16/SR/dA../dS..	16	100
108739	86-2554-16/SR/dA../dS..	16	150
108740	86-2554-25/SR/dA../dS..	25	150
108741	86-2554-25/SR/dA../dS..	25	200
108742	86-2554-25/SR/dA../dS..	25	250
108743	86-2554-40/SR/dA../dS..	40	200
108744	86-2554-40/SR/dA../dS..	40	300
108745	86-2554-40/SR/dA../dS..	40	400
108746	86-2554-64/SR/dA../dS..	64	400
108747	86-2554-64/SR/dA../dS..	64	500
108748	86-2554-64/SR/dA../dS..	64	600
108749	86-2554-100/SR/dA../dS..	100	600
108750	86-2554-100/SR/dA../dS..	100	750
108751	86-2554-100/SR/dA../dS..	100	1000

Please specify requested bore Ø dA and Ø dS at order.

86-2554 with Double Jointed Coupling and Clamping Ring Hub (RK)

Article-No.	Type	Size	Nominal Torque [N·m]
108752	86-2554-16/RK/dA../dR..	16	50
108753	86-2554-16/RK/dA../dR..	16	100
108754	86-2554-16/RK/dA../dR..	16	150
108755	86-2554-25/RK/dA../dR..	25	150
108756	86-2554-25/RK/dA../dR..	25	200
108757	86-2554-25/RK/dA../dR..	25	250
108758	86-2554-40/RK/dA../dR..	40	200
108759	86-2554-40/RK/dA../dR..	40	300
108760	86-2554-40/RK/dA../dR..	40	400
108761	86-2554-64/RK/dA../dR..	64	400
108762	86-2554-64/RK/dA../dR..	64	500
109492	86-2554-64/RK/dA../dR..	64	600
108764	86-2554-100/RK/dA../dR..	100	600
108765	86-2554-100/RK/dA../dR..	100	750
108766	86-2554-100/RK/dA../dR..	100	1000

Please specify requested bore Ø dA and Ø dR at order.

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86-2554 with Double Jointed Coupling and Key Hub (PS)

Article-No.	Type	Size	Nominal Torque [N·m]
108767	86-2554-16/PS/dA../dP..	16	50
108768	86-2554-16/PS/dA../dP..	16	100
108769	86-2554-16/PS/dA../dP..	16	150
108770	86-2554-25/PS/dA../dP..	25	150
108771	86-2554-25/PS/dA../dP..	25	200
108772	86-2554-25/PS/dA../dP..	25	250
108773	86-2554-40/PS/dA../dP..	40	200
108774	86-2554-40/PS/dA../dP..	40	300
108775	86-2554-40/PS/dA../dP..	40	400
108776	86-2554-64/PS/dA../dP..	64	400
108777	86-2554-64/PS/dA../dP..	64	500
108778	86-2554-64/PS/dA../dP..	64	600
108779	86-2554-100/PS/dA../dP..	100	600
108780	86-2554-100/PS/dA../dP..	100	750
108781	86-2554-100/PS/dA../dP..	100	1000

Please specify requested diameter \varnothing dA and \varnothing dP at order.

86-2554 with Double Jointed Coupling and Key Hub Large (PG)

Article-No.	Type	Size	Nominal Torque [N·m]
108782	86-2554-16/PG/dA../dG..	16	50
108783	86-2554-16/PG/dA../dG..	16	100
108784	86-2554-16/PG/dA../dG..	16	150
108785	86-2554-25/PG/dA../dG..	25	150
108786	86-2554-25/PG/dA../dG..	25	200
108787	86-2554-25/PG/dA../dG..	25	250
108788	86-2554-40/PG/dA../dG..	40	200
108789	86-2554-40/PG/dA../dG..	40	300
108790	86-2554-40/PG/dA../dG..	40	400
108791	86-2554-64/PG/dA../dG..	64	400
108792	86-2554-64/PG/dA../dG..	64	500
108793	86-2554-64/PG/dA../dG..	64	600
108794	86-2554-100/PG/dA../dG..	100	600
108795	86-2554-100/PG/dA../dG..	100	750
108796	86-2554-100/PG/dA../dG..	100	1000

Please specify requested diameter \varnothing dA and \varnothing dG at order.