Technical data

4.11 MSK050C Technical data

Designation	Symbol	Unit	MSK050C-0300-NN	MSK050C-0450-NN	MSK050C-0600-NN
Continuous torque at standstill 60 K	M_{0_60}	Nm	5.0		
Continuous current at standstill 60 K	$I_{0\_60(eff)}$	A	3.1	4.7	6.2
Continuous torque at standstill 100 K	M_{0_100}	Nm	5.5		
Continuous current at standstill 100 K	$I_{0\_100(eff)}$	A	3.4	5.2	6.8
Maximum torque	M_{max}	Nm	15.0		
Maximum current	$I_{max(eff)}$	A	12.4	18.8	24.8
Torque constant at 20 °C	K_{M_N}	Nm/A	1.77	1.16	0.89
Voltage constant at 20 °C[1)]	K_{EMK_1000}	V/1000 min-1	109.0	71.5	55.0
Winding resistance at 20 °C	R_{12}	Ohm	6.6	3.2	1.7
Winding inductance	L_{12}	mH	46.1	20.2	11
Leakage capacitance of the component	C_{dis}	nF	2.6	2.4	2.6
Number of pole pairs	p	-	4		
Moment of inertia of rotor	J_{red}	kg*m^2	0.00033		
Thermal time constant	T_{th_nom}	min	14.0		
Maximum speed (electric)	$n_{max\ el}$	min^{-1}	4700	6000	
Sound pressure level	L_P	dB[A]	< 75		
Mass[2)]	m	kg	5.4 (6.3)		
Ambient temperature during operation	T_{amb}	°C	0 ... 40		
Protection class (EN 60034-5)	-	-	IP65		
Thermal class (EN 60034-1)	T.CL.	-	155		
					Last amended: 2014-01-21

1) Manufacturing tolerance ±5%
2) (...) Motors with holding brake 1, 2, ...

Tab. 4-10: MSK - Technical data

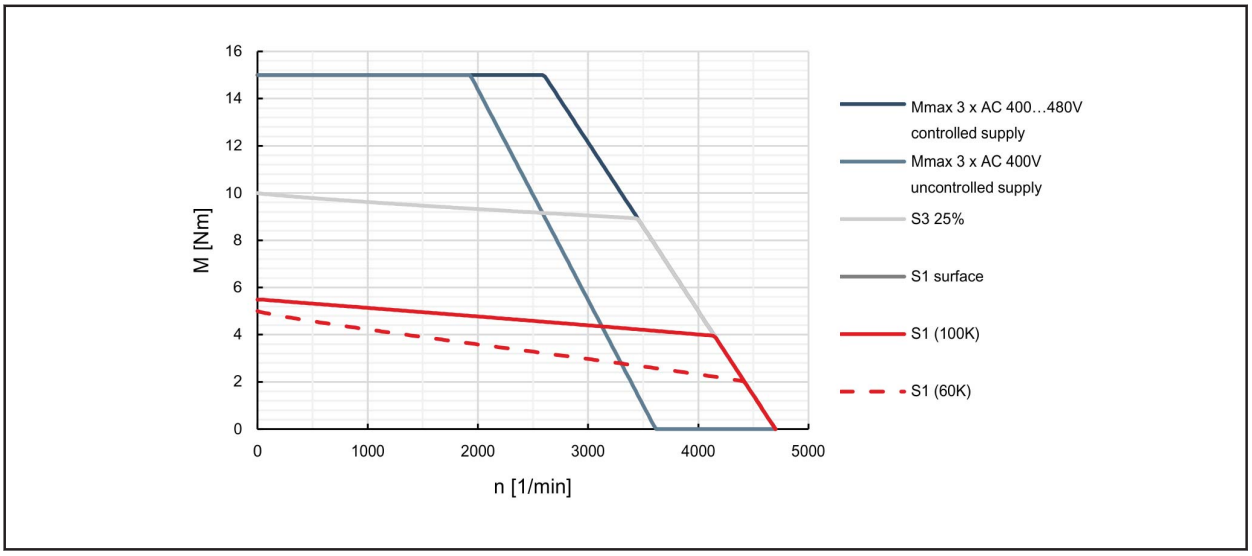

Fig. 4-13: Characteristic curves of motor MSK050C-0300

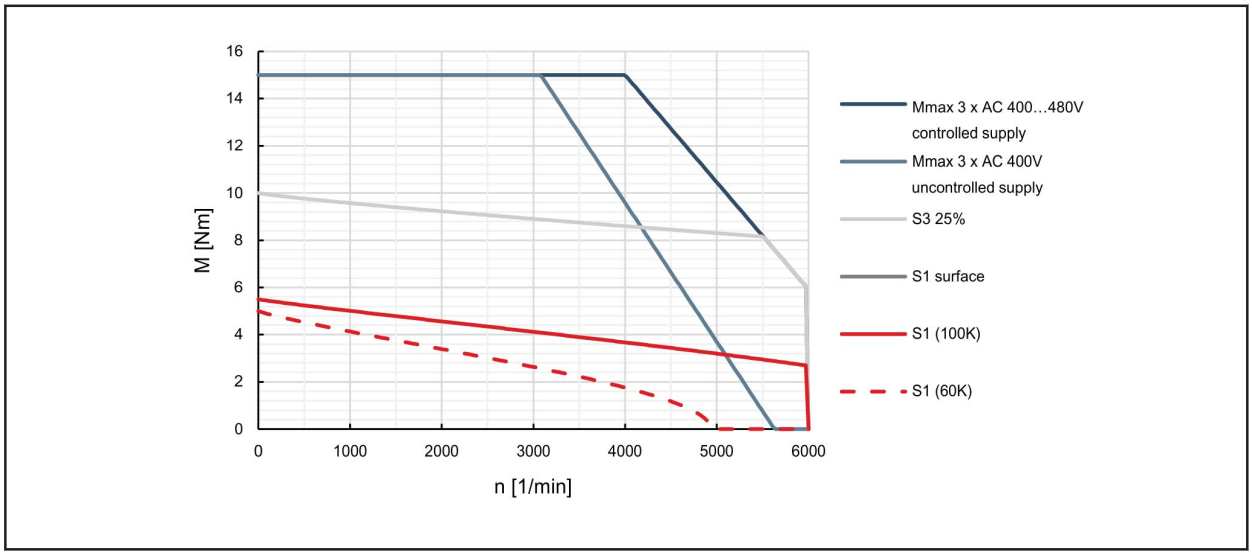

Fig. 4-14: Characteristic curves of motor MSK050C-0450

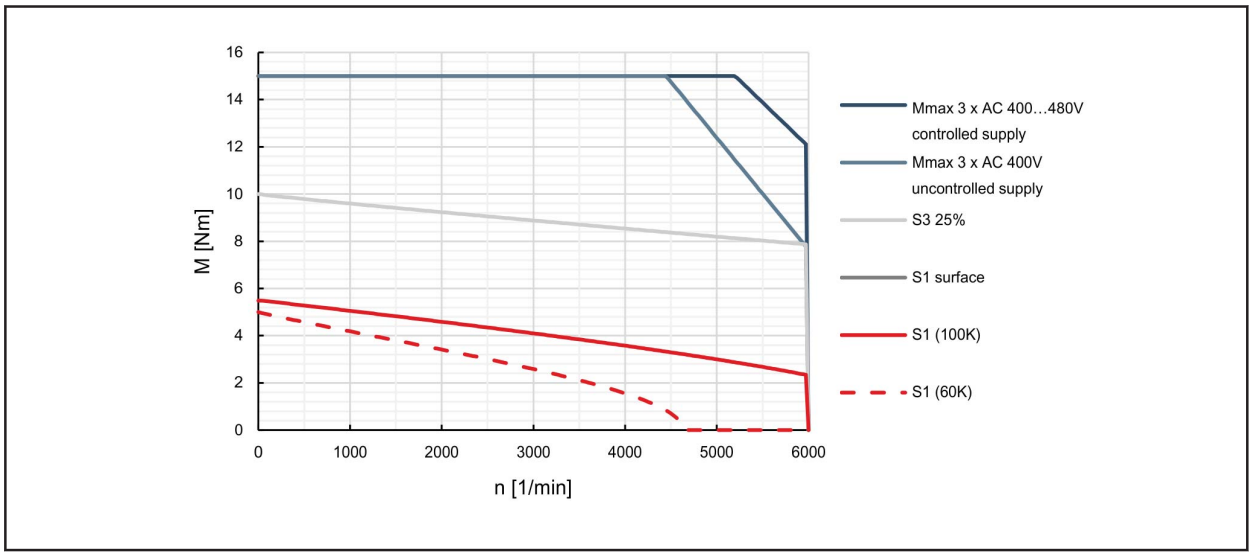

Fig. 4-15: Characteristic curves of motor MSK050C-0600

5.5 MSK050 Specifications

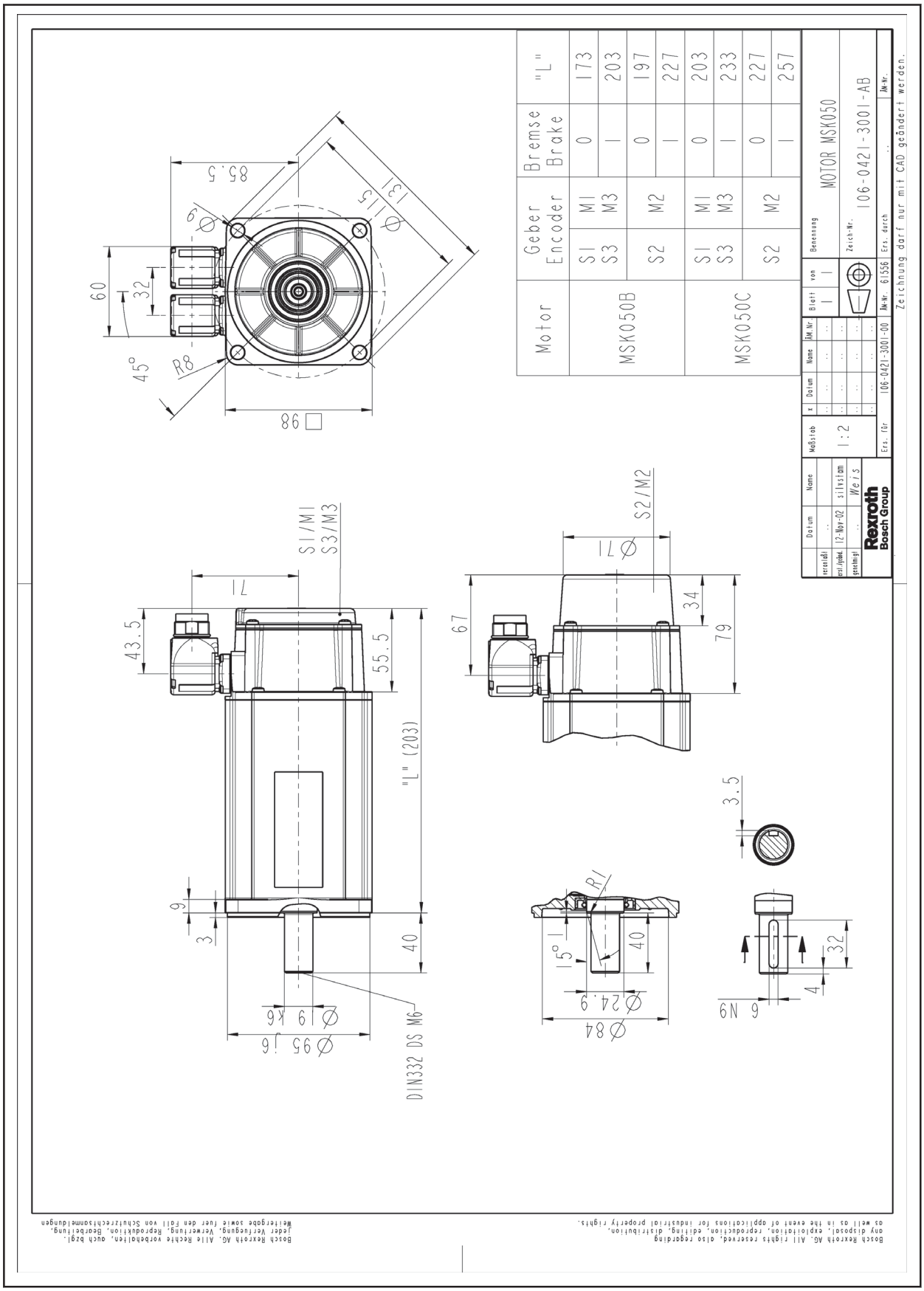

Fig. 5-4: MSK050 specification

Type code

6.5 MSK050 Type code

Abbreviation column	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Example:	M	S	K	0	5	0	C	-	0	6	0	0	-	N	N	-	S	1	-	U	G	0	-	N	N	N	N														

Product

MSK	= MSK

Size

050	=050

Lengths

Lengths	= B, C

Winding

MSK050B	= 0300, 0450, 0600
MSK050C	= 0300, 0450, 0600

Cooling

Natural convection	= NN

Encoder [1)]

Optical encoder, Singleturn Hiperface, with 128 signal periods	= S1
Optical encoder, Singleturn EnDat2.1, with 2,048 signal periods	= S2
Capacitive encoder, Singleturn Hiperface, with 16 signal periods	= S3
Optical encoder, Multiturn-absolute Hiperface, with 128 signal periods	= M1
Optical encoder, Multiturn-absolute EnDat2.1, with 2,048 signal periods	= M2
Capacitive encoder, Multiturn-absolute Hiperface, with 16 signal periods	= M3

Electrical Connection

Connector, rotatable 240°	= U

Shaft

Smooth shaft with shaft sealing ring (standard)	= G
Shaft with keyway acc. to DIN 6885-1 with shaft sealing ring	= P

Holding Brake

Without holding brake	= 0
Holding brake, electrically-released, 6 Nm	= 1

Other Design

Standard	= NNNN
Standard and Ex design acc. to device group II, category 3G and 3D acc. to EN 60079 ff	= NSNN
With increased concentricity, run-out acc. to DIN 42955	= RNNN
With increased concentricity, run-out acc. to DIN 42955 and Ex-design acc. to device group II, category 3G and 3D acc. to EN 60079 ff	= RSNN

Remark

1) Encoder "S1" and "M1" are only available with other design "NNNN" and "NSNN"
Encoder "S2" and "M2" are only available with other design "RNNN" and "RSNN"
Encoder "S3" and "M3" are only available with other design "NNNN"

Fig. 6-4: MSK050 type code