Technical Data

4.7 MSK040C - Technical Data

Designation	Symbol	Unit	MSK040C-0450-NN	MSK040C-0600-NN
UL Files (UL)			E335445	
Continuous torque at standstill 60 K	M_{0_60}	Nm	2.7	
Continuous current at standstill 60 K	$I_{0_60(rms)}$	A	2.4	3.1
Continuous torque at standstill 100 K	M_{0_100}	Nm	3.1	
Continuous current at standstill 100 K	$I_{0_100(rms)}$	A	3.1	4.7
Maximum torque	M_{max}	Nm	8.1	
Maximum current	$I_{max(rms)}$	A	9.6	12.4
Torque constant at 20 °C	K_{M_N}	Nm/A	1.25	0.95
Voltage constant at 20 °C[1)]	K_{EMK_1000}	V/min^{-1}	76.7	58.2
Winding resistance at 20 °C	R_{12}	ohms	7.40	3.90
Winding inductivity	L_{12}	mH	37.900	21.300
Discharge capacity of the component	C_{dis}	nF	2.0	
Number of pole pairs	p	-	4	
Moment of inertia of the rotor	J_{rot}	$kg*m^2$	0.00014	
Thermal time constant	T_{th}	min	16.0	
Maximum speed	n_{max}	min^{-1}	6,000	7,500
Sound pressure level	L_P	dB[A]	<75	
Weight [2)]	m	kg	3.6 (3.9)	
Ambient temperature in operation	T_{amb}	°C	0 ... 40	
Type of protection according to IEC 60529	---	-	IP65	
Insulation class according to DIN EN 60034-1	---	-	155	
				Latest amendment: 2008-10-13

1) Manufacturing tolerance ±5 %
2) (...) Values for motors with holding brake, sorted (holding brake 1, holding brake 2 ...)

Fig.4-13: MSK - Technical data (standard cooling)

Characteristic Motor Curves

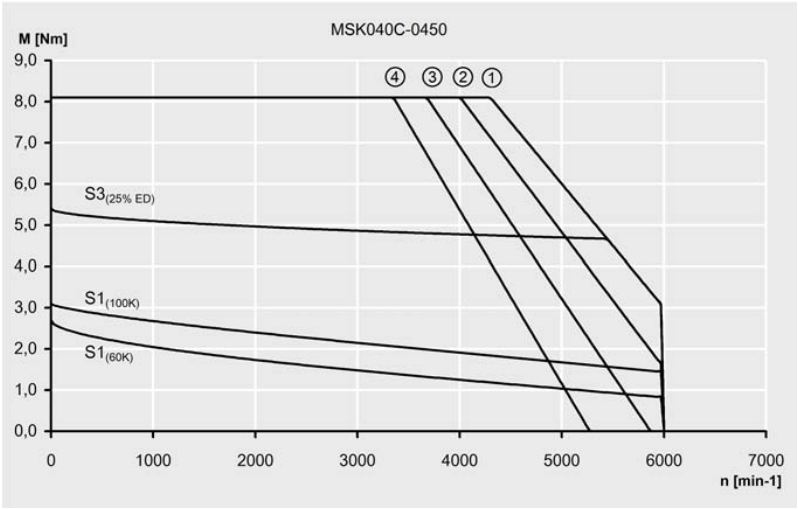

Fig.4-14: Characteristic curves MSK040C-0450

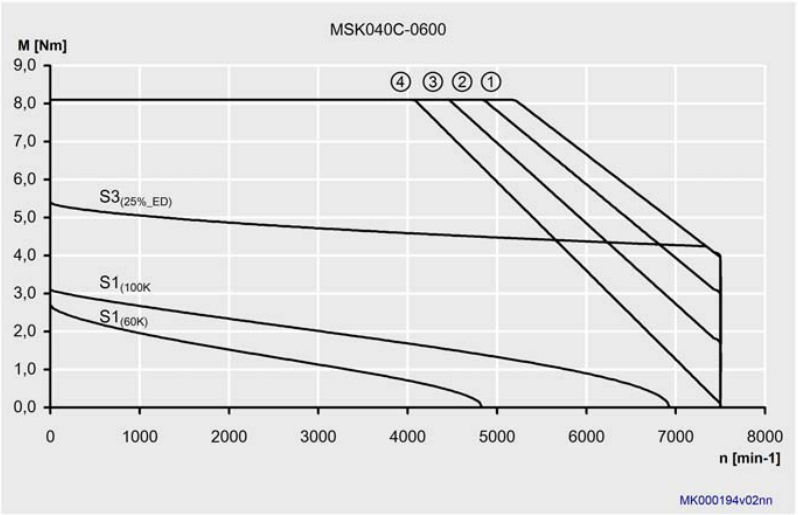

Fig.4-15: Characteristic curves MSK040C-0600

5.3 MSK040 Specifications

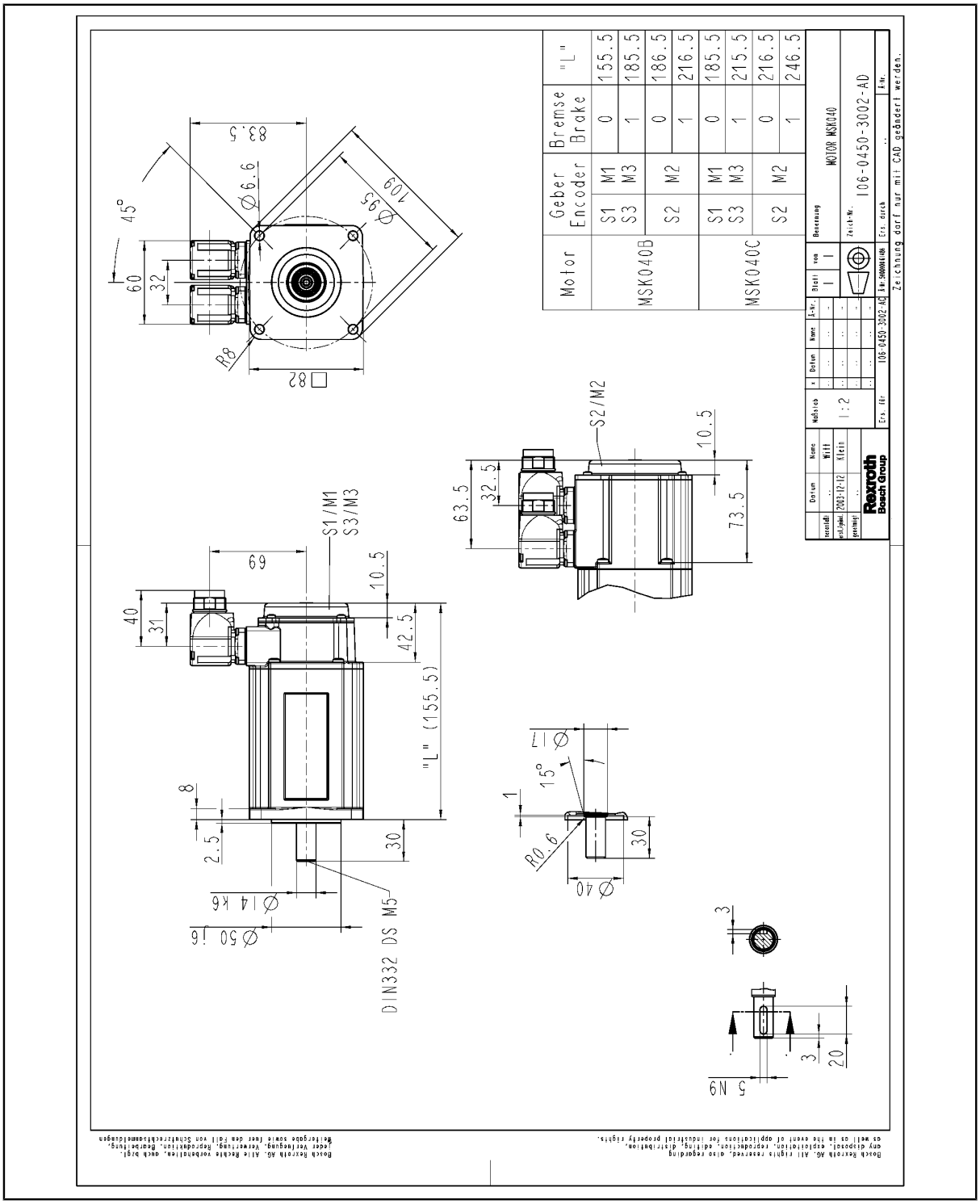

Fig.5-4: MSK040 specifications

Type Codes

6.3 MSK040 Type Code

ZN-40003-040_NOR_N_EN_2010-06-18.fh11

Abbrev. 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	4	0	B	-	0	6	0	0	-	N	N	-	S	1	-	U	G	0	-	N	N	N	N													

Product
MSK . . . . . = MSK

Size
040 . . . . . = 040

Length
Lengths . . . . . = B, C

Winding
MSK040B . . . . . = 0450, 0600
MSK040C . . . . . = 0450, 0600

Cooling mode
Natural convection . . . . . = NN

Encoder
Optical encoder, singleturn Hiperface,
with 128 increments. . . . . = S1
Optical encoder, singleturn EnDat2.1,
with 2048 increments. . . . . = S2
Capacitive encoder, singleturn Hiperface,
with 16 increments . . . . . = S3 (1)
Optical encoder, multiturn-absolute Hiperface,
with 128 increments. . . . . = M1
Optical encoder, multiturn-absolute EnDat2.1,
with 2048 increments. . . . . = M2
Capacitive encoder, multiturn-absolute Hiperface,
with 16 increments . . . . . = M3 (1)

Electrical connection
Plug, rotatable 240°. . . . . = U

Fig.6-7: MSK040 type code (page 1)

Type Codes

ZN 40003-040_NOR_N_EN_2010-06-18.fh11

Abbrev. 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	4	0	B	-	0	6	0	0	-	N	N	-	S	1	-	U	G	0	-	N	N	N	N														

Shaft

Plain shaft with shaft sealing ring (standard). . . . . = G
Shaft with key per DIN 6885-1 with
shaft sealing ring . . . . . = P

Holding brake

Without holding brake. . . . . .= 0
Holding brake, electrically-released, 4 Nm . . . . . = 1

Other design

Standard. . . . . = NNNN
Standard and Ex type for cluster II, categories 3G and 3D
on DIN EN 60079 ff . . . . . = NSNN

Note:

1 Encoder "S3" and "M3" are only available with other design "NNNN"

Standard reference

Standard	Title	Edition
DIN 6885-1	1968-08	Drive Type Fastenings without Taper Action; Parallel Keys, Keyways, Deep Pattern
DIN EN 60079 ff	-	Electrical apparatus for explosive gas atmospheres (ATEX)

Fig.6-8: MSK040 type code (page 2)