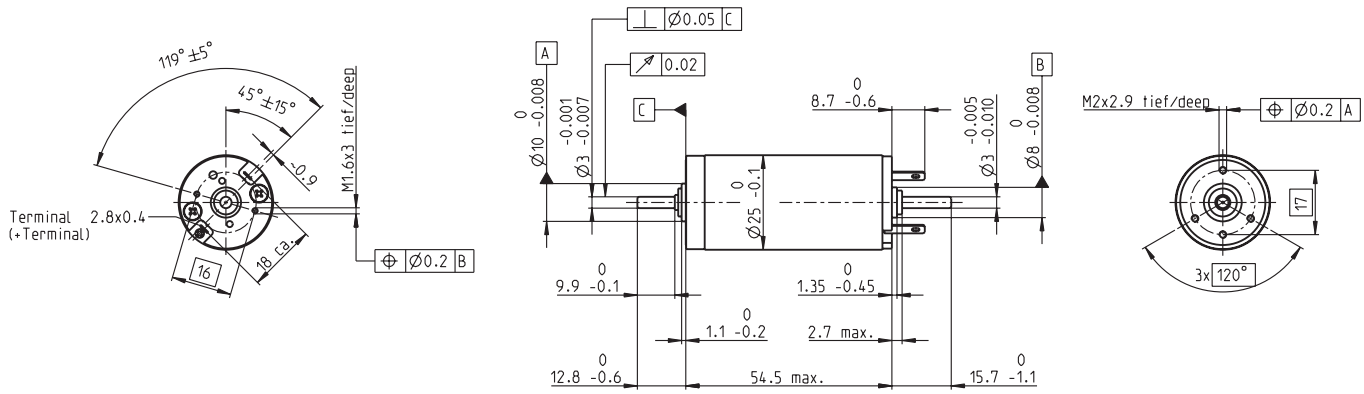
RE 25 ∅25 mm, Graphite Brushes, 20 Watt



M 1:2

Stock program
Standard program
Special program (on request)

			Order Number								
	according to dimensional drawing		118749	118750	118751	118752	118753	118754	118755	118756	118757
	shaft length 15.7 shortened to 4 mm		302002	302003	302004	302005	302006	302007	302001	302008	302009
Motor Data											
	Values at nominal voltage										
1	Nominal voltage	V	9.0	15.0	18.0	24.0	30.0	42.0	48.0	48.0	48.0
2	No load speed	rpm	10000	9650	10200	9550	9860	11100	10300	8230	5050
3	No load current	mA	110	60.7	53.9	36.9	30.5	25.2	20.1	15.2	8.51
4	Nominal speed	rpm	8980	8470	8890	8360	8680	9950	9190	7070	3870
5	Nominal torque (max. continuous torque)	mNm	11.1	20.6	23.1	26.7	27.2	27.6	28.4	29.4	30.8
6	Nominal current (max. continuous current)	A	1.50	1.50	1.47	1.17	0.983	0.799	0.667	0.548	0.352
7	Stall torque	mNm	244	237	233	257	263	299	280	222	136
8	Starting current	A	30.7	16.6	14.3	11.0	9.21	8.39	6.38	4.03	1.52
9	Max. efficiency	%	77	83	84	86	86	88	88	87	85
	Characteristics										
10	Terminal resistance	Ω	0.293	0.902	1.26	2.19	3.26	5.00	7.53	11.9	31.6
11	Terminal inductance	mH	0.0275	0.0882	0.115	0.238	0.353	0.551	0.832	1.31	3.48
12	Torque constant	mNm / A	7.97	14.3	16.3	23.4	28.5	35.7	43.8	55.0	89.7
13	Speed constant	rpm / V	1200	669	585	407	335	268	218	173	106
14	Speed / torque gradient	rpm / mNm	44.1	42.3	45.3	38.1	38.2	37.5	37.4	37.6	37.5
15	Mechanical time constant	ms	5.36	4.58	4.49	4.28	4.20	4.13	4.11	4.10	4.09
16	Rotor inertia	gcm²	11.6	10.3	9.45	10.7	10.5	10.5	10.5	10.4	10.4

Specifications

Thermal data

17	Thermal resistance housing-ambient	14 K / W
18	Thermal resistance winding-housing	3.1 K / W
19	Thermal time constant winding	12.4 s
20	Thermal time constant motor	910 s
21	Ambient temperature	-30 ... +100°C
22	Max. permissible winding temperature	+125°C

Mechanical data (ball bearings)

23	Max. permissible speed	14000 rpm
24	Axial play	0.05 - 0.15 mm
25	Radial play	0.025 mm
26	Max. axial load (dynamic)	3.2 N
27	Max. force for press fits (static) (static, shaft supported)	64 N 270 N
28	Max. radial loading, 5 mm from flange	16 N

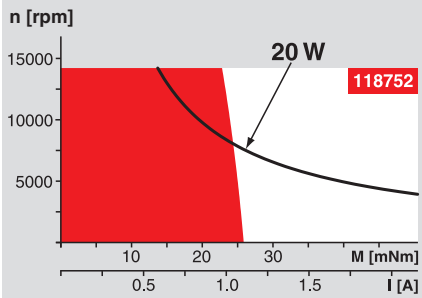
Other specifications

29	Number of pole pairs	1
30	Number of commutator segments	11
31	Weight of motor	130 g

Values listed in the table are nominal.
Explanation of the figures on page 49.

Option
Preloaded ball bearings

Operating Range



Comments

Continuous operation
In observation of above listed thermal resistance (lines 17 and 18) the maximum permissible winding temperature will be reached during continuous operation at 25°C ambient.
= Thermal limit.

Short term operation
The motor may be briefly overloaded (recurring).

Assigned power rating

maxon Modular System

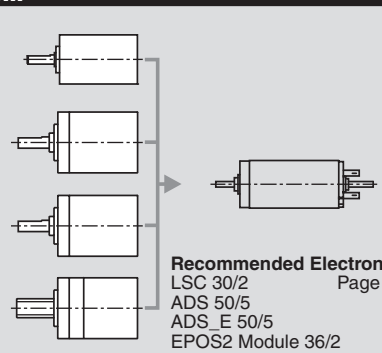
Overview on page 16 - 21

Planetary Gearhead
∅26 mm
0.5 - 2.0 Nm
Page 228

Planetary Gearhead
∅32 mm
0.75 - 6.0 Nm
Page 230 / 231 / 233

Koaxdrive
∅32 mm
1.0 - 4.5 Nm
Page 236

Spindle Drive
∅32 mm
Page 249 / 250 / 251



Recommended Electronics:

LSC 30/2	Page 282
ADS 50/5	282
ADS_E 50/5	283
EPOS2 Module 36/2	304
EPOS2 24/5	305
EPOS2 50/5	305
EPOS2P 24/5	308
Notes	**18**

Encoder MR
128 - 1000 Imp.,
3 channels
Page 262

Encoder Enc
22 mm
100 Imp., 2 channels
Page 264

Encoder HED_ 5540
500 Imp.,
3 channels
Page 266 / 268

DC-Tacho DCT
∅22 mm,
0.52 V
Page 276

Brake AB 28
24 VDC
0.4 Nm
Page 318