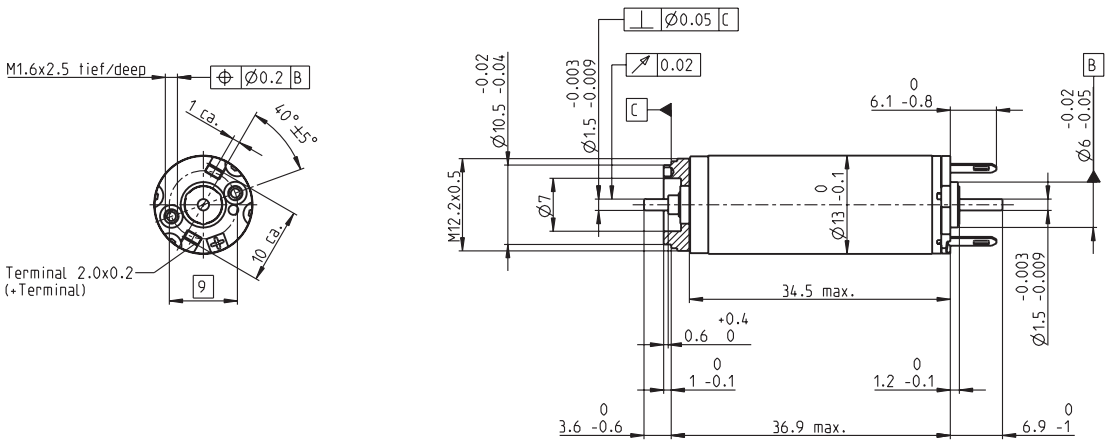
RE 13 ∅13 mm, Graphite Brushes, 3 Watt



M 1:1

Stock program
Standard program
Special program (on request)

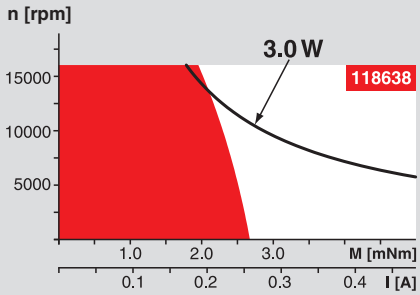
			Order Number													
			118628	118629	118630	118631	118632	118633	118634	118635	118636	118637	118638	118639	118640	118641	118642
Motor Data																	
	Values at nominal voltage																
1	Nominal voltage	V	3.0	3.6	3.6	4.8	6.0	6.0	7.2	9.0	10.0	12.0	15.0	18.0	21.0	24.0	30.0
2	No load speed	rpm	12700	14100	12300	13800	13700	12100	13100	13700	13100	13100	13300	12800	13900	13600	13800
3	No load current	mA	168	163	135	119	93.9	79.5	73.8	62.6	52.7	44.4	35.9	28.5	27.3	23.2	19.0
4	Nominal speed	rpm	11300	12500	10200	11300	10700	9030	10000	10700	10200	10200	10300	9820	10900	10600	10900
5	Nominal torque (max. continuous torque)	mNm	1.22	1.33	1.60	1.95	2.35	2.44	2.35	2.37	2.51	2.45	2.44	2.47	2.39	2.42	2.37
6	Nominal current (max. continuous current)	A	0.720	0.720	0.720	0.720	0.668	0.608	0.532	0.448	0.403	0.331	0.266	0.217	0.196	0.169	0.135
7	Stall torque	mNm	12.1	12.0	9.90	11.0	11.1	9.79	10.3	11.2	11.5	11.1	11.1	10.9	11.6	11.5	11.3
8	Starting current	A	5.51	5.11	3.67	3.43	2.74	2.15	2.04	1.84	1.63	1.32	1.07	0.837	0.828	0.701	0.563
9	Max. efficiency	%	68	68	66	67	67	66	66	67	68	67	67	67	68	68	67
	Characteristics																
10	Terminal resistance	Ω	0.544	0.705	0.980	1.40	2.19	2.79	3.53	4.88	6.14	9.07	14.1	21.5	25.4	34.2	53.3
11	Terminal inductance	mH	0.0213	0.0247	0.0323	0.0456	0.0727	0.092	0.114	0.164	0.223	0.316	0.485	0.749	0.870	1.19	1.79
12	Torque constant	mNm / A	2.19	2.36	2.70	3.20	4.04	4.55	5.05	6.06	7.07	8.42	10.4	13.0	14.0	16.3	20.0
13	Speed constant	rpm / V	4360	4050	3540	2980	2360	2100	1890	1570	1350	1130	914	736	683	584	476
14	Speed / torque gradient	rpm / mNm	1080	1210	1290	1310	1280	1290	1320	1270	1170	1220	1230	1220	1240	1220	1270
15	Mechanical time constant	ms	7.69	7.51	7.36	7.21	7.08	7.04	7.04	6.97	6.90	6.92	6.93	6.91	6.92	6.93	6.97
16	Rotor inertia	gcm²	0.677	0.592	0.545	0.527	0.527	0.523	0.509	0.525	0.562	0.541	0.537	0.541	0.533	0.540	0.526

Specifications

	Thermal data	
17	Thermal resistance housing-ambient	33 K / W
18	Thermal resistance winding-housing	7.0 K / W
19	Thermal time constant winding	4.85 s
20	Thermal time constant motor	380 s
21	Ambient temperature	-20 ... +65°C
22	Max. permissible winding temperature	+85°C
	Mechanical data (sleeve bearings)	
23	Max. permissible speed	16000 rpm
24	Axial play	0.05 - 0.15 mm
25	Radial play	0.014 mm
26	Max. axial load (dynamic)	0.8 N
27	Max. force for press fits (static)	15 N
	(static, shaft supported)	80 N
28	Max. radial loading, 5 mm from flange	1.4 N
	Other specifications	
29	Number of pole pairs	1
30	Number of commutator segments	7
31	Weight of motor	23 g

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

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
∅13 mm
0.05 - 0.15 Nm
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Planetary Gearhead
∅13 mm
0.2 - 0.35 Nm
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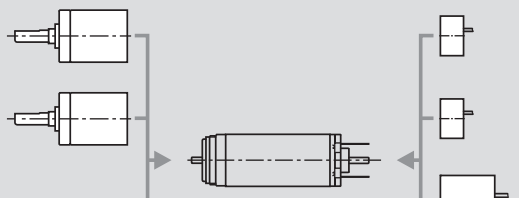

Encoder MR
16 Imp.,
2 channels
Page 255

Encoder MR
64 - 256 Imp.,
2 channels
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Encoder MEnc
∅13 mm
16 Imp., 2 channels
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Recommended Electronics:
LSC 30/2 Page 282
EPOS2 Module 36/2 304
Notes **18**