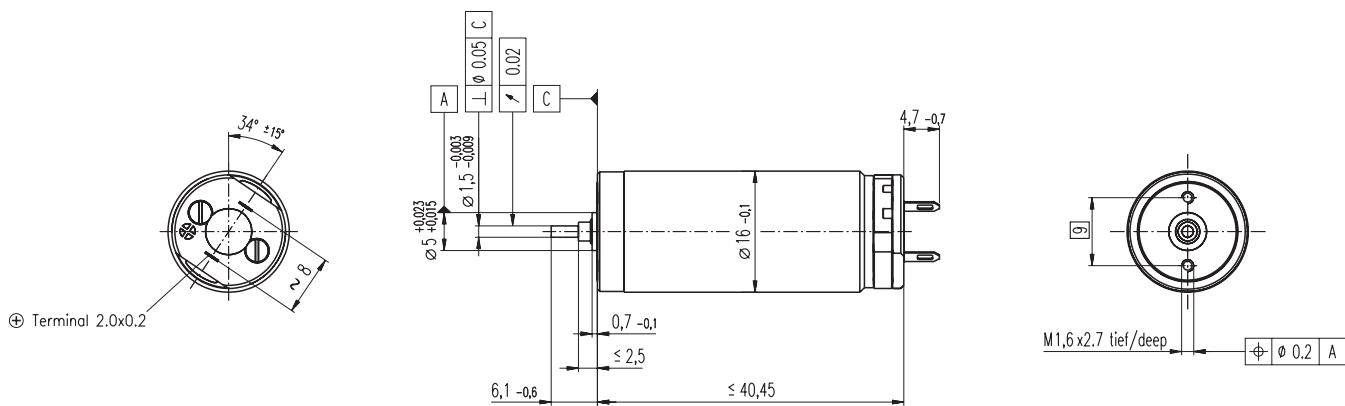


RE 16 \varnothing 16 mm, Precious Metal Brushes CLL, 3.2 Watt, $\text{C}\epsilon$ approved



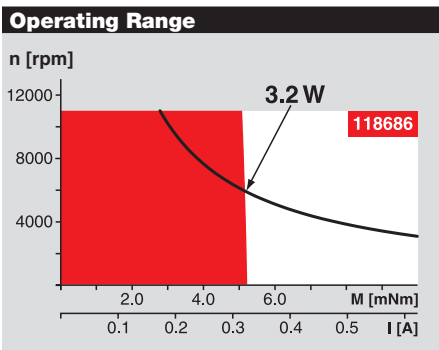
M 1:1

- Stock program
- Standard program
- Special program (on request)

Order Number

Motor Data	118678	118679	118680	118681	118682	118683	118684	118685	118686	118687	118688	118689	118690	118691	118692	
Values at nominal voltage																
1 Nominal voltage	V	1.8	2.4	3.0	3.2	4.5	4.8	7.2	9.0	12.0	12.0	15.0	18.0	24.0	30.0	48.0
2 No load speed	rpm	4990	6360	6890	6270	6740	5700	6890	6740	7130	5990	6010	5900	7250	6460	5500
3 No load current	mA	23.5	25.4	22.9	18.6	14.8	10.8	9.56	7.39	6.05	4.63	3.72	3.02	3.11	2.08	1.02
4 Nominal speed	rpm	4220	5420	5740	4860	4990	3610	4790	4620	5020	3830	3840	3720	5070	4220	3180
5 Nominal torque (max. continuous torque)	mNm	2.39	2.50	2.89	3.41	4.48	5.55	5.50	5.46	5.47	5.37	5.35	5.33	5.28	5.18	5.01
6 Nominal current (max. continuous current)	A	0.720	0.720	0.720	0.720	0.720	0.703	0.562	0.436	0.347	0.286	0.229	0.187	0.171	0.119	0.0614
7 Stall torque	mNm	15.5	16.9	17.3	15.2	17.4	15.2	18.1	17.4	18.6	14.9	14.9	14.5	17.6	15.0	11.9
8 Starting current	A	4.53	4.71	4.19	3.13	2.74	1.90	1.82	1.37	1.16	0.784	0.628	0.500	0.561	0.341	0.144
9 Max. efficiency	%	86	86	86	85	86	86	86	86	86	85	85	85	86	85	84
Characteristics																
10 Terminal resistance	Ω	0.397	0.510	0.715	1.02	1.64	2.53	3.95	6.56	10.3	15.3	23.9	36.0	42.8	88.0	333
11 Terminal inductance	mH	0.0207	0.0227	0.0302	0.0415	0.0711	0.113	0.174	0.284	0.452	0.639	0.993	1.48	1.75	3.44	12.1
12 Torque constant	mNm / A	3.43	3.58	4.13	4.84	6.34	7.99	9.92	12.7	16.0	19.0	23.7	28.9	31.4	44.1	82.7
13 Speed constant	rpm / V	2790	2660	2310	1970	1510	1190	962	753	597	502	403	330	304	217	115
14 Speed / torque gradient	rpm / mNm	323	379	400	415	391	378	383	389	386	404	406	410	414	432	465
15 Mechanical time constant	ms	5.81	5.67	5.53	5.43	5.33	5.28	5.26	5.26	5.24	5.26	5.27	5.28	5.28	5.33	5.39
16 Rotor inertia	gcm ²	1.72	1.43	1.32	1.25	1.30	1.33	1.31	1.29	1.29	1.24	1.24	1.23	1.22	1.18	1.11

Specifications	
Thermal data	
17 Thermal resistance housing-ambient	30 K / W
18 Thermal resistance winding-housing	8.5 K / W
19 Thermal time constant winding	10.5 s
20 Thermal time constant motor	570 s
21 Ambient temperature	-20 ... +65°C
22 Max. permissible winding temperature	+85°C
Mechanical data (sleeve bearings)	
23 Max. permissible speed	11000 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
28 Max. radial loading, 5 mm from flange	1.5 N



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**

Other specifications	
29 Number of pole pairs	1
30 Number of commutator segments	7
31 Weight of motor	38 g
CLL = Capacitor Long Life	
Values listed in the table are nominal. Explanation of the figures on page 49.	

maxon Modular System Overview on page 16 - 21

Planetary Gearhead
 \varnothing 16 mm
0.06 - 0.18 Nm
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Planetary Gearhead
 \varnothing 16 mm
0.1 - 0.3 Nm
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Recommended Electronics:
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