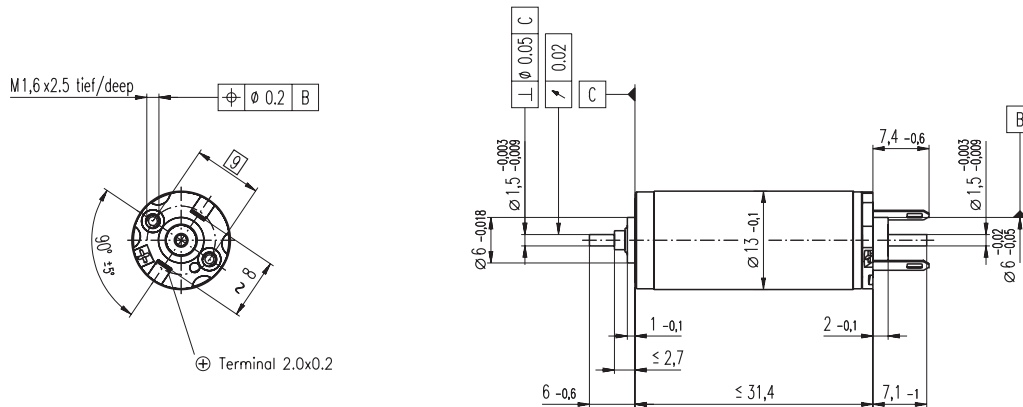


# RE 13 $\varnothing 13$ mm, Precious Metal Brushes, 2 Watt, $\text{C}\epsilon$ approved



M 1:1

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

### Order Number

118491	118492	118493	118494	118495	118496	118497	118498	118499	118500	118501	118502	118503	118504	118505
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### Motor Data

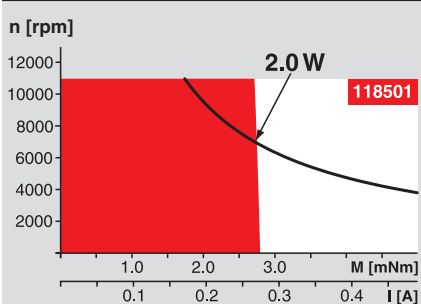
Values at nominal voltage		118491	118492	118493	118494	118495	118496	118497	118498	118499	118500	118501	118502	118503	118504	118505	
1	Nominal voltage	V	1.5	1.5	1.8	2.4	3.0	3.0	3.6	4.2	4.8	6.0	7.2	9.0	10.0	12.0	15.0
2	No load speed	rpm	6560	6070	6370	7160	7080	6290	6790	6610	6480	6800	6580	6620	6830	7010	7140
3	No load current	mA	43.7	39.7	35.2	30.7	24.2	20.8	19.1	15.8	13.5	11.5	9.17	7.40	6.93	5.97	4.90
4	Nominal speed	rpm	5000	4170	4020	4290	3470	2510	2970	2850	2860	3110	2870	2930	3110	3320	3390
5	Nominal torque (max. continuous torque)	mNm	1.46	1.58	1.82	2.18	2.78	2.88	2.84	2.90	3.01	2.95	2.93	2.94	2.92	2.93	2.88
6	Nominal current (max. continuous current)	A	0.720	0.720	0.720	0.720	0.720	0.663	0.587	0.499	0.445	0.366	0.293	0.237	0.218	0.188	0.150
7	Stall torque	mNm	6.22	5.12	5.01	5.51	5.51	4.87	5.11	5.16	5.47	5.5	5.27	5.34	5.42	5.64	5.55
8	Starting current	A	2.89	2.21	1.89	1.75	1.39	1.09	1.03	0.866	0.786	0.665	0.514	0.419	0.395	0.351	0.282
9	Max. efficiency	%	77	75	75	76	76	75	75	75	76	76	75	76	76	76	76
Characteristics		118491	118492	118493	118494	118495	118496	118497	118498	118499	118500	118501	118502	118503	118504	118505	
10	Terminal resistance	$\Omega$	0.519	0.679	0.951	1.37	2.16	2.75	3.50	4.85	6.11	9.03	14.0	21.5	25.3	34.2	53.2
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	2.15	2.32	2.65	3.15	3.97	4.47	4.97	5.96	6.95	8.28	10.3	12.7	13.7	16.1	19.7
13	Speed constant	rpm / V	4440	4120	3610	3040	2400	2140	1920	1600	1370	1150	930	749	695	595	485
14	Speed / torque gradient	rpm / mNm	1070	1210	1290	1320	1310	1320	1350	1300	1210	1260	1270	1260	1280	1270	1310
15	Mechanical time constant	ms	7.58	7.48	7.39	7.31	7.22	7.20	7.22	7.17	7.10	7.14	7.15	7.15	7.15	7.16	7.21
16	Rotor inertia	gcm <sup>2</sup>	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 346 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
  - (static, shaft supported) 95 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 21 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

