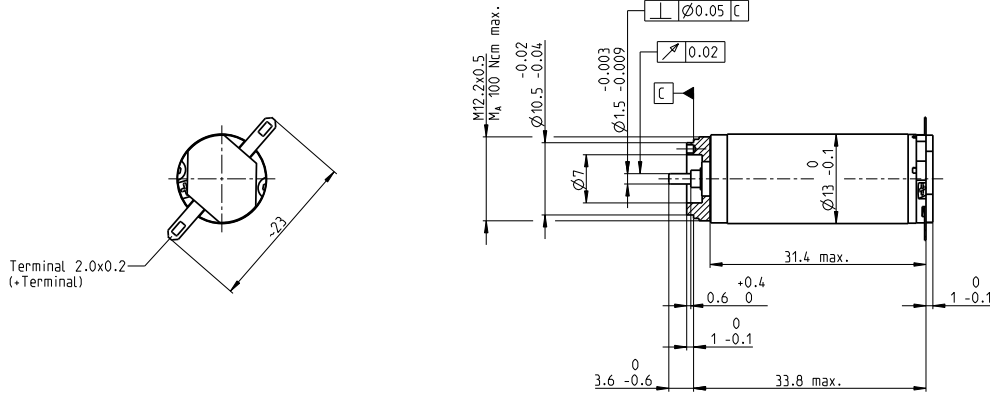


# RE 13 Ø13 mm, Precious Metal Brushes, 2.5 Watt



## M 1:1

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

### Part Numbers

118476	118477	118478	118479	118480	118481	118482	118483	118484	118485	118486	118487	118488	118489	118490
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Motor Data																
Values at nominal voltage																
1 Nominal voltage	V	2.4	3	3	3.6	4.8	4.8	6	7.2	8	10	12	15	15	18	24
2 No load speed	rpm	10600	12200	10700	10800	11400	10100	11400	11400	10900	11400	11000	11100	10300	10600	11500
3 No load current	mA	51.5	50.8	42	35.5	28.8	24.4	23	19.2	16.1	13.8	11	8.87	7.98	6.9	5.82
4 Nominal speed	rpm	9160	10500	8490	8050	7890	6430	7660	7730	7320	7790	7390	7470	6620	6920	7800
5 Nominal torque (max. continuous torque)	mNm	1.44	1.56	1.8	2.16	2.76	2.87	2.81	2.86	2.98	2.9	2.89	2.9	2.88	2.9	2.84
6 Nominal current (max. continuous current)	A	0.72	0.72	0.72	0.72	0.72	0.664	0.586	0.497	0.443	0.363	0.291	0.235	0.217	0.187	0.149
7 Stall torque	mNm	9.95	10.2	8.34	8.25	8.81	7.78	8.51	8.84	9.1	9.15	8.77	8.9	8.13	8.44	8.87
8 Stall current	A	4.63	4.42	3.15	2.63	2.22	1.74	1.72	1.48	1.31	1.11	0.856	0.699	0.592	0.526	0.451
9 Max. efficiency	%	80	80	79	78	79	78	79	79	79	79	79	79	78	79	79
Characteristics																
10 Terminal resistance	Ω	0.519	0.679	0.951	1.37	2.16	2.75	3.5	4.85	6.11	9.03	14	21.5	25.3	34.2	53.2
11 Terminal inductance	mH	0.021	0.025	0.032	0.046	0.073	0.092	0.114	0.164	0.223	0.316	0.486	0.75	0.871	1.19	1.79
12 Torque constant	mNm/A	2.15	2.31	2.65	3.14	3.97	4.46	4.96	5.95	6.94	8.27	10.2	12.7	13.7	16	19.7
13 Speed constant	rpm/V	4440	4130	3610	3040	2410	2140	1930	1600	1380	1160	932	750	696	595	485
14 Speed / torque gradient	rpm/mNm	1070	1210	1300	1330	1310	1320	1360	1310	1210	1260	1270	1260	1280	1270	1310
15 Mechanical time constant	ms	7.65	7.55	7.45	7.37	7.28	7.27	7.28	7.23	7.16	7.2	7.21	7.21	7.21	7.22	7.27
16 Rotor inertia	gcm <sup>2</sup>	0.681	0.596	0.548	0.53	0.53	0.526	0.512	0.528	0.565	0.545	0.541	0.544	0.536	0.543	0.529

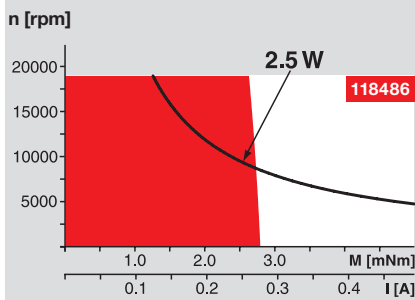
### Specifications

Thermal data	
17 Thermal resistance housing-ambient	33 K/W
18 Thermal resistance winding-housing	7.0 K/W
19 Thermal time constant winding	4.88 s
20 Thermal time constant motor	229 s
21 Ambient temperature	-20...+65°C
22 Max. winding temperature	+85°C
Mechanical data (sleeve bearings)	
23 Max. speed	19000 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 load, 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	24 g

Values listed in the table are nominal.  
Explanation of the figures on page 151.

### 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 20–27

<p><b>Planetary Gearhead</b> Ø13 mm 0.05 - 0.15 Nm Page 316</p> <p><b>Planetary Gearhead</b> Ø13 mm 0.2 - 0.35 Nm Page 317</p>	<p><b>Recommended Electronics:</b> Notes Page 24 ESCON Module 24/2 416 ESCON 36/2 DC 416</p>
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