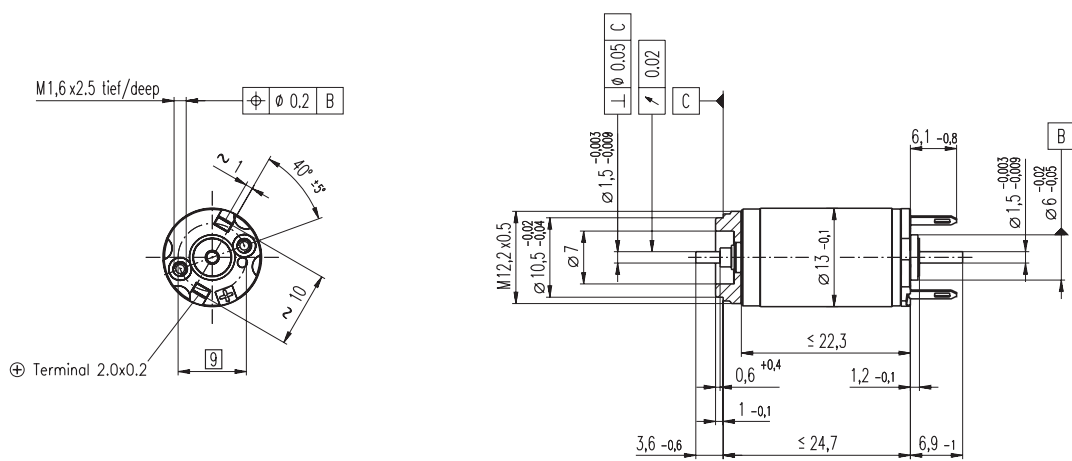


# RE 13 Ø13 mm, Graphite Brushes, 1.5 Watt



## M 1:1

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

### Order Number

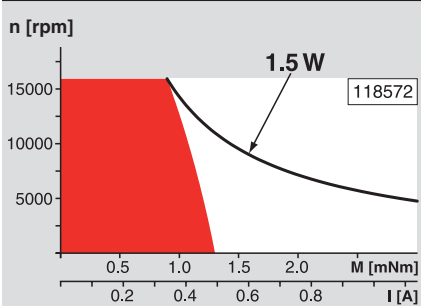
118567	118568	118569	118570	118571	118572	118573	118574	118575	118576	118577	118578	118579	118580	118581
--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------

Motor Data																	
<b>Values at nominal voltage</b>																	
1	Nominal voltage	V	1.2	1.5	2.4	3.0	3.6	4.2	4.8	6.0	7.2	9.0	12.0	12.0	15.0	18.0	20.0
2	No load speed	rpm	12800	12900	13600	13200	13000	13300	12300	12700	12300	13300	12400	13200	14000	13300	
3	No load current	mA	472	388	257	196	158	139	110	92.2	73.5	59.0	49.1	44.6	38.8	35.1	29.6
4	Nominal speed	rpm	11900	11200	10300	8420	7770	8270	7180	7550	7100	7110	8150	7060	7990	9010	8150
5	Nominal torque (max. continuous torque)	mNm	0.205	0.337	0.724	1.06	1.24	1.28	1.30	1.27	1.29	1.28	1.23	1.25	1.23	1.23	1.22
6	Nominal current (max. continuous current)	A	0.720	0.720	0.720	0.720	0.660	0.591	0.486	0.394	0.321	0.256	0.202	0.189	0.160	0.142	0.121
7	Stall torque	mNm	3.13	2.85	3.21	3.17	3.32	3.61	3.34	3.35	3.27	3.24	3.41	3.13	3.36	3.65	3.35
8	Starting current	A	4.00	2.97	2.17	1.65	1.41	1.34	1.01	0.836	0.658	0.524	0.445	0.382	0.347	0.333	0.264
9	Max. efficiency	%	43	41	44	44	45	47	46	45	45	45	45	44	45	47	45
<b>Characteristics</b>																	
10	Terminal resistance	Ω	0.300	0.504	1.11	1.81	2.55	3.14	4.76	7.18	10.9	17.2	27.0	31.4	43.2	54.0	75.8
11	Terminal inductance	mH	0.0061	0.0091	0.0216	0.0362	0.0545	0.0719	0.108	0.158	0.243	0.377	0.579	0.661	0.921	1.19	1.59
12	Torque constant	mNm / A	0.783	0.958	1.48	1.92	2.35	2.70	3.31	4.00	4.96	6.18	7.66	8.18	9.66	11.0	12.7
13	Speed constant	rpm / V	12200	9970	6450	4990	4060	3540	2890	2380	1920	1540	1250	1170	988	871	751
14	Speed / torque gradient	rpm / mNm	4670	5250	4820	4720	4400	4120	4150	4270	4240	4300	4390	4480	4420	4290	4480
15	Mechanical time constant	ms	17.4	15.9	14.5	14.2	13.9	13.7	13.6	13.6	13.6	13.7	13.7	13.7	13.7	13.5	13.7
16	Rotor inertia	gcm <sup>2</sup>	0.356	0.290	0.288	0.287	0.301	0.317	0.313	0.305	0.306	0.303	0.298	0.292	0.295	0.302	0.292

### Specifications

- Thermal data**
- 17 Thermal resistance housing-ambient 46 K / W
  - 18 Thermal resistance winding-housing 14 K / W
  - 19 Thermal time constant winding 5.35 s
  - 20 Thermal time constant motor 345 s
  - 21 Ambient temperature -20 ... +85°C
  - 22 Max. permissible winding temperature +125°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) (static, shaft supported) 15 N
  - 28 Max. radial loading, 5 mm from flange 1.4 N

### Operating Range



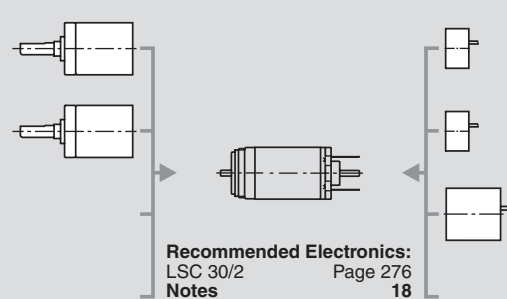
### Comments

- 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**

- Other specifications**
- 29 Number of pole pairs 7
  - 30 Number of commutator segments 15 g
  - 31 Weight of motor 15 g
- Values listed in the table are nominal.  
Explanation of the figures on page 49.

### maxon Modular System

- 1 **Planetary Gearhead**  
Ø13 mm  
0.05 - 0.15 Nm  
Page 217
- 7 **Planetary Gearhead**  
Ø13 mm  
0.2 - 0.35 Nm  
Page 218



### Overview on page 16 - 21

- Encoder MR**  
16 CPT,  
2 channels  
Page 252
- Encoder MR**  
64 - 256 CPT,  
2 channels  
Page 253 / 254
- Encoder MEnc**  
Ø13 mm  
16 CPT, 2 channels  
Page 270

**Recommended Electronics:**  
LSC 30/2  
Notes  
Page 276  
18