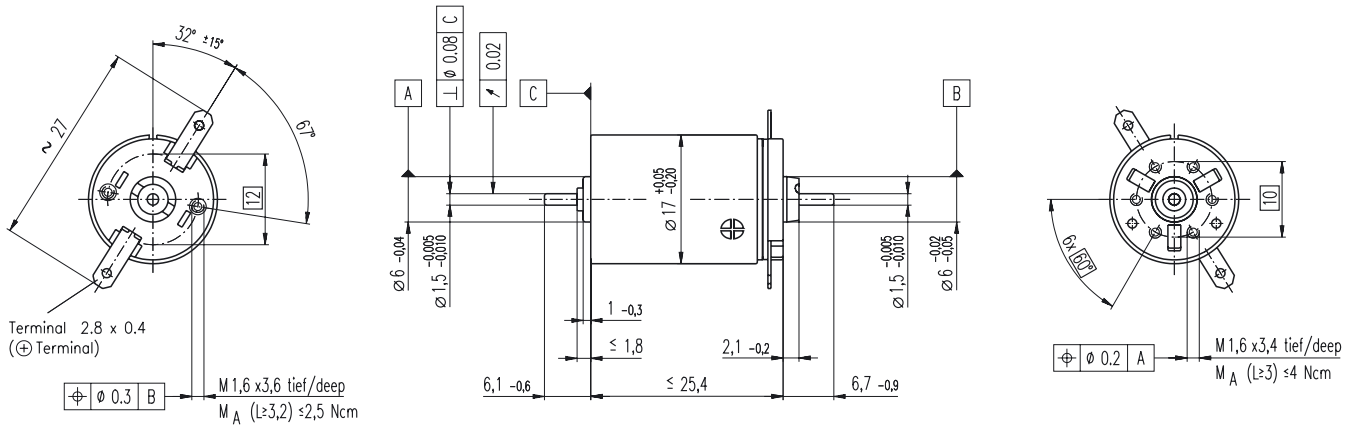
RE-max 17 ∅17 mm, Precious Metal Brushes CLL, 2.5 Watt



M 1:1

Stock program
Standard program
Special program (on request!)

Order Number

	Motor Data		215988	215989	215990	215991	215992	215993	215994	215995	215996	215997
1	Assigned power rating	W	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
2	Nominal voltage	Volt	2.0	3.0	7.2	9.0	12.0	15.0	18.0	21.0	24.0	36.0
3	No load speed	rpm	8100	6920	6840	6920	6920	7420	7940	7720	7810	7720
4	Stall torque	mNm	11.4	8.05	8.61	8.60	8.50	9.20	9.70	9.31	9.13	8.63
5	Speed / torque gradient	rpm / mNm	718	871	804	815	825	817	828	839	865	906
6	No load current	mA	48	26	11	9	6	6	5	4	4	2
7	Starting current	mA	4880	1970	868	702	520	482	453	362	315	196
8	Terminal resistance	Ohm	0.41	1.52	8.30	12.8	23.1	31.1	39.7	57.9	76.2	183
9	Max. permissible speed	rpm	7600	7600	7600	7600	7600	7600	7600	7600	7600	7600
10	Max. continuous current	mA	600	600	351	283	211	181	161	133	116	74.7
11	Max. continuous torque	mNm	1.27	2.26	3.24	3.22	3.20	3.22	3.20	3.18	3.13	3.06
12	Max. power output at nominal voltage	mW	2400	1440	1530	1550	1530	1770	2000	1870	1850	1730
13	Max. efficiency	%	82	79	79	79	79	80	80	80	80	79
14	Torque constant	mNm / A	2.34	4.09	9.92	12.3	16.3	19.1	21.4	25.7	29.0	44.0
15	Speed constant	rpm / V	4090	2340	962	779	584	501	446	372	329	217
16	Mechanical time constant	ms	8	7	7	7	7	7	7	7	7	7
17	Rotor inertia	gcm²	1.01	0.779	0.817	0.805	0.795	0.802	0.793	0.783	0.761	0.731
18	Terminal inductance	mH	0.01	0.03	0.21	0.31	0.56	0.76	0.96	1.38	1.75	4.04
19	Thermal resistance housing-ambient	K / W	35	35	35	35	35	35	35	35	35	35
20	Thermal resistance rotor-housing	K / W	12	12	12	12	12	12	12	12	12	12
21	Thermal time constant winding	s	9	7	7	7	7	7	7	7	7	6

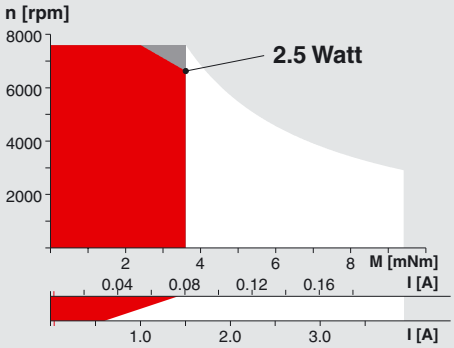
Specifications

- Axial play 0.05 - 0.15 mm
- Max. **sleeve bearing** loads
  axial (dynamic) 0.8 N
  radial (5 mm from flange) 1.4 N
  Force for press fits (static) 35 N
  (static, shaft supported) 280 N
- Max. **ball bearing** loads
  axial (dynamic) 2.2 N
  radial (5 mm from flange) 7.8 N
  Force for press fits (static) 30 N
  (static, shaft supported) 280 N
- Radial play **sleeve bearing** 0.012 mm
- Radial play **ball bearing** 0.025 mm
- Ambient temperature range -30 ... +85°C
- Max. rotor temperature +85°C
- Number of commutator segments 7
- Weight of motor 27 g
- 2 pole permanent magnet
- Values listed in the table are nominal.
  For applicable tolerances see page 43.
  For additional details please use the maxon selection program on the enclosed CD-ROM.
- CLL = Capacitor Long Life

- Options: Ball bearings in place of sleeve bearings, pigtails in place of terminals, without CLL.

Operating Range

Comments Details on page 49



Recommended operating range

Continuous operation
In observation of above listed thermal resistances (lines 19 and 20) the maximum permissible rotor temperature will be reached during continuous operation at 25°C ambient.
= Thermal limit.

Short term operation
The motor may be briefly overloaded (recurring).

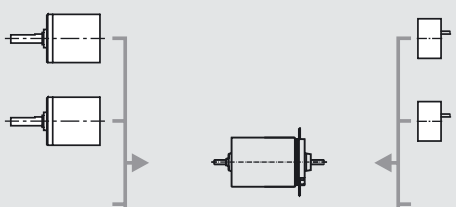
215997 Motor with high resistance winding
215988 Motor with low resistance winding

maxon Modular System

Overview on page 17 - 21

Planetary Gearhead
∅16 mm
0.1 - 0.3 Nm
Details page 205

Planetary Gearhead
∅16 mm
0.06 - 0.18 Nm
Details page 206



Encoder MR
32 CPT,
2 / 3 channels
Details page 235

Encoder MR
128 / 256 / 512 CPT,
2 / 3 channels
Details page 236

Recommended Electronics:

LSC 30/2	page 257
EPOS 24/1	271
MIP 10	273
Notes	**17**

April 2005 edition / subject to change