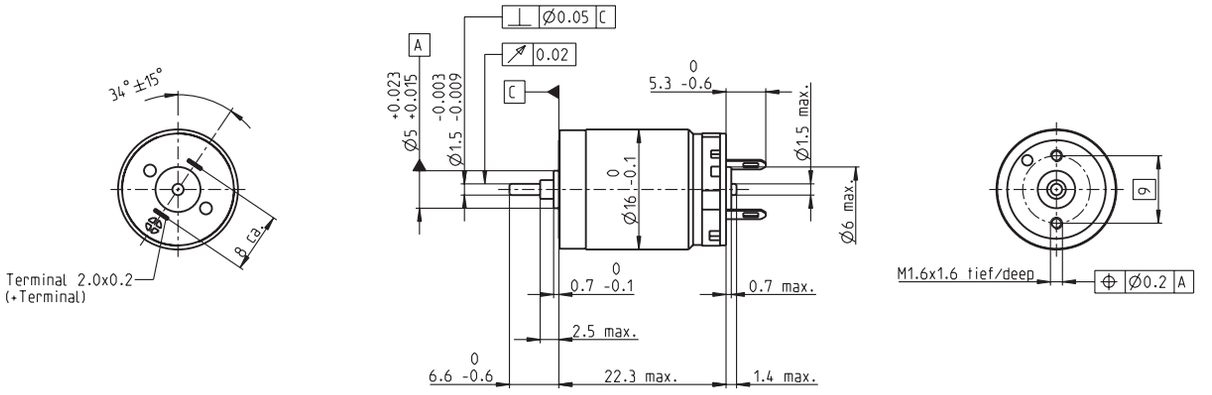
RE 16 ∅16 mm, Precious Metal Brushes CLL, 2 Watt



M 1:1

Stock program
Standard program
Special program (on request)

Part Numbers

	320173	320174	320175	320176	320177	320178	320179
Motor Data							
Values at nominal voltage							
1 Nominal voltage V	1.8	3	6	9	12	18	24
2 No load speed rpm	8240	8340	8490	8230	8090	7940	7760
3 No load current mA	35.1	21.4	11	7.02	5.81	3.35	2.44
4 Nominal speed rpm	6250	4830	4850	4590	4350	4140	3850
5 Nominal torque (max. continuous torque) mNm	1.42	2.38	2.38	2.38	2.29	2.28	2.22
6 Nominal current (max. continuous current) A	0.72	0.72	0.366	0.237	0.169	0.11	0.0783
7 Stall torque mNm	5.46	5.55	5.55	5.4	5.01	4.81	4.45
8 Starting current A	2.65	1.64	0.833	0.524	0.359	0.226	0.153
9 Max. efficiency %	79	79	79	79	77	77	77
Characteristics							
10 Terminal resistance Ω	0.679	1.83	7.2	17.2	33.4	79.8	157
11 Terminal inductance mH	0.0168	0.0456	0.176	0.421	0.77	1.8	3.35
12 Torque constant mNm/A	2.06	3.39	6.66	10.3	13.9	21.3	29.1
13 Speed constant rpm/V	4640	2810	1430	927	685	448	328
14 Speed / torque gradient rpm/mNm	1530	1520	1550	1550	1640	1680	1770
15 Mechanical time constant ms	10.4	9.97	9.87	9.87	9.98	9.92	10.1
16 Rotor inertia gcm²	0.65	0.626	0.609	0.61	0.58	0.565	0.546

Specifications

Thermal data

17	Thermal resistance housing-ambient	40.6 K/W
18	Thermal resistance winding-housing	9.5 K/W
19	Thermal time constant winding	5.33 s
20	Thermal time constant motor	268 s
21	Ambient temperature	-20…+65°C
22	Max. permissible winding temperature	+85°C

Mechanical data (sleeve bearings)

23	Max. permissible speed	11 000 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	1.5 N

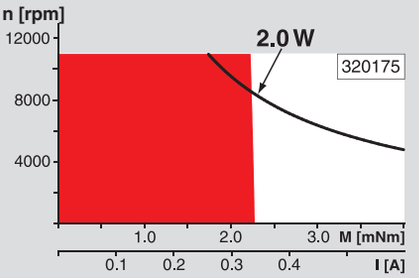
Other specifications

29	Number of pole pairs	1
30	Number of commutator segments	7
31	Weight of motor	21 g

CLL = Capacitor Long Life

Values listed in the table are nominal.
Explanation of the figures on page 79.

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

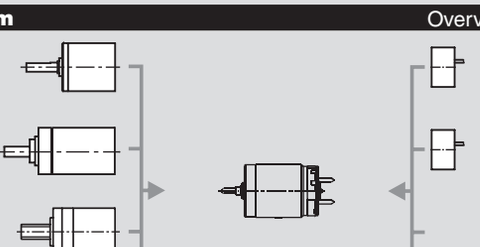
maxon Modular System

Overview on page 20–25

Planetary Gearhead
∅16 mm
0.1 - 0.3 Nm
Page 254

Planetary Gearhead
∅16 mm
0.2 - 0.6 Nm
Page 255

Spindle Drive
∅16 mm
Page 296–298



Encoder MR
32 CPT,
2 / 3 channels
Page 315

Encoder MR
128 / 256 / 512 CPT,
2 / 3 channels
Page 317

Recommended Electronics:

ESCON 36/2 DC	Page 342
ESCON Module 50/5	343
ESCON 50/5	344
EPOS2 24/2	350
EPOS2 Module 36/2	350
EPOS3 70/10 EtherCAT	357
MAXPOS 50/5	360
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