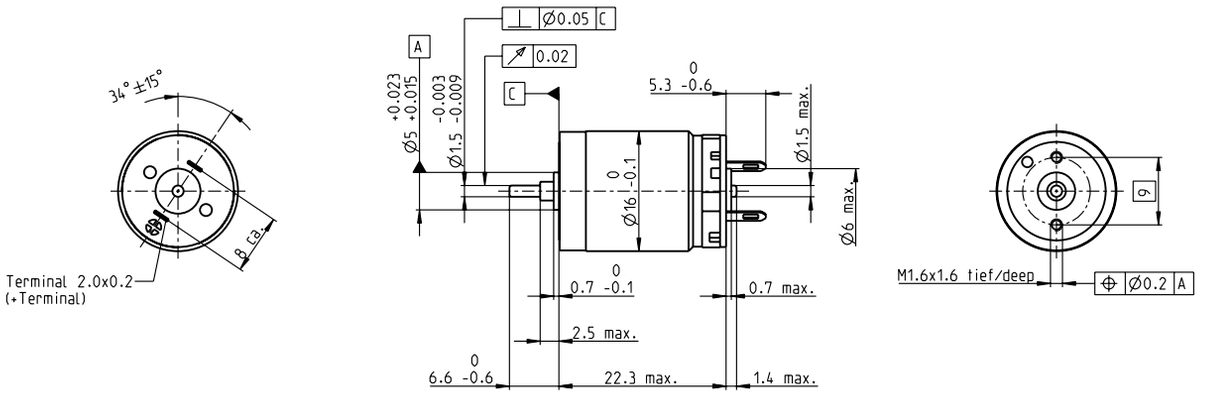
RE 16 ∅16 mm, precious metal brushes CLL, 2 watt



M 1:1

Stock program
Standard program
Special program (on request)

Motor data		Part numbers							
		320173	320174	320175	409575	320176	320177	320178	320179
	Values at nominal voltage								
1	Nominal voltage	V	1.8	3	6	6	9	12	18	24
2	No load speed	rpm	7730	7820	7960	7920	7730	7590	7450	7240
3	No load current	mA	32.2	19.6	10.1	13.8	6.44	5.35	3.08	2.94
4	Nominal speed	rpm	5700	4430	4520	4530	4290	4070	3880	3610
5	Nominal torque	mNm	1.52	2.55	2.54	2.5	2.54	2.45	2.44	2.36
6	Nominal current (max. continuous current)	A	0.72	0.72	0.365	0.364	0.237	0.169	0.11	0.0784
7	Stall torque	mNm	5.83	5.92	5.92	5.92	5.76	5.34	5.13	4.75
8	Stall current	A	2.65	1.64	0.833	0.833	0.524	0.359	0.226	0.153
9	Max. efficiency	%	80	80	80	76	79	77	78	75
	Characteristics								
10	Terminal resistance	Ω	0.679	1.83	7.2	7.2	17.2	33.4	79.8	157
11	Terminal inductance	mH	0.0169	0.0457	0.176	0.176	0.421	0.771	1.81	3.36
12	Torque constant	mNm/A	2.2	3.62	7.11	7.11	11	14.9	22.8	31
13	Speed constant	rpm/V	4350	2640	1340	1340	869	642	420	308
14	Speed / torque gradient	rpm/mNm	1340	1340	1360	1360	1360	1440	1470	1550
15	Mechanical time constant	ms	9.26	8.87	8.82	8.82	8.83	8.88	8.87	9.08
16	Rotor inertia	gcm²	0.659	0.633	0.619	0.619	0.621	0.587	0.575	0.558

Specifications

Thermal data

17	Thermal resistance housing-ambient	40.6 K/W
18	Thermal resistance winding-housing	9.52 K/W
19	Thermal time constant winding	5.33 s
20	Thermal time constant motor	295 s
21	Ambient temperature	-20...+65°C
22	Max. winding temperature	+85°C

Mechanical data (sleeve bearings)

23	Max. 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
28	Max. radial load, 5 mm from flange	1.5 N

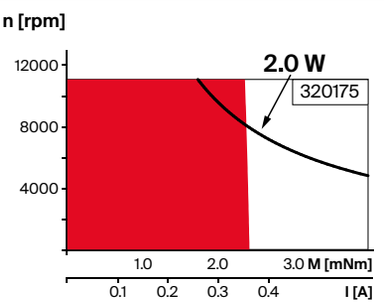
Other specifications

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 94.

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

Modular system

Details on catalog page 48

Gear
416_GP 16 A
417_GP 16 C
469–471_GP 16 S

Sensor
502_ENX 16 IMR
533_Encoder MR 32 CPT

Motor Control
550_ESCON Module 24/2
550_ESCON 36/2 DC
557_ESCON2 Nano 24/2
563_EPOS4 Micro 24/5
564_EPOS4 Module 24/1.5
565_EPOS4 Compact 24/5 3-axes
566_EPOS4 Compact 24/1.5