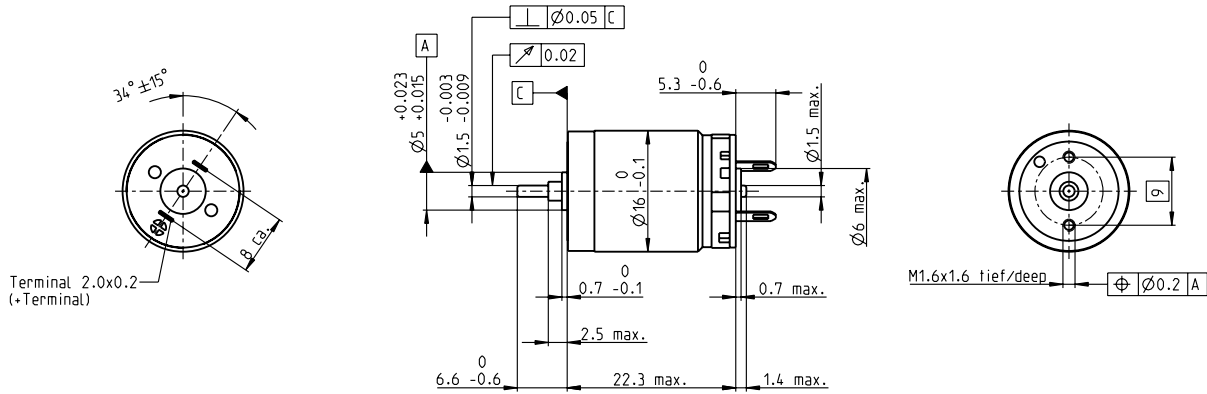


# RE 16 $\varnothing$ 16 mm, precious metal brushes CLL, 2 watt

RE



M 1:1

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

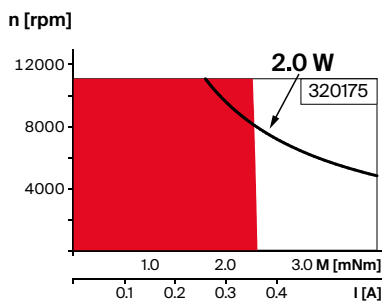
Part Numbers							
320173	320174	320175	409575	320176	320177	320178	320179

Motor Data		320173	320174	320175	409575	320176	320177	320178	320179
<b>Values at nominal voltage</b>									
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	7280
3 No load current	mA	32.2	19.6	10.1	13.8	6.44	5.35	3.08	2.24
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	2.37
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	%	79	79	79	76	79	77	78	78
<b>Characteristics</b>									
10 Terminal resistance	$\Omega$	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	9.13	8.76	8.67	8.67	8.67	8.77	8.72	8.89
16 Rotor inertia	gcm <sup>2</sup>	0.65	0.626	0.609	0.609	0.61	0.58	0.565	0.546

Specifications	Operating Range	Comments
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<b>Thermal data</b>	
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

<b>Mechanical data (sleeve bearings)</b>	
23 Max. 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



- 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**

<b>Other specifications</b>	
29 Number of pole pairs	1
30 Number of commutator segments	7
31 Weight of motor	21 g
CLL = Capacitor Long Life	

Modular System	Details on catalog page 44	
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<b>Gear</b>	<b>Sensor</b>	<b>Motor Control</b>
405_GP 16 A	507_Encoder MR 32 CPT	532_ESCON Module 24/2
406_GP 16 C	508_Encoder MR 128-512 CPT	532_ESCON 36/2 DC
447-449_GP 16 S		541_EPOS4 Micro 24/5
		542_EPOS4 Module 24/1.5
		543_EPOS4 Compact 24/5 3-axes
		544_EPOS4 Compact 24/1.5

Values listed in the table are nominal.  
Explanation of the figures on page 90.