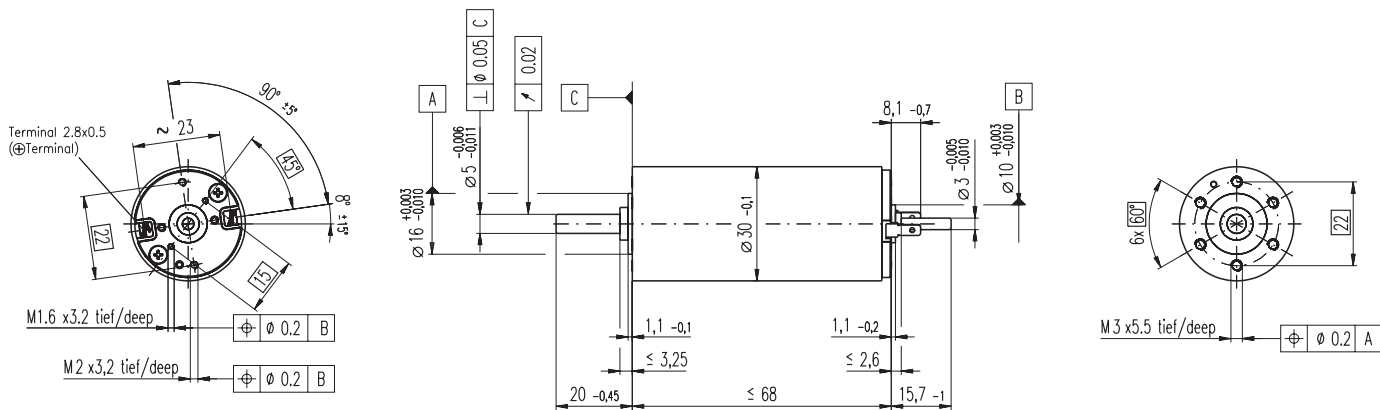


# RE 30 $\varnothing 30$ mm, Graphite Brushes, 60 Watt



M 1:2

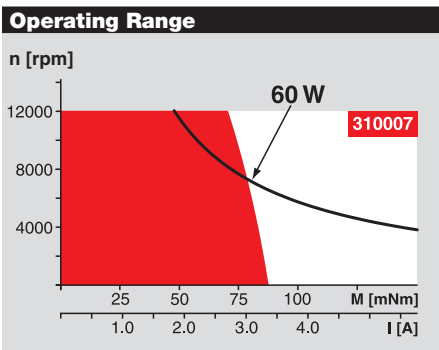
- Stock program
- Standard program
- Special program (on request)

according to dimensional drawing  
shaft length 15.7 shortened to 8.7 mm

Order Number					
310005	310006	310007	310008	310009	
268193	268213	268214	268215	268216	

Motor Data							
Values at nominal voltage							
1	Nominal voltage	V	12.0	18.0	24.0	36.0	48.0
2	No load speed	rpm	8170	8590	8810	8590	8490
3	No load current	mA	300	212	164	106	78.5
4	Nominal speed	rpm	7630	7900	8050	7810	7750
5	Nominal torque (max. continuous torque)	mNm	51.7	75.5	85.0	83.4	88.2
6	Nominal current (max. continuous current)	A	4.00	4.00	3.44	2.20	1.72
7	Stall torque	mNm	844	991	1020	936	1020
8	Starting current	A	60.5	49.8	39.3	23.5	19.0
9	Max. efficiency	%	86	87	87	87	88
Characteristics							
10	Terminal resistance	$\Omega$	0.198	0.362	0.611	1.53	2.52
11	Terminal inductance	mH	0.0345	0.0703	0.119	0.281	0.513
12	Torque constant	mNm / A	13.9	19.9	25.9	39.8	53.8
13	Speed constant	rpm / V	685	479	369	240	178
14	Speed / torque gradient	rpm / mNm	9.74	8.71	8.69	9.22	8.33
15	Mechanical time constant	ms	3.42	3.25	3.03	3.17	3.01
16	Rotor inertia	gcm <sup>2</sup>	33.5	35.7	33.3	32.9	34.5

Specifications	
<b>Thermal data</b>	
17	Thermal resistance housing-ambient 6.0 K / W
18	Thermal resistance winding-housing 1.7 K / W
19	Thermal time constant winding 16.2 s
20	Thermal time constant motor 714 s
21	Ambient temperature -20 ... +100°C
22	Max. permissible winding temperature +125°C
<b>Mechanical data (ball bearings)</b>	
23	Max. permissible speed 12000 rpm
24	Axial play 0.05 - 0.15 mm
25	Radial play 0.025 mm
26	Max. axial load (dynamic) 5.6 N
27	Max. force for press fits (static) 110 N (static, shaft supported) 1200 N
28	Max. radial loading, 5 mm from flange 28 N



**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 1
30	Number of commutator segments 13
31	Weight of motor 238 g

Values listed in the table are nominal.  
Explanation of the figures on page 47.

⚠ Tolerances may vary from the standard specification.

**Option**  
Preloaded ball bearings

**maxon Modular System**

**Planetary Gearhead**  
 $\varnothing 32$  mm  
0.75 - 4.5 Nm  
Page 230

**Planetary Gearhead**  
 $\varnothing 32$  mm  
1.0 - 6.0 Nm  
Page 231

Overview on page 16 - 21

**Encoder MR**  
256 - 1024 CPT  
3 channels  
Page 251

**Recommended Electronics:**

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