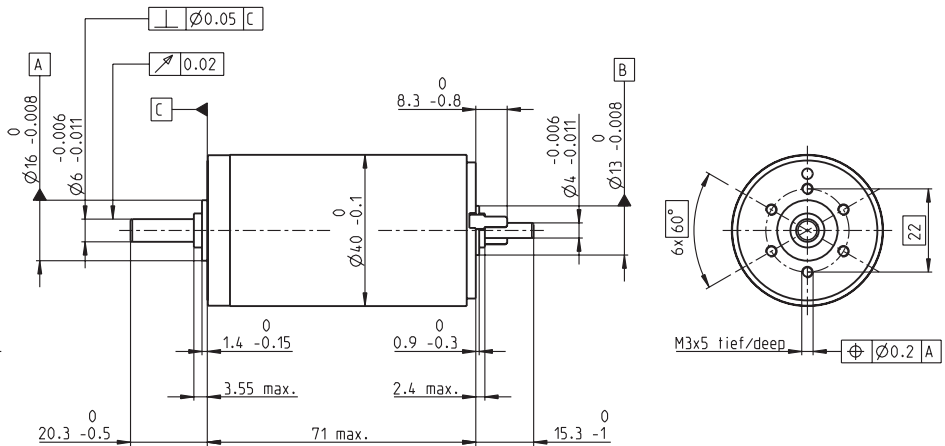
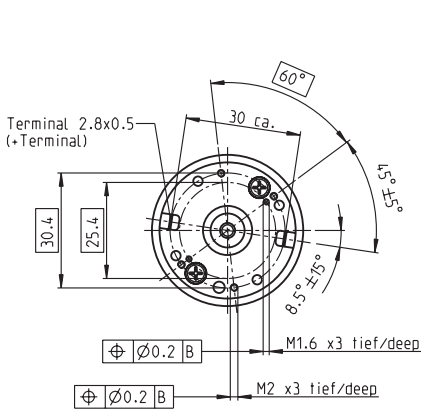


# RE 40 Ø40 mm, Graphite Brushes, 150 Watt



M 1:2

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

### Article Numbers

148866 148867 148877 218008 218009 218010 218011 218012 218013 218014

Motor Data	148866	148867	148877	218008	218009	218010	218011	218012	218013	218014
<b>Values at nominal voltage</b>										
1 Nominal voltage	V	12	24	48	48	48	48	48	48	48
2 No load speed	rpm	6920	7580	7590	6420	5560	3330	2690	2130	1420
3 No load current	mA	241	137	68.6	53.6	43.7	21.9	16.6	12.5	9.66
4 Nominal speed	rpm	6380	6940	7000	5810	4930	2710	2060	1510	1080
5 Nominal torque (max. continuous torque)	mNm	94.9	177	187	186	180	189	190	192	192
6 Nominal current (max. continuous current)	A	6	6	3.17	2.66	2.23	1.4	1.13	0.909	0.73
7 Stall torque	mNm	1720	2420	2560	2040	1620	1020	814	655	523
8 Starting current	A	105	80.2	42.4	28.6	19.7	7.43	4.79	3.06	1.97
9 Max. efficiency	%	87	91	92	91	91	89	89	88	87
<b>Characteristics</b>										
10 Terminal resistance	Ω	0.115	0.299	1.13	1.68	2.44	6.46	10	15.7	24.4
11 Terminal inductance	mH	0.0245	0.0823	0.329	0.46	0.612	1.7	2.62	4.14	6.4
12 Torque constant	mNm/A	16.4	30.2	60.3	71.3	82.2	137	170	214	266
13 Speed constant	rpm/V	581	317	158	134	116	69.7	56.2	44.7	35.9
14 Speed / torque gradient	rpm/mNm	4.05	3.14	2.97	3.16	3.45	3.29	3.31	3.27	3.29
15 Mechanical time constant	ms	5.89	4.67	4.28	4.2	4.19	4.16	4.15	4.15	4.16
16 Rotor inertia	gcm <sup>2</sup>	139	142	137	127	116	121	120	121	118

### Specifications

- Thermal data**
- 17 Thermal resistance housing-ambient 4.7 K/W
  - 18 Thermal resistance winding-housing 1.9 K/W
  - 19 Thermal time constant winding 41.5 s
  - 20 Thermal time constant motor 736 s
  - 21 Ambient temperature -30...+100°C
  - 22 Max. permissible winding temperature +155°C
- Mechanical data (ball bearings)**
- 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) (static, shaft supported) 110 N
  - 28 Max. radial loading, 5 mm from flange 1200 N

### Other specifications

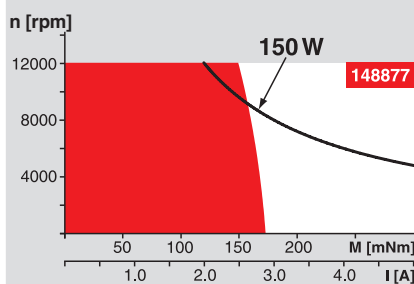
- 29 Number of pole pairs 1
- 30 Number of commutator segments 13
- 31 Weight of motor 480 g

Values listed in the table are nominal. Explanation of the figures on page 49.

### Option

Preloaded ball bearings

### Operating Range

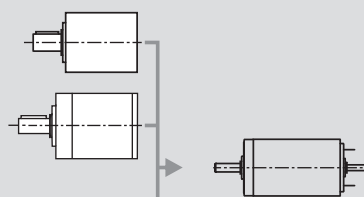


### Comments

- 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

- Planetary Gearhead**  
Ø42 mm  
3 - 15 Nm  
Page 242
- Planetary Gearhead**  
Ø52 mm  
4 - 30 Nm  
Page 245



- Recommended Electronics:**
- ESCON 50/5 Page 292
  - EPOS2 24/5 313
  - EPOS2 50/5 313
  - EPOS2 70/10 313
  - EPOS2 P 24/5 316
  - EPOS3 70/10 EtherCAT 319
  - ADS 50/10 373
  - ADS\_E 50/10 373
  - Notes** 18

### Overview on page 16 - 21

- Encoder MR**  
256 - 1024 Imp.,  
3 channels  
Page 273
- Encoder HEDL\_ 5540**  
500 CPT,  
3 channels  
Page 276/278
- Brake AB 28**  
24 VDC  
0.4 Nm  
Page 330
- Industrial Version**  
**Encoder HEDL 9140**  
Page 281
- Brake AB 28**  
Page 331
- End cap**  
Page 335