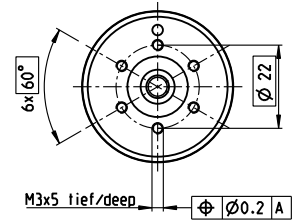
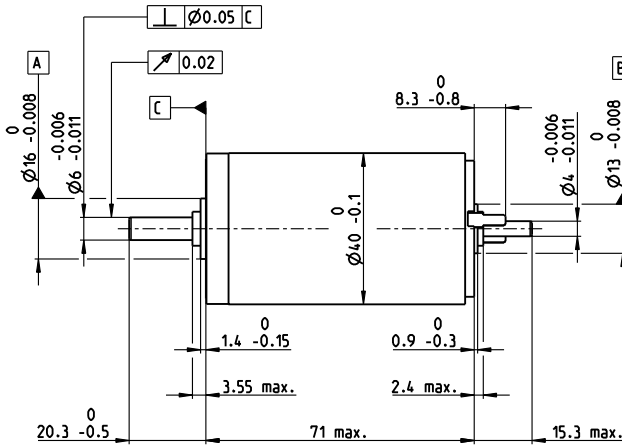
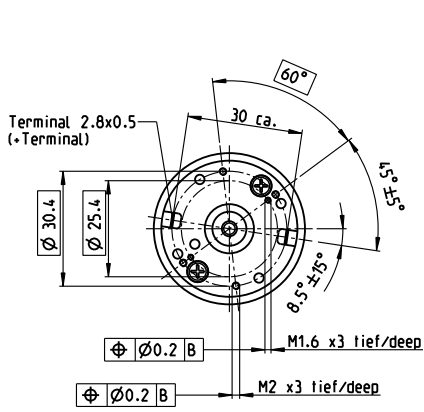


# RE 40 Ø40 mm, Graphite Brushes, 150 Watt

RE



M 1:2

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

## Part 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	48
2 No load speed	rpm	6920	7580	7590	6420	5560	3330	2690	2130	1720	1420
3 No load current	mA	241	137	68.6	53.7	43.7	21.9	16.6	12.5	9.66	7.76
4 Nominal speed	rpm	6380	6940	7000	5810	4930	2710	2060	1510	1080	781
5 Nominal torque (max. continuous torque)	mNm	94.9	177	187	186	180	189	190	192	192	190
6 Nominal current (max. continuous current)	A	6	6	3.17	2.66	2.23	1.4	1.13	0.909	0.73	0.6
7 Stall torque	mNm	1720	2420	2560	2040	1620	1020	814	655	523	424
8 Stall current	A	105	80.2	42.4	28.6	19.7	7.43	4.79	3.06	1.97	1.32
9 Max. efficiency	%	88	91	92	91	91	89	89	88	86	85
<b>Characteristics</b>											
10 Terminal resistance	Ω	0.115	0.299	1.13	1.68	2.44	6.46	10	15.7	24.4	36.3
11 Terminal inductance	mH	0.024	0.082	0.33	0.46	0.613	1.7	2.62	4.14	6.41	9.32
12 Torque constant	mNm/A	16.4	30.2	60.3	71.3	82.2	137	170	214	266	321
13 Speed constant	rpm/V	581	317	158	134	116	69.7	56.2	44.7	35.9	29.8
14 Speed / torque gradient	rpm/mNm	4.05	3.14	2.97	3.16	3.45	3.29	3.31	3.27	3.29	3.37
15 Mechanical time constant	ms	5.89	4.67	4.28	4.2	4.19	4.16	4.15	4.15	4.15	4.16
16 Rotor inertia	gcm <sup>2</sup>	139	142	137	127	116	121	120	121	120	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	809 s
21 Ambient temperature	-30...+100°C
22 Max. winding temperature	+155°C

**Mechanical data (ball bearings)**

23 Max. 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 load, 5 mm from flange	1200 N
	28 N

**Other specifications**

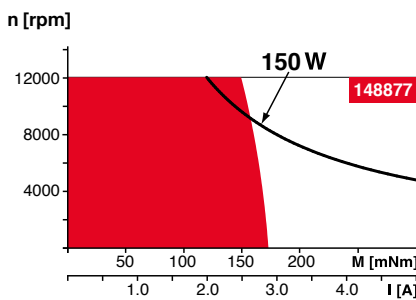
29 Number of pole pairs	1
30 Number of commutator segments	13
31 Weight of motor	480 g

Values listed in the table are nominal.  
 Explanation of the figures on page 72.

**Option**  
 Preloaded ball bearings

- \* Industrial version with radial shaft seal ring (resulting in increased no load current).
- IP54 protection only if mounted on brush side, in compliance with maxon modular system.

## Operating Range



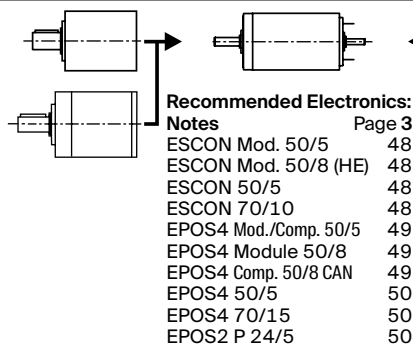
## Comments

- **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

Details on catalog page 34

- Planetary Gearhead**  
 Ø42 mm  
 3 - 15 Nm  
 Page 396
- Planetary Gearhead**  
 Ø52 mm  
 4 - 30 Nm  
 Page 401



- Encoder MR**  
 256 - 1024 CPT,  
 3 channels  
 Page 464
- Encoder HEDL\_5540**  
 500 CPT,  
 3 channels  
 Page 471/474
- Brake AB 28**  
 24 VDC  
 0.4 Nm  
 Page 519
- Industrial Version IP54\***  
**Encoder HEDL 9140**  
 Page 478  
**Brake AB 28**  
 Page 520  
**End cap**  
 Page 525