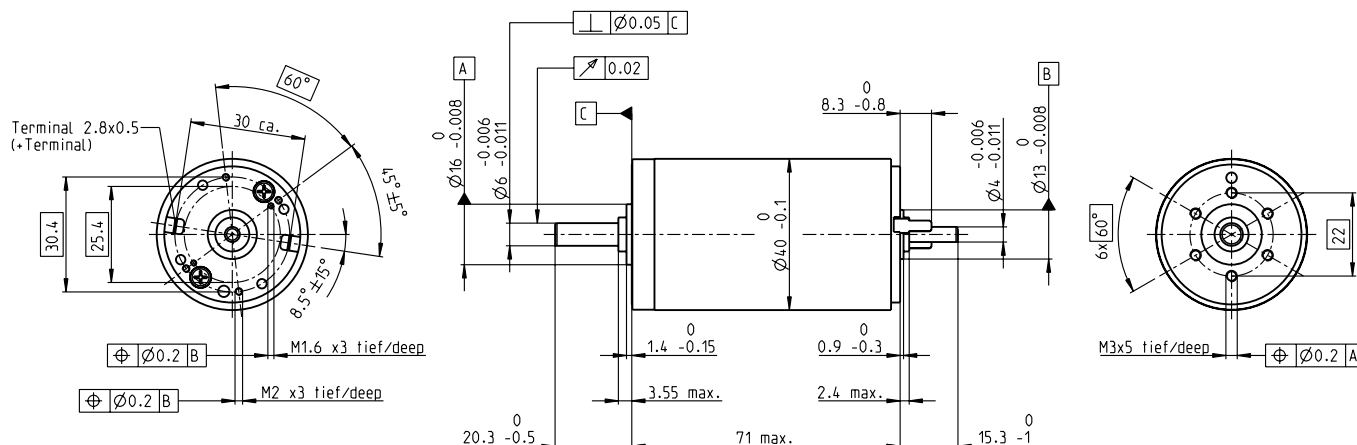


RE 40 Ø40 mm, Graphite Brushes, 150 Watt



M 1:2

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

Part Numbers

148866	148867	148877	218008	218009	218010	218011	218012	218013	218014
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Motor Data

Values at nominal voltage		
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
Characteristics		
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 ²	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	12 000 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 1200 N
28 Max. radial load, 5 mm from flange	28 N

Other specifications

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

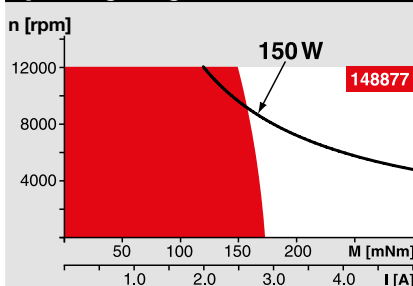
Values listed in the table are nominal.
Explanation of the figures on page 64.

Option

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.

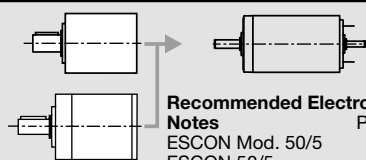
Short term operation
The motor may be briefly overloaded (recurring).

— Assigned power rating

maxon Modular System

Planetary Gearhead
 Ø42 mm
 3 - 15 Nm
 Page 345

Planetary Gearhead
 Ø52 mm
 4 - 30 Nm
 Page 350



Recommended Electronics:

Notes	Page
ESCON Mod. 50/5	427
ESCON 50/5	428
ESCON 70/10	428
EPOS2 24/5	435
EPOS2 50/5	435
EPOS2 70/10	435
EPOS2 P 24/5	438
EPOS4 Module/CB 50/5	442
EPOS4 Module 50/8	443
EPOS4 Comp. 50/8 CAN	443
MAXPOS 50/5	447

Overview on page 28–36

Encoder MR
256 - 1024 CPT,
3 channels
Page 405

Encoder HED_ 5540
500 CPT,
3 channels
Page 413/416

Brake AB 28
24 VDC
0.4 Nm
Page 458

Industrial Version IP54*
Encoder HEDL 9140
Page 419

Brake AB 28
Page 459

End cap
Page 463