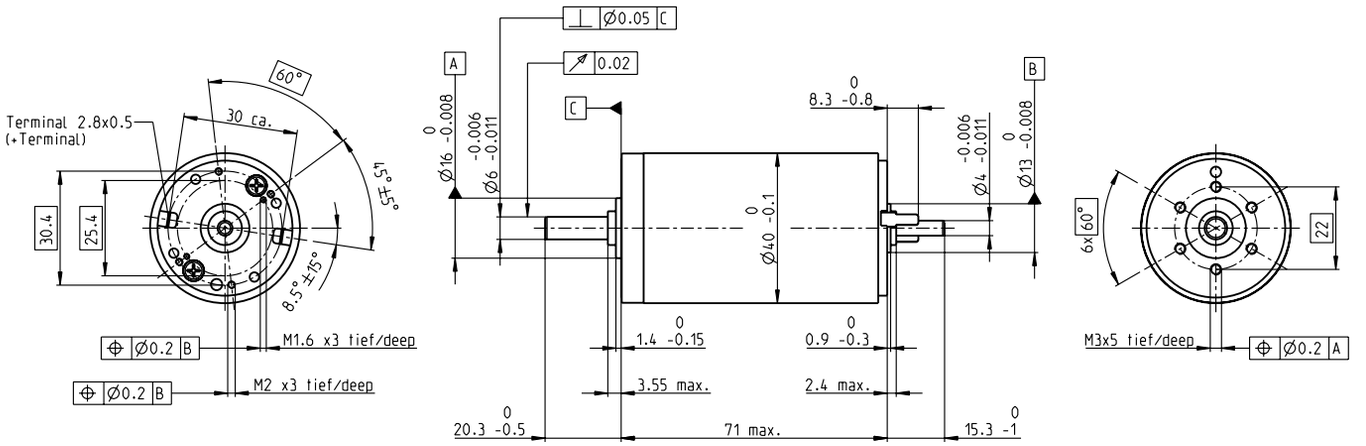
RE 40 ∅40 mm, Graphite Brushes, 150 Watt



M 1:2

Stock program
Standard program
Special program (on request)

Part Numbers

		148866	148867	148877	218008	218009	218010	218011	218012	218013	218014
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	gcm²	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)	110 N
	(static, shaft supported)	1200 N
28	Max. radial load, 5 mm from flange	28 N

Other specifications

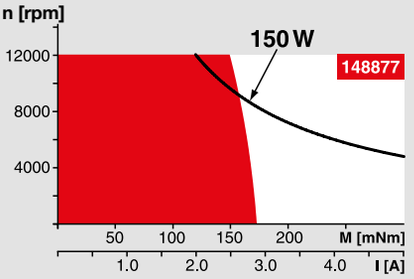
29	Number of pole pairs	1
30	Number of commutator segments	13
31	Weight of motor	480 g

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

Option
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

Overview on page 28–36

Planetary Gearhead
∅42 mm
3 - 15 Nm
Page 345

Planetary Gearhead
∅52 mm
4 - 30 Nm
Page 350

Recommended Electronics:

Notes	Page 30
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

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