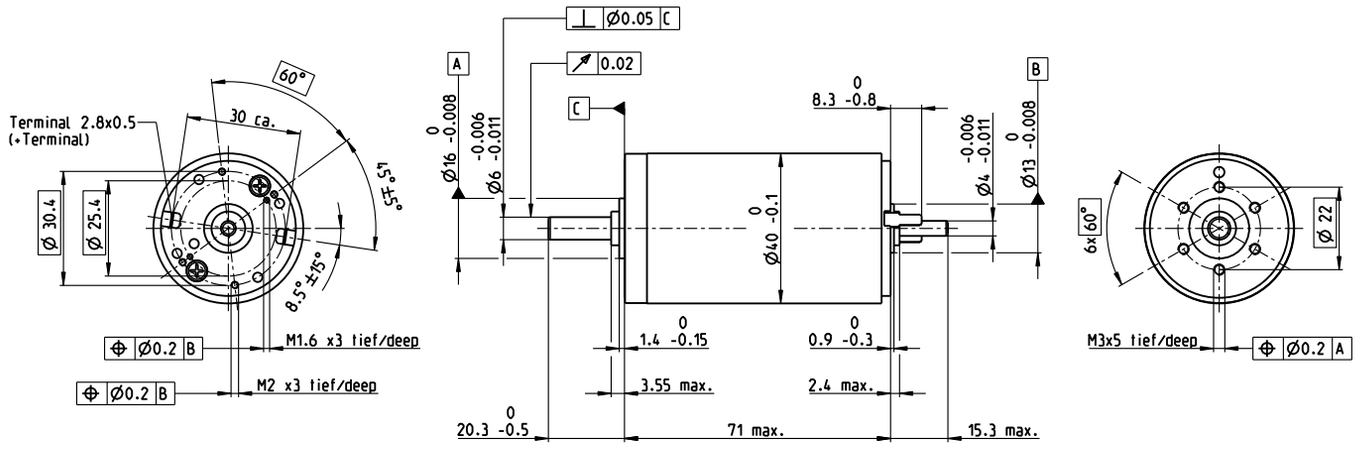
RE 40 ∅40 mm, graphite brushes, 150 watt



M 1:2

Stock program
Standard program
Special program (on request)

Part numbers

		148866	148867	148877	218008	218009	218010	218011	218012	218013
Motor data										
Values at nominal voltage										
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	1720
3 No load current	mA	241	137	68.6	53.7	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	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 Stall current	A	105	80.2	42.4	28.6	19.7	7.43	4.79	3.06	1.97
9 Max. efficiency	%	88	91	92	91	91	89	89	88	86
Characteristics										
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	0.024	0.082	0.33	0.46	0.613	1.7	2.62	4.14	6.41
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	4.15
16 Rotor inertia	gcm^2	139	142	137	127	116	121	120	121	120

Specifications

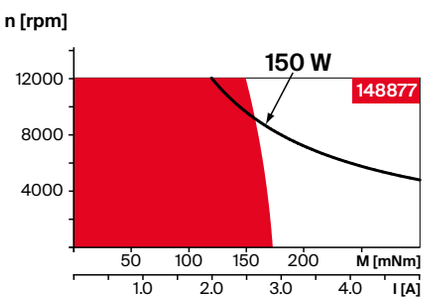
Thermal data	
17 Thermal resistance housing-ambient	4.7 K/W
18 Thermal resistance winding-housing	1.9 K/W
19 Thermal time constant winding	41.5 s
20 Thermal time constant motor	809 s
21 Ambient temperature	-30...+100°C
22 Max. winding temperature	+155°C
Mechanical data (ball bearings)	
23 Max. speed	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)	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 94.

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

Modular system

Details on catalog page 48

Gear
436_GP 42 A
439_GP 42 C
443_GP 52 C

Sensor
506_ENX 32 IMR
535_Encoder HEDS 5540
538_Encoder HEDL 5540
587_Brake AB 28

Industrial Version IP54*
540_Encoder HEDL 9140
588_Brake AB 28
594_End cap

Motor Control
551_ESCON Module 50/5
552_ESCON Module 50/8 HE
553_ESCON 50/5
553_ESCON 70/10
557_ESCON2 Micro 60/5
564_EPOS4 Module 50/5
565_EPOS4 Module 50/8
567_EPOS4 Compact 50/5
567_EPOS4 Compact 50/8 CAN
569_EPOS4 50/5
569_EPOS4 70/15
570_EPOS4 Disk 60/8
571_EPOS4 Disk 60/12

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