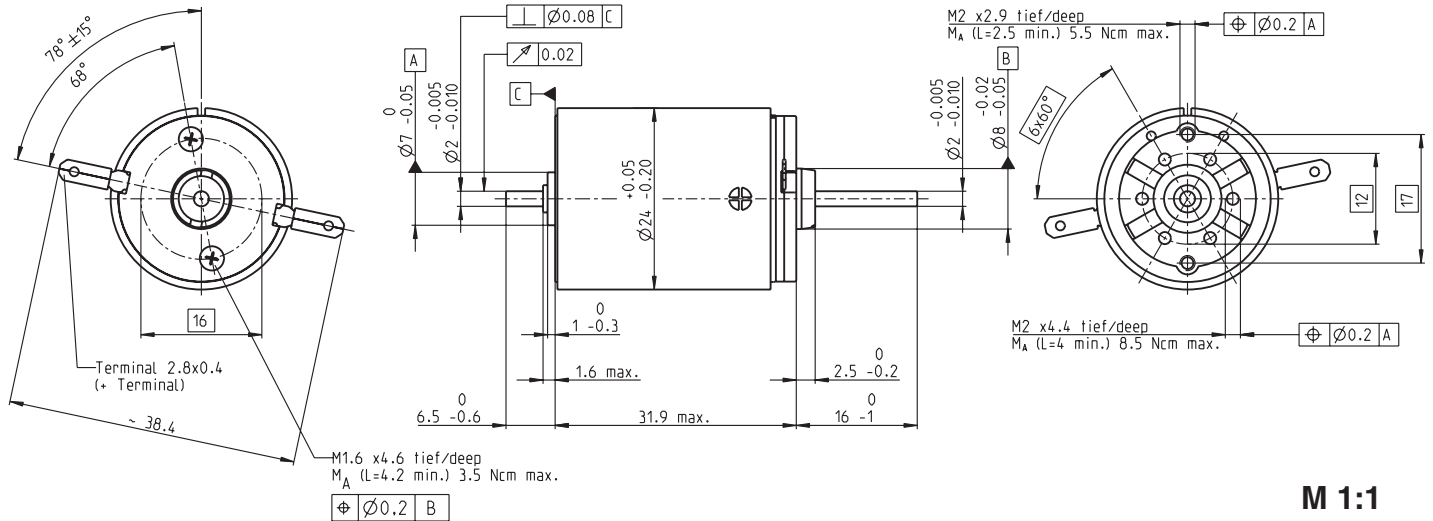


RE-max 24 Ø24 mm, Graphite Brushes, 11 Watt



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

Part Numbers

222048 222049 222050 222051 222052 222053 222054 222055 222056 222057 222058 222059

Motor Data		222048	222049	222050	222051	222052	222053	222054	222055	222056	222057	222058	222059
Values at nominal voltage													
1 Nominal voltage	V	9	12	15	18	18	24	24	36	42	48	48	48
2 No load speed	rpm	8080	7470	8230	8820	7950	9270	7510	9090	8580	7390	5240	4720
3 No load current	mA	45.4	30.9	27.6	24.9	22.1	19.8	15.5	12.9	10.3	7.59	5.15	4.59
4 Nominal speed	rpm	6290	5720	6510	7110	6220	7560	5760	7380	6850	5630	3410	2900
5 Nominal torque (max. continuous torque)	mNm	10.8	11.7	11.8	11.7	11.7	11.6	11.8	11.6	11.6	11.7	11.6	11.8
6 Nominal current (max. continuous current)	A	1.08	0.806	0.714	0.635	0.571	0.495	0.406	0.324	0.262	0.198	0.14	0.128
7 Stall torque	mNm	52.4	52.5	59	63.1	55.6	65	51.9	62.9	58.6	49.7	33.9	31.1
8 Starting current	A	5.04	3.48	3.44	3.28	2.61	2.66	1.72	1.68	1.27	0.809	0.393	0.325
9 Max. efficiency	%	80	80	82	82	82	83	81	83	83	81	78	78
Characteristics													
10 Terminal resistance	Ω	1.78	3.45	4.36	5.48	6.9	9.02	13.9	21.4	33.1	59.3	122	148
11 Terminal inductance	mH	0.0735	0.155	0.2	0.252	0.309	0.406	0.619	0.953	1.46	2.56	5.07	6.23
12 Torque constant	mNm/A	10.4	15.1	17.2	19.2	21.3	24.4	30.1	37.4	46.3	61.3	86.3	95.6
13 Speed constant	rpm/V	919	634	557	497	448	391	317	255	206	156	111	99.8
14 Speed / torque gradient	rpm/mNm	158	145	141	142	145	144	146	146	148	151	157	154
15 Mechanical time constant	ms	6.72	6.55	6.48	6.46	6.47	6.45	6.44	6.43	6.44	6.45	6.52	6.47
16 Rotor inertia	gcm ²	4.07	4.32	4.37	4.36	4.26	4.27	4.2	4.2	4.16	4.09	3.97	4.01

Specifications

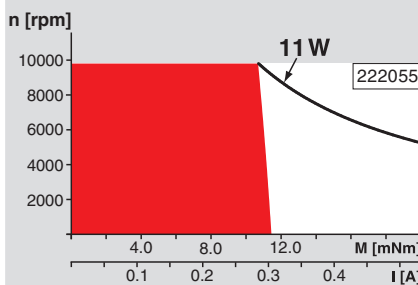
Thermal data	
17 Thermal resistance housing-ambient	24 K/W
18 Thermal resistance winding-housing	5.1 K/W
19 Thermal time constant winding	8.02 s
20 Thermal time constant motor	637 s
21 Ambient temperature	-30...+85°C
22 Max. permissible winding temperature	+125°C
Mechanical data (sleeve bearings)	
23 Max. permissible speed	9800 rpm
24 Axial play	0.05 - 0.15 mm
25 Radial play	0.012 mm
26 Max. axial load (dynamic)	1 N
27 Max. force for press fits (static) (static, shaft supported)	80 N
28 Max. radial load, 5 mm from flange	240 N
Mechanical data (ball bearings)	
23 Max. permissible speed	9800 rpm
24 Axial play	0.05 - 0.15 mm
25 Radial play	0.025 mm
26 Max. axial load (dynamic)	3.3 N
27 Max. force for press fits (static) (static, shaft supported)	45 N
28 Max. radial load, 5 mm from flange	240 N
Other specifications	
29 Number of pole pairs	1
30 Number of commutator segments	9
31 Weight of motor	71 g

Values listed in the table are nominal.
Explanation of the figures on page 79.

Option

- Ball bearings in place of sleeve bearings
- Pigtails in place of terminals

Operating Range

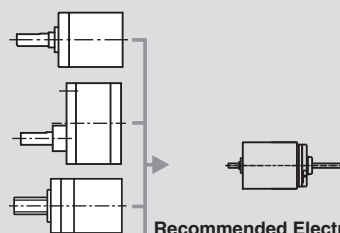


Comments

- 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**
Ø22 mm
0.5 - 2.0 Nm
Page 264
- Spur Gearhead**
Ø38 mm
0.1 - 0.6 Nm
Page 282
- Spindle Drive**
Ø22 mm
Page 299/300



Recommended Electronics:

- ESCON 36/2 DC Page 342
- ESCON Module 50/5 343
- ESCON 50/5 344
- ESCON 70/10 344
- EPOS2 24/2 350
- EPOS2 Module 36/2 350
- EPOS3 70/10 EtherCAT 357
- MAXPOS 50/5 360
- Notes 22

Overview on page 20-25

- Encoder MR**
32 CPT,
2 / 3 channels
Page 316
- Encoder MR**
128 / 256 / 512 CPT,
2 / 3 channels
Page 318