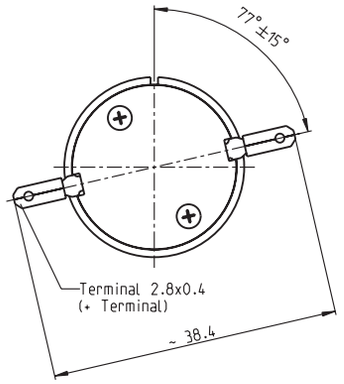
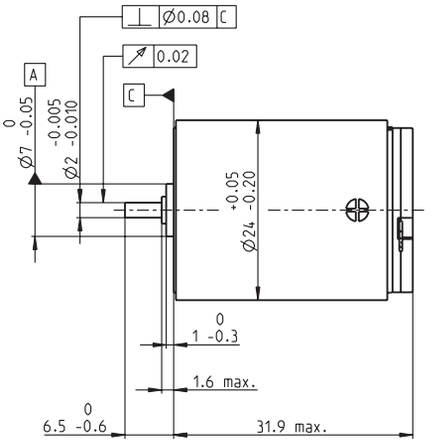
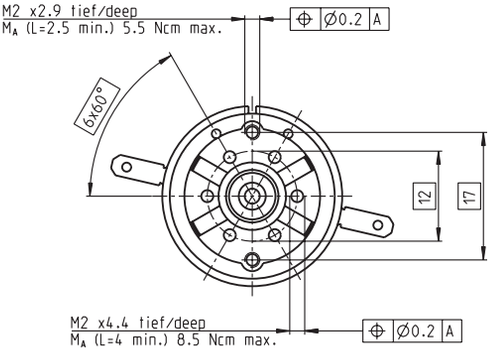
RE-max 24 ∅24 mm, Precious Metal Brushes CLL, 10 Watt







M 1:1

Stock program
Standard program
Special program (on request)

Part Numbers

			220404	220405	220406	220407	220408	220410	220415	220416	220418	220419	220422	220423
Motor Data														
	Values at nominal voltage													
1	Nominal voltage	V	9	15	15	18	20	24	30	36	42	48	48	48
2	No load speed	rpm	8240	9470	8320	8910	8930	9350	9470	9160	8640	7450	5290	4770
3	No load current	mA	18.8	14.1	11.5	10.7	9.65	8.65	7.07	5.58	4.35	3.01	1.79	1.54
4	Nominal speed	rpm	6950	8040	6900	7480	7480	7890	8000	7680	7150	5930	3730	3220
5	Nominal torque (max. continuous torque)	mNm	8.55	10.3	10.5	10.4	10.3	10.1	10	10	9.99	9.95	9.82	9.93
6	Nominal current (max. continuous current)	A	0.84	0.698	0.62	0.55	0.49	0.422	0.339	0.273	0.22	0.165	0.115	0.105
7	Stall torque	mNm	53.3	67.4	60.3	64.3	62.9	64.6	64.5	62.2	57.9	49	33.4	30.6
8	Starting current	A	5.12	4.47	3.52	3.34	2.95	2.65	2.14	1.66	1.25	0.799	0.387	0.32
9	Max. efficiency	%	88	89	89	89	89	89	89	89	89	88	87	87
	Characteristics													
10	Terminal resistance	Ω	1.76	3.36	4.27	5.39	6.78	9.07	14	21.6	33.5	60.1	124	150
11	Terminal inductance	mH	0.0735	0.154	0.2	0.251	0.309	0.406	0.618	0.952	1.45	2.56	5.06	6.22
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	155	141	138	139	143	145	147	148	150	153	159	156
15	Mechanical time constant	ms	6.61	6.37	6.34	6.34	6.36	6.49	6.48	6.5	6.52	6.53	6.61	6.57
16	Rotor inertia	gcm²	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

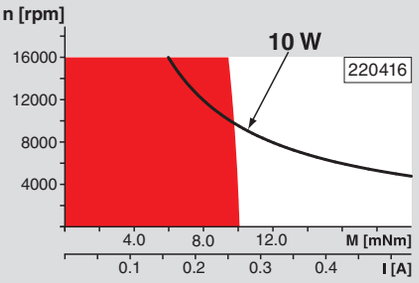
	Thermal data	
17	Thermal resistance housing-ambient	24 K/W
18	Thermal resistance winding-housing	5.1 K/W
19	Thermal time constant winding	8.32 s
20	Thermal time constant motor	637 s
21	Ambient temperature	-30…+65°C
22	Max. permissible winding temperature	+85°C
	Mechanical data (sleeve bearings)	
23	Max. permissible speed	16000 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)	80 N
28	Max. radial load, 5 mm from flange	2.8 N
	Mechanical data (ball bearings)	
23	Max. permissible speed	16000 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)	45 N
28	Max. radial load, 5 mm from flange	12.3 N
	Other specifications	
29	Number of pole pairs	1
30	Number of commutator segments	9
31	Weight of motor	70 g

CLL = Capacitor Long Life

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
Without CLL

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

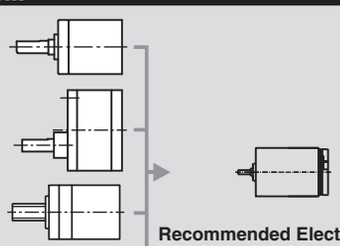
maxon Modular System

Overview on page 20–25

Planetary Gearhead
∅22 mm
0.5 - 2.0 Nm
Page 264

Spur Gearhead
∅38 mm
0.1 - 0.6 Nm
Page 282

Spindle Drive
∅22 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
Notes	**22**