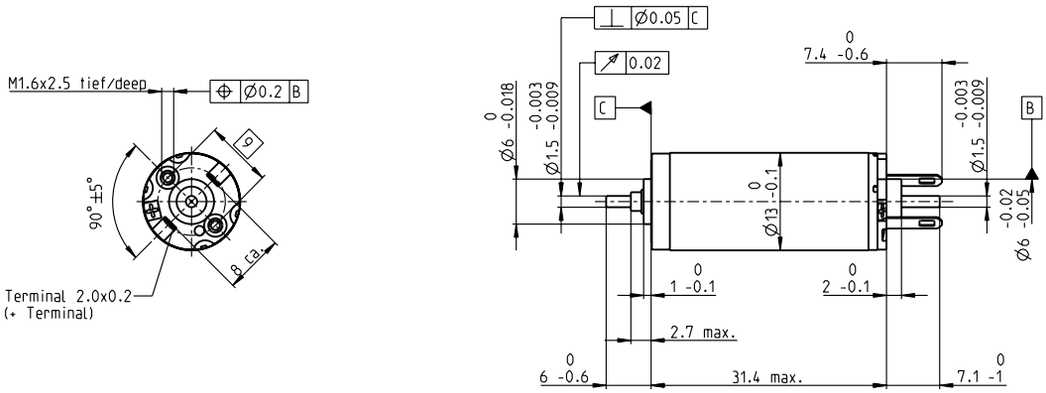
RE 13 ∅13 mm, Precious Metal Brushes, 2 Watt



M 1:1

Stock program
Standard program
Special program (on request)

Part Numbers

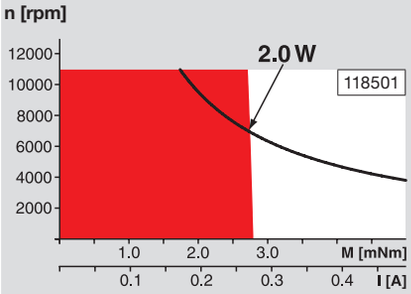
			118491	118492	118493	118494	118495	118496	118497	118498	118499	118500	118501	118502	118503	118504	118505
Motor Data																	
	Values at nominal voltage																
1	Nominal voltage	V	1.5	1.5	1.8	2.4	3	3	3.6	4.2	4.8	6	7.2	9	10	12	15
2	No load speed	rpm	6570	6090	6380	7170	7100	6300	6800	6620	6490	6810	6590	6630	6840	7020	7150
3	No load current	mA	43.8	39.8	35.3	30.8	24.3	20.8	19.2	15.8	13.5	11.5	9.19	7.41	6.94	5.99	4.91
4	Nominal speed	rpm	5170	4320	4160	4400	3560	2550	3000	2880	2880	3130	2880	2940	3120	3330	3400
5	Nominal torque (max. continuous torque)	mNm	1.46	1.58	1.82	2.18	2.78	2.91	2.85	2.91	3.02	2.95	2.93	2.94	2.92	2.93	2.88
6	Nominal current (max. continuous current)	A	0.72	0.72	0.72	0.72	0.72	0.669	0.592	0.502	0.446	0.367	0.294	0.237	0.218	0.188	0.151
7	Stall torque	mNm	6.22	5.12	5.01	5.5	5.51	4.86	5.1	5.16	5.46	5.49	5.26	5.34	5.42	5.63	5.54
8	Stall current	A	2.89	2.21	1.89	1.75	1.39	1.09	1.03	0.866	0.786	0.665	0.514	0.419	0.395	0.351	0.282
9	Max. efficiency	%	77	75	75	76	76	75	75	75	76	76	75	76	76	76	76
	Characteristics																
10	Terminal resistance	Ω	0.519	0.679	0.951	1.37	2.16	2.75	3.5	4.85	6.11	9.03	14	21.5	25.3	34.2	53.2
11	Terminal inductance	mH	0.021	0.025	0.032	0.046	0.073	0.092	0.114	0.164	0.223	0.316	0.485	0.749	0.87	1.19	1.79
12	Torque constant	mNm/A	2.15	2.31	2.65	3.14	3.97	4.46	4.96	5.95	6.94	8.27	10.2	12.7	13.7	16	19.7
13	Speed constant	rpm/V	4440	4130	3610	3040	2410	2140	1930	1600	1380	1160	932	750	696	595	485
14	Speed / torque gradient	rpm/mNm	1070	1210	1300	1330	1310	1320	1360	1310	1210	1260	1270	1260	1280	1270	1310
15	Mechanical time constant	ms	7.65	7.55	7.45	7.37	7.28	7.27	7.28	7.23	7.16	7.2	7.21	7.21	7.21	7.22	7.27
16	Rotor inertia	gcm^2	0.681	0.596	0.548	0.53	0.53	0.526	0.512	0.528	0.565	0.545	0.541	0.544	0.536	0.543	0.529

Specifications

	Thermal data	
17	Thermal resistance housing-ambient	33 K/W
18	Thermal resistance winding-housing	7.0 K/W
19	Thermal time constant winding	4.88 s
20	Thermal time constant motor	229 s
21	Ambient temperature	-20…+65°C
22	Max. winding temperature	+85°C
	Mechanical data (sleeve bearings)	
23	Max. speed	11000 rpm
24	Axial play	0.05 - 0.15 mm
25	Radial play	0.014 mm
26	Max. axial load (dynamic)	0.8 N
27	Max. force for press fits (static)	15 N
	(static, shaft supported)	95 N
28	Max. radial load, 5 mm from flange	1.4 N
	Other specifications	
29	Number of pole pairs	1
30	Number of commutator segments	7
31	Weight of motor	21 g

Values listed in the table are nominal.
Explanation of the figures on page 151.

Operating Range



Comments

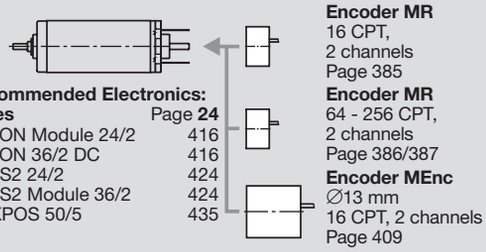
Continuous operation
In observation of above listed thermal resistance (lines 17 and 18) the maximum permissible winding temperature will be reached during continuous operation at 25°C ambient.
= Thermal limit.

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

Assigned power rating

maxon Modular System

Overview on page 20–27



Recommended Electronics:

Notes	Page **24**
ESCON Module 24/2	416
ESCON 36/2 DC	416
EPOS2 24/2	424
EPOS2 Module 36/2	424
MAXPOS 50/5	435

Encoder MR
16 CPT,
2 channels
Page 385

Encoder MR
64 - 256 CPT,
2 channels
Page 386/387

Encoder MEnc
∅13 mm
16 CPT, 2 channels
Page 409