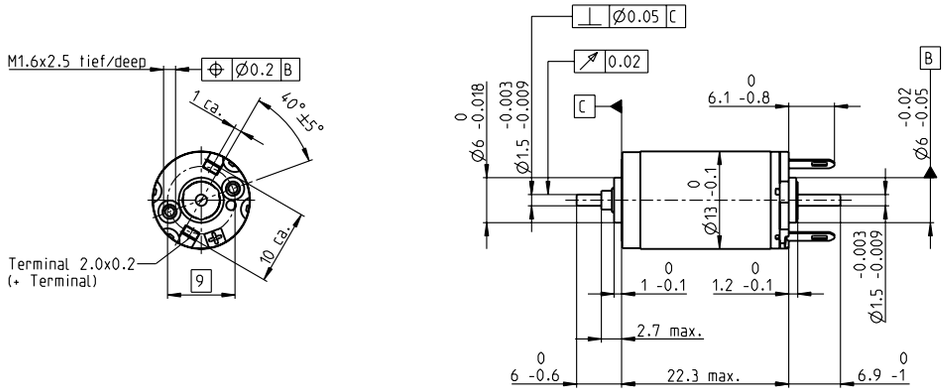
RE 13 ∅13 mm, graphite brushes, 1.5 watt



M 1:1

Stock program
Standard program
Special program (on request)

Part Numbers

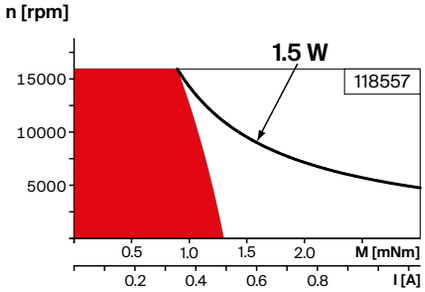
Motor Data		118555	118556	118557	118558	118559	118560	118561	118562	118563	118564	118565	118566
Values at nominal voltage													
1 Nominal voltage	V	3	3.6	4.2	4.8	6	7.2	9	12	12	15	18	20
2 No load speed	rpm	13200	13000	13300	12300	12700	12300	12300	13300	12300	13100	14000	13300
3 No load current	mA	197	159	140	111	92.5	73.7	59.2	49.2	44.7	38.9	35.1	29.7
4 Nominal speed	rpm	8520	7790	8260	7130	7480	7010	7000	8040	6940	7870	8890	8020
5 Nominal torque	mNm	1.06	1.23	1.27	1.28	1.25	1.26	1.25	1.21	1.22	1.21	1.2	1.19
6 Nominal current (max. continuous current)	A	0.72	0.659	0.588	0.481	0.39	0.316	0.252	0.199	0.186	0.157	0.139	0.119
7 Stall torque	mNm	3.19	3.3	3.56	3.26	3.25	3.16	3.12	3.28	3.01	3.23	3.51	3.22
8 Stall current	A	1.67	1.41	1.32	0.989	0.814	0.639	0.506	0.429	0.368	0.335	0.321	0.254
9 Max. efficiency	%	44	45	46	45	45	44	44	45	43	44	46	44
Characteristics													
10 Terminal resistance	Ω	1.8	2.56	3.18	4.85	7.37	11.3	17.8	28	32.6	44.8	56.1	78.8
11 Terminal inductance	mH	0.036	0.054	0.072	0.108	0.158	0.243	0.377	0.579	0.661	0.921	1.19	1.59
12 Torque constant	mNm/A	1.91	2.35	2.69	3.3	4	4.95	6.17	7.64	8.17	9.64	10.9	12.7
13 Speed constant	rpm/V	5000	4070	3550	2890	2390	1930	1550	1250	1170	990	872	753
14 Speed/torque gradient	rpm/mNm	4700	4440	4190	4250	4410	4390	4460	4570	4660	4600	4470	4680
15 Mechanical time constant	ms	14.2	14.1	14	14	14.1	14.2	14.2	14.3	14.3	14.3	14.2	14.4
16 Rotor inertia	gcm^2	0.288	0.303	0.318	0.315	0.306	0.308	0.304	0.3	0.293	0.297	0.303	0.294

Specifications

Thermal data	
17 Thermal resistance housing-ambient	46 K/W
18 Thermal resistance winding-housing	14 K/W
19 Thermal time constant winding	5.38 s
20 Thermal time constant motor	231 s
21 Ambient temperature	-20...+85°C
22 Max. winding temperature	+125°C
Mechanical data (sleeve bearings)	
23 Max. speed	16000 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)	140 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	15 g

Values listed in the table are nominal.
Explanation of the figures on page 90.

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 44

Sensor
472_ENX 13 GAMA
504_Encoder MR 16 CPT
505_Encoder MR 64-256 CPT
506_Encoder MR 64-256 CPT

Motor Control
532_ESCON Module 24/2
532_ESCON 36/2 DC
541_EPOS4 Micro 24/5
542_EPOS4 Module 24/1.5
543_EPOS4 Compact 24/5 3-axes
544_EPOS4 Compact 24/1.5