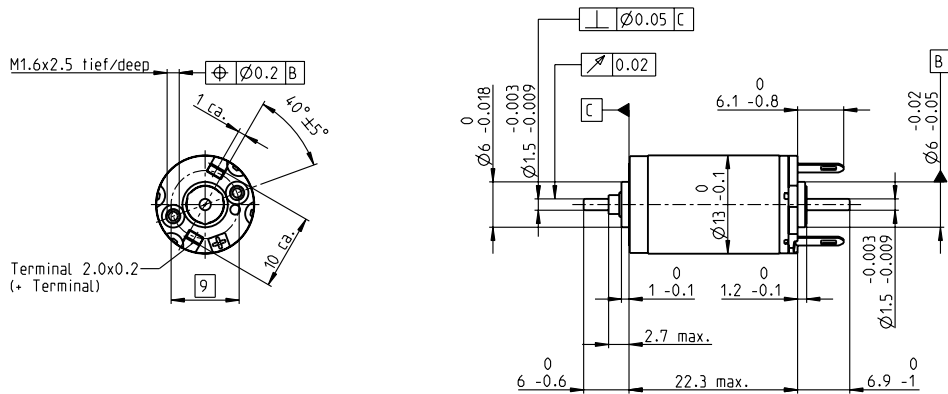


RE 13 Ø13 mm, graphite brushes, 1.5 watt

RE



M 1:1

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

Part numbers											
118555	118556	118557	118558	118559	118560	118561	118562	118563	118564	118565	118566

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 16 000 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 94.

Operating range

n [rpm]

15000

10000

5000

0.5 1.0 1.5 2.0

0.2 0.4 0.6 0.8

M [mNm]

I [A]

1.5 W

118557

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	
	Sensor		Motor Control
	498_ENX 13 GAMA		550_ESCON Module 24/2
	501_ENX 13 IMR		550_ESCON 36/2 DC
	532_Encoder MR 16 CPT		557_ESCON2 Nano 24/2
			563_EPOS4 Micro 24/5
			564_EPOS4 Module 24/1.5
			565_EPOS4 Compact 24/5 3-axes
			566_EPOS4 Compact 24/1.5