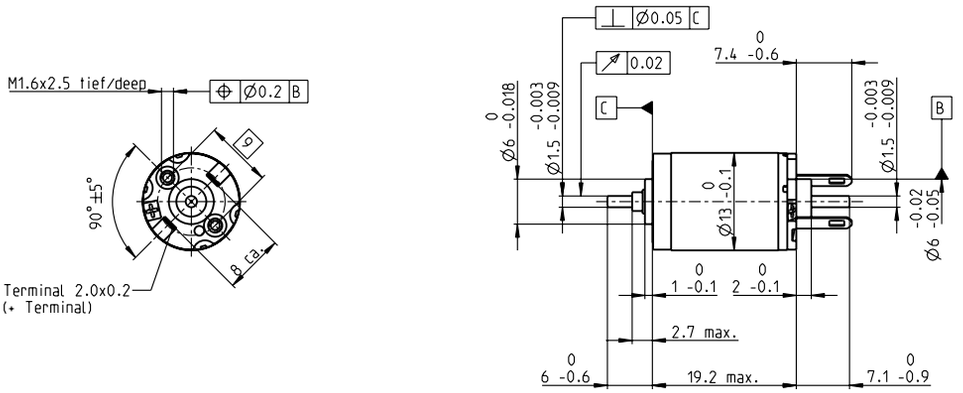
RE 13 ∅13 mm, precious metal brushes, 0.75 watt



M 1:1

Stock program
Standard program
Special program (on request)

Part numbers	118431	118432	118433	118434	118435	118436	118437	118438	118439	118440	118441	118442	118443	118444	118445
Motor data															
Values at nominal voltage															
1 Nominal voltage V	0.6	0.72	0.9	1.2	1.5	1.8	1.8	2.4	3	3.6	4.8	6	6	7.2	10
2 No load speed rpm	6900	6710	6590	7250	6990	6850	5950	6490	6700	6480	6950	7000	6530	6650	7030
3 No load current mA	88.2	71.7	56.1	47.3	36.2	29.4	24.7	20.6	17.1	13.7	11.2	9.06	8.33	7.09	5.46
4 Nominal speed rpm	5170	3920	3070	2740	1430	1430	682	1350	1300	1090	1520	1510	990	1140	1480
5 Nominal torque mNm	0.511	0.643	0.837	1.03	1.26	1.3	1.34	1.28	1.3	1.3	1.29	1.28	1.26	1.27	1.26
6 Nominal current (max. continuous current) A	0.72	0.72	0.72	0.72	0.671	0.562	0.504	0.396	0.331	0.268	0.213	0.17	0.158	0.134	0.101
7 Stall torque mNm	1.71	1.44	1.51	1.63	1.59	1.66	1.54	1.66	1.66	1.61	1.7	1.68	1.54	1.59	1.65
8 Stall current A	2.14	1.47	1.21	1.08	0.812	0.69	0.557	0.489	0.404	0.318	0.269	0.214	0.184	0.161	0.127
9 Max. efficiency %	64	61	62	63	63	63	63	64	64	63	64	64	62	63	63
Characteristics															
10 Terminal resistance Ω	0.281	0.491	0.742	1.11	1.85	2.61	3.23	4.9	7.42	11.3	17.8	28	32.6	44.9	78.8
11 Terminal inductance mH	0.006	0.009	0.015	0.022	0.036	0.054	0.072	0.108	0.158	0.243	0.377	0.579	0.661	0.921	1.59
12 Torque constant mNm/A	0.802	0.98	1.25	1.51	1.96	2.41	2.76	3.39	4.1	5.08	6.32	7.84	8.37	9.89	13
13 Speed constant rpm/V	11900	9740	7660	6310	4870	3970	3460	2820	2330	1880	1510	1220	1140	966	734
14 Speed / torque gradient rpm/mNm	4170	4880	4560	4640	4600	4310	4040	4090	4220	4190	4250	4350	4440	4380	4450
15 Mechanical time constant ms	15.6	14.9	14.3	14.1	13.9	13.7	13.5	13.5	13.5	13.5	13.6	13.7	13.6	13.6	13.7
16 Rotor inertia gcm^2	0.358	0.291	0.299	0.29	0.288	0.303	0.318	0.315	0.306	0.308	0.304	0.3	0.293	0.297	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	5.18 s
20 Thermal time constant motor	76.1 s
21 Ambient temperature	-20...+65 °C
22 Max. winding temperature	+85 °C

Mechanical data (sleeve bearings)

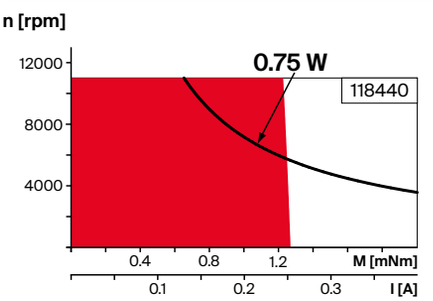
23 Max. speed	11000 rpm
24 Axial play	0.05 - 0.15 mm
25 Radial play	0.014 mm
26 Max. axial load (dynamic)	0.8 N
27 Max. force for press fits (static)	15 N
(static, shaft supported)	170 N
28 Max. radial load, 5 mm from flange	1.4 N

Other specifications

29 Number of pole pairs	1
30 Number of commutator segments	7
31 Weight of motor	12 g

Values listed in the table are nominal.
Explanation of the figures on page 94.

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 48

Sensor
498_ENX 13 GAMA
501_ENX 13 IMR
532_Encoder MR 16 CPT

Motor Control
550_ESCON Module 24/2
550_ESCON 36/2 DC
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