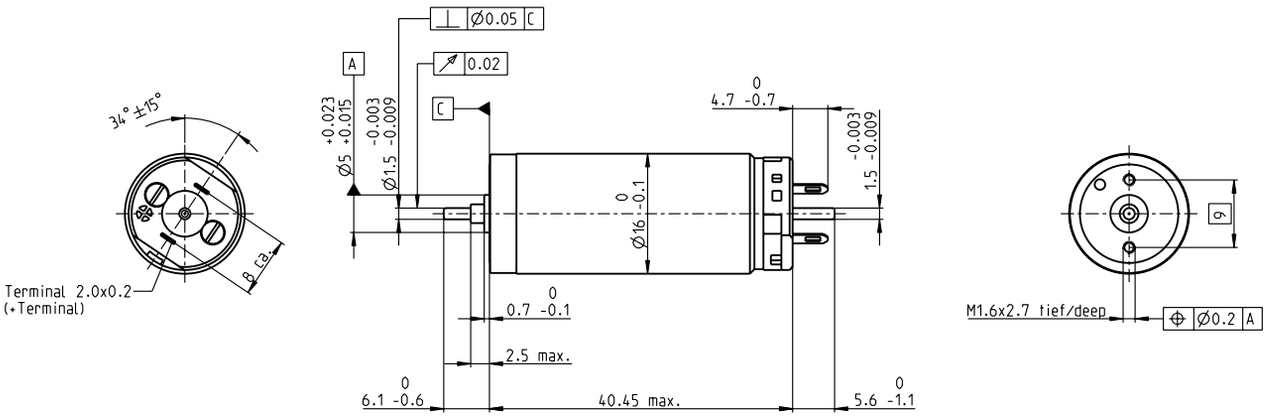
RE 16 ∅16 mm, precious metal brushes CLL, 3.2 watt



M 1:1

Stock program
Standard program
Special program (on request)

Part Numbers

Motor Data		118693	118694	118695	118696	118697	118698	118699	118700	118701	118702	118703	118704	118705	118706	118707
Values at nominal voltage																
1 Nominal voltage	V	1.8	2.4	3	3.2	4.5	4.8	7.2	9	12	12	15	18	24	30	48
2 No load speed	rpm	4990	6360	6890	6270	6740	5700	6890	6740	7130	5990	6010	5900	7250	6460	5500
3 No load current	mA	23.5	25.4	23	18.6	14.8	10.8	9.57	7.4	6.05	4.63	3.72	3.02	3.11	2.08	1.02
4 Nominal speed	rpm	4320	5510	5820	4930	5050	3630	4810	4630	5030	3830	3840	3730	5070	4220	3180
5 Nominal torque	mNm	2.39	2.5	2.89	3.41	4.48	5.61	5.54	5.48	5.48	5.38	5.36	5.33	5.29	5.18	5.01
6 Nominal current (max. continuous current)	A	0.72	0.72	0.72	0.72	0.72	0.711	0.566	0.438	0.348	0.287	0.229	0.187	0.171	0.119	0.0614
7 Stall torque	mNm	15.5	16.9	17.3	15.2	17.4	15.2	18.1	17.4	18.6	14.9	14.9	14.5	17.6	15	11.9
8 Stall current	A	4.53	4.71	4.19	3.13	2.74	1.9	1.82	1.37	1.16	0.784	0.628	0.5	0.561	0.341	0.144
9 Max. efficiency	%	86	86	86	85	86	86	86	86	86	86	85	85	86	85	84
Characteristics																
10 Terminal resistance	Ω	0.397	0.51	0.715	1.02	1.64	2.53	3.95	6.56	10.3	15.3	23.9	36	42.8	88	333
11 Terminal inductance	mH	0.021	0.023	0.03	0.042	0.071	0.113	0.174	0.284	0.452	0.639	0.993	1.48	1.75	3.44	12.1
12 Torque constant	mNm/A	3.43	3.58	4.13	4.84	6.34	7.99	9.92	12.7	16	19	23.7	28.9	31.4	44.1	82.7
13 Speed constant	rpm/V	2790	2660	2310	1970	1510	1190	962	753	597	502	403	330	304	217	115
14 Speed/torque gradient	rpm/mNm	323	379	400	415	391	378	383	389	386	404	406	410	414	432	465
15 Mechanical time constant	ms	5.84	5.71	5.56	5.46	5.36	5.31	5.29	5.29	5.27	5.29	5.3	5.31	5.31	5.36	5.42
16 Rotor inertia	gcm²	1.73	1.44	1.33	1.26	1.31	1.34	1.32	1.3	1.3	1.25	1.25	1.24	1.23	1.18	1.11

Specifications

Thermal data

17	Thermal resistance housing-ambient	30 K/W
18	Thermal resistance winding-housing	8.5 K/W
19	Thermal time constant winding	10.6 s
20	Thermal time constant motor	436 s
21	Ambient temperature	-20...+65°C
22	Max. winding temperature	+85°C

Mechanical data (sleeve bearings)

23	Max. speed	11 000 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)	70 N
28	Max. radial load, 5 mm from flange	1.5 N

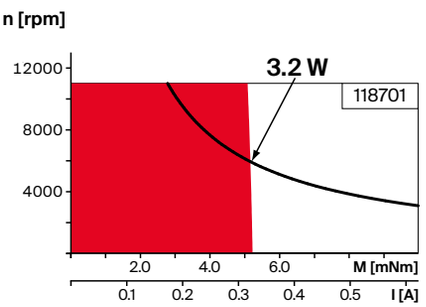
Other specifications

29	Number of pole pairs	1
30	Number of commutator segments	7
31	Weight of motor	38 g

CLL = Capacitor Long Life

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

Gear
405_GP 16 A
406_GP 16 C
447–449_GP 16 S

Sensor
472_ENX 13 GAMA
507_Encoder MR 32 CPT
508_Encoder MR 128-512 CPT

Motor Control
532_ESCON Module 24/2
532_ESCON 36/2 DC
533_ESCON Module 50/5
535_ESCON 50/5
541_EPOS4 Micro 24/5
542_EPOS4 Module 24/1.5
542_EPOS4 Module 50/5
543_EPOS4 Compact 24/5 3-axes
544_EPOS4 Compact 24/1.5
545_EPOS4 Compact 50/5
547_EPOS4 50/5