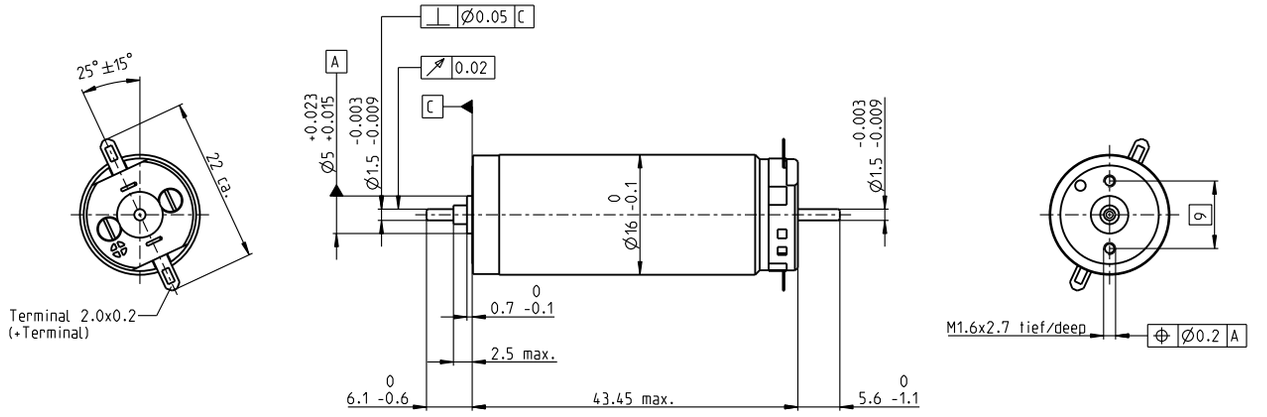
RE 16 ∅16 mm, Graphite Brushes, 4.5 Watt



M 1:1

Stock program
Standard program
Special program (on request)

Part Numbers

			118725	118726	118727	118728	118729	118730	118731	118732	118733	118734	118735	118736	118737	118738	118739
Motor Data																	
	Values at nominal voltage																
1	Nominal voltage	V	4.8	4.8	6	7.2	9	12	15	18	24	30	36	45	48	48	48
2	No load speed	rpm	12700	12100	13200	13600	13100	13900	14000	13200	14000	14700	14100	14500	14200	10100	5320
3	No load current	mA	105	98.7	87.6	75.4	56.9	45.9	37.1	28.5	23	19.6	15.6	12.8	11.8	7.66	3.63
4	Nominal speed	rpm	11200	10500	11500	11700	11000	11900	12200	11300	12200	12900	12300	12700	12400	8130	3170
5	Nominal torque (max. continuous torque)	mNm	2.15	2.27	2.67	3.18	4.09	4.36	4.34	4.48	4.5	4.37	4.44	4.41	4.43	4.65	4.77
6	Nominal current (max. continuous current)	A	0.72	0.72	0.72	0.72	0.69	0.582	0.467	0.375	0.299	0.245	0.199	0.162	0.15	0.111	0.0603
7	Stall torque	mNm	26.3	22.7	25.8	27.4	29.9	34.3	35.3	33.4	36.3	36.8	35.6	36.2	35.4	24.2	12.1
8	Stall current	A	7.56	6.26	6.16	5.58	4.65	4.23	3.51	2.6	2.24	1.91	1.48	1.23	1.11	0.541	0.144
9	Max. efficiency	%	69	69	72	73	76	79	79	79	80	80	80	81	81	78	71
	Characteristics																
10	Terminal resistance	Ω	0.635	0.767	0.975	1.29	1.94	2.83	4.28	6.93	10.7	15.7	24.4	36.5	43.3	88.7	334
11	Terminal inductance	mH	0.021	0.023	0.03	0.042	0.071	0.113	0.174	0.285	0.452	0.64	0.994	1.48	1.74	3.44	12.1
12	Torque constant	mNm/A	3.48	3.64	4.2	4.91	6.43	8.11	10.1	12.9	16.2	19.3	24.1	29.4	31.9	44.8	83.9
13	Speed constant	rpm/V	2750	2630	2280	1940	1480	1180	948	742	589	495	397	325	299	213	114
14	Speed / torque gradient	rpm/mNm	502	554	529	511	447	411	403	399	389	403	402	404	407	423	453
15	Mechanical time constant	ms	9.07	8.35	7.36	6.71	6.13	5.78	5.56	5.43	5.31	5.28	5.25	5.23	5.22	5.24	5.28
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	459 s
21	Ambient temperature	-20…+65°C
22	Max. winding temperature	+85°C

Mechanical data (sleeve bearings)

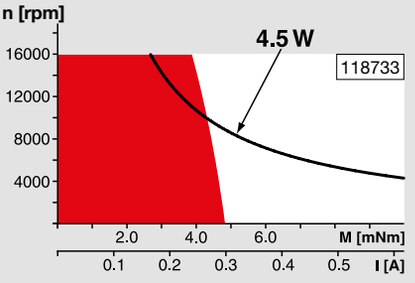
23	Max. speed	16000 rpm
24	Axial play	0.05 - 0.15 mm
25	Radial play	0.014 mm
26	Max. axial load (dynamic)	0.8 N
27	Max. force for press fits (static)	15 N
	(static, shaft supported)	60 N
28	Max. radial load, 5 mm from flange	1.5 N

Other specifications

29	Number of pole pairs	1
30	Number of commutator segments	7
31	Weight of motor	40 g

Values listed in the table are nominal.
Explanation of the figures on page 64.

Operating Range



Comments

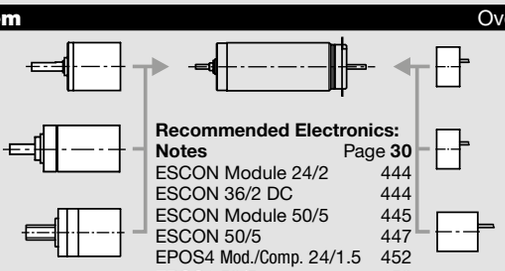
Continuous operation
In observation of above listed thermal resistance (lines 17 and 18) the maximum permissible winding temperature will be reached during continuous operation at 25°C ambient.
= Thermal limit.

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

Assigned power rating

maxon Modular System

Overview on page 28–36



Planetary Gearhead
∅16 mm
0.1 - 0.3 Nm
Page 328

Planetary Gearhead
∅16 mm
0.2 - 0.6 Nm
Page 329

Screw Drive
∅16 mm
Page 369–371

Recommended Electronics:

Notes	Page 30
ESCON Module 24/2	444
ESCON 36/2 DC	444
ESCON Module 50/5	445
ESCON 50/5	447
EPOS4 Mod./Comp. 24/1.5	452
EPOS4 50/5	453
EPOS4 Mod./Comp. 50/5	453
MAXPOS 50/5	468

Encoder MR
32 CPT,
2 / 3 channels
Page 416

Encoder MR
128 / 256 / 512 CPT,
2 / 3 channels
Page 417

Encoder MEnc
∅13 mm
16 CPT, 2 channels
Page 407