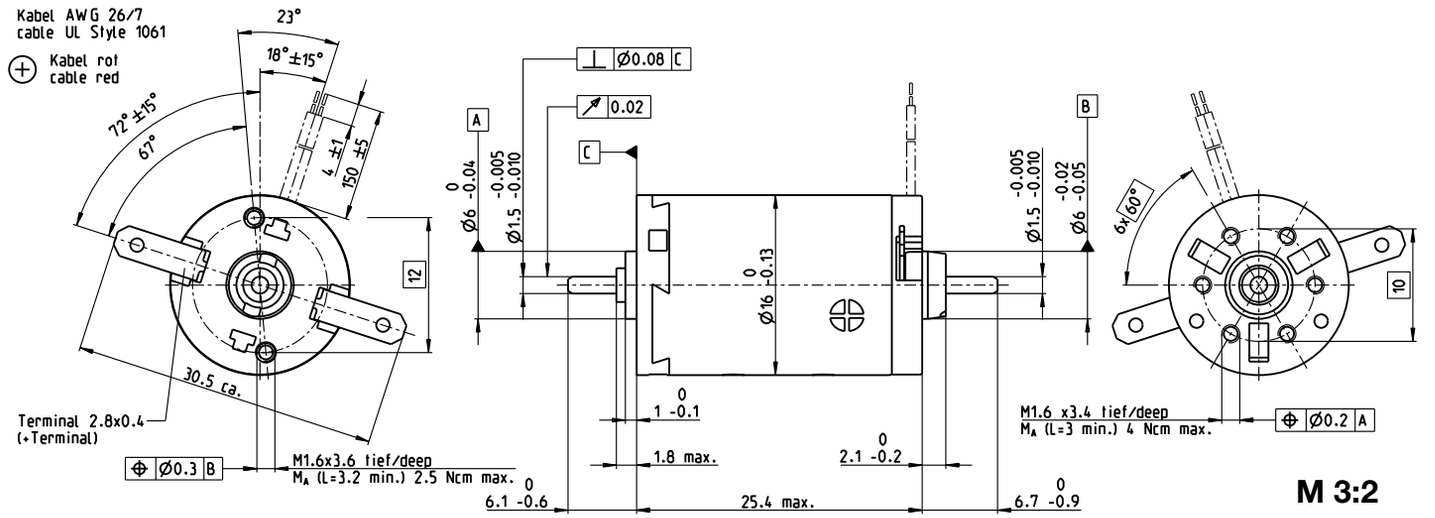
A-max 16 ∅16 mm, Graphite Brushes, 2 Watt



Stock program
Standard program
Special program (on request)

Part Numbers

with terminals		110071	110072	110073	110074	110075	110076	110077	110078	110079	110080
with cables		139825	352870	352871	352872	352873	352874	352875	352876	352877	352878
Motor Data											
	Values at nominal voltage										
1	Nominal voltage	V	1.5	3	6	9	12	14	15	18	21	30
2	No load speed	rpm	10200	11500	9360	11500	11500	11500	11000	10900	11300	10500
3	No load current	mA	282	164	65.6	54.6	41	35.1	31.1	25.9	23	15
4	Nominal speed	rpm	9010	8060	3280	5510	5460	5500	4860	4810	5100	4180
5	Nominal torque (max. continuous torque)	mNm	0.579	1.29	2.42	2.36	2.34	2.35	2.35	2.33	2.28	2.24
6	Nominal current (max. continuous current)	A	0.72	0.72	0.495	0.394	0.293	0.253	0.224	0.186	0.162	0.105
7	Stall torque	mNm	5.36	4.65	4.05	4.84	4.78	4.82	4.54	4.48	4.49	4.04
8	Stall current	A	4.1	2.03	0.727	0.704	0.521	0.451	0.378	0.311	0.276	0.164
9	Max. efficiency	%	54	51	49	52	52	52	51	51	50	48
	Characteristics											
10	Terminal resistance	Ω	0.366	1.48	8.25	12.8	23	31.1	39.7	57.9	76.1	183
11	Terminal inductance	mH	0.017	0.052	0.306	0.467	0.83	1.13	1.42	2.05	2.61	6.01
12	Torque constant	mNm/A	1.31	2.29	5.57	6.88	9.17	10.7	12	14.4	16.3	24.7
13	Speed constant	rpm/V	7290	4170	1720	1390	1040	893	795	663	587	387
14	Speed / torque gradient	rpm/mNm	2040	2690	2540	2580	2620	2590	2630	2660	2750	2880
15	Mechanical time constant	ms	22.6	23.1	23.1	23.2	23.3	23.3	23.5	23.4	23.5	23.9
16	Rotor inertia	gcm²	1.06	0.82	0.868	0.859	0.849	0.859	0.852	0.838	0.816	0.793

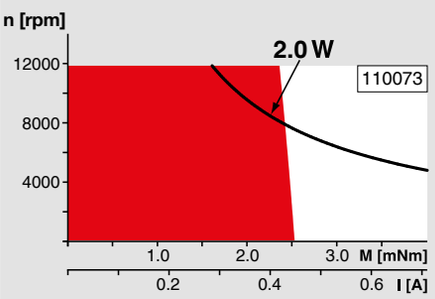
Specifications

	Thermal data	
17	Thermal resistance housing-ambient	29.8 K/W
18	Thermal resistance winding-housing	5.5 K/W
19	Thermal time constant winding	3.55 s
20	Thermal time constant motor	165 s
21	Ambient temperature	-30…+85°C
22	Max. winding temperature	+125°C
	Mechanical data (sleeve bearings)	
23	Max. speed	11900 rpm
24	Axial play	0.05 - 0.15 mm
25	Radial play	0.012 mm
26	Max. axial load (dynamic)	0.8 N
27	Max. force for press fits (static)	35 N
	(static, shaft supported)	280 N
28	Max. radial load, 5 mm from flange	1.4 N
	Mechanical data (ball bearings)	
23	Max. speed	11900 rpm
24	Axial play	0.05 - 0.15 mm
25	Radial play	0.025 mm
26	Max. axial load (dynamic)	2.2 N
27	Max. force for press fits (static)	30 N
	(static, shaft supported)	280 N
28	Max. radial load, 5 mm from flange	7.8 N
	Other specifications	
29	Number of pole pairs	1
30	Number of commutator segments	7
31	Weight of motor	22 g

Values listed in the table are nominal.
Explanation of the figures on page 68.

Option
Ball bearings in place of sleeve bearings

Operating Range



Comments

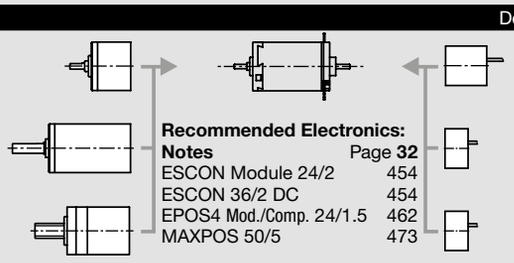
Continuous operation
In observation of above listed thermal resistance (lines 17 and 18) the maximum permissible winding temperature will be reached during continuous operation at 25°C ambient.
= Thermal limit.

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

Assigned power rating

maxon Modular System

Details on catalog page 32



Spur Gearhead
∅16 mm
0.01 - 0.1 Nm
Page 330–333

Planetary Gearhead
∅16 mm
0.1 - 0.6 Nm
Page 334/335

Screw Drive
∅16 mm
Page 377–379

Recommended Electronics:

Notes	Page 32
ESCON Module 24/2	454
ESCON 36/2 DC	454
EPOS4 Mod./Comp. 24/1.5	462
MAXPOS 50/5	473

Encoder MEnc
∅13 mm
16 CPT, 2 channels
Page 416

Encoder MR
32 CPT,
2 / 3 channels
Page 429

Encoder MR
128 / 256 / 512 CPT,
2 / 3 channels
Page 430