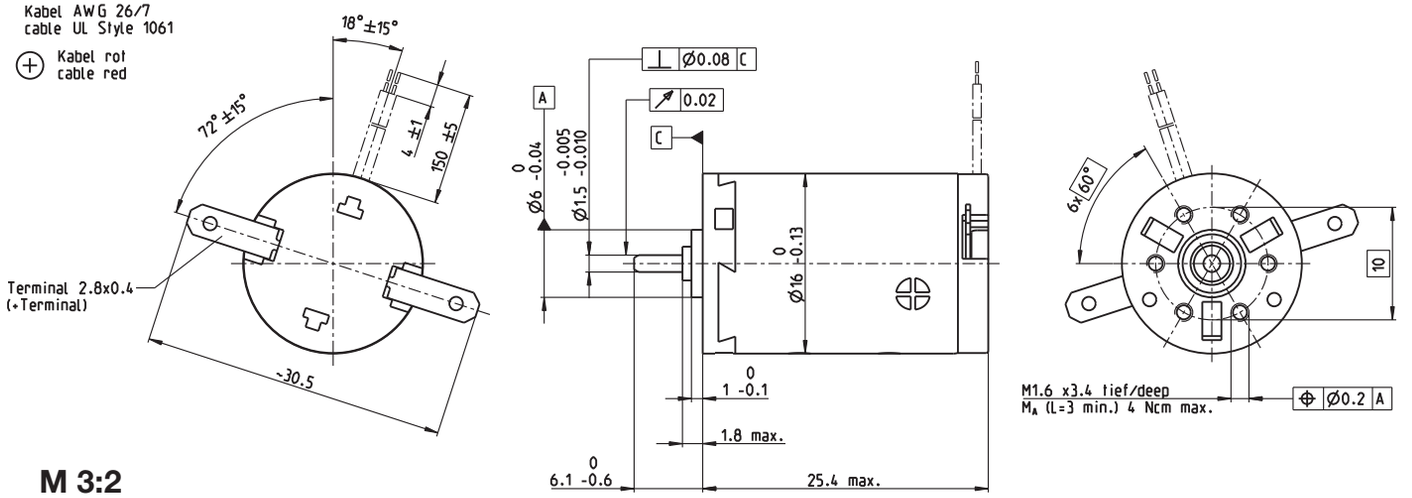
A-max 16 ∅16 mm, Graphite Brushes, 2 Watt



M 3:2

Stock program
Standard program
Special program (on request)

Part Numbers

with terminals	110061	110062	110063	**110064**	110065	110066	110067	110068	**110069**	110070
with cables	139821	352853	352854	352855	325083	352856	205903	352857	266076	352858

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

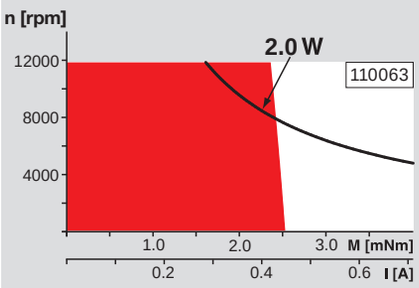
Specifications

	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
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
28	Max. radial load, 5 mm from flange	7.8 N
	Other specifications	1
29	Number of pole pairs	7
30	Number of commutator segments	21 g
31	Weight of motor	

Values listed in the table are nominal.
Explanation of the figures on page 151.

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

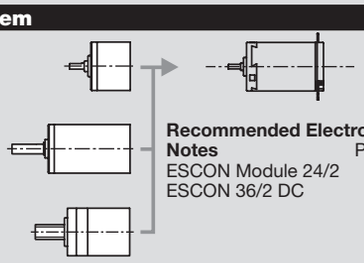
maxon Modular System

Overview on page 20–27

Spur Gearhead
∅16 mm
0.01 - 0.1 Nm
Page 319–322

Planetary Gearhead
∅16 mm
0.1 - 0.6 Nm
Page 323/324

Spindle Drive
∅16 mm
Page 365–367



Recommended Electronics:

Notes	Page **24**
ESCON Module 24/2	416
ESCON 36/2 DC	416