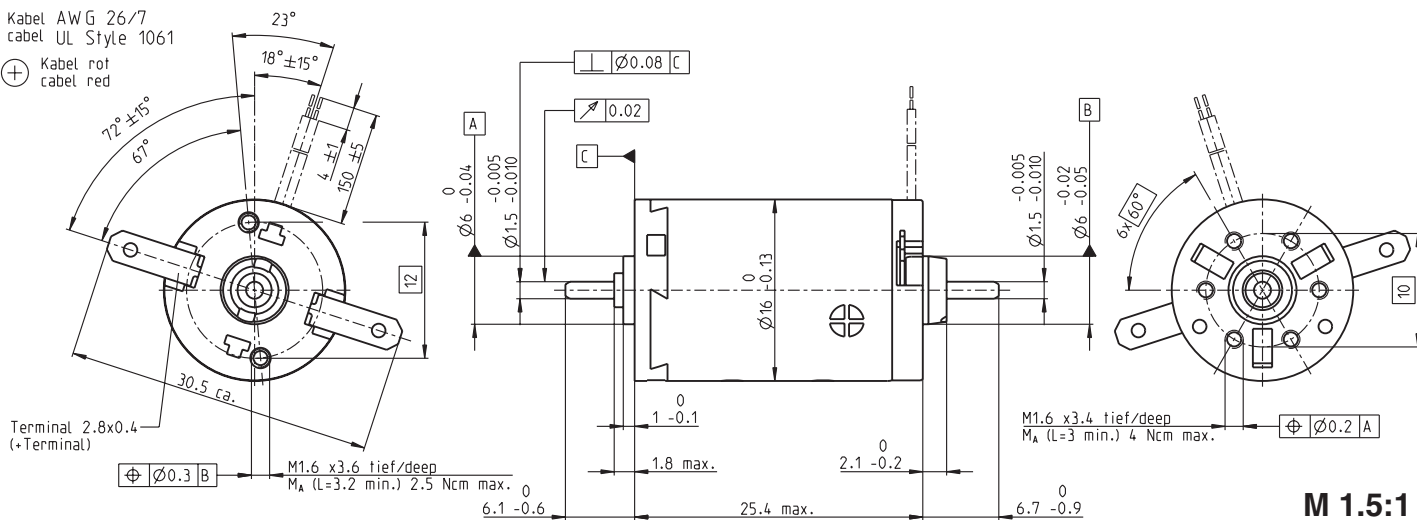


# A-max 16 $\varnothing 16$ mm, Graphite Brushes, 2 Watt

Kabel AWG 26/7  
cabel UL Style 1061

⊕ Kabel rot  
cabel red



M 1.5:1

- Stock program
- Standard program
- Special program (on request)

## Order Number

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	3.0	6.0	9.0	12.0	14.0	15.0	18.0	21.0	30.0								
2	No load speed	rpm	10200	11700	9620	11800	11800	11800	11200	11200	11600	10800								
3	No load current	mA	201	117	46.7	39.1	29.3	25.1	22.2	18.5	16.5	10.7								
4	Nominal speed	rpm	8670	7860	3240	5460	5410	5450	4820	4780	5070	4160								
5	Nominal torque (max. continuous torque)	mNm	0.686	1.40	2.51	2.47	2.45	2.46	2.46	2.44	2.39	2.35								
6	Nominal current (max. continuous current)	A	0.720	0.720	0.494	0.394	0.294	0.253	0.225	0.186	0.162	0.105								
7	Stall torque	mNm	4.93	4.51	4.02	4.82	4.76	4.81	4.53	4.47	4.48	4.03								
8	Starting current	A	3.76	1.97	0.721	0.700	0.519	0.45	0.377	0.31	0.275	0.164								
9	Max. efficiency	%	58	57	56	58	58	58	58	57	57	55								
Characteristics																				
10	Terminal resistance	$\Omega$	0.399	1.52	8.32	12.8	23.1	31.1	39.8	58.0	76.2	183								
11	Terminal inductance	mH	0.017	0.0519	0.306	0.467	0.831	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	12.0	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	2220	2770	2560	2600	2630	2600	2630	2670	2750	2880								
15	Mechanical time constant	ms	24.5	23.7	23.2	23.2	23.2	23.2	23.4	23.3	23.4	23.8								
16	Rotor inertia	gcm <sup>2</sup>	1.05	0.816	0.864	0.854	0.844	0.854	0.848	0.834	0.811	0.788								

## 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	3.53 s
20	Thermal time constant motor	328 s
21	Ambient temperature	-30 ... +85°C
22	Max. permissible winding temperature	+125°C

**Mechanical data (sleeve bearings)**

23	Max. permissible 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 loading, 5 mm from flange	1.4 N

**Mechanical data (ball bearings)**

23	Max. permissible 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 loading, 5 mm from flange	7.8 N

**Other specifications**

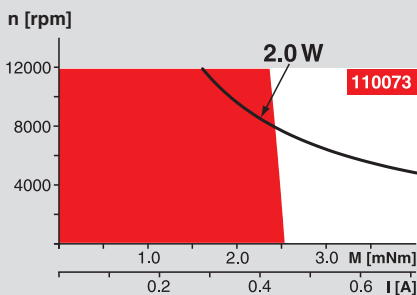
29	Number of pole pairs	1
30	Number of commutator segments	7
31	Weight of motor	22 g

Values listed in the table are nominal.  
Explanation of the figures on page 49.

### 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.

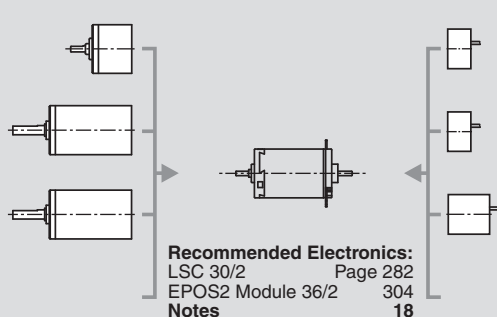
**Short term operation**  
The motor may be briefly overloaded (recurring).

— Assigned power rating

## maxon Modular System

Overview on page 16 - 21

- Spur Gearhead**  
 $\varnothing 16$  mm  
0.01 - 0.1 Nm  
Page 211 / 212 / 213 / 214
- Planetary Gearhead**  
 $\varnothing 16$  mm  
0.06 - 0.18 Nm  
Page 215
- Planetary Gearhead**  
 $\varnothing 16$  mm  
0.1 - 0.3 Nm  
Page 216



- Encoder MR**  
32 Imp.,  
2 / 3 channels  
Page 258
- Encoder MR**  
128 / 256 / 512 Imp.,  
2 / 3 channels  
Page 260
- Encoder MENC**  
 $\varnothing 13$  mm  
16 Imp., 2 channels  
Page 274