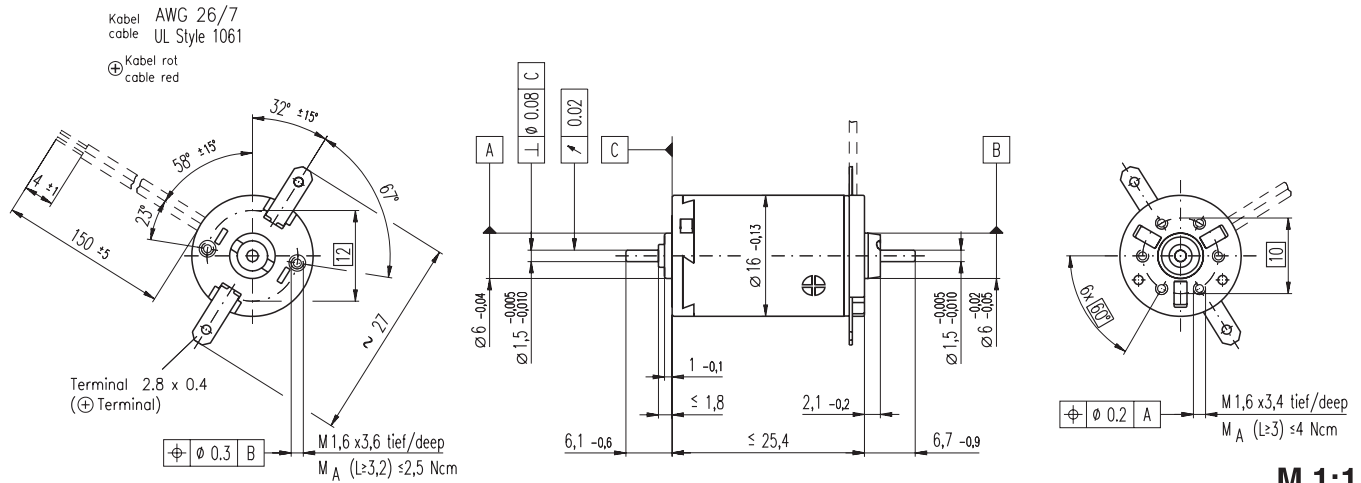


A-max 16 \varnothing 16 mm, Precious Metal Brushes CLL, 1.2 Watt, CE approved

maxon A-max



M 1:1

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

Order Number

with terminals	110051	110052	110053	110054	110055	110056	110057	110058	110059	110060
with cables	139823	352825	352826	352827	352828	352829	352830	352831	352832	352833

Motor Data

Values at nominal voltage															
1	Nominal voltage	V	1.2	2.4	6.0	7.2	9.0	12.0	15.0	18.0	18.0	30.0			
2	No load speed	rpm	8530	9720	10000	9740	9110	10400	11600	11600	10300	11300			
3	No load current	mA	73.8	44.1	18.3	14.7	10.8	9.69	8.99	7.49	6.34	4.33			
4	Nominal speed	rpm	6960	6190	4520	4190	3520	4900	6090	6050	4580	5500			
5	Nominal torque (max. continuous torque)	mNm	0.695	1.29	2.18	2.16	2.15	2.16	2.13	2.12	2.09	2.04			
6	Nominal current (max. continuous current)	A	0.600	0.600	0.406	0.326	0.244	0.209	0.185	0.153	0.134	0.0862			
7	Stall torque	mNm	3.83	3.61	4.03	3.86	3.57	4.13	4.54	4.48	3.84	4.04			
8	Starting current	A	2.93	1.58	0.723	0.561	0.390	0.386	0.378	0.311	0.236	0.164			
9	Max. efficiency	%	71	70	71	71	70	71	72	72	70	71			
Characteristics															
10	Terminal resistance	Ω	0.410	1.52	8.30	12.8	23.1	31.1	39.7	57.9	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	2280	2770	2560	2590	2620	2600	2630	2670	2750	2880			
15	Mechanical time constant	ms	25.1	23.6	23.1	23.1	23.1	23.2	23.3	23.2	23.3	23.7			
16	Rotor inertia	gcm ²	1.05	0.814	0.862	0.852	0.842	0.852	0.846	0.832	0.809	0.786			

Specifications

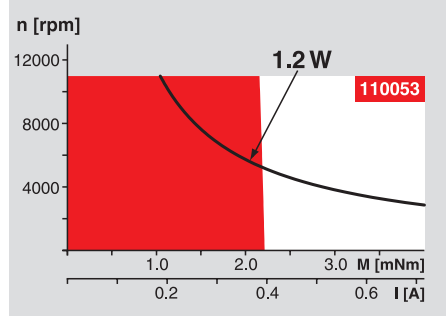
- Thermal data**
- 17 Thermal resistance housing-ambient 29.8 K / W
 - 18 Thermal resistance winding-housing 5.5 K / W
 - 19 Thermal time constant winding 3.53 s
 - 20 Thermal time constant motor 328 s
 - 21 Ambient temperature -30 ... +65°C
 - 22 Max. permissible winding temperature +85°C
- Mechanical data (sleeve bearings)**
- 23 Max. permissible speed 11000 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 11000 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
- CLL = Capacitor Long Life

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

Options

- Ball bearings in place of sleeve bearings
- Without CLL

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

Spur Gearhead
 \varnothing 16 mm
0.01 - 0.1 Nm
Page 219 / 220 / 221 / 222

Planetary Gearhead
 \varnothing 16 mm
0.06 - 0.18 Nm
Page 223

Planetary Gearhead
 \varnothing 16 mm
0.1 - 0.3 Nm
Page 224

Overview on page 16 - 21

Encoder MR
32 CPT,
2 / 3 channels
Page 255

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

Encoder MEnc
 \varnothing 13 mm
16 CPT, 2 channels
Page 270

Recommended Electronics:
LSC 30/2 Page 276
Notes 18