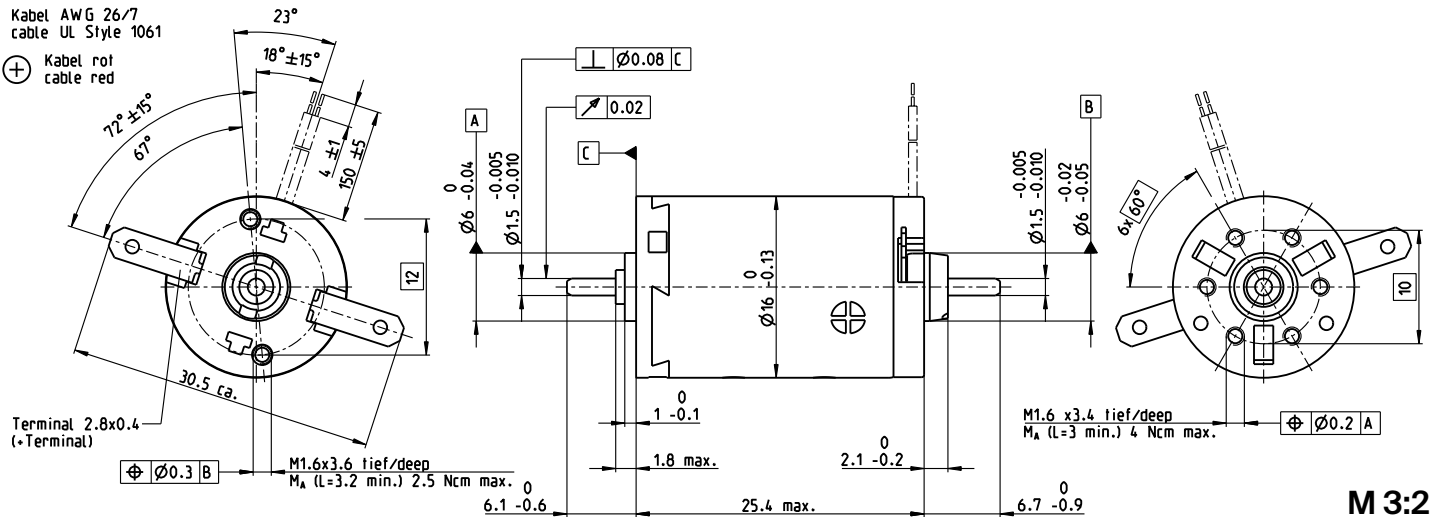


A-max 16 $\varnothing 16$ mm, graphite brushes, 2 watt

A-max

Kabel AWG 26/7
cable UL Style 1061

⊕ Kabel rot
cable red



M 3:2

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

Part numbers

with terminals
with cables

110071	110072	110073	110074	110075	110076	110077	110078	110079	110080
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	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	gcm ²	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

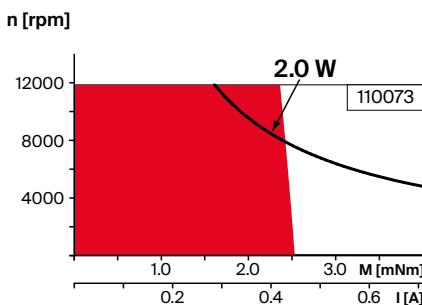
29 Number of pole pairs	1
30 Number of commutator segments	7
31 Weight of motor	22 g

Values listed in the table are nominal.
Explanation of the figures on page 94.

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**

Modular system

Details on catalog page 48

Gear	Sensor	Motor Control
416_GP 16 A	498_ENX 13 GAMA	550_ESCON Module 24/2
417_GP 16 C	502_ENX 16 IMR	550_ESCON 36/2 DC
449_GS 16 A	533_Encoder MR 32 CPT	557_ESCON2 Nano 24/2
450_GS 16 V		563_EPOS4 Micro 24/5
451_GS 16 VZ		564_EPOS4 Module 24/1.5
469-471_GP 16 S		565_EPOS4 Compact 24/5 3-axes
		566_EPOS4 Compact 24/1.5