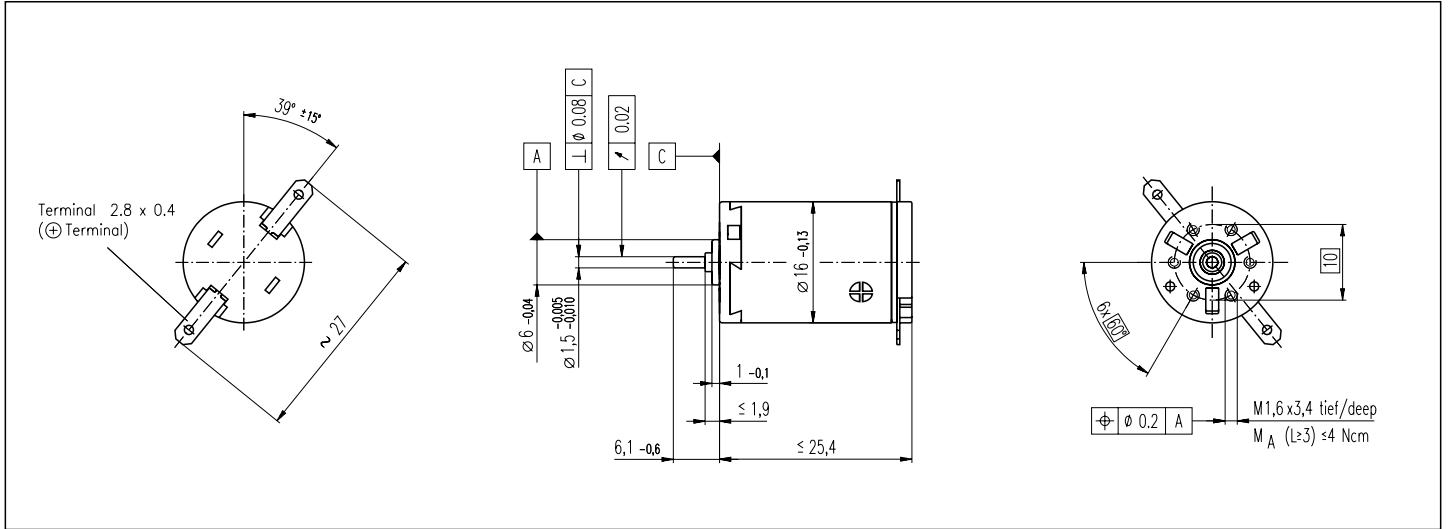


maxon DC motor



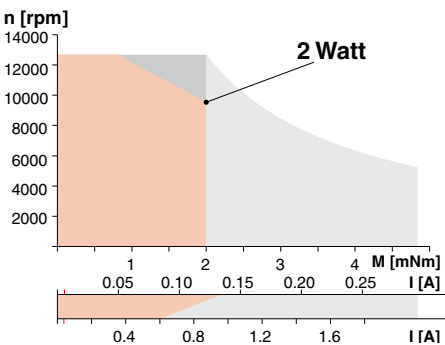
A-max 16
 Ø16 mm, Precious Metal Brushes CLL, 2 Watt



Motor Data:	Order Number																				
with CLL	110041	110042	110043	110044	110045	110046	110047	110048	110049	110050											

		W	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
1 Assigned power rating	W	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
2 Nominal voltage	Volt	1.5	3.0	6.0	9.0	12.0	15.0	18.0	21.0	24.0	30.0										
3 No load speed	rpm	10700	12200	10100	12200	12200	13100	14000	13600	13800	11300										
4 Stall torque	mNm	4.80	4.52	4.04	4.84	4.78	5.17	5.46	5.23	5.14	4.05										
5 Speed/torque gradient	rpm/mNm	2270	2760	2540	2580	2610	2580	2620	2650	2740	2860										
6 No load current	mA	61	38	14	13	10	9	8	7	6	3										
7 Starting current	mA	3660	1970	723	702	520	482	453	362	315	164										
8 Terminal resistance	Ohm	0.410	1.52	8.30	12.8	23.1	31.1	39.7	57.9	76.2	183										
9 Max. permissible speed	rpm	12700	12700	12700	12700	12700	12700	12700	12700	12700	12700										
10 Max. continuous current	mA	600	600	408	328	244	210	186	154	134	86.7										
11 Max. continuous torque	mNm	0.788	1.38	2.27	2.26	2.25	2.26	2.24	2.23	2.19	2.14										
12 Max. power output at nominal voltage	mW	1340	1440	1060	1540	1520	1770	1990	1860	1840	1190										
13 Max. efficiency	%	77	75	75	76	76	76	76	76	76	74										
14 Torque constant	mNm/A	1.31	2.30	5.58	6.89	9.19	10.7	12.0	14.4	16.3	24.7										
15 Speed constant	rpm/V	7270	4160	1710	1390	1040	890	793	661	586	386										
16 Mechanical time constant	ms	24	23	22	22	22	22	22	22	22	22										
17 Rotor inertia	gcm ²	1.01	0.781	0.819	0.807	0.797	0.804	0.795	0.785	0.763	0.733										
18 Terminal inductance	mH	0.02	0.05	0.31	0.47	0.83	1.13	1.43	2.05	2.62	6.02										
19 Thermal resistance housing-ambient	K/W	30	30	30	30	30	30	30	30	30	30										
20 Thermal resistance rotor-housing	K/W	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5										
21 Thermal time constant winding	s	4	3	3	3	3	3	3	3	3	3										

Operating Range	Comments	Details on page 36
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Recommended operating range

Continuous operation
 In observation of above listed thermal resistances (lines 19 and 20) the maximum permissible rotor temperature will be reached during continuous operation at 25°C ambient. = Thermal limit.

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

110049 Motor with high resistance winding

110042 Motor with low resistance winding

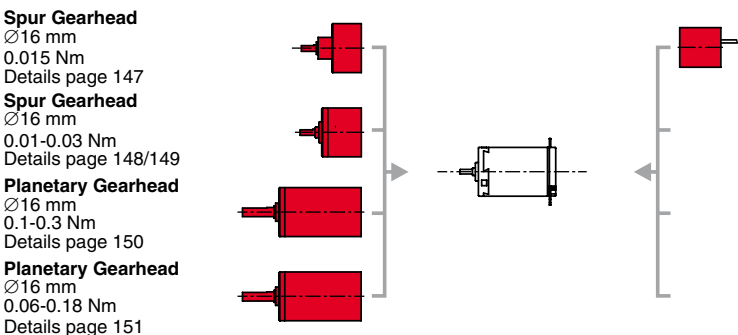
Stock program

Standard program

Special program (on request!)

- Axial play 0.05 - 0.15 mm
- Max. **sleeve bearing** loads
 - axial (dynamic) 0.8 N
 - radial (5 mm from flange) 1.4 N
 - Press-fit force (static) 15 N
- Max. **ball bearing** loads
 - axial (dynamic) 2.2 N
 - radial (5 mm from flange) 7.8 N
 - Press-fit force (static) 30 N
- Radial play **sleeve bearings** 0.012 mm
- Radial play **ball bearings** 0.025 mm
- Ambient temperature range -30/+85°C
- Max. rotor temperature +85°C
- Number of commutator segments 7
- Weight of motor 21 g
- Values listed in the table are nominal. For applicable tolerances (see page 33) and additional details please request our computer printout.
- CLL = Capacitor Long Life

maxon Modular System



Digital Magnetic Encoder Ø13 mm
 16 CTP, 2 channels
 Details page 184