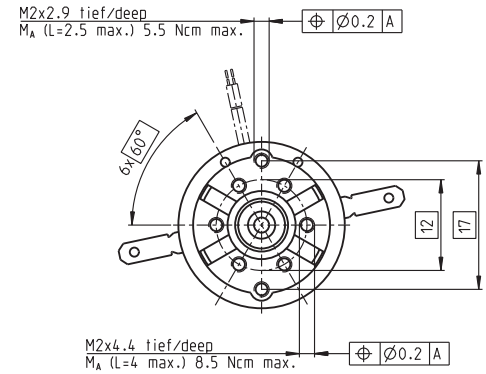
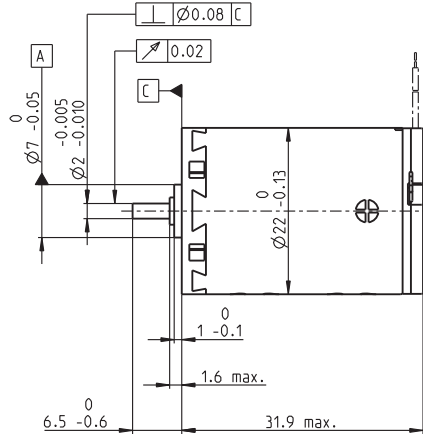
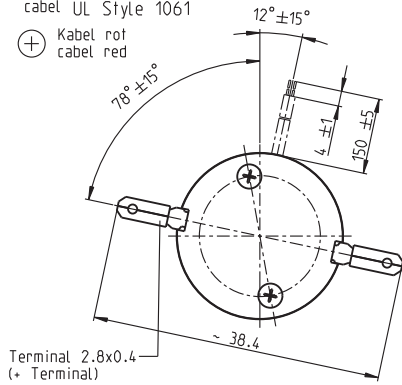


A-max 22 Ø22 mm, Graphite Brushes, 6 Watt

Kabel AWG 24/7
cable UL Style 1061

⊕ Kabel rot
⊖ Kabel red



M 1:1

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

Order Number

with terminals	110143	110145	110146	110147	110148	110149	110150	110151	110152	110153	110154	110155
with cables	139840	353017	199807	320206	323856	108828	199424	202921	267433	325492	313302	353019

Motor Data

Values at nominal voltage

1 Nominal voltage	V	6.0	9.0	9.0	12.0	12.0	15.0	18.0	24.0	24.0	36.0	48.0	48.0
2 No load speed	rpm	9250	9710	8530	10200	9200	10100	9800	10500	8500	9650	9130	8220
3 No load current	mA	83.2	57.9	49.7	45.9	40.5	36.0	29.0	23.7	18.4	14.2	10.0	8.85
4 Nominal speed	rpm	5550	6370	5240	6990	5960	6880	6630	7430	5340	6500	5920	5020
5 Nominal torque (max. continuous torque)	mNm	5.82	6.52	6.76	6.77	6.82	6.87	6.94	6.97	7.07	7.00	6.91	7.02
6 Nominal current (max. continuous current)	A	1.06	0.816	0.741	0.664	0.602	0.529	0.433	0.350	0.287	0.214	0.150	0.138
7 Stall torque	mNm	16.1	20.4	18.7	22.8	20.4	22.7	22.3	24.3	19.5	21.9	20.1	18.5
8 Starting current	A	2.73	2.38	1.92	2.09	1.69	1.64	1.30	1.14	0.745	0.631	0.411	0.340
9 Max. efficiency	%	65	70	69	72	71	72	72	73	71	72	71	70

Characteristics

10 Terminal resistance	Ω	2.20	3.78	4.69	5.74	7.12	9.15	13.8	21.0	32.2	57.1	117	141
11 Terminal inductance	mH	0.106	0.222	0.288	0.362	0.445	0.584	0.890	1.37	2.10	3.68	7.29	8.95
12 Torque constant	mNm / A	5.90	8.55	9.73	10.9	12.1	13.9	17.1	21.2	26.2	34.8	48.9	54.3
13 Speed constant	rpm / V	1620	1120	981	875	790	689	558	450	364	274	195	176
14 Speed / torque gradient	rpm / mNm	604	494	473	461	465	455	451	445	447	450	466	458
15 Mechanical time constant	ms	25.1	21.8	21.2	20.6	20.3	19.9	19.4	19.1	19.0	18.9	18.9	18.8
16 Rotor inertia	gcm ²	3.97	4.22	4.28	4.26	4.17	4.17	4.11	4.11	4.07	4.00	3.88	3.92

Specifications

Thermal data

17 Thermal resistance housing-ambient	20 K / W
18 Thermal resistance winding-housing	6.0 K / W
19 Thermal time constant winding	10.1 s
20 Thermal time constant motor	540 s
21 Ambient temperature	-30 ... +85°C
22 Max. permissible winding temperature	+125°C

Mechanical data (sleeve bearings)

23 Max. permissible speed	9800 rpm
24 Axial play	0.05 - 0.15 mm
25 Radial play	0.012 mm
26 Max. axial load (dynamic)	1 N
27 Max. force for press fits (static)	80 N
28 Max. radial loading, 5 mm from flange	2.8 N

Mechanical data (ball bearings)

23 Max. permissible speed	9800 rpm
24 Axial play	0.05 - 0.15 mm
25 Radial play	0.025 mm
26 Max. axial load (dynamic)	3.3 N
27 Max. force for press fits (static)	45 N
28 Max. radial loading, 5 mm from flange	12.3 N

Other specifications

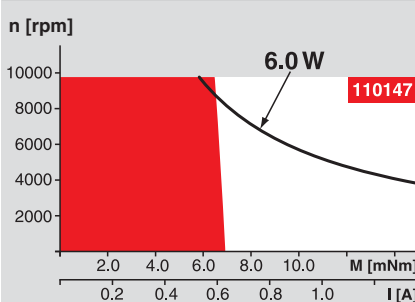
29 Number of pole pairs	1
30 Number of commutator segments	9
31 Weight of motor	54 g

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

Planetary Gearhead

Ø22 mm
0.1 - 0.6 Nm
Page 219 / 220

Planetary Gearhead

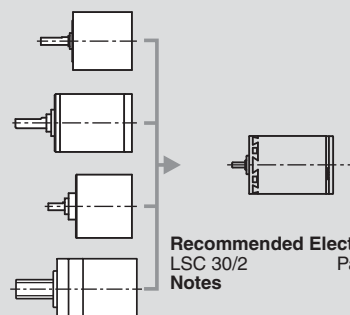
Ø22 mm
0.5 - 2.0 Nm
Page 221 / 222

Spur Gearhead

Ø24 mm
0.1 Nm
Page 226

Spindle Drive

Ø22 mm
Page 247 / 248



Recommended Electronics:
LSC 30/2
Notes
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