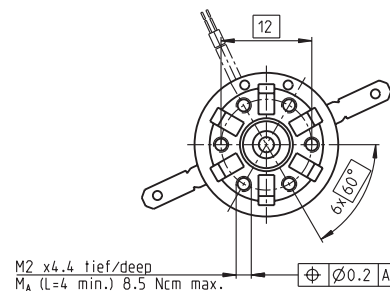
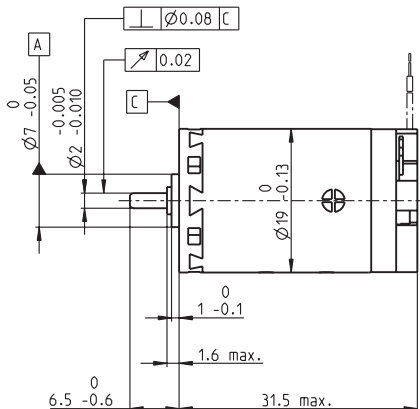
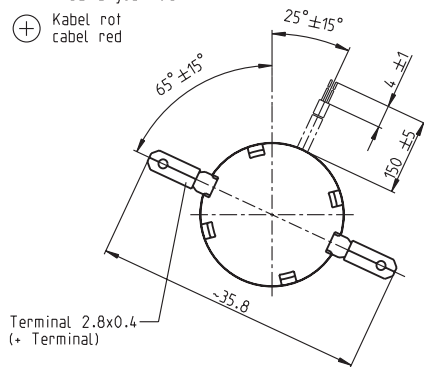


A-max 19 Ø19 mm, Graphite Brushes, 2.5 Watt

Kabel AWG 26/7
 kabel UL Style 1061

⊕ Kabel rot
 kabel red



M 1:1

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

Order Number

| | | | | | | | | | |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| with terminals | 249982 | 249983 | 249984 | 249985 | 249986 | 249987 | 249988 | 249989 | 249990 |
| with cables | 240133 | 352942 | 310977 | 352943 | 352944 | 352945 | 352946 | 352947 | 310980 |

Motor Data

| Values at nominal voltage | | 2.4 | 3.6 | 6.0 | 7.2 | 9.0 | 12.0 | 15.0 | 18.0 | 24.0 |
|---|------------------|--------|--------|-------|-------|-------|-------|-------|-------|-------|
| 1 Nominal voltage | V | 2.4 | 3.6 | 6.0 | 7.2 | 9.0 | 12.0 | 15.0 | 18.0 | 24.0 |
| 2 No load speed | rpm | 11700 | 10200 | 12100 | 8960 | 8830 | 9920 | 9930 | 8920 | 8470 |
| 3 No load current | mA | 287 | 157 | 113 | 66.0 | 51.8 | 44.5 | 35.6 | 26.2 | 18.6 |
| 4 Nominal speed | rpm | 9580 | 7240 | 8530 | 4570 | 4540 | 5620 | 5650 | 4600 | 4050 |
| 5 Nominal torque (max. continuous torque) | mNm | 0.783 | 1.79 | 2.76 | 3.84 | 3.95 | 3.86 | 3.89 | 3.91 | 3.84 |
| 6 Nominal current (max. continuous current) | A | 0.720 | 0.720 | 0.720 | 0.591 | 0.476 | 0.393 | 0.316 | 0.239 | 0.168 |
| 7 Stall torque | mNm | 4.78 | 6.59 | 9.77 | 8.23 | 8.50 | 9.29 | 9.40 | 8.45 | 7.74 |
| 8 Starting current | A | 2.72 | 2.11 | 2.17 | 1.14 | 0.925 | 0.849 | 0.687 | 0.465 | 0.305 |
| 9 Max. efficiency | % | 46 | 53 | 60 | 58 | 59 | 60 | 60 | 58 | 57 |
| Characteristics | | 0.883 | 1.71 | 2.76 | 6.33 | 9.72 | 14.1 | 21.8 | 38.7 | 78.8 |
| 10 Terminal resistance | Ω | 0.883 | 1.71 | 2.76 | 6.33 | 9.72 | 14.1 | 21.8 | 38.7 | 78.8 |
| 11 Terminal inductance | mH | 0.0186 | 0.0587 | 0.121 | 0.314 | 0.506 | 0.719 | 1.12 | 1.98 | 3.87 |
| 12 Torque constant | mNm / A | 1.76 | 3.13 | 4.50 | 7.23 | 9.19 | 10.9 | 13.7 | 18.2 | 25.4 |
| 13 Speed constant | rpm / V | 5430 | 3050 | 2120 | 1320 | 1040 | 873 | 698 | 525 | 376 |
| 14 Speed / torque gradient | rpm / mNm | 2720 | 1670 | 1300 | 1160 | 1100 | 1130 | 1110 | 1120 | 1170 |
| 15 Mechanical time constant | ms | 73.2 | 36.7 | 30.1 | 26.2 | 25.2 | 25.0 | 24.7 | 24.4 | 24.6 |
| 16 Rotor inertia | gcm ² | 2.56 | 2.10 | 2.21 | 2.17 | 2.19 | 2.11 | 2.11 | 2.08 | 2.01 |

Specifications

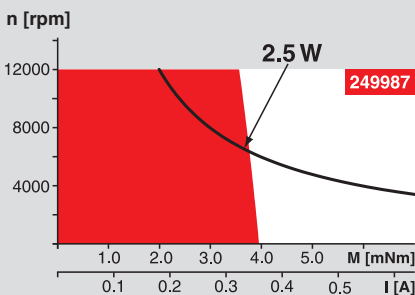
| Thermal data | |
|--|----------------|
| 17 Thermal resistance housing-ambient | 21.3 K / W |
| 18 Thermal resistance winding-housing | 10.5 K / W |
| 19 Thermal time constant winding | 11 s |
| 20 Thermal time constant motor | 351 s |
| 21 Ambient temperature | -30 ... +85°C |
| 22 Max. permissible winding temperature | +125°C |
| Mechanical data (sleeve bearings) | |
| 23 Max. permissible speed | 12000 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 | 2.7 N |
| Mechanical data (ball bearings) | |
| 23 Max. permissible speed | 12000 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 | 11.9 N |
| Other specifications | |
| 29 Number of pole pairs | 1 |
| 30 Number of commutator segments | 9 |
| 31 Weight of motor | 33 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.

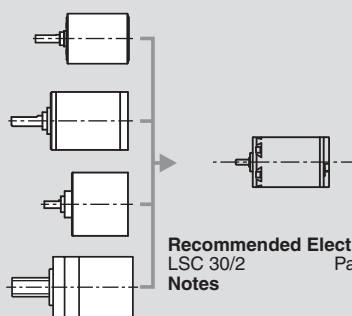
Short term operation
 The motor may be briefly overloaded (recurring).

— **Assigned power rating**

maxon Modular System

Overview on page 16 - 21

- Planetary Gearhead**
 Ø19 mm
 0.1 - 0.3 Nm
 Page 218
- Planetary Gearhead**
 Ø22 mm
 0.1 - 2.0 Nm
 Page 220 / 222 / 223
- Spur Gearhead**
 Ø24 mm
 0.1 Nm
 Page 227
- Spindle Drive**
 Ø22 mm
 Page 247 / 248



Recommended Electronics:
 LSC 30/2 Page 282
 Notes 18