

A-max 32 Ø32 mm, Graphite Brushes, 20 Watt

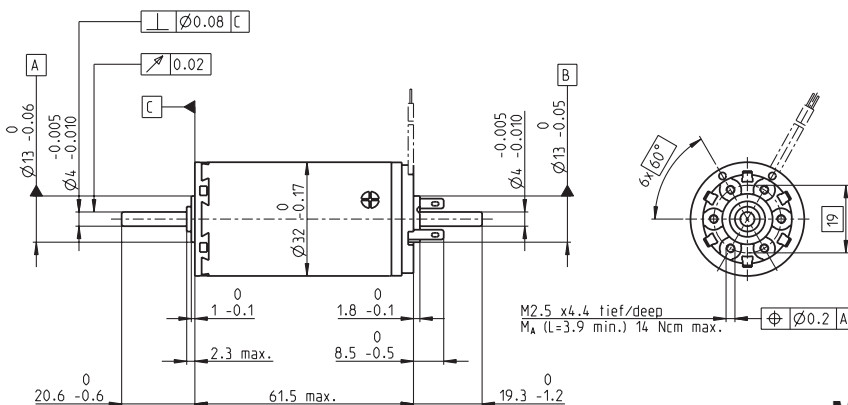
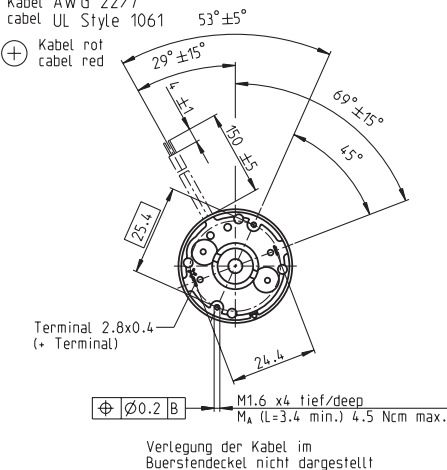
High Power

maxon A-max

Kabel AWG 22/7

cabel UL Style 1061

⊕ Kabel rot
cabel red



M 1:2

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

Order Number

| | 236666 | 236667 | 236668 | 236669 | 236670 | 236671 | 236672 |
|----------------|--------|--------|--------|--------|--------|--------|--------|
| with terminals | 353236 | 353237 | 301030 | 353239 | 353240 | 353241 | 353242 |
| with cables | | | | | | | |

Motor Data

| Values at nominal voltage | | 6.0 | 9.0 | 12.0 | 24.0 | 30.0 | 36.0 | 42.0 | |
|---------------------------|---|------------------|--------|-------|-------|-------|-------|-------|-------|
| 1 | Nominal voltage | V | 6.0 | 9.0 | 12.0 | 24.0 | 30.0 | 36.0 | 42.0 |
| 2 | No load speed | rpm | 4850 | 4980 | 4660 | 6460 | 6160 | 5850 | 5650 |
| 3 | No load current | mA | 122 | 83.8 | 58.0 | 42.7 | 32.2 | 25.2 | 20.7 |
| 4 | Nominal speed | rpm | 3140 | 3350 | 3100 | 5020 | 4710 | 4420 | 4200 |
| 5 | Nominal torque (max. continuous torque) | mNm | 38.4 | 40.0 | 42.1 | 44.4 | 44.4 | 45.0 | 44.7 |
| 6 | Nominal current (max. continuous current) | A | 3.43 | 2.43 | 1.79 | 1.30 | 0.994 | 0.796 | 0.655 |
| 7 | Stall torque | mNm | 120 | 129 | 131 | 205 | 193 | 186 | 177 |
| 8 | Starting current | A | 10.4 | 7.62 | 5.39 | 5.81 | 4.18 | 3.19 | 2.51 |
| 9 | Max. efficiency | % | 77 | 79 | 80 | 83 | 83 | 83 | 83 |
| Characteristics | | | | | | | | | |
| 10 | Terminal resistance | Ω | 0.577 | 1.18 | 2.23 | 4.13 | 7.17 | 11.3 | 16.7 |
| 11 | Terminal inductance | mH | 0.0601 | 0.129 | 0.264 | 0.555 | 0.953 | 1.52 | 2.22 |
| 12 | Torque constant | mNm / A | 11.6 | 17.0 | 24.3 | 35.2 | 46.1 | 58.2 | 70.4 |
| 13 | Speed constant | rpm / V | 825 | 562 | 394 | 271 | 207 | 164 | 136 |
| 14 | Speed / torque gradient | rpm / mNm | 41.1 | 39.1 | 36.1 | 31.9 | 32.2 | 31.8 | 32.3 |
| 15 | Mechanical time constant | ms | 18.9 | 16.6 | 15.7 | 15.0 | 14.8 | 14.8 | 14.7 |
| 16 | Rotor inertia | gcm ² | 43.9 | 40.6 | 41.4 | 45.0 | 44.0 | 44.4 | 43.6 |

Specifications

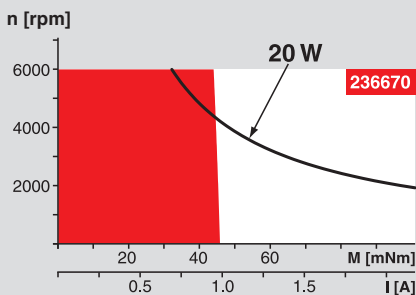
- Thermal data**
- 17 Thermal resistance housing-ambient 7.5 K / W
 - 18 Thermal resistance winding-housing 2.1 K / W
 - 19 Thermal time constant winding 17.7 s
 - 20 Thermal time constant motor 900 s
 - 21 Ambient temperature -20 ... +85°C
 - 22 Max. permissible winding temperature +125°C
- Mechanical data (ball bearings)**
- 23 Max. permissible speed 6000 rpm
 - 24 Axial play 0.12 - 0.22 mm
 - 25 Radial play 0.025 mm
 - 26 Max. axial load (dynamic) 7.6 N
 - 27 Max. force for press fits (static) 110 N
 - (static, shaft supported) 2000 N
 - 28 Max. radial loading, 5 mm from flange 32 N
- Mechanical data (sleeve bearings)**
- 23 Max. permissible speed 6000 rpm
 - 24 Axial play 0.12 - 0.22 mm
 - 25 Radial play 0.012 mm
 - 26 Max. axial load (dynamic) 5.0 N
 - 27 Max. force for press fits (static) 110 N
 - (static, shaft supported) 2000 N
 - 28 Max. radial loading, 5 mm from flange 10.5 N
- Other specifications**
- 29 Number of pole pairs 1
 - 30 Number of commutator segments 13
 - 31 Weight of motor 240 g

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

Option

Sleeve bearings in place of ball bearings

Operating Range



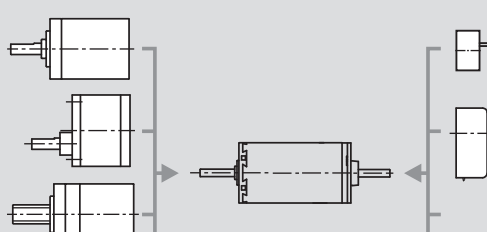
Comments

- 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**
∅32 mm
0.75 - 6.0 Nm
Page 230 / 232 / 233
- Spur Gearhead**
∅38 mm
0.1 - 0.6 Nm
Page 237
- Spindle Drive**
∅32 mm
Page 249 / 250 / 251



- Encoder MR**
256 - 1024 Imp.,
3 channels
Page 263
- Encoder HED_5540**
500 Imp.,
3 channels
Page 267 / 269

- Recommended Electronics:**
- LSC 30/2 Page 282
 - ADS 50/5 282
 - ADS_E 50/5 283
 - EPOS2 Module 36/2 304
 - EPOS2 24/5 305
 - EPOS2 50/5 305
 - EPOS2P 24/5 308
 - Notes** 18