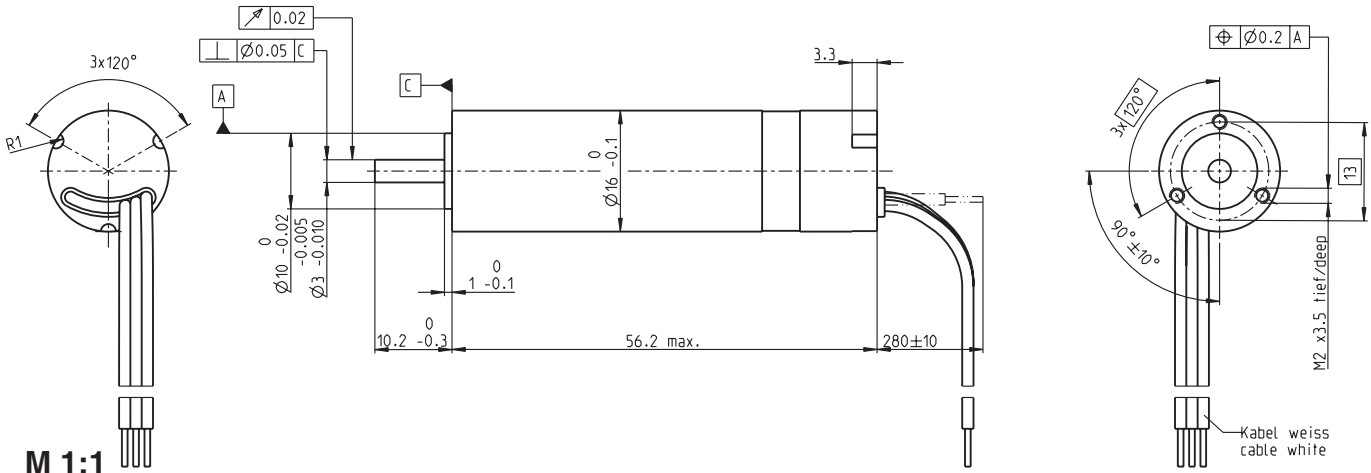


EC 16 Ø16 mm, brushless, 40 Watt, sterilizable



M 1:1

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

Order Number

235823 235821

Motor Data (provisional)

Values at nominal voltage

| | V | 12.0 | 24.0 |
|---|-----|-------|-------|
| 1 Nominal voltage | V | 12.0 | 24.0 |
| 2 No load speed | rpm | 42100 | 48700 |
| 3 No load current | mA | 572 | 342 |
| 4 Nominal speed | rpm | 38100 | 44900 |
| 5 Nominal torque (max. continuous torque) | mNm | 10.3 | 10.7 |
| 6 Nominal current (max. continuous current) | A | 4.36 | 2.61 |
| 7 Stall torque | mNm | 120 | 156 |
| 8 Starting current | A | 44.5 | 33.5 |
| 9 Max. efficiency | % | 79 | 81 |

Characteristics

| | Ω | 0.269 | 0.716 |
|---------------------------------------|------------------|--------|--------|
| 10 Terminal resistance phase to phase | Ω | 0.269 | 0.716 |
| 11 Terminal inductance phase to phase | mH | 0.0140 | 0.0420 |
| 12 Torque constant | mNm / A | 2.68 | 4.65 |
| 13 Speed constant | rpm / V | 3560 | 2050 |
| 14 Speed / torque gradient | rpm / mNm | 357 | 316 |
| 15 Mechanical time constant | ms | 5.12 | 4.54 |
| 16 Rotor inertia | gcm ² | 1.37 | 1.37 |

Specifications

Thermal data

| | |
|---|----------------|
| 17 Thermal resistance housing-ambient | 10.3 K / W |
| 18 Thermal resistance winding-housing | 1.2 K / W |
| 19 Thermal time constant winding | 2.08 s |
| 20 Thermal time constant motor | 299 s |
| 21 Ambient temperature | -40 ... +135°C |
| 22 Max. permissible winding temperature | +155°C |

Mechanical data (preloaded ball bearings)

| | |
|---|--------------|
| 23 Max. permissible speed | 50000 rpm |
| 24 Axial play at axial load < 3.5 N | 0 mm |
| 24 Axial play at axial load > 3.5 N | max. 0.14 mm |
| 25 Radial play | preloaded |
| 26 Max. axial load (dynamic) | 3 N |
| 27 Max. force for press fits (static) (static, shaft supported) | 43 N |
| 28 Max. radial loading, 5 mm from flange | 250 N |
| | 10 N |

Other specifications

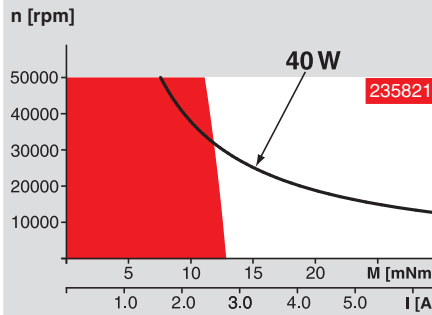
| | |
|-------------------------|------|
| 29 Number of pole pairs | 1 |
| 30 Number of phases | 3 |
| 31 Weight of motor | 58 g |

Values listed in the table are nominal.

Connection (Cable AWG 22)

| | |
|-------|-----------------|
| red | Motor winding 1 |
| black | Motor winding 2 |
| white | Motor winding 3 |

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

Application

Medicine / surgery / chemicals

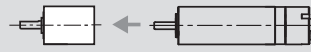
Hand tools that can be sterilized, such as bone saw, bone drilling and grinding machine
Dermatological and dental tools
Infusion pumps
ECG
Therapy aid, analysis and dialysis equipment

Sterilization information

| | |
|---|--------------|
| In normal use, the motor can be sterilized 500 times in an autoclave. No need to dismantle. | |
| Sterilization with steam | |
| Temperature | +134°C ± 4°C |
| Compression pressure up to | 2.3 bar |
| Rel. humidity | 100 % |
| Cycle length | 20 minutes |

maxon modular system

Planetary Gearhead
sterilizable
Ø16 mm
0.1 - 0.3 Nm
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