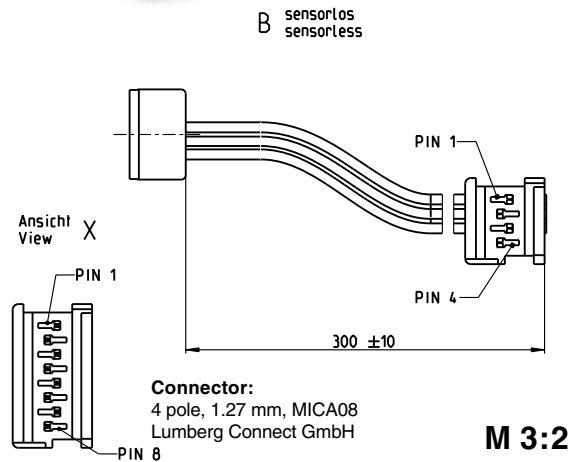
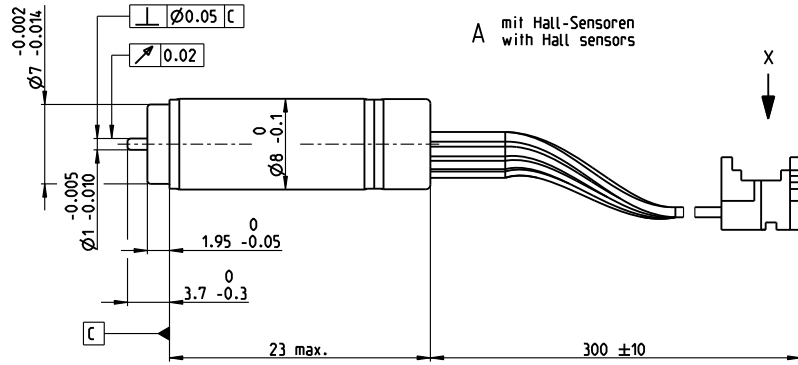


ECX SPEED 8 M brushless BLDC motor Ø8 mm

NEW



2/4.7 W 0.94 mNm 50000 rpm



Connector:
8 pole, 1.27 mm, MICA08
Lumberg Connect GmbH

Connector:
4 pole, 1.27 mm, MICA08
Lumberg Connect GmbH

M 3:2

Motor Data

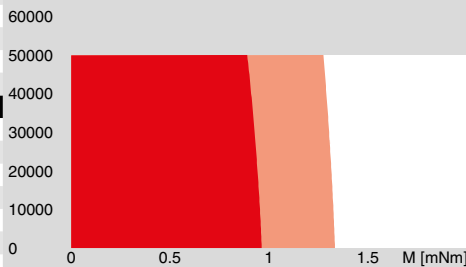
| | | | | | |
|-----|---|------------------|-------|-------|-------|
| 1_ | Nominal voltage | V | 6 | 12 | 24 |
| 2_ | No load speed | rpm | 34500 | 42200 | 41100 |
| 3_ | No load current | mA | 87.6 | 58.2 | 28 |
| 4_ | Nominal speed | rpm | 23300 | 31900 | 31100 |
| 5_ | Nominal torque (max. continuous torque) | mNm | 0.979 | 0.937 | 0.94 |
| 6_ | Nominal current (max. continuous current) | A | 0.689 | 0.408 | 0.199 |
| 7_ | Stall torque | mNm | 3.15 | 4.02 | 4.05 |
| 8_ | Stall current | A | 1.98 | 1.54 | 0.755 |
| 9_ | Max. efficiency | % | 63 | 66 | 66 |
| 10_ | Terminal resistance | Ω | 3.02 | 7.8 | 31.8 |
| 11_ | Terminal inductance | mH | 0.039 | 0.106 | 0.447 |
| 12_ | Torque constant | mNm/A | 1.59 | 2.61 | 5.37 |
| 13_ | Speed constant | rpm/V | 6020 | 3660 | 1780 |
| 14_ | Speed/torque gradient | rpm/mNm | 11500 | 10900 | 10500 |
| 15_ | Mechanical time constant | ms | 3 | 2.85 | 2.75 |
| 16_ | Rotor inertia | gcm ² | 0.025 | 0.025 | 0.025 |

Thermal data

| | | | |
|-----|------------------------------------|-----|-----------|
| 17_ | Thermal resistance housing-ambient | K/W | 51.2 |
| 18_ | Thermal resistance winding-housing | K/W | 3.5 |
| 19_ | Thermal time constant winding | s | 0.832 |
| 20_ | Thermal time constant motor | s | 154 |
| 21_ | Ambient temperature ¹ | °C | -20...+85 |
| 22_ | Max. winding temperature | °C | 125 |

Operating Range

n [rpm] Winding 12 V



■ Continuous operation
■ Continuous operation with reduced thermal resistance R_{th2} 50%
□ Short term operation

Mechanical data ball bearings

| | | | |
|-----|------------------------------------|-----|-----------|
| 23_ | Max. speed | rpm | 50000 |
| 24_ | Axial play | mm | 0...0.07 |
| | Preload | N | 0.3 |
| | Direction of force | | pull |
| 25_ | Radial play | | preloaded |
| 26_ | Max. axial load (dynamic) | N | 0.2 |
| 27_ | Max. force for press fits (static) | N | 10 |
| | (static, shaft supported) | N | 10 |
| 28_ | Max. radial load [mm from flange] | N | 2 [2] |

Other specifications

| | | |
|-----|---------------------------|-------------------|
| 29_ | Number of pole pairs | 1 |
| 30_ | Number of phases | 3 |
| 31_ | Weight of motor | g 6 |
| 32_ | Typical noise level [rpm] | dB(A) 49 [50 000] |

maxon Modular System

| | | | |
|-------------------|--------|--|--|
| maxon gear | Stages | maxon sensor | maxon motor control |
| 56_GPX 8 A | 1-5 | for motor type B: 80_ENX 8 81_ENX 8 Abs. | 378_ESCON Module 24/2 379_ESCON 36/3 EC 379_ESCON Module 50/4 EC-S 382_DEC Module 24/2 386_EPOS2 24/2 386_EPOS2 Module 36/2 |

Connection A (flat band cable AWG 28, pitch 1.27 mm)

- Pin 1 Motor winding 1
 - Pin 2 Motor winding 2
 - Pin 3 Motor winding 3
 - Pin 4 V_{Hall} 1.6...5.5 VDC
 - Pin 5 GND
 - Pin 6 Hall sensor 1
 - Pin 7 Hall sensor 2
 - Pin 8 Hall sensor 3
- Output signal: CMOS compatible
Output current per channel: max 0.5 mA

Connection B (flat band cable AWG 28, pitch 1.27 mm)

- Pin 1 Motor winding 1
- Pin 2 Motor winding 2
- Pin 3 Motor winding 3
- Pin 4 N.C.

Configuration

Shaft front: length
Electric connection: cable length
Cable insulation: PVC/PO/FEP

Notes

¹ For type A:
PVC-cable (-20...85°C)
PO- and FEP cable (-30...85°C)
For type B:
PVC-cable (-20...100°C)
PO- and FEP cable (-40...100°C)

Adapter Micromotor (Part number 498157) required for all maxon controllers.