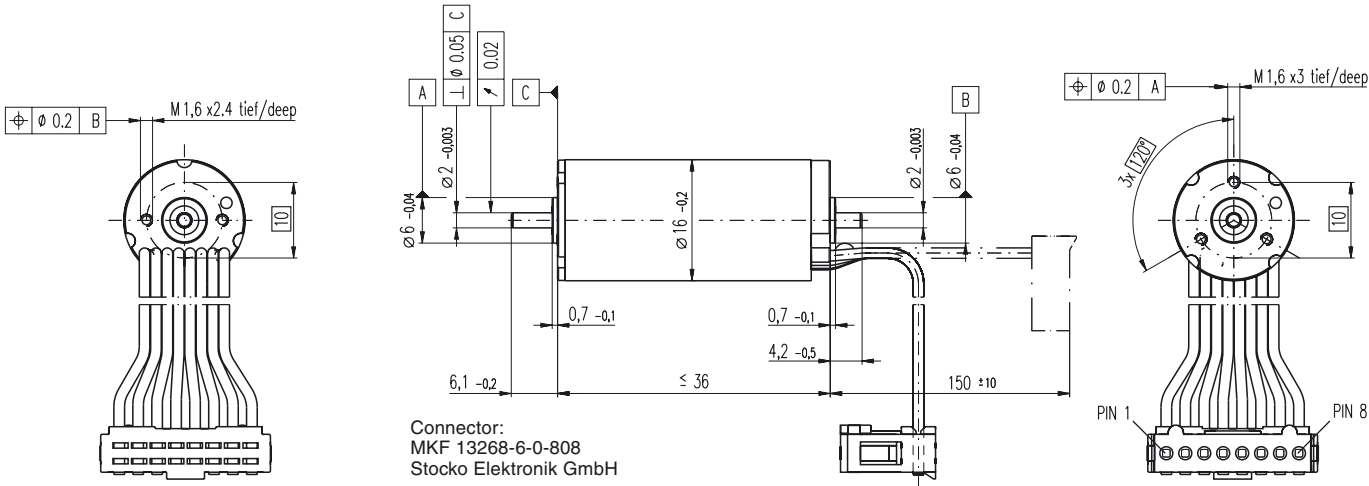


EC-max 16 Ø16 mm, brushless, 8 Watt

maxon EC-max



M 1:1

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

Order Number

283831	283832	283833	283834	283835
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Motor Data

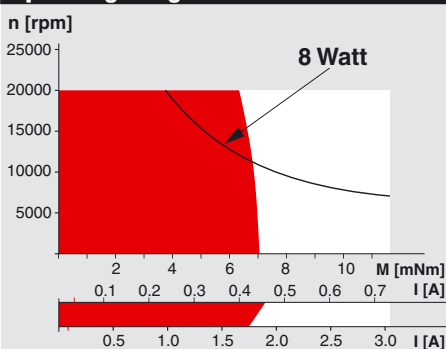
		283831	283832	283833	283834	283835
1 Assigned power rating	W	8	8	8	8	8
2 Nominal voltage	Volt	6.0	9.0	12.0	18.0	24.0
3 No load speed ¹⁾	rpm	12100	11900	12000	11900	11900
4 Stall torque ¹⁾	mNm	19.2	19.8	21.1	20.3	22.0
5 Speed / torque gradient ¹⁾	rpm / mNm	646	619	582	602	556
6 No load current ¹⁾	mA	119	77.5	58.5	38.8	29
7 Terminal resistance phase to phase	Ohm	1.44	3.19	5.30	12.4	20.5
8 Max. permissible speed	rpm	20000	20000	20000	20000	20000
9 Max. continuous current at 5000 rpm ¹⁾	mA	1750	1170	909	594	463
10 Max. continuous torque at 5000 rpm	mNm	6.72	6.87	7.09	6.97	7.27
11 Max. efficiency ¹⁾	%	70	70	71	71	72
12 Torque constant	mNm / A	4.61	7.02	9.32	14.0	18.7
13 Speed constant	rpm / V	2070	1360	1020	681	510
14 Mechanical time constant	ms	5.8	5.5	5.2	5.4	5.0
15 Rotor inertia	gcm ²	0.85	0.85	0.85	0.85	0.85
16 Terminal inductance phase to phase	mH	0.0343	0.0793	0.140	0.317	0.566
17 Thermal resistance housing-ambient	K / W	18	18	18	18	18
18 Thermal resistance winding-housing	K / W	1.4	1.4	1.4	1.4	1.4
19 Thermal time constant winding	s	0.9	0.9	1.0	1.0	1.0
20 Thermal time constant stator	s	427	427	427	427	427

1) Values determined with block commutation!

Specifications

- Axial play at axial load < 2.0 N 0 mm
- Preloaded ball bearing Preload strength min. 2 N
- Max. ball bearing loads axial (dynamic) 1.5 N radial (5 mm from flange) 6 N Force for press fits (static, shaft supported) 400 N
- Ambient temperature range -40 ... +100°C
- Max. permissible winding temperature +155°C
- Weight of motor 50 g
- 2 pole permanent magnet
- Values listed in the table are nominal.
- Connection (Cable AWG 24) brown Motor winding 1 Pin 1 red Motor winding 2 Pin 2 orange Motor winding 3 Pin 3 yellow V_{Hall} 4.5 ... 24 VDC Pin 4 green GND Pin 5 blue Hall sensor 1 Pin 6 violet Hall sensor 2 Pin 7 grey Hall sensor 3 Pin 8
- For wiring diagram for Hall sensors see p. 26

Operating Range

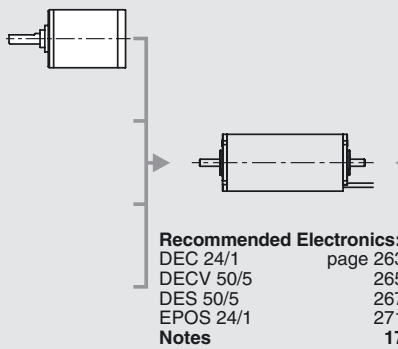


Comments

- Curve of constant assigned power rating
- Continuous operation In observation of above listed thermal resistances (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).
- 283835 Motor with high resistance winding
- 283831 Motor with low resistance winding

maxon Modular System

Planetary Gearhead
Ø22 mm
0.5 - 2.0 Nm
Details page 213



Overview on page 17 - 21

Encoder MR
128 / 256 / 512 CPT,
2 / 3 channels
Details page 237