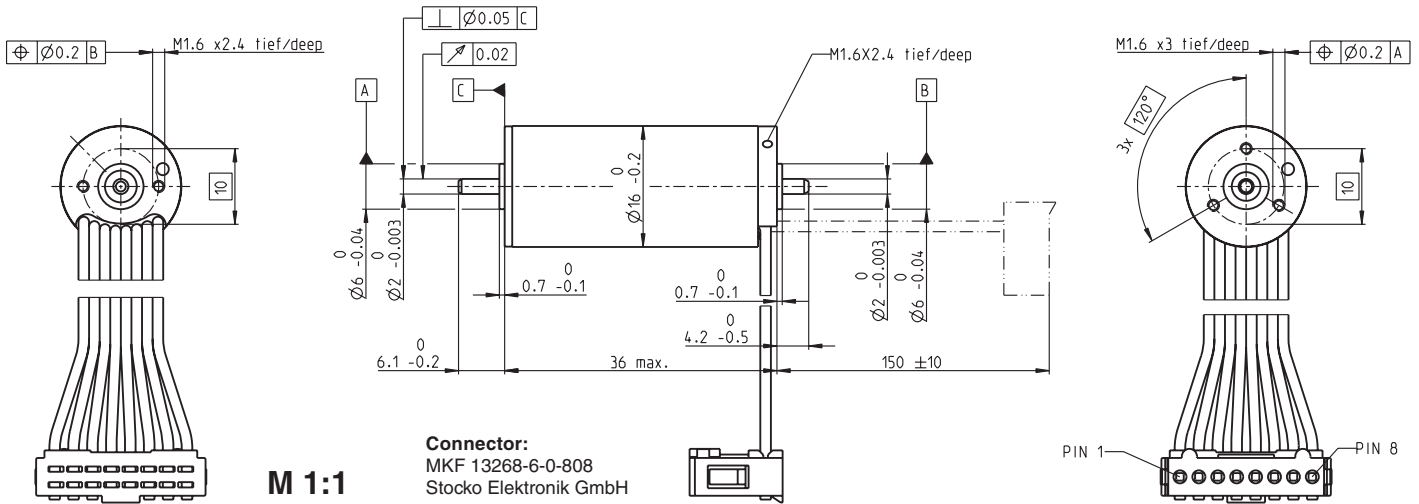


EC-max 16 \varnothing 16 mm, brushless, 8 Watt



Connector:
MKF 13268-6-0-808
Stocko Elektronik GmbH

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

Order Number

283831	283832	283833	283834	283835
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Motor Data

Values at nominal voltage		6.0	9.0	12.0	18.0	24.0
1 Nominal voltage	V	6.0	9.0	12.0	18.0	24.0
2 No load speed	rpm	12100	11900	12000	11900	11900
3 No load current	mA	119	77.5	58.5	38.8	29.0
4 Nominal speed	rpm	7170	7110	7310	7180	7350
5 Nominal torque (max. continuous torque)	mNm	7.62	7.80	8.04	7.90	8.23
6 Nominal current (max. continuous current)	A	1.74	1.17	0.907	0.593	0.461
7 Stall torque	mNm	19.2	19.8	21.1	20.3	22.0
8 Starting current	A	4.17	2.82	2.27	1.45	1.17
9 Max. efficiency	%	70	70	71	71	72
Characteristics		6.0	9.0	12.0	18.0	24.0
10 Terminal resistance phase to phase	Ω	1.44	3.19	5.30	12.4	20.5
11 Terminal inductance phase to phase	mH	0.0343	0.0793	0.140	0.317	0.566
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 Speed / torque gradient	rpm / mNm	646	619	582	602	556
15 Mechanical time constant	ms	5.75	5.51	5.18	5.36	4.95
16 Rotor inertia	gcm ²	0.850	0.850	0.850	0.850	0.850

Specifications

- Thermal data**
- 17 Thermal resistance housing-ambient: 17.7 K / W
 - 18 Thermal resistance winding-housing: 1.41 K / W
 - 19 Thermal time constant winding: 0.983 s
 - 20 Thermal time constant motor: 427 s
 - 21 Ambient temperature: -40 ... +100°C
 - 22 Max. permissible winding temperature: +155°C
- Mechanical data (preloaded ball bearings)**
- 23 Max. permissible speed: 20000 rpm
 - 24 Axial play at axial load < 2.0 N: 0 mm
 - > 2.0 N: 0.14 mm
 - 25 Radial play preloaded: 1.5 N
 - 26 Max. axial load (dynamic): 18 N
 - 27 Max. force for press fits (static) (static, shaft supported): 400 N
 - 28 Max. radial loading, 5 mm from flange: 6 N
- Other specifications**
- 29 Number of pole pairs: 1
 - 30 Number of phases: 3
 - 31 Weight of motor: 52 g

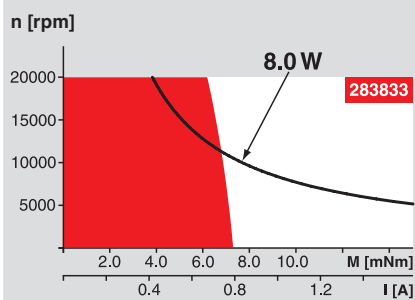
Values listed in the table are nominal.

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

Wiring diagram for Hall sensors see p. 27

Operating Range

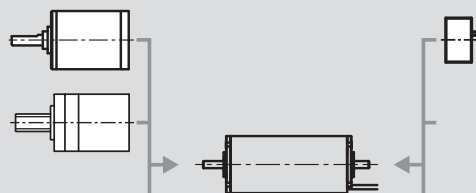


Comments

- 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

- Planetary Gearhead**
 \varnothing 22 mm
0.5 - 2.0 Nm
Page 224
- Spindle Drive**
 \varnothing 22 mm
Page 247 / 248



Overview on page 16 - 21

- Encoder MR**
128 / 256 / 512 Imp.,
2 / 3 channels
Page 261

Recommended Electronics:

DECS 50/5	Page 289
DEC 24/1	289
DEC 24/3	290
DEC Module 24/2	290
DECV 50/5	297
DES 50/5	298
EPOS2 Module 36/2	304
EPOS 24/1	304
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