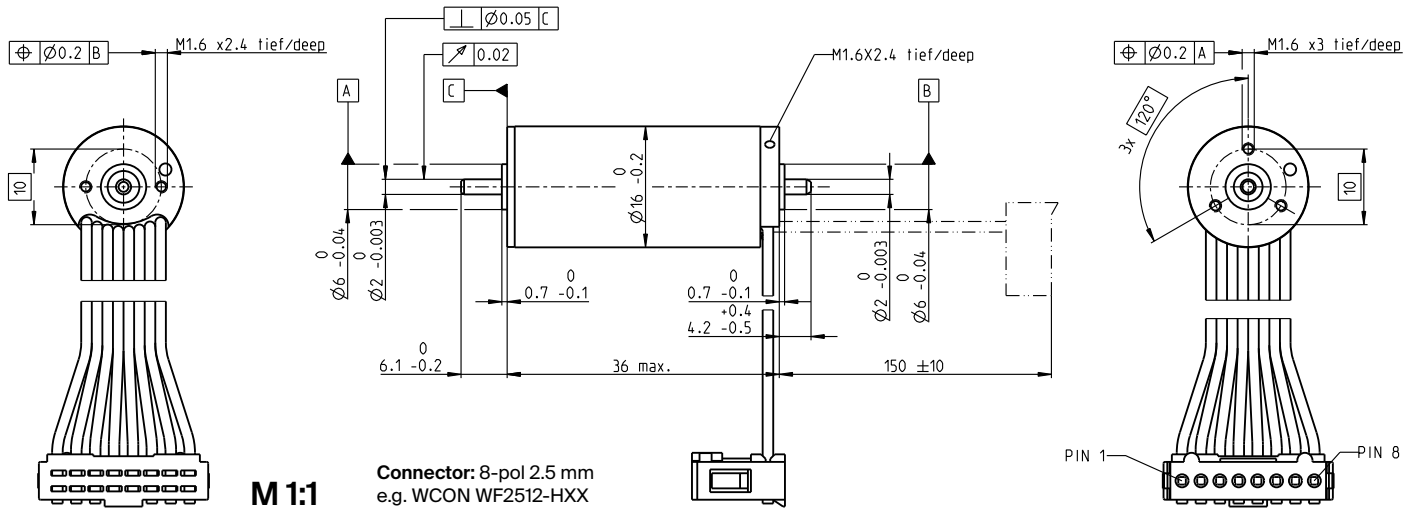


EC-max 16 \varnothing 16 mm, brushless, 8 watt

EC-max



M 1:1

Connector: 8-pol 2.5 mm
e.g. WCON WF2512-HXX

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

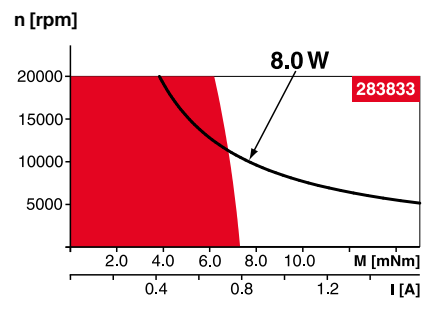
Part Numbers

283831	283832	283833	283834	283835
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Motor Data						
Values at nominal voltage						
1 Nominal voltage	V	6	9	12	18	24
2 No load speed	rpm	12000	11900	11900	11900	11900
3 No load current	mA	130	85.1	64.2	42.6	31.9
4 Nominal speed	rpm	7120	7090	7300	7170	7350
5 Nominal torque (max. continuous torque)	mNm	7.66	7.8	8.02	7.87	8.19
6 Nominal current (max. continuous current)	A	1.76	1.17	0.909	0.593	0.461
7 Stall torque	mNm	19.2	19.8	21.1	20.3	22
8 Stall current	A	4.17	2.82	2.27	1.45	1.17
9 Max. efficiency	%	69	69	70	70	71
Characteristics						
10 Terminal resistance phase to phase	Ω	1.44	3.19	5.3	12.4	20.5
11 Terminal inductance phase to phase	mH	0.034	0.079	0.14	0.317	0.566
12 Torque constant	mNm/A	4.61	7.02	9.32	14	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	0.85	0.85	0.85	0.85	0.85

Specifications **Operating Range** **Comments**

- 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: 0.9 s
 - 20 Thermal time constant motor: 427 s
 - 21 Ambient temperature: -40...+100°C
 - 22 Max. winding temperature: +155°C
- Mechanical data (preloaded ball bearings)**
- 23 Max. speed: 20000 rpm
 - 24 Axial play at axial load: < 1.5 N: 0 mm; > 1.5 N: 0.14 mm preloaded
 - 25 Radial play: 1 N
 - 26 Max. axial load (dynamic): 18 N
 - 27 Max. force for press fits (static) (static, shaft supported): 400 N
 - 28 Max. radial load, 5 mm from flange: 6 N



- 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**

- Other specifications**
- 29 Number of pole pairs: 1
 - 30 Number of phases: 3
 - 31 Weight of motor: 52 g

maxon Modular System **Details on catalog page 42**

- 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} 3...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. 57

<ul style="list-style-type: none"> Planetary Gearhead \varnothing16 mm 0.1-0.3 Nm Page 379 Planetary Gearhead \varnothing16 mm 0.2-0.6 Nm Page 380 Planetary Gearhead \varnothing22 mm 0.5-2.0 Nm Page 386 Screw Drive \varnothing16 mm Page 421-423 Screw Drive \varnothing22 mm Page 424/425 	<p>Recommended Electronics: Notes Page 42 ESCON Module 24/2 500 ESCON 36/3 EC 501 ESCON Mod. 50/4 EC-S 501 DEC Module 24/2 505 EPOS4 Micro 24/5 509 EPOS4 Mod./Comp. 24/1.5 510 EPOS4 Comp. 24/5 3-axes 511</p>	<p>Encoder MR 128/256/512 CPT, 2/3 channels Page 477</p>
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