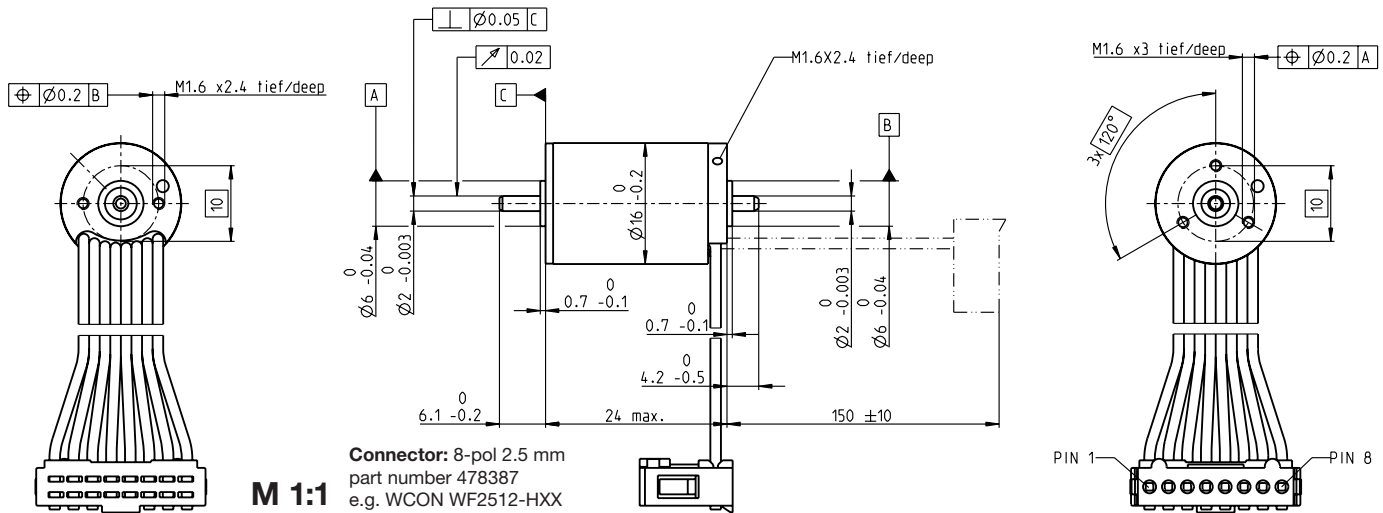


EC-max 16 Ø16 mm, brushless, 5 Watt

maxon EC-max



Connector: 8-pol 2.5 mm part number 478387 e.g. WCON WF2512-HXX

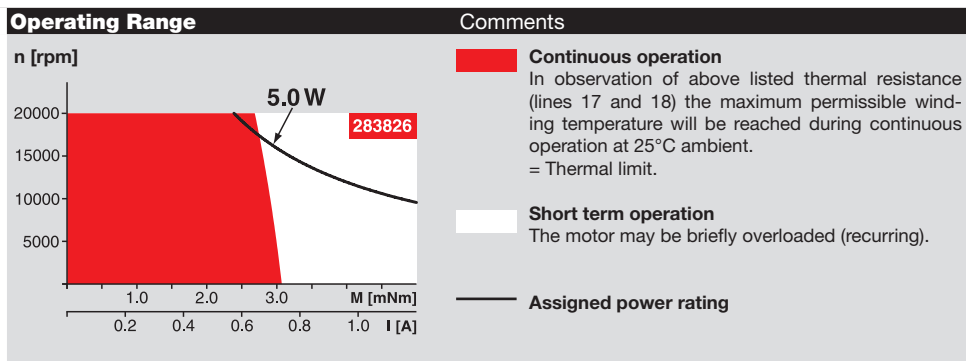
- Stock program
- Standard program
- Special program (on request)

Part Numbers

283825	283826	283827	283828
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Motor Data						
Values at nominal voltage						
1 Nominal voltage	V	4.5	6	9	12	
2 No load speed	rpm	12800	13500	12600	13500	
3 No load current	mA	148	120	72.4	60.2	
4 Nominal speed	rpm	5170	5690	4920	5840	
5 Nominal torque (max. continuous torque)	mNm	3.33	3.2	3.29	3.23	
6 Nominal current (max. continuous current)	A	1.18	0.903	0.574	0.456	
7 Stall torque	mNm	5.82	5.79	5.64	5.95	
8 Stall current	A	1.89	1.49	0.901	0.762	
9 Max. efficiency	%	53	53	53	53	
Characteristics						
10 Terminal resistance phase to phase	Ω	2.38	4.04	9.99	15.7	
11 Terminal inductance phase to phase	mH	0.0396	0.0634	0.163	0.254	
12 Torque constant	mNm/A	3.08	3.9	6.26	7.8	
13 Speed constant	rpm/V	3100	2450	1530	1220	
14 Speed/torque gradient	rpm/mNm	2390	2540	2440	2470	
15 Mechanical time constant	ms	10.7	11.4	10.9	11.1	
16 Rotor inertia	gcm ²	0.428	0.428	0.428	0.428	

Specifications	
Thermal data	
17 Thermal resistance housing-ambient	23.5 K/W
18 Thermal resistance winding-housing	2.57 K/W
19 Thermal time constant winding	0.943 s
20 Thermal time constant motor	390 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
25 Radial play	preloaded
26 Max. axial load (dynamic)	1 N
27 Max. force for press fits (static) (static, shaft supported)	18 N
28 Max. radial load, 5 mm from flange	600 N



Other specifications	
29 Number of pole pairs	1
30 Number of phases	3
31 Weight of motor	36 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} 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. 35

maxon Modular System		Overview on page 20-27
<p>Planetary Gearhead Ø16 mm 0.1 - 0.3 Nm Page 323</p> <p>Planetary Gearhead Ø16 mm 0.2 - 0.6 Nm Page 324</p> <p>Spindle Drive Ø16 mm Page 365-367</p>		<p>Encoder MR 128/256/512 CPT, 2/3 channels Page 391</p> <p>Recommended Electronics: Notes Page 26</p> <p>ESCON Module 24/2 416</p> <p>ESCON 36/3 EC 417</p> <p>ESCON Mod. 50/4 EC-S 417</p> <p>DEC Module 24/2 420</p> <p>EPOS2 24/2 424</p> <p>EPOS2 Module 36/2 424</p> <p>MAXPOS 50/5 435</p>