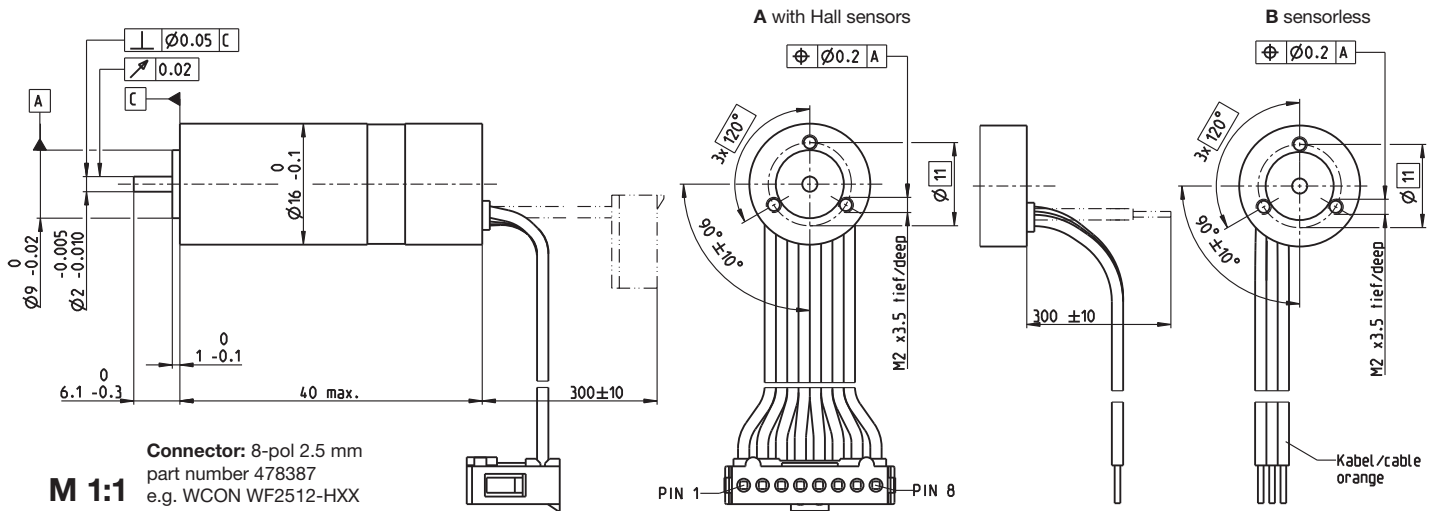


EC 16 Ø16 mm, brushless, 30 Watt



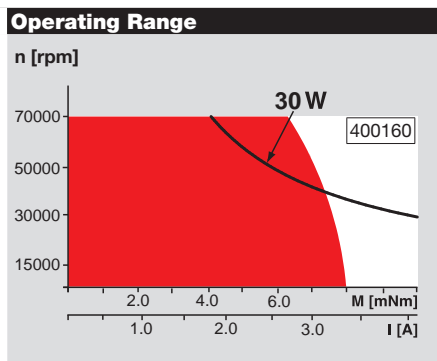
M 1:1
Connector: 8-pol 2.5 mm
 part number 478387
 e.g. WCON WF2512-HXX

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

		Part Numbers				
A with Hall sensors		400160	405812	400161	405813	400162
B sensorless		404079	405817	404080	405818	404081

Motor Data						
Values at nominal voltage						
1 Nominal voltage	V	12	18	24	36	48
2 No load speed	rpm	44500	42200	42800	45800	39600
3 No load current	mA	397	241	185	139	80.8
4 Nominal speed	rpm	39300	37400	38100	41100	34800
5 Nominal torque (max. continuous torque)	mNm	7.85	8.01	8.09	7.56	7.87
6 Nominal current (max. continuous current)	A	3.41	2.18	1.68	1.14	0.754
7 Stall torque	mNm	75.5	78	82.7	82.3	72.5
8 Stall current	A	29.8	19.4	15.6	11.1	6.35
9 Max. efficiency	%	79	80	80	80	79
Characteristics						
10 Terminal resistance phase to phase	Ω	0.403	0.928	1.53	3.24	7.56
11 Terminal inductance phase to phase	mH	0.0235	0.059	0.102	0.2	0.477
12 Torque constant	mNm/A	2.54	4.02	5.29	7.4	11.4
13 Speed constant	rpm/V	3760	2380	1810	1290	836
14 Speed/torque gradient	rpm/mNm	598	549	524	565	554
15 Mechanical time constant	ms	4.54	4.17	3.98	4.29	4.21
16 Rotor inertia	gcm ²	0.725	0.725	0.725	0.725	0.725

Specifications	
Thermal data	
17 Thermal resistance housing-ambient	16.3 K/W
18 Thermal resistance winding-housing	1.68 K/W
19 Thermal time constant winding	1.97 s
20 Thermal time constant motor	240 s
21 Ambient temperature	-20...+100°C
22 Max. winding temperature	+155°C
Mechanical data (preloaded ball bearings)	
23 Max. speed	70000 rpm
24 Axial play at axial load < 3.5 N	0 mm
> 3.5 N	max. 0.14 mm
25 Radial play	preloaded
26 Max. axial load (dynamic)	3 N
27 Max. force for press fits (static) (static, shaft supported)	35 N
28 Max. radial load, 5 mm from flange	250 N
10 N	



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**

Other specifications	
29 Number of pole pairs	1
30 Number of phases	3
31 Weight of motor	34 g

Values listed in the table are nominal.

Connection A		
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

Connection B (Cable AWG 24)		
brown	Motor winding 1	
red	Motor winding 2	
orange	Motor winding 3	

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for type A:
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