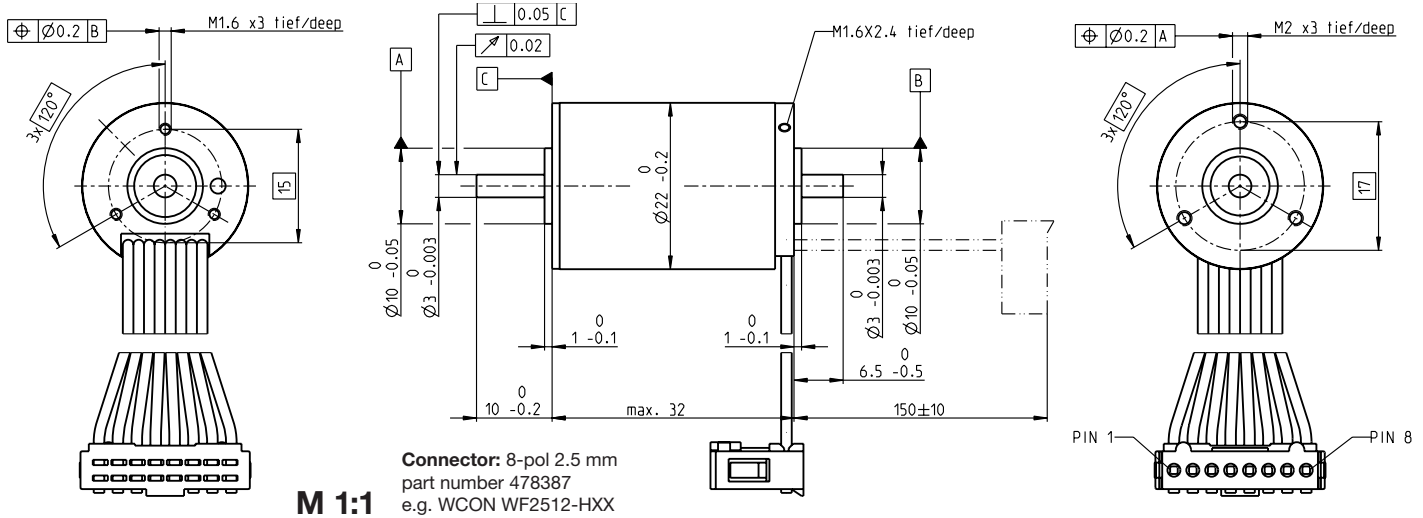


EC-max 22 Ø22 mm, brushless, 12 Watt



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

Part Numbers					
283837	283838	283839	283840	283841	

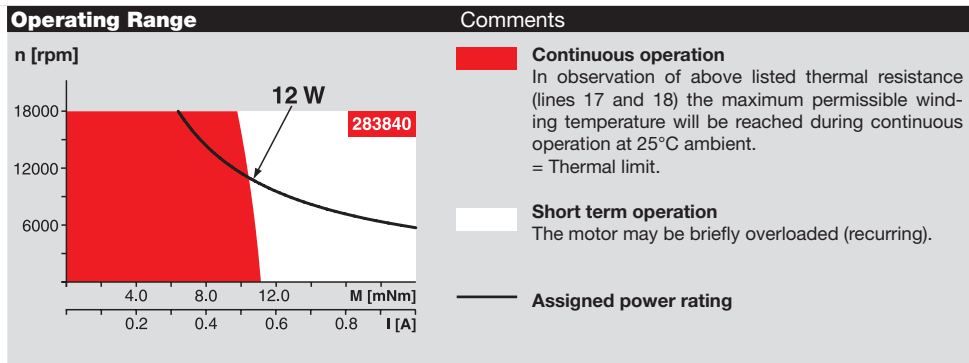
Motor Data						
Values at nominal voltage						
1 Nominal voltage	V	6	12	18	24	36
2 No load speed	rpm	11400	12100	12100	12100	12100
3 No load current	mA	282	155	103	77.3	51.6
4 Nominal speed	rpm	7230	8040	8250	8250	8210
5 Nominal torque (max. continuous torque)	mNm	10.5	10.2	10.9	10.8	10.6
6 Nominal current (max. continuous current)	A	2.41	1.25	0.88	0.657	0.432
7 Stall torque	mNm	30	31.3	35.4	35.1	34.1
8 Stall current	A	6.23	3.47	2.6	1.94	1.25
9 Max. efficiency	%	63	63	65	65	65
Characteristics						
10 Terminal resistance phase to phase	Ω	0.963	3.46	6.93	12.4	28.7
11 Terminal inductance phase to phase	mH	0.0343	0.121	0.275	0.488	1.09
12 Torque constant	mNm/A	4.81	9.02	13.6	18.1	27.2
13 Speed constant	rpm/V	1990	1060	701	526	352
14 Speed/torque gradient	rpm/mNm	397	406	356	360	371
15 Mechanical time constant	ms	9.36	9.56	8.39	8.47	8.75
16 Rotor inertia	gcm ²	2.25	2.25	2.25	2.25	2.25

Specifications		
Thermal data		
17 Thermal resistance housing-ambient	13.5 K/W	
18 Thermal resistance winding-housing	1.72 K/W	
19 Thermal time constant winding	1.69 s	
20 Thermal time constant motor	567 s	
21 Ambient temperature	-40...+100°C	
22 Max. winding temperature	+155°C	
Mechanical data (preloaded ball bearings)		
23 Max. speed	18000 rpm	
24 Axial play at axial load < 4 N	0 mm	
	> 4 N	0.14 mm
25 Radial play	preloaded	3.5 N
26 Max. axial load (dynamic)		53 N
27 Max. force for press fits (static)		1400 N
28 Max. radial load, 5 mm from flange		16 N
Other specifications		
29 Number of pole pairs	1	
30 Number of phases	3	
31 Weight of motor	83 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	
Planetary Gearhead Ø22 mm 0.5 - 3.4 Nm Page 332/333		Encoder MR 128/256/512 CPT, 2/3 channels Page 391	
Koaxdrive Ø32 mm 1.0 - 4.5 Nm Page 347		Recommended Electronics: Notes Page 26	Brake AB 20 24 VDC 0.1 Nm Page 444
Spindle Drive Ø22 mm Page 368/369		ESCON Module 24/2 416 ESCON 36/3 EC 417 ESCON Mod. 50/4 EC-S 417 ESCON Module 50/5 417 ESCON 50/5 418 DEC Module 24/2, 50/5 420 EPOS2 24/2, Module 36/2 424 EPOS2 24/5, 50/5 425 EPOS2 P 24/5 428 MAXPOS 50/5 435	