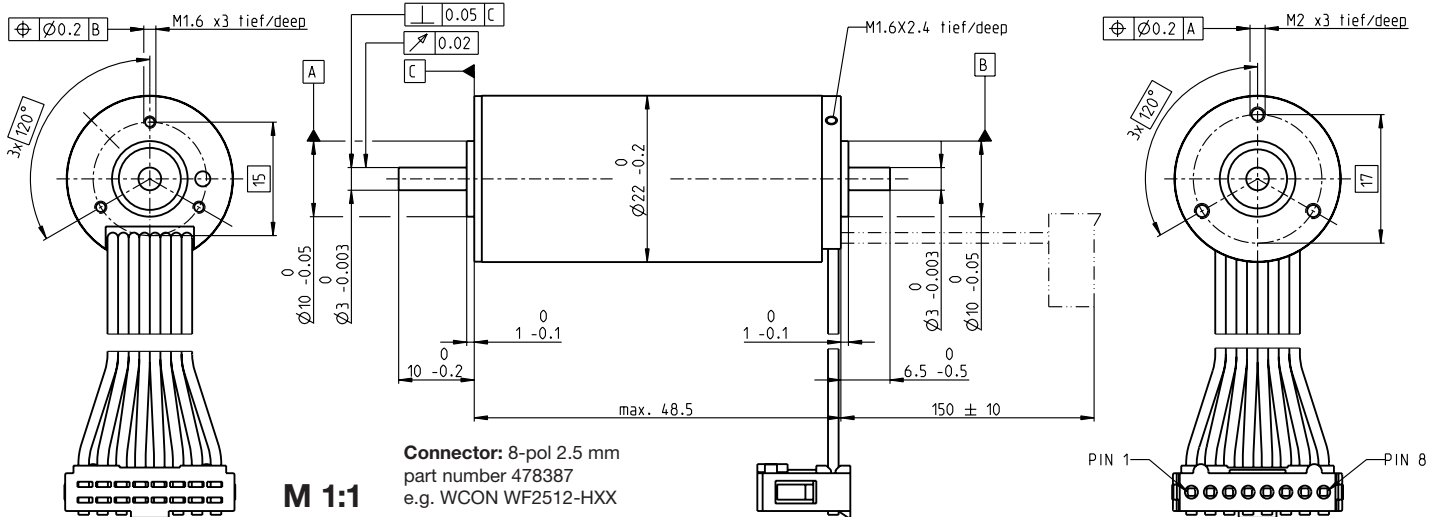


EC-max 22 Ø22 mm, brushless, 25 Watt



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

Part Numbers

283856	283857	283858	283859	283860
--------	--------	--------	--------	--------

Motor Data

Values at nominal voltage		12	18	24	36	48
1 Nominal voltage	V	12	18	24	36	48
2 No load speed	rpm	12400	12900	12900	12200	12900
3 No load current	mA	226	161	121	73.5	60.4
4 Nominal speed	rpm	9800	10300	10400	9630	10500
5 Nominal torque (max. continuous torque)	mNm	23	21.8	22.7	22.5	23.2
6 Nominal current (max. continuous current)	A	2.71	1.8	1.4	0.872	0.716
7 Stall torque	mNm	114	112	121	111	127
8 Stall current	A	12.6	8.55	6.97	4	3.66
9 Max. efficiency	%	76	75	76	75	77
Characteristics						
10 Terminal resistance phase to phase	Ω	0.955	2.1	3.44	9.01	13.1
11 Terminal inductance phase to phase	mH	0.05	0.103	0.182	0.462	0.729
12 Torque constant	mNm/A	9.1	13	17.4	27.7	34.8
13 Speed constant	rpm/V	1050	732	549	345	274
14 Speed/torque gradient	rpm/mNm	110	118	109	112	103
15 Mechanical time constant	ms	5.14	5.5	5.06	5.23	4.82
16 Rotor inertia	gcm ²	4.45	4.45	4.45	4.45	4.45

Specifications

- Thermal data**
- 17 Thermal resistance housing-ambient 10.2 K/W
 - 18 Thermal resistance winding-housing 1.02 K/W
 - 19 Thermal time constant winding 1.99 s
 - 20 Thermal time constant motor 628 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) 60 N
 - 27 Max. force for press fits (static, shaft supported) 1000 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 110 g

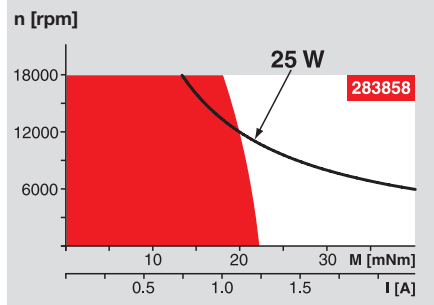
Values listed in the table are nominal.

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

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

<p>Planetary Gearhead Ø22 mm 0.5 - 3.4 Nm Seite 330/333</p> <p>Planetary Gearhead Ø32 mm 1.0 - 6.0 Nm Page 343</p> <p>Koaxdrive Ø32 mm 1.0 - 4.5 Nm Page 347</p> <p>Spindle Drive Ø32 mm Page 370-372</p>	<p>Recommended Electronics: Notes Page 26</p> <table style="width: 100%;"> <tr> <td>ESCON Module 24/2</td> <td>416</td> </tr> <tr> <td>ESCON 36/3 EC</td> <td>417</td> </tr> <tr> <td>ESCON Mod. 50/4 EC-S</td> <td>417</td> </tr> <tr> <td>ESCON Module 50/5</td> <td>417</td> </tr> <tr> <td>ESCON 50/5</td> <td>418</td> </tr> <tr> <td>DEC Module 24/2, 50/5</td> <td>420</td> </tr> <tr> <td>EPOS2 24/2, Module 36/2</td> <td>424</td> </tr> <tr> <td>EPOS2 24/5, 50/5</td> <td>425</td> </tr> <tr> <td>EPOS2 P 24/5</td> <td>428</td> </tr> <tr> <td>MAXPOS 50/5</td> <td>435</td> </tr> </table>	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	<p>Encoder MR 128/256/512 CPT, 2/3 channels Page 391</p> <p>Brake AB 20 24 VDC 0.1 Nm Page 444</p>
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																					