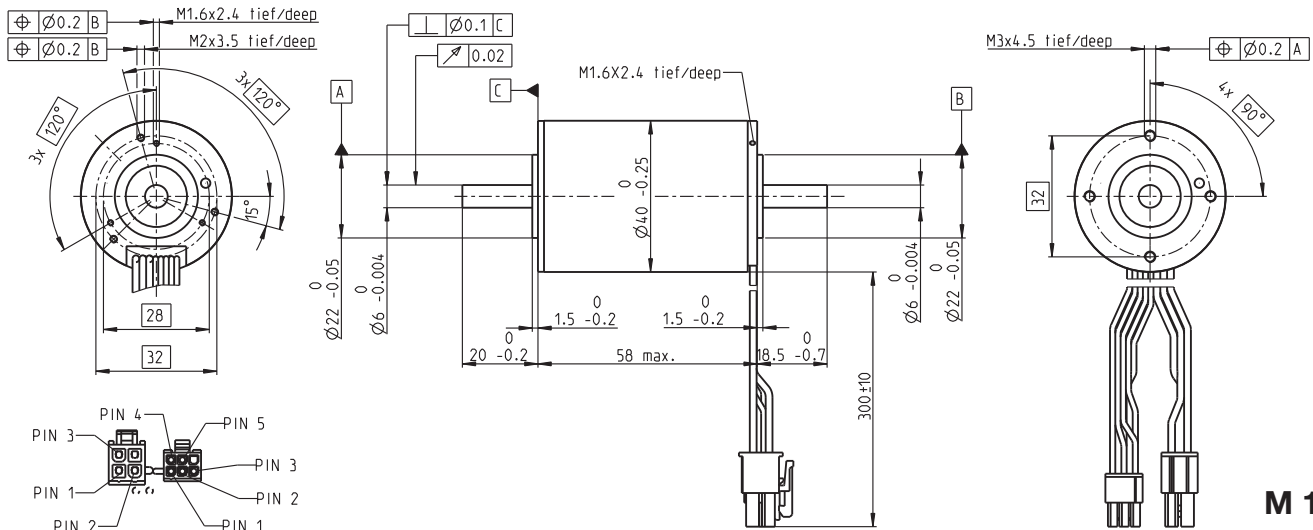


EC-max 40 Ø40 mm, brushless, 70 Watt



M 1:2

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

Part Numbers

	283866	283867	283868	283869
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Motor Data					
Values at nominal voltage					
1 Nominal voltage	V	12	24	36	48
2 No load speed	rpm	8030	8040	8470	9030
3 No load current	mA	584	292	209	173
4 Nominal speed	rpm	6410	6520	7030	7610
5 Nominal torque (max. continuous torque)	mNm	89.7	89.6	95	94.2
6 Nominal current (max. continuous current)	A	6.88	3.44	2.55	2.02
7 Stall torque	mNm	466	497	595	636
8 Stall current	A	33.3	17.8	14.9	12.7
9 Max. efficiency	%	76	77	78	79
Characteristics					
10 Terminal resistance phase to phase	Ω	0.36	1.35	2.42	3.78
11 Terminal inductance phase to phase	mH	0.0464	0.186	0.379	0.592
12 Torque constant	mNm/A	14	28	40	50
13 Speed constant	rpm/V	682	341	239	191
14 Speed/torque gradient	rpm/mNm	17.6	16.5	14.4	14.4
15 Mechanical time constant	ms	9.41	8.82	7.74	7.73
16 Rotor inertia	gcm ²	51.2	51.2	51.2	51.2

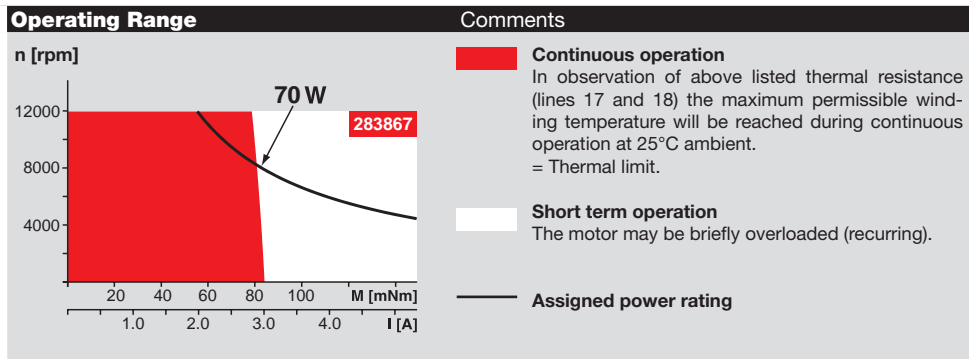
Specifications	
Thermal data	
17 Thermal resistance housing-ambient	4.63 K/W
18 Thermal resistance winding-housing	0.542 K/W
19 Thermal time constant winding	3.78 s
20 Thermal time constant motor	1060 s
21 Ambient temperature	-40...+100°C
22 Max. winding temperature	+155°C
Mechanical data (preloaded ball bearings)	
23 Max. speed	12000 rpm
24 Axial play at axial load < 10 N	0 mm
> 10 N	0.14 mm
25 Radial play	preloaded
26 Max. axial load (dynamic)	8 N
27 Max. force for press fits (static) (static, shaft supported)	211 N
28 Max. radial load, 5 mm from flange	5000 N
28 Max. radial load, 5 mm from flange	80 N

Other specifications	
29 Number of pole pairs	1
30 Number of phases	3
31 Weight of motor	460 g

Values listed in the table are nominal.

Connection motor (Cable AWG 20)		
red	Motor winding 1	Pin 1
black	Motor winding 2	Pin 2
white	Motor winding 3	Pin 3
	N.C.	Pin 4
Connector		
Molex	39-01-2040	
Connection (Cable AWG 26)		
yellow	Hall sensor 1	Pin 1
brown	Hall sensor 2	Pin 2
grey	Hall sensor 3	Pin 3
blue	GND	Pin 4
green	V _{Hall} 3...24 VDC	Pin 5
	N.C.	Pin 6
Connector		
Molex	430-25-0600	

Wiring diagram for Hall sensors see p. 35



maxon Modular System	Overview on page 20-27																										
<p>Planetary Gearhead Ø42 mm 3 - 15 Nm Page 350</p>	<p>Encoder MR 256 - 1024 CPT, 3 channels Page 393</p> <p>Encoder HEDL 5540 500 CPT, 3 channels Page 403</p> <p>Brake AB 28 24 VDC 0.4 Nm Page 445</p>																										
<p>Recommended Electronics: Notes Page 26</p> <table border="0"> <tr><td>ESCON 36/3 EC</td><td>417</td></tr> <tr><td>ESCON Mod. 50/5</td><td>417</td></tr> <tr><td>ESCON Mod. 50/4 EC-S</td><td>417</td></tr> <tr><td>ESCON 50/5</td><td>418</td></tr> <tr><td>ESCON 70/10</td><td>418</td></tr> <tr><td>DEC Module 50/5</td><td>420</td></tr> <tr><td>EPOS2 24/5</td><td>425</td></tr> <tr><td>EPOS2 50/5</td><td>425</td></tr> <tr><td>EPOS2 70/10</td><td>425</td></tr> <tr><td>EPOS2 P 24/5</td><td>428</td></tr> <tr><td>EPOS4 Module 50/8</td><td>431</td></tr> <tr><td>EPOS4 Comp. 50/8 CAN</td><td>431</td></tr> <tr><td>MAXPOS 50/5</td><td>435</td></tr> </table>	ESCON 36/3 EC	417	ESCON Mod. 50/5	417	ESCON Mod. 50/4 EC-S	417	ESCON 50/5	418	ESCON 70/10	418	DEC Module 50/5	420	EPOS2 24/5	425	EPOS2 50/5	425	EPOS2 70/10	425	EPOS2 P 24/5	428	EPOS4 Module 50/8	431	EPOS4 Comp. 50/8 CAN	431	MAXPOS 50/5	435	
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