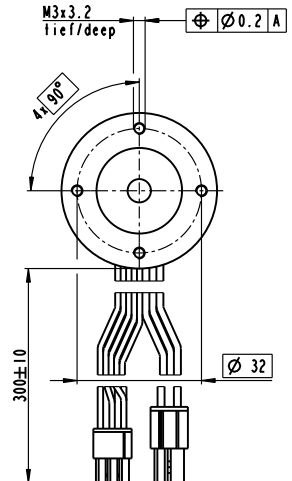
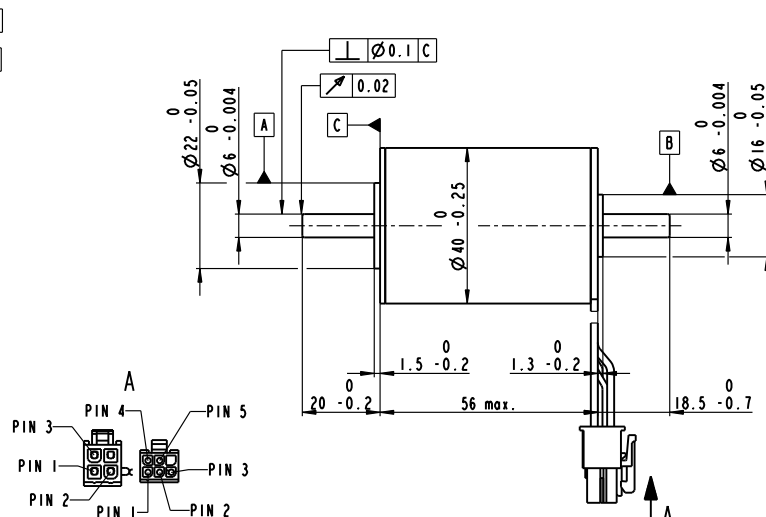
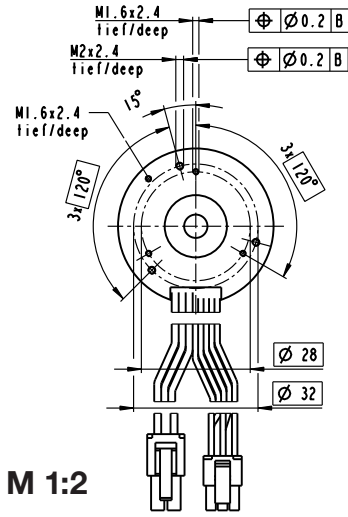


EC-i 40 Ø40 mm, brushless, 100 Watt

High Torque



M 1:2

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

Part Numbers

with Hall sensors	496660	496661	488607
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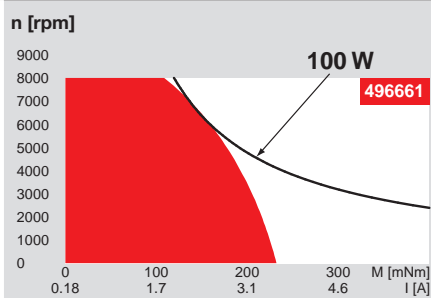
Motor Data

Values at nominal voltage		18	36	48
1 Nominal voltage	V	18	36	48
2 No load speed	rpm	4540	4550	5000
3 No load current	mA	352	176	150
4 Nominal speed	rpm	3920	3950	4390
5 Nominal torque (max. continuous torque)	mNm	207	207	222
6 Nominal current (max. continuous current)	A	5.46	2.72	2.39
7 Stall torque	mNm	2860	3160	4330
8 Stall current	A	76.3	42.2	47.5
9 Max. efficiency	%	87	87	89
Characteristics				
10 Terminal resistance phase to phase	Ω	0.236	0.853	1.01
11 Terminal inductance phase to phase	mH	0.169	0.675	0.995
12 Torque constant	mNm/A	37.5	74.9	91
13 Speed constant	rpm/V	255	127	105
14 Speed/torque gradient	rpm/mNm	1.6	1.45	1.16
15 Mechanical time constant	ms	0.739	0.669	0.537
16 Rotor inertia	gcm ²	44	44	44

Specifications

Thermal data	
17 Thermal resistance housing-ambient	7.17 K/W
18 Thermal resistance winding-housing	1.35 K/W
19 Thermal time constant winding	20.7 s
20 Thermal time constant motor	1400 s
21 Ambient temperature	-40...+100°C
22 Max. winding temperature	+155°C
Mechanical data (preloaded ball bearings)	
23 Max. speed	8000 rpm
24 Axial play at axial load < 9.0 N	0 mm
> 9.0 N	0.15 mm
25 Radial play	preloaded
26 Max. axial load (dynamic)	7 N
27 Max. force for press fits (static) (static, shaft supported)	87 N
28 Max. radial load, 5 mm from flange	3000 N
29	29.9 N

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**

Other specifications

29 Number of pole pairs	7
30 Number of phases	3
31 Weight of motor	390 g

Values listed in the table are nominal.

Connection (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 Article number		
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} 4.5...24 VDC	Pin 5
	N.C.	Pin 6
Connector Article number		
Molex	430-25-0600	

Wiring diagram for Hall sensors see p. 37

maxon Modular System

Planetary Gearhead
Ø42 mm
3 - 15 Nm
Page 350



Recommended Electronics:

Notes	Page 26
ESCON Mod. 50/4 EC-S	417
ESCON Module 50/5	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
EPOS4 Module 50/8	431
EPOS4 Comp. 50/8 CAN	431
MAXPOS 50/5	435

Overview on page 20-27

	Encoder 16 EASY 128 - 1024 CPT, 3 channels Page 382
	Encoder 16 EASY Absolute 4096 steps Page 383
	Encoder 2RMHF 3000 - 5000 CTP, 3 channels Page 397
	Encoder HEDL 5540 500 CPT, 3 channels Page 404
	Encoder AEDL 5810 1024 - 5000 CPT, 3 channels Page 407