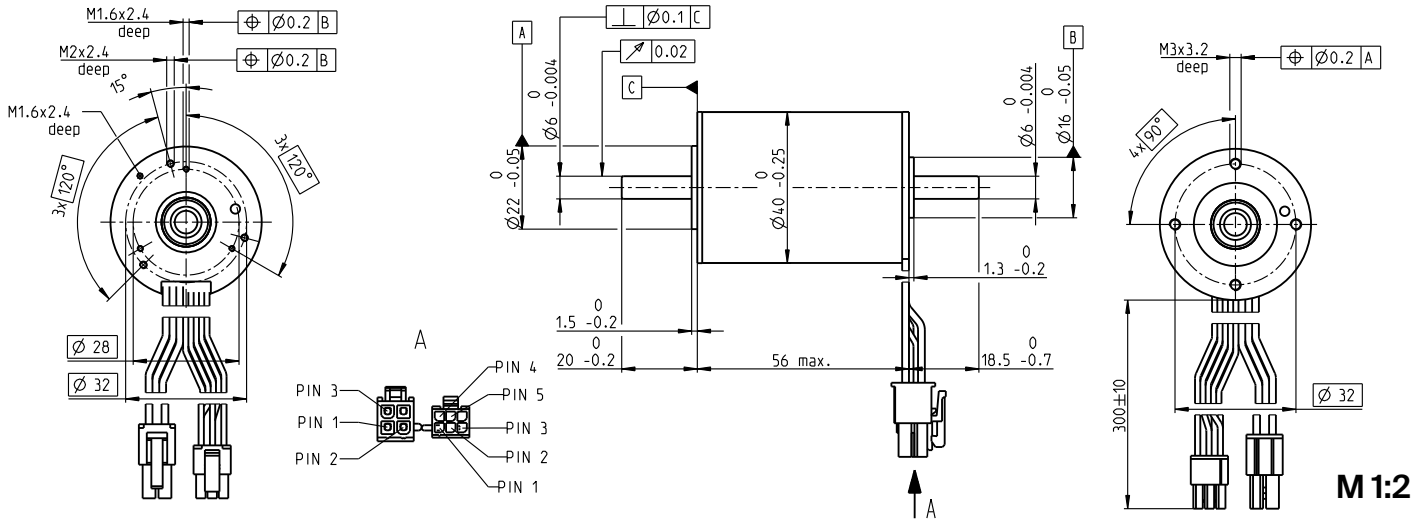


# EC-i 40 Ø40 mm, brushless, 100 watt

High Torque

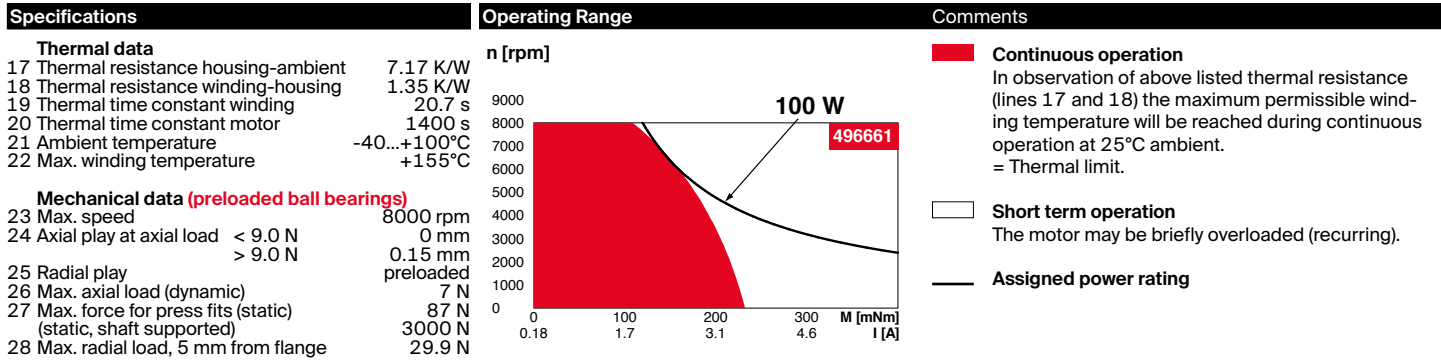
EC-i



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

Part Numbers				
with Hall sensors	<table border="1"> <tr> <td style="background-color: red;">496660</td> <td style="background-color: red;">496661</td> <td style="background-color: red;">488607</td> </tr> </table>	496660	496661	488607
496660	496661	488607		

Motor Data	496660	496661	488607	
<b>Values at nominal voltage</b>				
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 <sup>1</sup>	mNm	2860	3160	4330
8 Stall current	A	76.3	42.2	47.5
9 Max. efficiency	%	87	87	89
<b>Characteristics</b>				
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 <sup>2</sup>	44	44	44



- 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 7 N
- 26 Max. axial load (dynamic) 87 N
- 27 Max. force for press fits (static) (static, shaft supported) 3000 N
- 28 Max. radial load, 5 mm from flange 29.9 N

- 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 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 Article number		
Molex	39-01-2040	

Connection sensor (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 <sub>Hall</sub> 4.5...24 VDC	Pin 5
	N.C.	Pin 6

- Connector Article number**
- Molex 430-25-0600
- Wiring diagram for Hall sensors see p. 59
- <sup>1</sup>Calculation does not include saturation effect (p. 71/178)

## maxon Modular System Details on catalog page 42

**Planetary Gearhead**  
 Ø42 mm  
 3-15 Nm  
 Page 407



- Recommended Electronics:**
- | Notes                 | Page 42 |
|-----------------------|---------|
| ESCON 36/3 EC         | 501     |
| ESCON Mod. 50/4 EC-S  | 501     |
| ESCON Module 50/5     | 501     |
| ESCON Mod. 50/8 (HE)  | 502     |
| ESCON 50/5            | 503     |
| ESCON 70/10           | 503     |
| DEC Module 50/5       | 505     |
| EPOS4 Mod./Comp. 50/5 | 510     |
| EPOS4 Mod./Comp. 50/8 | 513     |
| EPOS4 50/5            | 515     |
| EPOS4 70/15           | 515     |
| EPOS2 P 24/5          | 520     |

- Encoder 16 EASY/XT**  
128 - 1024 CPT, 3 channels  
Page 465/467
- Encoder 16 RIO**  
1024 - 32768 CPT, 3 channels  
Page 482
- Encoder AEDL 5810**  
1024 - 5000 CPT, 3 channels  
Page 485
- Encoder HEDL 5540**  
500 CPT, 3 channels  
Page 492