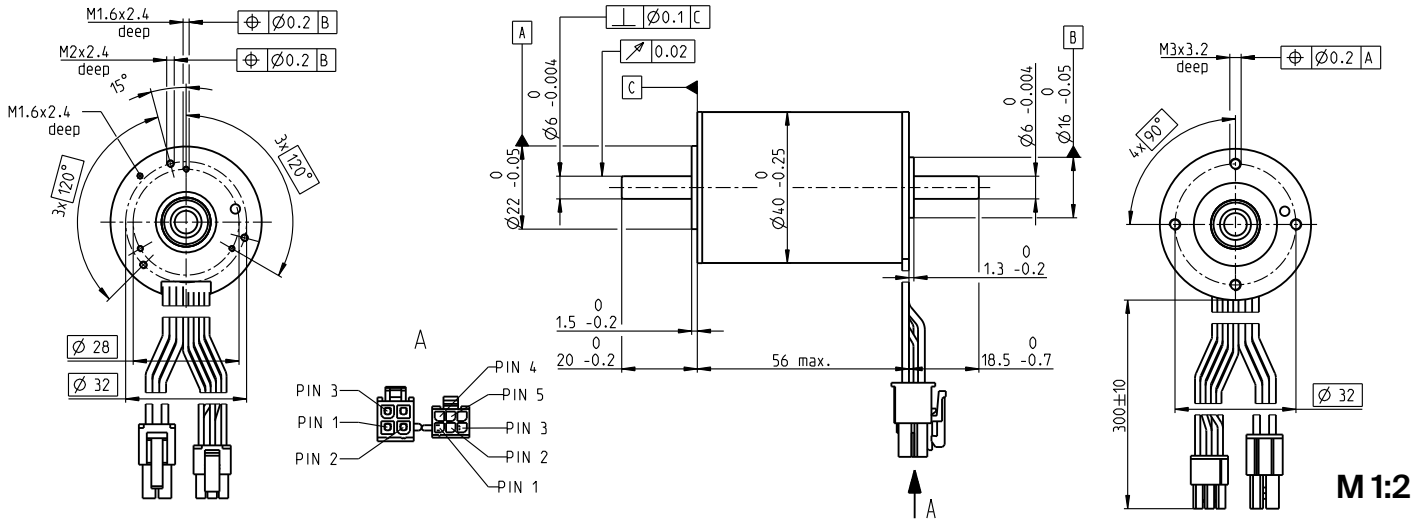


EC-i 40 Ø40 mm, brushless, 100 watt

High Torque

EC-i



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

Part Numbers

with Hall sensors

496660 496661 488607

Motor Data

Values at nominal voltage					
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	mNm	209	210	224	
6 Nominal current (max. continuous current)	A	5.5	2.76	2.41	
7 Stall torque	mNm	1850	1930	2080	
8 Stall current	A	77.4	43.4	48.3	
9 Max. efficiency	%	86.8	87.5	89	
Characteristics					
10 Terminal resistance phase to phase	Ω	0.233	0.829	0.994	
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	1.58	1.41	1.15	
15 Mechanical time constant	ms	0.729	0.65	0.528	
16 Rotor inertia	gcm ²	44	44	44	

Specifications

- 17 Thermal resistance housing-ambient 7.17 K/W
- 18 Thermal resistance winding-housing 1.35 K/W
- 19 Thermal time constant winding 25.8 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
- 25 Radial play 0.15 mm
- 26 Max. axial load (dynamic) 7 N
- 27 Max. force for press fits (static) 87 N
- 28 Max. radial load, 5 mm from flange 3000 N
- 29 Number of pole pairs 7
- 30 Number of phases 3
- 31 Weight of motor 390 g

Other specifications

- 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. 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_{Hall} 4.5...24 VDC Pin 5
- N.C. N.C. Pin 6

Connector Article number

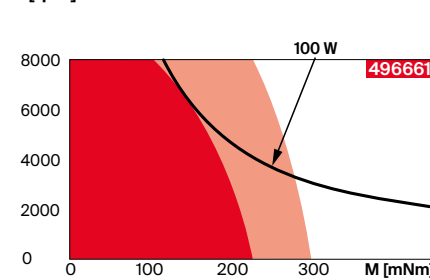
Molex 430-25-0600

Wiring diagram for Hall sensors see p. 67

Operating Range

Comments

n [rpm]



- Continuous operation
- Continuous operation with reduced thermal resistance R_{th2} 50%
- Intermittent operation
- Assigned power rating

Modular System

Details on catalog page 50

Gear 454_GP 42 C

Sensor 505_ENX 16 EASY
506_ENX 16 EASY XT
507_ENX 16 EASY Absolute
508_ENX 16 EASY Absolute XT
516_ENX 22 EMT
517_ENX 16 RIO
524_TSX 40 MAG
525_TSX 40 RIO

Motor Control 547_DEC Module 50/5
551_ESCON 36/3 EC
551_ESCON Module 50/4 EC-S
551_ESCON Module 50/5
552_ESCON Module 50/8 HE
553_ESCON 50/5
553_ESCON 70/10
562_EPOS4 Module 50/5
563_EPOS4 Module 50/8
565_EPOS4 Compact 50/5
565_EPOS4 Compact 50/8
567_EPOS4 50/5
567_EPOS4 70/15
568_EPOS4 Disk 60/8
569_EPOS4 Disk 60/12