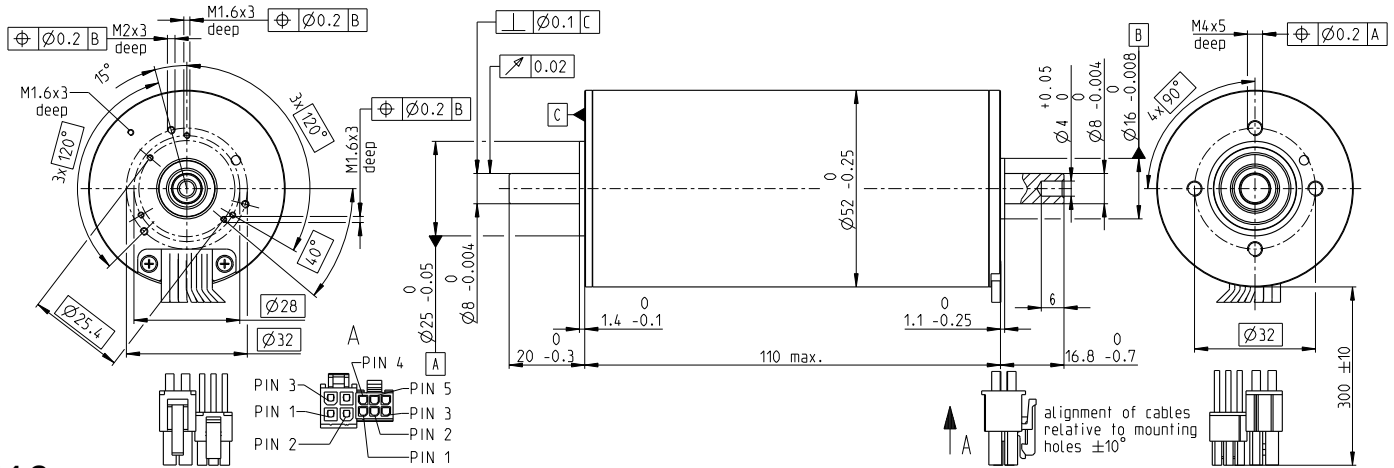


EC-i 52 Ø52 mm, brushless, 200 watt

High Torque



EC-i

M 1:2

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

Part Numbers

with Hall sensors **606793** **596099** **634043**

Motor Data (provisional)

Values at nominal voltage		24	36	48
1 Nominal voltage	V	24	36	48
2 No load speed	rpm	3340	3660	3970
3 No load current	mA	657	499	419
4 Nominal speed	rpm	2970	3300	3610
5 Nominal torque (max. continuous torque)	mNm	640	649	622
6 Nominal current (max. continuous current)	A	9.36	6.93	5.44
7 Stall torque ¹	mNm	13800	18800	22900
8 Stall current	A	202	202	200
9 Max. efficiency	%	89	90.4	91.1
Characteristics				
10 Terminal resistance phase to phase	Ω	0.119	0.178	0.24
11 Terminal inductance phase to phase	mH	0.149	0.28	0.424
12 Torque constant	mNm/A	68	93.1	115
13 Speed constant	rpm/V	140	103	83.3
14 Speed/torque gradient	rpm/mNm	0.245	0.196	0.174
15 Mechanical time constant	ms	0.677	0.543	0.482
16 Rotor inertia	gcm ²	264	264	264

Specifications

- Thermal data**
- 17 Thermal resistance housing-ambient 4.02 K/W
 - 18 Thermal resistance winding-housing 0.53 K/W
 - 19 Thermal time constant winding 12.8 s
 - 20 Thermal time constant motor 231.0 s
 - 21 Ambient temperature -40...+100°C
 - 22 Max. winding temperature +155°C

- Mechanical data (preloaded ball bearings)**
- 23 Max. permissible speed 5000 rpm
 - 24 Axial play at axial load < 15 N 0 mm
 - > 15 N 0.14 mm
 - 25 Radial play preloaded
 - 26 Max. axial load (dynamic) 12 N
 - 27 Max. force for press fits (static) 150 N
 - (static, shaft supported) 6000 N
 - 28 Max. radial load, 5 mm from flange 110 N

Other specifications

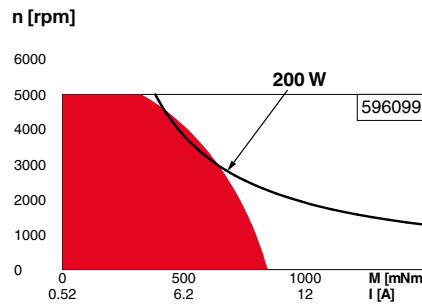
- 29 Number of pole pairs 8
 - 30 Number of phases 3
 - 31 Weight of motor 1150 g
- Values listed in the table are nominal.

- Connection motor (Cable AWG 16)**
- 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_{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. 59

¹Calculation does not include saturation effect (p. 71/178)

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

Details on catalog page 42

- Planetary Gearhead**
Ø52 mm
4-30 Nm
Page 411



- Recommended Electronics:**
- Notes Page 42
 - ESCON Mod. 50/8 (HE) 502
 - ESCON 70/10 503
 - EPOS4 Mod./Comp. 50/8 511
 - EPOS4 Mod./Comp. 50/15 511
 - EPOS4 70/15 515

- Encoder 16 EASY/XT**
128-1024 CPT, 3 channels
Page 465/467
- Encoder 16 EASY Absolute/XT**
4096 steps
Page 469/471
- 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