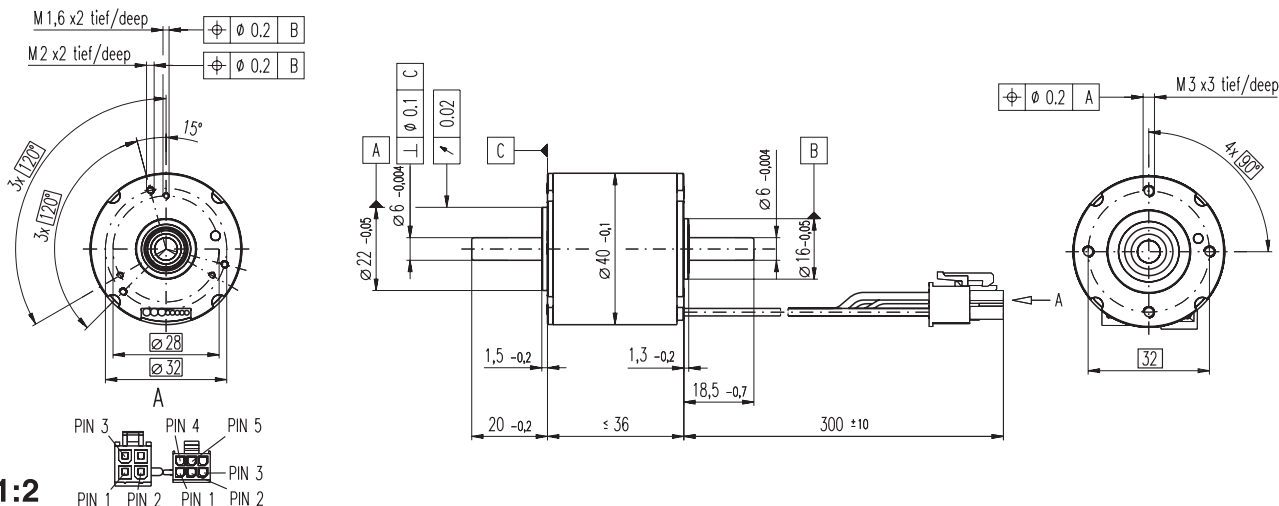


EC-i 40 \varnothing 40 mm, brushless, 70 Watt



M 1:2

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

Order Number

with hall sensors 339243 339244

Motor Data (provisional)

Values at nominal voltage		24.0	48.0
1	Nominal voltage	V	24.0
2	No load speed	rpm	13900
3	No load current	mA	386
4	Nominal speed	rpm	11900
5	Nominal torque (max. continuous torque)	mNm	53.5
6	Nominal current (max. continuous current)	A	3.28
7	Stall torque	mNm	1060
8	Starting current	A	65.4
9	Max. efficiency	%	86
Characteristics			
10	Terminal resistance phase to phase	Ω	0.367
11	Terminal inductance phase to phase	mH	0.180
12	Torque constant	mNm / A	16.1
13	Speed constant	rpm / V	592
14	Speed / torque gradient	rpm / mNm	13.5
15	Mechanical time constant	ms	3.41
16	Rotor inertia	gcm ²	24.2

Specifications

- Thermal data**
- 17 Thermal resistance housing-ambient: 7.8 K / W
 - 18 Thermal resistance winding-housing: 2.6 K / W
 - 19 Thermal time constant winding: 28.2 s
 - 20 Thermal time constant motor: 385 s
 - 21 Ambient temperature: -40 ... +100°C
 - 22 Max. permissible winding temperature: +155°C
- Mechanical data (preloaded ball bearings)**
- 23 Max. permissible speed: 15000 rpm
 - 24 Axial play at axial load < 6.0 N: 0 mm
 - > 6.0 N: 0.14 mm
 - 25 Radial play: preloaded
 - 26 Max. axial load (dynamic): 8 N
 - 27 Max. force for press fits (static): 100 N
 - (static, shaft supported): 2000 N
 - 28 Max. radial loading, 5 mm from flange: 50 N
- Other specifications**
- 29 Number of pole pairs: 7
 - 30 Number of phases: 3
 - 31 Weight of motor: 210 g

Values listed in the table are nominal.

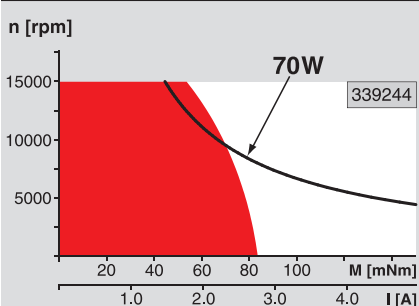
- Connection** (Cable AWG 20)
- red Motor winding 1 Pin 1
 - black Motor winding 2 Pin 2
 - white Motor winding 3 Pin 3
 - N.C. Pin 4

- 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

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.

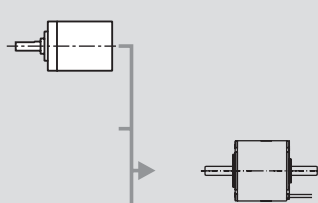
Short term operation
The motor may be briefly overloaded (recurring).

— Assigned power rating

maxon Modular System

Overview on page 16 - 21

Planetary Gearhead
 \varnothing 32 mm
1.0 - 6.0 Nm
Page 241



Encoder MR
256 - 1024 CPT,
3 channels
Page 259

Encoder HEDL 5540
500 CPT,
3 channels
Page 266

- Recommended Electronics:**
- DECS 50/5 Page 284
 - DEC 50/5 285
 - DECV 50/5 286
 - DEC 70/10 286
 - EPOS 24/5 294
 - EPOS 70/10 295
 - EPOS P 24/5 297
 - Notes 20