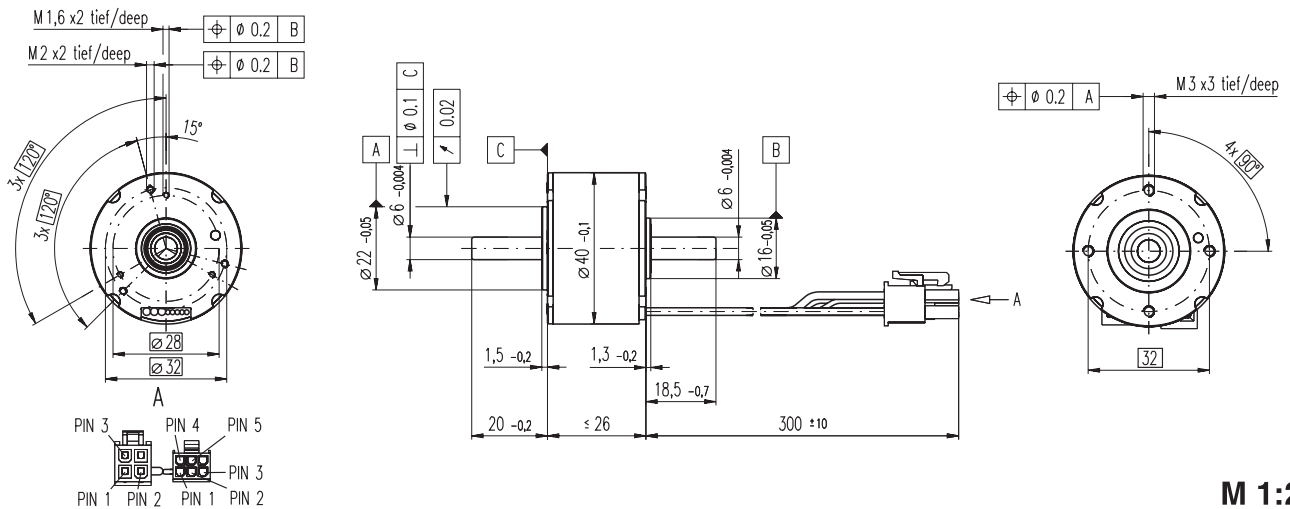


EC-i 40 \varnothing 40 mm, brushless, 50 Watt



M 1:2

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

Order Number

with hall sensors 339241 313320

Motor Data (provisional)

Values at nominal voltage		339241	313320	
1	Nominal voltage	V	12.0	24.0
2	No load speed	rpm	11600	12400
3	No load current	mA	635	351
4	Nominal speed	rpm	9390	9900
5	Nominal torque (max. continuous torque)	mNm	38.9	51.0
6	Nominal current (max. continuous current)	A	4.07	2.65
7	Stall torque	mNm	459	821
8	Starting current	A	48.3	45.8
9	Max. efficiency	%	79	84
Characteristics				
10	Terminal resistance phase to phase	Ω	0.248	0.524
11	Terminal inductance phase to phase	mH	0.109	0.390
12	Torque constant	mNm / A	9.50	17.9
13	Speed constant	rpm / V	1010	532
14	Speed / torque gradient	rpm / mNm	26.3	15.6
15	Mechanical time constant	ms	2.89	1.71
16	Rotor inertia	gcm ²	10.5	10.5

Specifications

- Thermal data**
- 17 Thermal resistance housing-ambient: 9.66 K / W
 - 18 Thermal resistance winding-housing: 2.57 K / W
 - 19 Thermal time constant winding: 17.5 s
 - 20 Thermal time constant motor: 676 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: 130 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

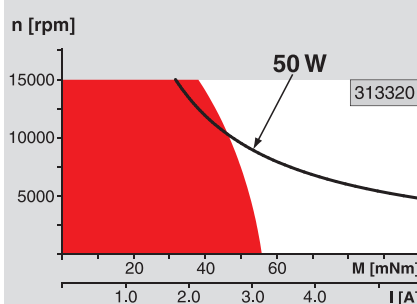
Connection (Cable AWG 26)

- 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.

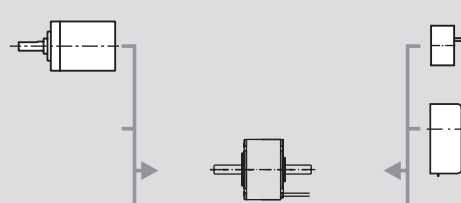
Short term operation
The motor may be briefly overloaded (recurring).

— Assigned power rating

maxon Modular System

Overview on page 16 - 21

Planetary Gearhead
ø32 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 P 24/5	297
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