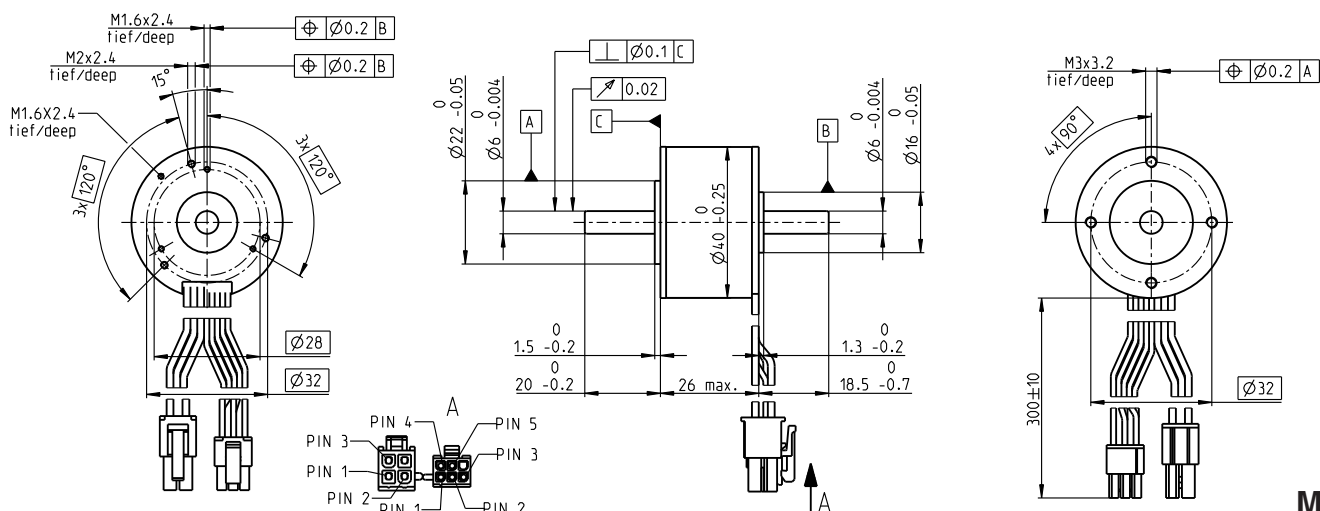


EC-i 40 Ø40 mm, brushless, 50 Watt



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

Order Number

with Hall sensors

339241

313320

Motor Data

Values at nominal voltage

1 Nominal voltage	V	12.0	24.0
2 No load speed	rpm	12300	13100
3 No load current	mA	629	347
4 Nominal speed	rpm	9890	10400
5 Nominal torque (max. continuous torque)	mNm	36.8	48.2
6 Nominal current (max. continuous current)	A	4.04	2.64
7 Stall torque	mNm	432	773
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	8.95	16.9
13 Speed constant	rpm / V	1070	565
14 Speed / torque gradient	rpm / mNm	29.6	17.5
15 Mechanical time constant	ms	3.26	1.93
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	17.6 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
24 Axial play at axial load > 6.0 N	0.15 mm
25 Radial play	preloaded
26 Max. axial load (dynamic)	8 N
27 Max. force for press fits (static)	87 N
27 Max. force for press fits (static) (static, shaft supported)	2000 N
28 Max. radial loading, 5 mm from flange	15 N

Other specifications

29 Number of pole pairs	7
30 Number of phases	3
31 Weight of motor	170 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)

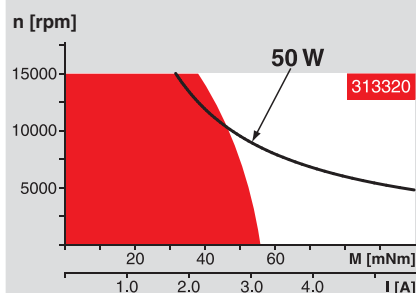
yellow	Hall sensor 1	Pin 1
brown	Hall sensor 2	Pin 2
grey	Hall sensor 3	Pin 3
blue	GND	Pin 4
green	V _{Hall} 4.5 ... 24 VDC	Pin 5
	N.C.	Pin 6

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

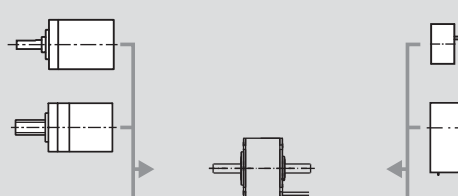
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Spindle Drive

Ø32 mm

1.0 - 6.0 Nm

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Encoder MR

256 - 1024 CPT,

3 channels

Page 263

Encoder HEDL 5540

500 CPT,

3 channels

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Recommended Electronics:

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DECV 50/5	297
DEC 70/10	297
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