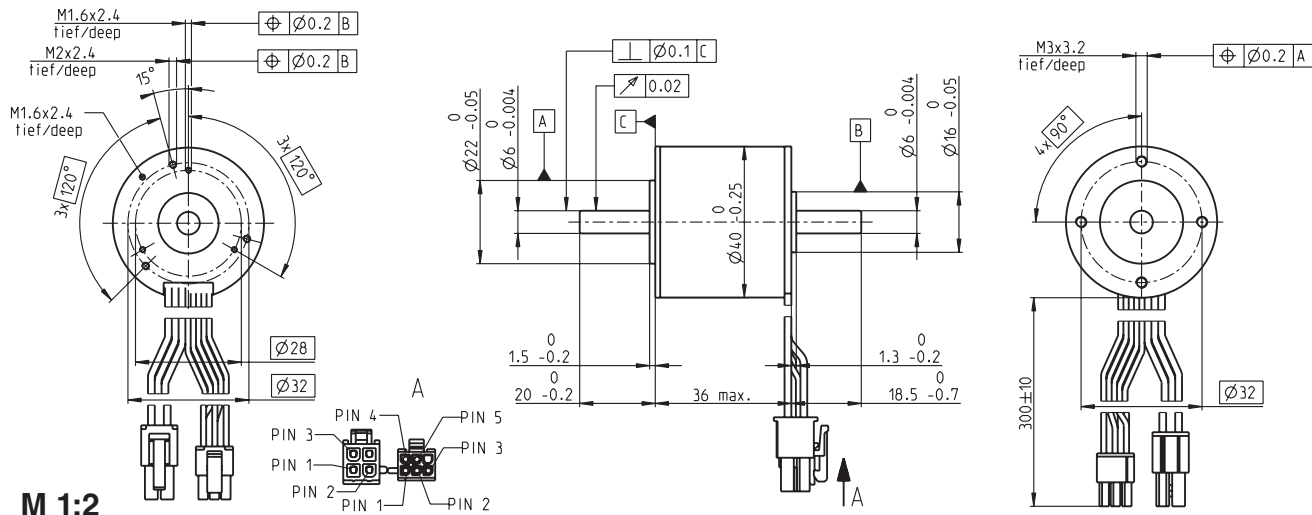


EC-i 40 Ø40 mm, brushless, 70 Watt

NRND See page 13
Not recommended for New Design

maxon flat motor



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

Part Numbers

	with Hall sensors	339243	339244
Motor Data			

Values at nominal voltage		18	36
1 Nominal voltage	V	18	36
2 No load speed	rpm	10000	10700
3 No load current	mA	476	262
4 Nominal speed	rpm	8400	8940
5 Nominal torque (max. continuous torque)	mNm	58	70.8
6 Nominal current (max. continuous current)	A	3.49	2.17
7 Stall torque	mNm	798	1140
8 Starting current	A	49.1	44.6
9 Max. efficiency	%	82	86
Characteristics			
10 Terminal resistance phase to phase	Ω	0.367	0.807
11 Terminal inductance phase to phase	mH	0.18	0.644
12 Torque constant	mNm/A	16.7	31.5
13 Speed constant	rpm/V	572	303
14 Speed/torque gradient	rpm/mNm	12.6	7.75
15 Mechanical time constant	ms	3.18	1.96
16 Rotor inertia	gcm ²	24.2	24.2

Specifications	Operating Range	Comments
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: 28.4 s 20 Thermal time constant motor: 936 s 21 Ambient temperature: -40...+100°C 22 Max. permissible winding temperature: +155°C		<p>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.</p> <p>Short term operation The motor may be briefly overloaded (recurring).</p> <p>Assigned power rating</p>
Mechanical data (preloaded ball bearings) 23 Max. permissible speed: 15000 rpm 24 Axial play at axial load < 7.0 N: 0 mm > 7.0 N: 0.15 mm 25 Radial play: preloaded 26 Max. axial load (dynamic): 5 N 27 Max. force for press fits (static) (static, shaft supported): 87 N 2000 N 28 Max. radial loading, 5 mm from flange: 15 N		

Other specifications	maxon Modular System	Overview on page 20 - 25
29 Number of pole pairs: 7	Planetary Gearhead Ø32 mm 1.0 - 6.0 Nm Page 264	Encoder MR 256 - 1024 CPT, 3 channels Page 303
30 Number of phases: 3	Spindle Drive Ø32 mm Page 286-288	Encoder HEDL 5540 500 CPT, 3 channels Page 309
31 Weight of motor: 240 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 Part 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 Part number	
Molex	430-25-0600

Recommended Electronics:

ESCON 50/5	Page 321
ESCON Module 50/5	321
ESCON 70/10	321
DECS 50/5	324
DEC Module 50/5	325
EPOS2 Module 36/2	330
EPOS2 24/5	331
EPOS2 70/10	331
EPOS2 P 24/5	334
EPOS3 70/10 EtherCAT	337
Notes	24