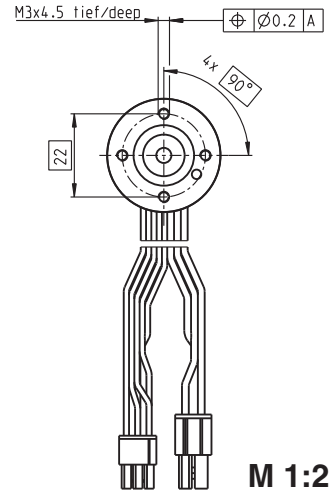
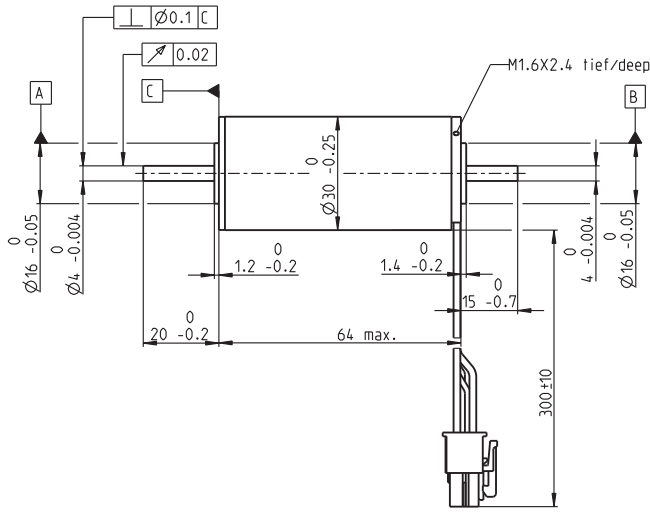
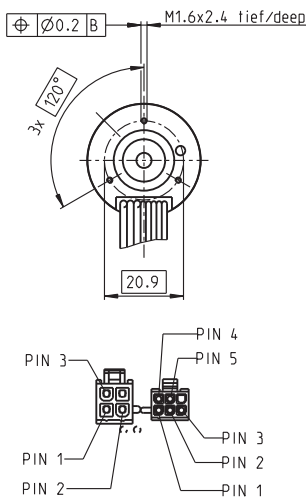


EC-max 30 Ø30 mm, brushless, 60 Watt



M 1:2

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

Order Number

272762 **272763** 272764 272765

Motor Data

Values at nominal voltage

	V	12	24	36	48
1 Nominal voltage	V	12	24	36	48
2 No load speed	rpm	7970	9330	9490	9340
3 No load current	mA	323	200	137	100
4 Nominal speed	rpm	6650	8070	8290	8150
5 Nominal torque (max. continuous torque)	mNm	60.2	58.9	62.2	62.8
6 Nominal current (max. continuous current)	A	4.52	2.6	1.85	1.38
7 Stall torque	mNm	381	458	522	519
8 Starting current	A	26.8	18.8	14.5	10.7
9 Max. efficiency	%	80	81	82	82

Characteristics

	Ω	0.447	1.27	2.48	4.49
10 Terminal resistance phase to phase	Ω	0.447	1.27	2.48	4.49
11 Terminal inductance phase to phase	mH	0.049	0.143	0.312	0.573
12 Torque constant	mNm / A	14.2	24.3	35.9	48.6
13 Speed constant	rpm / V	672	393	266	197
14 Speed / torque gradient	rpm / mNm	21.2	20.6	18.4	18.2
15 Mechanical time constant	ms	4.86	4.73	4.21	4.17
16 Rotor inertia	gcm ²	21.9	21.9	21.9	21.9

Specifications

Thermal data

17 Thermal resistance housing-ambient	7.4 K / W
18 Thermal resistance winding-housing	0.5 K / W
19 Thermal time constant winding	2.76 s
20 Thermal time constant motor	1000 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	0.14 mm
25 Radial play	preloaded
26 Max. axial load (dynamic)	5.5 N
27 Max. force for press fits (static) (static, shaft supported)	98 N / 1300 N
28 Max. radial loading, 5 mm from flange	25 N

Other specifications

29 Number of pole pairs	1
30 Number of phases	3
31 Weight of motor	305 g

Values listed in the table are nominal.

Connection Motor (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 Sensors (Cable AWG 26)

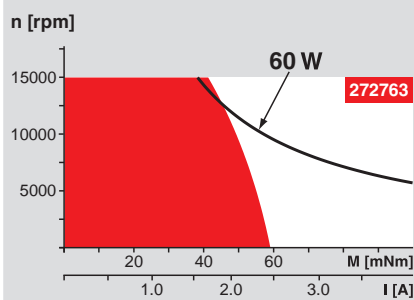
yellow	Hall sensor 1	Pin 1
brown	Hall sensor 2	Pin 2
grey	Hall sensor 3	Pin 3
blue	GND	Pin 4
green	V _{Hall} 4.5 ... 24 VDC	Pin 5
	N.C.	Pin 6

Connector Article number

Molex 430-25-0600

Wiring diagram for Hall sensors see p. 27

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

8.0 Nm

Page 235

Koaxdrive

Ø32 mm

1.0 - 4.5 Nm

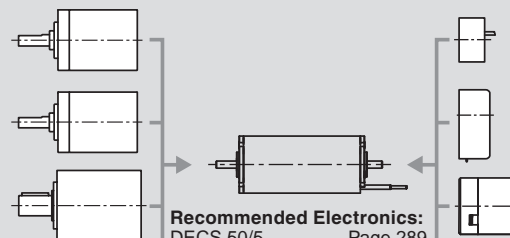
Page 236

Planetary Gearhead

Ø42 mm

3 - 15 Nm

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Recommended Electronics:

DECS 50/5 Page 289

DEC 50/5 291

DEC Module 50/5 291

DECV 50/5 297

DES 50/5 298

EPOS2 24/5 305

EPOS2 50/5 305

EPOS P 24/5 308

Notes 20

Encoder MR

500 / 1000 Imp.,

3 channels

Page 262

Encoder HEDL 5540

500 Imp.,

3 channels

Page 269

Brake AB 20

24 VDC

0.1 Nm

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