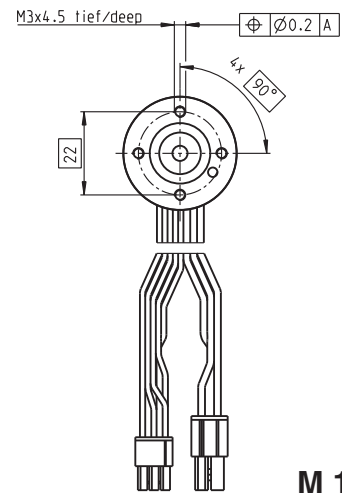
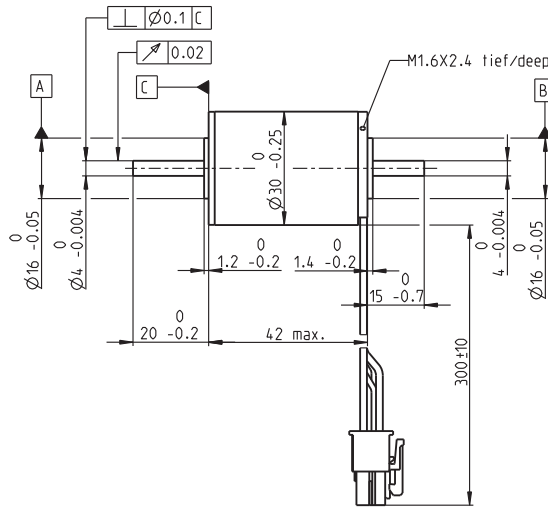
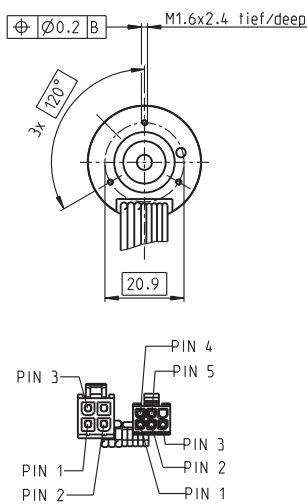


EC-max 30 Ø30 mm, brushless, 40 Watt



M 1:2

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

Order Number

272766 272768 272769 272770

Motor Data

Values at nominal voltage		12	24	36	48
1 Nominal voltage	V	12	24	36	48
2 No load speed	rpm	8680	9250	9140	9250
3 No load current	mA	232	126	82.9	63.1
4 Nominal speed	rpm	6670	7240	7110	7230
5 Nominal torque (max. continuous torque)	mNm	33.9	33.2	32.8	33
6 Nominal current (max. continuous current)	A	2.81	1.47	0.962	0.732
7 Stall torque	mNm	153	160	154	157
8 Starting current	A	11.8	6.57	4.18	3.24
9 Max. efficiency	%	74	75	74	74
Characteristics		1.01	3.65	8.61	14.8
10 Terminal resistance phase to phase	Ω	1.01	3.65	8.61	14.8
11 Terminal inductance phase to phase	mH	0.088	0.31	0.713	1.24
12 Torque constant	mNm / A	12.9	24.3	36.8	48.6
13 Speed constant	rpm / V	738	393	259	197
14 Speed / torque gradient	rpm / mNm	57.8	59.1	60.6	59.9
15 Mechanical time constant	ms	6.66	6.81	6.98	6.9
16 Rotor inertia	gcm ²	11	11	11	11

Specifications

Thermal data	
17 Thermal resistance housing-ambient	8.6 K / W
18 Thermal resistance winding-housing	1 K / W
19 Thermal time constant winding	3.25 s
20 Thermal time constant motor	777 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
25 Radial play	0.14 mm preloaded
26 Max. axial load (dynamic)	5.5 N
27 Max. force for press fits (static) (static, shaft supported)	98 N
	2000 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	195 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
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Connection sensors (Cable AWG 26)

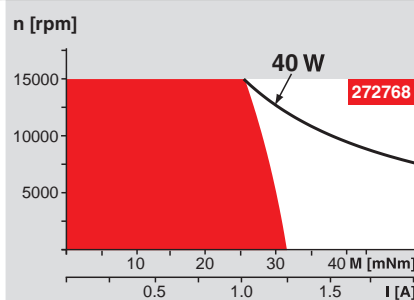
yellow	Hall sensor 1	Pin 1
brown	Hall sensor 2	Pin 2
grey	Hall sensor 3	Pin 3
blue	GND	Pin 4
green	V _{Hall} 4.5 ... 24 VDC	Pin 5
	N.C.	Pin 6

Connector Article number

Molex	430-25-0600
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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

Planetary Gearhead

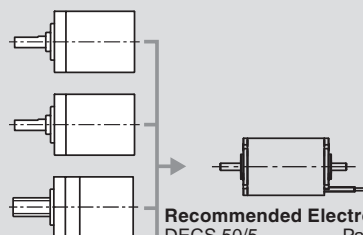
Ø32 mm
1.0 - 8.0 Nm
Page 234 / 235

Koaxdrive

Ø32 mm
1.0 - 4.5 Nm
Page 236

Spindle Drive

Ø32 mm
Page 249 / 250 / 251



Recommended Electronics:

DECS 50/5	Page 289
DEC Module 24/2	290
DEC Module 50/5	291
DEC 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

Overview on page 16 - 21

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
Page 316