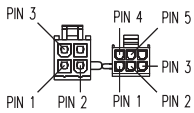
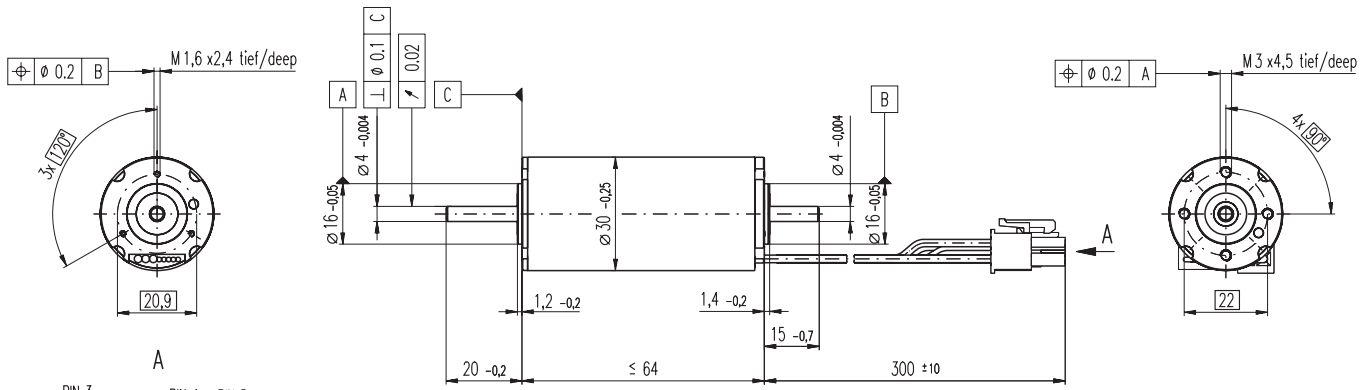


EC-max 30 \varnothing 30 mm, brushless, 60 Watt



M 1:2

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

Order Number

272762	272763	272764	272765
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Motor Data

Values at nominal voltage		272762	272763	272764	272765	
1	Nominal voltage	V	12.0	24.0	36.0	48.0
2	No load speed	rpm	7990	9350	9500	9360
3	No load current	mA	268	170	116	85.1
4	Nominal speed	rpm	6630	8040	8260	8120
5	Nominal torque (max. continuous torque)	mNm	62.4	61.3	64.7	65.3
6	Nominal current (max. continuous current)	A	4.61	2.66	1.90	1.41
7	Stall torque	mNm	381	458	522	519
8	Starting current	A	26.8	18.8	14.5	10.7
9	Max. efficiency	%	81	82	83	83
Characteristics						
10	Terminal resistance phase to phase	Ω	0.447	1.27	2.48	4.49
11	Terminal inductance phase to phase	mH	0.0490	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	2.69 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
	> 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)	100 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	275 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)

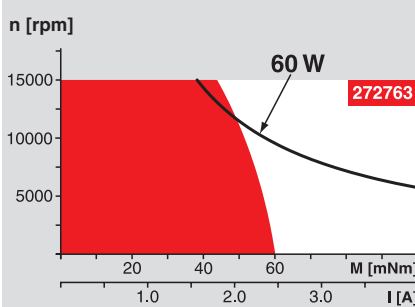
yellow	Hall sensor 1	Pin 1
brown	Hall sensor 2	Pin 2
grey	Hall sensor 3	Pin 3
blue	GND	Pin 4
green	V _{Hall} 4.5 ... 24 VDC	Pin 5
	N.C.	Pin 6

Connector Article number

Molex 430-25-0600

Wiring diagram for Hall sensors see page 26

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.

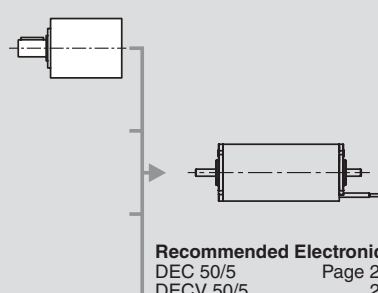
Short term operation
The motor may be briefly overloaded (recurring).

— Assigned power rating

maxon Modular System

Overview on page 16 - 21

1 Planetary Gearhead
 \varnothing 42 mm
3 - 15 Nm
Page 236



Recommended Electronics:

DEC 50/5	Page 277
DECV 50/5	278
DES 50/5	279
EPOS 24/5	286
EPOS P 24/5	287
MIP 50	289
Notes	20

Encoder MR

500 / 1000 CPT,
3 channels
Page 250

Encoder HEDL 5540

500 CPT,
3 channels
Page 258

Brake AB 20

\varnothing 20 mm
24 VDC, 0.1 Nm
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