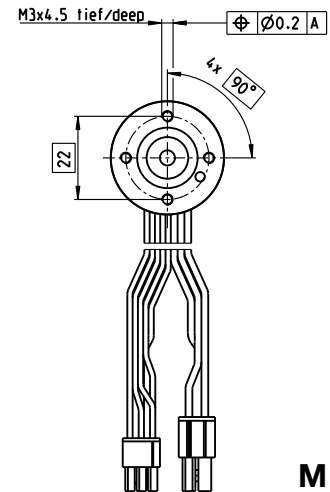
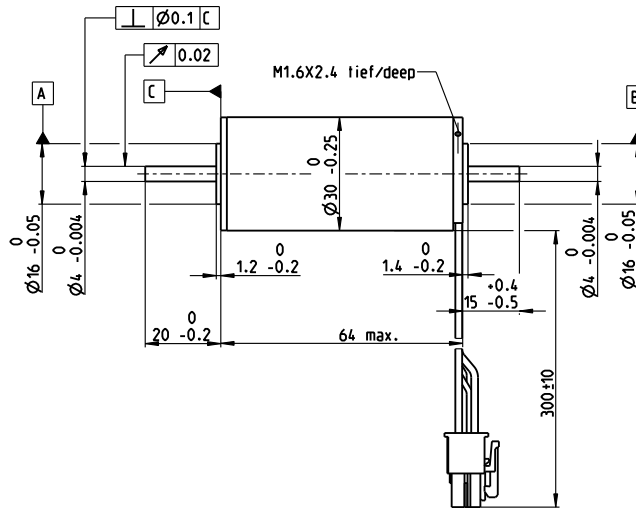
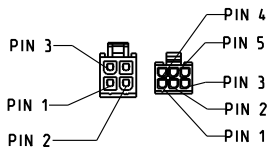
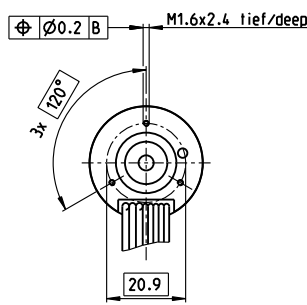


# EC-max 30 Ø30 mm, brushless, 60 Watt

maxon EC-max



M 1:2

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

## Part Numbers

272762	272763	272764	272765
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Motor Data					
Values at nominal voltage					
1 Nominal voltage	V	12	24	36	48
2 No load speed	rpm	7980	9340	9490	9350
3 No load current	mA	302	191	130	95.4
4 Nominal speed	rpm	6590	8040	8270	8130
5 Nominal torque (max. continuous torque)	mNm	63.6	60.7	63.7	64.1
6 Nominal current (max. continuous current)	A	4.72	2.66	1.88	1.4
7 Stall torque	mNm	381	458	522	519
8 Stall current	A	26.8	18.8	14.5	10.7
9 Max. efficiency	%	80	81	82	82
Characteristics					
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 <sup>2</sup>	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. winding temperature	+155°C
Mechanical data (preloaded ball bearings)	
23 Max. 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 N
27 Max. force for press fits (static)	98 N
(static, shaft supported)	1300 N
28 Max. radial load, 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.

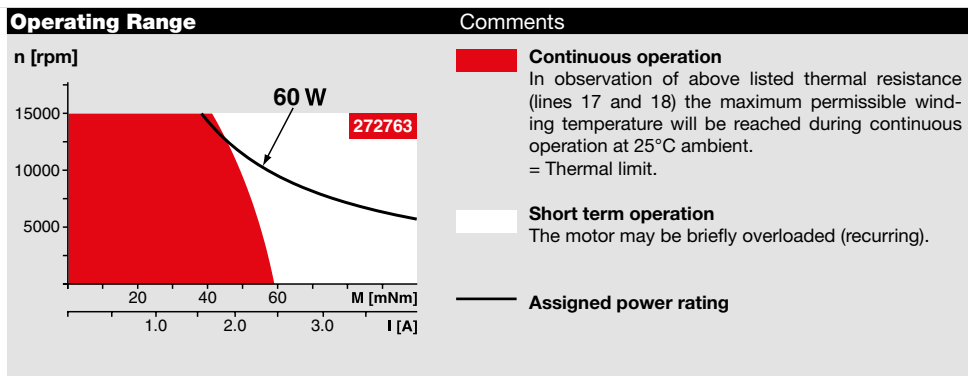
Connection motor (Cable AWG 20)		
red	Motor winding 1	Pin 1
black	Motor winding 2	Pin 2
white	Motor winding 3	Pin 3
	N.C.	Pin 4

Connector	Part 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 <sub>Hall</sub> 3...24 VDC	Pin 5
	N.C.	Pin 6

Connector	Part number
Molex	430-25-0600

Wiring diagram for Hall sensors see p. 41



maxon Modular System		Overview on page 28–36
<b>Planetary Gearhead</b> Ø32 mm 1.0 - 8.0 Nm Page 347/350		<b>Encoder MR</b> 500/1000 CPT, 3 channels Page 419
<b>Koaxdrive</b> Ø32 mm 1.0 - 4.5 Nm Page 352		<b>Encoder HEDL 5540</b> 500 CPT, 3 channels Page 433
<b>Planetary Gearhead</b> Ø42 mm 3 - 15 Nm Page 355		<b>Brake AB 20</b> 24 VDC 0.1 Nm Page 478
<b>Recommended Electronics:</b>		
<b>Notes</b>		
	Page 32	
	ESCÓN 36/3 EC	445
	ESCÓN Mod. 50/4 EC-S	445
	ESCÓN Module 50/5	445
	ESCÓN 50/5	447
	DEC Module 50/5	449
	EPOS4 50/5	453
	EPOS4 Mod./Comp. 50/5	453
	EPOS2 P 24/5	464
	MAXPOS 50/5	468