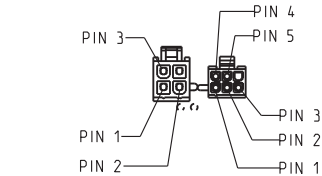
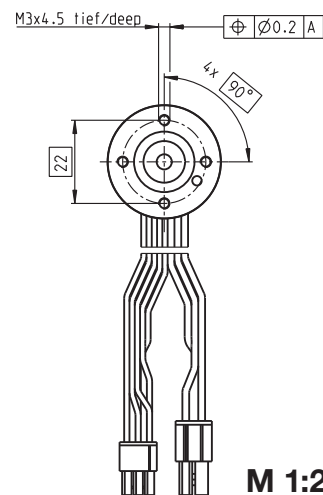
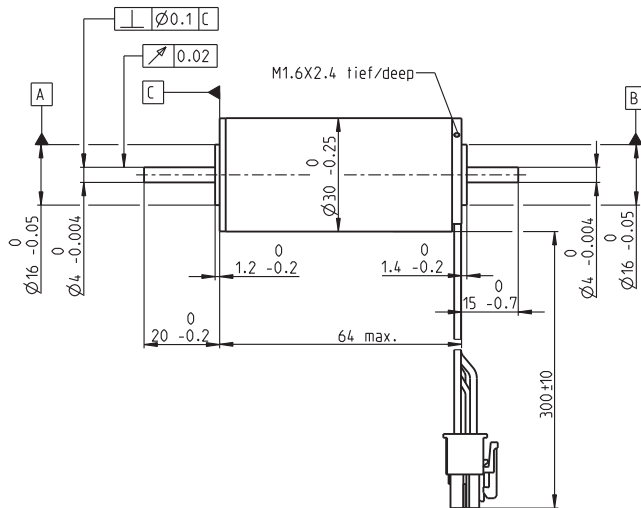
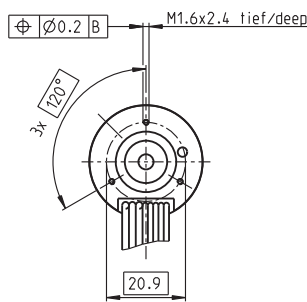


EC-max 30 Ø30 mm, brushless, 60 Watt

maxon EC-max



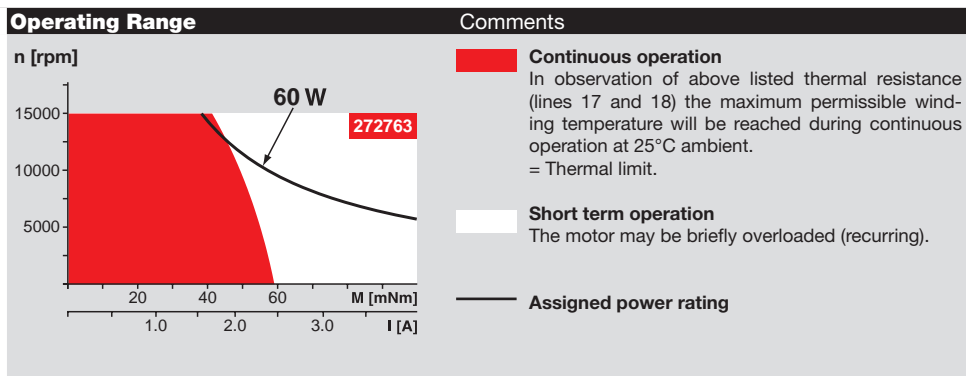
- Stock program
- Standard program
- Special program (on request)

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 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. 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			
Molex	Part number		
	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} 3...24 VDC	Pin 5	
	N.C.	Pin 6	
Connector			
Molex	Part number		
	430-25-0600		

Wiring diagram for Hall sensors see p. 35

maxon Modular System

- Planetary Gearhead**
Ø32 mm
1.0 - 8.0 Nm
Page 343/345
- Koaxdrive**
Ø32 mm
1.0 - 4.5 Nm
Page 347
- Planetary Gearhead**
Ø42 mm
3 - 15 Nm
Page 350

Overview on page 20-27

- Encoder MR**
500/1000 CPT,
3 channels
Page 392
- Encoder HEDL 5540**
500 CPT,
3 channels
Page 403
- Brake AB 20**
24 VDC
0.1 Nm
Page 444

Recommended Electronics:

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ESCON Mod. 50/4 EC-S	417
ESCON Module 50/5	417
ESCON 50/5	418
DEC Module 50/5	420
EPOS2 Module 36/2	424
EPOS2 24/5, 50/5	425
EPOS2 P 24/5	428
EPOS4 Module 50/8	431
EPOS4 Comp. 50/8 CAN	431
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