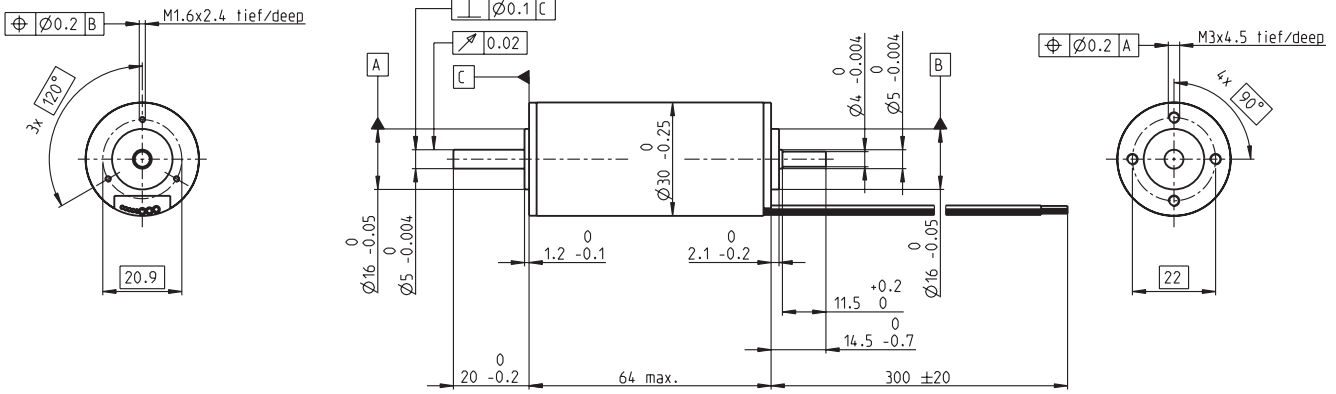


EC-4pole 30 Ø30 mm, brushless, 200 Watt

High Power



M 1:2

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

Order Number

305013 305014 305015

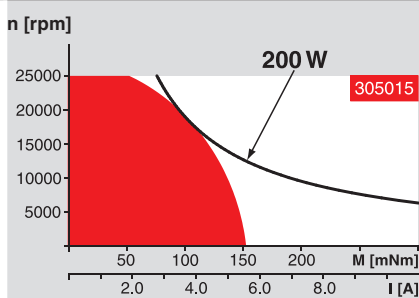
Motor Data (provisional)

Values at nominal voltage		24.0	36.0	48.0	
1	Nominal voltage	V	24.0	36.0	48.0
2	No load speed	rpm	17000	17000	16500
3	No load current	mA	885	590	422
4	Nominal speed	rpm	16200	16200	15800
5	Nominal torque (max. continuous torque)	mNm	114	119	120
6	Nominal current (max. continuous current)	A	9.21	6.39	4.70
7	Stall torque	mNm	3180	3460	3430
8	Starting current	A	236	171	124
9	Max. efficiency	%	88	89	89
Characteristics					
10	Terminal resistance phase to phase	Ω	0.102	0.210	0.386
11	Terminal inductance phase to phase	mH	0.0163	0.0368	0.0653
12	Torque constant	mNm / A	13.5	20.2	27.6
13	Speed constant	rpm / V	710	473	346
14	Speed / torque gradient	rpm / mNm	5.36	4.92	4.83
15	Mechanical time constant	ms	1.87	1.72	1.68
16	Rotor inertia	gcm ²	33.3	33.3	33.3

Specifications

Thermal data		
17	Thermal resistance housing-ambient	5.3 K / W
18	Thermal resistance winding-housing	0.785 K / W
19	Thermal time constant winding	0.738 s
20	Thermal time constant motor	848 s
21	Ambient temperature	-20 ... +100°C
22	Max. permissible winding temperature	+155°C
Mechanical data (preloaded ball bearings)		
23	Max. permissible speed	25000 rpm
24	Axial play at axial load	< 8.0 N: 0 mm > 8.0 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)	73 N 1300 N
28	Max. radial loading, 5 mm from flange	25 N

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**

Other specifications

29	Number of pole pairs	2
30	Number of phases	3
31	Weight of motor	300 g

Values listed in the table are nominal.

Connection Motor (Cable AWG 18)
black Motor winding 2
white Motor winding 3
red Motor winding 1

Connection sensors (Cable AWG 26)
black/grey Hall sensor 2
blue GND
green V_{Hall} 4.5 ... 24 VDC
red/grey Hall sensor 1
white/grey Hall sensor 3

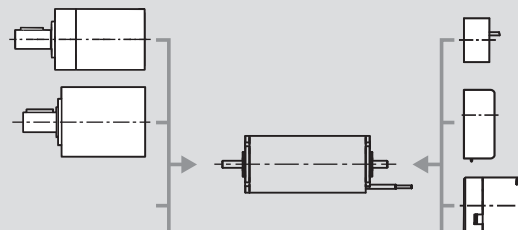
maxon Modular System

Planetary Gearhead

Ø32 mm
8 Nm
Page 235

Planetary Gearhead

Ø42 mm
3 - 15 Nm
Page 239



Recommended Electronics:
DECS 50/5 Page 289
DEC 70/10 297
DES 70/10 298
EPOS2 70/10 305
EPOS2 50/5 305
Notes 20

Overview on page 16 - 21

Encoder MR
128 - 1000 Imp.,
3 channels
Page 262

Encoder HEDL 5540
500 Imp.,
3 channels
Page 270

Brake AB 20
24 VDC
0.1 Nm
Page 316