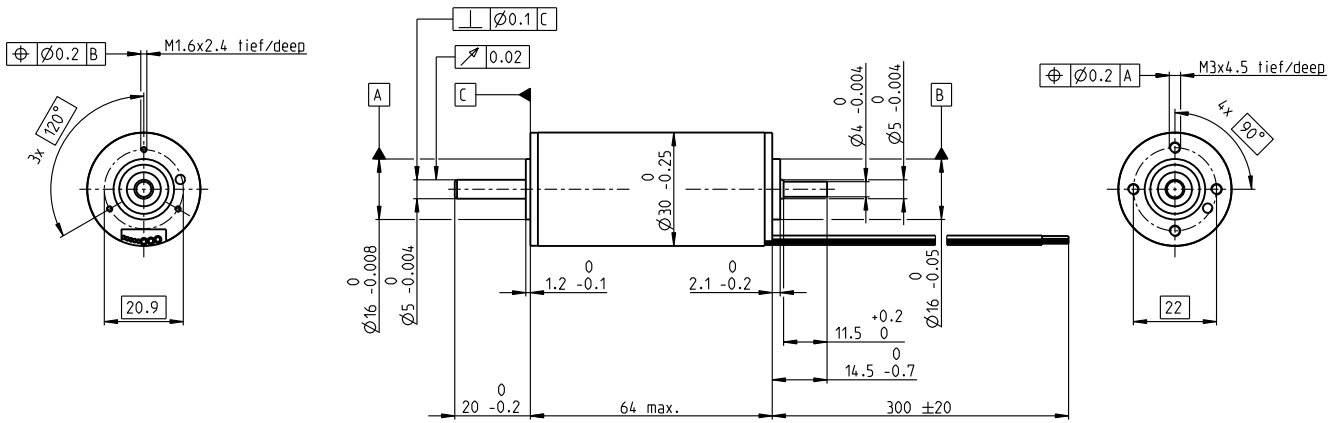


EC-4pole 30 Ø30 mm, brushless, 200 Watt

High Power



M 1:2

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

Part Numbers

305013	305014	305015
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Motor Data

Values at nominal voltage					
1	Nominal voltage	V	24	36	48
2	No load speed	rpm	16700	16700	16500
3	No load current	mA	723	482	356
4	Nominal speed	rpm	16100	16100	16000
5	Nominal torque (max. continuous torque)	mNm	95.6	95.2	92.9
6	Nominal current (max. continuous current)	A	7.61	5.06	3.68
7	Stall torque	mNm	3240	3520	3430
8	Stall current	A	236	171	124
9	Max. efficiency	%	90	90	90
Characteristics					
10	Terminal resistance phase to phase	Ω	0.102	0.21	0.386
11	Terminal inductance phase to phase	mH	0.016	0.037	0.065
12	Torque constant	mNm/A	13.7	20.6	27.6
13	Speed constant	rpm/V	697	465	346
14	Speed/torque gradient	rpm/mNm	5.17	4.75	4.83
15	Mechanical time constant	ms	1.80	1.66	1.69
16	Rotor inertia	gcm ²	33.3	33.3	33.3

Specifications

Thermal data		
17	Thermal resistance housing-ambient	7.4 K/W
18	Thermal resistance winding-housing	0.21 K/W
19	Thermal time constant winding	2.11 s
20	Thermal time constant motor	1180 s
21	Ambient temperature	-20...+100°C
22	Max. winding temperature	+155°C

Mechanical data (preloaded ball bearings)		
23	Max. speed	25000 rpm
24	Axial play at axial load < 4.0 N	0 mm
	> 4.0 N	0.14 mm
25	Radial play preloaded	0.14 mm
26	Max. axial load (dynamic)	5.5 N
27	Max. force for press fits (static) (static, shaft supported)	73 N
28	Max. radial load, 5 mm from flange	1300 N
		25 N

Other specifications

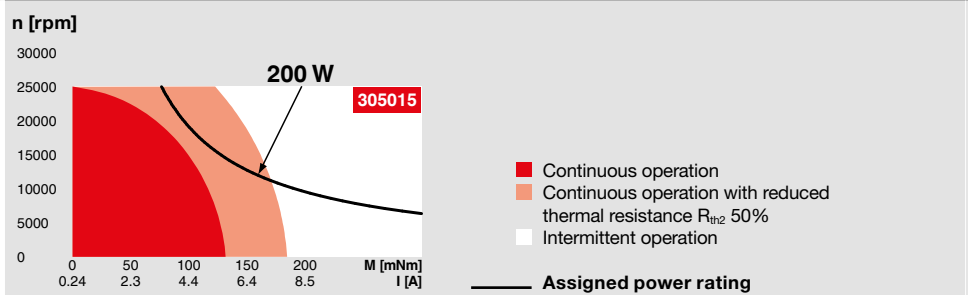
29	Number of pole pairs	2
30	Number of phases	3
31	Weight of motor	300 g

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} 3...24 VDC
 - red/grey Hall sensor 1
 - white/grey Hall sensor 3
- Wiring diagram for Hall sensors see p. 45

Operating Range

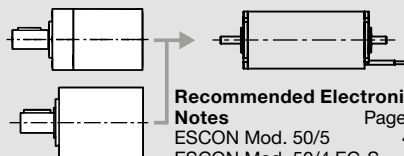
Comments



maxon Modular System

Details on catalog page 34

- 2 Planetary Gearhead
- 3 Ø32 mm
- 4 - 8 Nm
- Page 356
- Planetary Gearhead
- Ø42 mm
- 3 - 15 Nm
- Page 362



- Recommended Electronics:**
- | Notes | Page 34 |
|-----------------------|---------|
| ESCON Mod. 50/5 | 455 |
| ESCON Mod. 50/4 EC-S | 455 |
| ESCON Mod. 50/8 (HE) | 456 |
| ESCON 50/5 | 457 |
| ESCON 70/10 | 457 |
| DEC Module 50/5 | 459 |
| EPOS4 50/5 | 463 |
| EPOS4 Mod./Comp. 50/5 | 463 |
| EPOS4 Module 50/8 | 465 |
| EPOS4 Comp. 50/8 CAN | 465 |
| EPOS4 70/15 | 467 |
| MAXPOS 50/5 | 473 |

- Encoder 16 EASY/XT**
- 128 - 1024 CPT, 3 channels
- Page 418/420
- Encoder 16 EASY Absolute/XT**
- 4096 steps, Single Turn
- Page 422/424
- Encoder 16 RIO**
- 1024 - 32768 CPT, 3 channels
- Page 435
- Encoder AEDL 5810**
- 1024 - 5000 CPT, 3 channels
- Page 438
- Encoder HEDL 5540**
- 500 CPT, 3 channels
- Page 446
- Brake AB 20**
- 24 VDC, 0.1 Nm
- Page 488