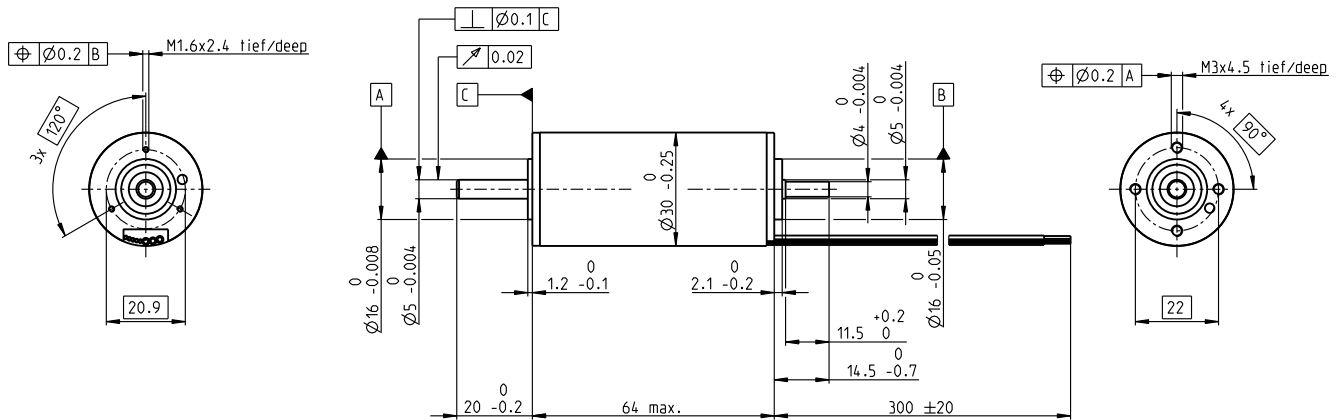


EC-4pole 30 Ø30 mm, brushless, 200 watt

High Power



EC-4pole

M 1:2

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

Part numbers

305013 305014 305015

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	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	25 000 rpm
24	Axial play at axial load < 4.0 N	0 mm
	> 4.0 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
28	Max. radial load, 5 mm from flange	1300 N

Other specifications

- 29 Number of pole pairs
- 30 Number of phases
- 31 Weight of motor

Values listed in the table are nominal.

Connection motor (Cable AWG 18)

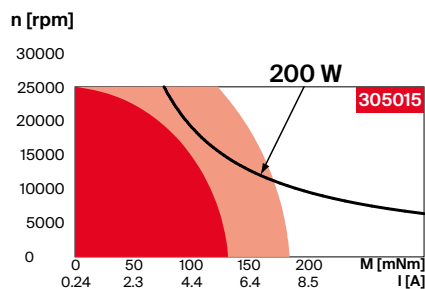
- black Motor winding 2
- white Motor winding 3
- red Motor winding 1

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. 67

Operating range

Comments



- Continuous operation
- Continuous operation with reduced thermal resistance R_{th2} 50%
- Intermittent operation

Assigned power rating

Modular system

Details on catalog page 52

Gear

- 2 430_GP 32 C
- 3 433_GP 32 HP
- 300 g 436-438_GP 42 A
- 439-441_GP 42 C
- 474-482_GP 32 S

Sensor

- 509_ENX 16 EASY
- 510_ENX 16 EASY XT
- 511_ENX 16 EASY Absolute
- 512_ENX 16 EASY Absolute XT
- 518_ENX 22 EMT
- 519_ENX 16 RIO

Accessories

- 585_Brake AB 20

Motor Control

- 547_DEC Module 50/5
- 551_ESCON Module 50/5
- 551_ESCON Module 50/4 EC-S
- 552_ESCON Module 50/8 HE
- 553_ESCON 50/5
- 553_ESCON 70/10
- 557_ESCON2 Micro 60/5
- 558_ESCON2 Module 60/12
- 559_ESCON2 Compact 60/12
- 564_EPOS4 Module 50/5
- 565_EPOS4 Module 50/8
- 567_EPOS4 Compact 50/5
- 567_EPOS4 Compact 50/8 CAN
- 569_EPOS4 50/5
- 569_EPOS4 70/15
- 570_EPOS4 Disk 60/8
- 571_EPOS4 Disk 60/12