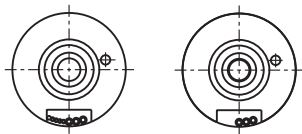


EC-4pole 30 Ø30 mm, brushless, 150 Watt

sterilizable

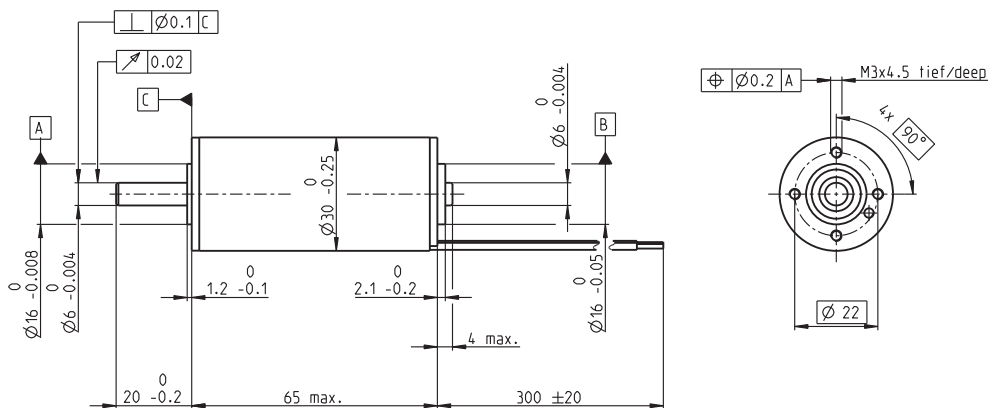
A with Hall Sensors

B sensorless



Lage des Kabelabgangs zum Befestigungsbohrbild ±10°

Alignment of cables relative to mounting holes ±10°



M 1:2

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

Part Numbers	
A with Hall sensors	468311 468313
B sensorless	468312 468314

Motor Data (provisional)			
Values at nominal voltage			
1 Nominal voltage	V	24	32
2 No load speed	rpm	17100	13100
3 No load current	mA	944	429
4 Nominal speed	rpm	16600	12300
5 Nominal torque (max. continuous torque)	mNm	86.8	108
6 Nominal current (max. continuous current)	A	7.38	5
7 Stall torque	mNm	3140	2320
8 Stall current	A	236	99.7
9 Max. efficiency	%	88	87.6
Characteristics			
10 Terminal resistance phase to phase	Ω	0.102	0.321
11 Terminal inductance phase to phase	mH	0.0159	0.0487
12 Torque constant	mNm/A	13.3	23.3
13 Speed constant	rpm/V	718	410
14 Speed/torque gradient	rpm/mNm	5.49	5.66
15 Mechanical time constant	ms	2.02	2.09
16 Rotor inertia	gcm ²	35.2	35.2

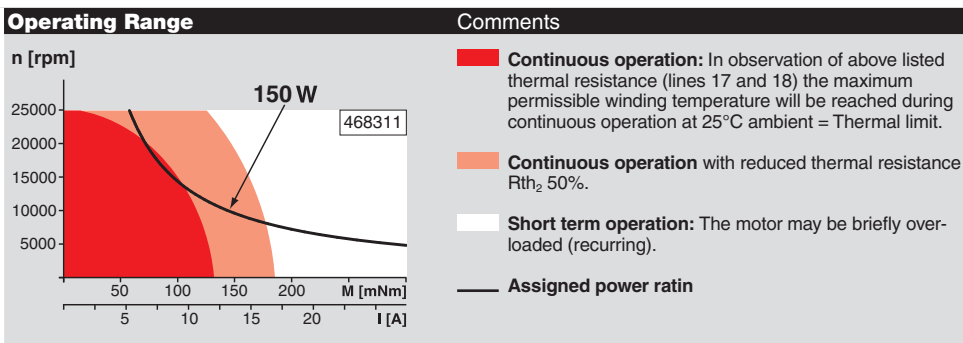
Specifications	
Thermal data	
17 Thermal resistance housing-ambient	7.4 K/W
18 Thermal resistance winding-housing	0.209 K/W
19 Thermal time constant winding	1.24 s
20 Thermal time constant motor	1150 s
21 Ambient temperature	-40...+135°C
22 Max. permissible winding temperature	155°C
Mechanical data (preloaded ball bearings)	
23 Max. permissible speed	25000 rpm
24 Axial play at axial load < 6 N	0 mm
> 6 N	max. 0.15 mm
25 Radial play	preloaded
26 Max. axial load (dynamic)	5.5 N
27 Max. force for press fits (static) (static, shaft supported)	100 N
28 Max. radial loading, 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	274 g

Values listed in the table are nominal.

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

Connection sensors (Cable AWG 26)
 green VHall 3...24 VDC
 blue GND
 red/grey Hall sensor 1
 black/grey Hall sensor 2
 white/grey Hall sensor 3
 Wiring diagram for Hall sensors see p. 33

Option
 Hollow shaft with bore diameter up to 4.1 mm



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.
- Continuous operation with reduced thermal resistance** Rth₂ 50%.
- Short term operation:** The motor may be briefly overloaded (recurring).
- Assigned power rating**

Application	Sterilization information
<div style="border: 1px solid black; padding: 2px; display: inline-block;"> 135°C </div> Sterilizable Devices Orthopedic Drills Orthopedic Saws Surgical Reamers	Tested for 1000 sterilization cycles in an autoclave. No need to dismantle. Sterilization with steam Temperature +134°C ± 4°C Compression pressure up to 2.3 bar Rel. humidity 100 % Cycle length 18 minutes

maxon Modular System	Overview on page 20–25
	Recommended Electronics: Notes Page 24 ESCON Mod. 50/5 343 ESCON Mod. 50/4 EC-S 343 ESCON 50/5 344 ESCON 70/10 344 DEC Module 50/5 346