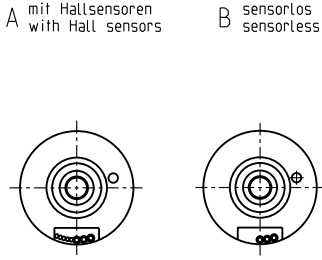


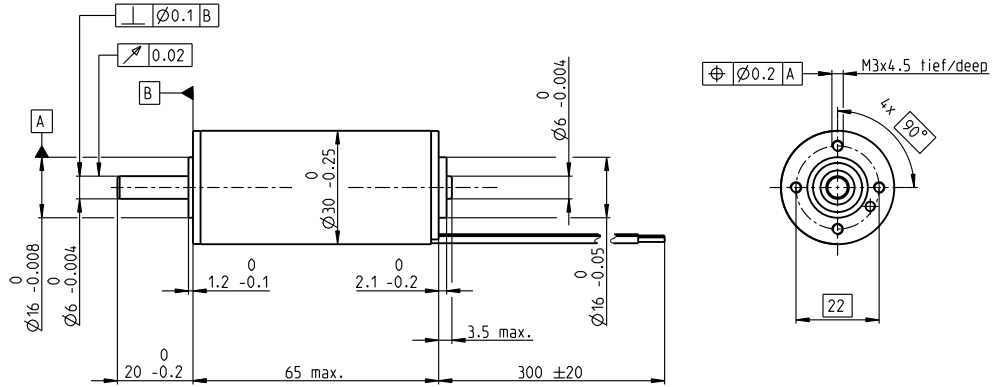
EC-4pole 30 Ø30 mm, brushless, 150 watt

Sterilizable

EC-4pole



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			
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	12400
5 Nominal torque (max. continuous torque)	mNm	84.6	106
6 Nominal current (max. continuous current)	A	7.23	4.9
7 Stall torque	mNm	3140	2320
8 Stall current	A	236	99.7
9 Max. efficiency	%	88	88
Characteristics			
10 Terminal resistance phase to phase	Ω	0.102	0.321
11 Terminal inductance phase to phase	mH	0.016	0.049
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	Operating Range	Comments
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	2.11 s	
20 Thermal time constant motor	1180 s	
21 Ambient temperature	-40...+150°C	
22 Max. permissible winding temperature	155°C	
Mechanical data (preloaded ball bearings)		
23 Max. permissible speed	25000 rpm	<ul style="list-style-type: none"> ■ Continuous operation ■ Continuous operation with reduced thermal resistance R_{in2} 50% Intermittent operation — Assigned power rating
24 Axial play at axial load < 4.0 N	0 mm	
24 Axial play at axial load > 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)	73 N	
27 Max. force for press fits (static) (static, shaft supported)	1300 N	
28 Max. radial loading, 5 mm from flange	25 N	

Application	Sterilization information
<div style="border: 1px solid black; padding: 2px; display: inline-block;"> 135°C </div> Sterilizable Devices	Sensorless: typically 2000 autoclave cycles Hall sensor: typically 1000 autoclave cycles
Orthopedic Drills	Sterilization with steam
Orthopedic Saws	Temperature +134°C ± 4°C
Surgical Reamers	Compression pressure up to 2.3 bar
	Rel. humidity 100%
	Cycle length 18 minutes

Connection motor	Connection sensors	Option	maxon Modular System	Recommended Electronics:
red Motor winding 1	green VHall 3...24 VDC	Hollow shaft with bore diameter up to 4.1 mm		Notes Page 42
black Motor winding 2	blue GND			ESCON Mod. 50/5 501
white Motor winding 3	red/grey Hall sensor 1			ESCON Mod. 50/4 EC-S 501
	black/grey Hall sensor 2			ESCON Mod. 50/8 (HE) 502
	white/grey Hall sensor 3			ESCON 50/5 503
	Wiring diagram for Hall sensors see p. 57			ESCON 70/10 503
				DEC Module 50/5 505