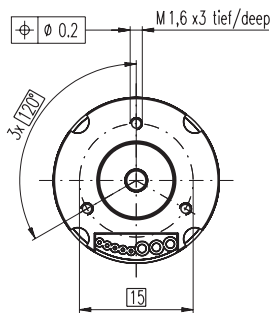


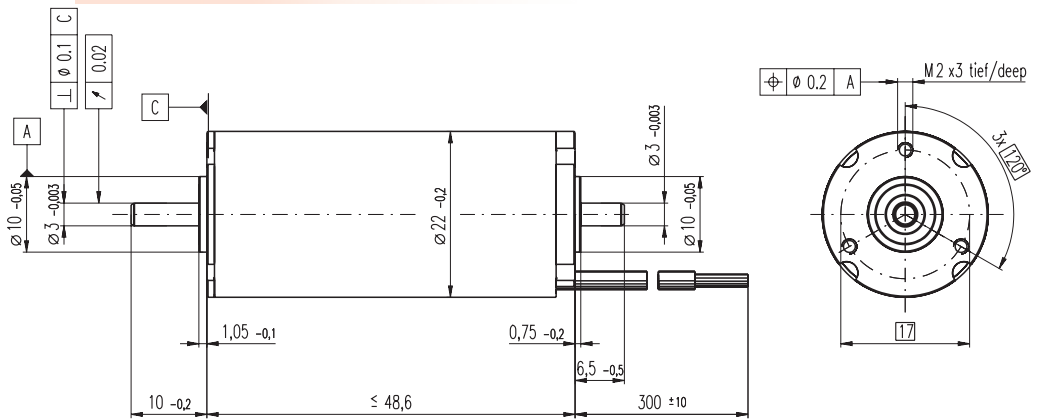
EC-powermax 22 Ø22 mm, brushless, 90 Watt

HighPower



Lage des Kabelabgangs zum Befestigungsbohrbild ±10°

Alignment of cables relative to mounting holes ±10°



M 1:1

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

Order Number

323217 323218 **323219** 323220 327739

Motor Data (provisional)

Values at nominal voltage		323217	323218	323219	323220	327739	
1	Nominal voltage	V	18.0	24.0	36.0	48.0	48.0
2	No load speed	rpm	16200	16200	16200	16200	6900
3	No load current	mA	275	206	137	103	21.5
4	Nominal speed	rpm	14700	14700	14700	14700	5420
5	Nominal torque (max. continuous torque)	mNm	45.0	47.0	46.0	45.0	47.4
6	Nominal current (max. continuous current)	A	4.43	3.46	2.26	1.66	0.722
7	Stall torque	mNm	607	661	633	607	242
8	Starting current	A	57.7	47.1	30.1	21.6	3.67
9	Max. efficiency	%	87	88	87	87	86
Characteristics							
10	Terminal resistance phase to phase	Ω	0.312	0.510	1.20	2.22	13.1
11	Terminal inductance phase to phase	mH	0.0597	0.106	0.239	0.425	2.34
12	Torque constant	mNm / A	10.5	14.0	21.1	28.1	66.0
13	Speed constant	rpm / V	907	680	453	340	145
14	Speed / torque gradient	rpm / mNm	26.9	24.7	25.8	26.9	28.7
15	Mechanical time constant	ms	1.56	1.43	1.50	1.56	1.66
16	Rotor inertia	gcm ²	5.54	5.54	5.54	5.54	5.54

Specifications

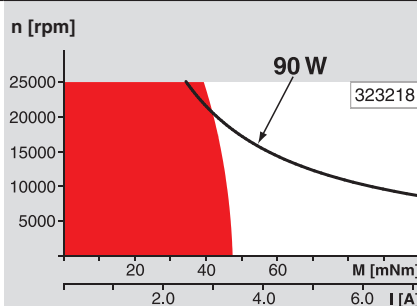
Thermal data		
17	Thermal resistance housing-ambient	9.08 K / W
18	Thermal resistance winding-housing	0.904 K / W
19	Thermal time constant winding	3.98 s
20	Thermal time constant motor	358 s
21	Ambient temperature	-20 ... +100°C
22	Max. permissible winding temperature	+155°C
Mechanical data (preloaded ball bearings)		
23	Max permissible speed	25000 rpm
24	Axial play at axial load < 5.0 N	0 mm
	> 5.0 N	0.14 mm
25	Radial play	
26	Max. axial load (dynamic)	4.5 N
27	Max. force for press fits (static) (static, shaft supported)	60 N
		1000 N
28	Max. radial loading, 5 mm from flange	16 N
Other specifications		
29	Number of pole pairs	2
30	Number of phases	3
31	Weight of motor	110 g

Values listed in the table are nominal.

Connection Motor (Cable AWG 20)
 red Motor winding 1
 white Motor winding 3
 black Motor winding 2

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

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).

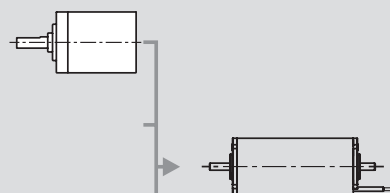
— Assigned power rating

maxon Modular System

Overview on page 16 - 21

Planetary Gearhead

Ø32 mm
 1.0 - 6.0 Nm
 Page 241



Recommended Electronics:

DECS 50/5 Page 284
 DEC 50/5 285
 DECV 50/5 286
 DEC 70/10 286
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