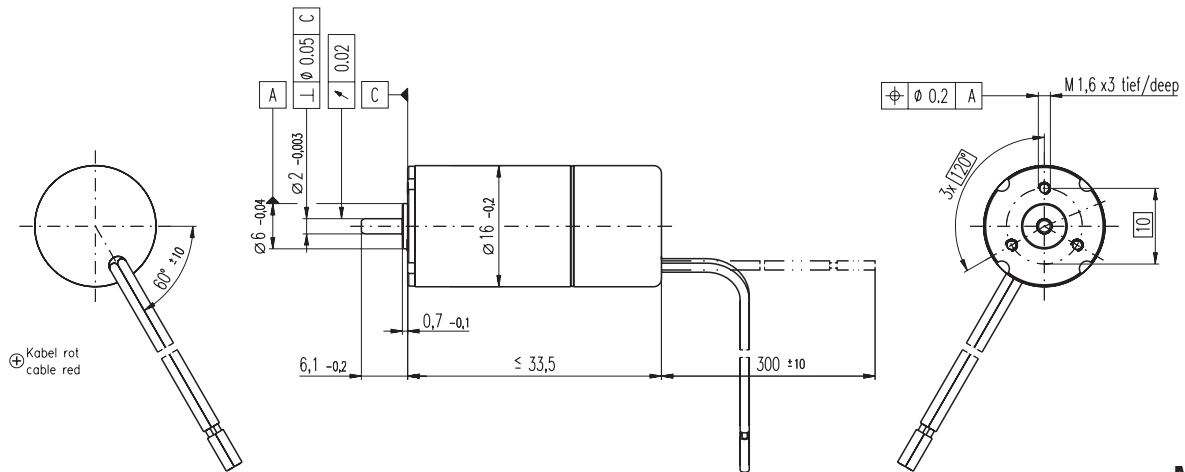


EC-max 16 2-wire $\varnothing 16$ mm, brushless, 5 Watt



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

Order Number

320816 320817 320818 320819

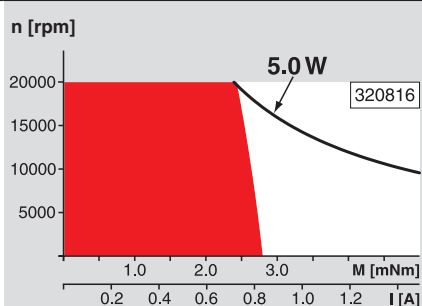
Motor Data

		320816	320817	320818	320819	
Values at nominal voltage						
1	Nominal voltage	V	5.0	6.0	9.0	12.0
2	No load speed	rpm	13600	12900	12100	13000
3	No load current	mA	126.0	97.1	58.9	48.8
4	Nominal speed	rpm	7200	6530	6040	7010
5	Nominal torque (max. continuous torque)	mNm	2.41	2.47	2.66	2.64
6	Nominal current (max. continuous current)	A	0.838	0.675	0.448	0.359
7	Stall torque	mNm	n.i.	n.i.	n.i.	n.i.
8	Starting current	A	1.66	1.28	0.842	0.729
9	Max. efficiency	%	54	54	55	56
Characteristics						
10	Terminal resistance phase to phase	Ω	n.i.	n.i.	n.i.	n.i.
11	Terminal inductance phase to phase	mH	n.i.	n.i.	n.i.	n.i.
12	Torque constant	mNm / A	3.25	4.12	6.60	8.23
13	Speed constant	rpm / V	2940	2320	1450	1160
14	Speed / torque gradient	rpm / mNm	2730	2650	2340	2320
15	Mechanical time constant	ms	12.2	11.9	10.5	10.4
16	Rotor inertia	gcm ²	0.428	0.428	0.428	0.428

Specifications

Thermal data		
17	Thermal resistance housing-ambient	23.5 K / W
18	Thermal resistance winding-housing	2.57 K / W
19	Thermal time constant winding	0.92 s
20	Thermal time constant motor	390 s
21	Ambient temperature	-40 ... +85°C
22	Max. temperature of electronics (max. loading capacity of the motor is defined by the electronics)	+100°C
Mechanical data (preloaded ball bearings)		
23	Max permissible speed	20000 rpm
24	Axial play at axial load	< 2.0 N: 0 mm > 2.0 N: 0.14 mm
25	Radial play	preloaded
26	Max. axial load (dynamic)	1.5 N
27	Max. force for press fits (static)	40 N
28	Max. radial loading, 5 mm from flange	6 N

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**

Other specifications

29	Number of pole pairs	1
30	Number of phases	3
31	Weight of motor	26 g
	Direction of rotation	clockwise (CW)

Values listed in the table are nominal.

Connection (Cable AWG 26/7 UL Style 1569)

red	+V _{CC}
black	GND

Electronic data

Operating voltage range	+5 ... +15 VDC
Protection against wrong polarity up to max.	18 VDC
Shaft blocking protection at speed	< 76 rpm
Temperature monitoring	> 104°C
Current limitation	1.6 A \pm 15%
Low voltage monitoring	< 4 VDC

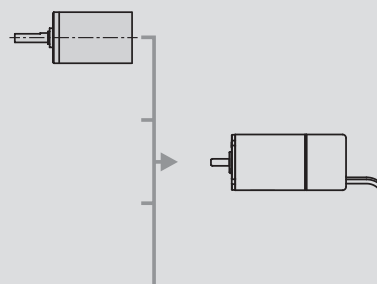
Δ **Attention:** Operating voltage V_{CC} > 18 VDC will destroy the electronics

Option: Sense of rotation: counter-clockwise (CCW)

maxon Modular System

Planetary Gearhead

$\varnothing 16$ mm
0.1 - 0.3 Nm
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