

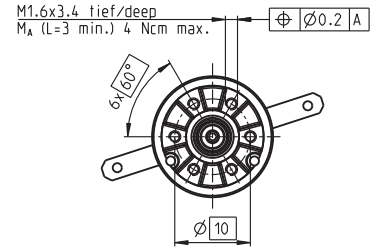
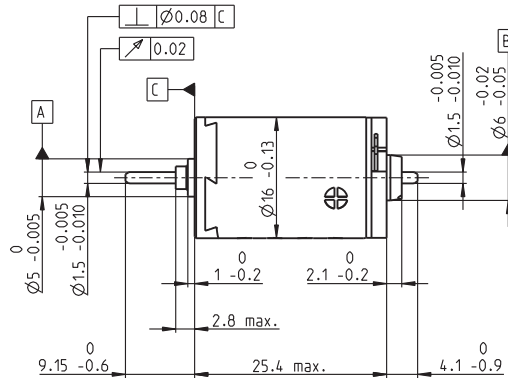
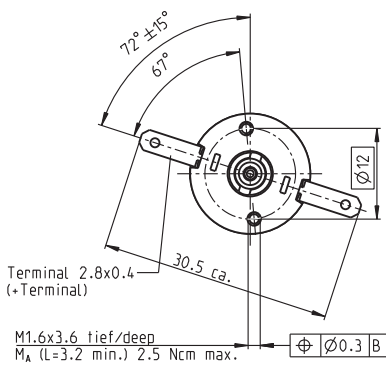
DC-max 16 S Graphite Brushes

DC motor Ø16 mm

3/4.7 W 4.8 mNm 11000 rpm



maxon X drives



M 1:1

Motor Data

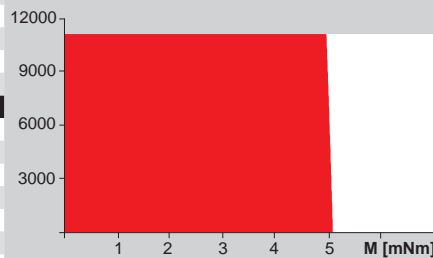
1_	Nominal voltage	V	6	12	24
2_	No load speed	rpm	9870	9860	9920
3_	No load current	mA	67.3	33.6	16.8
4_	Nominal speed	rpm	6770	6200	6580
5_	Nominal torque (max. continuous torque)	mNm	3.71	4.31	4.76
6_	Nominal current (max. continuous current)	A	0.720	0.413	0.227
7_	Stall torque	mNm	12.1	11.9	14.4
8_	Stall current	A	2.15	1.05	0.64
9_	Max. efficiency	%	68	68	71
10_	Terminal resistance	Ω	2.79	11.4	37.5
11_	Terminal inductance	mH	0.086	0.343	1.37
12_	Torque constant	mNm/A	5.62	11.2	22.5
13_	Speed constant	rpm/V	1700	849	424
14_	Speed/torque gradient	rpm/mNm	843	858	707
15_	Mechanical time constant	ms	8.85	8.92	8.57
16_	Rotor inertia	gcm ²	1.00	0.993	1.16

Thermal data

17_	Thermal resistance housing-ambient	K/W	29.8
18_	Thermal resistance winding-housing	K/W	5.5
19_	Thermal time constant winding	s	5.35
20_	Thermal time constant motor	s	288
21_	Ambient temperature	°C	-30...+85
22_	Max. winding temperature	°C	125

Operating Range

n [rpm] Winding 24 V



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

Mechanical data ball bearings

23_	Max. speed	rpm	11000
24_	Axial play	mm	0.15...0.05
	Preload	N	0
25_	Radial play	mm	0.025
26_	Max. axial load (dynamic)	N	2.2
27_	Max. force for press fits (static) (static, shaft supported)	N	30
28_	Max. radial load [mm from flange]	N	200
		N	7.8 [5]

Mechanical data sleeve bearings

23_	Max. speed	rpm	11000
24_	Axial play	mm	0.15...0.05
	Preload	N	0
25_	Radial play	mm	0.012
26_	Max. axial load (dynamic)	N	0.8
27_	Max. force for press fits (static) (static, shaft supported)	N	35
28_	Max. radial load [mm from flange]	N	200
		N	1.4 [5]

Other specifications

29_	Number of pole pairs		1
30_	Number of commutator segments		7
31_	Weight of motor	g	23.1

maxon Modular System

maxon gear	Stages	maxon sensor	maxon motor control
122_GPX 16 A/C	1-2	146_ENX 10 QUAD	416_ESCON Module 24/2
123_GPX 16 LN/LZ	1-2	146_ENX 10 EASY	416_ESCON 36/2 DC
126_GPX 19 A/C	3-4		424_EPOS2 24/2 (DC/EC)
127_GPX 19 LN/LZ	3-4		424_EPOS2 Module 36/2
			435_MAXPOS 50/5

Configuration

Bearing: Sleeve bearings/ball bearings
Commutation: Precious metal brushes with CLL/Graphite Brushes
Shaft front/back: Length
Electric connection: Terminals/cable

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