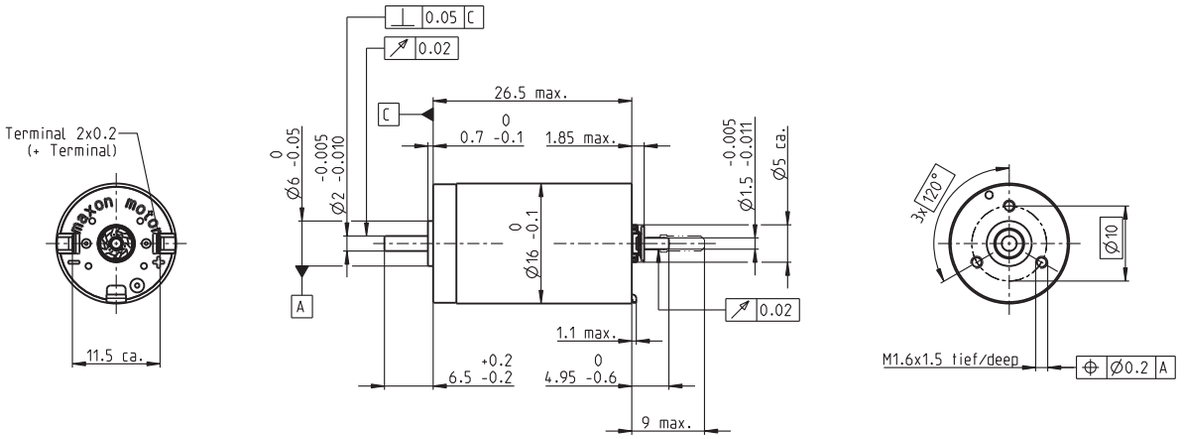
DCX 16 S Precious Metal Brushes
DC motor Ø16 mm

3/5 W 5.3 mNm 8680 rpm



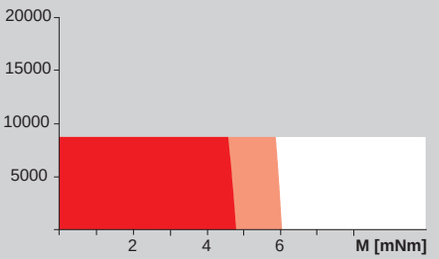
M 1:1

	Motor Data							
1_	Nominal voltage	V	3	4.5	6	9	12	24
2_	No load speed	rpm	6290	6290	6580	6290	6230	6220
3_	No load current	mA	56.0	37.3	29.6	18.7	13.8	6.91
4_	Nominal speed	rpm	3350	3300	3770	3280	3330	3210
5_	Nominal torque (max. continuous torque)	mNm	5.10	5.01	5.30	4.96	5.15	4.95
6_	Nominal current (max. continuous current)	A	1.20	0.782	0.648	0.388	0.298	0.143
7_	Stall torque	mNm	11.1	10.7	12.6	10.6	11.2	10.4
8_	Stall current	A	2.49	1.61	1.48	0.791	0.624	0.289
9_	Max. efficiency	%	73	72	74	72	73	72
10_	Terminal resistance	Ω	1.20	2.80	4.06	11.4	19.2	83.1
11_	Terminal inductance	mH	0.036	0.080	0.131	0.320	0.581	2.32
12_	Torque constant	mNm/A	4.45	6.67	8.53	13.3	18.0	36.0
13_	Speed constant	rpm/V	2150	1430	1120	715	531	265
14_	Speed/torque gradient	rpm/mNm	580	600	533	610	568	613
15_	Mechanical time constant	ms	6.09	6.09	6.05	6.13	6.11	6.17
16_	Rotor inertia	gcm²	1.00	0.97	1.08	0.959	1.03	0.960

	Thermal data		
17_	Thermal resistance housing-ambient	K/W	23.5
18_	Thermal resistance winding-housing	K/W	9.9
19_	Thermal time constant winding	s	9.63
20_	Thermal time constant motor	s	227
21_	Ambient temperature ball bearings	°C	-40…+85
	Ambient temperature sleeve bearings	°C	-30…+85
22_	Max. winding temperature	°C	100
	Mechanical data ball bearings		
23_	Max. speed	rpm	8680
24_	Axial play	mm	0…0.1
	Preload	N	0.8
25_	Radial play	mm	0.015
26_	Max. axial load (dynamic)	N	0.8
27_	Max. force for press fits (static)	N	18
	(static, shaft supported)	N	300
28_	Max. radial load [mm from flange]	N	10 [5]
	Mechanical data sleeve bearings		
23_	Max. speed	rpm	8680
24_	Axial play	mm	0…0.2
	Preload	N	0.8
25_	Radial play	mm	0.015
26_	Max. axial load (dynamic)	N	0.1
27_	Max. force for press fits (static)	N	18
	(static, shaft supported)	N	300
28_	Max. radial load [mm from flange]	N	10 [5]
	Other specifications		
29_	Number of pole pairs		1
30_	Number of commutator segments		7
31_	Weight of motor	g	26
32_	Typical noise level	dBA	40

Operating Range

n [rpm] Winding 12 V



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

maxon Modular System

maxon gear	Stages	maxon sensor	maxon motor control
122_GPX 16 A/C	1–2	146_ENX 10 EASY	416_ESCON Module 24/2
123_GPX 16 LN/LZ	1–2	146_ENX 10 QUAD	416_ESCON 36/2 DC
124_GPX 16 HP	2–3	147_ENX 16 EASY	424_EPOS2 24/2 (DC/EC)
126_GPX 19 A/C	3–4	148_ENX 16 EASY Abs.	424_EPOS2 Module 36/2
127_GPX 19 LN/LZ	3–4		435_MAXPOS 50/5
128_GPX 19 HP	4		

Configuration

Bearing: Ball bearings preloaded/sleeve bearings
Commutation: Precious metal brushes with CLL/graphite brushes
Flange front/back: Standard flange/configurable flange/no flange
Shaft front/back: Length/diameter/flat face
Electric connection: Terminals or cable/alignment of connection/cable length/connector type

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