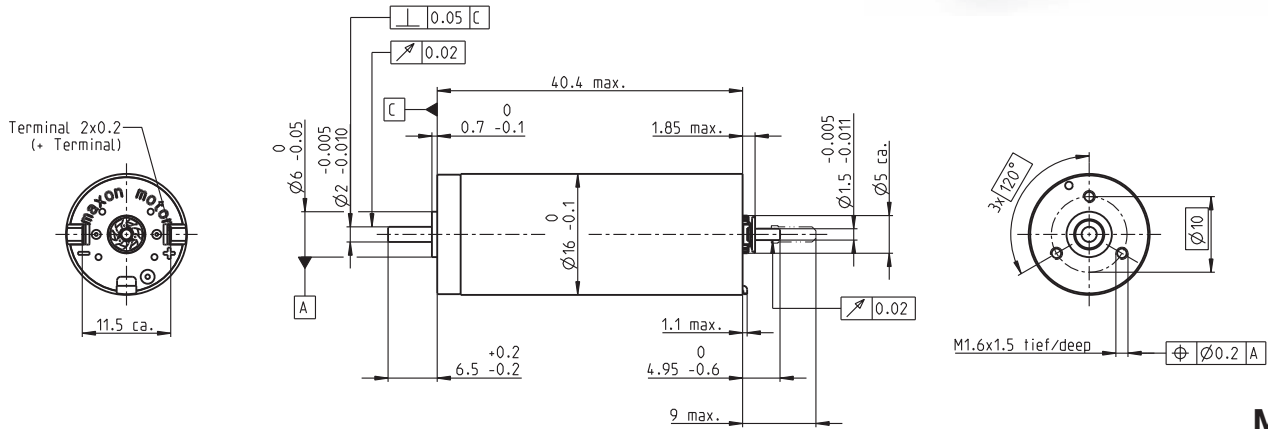


DCX 16 L Precious Metal Brushes

DC motor Ø16 mm

5/10 W 11.5 mNm 8680 rpm



M 1:1

Motor Data

1_	Nominal voltage	V	3	6	9	12	18	24
2_	No load speed	rpm	6390	6620	6400	6400	6400	6560
3_	No load current	mA	66.8	34.9	22.3	16.7	11.1	8.62
4_	Nominal speed	rpm	5450	4920	4630	4500	4520	4640
5_	Nominal torque (max. continuous torque)	mNm	5.05	10.0	11.5	10.8	10.9	10.6
6_	Nominal current (max. continuous current)	A	1.20	1.20	0.887	0.622	0.419	0.315
7_	Stall torque	mNm	34.4	39.3	41.8	36.6	37.3	36.6
8_	Stall current	A	7.73	4.57	3.14	2.06	1.40	1.06
9_	Max. efficiency	%	82	83	84	83	83	83
10_	Terminal resistance	Ω	0.388	1.31	2.87	5.82	12.9	22.7
11_	Terminal inductance	mH	0.026	0.096	0.231	0.411	0.925	1.56
12_	Torque constant	mNm/A	4.44	8.59	13.3	17.8	26.7	34.7
13_	Speed constant	rpm/V	2150	1110	716	537	358	276
14_	Speed/torque gradient	rpm/mNm	188	170	154	176	173	181
15_	Mechanical time constant	ms	4.29	4.20	4.18	4.19	4.22	4.23
16_	Rotor inertia	gcm ²	2.18	2.36	2.59	2.28	2.33	2.23

Thermal data

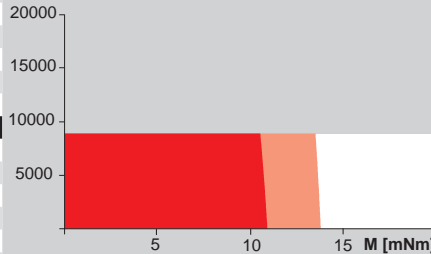
17_	Thermal resistance housing-ambient	K/W	17.9
18_	Thermal resistance winding-housing	K/W	7.21
19_	Thermal time constant winding	s	21.5
20_	Thermal time constant motor	s	294
21_	Ambient temperature ball bearings	$^{\circ}$ C	-40...+85
21_	Ambient temperature sleeve bearings	$^{\circ}$ C	-30...+85
22_	Max. winding temperature	$^{\circ}$ 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]

Operating Range

n [rpm] Winding 9 V



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

Mechanical data sleeve bearings

23_	Max. speed	rpm	8680
24_	Axial play	mm	0...0.1
	Preload	N	0
25_	Radial play	mm	0.015
26_	Max. axial load (dynamic)	N	0.1
27_	Max. force for press fits (static)	N	60
	(static, shaft supported)	N	300
28_	Max. radial load [mm from flange]	N	2 [5]

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		428_EPOS2 P 24/5
128_GPX 19 HP	4		435_MAXPOS 50/5

Other specifications

29_	Number of pole pairs		1
30_	Number of commutator segments		7
31_	Weight of motor	g	42
32_	Typical noise level	dBA	44

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