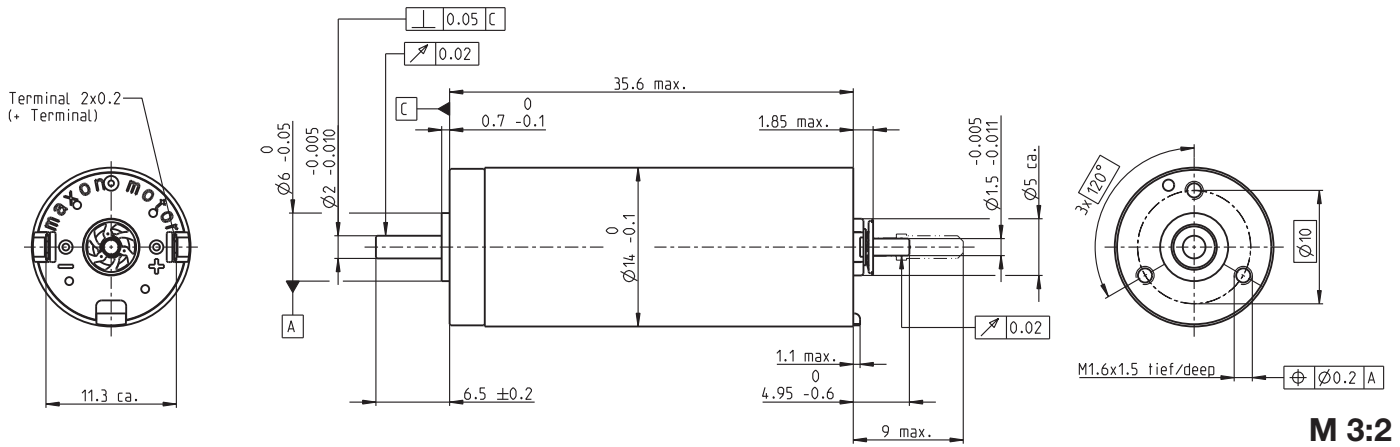


DCX 14 L Precious Metal Brushes

DC motor Ø14 mm



3/5 W 6.3 mNm 8680 rpm



M 3:2

Motor Data

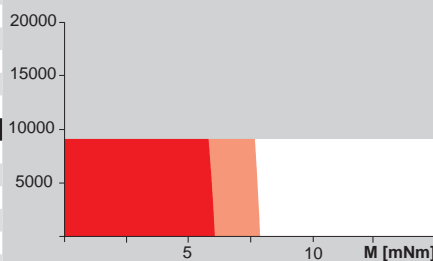
1_	Nominal voltage	V	3	4.5	6	9	12	18	24
2_	No load speed	rpm	7720	7730	7730	7740	7740	7720	7730
3_	No load current	mA	76.3	50.9	38.2	25.5	19.1	12.7	9.55
4_	Nominal speed	rpm	5770	5170	5150	5210	5220	5060	5160
5_	Nominal torque (max. continuous torque)	mNm	4.11	6.25	6.19	6.33	6.34	5.96	6.2
6_	Nominal current (max. continuous current)	A	1.2	1.19	0.884	0.602	0.452	0.284	0.221
7_	Stall torque	mNm	16.5	19.1	18.8	19.6	19.7	17.5	18.9
8_	Stall current	A	4.52	3.49	2.57	1.79	1.35	0.799	0.647
9_	Max. efficiency	%	75.6	77.3	77.2	77.7	77.7	76.5	77.3
10_	Terminal resistance	Ω	0.664	1.29	2.33	5.02	8.9	22.5	37.1
11_	Terminal inductance	mH	0.0252	0.0567	0.101	0.227	0.403	0.908	1.61
12_	Torque constant	mNm/A	3.65	5.47	7.3	10.9	14.6	21.9	29.2
13_	Speed constant	rpm/V	2620	1740	1310	872	654	436	327
14_	Speed/torque gradient	rpm/mNm	476	411	418	400	399	449	415
15_	Mechanical time constant	ms	4.14	4.06	4.05	4.04	4.05	4.1	4.09
16_	Rotor inertia	gcm ²	0.831	0.942	0.926	0.966	0.97	0.872	0.939

Thermal data

17_	Thermal resistance housing-ambient	K/W	22.2
18_	Thermal resistance winding-housing	K/W	8.63
19_	Thermal time constant winding	s	10.3
20_	Thermal time constant motor	s	226
21_	Ambient temperature ball bearings	°C	-40...+85
21_	Ambient temperature sleeve bearings	°C	-30...+85
22_	Max. winding temperature	°C	100

Operating Range

n [rpm] Winding 9 V



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

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...0.1
	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
119_GPX 14 A/C	1-2	146_ENX 10 EASY	416_ESCON Module 24/2
120_GPX 14 LN/LZ	1-2	146_ENX 10 QUAD	416_ESCON 36/2 DC
121_GPX 14 HP	2-3		424_EPOS2 24/2 (DC/EC)
122_GPX 16 A/C	3-4		424_EPOS2 Module 36/2
123_GPX 16 LN/LZ	3-4		435_MAXPOS 50/5
124_GPX 16 HP	4		

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	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