

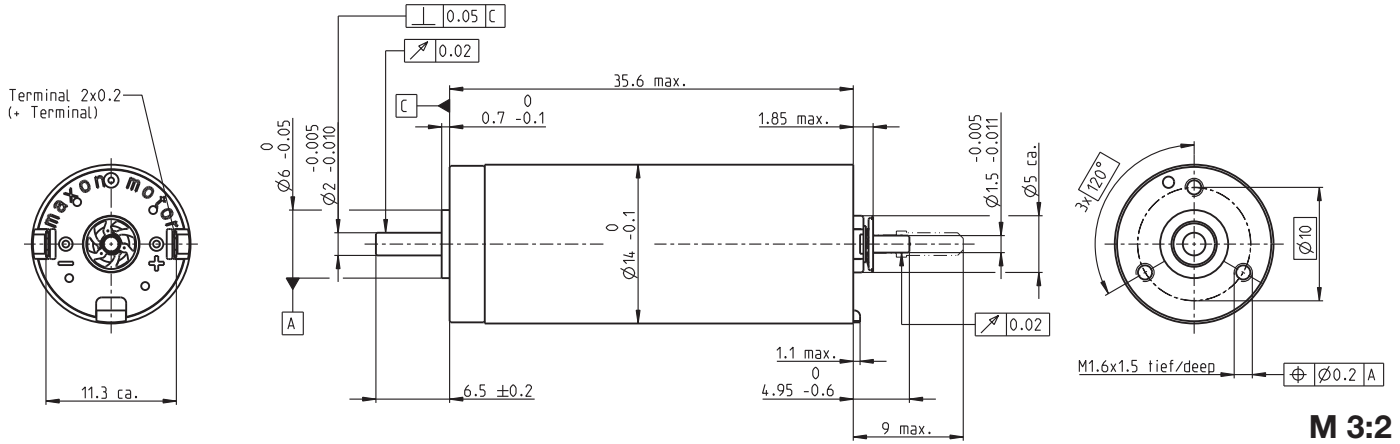
DCX 14 L Graphite Brushes

DC motor Ø14 mm

6/10 W 6.9 mNm 17000 rpm



maxon X drives



M 3:2

Motor Data								
1_	Nominal voltage	V	4.5	6	9	12	18	24
2_	No load speed	rpm	11600	10400	11700	10300	11600	10300
3_	No load current	mA	74.8	48	37.4	24	18.7	12
4_	Nominal speed	rpm	8470	7430	8760	7370	8760	7310
5_	Nominal torque (max. continuous torque)	mNm	6.34	6.92	6.85	6.87	6.91	6.62
6_	Nominal current (max. continuous current)	A	1.8	1.31	0.972	0.649	0.491	0.313
7_	Stall torque	mNm	23.5	24.8	27.8	24.7	28.5	22.9
8_	Stall current	A	6.45	4.53	3.8	2.26	1.95	1.05
9_	Max. efficiency	%	79.2	80.4	81.2	79.7	81	79.7
10_	Terminal resistance	Ω	0.698	1.33	2.37	5.31	9.21	22.9
11_	Terminal inductance	mH	0.0252	0.0567	0.101	0.227	0.403	0.908
12_	Torque constant	mNm/A	3.65	5.47	7.3	10.9	14.6	21.9
13_	Speed constant	rpm/V	2620	1740	1310	872	654	436
14_	Speed/torque gradient	rpm/mNm	500	422	424	423	413	456
15_	Mechanical time constant	ms	4.35	4.17	4.11	4.28	4.19	4.17
16_	Rotor inertia	gcm ²	0.831	0.942	0.926	0.966	0.97	0.872

Thermal data			Operating Range	
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...+100	
21_	Ambient temperature sleeve bearings	°C	-30...+100	
22_	Max. winding temperature	°C	125	

Mechanical data ball bearings			
23_	Max. speed	rpm	17000
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			maxon Modular System				
23_	Max. speed	rpm	15000	maxon gear	Stages	maxon sensor	maxon motor control
24_	Axial play	mm	0...0.2	119_GPX 14 A/C	1-2	146_ENX 10 EASY	416_ESCON Module 24/2
	Preload	N	0	120_GPX 14 LN/LZ	1-2	146_ENX 10 QUAD	416_ESCON 36/2 DC
25_	Radial play	mm	0.015	121_GPX 14 HP	2-3		424_EPOS2 24/2 (DC/EC)
26_	Max. axial load (dynamic)	N	0.1	122_GPX 16 A/C	3-4		424_EPOS2 Module 36/2
27_	Max. force for press fits (static)	N	60	123_GPX 16 LN/LZ	3-4		435_MAXPOS 50/5
	(static, shaft supported)	N	300	124_GPX 16 HP	4		
28_	Max. radial load [mm from flange]	N	2 [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

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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