

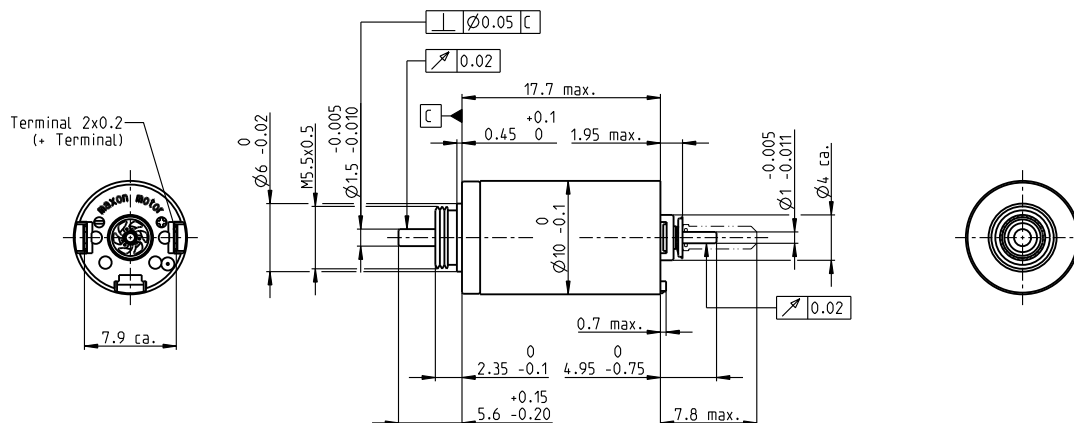
DCX 10 S Precious Metal Brushes

DC motor $\varnothing 10$ mm



Key Data: 1/1.4 W, 0.9 mNm, 14300 rpm

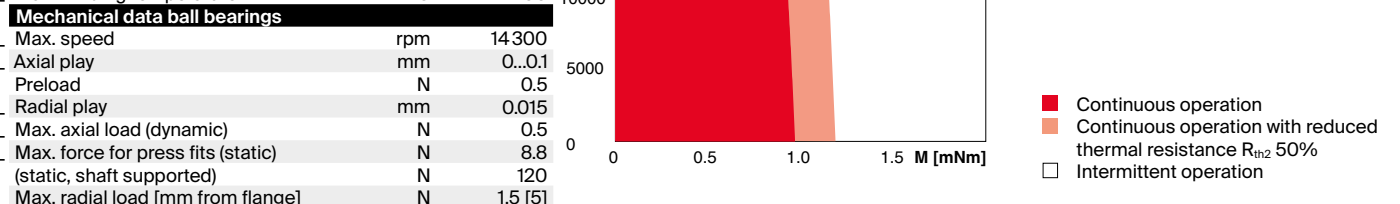
DCX



M 3:2

Motor Data								
1_	Nominal voltage	V	1.5	3	4.5	6	9	12
2_	No load speed	rpm	12600	13000	12600	11400	12600	12500
3_	No load current	mA	84.1	43.8	28	18.2	14	10.5
4_	Nominal speed	rpm	4530	4690	4270	3310	3930	3890
5_	Nominal torque (max. continuous torque)	mNm	0.918	0.948	0.944	0.993	0.909	0.905
6_	Nominal current (max. continuous current)	A	0.924	0.49	0.316	0.223	0.152	0.114
7_	Stall torque	mNm	1.49	1.54	1.48	1.46	1.38	1.37
8_	Stall current	A	1.39	0.742	0.463	0.307	0.215	0.16
9_	Max. efficiency	%	58	58	58	58	56	56
10_	Terminal resistance	Ω	1.08	4.04	9.72	19.5	41.8	74.9
11_	Terminal inductance	mH	0.014	0.051	0.122	0.268	0.488	0.868
12_	Torque constant	mNm/A	1.07	2.07	3.2	4.74	6.4	8.53
13_	Speed constant	rpm/V	8950	4600	2980	2010	1490	1120
14_	Speed/torque gradient	rpm/mNm	9030	8970	9060	8290	9750	9830
15_	Mechanical time constant	ms	7.24	7.19	7.21	7.03	7.27	7.26
16_	Rotor inertia	gcm ²	0.077	0.077	0.076	0.081	0.071	0.071

Thermal data			Operating Range	
17_	Thermal resistance housing-ambient	K/W	376	n [rpm] Winding 4.5 V
18_	Thermal resistance winding-housing	K/W	22.0	
19_	Thermal time constant winding	s	4.69	
20_	Thermal time constant motor	s	156	
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			maxon Modular System			Details on catalog page 32	
23_	Max. speed	rpm	14300	maxon gear	Stages [opt.]	maxon sensor	maxon motor control
24_	Axial play	mm	0...0.1	323_GPX 10 A	1-5	433_ENX 10 EASY	486_ESCON Module 24/2
	Preload	N	0.5			433_ENX 10 QUAD	486_ESCON 36/2 DC
25_	Radial play	mm	0.015			434_ENX 10 EASY XT	498_EPOS4 Mod./Comp. 24/1.5
26_	Max. axial load (dynamic)	N	0.5				
27_	Max. force for press fits (static)	N	8.8				
	(static, shaft supported)	N	120				
28_	Max. radial load [mm from flange]	N	1.5 [5]				

Mechanical data sleeve bearings			Other specifications				
23_	Max. speed	rpm	14300	29_	Number of pole pairs	1	
24_	Axial play	mm	0...0.15	30_	Number of commutator segments	7	
	Preload	N	0	31_	Weight of motor	g	6.3
25_	Radial play	mm	0.015	32_	Typical noise level	dBA	35
26_	Max. axial load (dynamic)	N	0.1				
27_	Max. force for press fits (static)	N	30				
	(static, shaft supported)	N	120				
28_	Max. radial load [mm from flange]	N	0.8 [5]				

Configuration
 Bearing: Sleeve bearings/ball bearings preloaded
 Commutation: Precious metal brushes with or without CLL
 Flange front/back: Standard flange/Flange with thread holes/no flange
 Shaft front/back: Length
 Electric connection: Terminals or cable/cable length/connector type