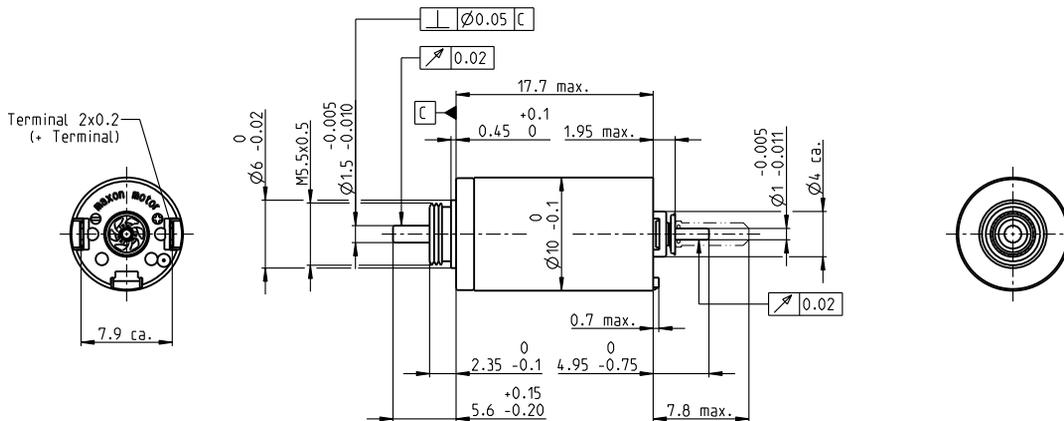


# DCX 10 S $\varnothing$ 10 mm, precious metal brushes, DC motor

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	$\Omega$	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 <sup>2</sup>	0.077	0.077	0.076	0.081	0.071	0.071

### Thermal data

17_	Thermal resistance housing-ambient	K/W	37.6	Operating Range				
18_	Thermal resistance winding-housing	K/W	22.0	n [rpm] Winding 4.5 V				
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

23_	Max. speed	rpm	14300					
24_	Axial play	mm	0...0.1					
	Preload	N	0.5					
25_	Radial play	mm	0.015					
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

23_	Max. speed	rpm	14300	maxon Modular System			Details on catalog page 34	
24_	Axial play	mm	0...0.15	maxon gear	Stages [opt.]	maxon sensor	maxon motor control	
	Preload	N	0	333_GPX 10 A	1-5	447_ENX 10 EASY	500_ESCON Module 24/2	
25_	Radial play	mm	0.015			447_ENX 10 QUAD	500_ESCON 36/2 DC	
26_	Max. axial load (dynamic)	N	0.1			448_ENX 10 EASY XT	512_EPOS4 Mod./Comp. 24/1.5	
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]					

### Other specifications

29_	Number of pole pairs		1
30_	Number of commutator segments		7
31_	Weight of motor	g	6.3
32_	Typical noise level	dBA	35

### 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