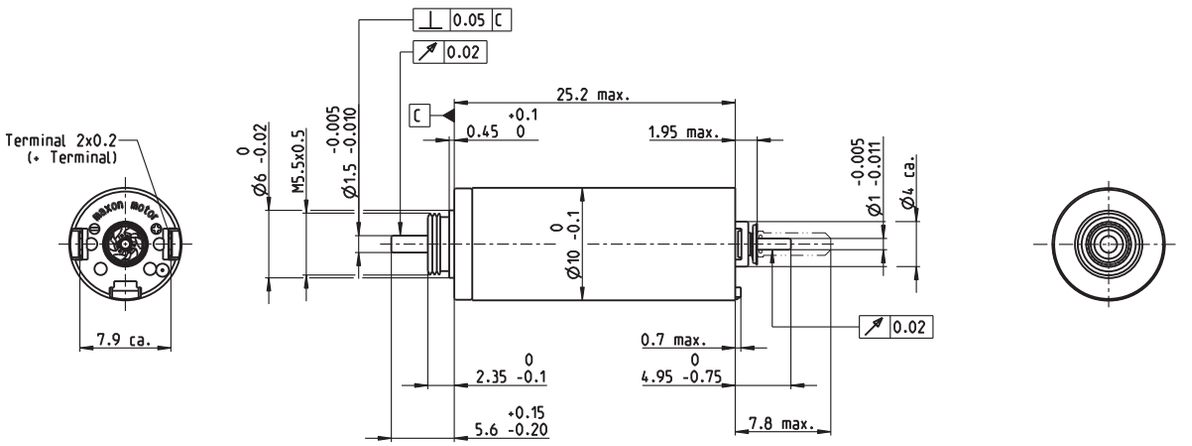
DCX 10 L Precious Metal Brushes
DC motor Ø10 mm

1.5/3 W 2.2 mNm 14300 rpm



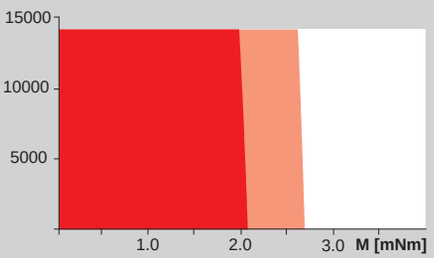
M 3:2

	Motor Data							
1_	Nominal voltage	V	1.5	3	4.5	6	9	12
2_	No load speed	rpm	11500	12100	11900	12100	11900	11200
3_	No load current	mA	83.5	45.1	29.3	22.5	14.6	10
4_	Nominal speed	rpm	9180	6910	7090	6620	6760	5960
5_	Nominal torque (max. continuous torque)	mNm	1.04	2.05	2.2	1.94	2.06	2.03
6_	Nominal current (max. continuous current)	A	0.924	0.919	0.646	0.435	0.303	0.211
7_	Stall torque	mNm	5.15	4.83	5.48	4.34	4.82	4.39
8_	Stall current	A	4.23	2.09	1.55	0.937	0.682	0.439
9_	Max. efficiency	%	74	73	75	72	74	73
10_	Terminal resistance	Ω	0.355	1.44	2.9	6.4	13.2	27.3
11_	Terminal inductance	mH	0.006	0.021	0.050	0.086	0.199	0.399
12_	Torque constant	mNm/A	1.22	2.32	3.54	4.63	7.07	10.0
13_	Speed constant	rpm/V	7830	4120	2700	2060	1350	955
14_	Speed/torque gradient	rpm/mNm	2280	2560	2220	2850	2520	2610
15_	Mechanical time constant	ms	3.64	3.53	3.5	3.54	3.53	3.56
16_	Rotor inertia	gcm²	0.153	0.132	0.151	0.119	0.134	0.130

	Thermal data		
17_	Thermal resistance housing-ambient	K/W	36.5
18_	Thermal resistance winding-housing	K/W	10.6
19_	Thermal time constant winding	s	3.94
20_	Thermal time constant motor	s	151
21_	Ambient temperature ball bearings	°C	-40…+85
	Ambient temperature sleeve bearings	°C	-30…+85
22_	Max. winding temperature	°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
24_	Axial play	mm	0…0.15
	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	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	11
32_	Typical noise level	dBA	37

Operating Range

n [rpm] Winding 4.5 V



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

maxon Modular System

maxon gear	Stages	maxon sensor	maxon motor control
115_GPX 10 A	1–5	146_ENX 10 EASY	416_ESCON Module 24/2
		146_ENX 10 QUAD	416_ESCON 36/2 DC
			424_EPOS2 24/2 (DC/EC)
			424_EPOS2 Module 36/2

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

xdrives.maxonmotor.com