

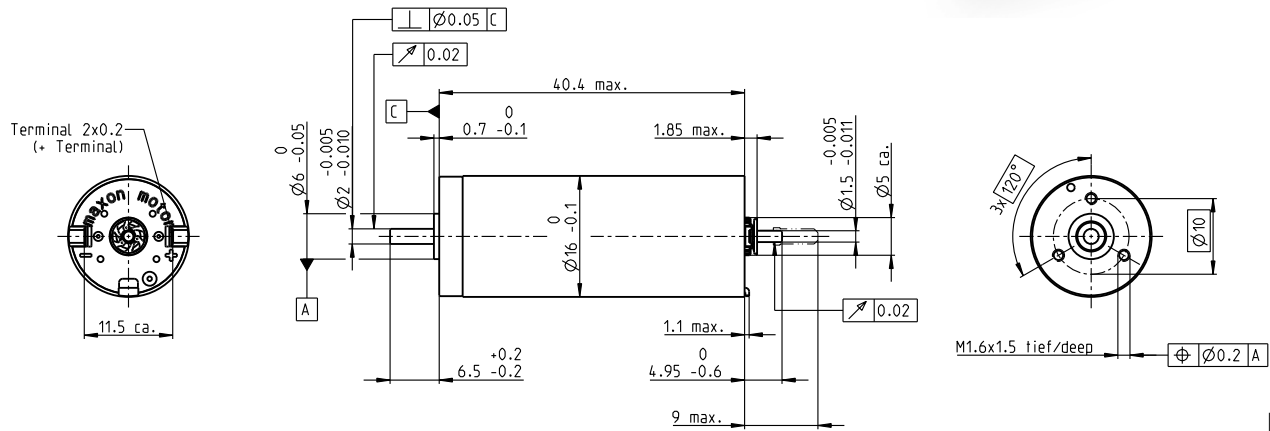
DCX 16 L Precious Metal Brushes

DC motor $\varnothing 16$ mm

Key Data: 5/10 W, 11.5 mNm, 8680 rpm



DCX



M 1:1

Motor Data

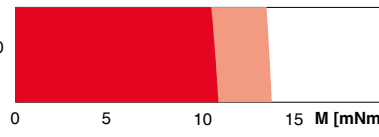
1_ Nominal voltage	V	3	6	9	12	18	24
2_ No load speed	rpm	6400	6620	6410	6400	6400	6560
3_ No load current	mA	62.5	32.6	20.8	15.6	10.4	8.05
4_ Nominal speed	rpm	5450	4920	4620	4490	4510	4630
5_ Nominal torque (max. continuous torque)	mNm	5.06	10.0	11.6	10.8	10.9	10.7
6_ Nominal current (max. continuous current)	A	1.20	1.20	0.89	0.625	0.42	0.316
7_ Stall torque	mNm	34.4	39.3	41.8	36.6	37.3	36.6
8_ Stall current	A	7.73	4.57	3.14	2.06	1.40	1.06
9_ Max. efficiency	%	83	84	84	83	84	83
10_ Terminal resistance	Ω	0.388	1.31	2.87	5.82	12.9	22.7
11_ Terminal inductance	mH	0.026	0.096	0.231	0.411	0.925	1.56
12_ Torque constant	mNm/A	4.44	8.59	13.3	17.8	26.7	34.7
13_ Speed constant	rpm/V	2150	1110	716	537	358	276
14_ Speed/torque gradient	rpm/mNm	188	170	154	176	173	181
15_ Mechanical time constant	ms	4.29	4.20	4.18	4.19	4.22	4.23
16_ Rotor inertia	gcm ²	2.18	2.36	2.59	2.28	2.33	2.23

Thermal data

17_ Thermal resistance housing-ambient	K/W	17.9	Operating Range				
18_ Thermal resistance winding-housing	K/W	7.21	n [rpm]	Winding 9 V			
19_ Thermal time constant winding	s	21.5					
20_ Thermal time constant motor	s	294	20000				
21_ Ambient temperature ball bearings	$^{\circ}$ C	-40...+85					
21_ Ambient temperature sleeve bearings	$^{\circ}$ C	-30...+85	15000				
22_ Max. winding temperature	$^{\circ}$ C	100					

Mechanical data ball bearings

23_ Max. speed	rpm	8680	10000
24_ Axial play	mm	0...0.1	
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]	



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

Mechanical data sleeve bearings

23_ Max. speed	rpm	8680	maxon Modular System		Details on catalog page 32	
24_ Axial play	mm	0...0.2	maxon gear	Stages [opt.]	maxon sensor	maxon motor control
Preload	N	0	331_GPX 16 A/C	1-2 [3-4]	433_ENX 10 EASY	486_ESCON Module 24/2
25_ Radial play	mm	0.015	332_GPX 16 LN/LZ	1-2 [3-4]	433_ENX 10 QUAD	486_ESCON 36/2 DC
26_ Max. axial load (dynamic)	N	0.1	333_GPX 16 HP	2-3 [4]	434_ENX 10 EASY XT	496_EPOS4 Mod./Comp. 24/1.5
27_ Max. force for press fits (static)	N	60	335_GPX 19 A/C	3-4	436_ENX 16 EASY	504_EPOS2 P 24/5
(static, shaft supported)	N	300	336_GPX 19 LN/LZ	3-4	437_ENX 16 EASY XT	
28_ Max. radial load [mm from flange]	N	2 [5]	337_GPX 19 HP	4	438_ENX 16 EASY Abs.	
					439_ENX 16 EASY Abs. XT	
					443_ENX 16 RIO	

Other specifications

29_ Number of pole pairs		1
30_ Number of commutator segments		7
31_ Weight of motor	g	42
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