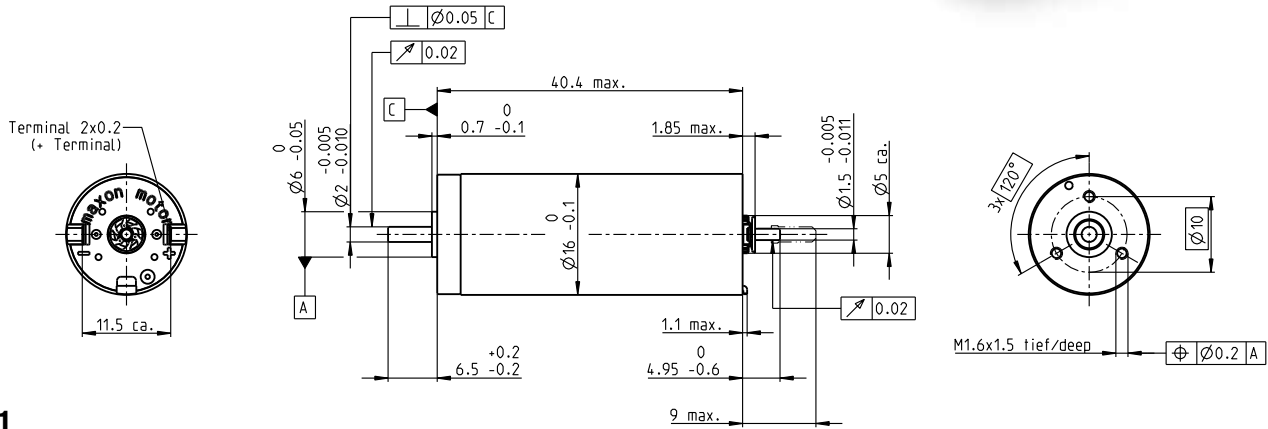


# DCX 16 L $\varnothing 16$ mm, graphite brushes, DC motor

Key Data: 10/19 W, 11.7 mNm, 17000 rpm

DCX



## M 1:1

Motor Data								
1_	Nominal voltage	V	6	9	12	18	24	36
2_	No load speed	rpm	12800	13100	13200	12800	12800	12800
3_	No load current	mA	73.5	50.7	38.6	24.5	18.4	12.3
4_	Nominal speed	rpm	11000	11000	10700	10600	10600	10700
5_	Nominal torque	mNm	8.58	11.8	10.4	11.6	11.3	11.6
6_	Nominal current (max. continuous current)	A	2.00	1.85	1.24	0.896	0.651	0.447
7_	Stall torque	mNm	61.8	74.2	63.3	74.5	68.5	72
8_	Stall current	A	13.9	11.4	7.37	5.59	3.85	2.70
9_	Max. efficiency	%	85	87	83	86	86	87
10_	Terminal resistance	$\Omega$	0.431	0.791	1.63	3.22	6.23	13.3
11_	Terminal inductance	mH	0.026	0.055	0.096	0.231	0.411	0.925
12_	Torque constant	mNm/A	4.44	6.52	8.59	13.3	17.8	26.7
13_	Speed constant	rpm/V	2150	1470	1110	716	537	358
14_	Speed/torque gradient	rpm/mNm	209	178	211	173	188	179
15_	Mechanical time constant	ms	4.77	4.47	5.21	4.70	4.48	4.37
16_	Rotor inertia	gcm <sup>2</sup>	2.18	2.40	2.36	2.59	2.28	2.33

## Thermal data

Thermal data			Operating Range	
17_	Thermal resistance housing-ambient	K/W	17.9	n [rpm] Winding 12 V
18_	Thermal resistance winding-housing	K/W	7.21	
19_	Thermal time constant winding	s	21.5	
20_	Thermal time constant motor	s	294	
21_	Ambient temperature ball bearings	$^{\circ}$ C	-40...+100	
21_	Ambient temperature sleeve bearings	$^{\circ}$ C	-30...+100	
22_	Max. winding temperature	$^{\circ}$ 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

Mechanical data sleeve bearings			Modular System		Details on catalog page 36	
23_	Max. speed	rpm	15000	<b>Gear</b>	<b>Sensor</b>	<b>Motor Control</b>
24_	Axial play	mm	0...0.2	367_GPX 16 A/C	473_ENX 10 EASY	532_ESCON Module 24/2
	Preload	N	0	368_GPX 16 LN/LZ	473_ENX 10 QUAD	532_ESCON 36/2 DC
25_	Radial play	mm	0.015	369_GPX 16 HP	474_ENX 10 EASY XT	541_EPOS4 Micro 24/5
26_	Max. axial load (dynamic)	N	0.1	371_GPX 19 A/C	475_ENX 16 EASY	542_EPOS4 Module 24/1.5
27_	Max. force for press fits (static)	N	60	372_GPX 19 LN/LZ	476_ENX 16 EASY XT	542_EPOS4 Module 50/5
	(static, shaft supported)	N	300	373_GPX 19 HP	477_ENX 16 EASY Abs.	543_EPOS4 Compact 24/5 3-axes
28_	Max. radial load [mm from flange]	N	2 [5]		478_ENX 16 EASY Abs. XT	544_EPOS4 Compact 24/1.5
					486_ENX 16 RIO	545_EPOS4 Compact 50/5
						547_EPOS4 50/5

## 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	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