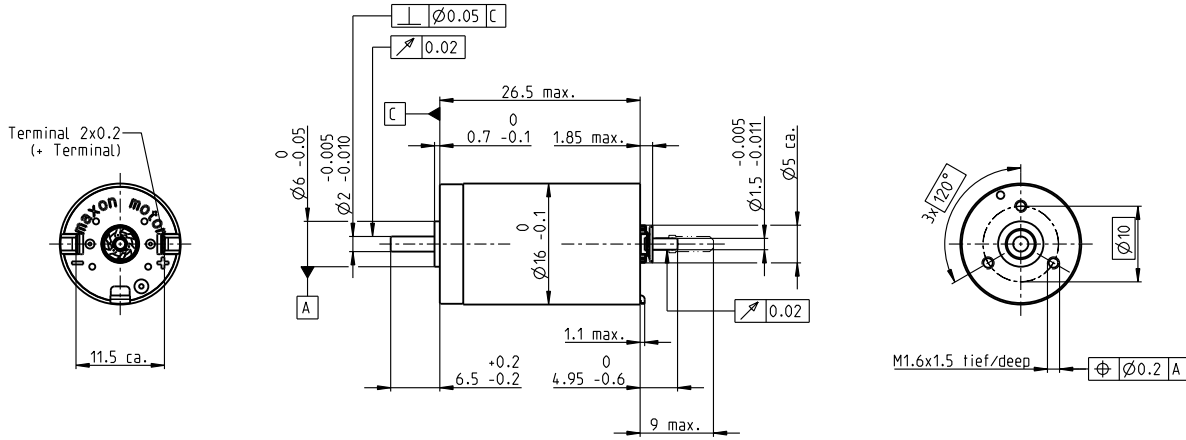


# DCX 16 S $\varnothing 16$ mm, precious metal brushes, DC motor

Key Data: 3/5 W, 5.3 mNm, 8680 rpm



DCX



M 1:1

### Motor Data

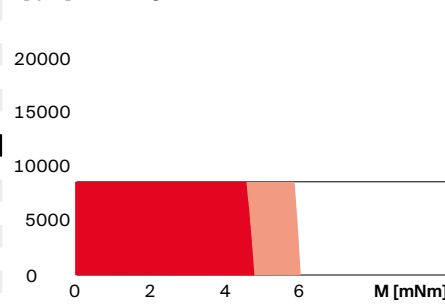
	V	3	4.5	6	9	12	18	24
1_ Nominal voltage	V	3	4.5	6	9	12	18	24
2_ No load speed	rpm	6320	6320	6610	6320	6260	6340	6250
3_ No load current	mA	44.6	29.7	23.4	14.9	11	7.43	5.51
4_ Nominal speed	rpm	3350	3300	3760	3270	3320	3530	3200
5_ Nominal torque	mNm	5.15	5.05	5.36	5	5.19	5.45	4.99
6_ Nominal current (max. continuous current)	A	1.20	0.784	0.65	0.389	0.299	0.211	0.144
7_ Stall torque	mNm	11.1	10.7	12.6	10.6	11.2	12.5	10.4
8_ Stall current	A	2.49	1.61	1.48	0.791	0.624	0.467	0.289
9_ Max. efficiency	%	75	75	77	75	75	77	74
10_ Terminal resistance	$\Omega$	1.20	2.80	4.06	11.4	19.2	38.6	83.1
11_ Terminal inductance	mH	0.036	0.080	0.131	0.320	0.581	1.28	2.32
12_ Torque constant	mNm/A	4.45	6.67	8.53	13.3	18.0	26.7	36.0
13_ Speed constant	rpm/V	2150	1430	1120	715	531	358	265
14_ Speed/torque gradient	rpm/mNm	580	600	533	610	568	517	613
15_ Mechanical time constant	ms	6.09	6.09	6.05	6.13	6.11	6.08	6.17
16_ Rotor inertia	gcm <sup>2</sup>	1.00	0.97	1.08	0.959	1.03	1.12	0.960

### Thermal data

17_ Thermal resistance housing-ambient	K/W	23.5
18_ Thermal resistance winding-housing	K/W	9.9
19_ Thermal time constant winding	s	9.63
20_ Thermal time constant motor	s	227
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

### Operating Range

n [rpm] Winding 12 V



### Mechanical data ball bearings

23_ Max. speed	rpm	8680
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

23_ Max. speed	rpm	8680
24_ Axial play	mm	0...0.2
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	60
(static, shaft supported)	N	300
28_ Max. radial load [mm from flange]	N	2 [5]

### Modular System

Gear	Stages [opt.]	Sensor
367_GPX 16 A/C	1-2 [3-4]	473_ENX 10 EASY
368_GPX 16 LN/LZ	1-2 [3-4]	473_ENX 10 QUAD
369_GPX 16 HP	2-3 [4]	474_ENX 10 EASY XT
371_GPX 19 A/C	3-4	475_ENX 16 EASY
372_GPX 19 LN/LZ	3-4	476_ENX 16 EASY XT
373_GPX 19 HP	4	477_ENX 16 EASY Abs.
		478_ENX 16 EASY Abs. XT
		486_ENX 16 RIO

Details on catalog page 36

### Motor Control

532_ESCON Module 24/2
532_ESCON 36/2 DC
541_EPOS4 Micro 24/5
542_EPOS4 Module 24/1.5
543_EPOS4 Compact 24/5 3-axes
544_EPOS4 Compact 24/1.5
547_EPOS4 50/5

### Other specifications

29_ Number of pole pairs		1
30_ Number of commutator segments		7
31_ Weight of motor	g	26
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