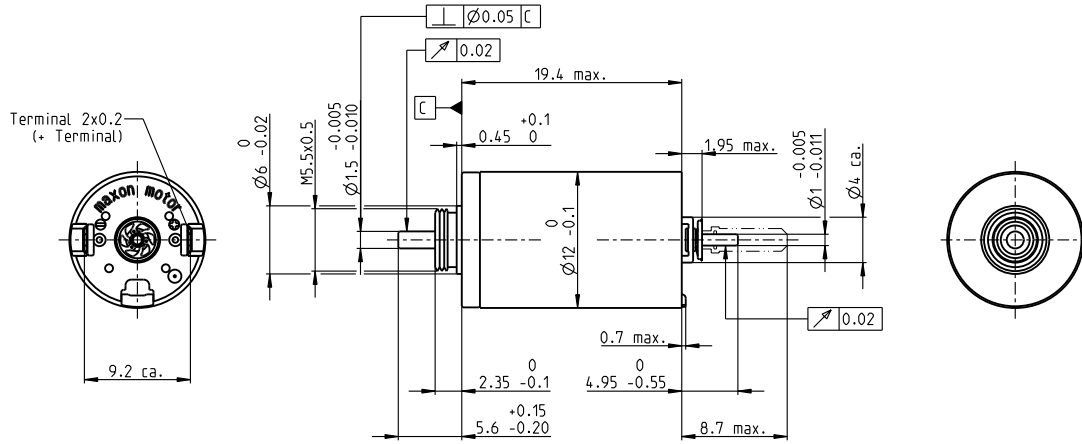


DCX 12 S $\varnothing 12$ mm, precious metal brushes, DC motor

Key Data: 1.6/2 W, 2.0 mNm, 13000 rpm



DCX



M 3:2

Motor Data

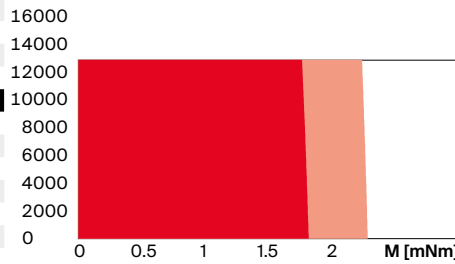
	V	3	4.5	6	9	12
1_ Nominal voltage	V	3	4.5	6	9	12
2_ No load speed	rpm	9090	9000	9100	9010	9020
3_ No load current	mA	31.8	20.9	15.9	10.5	7.88
4_ Nominal speed	rpm	3760	3620	3870	3700	3620
5_ Nominal torque	mNm	1.92	1.9	1.95	1.92	1.88
6_ Nominal current (max. continuous current)	A	0.655	0.427	0.332	0.216	0.159
7_ Stall torque	mNm	3.35	3.25	3.46	3.33	3.21
8_ Stall current	A	1.09	0.701	0.566	0.36	0.261
9_ Max. efficiency	%	69	69	70	69	69
10_ Terminal resistance	Ω	2.74	6.42	10.6	25	46
11_ Terminal inductance	mH	0.0724	0.166	0.29	0.664	1.17
12_ Torque constant	mNm/A	3.06	4.63	6.12	9.26	12.3
13_ Speed constant	rpm/V	3120	2060	1560	1030	775
14_ Speed/torque gradient	rpm/mNm	2800	2860	2700	2780	2890
15_ Mechanical time constant	ms	8.37	8.32	8.31	8.33	8.33
16_ Rotor inertia	gcm ²	0.286	0.278	0.293	0.286	0.275

Thermal data

17_ Thermal resistance housing-ambient	K/W	35
18_ Thermal resistance winding-housing	K/W	14.4
19_ Thermal time constant winding	s	718
20_ Thermal time constant motor	s	146
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 4.5 V



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

Mechanical data ball bearings

23_ Max. speed	rpm	13000
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	13000
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]

Modular System

Gear	Stages [opt.]	Sensor
360_GPX 12 A/C	1-4	473_ENX 10 EASY
361_GPX 12 LN/LZ	1-4	473_ENX 10 QUAD
362_GPX 12 HP	2-4	474_ENX 10 EASY XT
364_GPX 14 A/C	3-4	
365_GPX 14 LN/LZ	3-4	
366_GPX 14 HP	4	

Details on catalog page 36

Motor Control
532_ESCON Module 24/2
532_ESCON 36/2 DC
542_EPOS4 Module 24/1.5
544_EPOS4 Compact 24/1.5

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	40

Configuration

Bearing: Sleeve bearings/ball bearings preloaded
 Commutation: Precious metal brushes with 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