

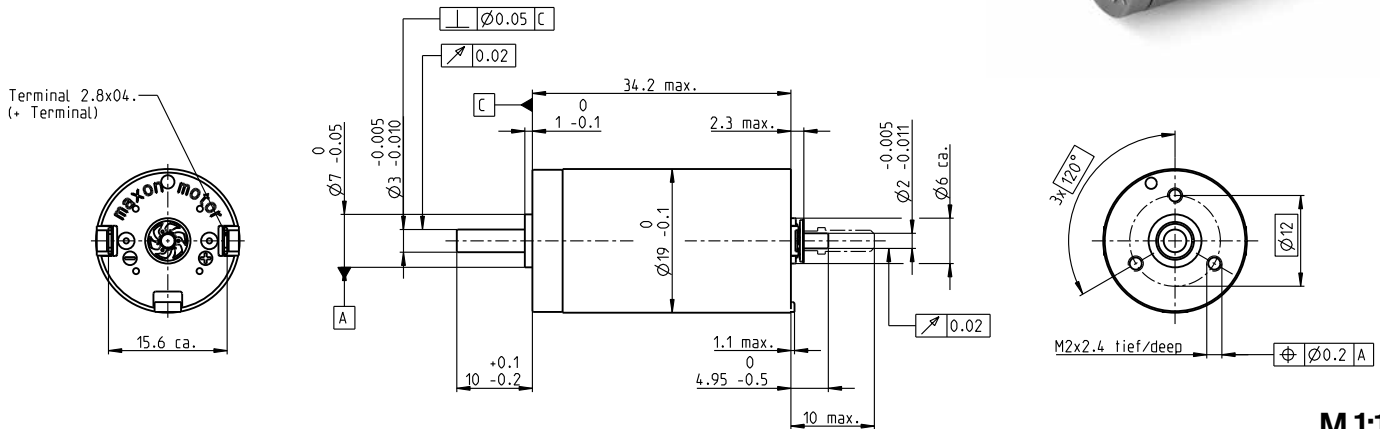
# DCX 19 S Precious Metal Brushes

## DC motor Ø19 mm

Key Data: 5/8 W, 11.0 mNm, 7500 rpm



DCX



M 1:1

### Motor Data

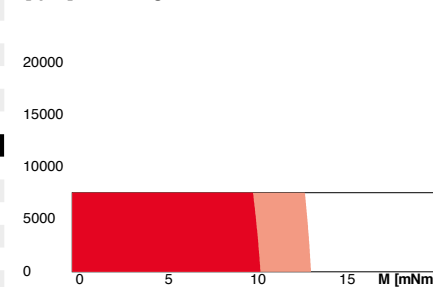
1.	Nominal voltage	V	4.5	6	9	12	18	24
2.	No load speed	rpm	6440	6350	6260	6360	6360	6350
3.	No load current	mA	72	53	34.6	26.5	17.7	13.2
4.	Nominal speed	rpm	5080	4540	4350	4490	4490	4480
5.	Nominal torque (max. continuous torque)	mNm	7.46	10.3	10.8	11.0	11.0	10.9
6.	Nominal current (max. continuous current)	A	1.20	1.20	0.829	0.643	0.428	0.319
7.	Stall torque	mNm	35.7	36.3	35.8	38.0	37.8	37.5
8.	Stall current	A	5.42	4.07	2.64	2.13	1.41	1.05
9.	Max. efficiency	%	78	79	79	79	79	79
10.	Terminal resistance	Ω	0.831	1.47	3.40	5.63	12.7	22.8
11.	Terminal inductance	mH	0.045	0.082	0.191	0.329	0.740	1.320
12.	Torque constant	mNm/A	6.58	8.90	13.5	17.8	26.7	35.6
13.	Speed constant	rpm/V	1450	1070	705	536	358	268
14.	Speed/torque gradient	rpm/mNm	183	177	177	170	170	172
15.	Mechanical time constant	ms	5.12	4.99	4.92	4.89	4.89	4.90
16.	Rotor inertia	gcm <sup>2</sup>	2.67	2.68	2.65	2.75	2.74	2.72

### Thermal data

17.	Thermal resistance housing-ambient	K/W	17.6
18.	Thermal resistance winding-housing	K/W	6.5
19.	Thermal time constant winding	s	11.6
20.	Thermal time constant motor	s	312
21.	Ambient temperature ball bearings	°C	-40...+85
21.	Ambient temperature sleeve bearings	°C	-30...+85
22.	Max. winding temperature	°C	100

### Operating Range

n [rpm] Winding 9 V



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

### Mechanical data ball bearings

23.	Max. speed	rpm	7500
24.	Axial play	mm	0...0.1
24.	Preload	N	2.5
25.	Radial play	mm	0.02
26.	Max. axial load (dynamic)	N	2.5
27.	Max. force for press fits (static)	N	30
27.	(static, shaft supported)	N	440
28.	Max. radial load [mm from flange]	N	16 [5]

### Mechanical data sleeve bearings

23.	Max. speed	rpm	7500
24.	Axial play	mm	0...0.2
24.	Preload	N	0
25.	Radial play	mm	0.02
26.	Max. axial load (dynamic)	N	0.1
27.	Max. force for press fits (static)	N	80
27.	(static, shaft supported)	N	440
28.	Max. radial load [mm from flange]	N	3 [5]

### maxon Modular System

maxon gear	Stages [opt.]
335_GPX 19 A/C	1-2 [3-4]
336_GPX 19 LN/LZ	1-2 [3-4]
337_GPX 19 HP	2-3 [4]
339_GPX 22 A/C	3-4
340_GPX 22 LN/LZ	3-4
341_GPX 22 HP	4

### maxon sensor

433_ENX 10 EASY
433_ENX 10 QUAD
434_ENX 10 EASY XT
436_ENX 16 EASY
437_ENX 16 EASY XT
438_ENX 16 EASY Abs.
439_ENX 16 EASY Abs. XT
443_ENX 16 RIO

### maxon motor control

486_ESCON Module 24/2
486_ESCON 36/2 DC
496_EPOS4 Mod./Comp. 24/1.5
504_EPOS2 P 24/5

### Other specifications

29.	Number of pole pairs	1
30.	Number of commutator segments	9
31.	Weight of motor	g 50
32.	Typical noise level	dBA 48

### 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