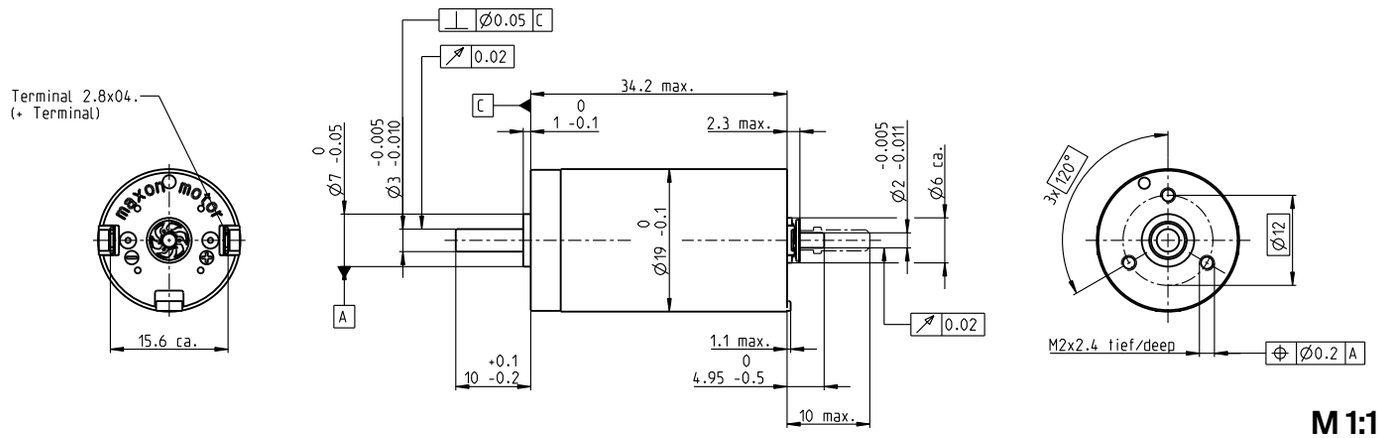
DCX 19 S ∅19 mm, precious metal brushes, DC motor

DCX

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



M 1:1

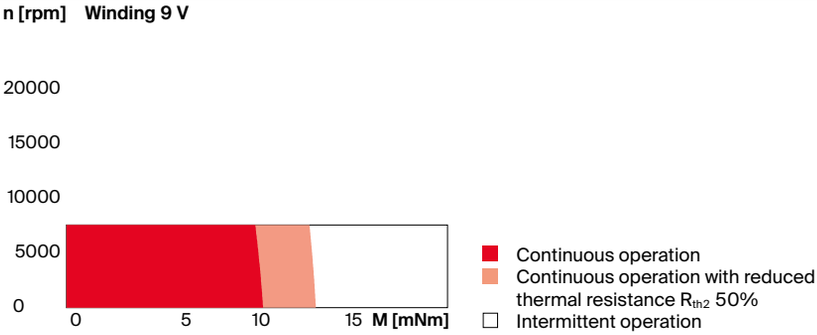
	Motor data							
1_	Nominal voltage	V	4.5	6	9	12	18	24
2_	No load speed	rpm	6440	6350	6260	6360	6360	6350
3_	No load current	mA	72	53	34.6	26.5	17.7	13.2
4_	Nominal speed	rpm	5080	4540	4350	4490	4490	4480
5_	Nominal torque	mNm	7.46	10.3	10.8	11.0	11.0	10.9
6_	Nominal current (max. continuous current)	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	gcm²	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
	Ambient temperature sleeve bearings	°C	-30...+85
22_	Max. winding temperature	°C	100
	Mechanical data ball bearings		
23_	Max. speed	rpm	7500
24_	Axial play	mm	0...0.1
	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
	(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
	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
	(shaft supported)	N	440
28_	Max. radial load [mm from flange]	N	3 [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

Operating range



Modular system Details on catalog page 40

Gear	Stages [opt.]	Sensor	Motor Control
386_GPX 19 A/C	1–2 [3–4]	507_ENX 10 EASY	550_ESCON Module 24/2
387_GPX 19 LN/LZ	1–2 [3–4]	507_ENX 10 QUAD	550_ESCON 36/2 DC
388_GPX 19 HP	2–3 [4]	508_ENX 10 EASY XT	557_ESCON2 Nano 24/2
390_GPX 22 A/C	3–4	509_ENX 16 EASY	563_EPOS4 Micro 24/5
391_GPX 22 LN/LZ	3–4	510_ENX 16 EASY XT	564_EPOS4 Module 24/1.5
392_GPX 22 HP	4	511_ENX 16 EASY Abs.	565_EPOS4 Compact 24/5 3-axes
		512_ENX 16 EASY Abs. XT	566_EPOS4 Compact 24/1.5
		519_ENX 16 RIO	

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

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