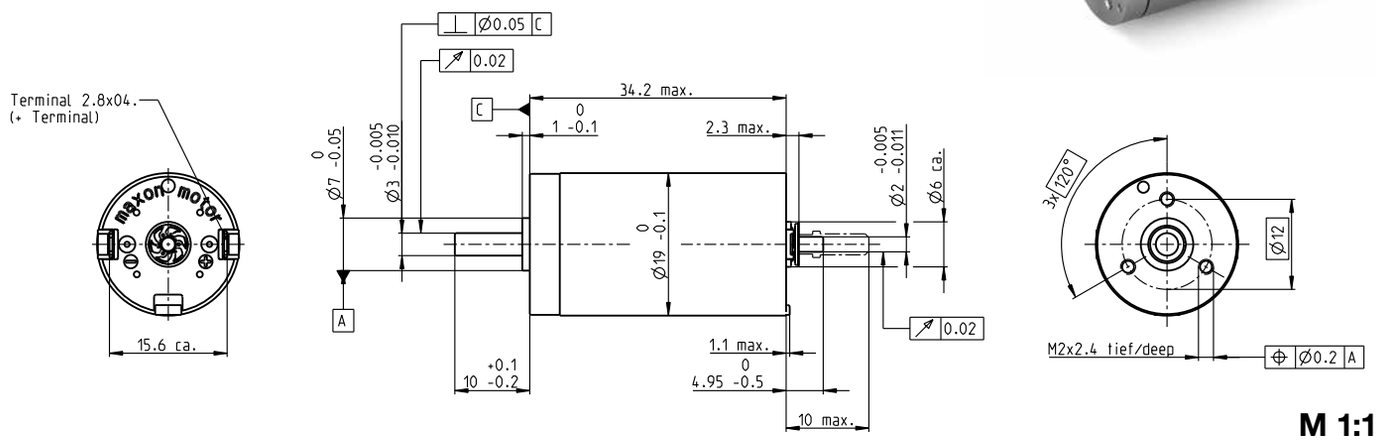
DCX 19 S Graphite Brushes
DC motor ∅19 mm

Key Data: 11/17 W, 11.3 mNm, 16000 rpm



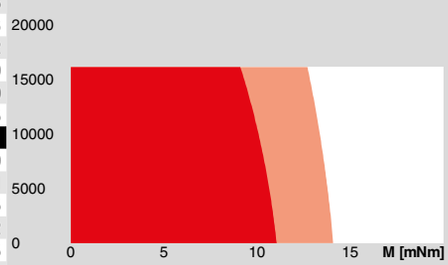
M 1:1

	Motor Data							
1_	Nominal voltage	V	9	12	18	24	36	48
2_	No load speed	rpm	12900	12800	12600	12700	12700	12700
3_	No load current	mA	102	75	48.9	37.4	25	18.7
4_	Nominal speed	rpm	10900	10800	10600	10600	10700	10700
5_	Nominal torque (max. continuous torque)	mNm	11.3	11.4	11.4	11.1	11.3	11.3
6_	Nominal current (max. continuous current)	A	1.81	1.35	0.884	0.657	0.445	0.335
7_	Stall torque	mNm	73.8	73.9	72.2	73.2	73.9	73.8
8_	Stall current	A	11.2	8.30	5.33	4.11	2.77	2.07
9_	Max. efficiency	%	82	82	82	81	82	82
10_	Terminal resistance	Ω	0.802	1.45	3.38	5.84	13.0	23.2
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	177	174	176	176	174	174
15_	Mechanical time constant	ms	4.94	4.90	4.88	5.07	5.00	4.97
16_	Rotor inertia	gcm^2	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…+100
	Ambient temperature sleeve bearings	°C	-30…+100
22_	Max. winding temperature	°C	125
	Mechanical data ball bearings		
23_	Max. speed	rpm	16000
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
	(static, shaft supported)	N	440
28_	Max. radial load [mm from flange]	N	16 [5]
	Mechanical data sleeve bearings		
23_	Max. speed	rpm	13500
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
	(static, 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	40

Operating Range

n [rpm] Winding 18 V



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

maxon Modular System Details on catalog page 30

maxon gear	Stages [opt.]	**maxon sensor**	**maxon motor control**
302_GPX 19 A/C	1–2 [3–4]	398_ENX 10 EASY	454_ESCON Module 24/2
303_GPX 19 LN/LZ	1–2 [3–4]	398_ENX 10 QUAD	454_ESCON 36/2 DC
304_GPX 19 HP	2–3 [4]	399_ENX 10 EASY XT	455_ESCON Module 50/5
306_GPX 22 A/C	3–4	401_ENX 16 EASY	457_ESCON 50/5
307_GPX 22 LN/LZ	3–4	402_ENX 16 EASY XT	462_EPOS4 Module/Comp. 24/1.5
308_GPX 22 HP	4	403_ENX 16 EASY Abs.	463_EPOS4 50/5
		404_ENX 16 EASY Abs. XT	463_EPOS4 Module/Comp. 50/5
		410_ENX 16 RIO	470_EPOS2 P 24/5
			473_MAXPOS 50/5

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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