

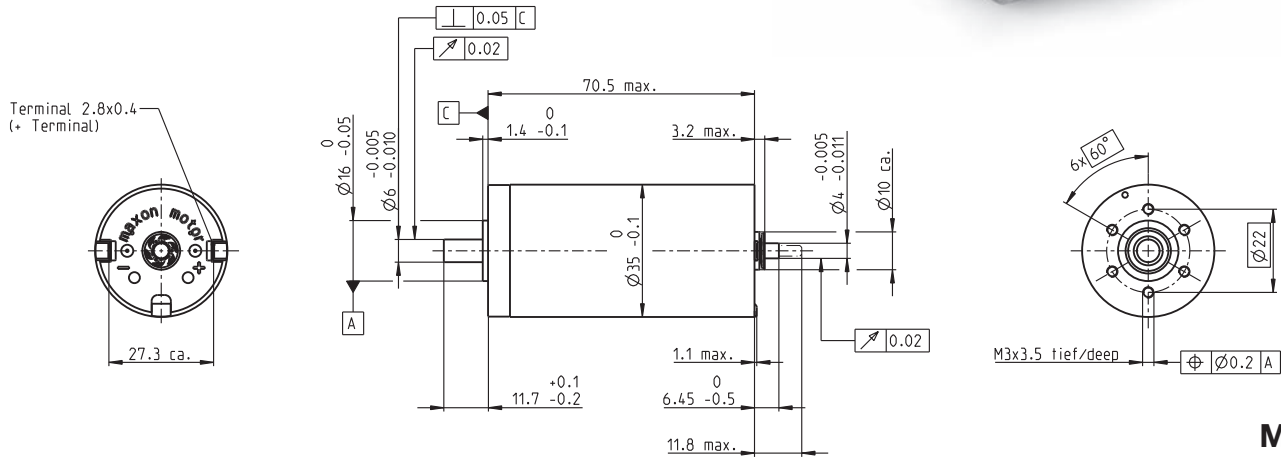
DCX 35 L Graphite Brushes

DC motor Ø35 mm

80/120 W 138 mNm 12300 rpm



maxon X drives



M 1:2

Motor Data

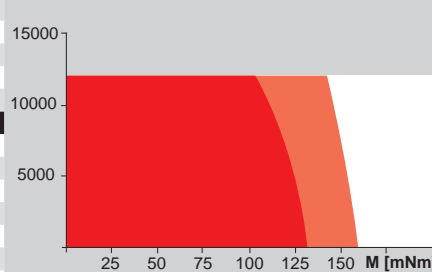
1_	Nominal voltage	V	12	18	24	36	48	60
2_	No load speed	rpm	8130	7200	7720	7940	6670	7690
3_	No load current	mA	320	177	146	101	58.6	57.5
4_	Nominal speed	rpm	7610	6640	7160	7410	6140	7160
5_	Nominal torque (max. continuous torque)	mNm	77.7	120	121	128	138	132
6_	Nominal current (max. continuous current)	A	6.00	5.32	4.26	3.07	2.08	1.84
7_	Stall torque	mNm	2080	1980	2030	2160	1860	2050
8_	Stall current	A	152	84.8	69.3	50.3	27.3	27.7
9_	Max. efficiency	%	85	88	89	90	90	90
10_	Terminal resistance	Ω	0.079	0.212	0.346	0.716	1.76	2.16
11_	Terminal inductance	mH	0.026	0.077	0.121	0.260	0.658	0.776
12_	Torque constant	mNm/A	13.7	23.4	29.3	42.9	68.3	74.1
13_	Speed constant	rpm/V	699	408	326	223	140	129
14_	Speed/torque gradient	rpm/mNm	4.04	3.70	3.86	3.72	3.61	3.76
15_	Mechanical time constant	ms	4.21	3.97	3.91	3.84	3.76	3.75
16_	Rotor inertia	gcm ²	99.5	102	96.6	98.7	99.5	95.2

Thermal data

17_	Thermal resistance housing-ambient	K/W	6.98
18_	Thermal resistance winding-housing	K/W	2.1
19_	Thermal time constant winding	s	43.9
20_	Thermal time constant motor	s	1030
21_	Ambient temperature	°C	-40...+100
22_	Max. winding temperature	°C	155

Operating Range

n [rpm] Winding 36 V



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

Mechanical data ball bearings

23_	Max. speed	rpm	12300
24_	Axial play	mm	0...0.1
	Preload	N	7
25_	Radial play	mm	0.02
26_	Max. axial load (dynamic)	N	7
27_	Max. force for press fits (static) (static, shaft supported)	N	22.6 2510
28_	Max. radial load [mm from flange]	N	65.3 [5]

Other specifications

29_	Number of pole pairs	1	
30_	Number of commutator segments	11	
31_	Weight of motor	g	385
32_	Typical noise level	dBA	48

maxon Modular System

maxon gear	Stages	maxon sensor	maxon motor control
140_GPX 37 A	1-2	146_ENX 10 QUAD	417_ESCON Module 50/5
141_GPX 37 LN/LZ	1-2	147_ENX 16 EASY	418_ESCON 50/5
142_GPX 42 C	1-4	148_ENX 16 EASY Abs.	418_ESCON 70/10
		397_ENC 2RMHF	425_EPOS2 24/5
		404_ENC 30 HEDL 5540	425_EPOS2 50/5
		407_ENC AEDL 5810	425_EPOS2 70/10
			428_EPOS2 P 24/5
			431_EPOS4 Module/Comp. 50/8
			435_MAXPOS 50/5

Configuration

Bearing: Ball bearings preloaded
 Commutation: 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

xdrives.maxonmotor.com