

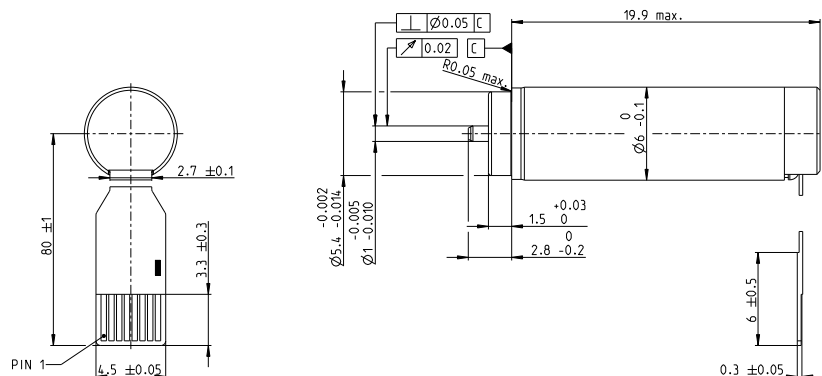
ECX PRIME 6 M Ø6 mm, brushless, BLDC motor

High Power

Key data: 1.6/2.2 W, 0.57 mNm, 50 000 rpm



ECX PRIME



M 2:1

Motor data

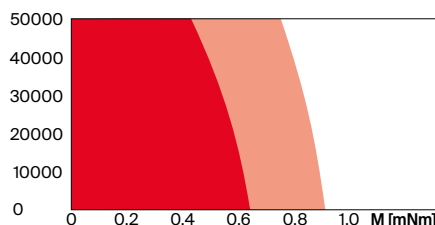
1_	Nominal voltage	V	6	12
2_	No load speed	rpm	36300	36300
3_	No load current	mA	83.8	41.9
4_	Nominal speed	rpm	29500	29500
5_	Nominal torque	mNm	0.58	0.58
6_	Nominal current (max. continuous current)	A	0.458	0.229
7_	Stall torque	mNm	3.21	3.21
8_	Stall current	A	2.12	1.06
9_	Max. efficiency	%	65.3	65.3
10_	Terminal resistance	Ω	2.83	11.3
11_	Terminal inductance	mH	0.0187	0.0746
12_	Torque constant	mNm/A	1.52	3.03
13_	Speed constant	rpm/V	6300	3150
14_	Speed/torque gradient	rpm/mNm	11800	11800
15_	Mechanical time constant	ms	1.47	1.47
16_	Rotor inertia	gcm ²	0.0119	0.0119

Thermal data

17_	Thermal resistance housing-ambient	K/W	93.9	
18_	Thermal resistance winding-housing	K/W	2.98	
19_	Thermal time constant winding	s	0.358	
20_	Thermal time constant motor	s	138	
21_	Ambient temperature	°C	-20...+100	
22_	Max. winding temperature	°C	125	

Mechanical data ball bearings

23_	Max. speed	rpm	50 000	
24_	Axial play	mm	0..0.07	
	Preload	N	0.45	
	Direction of force		pull	
25_	Radial play		preloaded	
26_	Max. axial load (dynamic)	N	0.2	
27_	Max. force for press fits (static)	N	10	
	(static, shaft supported)	N	110	
28_	Max. radial load [mm from flange]	N	2 [2]	



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

Other specifications

29_	Number of pole pairs	2			
30_	Number of phases	3			
31_	Weight of motor	g	3		
32_	Typical noise level [rpm]	dBA	35 [20 000]		

Connection motor with hall sensor (A)

FPC Flexprint 8-pole, pitch 0.5 mm

- Pin 1 Motor winding 1
- Pin 2 Motor winding 2
- Pin 3 Motor winding 3
- Pin 4 V_{CC} 3.0...3.6 V
- Pin 5 GND
- Pin 6 Hall sensor 1
- Pin 7 Hall sensor 2
- Pin 8 Hall sensor 3

Output signals: CMOS compatible push-pull stage
Hall signals are generated by the MAG sensor.

'ENX 6 MAG encoder and adapter
498157 required for all maxon controllers.

Configuration

Front flange: Standard flange/threaded hole
Shaft front: length