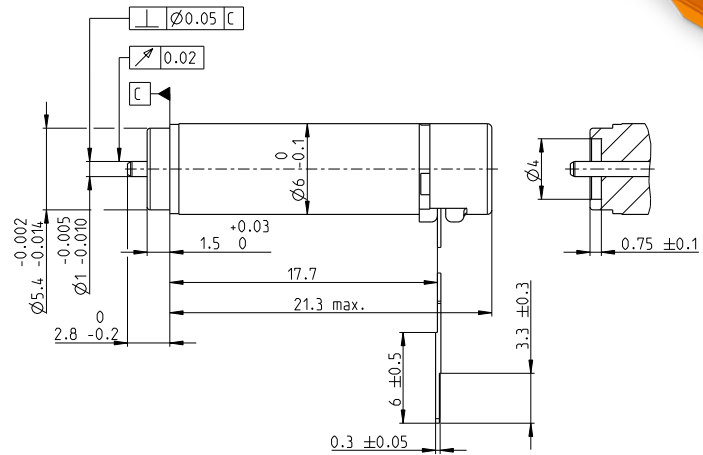
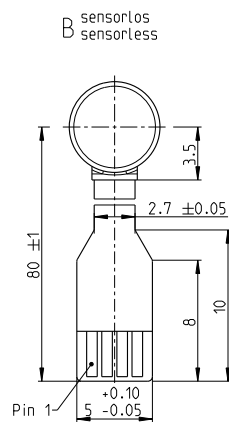
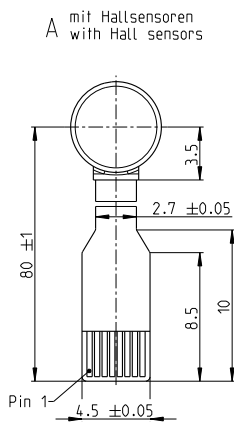


ECX SPEED 6 M $\varnothing 6$ mm, brushless, BLDC motor

Key Data: 1.5/3.0 W, 0.33 mNm, 100 000 rpm



ECX SPEED



M 2:1

Motor Data

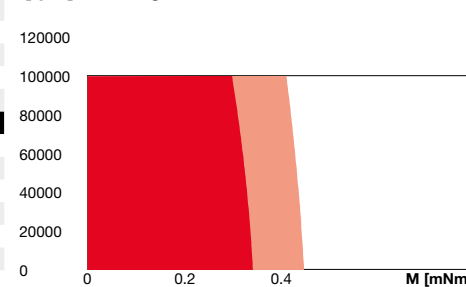
1_	Nominal voltage	V	6	12
2_	No load speed	rpm	44200	33300
3_	No load current	mA	46.5	16.2
4_	Nominal speed	rpm	25500	13900
5_	Nominal torque (max. continuous torque)	mNm	0.334	0.322
6_	Nominal current (max. continuous current)	A	0.314	0.116
7_	Stall torque	mNm	0.832	0.59
8_	Stall current	A	0.688	0.188
9_	Max. efficiency	%	55.6	50.4
10_	Terminal resistance	Ω	8.72	63.8
11_	Terminal inductance	mH	0.0652	0.436
12_	Torque constant	mNm/A	1.21	3.14
13_	Speed constant	rpm/V	7900	3040
14_	Speed/torque gradient	rpm/mNm	57000	61800
15_	Mechanical time constant	ms	4.2	4.55
16_	Rotor inertia	gcm ²	0.00703	0.00703

Thermal data

17_	Thermal resistance housing-ambient	K/W	67.1
18_	Thermal resistance winding-housing	K/W	16.8
19_	Thermal time constant winding	s	1.69
20_	Thermal time constant motor	s	71.8
21_	Ambient temperature	$^{\circ}$ C	-20...+100
22_	Max. winding temperature	$^{\circ}$ C	125

Operating Range

n [rpm] winding 6 V



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

Mechanical data ball bearings

23_	Max. speed	rpm	100 000
24_	Axial play	mm	0..0.07
	Preload	N	0.15
	Direction of force		pull
25_	Radial play		preloaded
26_	Max. axial load (dynamic)	N	0.1
27_	Max. force for press fits (static)	N	10
	(static, shaft supported)	N	11.0
28_	Max. radial load [mm from flange]	N	2 [2]

maxon Modular System

Details on catalog page 34

Other specifications

29_	Number of pole pairs	1
30_	Number of phases	3
31_	Weight of motor	g
32_	Typical noise level [rpm]	dBA 44 [50 000]

maxon gear

Stages [opt.]

maxon sensor
for motor type A:
443_ENX 6 MAG

maxon motor control

510_EPOS4 Mod./Comp. 24/1.5

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_{Hall} 2.5...5.5 VDC
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 Output
Output current per channel: max. 0.5 mA

Connection motor sensorless (B)

FPC flexprint 4-pole, pitch 1.0 mm:

Pin 1	Motor winding 1
Pin 2	Motor winding 2
Pin 3	Motor winding 3
Pin 4	N.C.

Configuration

Shaft front: length

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