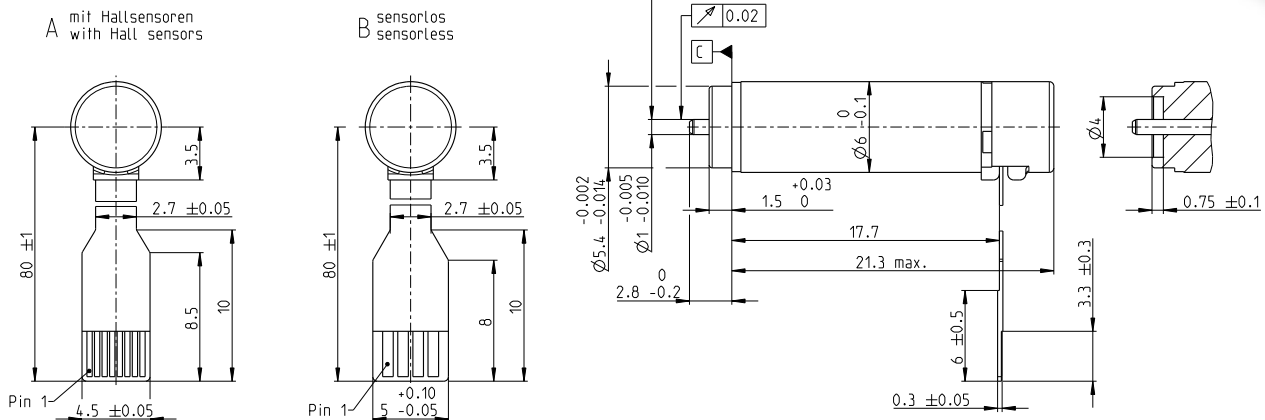


ECX SPEED 6 M Ø6 mm, brushless, BLDC motor

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	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	°C	-20...+100
22. Max. winding temperature	°C	125

Mechanical data ball bearings

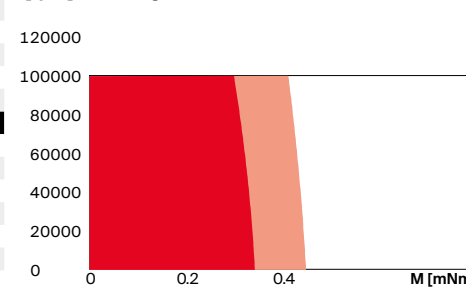
23. Max. speed	rpm	100 000
24. Axial play	mm	0...0.07
Preload	N	0.15
Direction of force		pull
25. Radial play		preloaded
26. Max. axial load (dynamic)	N	0.1
27. Max. force for press fits (static)	N	10
(static, shaft supported)	N	11.0
28. Max. radial load [mm from flange]	N	2 [2]

Other specifications

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

Operating Range

n [rpm] winding 6 V



Modular System

Details on catalog page 40

Other specifications		Gear	Stages [opt.]	Sensor	Motor Control
29_	Number of pole pairs	1	357_GPX 6 A	for motor type A: 469_ENX 6 MAG	542_EPOS4 Module 24/1.5
30_	Number of phases	3			544_EPOS4 Compact 24/1.5
31_	Weight of motor	g 3			
32_	Typical noise level [rpm]	dBA 44 [50 000]			

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 _{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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