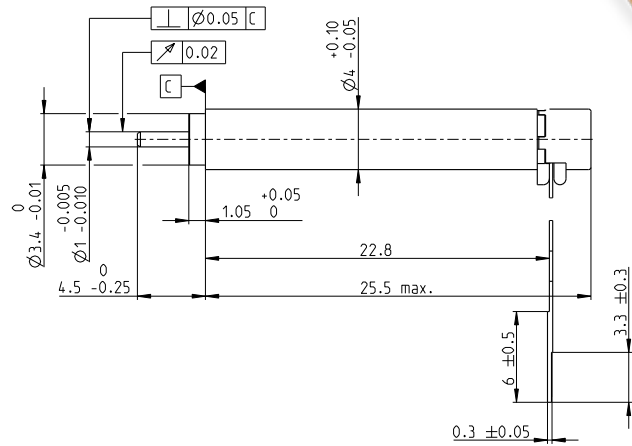
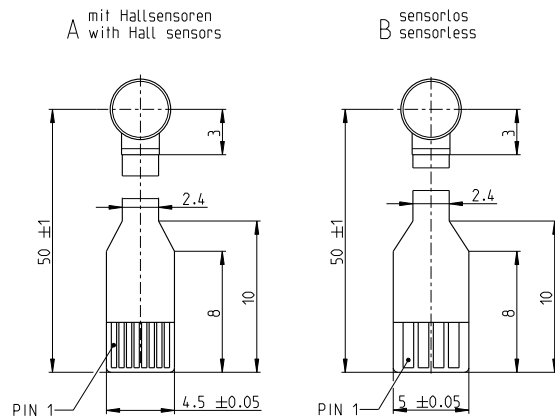


ECX SPEED 4 L Ø4 mm, brushless, BLDC motor

Key Data: 1.0/1.6 W, 0.34 mNm, 50 000 rpm

ECX SPEED



Motor Data

1. Nominal voltage	V	3	6
2. No load speed	rpm	40700	30500
3. No load current	mA	55.6	18.9
4. Nominal speed	rpm	23000	13400
5. Nominal torque (max. continuous torque)	mNm	0.338	0.341
6. Nominal current (max. continuous current)	A	0.545	0.206
7. Stall torque	mNm	0.817	0.641
8. Stall current	A	1.22	0.36
9. Max. efficiency	%	62.6	60
10. Terminal resistance	Ω	2.46	16.7
11. Terminal inductance	mH	0.0458	0.323
12. Torque constant	mNm/A	0.67	1.78
13. Speed constant	rpm/V	14300	5360
14. Speed/torque gradient	rpm/mNm	52300	50200
15. Mechanical time constant	ms	0.903	0.867
16. Rotor inertia	gcm ²	0.00165	0.00165

Thermal data

17. Thermal resistance housing-ambient	K/W	84
18. Thermal resistance winding-housing	K/W	16.7
19. Thermal time constant winding	s	1.31
20. Thermal time constant motor	s	76.4
21. Ambient temperature	°C	-20 ... +80
22. Max. winding temperature	°C	125

Mechanical data

23. Max. speed	rpm	50 000
24. Max. axial play	mm	0.06
Preload	N	-
Direction of force	-	-
25. Radial play		0.012
26. Max. axial load (dynamic)	N	0.1
27. Max. force for press fits (static)	N	10
(static, shaft supported)	N	10
28. Max. radial load [mm from flange]	N	0.2 [2]

Other specifications

29. Number of pole pairs		1
30. Number of phases		3
31. Weight of motor	g	1.8
32. Typical noise level [rpm]	dBA	47 [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 current per channel: max. 0.5 mA

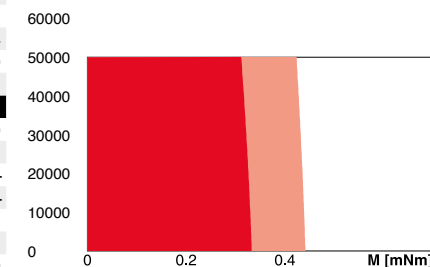
Connection motor sensorless (B)

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.

Operating Range

n [rpm] winding 3 V



maxon Modular System

maxon gear	Stages [opt.]	maxon sensor
330_GPX 4 C	2-4	for motor type A: 442_ENX 4 MAG

Details on catalog page 34

maxon motor control
512_EPOS4 Mod./Comp. 24/1.5

Configuration

Shaft front: length/diameter
Electrical connection: Flex cable/round cable

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