

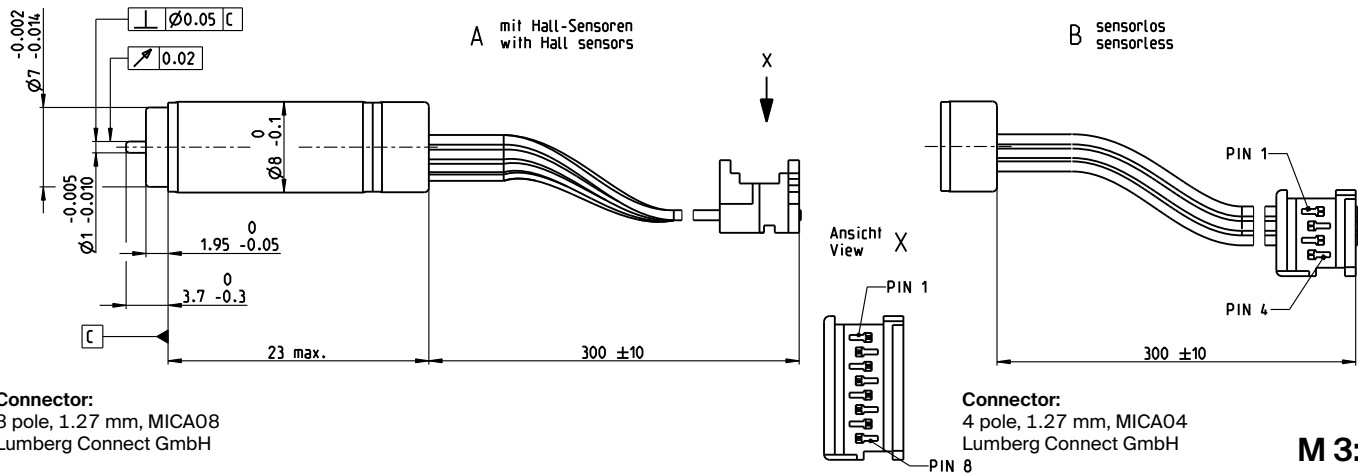
ECX SPEED 8 M $\varnothing 8$ mm, brushless, BLDC motor

High Power

Key Data: 3/6 W, 1.26 mNm, 50 000 rpm



ECX SPEED



Connector:
8 pole, 1.27 mm, MICA08
Lumberg Connect GmbH

Connector:
4 pole, 1.27 mm, MICA04
Lumberg Connect GmbH

M 3:2

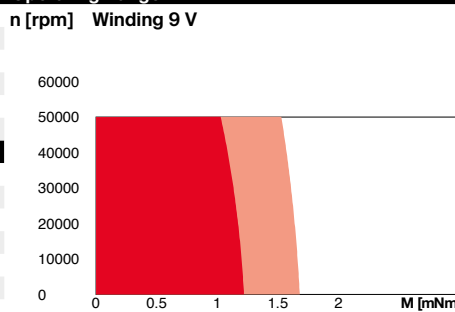
Motor Data

1_	Nominal voltage	V	6	9	12
2_	No load speed	rpm	35500	29100	30500
3_	No load current	mA	128	63.4	50.9
4_	Nominal speed	rpm	26700	21200	22800
5_	Nominal torque (max. continuous torque)	mNm	1.23	1.26	1.26
6_	Nominal current (max. continuous current)	A	0.902	0.497	0.391
7_	Stall torque	mNm	5.18	4.83	5.18
8_	Stall current	A	3.34	1.7	1.43
9_	Max. efficiency	%	66	66	67
10_	Terminal resistance	Ω	1.8	5.3	8.38
11_	Terminal inductance	mH	0.026	0.089	0.144
12_	Torque constant	mNm/A	1.55	2.84	3.62
13_	Speed constant	rpm/V	6160	3360	2640
14_	Speed/torque gradient	rpm/mNm	7130	6260	6110
15_	Mechanical time constant	ms	1.86	1.64	1.6
16_	Rotor inertia	gcm ²	0.0249	0.0249	0.0249

Thermal data

17_	Thermal resistance housing-ambient	K/W	51.2
18_	Thermal resistance winding-housing	K/W	4.11
19_	Thermal time constant winding	s	0.874
20_	Thermal time constant motor	s	154
21_	Ambient temperature	$^{\circ}$ C	-20...+85
22_	Max. winding temperature	$^{\circ}$ C	+125

Operating Range



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

Mechanical data ball bearings

23_	Max. speed	rpm	50 000
24_	Axial play	mm	0...0.07
	Preload	N	0.3
	Direction of force		pull
25_	Radial play		preloaded
26_	Max. axial load (dynamic)	N	0.2
27_	Max. force for press fits (static) (static, shaft supported)	N	10
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	6
32_	Typical noise level [rpm]	dBA	49 [50 000]

maxon Modular System

maxon gear	Stages [opt.]	maxon sensor	maxon motor control
332_GPX 8 A	1-5	for motor type A: 444_ENX 8 MAG	500_ESCON Module 24/2 501_ESCON 36/3 EC
		for motor type A + B: 445_ENX 8 EASY INT 446_ENX 8 EASY INT Abs.	501_ESCON Module 50/4 EC-S 505_DEC Module 24/2 510_EPOS4 Mod./Comp. 24/1.5

Details on catalog page 34.

Connection A (flat band cable AWG 28, pitch 1.27 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 signal: CMOS compatible
 Output current per channel: max 0.5 mA

Connection B (flat band cable AWG 28, pitch 1.27 mm)

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

Configuration

Shaft front: length
 Electric connection: flex or cable, cable length
 Cable insulation: PVC/PO/FEP

¹ For type A:
 PVC-cable (-20...85 $^{\circ}$ C)
 PO- and FEP cable (-30...85 $^{\circ}$ C)
 For type B:
 PVC-cable (-20...100 $^{\circ}$ C)
 PO- and FEP cable (-40...100 $^{\circ}$ C)

Cable and plug configuration: Adapter
 Micromotor (Part number 498157)
 required for all maxon controllers.

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