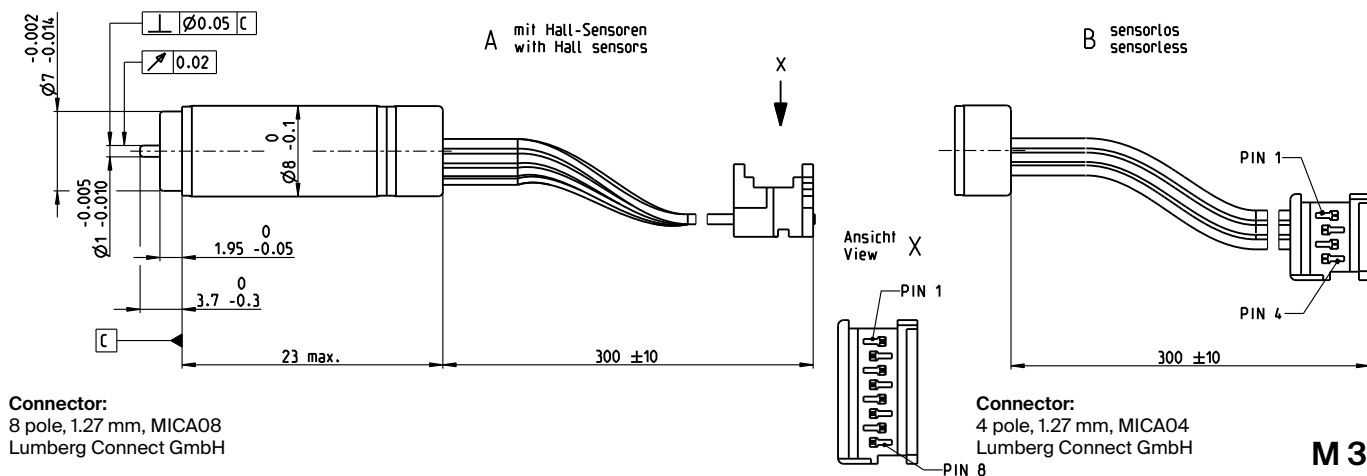


ECX SPEED 8 M Ø8 mm, brushless, BLDC motor

Key data: 2/4.7 W, 0.92 mNm, 50 000 rpm



ECX SPEED



Motor data							
1_	Nominal voltage	V	6	12	24		
2_	No load speed	rpm	35400	43300	42200		
3_	No load current	mA	105	69	33.2		
4_	Nominal speed	rpm	24200	33100	32300		
5_	Nominal torque	mNm	0.917	0.874	0.877		
6_	Nominal current (max. continuous current)	A	0.687	0.406	0.198		
7_	Stall torque	mNm	3.04	3.88	3.92		
8_	Stall current	A	1.98	1.54	0.755		
9_	Max. efficiency	%	61	63	64		
10_	Terminal resistance	Ω	3.02	7.8	31.8		
11_	Terminal inductance	mH	0.039	0.106	0.447		
12_	Torque constant	mNm/A	1.53	2.51	5.19		
13_	Speed constant	rpm/V	6230	3780	1840		
14_	Speed/torque gradient	rpm/mNm	12300	11700	11300		
15_	Mechanical time constant	ms	3.21	3.06	2.95		
16_	Rotor inertia	gcm ²	0.0249	0.0249	0.0249		
Thermal data			Operating range				
17_	Thermal resistance housing-ambient	K/W	51.2	n [rpm] Winding 12 V 60000 50000 40000 30000 20000 10000 0 0 0.5 1 1.5 M [mNm]			
18_	Thermal resistance winding-housing	K/W	3.5				
19_	Thermal time constant winding	s	0.811				
20_	Thermal time constant motor	s	154				
21_	Ambient temperature¹	°C	-20...+85				
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	0.3				
	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]				
Other specifications			Modular system				
29_	Number of pole pairs		1	Gear 372_GPX 8 A	Stages [opt.] 1-5	Sensor for motor type A: 495_ENX 8 MAG	Motor Control 547_DEC Module 24/2 550_ESCON Module 24/2 551_ESCON 36/3 EC 551_ESCON Module 50/4 EC-S
30_	Number of phases		3				
31_	Weight of motor	g	6				
32_	Typical noise level [rpm]	dBA	49 [50 000]				
			Details on catalog page 44				

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: pins/flexprint/cable length
Cable insulation: PVC/PO/FEP

¹For type A:
PVC-cable (-20...85°C)
PO- and FEP cable (-30...85°C)
For type B:
PVC-cable (-20...100°C)
PO- and FEP cable (-40...100°C)

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