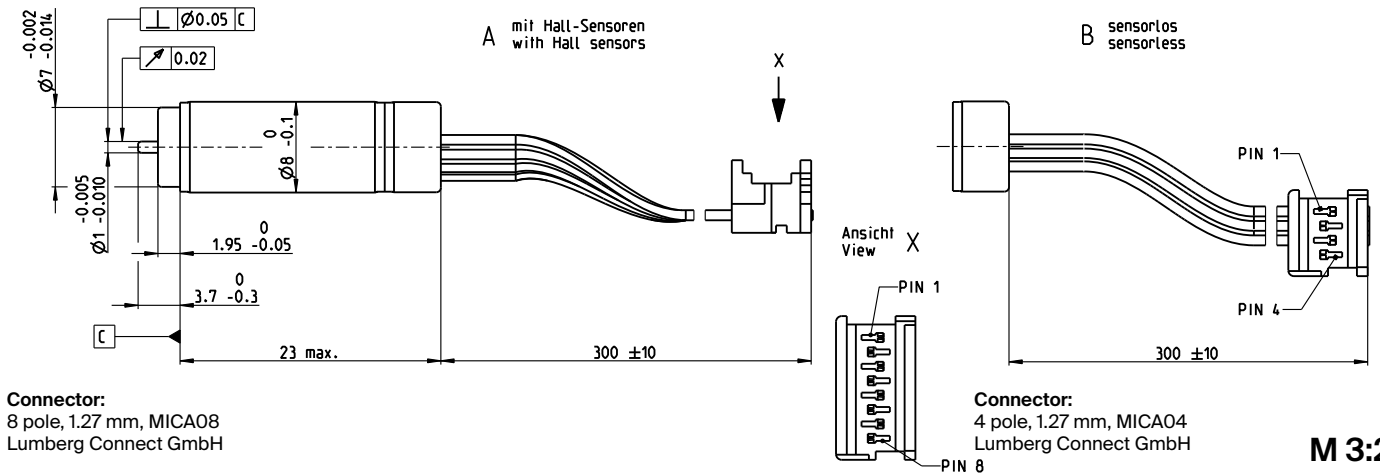


ECX SPEED 8 M Ø8 mm, brushless, BLDC motor

High Power

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



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	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 resistance housing-ambient	K/W	51.2	n [rpm]	Winding 9 V
Thermal resistance winding-housing	K/W	4.11		
Thermal time constant winding	s	0.874	60000	
Thermal time constant motor	s	154		
Ambient temperature ¹	°C	-20...+85	50000	
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		Details on catalog page 44	
29. Number of pole pairs	1	372_GPX 8 A	Stages [opt.]	1-5	Sensor	for motor type A: 495_ENX 8 MAG
30. Number of phases	3				Motor Control	547_DEC Module 24/2 550_ESCON Module 24/2 551_ESCON 36/3 EC 551_ESCON Module 50/4 EC-S 557_ESCON2 Nano 24/2 564_EPOS4 Module 24/1.5 566_EPOS4 Compact 24/1.5
31. Weight of motor	g	6				
32. Typical noise level [rpm]	dBA	49 [50 000]				

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.