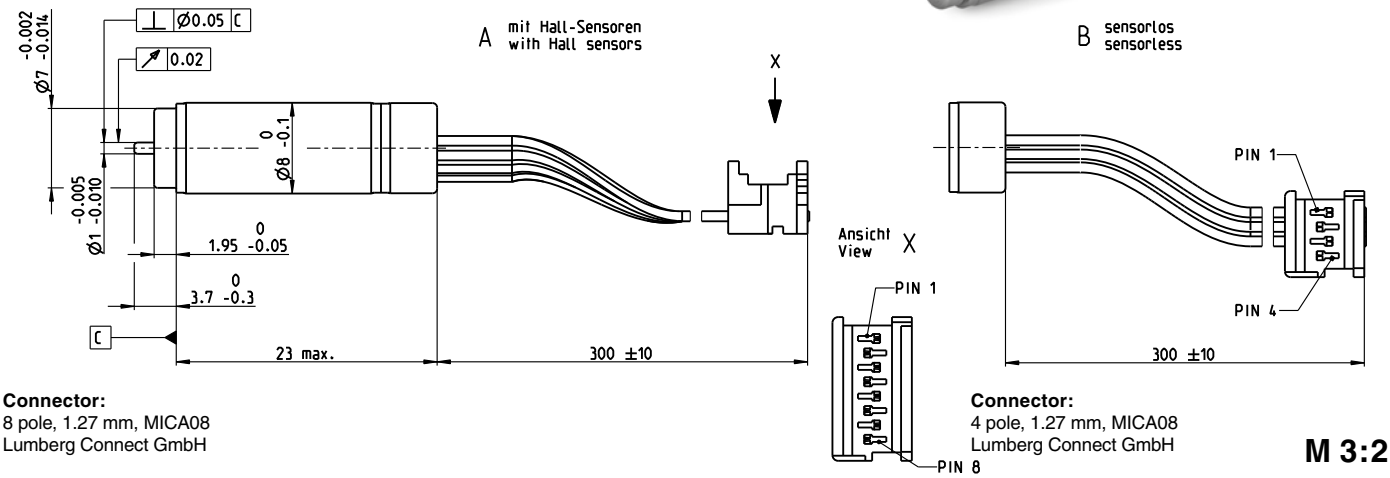
ECX SPEED 8 M brushless

BLDC motor Ø8 mm

High Power

3/6.0 W 1.24 mNm 50000 rpm

NEW



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

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

M 3:2

	Motor Data				
1_	Nominal voltage	V	6	9	12
2_	No load speed	rpm	37900	31400	33000
3_	No load current	mA	88.2	43.4	35.2
4_	Nominal speed	rpm	28000	22500	24300
5_	Nominal torque (max. continuous torque)	mNm	1.24	1.24	1.24
6_	Nominal current (max. continuous current)	A	0.913	0.5	0.393
7_	Stall torque	mNm	4.91	4.53	4.85
8_	Stall current	A	3.34	1.7	1.43
9_	Max. efficiency	%	71	71	72
10_	Terminal resistance	Ω	1.8	5.3	8.38
11_	Terminal inductance	mH	0.0264	0.0888	0.144
12_	Torque constant	mNm/A	1.47	2.67	3.39
13_	Speed constant	rpm/V	6500	3580	2820
14_	Speed/torque gradient	rpm/mNm	7940	7110	6980
15_	Mechanical time constant	ms	2.08	1.73	1.69
16_	Rotor inertia	gcm²	0.025	0.025	0.025

	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	0.906
20_	Thermal time constant motor	s	154
21_	Ambient temperature[1]	°C	-20…+85
22_	Max. winding temperature	°C	125

	Mechanical data ball bearings		
23_	Max. speed	rpm	50000
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	10
28_	Max. radial load [mm from flange]	N	2 [2]

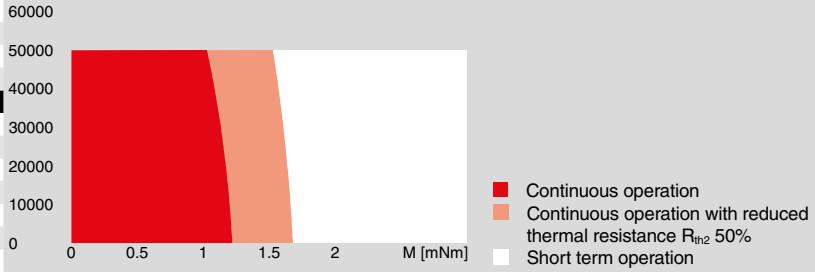
	Other specifications		
29_	Number of pole pairs		1
30_	Number of phases		3
31_	Weight of motor	g	6
32_	Typical noise level [rpm]	dBA	49 [50000]

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} 1.6…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.

Operating Range

n [rpm] Winding 9 V



maxon Modular System

maxon gear	Stages	maxon sensor	maxon motor control
56_GPX 8 A	1–5	for motor type B: 80_ENX 8 81_ENX 8 Abs.	378_ESCON Module 24/2 379_ESCON 36/3 EC 379_ESCON Module 50/4 EC-S 382_DEC Module 24/2 386_EPOS2 24/2 386_EPOS2 Module 36/2

Configuration

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

Notes

[1] For 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)

Adapter Micromotor (Part number 498157) required for all maxon controllers.

xdrives.maxonmotor.com