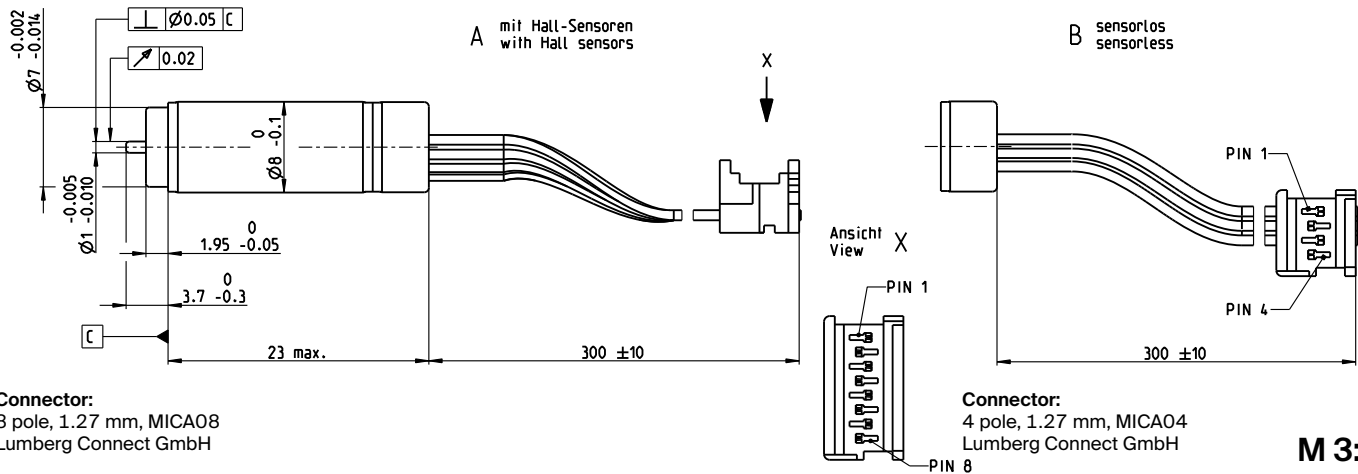


ECX SPEED 8 M \varnothing 8 mm, brushless, BLDC motor

Key Data: 2/4.7 W, 0.98 mNm, 50 000 rpm



ECX SPEED



M 3:2

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

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

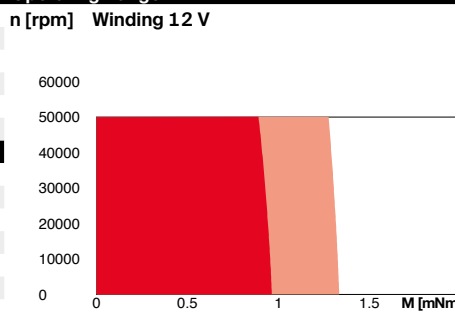
Motor Data

1_ Nominal voltage	V	6	12	24
2_ No load speed	rpm	35400	43300	42200
3_ No load current	mA	105	69.0	33.2
4_ Nominal speed	rpm	24200	33100	32300
5_ Nominal torque (max. continuous 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

17_ Thermal resistance housing-ambient	K/W	51.2
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 temperature	°C	-20...+85
22_ Max. winding temperature	°C	+125

Operating Range



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	11.0
28_ Max. radial load [mm from flange]	N	2 [2]

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

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°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.