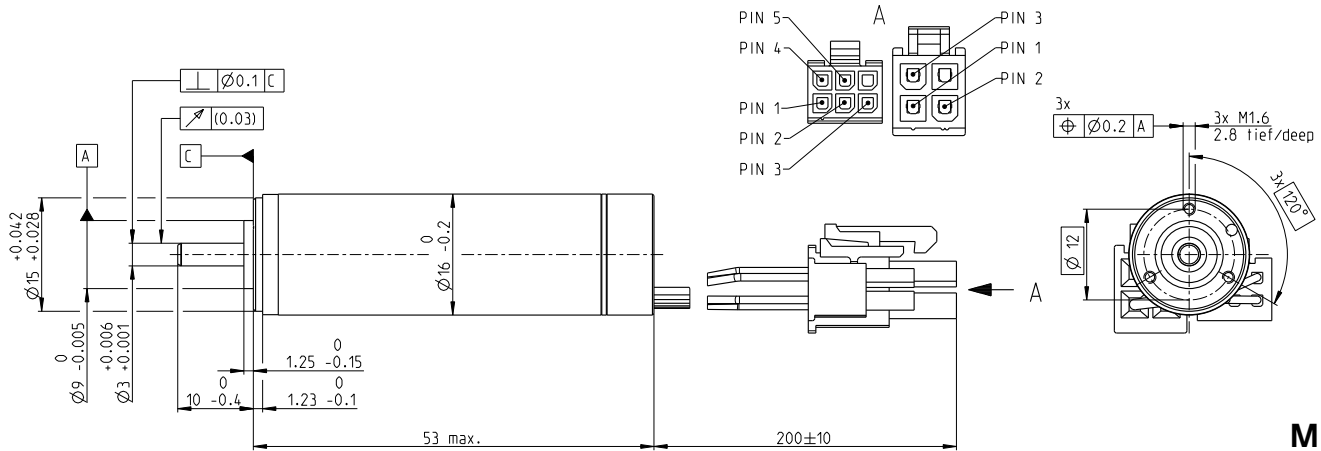


ECX PRIME 16 L Ø16 mm, brushless, BLDC motor

Key Data: 50/53 W, 24.7 mNm, 25 000 rpm



ECX PRIME



M 1:1

Motor data

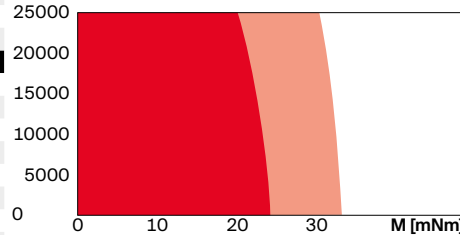
1_	Nominal voltage	V	24	36
2_	No load speed	rpm	17700	19900
3_	No load current	mA	97.2	78.6
4_	Nominal speed	rpm	16200	18400
5_	Nominal torque	mNm	24.7	23.7
6_	Nominal current (max. continuous current)	A	1.99	1.45
7_	Stall torque	mNm	316	339
8_	Stall current	A	23.6	19.7
9_	Max. efficiency	%	87.8	88.1
10_	Terminal resistance	Ω	1.01	1.83
11_	Terminal inductance	mH	0.033	0.0586
12_	Torque constant	mNm/A	12.9	17.2
13_	Speed constant	rpm/V	740	555
14_	Speed/torque gradient	rpm/mNm	58.2	58.9
15_	Mechanical time constant	ms	1.39	1.41
16_	Rotor inertia	gcm ²	2.28	2.28

Thermal data

17_	Thermal resistance housing-ambient	K/W	16.7
18_	Thermal resistance winding-housing	K/W	1.65
19_	Thermal time constant winding	s	5.76
20_	Thermal time constant motor	s	462
21_	Ambient temperature	°C	-20...+100
22_	Max. winding temperature	°C	155

Mechanical data ball bearings

23_	Max. speed	rpm	25 000
24_	Axial play	mm	0..0.14
	Preload	N	1.0
	Direction of force	push	
25_	Radial play	preloaded	
26_	Max. axial load (dynamic)	N	1.0
27_	Max. force for press fits (static)	N	50
	(static, shaft supported)	N	1000
28_	Max. radial load [mm from flange]	N	10 [5]



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

Other specifications

29_	Number of pole pairs	2
30_	Number of phases	3
31_	Weight of motor	g 66
32_	Typical noise level [rpm]	dBA 52 [20 000]

Modular system

Gear	Stages
381_GPX 16 A/C	1-2
382_GPX 16 LN/LZ	1-2
383_GPX 16 HP	2-3
386_GPX 19 A/C	3-4
387_GPX 19 LN/LZ	3-4
388_GPX 19 HP	4

Sensor

507_ENX 10 EASY
508_ENX 10 EASY XT
509_ENX 16 EASY
510_ENX 16 EASY XT
511_ENX 16 EASY Abs.
512_ENX 16 EASY Abs. XT
519_ENX 16 RIO

Motor Control

547_DEC Module 50/5
551_ESCON 36/3 EC
551_ESCON Module 50/5
553_ESCON 50/5
557_ESCON2 Micro 60/5
564_EPOS4 Module 50/5
567_EPOS4 Compact 50/5
569_EPOS4 50/5
570_EPOS4 Disk 60/8

Connection motor (Cable AWG 22)

- Pin 1 Motor winding 1 (red)
- Pin 2 Motor winding 2 (black)
- Pin 3 Motor winding 3 (white)
- Pin 4 N.C.

Connector, Part number

Molex, 39-01-2040

Connection sensors (Cable AWG 26)

- Pin 1 Hall sensor 1 (yellow)
- Pin 2 Hall sensor 2 (brown)
- Pin 3 Hall sensor 3 (grey)
- Pin 4 GND (blue)
- Pin 5 V_{Hall} 3...24 VDC (orange)
- Pin 6 N.C.

Connector, Part number

Molex, 430-25-0600

Wiring diagram for Hall sensors see p. 67

Configuration

- Flange back: end cap/flange with thread holes
- Shaft front/back: length/diameter
- Electric connection: cable length/connector/connection alignment