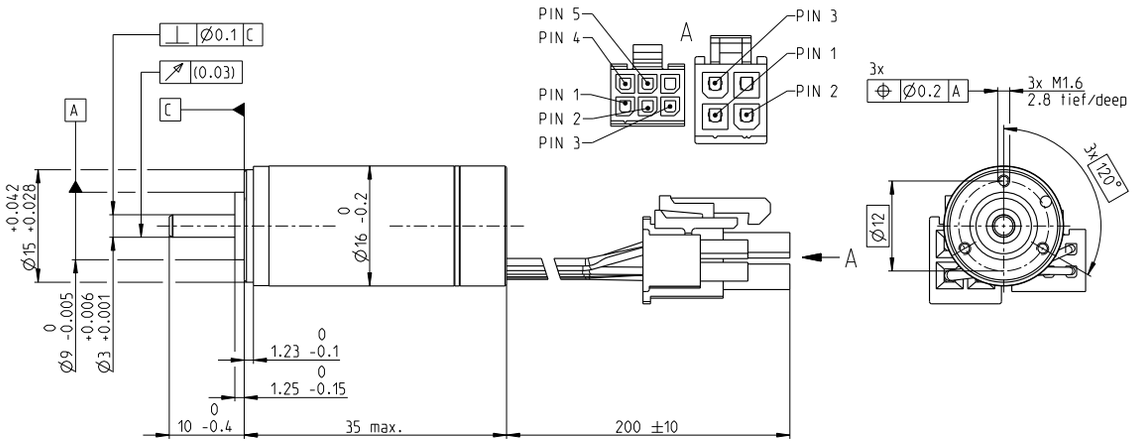
ECX PRIME 16 M ∅16 mm, brushless, BLDC motor

NEW



Key Data: 25/32 W, 14.6 mNm, 25 000 rpm

ECX PRIME



M 1:1

	Motor data				
1_	Nominal voltage	V	12	18	24
2_	No load speed	rpm	15600	15600	15600
3_	No load current	mA	103	69	51.8
4_	Nominal speed	rpm	12800	12800	12900
5_	Nominal torque	mNm	14.2	14.2	14.6
6_	Nominal current (max. continuous current)	A	2.02	1.35	1.04
7_	Stall torque	mNm	85.6	86.5	91.5
8_	Stall current	A	11.7	7.91	6.27
9_	Max. efficiency	%	82.4	82.5	83
10_	Terminal resistance	Ω	1.02	2.28	3.83
11_	Terminal inductance	mH	0.0485	0.111	0.193
12_	Torque constant	mNm/A	7.29	10.9	14.6
13_	Speed constant	rpm/V	1310	873	655
14_	Speed/torque gradient	rpm/mNm	184	182	172
15_	Mechanical time constant	ms	1.98	1.96	1.85
16_	Rotor inertia	gcm²	1.03	1.03	1.03

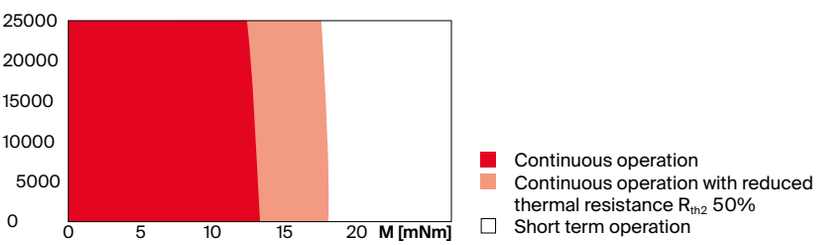
	Thermal data		
17_	Thermal resistance housing-ambient	K/W	17.3
18_	Thermal resistance winding-housing	K/W	1.98
19_	Thermal time constant winding	s	3.75
20_	Thermal time constant motor	s	209
21_	Ambient temperature	°C	-20...+100
22_	Max. winding temperature	°C	155

	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]

	Other specifications		
29_	Number of pole pairs		2
30_	Number of phases		3
31_	Weight of motor	g	43
32_	Typical noise level [rpm]	dBA	50 [20 000]

Operating range

n [rpm] winding 12 V



Modular system Details on catalog page 44

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

Configuration

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

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

© 2025 maxon. All rights reserved. March edition. Provisional data. Subject to change.