

ECX FLAT 42 M Ø42 mm, brushless, BLDC motor

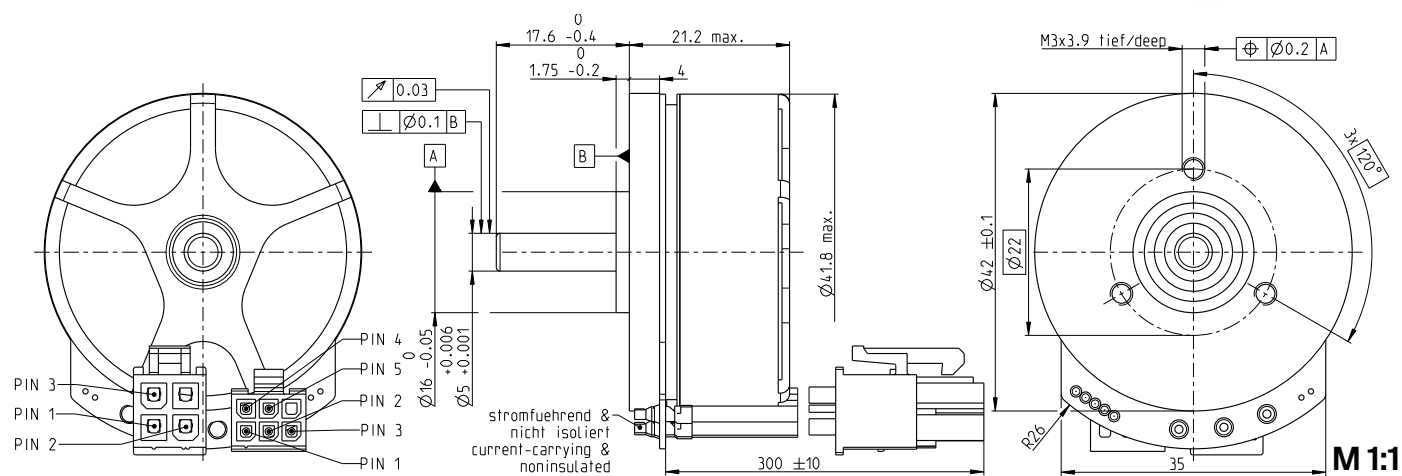
High Torque

Key Data: 150/224 W, 213 mNm, 10 000 rpm



NEW

ECX FLAT



M 1:1

Motor Data

1. Nominal voltage	V	24
2. No load speed	rpm	8050
3. No load current	mA	363
4. Nominal speed	rpm	6470
5. Nominal torque	mNm	214
6. Nominal current (max. continuous current)	A	7.34
7. Stall torque	mNm	1120
8. Stall current	A	103
9. Max. efficiency	%	83.5
10. Terminal resistance	Ω	0.233
11. Terminal inductance	mH	0.153
12. Torque constant	mNm/A	28.2
13. Speed constant	rpm/V	339
14. Speed/torque gradient	rpm/mNm	2.8
15. Mechanical time constant	ms	2.53
16. Rotor inertia	gcm ²	86.2

Thermal data

17. Thermal resistance housing-ambient	K/W	1.66
18. Thermal resistance winding-housing	K/W	3.01
19. Thermal time constant winding	s	20.1
20. Thermal time constant motor	s	92.2
21. Ambient temperature	°C	-40...+100
22. Max. winding temperature	°C	155

Mechanical data ball bearings

23. Max. speed	rpm	10000
24. Axial play at axial load		
	< 6 N	0 mm
	> 6 N	0.14 mm
Direction of force		pull
25. Radial play	preloaded	
26. Max. axial load (dynamic)	N	6
27. Max. force for press fits (static)	N	86
(static, shaft supported)	N	1300
28. Max. radial load [mm from flange]	N	40 [5]

Other specifications

Other specifications		
29_	Number of pole pairs	8
30_	Number of phases	3
31_	Weight of motor	g 127

Connections, motor (cable AWG 18)

Pin 1 Motor winding 1
Pin 2 Motor winding 2
Pin 3 Motor winding 3
Pin 4 N.C.

Connector, Part number

Molex, 39-01-2040

Connections, sensors (cable AWG 28)

Pin 1 Hall sensor 1
Pin 2 Hall sensor 2
Pin 3 Hall sensor 3
Pin 4 GND
Pin 5 V_{Hall} 2.7...24 VDC
Pin 6 N.C.

Connector, Part number

Molex, 43025-0600

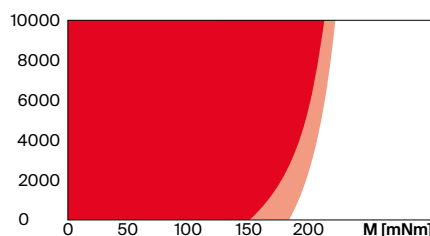
Circuit diagram for Hall sensors see page 67.

No pull-up resistor required.

Output signals: CMOS compatible push-pull stage.

Operating Range

n [rpm] winding 24 V



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

Modular System

Details on catalog page 42

Other specifications		Gear	Stages [opt.]	Sensor	Motor Control	
29_	Number of pole pairs	8	409_GPX 42 C	1-4	496_ENX 42 MILE	547_DEC Module 50/5
30_	Number of phases	3	409_GPX 42 UP	1-4		551_ESCON 36/3 EC
31_	Weight of motor	g	127			551_ESCON Module 50/5
						553_ESCON 50/5
						553_ESCON 70/10
						561_EPOS4 Micro 24/5 CAN
						561_EPOS4 Micro 24/5 EtherCAT
						562_EPOS4 Module 50/5
						563_Compact 24/5 EtherCAT 3-axes
						565_EPOS4 Compact 50/5
						565_EPOS4 Compact 50/8
						567_EPOS4 50/5
						568_EPOS4 Disk 60/8
						569_EPOS4 Disk 60/12

Connections, motor (cable AWG 18)

Pin 1 Motor winding 1

Pin 2 Motor winding 2

Pin 3 Motor winding 3

Pin 4 N.C.

Connector, Part number

Molex, 39-01-2040

Configuration

Flange: Standard flange/aluminum flange

Shaft, front: Length/shaft shoulder/faces

Shaft, rear: Length/shaft shoulder

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