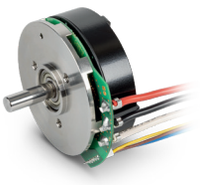
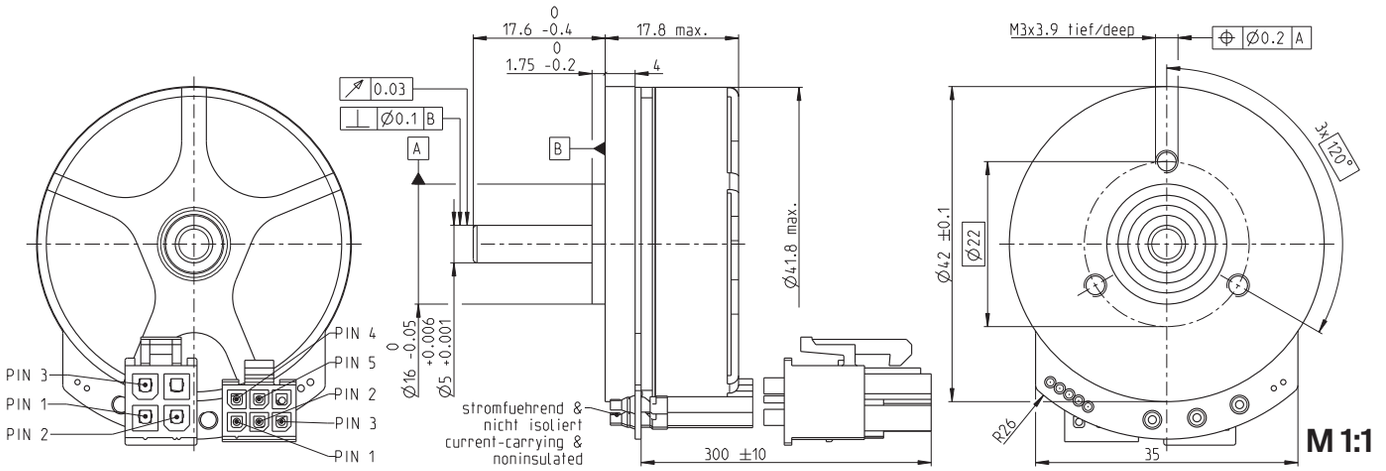
ECX FLAT 42 S ∅42 mm, brushless, BLDC motor

High Torque

Key data: 100/134 W, 133 mNm, 10 000 rpm

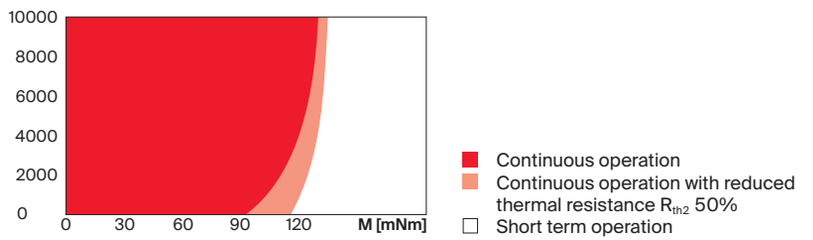




	Motor data			
1_	Nominal voltage	V	24	48
2_	No load speed	rpm	9140	8740
3_	No load current	mA	306	142
4_	Nominal speed	rpm	7340	7040
5_	Nominal torque	mNm	131	133
6_	Nominal current (max. continuous current)	A	5.33	2.59
7_	Stall torque[1]	mNm	618	634
8_	Stall current	A	67.6	34.2
9_	Max. efficiency	%	79.5	80
10_	Terminal resistance	Ω	0.355	1.41
11_	Terminal inductance	mH	0.178	0.779
12_	Torque constant	mNm/A	24.8	51.8
13_	Speed constant	rpm/V	385	184
14_	Speed/torque gradient	rpm/mNm	5.52	5
15_	Mechanical time constant	ms	3.78	3.42
16_	Rotor inertia	gcm²	65.3	65.3
	Thermal data			
17_	Thermal resistance housing-ambient	K/W	2.12	
18_	Thermal resistance winding-housing	K/W	3.53	
19_	Thermal time constant winding	s	15.2	
20_	Thermal time constant motor	s	118	
21_	Ambient temperature	°C	-40...+100	
22_	Max. winding temperature	°C	155	
	Mechanical data ball bearings			
23_	Max. speed	rpm	10 000	
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	35 [5]	
	Other specifications			
29_	Number of pole pairs		8	
30_	Number of phases		3	
31_	Weight of motor	g	106	

Operating range

n [rpm] winding 24 V



Modular system Details on catalog page 52

Gearheads	Stages [opt.]	Sensors
366_GPX 42 C	1–4	408_ENX 42 MILE
366_GPX 42 UP	1–4	
392_GSW 40 HP	1	
393_GSW 55 A	1	

Control Electronics
443_DEC Module 50/5
447_ESCON2 Micro 60/5
449_ESCON2 Compact 60/5
450_ESCON2 60/12
454_EPOS4 Micro 24/5 CAN
454_EPOS4 Micro 24/5 EtherCAT
455_EPOS4 Module 50/5
457_Compact 24/5 EtherCAT 3-axes
458_EPOS4 Compact 50/5
461_EPOS4 50/5

Configuration

Flange: standard flange
Shaft, front: length/shaft shoulder/faces
Shaft, rear: length/shaft shoulder

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 73.

[1]calculation does not include saturation effect (p. 93/129)

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