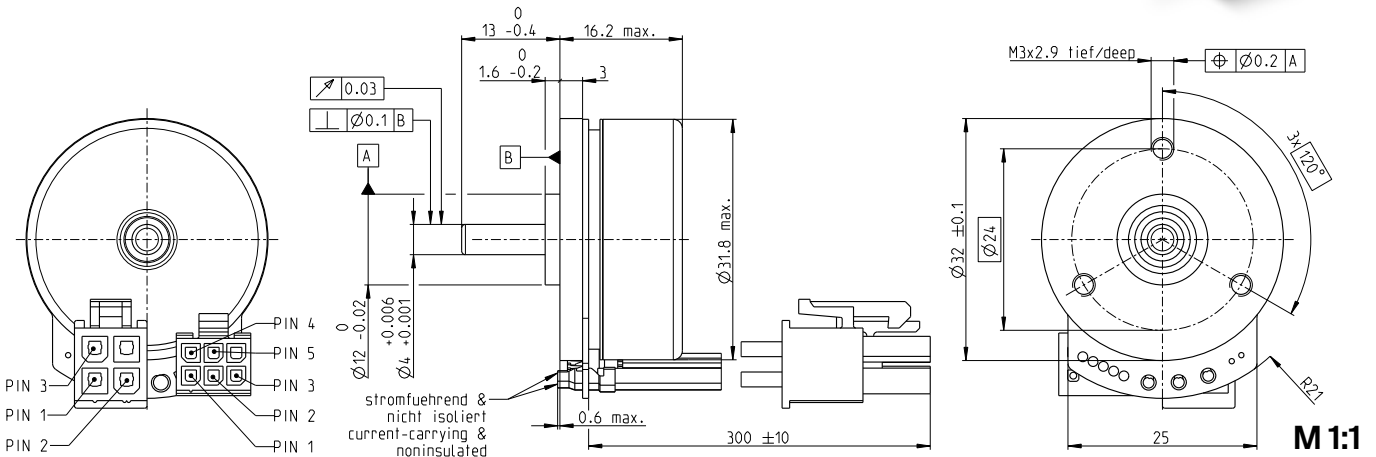


ECX FLAT 32 S Ø32 mm, brushless, BLDC motor

Key data: 35/50.7 W, 35 mNm, 14 000 rpm



M 1:1

Motor data

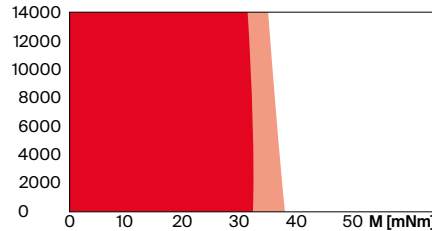
1. Nominal voltage	V	12	24	48
2. No load speed	rpm	11000	12200	13700
3. No load current	mA	179	106	64.8
4. Nominal speed	rpm	7320	8380	9600
5. Nominal torque	mNm	35	33.6	32.3
6. Nominal current (max. continuous current)	A	3.03	1.66	0.905
7. Stall torque ¹	mNm	107	114	117
8. Stall current	A	26.6	17.4	10.3
9. Max. efficiency	%	76.7	77.3	77.2
10. Terminal resistance	Ω	0.452	1.38	4.66
11. Terminal inductance	mH	0.345	1.12	3.53
12. Torque constant	mNm/A	10.2	18.3	32.6
13. Speed constant	rpm/V	937	521	293
14. Speed/torque gradient	rpm/mNm	41.6	39.2	41.8
15. Mechanical time constant	ms	14.2	13.4	14.3
16. Rotor inertia	gcm ²	32.6	32.6	32.6

Thermal data

17. Thermal resistance housing-ambient	K/W	3.99
18. Thermal resistance winding-housing	K/W	4.74
19. Thermal time constant winding	s	11.3
20. Thermal time constant motor	s	125
21. Ambient temperature	°C	-40...+100
22. Max. winding temperature	°C	125

Mechanical data ball bearings

23. Max. speed	rpm	14000
24. Axial play at axial load	< 4 N	0 mm
	> 4 N	0.14 mm
Direction of force		pull
25. Radial play	preloaded	
26. Max. axial load (dynamic)	N	4
27. Max. force for press fits (static)	N	45
(static, shaft supported)	N	1000
28. Max. radial load [mm from flange]	N	12 [5]



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

Other specifications

29. Number of pole pairs	6
30. Number of phases	3
31. Weight of motor	g 62.9

Connections, motor (cable AWG 20)

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 69.

¹calculation does not include saturation effect (p. 83/190)

Modular system

Gear	Stages [opt.]	Sensor
399_GPX 32 A/C	1-3	491_ENX 32 MILE
400_GPX 32 LN/LZ	1-3	
401_GPX 32 HP	2-4	
402_GPX 32 UP	1-4	
403_GPX 37 A	3	
404_GPX 37 LN/LZ	3	

Details on catalog page 44

Configuration

Flange: Standard flange/aluminum flange
Shaft, front: Length/shaft shoulder/faces
Shaft, rear: Length/shaft shoulder

Motor Control

547_DEC Module 24/2
547_DEC Module 50/5
550_ESCON Module 24/2
551_ESCON 36/3 EC
551_ESCON Module 50/5
553_ESCON 50/5
557_ESCON2 Nano 24/2
557_ESCON2 Micro 60/5
563_EPOS4 Micro 24/5 CAN
563_EPOS4 Micro 24/5 EtherCAT
564_EPOS4 Module 24/1.5
564_EPOS4 Module 50/5
565_Compact 24/5 EtherCAT 3-axes
566_EPOS4 Compact 24/1.5
567_EPOS4 Compact 50/5
569_EPOS4 50/5