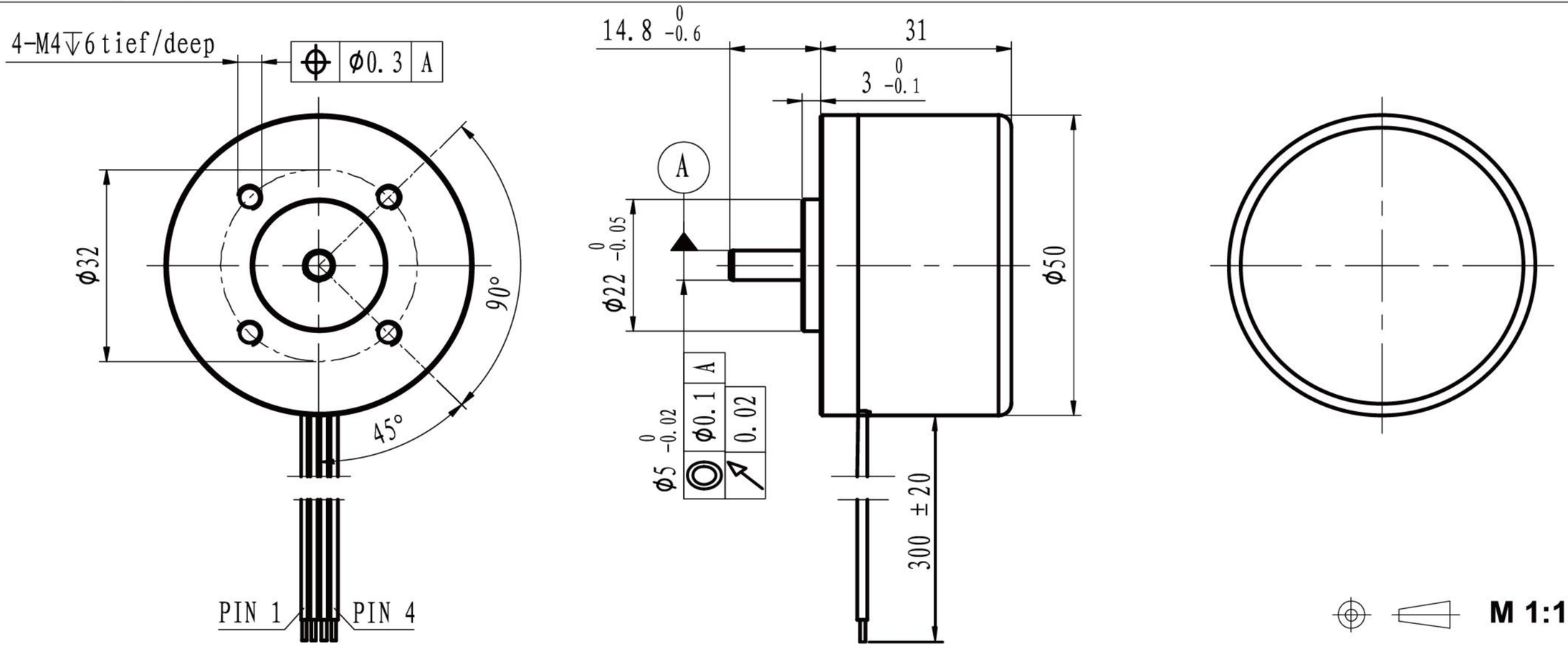
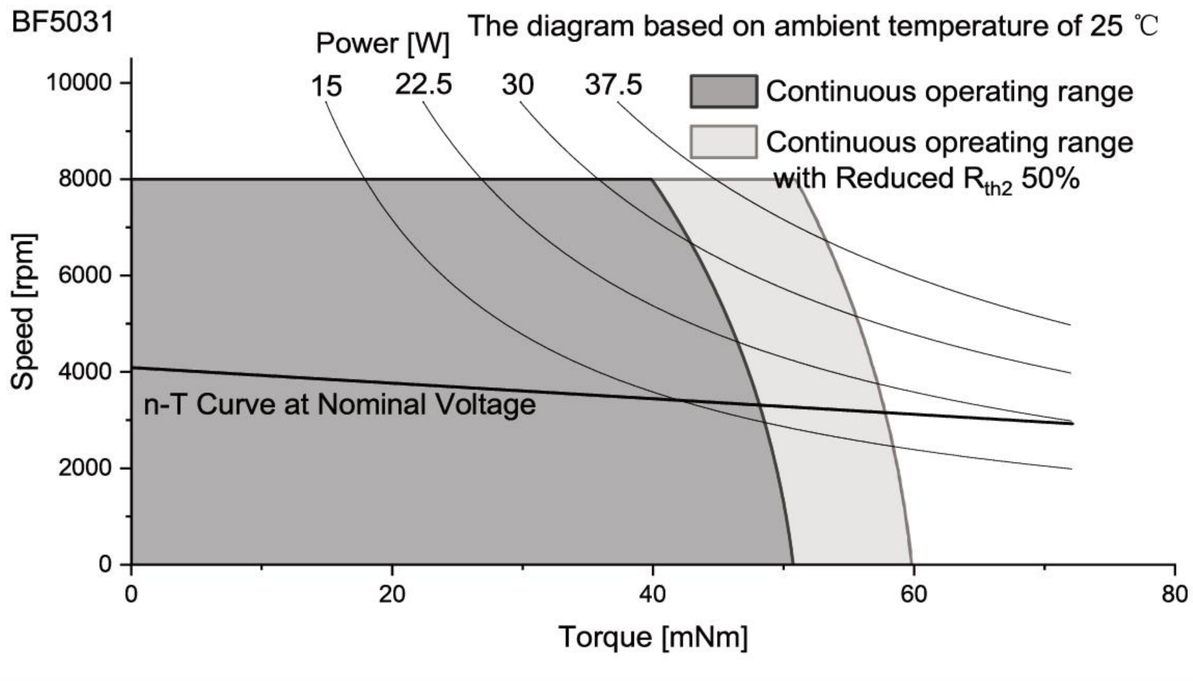
BF series. Outer Rotor BLDC Motor with int. controller

BF5031, Φ50mmX31mm



With hall sensor	BF5031S-...	1204	2404						
Motor data									
Values at nominal voltage									
1 Nominal voltage	V	12	24						
2 No load speed	rpm	4038	4021						
3 No load current	mA	170	90						
4 Nominal speed	rpm	3747	3521						
5 Nominal torque	mNm	30	30						
6 Nominal current	A	1.24	0.63						
7 Stall torque	mNm	416.08	241.30						
8 Stall current	A	15.00	4.41						
9 Max. efficiency	%	79.8	73.5						
10 Supply voltage +Vcc	V	10..28	10..28						
11 Direction of ratation		CW	CW						
12 Torque constant	mNm/A	28.06	55.83						
13 Speed constant	rpm/V	340	171						
14 Speed/torque gradient	rpm/mNm	10	17						
15 Mechanical time constant	ms	8.8	15.2						
16 Rotor inertia	gcm^2	87	87						
17 Thermal resistance housing-ambient	8.9 K/W								
18 Thermal resistance winding-housing	6.9 K/W								
19 Thermal time constant winding	22.5 s								
20 Thermal time constant motor	508 s								
21 Ambient temprature	-30…+100℃								
22 Max. permissible winding temperature	+150℃								
23 Max. permissible speed	8000 rpm								
24 Axial play at axial load <8 N	0 mm								
>8 N	max. 0.3 mm								
25 Radial play	preloaded								
26 Max. axial load (dynamic)	7.5 N								
27 Max.force for press fits (static)	100 N								
(static, shaft supported)	2700 N								
28 Max. radial loading, 5mm from flange	25 N								
29 Number of pole pairs	5								
30 Number of phases	3								
31 Weight of motor	108 g								

Operating Range



Controller features

Sensor, Open loop, Imax < 4A

Overload protection, Stall protection

Max. temperature of electronics +105℃

Connection

Conection

Pin 1	+VCC	AWG24	red
Pin 2	GND	AWG24	black
Pin 1	SP	AWG24	blue
Pin 2	FG	AWG24	yellow

PVC

Caution:
Incorrect lead connection will damage the controller!

Configuration

Function: On&Off/Direction/Speed control/Brake
Speed closed&open-loop Control/Speed feedback
Performance: Customized in the continuous operating range
Ball bearing: Preload
Flange: Standard frange front&back/customize the frange
Shaft: Length/Diameter/Cut face
Leadwire: PVC/Silicon/Teflon/UL No/Dimension/length
Connector: JST/MOLEX/TE

More:
Please contact our sales engineers