

# BO2820N2B $\varnothing 27.6\text{mm} \times 20.1\text{mm}$ , 外转子无传感器 Outer Rotor, Sensorless

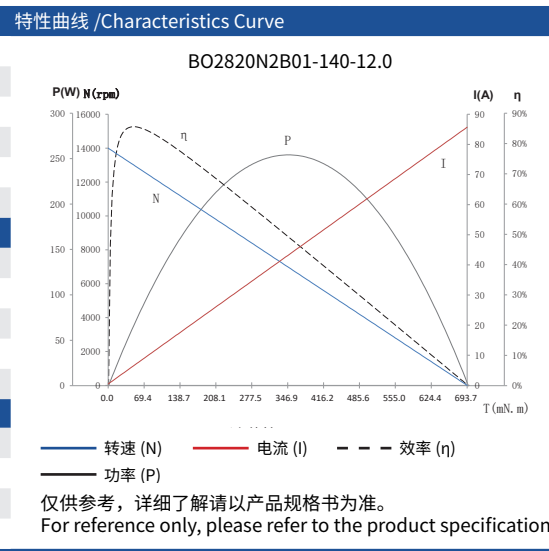
应用领域: 无人机、航模等驱动领域。  
Applications: UAV, aeromodelling, etc.

				01-140-12.0	02-140-24.0	03-140-36.0
<b>电机参数 / Motor Data</b>						
1	电压	Voltage	V	12.0	24.0	36.0
2	端电阻	Terminal resistance	$\Omega$	0.14	0.58	1.22
3	空载转速	No-load speed	rpm	14000	14000	14000
4	空载电流	No-load current	A	0.48	0.24	0.16
5	堵转转矩	Stall torque	mNm	698	664	718
6	堵转电流	Stall current	A	86.3	41.2	29.6
7	额定转矩	Nominal torque	mNm	68.5	75	73
8	额定转速	Nominal speed	rpm	10350	10680	11310
9	额定电流	Nominal current	A	9.1	4.7	3.0
10	最大输出功率	Max. output power	W	256	244	263
11	最大效率	Max. efficiency	%	85.6	85.1	85.9
12	反电势常数	Back-EMF constant	mV/rpm	0.9	1.7	2.6
13	转矩常数	Torque constant	mNm/A	8.1	16.2	24.4
14	电感	Terminal inductance	mH	1168	585	389
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	20.1	21.2	19.5
16	转子惯量	Rotor inertia	$\text{gcm}^2$	19	19	19
17	重量	Weight	g	41	41	41

<b>热参数 / Thermal Data</b>			
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W 2.3
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W 2
20	热时常数 (电机)	Thermal time constant motor	s 280
21	热时常数 (线圈)	Thermal time constant winding	s 37
22	工作温度范围	Operating temperature range	$^{\circ}\text{C}$ -40~+120
23	绕组耐温等级	Thermal class of winding	$^{\circ}\text{C}$ 180

<b>机械参数 / Mechanical Data</b>			
24	轴向间隙	Axial play	mm 0.012
25	径向间隙	Radial play	mm 0.008
26	动态轴向载荷	Axial load dynamic	N 5
27	静态轴向载荷	Axial load static	N 80
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N 29

<b>其它参数 / Other Specifications</b>			
29	极对数	No. of pole pairs	7
30	滚珠轴承	Ball bearings	2
31	换向结构	Commutation structure	sensorless
32	防护等级	Protection class	IP20



<b>可选配置 / Options</b>		<b>端子定义 / Connection</b>	
齿轮箱: 行星齿轮 Gearbox: planetary gearbox	齿轮组主要技术指标详见第 157 页 the main technical parameters are detailed on page 157	无传感器 / sensorless	AWG 22
性能 Special coils: 连续运行范围内可定制 customizable in continuous operation range		Pin1	U red
编码器 Encoder/ 驱动器 Driver: 可定制 customizable upon request		Pin2	V white
法兰 Flange: 标准前后法兰 standard front and rear flanges / 定制法兰 custom flanges		Pin3	W black
轴 Shaft: 长度 length / 异形 shape			
轴承类型 Bearing type: 含油轴承 sleeve bearings / 滚珠轴承 ball bearings			
电气连接 Electrical connection: 端子或导线 connector or wire / 导线长度 lead wires length			

