

E 22 Ø22 brushless 100W 无刷 100W

				Order number	
				100335	100336
Motor parameters					
1	Nominal voltage 额定电压	U_N	V	18	24
2	Terminal resistance, phase to phase 相间电阻	R	Ω	0.175	0.274
3	Output power 最大输出功率	P_{2max}	W	160	162
4	Efficiency 最大效率	η_{max}	%	88	89
5	No-load speed 空载转速	n_0	rpm	30500	29500
6	No-load current 空载电流	I_0	A	0.395	0.279
7	Stall torque 堵转转矩	M_H	mNm	627	688
8	Friction torque 摩擦转矩	M_F	mNm	0.53	0.53
9	Friction torque coefficient 摩擦转矩系数	C_F	mNm/rpm	4.2E-05	4.2E-05
10	Speed constant 速度常数	k_n	rpm/V	1701	1233
11	Back-EMF constant 反电动势常数	k_E	mV/rpm	0.59	0.81
12	Torque constant 转矩常数	k_M	mNm/A	5.61	7.74
13	Current constant 电流常数	k_I	A/mNm	0.178	0.129
14	Slope of n-M curve 转速-转矩曲线斜率	$\Delta n / \Delta M$	rpm/mNm	53.0	43.6
15	Mechanical time constant 机械时间常数	τ_m	ms	2.15	1.97
16	Rotor inertia 转子惯量	J	gcm ²	4.12	4.12
17	Angular acceleration 最大角加速度	α_{max}	10 ³ rad/s ²	1521	1669
18	Thermal resistance 热阻	R_{th1} / R_{th2}	K/W	1 / 7	
19	Thermal time constant 热时间常数	τ_{w1} / τ_{w2}	s	5 / 360	
20	Operating temperature range 工作温度范围		°C	-30 ... +85	
21	Shaft bearings 轴承			ball bearing, preloaded	
22	Shaft load max 轴载荷				
	- radial at 3,000/20,000rpm (4.5mm from bearing)		N	30 / 15	
	- axial at 3,000/20,000rpm (axial push-on only)		N	18 / 12	
	- axial at standstill (axial push-on only)		N	75	
23	Shaft play 轴间隙				
	- radial 径向	<=	mm	0.015	
	- axial 轴向	<=	mm	0.1	
24	Magnet material 永磁材料			Sintered Nd-Fe-B	
25	Housing material 外壳材料			Aluminum, back anodized	
26	Pole pairs 极对数		p	1	
27	Weight 重量		g	135	
28	Direction of rotation 旋转方向			Electronically reversible	
Operating Data for η_{max} of Customer's Specifications					
29	Output power 输出功率	P_{2opt}	W	145	137
30	Efficiency 效率	η_{opt}	%	89	89
31	Speed 转速	n_{opt}	rpm	28300	27100
32	Load current 电流	I_{opt}	A	9.03	6.44
33	Operating torque 转矩	M_{opt}	mNm	49.0	48.2

Recommended values - mathematically independent of each other

34	max. operation speed 最高转速	$n_{e \max}$	rpm	60000	60000
35	max. operation torque 最大转矩	$M_{e \max}$	mNm	25.4	25.8
36	max. operation current 最大电流	$I_{e \max}$	A	5.07	3.73

Recommended areas for continuous operation

