

E 26 Ø26 brushless 120W 无刷 120W

				Order number			
				100341	100342	100343	100344
Motor parameters							
1	Nominal voltage 额定电压	U_N	V	12	24	36	48
2	Terminal resistance, phase to phase 相间电阻	R	Ω	0.154	0.546	1.243	2.114
3	Output power 最大输出功率	P_{2max}	W	170	172	171	170
4	Efficiency 最大效率	η_{max}	%	85	85	85	86
5	No-load speed 空载转速	n_0	rpm	25400	26300	26500	26300
6	No-load current 空载电流	I_0	A	0.469	0.284	0.177	0.115
7	Stall torque 堵转转矩	M_H	mNm	843	864	879	895
8	Friction torque 摩擦转矩	M_F	mNm	0.53	0.53	0.53	0.53
9	Friction torque coefficient 摩擦转矩系数	C_F	mNm/rpm	6.4E-05	6.4E-05	6.4E-05	6.4E-05
10	Speed constant 速度常数	k_n	rpm/V	2117	1096	736	548
11	Back-EMF constant 反电动势常数	k_E	mV/rpm	0.47	0.91	1.36	1.83
12	Torque constant 转矩常数	k_M	mNm/A	4.51	8.71	12.97	17.43
13	Current constant 电流常数	k_I	A/mNm	0.222	0.115	0.077	0.057
14	Slope of n-M curve 转速-转矩曲线斜率	$\Delta n/\Delta M$	rpm/mNm	72.3	68.7	70.5	66.5
15	Mechanical time constant 机械时间常数	τ_m	ms	2.15	1.97	1.83	1.65
16	Rotor inertia 转子惯量	J	gcm ²	4.12	4.12	4.12	4.12
17	Angular acceleration 最大角加速度	α_{max}	10 ³ rad/s ²	2045	2096	2132	2171
18	Thermal resistance 热阻	R_{th1} / R_{th2}	K/W	1.5 / 9			
19	Thermal time constant 热时间常数	τ_{w1} / τ_{w2}	s	8 / 450			
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	28 / 14			
	- axial at 3,000/20,000rpm (axial push-on only)		N	17 / 11			
	- axial at standstill (axial push-on only)		N	75			
23	Shaft play 轴间隙						
	- radial 径向	\leq	mm	0.015			
	- axial 轴向	\leq	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	90			
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	117	120	120	120
30	Efficiency 效率	η_{opt}	%	83	82	82	82
31	Speed 转速	n_{opt}	rpm	21800	22500	22500	22500
32	Load current 电流	I_{opt}	A	11.78	6.09	4.07	3.03
33	Operating torque 转矩	M_{opt}	mNm	51.2	51.1	50.8	50.9

Recommended values - mathematically independent of each other

34	max. operation speed 最高转速	$n_{e\ max}$	rpm	30000	30000	30000	30000
35	max. operation torque 最大转矩	$M_{e\ max}$	mNm	54.2	54.6	54.3	54.1
36	max. operation current 最大电流	$I_{e\ max}$	A	12.56	6.55	4.37	3.24

Recommended areas for continuous operation

