

E 35 Ø35 brushless 80W 无刷 80W

				Order number			
				100351	100352	100353	100354
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	0.6	1.21	2.83	4.45
3	Output power 最大输出功率	P_{2max}	W	109	101	101	101
4	Efficiency 最大效率	η_{max}	%	81	81	81	81
5	No-load speed 空载转速	n_0	rpm	7850	10500	11300	11800
6	No-load current 空载电流	I_0	A	0.207	0.192	0.128	0.106
7	Stall torque 堵转转矩	M_H	mNm	291	376	382	395
8	Friction torque 摩擦转矩	M_F	mNm	1.1	1.1	1.1	1.1
9	Friction torque coefficient 摩擦转矩系数	C_F	mNm/rpm	2.4E-04	2.4E-04	2.4E-04	2.4E-04
10	Speed constant 速度常数	k_n	rpm/V	661	442	317	248
11	Back-EMF constant 反电动势常数	k_E	mV/rpm	1.51	2.26	3.15	4.03
12	Torque constant 转矩常数	k_M	mNm/A	14.45	21.62	30.12	38.46
13	Current constant 电流常数	k_i	A/mNm	0.069	0.046	0.033	0.026
14	Slope of n-M curve 转速-转矩曲线斜率	$\Delta n / \Delta M$	rpm/mNm	27.5	24.7	29.8	28.7
15	Mechanical time constant 机械时间常数	τ_m	ms	10	11	11	11
16	Rotor inertia 转子惯量	J	gcm ²	34	34	34	34
17	Angular acceleration 最大角加速度	α_{max}	10 ³ rad/s ²	85	110	112	116
18	Thermal resistance 热阻	R_{th1} / R_{th2}	K/W	2.5 / 6.3			
19	Thermal time constant 热时间常数	τ_{w1} / τ_{w2}	s	23 / 1175			
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	108/73			
	- axial at 3,000/20,000rpm (axial push-on only)		N	50/30			
	- axial at standstill (axial push-on only)		N	130			
23	Shaft play 轴间隙						
	- radial 径向	<=	mm	0.015			
	- axial 轴向	<=	mm	0.2			
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	206			
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	47	68	76	79
30	Efficiency 效率	η_{opt}	%	78	75	73	72
31	Speed 转速	n_{opt}	rpm	6400	8320	8630	8950
32	Load current 电流	I_{opt}	A	5.05	3.76	2.91	2.26
33	Operating torque 转矩	M_{opt}	mNm	70.3	78.2	84.5	83.8

Recommended values - mathematically independent of each other

34	max. operation speed 最高转速	$n_{e \max}$	rpm	22000	22000	22000	22000
35	max. operation torque 最大转矩	$M_{e \max}$	mNm	47.1	44	43.9	44
36	max. operation current 最大电流	$I_{e \max}$	A	3.70	2.33	1.67	1.31

Recommended areas for continuous operation

