

**承 认 书**  
**SPECIFICATION**

客户名称(Customer): 强 复

客户料号(Material code of Customer): \_\_\_\_\_

我司料号 (Material code of our company): \_\_\_\_\_

品 称(Part Name): DC Brushless Fan

规 格(Model NO): A12025M12S 黑色环保安规风扇

线材端子(Lead Wire): 黑红黄 1007 26# 2.54/ 3P 导线框外 450mm 转黑红 2468 26#2.0/2P 导线长 50mm

日 期(Date): 2010-04-28

本产品符合 2002/95/EC 欧盟环保标准

※ 如蒙贵公司承认，请回签一份本承认书给本公司存档，谢谢！

**If you confirmed it, please return, thanks!**

本公司发行章 (Issue)

客户承认章 (Approved)

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		洪正雄

# 规格说明书 Specifications

## 1. 产品编号之识别方法 Identification of part number

### 1-1. 编号说明 Part number Descriptions:

举例说明 Example: A8025M12S

<b>A</b>	<b>80</b>	<b>25</b>	<b>M</b>	<b>12</b>	<b>S</b>	-	<b>P</b>
风扇型式 (Fan type)	外框尺寸 (Frame size)	外框厚度 (Frame thickness)	转速 (RPM Speed)	额定电压 (Rated Volts)	轴承类型 (Bearing Type)	保护装置 (Protection device)	性能 (Function)
A: Axial Fan	25: 25x25mm 20: 20x20mm	06: 06mm 10: 10mm	<b>LL:</b> Super low speed	<b>05:</b> 5V DC	<b>S:</b> Sleeve	- : With auto restart Protection device	<b>A:</b> <b>ACto DC</b>
B: Blower	30: 30x30mm V4: $\Phi$ 47mm	15: 15mm 18: 18mm	<b>L:</b> Low speed	<b>12:</b> 12V DC	<b>C:</b> 1 ball & 1 sleeve	:	<b>M:</b> PWM
D: Diagonal Fan	40: 40x40mm 50: 50x50mm 52: 52x52mm 60: 60x60mm 65: 65x65mm 70: 70x70mm 81: 81x81mm 80: 80x80mm 92: 92x92mm 100: 100x100mm 120: 120x120mm 135: 135X135mm 140: 140X140mm 160: $\Phi$ 160mm 175: $\Phi$ 175mm 190: $\Phi$ 190mm 220: $\Phi$ 220mm 230: $\Phi$ 230mm 300: $\Phi$ 300mm	20: 20mm 24: 24mm 25: 25mm 30: 30mm 32: 32mm 38: 38mm	<b>M:</b> Medium speed	<b>24:</b> 24V DC	<b>B:</b> One ball And Two balls	: Without auto restart Protection device	<b>P:</b> Auto restart protection
			<b>H:</b> High speed	<b>48:</b> 48V DC	<b>F:</b> Long life bearing		<b>T:</b> Temperature contrd
			<b>HH:</b> Double high speed	<b>120:</b> 120V AC			
			<b>TH:</b> Triple high speed	<b>230:</b> 230V AC			
			<b>FH:</b> Fourfold high speed				

1-2. 转速可依客户要求制作 RPM speed upon customer's request.

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## Specifications

### 2. 电源线长度及端子 Lead wire length and connector

2-1. 标准规格 Standard specifications: 黑红黄 1007 26# 2.54/3P 导线框外 450mm 转黑红 2468 26# 2.0/2P 导线长 50mm Lead wire length 450mm and connector

2-2. 可依客户要求制作 Customer-made is preferred

### 3. 机构 Mechanical

3-1. 外观尺寸 External dimension 参考附图 Refer to drawing

3-2. 重量 Weight 113g/pcs

3-3. 轴承 Bearing 含油轴承 Sleeve bearing

### 4. 电气特性 Electrical characteristics (在通风及额定电压条件下 in free air at rated voltage)

4-1. 额定电压 Rated voltage 12V

4-2. 额定电流 Rated current 0.32A

4-3. 运转电流 Operating current 0.30A

4-4. 额定输入功率 Rated input power 3.84W

4-5. 操作电压 Operating voltage range 6.0V~13.8V

4-6. 起动电压 Starting voltage 6.0V (ON/OFF)

4-7. 锁定电流 Locked current 0.35A (Reference)

#### 4-8. 特性定义 Characteristics definition

4-8-1. 额定电流 (4-2) & 额定转速 (5-1) & 额定操作功率 (4-3), 须在额定电压下 (4-1), 在常温 25℃ 环境下, 马达连续转 5 分钟达到规格下限, 10 分钟达到正常值

Rated current rated speed, and rated input power shall reach bottom line of specification after 5 minutes continuous rotation at rated voltage and reach standard specification after 10 minutes continuous at rated voltage.

4-8-2. 起动电压是指当突然通电后能够使风扇起动之最低电压

Starting voltage is the least voltage that enables to start the fan by sudden power on.

### 5. 效率 Efficiency

5-1. 风扇转速 Rated speed (范围 range) 1400±10%RPM

5-2. 最大风量 Maximum air flow 60.56CFM

5-3. 最大静压 Maximum static air pressure 2.04mm-H<sub>2</sub>O

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<b>6. 特性规格 Characteristics</b>	
6-4. 操作温度 Operating temperature	-10℃ ~+70℃
6-5. 储存温度 Storage temperature	-30℃ ~+85℃
6-6. 环境湿度测试 Environment humidity	10% (RH) 45℃ for 24 hours & 98% (RH) 45℃ for 24 hours
6-7. 绝缘阻抗强度 Insulation resistance	在本体与两条导线间加 500V 直流电压之绝缘阻抗在 10MΩ 以上 At least 10MΩ at 500 VDC between housing and both lead wires.
6-8. 绝缘耐压强度 Dielectric strength	必须能抵抗在本体与两线间加 500V 交流电压 1 分钟 1mA Withstand 500 VAC 1 minute 1mA between housing and both lead wires.
6-9. 预期寿命(MTBF): 指在额定电压及正常温度 25℃, 湿度 85%(RH)条件下连续运转 Life expectancy: continuous operation at rated voltage and normal temperature & humidity.	
6-9-1. 含油轴承寿命: 至少 20,000 小时 Sleeve bearing life expectancy: 20,000 hours minimum	
6-9-2. 长寿命轴承、一个滚珠与一个含油轴承预期寿命: 至少 30,000 小时 Long life bearing、 One ball and one sleeve bearing life expectancy: 30,000 hours minimum	
6-9-3. 一个滚珠轴承和双滚珠轴承预期寿命: 至少 40,000 小时 One ball bearing and Two balls bearing life expectancy: 40,000 hours minimum	
6-10. 端子抗拉强度 Tensile strength of connector	端子以 1 公斤的拉力拉扯 15 秒不会脱落 Connector will not be any broken at 1 kg for 15 seconds per piece.
6-11. 噪音分贝 Acoustic sound level	24.79Dba (Max)
<p>6-11. 噪音测试说明 Acoustic sound level test descriptions</p> <p>以额定电压在噪音实验中测试背景噪音 16.8 分贝 At rated voltage in sound proof room Background noise: 16.8dBA</p> <div style="text-align: center; margin-top: 20px;"> <p style="text-align: center;">悬吊 Suspension</p> <p style="text-align: center;">1 m</p> <p style="text-align: center;">麦克风感应器 MIC. sensor</p> <p style="text-align: center;">(对准风扇中心) (Aim to center of the fan)</p> <p style="text-align: center;">通风状态 Free air</p> <p style="text-align: center;">风扇 Fan</p> </div>	

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7. 安全规格 Safety	UL	CE	TÜV	环保
	E306362	200705005026	R50089316	SZR10904221562001C

8. 原材料 Material					
项次 Item	主要组件 Major components	材质或型式 Material & Specification	等级 Grade	UL 号码 UL No.	备注 Remark
8-1	外框 Fan housing	PBT 黑色方框 70% + Fiber 30%	94V-0	E107536	
8-2	扇叶 Fan blade	PBT 黑色叶 100% (弯 7 叶)	94V-0	E107536	
8-3	轴心 Stator core	不锈钢 Stainless steel (SUS420J2)			
8-4	轴承 Bearing	含油轴承 Sleeve bearing			
8-5	橡胶磁铁 Rubber magnet	铁锶粉末化合物 Strontium ferrite (BQB14W)			
8-6	硅钢片 Silicon steel strip	(H23) (H18)			
8-7	漆包线 Enameled copper wires	去膜直径 0.04~0.20mm Material & Specification 0.04~0.20mm	MW-2 UEW	E196473	耐热 Heat resistance 120 °C
8-8	印刷线路板 Printed Circuit Board	单层印刷线路板 Wiring printed single layer board		E317342	94V-0 T: 0.6mm
8-9	电源线 Lead wires	聚乙烯氯化物包铜线 Polyvinyl Chloride enameled copper wires (AWG)		E251491	黑线: 负极 红线: 正极 黄线: FG 讯号线 Black wire: - polarity Red wire: + polarity Yellow wire: FG
8-10	贴纸 Label	多元脂 Polyester		PGAA. LP3799	
8-11	Connector housing 端子接头	2.54/ 3P			

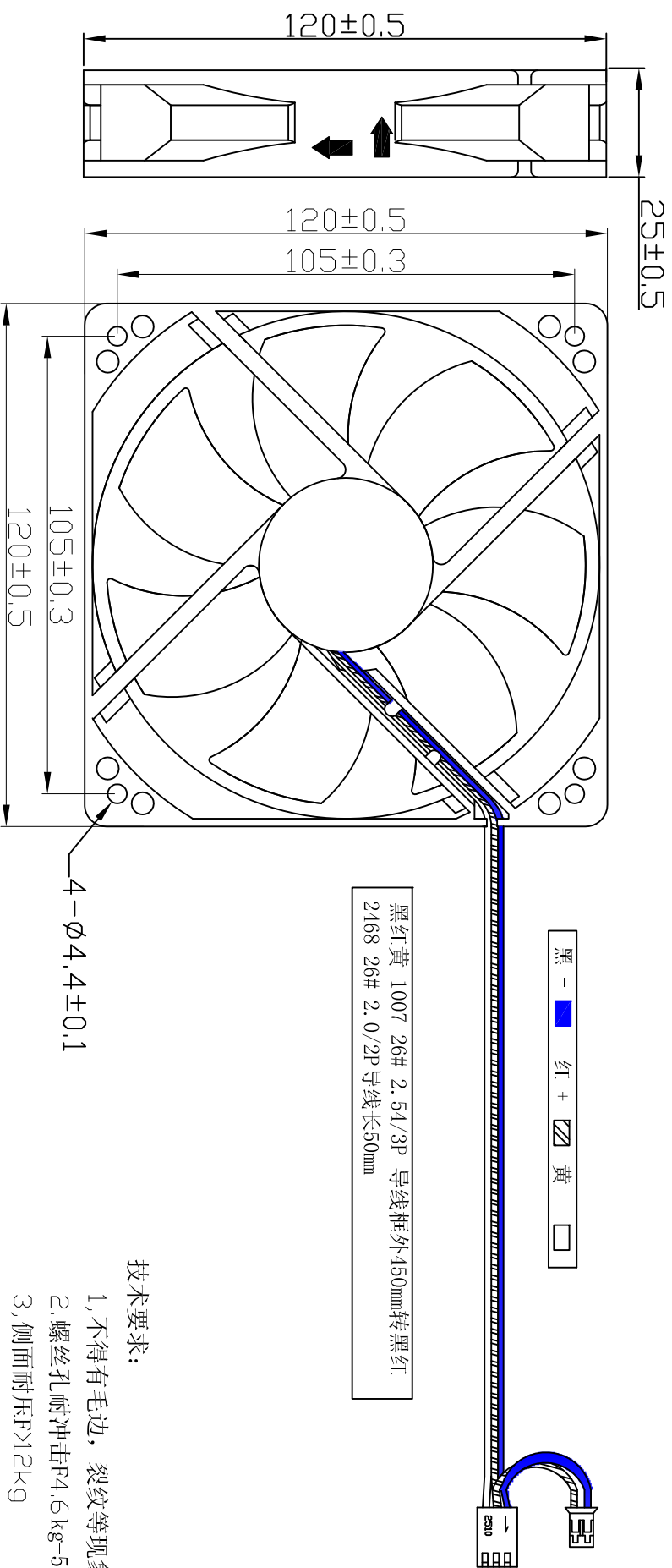
# 规格说明书

## Specifications

### 9. 注意事项 (Notes)

- 9-1. 使用时请勿超出本规格所规定之极限，否则我们不保证此产品  
We, Fu Fang will not guarantee the products if the application of our products are exceeded the limitation which is specified on the specification.
- 9-2. 倘若要变更此份文件的任何规格，请务必事先提出要求  
In case of changes of the specification specified on this document. A WRITTEN NOTICE IS REQUESTED IN ADVANCE.
- 9-3. 请勿触压着叶片以及电源线缠绕着风扇或用力拉扯电源线，如此轴心与电源线将会被损坏  
Please do not touch the impeller with the pressure and never bring the fan with lead wire. The bearing and lead wire may be damaged.
- 9-4. 本产品不保证因粉尘、水滴、小虫进入，而影响寿命与不良产生  
No guarantee on the products against the safety problem or failure caused by powder dust, drop of water or insect.
- 9-5. 如有任何数据及文件与此份数据不同，将以此份数据为主要参考  
If there is any data or related documentation different from this data sheet. This data sheet is the principle reference.
- 9-6. 请勿在可燃性气体与任何有害环境中使用  
Please do not use the fan in the environment of corrosive gas or liquid or any detrimental gas.
- 9-7. 请于六个月内使用，否则风扇存放在很高温或很低温及湿度很高的室温中，风扇于六个月后将可能会有漏电流产生  
Please do not store the fan in the environment of high/low temperature, high humidity or detrimental gas. Please store within six months, every six months, shall be a leakage of electric current to the fan, even though the fan is stored in room temperature.
- 9-8. 当风扇于运转中，请勿企图将风扇死锁特别长的时间。如此，会因连续停止不转，产生高热而烧毁风扇  
While the fan is in operation, please do not lock the fan intentionally for a long period of time, since the continuous stoppage will result in overheat and thus burnt out the fan..
- 9-9. 组装风扇时，请特别注意，因共振或振动产生的噪音  
During the installation of the fan, please pay substantial attention to possible notice caused by resonance vibration and shock.
- 9-10. 当搬运或作业中，风扇如从 60cm 的高度落下，将会对叶片的平衡产生若干影响，特别是滚珠轴承避免掉落。  
It is very important to notify that avoid to drop from 60cm height when in any movement or operation, it will impact the balance of blade. Especially ball bearing structure is avoided to drop down.
- 9-11. 锁外壳之螺丝扭力标准为 4.6kg-5.3kg  
The torque of the screw that locked the frame should standard 4.6kg-5.3kg.

符号	变更内容	变更原因	修改日期	修改者
△				
△				
△				



技术要求:

- 1, 不得有毛边, 裂纹等现象存在.
2. 螺丝孔耐冲击F4.6 kg-5.3kg
- 3, 侧面耐压F>12kg
- 4, 平面耐压F>12kg
- 5, 未注明倒角R0.2
6. 转速1400 ± 10% RPM

名稱		A12025M12S 黑色安规环保风扇				材質		版本		公差	
繪圖		游艳艳		日期	2010-04-28	表面處理		料號		0-3	±0.05
審查				日期						3-12	±0.10
核准				日期		投影				12-35	±0.15
						單位				35-70	±0.20
						mm				120???	±0.30
正極科技有限公司											