

产 品 规 格 书

PRODUCT SPECIFICATION

产品名称(NAME): 电容启动异步电机

产品型号(MODEL): 250FLW2

电机编码(MOTOR CODE): M2E09203-AF

订货编码(ORDER NO.):

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1. 命名规则 naming rule foe model

1、 产品代号说明

例： 250 F L W 2

1 2 3 4 5

1- 企业代号或风机叶轮直径；

2- 风机；

3- 离心；

4- 涡流

5- 电压（1： 115v, 2： 230v, 3： 380v）。

2、 电机代号说明

例： M2E - 092 - 03 - A - F

1 2 3 4 5 6 7

1- 电机；

2- 极数（2： 2 极， 4： 4 极， 6： 6 极， 8： 8 极）；

3- 输入电压（S： 115V， E： 230V， D： 380V）；

4- 电机外形直径；

5- 电机设计序号；

6- 交流电；

7- 绝缘等级（B： B 极， F： F 极）。

2. 产品标准和安规要求 production standard and safety regulations

1	产品符合的标准 The product satisfy requirements	☒ GB12350 《小功率电动机的安全要求》 GB12350 《Safety requirements of small power motors》
		☐ GB/T13275 《一般用途离心通用机通用技术条件要求》 GB/13275 《General technical requirements for general centrifugal fan》
		☒ EN60335-1 《家电和类似用途电器的安要求》 EN60335-1 《Household and similar electrical appliances-safety》
		☐ EN62368-1 《家电和类似用途电器的安全要求》 EN62368-1 《Household and similar electrical appliances-safety》
		☒ UL507 电风扇标准 UL507 electric fan standard
2	管理体系认证 Management system certification	☒ 质量管理体系 ISO9001: 2015 ☒ 环境管理体系 ISO14001: 2015 ☐ 职业健康安全管理体系 ISO 45001:2008
3	安规认证 certificate	☒ CCC 自我申明/CCC Self-declaration 自我申明编号/Self-declaration No:2024000401000296 依据的标准/According to the standard: GB/T12350-2022
		☒ CE
		☒ UL/CUL 证书编号/Certificate No:E539716
		☐ TUV 证书编号/Certificate No:
4	振动/Vibration of the fan	☒ 风机振动速度有效值按照 JB/T8689 标准规定。 Fan effective value of vibration velocity according JB/T8689 standard

3. 技术参数 General Specification

项目 ITEMS		规格/条件 Specification/condition		
1	外型尺寸(Outline. Dimension)	详见产品附图 see enclosed drawing		
2	电机类型 TYPE OF MOTOR	电容式外转子离心电机 Capacitive external rotor centrifugal motor		
3	电机极数 No. of Poles	2 极/2poles		
4	启动电压 Starting Voltage	额定电压 Rated voltage85%		
5	电压范围(Voltage range)	额定电压 Rated voltage $\pm 10\%$		
6	额定电压(Rated .voltage)/频率 (frequency)	230V	50HZ	60HZ
7	额定电流(Rated current)	额定电压试验 /Testing under the rated voltage	0.59A $\pm 10\%$	0.76A $\pm 10\%$
8	额定功率(Power consumption)		130W $\pm 10\%$	173W $\pm 10\%$
9	额定转速 (Rated speed)		2650RPM $\pm 10\%$	2970RPM $\pm 10\%$
10	最大风量: (Max Airflow)		1250 $\pm 5\%$ m ³ h	1350 $\pm 5\%$ m ³ h
11	最大静压: (Air .Static Pressure)		/	/
12	风扇叶轮 (Fan impeller)	阻燃 PA66 材质 注塑工艺(Flame retardant PA66 material injection molding process)		
13	运转方向 (Rotating Direction)	从扇叶面观测顺时针 View clockwise from the fan plane		
14	出风方向 (Air Outlet Direction)	直进 90° 出 rotation with 90° out		
15	运转温升 (Operating temperature)	标准温升 $\leq 60K$, 在额定电压 1.1 倍 (50Hz) 实验室环境温度 25℃ 下测试温升 The standard temperature rise is less than or equal to 60K. Test the temperature rise at 25 ° C in the laboratory with 1.1 times the rated voltage (50Hz)		
16	最大噪音 (Max Noise)	68/70dBa $\pm 5\%$		
17	寿命 (Life time)	风机耐久性试验:风机连续运转 50000 小时 不失效(在额定电压、环境温度为 25℃、湿度小于 70%RH、风机全速运转时)。 Fans endurance test: can continuous work within 50000hours (under nominal voltage, environmental temperature is 25℃、humidity< 70%RH、fans full-speed operation。		
18	故障报警 failure warning (选配 selectable)	报警/Alarm: ☐ 常闭型 closed ☐ 常开型 opened 无源触点 Passive touch spot, 触点负载 Touch spot loading: 8A/AC125V 6A/AC250V 8A/DC12V 6A/DC24V		

19	信号反馈 signal feedback (选配) FG 信号 signal	☐ FG 信号 signal																								
20	其它功能说明 (Description Of Other Functions)																									
21	重量(Weight)	2.42KG																								
22	生产地(Place of production)	中国上海 Shanghai, China																								
23	风量风压特性曲线 Air capacity and air pressure curve																									
	The graph illustrates the relationship between static pressure difference (Pa) and flow rate for two frequencies: 50Hz (solid line) and 60Hz (dashed line). The y-axis represents static pressure difference (Pa) with values 0, 150, 300, 450, and 600. The x-axis has two scales: flow rate in M³/h (0, 375, 750, 1125, 1500) and CFM (0, 200, 400, 600). Both curves show a downward trend, indicating that static pressure difference decreases as flow rate increases. The 60Hz curve is consistently higher than the 50Hz curve. <table><caption>Approximate data points from the graph</caption><thead><tr><th>Flow Rate (M³/h)</th><th>Flow Rate (CFM)</th><th>Static Pressure Difference (Pa) - 50Hz</th><th>Static Pressure Difference (Pa) - 60Hz</th></tr></thead><tbody><tr><td>0</td><td>0</td><td>~550</td><td>~650</td></tr><tr><td>375</td><td>~160</td><td>~450</td><td>~550</td></tr><tr><td>750</td><td>~320</td><td>~300</td><td>~450</td></tr><tr><td>1125</td><td>~480</td><td>~150</td><td>~300</td></tr><tr><td>1500</td><td>~640</td><td>~0</td><td>~150</td></tr></tbody></table>		Flow Rate (M³/h)	Flow Rate (CFM)	Static Pressure Difference (Pa) - 50Hz	Static Pressure Difference (Pa) - 60Hz	0	0	~550	~650	375	~160	~450	~550	750	~320	~300	~450	1125	~480	~150	~300	1500	~640	~0	~150
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4.0 主要材料/零件规格 Main Materials/parts Specification

材料/零件 (Materials/parts)		规格(Specification)
1	外框 (Housing)	
2	风扇叶轮 (Blade)	阻燃 PA66 材质 注塑工艺(Flame retardant PA66 material injection molding process)
3	轴承 (Bearing Type)	滚珠轴承 Ball Bearing 轴承规格 Bearing spec: NMB 608
4	漆包线 Enameled wire	QZY-2 180℃
5	引出线方式 (Lead way)	
	引线长度(Length of Lead)	400±20mm 测试线，默认不配
	导线规格 (Wire Specification)	UL3266 18AWG 125℃
6	阻燃等级 flame retardant rating	V-0: 对样品进行两次 10 秒的燃烧测试后，火焰在 30 秒内熄灭。不能有燃烧物掉下。V-0: The fire burn out within 30seconds after two times of 10seconds burning testing for samples. Not Allow the objects drop after burning.
7	引出线套管 lead wire pipe	热缩管 Heat-shrink tube
	端子 (Connector)	无端子
	端子外壳 terminal shell	无端子
8	电容 (capacitance)	CBB60 4.0μF/450VDB
9	(离心风机项目) 导风圈 (Inlet cones)	☐ 带/ Yes ☒ 不带/ No

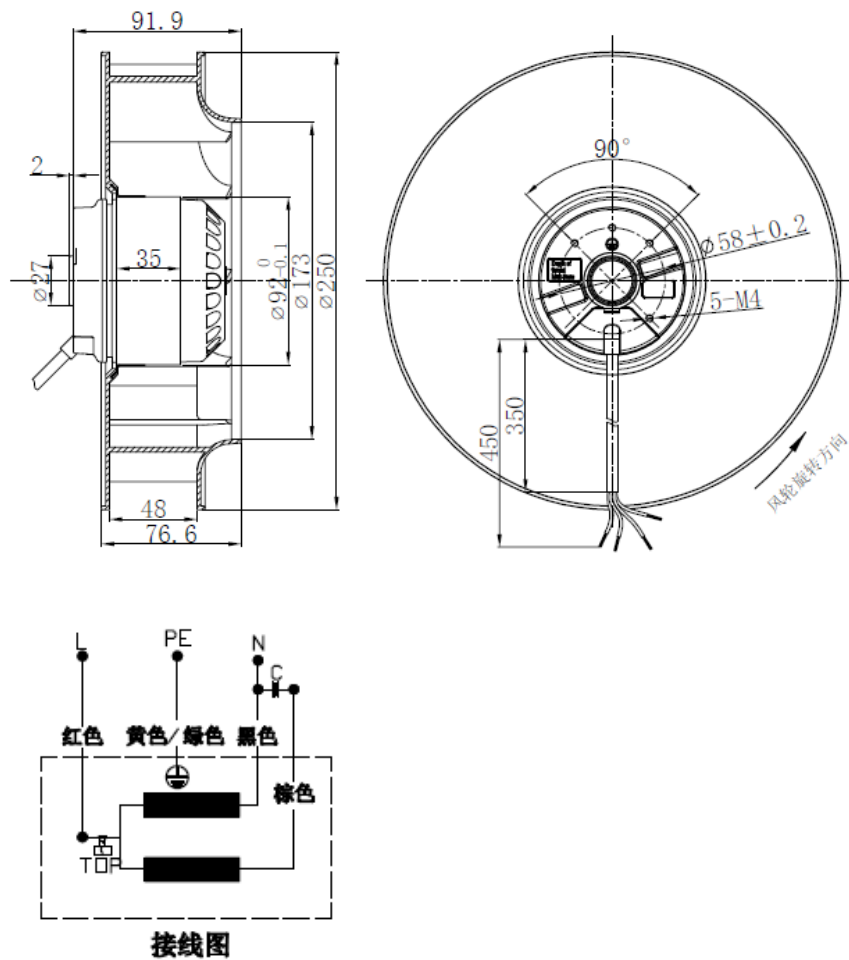
5.0 电性规格 Electrical Specifically

1	绝缘阻抗 Insulation Resistance	200M Ω /裸线与外转子端盖间测量 500VDC/1min 200M Ω / The measurement between the bare wire and the outer rotor end cover is at 500VDC/1min
2	绝缘耐压 Dielectric Strength	导线与外转子端盖间测量 between wire and the outer rotor end cover 1800VAc 5mA 1S
3	防护等级 INGRESS PROTECTION	IP20
4	电机保护类型 Motor protection type	过热保护 Overheat protection
5	热保护复位类型 Thermal protection reset type	机械式 Mechanical
6	保护器动作温度 Operating temperature of protector	130°C

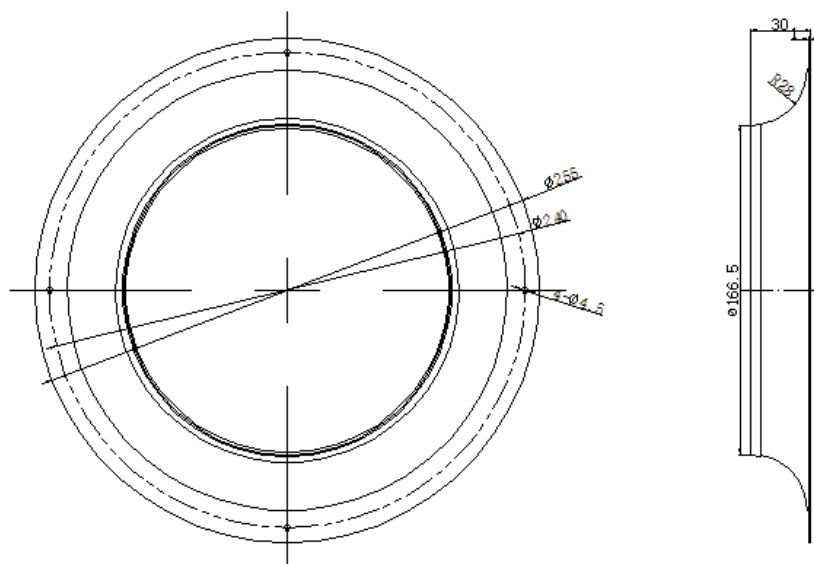
6.0 环境测试 Environmental Specification

1	运转温度范围 working temperature range	温度/Temperature: -30°C~+75°C
2	运转湿度范围 working humidity range	湿度/Humidity: 0-70%RH
3	保存温度范围 Keeping temperature range	温度/Temperature: -40°C~+70°C
4	保存湿度范围 Keeping humidity range	湿度/Humidity: 0-85%RH
5	绝缘等级 Insulation Shock	IEC61858 F 级
6	包装耐振动试验 Packing Vibration Test	包装后, XYZ 三方向施 1.1G load vibration test for 30min .No serious damage
7	包装耐冲击试验 Packing Shock Proof Test	捆包后, 高 60 公分, 1 棱角 3 边 6 面自然落 下, 无严重损坏.

7.0 外形安装图纸 Shape and installation drawings



8. 导风环尺寸图 Dimension drawing of the air guide ring



9.0 注意事项 Notes

1. 我们提供的产品应在规格书指定的条件内使用,如果您的应用超出规格极限,我们对此不保证产品质量。

Our products should be used within the specification appointed condition, so we will not guarantee this product quality if your application exceeds the limitations outlined in this specification.

2. 除非事先通知我们所需求参数,否则出货产品与此份规格书一致,未在此份规格书中指定的参数与贵公司最终承认的样品相同。

Product will be shipped in accordance with this specification unless we has been previously notified of parameters requiring exception, if parameters which are not specified in this specification.

3. 不适当的安装可能产生刺耳的共振,振动和噪音,安装时,请不要在安装点用力过度或用力不均以免造成振动或噪音. 在安装点装置减振器,可有效降低噪音及振动。Improper mounting may cause harsh resonance, vibration and noise. Please mount this fan motor properly without applying excessive or uneven force at the mounting points to avoid vibration and noise. Dampers at the mounting points can reduce noise and vibrations greatly.

4. 建议安装风扇保护罩,以免对人员造成意外伤害。

Please use fan guards to avoid personal accidental injuries.

5. 除非 IP 等级中有特殊说明,否则该款风扇只能在正常环境下操作。Unless this fan motor is specified for use in abnormal environments designated by IP rating level, this fan is designed to operate under normal environ mental conditions.

6. 请避免将 M-FAN 系列产品接触有毒物质 如:(有机物、氰、福尔马林、苯酚等)。以及在腐蚀性气体环境中使用如:(硫化氢、二氧化硫、二氧化氮等)。
Please avoid operating M-FAN's products in poisonous material (organic, cyanogens , formalin, phenol, etc.) or corrosive gas environment (H2S, SO2, NO2, etc.)

7. 当风扇在灰尘环境中使用时,请在风扇进风口处安装过滤装置以延长风扇使用寿命。 Please use filters to clean the air-intake in very dusty air environments for extended fan life.

8. 在保证产品性能及寿命不变,或者得以提升的条件下。 除非事先约定,我们保留使用同等规格多种来源零件的权利,原材料和结构的变更不做预先通知。
Unless prior agreement, We reserve the right to use components with equivalent specifications from multiple sources, so material and construction are subject to change without advance notice.

9. 请确保风扇在规定的温湿度储存环境中,如果风扇存储 6 个月以上,我们建议客户测试风扇功能后再使用。Always ensure that fans are stored according to the

storage temperatures specified. Do not store in a high humidity environment. If the fans are stored for more than 6 months, we recommend functional testing before using.

10.确定在连接和断开连接器之前关掉电源,避免产生电子零件短路。Make sure to turn off the power before connection or disconnecting the connectors. This may cause short of electronic parts.