



产 品 规 格 书

PRODUCT SPECIFICATION

名 称 (NAME): 无刷直流冷凝风机 Brushless DC cooling fan

型 号 (MODEL): LNF2(1)93202X/C

编 制 (MADE): _____

审 核 (CHECKED): _____

批 准 (APPROVED): _____



LNF2(1)93202X



LNF2(1)93202C

1.0 概述/ Introduction

本规格书主要描述了产品标准、使用环境、技术要求等.

This specification describes the standard、operation environment、and technical requirements of the product.

2.0 产品标准和安规要求/Requirement of production standard and safety regulations

2.1 本产品符合的标准 / The product satisfy requirements

2.1.1 GB12350 《小功率电动机的安全要求》

GB12350 《Safety requirements of small power motors》

2.1.2 GB / T13275 《一般用途离心轴流风机通用技术条件要求》

GB/T13275 《General technical requirement for general centrifugal fan》

2.1.3 EN60950-1 《信息技术设备的安全》

EN60950-1 《Safety of information technology equipment》

2.1.4 GB/T708-2004 《汽车空调技术条件》

GB/T708-2004 《Automotive air conditioning technology conditions》

2.1.5 Q/320506AHJ02 《汽车空调冷凝风机通用技术条件》

Q/320506AHJ02 《General technical conditions for Car conditioning cooling fan》

2.2 本产品全部材料符合 RoHS 要求.

All material accord with RoHS 。

3.0 使用环境/ Operating environment requirements

3.1 工作温度和湿度/ Operating temperature and humidity

工作温度范围: $-40^{\circ}\text{C}\sim+90^{\circ}\text{C}$, 工作湿度范围:5%~95% RH.

Operating temperatures from -40°C to $+90^{\circ}\text{C}$, Operating humidity from 5% to 95% RH.

3.2 贮存温度和湿度/Storing temperature and humidity

贮存温度范围: $-10^{\circ}\text{C}\sim+38^{\circ}\text{C}$, 贮存湿度范围:不大于85% RH.

Storing temperatures from -10°C to $+38^{\circ}\text{C}$; storing humidity not exceed 85% RH.

4.0 技术要求/ technical requirements

4.1 外形图/outline

见附图一 LNF293202X(吸风) 及附图二 LNF293202C (吹风)

4.2 叶轮、网罩/Impeller

叶轮、网罩均由 PA66+25%GF 材料制成, 材料符合UL-V1.

Impeller made of PA66+25%GF, material accord with UL-V1.

4.3 电机/Motor

外转子直流无刷电机,

External rotor brushless DC motor,

4.4 风机保护

风机具备堵转及过流、过压保护-当电源电压达到 33VDC 时风机具有自动停止工作功能。

Fan have blocked and over-current, over-voltage protection-when it comes to an 33VDC supply voltage fan has the function of automatically stop working

4.5 堵转保护/Locked-rotor protection

风机具备堵转保护功能.

Fans have blocked protection function.

4.6 振动/Vibration of the fan

风机振动值 ≤ 1.2 mm/s, 测试方法按照JB/T 8689标准规定.

Vibration speed virtual value of fans ≤ 1.2 mm/s, test method accord with JB/T 8689.

4.7 防护等级/Type of protection

风机的防护等级为IP24 . 电机控制室的防护等级为IP68

Type of protection is IP24.Modor control room for IP68 protection grade

4.8 寿命/Life time

风机寿命估算值 25000 小时，（在额定电压、环境温度为40℃、风机全速运转时）.

Fan life expectance 25000 hours, determined when at rated voltage, running at full speed, environment temperature of 40 °C.

5.0 风机性能/Fan performance

5.1 标称参数/Rating data

额定电压/ Rating voltage[VDC]	输入电流/ Current draw [A]	输入功率/ Power input ± 10% [W]	转速/ Speed ± 10%[r/min]	风量/ Air flow ±10% [m³/h]	噪音/ Noise level [Lp dB(A)]	绝缘等级/ Insulation class
24	4.9±10%	120	2600	2000	≤74	F
48	2.5±10%	120	2600	2000	≤74	F
12	11±10%	130	2600	2000	≤74	F

5.2 调速特性曲线/Performance curve

6.0 电气性能/Electrical performance

6.1 接线示意图/View lead connection

见外形图附图

6.1.1 电压范围/Voltage range

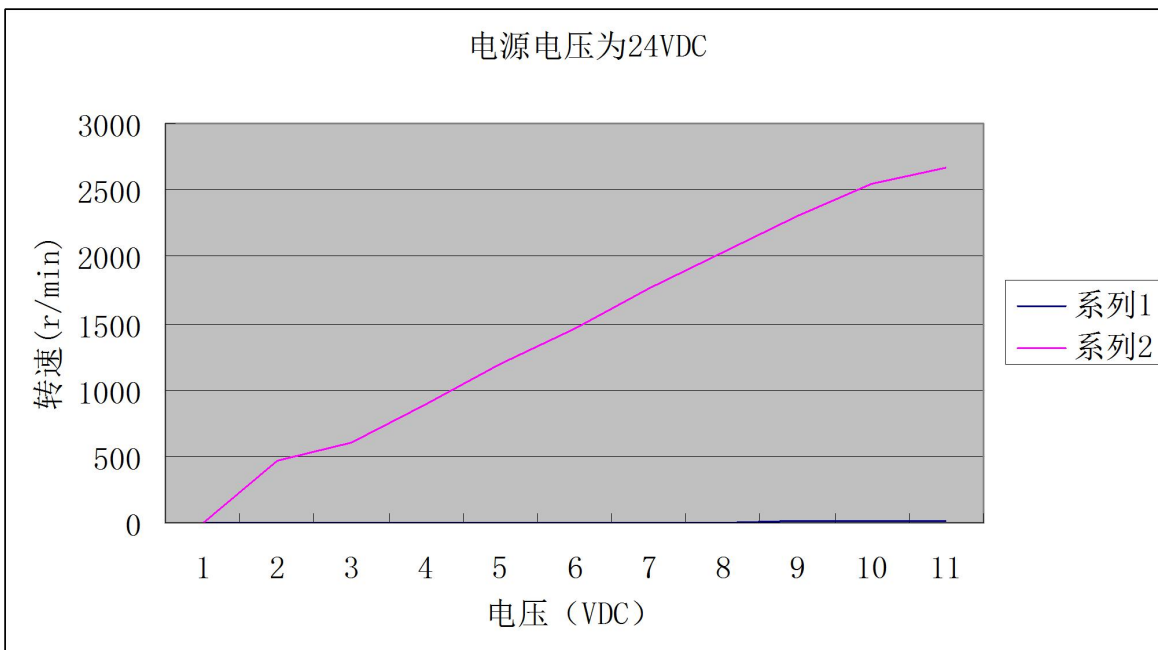
风机设计的额定运行电压为 24VDC ，电压变化范围为 12~32VDC ，转速与性能随着输入电压不同而改变。
The fan is designed to operate at a nominal voltage of 24 VDC , changing voltage from 12 VDC to 32 VDC , Speed and performance will change with input voltage.

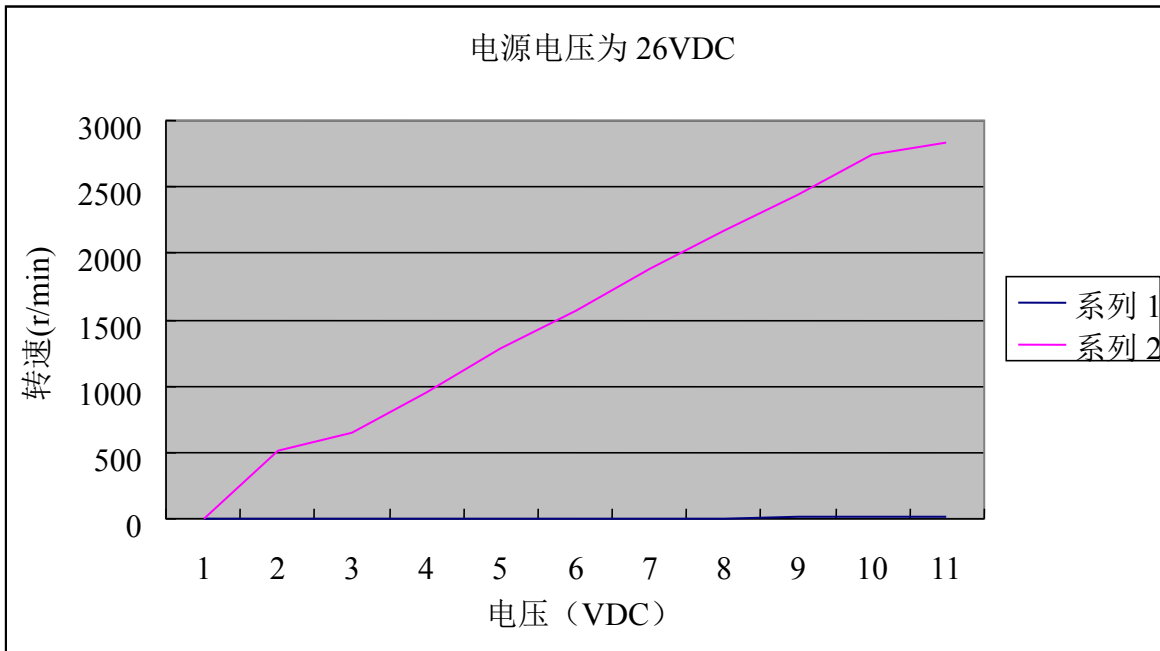
6.1.3 速度控制/Speed control

6.1.3.1 PWM 输入控制电压范围: 0~10 VDC/ Signal voltage range: 0~10 VDC.

PWM 控制信号频率范围:1~10 KHz ./ The frequency for control signal of the fan shall be able to accept 1~10 kHz.

6.1.3.2 调速曲线/ Regulate speed curve





6.6 电磁兼容性/ Electromagnetic compatibility

电磁辐射通过 CISPR25-2008 标准规定中的四

Electromagnetic radiation through CISPR25-2008 standard requirement of four

7.0 质量要求/Quality requests

质量要求符合企业标准 / Q /320506AHJ02

8.0 包装和标识/ Packaging and marks

8.1 包装/Packaging

包装必须有确定的尺寸和合适的结构确保风机在运输过程中不会损坏。

The packaging has to be well dimension and structure, so that the fans for on normal transport could not be damaged.

8.2 标识/Marks

制造商名称、产品型号、重量、尺寸等。

Markings: Name of manufacturer, type of fan, date of manufacture, weight and size etc.

9.0 附件/Other requirements on accessory

9.0.1 电机引出线/ Motor lead wire

QC/T29106-2004 镀锡导线-阻燃性能达到GB/T2408中UL94V-0

9.0.2 连接件要求/ Requirement of linker

连接器/linker(■有/Yes、□没有/No),

端子/terminal(■有/Yes、□没有//No),

型号为/model:282104-1/282103-1 (可根据客户要求定制)

型号为/model:282465-1 (可根据客户要求定制)

