



JMF-1U-D404 型 • 机柜温控风扇单元

JMF-1U-D404 • Cabinet cooling fan unit

用户手册 User Manual v1.0



成都兢志成电子科技有限公司

Chengdu Jingzhicheng Electronic Technology Co., LTD



版权©2025 成都兢志成电子科技有限公司保留所有权

Copyright © 2025 Chengdu Jingzhicheng Electronic Technology Co., Ltd. retains the ownership

所有权信息

未经版权所有者同意，不得将本文档的全部或者部分以纸面或者电子文档的形式重新发布。本文档仅用于辅助用户使用产品，我司不对因该文档中的信息而引起的损失或者错误负责。。本文档描述的产品可能会不断地升级完善，我司有权在未通知用户的情况下修改本文档。

Ownership information

All or part of this document shall not be republished in paper or electronic document without the consent of the copyright owner.

This document is only used to assist users with the product, and we are not responsible for the loss or error caused by the information in this document

The products described in this document may be continuously upgraded and improved, and we have the right to modify this document without notifying the users.

版本信息 Version information:

版本号 Version number	主要变更内容 Main change content	日期 date
V1.00	初始版本 The initial version	2025-01



1. 功能概述 Function overview

JMF-1U-D404 型 • 机柜温控风扇单元为我司原研产品，1U 标准尺寸，内置 4 个大风量直流散热风机，设备主要用于机箱机柜的抽/排风散热；内部集成温度传感器，实时采集、显示温度，采用智能温控调速技术，低温时风机低速运行或关停，节能降噪；高温时风机自动加速运行，快速排风散热；全自动平衡机柜温度和风机噪音，无需布线插电即用，是机箱机柜抽排风散热的新选择。

The JMF-1U-D404 series cabinet temperature control fan unit is our company's original research product, which is equipped with two large air volume cooling fans, mainly used for the extraction/exhaust heat dissipation of the cabinet. The equipment integrates temperature sensors, real-time temperature collection and display, and adopts intelligent temperature control speed regulation technology internally. The fan operates at low speed for energy-saving and noise reduction, and operates at high speed for fast ventilation and heat dissipation. It automatically balances the cabinet temperature and fan noise, and can be used without wiring or plugging in. It is the preferred choice for mid to high end chassis and cabinet ventilation and heat dissipation.

2. 技术参数 Technical parameters

1. 供电范围：DC10V~DC28V

Power supply range: DC10V~DC28V

2. 整机功率：≤5W

Overall power: ≤ 5W

3. 散热风量：≈30cfm (50m³/h)

Heat dissipation air volume: ≈30cfm (50m³/h)

4. 内置风机类型及数量：直流无刷风机 *4，

Internal fan type: DC fan *4

5. 高温报警值：默认为 60℃

High temperature alarm value: default to 60 °C

6. 测温范围：-20~120℃

Temperature measurement range: -20~120 °C

7. 温度误差：±1℃

Temperature error: ± 1 °C

8. 净重：≈300g

Net weight: ≈300g

9. 安装方式：M6 螺丝孔固定

Installation method: Embedded installation

10. 外观颜色：常规为磨砂黑，批量订单可以定制颜色

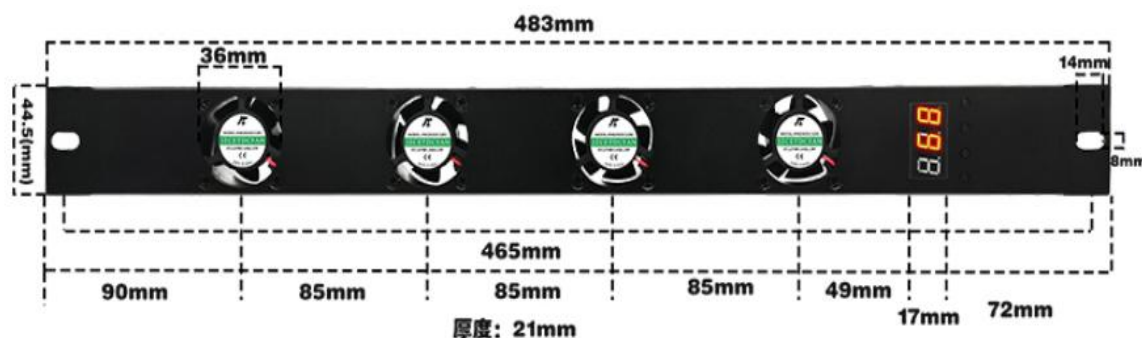
Appearance color: matte black, and the color can be customized for bulk orders



3. 产品尺寸 (单位 mm) size

标准 1U 尺寸, 可直接固定在 19 英寸标准机柜的机架上

Standard 1U size, can be directly fixed on the rack of a 19 inch standard cabinet



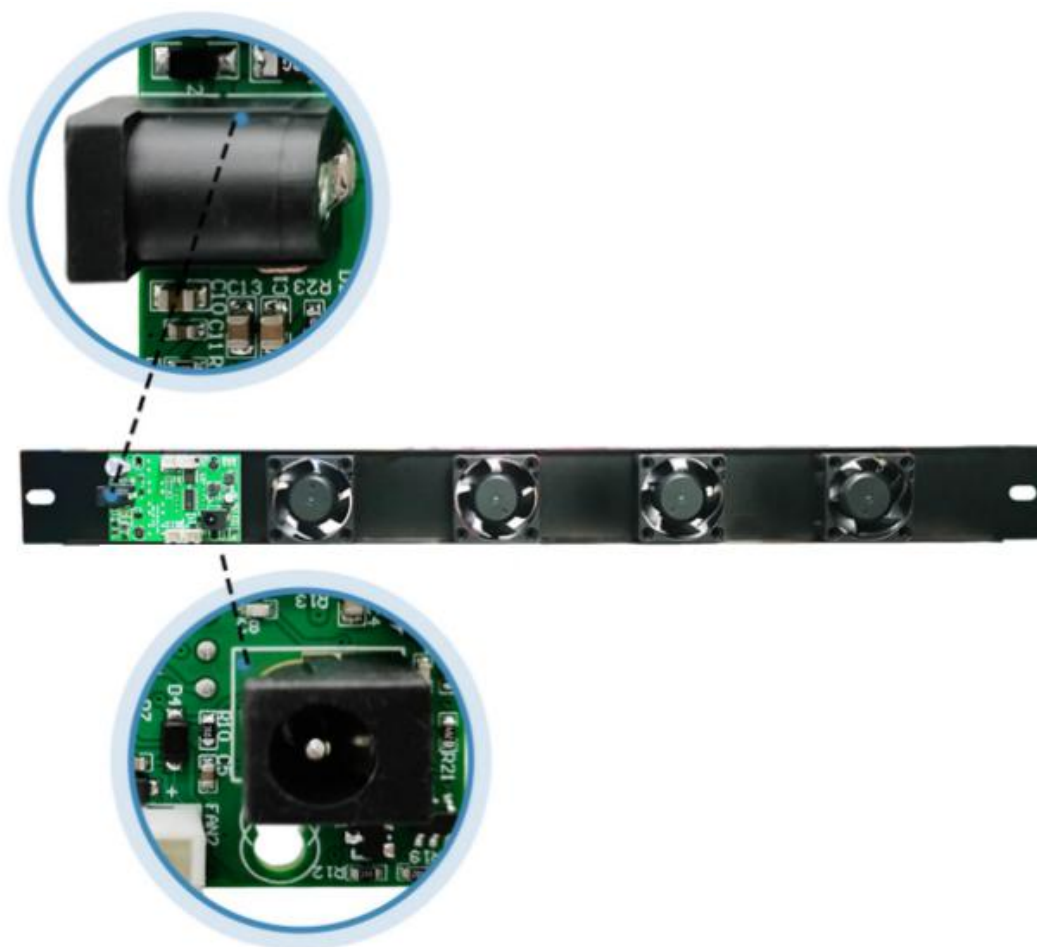
*整机厚度约 2cm, The overall thickness of the machine is about 2cm

4. 接口说明 interface specification

设备背面有 2 个 DC005*2.1 的供电插口, 2 选 1 使用, 如下图所示:

There is two DC005 * 2.1 power socket on the back of the device, use one.

as shown in the following figure:



5. 基础功能使用说明 Come into use

5.1 插上直流电源

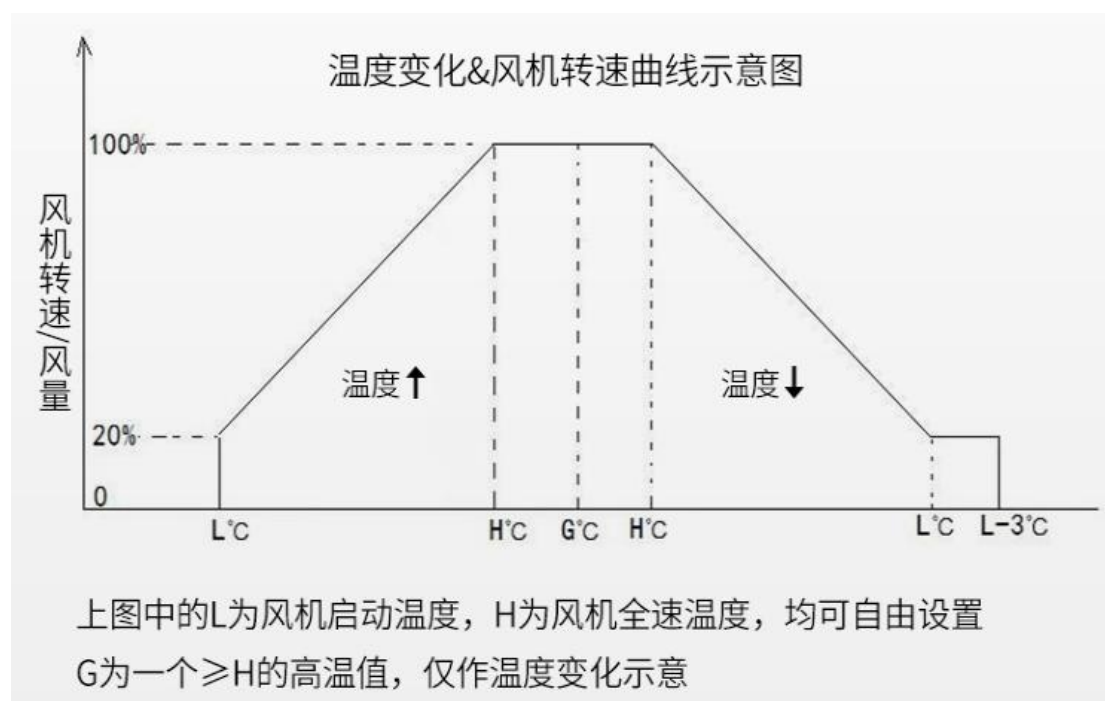
Connect the wiring according to the interface Commands

5.2 供电正常后，数码显示屏会显示当前温度，并根据当前设置的温度区间来调节风机的转速，以出厂默认的温度区间为例，设备出厂默认的温度区间为 $L=30^{\circ}\text{C}$ 、 $H=50^{\circ}\text{C}$ ，当检测到当前温度大于等于 30°C 时，设备按线性比例调节风扇的转速，温度升高，风扇转速也会加快，当温度 $\geq 50^{\circ}\text{C}$ 时，风机变为全速。当温度降低到 $\leq 27^{\circ}\text{C}$ ($L-3$) 时，设备使风扇处于最小转速/或关停风机。

After the power supply is normal, the LED lights up, the governor starts to detect the current temperature, and adjust the speed of the fan according to the current temperature interval. Take the default temperature interval of the governor as an example, the default temperature interval of the governor is $L=30^{\circ}\text{C}$, $H=50^{\circ}\text{C}$. When the current temperature is greater than or equal to 30°C , the governor adjusts the fan speed in linear proportion, and the fan speed will accelerate. When the temperature is 50°C , the fan changes to full speed.

风机转速&温度关系示意图:

Schematic diagram of the fan rotation speed & temperature relationship:



In the figure above, L is the starting temperature of the fan, and H is the temperature of the fan at full speed, which can be set freely.

G is for reference only



6. 数码面板操作说明 Panel operation Commands

数码面板实时显示当前温度，带 4 个按键，通过按键可以设置调速器的所有参数
待机状态下，按 MODE 键可进入配置/切换参数项，配置时按↓键可以调整数值，OK 键确认
The digital panel displays the current temperature in real time, with four keys, through which all the parameters of the governor can be set In standby state, press MODE key to enter the configuration / switch parameter items, and press ↓ key to adjust the value, and OK key to confirm

参数项 Parameter item

数显代号 Number of code	参数释义 Parameter definition	参数说明 parameter declaration
Lxx	风机启动温度 Start temperature of fan	设置风机的启动（下限）温度值 设置范围：-20~120℃ Set the start temperature value of the fan Setting range: -20~120℃
Hxx	风机全速温度 Full speed temperature of fan	设置风机的全速（上限）温度值 设置范围：-20~120℃，H 的值必须大于 L 的值 Set the full speed temperature value of the fan Set the range: -20~120℃, the value of H must be greater than the value of L
Pxx	工作模式 work pattern	设置设备的工作模式 当温度小于设置的启动温度-3℃时，用此参数设置设备是控制风机关闭还是维持风机处于最小（20%）的转速） 设置范围： 01 表示维持最小转速，00 表示关闭风机 Set up the working mode of the governor When the temperature is less than the set start temperature-3℃, use this parameter to set the governor to control the fan off or maintain the fan at the minimum (20%) speed) Setting range: 01 means maintaining the minimum rotation speed, and 00 means turning off the fan
bxx	高温报警值 High temperature alarm value	设置高温报警阈值 当温度超过此值后，设备内置的蜂鸣器会“滴滴”报警，当温度降低到 b-3℃后，报警解除 Set high temperature alarm threshold When the temperature exceeds this value, the built-in buzzer of the device will beep an alarm. When the temperature drops to b-3℃, the alarm will be released



***以设置风机的启动、全速温度为例**

* Take setting the start and full speed temperature of the fan as an example

待机状态下，面板显示当前的温度值，按 1 下 MODE 键，数码管显示 Lxx，L 代表启动温度，xx 表示当前设置的温度值，

按上下键可以调整参数值，调整完成后，按 ok 键确认，回到待机界面

In the standby state, the panel shows the current temperature value, press 1 MODE key, the digital tube displays Lxx, L represents the start temperature, xx represents the currently set temperature value, Press the upper and lower keys to adjust the parameter value. After the adjustment is completed, press the ok key to confirm and return to the standby interface

待机状态下，按 2 下 MODE 键，数码管显示 Hxx，H 代表全速温度，xx 表示当前设置的温度值，按上下键可以调整参数值，调整完成后，按 ok 键确认

In standby state, press MODE key for 2, the digital tube shows Hxx, H represents the full speed temperature, xx represents the current set temperature value, press the upper and lower key to adjust the parameter value, after the adjustment is completed, press OK key to confirm

设置完成，设备将根据新设置的温度参数来自动控制风机的转速。

其他参数的设置与上面步骤类似。

When the setting is complete, the governor will automatically control the speed of the fan according to the newly set temperature parameters. The other parameters were set similarly to the above steps.

***使用提示 prompt**

实际使用时，可以根据现场的温控要求来设置风机的启动温度和全速温度，风机全速时会有比较大的噪音，如果觉得风机全速时的声音太大，可以将全速温度值(参数 H)稍微设置高一点；如果想要风机不停转一直保持通风散热，可以把工作模式(参数 P)设为最小转速模式。

The heat sink is generally embedded and installed on the top or side of the cabinet, with the wind direction facing outward, to discharge the hot air inside the cabinet outward,

In actual use, the starting temperature and full speed temperature of the fan can be set according to the environmental requirements on site. When the fan is at full speed, there will be relatively large noise. If you want to avoid this noise, you can set the full speed temperature value slightly higher; If you want the fan to remain idle and maintain ventilation, you can set the working mode to the minimum speed mode.



7. 关于安装

设备一般安装于机柜机架的中上部，背面进风，正面出风，将机柜内部的热空气排出到柜外，以此形成空气对流，降低柜内温度。

安装示意如下图：

The equipment is generally installed in the middle and upper part of the cabinet rack, with air inlet on the back and air outlet on the front, to discharge the hot air inside the cabinet to the outside, thereby forming air convection and reducing the temperature inside the cabinet.

The installation diagram is shown in the following figure:





成都兢志成电子科技有限公司

Chengdu Jingcheng Electronic Technology Co., LTD

官网/website: www.jzcet.com

固话/Fixed-line: 028-66570969

手机/Mobile phone: 18227618314

邮箱/Email address: jzcet@foxmail.com

地址/Address: 四川省成都市双流区龙桥路 6 号

Address: No.6, Longqiao Road, Shuangliu District, Chengdu, Sichuan