SPECIFICATION

MODEL
K-DC332-A26-33

1.目的/ Purpose

本规格书规定了产品规格细节要求、技术标准或技术要求等。
This specification provides part specific requirements and the Engineering Standard and/or Engineering requirements.

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

2.1 本产品符合的标准/Engineering standard
2.1.1 GB12350《小功率电动机的安全要求》
GB12350 Safety requirements of small power motor
2.1.2 JB/T10562《一般用途轴流通风机通用技术条件》
JB/T10562 General technical requirement for general axial fan
2.1.3 QC/T 708《汽车空调风机技术条件》
QC/T 708 Technical specification for automobile air conditioning fan
2.2 本产品全部材料符合 RoHS。
All materials accord with RoHS.

3.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℃～+85℃，工作湿度范围: 5%～95% RH。
Operating temperature from -40℃ to +85℃, Operating humidity from 5%～95% RH.
3.2 贮存温度和湿度/Storaging temperature and humidity
贮存温度范围：-40℃～+85℃，贮存湿度范围: 5%～95% RH。
Storaging temperature from -40℃ to +85℃, storaging humidity from 5%～95% RH.

4.机械要求/ Mechanical requirements

4.1叶轮/Impeller
叶轮由 PA66+GF 材料制成，材料符合UL-V0.
Mpeller made of PA66+GF, material accord with UL-V0.
4.2内转子直流永磁同步电机电机
Internal rotor DC permanent magnet synchronous motor
4.3软件/Software
本产品内嵌风机驱动软件
Fan driver software is embedded within this product
4.4平衡/ Balancing
风机在 3300±10%r/min 运转时，每个端面动平衡精度不低于 G6.3，符合标准 JB/T 9101。
Running at 3300±10%r/min ,the residual unbalance of the fan not less than G6.3(balancing precision grade) in each plane, according with JB/T 9101
4.5振动/Vibration of the fan
风机振动值≤2.0mm/s，测试方法按照JB/T 8689标准规定。
Vibration speed virtual value of fans ≤2.0mm/s, test method accord with JB/T 8689.
4.6防护等级/Type of protection
电机的防护等级为IP68。
Type of motor protection is IP68.

4.7寿命/Life time

在额定电压、环境温度40℃、风机全速连续运转时，预期寿命为40,000小时。（根据产品实际应用工况，预期寿命会有不同，以质保有效期为准）

The expected life is 40,000 hours when the rated voltage, ambient temperature is 40℃, continuouslyrunning at full speed. (According to the actual application conditions of the product, life expectancywill be different,subject to the warranty period)

5.风机性能/Fan performance

5.1标称参数（放空状态下）/Rating data（Free status）

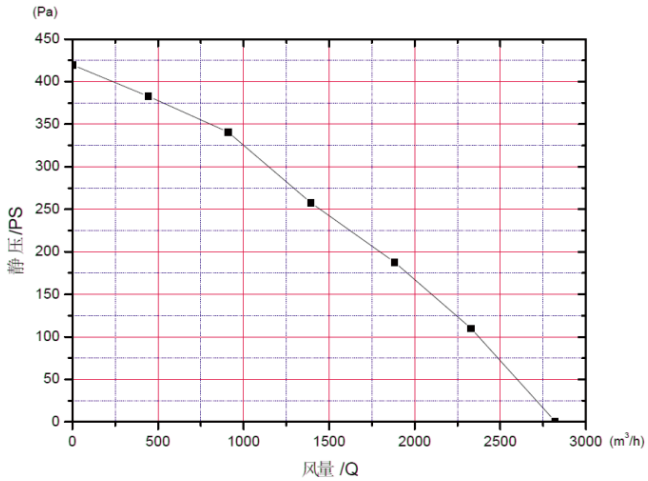
额定电压 Rated voltage [VDC]	输入电流 Current input [A] (±10%)	输入功率 Power input [W] (±10%)	转速 Speed [r/min] (±10%)	风量 Air flow [m3/h] (±10 %)	噪音 Noise [Lp:dB(A)] (+3/-7)	绝缘等级 Insulation class
26	8.7	226	3300	2800	76^{+3}_{-7}	F

备注：标称参数是单风机敞开运行。风量按我司风洞测量值；噪音是在噪音房里，轴水平放置风机,离风机进风口1 米处测试。

Note: the nominal parameter under following situation in Fans-tech lab: Fan was running in open operation,

The airflow is measured in the wind tunnel, the noise was tested in the noise room in horizontal position, with 1m distance to the air inlet of the fan.

5.2 特性曲线/Performance curve (额定工作电压 26 VDC 时/ Rating voltage 26 VDC)



6.电气性能/Electrical performance

6.1 接线示意图/View lead connection

Red	=UN(+)
Blue	=GND(-)
Yellow	=PWM / Linear Voltage

6.1.1 电压范围/Voltage range

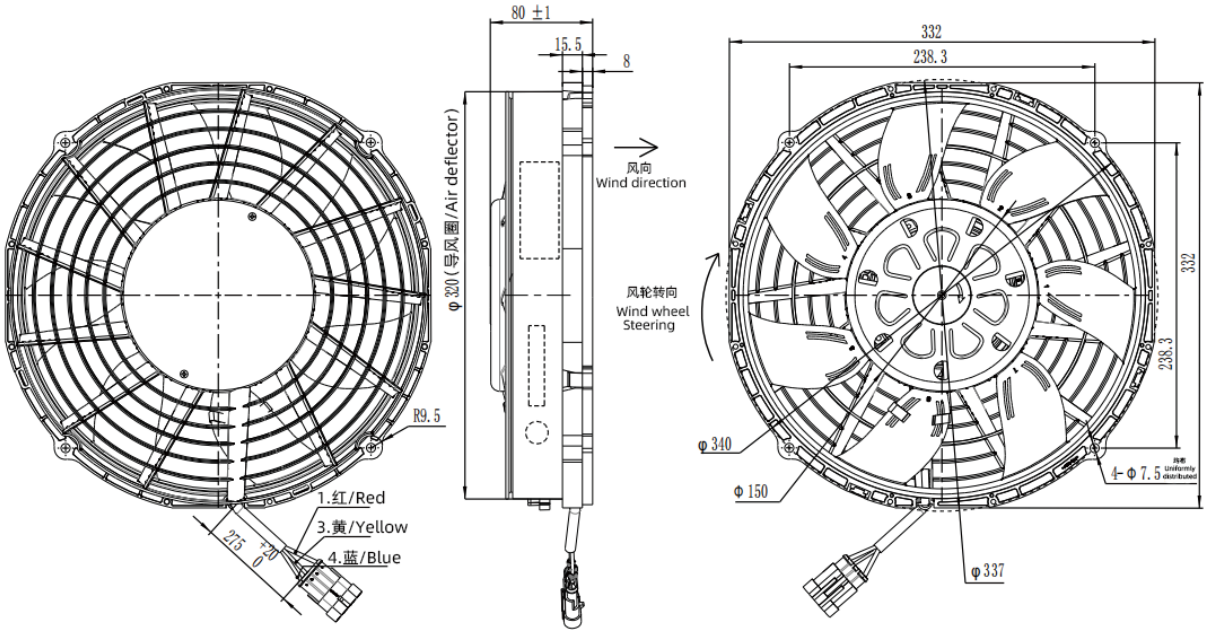
风机设计的额定运行电压为 26VDC，工作电压变化范围为 16～32VDC， 转速与性能随着输入电压不同而改变。

The fan is designed to operate at a nominal voltage of 26 VDC， changing voltage from 16 VDC to 32VDC， Speed and performance will change with input voltage.

6.1.2 速度控制/Speed control
6.1.2.1 可以用以下两种方法之一来进行速度控制：
Either of the two methods can be adopted to control speed:
线性电压：0～10VDC
Linear voltage:0～10VDC
PWM 信号（频率为 1K～10 KHz，幅值为 10～12V）：占空比为 0%～100%
PWM signal(frequency 1K～10KHz, amplitude 10～12V):duty cycle 0%～100% .
输入 PWM 信号时，幅值额定设计为 10VDC，其中低电平：<1VDC、高电平：小于等于 12VDC，最高幅值为 12VDC，输入频率范围为 1KHz～10KHz，有效输入占空比为 10%～100%，幅值非额定时，会造成调速曲线偏移。
When the PWM signal is input, the rated amplitude is 10VDC, low level: <1VDC, high level: less than or equal to 12VDC, the highest amplitude is 12VDC, the input frequency range is 1KHz ~ 10KHz, the effective input duty cycle is 10% ~ 100%, when the rated amplitude is not, it will cause the deviation of the speed regulation curve.
6.2 软起动/Soft start
电机以低转速起动，大约20秒到达全速，以减少对电源的电流冲击。
The motor starts at low speed, after 20 SEC running to full speed, to reduce current surges being drawnto the power supply.
6.3 保护/Protection
电机保护功能有堵转保护、低电压与过电压停止运转保护、限流保护、过流保护、极性保护和过温保护。
This motor with locked-rotor protection, under-voltage and over-voltage lockout protection, current limited, over-current protection, reversed polarity protection and over temperature protection.
6.4 电磁兼容特性/EMC
风机通过如下检测：
Fan through the following detection:
(1) GB/T 17619-1998《机动车电子电器组件的电磁辐射抗扰度限值和测量方法》；
GB/T 17619-1998《 Limits and methods of testing for immunity of electrical/electronic sub-assemblies in vehicles to electromagnetic radiation》
(2) GB/T 18655-2010《车辆、船和内燃机-无线电骚扰特性-用于保护车载接收机的限值和方法》等级III;
GB/T 18655-2010《 Vehicles, boats and internal combustion engines - Radio disturbance characteristics - Limits and methods of measurement for the protection of on-board receivers》Level III
(3) GB/T 19951-2005《道路车辆静电放电产生的电骚扰试验方法》；
GB/T 19951-2005《Road vehicles- Test methods for electrical disturbances from electrostatic discharge》
(4) GB/T 21437.2-2008《道路车辆—由传导和耦合引起的电骚扰第 2 部分：沿电源线的电瞬态传导》；
GB/T 21437.2-2008《Road vehicles- Electrical disturbances from conduction and coupling- Part 2: Electrical transient conduction along supply lines only》
(5) GB T 21437.3-2012《道路部分由传导和耦合引起的电骚扰第 3 部分：除电源线外的导线通过容性和感性耦合的电瞬态发射》

GB T 21437.3-2012《Road vehicles- Electrical disturbances from conduction and couplingPart 3: Electrical transient transmission by capacitive and inductive coupling via lines other than supply lines》

7.外形图/Dimension drawing



8.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 package must have a defined size and a suitable structure to ensure that the fan will not be damaged

during transport.

8.2 标识/Marks:

制造商名称、产品型号、重量、尺寸等。

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

9.附件/Other requirements on accessory

9.1导风圈/ Inlet cones

■带/ Yes, □不带/ No

9.2 网罩/ Scroll housing

(■有/YES、□没有/NO)

材料/ Scroll housing Material:

9.3 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)

10.安装要求/Installation requirements

风机必须采用“吹风方向”朝上方向安装;风机安装后,风机周围结构件与风机叶轮距离不小于15mm.
The Fan must be installed with the blowing direction facing up, After the fan is installed, the distance between the structural parts around the fan and the fan impeller is not less than 15mm.