

产 品 规 格 书
Product Specification

名 称 (Part Name):	轴流风机 Axial Fan	编 制 (Prepared by):	
型 号 (Model No.):	EC137-A630-C01 070-05S-F-501	校 对 (Checked by):	
顾客代码 (Customer Code):	/	审 核 (Reviewed by):	
版 次 (Version No.):	A/1	批 准 (Approved by):	

客户确认/日期 (Customer Approval/Date) : _____

换版记录 Description of Revision

版本号 No.	换版原因 Notes & Remarks	换版内容 Contents	修订人 Revised by	日期 Date
A/1	根据风机公司标准更改规格书	增加电流参数，更新铭牌/出厂检验参数	WWH	2023.10.16

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 standards, operating environment, and technical requirements of the product.

2.0 产品符合的标准要求/ Standards & Requirements of The Product Followed

2.1 本产品符合的标准/ Standards of the product followed

- EN IEC 60034-1 / GB 755 旋转电机.第一部分.定额与性能
EN IEC 60034-1 / GB 755 Rotating electrical machines - Part1:Rating and performance
- EN IEC 61000-6-2 电磁兼容 (EMC) 第6-2部分.通用标准.工业环境的抗扰度标准
EN IEC 61000-6-2 Electromagnetic compatibility (EMC) - part 6-2 : Generic standards - immunity for industrial environments
- EN IEC 61000-6-4 电磁兼容 (EMC) 第6-4部分.通用标准.工业环境的辐射标准
EN IEC 61000-6-4 Electromagnetic compatibility (EMC) - part 6-4 : Generic standards - Emission standard for industrial environments

2.2 本产品通过 CCC、CE认证/ The fan is CCC, CE approved

2.3 本产品材料符合RoHS要求/ Materials are RoHS compliant

3.0 机械要求/ Mechanical Requirements

3.1 外形图/ Dimensional drawings

3.2 风机材质/ Fan Materials

• 风叶材质/ Material of blade

- ☐ SPCC / 冷轧钢板 ☐ Aluminium alloy / 铝合金 ☒ Plastic / 塑料
- ☐ Stainless Steel / 不锈钢 ☐ Others / 其它

• 电机磁材/ Materials of motor magnets

高强度漆包铜线 QZY-2 180°C/ High strength enamelled wire QZY-2 180°C
硅钢片/ Silicon Steel

• 轴承类型/ Bearing type

免维护滚珠轴承/ Maintenance free ball bearing

3.3 电机型号/ Motor: EC137M

3.4 平衡/ Balancing

风机在额定电压和频率下运转时, 每个端面动平衡精度不低于G4.0, 符合标准JB/T9101;
The residual unbalance weight is less than the permit value of G4.0 rating (balancing

precision grade, according to the standard of JB/T9101) when the fan is running at rated voltage and frequency.

3.5 振动/ Vibration

风机振动速度有效值按照JB/T8689标准规定

Vibrating speed virtual value of fans accord with JB/T8689

3.6 产品净重/ Net weight: 26 kg

3.7 风机寿命/ Fan life

估算值40000小时(在额定电压、环境温度为40℃、额定负载运转时);

The designed lifespan of the fan is 40000 hours assuming the fan is running at rated voltage, rated load and 40 degree C environmental temperature.

4.0 风机性能/ Fan Performance

4.1 电压范围/ Voltage range

风机的额定电压为 380V, 风机的额定电压范围是 380~480V;

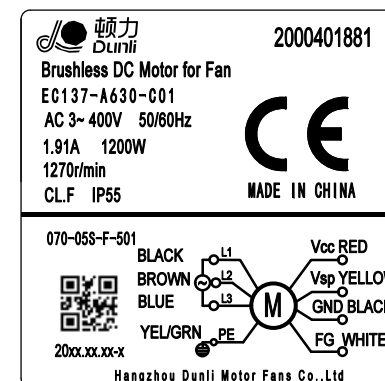
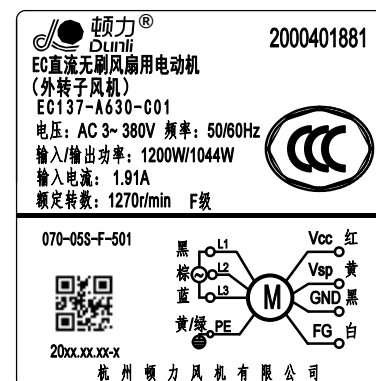
The nominal voltage of the fan is 400V, and The nominal voltage range of the fan is 380-480V.

4.2 额定参数/ Nominal data

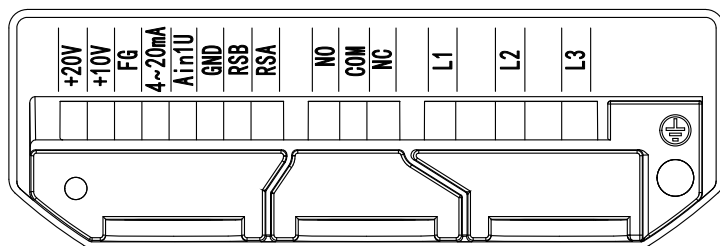
4.3 铭牌/ LABEL

☐ 中文/Chinese

☐ 英文/English



4.4 接线图/ Wiring diagram



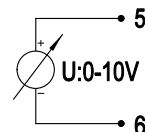
+20V	DC20V直流电源输出/Output 20V DC power supply, max. 40 mA
+10V	DC 10V直流电源输出/Output 10V DC power supply, max. 10 mA
FG	反馈信号/Tach output
4~20mA	4~20mA直流调速电流/Input 4~20mA DC regulation current
Ain1U	0~10V/PWM转速控制输入/0~10V/PWM Transfer control input, $R_i \geq 100K \Omega$
GND	信号接地/Ground, Reference ground for control interface
RSB	RS485, RSB, MODBUS interface
RSA	RS485, RSA, MODBUS interface

NO	继电器常开开关/ Relay normally open switch
COM	COM, contact rating 250 VAC / 3 A (AC1)
NC	继电器常闭开关/ Relay normally closed switch

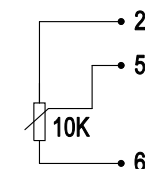
L1	Power: 3~380VAC 50/60HZ
L2	
L3	

客户回路
Customer circuit

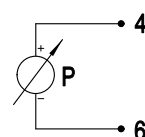
Speed setting via 0-10V



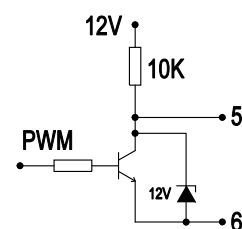
Speed setting via potentiometer



Speed setting via 4~20mA



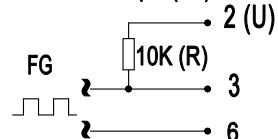
Speed setting via PWM



Speed setting via Bus

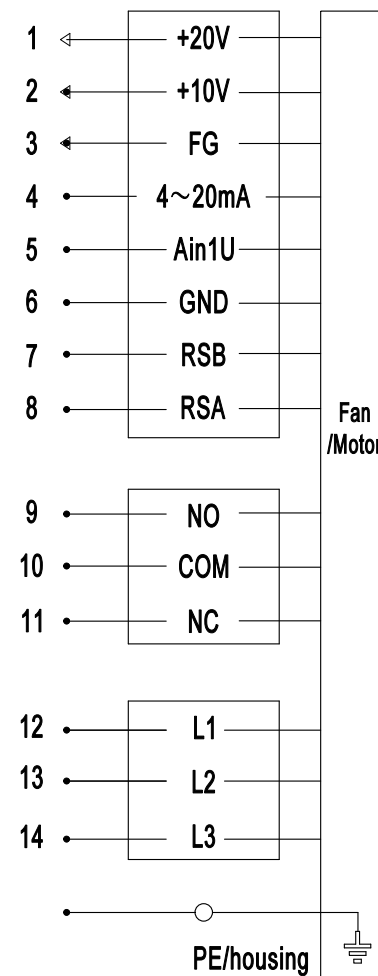


Tach output (FG)

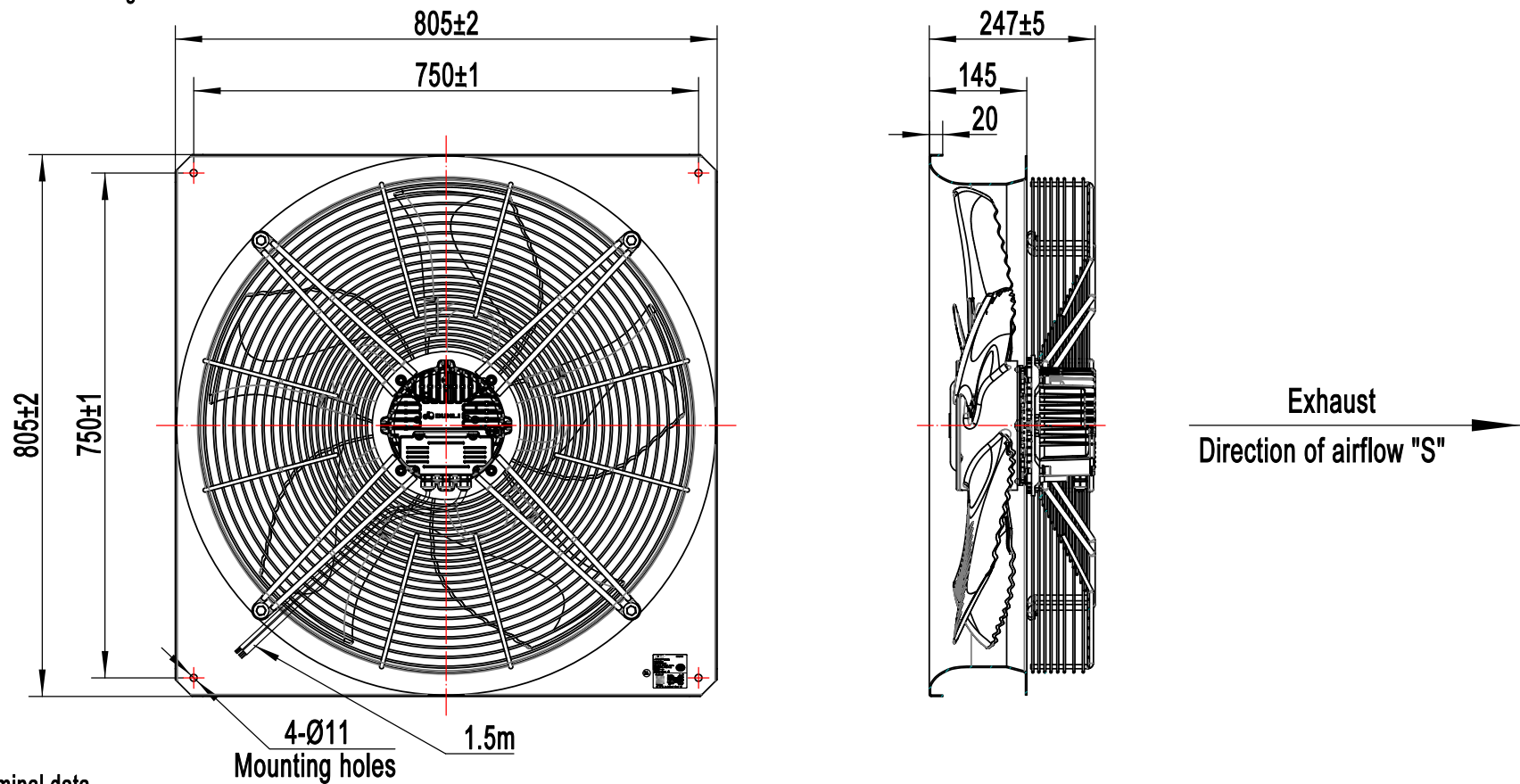


连接器
Connection

风扇
Fan/Motor



3.1 外形图/ Dimensional drawings

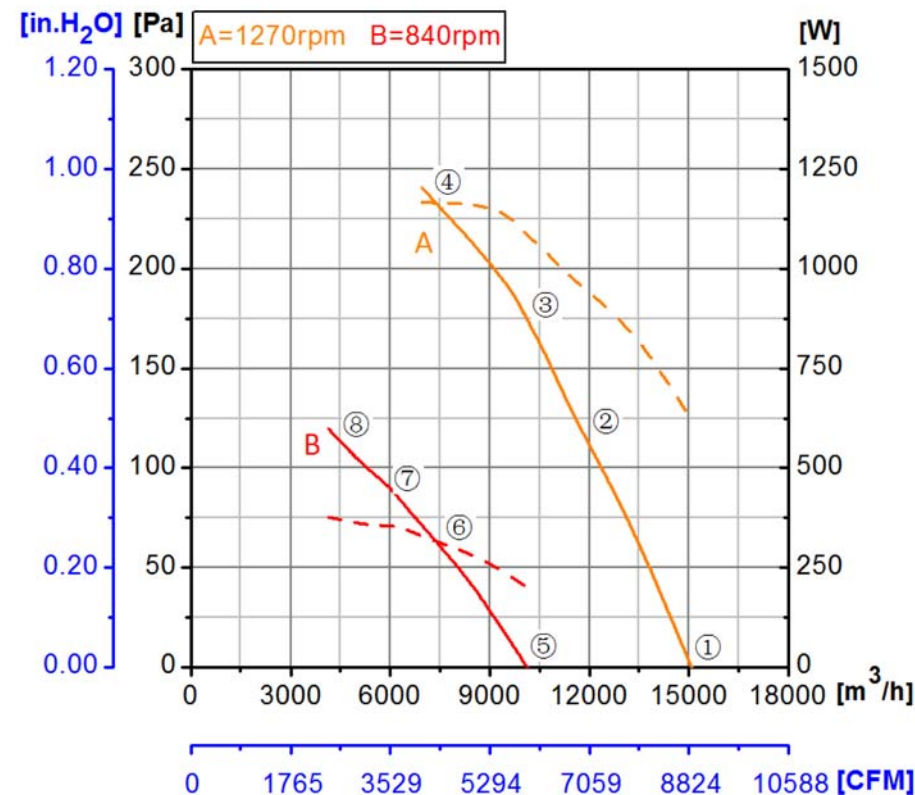


4.2 额定参数/ Nominal data

Voltage [V]	Frequency [Hz]	Current [A] (±16%)	Input Power [W] (±16%)	Speed [r/min] (±10%)	Noise Level* [Lp dB(A)] Max	Type of Data Definition
3~380	50/60	1.20	650	1270	75	rt
3~380	50/60	1.91	1200	1270	/	ml

数据状态: / Definition of Data:
fa: 放空状态 / fa - Running at free air
ml: 最大负载点 / ml - Max load
me: 最大效率点 / me - Max efficiency
cs: 客户要求 / cs - Customer specified
cu: 客户机箱中 / cu - Customer unit
rt: 常规测试 / rt - Routine testing

4.5 风量特性曲线/ Air performance curve(s)



Data according to ErP Directive	Actual	Req.2015			
Installation category	A		Power consumption P_{ed}	W	1100
Efficiency category	static		Air flow q_v	m^3/h	9960
Overall Efficiency η_{es}	49.1%	33.9%	Pressure increase P_{ts}	Pa	180
Efficiency grade N	55	40	Speed(rpm) n	r/min	1270
Variable speed drive	yes		**ErP2015		
Data obtained at optimum efficiency level The ErP data is determined by using a motor-impeller combination in a standardized measurement setup					

4.6测试值/ Measured values

Item No.	Volt V	Speed r/min	Input W	Current A	Static Pressure Pa		Air Flow m ³ /h		CFM
1	380	1270	620	1.08	0	0.00	15080	8871	
2	380	1270	959	1.56	120	0.48	11725	6897	
3	380	1270	1100	1.76	180	0.72	9960	5859	
4	380	1270	1167	1.86	240	0.96	6955	4091	
5	380	840	201	0.42	0	0.00	10130	5959	
6	380	840	310	0.61	60	0.24	7580	4459	
7	380	840	357	0.69	90	0.36	6015	3538	
8	380	840	377	0.72	120	0.48	4150	2441	

5.0 电气要求/ Electrical Requirements

5.1 控制方式/ Control methods:

0-10VDC / PWM / 4~20mA / MODBUS

5.2 输出电源/ Power output: +10VDC / +20VDC

5.3 转速输出信号: 5脉冲/ Tach output:5 Pulse

FG端连接R上拉电阻到U上拉电压端(DC电压), R的电阻值由 $R=U/1mA$ 确定; 当风机启动后, FG会输出占空比50%的方波信号,其频率为 $f=P*n/60$ (其中: P为电机极对数, n为电机转速)。

To connect a Pull-up Resistance between FG Line and Pull-up Line Voltage ($R=U/1mA$). FG will output a 50% duty cycle square signal once the motor started, and the frequency is " $f=P*n/60$ " (P-motor pole, n-motor rotational speed).

5.4 技术特征/Technical features

报警继电器/无源PFC/软启动等功能

Alarm relay / Passive PFC / Soft start.

5.5 保护模式/ Protect functions:

过温/堵转/欠电压/过电压/缺相/限流等故障停机, 故障解除, 风机可自动恢复运行。

When there's any protection of over-temperature, locked-rotor, under-voltage,

over-voltage, phase missing or current limit occurred and caused the motor stopped, the motor will restart automatically after the fault removed.

5.6 电磁兼容/ EMC:

电磁兼容的抗扰度标准根据 EN IEC 61000-6-2 (工业环境)

EMC immunity to interference According to EN IEC 61000-6-2(industrial environment)

电磁兼容的辐射标准根据 EN IEC 61000-6-4 (工业环境)

EMC interference emission According to EN IEC 61000-6-4(industrial environment)

5.7 防护等级/ Level of protection: IP55

5.8 绝缘等级/ Insulation class: F

5.9 泄漏电流/ Leakage current: According to GB 4760.1 (EN IEC 60335-1)

5.10 工作制/ Type of Application: S1

5.11 安装方式/ Installation Mode:

■ 转子在底部/ Rotor on bottom

■ 旋转轴水平/ Shaft horizontal

□ 特殊要求需与厂家联系/ Special request, please contact manufacturer

6.0 符合ISO9001质量体系认证

Product is built according to the ISO9001 Quality Management System.

7.0 使用和存储环境/ Operating & Storing Environmental Requirements

7.1 使用环境/ Operating environmental requirements

使用温度范围/ Operating temperature range: -40℃~+60℃

使用湿度范围/ Operating humidity range: 0%~95% RH

(要求环境无凝霜或结露/ No Rime or Condensation with the Ambient)

海拔高度/ Operating altitude: ≤1000m

(若海拔高度>1000m, 需参照EN IEC 60034-1 / GB 755 标准)

(If the altitude is higher than 1000m, please refer to EN IEC 60034-1/GB 755)

大气压范围/ Atmospheric pressure Range: 80~110Kpa

7.2 运输/贮存环境要求/ Tansport/Storing environmental requirements

运输/贮存温度范围: -40℃~+80℃

Temperature range of transportation/storage: -40℃ ~ +80℃

运输和贮存湿度范围: 0%~75% RH

Humidity range of transportation and storage: 0% ~ 75% RH

8.0 包装和标识/ Packaging & Marks

8.1 包装/ Packaging: 纸箱包装/ Carton packaging

8.2 标识/ Marks

制造商名称、产品型号、重量、尺寸等;

Mark with the name of manufacturer, fan model number, date of production, weight, dimensions, etc.

9.0 附件/ Other Requirements On Accessories

9.1 控制器/ Controller

■ 内置/ Inner The Fan □ 外置/ External The Fan □ 不带/No

□ 根据销售订单配备/As per sales' requirements

9.2 连接件要求/ Connector

连接器/ Connector (□ 有/ Yes ■ 没有/ No) 型号/ Model:

端子/ Terminal (□ 有/ Yes ■ 没有/ No) 型号/ Model:

10.0 警示与说明/ Warnings & Instructions:

10.1 本产品不适用于有明显破坏绝缘的气体或蒸汽的环境中; 不适用于具有甲烷混合气体和煤尘爆炸危险的煤矿井下;

This product can not be used for these places where the corrosive gas and/or steam are exsiting, and/or in coal mine wells where there are methane mixed gas and coal that may cause dust explosion hazard.

10.2 产品内部使用球轴承, 避免转子受到冲击, 不适用于有强烈冲击、振动的地方;

The bearings used are ball bearing. Please prevent the rotor from strike and impact. The fan should be stored at and used for these places where have no strong impact force and shock.

10.3 本产品请专业人员按规格书或接线图连接线路, 安装时确保风机转动无卡滞现象; 风机启动时, 观察风机转向是否与标识一致;

Please do connections by professionals according to the wire diagram or this product specification. Please check to make sure there's no blocking with the fan before installation. Please make sure the fan is running in correct direction.

10.4 产品通电时请勿接触高压线路, 防止触电, 要求用户风机设备可靠接地;

Please do not touch any of the high voltage line while the product is powered on. The fan unit should be connected to ground well.

10.5 产品需要通风冷却, 使用时请考虑周边通风条件, 并防止烫伤;

In order to cool down the motor part, please use this product under a well-ventilated condition and beware of avoiding being scalded during operation.

10.6 产品运转时请勿靠近旋转部件, 并防止异物进入内部;

Please keep away from rotating parts while the product is running, and no exoteric matter getting into inside of the product.

10.7 移动产品时请勿拉扯线束, 避免线路断裂或绝缘受损;

In order to prevent the product from damage by the impact voltage, please use VSP to control fan start or stop. Do not use relay or other mechanical switch on the power supply line to control fan start or stop frequently.

10.8 按本规格书中的参数评价产品, 若工作参数发生变更, 请与本公司联系;

Please use this product under the conditions specified on this specification, and please contact with us if your application is out of the applicable conditions specified in the spec sheet.

10.9 产品自购买之日起, 质保期为壹年 (具体以订货合同为准);

The warranty of the products is normally one (1) year (accordance to contract or purchase order).

11.0 其它/ Others

11.1 本产品的知识产权属于本公司 在本产品的使用上不会发生专利争议问题; 如果应用本产品形成有关新的产品或新方法或新的技术方案造成的专利侵权, 本公司不予保证;

We have intellectual rights on this product. We are NOT responsible for any patent disputes caused by using this product on other products/technical solutions.

11.2 未经本公司许可不得将本产品规格书泄漏给其它任何第三方;

It should be assured that this specification can NOT be revealed to any third party without the consent of our corporation.

12.0 特别提示/Attentions

若未按本规格书之要求和未按警示与说明所列情形违规操作, 由此引起的质量问题与事故由用户自行承担;

If customer does NOT comply with the stipulations of this specification or the listed warnings and instructions, customer should undertake the due obligation for all the quality issues and accidents.