

技术规范

TECHNICAL SPECIFICATION

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1、一般技术参数 Nominal Data

后向离心风机 DC Backward Centrifugal Fans	
型号 Type	FB3G250-48PL-91
电机类型 Model	BLDC92



额定电压 Nominal Voltage	VDC	48
电压范围 Nominal voltage range	VDC	36~57
电流消耗 Current draw	A	4.0±10%
转速 Speed(RPM)	min ⁻¹	2950±5%
功率消耗 Power consumption	W	192±10%
声压级 Sound Pressure Level	dB(A)	71±5%
最大风量 Max. Air Flow	CFM / m ³ /H	885.2/1504.1
最大静压 Max. Static Pressure	In.wg /Pa	3.06/765
绝缘等级 Insulation class	~	Class B
防护等级 Degree of protection	~	IP44
控制方式 Control Input	~	0~10VDC / PWM
信号输出 Signal Output	~	FG (Tach output)

2、电气性能 Electrical Characteristics

绝缘耐压 Dielectric Resistance	在 600VAC 50Hz 下 1 秒电流不超过 10mA 10mA maximum at 600VAC 50Hz one second	
寿命 Life Expectance	在 40℃的室内, 湿度 15%~65%RH 环境下寿命 50000 小时(L10) 50,000 Hours(L10), At 40℃ room, humidity 15%~65%RH	
气流方向 Direction of Air Flow	四周, 直接从风口甩出 All around, Straight forward from air outlet	
电机类型 Motor	外转子 DC 风机 External rotor DC motor	
保护方式 Technical features	限流 Motor current limitation	
	软启动保护 Soft starting Protection	
	过压/欠压保护 Under/Over voltage detection	
	电子元器件/电机过热保护 Thermal overload protection for electronics/motor	
	线路欠压保护 Line undervoltage detection	
	堵转保护 Locked-rotor Protection	
	极性保护 Reverse Polarity Protection	
使用温度范围 Operating Temperature	风机 Fan	-25℃ (Min.)~60℃ (Max.)
	集成电路散热 Heat sink of IC	115℃ (Max.)
	其他电子元器件 Other electronic parts	85℃ (Max.)
	轴承 Ball bearing	80℃ (Max.)
	电源线 Lead Wire	120℃ (Max.)

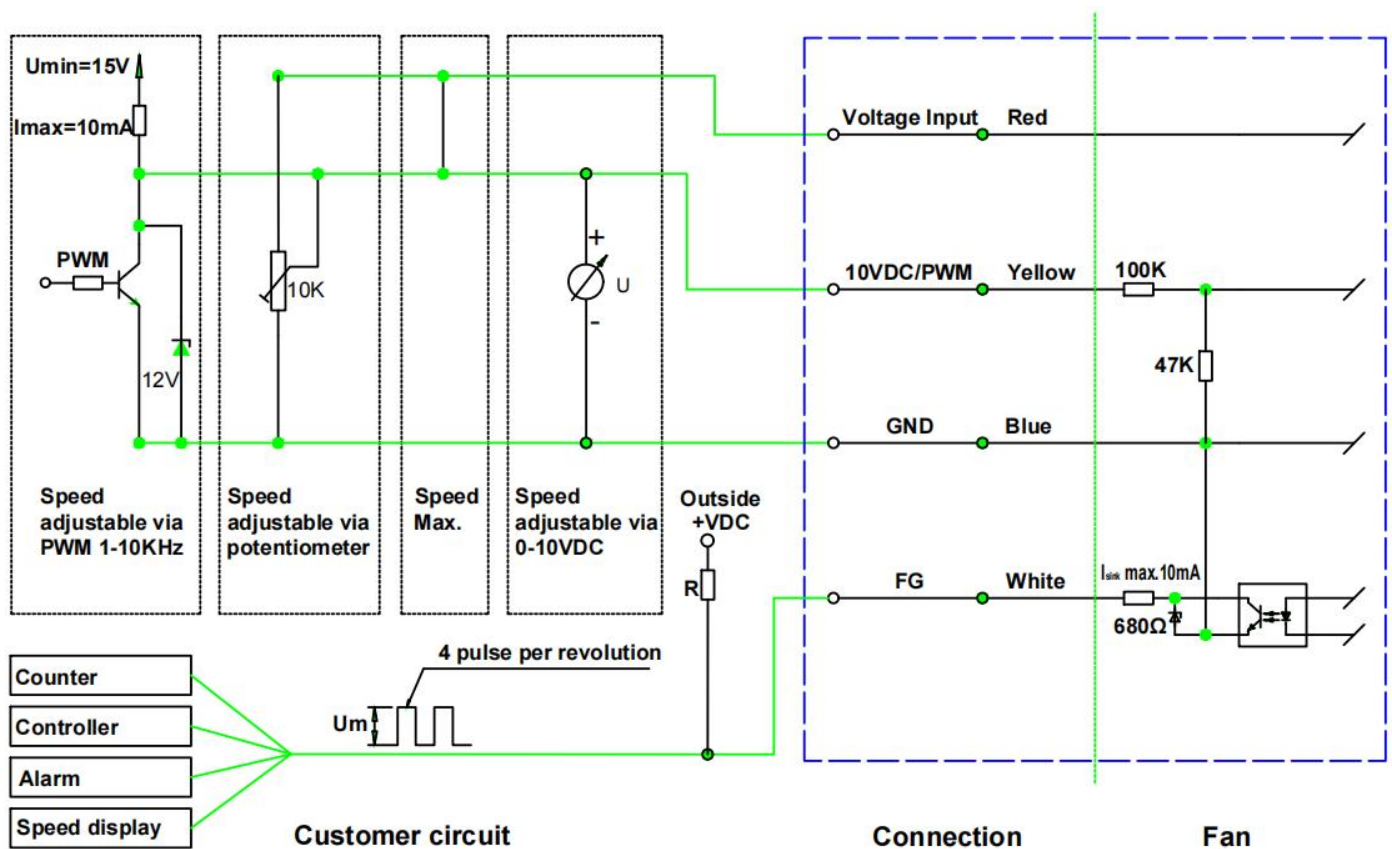
储存温度 Storage Temperature	-40℃ to 75℃
工作湿度 Operating Humidity	5% to 90% RH
储存湿度 Storage Humidity	5% to 95% RH

3、机械规范 Mechanical Specification

重量 Weight	(风机/导风圈) 2100/600g (Fan/Inlet)
风轮直径 Impeller Diameter	250mm
转子直径 Rotor Diameter	92mm
叶片数量 Number of Blades	7
叶轮材料 Impeller Material	塑料+玻纤 Propylene with glass-fiber reinforced
端盖材料 Electronics housing material	铝合金 Die-cast aluminum
叶轮旋转方向 Direction of Rotation	顺时针方向, 转子看向端盖 Clockwise, viewed toward rotor
安装位置 Installation position	任意方向 Any
工作制 Operation Mode	连续工作制 S1
电机轴承 Motor bearing	滚珠轴承 Ball bearing

转子表面 Surface of Rotor	电泳黑色 Coated in black
标准/证书 Valid For Approval/Standard	CE,RoHS,ISO9001,ErP2015
本规范适用于三相无刷直流电机。除本规范另有规定外，适用于中国强制性产品通过 CE 认证，并符合欧盟 ErP 要求。 This specification is applicable to three-phase brushless DC motors. Except as indicated in the specification, it is applicable to Chinese compulsory products Passed CE certification, and in line with EU ErP requirements.	EN ISO12100 机械安全标准 EN ISO12100 Safety standard of machinery
	EN 60204-1 电气设备安全标准 EN 60204-1 Safety standard of electrical equipment
	GB12350 小功率电机安全要求 GB12350 Safety requirements of small-power motors
	JB/T 9101 风机转子平衡 G6.3 JB/T 9101 Fan rotor balance G6.3
	EN 61000-6-2 工业环境抗扰度标准 EN 61000-6-2 Immunity standard for industrial environments
	EN 61000-6-4 工业环境排放标准 EN 61000-6-4 Emission standard for industrial environments
	EN 61000-6-4 工业环境排放标准 EN 61000-3-2 Harmonic current standard
	EN 61000-3-3 电压波动和闪烁标准 EN 61000-3-3 Voltage fluctuations and flicker standard

4、接线图 Connection diagram



WIRING DIAGRAM			
Red +	Blue -	Yellow 0-10V/PWM	White FG
Note: Only DC voltage can be connected! It is strictly prohibited to connect any AC voltage!			

备注 Remarks:

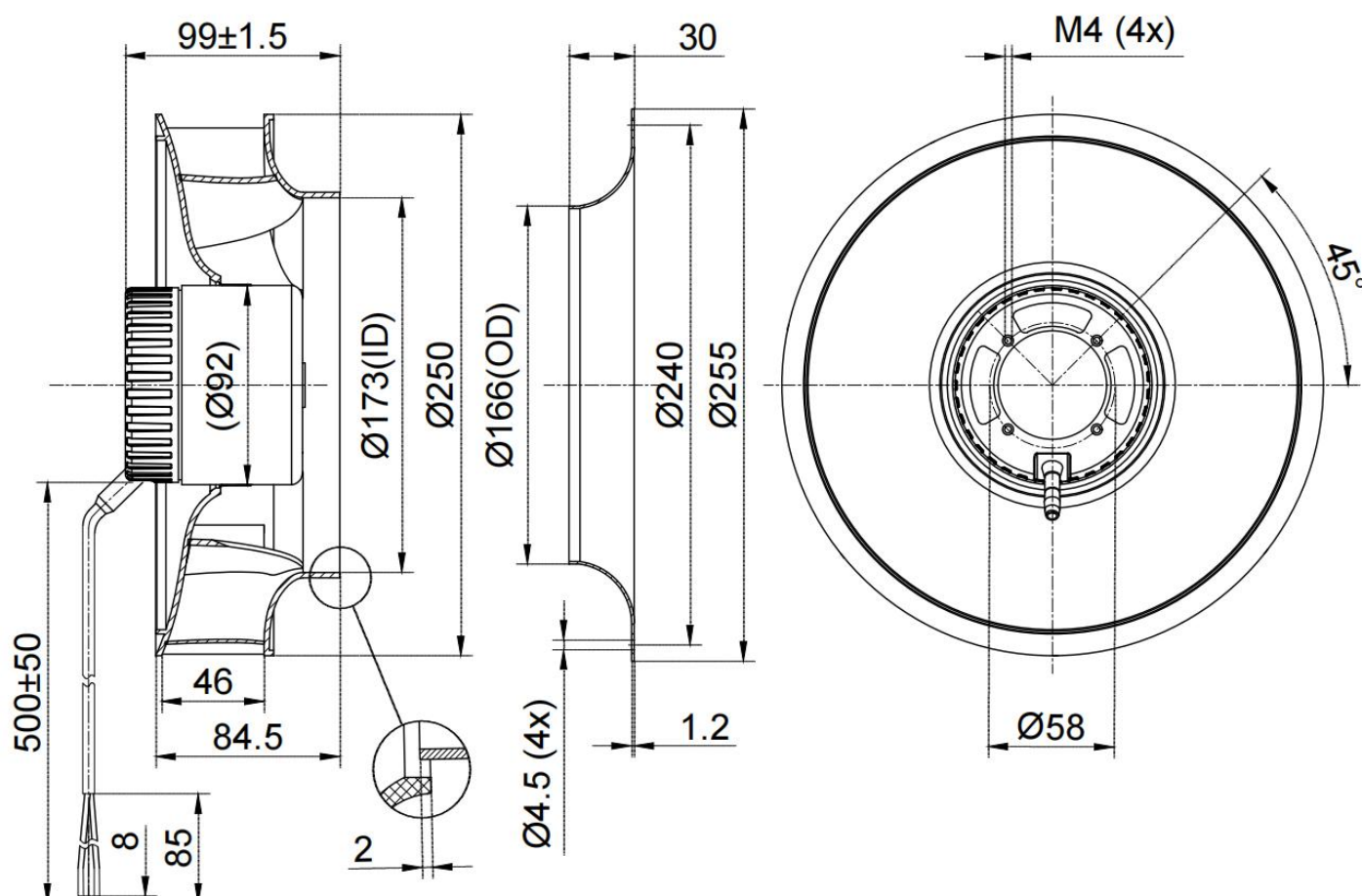
I. 电源线标准长度见下图。电源线长度可定制

I . Standard power cable length Refer to the figure below. The power cable can be customized

II. 标准为 0-10V/PWM 控制, 可随意更换通信协议, 详细通信协议内容请联系技术人员

II. Standard is 0-10V/PWM control, can optionally replace the communication protocol, detailed communication protocol content, please contact technical personnel

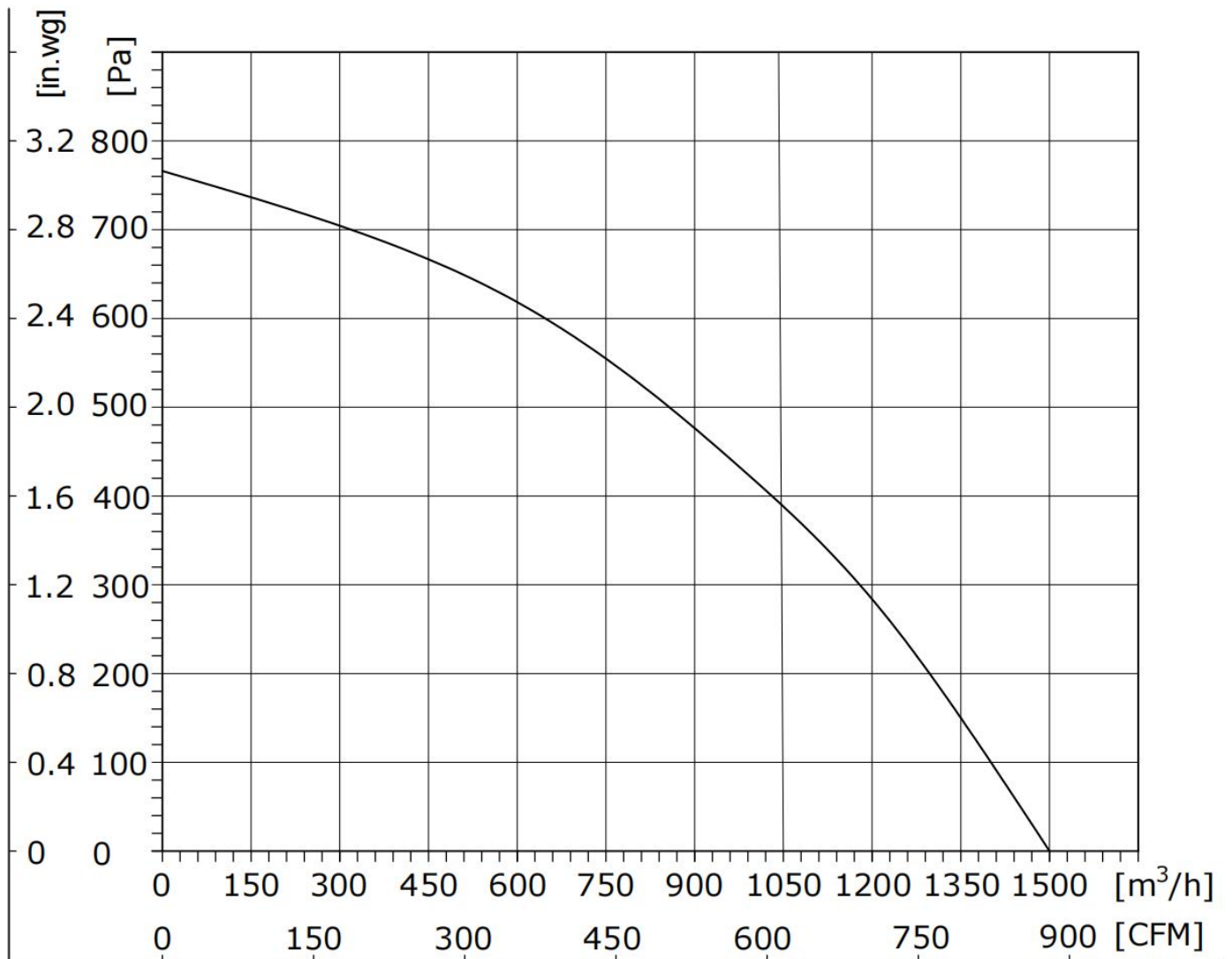
5、风机图纸 Product drawing



电源线	线径	功能	颜色	分配/函数
Line	AWG	Single	Colour	Assignment/function

电源连接 Power Conner	#20AWG	+	红色 Red	电压输入+24VDC Voltage input +24VDC
		0~10VDC/PWM	黄色 Yellow	控制输入 0~10VDC 或 PWM Control input 0~10VDC or PWM
FG		白色 White	转速输出:每转 4 次 Tach output:4 puls per revolution	
—		蓝色 Blue	电线接地端 GND connection of control interface	
控制连接 Control Connect				

6、风量静压曲线图 Aerodynamic Performance Charts



测试条件 Test condition:

I .测试数据是在规定的环境条件和安装方式下获得的

I .The test data is obtained under the specified environment conditions and installation mode

II .输入电压---工作电压

II .Input Voltage---Operating voltage

III.温度---室温

III.Temperature---Room temperature

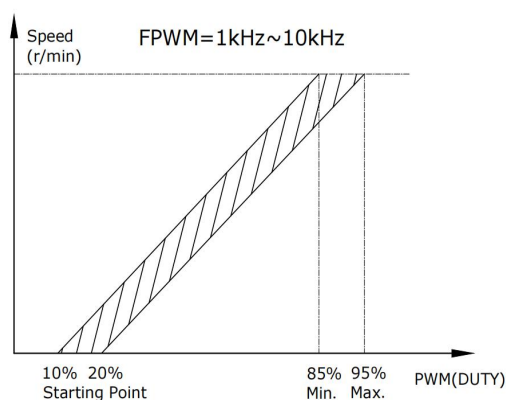
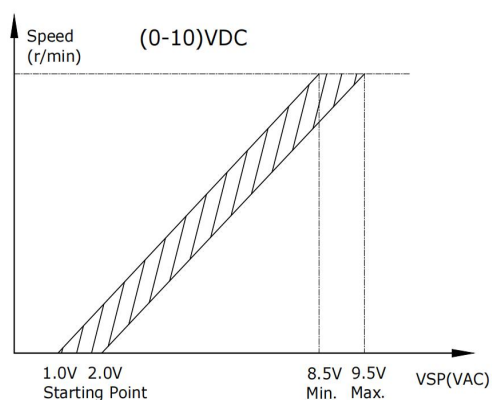
V .湿度---65%RH

V .Humidity---65%RH

7、安全使用说明 Safety Requirements

- I.取出风机时，请勿直接提起风机引线。如果引线受力过大，内部焊接部分可能会脱落。
- I .When taking out the fan, do not directly lift the fan lead. If the lead is excessively stressed, the internal welding part may fall off.
- II.禁止在风机运行时拔插风机引线插头。
- II .Do not plug or unplug the fan lead plug when the fan is running.
- III.如果风机启动后不工作，请勿触摸叶轮、转子等部件，请专业技术人员对风机进行检查，防止风机突然启动造成手部或其他人身伤害。
- III.If the fan does not work after starting, do not touch the impeller, rotor, or other parts, professional technical personnel are required to inspect the fan to prevent sudden start of the fan from causing hand or other personal injury.
- V.由于风机为软启动特性，在上电或低速运行时，请勿触摸风机叶轮或其他部件，以免造成人身伤害。
- V .Because of the soft start characteristics of the fan, to prevent personal injury, do not touch the impeller or other parts of the fan during powered on or running at low speeds.
- VI.风机需要在专业人员指导下操作和使用，防止儿童接触到本产品。
- VI.The fan needs to be operated and used under the guidance of professional personnel to prevent children from coming into contact with this product.
- VII.电源线如有磨损或损坏，需回厂维修或在厂家指导下更换。
- VII.If the power cord is worn or damaged, it needs to be returned to the factory for repair or be replaced under the guidance of the manufacturer.
- VIII.电机作为风机的一部分，在没有叶轮或负载的情况下，不建议单独使用。
- VIII.As a part of the fan, it is not recommended to use the motor alone when there is no impeller or load.
- IX.使用前请仔细阅读本技术手册。
- IX.Please read this technical manual carefully before using it.

备注 Remarks:



8、简易接线示意图 Simple wiring diagram

