

Product Specification

Type : BC-B220C-EC-00

Blauberg	Compilation	Check	Approved
	Hearn		
Customer			

[illegible]

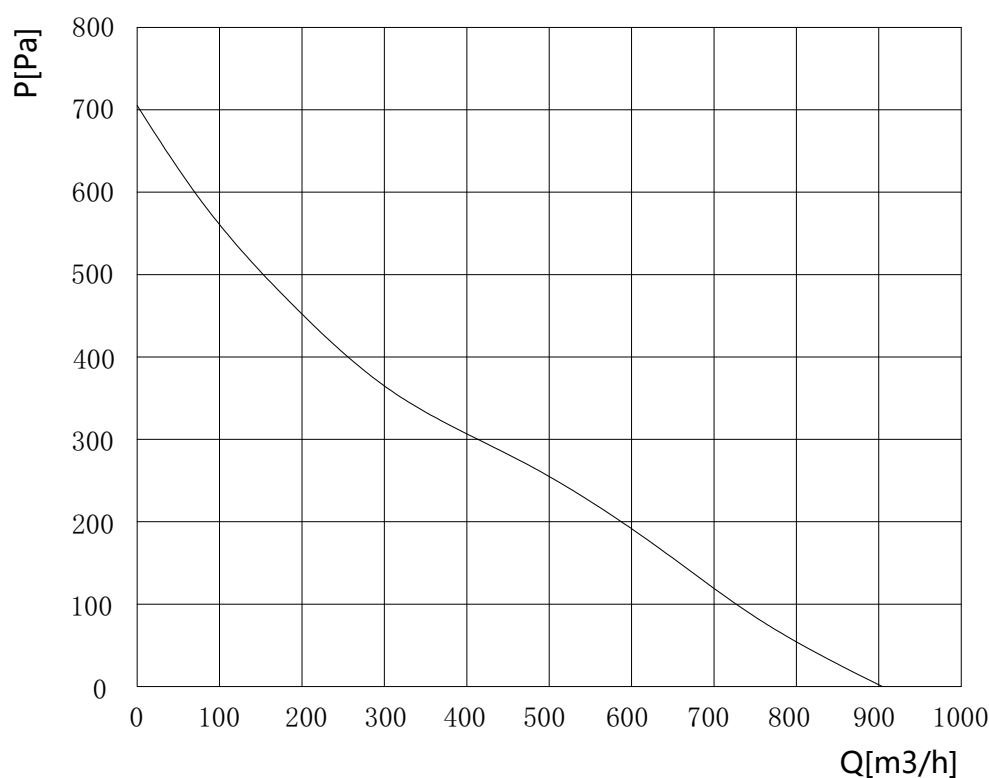
Rated parameters

Type	BC-B220C-EC-00
Phase	1 ~
Nominal Voltage	115VAC
Nominal Voltage Range	92 ~ 138VAC
Frequency	50/60 Hz
Nominal Speed	2400±5%RPM
Max. Input Power	85W
Max. Input Current	1.3A
Sound level	72dB(A)
Min. Ambient Temperature	-25°C
Max. Ambient Temperature	60°C

Nominal data tested in free air

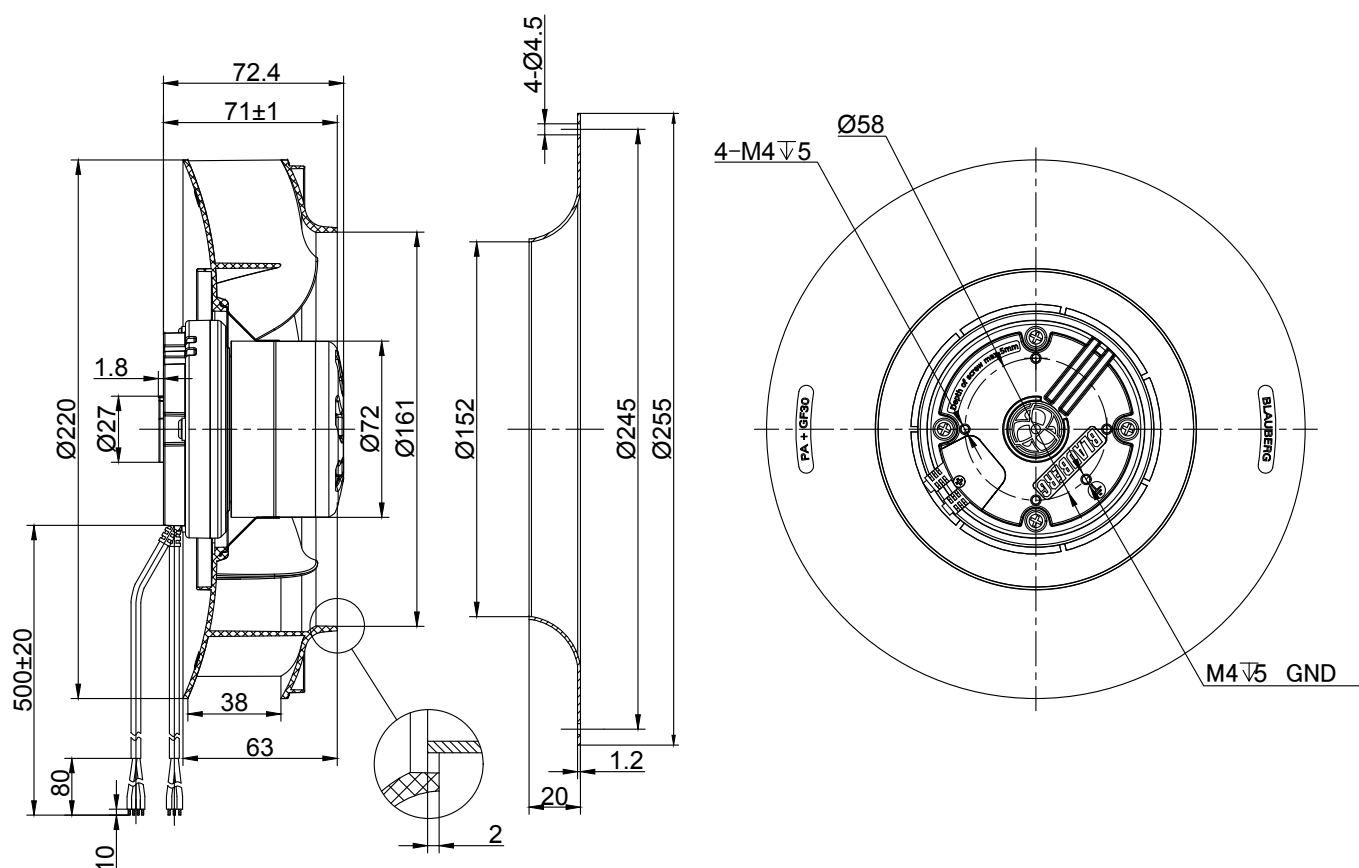
Technical description	
Fan size (L×W×H)	220×220×71mm
Motor rotor diameter	Ø72mm
Impeller Material	Plastic
Number of Blades	7 Pieces
Direction of Rotation	Clockwise, Viewed Toward Rotor
Rotor Surface	Plastic Spraying (Blue)
Degree of Protection	IP55
InsulationClass	Class B
Min. Permitted Ambient Temp. for Motor (Transport/Storage)	-40°C
Max. Permitted Ambient Temp. for Motor (Transport/Storage)	+80°C
Min./Max. Humidity	5% ~ 90%RH
Min./Max. Storage	5% ~ 95%RH
Condensate Drain Hole	At the top of the Rotor
Mode	S1 continuous work system
Motor Storage	Maintenance-free ball bearing
Technical Features	♦Output 10 VDC, Max. 10 mA ♦Control Input 0-10 VDC / PWM,PWM Max. Input Voltage 10VDC ♦Locked Rotor Protection ♦Thermal Protection ♦Excessive Voltage Protection ♦Less Voltage Protection ♦Overcurrent Protection ♦Soft Start
Length of Cable	500±20mm
Dielectric Strength	1800VAC/50Hz, 1s, Leakage Current ≤10mA, No Breakdown Flashover
Touch Current According to IEC 60990	≤3.5mA
Conformity with Standards	CCC、CE、RoHS

Air Performance



The air performance measurement adopts the "A" installation method in GB/T1236-2017 (same as ISO5801:2007 and AMCA210) standards. At rated voltage and rated frequency, Use the Blauberg air guide ring to match and securely install the corresponding backward-curved centrifugal fan. The relative position of the guide vane ring and the impeller inlet: spacing s/D (impeller diameter) = 0.4%; axial insertion depth of the guide vane ring x/D = 0.6%. The inlet of the fan faces an open and unobstructed space. The distance between the fan inlet and the nearest wall or other obstacle should be at least 1.5 times the diameter of the wall ring to ensure smooth and vortex free airflow. According to the standard requirements, it is necessary to record the atmospheric pressure, temperature, and humidity of the testing environment during measurement, and convert the measurement data into the standard value when the standard air density is 1.15Kg/M^3 . This value serves as the nominal parameter in this specification. Different installation methods and measurement standards may result in different test parameters. If the parameters you test deviate from the rated parameters in this specification, please verify the parameters according to the measurement standard requirements.

Outline Drawing(Unit: mm)



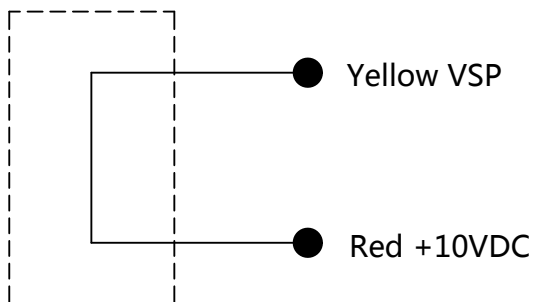
- | | |
|---|----------------------|
| 1 | AC Cable PVC 3×AWG20 |
| 2 | DC Cable PVC 4×AWG24 |

Wiring Diagram

Line	Conn.	Designation	Colour	Function/Assignment
Power Line		PE	Green/ Yellow	Protective Earth
	U1	L	Brown	Power supply, live wire see nameplate for voltage range
	U2	N	Blue	Power supply, neutral wire see nameplate for voltage range
Control Line	U4	+10V	Red	Fixed voltage output 10 VDC $\pm 5\%$, I _{max} .10mA, power supply for external devices(e.g.potentiometers);SELV
	U5	Speed Control	Yellow	0-10V/PWM(Max. amplitude of PWM 10V) control input;SELV
	U6	Signal Feedback	White	Tach output, 2 pulse per revolution, (pulses can be customized, or changed to RD signal);SELV
	U7	GND	Blue	Reference ground for control interface;SELV

Speed Setting(Optional)

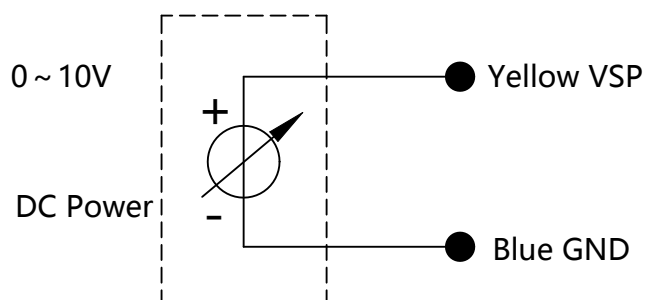
1.Full Speed



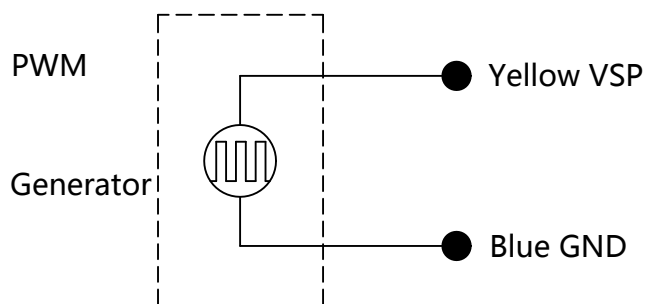
Short Red&Yellow

Fan will run full speed

2.Voltage Control 0-10VDC

User DC power support 0 ~ 10VDC voltage
Voltage higher than 1.0V DC, fan start up

3.PWM Control,PWM duty 0%-100%

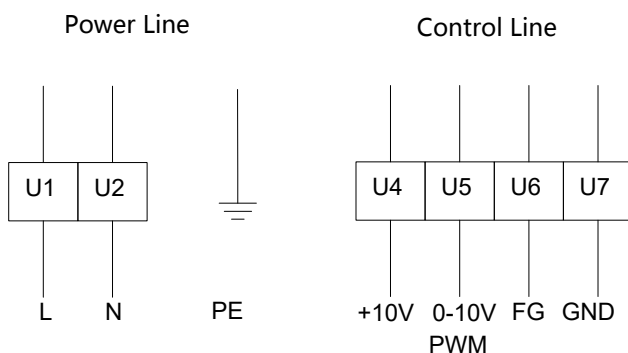


PWM suggest amplitude:10VDC

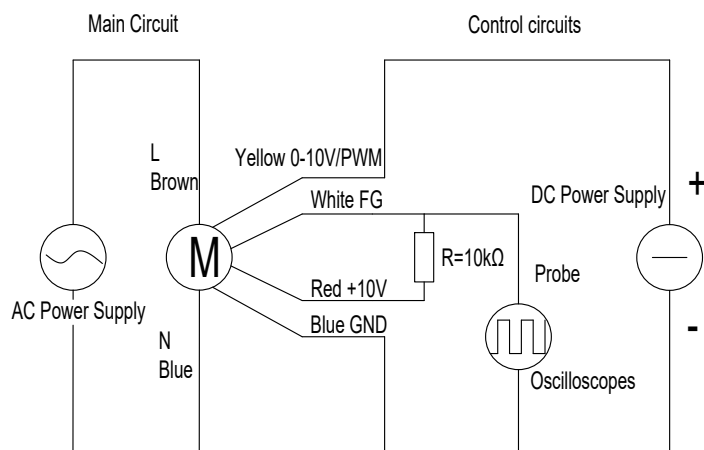
PWM Frequency:1KHz ~ 10KHz

PWM duty higher than 10%,fan start up

Wiring Label



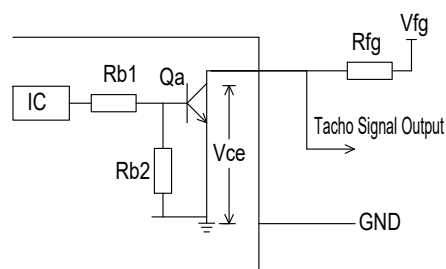
Wiring Diagram for Signal Feedback



The fan provides a speed output signal,output signal drawing see diagram below.

Vfg and pull up resistor are connected by customer.

$V_{fg} = (3.3-30)VDC, R \geq 1000 \times (v_{fg})\Omega$



Speed Calculation

$$n = 60f/a ;$$

n=Fan speed

a=Pulse (Several Pulse/Revolutions)

f=Signal Output waveform frequency

Note

- 1 The power line and control line of the fan should be connected in strict accordance with the wiring diagram;
- 2 Please do not connect the white signal wire directly to the red signal wire or the external power supply;
- 3 If the fan does not work after starting, please check the input voltage of the speed regulation, which may be poorly connected;
- 4 Please do not touch the impeller or rotor under the condition of electrifying or low speed operating;
- 5 Before turning on the power, please check whether the motor is installed reliably;
- 6 Please do not pull the cable. If the lead wire is damaged, it should be replaced by the manufacturer;
- 7 Please do not flush the motor, to prevent leakage accidents caused by reducing the insulation performance of the motor;
- 8 If you need to use special customized products, please consult us first and confirm before use;
- 9 After the fan operation stops, the temperature of the motor casing may be high in a short period of time, please avoid direct touch.
- 10 When installing the equipment, pay attention to check the casing and other shells, no debris can fall in, and clean up the inside if necessary;
- 11 Before the fan is installed and running, need to confirm that there is no collision, or jamming before it can be powered on;
- 12 As a part of the fan, the motor cannot be used alone without impeller or load;
- 13 After the product packaging has been disassembled, it should be repackaged if it needs to be kept in storage. The product shall be stored in a clean, well-ventilated warehouse with ambient temperature of -40°C~+80°C, relative humidity of no more than 95%, no corrosive gases in the air, and 15cm above the ground;
- 14 Please do not allow children to use this product;
- 15 Please read this technical specification carefully before use.

Life and maintenance, warranty

- 1 From the date of purchase (subject to the delivery date of the order), the warranty period of the whole machine is one year, during this period, the company provides free replacement or repair for the failure and damage caused by the quality problem of the product itself. If the damage is caused by undue disassembly, handling, man-made damage or natural disasters and other force majeure, it is not covered by the Blauberg's warranty.