

# Product Specification

Type: IL-B150P-EC-00

|          |             |       |          |
|----------|-------------|-------|----------|
| Blauberg | Compilation | Check | Approved |
|          | Alan        |       |          |
| Customer |             |       |          |

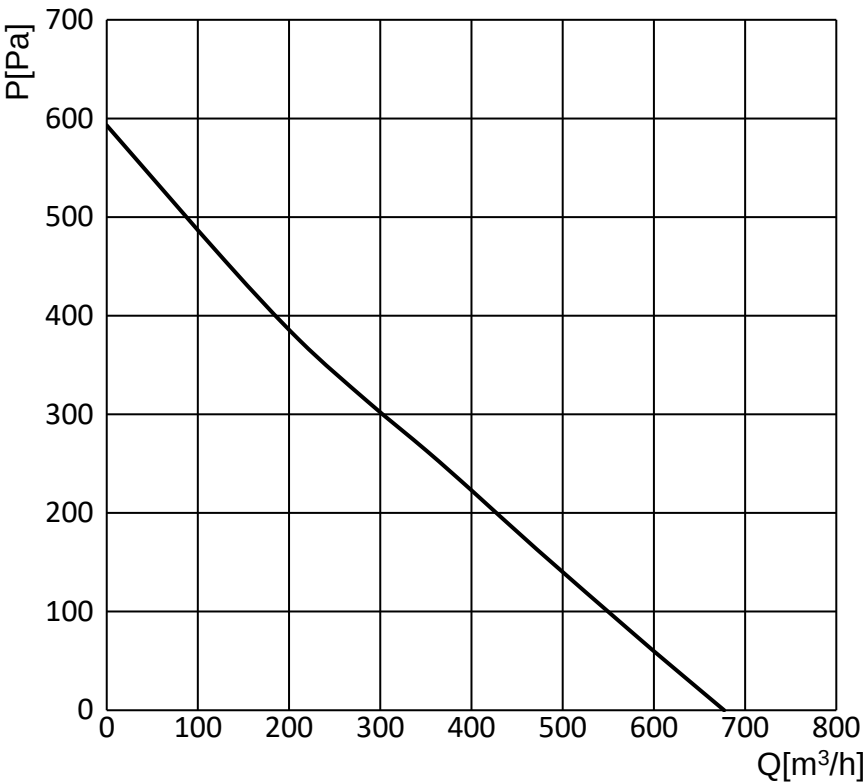
[illegible]

## Nominal Data

|                                 |                |
|---------------------------------|----------------|
| Type                            | IL-B150P-EC-00 |
| Phase                           | 1 ~            |
| Nominal Voltage                 | 230VAC         |
| Operating Voltage Range         | 184 ~ 276VAC   |
| Frequency                       | 50/60 Hz       |
| Nominal Speed                   | 2650±5%RPM     |
| Nominal Input Power             | 85W            |
| Nominal Input Current           | 0.65A          |
| Sound Level                     | 66dB(A)        |
| Min. Ambient Temperature        | -25°C          |
| Max. Ambient Temperature        | 60°C           |
| Nominal data tested in free air |                |

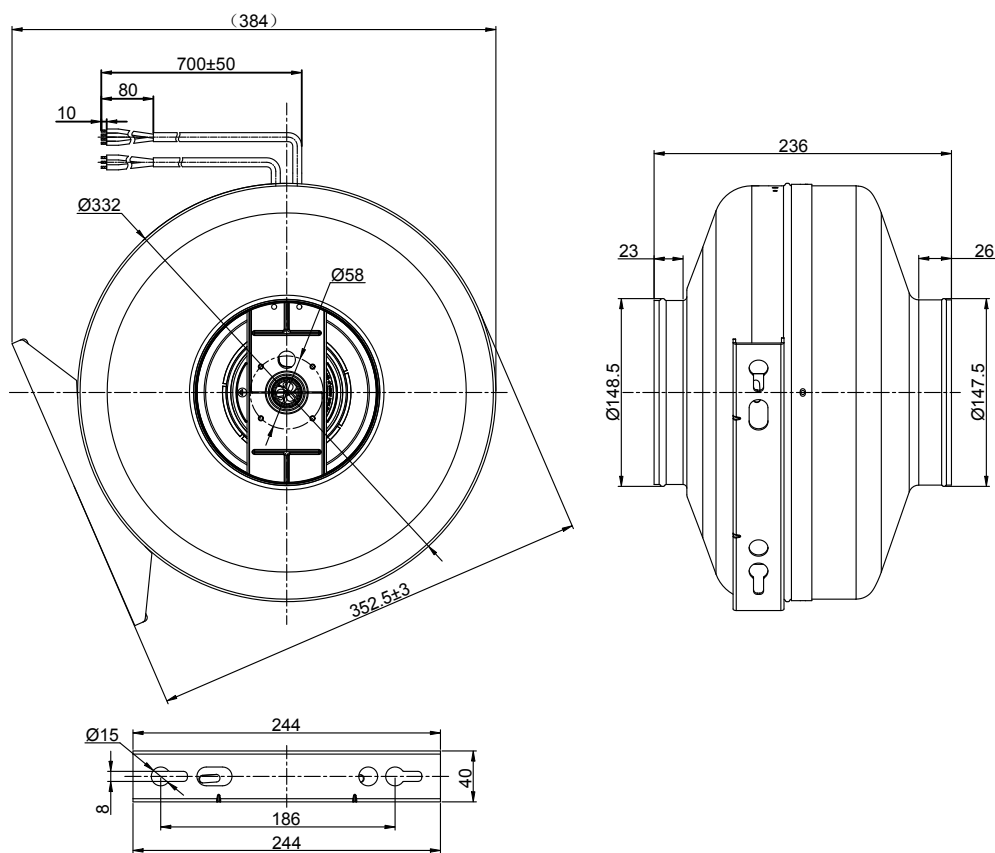
| Technical description                                      |                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fan size (L×W×H)                                           | 352×332×236mm                                                                                                                                                                                                                                                                                                                                  |
| Motor Rotor Size                                           | Φ72mm                                                                                                                                                                                                                                                                                                                                          |
| Impeller Material                                          | PA+GF                                                                                                                                                                                                                                                                                                                                          |
| Number of Blades                                           | 7Pieces                                                                                                                                                                                                                                                                                                                                        |
| Direction of Air Flow                                      | Axial                                                                                                                                                                                                                                                                                                                                          |
| Direction of Rotation                                      | Clockwise, Viewed Toward Rotor                                                                                                                                                                                                                                                                                                                 |
| Rotor Surface Treatment                                    | Plastic Spraying (Blue)                                                                                                                                                                                                                                                                                                                        |
| Degree of Protection                                       | IP55                                                                                                                                                                                                                                                                                                                                           |
| Insulation Class                                           | Class B                                                                                                                                                                                                                                                                                                                                        |
| Min. Permitted Ambient Temp. for Motor (Transport/Storage) | -40°C                                                                                                                                                                                                                                                                                                                                          |
| Max. Permitted Ambient Temp. for Motor (Transport/Storage) | +80°C                                                                                                                                                                                                                                                                                                                                          |
| Operating Humidity                                         | 5% ~ 90%RH                                                                                                                                                                                                                                                                                                                                     |
| Storage Humidity                                           | 5% ~ 95%RH                                                                                                                                                                                                                                                                                                                                     |
| Installation Position                                      | Any                                                                                                                                                                                                                                                                                                                                            |
| Condensation Drainage Holes                                | At the Top of the Rotor                                                                                                                                                                                                                                                                                                                        |
| Operating Mode                                             | Continuous operation(S1)                                                                                                                                                                                                                                                                                                                       |
| Motor Bearing Structure                                    | Maintenance-free Ball Bearing                                                                                                                                                                                                                                                                                                                  |
| Technical Features                                         | <ul style="list-style-type: none"> <li>♦Output 10 VDC, Max. 10 mA</li> <li>♦Control Input 0-10 VDC / PWM,PWM Max. Input Voltage 10VDC</li> <li>♦Locked Rotor Protection</li> <li>♦Thermal Protection</li> <li>♦Excessive Voltage Protection</li> <li>♦Less Voltage Protection</li> <li>♦Overcurrent Protection</li> <li>♦Soft Start</li> </ul> |
| Length of Cable                                            | 700±50mm                                                                                                                                                                                                                                                                                                                                       |
| 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/M3, which serves as the nominal parameter value of specification sheet. Different installation methods and measurement standards will result in different test parameters. If there is a deviation between your tested parameters and the rated ones in this specification sheet, please review the parameters according to the measurement standard requirements.

# Outline Drawing(Unit:mm )



1 AC Cable PVC 3×AWG20

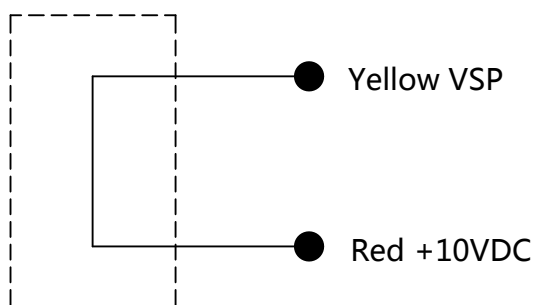
2 DC Cable PVC 4×AWG24

## Wiring Diagram

| Line         | Conn. | Designation     | Colour           | Function/Assignment                                                                                                           |
|--------------|-------|-----------------|------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Power Line   |       | PE              | Green/<br>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<br>$\pm 5\%$ , I <sub>max</sub> .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)

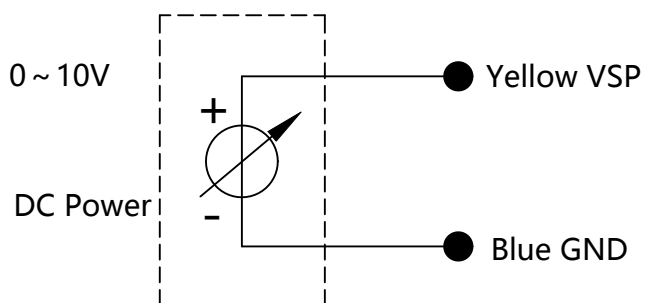
## 1.Full Speed



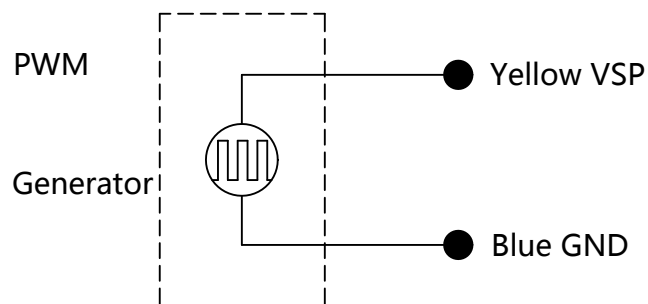
Short Red&amp;Yellow

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%



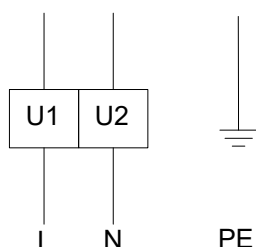
PWM suggest amplitude:10VDC

PWM Frequency:1KHz ~ 10KHz

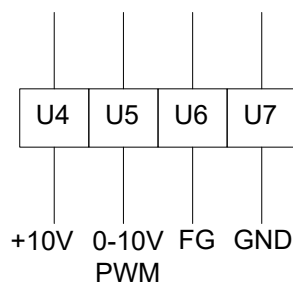
PWM duty higher than 10%,fan start up

## Wiring Label

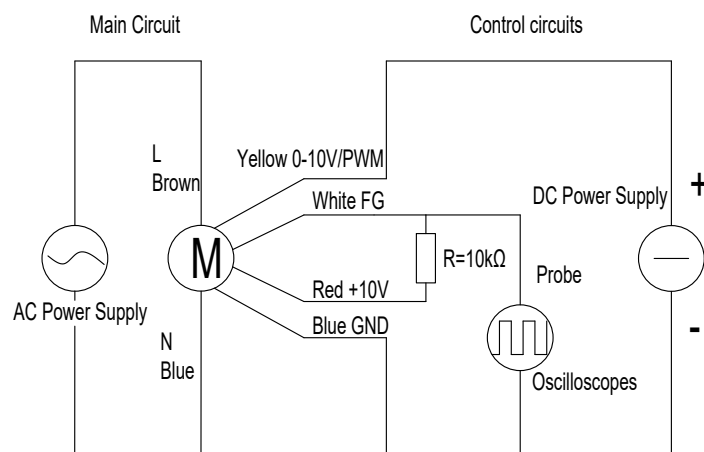
Power Line



Control Line



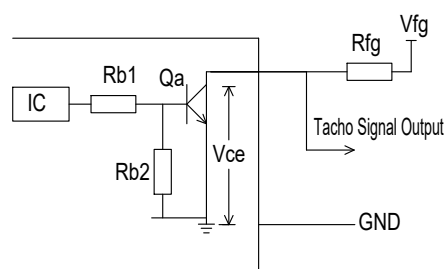
## Wiring Diagram for Signal Feedback



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 read this technical specification carefully before use.                                                                                                                                                                                                                                                            |

## Warranty

|   |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | From the date of purchase (subject to the delivery date of the order), the warranty period of the whole machine is two years, 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. |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|