

## Wathai 9733

# Wathai 9733 12V DC Brushless Blower Fan Instruction Manual

Model: 9733B12V4P

## 1. INTRODUCTION

This manual provides essential information for the safe and efficient use of your Wathai 97mm x 33mm 9733 12V DC Brushless Small Blower Fan. This compact centrifugal fan is designed to deliver high-velocity airflow for various applications, including cooling electronic equipment, ventilating workspaces, and providing targeted air circulation in confined spaces. Please read this manual thoroughly before installation and operation.

# Small Space, Big Power

97x33mm Design Fits Anywhere – Server/PC/RV/3D printer/battery compartment, one machine to solve the problem of heat dissipation in confined space!



Image 1.1: The Wathai 9733 Blower Fan is suitable for diverse applications such as PC servers, 3D printers, PC cases, and camper ventilation, demonstrating its versatility in small spaces.

## 2. PRODUCT FEATURES

- **Compact Centrifugal Design:** A 97mm x 33mm squirrel cage fan delivers high-velocity airflow, ideal for electronics, appliances, and instruments.
- **PWM Speed Control:** Features a 4-pin PWM connector (1300-4800 RPM) for automatic BIOS-controlled

cooling, adapting to various workloads.

- **Durable Construction:** Built with PBT plastic housing and dual-ball bearings, ensuring a 50,000-hour lifespan and supporting both horizontal and vertical mounting.
- **High Performance:** Provides 35.8 CFM airflow, 2 In H2O static pressure, and operates at 18W.
- **Wide Voltage Range:** Operates efficiently within a voltage range of 7-13.5V, with a startup voltage of 5.5V.
- **Low-Profile Design:** Suitable for installation in tight spaces.

## Dual Ball **50000** hours handles 24/7 operation

Turbo-like airflow at full speed ("jet engine" effect), perfect for demanding cooling tasks. Significantly noisy at full speed (51-58dBA), not suitable for quiet sensitive environments.

◦ **Power**  
**1.4-18W**

◦ **Noise**  
**24-58dBA**

◦ **Speed**  
**1400-4800**  
RPM

Built for endurance and performance, this fan delivers powerful airflow, features a 50,000-hour ball bearing.

Image 2.1: The Wathai 9733 Blower Fan is engineered for endurance and performance, featuring a 50,000-hour dual-ball bearing

and variable power, noise, and speed capabilities.

### 3. WHAT'S IN THE BOX

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Upon opening the package, please verify that all the following components are included:

- 1x Wathai 12V PWM Blower Fan
- 1x Metal Fan Guard
- Screws and Nuts for mounting

# What's in the box

- 1 Pcs Fan
- 1 Fan Grill
- 2 Screws & Nuts



| PWM Control    |         |         |         |         |
|----------------|---------|---------|---------|---------|
| PWM Duty Cycle | 30%     | 50%     | 75%     | 100%    |
| Speed          | 1400RPM | 2800RPM | 3900RPM | 4800RPM |
| Current        | 0.1A    | 0.4A    | 0.9A    | 1.5A    |
| Power          | 1.4W    | 4.6W    | 10.7W   | 18W     |

Image 3.1: The package includes the Wathai 9733 Blower Fan, a protective fan grill, and necessary mounting hardware (screws and nuts).

## 4. SETUP AND INSTALLATION

The Wathai 9733 Blower Fan is designed for easy integration into various systems. Follow these steps for proper installation:

- Mounting:** Secure the blower fan in your desired location using the provided screws and nuts. Ensure

adequate clearance for airflow. The fan supports both horizontal and vertical mounting orientations.

2. **Connect Fan Guard:** Attach the metal fan guard to the intake side of the fan to prevent foreign objects from entering and damaging the impeller.
3. **Power Connection:** Connect the 4-pin PWM connector to a compatible 4-pin fan header on your motherboard or power supply.
4. **Wiring Diagram:**
  - **Black:** Ground (-)
  - **Red:** 12V DC (+)
  - **Yellow:** RPM Signal (Tachometer)
  - **Blue:** PWM Signal (Speed Control)
5. **Cable Management:** Route the fan cable neatly to avoid interference with other components or moving parts.

# 4Pin PWM Blower

4-Pin PWM Adjusts from Whisper-Quiet to Full Jet Engine Mode – Your Rules, Your Temps! Suitable for computer motherboard 4PIN connection.

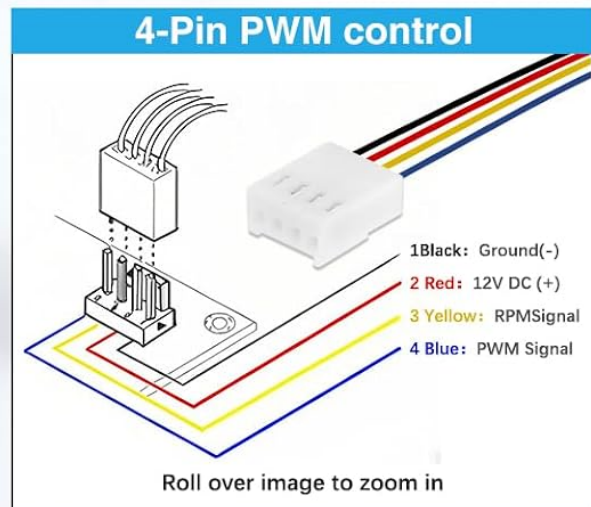
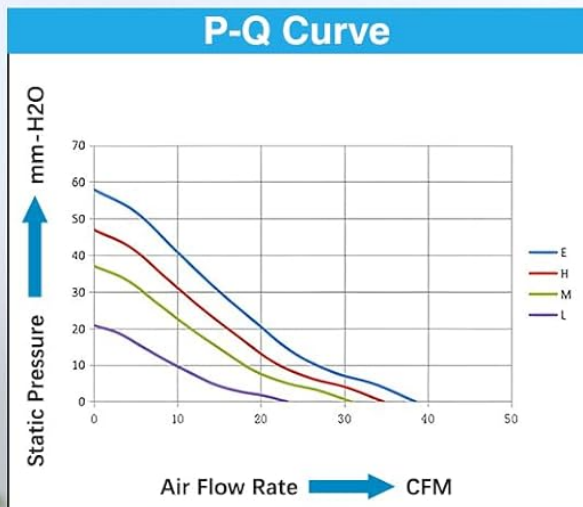


Image 4.1: The 4-pin PWM connector allows for precise speed control and provides RPM feedback. The wiring diagram illustrates the function of each pin.

## 5. OPERATION

The Wathai 9733 Blower Fan utilizes a 4-pin PWM connection for dynamic speed control, allowing it to adjust its performance based on system requirements.

### 5.1. PWM Speed Control

When connected to a compatible motherboard or controller, the fan's speed can be automatically adjusted via PWM signals. This allows for optimized cooling performance and noise reduction. The fan's speed ranges from 1300 RPM to 4800 RPM.

| PWM Duty Cycle | Speed    | Current | Power |
|----------------|----------|---------|-------|
| 30%            | 1400 RPM | 0.1A    | 1.4W  |
| 50%            | 2800 RPM | 0.4A    | 4.6W  |
| 75%            | 3900 RPM | 0.9A    | 10.7W |
| 100%           | 4800 RPM | 1.5A    | 18W   |

At lower PWM duty cycles, the fan operates quietly, suitable for general use. At higher duty cycles, it delivers maximum airflow, which may result in increased noise levels (up to 58.5 dBA) comparable to a "jet engine" sound, ideal for demanding cooling tasks.

### 5.2. Direct 12V Operation

If PWM control is not desired or available, the fan can be powered directly by connecting the Red wire to 12V DC (+) and the Black wire to Ground (-). In this configuration, the fan will operate at its maximum speed (4800 RPM) and noise level. The Yellow (RPM Signal) and Blue (PWM Signal) wires can be left unconnected if not used.

## 6. MAINTENANCE

Regular maintenance ensures optimal performance and extends the lifespan of your Wathai blower fan.

- **Cleaning:** Periodically inspect the fan blades and housing for dust accumulation. Use compressed air or a soft brush to gently remove dust. Ensure the fan is powered off and disconnected before cleaning.
- **Bearing Check:** While the dual-ball bearings are designed for long life, listen for any unusual noises during operation, which might indicate a bearing issue.
- **Cable Inspection:** Check the power cable and connector for any signs of wear, damage, or loose connections.

## 7. TROUBLESHOOTING

If you encounter issues with your Wathai blower fan, refer to the following common troubleshooting steps:

- **Fan Not Spinning:**
  - Ensure the 4-pin connector is securely plugged into the fan header.
  - Verify that the power supply is providing 12V DC.
  - Check BIOS settings if using PWM control; ensure the fan header is enabled and configured correctly.
  - If connected directly (Red to 12V, Black to Ground), ensure correct polarity and sufficient power.
- **Excessive Noise:**
  - At full speed (4800 RPM), the fan is designed to be loud (up to 58.5 dBA). This is normal for its high airflow capacity.
  - If using PWM, reduce the fan speed via your motherboard's BIOS or fan control software.
  - Check for any obstructions or loose mounting that might cause vibrations.
  - Ensure the fan guard is properly installed and not rattling.

- **Insufficient Airflow:**
  - Ensure the fan is operating at a sufficient speed. Increase PWM duty cycle if possible.
  - Check for dust buildup on the fan blades or in the intake/exhaust vents.
  - Verify that the fan is installed in the correct orientation for desired airflow.

## 8. SPECIFICATIONS

Detailed technical specifications for the Wathai 9733 Blower Fan:

|                          |                                                                |
|--------------------------|----------------------------------------------------------------|
| Model Number             | 9733B12V4P                                                     |
| Dimensions (L x W x H)   | 97 x 97 x 33 mm (3.82 x 3.82 x 1.3 inches)                     |
| Bearing Type             | Dual Ball Bearing                                              |
| Connector Type           | 4-pin PWM (Computer Motherboard)                               |
| Rated Voltage            | 12V DC                                                         |
| Operating Voltage Range  | 7V to 13.5V DC                                                 |
| Startup Voltage          | 5.5V DC                                                        |
| Rated Current            | 1.5 Amp (Max)                                                  |
| Power Consumption        | 18 Watts (Max)                                                 |
| Maximum Rotational Speed | 4800 RPM                                                       |
| Airflow Capacity         | 35.8 CFM                                                       |
| Static Pressure          | 2 In H2O                                                       |
| Noise Level              | 58.5 dBA (Max)                                                 |
| Life Expectancy          | 50,000 Hours                                                   |
| Material                 | PBT Plastic Housing, Metal Grill                               |
| Compatible Devices       | Amplifier, Desktop, Electronic Equipment, Laptop, Refrigerator |

# SPECIFICATION

Size: 97 x94 x 33 mm

3.82 x 3.74 x 1.3 inches

## Bearings: Dual Ball

Rated Current: 1.5 Amp

Rated Voltage: 12V DC

Operating Voltage: 7 to 13.5V

Life Expectancy: 50,000 Hrs

Connector: PWM 4-Pin

Speed: 4800 RPM(Max)

Airflow: 35.8 CFM

Power: 18 W

Noise: max. 58.5 dBA

Static Pressure: 2 In H<sub>2</sub>O

Startup Voltage: 5.5V DC

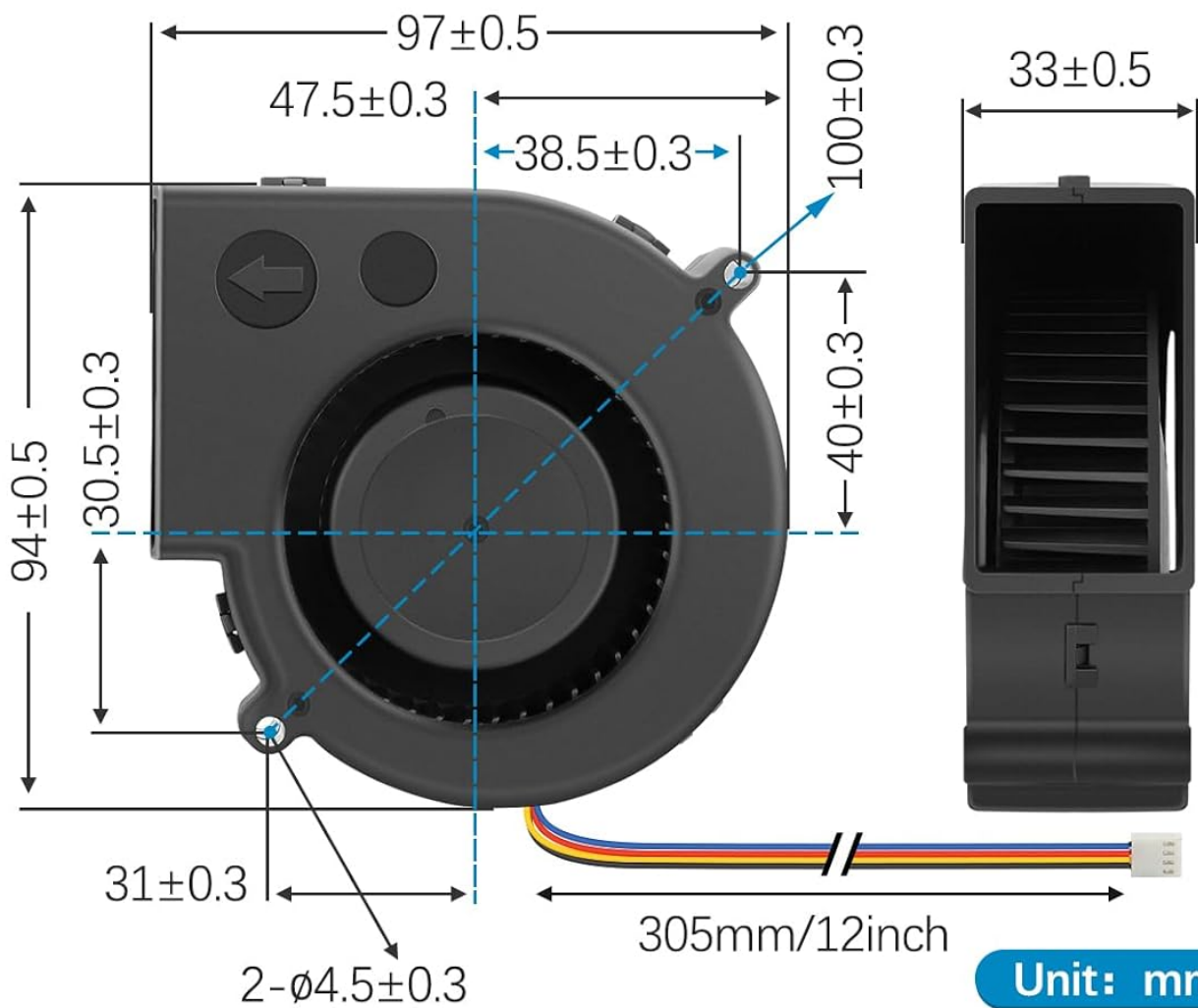


Image 8.1: A comprehensive overview of the fan's specifications and precise dimensions, including its 97x97x33mm size and 4-pin PWM connector.

## 9. WARRANTY AND SUPPORT

For warranty information, technical support, or any inquiries regarding your Wathai 9733 Blower Fan, please contact the manufacturer directly through their official website or the retailer from whom the product was purchased. Keep your purchase receipt as proof of purchase.

Manufacturer: Wathai  
For more information, visit the [Wathai Store on Amazon](#).