Aquacomputer 53293

Aquacomputer G1/4 Next RGBpx Flow Sensor (Model 53293) User Manual

Model: 53293

1. INTRODUCTION

The Aquacomputer G1/4 Next RGBpx Flow Sensor is an advanced, fully integrated device designed for liquid cooling systems. It provides real-time monitoring of flow rate, coolant temperature, and electrical conductivity (coolant quality). Featuring a USB interface, RGBpx lighting, and an OLED display, this sensor offers comprehensive control and visual feedback for your cooling loop.

2. SAFETY INFORMATION

Please read and understand all safety instructions before installing or operating the device. Failure to follow these instructions may result in product damage, system malfunction, or personal injury.

- Ensure your liquid cooling system is completely drained and depressurized before installation or maintenance.
- Always disconnect power from your computer system before handling internal components.
- Use appropriate tools and avoid overtightening fittings to prevent damage to the sensor or other components.
- Verify all connections are secure and leak-free before powering on the system.
- Do not expose the device to extreme temperatures or direct sunlight.
- Keep the device away from moisture and liquids, except for the intended coolant flow.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- Aquacomputer G1/4 Next RGBpx Flow Sensor
- Internal USB connection cable

4. PRODUCT OVERVIEW

The Aquacomputer G1/4 Next RGBpx Flow Sensor integrates multiple monitoring functions into a compact unit. It features a magnetic rotor for flow measurement, a precise conductivity sensor, and a water temperature sensor. The OLED display provides immediate feedback, while RGBpx lighting offers customizable visual effects.

Figure 1: Aquacomputer G1/4 Next RGBpx Flow Sensor. This image displays the Aquacomputer G1/4 Next RGBpx Flow Sensor. The device is black with G1/4 connection threads visible on the side. The top features an integrated OLED display showing 'Flow 186.1 l/h' and 'Water 34.5 °C', indicating real-time flow rate and water temperature. A vibrant RGBpx LED strip wraps around the top edge, showcasing its customizable lighting capabilities. Control buttons are also visible on the top surface.

5. SETUP AND INSTALLATION

Follow these steps for proper installation of your flow sensor:

1. **Physical Integration:** Install the flow sensor into your liquid cooling loop using the G1/4 connection threads. Ensure the flow direction matches the arrow indicated on the sensor body. Use appropriate G1/4 fittings (not included) and ensure they are securely tightened to prevent leaks.

2. **USB Connection:** Connect the provided internal USB cable from the sensor to an available internal USB 2.0 header on your motherboard. This connection provides power and data communication to your PC.

3. **RGBpx Connection (Optional):** If you wish to control additional RGBpx compatible devices, connect them to the RGBpx output on the sensor. The sensor can control up to 90 addressable LEDs.

4. **Software Installation:** Download and install the latest version of the Aquasuite software from the official Aquacomputer website. This software is required for advanced configuration, monitoring, and firmware updates.

5. **Leak Testing:** After installation, perform a thorough leak test of your entire liquid cooling system before powering on your computer.

6. OPERATING INSTRUCTIONS

The sensor can be operated and configured via its integrated OLED display and three control buttons, or through the Aquasuite software.

6.1. On-Device Operation

- **Navigation:** Use the three buttons located on the top of the sensor to navigate through menus and adjust settings on the OLED display.
- **Monitoring:** The display shows real-time values for flow rate (l/h), water temperature (°C), and coolant conductivity (µS). These can be viewed as numerical values or graphical diagrams.
- **Alarm Buzzer:** The integrated alarm buzzer will sound if configured alarm limits are exceeded.

6.2. Aquasuite Software

The Aquasuite software provides advanced control and customization:

- **Configuration:** Adjust sensor settings, set alarm thresholds for flow, temperature, and conductivity.
- **RGBpx Control:** Configure the 10 integrated RGBpx LEDs and any connected external RGBpx devices. Create custom lighting effects and assign them to up to six LED groups.
- **Data Logging:** Monitor and log sensor data over time.
- **Aquabus Integration:** Data from the sensor can be transmitted to a connected Aquacomputer Aquaero 5/6 device for centralized control.

7. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your liquid cooling system and sensor.

- **Coolant Quality:** Regularly monitor coolant conductivity via the sensor. High conductivity indicates coolant degradation or contamination, which can lead to corrosion. Replace coolant as recommended by your coolant manufacturer.
- **System Cleaning:** Periodically flush and clean your entire liquid cooling loop to prevent buildup that could affect flow rate or sensor accuracy.
- **Visual Inspection:** Inspect the sensor and fittings for any signs of leaks, corrosion, or damage.
- **Firmware Updates:** Check the Aquacomputer website for firmware updates for your sensor and install them using the Aquasuite software to ensure the best performance and features.

8. TROUBLESHOOTING

If you encounter issues, refer to the following common problems and solutions:

- **No Flow Reading:**
  - Check that the sensor is installed in the correct flow direction.
  - Ensure the pump is operating and coolant is flowing.
  - Verify the USB connection to the PC is secure.
  - Inspect the rotor for any obstructions or damage.
- **Incorrect Temperature/Conductivity Readings:**
  - Ensure the sensor is fully submerged in coolant.

- Check for air bubbles trapped near the sensor elements.
- Calibrate the sensor if an option is available in Aquasuite.

- **Display Not Working/No Power:**

  - Verify the internal USB cable is correctly connected to both the sensor and the motherboard.
  - Check if the motherboard's internal USB header is enabled and receiving power.
  - Try a different internal USB header if available.

- **RGBpx Lighting Issues:**

  - Ensure the sensor is powered via USB.
  - Check RGBpx settings in the Aquasuite software.
  - Verify connections for any external RGBpx devices.

- **Aquasuite Software Not Detecting Sensor:**

  - Ensure the USB cable is properly connected.
  - Restart the Aquasuite software and/or your computer.
  - Check for driver issues in your operating system's Device Manager.
  - Update Aquasuite to the latest version.

9. TECHNICAL SPECIFICATIONS

Model Number	53293
Dimensions (L x W x H)	Approx. 51 x 43 x 34 mm
Connection Thread	G 1/4
Flow Rate Measurement Range	Approx. 35 l/h to 1000 l/h
Conductivity Measurement Range	2-200 µS
Integrated RGBpx LEDs	10
RGBpx Output	For up to 90 addressable LEDs
Power Connector Type	USB
Wattage	1.8 watts
Cooling Method	Water
Compatible Devices	Desktop
Material	Brass

10. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official Aquacomputer website or contact their customer service directly. Keep your proof of purchase for warranty claims.