

## Vaillant 306787

# Vaillant VR 10 Standard Sensor Instruction Manual

Model: 306787

## 1. INTRODUCTION

This manual provides essential information for the correct installation, operation, and maintenance of the Vaillant VR 10 Standard Sensor. The VR 10 sensor is designed to work with Vaillant CalorMATIC 630/2 and auroMATIC 620/2 heating control systems, providing accurate temperature readings for optimal system performance. Please read this manual thoroughly before installation and use to ensure safe and efficient operation.

## 2. SAFETY INFORMATION

Always observe the following safety instructions to prevent personal injury and damage to the product or property:

- Installation and maintenance must only be carried out by qualified and authorized personnel.
- Ensure the power supply to the heating system is disconnected before commencing any installation or maintenance work.
- Do not modify the sensor or its components. Use only original Vaillant spare parts.
- Protect the sensor and its wiring from mechanical damage, moisture, and extreme temperatures.
- Keep packaging materials away from children.

## 3. PRODUCT OVERVIEW

The Vaillant VR 10 Standard Sensor (Model 306787) is a wired temperature sensor designed for integration with specific Vaillant heating control units. It provides precise temperature data to the control system, enabling efficient regulation of heating and hot water. The sensor typically consists of a sensing element at one end of a cable, with a connector at the other end for connection to the control unit.



**Figure 1:** Vaillant VR 10 Standard Sensor. This image shows the sensor with its coiled cable and a metallic sensing tip, ready for installation.



**Figure 2:** Schematic representation of the Vaillant VR 10 Standard Sensor. This diagram illustrates the sensor's cable and connector, highlighting its design for integration into heating systems.

## 4. SETUP AND INSTALLATION

The VR 10 sensor is designed for straightforward integration. Follow these steps for proper installation:

1. **Preparation:** Ensure the main power supply to the heating system (CalorMATIC 630/2 or auroMATIC 620/2) is switched off at the circuit breaker.
2. **Location:** Determine the optimal location for the sensor. For outdoor temperature sensing, it should be placed on a north-facing wall, away from direct sunlight, heat sources, and windows/doors that could affect readings. For flow/return temperature sensing, refer to the specific instructions of your heating control unit for sensor well placement.
3. **Wiring:** Connect the VR 10 sensor cable to the designated terminals on your Vaillant CalorMATIC 630/2 or auroMATIC 620/2 control unit. Refer to the wiring diagram in your control unit's manual for precise terminal

identification. Ensure connections are secure and correctly polarized if applicable.

4. **Mounting:** Secure the sensor in its chosen location using appropriate mounting hardware (not included). Ensure the cable is routed safely, avoiding sharp edges or areas where it could be pinched or damaged.
5. **Power On:** Once the sensor is securely installed and wired, restore power to the heating system.
6. **System Configuration:** Access the settings menu on your CalorMATIC 630/2 or auroMATIC 620/2 control unit to confirm the sensor is recognized and configured correctly. Follow the control unit's manual for specific sensor setup procedures.

## 5. OPERATING INSTRUCTIONS

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The Vaillant VR 10 Standard Sensor operates passively by providing temperature data to the connected Vaillant control unit. Its operation is fully integrated with the control unit's functionality.

- The sensor continuously measures the ambient or fluid temperature, depending on its installation location.
- This data is transmitted to the CalorMATIC 630/2 or auroMATIC 620/2, which uses it to adjust heating curves, manage boiler operation, and optimize energy consumption.
- No direct user interaction with the sensor itself is required after installation. All adjustments and monitoring are performed via the connected control unit.

For detailed information on how the temperature data influences your heating system and how to adjust settings, please refer to the instruction manual of your Vaillant CalorMATIC 630/2 or auroMATIC 620/2 control unit.

## 6. MAINTENANCE

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The Vaillant VR 10 Standard Sensor is designed for long-term, maintenance-free operation. However, periodic checks can help ensure its continued accuracy and reliability:

- **Visual Inspection:** Periodically inspect the sensor and its cable for any signs of physical damage, wear, or corrosion. Ensure the cable is securely fastened and not exposed to potential damage.
- **Cleanliness:** If installed outdoors, ensure the sensor head is free from dirt, debris, or insect nests that could obstruct accurate temperature readings. Clean gently with a soft, damp cloth if necessary. Do not use abrasive cleaners or solvents.
- **Connection Check:** During routine heating system maintenance, a qualified technician can verify the integrity of the sensor's electrical connections to the control unit.

No user-serviceable parts are inside the sensor. Do not attempt to open or repair the sensor.

## 7. TROUBLESHOOTING

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If you suspect an issue with your VR 10 sensor, consider the following common scenarios:

- **Incorrect Temperature Readings:**
  - Check the sensor's placement. Is it exposed to direct sunlight, drafts, or other heat sources? Relocate if necessary.
  - Inspect the sensor head for dirt or debris. Clean as described in the Maintenance section.
  - Verify the wiring connections at the control unit. Loose or corroded connections can lead to inaccurate readings.
- **Sensor Not Detected by Control Unit:**

- Ensure the sensor is correctly wired to the designated terminals on the CalorMATIC 630/2 or auroMATIC 620/2.
  - Check for continuity in the sensor cable if physical damage is suspected.
  - Consult the control unit's manual for specific error codes related to sensor detection.
- **System Malfunction (related to temperature):**
    - If the heating system is behaving erratically based on temperature, and other components are ruled out, the sensor itself might be faulty.
    - A qualified technician can test the sensor's resistance values to determine if it is operating within specifications.

If troubleshooting steps do not resolve the issue, contact a qualified Vaillant service technician for further assistance.

## 8. SPECIFICATIONS

| Attribute          | Specification                                       |
|--------------------|-----------------------------------------------------|
| Model Number       | 306787                                              |
| Type               | Standard Sensor (VR 10)                             |
| Compatibility      | Vaillant CalorMATIC 630/2, Vaillant auroMATIC 620/2 |
| Manufacturer       | Vaillant                                            |
| Item Weight        | 59 g                                                |
| Product Dimensions | 20 x 10 x 20 cm (packaging/overall); 58.97 g        |
| Batteries Required | No                                                  |

## 9. WARRANTY AND SUPPORT

For information regarding the warranty period and terms for your Vaillant VR 10 Standard Sensor, please refer to the warranty documentation provided with your purchase or contact your local Vaillant distributor or customer service. Warranty conditions may vary by region.

For technical support, spare parts, or service inquiries, please contact Vaillant customer service or an authorized Vaillant service partner. Contact details can typically be found on the official Vaillant website or in your product documentation.

**Vaillant Official Website:** [www.vaillant.com](http://www.vaillant.com)

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