IDEASURE 62-23543-01

IDEASURE Flame Sensor for Rheem & Ruud Gas Furnaces - Model 62-23543-01 Instruction Manual

1. Introduction

This manual provides essential information for the safe and effective installation, operation, and maintenance of your IDEASURE Flame Sensor, replacement part number 62-23543-01. This flame sensor is designed for compatibility with various Rheem and Ruud gas furnaces. Please read these instructions thoroughly before proceeding with installation or maintenance.

2. Safety Information

WARNING: Risk of electric shock, fire, or explosion. Improper installation, adjustment, alteration, service, or maintenance can cause injury or property damage. Consult a qualified installer, service agency, or the gas supplier for assistance.

- Always disconnect electrical power to the furnace and shut off the gas supply before installing, servicing, or removing any components.
- Wear appropriate personal protective equipment, including gloves and eye protection.
- Ensure the work area is well-ventilated.
- Do not bypass any safety devices.
- If you are unsure about any step, consult a qualified HVAC technician.

3. Product Overview

The IDEASURE Flame Sensor (part number 62-23543-01) is a critical safety component in your gas furnace. It detects the presence of a flame in the burner assembly, signaling the control board to continue the gas flow. If no flame is detected, the sensor signals the control board to shut off the gas, preventing uncombusted gas from accumulating.

Key Features

- Direct replacement for Rheem & Ruud furnace flame sensors, including part numbers 62-23543-01, 62-23543-02, 62-23543-03, and 62-23543-04.
- Compatible with Rheem & Ruud gas furnaces, such as Rheem Classic 90 Plus and Rheem Criterion II models.
- Constructed from durable metals and ceramics for reliable performance.
- Designed for easy installation.

Image 1: Product Features and Compatibility.

Specifications

Attribute	Value
Brand	IDEASURE
Model Number	62-23543-01
Material	Metal, Ceramic
Length (mounting flange to sensor tip)	2-1/2 inches
Sensor Offset Length	1-9/16 inches

Attribute	Value
Angle Sensor Offset	90 degrees
Termination	1/4 inch male quick connect
Product Dimensions (L x W x H)	5.67 x 3.78 x 0.67 inches

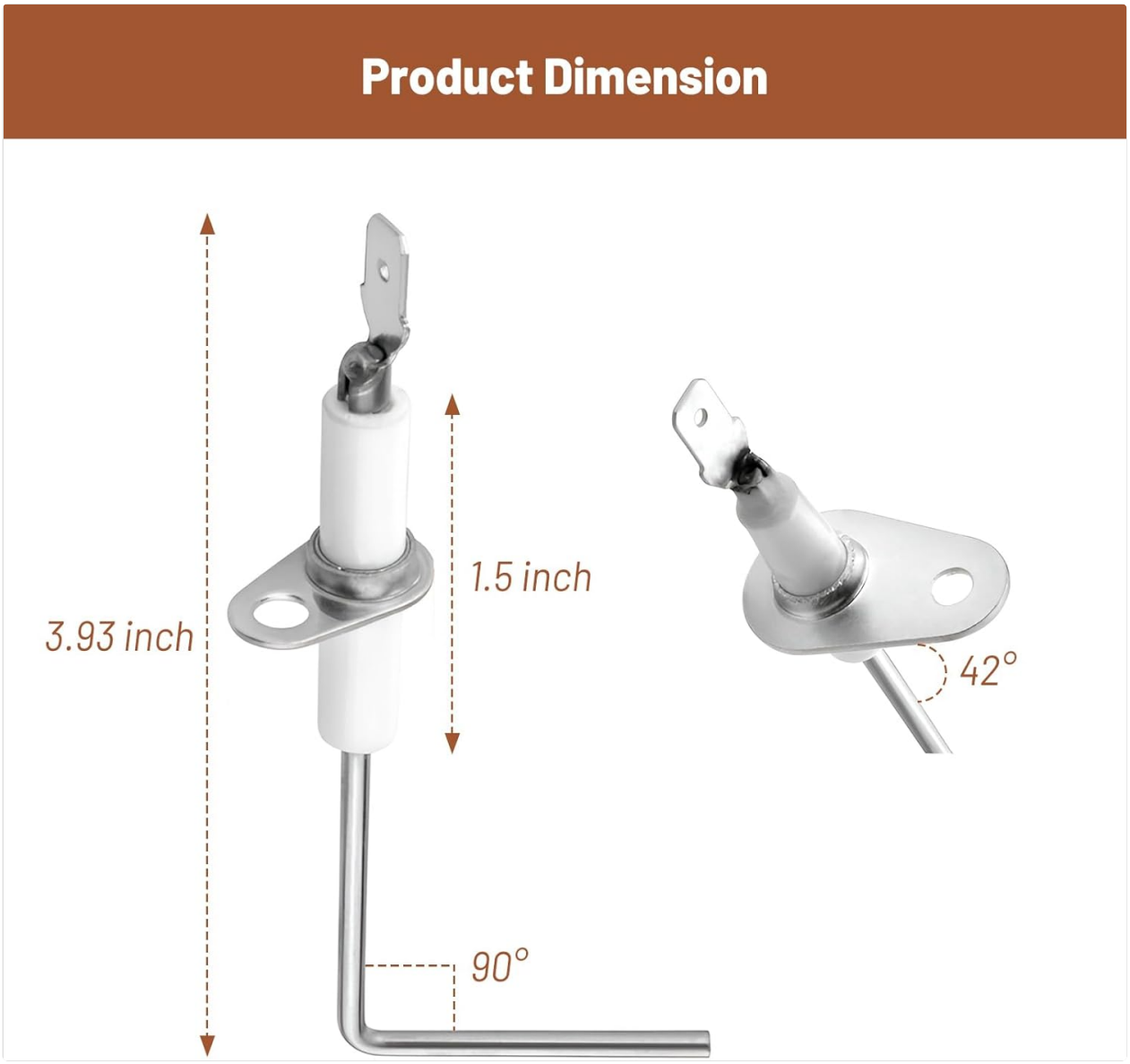

Image 2: Product Dimensions.

Package Contents

- 2 x IDEASURE Flame Sensors (Part #62-23543-01)

Image 3: Two IDEASURE Flame Sensors.

4. Installation

Before beginning installation, ensure all safety precautions listed in Section 2 are followed. Failure to do so can result in serious injury or damage.

1. **Locate the Existing Flame Sensor:** Identify the current flame sensor in your furnace. It is typically a thin metal rod with a ceramic insulator, positioned in the path of the burner flame.
2. **Disconnect Wiring:** Carefully disconnect the electrical wire connected to the existing flame sensor. Note its connection point.
3. **Remove Old Sensor:** Unscrew or unclip the mounting bracket that secures the old flame sensor to the furnace. Gently remove the sensor.
4. **Inspect New Sensor:** Before installing, visually inspect the new IDEASURE flame sensor for any damage.

5. **Install New Sensor:** Position the new flame sensor in the same location and orientation as the old one. Ensure the sensing rod is directly in the path of the burner flame. Secure it using the mounting bracket.
6. **Connect Wiring:** Reconnect the electrical wire to the 1/4 inch male quick connect terminal on the new flame sensor. Ensure a secure connection.
7. **Restore Power and Gas:** Once the sensor is securely installed and wired, restore the gas supply and electrical power to the furnace.
8. **Test Operation:** Initiate a heating cycle to verify that the furnace ignites properly and the flame sensor functions correctly. Observe the ignition sequence to ensure the flame is detected and the burners remain lit.

Image 4: Professional installation of a flame sensor in a furnace.

Image 5: Detailed views of the flame sensor tip and base for installation reference.

5. Operation

The flame sensor operates by creating a small electrical current when heated by the furnace's pilot or main burner flame. This current is sent to the furnace's control board, confirming the presence of a flame. If the control board does not receive this signal within a specified timeframe after ignition is attempted, it will shut down the gas valve to prevent uncombusted gas from accumulating, which is a critical safety feature. A properly functioning flame sensor ensures safe and continuous operation of your furnace.

6. Maintenance

Regular maintenance of your flame sensor is crucial for the safe and efficient operation of your furnace. Over time, soot and carbon deposits can accumulate on the sensor rod, insulating it and preventing it from detecting the flame correctly. This can lead to intermittent furnace operation or complete shutdown.

Recommended Maintenance Steps:

- **Annual Inspection:** It is recommended to inspect the flame sensor annually, preferably before the heating season begins.
- **Cleaning:** If soot or carbon buildup is visible on the ceramic insulator or metal rod, carefully remove the sensor (following safety precautions in Section 2) and gently clean it with fine-grit sandpaper or a Scotch-Brite pad. Do not use harsh chemicals or abrasive cleaners that could damage the sensor.
- **Reinstallation:** After cleaning, reinstall the sensor as per the installation instructions in Section 4.
- **Professional Servicing:** Consider having your furnace professionally serviced annually, which typically includes flame sensor inspection and cleaning.

Image 6: Regular inspection of your flame sensor is important for appliance safety.

7. Troubleshooting

If your furnace is experiencing issues related to ignition or maintaining a flame, the flame sensor may be a contributing factor. Here are some common symptoms and troubleshooting steps:

Symptom	Possible Cause	Solution
Furnace attempts to ignite but shuts off shortly after.	Dirty or faulty flame sensor.	Clean the flame sensor (refer to Section 6). If the issue persists, replace the sensor.
Furnace cycles on and off frequently (short cycling).	Intermittent flame sensor signal due to buildup or loose connection.	Inspect and clean the flame sensor. Ensure electrical connections are secure.

Symptom	Possible Cause	Solution
Furnace does not ignite at all, but other components (blower, igniter) seem to be working.	Completely failed flame sensor or wiring issue.	Check wiring for damage or loose connections. Test the flame sensor for continuity (if you have the proper tools and expertise). Replace if faulty.
Error code related to flame proving or ignition failure.	Flame sensor not detecting flame.	Consult your furnace's manual for specific error code meanings. Clean or replace the flame sensor as indicated.

If troubleshooting steps do not resolve the issue, it is recommended to contact a qualified HVAC technician for further diagnosis and repair.

8. Warranty and Support

The IDEASURE Flame Sensor comes with a limited warranty. Please refer to the product packaging or contact IDEASURE customer support for specific warranty terms and conditions. For technical assistance or further inquiries, please visit the IDEASURE brand store or contact their customer service department.

IDEASURE Brand Store: Visit IDEASURE Store on Amazon