Honeywell R7849A1015

Honeywell R7824, R7847, R7848, R7849, R7851, R7861, R7886 Series Flame Signal Amplifiers User Manual

Model: R7849A1015 and compatible series models

1. Introduction

This manual provides essential information for the safe and effective installation, operation, and maintenance of Honeywell R7824, R7847, R7848, R7849, R7851, R7861, R7886 Series Flame Signal Amplifiers. These devices are critical components in industrial burner management systems, designed to detect the presence or absence of flame and provide a signal to the control system. Proper understanding and adherence to these instructions are crucial for optimal performance and safety.

2. Safety Information

WARNING: Installation and servicing of this equipment must be performed by qualified, experienced personnel only. Failure to follow these instructions could result in severe personal injury, death, or property damage.

- Always disconnect power before installing or servicing the amplifier.
- Ensure all wiring complies with local and national electrical codes.
- Do not operate the system if any component is damaged or malfunctioning.
- This device is intended for use in industrial control applications.

3. Product Description

The Honeywell Flame Signal Amplifiers (R7824, R7847, R7848, R7849, R7851, R7861, R7886 series) are designed to work in conjunction with flame detectors and burner control systems to monitor flame presence in various industrial heating applications. These amplifiers process the signal from a flame sensor (e.g., UV or IR) and provide a reliable flame/no-flame indication. The specific model R7849A1015 is an Ultraviolet Flame Amplifier.

Figure 1: Angled view of the Honeywell Ultraviolet Flame Amplifier (R7849A1015). The device is blue with a black and purple label indicating "Honeywell" and "ULTRAVIOLET FLAME AMPLIFIER".

Figure 2: Front view of the Honeywell Ultraviolet Flame Amplifier. The label clearly shows "Honeywell" and "ULTRAVIOLET FLAME AMPLIFIER" along with connection indicators for (COM), acceptable flame signal (1.25VDC minimum), and a ground symbol.

4. Setup and Installation

The Honeywell Flame Signal Amplifier is designed for surface mount installation. It is crucial that installation is performed by a qualified technician familiar with industrial control systems and electrical safety standards.

4.1 Mounting

- Mount the amplifier securely to a flat surface within the control panel or enclosure.
- Ensure adequate clearance for wiring and ventilation.
- Avoid locations subject to excessive vibration, moisture, or extreme temperatures outside the specified operating range.

4.2 Wiring

Connect the amplifier to the flame sensor, burner control, and power supply according to the specific wiring diagrams provided with your complete burner management system. Pay close attention to polarity and voltage requirements. The amplifier is designed for use with specific flame sensors such as C7027, C7035, or C7044.

5. Operating Instructions

Once properly installed and wired, the flame signal amplifier operates automatically as part of the burner management system. It continuously monitors the flame sensor input.

- **Flame Detection:** When a flame is present and detected by the sensor, the amplifier processes this signal. An

acceptable flame signal is indicated by a minimum of 1.25VDC.

- **Flame Failure:** In the event of flame loss, the amplifier will detect the absence of the flame signal. The flame failure response time is typically 0.8 or 1.0 seconds, depending on the relay module used.
- **Output Signal:** The amplifier provides an output signal to the main burner control, indicating flame presence or absence, which then initiates appropriate safety actions (e.g., fuel shutoff).

6. Maintenance

The Honeywell Flame Signal Amplifier is designed for reliable, long-term operation with minimal maintenance. However, periodic checks of the overall burner management system are recommended.

- **Visual Inspection:** Periodically inspect the amplifier and its connections for any signs of physical damage, corrosion, or loose wiring.
- **System Testing:** Follow the manufacturer's recommendations for your complete burner management system regarding periodic testing of flame safeguard components, including the flame amplifier and sensor.
- **Cleaning:** Keep the amplifier free from dust and debris. Use a soft, dry cloth for cleaning. Do not use solvents or abrasive cleaners.

7. Troubleshooting

If the burner system is experiencing issues related to flame detection, consider the following troubleshooting steps. Always consult the complete burner management system manual for specific diagnostic procedures.

- **No Flame Signal:**
  - Verify the flame sensor is clean and properly positioned.
  - Check wiring between the flame sensor and amplifier for continuity and proper connections.
  - Ensure the flame itself is stable and of sufficient intensity.
  - Confirm power supply to the amplifier is within specifications.
- **Intermittent Flame Signal:**
  - Inspect for loose connections or intermittent wiring faults.
  - Check for environmental factors affecting the flame sensor (e.g., flickering flame, air currents).
  - Verify the flame sensor is compatible and functioning correctly.
- **Amplifier Malfunction:** If all external factors are ruled out, and the amplifier is suspected of malfunction, it should be replaced by a qualified technician. Do not attempt to repair the amplifier.

8. Specifications

Feature	Specification
Brand	Honeywell
Model Number	R7849A1015 (Series: R7824, R7847, R7848, R7849, R7851, R7861, R7886)
Item Weight	4 Pounds
Mounting Type	Surface Mount
Number of Channels	1
Flame Failure Response Time	0.8 or 1.0 seconds (See Relay Module)

Feature	Specification
Operating Ambient Temperature	-40°F to 140°F (-40°C to 60°C)
Compatible Flame Sensors	C7027, C7035, or C7044
Date First Available	July 5, 2012
ASIN	B008HOUQCS

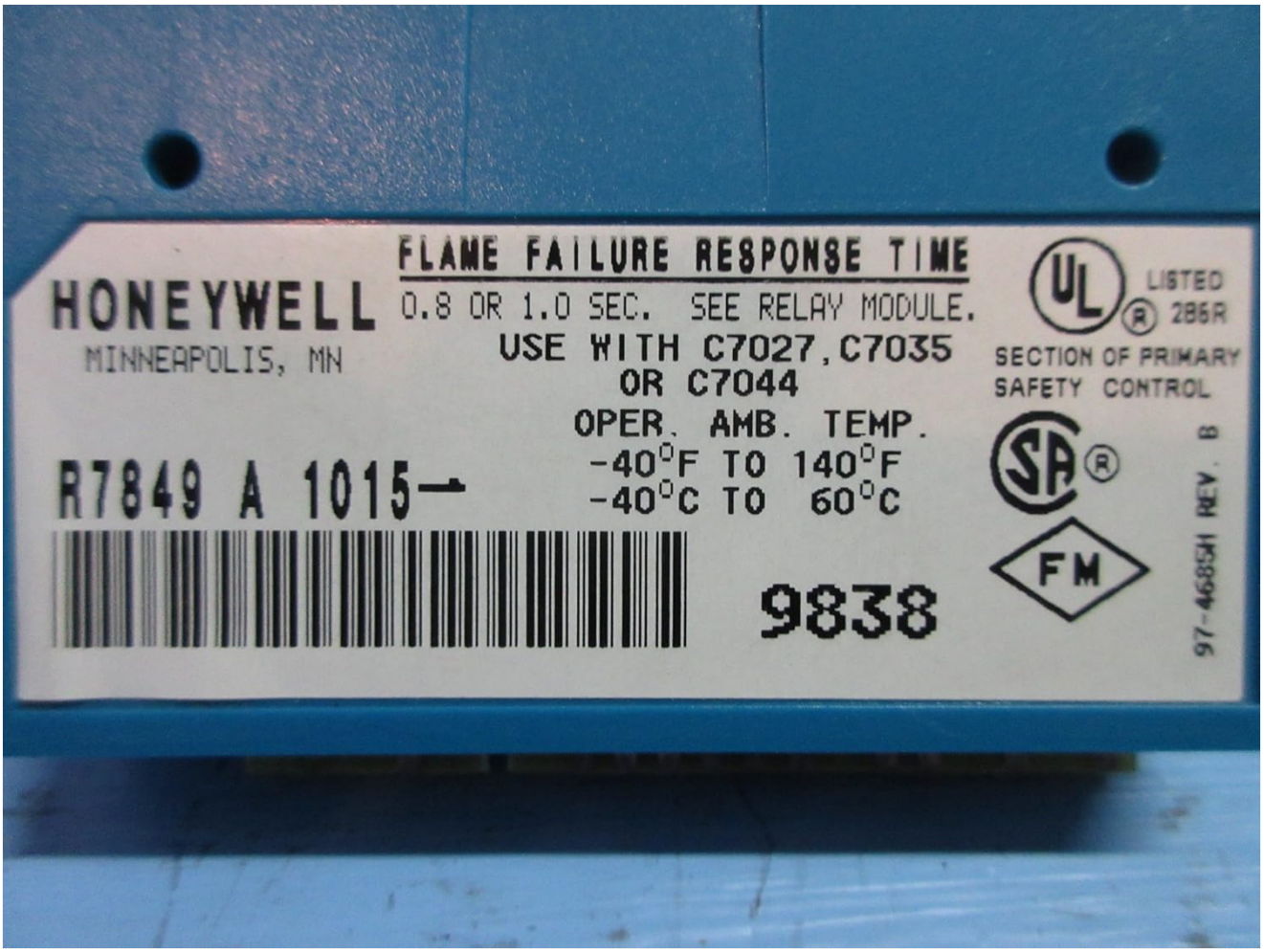

Figure 3: Bottom label of the Honeywell R7849A1015 Flame Amplifier, showing specifications such as "FLAME FAILURE RESPONSE TIME", "OPER. AMB. TEMP.", and compatible sensor models. The model number "R7849 A 1015" is clearly visible.

Figure 4: Top label of the Honeywell R7849A1015 Flame Amplifier, displaying certifications like UL Listed, CSA, and FM. The model number "R7849 A 1015" is also present.

9. Warranty and Support

For warranty information and technical support, please contact Honeywell directly or refer to the documentation provided with your complete burner management system. Honeywell products are designed for industrial applications and are typically covered by a standard manufacturer's warranty against defects in materials and workmanship.

For further assistance, visit the official Honeywell website or contact their customer service department.

Honeywell Contact Information: Please refer to www.honeywell.com for the most current contact details and support resources.