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› [Honeywell](#) /

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Honeywell RM7840L1018U

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Model: RM7840L1018U

1. INTRODUCTION AND OVERVIEW

The Honeywell RM7840L1018 Burner Control module is designed to provide advanced safety and functional capabilities for industrial burner systems. This microprocessor-based relay module offers automatic burner sequencing, flame supervision, system status indication, and comprehensive self-diagnostics for efficient troubleshooting.

This manual provides essential information for the proper installation, operation, and maintenance of your Honeywell RM7840L1018 Burner Control. Adherence to these instructions is crucial for safe and reliable system performance.



Figure 1: Honeywell RM7840L1018 Burner Control module. This image displays the blue rectangular device with 'Honeywell' and 'BURNER CONTROL' labels on the top front, a black display area, and a section with indicator lights and a button on the lower left.

2. PRODUCT FEATURES

The Honeywell RM7840L1018 Burner Control offers several key features:

- Provides enhanced safety and functional capabilities beyond conventional controls.
- Includes automatic burner sequencing for controlled startup and shutdown.
- Features flame supervision to monitor flame presence and ensure safe operation.
- Offers system status indication for real-time operational feedback.
- Incorporates system or self-diagnostics for efficient troubleshooting.
- Allows access for external electrical voltage checks.
- Provides application flexibility and communication interface capability.
- Equipped with five LEDs to provide sequence information.

3. WHAT'S IN THE BOX

Upon unpacking, verify that the following component is included:

- Honeywell RM7840L1018 Burner Control Module (Cover)

If any components are missing or damaged, contact your supplier immediately.

4. SETUP AND INSTALLATION

Important Safety Information: Installation must be performed by qualified personnel in accordance with all local and national electrical codes and regulations. Disconnect all power to the system before beginning installation to prevent electrical shock or equipment damage.

4.1 Mounting

The Honeywell RM7840L1018 is designed for DIN Rail mounting. Ensure the mounting location is free from excessive vibration, moisture, and extreme temperatures. Mount the module securely to the DIN rail, ensuring proper ventilation around the unit.

4.2 Wiring

Refer to the detailed wiring diagrams provided with the product packaging or available from Honeywell's official documentation. Ensure all connections are tight and correctly terminated. Pay close attention to:

- Power supply connections (120 VAC, 10-15% tolerance).
- Flame sensor input.
- Ignition transformer connections.
- Main fuel valve and pilot valve connections.
- Interlock circuits.

Verify all wiring against the system schematic before applying power.

5. OPERATION

The RM7840L1018 operates automatically, managing the burner sequence from start-up to shutdown. The five LEDs on the module provide critical sequence and status information.

5.1 Power-Up Sequence

1. Upon applying power, the module performs internal self-diagnostics.
2. The LEDs will illuminate in a specific pattern to indicate the diagnostic process.
3. Once diagnostics are complete and no faults are detected, the module enters a standby state, awaiting a call for heat.

5.2 Burner Start-Up

1. When a call for heat is received, the module initiates the pre-purge cycle.
2. The pilot ignition sequence begins, and the flame sensor monitors for pilot flame establishment within the specified Flame Establishing Period (Pilot).
3. If the pilot flame is established, the main fuel valve opens, and the main flame is monitored within the Flame Establishing Period (Main).
4. Once the main flame is stable, the module continues to supervise the flame throughout the run cycle.

5.3 LED Indicators

The five LEDs provide visual feedback on the current operating state and any detected faults. Consult the product's detailed wiring and operation manual for a complete legend of LED indications and their meanings.

6. MAINTENANCE

The Honeywell RM7840L1018 Burner Control is designed for reliable operation with minimal maintenance. However, periodic checks are recommended to ensure continued performance and safety.

- **Visual Inspection:** Periodically inspect the module for any signs of physical damage, loose connections, or excessive dust accumulation.
- **Connection Integrity:** Ensure all electrical connections remain tight and free from corrosion.
- **System Testing:** Conduct regular system safety checks as recommended by the burner manufacturer and local regulations. This includes testing flame failure response and interlock functions.
- **Cleaning:** If necessary, gently clean the exterior of the module with a soft, dry cloth. Do not use solvents or abrasive cleaners.

Note: Do not attempt to open or repair the module. Refer all servicing to qualified service personnel.

7. TROUBLESHOOTING

The RM7840L1018 features self-diagnostics to assist in identifying operational issues. The five LEDs provide diagnostic codes that can help pinpoint the problem.

7.1 Common Issues and Solutions

- **No Power:** Check power supply to the module and associated circuit breakers.
- **Module Lockout:** If the module enters a lockout state (indicated by specific LED patterns), identify the cause using the diagnostic codes. Common causes include flame failure, interlock open, or ignition failure. Reset the module only after resolving the underlying issue.
- **Flame Not Established:** Verify flame sensor operation, ignition system, and fuel supply. Check for proper air-to-fuel ratio.
- **Interlock Open:** Inspect all safety interlock devices (e.g., pressure switches, limit switches) for proper operation and closure.

For detailed troubleshooting procedures and specific diagnostic codes, refer to the comprehensive technical documentation provided by Honeywell for the RM7840L1018 series.

8. SPECIFICATIONS

Specification	Value
Model Number	RM7840L1018U
Voltage	120 VAC (10%, 15% tolerance)
Flame Establishing Period (Pilot)	4 Sec or 10 Sec
Flame Establishing Period (Main)	10 Sec or 15 Sec

Specification	Value
Flame Failure Response Time	4 Sec or 10 Sec
Interlocks	Lockout
Second Stage Pilot Valve	Interrupted
Type	Microprocessor Relay Module
Mounting Type	DIN Rail Mount
Connector Type	Plug-In
Contact Type	Normally Open
Operation Mode	Automatic
Product Dimensions	7 x 7 x 5 inches
Weight	0.01 ounces (Note: Product description states 2.75 lbs, please verify actual weight)
Manufacturer	Honeywell
Country of Origin	Mexico

9. WARRANTY AND SUPPORT

For specific warranty information regarding the Honeywell RM7840L1018 Burner Control, please refer to the warranty card included with your product or contact Honeywell directly. Warranty terms may vary based on region and purchase agreement.

For technical support, service, or to obtain official documentation, please visit the official Honeywell website or contact their customer service department. Ensure you have your product model number (RM7840L1018U) available when seeking support.