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› Supplying Demand 47-102684-204 HVAC Heat Pump Defrost Control Board Replacement Kit Instruction Manual

## Supplying Demand 47-102684-204

# Supplying Demand HVAC Heat Pump Defrost Control Board Replacement Kit (Model 47-102684-204)

Instruction Manual

## 1. INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of the Supplying Demand 47-102684-204 HVAC Heat Pump Defrost Control Board Replacement Kit. This kit is designed to effectively control the defrost cycle in your HVAC system, ensuring proper operation and efficiency. Please read this manual thoroughly before attempting any installation or service.



Image 1: Overview of the Supplying Demand 47-102684-204 HVAC Heat Pump Defrost Control Board Replacement Kit, showing the control board and connected sensor.

## 2. SAFETY INFORMATION

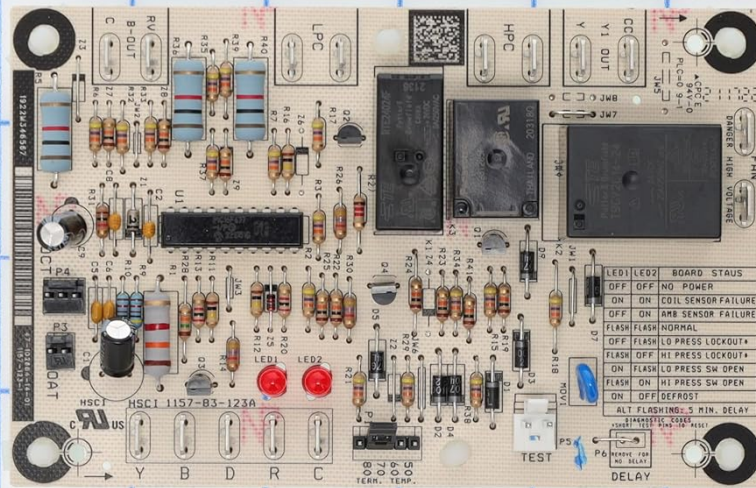
**WARNING:** Heating, ventilation, air conditioning, or refrigeration parts and accessories should only be installed by qualified technicians. Improper installation can lead to property damage, serious injury, or death. Always disconnect power to the unit before servicing.

- Always disconnect power to the HVAC unit before beginning any work.
- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves.
- Ensure all wiring connections are secure and conform to local electrical codes.
- If you are unsure about any step, consult a qualified HVAC technician.

## 3. PACKAGE CONTENTS

The Supplying Demand 47-102684-204 kit includes the following components:

- 1x Defrost Control Board
- 1x Defrost Sensor



**SUPPLYING DEMAND ® 1 INCH GRID**

Image 2: The defrost control board component of the kit, shown on a grid background for scale.

#### 4. COMPATIBILITY VERIFICATION

This replacement part is compatible with various major HVAC brands. To ensure proper fitment and functionality, it is crucial to verify compatibility with your specific HVAC unit's model number. The model number is typically located on a label near the service panel of your outdoor unit or furnace.

Refer to the video below for guidance on locating your HVAC unit's model number.

Your browser does not support the video tag.

Video 1: Instructions on how to locate the model number on an HVAC unit for fitment and compatibility verification.



Image 3: Example of an appliance label highlighting the model, revision, and serial numbers for identification.

## 5. INSTALLATION INSTRUCTIONS

Installation of this defrost control board kit should only be performed by a qualified HVAC technician. The following steps are for informational purposes only and do not substitute professional expertise.

1. **Disconnect Power:** Ensure all power to the outdoor unit and indoor furnace/air handler is completely disconnected at the circuit breaker.
2. **Access Control Panel:** Locate and open the control panel cover on your outdoor heat pump unit.
3. **Document Wiring:** Before disconnecting any wires, take clear photos of the existing wiring connections on the old defrost control board. This will serve as a reference during reinstallation.
4. **Disconnect Old Board:** Carefully disconnect all wires and the defrost sensor from the old control board. Note the position of each wire.
5. **Remove Old Board:** Unmount the old defrost control board from its housing.
6. **Install New Board:** Mount the new Supplying Demand 47-102684-204 defrost control board in the same location.
7. **Connect Wiring:** Refer to your documented photos and the wiring diagram (if available with your unit) to reconnect all wires to the new board. Ensure all connections are firm and correct.
8. **Install New Sensor:** Replace the old defrost sensor with the new one provided in the kit. Connect it to the designated terminals on the new control board.
9. **Secure Panel:** Close and secure the control panel cover.
10. **Restore Power:** Restore power to the HVAC unit at the circuit breaker.
11. **Test Operation:** Monitor the unit's operation to ensure the defrost cycle functions correctly.



Image 4: The defrost control board with its associated wiring, illustrating the components involved in installation.

## 6. OPERATION

The defrost control board is an integral component of a heat pump system, responsible for managing the defrost cycle. During heating operation in cold weather, ice can accumulate on the outdoor coil. The defrost board monitors the coil temperature via the defrost sensor and initiates a defrost cycle when necessary.

During a defrost cycle, the heat pump temporarily reverses its operation to send warm refrigerant to the outdoor coil, melting any accumulated ice. Once the coil is clear or a set time limit is reached, the board returns the unit to normal heating operation. This ensures efficient heat transfer and prevents damage to the unit from excessive ice buildup.

## 7. MAINTENANCE

Regular maintenance of your HVAC system is essential for its longevity and efficient operation. While the defrost control board itself typically requires no direct maintenance, ensuring the overall system is well-maintained will help prevent issues that could affect the board's performance.

- **Annual Professional Inspection:** Schedule annual inspections and tune-ups by a qualified HVAC technician.
- **Keep Outdoor Unit Clear:** Ensure the outdoor unit is free from debris, leaves, and other obstructions that could impede airflow.
- **Clean Coils:** Periodically clean the outdoor coil to maintain optimal heat exchange.
- **Check Air Filters:** Regularly inspect and replace air filters in your indoor unit to ensure proper airflow.

## 8. TROUBLESHOOTING

If your heat pump is experiencing issues related to defrosting, consider the following common problems. Always consult a qualified technician for diagnosis and repair.

Problem	Possible Cause	Action
Unit not defrosting / Excessive ice on outdoor coil	Faulty defrost sensor, faulty defrost control board, low refrigerant, outdoor fan motor issue.	Inspect defrost sensor and wiring. Check for error codes on the control board. Consult a technician for refrigerant levels and fan motor inspection.
Unit frequently entering defrost cycle	Dirty outdoor coil, faulty defrost sensor, incorrect defrost settings.	Clean outdoor coil. Have a technician check the defrost sensor and board settings.
Heat pump not heating effectively	Defrost issue, low refrigerant, compressor problem, airflow obstruction.	Ensure defrost cycle is functioning. Check air filters. Contact a technician for comprehensive diagnosis.

Many defrost control boards have diagnostic LEDs that can indicate specific error codes. Refer to your HVAC unit's specific

manual for interpreting these codes.

Your browser does not support the video tag.

Video 2: A 360-degree view of the Supplying Demand 47-102684-204 defrost control board, useful for visual inspection during troubleshooting.

## 9. SPECIFICATIONS

Feature	Detail
Brand	Supplying Demand
Model Number	SD47-102684-204
Included Components	Control Board, Sensor
Item Weight	8.1 ounces
Product Dimensions	49 x 3.5 x 2 inches
UPC	810135203241

## 10. WARRANTY AND SUPPORT

**Warranty Description:** This product comes with a 30-day return policy for new and unopened items only. Additionally, a 90-day limited manufacturer's warranty is provided on compatible models.

For technical support or warranty claims, please contact Supplying Demand customer service through their official channels. Ensure you have your model number and purchase information available.