

## Lennox 40K82 BDC3-1

# Lennox 40K82 BDC3-1 Circuit Board Instruction Manual

Model: 40K82 BDC3-1

## 1. INTRODUCTION

This instruction manual provides essential information for the proper installation, configuration, and maintenance of the Lennox 40K82 BDC3-1 Circuit Board. This component is designed as a replacement part for specific Lennox HVAC systems. Please read this manual thoroughly before attempting any installation or service.

## 2. SAFETY INFORMATION

**WARNING:** Improper installation, adjustment, alteration, service, or maintenance can cause property damage, personal injury, or loss of life. Installation and service must be performed by a qualified installer, service agency, or the gas supplier.

- Always disconnect the main power supply to the HVAC unit before installing, servicing, or removing the circuit board.
- Ensure all wiring connections comply with local and national electrical codes.
- Wear appropriate personal protective equipment (PPE) during installation and service.
- Do not touch electronic components with bare hands to avoid electrostatic discharge (ESD) damage.
- Verify correct voltage and current ratings before connecting power.

## 3. PRODUCT OVERVIEW

The Lennox 40K82 BDC3-1 is a replacement circuit board designed for specific Lennox furnace applications. It manages various functions within the HVAC system, including fan operation, heating, and cooling cycles. This board replaces models LB-89812 and 40K8201.



**Figure 1:** Lennox 40K82 BDC3-1 Circuit Board. This image displays the green circuit board with various electronic components, connectors, and labeled jumper settings for configuration.

Key components visible on the board include a Zettler relay (AZ8-1C-24DSE), various resistors, capacitors, and multiple jumper pin sets labeled for configuration, such as "ADJUST", "HEAT", "COOL", "DELAY", "CFM", and "RUN". There is also a multi-pin connector for system integration.

## 4. SETUP AND INSTALLATION

### 4.1. Pre-Installation Steps

1. **Disconnect Power:** Turn off all electrical power to the HVAC unit at the main service panel. Verify power is off using a voltage tester.
2. **Access Old Board:** Open the control panel of the HVAC unit to access the existing circuit board.
3. **Document Wiring:** Carefully label all wires connected to the old circuit board before disconnecting them. Take photographs for reference if necessary.
4. **Remove Old Board:** Disconnect all wires and mounting screws, then carefully remove the old circuit board.

### 4.2. Installing the New Board

1. **Mount New Board:** Secure the Lennox 40K82 BDC3-1 circuit board in the same location as the old board using the appropriate mounting hardware.
2. **Connect Wiring:** Reconnect all wires to the new board according to your documented labels and the HVAC system's wiring diagram. Ensure all connections are secure and correct.
3. **Configure Jumpers:** Set the jumpers for "ADJUST", "HEAT", "COOL", "DELAY", "CFM", and "RUN" according to the specific requirements of your HVAC system and the manufacturer's specifications. Refer to your HVAC unit's service manual for correct jumper settings.
4. **Close Panel:** Once all connections are verified and jumpers are set, close the control panel.

## 5. OPERATING INSTRUCTIONS

After installation, the circuit board operates automatically as part of the HVAC system. The primary "operation" involves ensuring correct configuration during setup.

1. **Restore Power:** Turn on the main electrical power supply to the HVAC unit.

- 2. **System Test:** Initiate a test cycle for both heating and cooling modes from your thermostat to verify proper operation of the furnace and air conditioning.
- 3. **Monitor Performance:** Observe the system for a short period to ensure stable and correct functionality.

## 6. MAINTENANCE

The Lennox 40K82 BDC3-1 circuit board requires minimal maintenance. Regular inspection during routine HVAC system service is recommended.

- **Visual Inspection:** Periodically inspect the board for any signs of damage, discoloration, or loose connections.
- **Cleaning:** If dust accumulation is observed, gently clean the board using a soft brush or compressed air. Ensure power is disconnected before cleaning.
- **Connection Check:** Verify that all wire connections remain secure.

## 7. TROUBLESHOOTING

If the HVAC system is not functioning correctly after installing the new circuit board, consider the following troubleshooting steps:

- **No Power:**
  - Check the main power supply to the HVAC unit.
  - Verify all low-voltage and high-voltage connections to the board are secure.
  - Inspect fuses on the board or within the HVAC unit.
- **Incorrect Operation (e.g., fan not running, no heat/cool):**
  - Re-check all wiring connections against the system's wiring diagram.
  - Verify that all configuration jumpers ("ADJUST", "HEAT", "COOL", "DELAY", "CFM", "RUN") are set correctly according to your HVAC unit's specifications.
  - Consult the specific troubleshooting guide for your Lennox HVAC unit model, as the circuit board interacts with other system components.
- **Error Codes:** If your HVAC system displays error codes, refer to your HVAC unit's service manual for their interpretation and recommended actions.

If issues persist, it is recommended to contact a qualified HVAC technician for diagnosis and repair.

## 8. SPECIFICATIONS

Model Number	40K82 BDC3-1
Replaces Part Numbers	LB-89812, 40K8201
Manufacturer	Lennox
Product Dimensions	6 x 6 x 4 inches
Item Weight	2 pounds
Input Voltage (ACC)	24V/1A (as indicated on board)

Relay Rating (Zettler AZ8-1C-24DSE)

10A 120VAC, 7A 240VAC

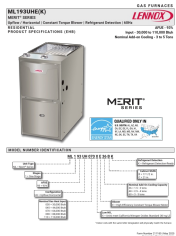


## 9. WARRANTY AND SUPPORT




For specific warranty information regarding the Lennox 40K82 BDC3-1 Circuit Board, please refer to the original purchase documentation or contact your authorized Lennox dealer or the point of purchase. Warranty terms may vary.

For technical support or further assistance, it is recommended to consult a qualified HVAC professional or contact Lennox customer service directly through their official website or contact channels.

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### Related Documents - 40K82 BDC3-1

	<p><a href="#">Lennox ML193UHE(K) Gas Furnace Product Specifications</a></p> <p>Detailed product specifications, features, installation guidelines, and optional accessories for the Lennox ML193UHE(K) residential gas furnace. This document covers technical details, performance data, and model identification.</p>
	<p><a href="#">Lennox SLP99DFVK Gas Furnace Installation Instructions</a></p> <p>Comprehensive installation guide for the Lennox SLP99DFVK Dave Lennox Signature Collection Gas Furnace. Covers safety, setup, electrical, gas piping, venting, and troubleshooting for professional HVAC installers.</p>
	<p><a href="#">Lennox Integrated Control Replacement Kit 23C48 Installation Instructions</a></p> <p>Installation guide for the Lennox Integrated Control Replacement Kit 23C48, providing step-by-step instructions and wiring diagrams for single-stage furnaces with constant torque indoor blower motors.</p>

 <p>Lennox EL280DFE Gas Furnace Installation Instructions. The document includes a title page with the Lennox logo, a product photo, and a table of contents. It also features a 'WARNING' section with a flame icon and a 'CAUTION' section with a lightning bolt icon. The table of contents lists sections such as 'Safety', 'Clearances', 'Ducting', 'Venting', 'Gas Piping', 'Electrical Connections', 'Unit Setup', 'Operation', and 'Maintenance'.</p>	<p><a href="#">Lennox EL280DFE Gas Furnace Installation Instructions</a></p> <p>Comprehensive installation guide for the Lennox EL280DFE Elite Series Gas Furnace, covering safety, clearances, ducting, venting, gas piping, electrical connections, unit setup, operation, and maintenance.</p>
 <p>Lennox Constant Torque Motor Replacement Kit Installation Guide. The document includes a title page with the Lennox logo, a product photo, and a table of contents. It also features a 'WARNING' section with a flame icon and a 'CAUTION' section with a lightning bolt icon. The table of contents lists sections such as 'Safety', 'Clearances', 'Ducting', 'Venting', 'Gas Piping', 'Electrical Connections', 'Unit Setup', 'Operation', and 'Maintenance'.</p>	<p><a href="#">Lennox Constant Torque Motor Replacement Kit Installation Guide (23C01-23C04)</a></p> <p>Step-by-step installation guide for Lennox Constant Torque Motor Replacement Kits (models 23C01, 23C02, 23C03, 23C04) for E model furnaces. Includes shipping list, application, safety warnings, and installation procedures.</p>
 <p>Lennox SL297UHNVK Gas Furnace Installation Instructions. The document includes a title page with the Lennox logo, a product photo, and a table of contents. It also features a 'WARNING' section with a flame icon and a 'CAUTION' section with a lightning bolt icon. The table of contents lists sections such as 'Safety', 'Clearances', 'Ducting', 'Venting', 'Gas Piping', 'Electrical Connections', 'Unit Setup', 'Operation', and 'Maintenance'.</p>	<p><a href="#">Lennox SL297UHNVK Gas Furnace Installation Instructions</a></p> <p>Detailed installation instructions for the Lennox SL297UHNVK Dave Lennox Signature® Gas Furnace, covering setup, wiring, venting, and safety procedures.</p>