

ICP 1190596

Instruction Manual for ICP 1190596 Control Board

Model: 1190596

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of the ICP 1190596 Control Board. This control board is a critical component for various HVAC systems, ensuring proper function and safety. Please read this manual thoroughly before attempting any installation or operation.

2. SAFETY INFORMATION

WARNING: Improper installation, adjustment, alteration, service, or maintenance can cause property damage, personal injury, or loss of life. Consult a qualified installer, service agency, or the manufacturer for information or assistance.

- Always disconnect power to the unit before installing or servicing the control board.
- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves.
- Ensure all wiring connections comply with local and national electrical codes.
- Avoid electrostatic discharge (ESD) when handling the control board. ESD can damage sensitive electronic components.
- Do not attempt to repair a damaged control board. Replace it with a genuine ICP 1190596 part.

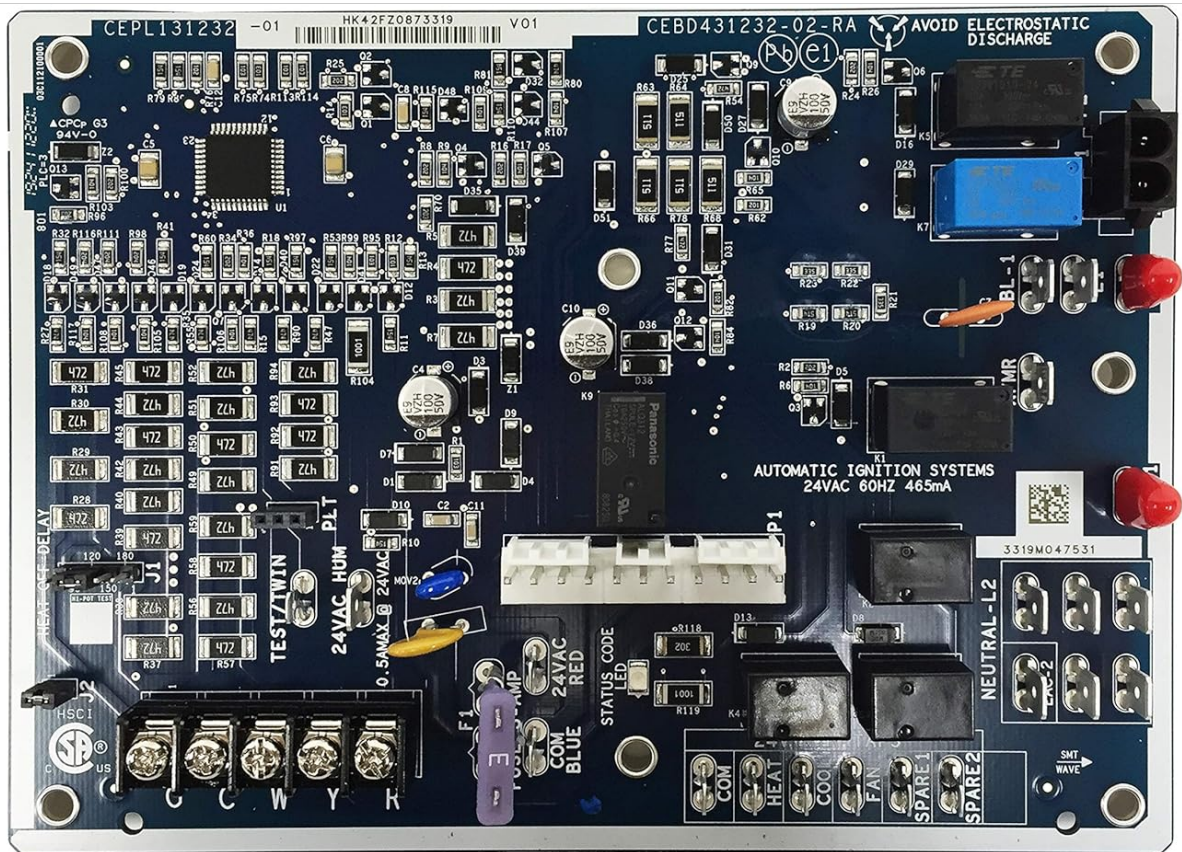


Figure 1: ICP 1190596 Control Board. Note the "AVOID ELECTROSTATIC DISCHARGE" label on the top right.

3. PRODUCT DESCRIPTION AND FEATURES

The ICP 1190596 Control Board is a replacement part designed for specific INTERNATIONAL COMFORT PRODUCTS HVAC units. It serves as the central processing unit for the furnace or air handler, managing various functions such as ignition, fan operation, and safety protocols.

3.1 Key Features:

- Integrated Automatic Ignition Systems (24VAC 60Hz 465mA).
- Multiple terminal connections for various system components (e.g., COM, HEAT, COOL, FAN, SPARE).
- Status Code LED for diagnostic purposes.
- Designed for compatibility with a range of ICP furnace models.

3.2 Compatible Models:

This control board is compatible with the following INTERNATIONAL COMFORT PRODUCTS models:

- N80ESL0451412A1, N80ESL0451712A1, N80ESL0701412A1, N80ESL0701712A1, N80ESL0702116A1, N80ESL0901714A1, N80ESL0902116A1, N80ESL0902120A1, N80ESL0902420A1, N80ESL1102120A1, N80ESL1102420A1, N80ESL1352420A1, N80ESL1552420A1
- N80ESN0451412A1, N80ESN0451712A1, N80ESN0701412A1, N80ESN0701712A1, N80ESN0702116A1, N80ESN0901714A1, N80ESN0902116A1, N80ESN0902120A1, N80ESN0902420A1, N80ESN1102120A1, N80ESN1102420A1, N80ESN1352420A1, N80ESN1552420A1
- N92ESN0401410A1, N92ESN0401712A1, N92ESN0601412A1, N92ESN0601714A1, N92ESN0801716A1,

N92ESN0802120A1, N92ESN1002120A1, N92ESN1202420A1

- N95ESN0261410A1, N95ESN0401410A1, N95ESN0401712A1, N95ESN0601412A1, N95ESN0601714A1, N95ESN0801716A1, N95ESN0802120A1, N95ESN1002120A1, N95ESN1202422A1, N95ESN1402422A1
- R92ESN0601714A1, R92ESN0801716A1, R92ESN0802120A1, R92ESN1002120A1, R92ESN1202420A1
- WFAX060B042A1, WFAX080B048A1, WFAX080C060A1, WFAX100C060A1, WFAX120D060A1

4. SETUP AND INSTALLATION

Installation of the 1190596 Control Board should only be performed by a qualified HVAC technician. Refer to the specific furnace or air handler service manual for detailed wiring diagrams and procedures.

4.1 Pre-Installation Steps:

1. **Power Disconnection:** Turn off all electrical power to the HVAC unit at the main service panel. Verify power is off using a voltmeter.
2. **Access Panel Removal:** Remove the access panel(s) to expose the existing control board.
3. **Documentation:** Take clear photos of the existing wiring connections before disconnecting any wires. Label all wires as they are removed.
4. **ESD Precautions:** Ground yourself to prevent electrostatic discharge. Handle the new control board by its edges.

4.2 Installation Procedure:

1. **Remove Old Board:** Carefully disconnect all wires and mounting screws from the old control board.
2. **Mount New Board:** Secure the new ICP 1190596 Control Board in the same location using the original mounting hardware.
3. **Connect Wiring:** Reconnect all wires to the corresponding terminals on the new board, referring to your labels and photos. Ensure all connections are secure. Pay close attention to the "COM", "HEAT", "COOL", "FAN", "NEUTRAL-L2", and "24VAC" terminals.
4. **Verify Connections:** Double-check all wiring against the unit's wiring diagram.
5. **Replace Access Panels:** Once all connections are verified, replace the access panels.

5. OPERATING INSTRUCTIONS

The ICP 1190596 Control Board operates automatically once installed and powered. Its primary function is to manage the sequence of operations for the HVAC system based on thermostat calls and internal safety checks.

5.1 Initial Power-Up:

1. **Restore Power:** Turn on the electrical power to the HVAC unit at the main service panel.
2. **Observe Status LED:** The Status Code LED on the control board will illuminate and may flash a sequence indicating system status or diagnostic codes. Refer to the troubleshooting section for common codes.
3. **Test Operation:** Set the thermostat to call for heating or cooling to verify proper system operation. Observe the furnace/air handler's sequence of operation.

5.2 Normal Operation:

The control board continuously monitors system conditions and responds to thermostat demands. It controls the inducer motor, igniter, gas valve, and blower motor in the correct sequence for safe and efficient operation.

6. MAINTENANCE

The ICP 1190596 Control Board itself requires no routine maintenance. However, regular maintenance of the overall HVAC system is crucial for its longevity and proper function. This includes:

- Annual professional inspection and tune-up of the HVAC system.
- Regular replacement of air filters.
- Keeping the area around the furnace/air handler clean and free of obstructions.
- Checking and cleaning the flame sensor and igniter as part of routine furnace maintenance.

If the control board appears dirty or dusty, ensure power is disconnected and gently clean it with a soft, dry brush or compressed air. Do not use liquids or abrasive cleaners.

7. TROUBLESHOOTING

The Status Code LED on the control board provides diagnostic information. Refer to the specific furnace model's service manual for a complete list of diagnostic codes. Below are some common indicators:

LED Flash Code	Description	Possible Cause / Action
Solid ON	Normal Operation / Power On	No action required.
Slow Flash (e.g., 1 flash per second)	Call for Heat/Cool/Fan	Indicates the board is receiving a demand from the thermostat.
Rapid Flash	Lockout Condition	System has attempted to ignite multiple times and failed. Check gas supply, igniter, flame sensor. Reset power to clear lockout.
Specific Flash Pattern (e.g., 2 flashes, pause, 2 flashes)	Specific Fault Code	Consult the furnace's service manual for the exact meaning of the flash pattern and recommended troubleshooting steps. Common issues include pressure switch errors, limit switch errors, or flame sensor issues.

If you are unable to resolve an issue, contact a qualified HVAC technician for assistance.

8. SPECIFICATIONS

- **Model Number:** 1190596
- **Brand:** ICP (INTERNATIONAL COMFORT PRODUCTS)
- **Type:** HVAC Furnace Control Board
- **Ignition System:** Automatic Ignition Systems
- **Voltage:** 24VAC
- **Frequency:** 60Hz
- **Current:** 465mA (for ignition system)
- **ASIN:** B08428DPNS
- **Date First Available:** Jan. 20 2020

9. WARRANTY INFORMATION

Specific warranty terms for the ICP 1190596 Control Board are typically provided by the original equipment manufacturer

(ICP) or the authorized distributor/seller at the time of purchase. It is recommended to retain your purchase receipt and consult the warranty documentation provided with your HVAC unit or the control board itself.

Generally, replacement parts like control boards may carry a limited warranty against defects in material and workmanship. Damage due to improper installation, misuse, or external factors (e.g., power surges) is typically not covered.

10. CUSTOMER SUPPORT

For technical assistance, warranty claims, or to locate an authorized service provider, please contact INTERNATIONAL COMFORT PRODUCTS or your local HVAC dealer. When contacting support, please have your product model number (1190596) and the serial number of your HVAC unit readily available.

You may also refer to the official ICP website for additional resources and contact information.



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