Step 1: Component Self Test

A. Connect the white blower motor lead to the BLW connection on the new furnace control board. (Located on the blower enable harness connector.)

B. Connect the blower motor heat tap to the blower relay connection on the new furnace control board. (Located on the blower enable harness connector.)

C. Connect the remaining blower motor lead to SPARE-1 and SPARE-2.

D. Connect the remaining blower motor leads to SPARE-1 and SPARE-2.

E. Blower motor cool speed will turn ON for 10 secs.

F. Blower motor heat speed will turn ON for 10 secs.

G. Inducer motor will run for the entire component test.

Step 2: Flame Sensor Operation

Turn on power to the furnace, remove the outer door assembly and remove the two screws securing the control board. The factory default is set at 120 seconds. When the flame current reading is less than 2.0 microamps DC, the furnace control will lock out. If the flame current is between 2.0 and 3.0 microamps DC, either replace or remove and clean flame sensor with a fine grade steel wool. When the flame current falls to 0.5 microamps DC, the furnace control will lock out.

CAUTION!

Use caution when handling circuit board. A 3/16” quick connect terminal is provided on the new furnace control board for communication between another control board. The factory default is set at 120 seconds.

Heat: 1.5A @ 30 VAC

Cool: 3.0A, 2HP, 240 VAC

Blower: 5A @ 120 VAC

Specifications

Electrical

• Voltage Range: Line (98 to 132 VAC) @ 60Hz
• Ignitor: 5A @ 120 VAC
• Cool Blower: 30A, 2HP, 240 VAC
• Heat: 5A, 120 VPC, 240 VAC

System Tests

Step 1: Component Self Test

1. Begin component test sequence by ensuring that thermostat is turned off to position or set it to the lowest possible setting.

2. Turn OFF electrical supply to furnace.

3. Perform necessary safety checks. Consider flame safety, limit switch, and vent system.

4. Connect the white wire from the furnace auxiliary junction box to L1 on the new furnace control board (located on the blower enable harness connector).

5. Connect the control box assembly to the blower deck using the screws previously removed from the blower deck.

6. Install blower door and access door.

7. Connect all accessory wires.

8. Connect the blower motor coil to the blower relay connection marked COOL.

9. Connect all accessory wires.

10. For 90% furnaces, reinstall the control box assembly to the blower deck. Using a short piece of wire, briefly short TEAT/TVIN terminal to Com/OTV terminal. (The component test sequence follows: A. Status LED will flash code and then shut off the inducer motor.

• B. Inducer motor will run for the entire component test.

• C. Hot surface ignitor will turn ON for 15 secs.

• D. Blower motor heat speed will turn ON for 10 secs.

• E. Blower motor cool speed will turn ON for 10 secs.

• F. Repair, replace, or service any failing components from the component self test.

• G. The gas valve is not energized during the self test.

• H. Turn power OFF.

• I. Release the blower door switch.

• J. Connect thermostat wires.

• K. Install blower door and access door.

• L. Turn gas ON.

Step 2: Flame Sensor Operation

1. Connect C, P, and L1 in series with the control.

2. Initiate a heat call. After burners ignite and stabilize, measure flame current. Normal flame current is between 2.0 and 3.0 microamps DC. If flame current reading is less than 2.0 microamps DC, either replace or remove and clean flame sensor with a fine grade steel wool. When the flame current falls to 0.5 microamps DC, the furnace control will lock out.

Step 3: System Operation

1. Perform necessary safety checks. Consider flame safety, limit switch, and vent system.

2. Operate unit through a complete call for heat cycle.

Testing Instructions

1. A 3/16” quick connect terminal is provided on the ICIB2A control board for communication between another ICIB2A control board for communicating with another control board. The factory default is set at 120 seconds.

2. To configure your control boards for twinning:

• 1. Install each control board according to the installation instructions.

• 2. Connect the TWINS terminal on the top-side portion of the control board.

• 3. Connect the 24 VAC common terminal (a common ground between the two furnaces is also required.)

• 4. If the 24 VAC supplies to the control in phase, both furnaces will turn the blower on and off synchronously and at the same speed. If the 24 VAC supplies are not in phase, then neither control will respond to the thermostat commands and the status LED will flash rapidly.

3. Connect the following wire to the furnace auxiliary junction box to L1 on the new furnace control board (located on the blower enable harness connector):

• A. Connect the white wire from the furnace auxiliary junction box to L1 on the new furnace control board (located on the blower enable harness connector).

• B. Connect the blower motor lead to the BLW connection within the group of 115-volt Neutral spade connections.

• C. Connect the blower motor lead to the BLW connection within the group of 115-volt Neutral spade connections.

• D. Connect the white wire from the furnace auxiliary junction box to L1 on the new furnace control board (located on the blower enable harness connector).

• E. Connect the blower motor lead to the BLW connection within the group of 115-volt Neutral spade connections.

• F. Connect the white wire from the furnace auxiliary junction box to L1 on the new furnace control board (located on the blower enable harness connector).

• G. Connect the blower motor lead to the BLW connection within the group of 115-volt Neutral spade connections.

• H. Connect the white wire from the furnace auxiliary junction box to L1 on the new furnace control board (located on the blower enable harness connector).

• I. Connect the white wire from the furnace auxiliary junction box to L1 on the new furnace control board (located on the blower enable harness connector).

• J. Connect the white wire from the furnace auxiliary junction box to L1 on the new furnace control board (located on the blower enable harness connector).

• K. Connect the white wire from the furnace auxiliary junction box to L1 on the new furnace control board (located on the blower enable harness connector).

• L. Connect the white wire from the furnace auxiliary junction box to L1 on the new furnace control board (located on the blower enable harness connector).

• M. Connect the white wire from the furnace auxiliary junction box to L1 on the new furnace control board (located on the blower enable harness connector).

• N. Connect the white wire from the furnace auxiliary junction box to L1 on the new furnace control board (located on the blower enable harness connector).

• O. Connect the white wire from the furnace auxiliary junction box to L1 on the new furnace control board (located on the blower enable harness connector).

• P. Connect the white wire from the furnace auxiliary junction box to L1 on the new furnace control board (located on the blower enable harness connector).

• Q. Connect the white wire from the furnace auxiliary junction box to L1 on the new furnace control board (located on the blower enable harness connector).

• R. Connect the white wire from the furnace auxiliary junction box to L1 on the new furnace control board (located on the blower enable harness connector).

• S. Connect the white wire from the furnace auxiliary junction box to L1 on the new furnace control board (located on the blower enable harness connector).

• T. Connect the white wire from the furnace auxiliary junction box to L1 on the new furnace control board (located on the blower enable harness connector).

• U. Connect the white wire from the furnace auxiliary junction box to L1 on the new furnace control board (located on the blower enable harness connector).

• V. Connect the white wire from the furnace auxiliary junction box to L1 on the new furnace control board (located on the blower enable harness connector).

• W. Connect the white wire from the furnace auxiliary junction box to L1 on the new furnace control board (located on the blower enable harness connector).

• X. Connect the white wire from the furnace auxiliary junction box to L1 on the new furnace control board (located on the blower enable harness connector).

• Y. Connect the white wire from the furnace auxiliary junction box to L1 on the new furnace control board (located on the blower enable harness connector).

• Z. Connect the white wire from the furnace auxiliary junction box to L1 on the new furnace control board (located on the blower enable harness connector).

Features

• Controls gas valve, igniter, blower motor, inducer, humidifier and or

• Microprocessor-based

• Designed for 98% gas shut-off in case of ignition failure

• Twinning compatible with other ICIB2A boards

• Reverse polarity protection

• Secondary board protection

• Compatible with 24 VAC standard thermostat

• Provides diagnostic LED to aid in troubleshooting