



AIR CONDITIONERS SINGLE ZONE CONTROL KIT



331623x.7xx INSTALLATION MANUAL

INSTALLATION INSTRUCTIONS

Wiring Requirements

1. Route a copper, with ground, 120 Vac supply wire from the time delay fuse or circuit breaker box to the roof opening.
 - a. This supply wire must be located in the front portion of the roof opening.
 - b. The power **MUST** be on an appropriately sized separate time delay fuse or circuit breaker.
 - c. Make sure that at least 15" of supply wire extends into the roof opening. This insures an easy connection at the junction box.
 - d. Protect the wire where it passes into the opening with approved method.
2. Route a dedicated 12 Vdc supply wire (18-22 AWG) from the RV converter (filtered side) or battery to the roof opening.
3. Route a 3 conductor communication cable, 18 to 22 AWG, from the roof opening to the thermostat mounting location. Make sure that at least 15" of the wire extends into the roof opening and 6" extends from the wall at the thermostat mounting location.
4. If system includes a gas furnace, route two 18 gauge thermostat wires from the furnace to the roof opening.

Choosing Thermostat Location

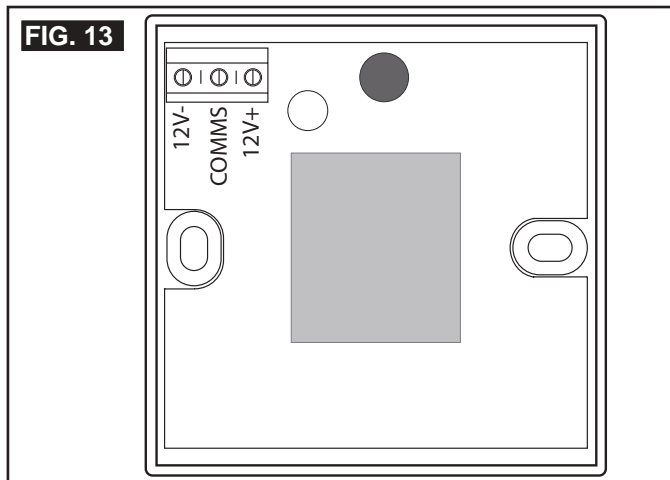
1. The proper location of the thermostat is very important to ensure that it will provide a comfortable RV temperature. Observe the following rules when selecting a location.
 - a. Locate the thermostat 54" above the floor.
 - b. Install the thermostat on a partition, not on an outside wall.
 - c. **NEVER** expose the thermostat to direct heat from lamps, sun or other heat producing items.
 - d. Avoid locations close to the doors that lead outside, windows, or adjoining outside walls.
 - e. Avoid locations close to supply registers and the air from them.

INSTALLATION INSTRUCTIONS

Thermostat Installation

i Wire colors listed for the communication cable (3 conductor cable) match the wire colors in the unit wire harness and the wire harness at the electronic control box. Available wire colors may vary.

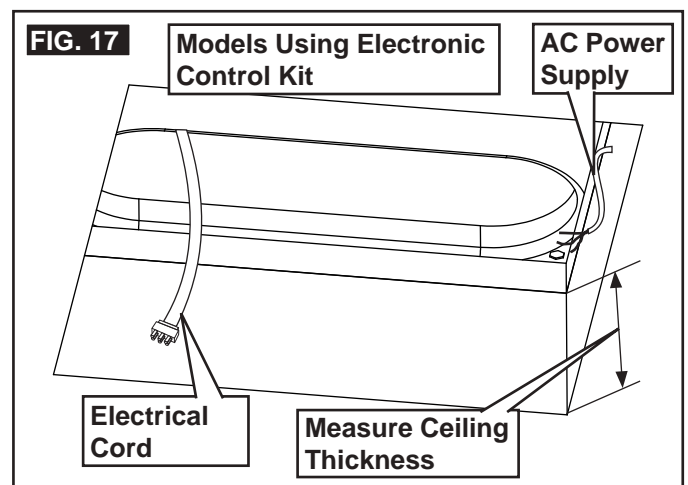
- Remove the cover from the thermostat. Depress tab on bottom of thermostat and separate it from the base.
- Insert the previously run communication cable (3 conductor cable) through the hole in the base assembly.
- Cut back the outer cable shield approximately 3 inches and strip 1/4" insulation from each wire.
- Mount the thermostat level on the wall using the screws provided.
- Make the following connections to the thermostat. See (FIG. 13).



- Red/white wire to the 12V+ terminal
 - Black wire to the 12V- terminal
 - Orange wire to the "COMMS" terminal
- Inspect all connections to make sure they are tight and not touching any other terminals or wires.
 - Push the wires back through the base into the wall. Place cover on the thermostat and push until an audible click is heard.

120 Vac Power Supply Connection

- ⚠ WARNING** ELECTRICAL SHOCK HAZARD. Verify 120 Vac power is disconnected from RV. Failure to obey this warning could result in death or serious injury.
- ⚠ WARNING** ELECTRICAL SHOCK HAZARD. Provide grounding in compliance with all applicable electrical codes. Failure to obey this warning could result in death or serious injury.
- Reach up into the return air opening of the unit and pull down the unit electrical cord and power supply wires. See (FIG. 17).

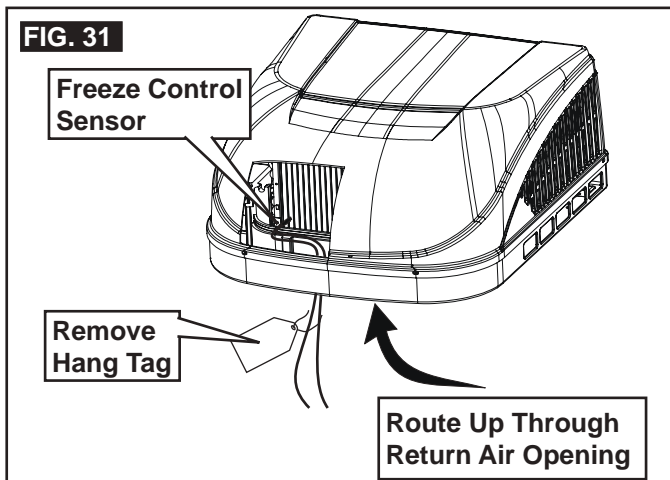


- Remove junction box cover. Save screws for re-installation.
- Route the previously run 120 Vac supply wire through the strain relief and into junction box. Tighten strain relief making sure not to damage wires. Leave enough wire inside junction box to connect to unit 120 Vac wires.
 - Connect white to white; black to black; and green to green or bare copper wire using appropriate size wire connectors.
 - Tape the connectors to the supply wire to ensure they don't vibrate loose.
 - Install junction box cover. Push the wires into the junction box and install junction box cover using screw(s) provided.
 - Plug the 6 pin electrical cord from the unit into the mating connector in the electronic control box. The plug is polarized and will only fit in one direction.

INSTALLATION INSTRUCTIONS

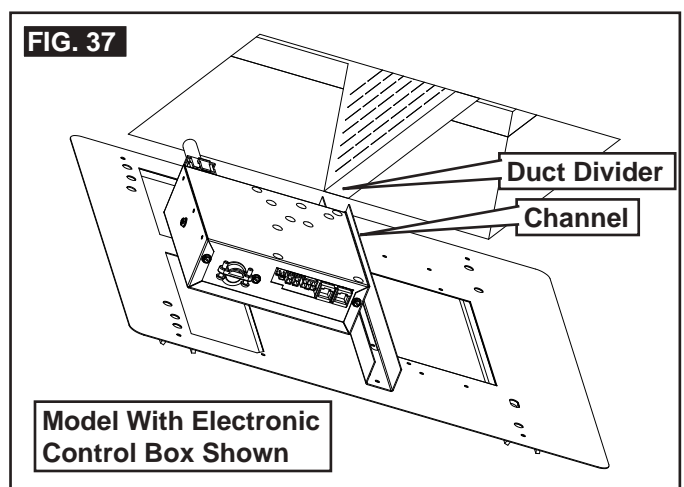
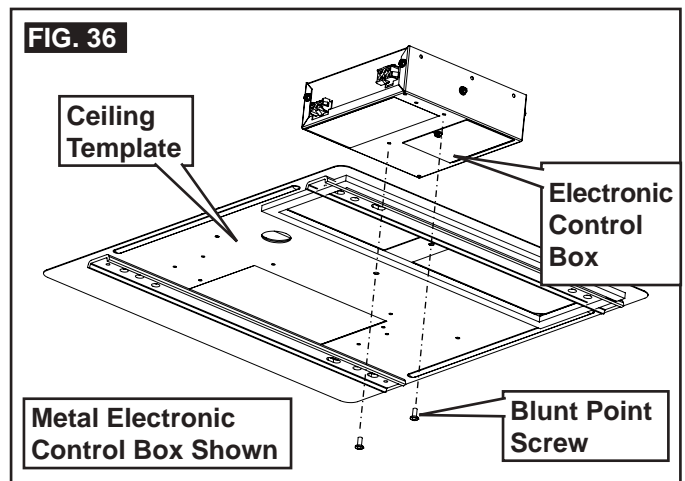
Low Voltage Wire Connections

1. Verify the positive (+) 12 Vdc terminal is disconnected from supply battery.
2. Plug the supplied freeze control sensor and the 4 wire harness into their matching connectors in the electronic control box.
3. Heat Pump Electronic Control Kit Systems
 - a. Plug the outdoor temperature sensor from the unit into the white 2 pin matching connector in the electronic control box.
4. Insert the freeze control sensor into the evaporator coil fins and on the left side. See (FIG. 31). Bend fins over sensor to secure in place.
5. Connect the previously run +12 Vdc supply wire to the red wire protruding from the roof opening or to the red wire at the electronic control box.
6. Connect the previously run -12 Vdc supply wire to both the black wire protruding from the roof opening or to the black wire at the electronic control box and to the wire of the three wire cable that goes to the thermostat 12-terminal.
7. Connect the previously run furnace thermo-stat wires (if applicable) to the blue wires protruding from the roof opening or to the 1/4" connectors at the electronic control box using the supplied 1/4" insulated connectors. The polarity of this connection does not matter.
8. Connect the red/white wire from the roof opening or the red/white wire at the electronic control box to the wire of the three wire cable that goes to the thermostat 12V+ terminal.
9. Connect the orange wire from the roof opening or the orange wire at the electronic control box to the wire of the three wire cable that goes to the thermostat COMMS terminal.



Installing Electronic Control Box

1. Make sure all wiring has been completed and that the electronic control box cover has been installed. To secure electronic control box to ceiling template, drive two (2) #6 x 3/8" blunt point Phillips head screws through the ceiling template and into holes in the control box. See (FIG. 36)
2. Hold the ceiling template up to the roof opening and line up the channel in the ceiling template with the duct divider. See (FIG. 37)
3. Hold the ceiling template up to the roof opening and start each mounting bolt by hand, through the ceiling template and up into the unit base pan.
4. Tighten all four mounting bolts evenly with in 40 to 50 inch pounds. Overtightening could damage unit's base pan or ceiling template. Not enough torque will allow an inadequate roof seal, and could cause a leak.
5. Re-install the air distribution box to the ceiling template using the air distribution boxes instructions.

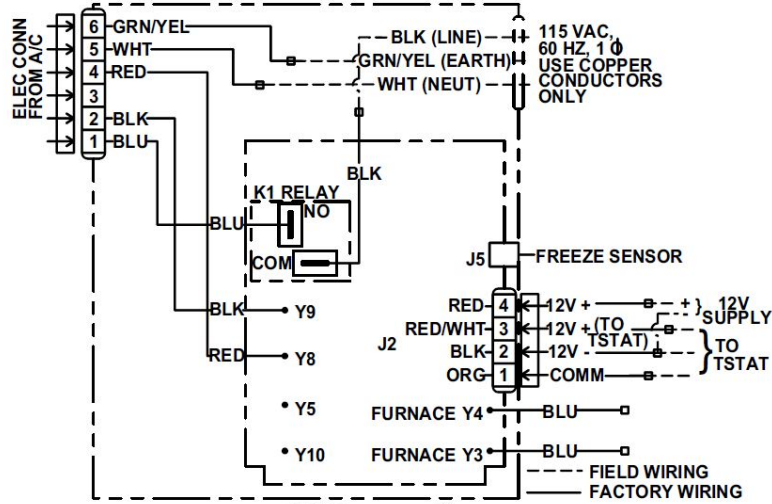


WIRING DIAGRAMS

3316230 Control Board Wiring Diagram Cool/Furnace

FIG. 60

IF THIS PRODUCT IS SUPPLIED BY A WIRING SYSTEM THAT, IN ACCORDANCE WITH CANADIAN ELECTRIC CODE PART 1 C22.1-2009 AND THE NATIONAL ELECTRIC CODE, ANSI/NFPA NO. 70-2008, REQUIRES THE INSTALLATION OF AN EQUIPMENT GROUNDING CONDUCTOR OR CONDUCTORS, TERMINAL(S) OR GROUND SCREW(S) FOR THIS PURPOSE MUST BE INSTALLED.



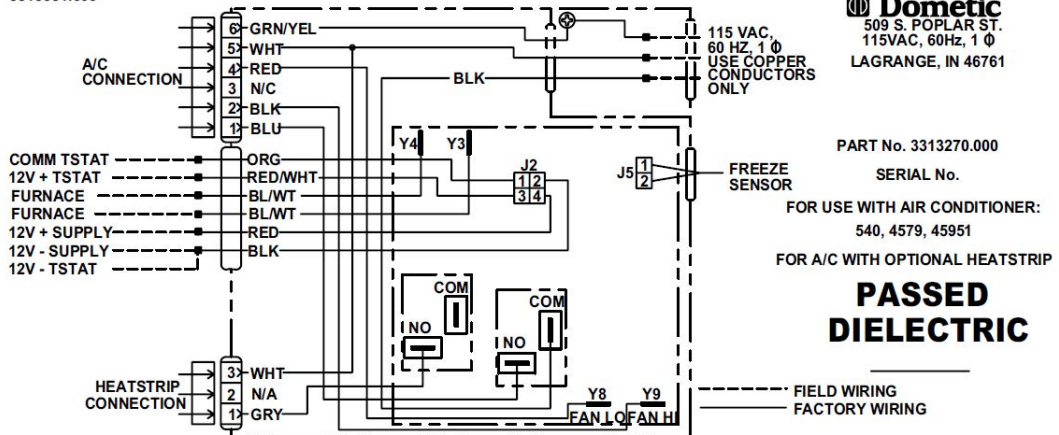
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3316234 Control Board Wiring Diagram Cool/Furnace

FIG. 61

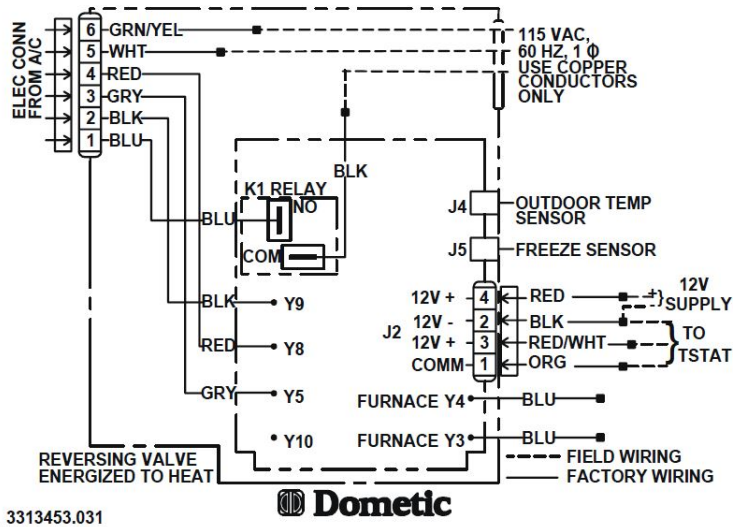
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3316232 Control Board Wiring Diagram Cool/Furnace

FIG. 62

IF THIS PRODUCT IS SUPPLIED BY A WIRING SYSTEM THAT, IN ACCORDANCE WITH CANADIAN ELECTRIC CODE PART 1 C22.1-2009 AND THE NATIONAL ELECTRIC CODE ANSI/NFPA NO. 70-2008, REQUIRES THE INSTALLATION OF AN EQUIPMENT GROUNDING CONDUCTOR OR CONDUCTORS, TERMINAL(S) OR GROUND SCREW(S) FOR THIS PURPOSE MUST BE INSTALLED.



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