

<p align="center">Electric Heater Model WSJ Series</p>	<p align="center">INSTALLATION INSTRUCTIONS</p> <p align="center">Date: 04/24/2013</p>	<p align="center">Models</p> <p align="center">Packaged AC & Heat Pumps SJ,PAC,NM,NL 024-060 Straight cool series JP, PHP,UQ,UB 024-060 Heat Pump Series</p>
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GENERAL

This Warren Technology electric heater is designed to be installed in the York SJ, NM / Coleman PAC, NL / Luxaire NL packaged Air Conditioners & York JP, UQ / Coleman PHP, UB / Luxaire UB packaged Heat Pumps. The **WSJ** heater comes in two parts; a control plate and an element section. Before proceeding, check the heater label for correct voltage and KW requirements. Refer to base unit installation instructions for complete unit installation details. **Verify that all elements are properly secure in their ceramic holders.**

Important: Use flexible connectors between ductwork and unit to prevent transmission of vibration. Use suitable gaskets to ensure weather tight and airtight seal. If flexible duct is used, insert a sheet metal sleeve inside the duct. Heat resistant duct connector (or sheet metal sleeve) must extend 24-in. from the unit connection flanges into the duct work. **WARNING:** Use of other than specified duct materials may pose a fire hazard. Use sheet metal or U.L. 181 listed flexible duct.

HEATER INSTALLATION

CAUTION: Disconnect all electric power before proceeding. Failure to do so may result in electrical shock. The unit must have an uninterrupted or unbroken electrical ground to minimize personal injury if an electrical fault should occur. Ground may consist of an electrical wire or approved conduit when installed in accordance with local codes and ordinances.

1. Inspect the heating elements to verify that shipping and handling have not shorted elements to grounded metal parts.
2. Remove blower assembly access panel and blower control compartment cover (see fig. 1).
3. Remove the blower chute top plate - remove and discard the cover plate attached to the blower top plate (save the (4) removed screws for mounting the heater).
4. Remove the heater cover to allow installation onto the blower top plate.
5. Insert the heater element section into the blower top plate and slide the heater offset flange under the discharge flange. Use patch plate (provided) to secure heater into place using the screws removed in step 3 (fig. 2).
6. Secure the heater cover previously removed.
7. Route the heater element section wiring by the blower and up to the control panel entry hole and secure it with wire ties to keep it clear of the fan blades (see fig. 2).
8. Install the heater control plate in the unit electrical control compartment.

CONTROL PLATE AND HEATER LEADS INSTALLATION

1. Install the heater control plate with (4) screws provided.
2. Trim away insulation to ease installation in the unit control compartment.
3. Feed the wires from the heater element section through the control panel entry.
4. Connect the heater element leads as follows:

For models WSJ0502(B)(S)(RK) –

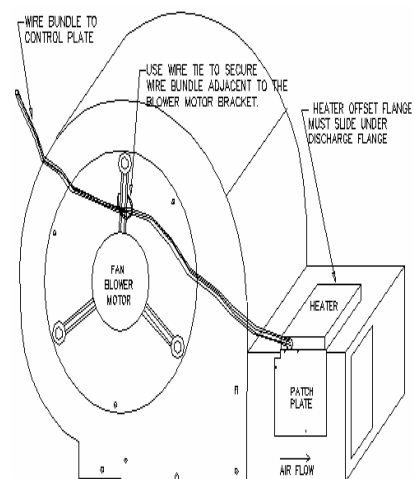
- (A) Connect VIOLET colored heater element wire lead to empty spade on contactor labeled “C1” (see wiring diagram).
- (B) Connect BLUE colored heater element lead to the “M1” terminal of the terminal block (or circuit breaker labeled “CB1”) (see wiring diagram).



FIG. 1 – Removed control panel and blower cover.

For models WSJ0652(B)(S), WSJ0752(B)(S), WSJ1002(B)(S)(RK) –

- A) Connect VIOLET colored heater element wire lead to empty spade on contactor labeled “C1” (see wiring diagram).
- B) Connect RED colored heater element wire lead to empty spade on contactor labeled “C2” (see wiring diagram).
- C) Connect (2) BLUE colored heater element leads to the “M1” terminal of the terminal block (or circuit breaker labeled “CB1”) (see wiring diagram).



For models WSJ1502B(S)(RK) –

- A) Connect VIOLET colored heater element wire lead to empty spade on contactor labeled “C1” (see wiring diagram).
- B) Connect RED colored heater element wire lead to empty spade on contactor labeled “C2” (see wiring diagram).
- C) Connect BROWN colored heater element wire lead to empty spade on contactor labeled “C3” (see wiring diagram).
- D) Connect (2) BLUE colored heater element leads to the “M1” terminal of the circuit breaker labeled “CB1” (see wiring diagram).
- F) Connect ORANGE colored heater element leads to the “M2” terminal of the circuit breaker labeled “CB2” (see wiring diagram).

NOTE: A pair of jumper wires are included with each kit to connect the terminal block / circuit breaker to the compressor contactor for single point applications (on single point WSJ heater kits these jumper wires are pre-installed to the breaker). All Heat Pump applications require Circuit breakers.

5. BLOWER MOTOR WIRING: SJ, JP, PAC, PHP, UQ, UB, NM, NL units.

STANDARD HEATER MODELS:

Disconnect the YELLOW (129) and ORANGE (130) blower motor lead wires from the unit contactor and route up to the heater control plate (except for NL/NM units size 024-036, where a relay kit is required. Refer to relay kit installation instruction). Connect the YELLOW wire to an empty spade on terminal “L1” of the Terminal Block or Breaker (breaker terminal may have a T1 marking). Connect ORANGE wire to an empty spade on terminal “L2” of Terminal Block or Breaker (breaker terminal may have a T2 marking).

WSJ*RK HEATER MODELS: NM, NL units (for use on size 024-036 only).

These heater models are equipped with the blower relay needed to operate the size 024-036 units. Disconnect the YELLOW (129) and ORANGE (130) blower motor lead wires from the unit contactor and route up to the heater control plate. Connect the YELLOW (129) wire to the bottom terminal (marked M1) of the Terminal Block or Breaker. Connect the ORANGE wire to blower relay terminal “2”. Route RED colored lead wire from the heater control plate to the desired blower speed tap.

6. CONTROL WIRING ALL MODELS:

- a) Route BROWN colored wire lead to the 24 control volts side of the unit contactor (connect to the side where the transformer brown colored wire connects to the compressor contactor).
- b) Route WHITE colored wire lead to the W1 connection point of the DEFROST BOARD on heat pump JP, PHP, UQ, UB units (For SJ, PAC, NM, NL units connect to WHITE low voltage wire that leads to the low voltage box area, use of a wire nut is required (W1 connection point for thermostat)).
- c) For 2-stage models - Route BLACK colored wire to the low voltage box area (W2 connection point for thermostat).
- d) Route GREEN wire to “G” on thermostat.

7. To wire the Thermostat refer to base unit installation instructions.

ELECTRICAL CONNECTIONS

1. All electrical connections, wire sizes and type and conduit sizes shall comply with the National Electric Code and State and Local Codes. Recommended minimum wire sizes, circuit fusing, etc. are listed on the corresponding schematic diagram. **USE COPPER CONDUCTORS ONLY.**
2. Make all wire spliced connections inside air handler unit. Separate all wires from incoming power leads. Route wires away from uninsulated parts. **Verify that there are no possible shorts to ground.**
3. Factory branch circuit wiring and fusing is in accordance with the National Electrical Code maximum of 48 amps per circuit. Heaters with factory installed circuit breakers may be installed on a branch circuit protection by a circuit breaker. For all other heater, the branch circuit must be protected by a fuse or a circuit breaker supplied by others.
4. Connect heater wiring as shown in the corresponding schematic diagram. All connections should be made inside the air handler.
5. As shipped by factory this unit is shipped to operate as a dual branch circuit (do not use ORANGE and YELLOW jumper wires for dual branch circuits). For single point circuits a special heater kit is available with an additional breaker for the compressor.

START-UP and CHECK-OUT

CAUTION: Before proceeding, verify that all wiring is correct per factory approved schematic. Notify factory immediately of any discrepancies. Improper installation may damage equipment.

1. Check that all fuse and circuit breaker short circuit interrupting ratings are adequate.
2. With thermostat set to the "Off" position, turn on unit and heater power.
3. Set thermostat to call for heat and check operation of heater. **NOTE:** There is an inherent delay before the blower and first element will energize.
4. Check for proper thermostat operation.
5. Check that air flow across heater is at or above minimum recommended fan speed. Adjust as required.
6. Any modification or repair to this equipment without written permission from the factory will be done at the installer's own risk and expense.

PACKAGE CONTENTS:

- 1) Wiring diagram on adhesive paper.
- 2) Installation Instructions.
- 3) (2) #10 Ga. wire jumpers.
- 4) (3) wire ties.
- 5) Heater and Control assembly.
- 6) (8) mounting screws & (1) wire nut.

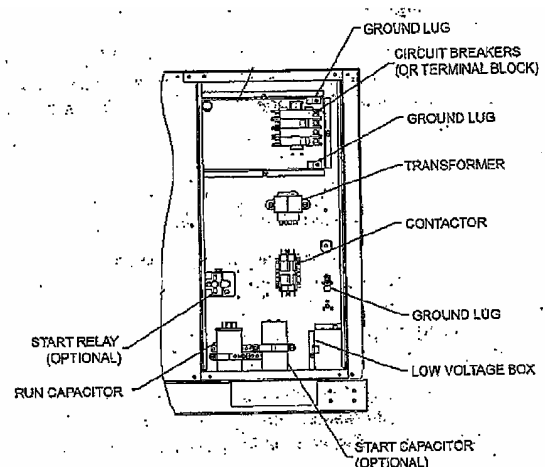


FIG. 3 – Typical view of control panel

Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring