

<p><b>Warren Electric Heater Model WSA Series</b></p>	<p><b>INSTALLATION INSTRUCTIONS</b> Date: 07/09/14</p>	<p><b>Models</b> AIREASE, ARMSTRONG, DUCANE, CONCORD, ADP RPHP, RHP, RPCE, RCE, 13HPP, PCE, PHP  Residential Package and Electric Unit Models Size 024-060</p>
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## GENERAL

This Warren Technology electric heater is engineered, designed, and approved to be installed in the Airease, Armstrong, Ducane, Concord, ADP Residential Package and Electrical unit models; RPHP, RHP, RPCE, RCE, 13HPP, PCE, PHP size 24-60.. Before proceeding, check the heater label for correct voltage and KW requirements.

Installation and servicing of this equipment should only be performed by trained and qualified personnel. Before proceeding with the heater installation, inspect thoroughly for shipping damage. Notify the shipper immediately if any damage is found. Check all porcelain insulators for breakage and inspect heater element wire to see that none have been deformed. Clean all dirt, dust, and moisture from equipment. Check for proper clearances of live parts, between phases, and to ground. Make sure that all required barriers are in place. Check conductors run in multiple to insure that they are properly wired. Refer to installation instructions for complete unit installation details. **Verify that all elements are properly secure in their ceramic holders.**

### **WARNING**

Before performing service or maintenance operations on system, turn off all main power switches. There may be more than one disconnect. Turn off accessory heater power switch if applicable. Electrical shock can cause personal injury. **TAG DISCONNECT SWITCH(ES) WITH A SUITABLE WARNING LABEL.**

## HEATER INSTALLATION

### INSTALL HEATER AS FOLLOWS:

1. Refer to the base unit installation instructions as required. Check for proper equipment model from table 1.
2. Remove heater compartment access panel see fig. 1.
3. Remove cover plate covering the heater box opening (see fig 1) by removing (4) screws. Save screws.
4. Check the "**Air Flow**" label for correct mounting position. Carefully slide heater assembly into blower section through the access opening. Secure heater into place with screws removed from cover plate. Use caution when inserting heater to avoid damage to heater elements.
5. Disconnect the plug separating the high voltage wire harness. Remove the high voltage wire harness plug and discard.
6. Connect the (6) pin heater plug harness into the wiring harness of the control assembly.
7. Re-install access panel.
8. Affix the heater ampacity label and heater wiring diagram provided to the outside of the unit panel. Mark an **X** next to the appropriate heater/unit combination.



**Fig. 1 - Heater access panel.**

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## **ELECTRICAL CONNECTIONS**

### **CONNECT HEATER AS FOLLOWS:**

1. All electrical connections, wire sizes and type of conduit sizes shall meet the National Electric Code, State and Local Codes. Main power supply, Minimum wire sizes, circuits, fusing, etc. is shown on schematic wiring diagrams. Field wiring of the auxiliary heater is separate from the unit power supply - **NOTE: Use copper wire only.**
2. Refer to base unit instructions for recommended wiring procedures.
3. Remove the high voltage wire harness plug connected to the control assembly plug and discard. Connect the (6) pin heater plug harness to the corresponding plug on the control assembly.
4. Separate all wires from incoming power leads. Be sure that all electrical terminal connections, clamps, screws, etc. are tight before proceeding. **Verify that there are no possible shorts to ground.**
5. **480V "A" model:** The transformer is for use on applications where 480V heaters are being wired into 208/240 volt single phase AHU. The single point transformer must be externally mounted and secured with screws onto the air handler unit. Use the louvered transformer cover (provided) for protection of this part (see fig. 5). For wiring purposes the wiring on the transformer is labeled and color coded (refer to schematic).
6. 480V "non transformer" model: Dual source circuit is required to power the electric heater and unit separately.
7. Check wiring diagram supplied with heater for specific connections and information.
8. Check operation as described in start-up section.

**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.

## **START-UP and CHECK-OUT**

**CAUTION:** Before proceeding, verify that all wiring is correct per factory approved schematic. Notify factory immediately of any discrepancies.

1. Refer to base unit installation instructions as required.
2. Check for loose terminal connections.
3. Check that all circuit breaker short circuit interrupting ratings are adequate.
4. Turn on unit and heater power.
5. Set thermostat to call for heat.
6. Check operation of heater.
7. Check that air flow across heater is at or above minimum recommended fan speed. Adjust as required.
8. Any modifications or repairs to this equipment without written permission from the factory will be done at the installer's own risk and expense.

### **HEATER PACKAGE CONTENTS:**

1. Heater assembly
2. Installation Instructions
3. Installer label
4. Schematic
5. (4) screws