

**Warren Electric  
Heater Model  
W1F Series  
2.5 - 30 KW  
208/240 (60/50) /1  
208/240 (60/50) /3  
460 (60/50) /3**

## **INSTALLATION AND OPERATING INSTRUCTIONS**



08-01-09

**York/Luxaire/Fraser Johnston  
Coleman/Air Pro  
F\*RP/F\*FP 018-060  
F\*RC/F\*FC 018-036  
N\*AHB 0806, 1206, 1293, 1246  
N\*AHC 1606, 1693, 1646  
N\*AHD 2006, 2093, 2046  
F\*NP/F\*LP 018-060  
F\*NB/F\*LB 018-036  
F\*FV 060  
\* = A/B/1/2/3/4/5/6/X/Y**

### **GENERAL**

This Warren Technology electric heater is engineered, designed, and ARL listed to be installed in the York/ Luxaire/ Fraser Johnston/ Coleman/Air Pro F\*RP/F\*FP, F\*RC/F\*FC, N\*AHB/N\*AHC/N\*AHD and F\*NP/F\*LP, F\*NB/F\*LB, F\*FV series air handler.

Before installing the heater, inspect thoroughly for shipping damage. Notify carrier immediately if any damage is found. Check all porcelain insulators for breakage and inspect heater element wires 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 that conductors run in multiple to insure that they are properly phased.

### **WARNING**

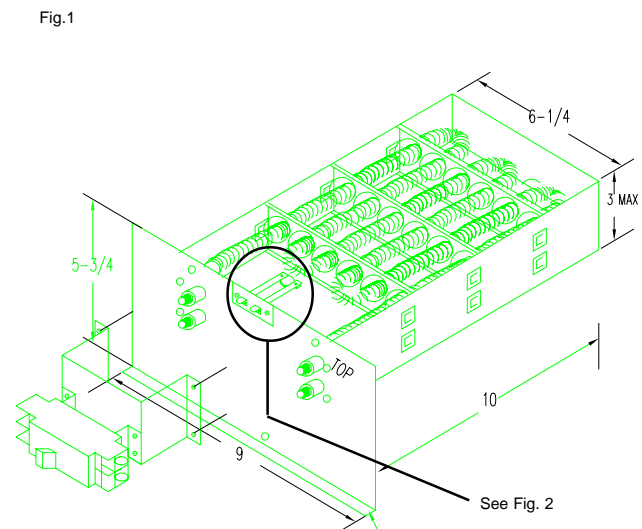
Before performing service or maintenance operations on system, turn off all main power switches. There may be more than one disconnect. Turn off accessory heater power switch if applicable. Electrical shock can cause personal injury. ***TAG DISCONNECT SWITCH(ES) WITH A SUITABLE WARNING LABEL.***

### **HEATER INSTALLATION**

This electric resistance heater is designed for field installation in the discharge air compartment of the above referenced air handler units.

#### **INSTALL HEATER AS FOLLOWS:**

1. Refer to the base unit installation instructions as required.
2. Remove the heater/fan motor access panel of air handler.
3. Remove internal cover plate. Save sheet metal screws. Discard cover plate.
4. Install heater assembly into access opening located in the front vestibule of the air handler. Be sure the heater mounting plate is flush with base unit and heating elements are not in contact with any object. Secure with sheet metal screws from cover plate.
5. Plug electric heater plug into matching receptacle plugs on air handler.
6. If electric heater has factory supplied circuit breakers, remove breaker access plate from air handler door. Align circuit breakers with access panel knock-out.
7. Attach externally mounted single point autoformer (if provided). Refer to schematic for color coded wiring and electrical connections.



### **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.

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

2. Refer to air handler unit instructions for recommended wiring procedures.
3. Connect low voltage control wires as shown in schematic diagram.
4. Connect power wiring as shown in schematic diagram. All connections should be made inside the heater control box and comply with National Electric Codes, State and Local Codes. Heater with factory installed fuses or circuit breakers may be installed on a branch circuit protected by either a fuse or a circuit breaker. For all other heaters, the branch circuit must be protected by a fuse or a circuit breaker supplied by others.
5. Make all power wire spliced connections inside heater control box. Separate all wires from incoming power leads.
6. Be sure that all electrical terminal connections, clamps, screws, etc. are tight before proceeding.

### **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.**

## **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 fuse and 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.

## **SERVICE**

**Circuit Breakers** - Malfunction will interrupt power to the unit. *Check for cause of failure, correct, and replace fuses or reset circuit breaker.*

**Limit Switch** - Malfunction prevents heating element(s) from being energized. *Replace switch if malfunction occurs.*

**Relay** - Malfunction will cause heater to not come on or not shut off. Replace faulty relay. *Do not attempt to replace coil or dress contacts.*

## **WARNING**

**Auto limit location critical, must be 1 1/2" from element**

