

Electric Heater Model WMK series 208/240-1-60 208/240-3-60	INSTALLATION INSTRUCTIONS Date: 08/07/2015	Horizontal Fan Coils CARRIER FPMA(B) 018-036 ICP FMU4P(X), FMC4P(X), WATC, WAMC 1800-3600
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GENERAL

This electric heater series is engineered, designed, and approved to be installed in the Carrier FPMA(B), ICP FMU4P(X), FMC4P(X), WATC, WAMC fan coils. Before proceeding, check the heater label for the 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 base 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.** When installed in a garage, heater elements should have a clearance of 18" from the floor, insure that the area is ventilated.

HEATER INSTALLATION

1. Refer to the base unit installation instructions as required. Affix Warren Heater installer label to the fan coil control box cover.
2. Remove fan coil control box cover.
3. Detach the unit control box from the fan coil by removing the (4) screws that attach the control box to the fan coil. Do not remove the blower motor wires.
4. Remove the heater opening cover from the control box and discard. Retain screws for heater installation.
5. Align the heater control section with the control box opening and insert the heater control box carefully into the fan coil control box. Check for proper air flow direction prior to fastening the heater assembly to the fan coil control box. Use screws to fasten the heater assembly to the control box.
6. Insert the heater coils onto the fan coil blower compartment (mounting position is important, check the "AIRFLOW" label for correct position).
7. Secure the completely assembled fan coil control box to fan coil with screws. See fig. 2.
8. Connect the 6-pin wire connector to matching plug in the fan coil control box. Install the appropriate size conduit connector.
9. Use wire nuts provided to connect the Red and Black wires from the heater and fan coil control box.
10. Apply wiring diagram to the fan coil for future reference.
11. Reinstall blower access panel.

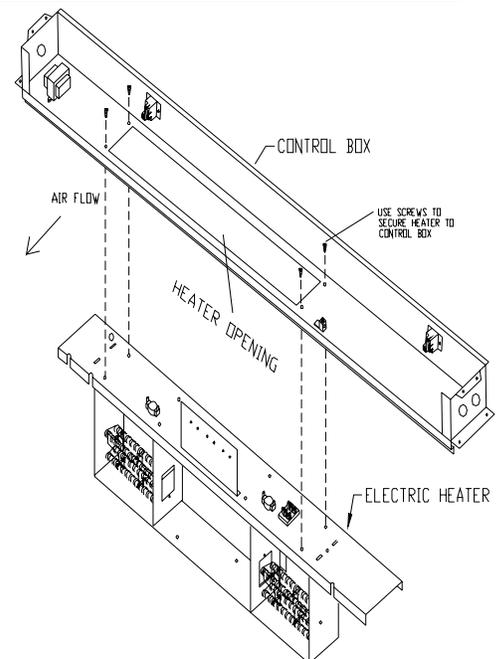


Fig. 1 - Heater assembly

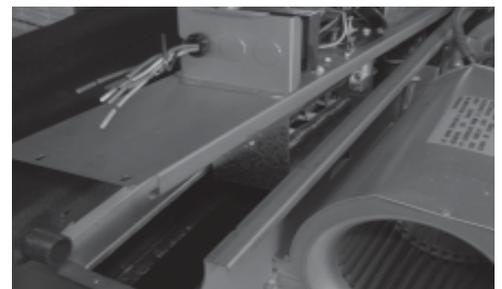


Fig. 2 - Control box installation

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ELECTRICAL CONNECTIONS

- All electrical connections, wire sizes and type and 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. Use copper wire only.
- Refer to base unit instructions for recommended wiring procedures.
- Power may be brought into the unit by connecting to the L1, L2 terminals of the power block. Heaters can be wired for single point connection only. The Red and Black pigtails from the fan coil and heater must be connected using wire nuts, ensure a tight connection by pulling on connected wires.
- Connect the 6-pin plug to the matching fan coil connector in the fan coil.
Note: A design feature for heat pump applications does not allow simultaneous operation of heat pump and electric heater, refer to fig. 3 for proper wiring.
- Be sure that all electrical terminal connections, clamps, screws, etc. are tight before proceeding. Verify that there are no possible shorts to ground.**
- Check wiring diagram supplied with heater for specific connections and information.
- Check operation as described in start-up section.

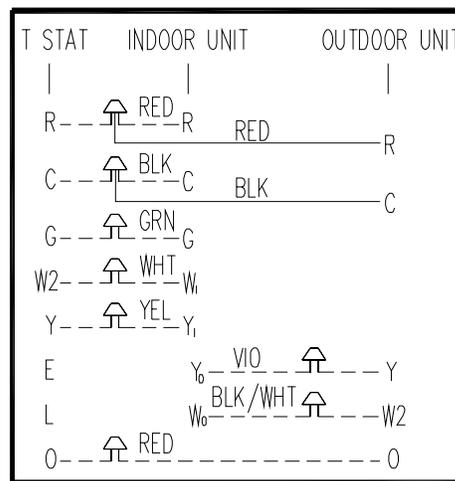


Fig. 3 - Heat Pump Application wiring.

START-UP AND CHECK-OUT

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

- Refer to base unit installation instructions as required.
- Check for loose terminal connections.**
- Check that all fuse and circuit breaker short circuit interrupting ratings are adequate.
- Turn on unit and heater power.
- Set thermostat to call for heat.
- Refer to base instructions for Air Flow Data Tables and adjustment of Fan motor speed. Check that air flow across heater is at or above minimum recommended fan speed (see fig. 4):**
HIGH speed - connect fan motor BLACK wire to fan Relay No. 4.
LOW speed - connect fan motor BLUE wire to fan relay No 4 and fan motor RED wire to fan relay No. 6.

Unit Size	Minimum CFM		
	5.0 kW	7.5 kW	10 kW
18	325	350	375
24	450	475	500
30	575	600	625
36	700	725	750

MOTOR SPEED COLOR CODE	
SPEED TAP	WIRE COLOR
Common	Purple
High	Black
Medium	Red
Low	Blue

* for heat applications set to HIGH speed

Fig. 4 - FAN speed color code.

CAUTION: When commissioning any AHU with electric heat, **ALWAYS** check to see if the heater is cycling on its automatic reset high temperature limit when the system is producing the highest temperature leaving the AHU coil.

HEATER KIT CONTENTS

- Heater assembly
- Installation Instructions
- Installer label
- Wiring diagram
- (2) small wire ties
- (2) GREY wire nuts

USER CAUTION: The use of improperly selected air filters/ and or operation with dirty filters may result in insufficient airflow which may result in abnormal operation of electric heaters and tripping of temperature safety limits. Also, insufficient airflow will degrade the efficiency of the system (SEER rating) and excessive wear and premature failure of the system compressor may result. Other conditions, such as undersized or obstructed ductwork, may also cause insufficient airflow. It is recommended that a qualified technician be consulted to ensure proper airflow and air filtration selection and application. See (www.lowairflow.com) for more information.