



# Installation, Operation and Maintenance Manual

EQUIPMENT: Markel Heaters

TAGS: EH-1 and 2

PROJECT: Hightower Park Improvements

LOCATION: West Memphis, AR

ENGINEER: Chad Stewart & Associates Inc.

CONTRACTOR:   
A R K A N S A S

DATE: 12/12/2024

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## 1. LOCATION OF HEATER:

- Heater is mounted on the wall near ceiling or floor, air flow down.
  - CAUTION:** Do not obstruct the front grille of the heater with curtains, furniture, etc., since the proper operation of the heater requires a free flow intake and exhaust of air.
- Minimum mounting height is 10" above finished floor and 8" from adjacent walls.
- For surface mounting use adapter AFAA/3320EX33.
- For semi-recessed mounting, use adaptor AFAA-2/3320EX16.

## 2. BEFORE MOUNTING:

- Insure that the supply voltage matches voltage rating on the label of the heater.
- Turn off electrical power to heater circuit.

## 3. MOUNTING INSTRUCTIONS:

- Disassemble heater by removing 7 screws "C" as shown in Figure 1 and 2.
- Flush mounting, see Fig. 1. Place rough-in box "A" between studs at desired height: secure to studs through holes "M". The flanges on the rough-in box must rest on the surface of the finished wall; if the box is installed prior to the application of the finished wall, allowance must be made for the wall thickness.
- Surface mounting, See Fig. 2. Insert rough-in box "A" into surface adapter "E". Secure the heater rough-in box to wall at desired height through holes "X". Be sure that the rough in box is centered in surface adapter. For surface mounting, bring wiring through bottom knockout "K" only.
- Semi-recessed mounting: Secure rough-in box so that the long flanges extend away from the finished wall equal to the depth of the adaptor. Bring service in through top or bottom knockout "K". E. Place assembly "B" into rough-in box "A". Secure with six screws "C".

## WIRING INSTRUCTIONS REF: WD1, WD2, WD3, WD4, WD5, WD6 AND THREE PHASE UNITS

- Bring service leads through knockout "K" on top or bottom of rough-in box for flush or semi-recessed mounting, bottom knockout "K" only for surface mounting. When wiring from the bottom, install wire through cover "G" by removing screw "H".
- Attach service leads to two black leads on 208-240 volt models and to black and white leads on 120-277 volt models, 3-phase units are supplied with 3 black leads. Attach ground lead to green wire with approved connectors. Comply with all national and local codes.
- Attach wiring compartment cover "D" to assembly with screw "C".

## 5. FINAL STEPS:

- Clean all construction dirt and debris from inside heater.
- Attach front grille "F" with four screws "L".
- Place grille frame over tabs on top of grille, snap bottom in place. For added security install screw "Q" into bottom of frame.

## 6. OPERATING INSTRUCTIONS:

- Turn on power at the circuit breaker panel.
- Thermostat adjustment is made by inserting a small blade screw driver through grille opening into slot in stem. Turn thermostat adjustment stem fully clockwise, this will energize the heating element and after a short delay, the fan should energize, causing warm air discharge from bottom of the grille.
- After the desired temperature is reached, turn thermostat stem counter clockwise until a click is heard from the thermostat.
- Models with double-pole thermostats: Turn thermostat adjustment stem fully counter-clockwise, this will de-energize the heating element and fan.

## 7. CLEANING AND MAINTENANCE INSTRUCTIONS:

- At the beginning of each heating season, disconnect electrical power at circuit breaker panel. Remove front grille.
- Use the narrow (crevice) suction attachment of the vacuum cleaner to remove dust and lint from heater and heating element.
- Lubricate the motor with SAE No. 10 oil. Two (2) oil spouts are located on front and back of motor.
- Reinstall front grille with previously removed screws. Restore power to the heater.

## Wall Installation

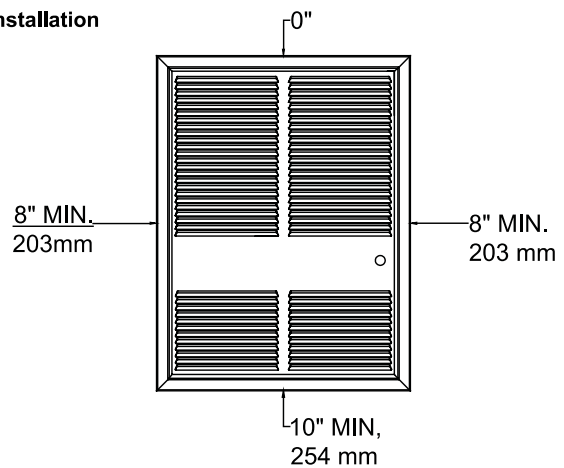


FIG. 1 FLUSH MOUNT

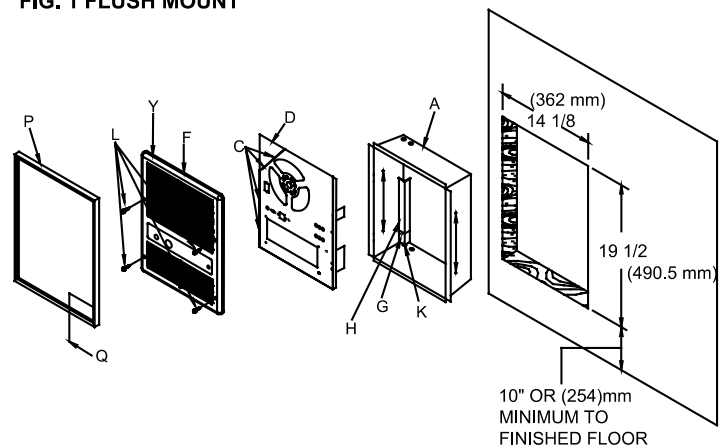
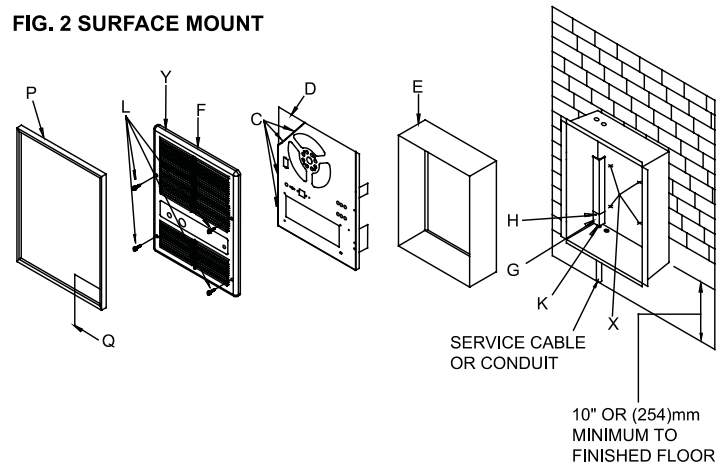


FIG. 2 SURFACE MOUNT



Note: This heater employs a visual alarm (light) to warn that parts of the heater are getting excessively hot. If the alarm illuminates, immediately disconnect power from heater and inspect for any objects on or adjacent to the heater that may cause high temperatures. DO NOT OPERATE HEATER WITH THE ALARM (LIGHT) ILLUMINATED.

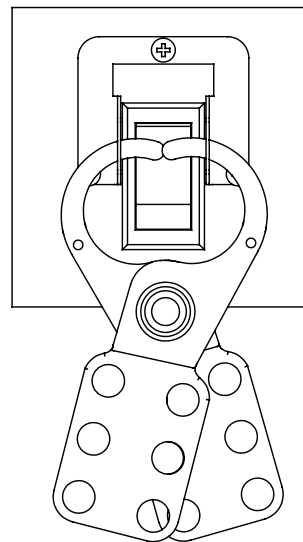
**NOTE: Three phase units do not have an alarm light, these units are equipped with a manual reset limit control.**

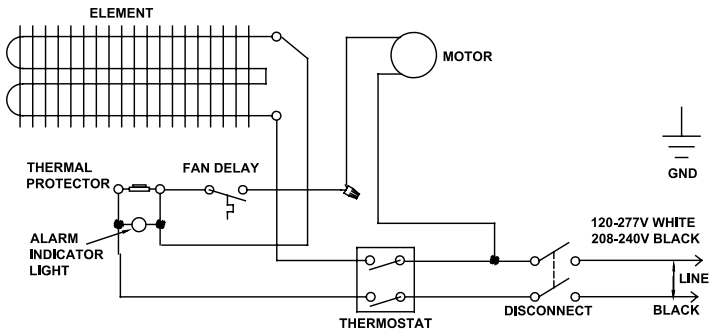
## IMPORTANT INSTRUCTIONS

1. When using electrical appliances, basic precautions should always be followed to reduce the risk of fire, electrical shock, and injury to persons, including the following:
2. Read all instructions before using this heater.
3. **CAUTION:** High temperatures. Keep cords and all other combustible material, such as furniture, papers, clothes and curtains away from the heater. For safe and efficient operation, keep an open space around heater of three feet in front and 12 inches at ends and rear.
4. Extreme caution is necessary when any heater is used by or near children or invalids and whenever the heater is left operating and unattended.
5. Do not operate any heater after it malfunctions, has been dropped or damaged in any manner. Return heater to authorized service facility for examination, electrical or mechanical adjustment, or repair.
6. Do not use outdoors.
7. To disconnect heater, turn controls to off, and turn off power to heater circuit at main disconnect panel (or operate internal disconnect switch if provided).
8. Do not insert or allow foreign objects to enter any ventilation or exhaust opening as this may cause an electric chock or fire, or damage the heater.
9. To prevent a possible fire, do not block air intakes or exhaust in any manner.
10. A heater has hot and arcing or sparking parts inside. **WARNING:** Do not use it in area where gasoline, paint, or flammable liquids are used or stored.
11. Use this heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons.
12. This heater may include an audible or visual alarm to warn that parts of the heater are getting excessively, hot. If the alarm sounds (or illuminates), immediately turn the heater off and inspect for any objects on or adjacent to the heater that may have blocked the airflow or otherwise caused high temperatures to have occurred. **DO NOT OPERATE THE HEATER WITH THE ALARM SOUNDING (OR ILLUMINATING).**
13. **SAVE THESE INSTRUCTIONS**

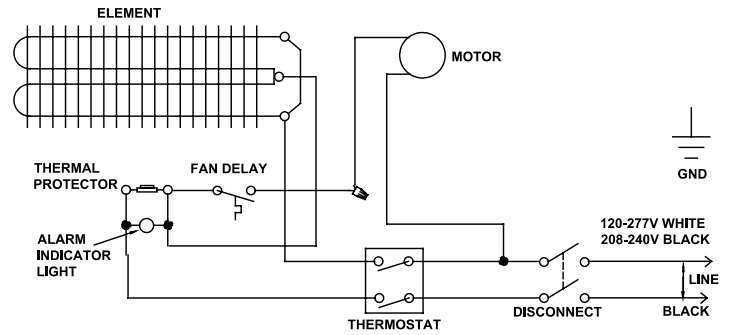
### SWITCH LOCKOUT

For switch lockout hasp or padlock thru bracket as shown. Note: Front grille must remain off during lockout.

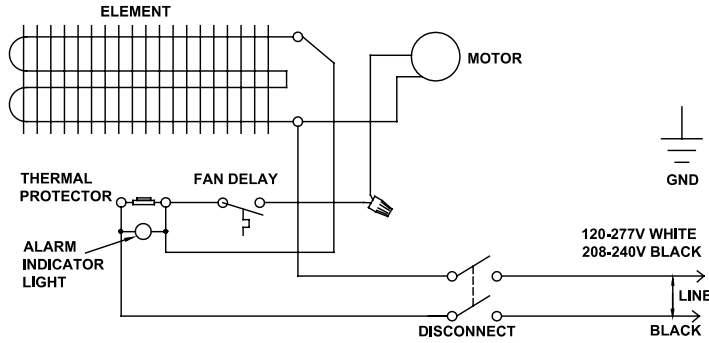




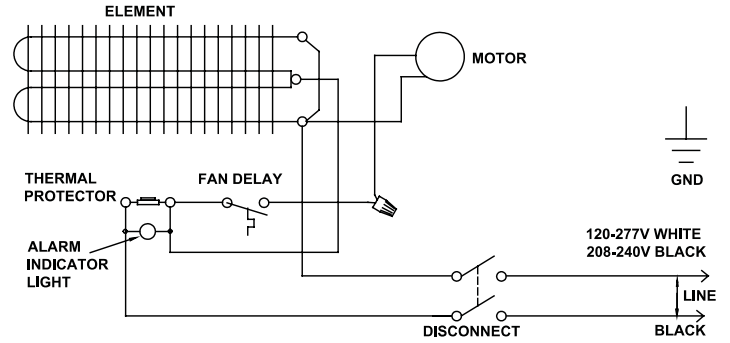
WD-1



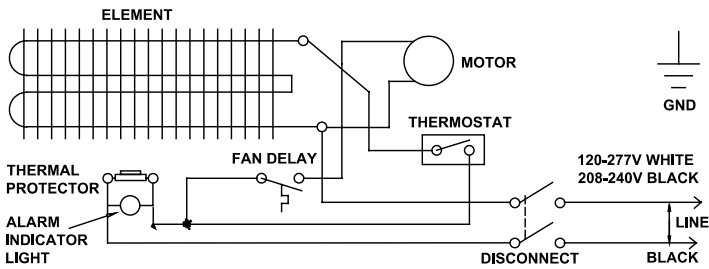
WD-5



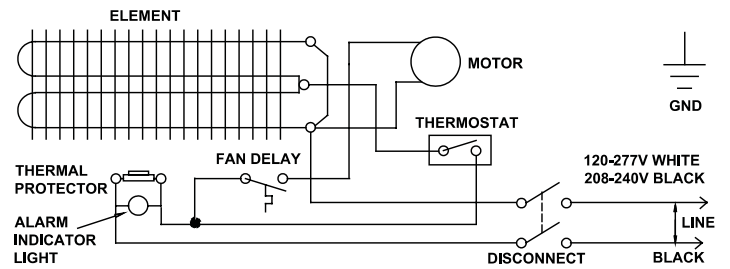
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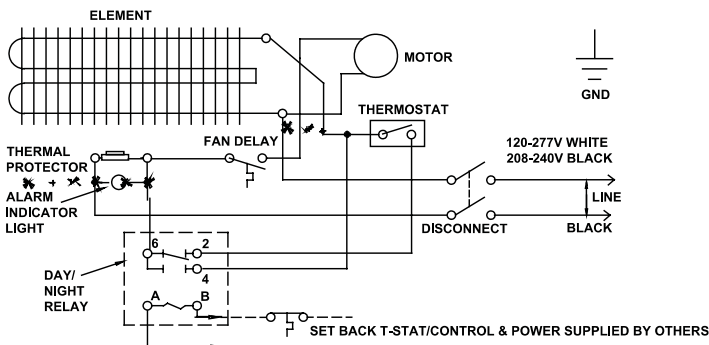
WD-6



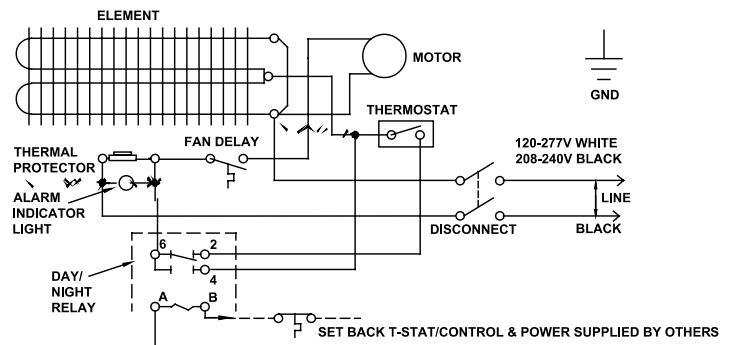
WD-3



WD-7



WD-4



WD-8

WD #	MODEL #	OPTIONS
WD-1 WD-2 WD-3 WD-4	All models except E3321 , HF3325 & HF3326	3320 with Disconnect and Double Pole Thermostat 3320 with Disconnect 3320 with Disconnect and Single Pole Thermostat 3320 with Disconnect, Single Pole Thermostat and Day/Night Relay
WD-5 WD-6 WD-7 WD-8	E3321 , HF3325 & HF3326	3320 with Disconnect and Double Pole Thermostat 3320 with Disconnect 3320 with Disconnect and Single pole Thermostat 3320 with Disconnect, Single Pole Thermostat and Day/Night Relay

**IMPORTANT: OWNER SHOULD RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE**

# THREE PHASE WIRING DIAGRAM

