

WIRING DIAGRAMS

steam/hot water unit heaters

Models HSB/HC, V/VN, PT/PTN, WTC/WSC, WPC/WPN, WVC/WVN

Diagram Selection

Diagrams are provided for both single and three-phase circuits, and are readily identified in the Selection Table 1.1.

Select the correct wiring diagram as follows:

1. Determine unit heater model, size and voltage/power code.
2. Review Table 1.1 to locate the page number that matches the characteristics of the heater from step 1.

Example Selection

Select the wiring diagram for an HSB340 for use on 460V/60 hz/3 phase supply voltage.

In Table 1.1 select the page number where the column for the voltage intersects with the row for HSB340. The correct wiring diagram for this unit is found on page 2. Note that footnote ① indicates that the unit will be Power Code 01, 115V/60Hz/1ph requiring an accessory transformer. See literature #1-556 for additional details.

Two-in-one Diagrams

Two wiring diagrams are furnished for each circuit configuration in this manual. Included are a connection diagram at the left for field installation and circuit schematic at the right to aid in continuity and trouble shooting.

The heavier lines in the connection diagram indicate line voltage; the lighter lines indicate low voltage. Solid lines show pre-wiring performed at the factory; dotted lines inform the installer of connections required to put the heater in operation.

NOTE: As indicated in every diagram, all wiring must comply with the National Electrical Code and all local codes. All components must agree with their respective power source.



Turn off all power and gas to unit before wiring. Failure to wire this unit according to this wiring diagram may result in injury to the installer or user. For deviations, contact factory.

Table 1.1
Wiring Diagram Page Location for Units with Totally Enclosed Motors

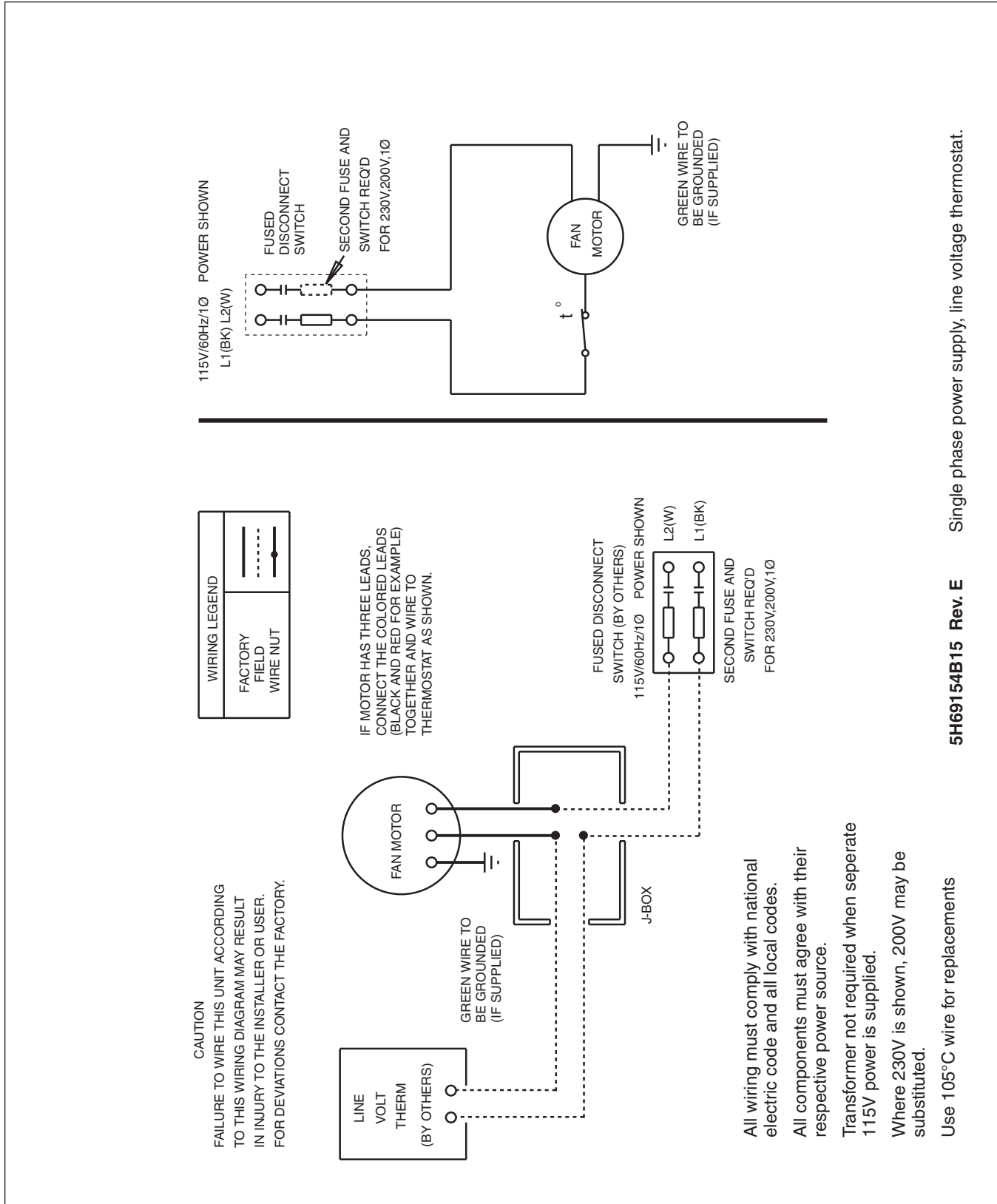
| Model | Motor Voltage and Power Code | | | | | |
|--|------------------------------|---------|----------|--------------|--------------|----------|
| | 115/60/1 | 200/601 | 230/60/1 | 200-208/60/3 | 230/460/60/3 | 575/60/3 |
| | 01 | - | 02 | 04 | 05 | 10 |
| Model | Page | Page | Page | Page | Page | Page |
| HSB/HC, WTC/WSC 18-340 | 2 | 2 ① | 2 | 2 ①③ | 2 ①③ | 2 ①③ |
| V/VN, WVC/WVN 42-279 | 2 | 2 ① | 2 | 2 ①③ | 2 ①③ | 2 ①③ |
| V/VN, PT/PTN, WVC/WVN, WPC/WPN 333 | 3 | 3 ① | 3 | 3 ①③ | 3 ①③ | 3 ①③ |
| V/VN, PT/PTN, WVC/WVN, WPC/WPN 385-952 ② | - | - | - | 4 | 4 | 4 |

① For supply voltages of 200V/60Hz/1ph and all non-explosion proof 3 phase voltages of 200, 230, 460 and 575, Model Numbers indicated with Note ①, require that a 115V/60Hz/1 phase Power Code 01 unit heater be used with a shipped loose accessory transformer. See literature #1-556 for additional information.

② VN/PTN, WVN/WPN952 not available.

③ For HSB/HC, WTC/WSC (all sizes) and VN/PTN, WVN/WPN (sizes 333 and below) with Power Code 04, 05 and 10 manufactured before September, 2005, use the wiring diagram on page 4.

Figure 1
Steam/Hot Water Unit Heater Wiring Diagram - 115 V/1 Ph (Except V/VN, PT/PTN, WVC/WVN, WPC/WPN 333)



5H69154B15 Rev. E Single phase power supply, line voltage thermostat.

Abbreviations and Symbols

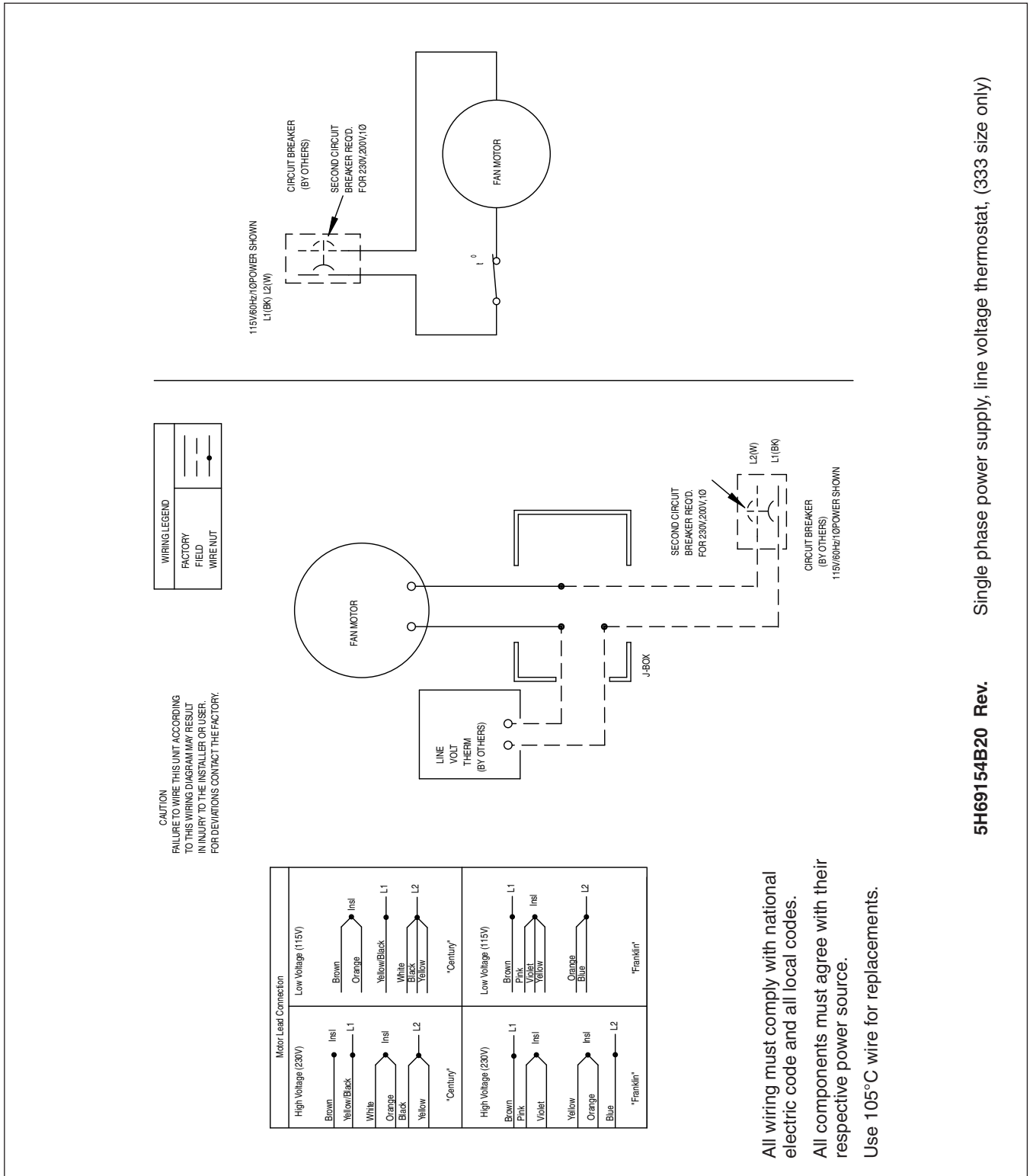
| | |
|--------------|-------------------------------|
| XFMR | Transformer |
| V | Volts |
| Hz | Cycle or Hertz |
| φ | Phase |
| “J” Box | Junction Box |
| t | Thermostat |
| VA | Volt-Ampere |
| H1, H2, etc. | Transformer Primary Terminals |
| O.L.C. | Overload Contact |

| | |
|--------------|---------------------------------|
| X1, X2, etc. | Transformer Secondary Terminals |
| L1, L2, etc. | Electric Load Terminals |
| T1, T2, etc. | Starter or Motor Terminals |

Wire Color Coding

| | |
|----|-------|
| BK | Black |
| BL | Blue |
| BR | Brown |
| R | Red |
| W | White |

Figure 2
Steam/Hot Water Unit Heater Wiring Diagram - 115V/1ph (V/VN, PT/PTN, WVC/WVN, WPC/WPN 333 only)

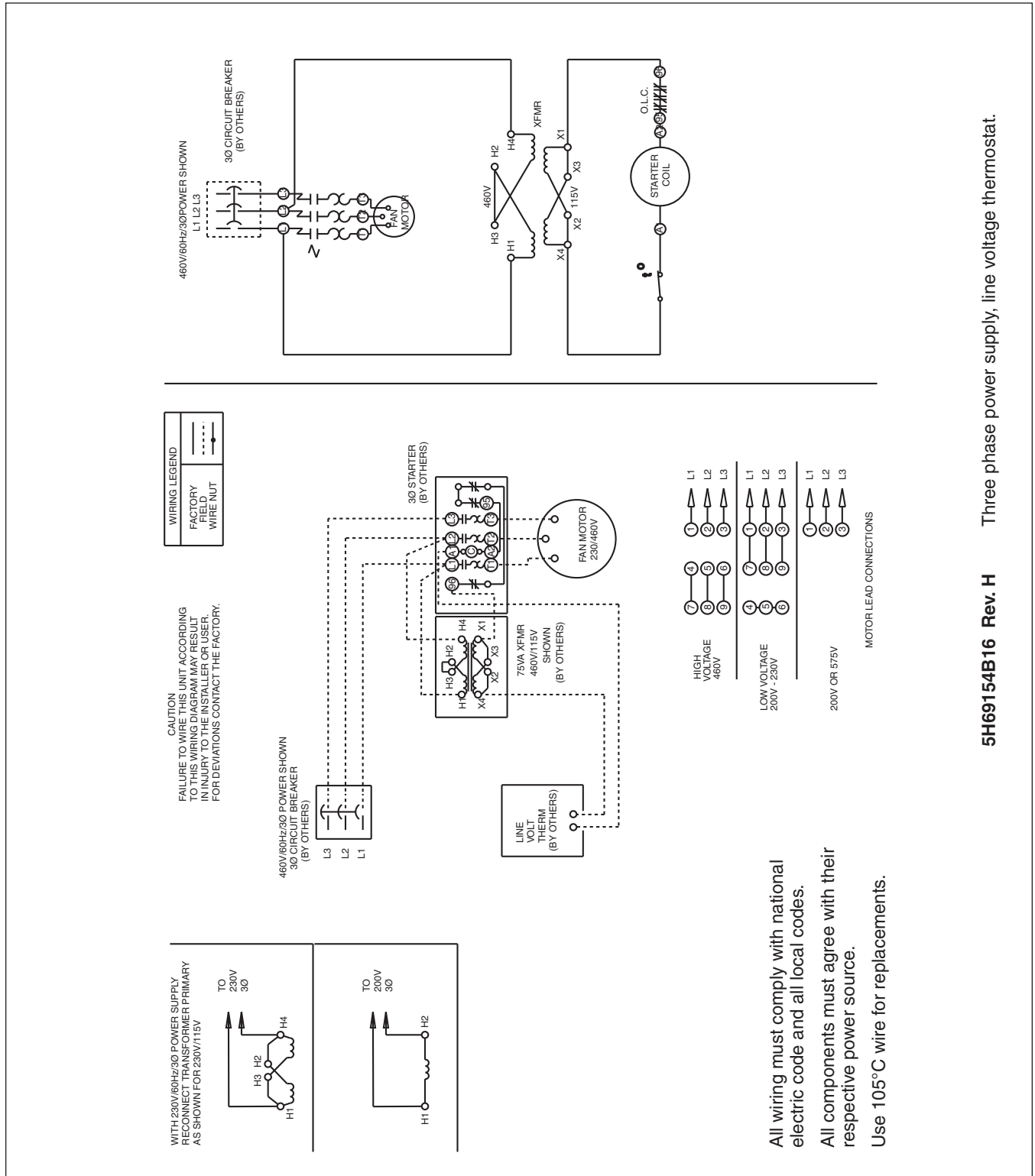


- Abbreviations and Symbols**
- XFMR Transformer
 - V Volts
 - Hz Cycle or Hertz
 - φ Phase
 - "J" Box Junction Box
 - t Thermostat
 - VA Volt-Ampere
 - H1, H2, etc. Transformer Primary Terminals
 - O.L.C. Overload Contact

- X1, X2, etc. Transformer Secondary Terminals
 - L1, L2, etc. Electric Load Terminals
 - T1, T2, etc. Starter or Motor Terminals
- Wire Color Coding**
- BK Black
 - BL Blue
 - BR Brown
 - R Red
 - W White

5H69154B20 Rev. Single phase power supply, line voltage thermostat, (333 size only)

Figure 3
Steam/Hot Water Unit Heater Wiring Diagram - All three phase voltages (Power Codes 04, 05 and 10)



All wiring must comply with national electric code and all local codes.
 All components must agree with their respective power source.
 Use 105°C wire for replacements.

Abbreviations and Symbols

- XFMR Transformer
- V Volts
- Hz Cycle or Hertz
- φ Phase
- “J” Box Junction Box
- t Thermostat
- VA Volt-Ampere
- H1, H2, etc. Transformer Primary Terminals
- O.L.C. Overload Contact

- X1, X2, etc. Transformer Secondary Terminals
- L1, L2, etc. Electric Load Terminals
- T1, T2, etc. Starter or Motor Terminals

Wire Color Coding

- BK Black
- BL Blue
- BR Brown
- R Red
- W White