



**EARTHLINKED**  
TECHNOLOGIES

**EarthLinked®**  
**60Hz Electrical Illustrations**  
**for**  
**R-410A**  
**SHC Compressor Units**

**Disclaimer**

Proper installation and servicing of the EarthLinked® Heating and Cooling System is essential to its reliable performance. All EarthLinked® systems must be installed and serviced by an authorized, trained technician who has successfully completed the training class and passed the final examination. Installation and service must be made in accordance with the information in this manual and the instructions set forth in the EarthLinked® Heating and Cooling System Installation, Operation and Maintenance Manual. Failure to provide installation and service by an authorized, trained installer in a manner consistent with the subject manual will nullify the limited warranty coverage for the system.

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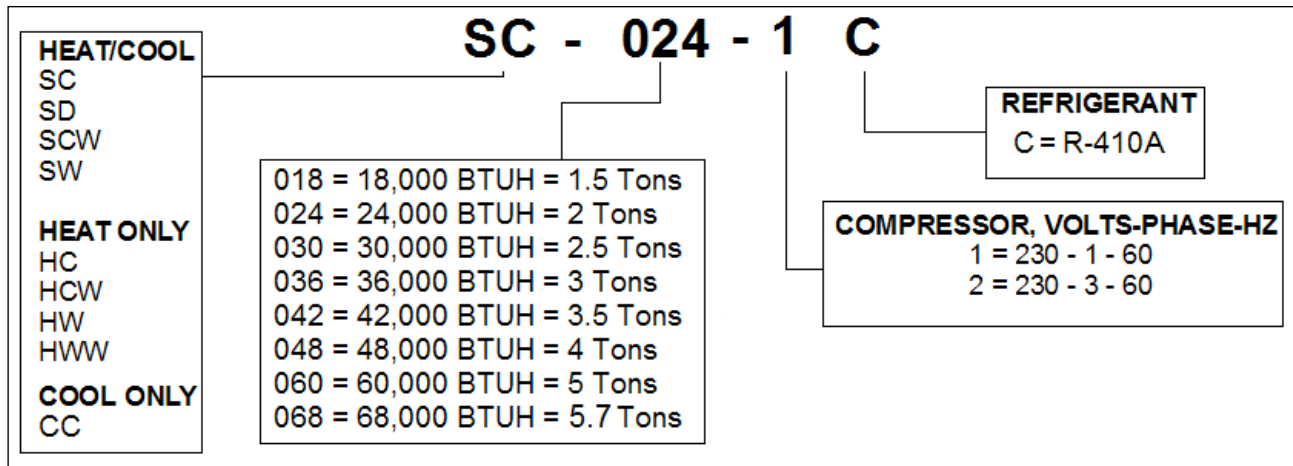
**CSI # 23 80 00**

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# Compressor Unit Reference Information

## Compressor Unit Model Numbers



### Electrical Data

Compressor Unit Model	Compressor Model	Voltage/Phase/Hz	Voltage		LRA	RLA	MCA	MFS
			Min.	Max.				
-018-1C	ZP20K5E-PFV	230-1-60	207	253	58.3	15.0	18.0	30
-024-1C	ZP24K5E-PFV	230-1-60	207	253	64.0	14.3	18.0	30
-024-2C	ZP24K5E-TF5	230-3-60	207	253	58.0	9.3	11.0	20
-030-1C	ZP29K5E-PFV	230-1-60	207	253	77.0	15.7	19.0	30
-030-2C	ZP29K5E-TF5	230-3-60	207	253	71.0	10.0	12.0	20
-036-1C	ZP36K5E-PFV	230-1-60	207	253	112.0	20.0	25.0	40
-036-2C	ZP36K5E-TF5	230-3-60	207	253	88.0	15.1	19.0	30
-042-1C	ZP42K5E-PFV	230-1-60	207	253	117.0	24.3	30.0	45
-042-2C	ZP42K5E-TF5	230-3-60	207	253	83.1	15.3	19.0	30
-048-1C	ZP49K5E-PFV	230-1-60	207	253	134.0	27.9	34.0	50
-048-2C	ZP49K5E-TF5	230-3-60	207	253	110.0	17.7	22.0	35
-060/-068-1C	ZP57K5E-PFV	230-1-60	207	253	158.0	33.6	41.0	60
-060/-068-2C	ZP57K5E-TF5	230-3-60	207	253	155.0	22.9	28.0	45

LRA = Locked Rotor Amps

RLA = Rated Load Amps

MCA = Minimum Circuit Ampacity

MFS = Maximum Fuse or HACR Circuit Breaker Size

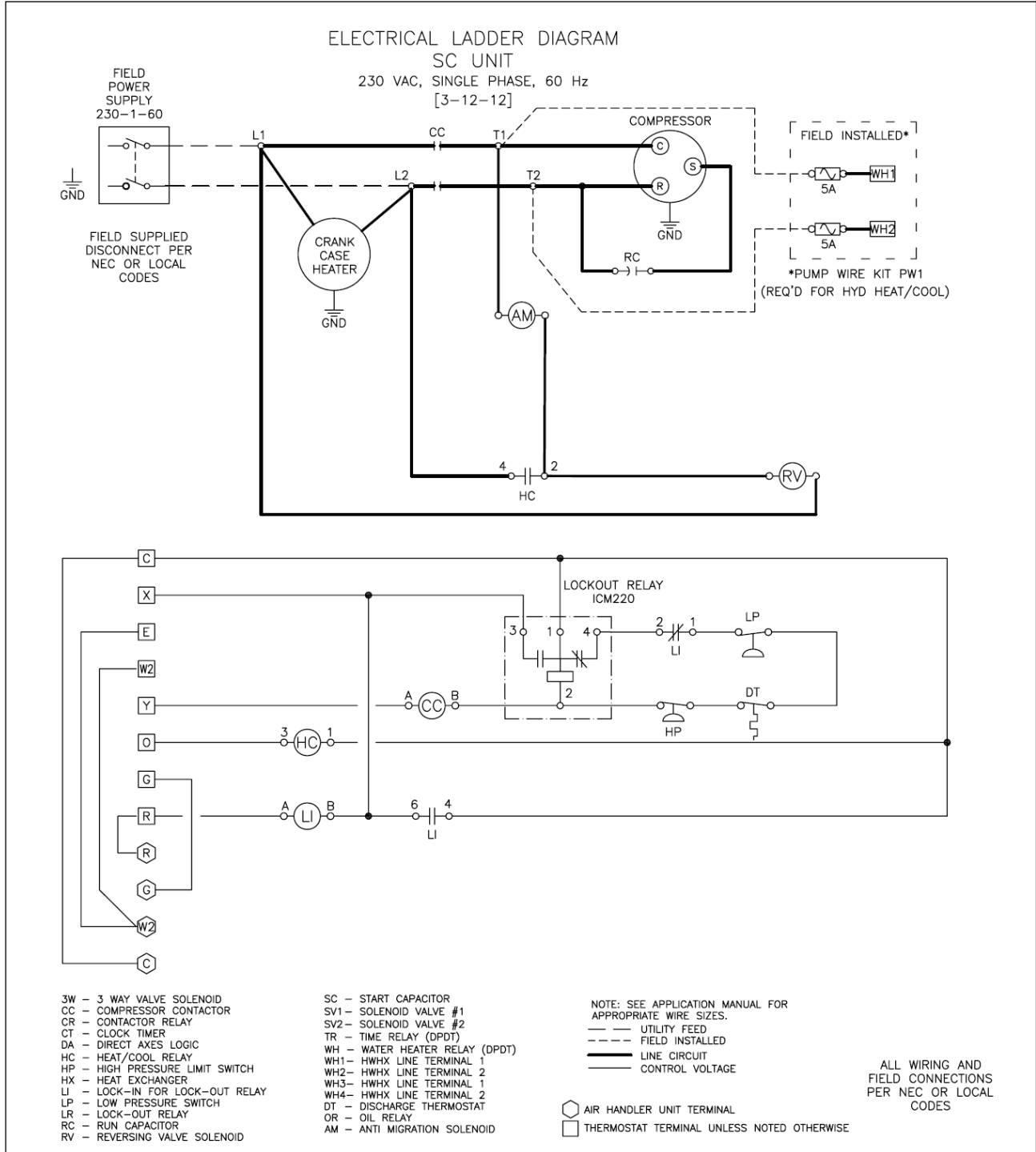
(External)

AWG = Consult NEC and Local Codes

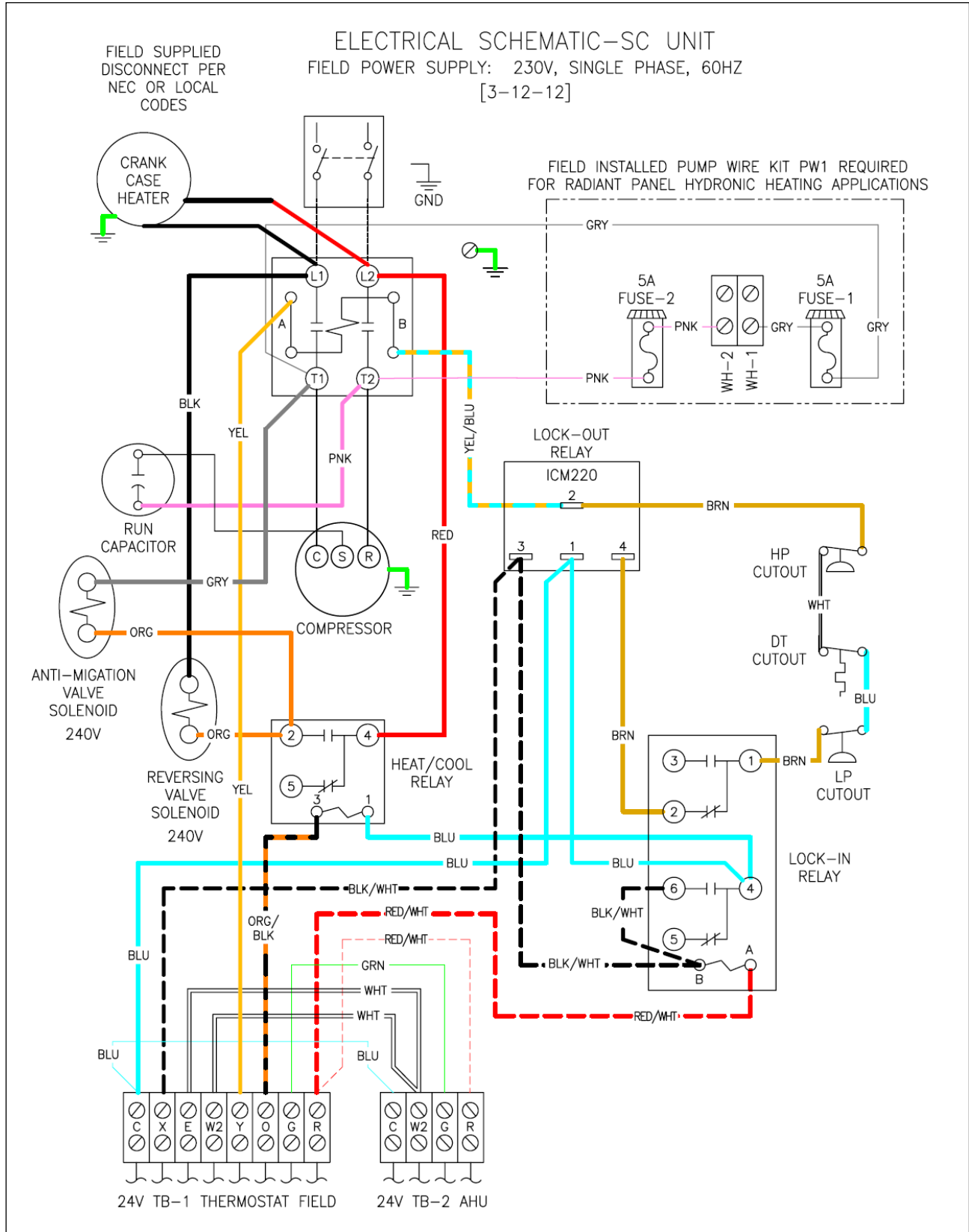
# Electrical Illustrations

## A. SC Compressor Unit

### a. 230-1-60 Ladder



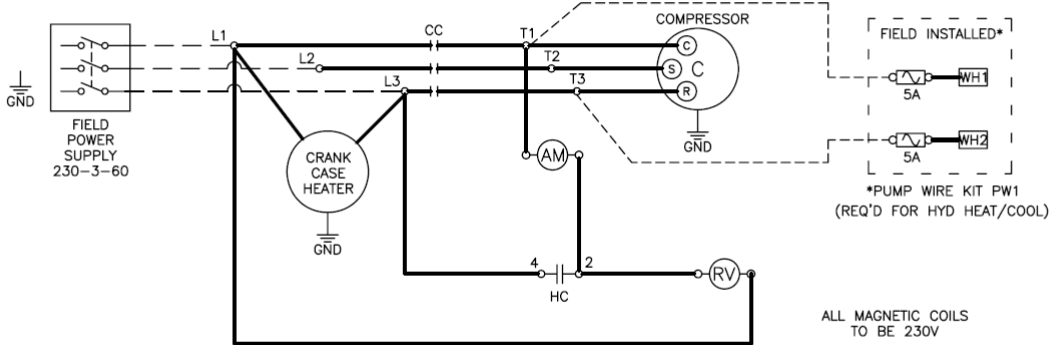
## b. 230-1-60 Schematic



### c. 230-3-60 Ladder

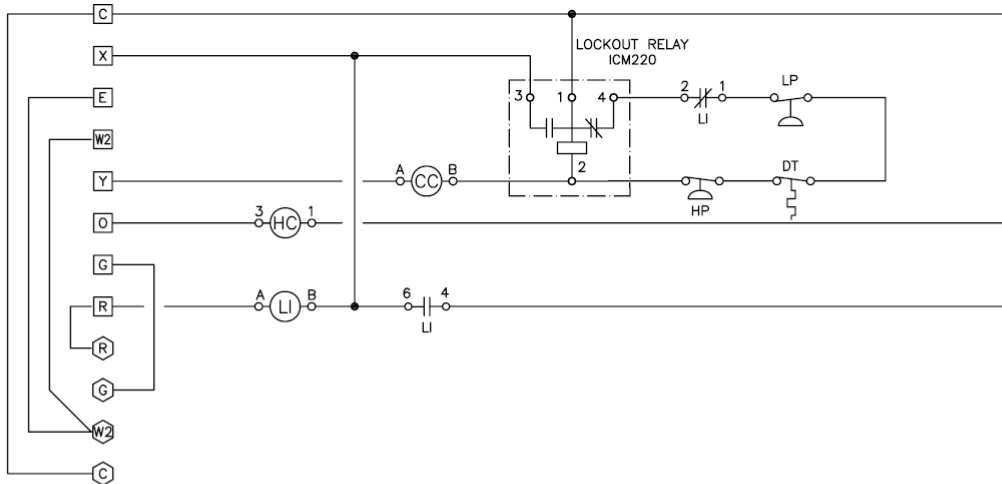
ELECTRICAL LADDER DIAGRAM  
SC UNIT  
230V, 3 PHASE, 60HZ  
[3-12-12]

INSTALL FIELD CONNECTIONS PER NEC/LOCAL CODE



ALL MAGNETIC COILS  
TO BE 230V

NOTE: SEE ELECTRICAL SCHEMATIC FOR KIT AND  
SURGE PROTECTION INSTALLATION CONNECTIONS



- 3W - 3 WAY VALVE SOLENOID
- CC - COMPRESSOR CONTACTOR
- CR - CONTACTOR RELAY
- CT - CLOCK TIMER
- DA - DIRECT AXES LOGIC
- HC - HEAT/COOL RELAY
- HP - HIGH PRESSURE LIMIT SWITCH
- HX - HEAT EXCHANGER
- LI - LOCK-IN FOR LOCK-OUT RELAY
- LP - LOW PRESSURE SWITCH
- LR - LOCK-OUT RELAY
- RC - RUN CAPACITOR
- RV - REVERSING VALVE SOLENOID

- SC - START CAPACITOR
- SV1 - SOLENOID VALVE #1
- SV2 - SOLENOID VALVE #2
- TR - TIME RELAY (DPDT)
- WH - WATER HEATER RELAY (DPDT)
- WH1 - HWHX LINE TERMINAL 1
- WH2 - HWHX LINE TERMINAL 2
- WH3 - HWHX LINE TERMINAL 1
- WH4 - HWHX LINE TERMINAL 2
- DT - DISCHARGE THERMOSTAT
- OR - OIL RELAY
- AM - ANTI MIGRATION SOLENOID

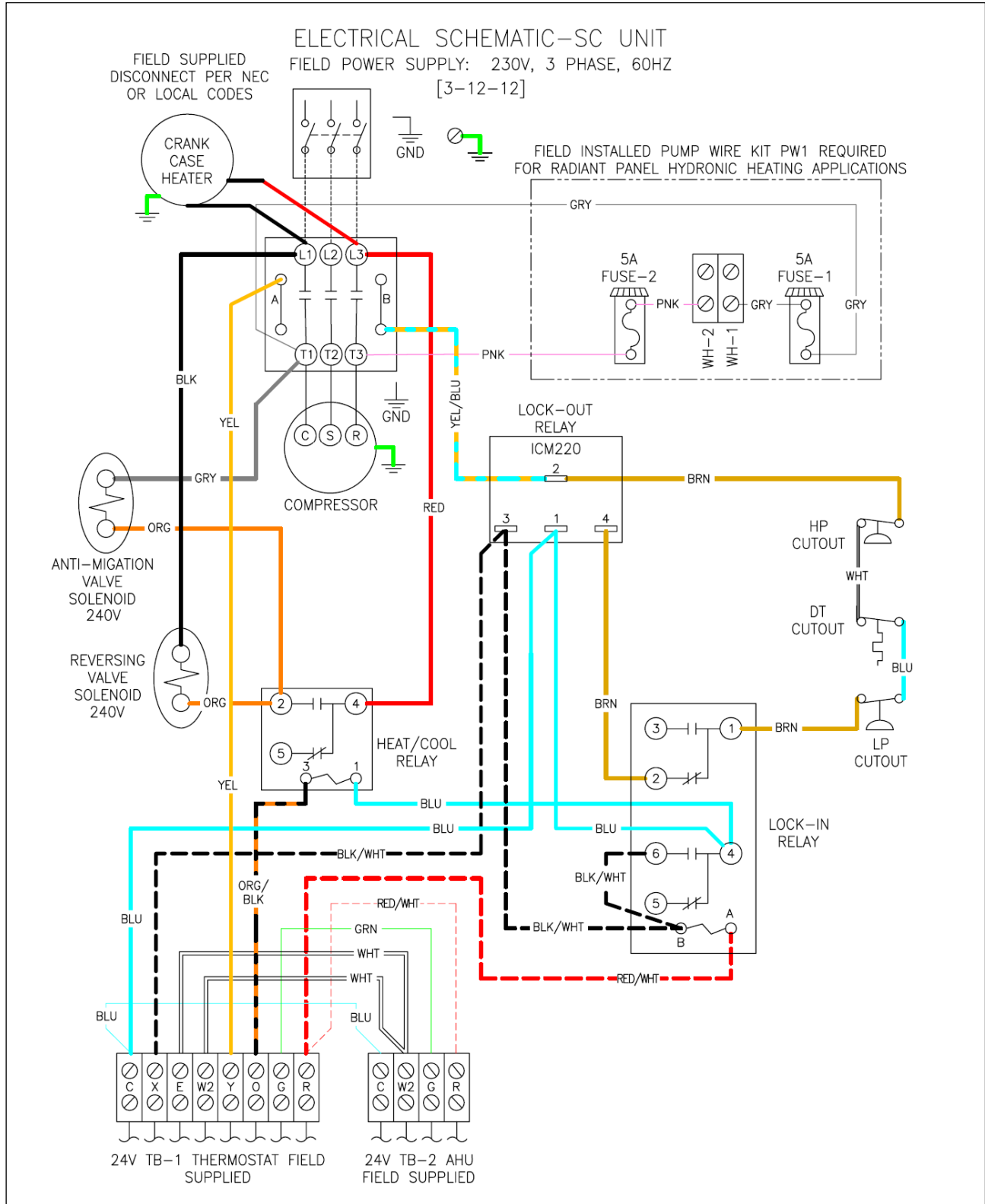
NOTE: SEE APPLICATION MANUAL FOR  
APPROPRIATE WIRE SIZES.

- UTILITY FEED
- - - - FIELD INSTALLED
- LINE CIRCUIT
- CONTROL CIRCUIT

- AIR HANDLER UNIT TERMINAL
- THERMOSTAT TERMINAL UNLESS NOTED OTHERWISE

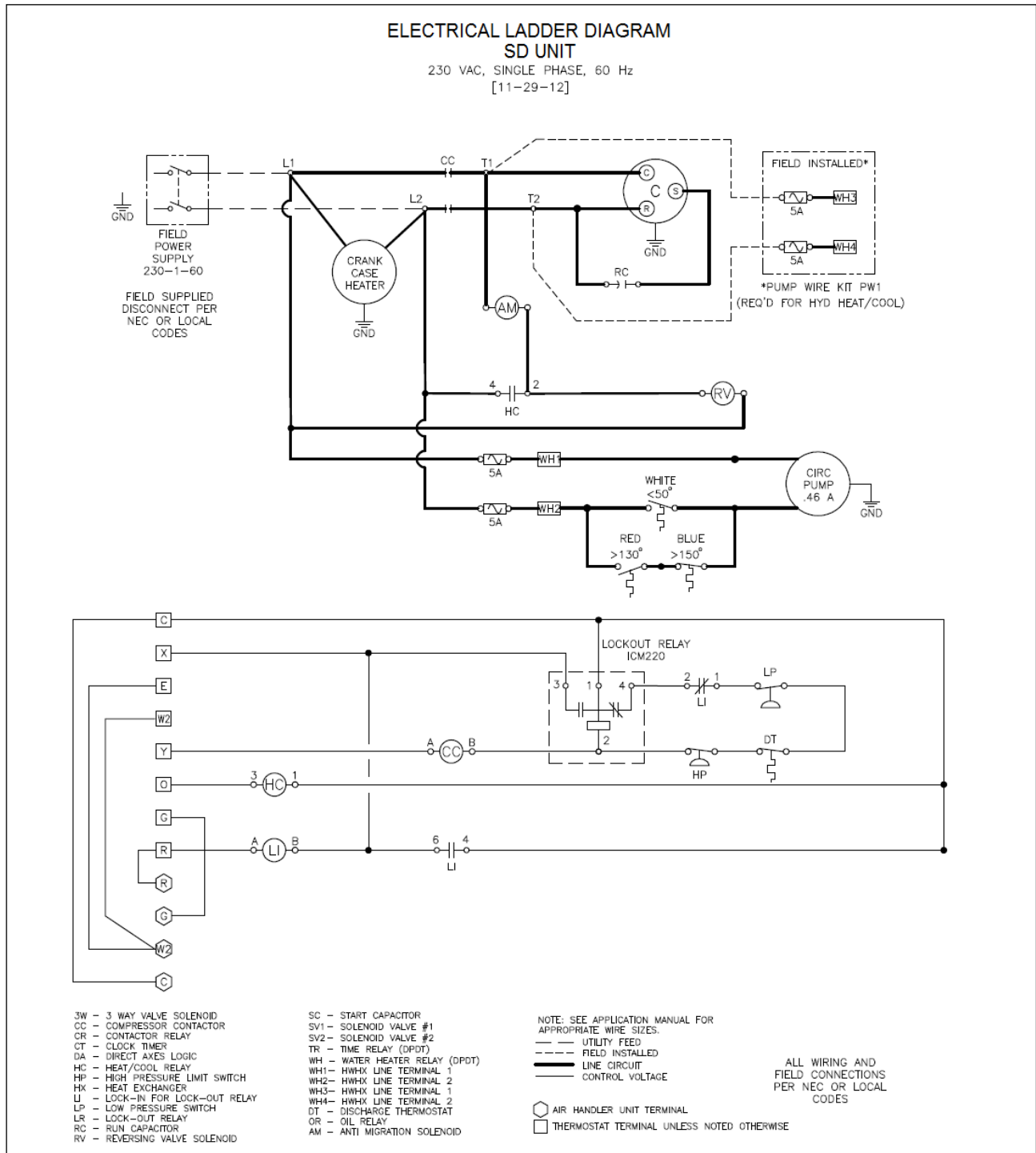
ALL WIRING AND  
FIELD CONNECTIONS  
PER NEC OR LOCAL  
CODES

### d. 230-3-60 Schematic



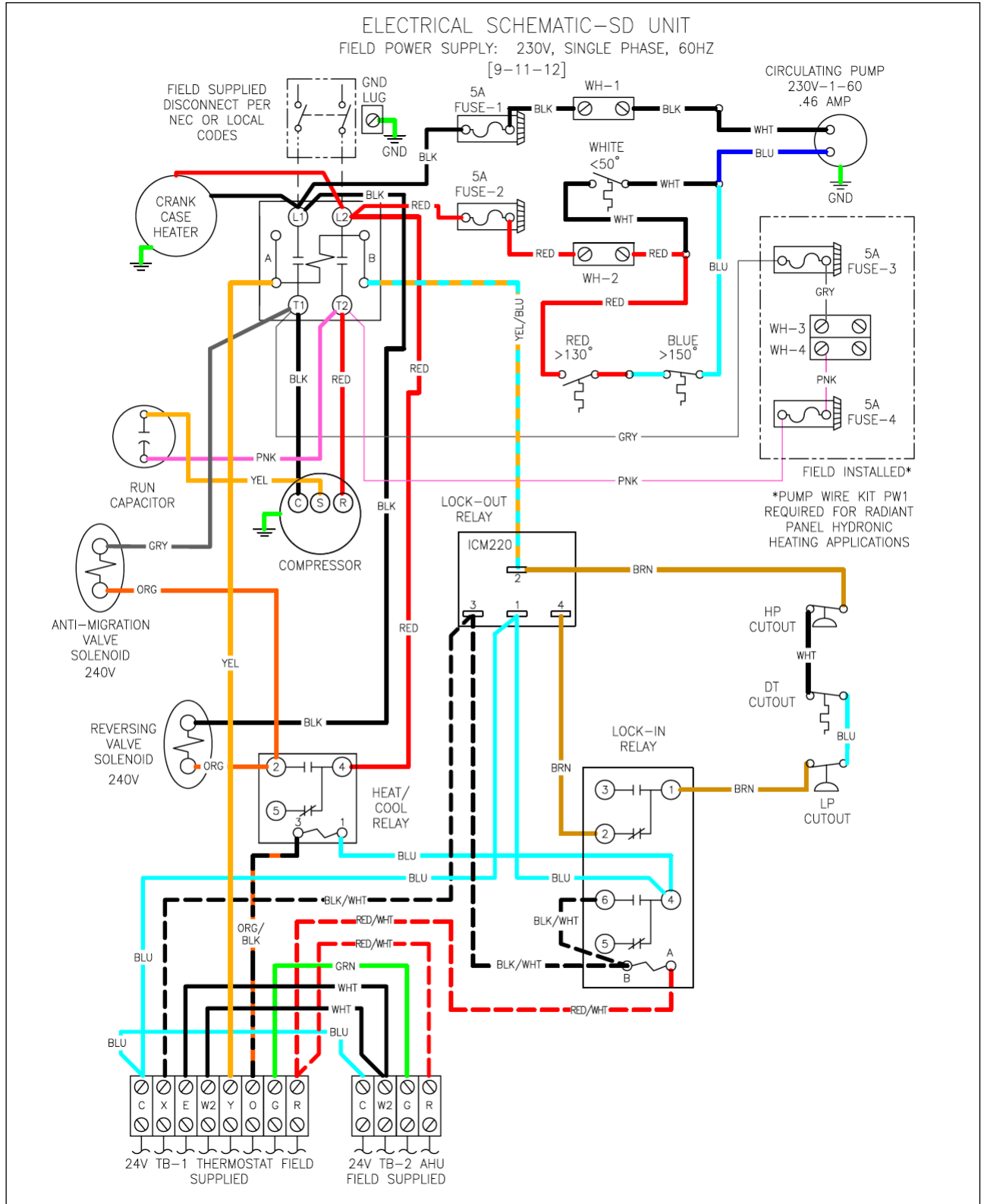
# B. SD Compressor Unit

## a. 230-1-60 Ladder

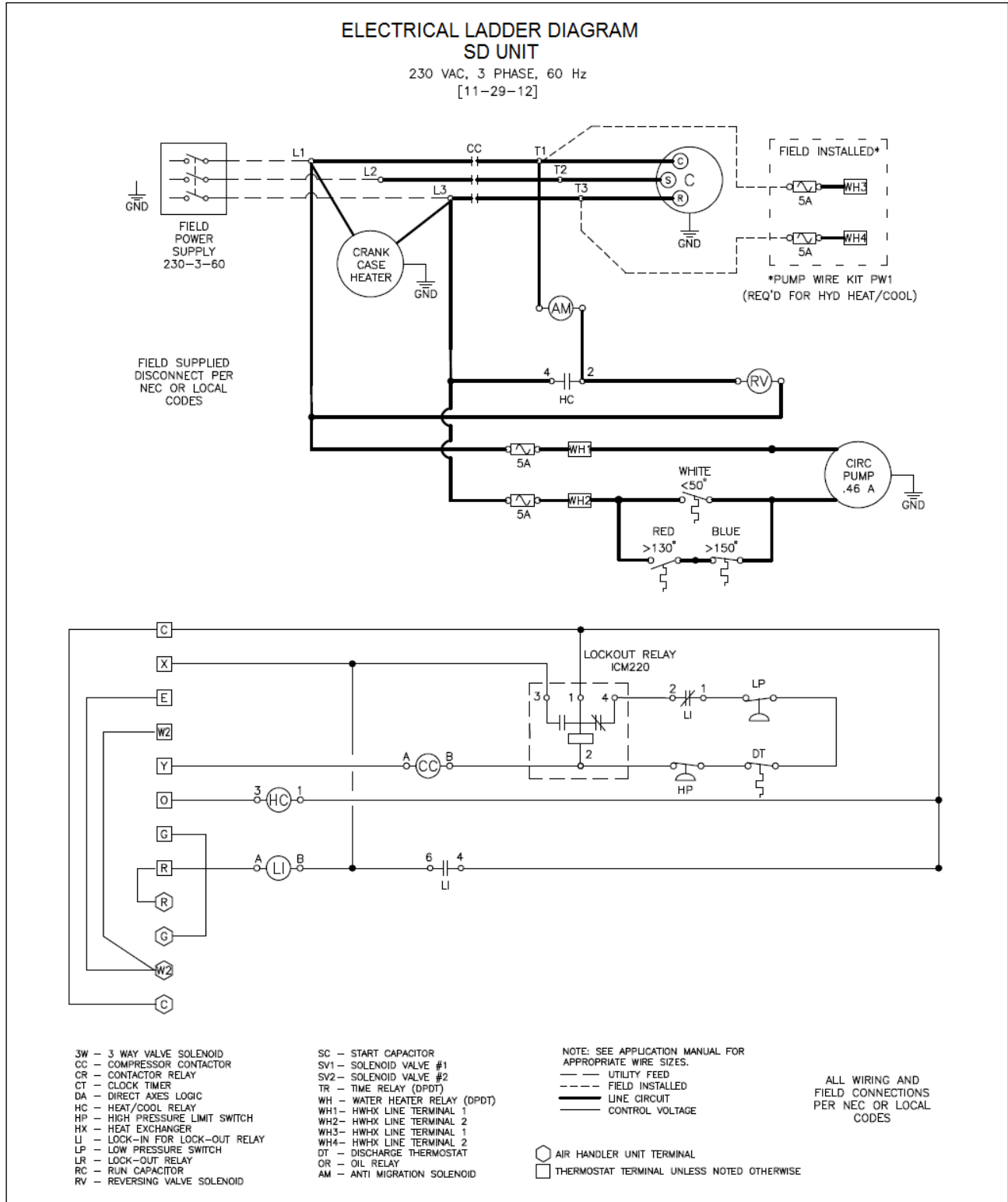




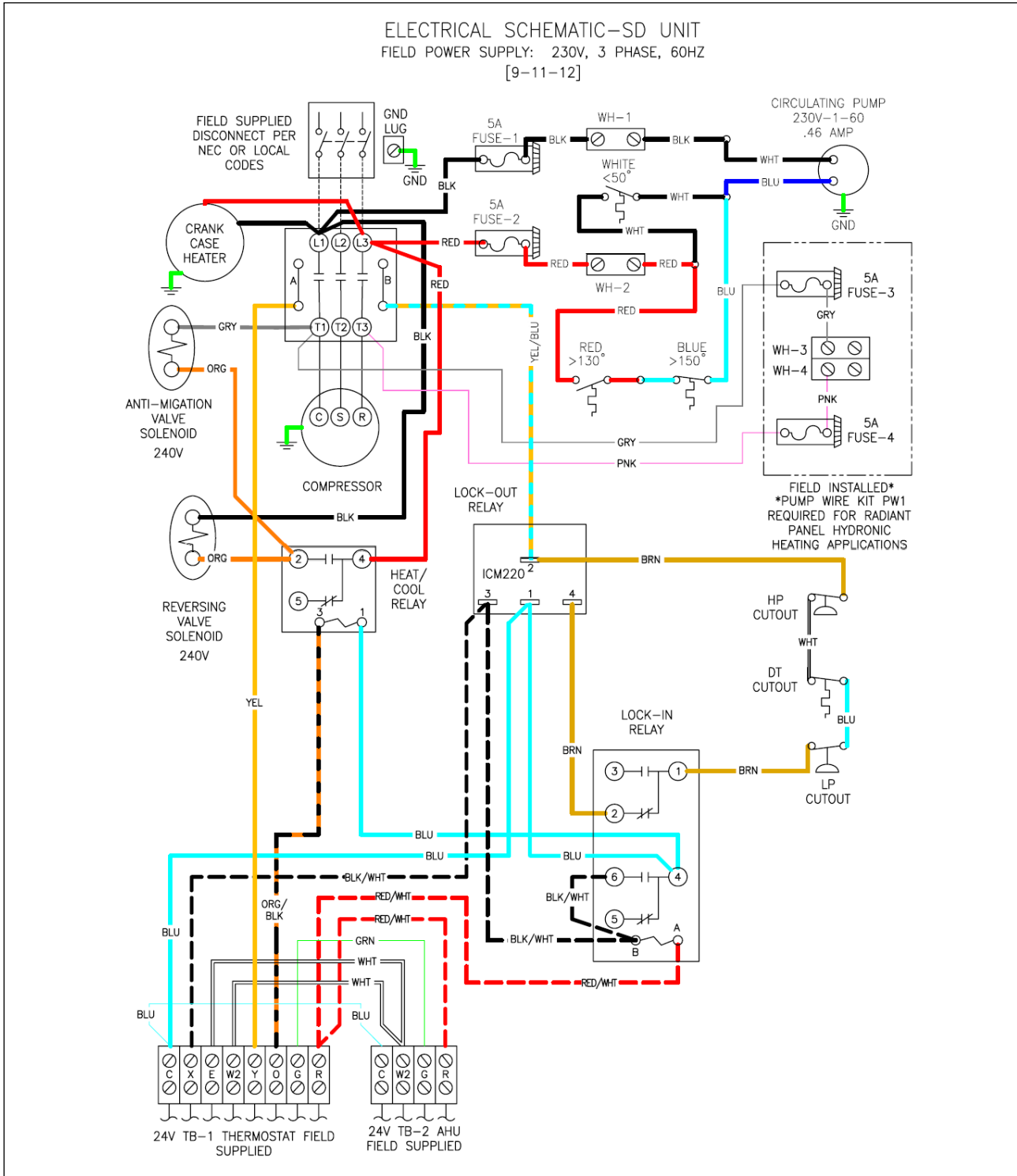
## b. 230-1-60 Schematic



### c. 230-3-60 Ladder

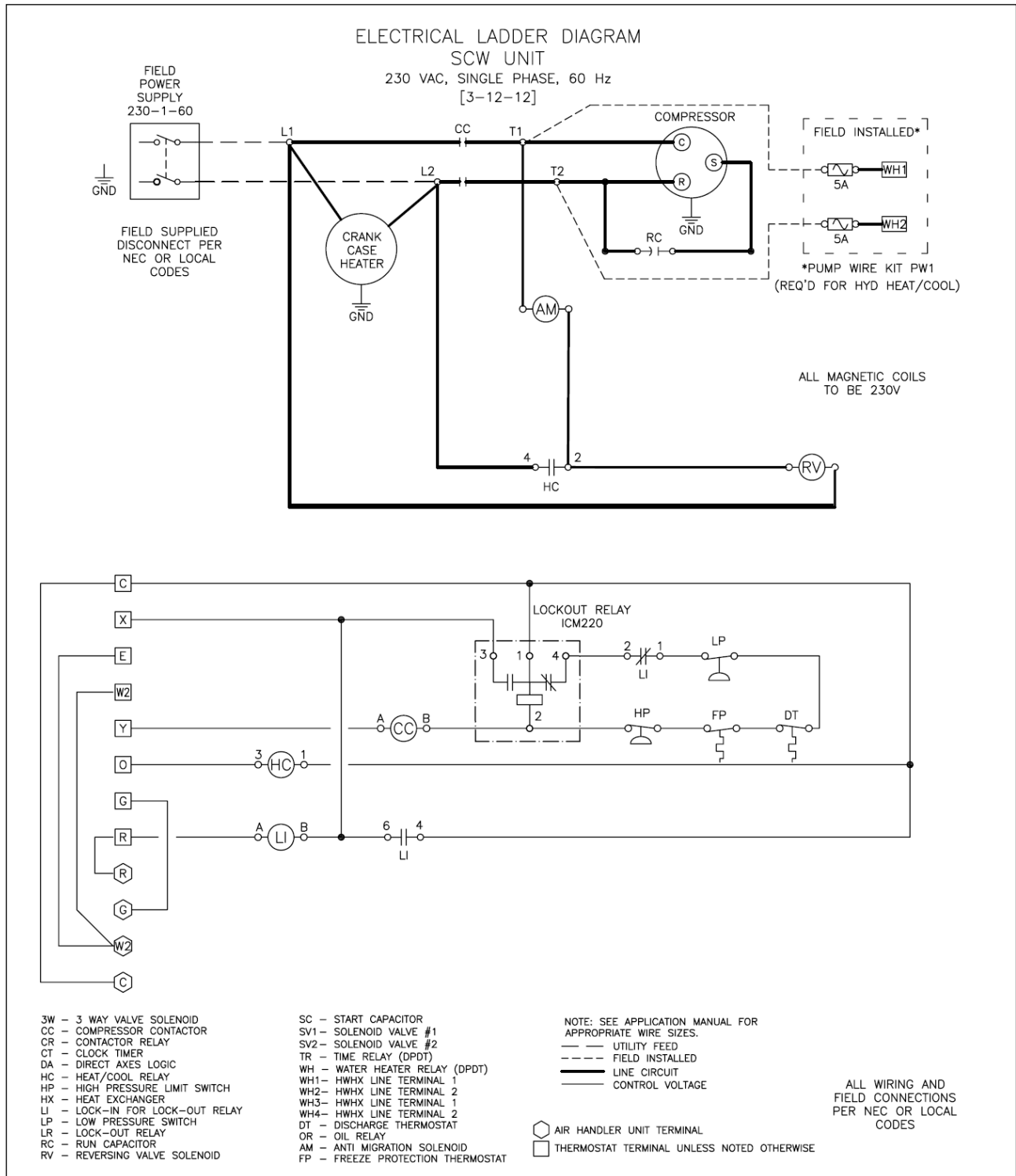


### d. 230-3-60 Schematic

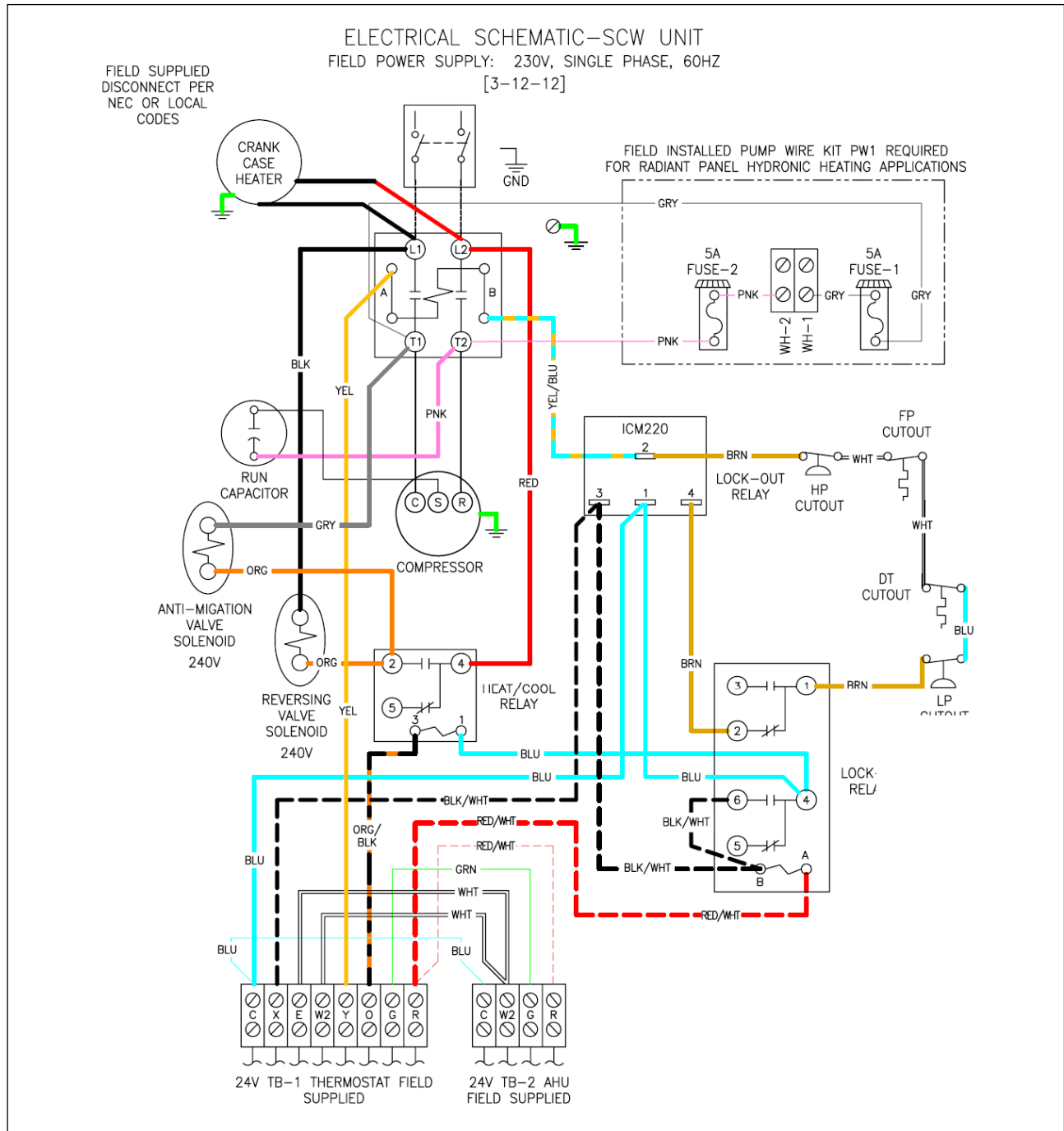


# C. SCW Compressor Unit

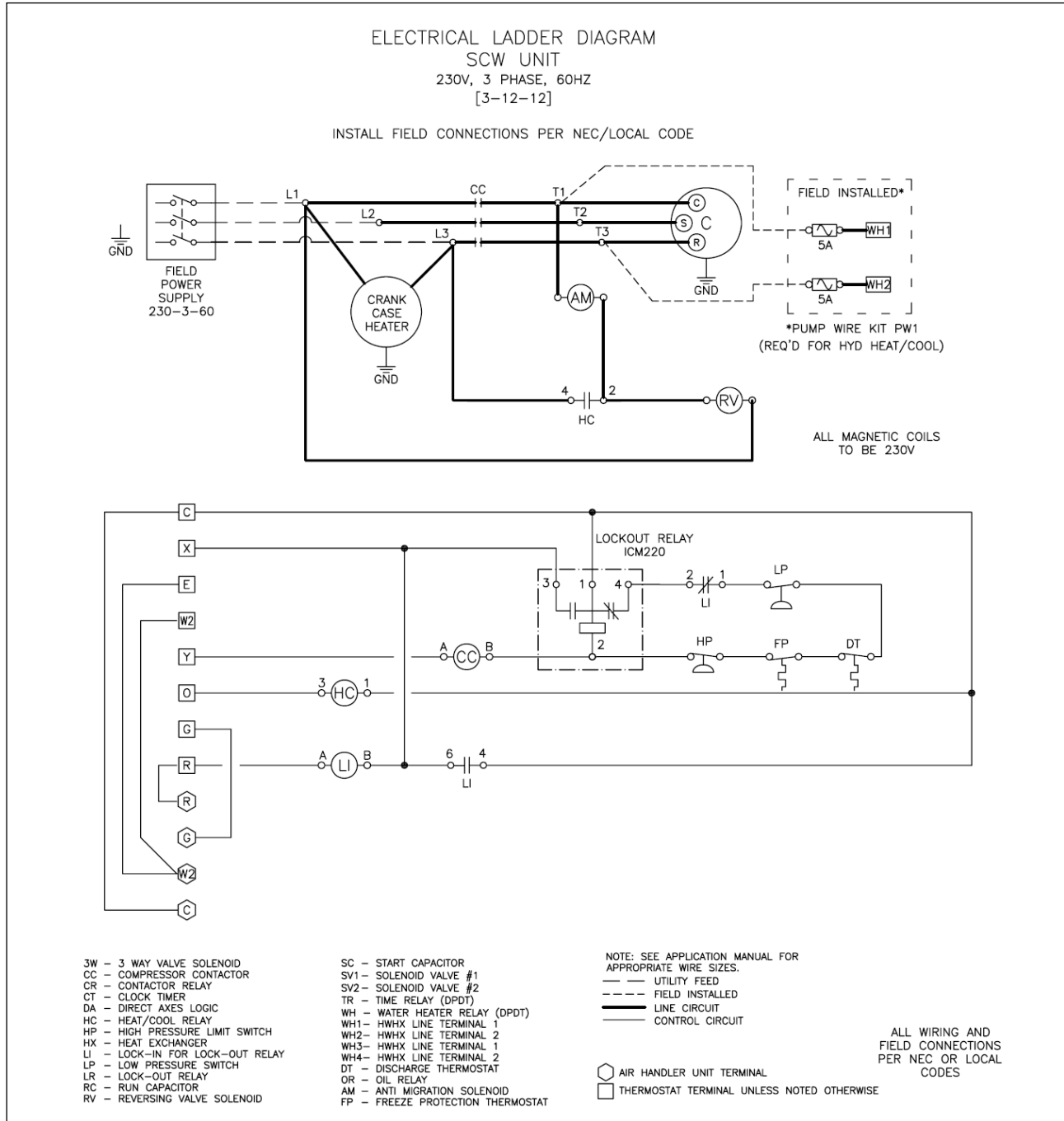
## a. 230-1-60 Ladder



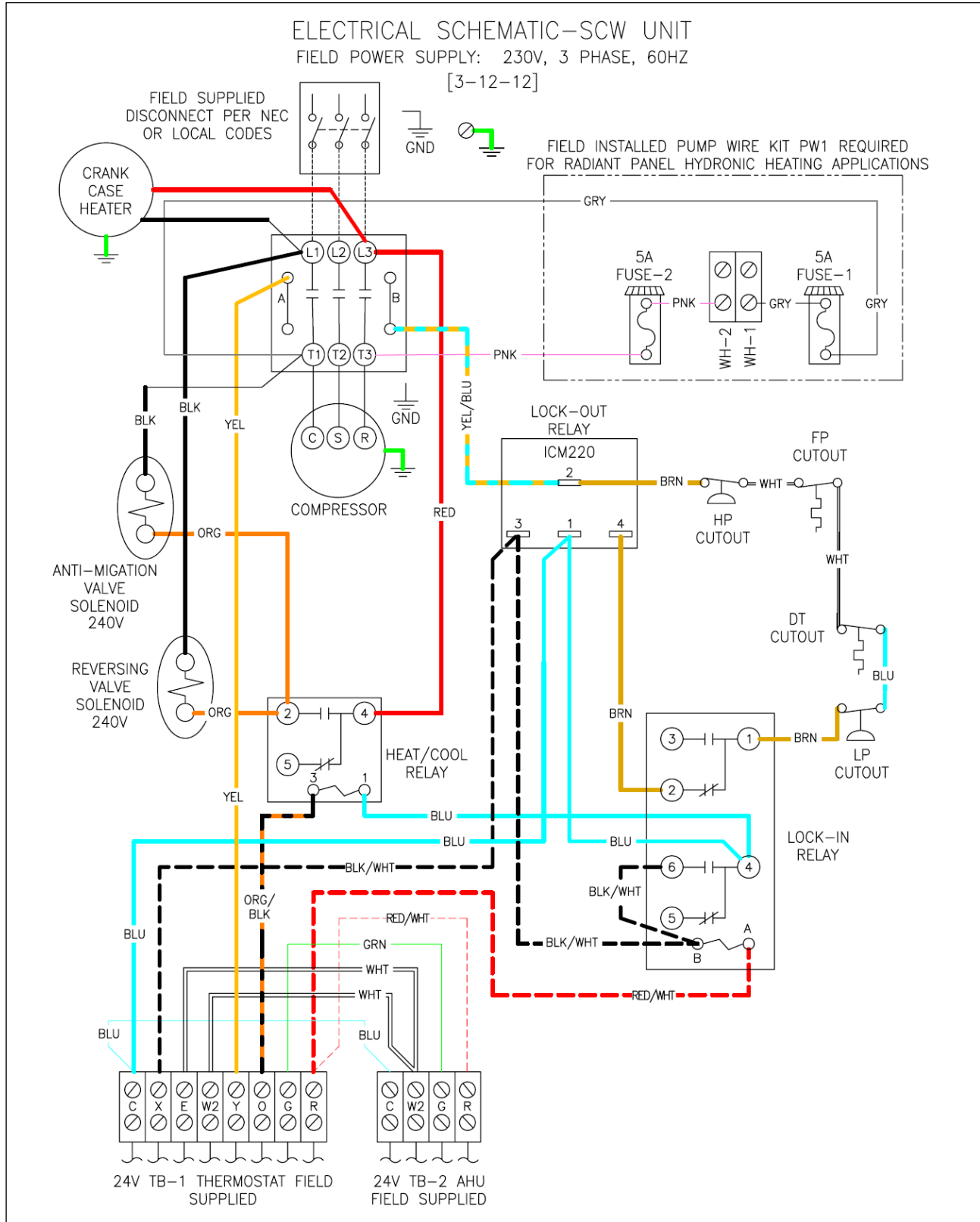
## b. 230-1-60 Schematic



### c. 230-3-60 Ladder

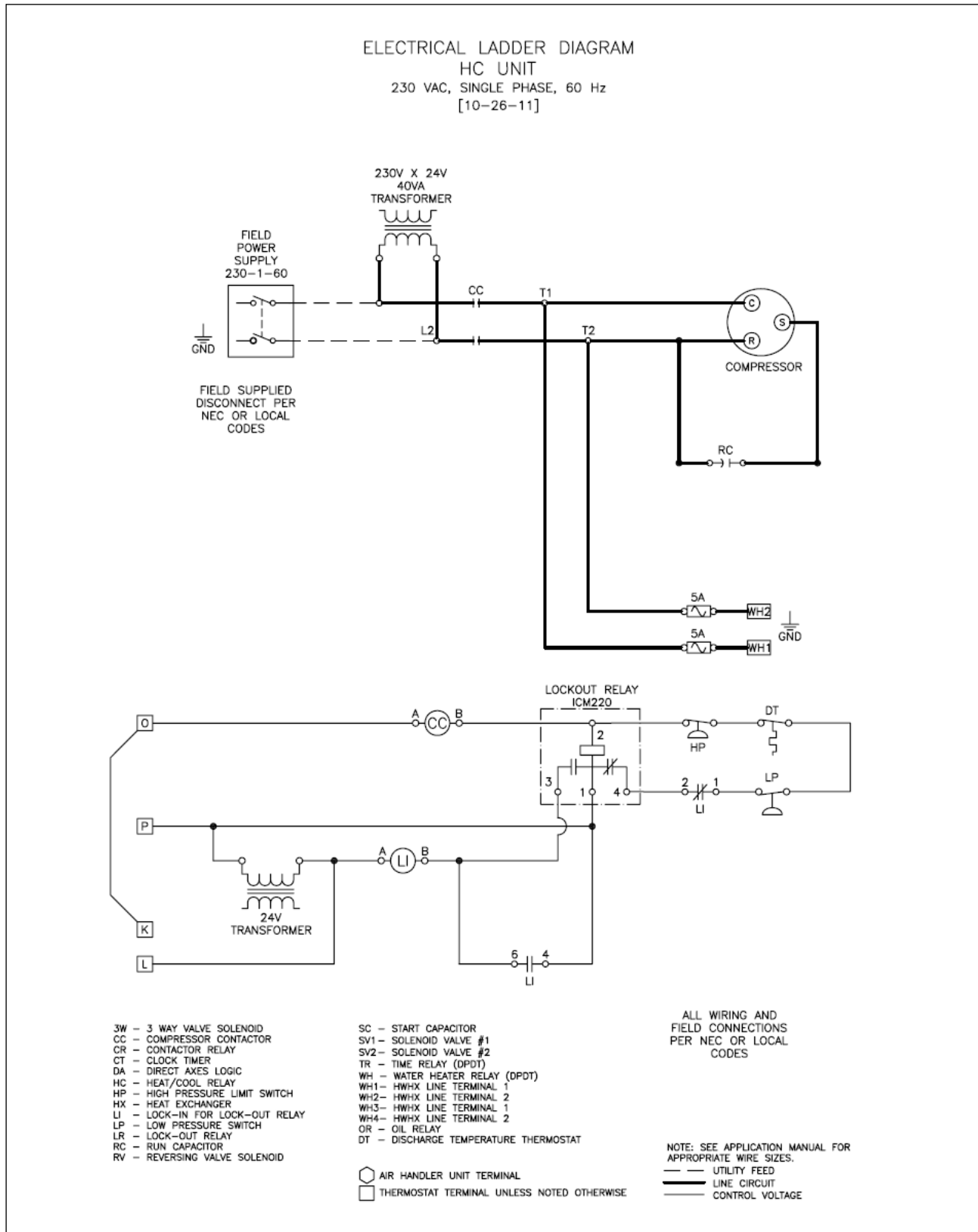


### d. 230-3-60 Schematic



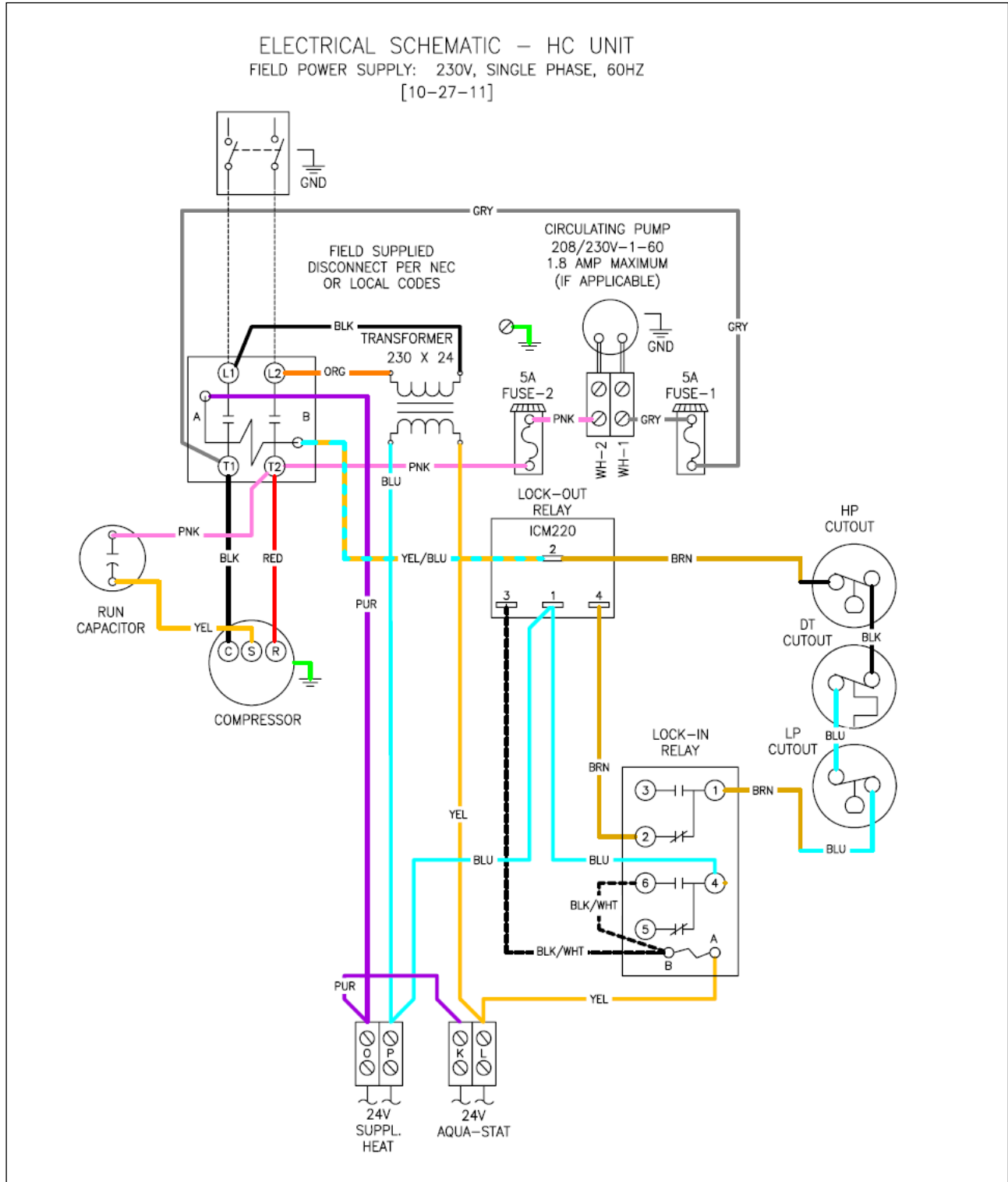
# D. HC Compressor Unit

## a. 230-1-60 Ladder





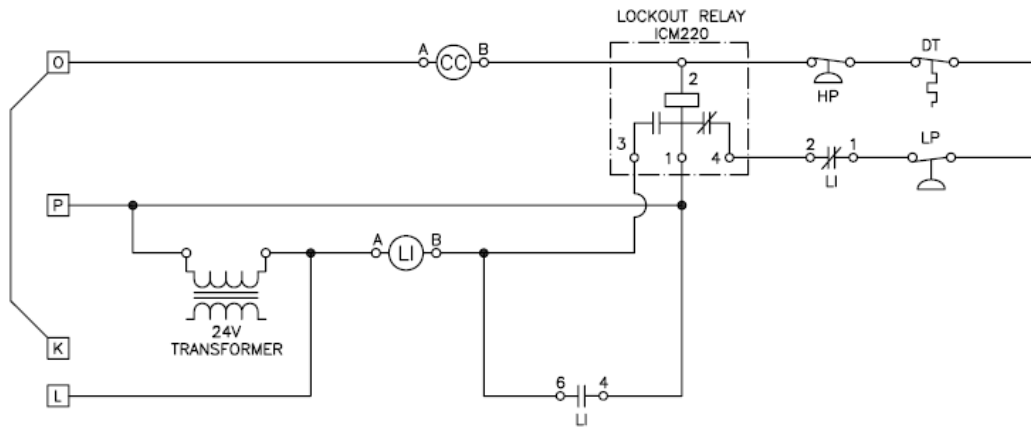
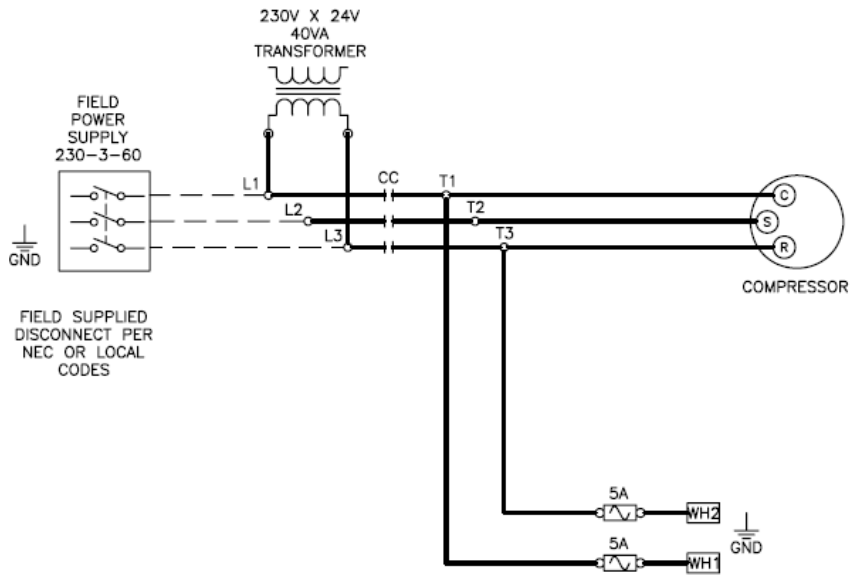
## b. 230-1-60 Schematic



### c. 230-3-60 Ladder

#### ELECTRICAL LADDER DIAGRAM HC UNIT 230V, 3 PHASE, 60 Hz [9-25-12]

INSTALL FIELD CONNECTIONS PER NEC/LOCAL CODE



- 3W - 3 WAY VALVE SOLENOID
- CC - COMPRESSOR CONTACTOR
- CR - CONTACTOR RELAY
- CT - CLOCK TIMER
- DA - DIRECT AXES LOGIC
- HC - HEAT/COOL RELAY
- HP - HIGH PRESSURE LIMIT SWITCH
- HX - HEAT EXCHANGER
- LI - LOCK-IN FOR LOCK-OUT RELAY
- LP - LOW PRESSURE SWITCH
- LR - LOCK-OUT RELAY
- RC - RUN CAPACITOR
- RV - REVERSING VALVE SOLENOID

- SC - START CAPACITOR
- SV1 - SOLENOID VALVE #1
- SV2 - SOLENOID VALVE #2
- TR - TIME RELAY (DPDT)
- WH - WATER HEATER RELAY (DPDT)
- WH1 - HWHX LINE TERMINAL 1
- WH2 - HWHX LINE TERMINAL 2
- WH3 - HWHX LINE TERMINAL 1
- WH4 - HWHX LINE TERMINAL 2
- OR - OIL RELAY
- DT - DISCHARGE TEMPERATURE THERMOSTAT

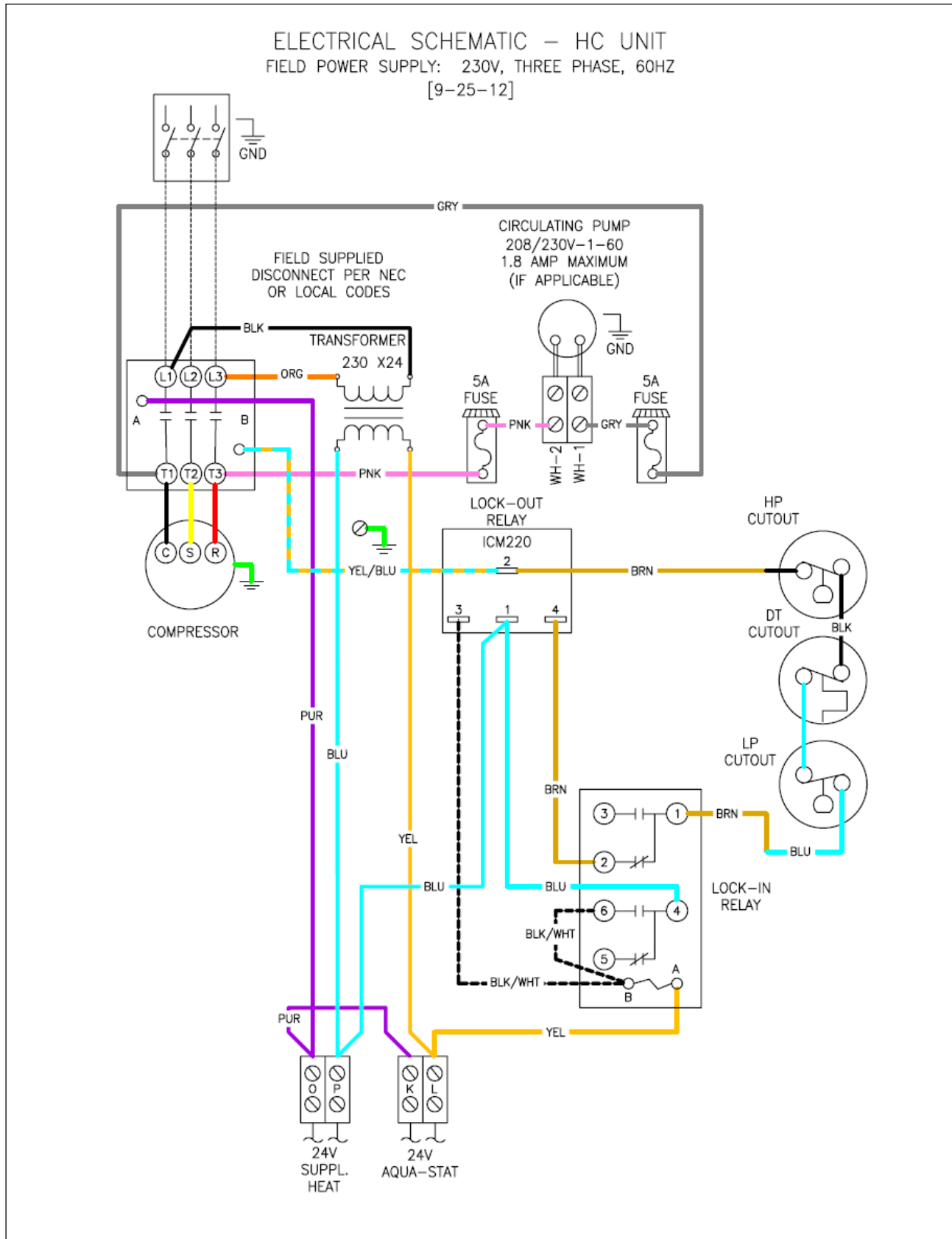
ALL WIRING AND  
FIELD CONNECTIONS  
PER NEC OR LOCAL  
CODES

NOTE: SEE APPLICATION MANUAL FOR  
APPROPRIATE WIRE SIZES.

- AIR HANDLER UNIT TERMINAL
- THERMOSTAT TERMINAL UNLESS NOTED OTHERWISE

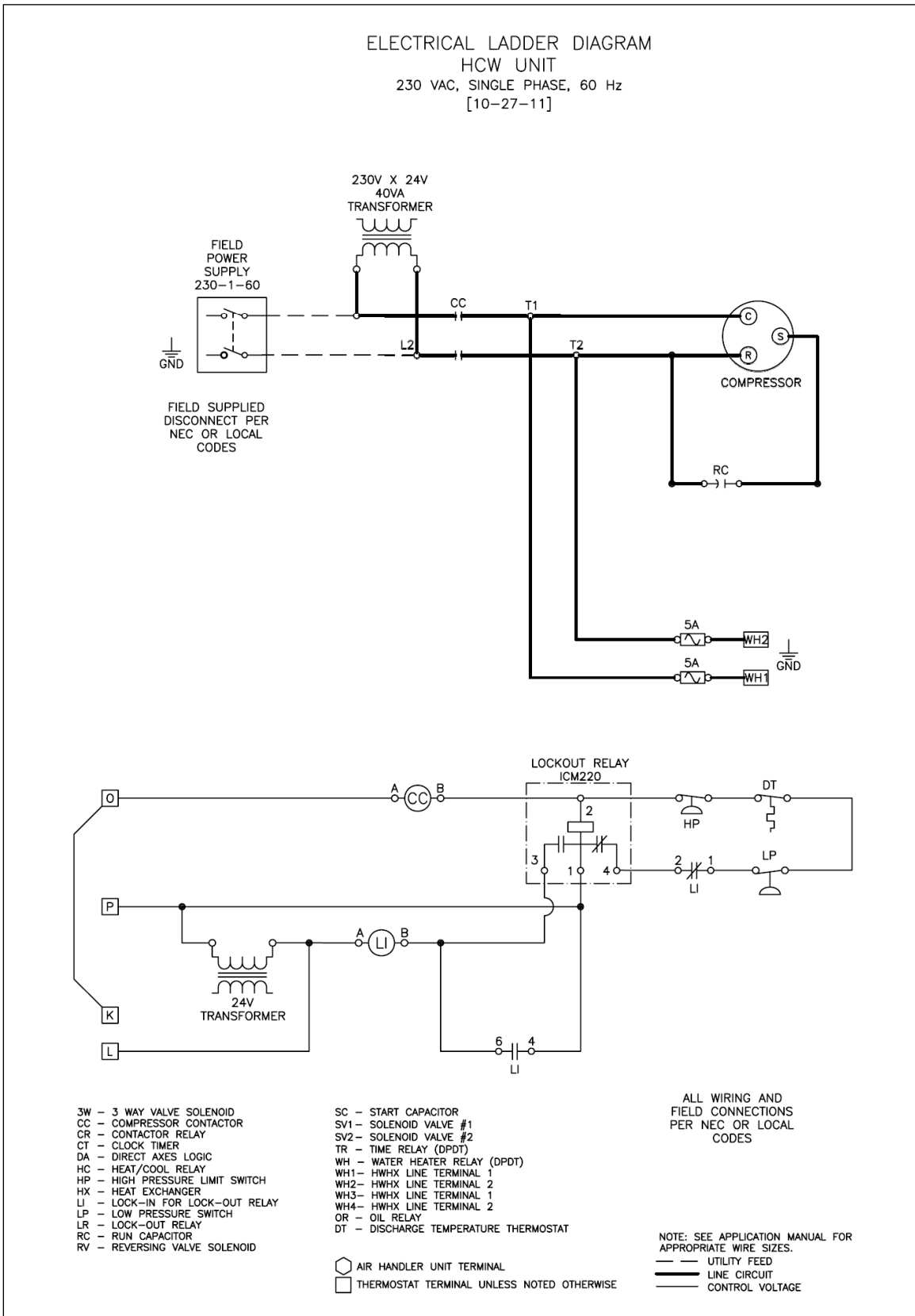
- UTILITY FEED
- LINE CIRCUIT
- CONTROL VOLTAGE

### d. 230-3-60 Schematic

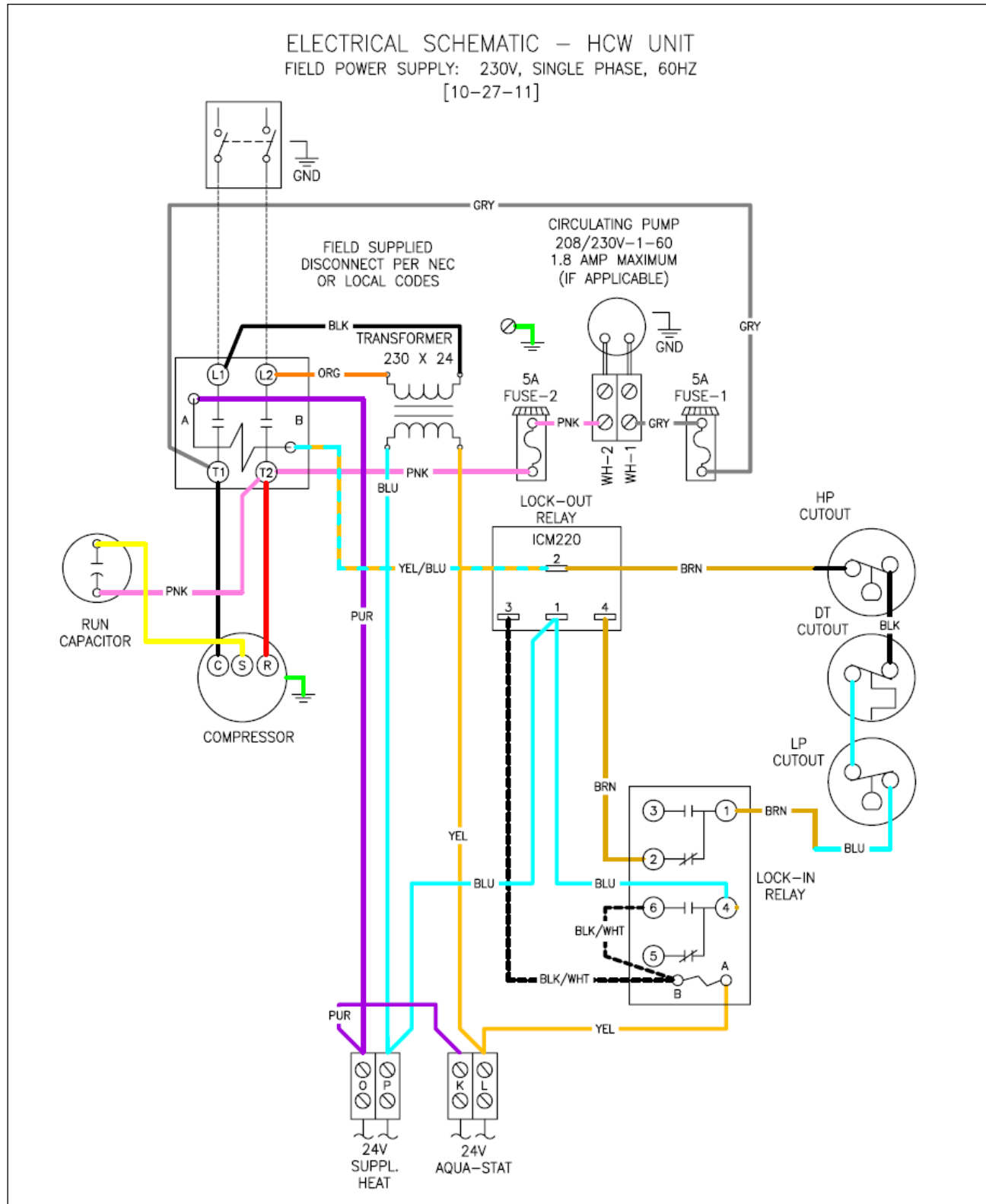


# E. HCW Compressor Unit

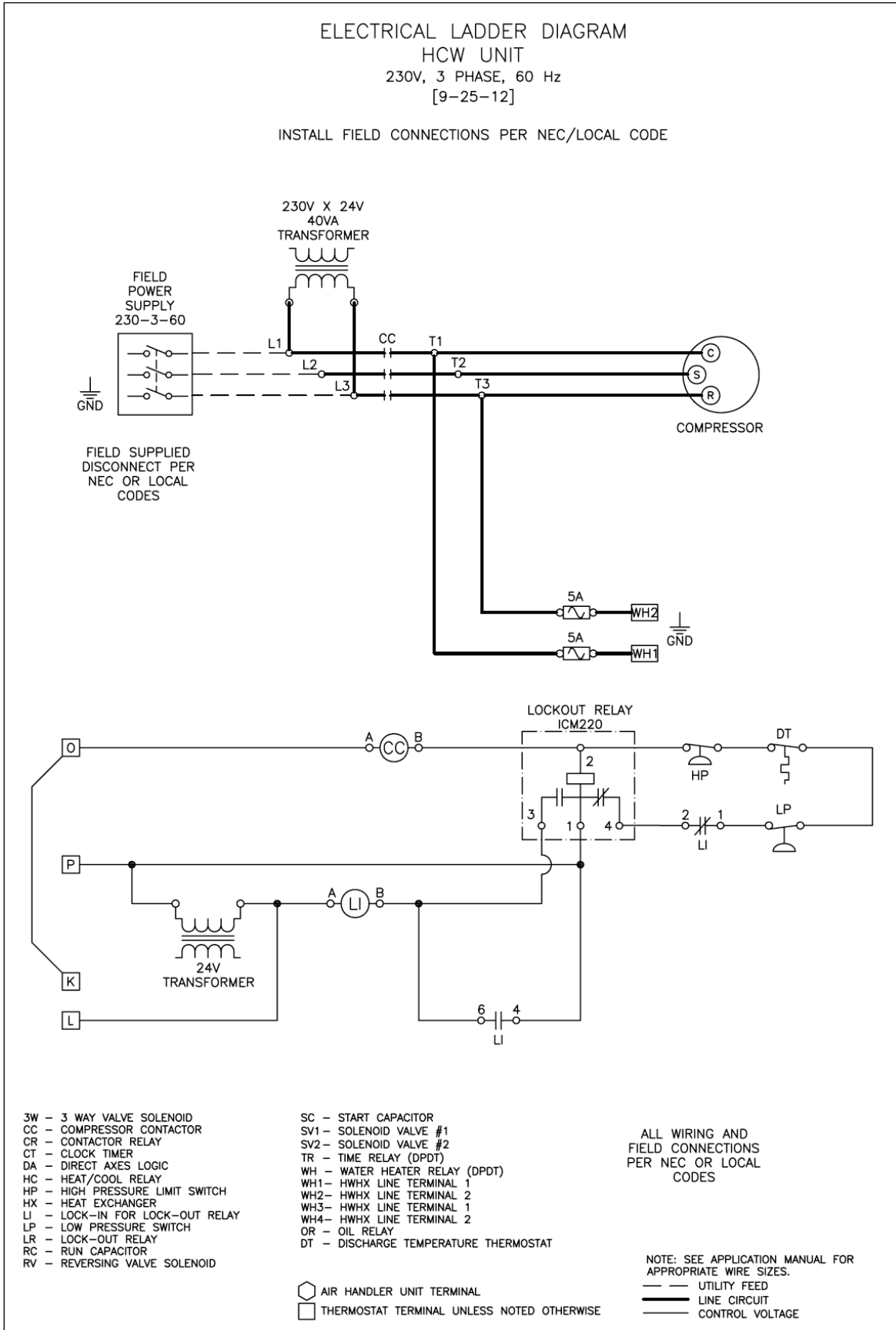
## a. 230-1-60 Ladder



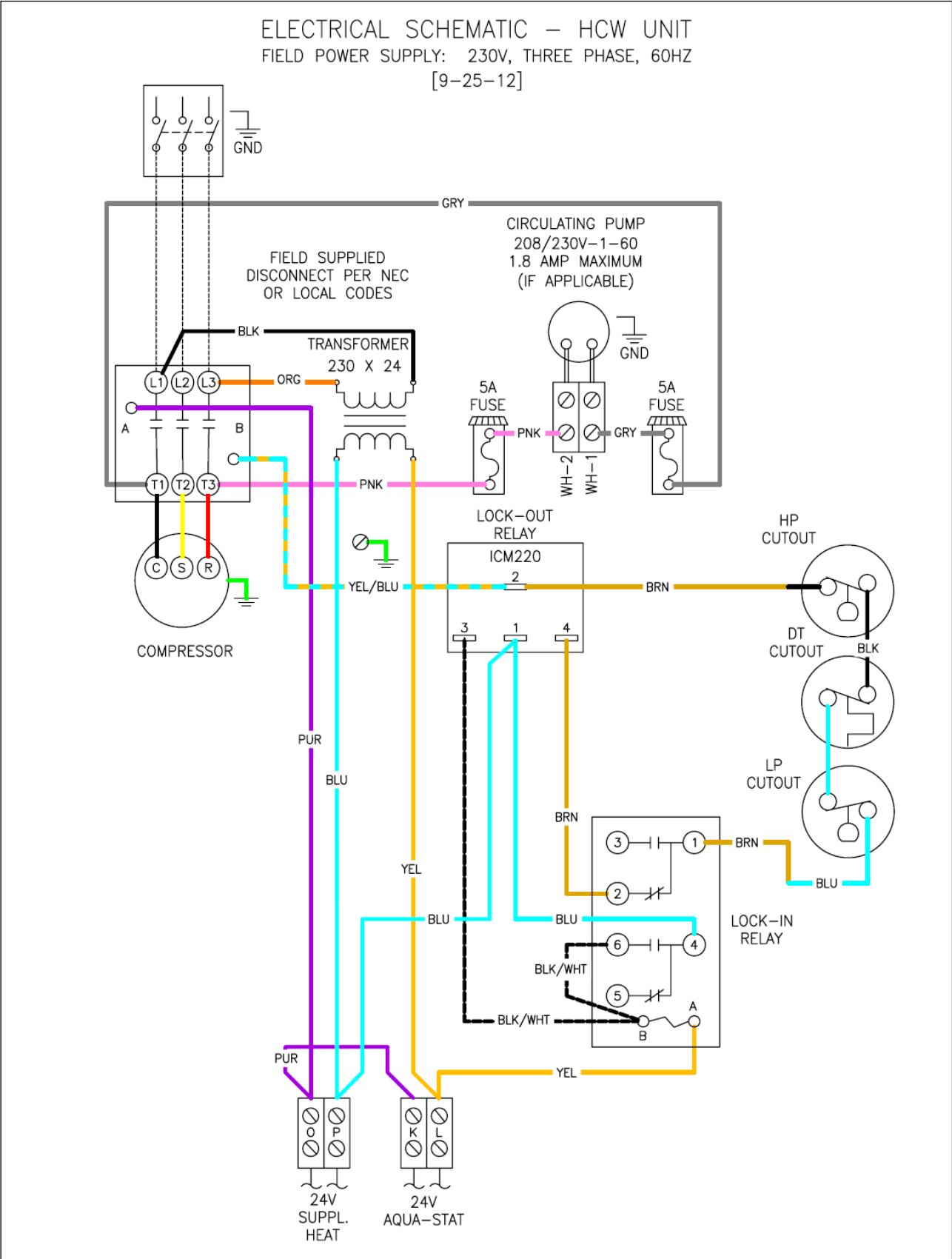
## b. 230-1-60 Schematic



### c. 230-3-60 Ladder

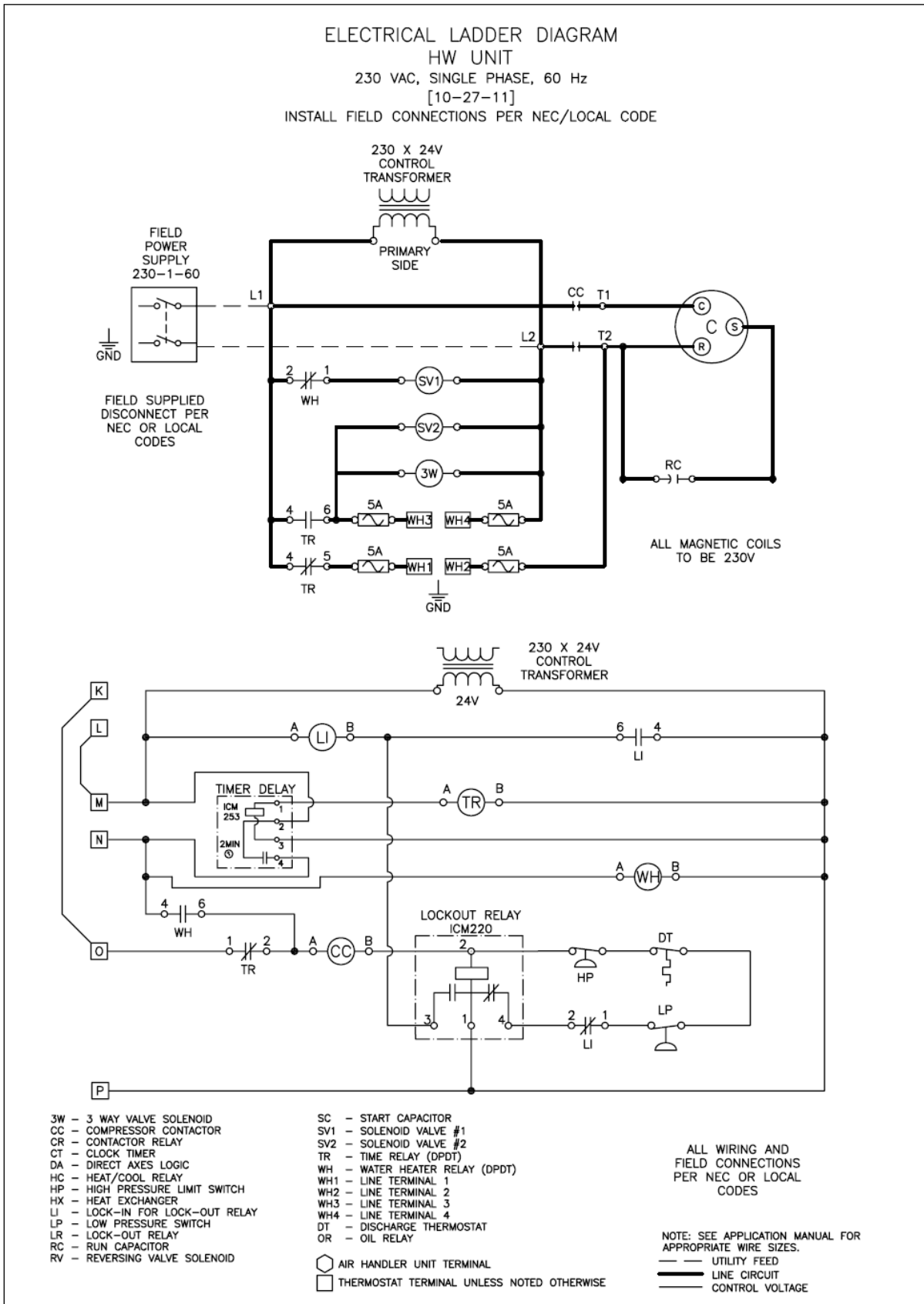


**d. 230-3-60 Schematic**



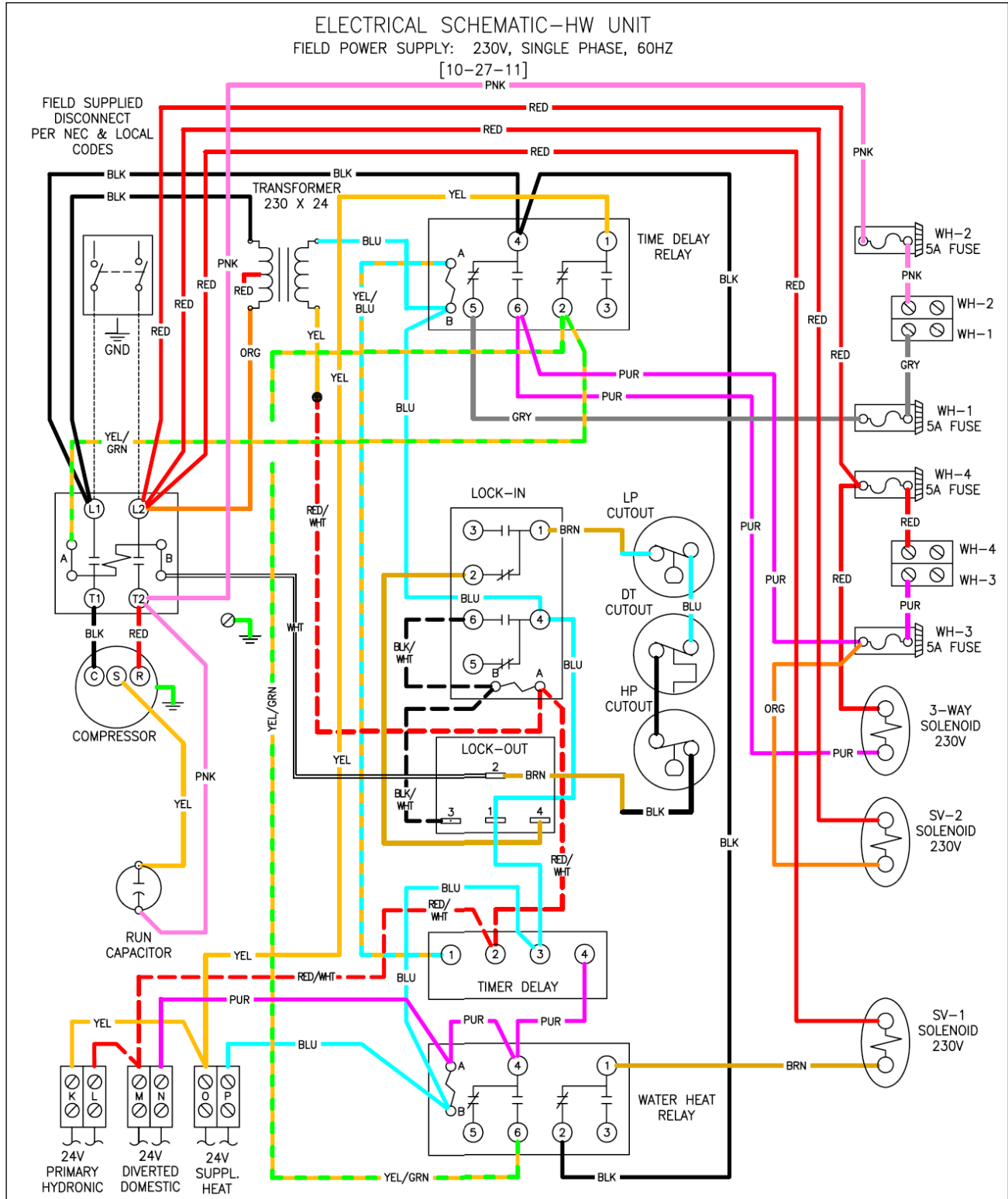
# F. HW Compressor Unit

## a. 230-1-60 Ladder

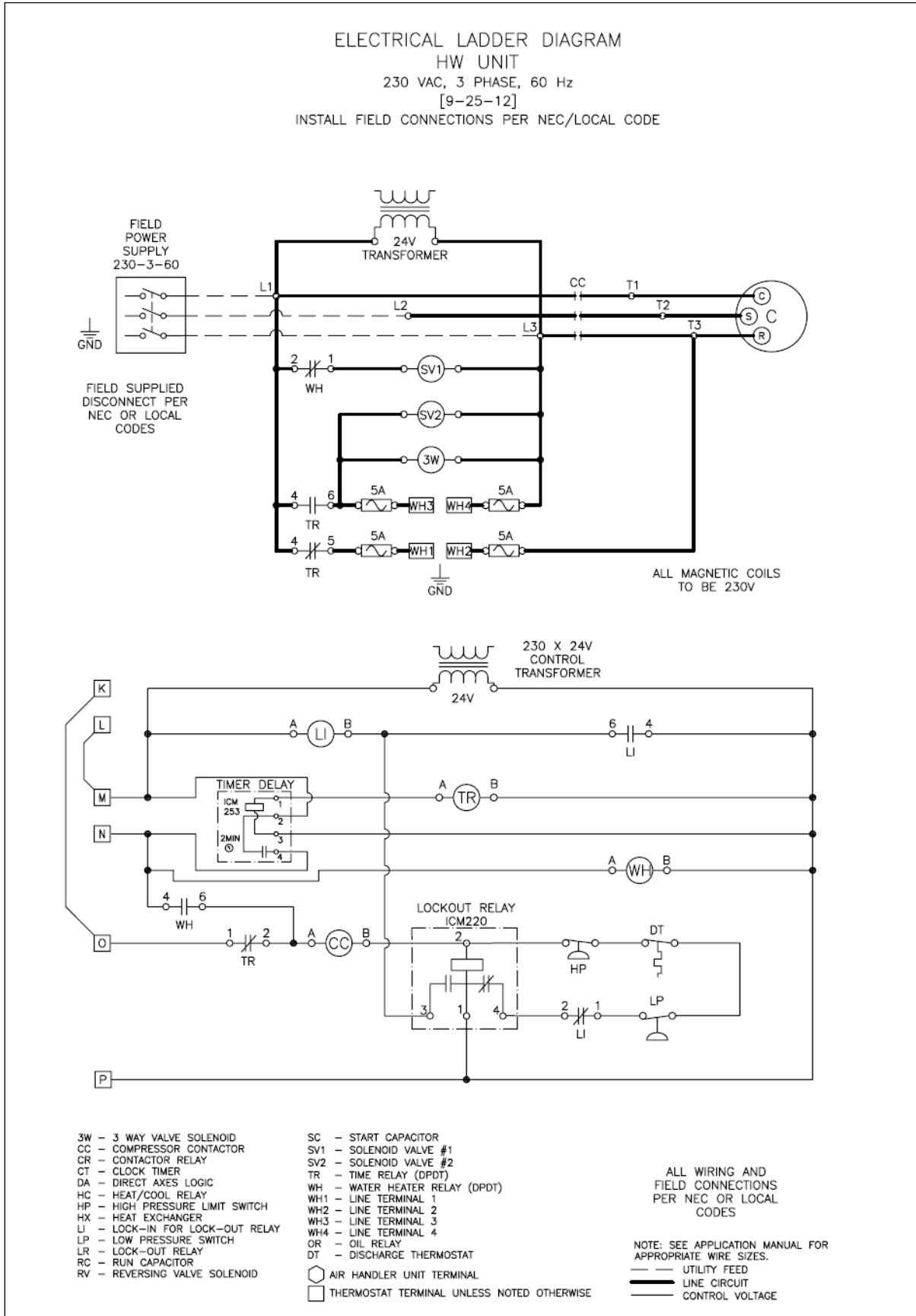




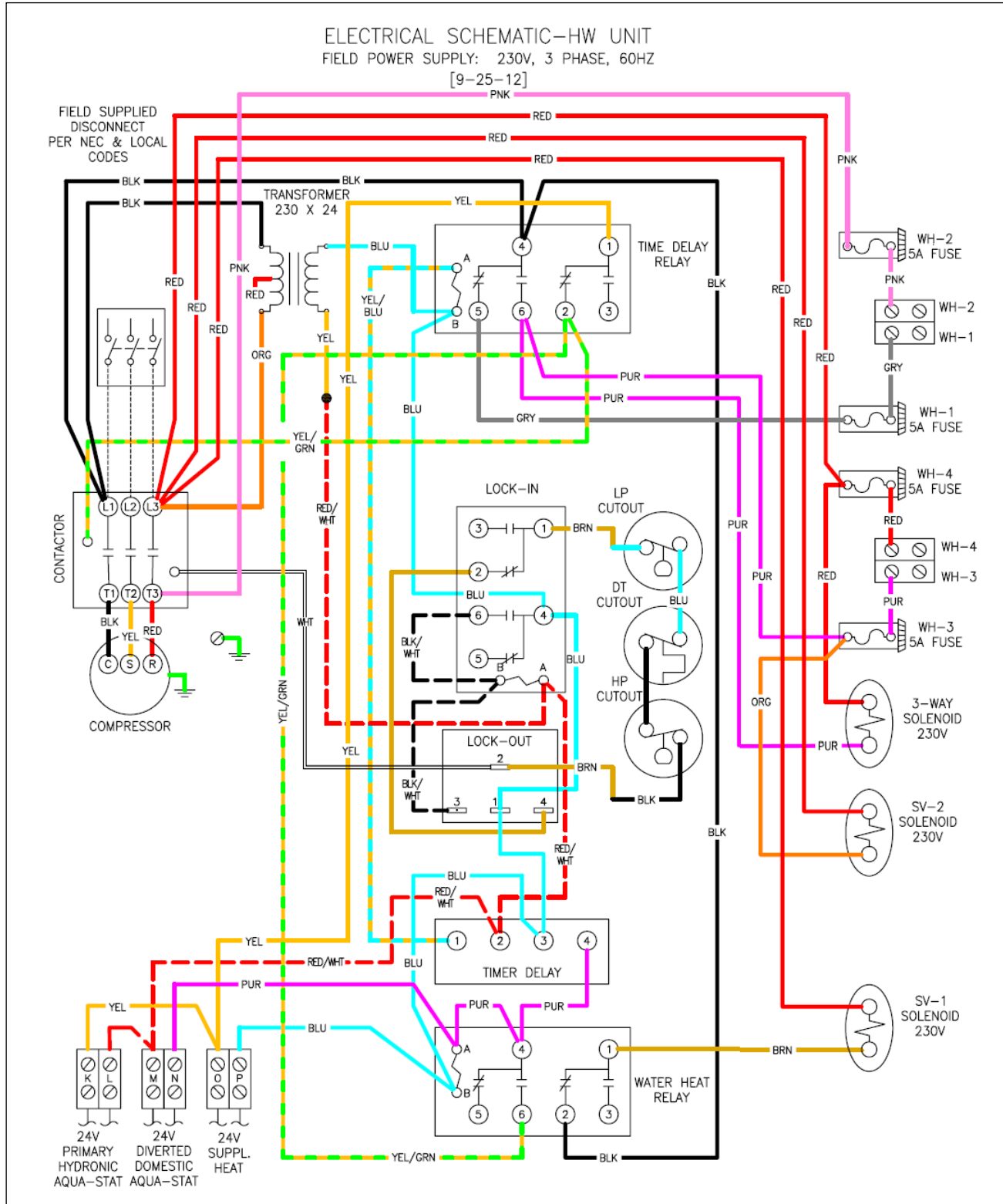
## b. 230-1-60 Schematic



### c. 230-3-60 Ladder

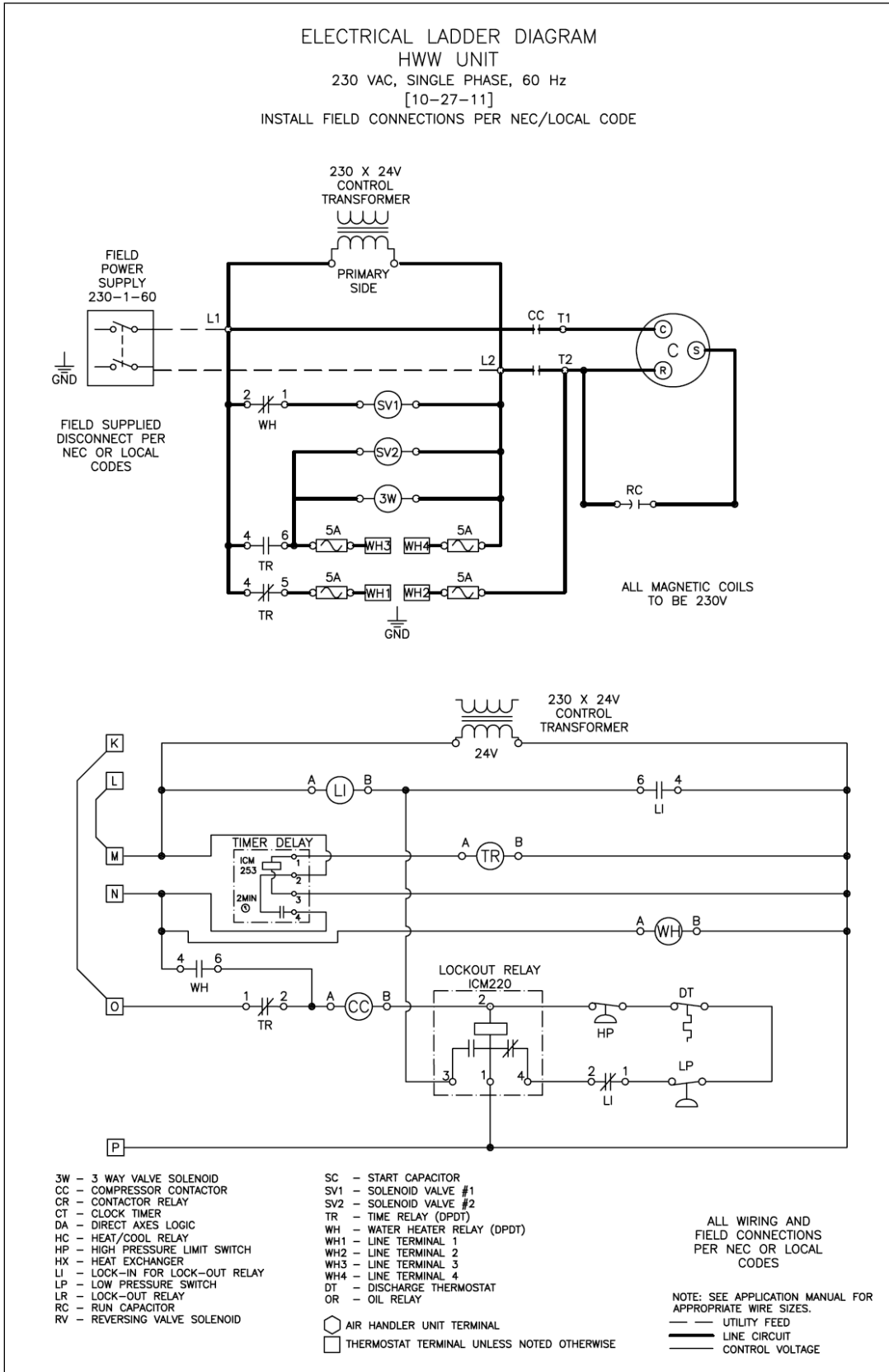


### d. 230-3-60 Schematic

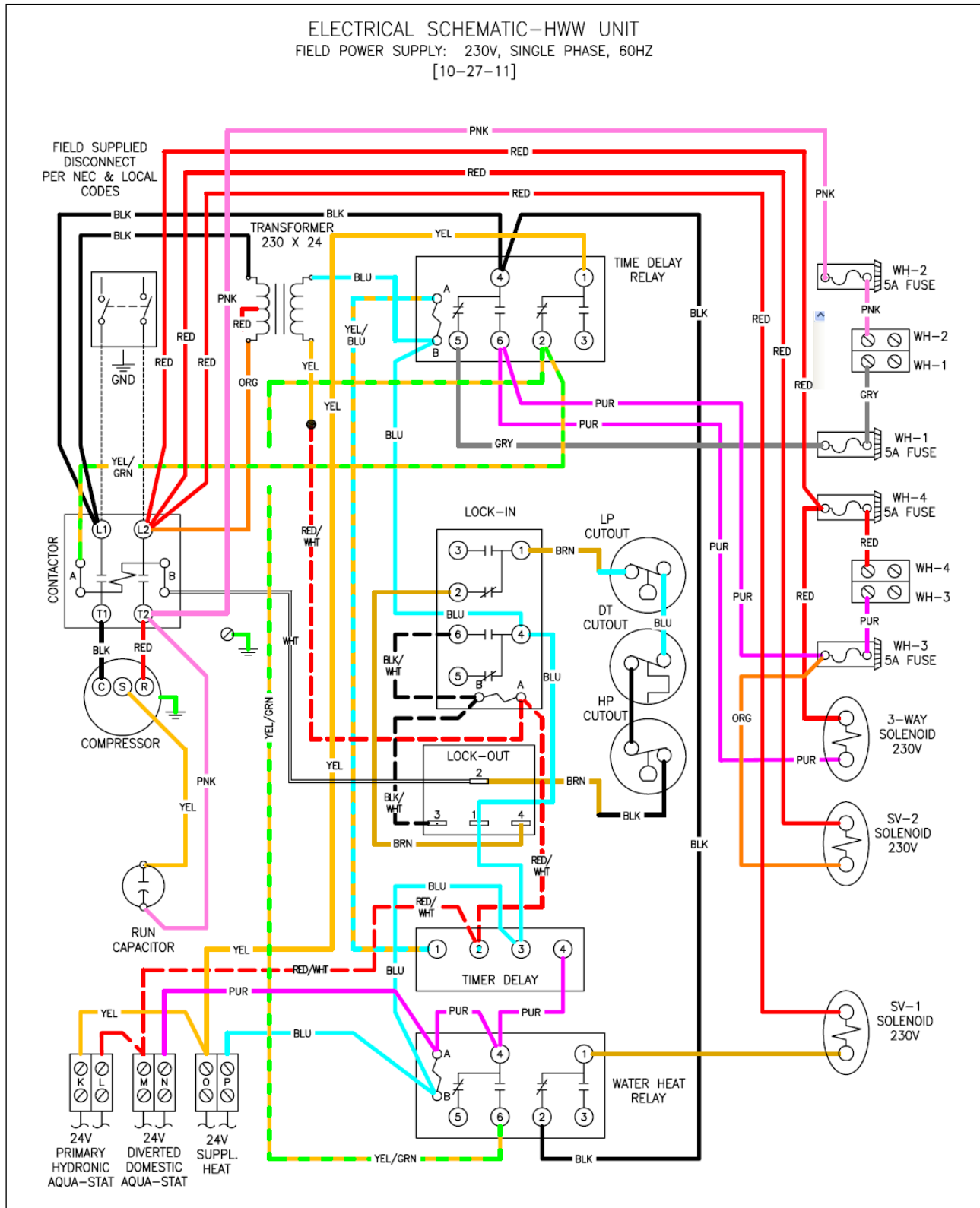


# G. HWW Compressor

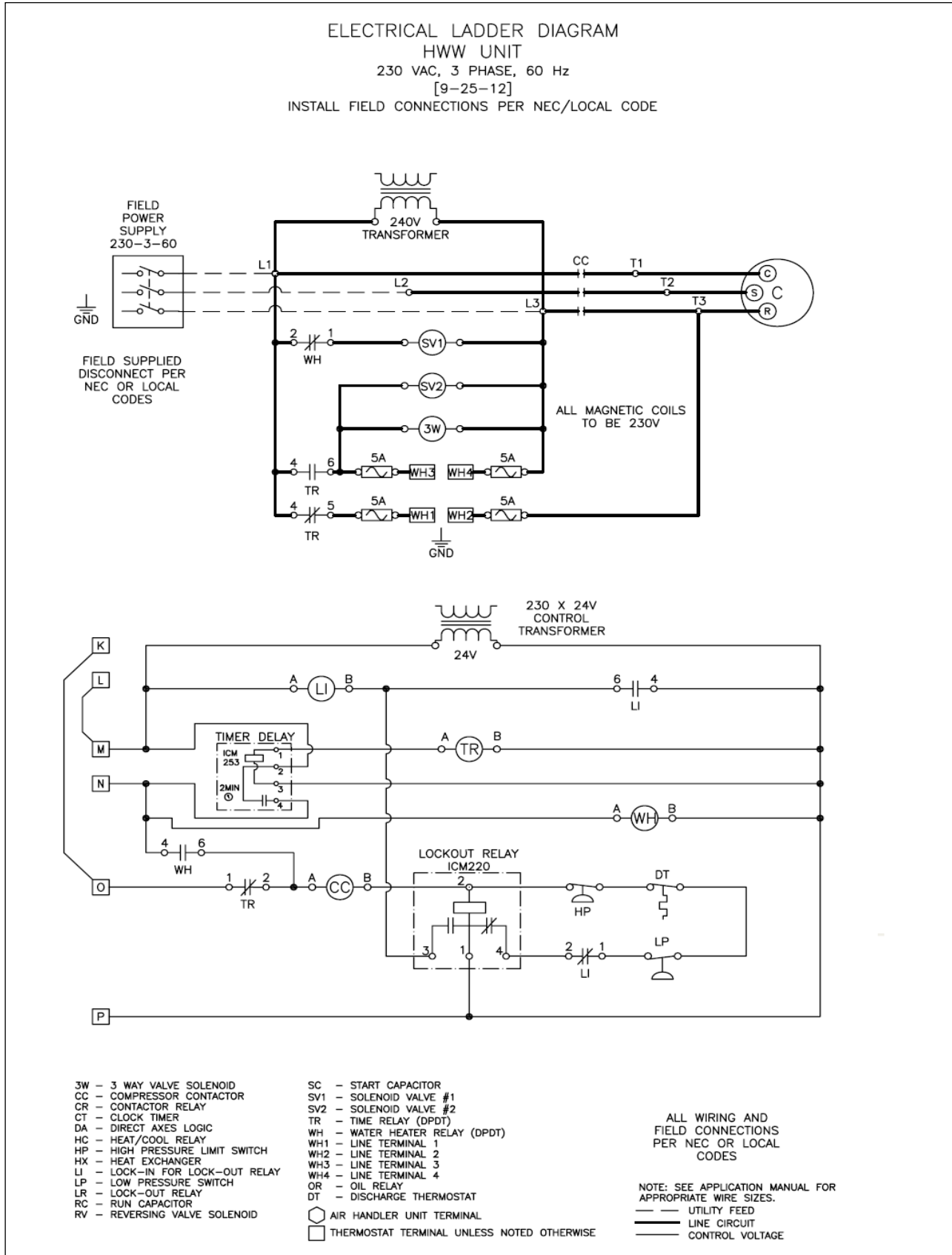
## a. 230-1-60 Ladder



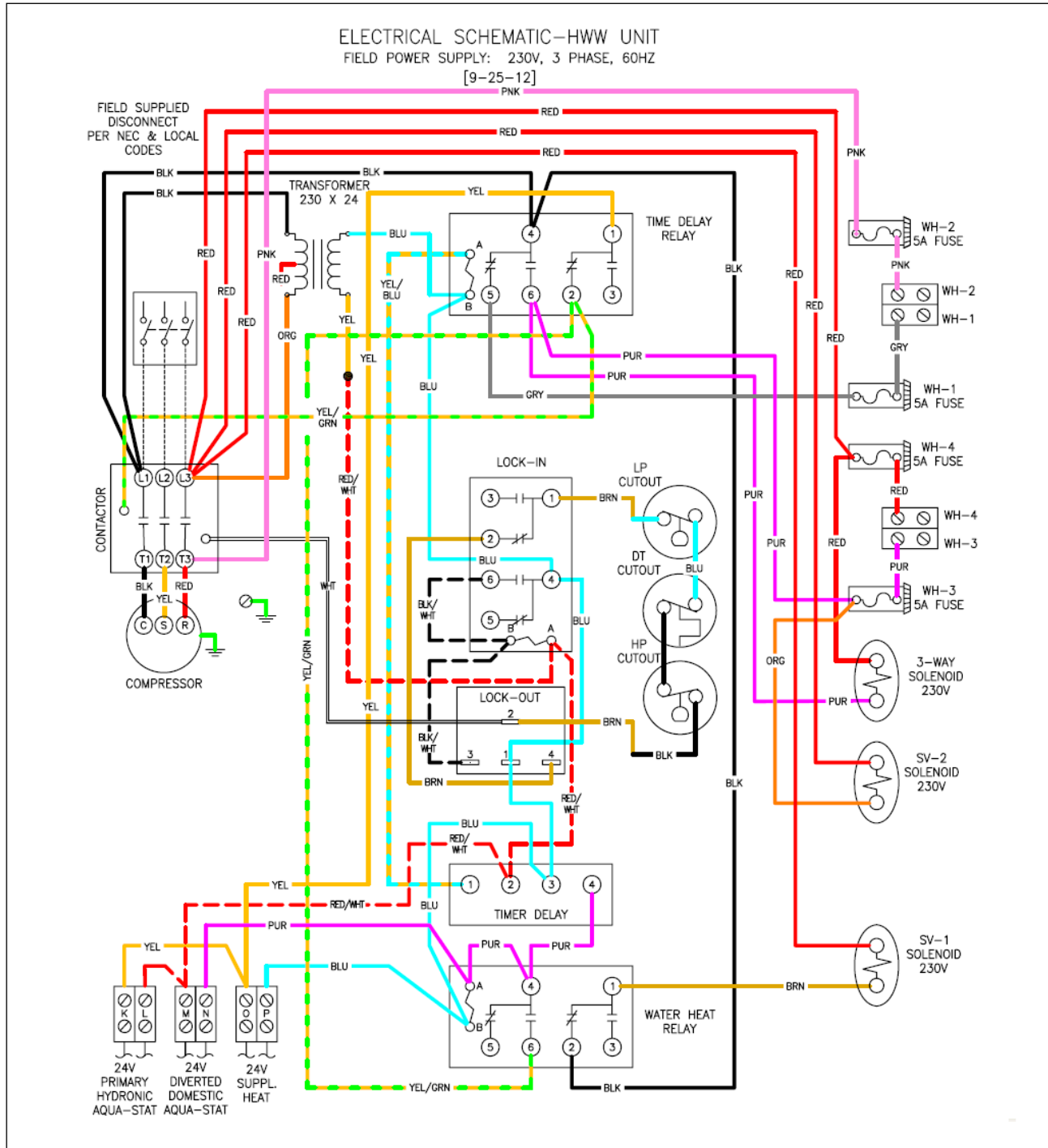
## b. 230-1-60 Schematic



### c. 230-3-60 Ladder

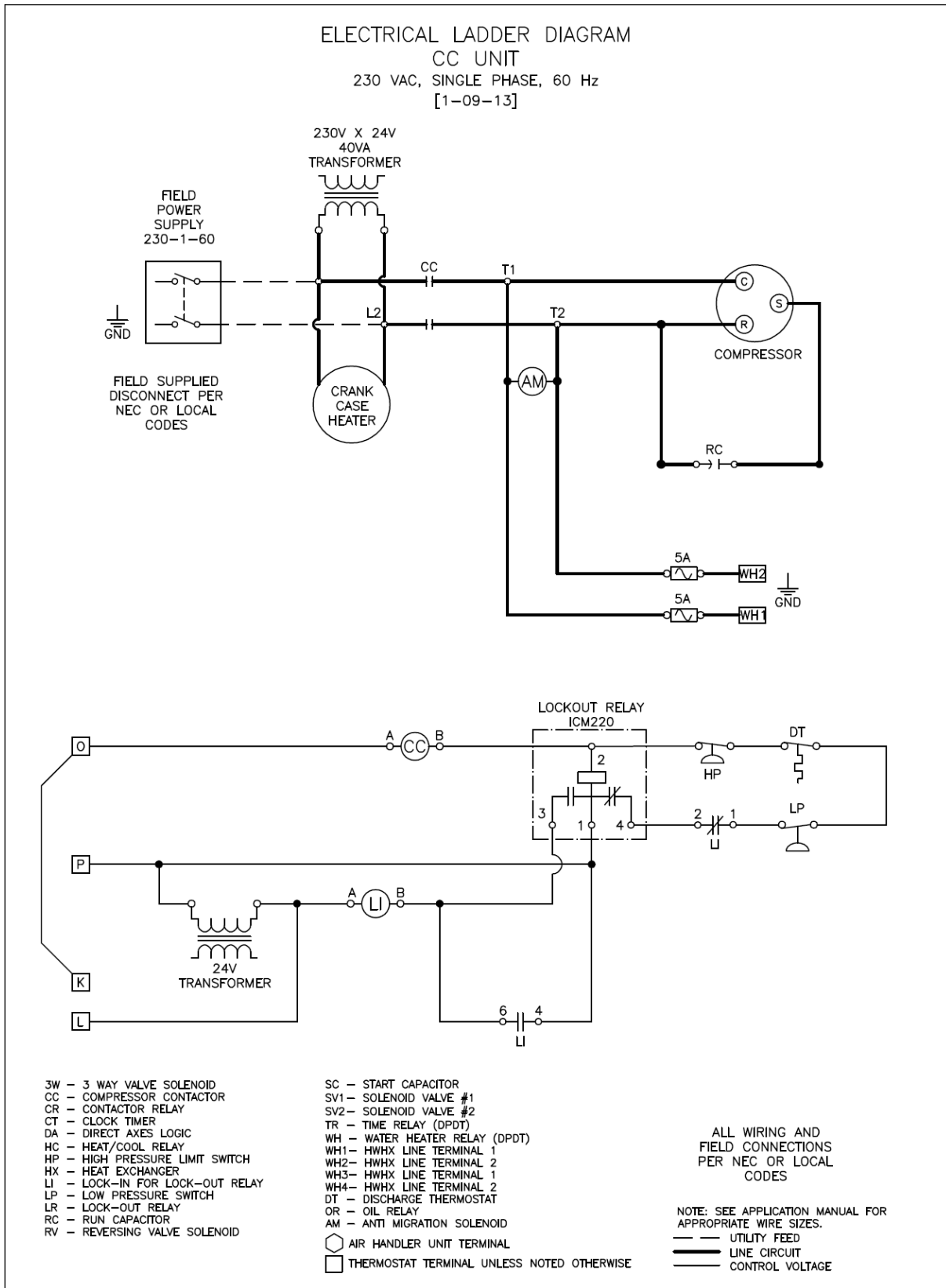


d. 230-3-60 Schematic



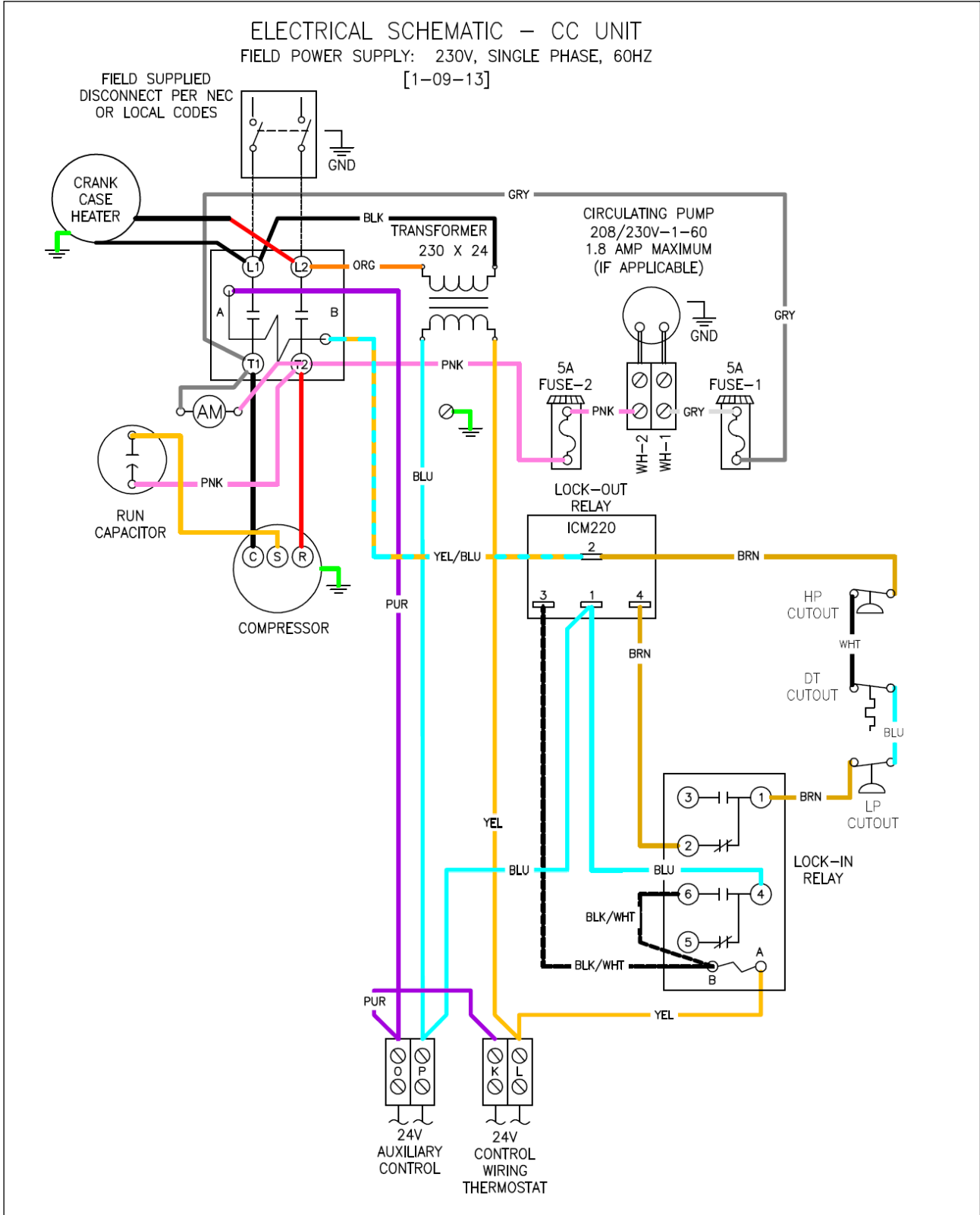
# H. CC Compressor

## a. 230-1-60 Ladder





### b. 230-1-60 Schematic



### c. 230-3-60 Ladder

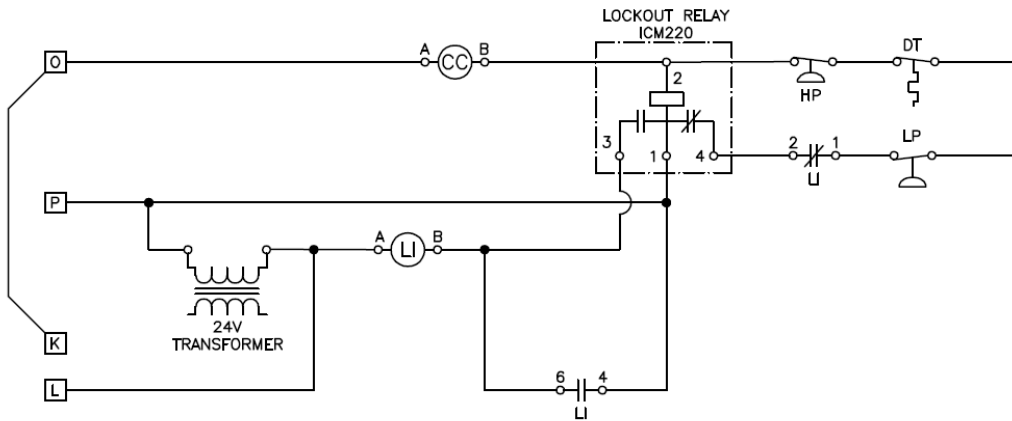
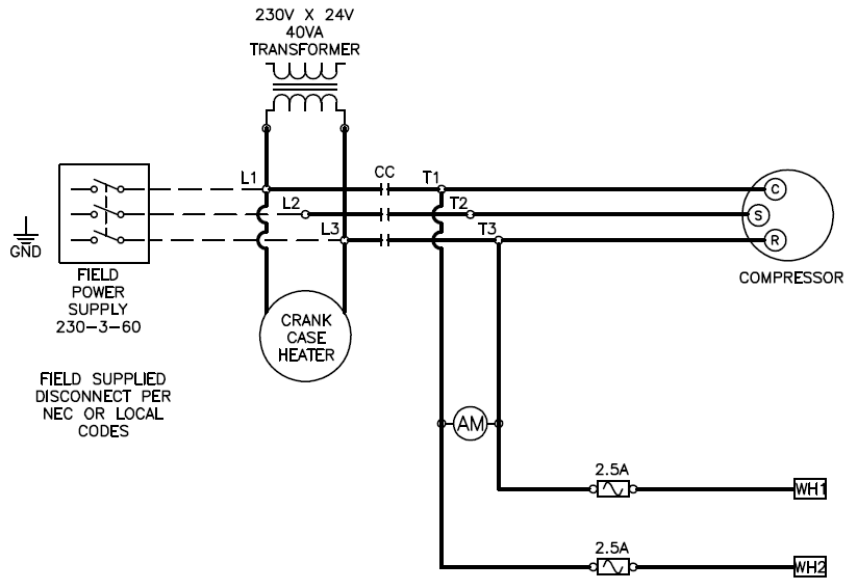
# ELECTRICAL LADDER DIAGRAM

## CC UNIT

230V, 3 PHASE, 60HZ

[1-09-13]

INSTALL FIELD CONNECTIONS PER NEC/LOCAL CODE



- 3W - 3 WAY VALVE SOLENOID
- CC - COMPRESSOR CONTACTOR
- CR - CONTACTOR RELAY
- CT - CLOCK TIMER
- DA - DIRECT AXES LOGIC
- HC - HEAT/COOL RELAY
- HP - HIGH PRESSURE LIMIT SWITCH
- HX - HEAT EXCHANGER
- LI - LOCK-IN FOR LOCK-OUT RELAY
- LP - LOW PRESSURE SWITCH
- LR - LOCK-OUT RELAY
- RC - RUN CAPACITOR
- RV - REVERSING VALVE SOLENOID

- SC - START CAPACITOR
- SV1 - SOLENOID VALVE #1
- SV2 - SOLENOID VALVE #2
- TR - TIME RELAY (DPDT)
- WH - WATER HEATER RELAY (DPDT)
- WH1 - HWHX LINE TERMINAL 1
- WH2 - HWHX LINE TERMINAL 2
- WH3 - HWHX LINE TERMINAL 1
- WH4 - HWHX LINE TERMINAL 2
- DT - DISCHARGE THERMOSTAT
- OR - OIL RELAY
- AM - ANTI MIGRATION SOLENOID

- AIR HANDLER UNIT TERMINAL
- THERMOSTAT TERMINAL UNLESS NOTED OTHERWISE

ALL WIRING AND  
FIELD CONNECTIONS  
PER NEC OR LOCAL  
CODES

NOTE: SEE APPLICATION MANUAL FOR  
APPROPRIATE WIRE SIZES.

- UTILITY FEED
- LINE CIRCUIT
- CONTROL CIRCUIT

### d. 230-3-60 Schematic

