506952-01
3/2018

T3EH SERIES UNITS

INSTALLATION INSTRUCTIONS FOR T3EH SERIES ELECTRIC HEAT SECTIONS USED WITH ELA 072-240 AND TAA 072-240 SERIES UNITS

Shipping and Packing List

Package 1 of 1 contains:

1 – Assembled electric heat section

1 – Bag assembly containing 16 sheet-metal screws

1 – Plastic bushing

2 – Wiring diagrams

⚠ WARNING

Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life. Installation and service must be performed by a licensed professional HVAC installer or equivalent, service agency, or the gas supplier.

⚠ CAUTION

As with any mechanical equipment, contact with sharp sheet metal edges can result in personal injury. Take care while handling this equipment and wear gloves and protective clothing.

⚠ WARNING

Electric Shock Hazard! – Disconnect all power supplies before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

Requirements

Installation of electric heat sections must conform with standard in National Fire Protection Association (NFPA) Standard for Installation of Air Conditioning and Ventilation Systems NFPA No. 90A, Standard for the Installation of Residence Type Warm Air Heating and Air Conditioning System NFPA No. 90B, manufacturer's installation instructions and local municipal building codes.

Wiring must conform to the current National Electric Code ANSI/NFPA No. 70, or Canadian Electric Code Part I, CSA Standard C22.1, and local building codes. Refer to following wiring diagrams. See unit nameplate for minimum circuit ampacity and maximum over-current protection size.

Select the proper supply circuit conductors in accordance with tables 310-16 and 310-17 in the National Electric Code, ANSI/NFPA No. 70 or tables 1 through 4 in the Canadian Electric Code, Part I, CSA Standard C22.1.

Application

T3EH series heat sections are used as primary heaters for ELA 072-240 and TAA 072-240 series units. T3EH heat sections may be installed in either upflow or horizontal air discharge applications as illustrated in figures 4 through 8. The T3EH units are designed for indoor use only.

Installation

1 - If the air handler unit has been previously installed, remove the duct from the supply air side of the blower coil unit.

2 - If the air handler unit has not been installed, attach the supply side duct flanges provided with the air handler.

3 - Remove the blower access panel.

4 - Remove the blower coil knockout located beside the supply air blower opening. TAA location is shown in figures 1 through 3.

5 - Install plastic bushing into knockout.

6 - Align the electric heat section unit with the air handler unit. Align the grommet on the T3EH with the knockout as illustrated in figures 4 and 5 for the TAA units and figures 6 through 8 for the ELA units.

***NOTE** - Refer to figures 10 through 17 for TAA Series wiring. Refer to figures 18 through 25 for ELA Series wiring.*

7 - Route the electric heat wiring through the grommet and knockout bushing to the coil blower control box as illustrated in figure 9.

8 - Insert bottom flange of electric heater inside the supply duct flanges. Use the provided screws to secure the two cabinets together.

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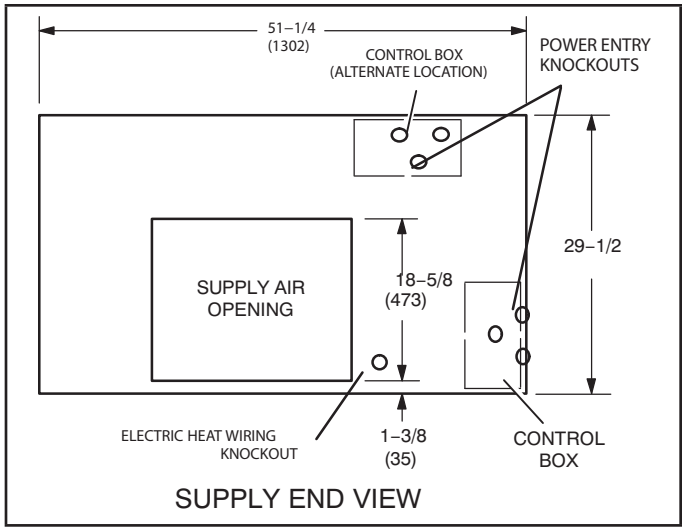


FIGURE 1. TAA 072 and 090 Knockout Location – Dimensions – inches (mm)

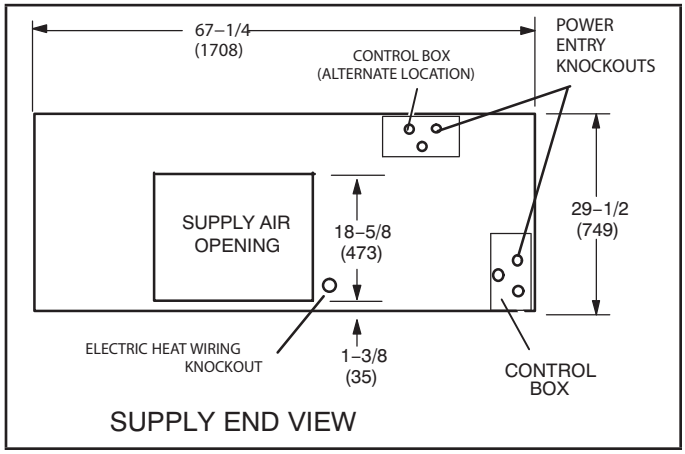


FIGURE 2. TAA 120 and 150 Knockout Location – Dimensions – inches (mm)

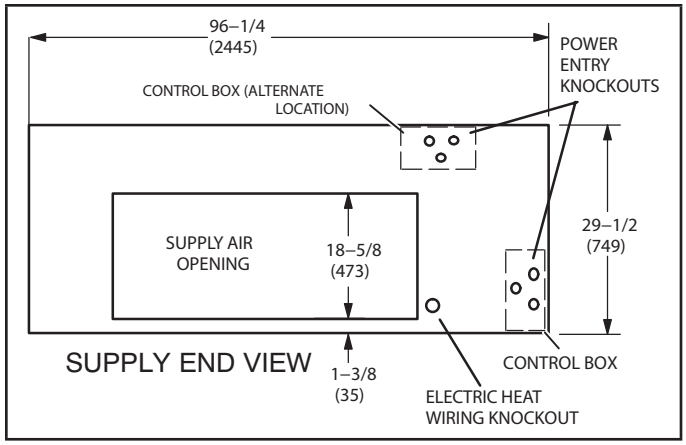


FIGURE 3. TAA 180 and 240 Knockout Location – Dimensions – inches (mm)

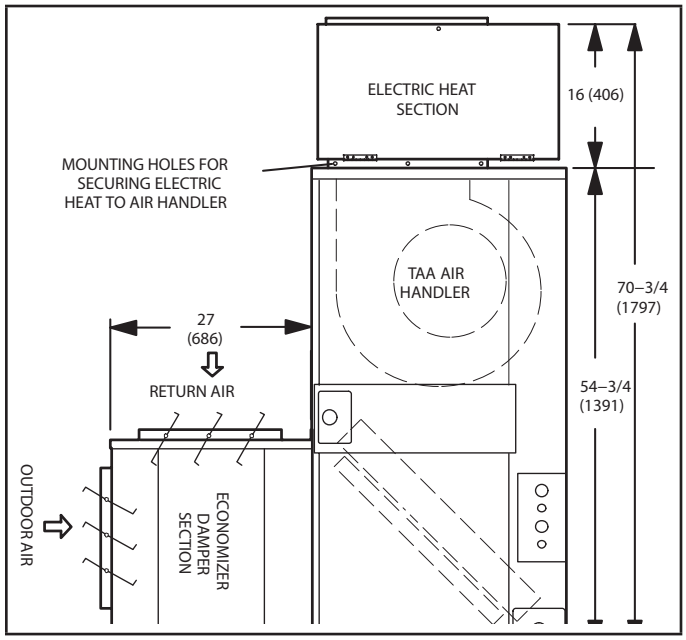


FIGURE 4. TAA Upflow Application – Dimensions – inches (mm)

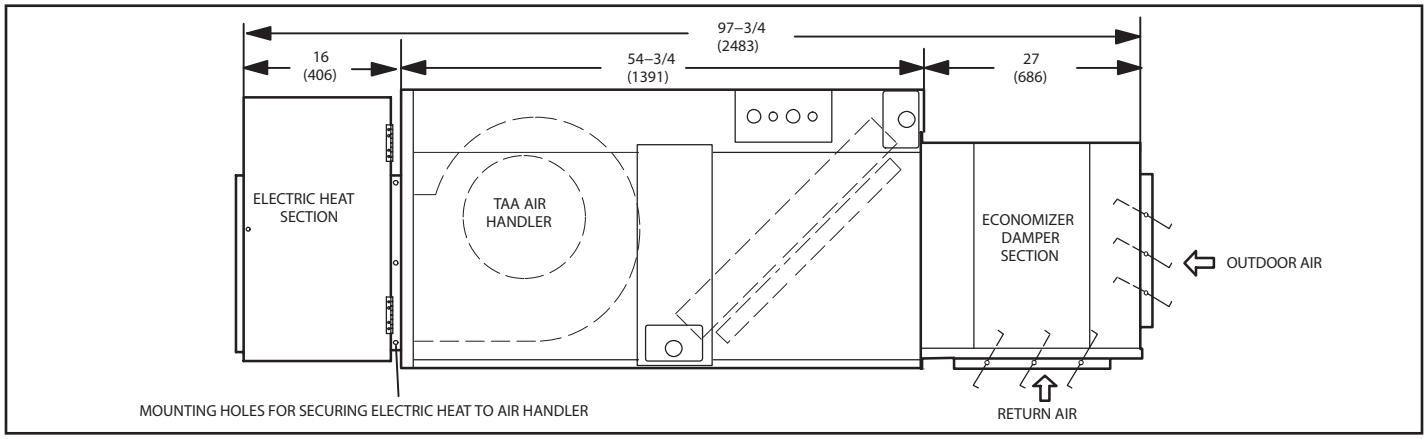


FIGURE 5. TAA Horizontal Application – Dimensions – inches (mm)

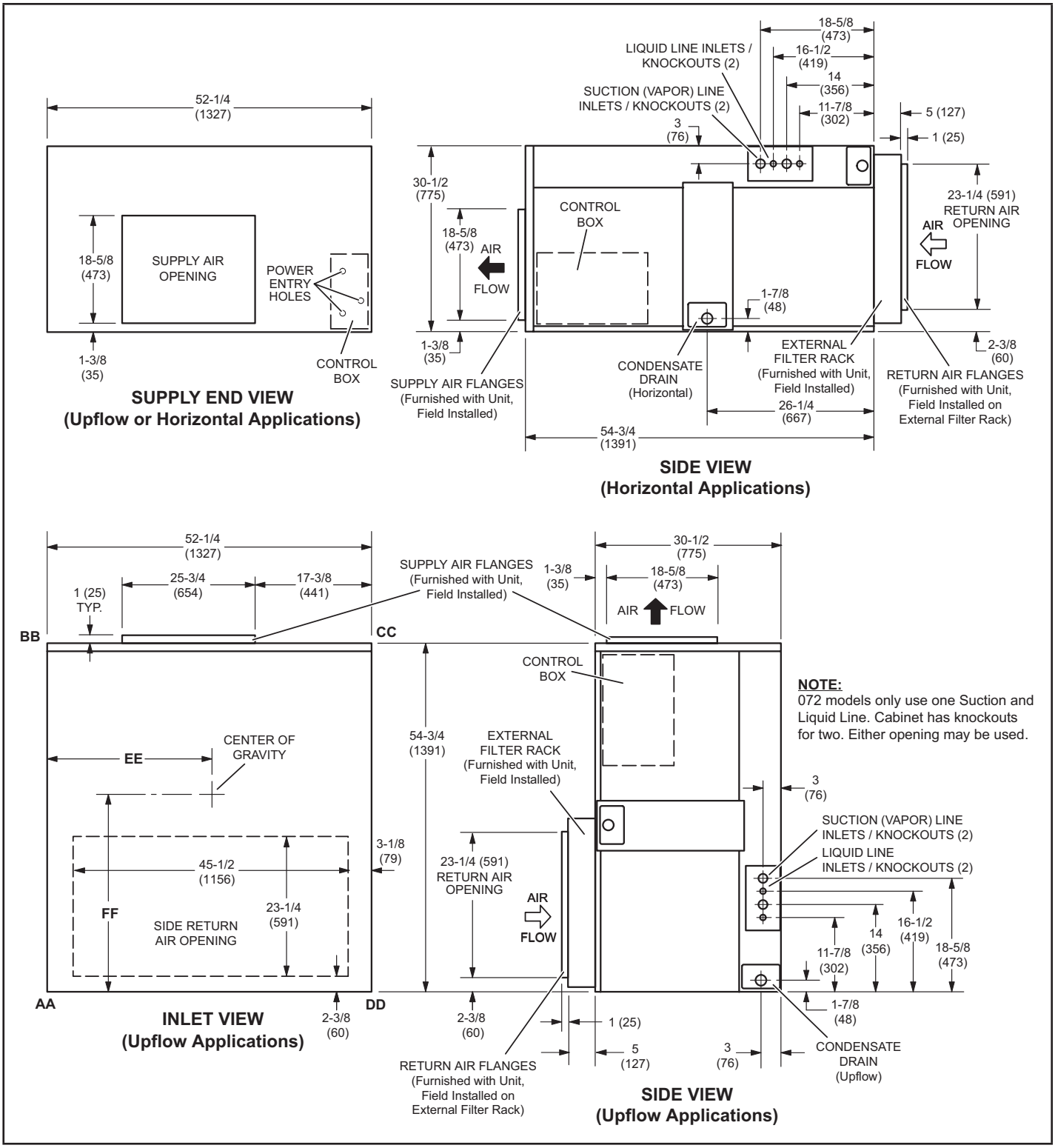


FIGURE 6. ELA 072-090 Unit Dimensions – inches (mm)

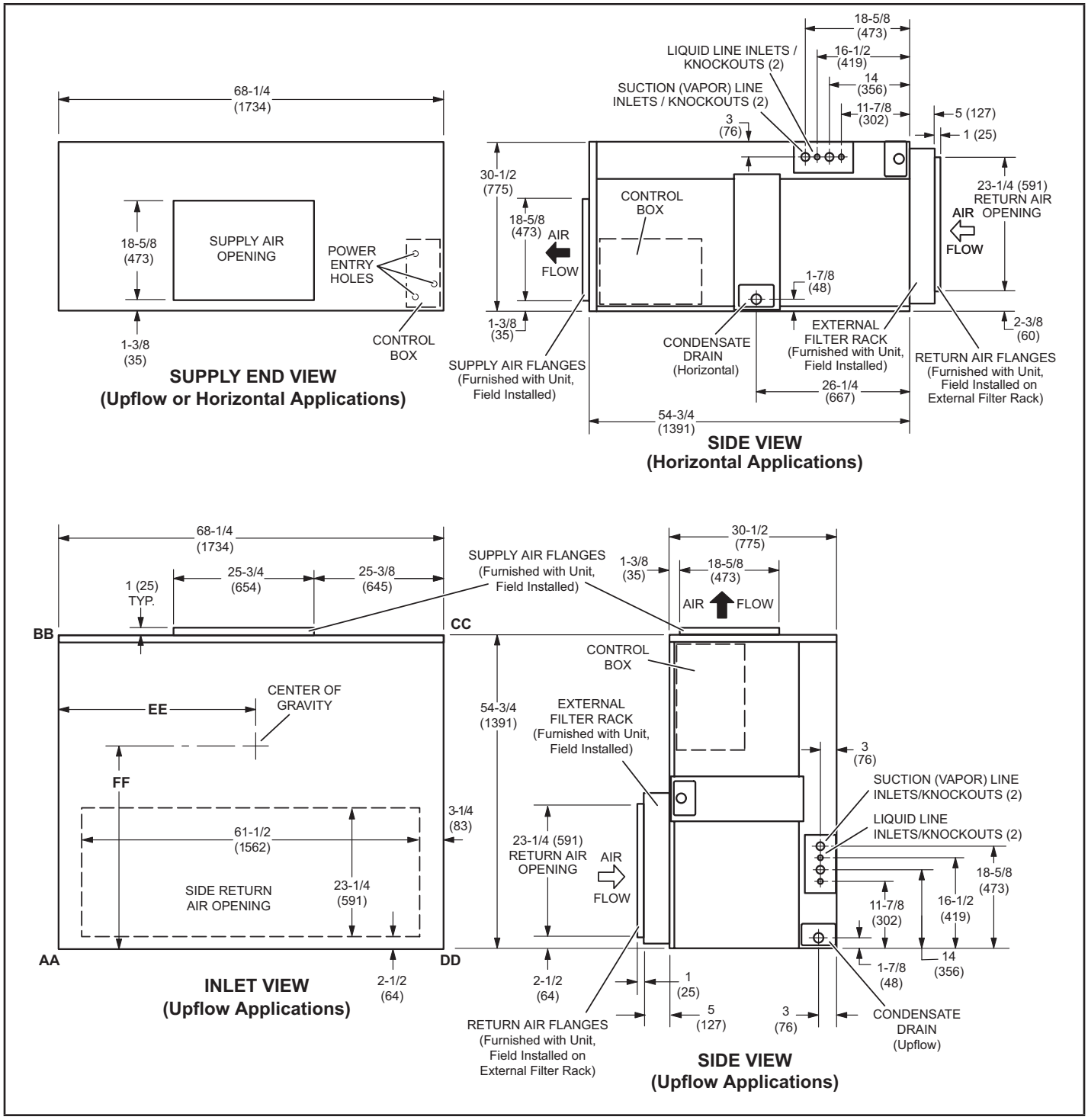


FIGURE 7. ELA 120-150 Unit Dimensions – inches (mm)

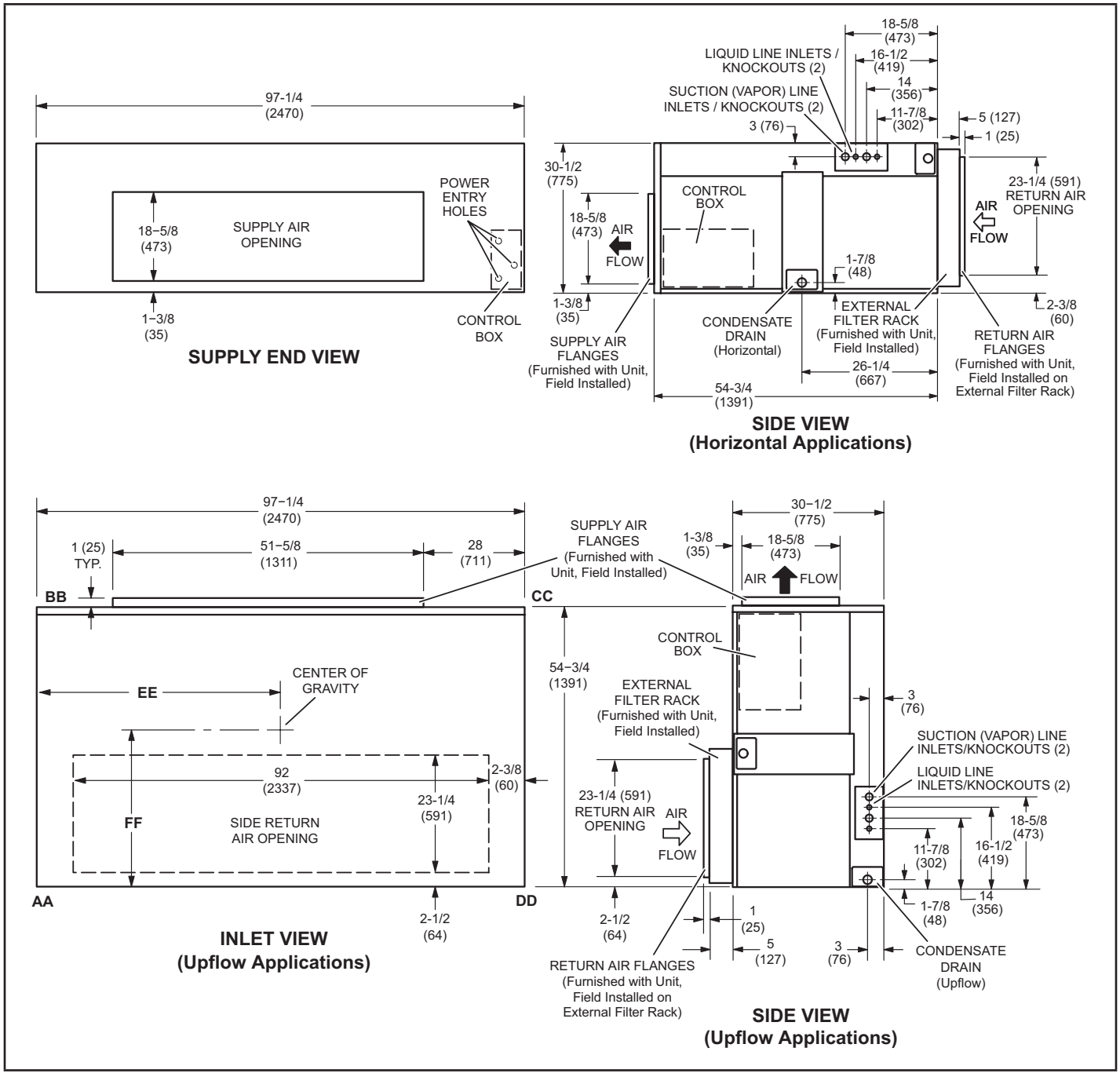


FIGURE 8. ELA 180-240 Unit Dimensions – inches (mm)

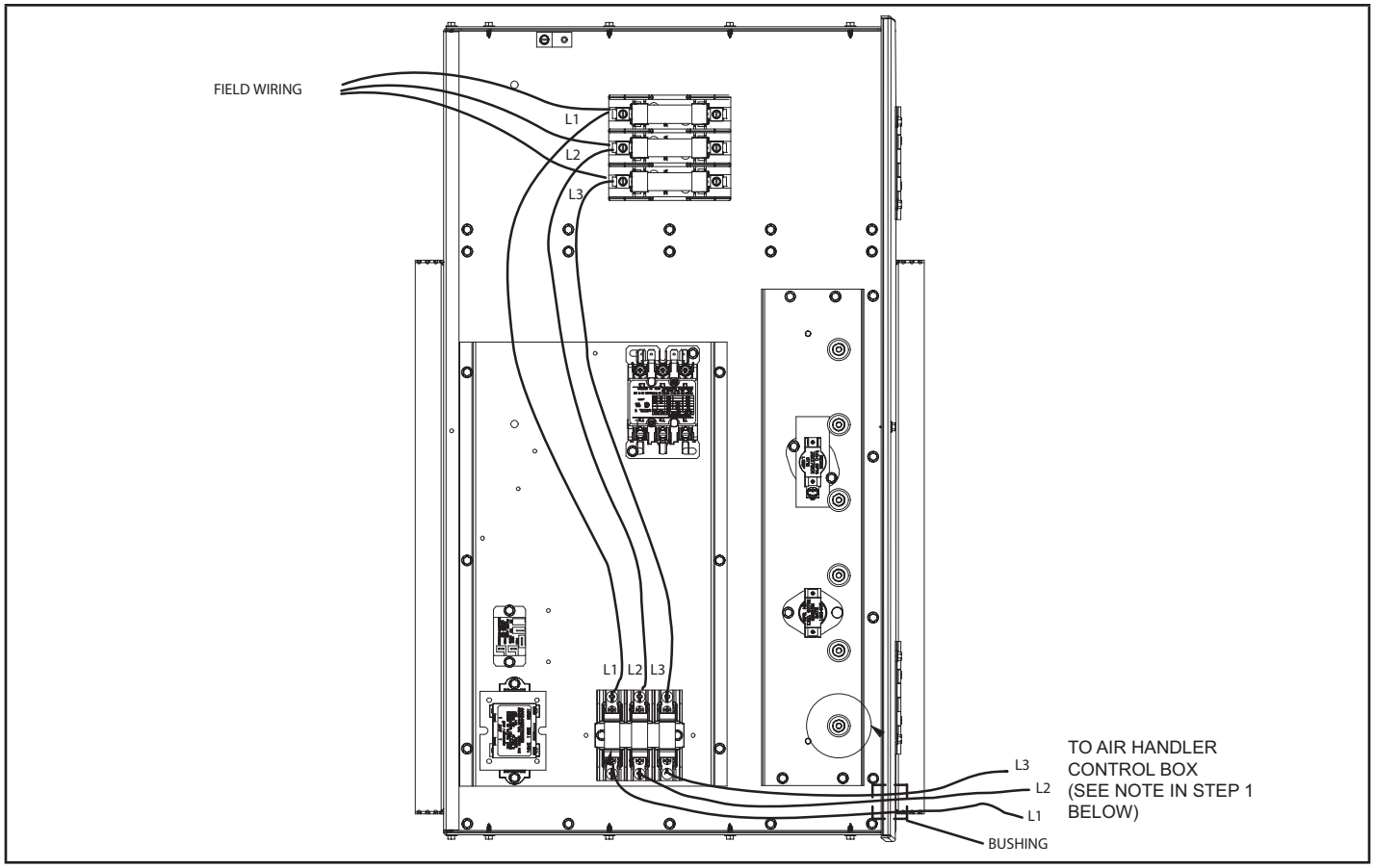


FIGURE 9. Typical Wire Routing

Electrical Connections

If you install the T3EH with an existing ELA/TAA, you must change the power supply wiring if it is not already sized to carry the blower and electric heat load.

Remove the original power supply wires or disconnect the power source.

1 - The T3EH heat section contains the blower motor wiring harness and sub−fusing. Route the blower motor harness from the electric heat section through the knockout into the blower unit, and into the wiring makeup box.

NOTE *- Route to K3 for TAA Series units and to TB13 for ELA Series units.*

2 - See figures 10 through 25 for proper wiring. The T3EH electric heat section includes provisions for high and low voltage field wiring.

3 - Route the low voltage wiring from the electric heater to the low voltage terminal strip in the ELA/TAA unit.

Refer to wiring diagrams provided with the T3EH unit for details on wiring with a heat pump or AC.

Blower Speed Requirements

T3EH electric heat applications require specific blower air volumes. To determine unit CFM, refer to the ELA/TAA series installation instruction.

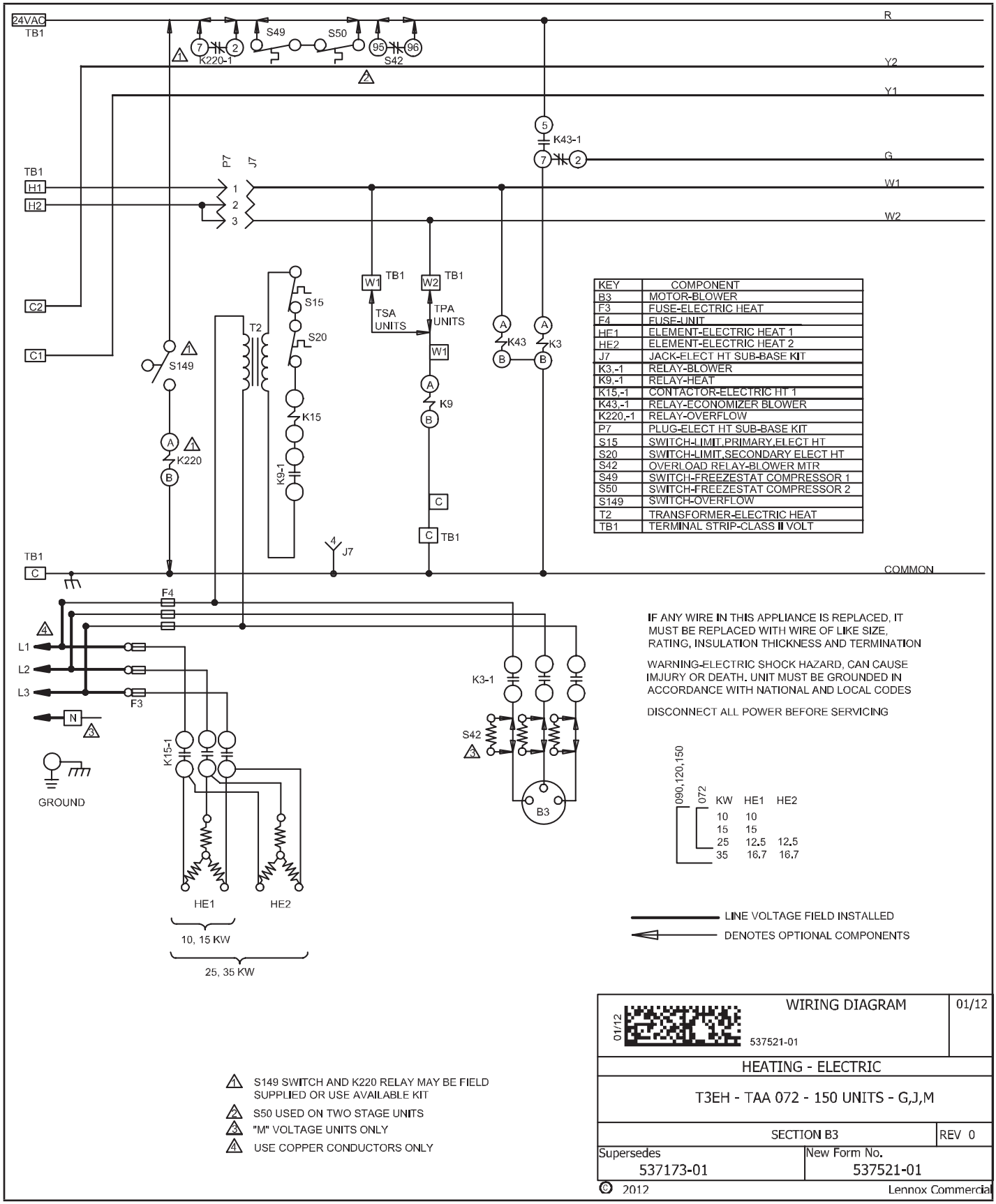
Duct Connections

Refer to the ELA/TAA series installation instruction and the ELA/TAA heater installed nameplate for the proper duct connections and clearances.

Unit Start-Up (Heating Cycle)

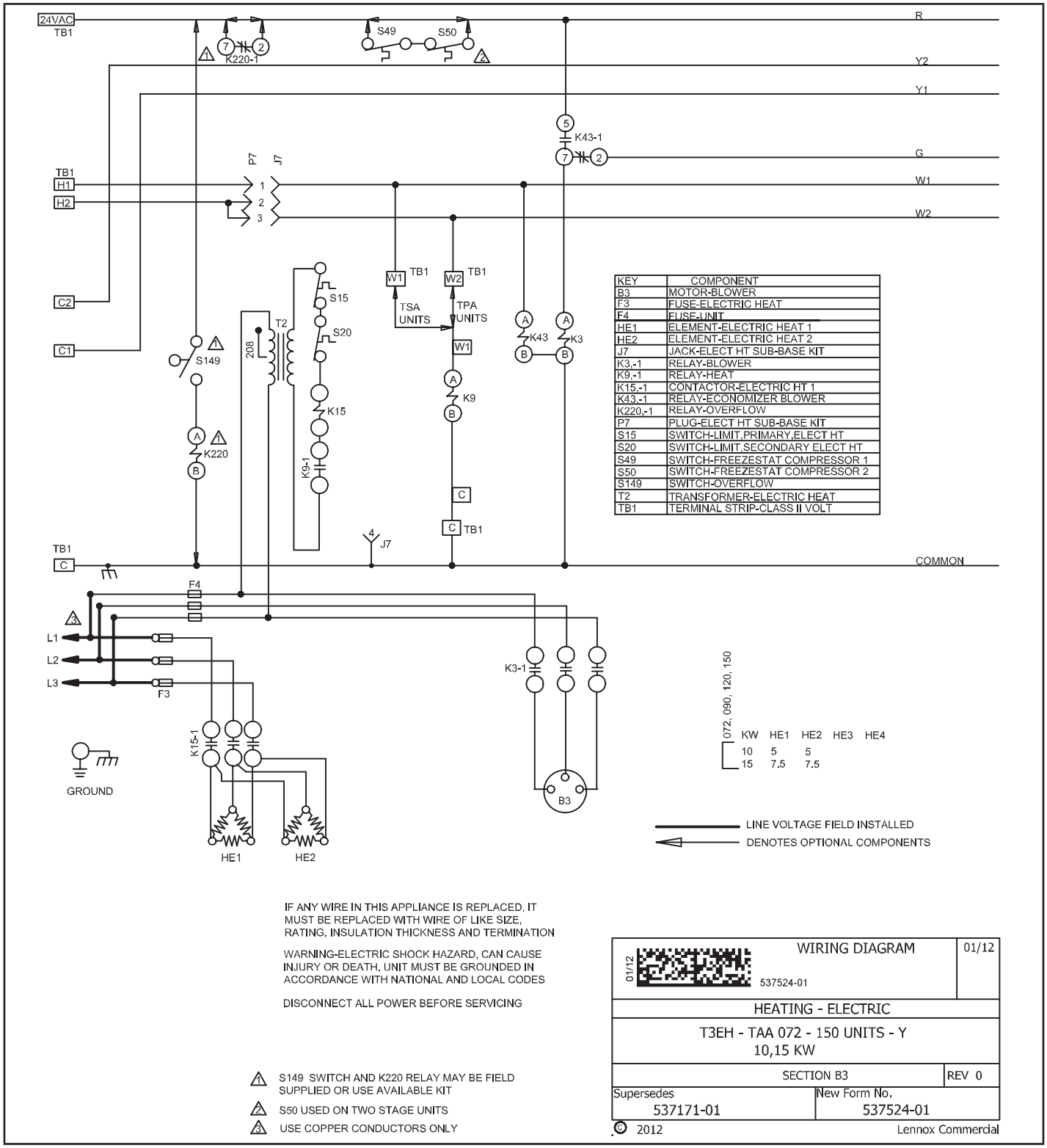
Set the room sensor for the proper HEAT or AUTO operation, if you use a switching subbase. Close the disconnect switch and position the heat setpoint above room temperature.

Wiring Diagrams



KEY	COMPONENT
B3	MOTOR-BLOWER
F3	FUSE-ELECTRIC HEAT
F4	FUSE-UNIT
HE1	ELEMENT-ELECTRIC HEAT 1
HE2	ELEMENT-ELECTRIC HEAT 2
J7	JACK-ELECT HT SUB-BASE KIT
K3,-1	RELAY-BLOWER
K9,-1	RELAY-HEAT
K15,-1	CONTACTOR-ELECTRIC HT 1
K43,-1	RELAY-ECONOMIZER BLOWER
K220,-1	RELAY-OVERFLOW
P7	PLUG-ELECT HT SUB-BASE KIT
S15	SWITCH-LIMIT,PRIMARY,ELECT HT
S20	SWITCH-LIMIT,SECONDARY ELECT HT
S42	OVERLOAD RELAY-BLOWER MTR
S49	SWITCH-FREEZESTAT COMPRESSOR 1
S50	SWITCH-FREEZESTAT COMPRESSOR 2
S149	SWITCH-OVERFLOW
T2	TRANSFORMER-ELECTRIC HEAT
TB1	TERMINAL STRIP-CLASS II VOLT

FIGURE 10. T3EH-10, 15, 25 and 35 (G, J and M Voltages) for use with TAA 072 through 150



KEY	COMPONENT
B3	MOTOR-BLOWER
F3	FUSE-ELECTRIC HEAT
F4	FUSE-UNIT
HE1	ELEMENT-ELECTRIC HEAT 1
HE2	ELEMENT-ELECTRIC HEAT 2
J7	JACK-ELECT HT SUB-BASE KIT
K3,-1	RELAY-BLOWER
K9,-1	RELAY-HEAT
K15,-1	CONTACTOR-ELECTRIC HT 1
K43,-1	RELAY-ECONOMIZER BLOWER
K220,-1	RELAY-OVERFLOW
P7	PLUG-ELECT HT SUB-BASE KIT
S15	SWITCH-LIMIT,PRIMARY,ELECT HT
S20	SWITCH-LIMIT,SECONDARY ELECT HT
S49	SWITCH-FREEZESTAT COMPRESSOR 1
S50	SWITCH-FREEZESTAT COMPRESSOR 2
S149	SWITCH-OVERFLOW
T2	TRANSFORMER-ELECTRIC HEAT
TB1	TERMINAL STRIP-CLASS II VOLT

IF ANY WIRE IN THIS APPLIANCE IS REPLACED, IT MUST BE REPLACED WITH WIRE OF LIKE SIZE, RATING, INSULATION THICKNESS AND TERMINATION

WARNING-ELECTRIC SHOCK HAZARD, CAN CAUSE INJURY OR DEATH. UNIT MUST BE GROUNDED IN ACCORDANCE WITH NATIONAL AND LOCAL CODES

DISCONNECT ALL POWER BEFORE SERVICING

1. S149 SWITCH AND K220 RELAY MAY BE FIELD SUPPLIED OR USE AVAILABLE KIT
2. S50 USED ON TWO STAGE UNITS
3. USE COPPER CONDUCTORS ONLY

01/12	WIRING DIAGRAM 537524-01	01/12
HEATING - ELECTRIC		
T3EH - TAA 072 - 150 UNITS - Y 10,15 KW		
SECTION B3		REV 0
Supersedes 537171-01	New Form No. 537524-01	

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FIGURE 11. T3EH-10 and 15 (Y Voltage) for use with TAA 072 through 150

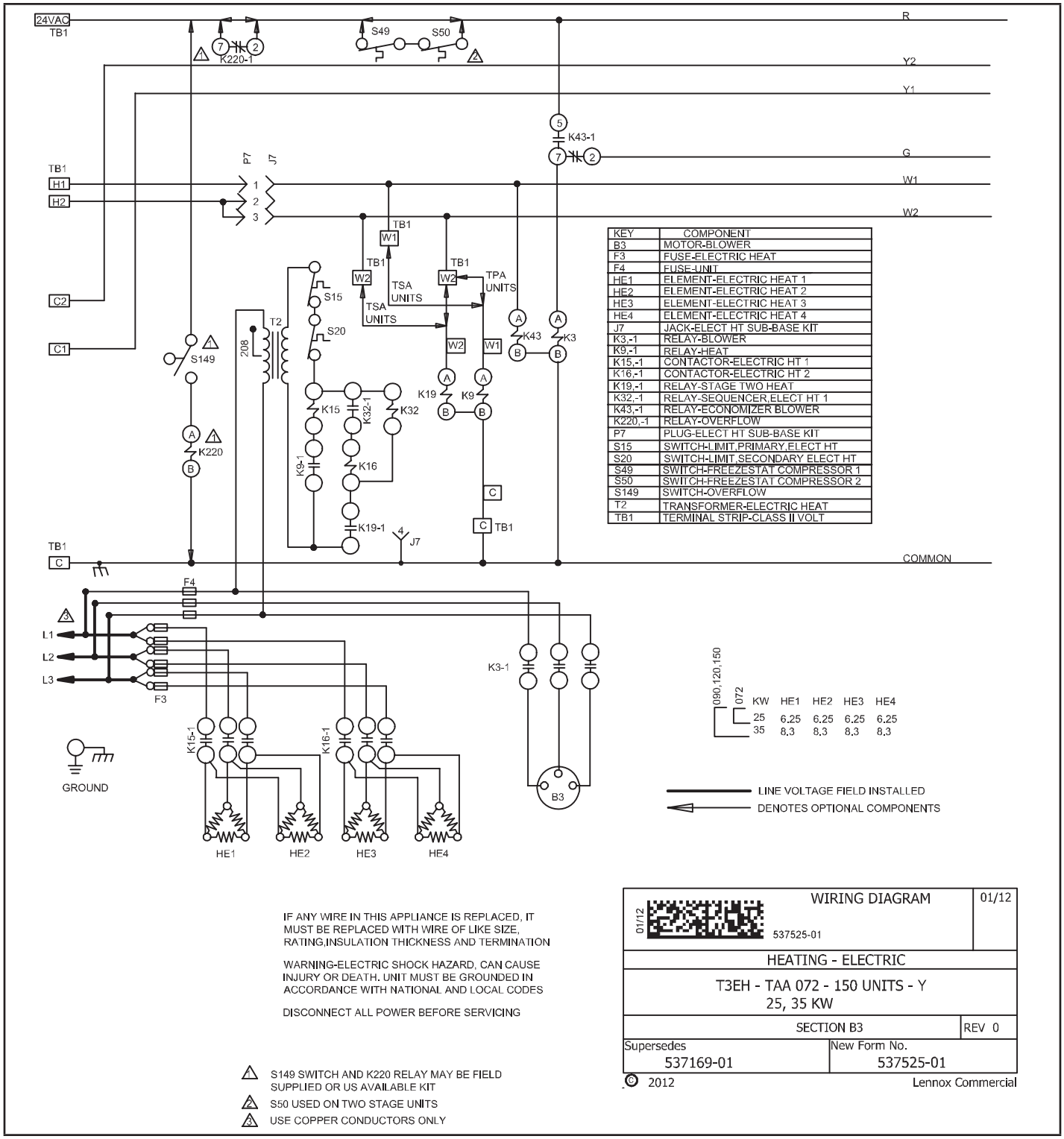
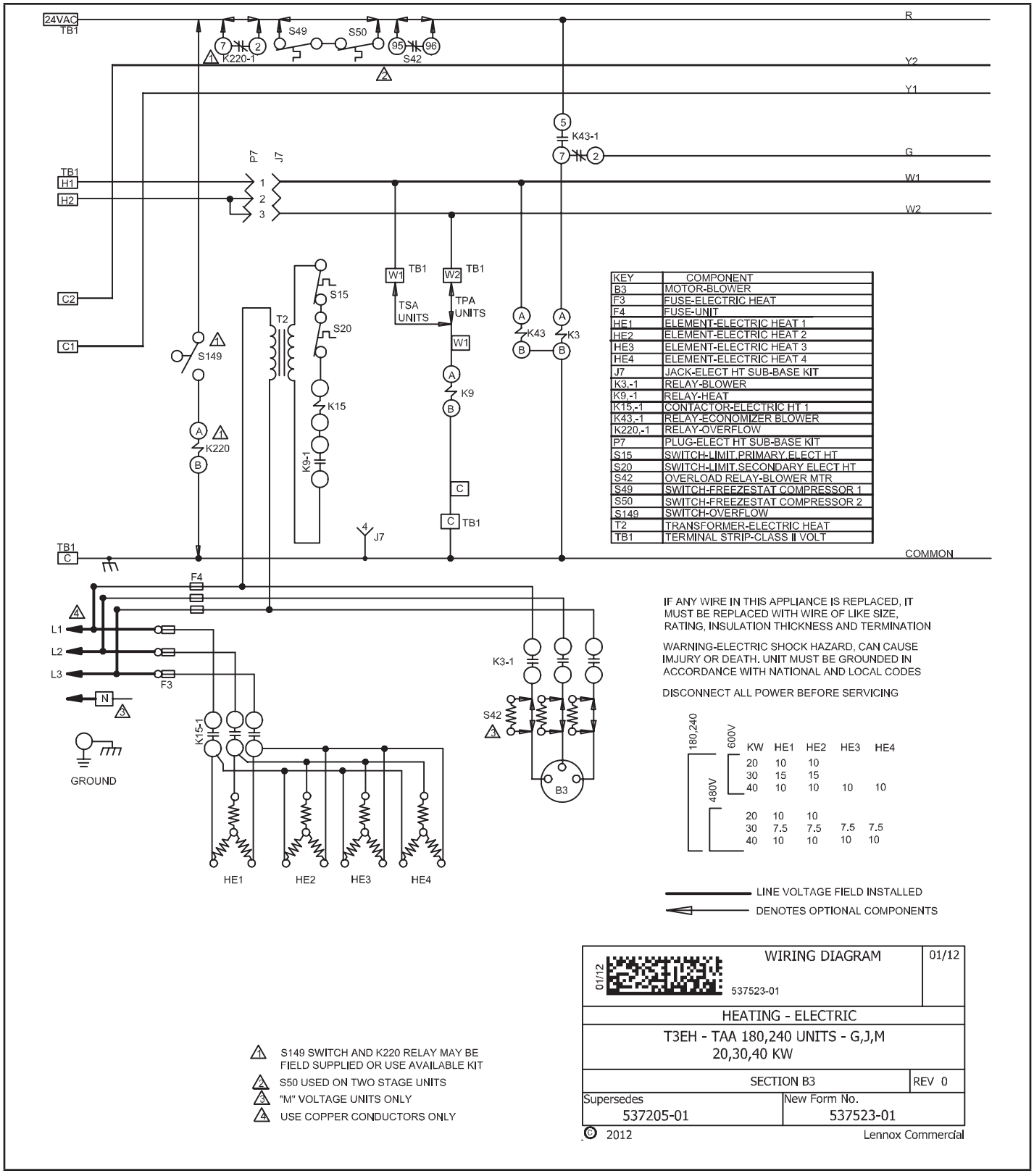


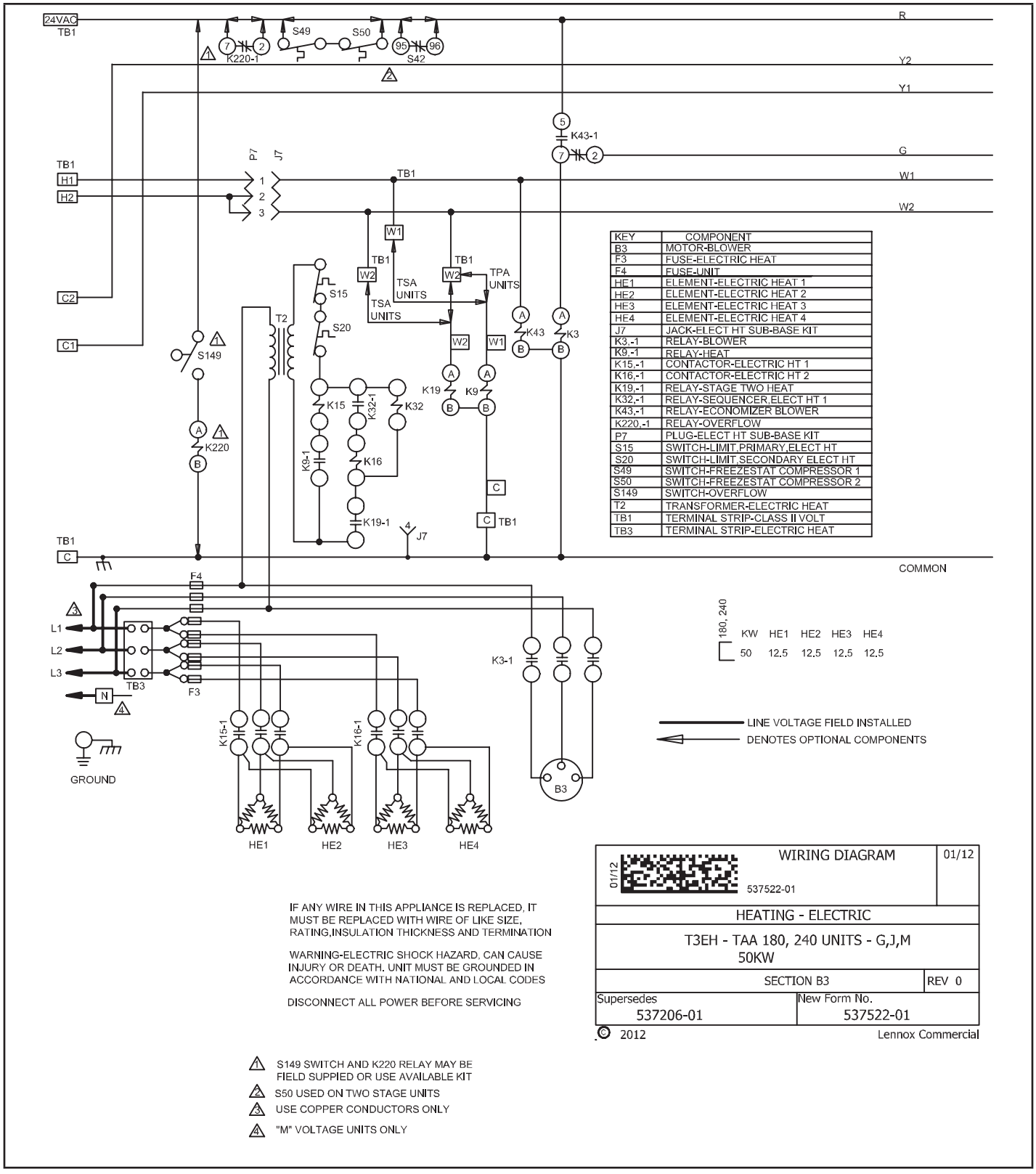
FIGURE 12. T3EH-25 and 35 (Y Voltage) for use with TAA 072 through 150



KEY	COMPONENT
B3	MOTOR-BLOWER
F3	FUSE-ELECTRIC HEAT
F4	FUSE-UNIT
HE1	ELEMENT-ELECTRIC HEAT 1
HE2	ELEMENT-ELECTRIC HEAT 2
HE3	ELEMENT-ELECTRIC HEAT 3
HE4	ELEMENT-ELECTRIC HEAT 4
J7	JACK-ELECT HT SUB-BASE KIT
K3,-1	RELAY-BLOWER
K9,-1	RELAY-HEAT
K15,-1	CONTACTOR-ELECTRIC HT 1
K43,-1	RELAY-ECONOMIZER BLOWER
K220,-1	RELAY-OVERFLOW
P7	PLUG-ELECT HT SUB-BASE KIT
S15	SWITCH-LIMIT,PRIMARY,ELECT HT
S20	SWITCH-LIMIT,SECONDARY ELECT HT
S42	OVERLOAD RELAY-BLOWER MTR
S49	SWITCH-FREEZESTAT COMPRESSOR 1
S50	SWITCH-FREEZESTAT COMPRESSOR 2
S149	SWITCH-OVERFLOW
T2	TRANSFORMER-ELECTRIC HEAT
TB1	TERMINAL STRIP-CLASS II VOLT

		KW	HE1	HE2	HE3	HE4
180,240	600V	20	10	10		
		30	15	15		
		40	10	10	10	10
	480V	20	10	10		
		30	7.5	7.5	7.5	7.5
		40	10	10	10	10

FIGURE 13. T3EH-20, 30 and 50 (G, J and M Voltages) for use with TAA 180 and 240



KEY	COMPONENT
B3	MOTOR-BLOWER
F3	FUSE-ELECTRIC HEAT
F4	FUSE-UNIT
HE1	ELEMENT-ELECTRIC HEAT 1
HE2	ELEMENT-ELECTRIC HEAT 2
HE3	ELEMENT-ELECTRIC HEAT 3
HE4	ELEMENT-ELECTRIC HEAT 4
J7	JACK-ELECT HT SUB-BASE KIT
K3,-1	RELAY-BLOWER
K9,-1	RELAY-HEAT
K15,-1	CONTACTOR-ELECTRIC HT 1
K16,-1	CONTACTOR-ELECTRIC HT 2
K19,-1	RELAY-STAGE TWO HEAT
K32,-1	RELAY-SEQUENCER,ELECT HT 1
K43,-1	RELAY-ECONOMIZER BLOWER
K220,-1	RELAY-OVERFLOW
P7	PLUG-ELECT HT SUB-BASE KIT
S15	SWITCH-LIMIT,PRIMARY,ELECT HT
S20	SWITCH-LIMIT,SECONDARY ELECT HT
S49	SWITCH-FREEZESTAT COMPRESSOR 1
S50	SWITCH-FREEZESTAT COMPRESSOR 2
S149	SWITCH-OVERFLOW
T2	TRANSFORMER-ELECTRIC HEAT
TB1	TERMINAL STRIP-CLASS II VOLT
TB3	TERMINAL STRIP-ELECTRIC HEAT

IF ANY WIRE IN THIS APPLIANCE IS REPLACED, IT MUST BE REPLACED WITH WIRE OF LIKE SIZE, RATING,INSULATION THICKNESS AND TERMINATION

WARNING-ELECTRIC SHOCK HAZARD. CAN CAUSE INJURY OR DEATH. UNIT MUST BE GROUNDED IN ACCORDANCE WITH NATIONAL AND LOCAL CODES

DISCONNECT ALL POWER BEFORE SERVICING

01/12	WIRING DIAGRAM 537522-01	01/12
HEATING - ELECTRIC		
T3EH - TAA 180, 240 UNITS - G,J,M 50KW		
SECTION B3		REV 0
Supersedes 537206-01	New Form No. 537522-01	

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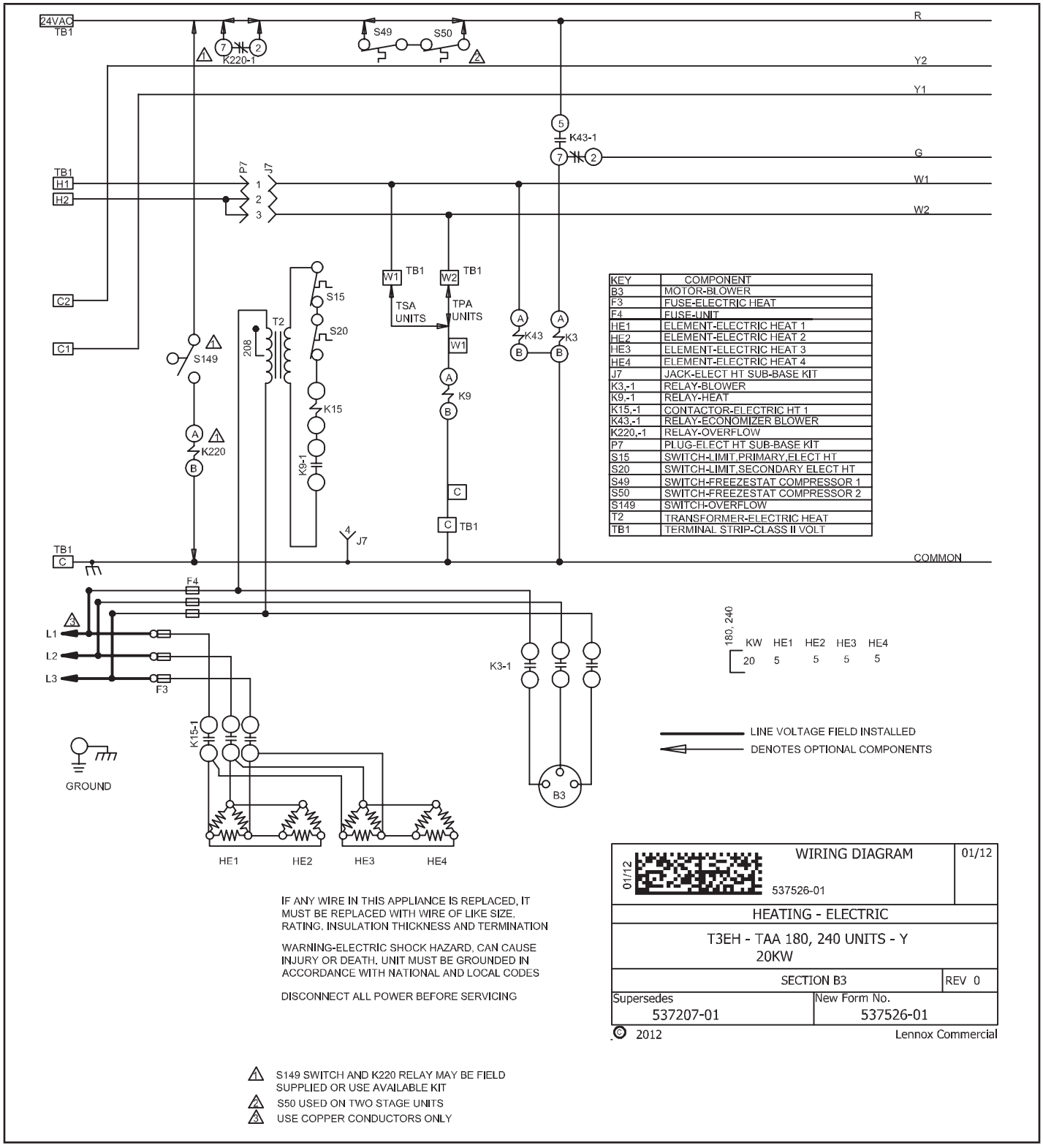
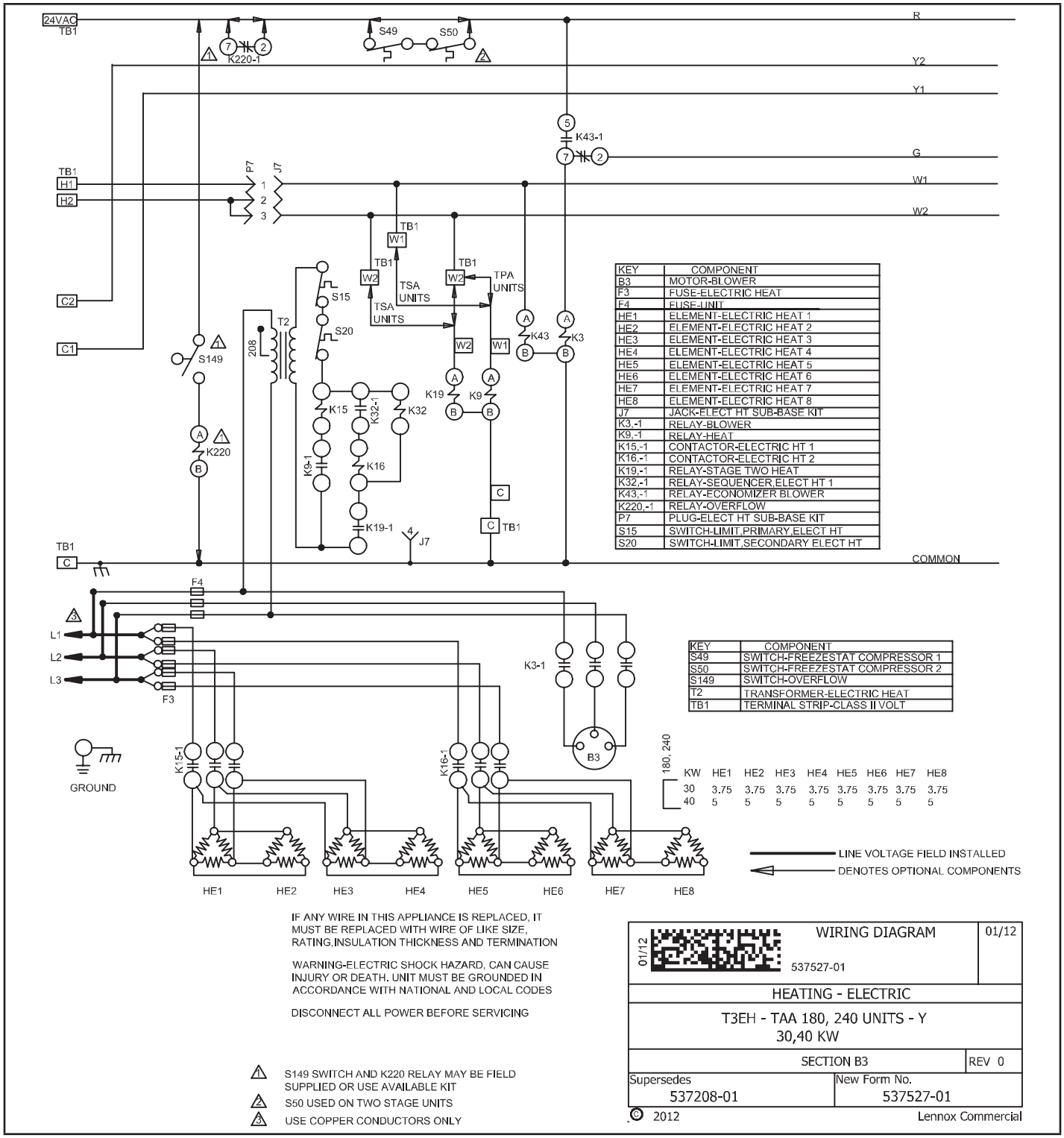
1. S149 SWITCH AND K220 RELAY MAY BE FIELD SUPPIED OR USE AVAILABLE KIT
2. S50 USED ON TWO STAGE UNITS
3. USE COPPER CONDUCTORS ONLY
4. "M" VOLTAGE UNITS ONLY

FIGURE 14. T3EH-50 (G, J and M Voltages) for use with TAA 180 and 240



KEY	COMPONENT
B3	MOTOR-BLOWER
F3	FUSE-ELECTRIC HEAT
F4	FUSE-UNIT
HE1	ELEMENT-ELECTRIC HEAT 1
HE2	ELEMENT-ELECTRIC HEAT 2
HE3	ELEMENT-ELECTRIC HEAT 3
HE4	ELEMENT-ELECTRIC HEAT 4
J7	JACK-ELECT HT SUB-BASE KIT
K3,-1	RELAY-BLOWER
K9,-1	RELAY-HEAT
K15,-1	CONTACTOR-ELECTRIC HT 1
K43,-1	RELAY-ECONOMIZER BLOWER
K220,-1	RELAY-OVERFLOW
P7	PLUG-ELECT HT SUB-BASE KIT
S15	SWITCH-LIMIT,PRIMARY,ELECT HT
S20	SWITCH-LIMIT,SECONDARY ELECT HT
S49	SWITCH-FREEZESTAT COMPRESSOR 1
S50	SWITCH-FREEZESTAT COMPRESSOR 2
S149	SWITCH-OVERFLOW
T2	TRANSFORMER-ELECTRIC HEAT
TB1	TERMINAL STRIP-CLASS II VOLT

FIGURE 15. T3EH-20 (Y Voltage) for use with TAA 180 and 240



KEY	COMPONENT
B3	MOTOR-BLOWER
F3	FUSE-ELECTRIC HEAT
F4	FUSE-UNIT
HE1	ELEMENT-ELECTRIC HEAT 1
HE2	ELEMENT-ELECTRIC HEAT 2
HE3	ELEMENT-ELECTRIC HEAT 3
HE4	ELEMENT-ELECTRIC HEAT 4
HE5	ELEMENT-ELECTRIC HEAT 5
HE6	ELEMENT-ELECTRIC HEAT 6
HE7	ELEMENT-ELECTRIC HEAT 7
HE8	ELEMENT-ELECTRIC HEAT 8
J7	JACK-ELECT HT SUB-BASE KIT
K3,-1	RELAY-BLOWER
K9,-1	RELAY-HEAT
K15,-1	CONTACTOR-ELECTRIC HT 1
K16,-1	CONTACTOR-ELECTRIC HT 2
K19,-1	RELAY-STAGE TWO HEAT
K32,-1	RELAY-SEQUENCER,ELECT HT 1
K43,-1	RELAY-ECONOMIZER BLOWER
K220,-1	RELAY-OVERFLOW
P7	PLUG-ELECT HT SUB-BASE KIT
S15	SWITCH-LIMIT,PRIMARY,ELECT HT
S20	SWITCH-LIMIT,SECONDARY ELECT HT

KEY	COMPONENT
S49	SWITCH-FREEZESTAT COMPRESSOR 1
S50	SWITCH-FREEZESTAT COMPRESSOR 2
S149	SWITCH-OVERFLOW
T2	TRANSFORMER-ELECTRIC HEAT
TB1	TERMINAL STRIP-CLASS II VOLT

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WARNING-ELECTRIC SHOCK HAZARD, CAN CAUSE INJURY OR DEATH. UNIT MUST BE GROUNDED IN ACCORDANCE WITH NATIONAL AND LOCAL CODES

DISCONNECT ALL POWER BEFORE SERVICING

1. S149 SWITCH AND K220 RELAY MAY BE FIELD SUPPLIED OR USE AVAILABLE KIT
2. S50 USED ON TWO STAGE UNITS
3. USE COPPER CONDUCTORS ONLY

01/12	WIRING DIAGRAM 537527-01	01/12
HEATING - ELECTRIC		
T3EH - TAA 180, 240 UNITS - Y 30,40 KW		
SECTION B3		REV 0
Supersedes 537208-01	New Form No. 537527-01	

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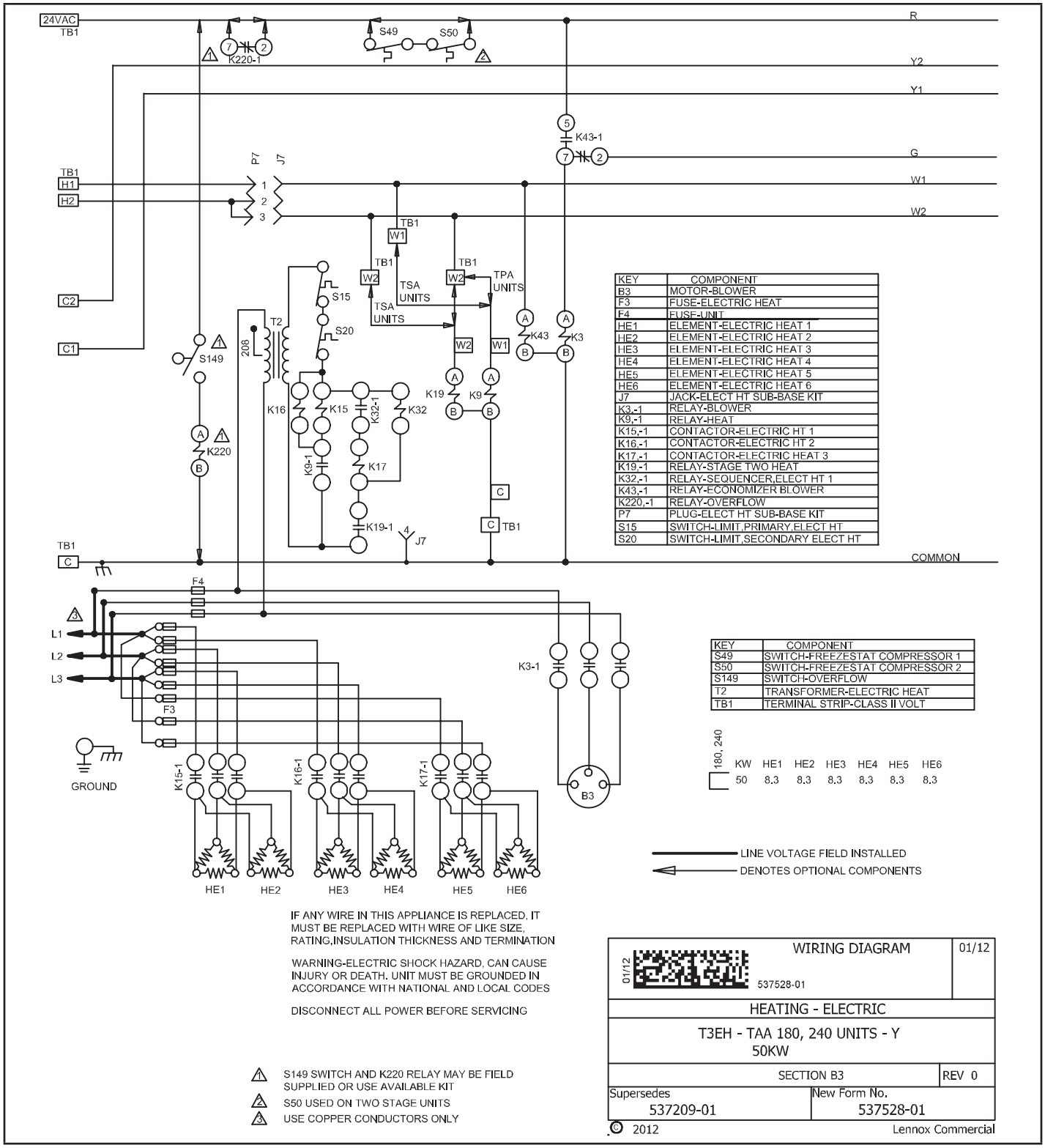
FIGURE 16. T3EH-30 and 40 (Y Voltage) for use with TAA 180 and 240



KEY	COMPONENT
B3	MOTOR-BLOWER
F3	FUSE-ELECTRIC HEAT
F4	FUSE-UNIT
HE1	ELEMENT-ELECTRIC HEAT 1
HE2	ELEMENT-ELECTRIC HEAT 2
HE3	ELEMENT-ELECTRIC HEAT 3
HE4	ELEMENT-ELECTRIC HEAT 4
HE5	ELEMENT-ELECTRIC HEAT 5
HE6	ELEMENT-ELECTRIC HEAT 6
J7	JACK-ELECT HT SUB-BASE KIT
K3,-1	RELAY-BLOWER
K9,-1	RELAY-HEAT
K15,-1	CONTACTOR-ELECTRIC HT 1
K16,-1	CONTACTOR-ELECTRIC HT 2
K17,-1	CONTACTOR-ELECTRIC HEAT 3
K19,-1	RELAY-STAGE TWO HEAT
K32,-1	RELAY-SEQUENCER,ELECT HT 1
K43,-1	RELAY-ECONOMIZER BLOWER
K220,-1	RELAY-OVERFLOW
P7	PLUG-ELECT HT SUB-BASE KIT
S15	SWITCH-LIMIT,PRIMARY,ELECT HT
S20	SWITCH-LIMIT,SECONDARY ELECT HT

KEY	COMPONENT
S49	SWITCH-FREEZESTAT COMPRESSOR 1
S50	SWITCH-FREEZESTAT COMPRESSOR 2
S149	SWITCH-OVERFLOW
T2	TRANSFORMER-ELECTRIC HEAT
TB1	TERMINAL STRIP-CLASS II VOLT

180, 240

KW	HE1	HE2	HE3	HE4	HE5	HE6
50	8.3	8.3	8.3	8.3	8.3	8.3

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WARNING-ELECTRIC SHOCK HAZARD, CAN CAUSE INJURY OR DEATH. UNIT MUST BE GROUNDED IN ACCORDANCE WITH NATIONAL AND LOCAL CODES

DISCONNECT ALL POWER BEFORE SERVICING

1. S149 SWITCH AND K220 RELAY MAY BE FIELD SUPPLIED OR USE AVAILABLE KIT
2. S50 USED ON TWO STAGE UNITS
3. USE COPPER CONDUCTORS ONLY

WIRING DIAGRAM	01/12
01/12 537528-01	
HEATING - ELECTRIC	
T3EH - TAA 180, 240 UNITS - Y 50KW	
SECTION B3	REV 0
Supersedes 537209-01	New Form No. 537528-01

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FIGURE 17. T3EH-50 (Y Voltage) for use with TAA 180 and 240

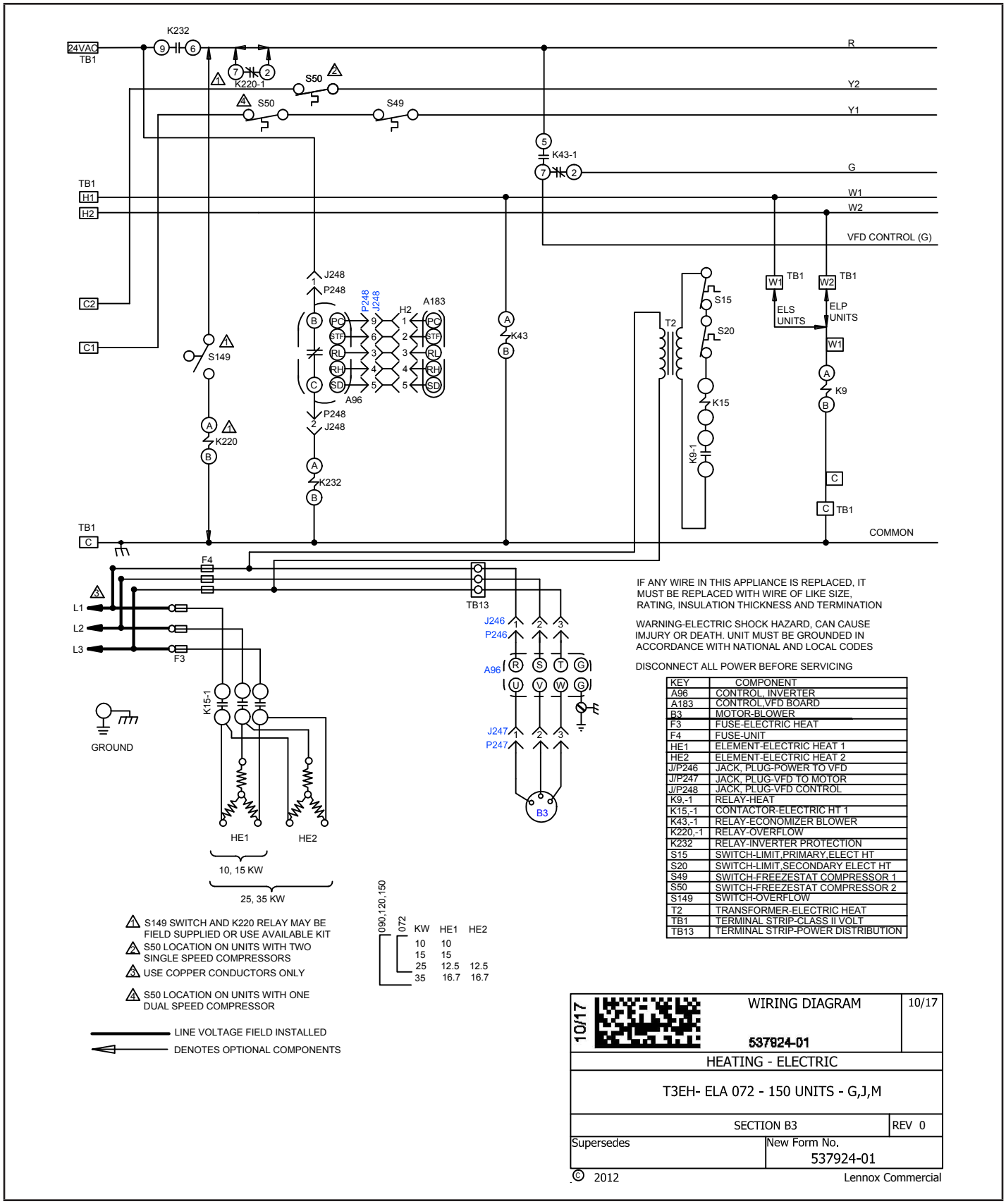
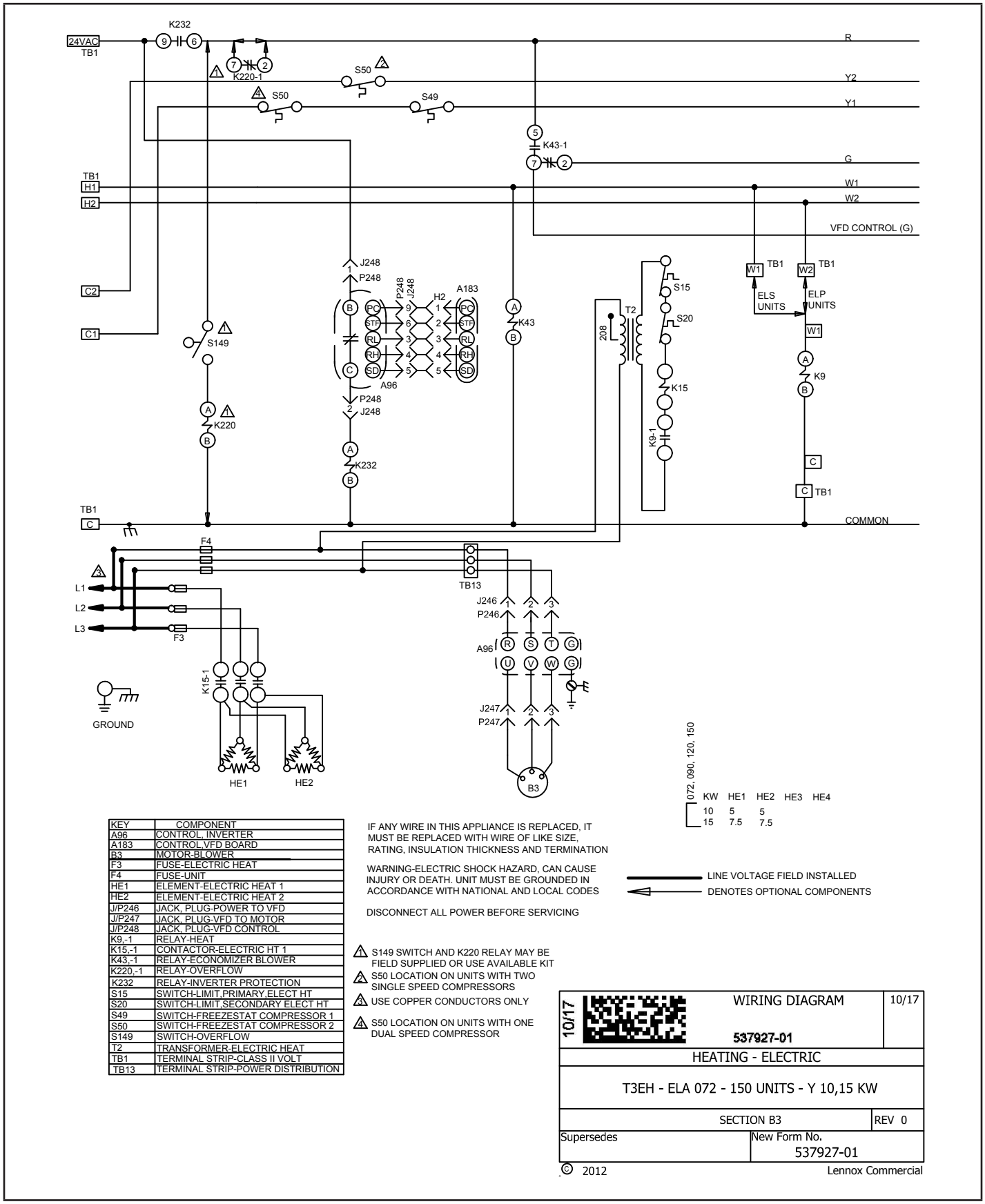


FIGURE 18. T3EH (G, J, M Voltage) for use with ELA 072-150 Units



KEY	COMPONENT
A96	CONTROL, INVERTER
A183	CONTROL,VFD BOARD
B3	MOTOR-BLOWER
F3	FUSE-ELECTRIC HEAT
F4	FUSE-UNIT
HE1	ELEMENT-ELECTRIC HEAT 1
HE2	ELEMENT-ELECTRIC HEAT 2
J/P246	JACK, PLUG-POWER TO VFD
J/P247	JACK, PLUG-VFD TO MOTOR
J/P248	JACK, PLUG-VFD CONTROL
K9,-1	RELAY-HEAT
K15,-1	CONTACTOR-ELECTRIC HT 1
K43,-1	RELAY-ECONOMIZER BLOWER
K220,-1	RELAY-OVERFLOW
K232	RELAY-INVERTER PROTECTION
S15	SWITCH-LIMIT,PRIMARY,ELECT HT
S20	SWITCH-LIMIT,SECONDARY ELECT HT
S49	SWITCH-FREEZESTAT COMPRESSOR 1
S50	SWITCH-FREEZESTAT COMPRESSOR 2
S149	SWITCH-OVERFLOW
T2	TRANSFORMER-ELECTRIC HEAT
TB1	TERMINAL STRIP-CLASS II VOLT
TB13	TERMINAL STRIP-POWER DISTRIBUTION

IF ANY WIRE IN THIS APPLIANCE IS REPLACED, IT MUST BE REPLACED WITH WIRE OF LIKE SIZE, RATING, INSULATION THICKNESS AND TERMINATION

WARNING-ELECTRIC SHOCK HAZARD, CAN CAUSE INJURY OR DEATH. UNIT MUST BE GROUNDED IN ACCORDANCE WITH NATIONAL AND LOCAL CODES

DISCONNECT ALL POWER BEFORE SERVICING

LINE VOLTAGE FIELD INSTALLED

DENOTES OPTIONAL COMPONENTS

1. S149 SWITCH AND K220 RELAY MAY BE FIELD SUPPLIED OR USE AVAILABLE KIT
2. S50 LOCATION ON UNITS WITH TWO SINGLE SPEED COMPRESSORS
3. USE COPPER CONDUCTORS ONLY
4. S50 LOCATION ON UNITS WITH ONE DUAL SPEED COMPRESSOR

10/17	WIRING DIAGRAM 537927-01	10/17
	HEATING - ELECTRIC	
	T3EH - ELA 072 - 150 UNITS - Y 10,15 KW	
	SECTION B3	REV 0
Supersedes	New Form No. 537927-01	

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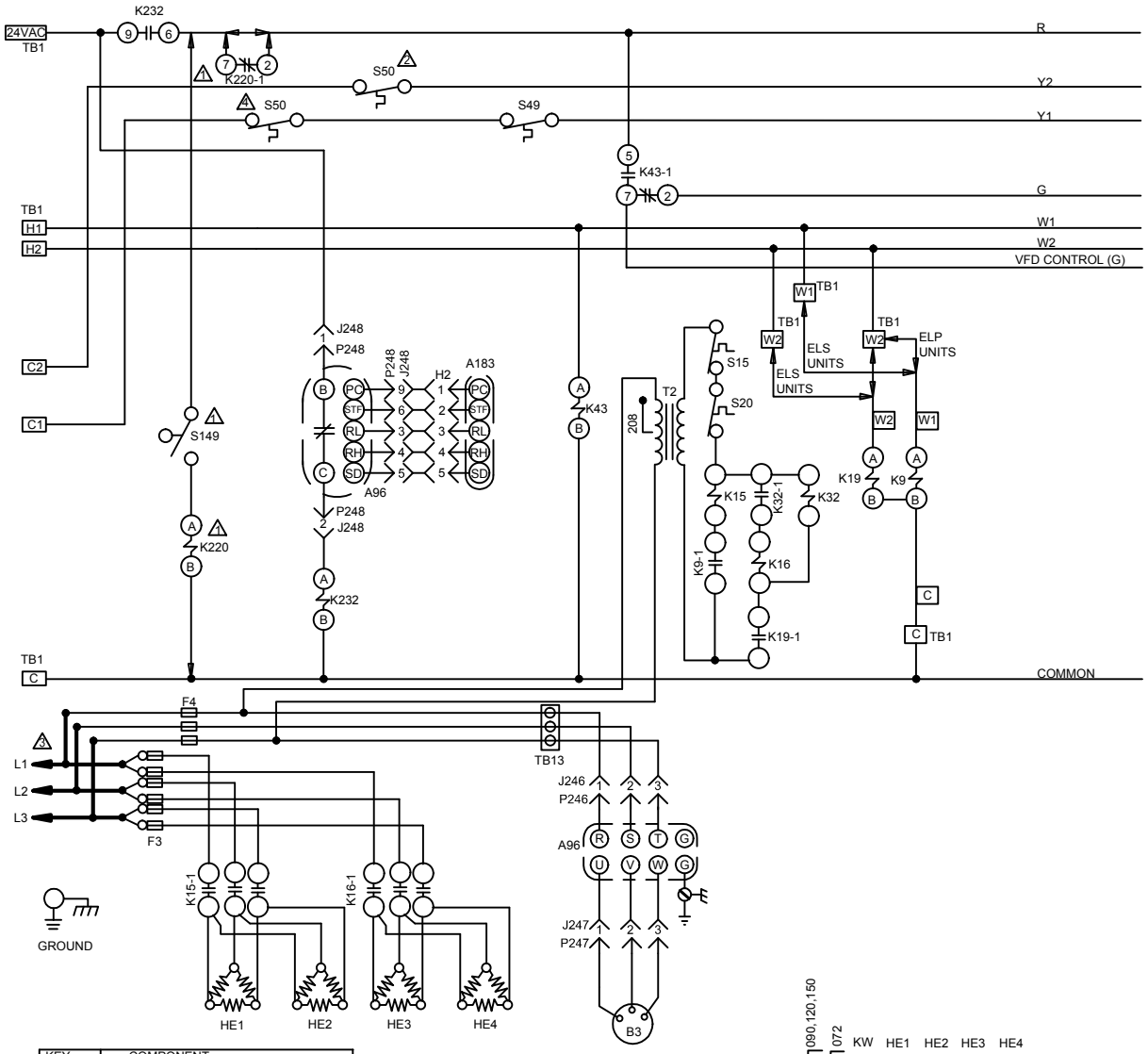
FIGURE 19. T3EH-10 / 15 (Y Voltage) for use with ELA 072-150 Units



KEY	COMPONENT
B3	MOTOR-BLOWER
B3	MOTOR-BLOWER
F3	FUSE-ELECTRIC HEAT
F4	FUSE-UNIT
HE1	ELEMENT-ELECTRIC HEAT 1
HE2	ELEMENT-ELECTRIC HEAT 2
HE3	ELEMENT-ELECTRIC HEAT 3
HE4	ELEMENT-ELECTRIC HEAT 4
J/P246	JACK, PLUG-POWER TO VFD
J/P247	JACK, PLUG-VFD TO MOTOR
J/P248	JACK, PLUG-VFD CONTROL
K9,-1	RELAY-HEAT
K15,-1	CONTACTOR-ELECTRIC HT 1
K16,-1	CONTACTOR-ELECTRIC HT 2
K19,-1	RELAY-STAGE TWO HEAT
K32,-1	RELAY-SEQUENCER,ELECT HT 1
K43,-1	RELAY-ECONOMIZER BLOWER
K220,-1	RELAY-OVERFLOW
K232	RELAY-INVERTER PROTECTION
S15	SWITCH-LIMIT,PRIMARY,ELECT HT
S20	SWITCH-LIMIT,SECONDARY ELECT HT
S49	SWITCH-FREEZESTAT COMPRESSOR 1
S50	SWITCH-FREEZESTAT COMPRESSOR 2
S149	SWITCH-OVERFLOW
T2	TRANSFORMER-ELECTRIC HEAT
TB1	TERMINAL STRIP-CLASS II VOLT
TB13	TERMINAL STRIP-CLASS II VOLT

IF ANY WIRE IN THIS APPLIANCE IS REPLACED, IT MUST BE REPLACED WITH WIRE OF LIKE SIZE, RATING,INSULATION THICKNESS AND TERMINATION

WARNING-ELECTRIC SHOCK HAZARD, CAN CAUSE INJURY OR DEATH. UNIT MUST BE GROUNDED IN ACCORDANCE WITH NATIONAL AND LOCAL CODES

DISCONNECT ALL POWER BEFORE SERVICING

1. S149 SWITCH AND K220 RELAY MAY BE FIELD SUPPLIED OR US AVAILABLE KIT
2. S50 LOCATION ON UNITS WITH TWO SINGLE SPEED COMPRESSORS
3. USE COPPER CONDUCTORS ONLY
4. S50 LOCATION ON UNITS WITH ONE DUAL SPEED COMPRESSOR

10/17	WIRING DIAGRAM 537928-01	10/17
HEATING - ELECTRIC		
T3EH- ELA 072 - 150 UNITS - Y 25,35 KW		
SECTION B3		REV 0
Supersedes	New Form No. 537928-01	

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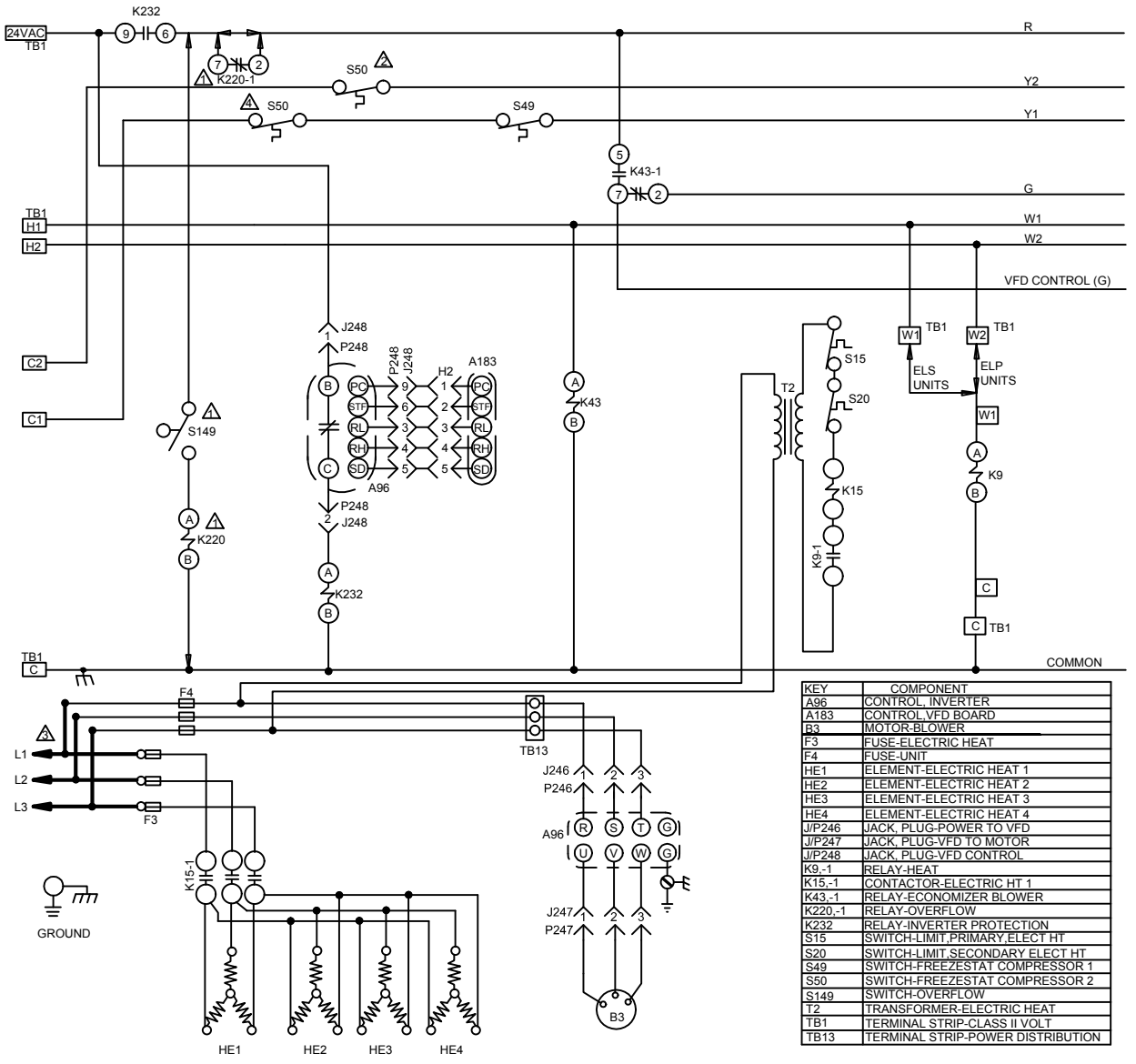
FIGURE 20. T3EH-25 / 35 (Y Voltage) for use with ELA 072-150 Units



KEY	COMPONENT
A96	CONTROL, INVERTER
A183	CONTROL,VFD BOARD
B3	MOTOR-BLOWER
F3	FUSE-ELECTRIC HEAT
F4	FUSE-UNIT
HE1	ELEMENT-ELECTRIC HEAT 1
HE2	ELEMENT-ELECTRIC HEAT 2
HE3	ELEMENT-ELECTRIC HEAT 3
HE4	ELEMENT-ELECTRIC HEAT 4
J/P246	JACK, PLUG-POWER TO VFD
J/P247	JACK, PLUG-VFD TO MOTOR
J/P248	JACK, PLUG-VFD CONTROL
K9,-1	RELAY-HEAT
K15,-1	CONTACTOR-ELECTRIC HT 1
K43,-1	RELAY-ECONOMIZER BLOWER
K220,-1	RELAY-OVERFLOW
K232	RELAY-INVERTER PROTECTION
S15	SWITCH-LIMIT,PRIMARY,ELECT HT
S20	SWITCH-LIMIT,SECONDARY ELECT HT
S49	SWITCH-FREEZESTAT COMPRESSOR 1
S50	SWITCH-FREEZESTAT COMPRESSOR 2
S149	SWITCH-OVERFLOW
T2	TRANSFORMER-ELECTRIC HEAT
TB1	TERMINAL STRIP-CLASS II VOLT
TB13	TERMINAL STRIP-POWER DISTRIBUTION

LINE VOLTAGE FIELD INSTALLED

DENOTES OPTIONAL COMPONENTS

IF ANY WIRE IN THIS APPLIANCE IS REPLACED, IT MUST BE REPLACED WITH WIRE OF LIKE SIZE, RATING, INSULATION THICKNESS AND TERMINATION

WARNING-ELECTRIC SHOCK HAZARD, CAN CAUSE IMJURY OR DEATH. UNIT MUST BE GROUNDED IN ACCORDANCE WITH NATIONAL AND LOCAL CODES

DISCONNECT ALL POWER BEFORE SERVICING

1. S149 SWITCH AND K220 RELAY MAY BE FIELD SUPPLIED OR USE AVAILABLE KIT
2. S50 LOCATION ON UNITS WITH TWO SINGLE SPEED COMPRESSORS
3. USE COPPER CONDUCTORS ONLY
4. S50 LOCATION ON UNITS WITH ONE DUAL SPEED COMPRESSOR

		KW	HE1	HE2	HE3	HE4
180,240	600V	20	10	10		
		30	15	15		
		40	10	10	10	10
	480V	20	10	10		
		30	7.5	7.5	7.5	7.5
		40	10	10	10	10

10/17	WIRING DIAGRAM ~~537926-01~~	10/17
HEATING - ELECTRIC		
T3EH - ELA 180,240 UNITS - G,J,M 20,30,40KW		
SECTION B3		REV 0
Supersedes	New Form No. 537926-01	

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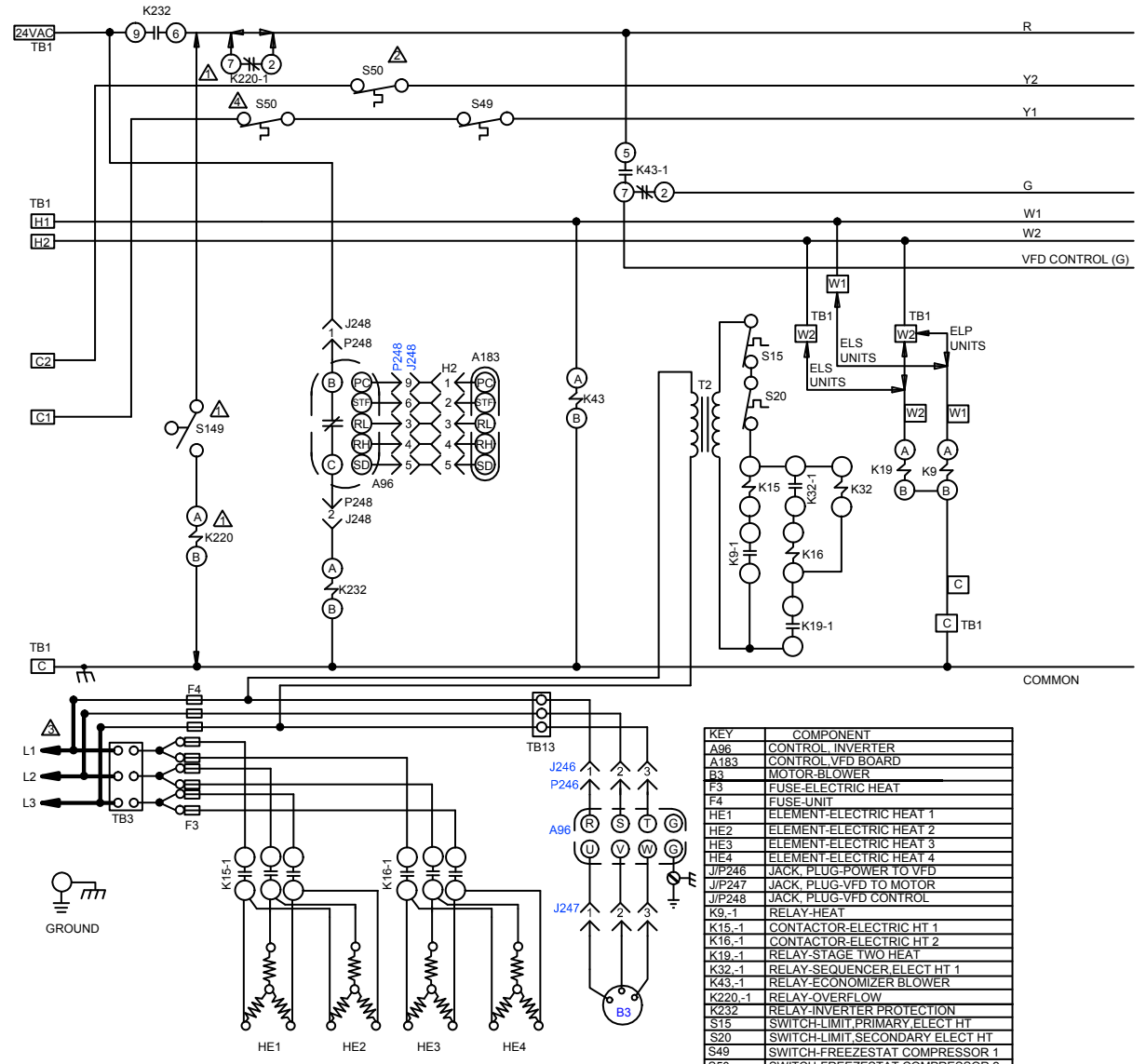
FIGURE 21. T3EH-20 / 30 / 40 (G, J, M Voltages) for use with ELA 180 and 240 Units



KEY	COMPONENT
A96	CONTROL, INVERTER
A183	CONTROL,VFD BOARD
B3	MOTOR-BLOWER
F3	FUSE-ELECTRIC HEAT
F4	FUSE-UNIT
HE1	ELEMENT-ELECTRIC HEAT 1
HE2	ELEMENT-ELECTRIC HEAT 2
HE3	ELEMENT-ELECTRIC HEAT 3
HE4	ELEMENT-ELECTRIC HEAT 4
J/P246	JACK, PLUG-POWER TO VFD
J/P247	JACK, PLUG-VFD TO MOTOR
J/P248	JACK, PLUG-VFD CONTROL
K9,-1	RELAY-HEAT
K15,-1	CONTACTOR-ELECTRIC HT 1
K16,-1	CONTACTOR-ELECTRIC HT 2
K19,-1	RELAY-STAGE TWO HEAT
K32,-1	RELAY-SEQUENCER,ELECT HT 1
K43,-1	RELAY-ECONOMIZER BLOWER
K220,-1	RELAY-OVERFLOW
K232	RELAY-INVERTER PROTECTION
S15	SWITCH-LIMIT,PRIMARY,ELECT HT
S20	SWITCH-LIMIT,SECONDARY ELECT HT
S49	SWITCH-FREEZESTAT COMPRESSOR 1
S50	SWITCH-FREEZESTAT COMPRESSOR 2
S149	SWITCH-OVERFLOW
T2	TRANSFORMER-ELECTRIC HEAT
TB1	TERMINAL STRIP-CLASS II VOLT
TB3	TERMINAL STRIP-ELECTRIC HEAT
TB13	TERMINAL STRIP-POWER DISTRIBUTION

1. S149 SWITCH AND K220 RELAY MAY BE FIELD SUPPIED OR USE AVAILABLE KIT
2. S50 LOCATION ON UNITS WITH TWO SINGLE SPEED COMPRESSORS
3. USE COPPER CONDUCTORS ONLY
4. S50 LOCATION ON UNITS WITH ONE DUAL SPEED COMPRESSOR

IF ANY WIRE IN THIS APPLIANCE IS REPLACED, IT MUST BE REPLACED WITH WIRE OF LIKE SIZE, RATING,INSULATION THICKNESS AND TERMINATION

WARNING-ELECTRIC SHOCK HAZARD, CAN CAUSE INJURY OR DEATH. UNIT MUST BE GROUNDED IN ACCORDANCE WITH NATIONAL AND LOCAL CODES

DISCONNECT ALL POWER BEFORE SERVICING

180, 240

KW	HE1	HE2	HE3	HE4
50	12.5	12.5	12.5	12.5

LINE VOLTAGE FIELD INSTALLED

DENOTES OPTIONAL COMPONENTS

01/18	WIRING DIAGRAM 537925-01	01/18
HEATING - ELECTRIC		
T3EH-ELA 180,240 UNITS - G,J,M		
SECTION B3		REV 1
Supersedes	New Form No. 537925-01	

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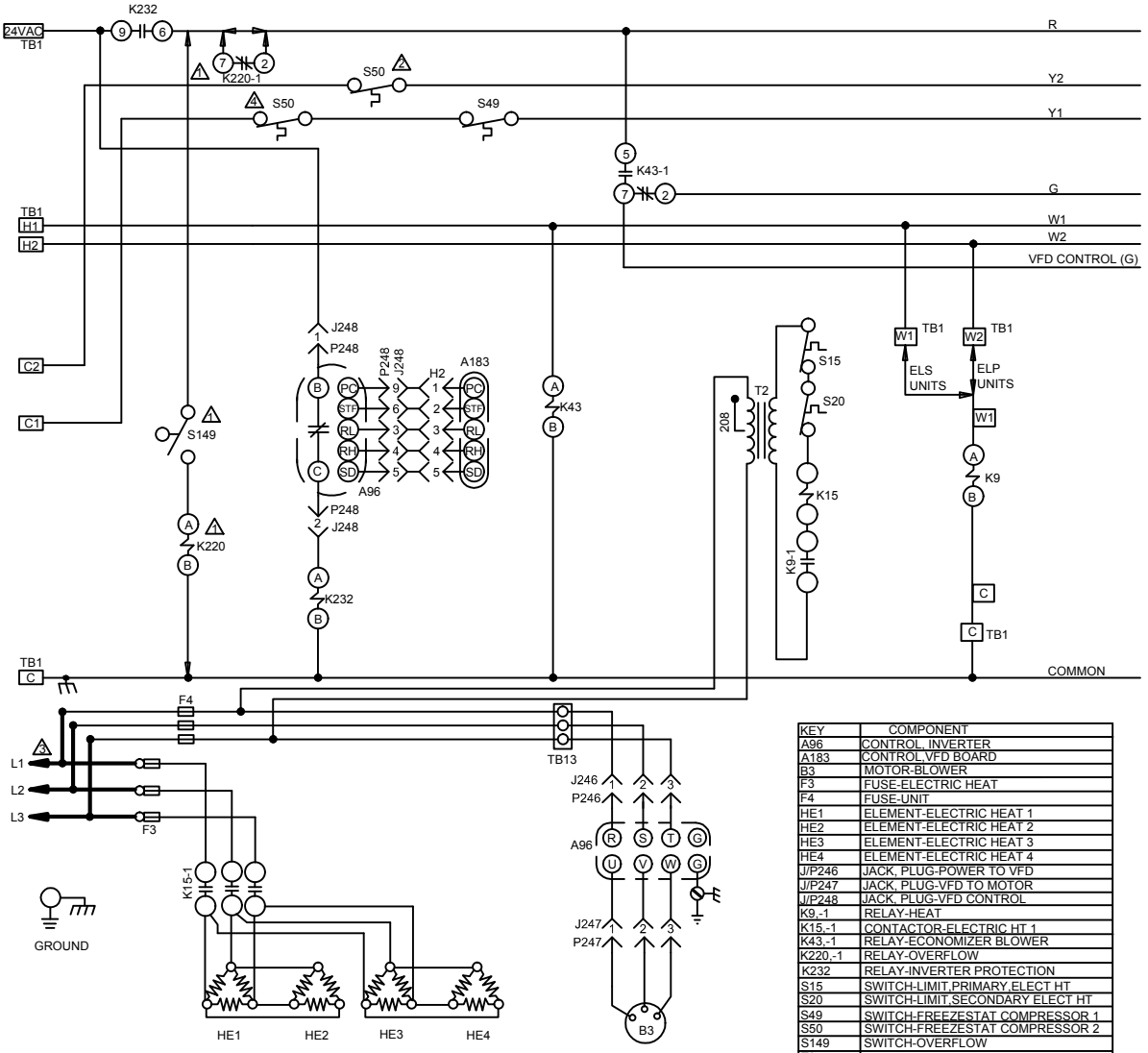
FIGURE 22. T3EH (G, J, M Voltages) for use with ELA 180 and 240 Units



KEY	COMPONENT
A96	CONTROL, INVERTER
A183	CONTROL,VFD BOARD
B3	MOTOR-BLOWER
F3	FUSE-ELECTRIC HEAT
F4	FUSE-UNIT
HE1	ELEMENT-ELECTRIC HEAT 1
HE2	ELEMENT-ELECTRIC HEAT 2
HE3	ELEMENT-ELECTRIC HEAT 3
HE4	ELEMENT-ELECTRIC HEAT 4
J/P246	JACK, PLUG-POWER TO VFD
J/P247	JACK, PLUG-VFD TO MOTOR
J/P248	JACK, PLUG-VFD CONTROL
K9,-1	RELAY-HEAT
K15,-1	CONTACTOR-ELECTRIC HT 1
K43,-1	RELAY-ECONOMIZER BLOWER
K220,-1	RELAY-OVERFLOW
K232	RELAY-INVERTER PROTECTION
S15	SWITCH-LIMIT,PRIMARY,ELECT HT
S20	SWITCH-LIMIT,SECONDARY ELECT HT
S49	SWITCH-FREEZESTAT COMPRESSOR 1
S50	SWITCH-FREEZESTAT COMPRESSOR 2
S149	SWITCH-OVERFLOW
T2	TRANSFORMER-ELECTRIC HEAT
TB1	TERMINAL STRIP-CLASS II VOLT
TB13	TERMINAL STRIP-CLASS II VOLT

IF ANY WIRE IN THIS APPLIANCE IS REPLACED, IT MUST BE REPLACED WITH WIRE OF LIKE SIZE, RATING, INSULATION THICKNESS AND TERMINATION

WARNING-ELECTRIC SHOCK HAZARD, CAN CAUSE INJURY OR DEATH. UNIT MUST BE GROUNDED IN ACCORDANCE WITH NATIONAL AND LOCAL CODES

DISCONNECT ALL POWER BEFORE SERVICING

1. S149 SWITCH AND K220 RELAY MAY BE FIELD SUPPLIED OR USE AVAILABLE KIT
2. S50 LOCATION ON UNITS WITH TWO SINGLE SPEED COMPRESSORS
3. USE COPPER CONDUCTORS ONLY
4. S50 LOCATION ON UNITS WITH ONE DUAL SPEED COMPRESSOR

180, 240

KW	HE1	HE2	HE3	HE4
20	5	5	5	5

LINE VOLTAGE FIELD INSTALLED

DENOTES OPTIONAL COMPONENTS

10/17	WIRING DIAGRAM 537929-01	10/17
HEATING - ELECTRIC		
T3EH - ELA 180,240 UNITS - Y 20KW		
SECTION B3		REV 0
Supersedes	New Form No. 537929-01	

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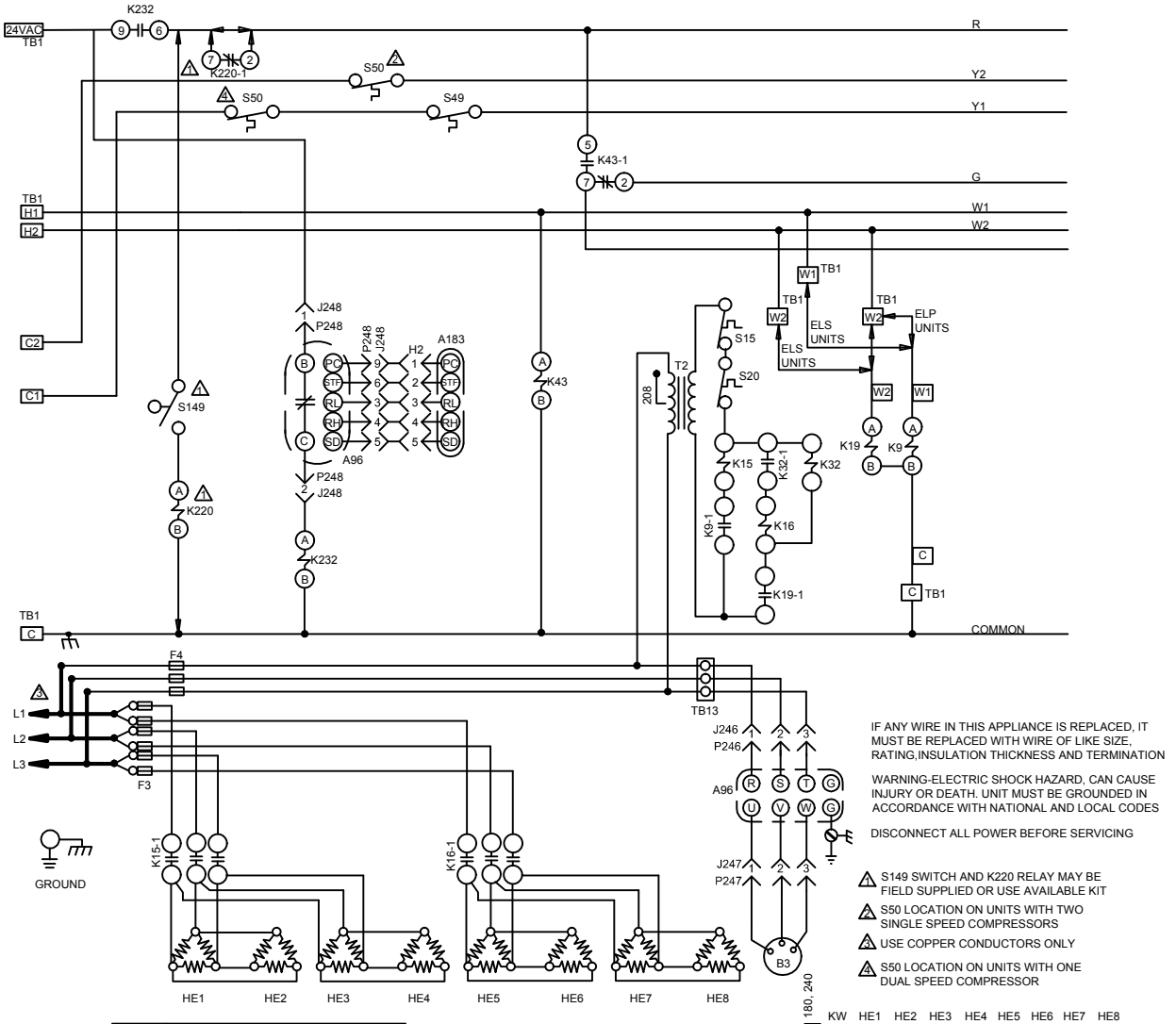
FIGURE 23. T3EH-20 (Y Voltage) for use with ELA 180 and 240 Units



KEY	COMPONENT
A96	CONTROL, INVERTER
A183	CONTROL,VFD BOARD
B3	MOTOR-BLOWER
F3	FUSE-ELECTRIC HEAT
F4	FUSE-UNIT
HE1	ELEMENT-ELECTRIC HEAT 1
HE2	ELEMENT-ELECTRIC HEAT 2
HE3	ELEMENT-ELECTRIC HEAT 3
HE4	ELEMENT-ELECTRIC HEAT 4
HE5	ELEMENT-ELECTRIC HEAT 5
HE6	ELEMENT-ELECTRIC HEAT 6
HE7	ELEMENT-ELECTRIC HEAT 7
HE8	ELEMENT-ELECTRIC HEAT 8
J/P246	JACK, PLUG-POWER TO VFD
J/P247	JACK, PLUG-VFD TO MOTOR
J/P248	JACK, PLUG-VFD CONTROL
K9,-1	RELAY-HEAT
K15,-1	CONTACTOR-ELECTRIC HT 1
K16,-1	CONTACTOR-ELECTRIC HT 2
K19,-1	RELAY-STAGE TWO HEAT
K32,-1	RELAY-SEQUENCER,ELECT HT 1
K43,-1	RELAY-ECONOMIZER BLOWER
K220,-1	RELAY-OVERFLOW
K232	RELAY-INVERTER PROTECTION
S15	SWITCH-LIMIT,PRIMARY,ELECT HT
S20	SWITCH-LIMIT,SECONDARY ELECT HT

KEY	COMPONENT
S49	SWITCH-FREEZESTAT COMPRESSOR 1
S50	SWITCH-FREEZESTAT COMPRESSOR 2
S149	SWITCH-OVERFLOW
T2	TRANSFORMER-ELECTRIC HEAT
TB1	TERMINAL STRIP-CLASS II VOLT
TB13	TERMINAL STRIP-CLASS II VOLT

10/17	WIRING DIAGRAM 537930-01	10/17
HEATING - ELECTRIC		
T3EH - ELA 180, 240 UNITS - Y 30,40 KW		
SECTION B3		REV 0
Supersedes	New Form No. 537930-01	

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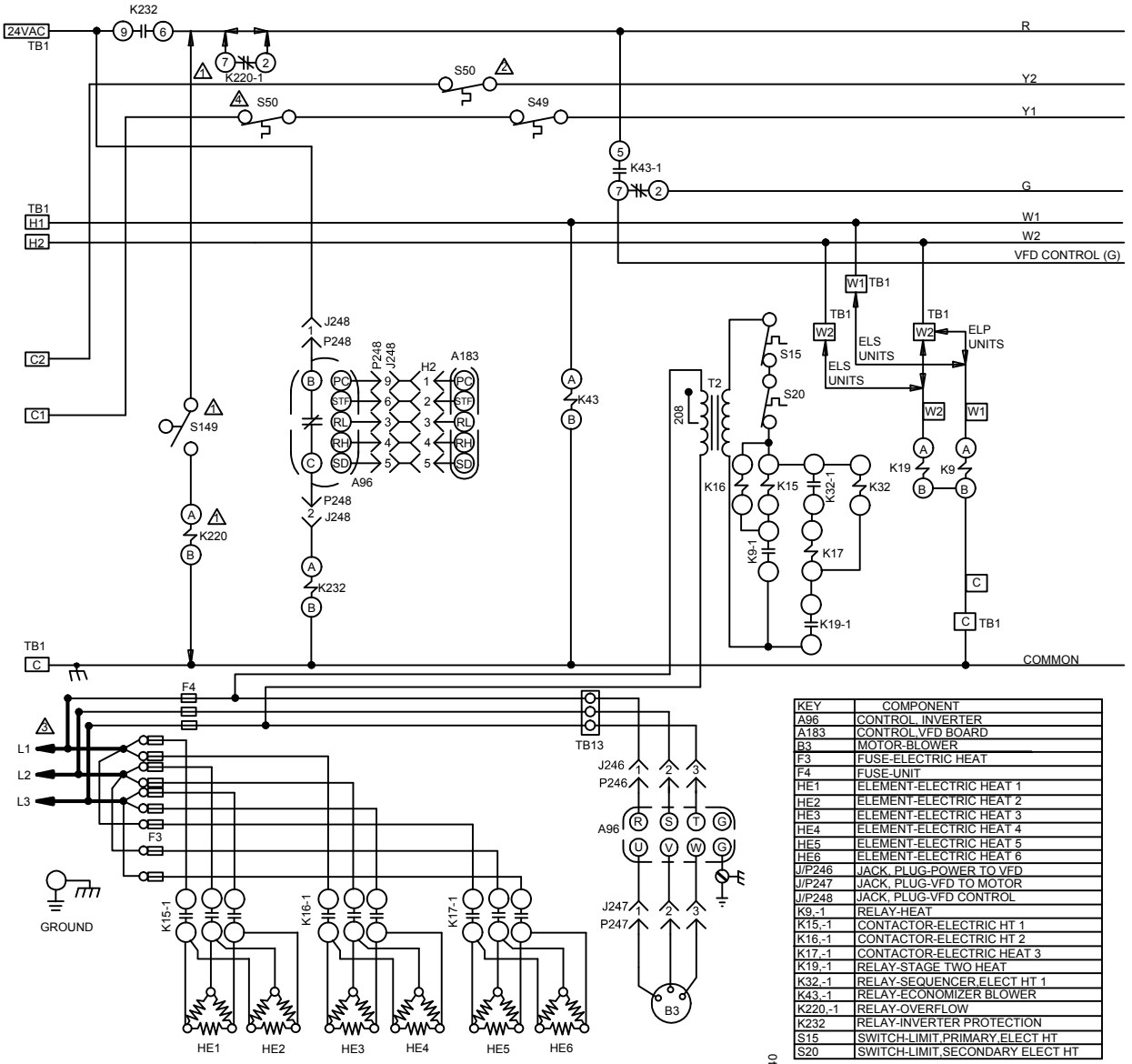
FIGURE 24. T3EH-30 / 40 (Y Voltage) for use with ELA 180 and 240 Units



KEY	COMPONENT
A96	CONTROL, INVERTER
A183	CONTROL,VFD BOARD
B3	MOTOR-BLOWER
F3	FUSE-ELECTRIC HEAT
F4	FUSE-UNIT
HE1	ELEMENT-ELECTRIC HEAT 1
HE2	ELEMENT-ELECTRIC HEAT 2
HE3	ELEMENT-ELECTRIC HEAT 3
HE4	ELEMENT-ELECTRIC HEAT 4
HE5	ELEMENT-ELECTRIC HEAT 5
HE6	ELEMENT-ELECTRIC HEAT 6
J/P246	JACK, PLUG-POWER TO VFD
J/P247	JACK, PLUG-VFD TO MOTOR
J/P248	JACK, PLUG-VFD CONTROL
K9,-1	RELAY-HEAT
K15,-1	CONTACTOR-ELECTRIC HT 1
K16,-1	CONTACTOR-ELECTRIC HT 2
K17,-1	CONTACTOR-ELECTRIC HEAT 3
K19,-1	RELAY-STAGE TWO HEAT
K32,-1	RELAY-SEQUENCER,ELECT HT 1
K43,-1	RELAY-ECONOMIZER BLOWER
K220,-1	RELAY-OVERFLOW
K232	RELAY-INVERTER PROTECTION
S15	SWITCH-LIMIT,PRIMARY,ELECT HT
S20	SWITCH-LIMIT,SECONDARY ELECT HT

180, 240

KW	HE1	HE2	HE3	HE4	HE5	HE6
50	8.3	8.3	8.3	8.3	8.3	8.3

LINE VOLTAGE FIELD INSTALLED

DENOTES OPTIONAL COMPONENTS

1. S149 SWITCH AND K220 RELAY MAY BE FIELD SUPPLIED OR USE AVAILABLE KIT
2. S50 LOCATION ON UNITS WITH TWO SINGLE SPEED COMPRESSORS
3. USE COPPER CONDUCTORS ONLY
4. S50 LOCATION ON UNITS WITH ONE DUAL SPEED COMPRESSOR

IF ANY WIRE IN THIS APPLIANCE IS REPLACED, IT MUST BE REPLACED WITH WIRE OF LIKE SIZE, RATING,INSULATION THICKNESS AND TERMINATION

WARNING-ELECTRIC SHOCK HAZARD, CAN CAUSE INJURY OR DEATH. UNIT MUST BE GROUNDED IN ACCORDANCE WITH NATIONAL AND LOCAL CODES

DISCONNECT ALL POWER BEFORE SERVICING

KEY	COMPONENT
S49	SWITCH-FREEZESTAT COMPRESSOR 1
S50	SWITCH-FREEZESTAT COMPRESSOR 2
S149	SWITCH-OVERFLOW
T2	TRANSFORMER-ELECTRIC HEAT
TB1	TERMINAL STRIP-CLASS II VOLT
TB13	TERMINAL STRIP-CLASS II VOLT

10/17	WIRING DIAGRAM 537931-01	10/17
HEATING - ELECTRIC		
T3EH - ELA 180, 240 UNITS - Y 50KW		
SECTION B3		REV 0
Supersedes	New Form No. 537931-01	

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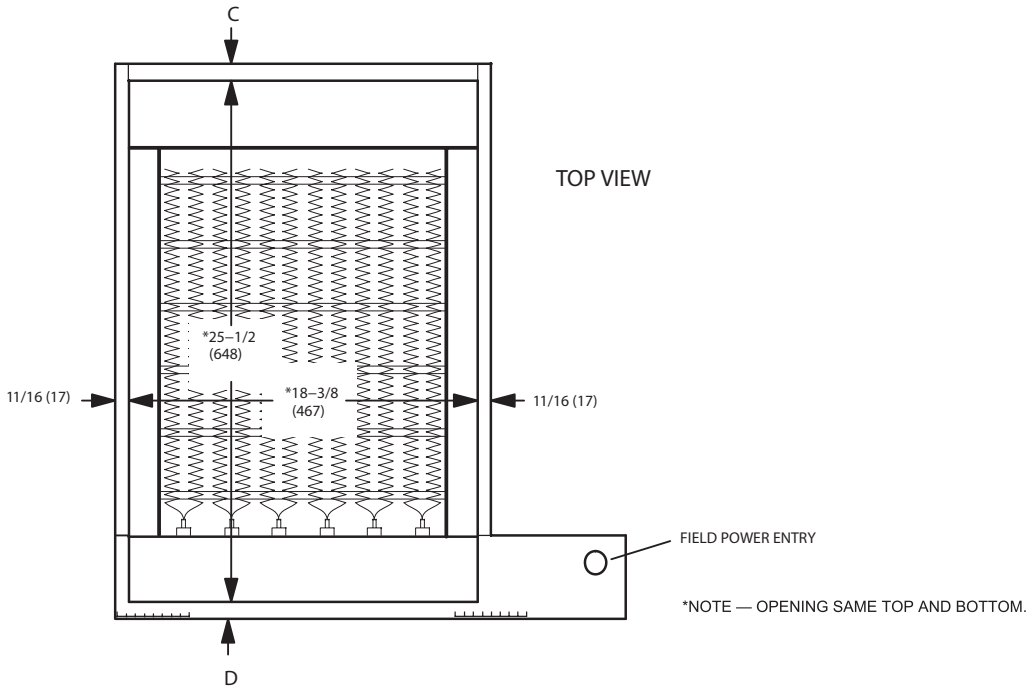
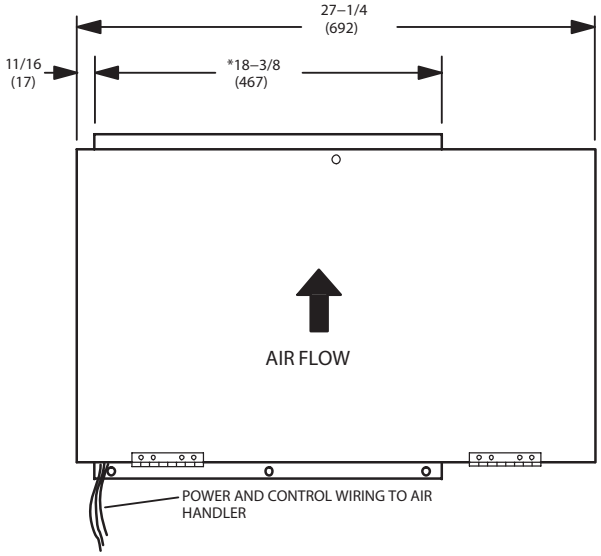
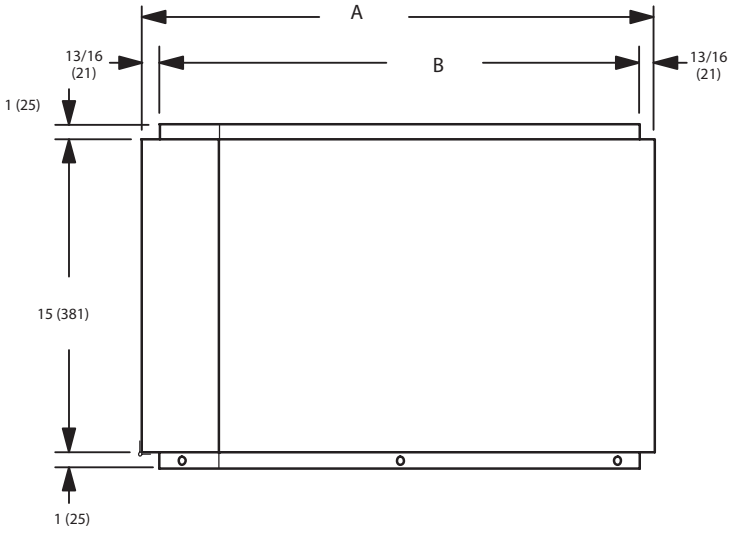
FIGURE 25. T3EH-50 (Y Voltage) for use with ELA 180 and 240 Units

Electric Heat Section Dimensions – inches (mm)





FRONT VIEW



SIDE VIEW

Air Handler Usage	A		B		C		D	
	in.	mm	in.	mm	in.	mm	in.	mm
ELA/TAA072 through ELA/TAA150	27–1/8	689	25–1/2	648	13/16	21	13/16	21
ELA/TAA180 through ELA/TAA240	56–3/4	1441	51–1/4	1302	1–1/2	38	4	102