

INSTALLER'S GUIDE

ALL phases of this installation must comply with NATIONAL,
STATE AND LOCAL CODES

Models:

- **AEHFD5X1BA
- **AEHFD10X1BA
- **AEHFD15X1BA
- **AEHFD20X1BA

Supplementary Electric Heaters for Air Handlers

SAFETY

WARNING may cause personal death or serious injury.

CAUTION may lead to injury or structural damage under some conditions.

!WARNING

HAZARDOUS VOLTAGE!

DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECTS BEFORE SERVICING INSURE THAT ALL MOTOR CAPACITORS HAVE DISCHARGED STORED VOLTAGE.

FAILURE TO DO THE ABOVE COULD RESULT IN DEATH OR SERIOUS INJURY.

!WARNING

FIBERGLASS WOOL EXPOSURE!

REFER TO OWNER'S INFORMATION MANUAL PROVIDED WITH THIS UNIT FOR PROPER INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS.

DURING THE INSTALLATION OF ELECTRIC HEATING ACCESSORIES, BE CAREFUL NOT TO DAMAGE THE GLASS LEAD WOOL OF THE AHU.

DISTURBING THE INSULATION IN THIS PRODUCT DURING INSTALLATION, MAINTENANCE OR REPAIR WILL EXPOSE YOU TO AIRBORNE PARTICLES OF GLASS WOOL FIBERS AND CERAMIC FIBERS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER THROUGH INHALATION. GLASS WOOL FIBERS COULD ALSO CAUSE RESPIRATORY, SKIN OR EYE IRRITATION.

!WARNING

FIRE HAZARD!

WITH HEAT PUMP INSTALLATIONS, SOME ELECTRIC HEATERS ARE POSITION SENSITIVE. USE ONLY APPROVED HEATER TO UNIT COMBINATIONS PER NAMEPLATE AND SET BLOWER AIRFLOW SPEED PER NAMEPLATE INSTRUCTIONS.

WHEN HEATERS COME SUPPLIED WITH CIRCUIT BREAKERS, USE 240/208 VOLT SUPPLY POWER WITH 120 VOLTS (NOMINAL) TO GROUND.

FAILURE TO FOLLOW THE ABOVE COULD RESULT IN DEATH, SERIOUS INJURY OR EQUIPMENT DAMAGE.

ATTENTION INSTALLING PERSONNEL

Prior to installation, thoroughly familiarize yourself with this Installation Manual. Comply with all safety warnings. During installation or repair, caution is to be observed

It is your responsibility to install the product safely and to educate the customer on its safe use.

1. Electrical Data

Table 1. Electrical data

Air Handler Model	Voltage-Phase-Hz	Power Supply Wiring Gauge	Motor HP	Motor Steps	Minmum Circuit AMPS	Fuse (A)
**AEAMPVT24D21BA	208/230/240~1Ph-60Hz	14AWG	1/2	7	5.0	15
**AEAMPVT36D21BA			1/2		5.0	
**AEAMPVT48F21BA			3/4		7.0	
**AEAMPVT60F21BA			3/4		7.0	

NOTE: The parameters in the table do not include electric heating.

2. Electric Heat Data

Table 2. Electric heat data

Kit Model	Air Handlers Model	Electric Heat (kW)	MIN. Circuit Ampacity (A)			MAX. Fuse or Breaker (HACR) Ampacity (A)		
			208V	230 V	240 V	208 V	230 V	240 V
**AEHFD5X1BA	**AEAMPVT24D21BA	5	22.6	24.95	26	25	30	30
**AEHFD10X1BA		10	45.2	49.9	52	50	60	60
**AEHFD5X1BA	**AEAMPVT36D21BA	5	22.6	24.95	26	25	30	30
**AEHFD10X1BA		10	45.2	49.9	52	50	60	60
**AEHFD15X1BA		10+5	45.2+22.6	49.9+24.95	52+26	25+50	30+60	30+60
**AEHFD5X1BA	**AEAMPVT48F21BA	5	22.6	24.95	26	25	30	30
**AEHFD10X1BA		10	45.2	49.9	52	50	60	60
**AEHFD15X1BA		10+5	45.2+22.6	49.9+24.95	52+26	25+50	30+60	30+60
**AEHFD20X1BA		10+10	45.2+45.2	49.9+49.9	52+52	50+50	60+60	60+60
**AEHFD5X1BA	**AEAMPVT60F21BA	5	22.6	24.95	26	25	30	30
**AEHFD10X1BA		10	45.2	49.9	52	50	60	60
**AEHFD15X1BA		10+5	45.2+22.6	49.9+24.95	52+26	25+50	30+60	30+60
**AEHFD20X1BA		10+10	45.2+45.2	49.9+49.9	52+52	50+50	60+60	60+60

*MCA and Max Fuse Ampacity contains the motor amps.

●Electric heat kits are suitable for air handler multiple position installation. ●means available ×means unavailable

Safety Cautions All electric work must be performed by qualified personnel.

AEHFDX1BA series is designed and approved to be installed in the IV18 or TOP AHU series air handlers.

●Check the **AEHFD**X1BA label to confirm **AEHFD**X1BA size based on room load under lowest ambient temperature.

●Inspect all heating elements and whether heater element wires. Contact local distributor immediately if there is any occurred damage.

Warning

- Disconnect all external power supplies before performing installation and servicing. Turn off accessory heater power switch if applicable. Failure to do so may cause serious injury.
- **AEHFD**X1BA must be properly grounded and use copper supply wires. ▪ Make sure to follow national electric code and local regulations.
- When installing it in an enclosed area such as a garage, heater elements should have a minimum clearance of 18" from the floor to insure the proper ventilation.

3. Available electric auxiliary heater

When unit is installed with electric auxiliary heater, the fan speed selection must meet the following static pressure requirements, and the gray boxes part is not allowed to use electric auxiliary heating.

Air Handler Model	Motor Speed /CFM	Available electric auxiliary heater									
		External Static Pressure-Inches W.C.[Psi]									
		0	0.1	0.16	0.2	0.3	0.4	0.5	0.6	0.7	0.8
	[0]	[.003]	[.005]	[.007]	[.010]	[.014]	[.018]	[.021]	[.025]	[.028]	
**AEAMPVT24D21BA	Tap (7)	1173	1130	1086	1065	1021	956	909	838	791	720
	Tap (6)	1139	1095	1050	1028	983	916	867	795	747	675
	Tap (5)	1105	1059	1013	990	944	875	826	752	703	629
	Tap (4)	1072	1024	977	953	906	835	785	709	659	583
	Tap (3)	1038	989	940	916	868	795	743	666	615	538
	Tap (2)	1004	954	904	879	829	754	702	623	571	492
	Tap (1)	970	919	868	842	791	714	661	580	527	446
**AEAMPVT36D21BA	Tap (7)	1539	1510	1481	1467	1438	1395	1360	1306	1271	1218
	Tap (6)	1440	1407	1374	1358	1325	1276	1237	1179	1140	1082
	Tap (5)	1340	1304	1267	1248	1211	1156	1114	1052	1010	947
	Tap (4)	1241	1200	1159	1139	1098	1036	992	924	879	812
	Tap (3)	1173	1130	1086	1065	1021	956	909	838	791	720
	Tap (2)	1105	1059	1013	990	944	875	826	752	703	629
	Tap (1)	1038	989	940	916	868	795	743	666	615	538
**AEAMPVT48F21BA	Tap (7)	1871	1836	1801	1784	1749	1697	1654	1589	1545	1481
	Tap (6)	1779	1746	1713	1696	1663	1613	1572	1510	1469	1408
	Tap (5)	1687	1655	1624	1608	1577	1529	1490	1432	1393	1335
	Tap (4)	1502	1474	1446	1432	1404	1362	1327	1275	1241	1188
	Tap (3)	1410	1377	1345	1329	1296	1248	1210	1154	1116	1060
	Tap (2)	1317	1281	1244	1225	1189	1133	1093	1032	992	931
	Tap (1)	1225	1184	1143	1122	1081	1019	976	911	867	802
**AEAMPVT60F21BA	Tap (7)	2056	2017	1979	1960	1922	1864	1817	1745	1698	1627
	Tap (6)	1871	1836	1801	1784	1749	1697	1654	1589	1545	1481
	Tap (5)	1687	1655	1624	1608	1577	1529	1490	1432	1393	1335
	Tap (4)	1502	1474	1446	1432	1404	1362	1327	1275	1241	1188
	Tap (3)	1410	1377	1345	1329	1296	1248	1210	1154	1116	1060
	Tap (2)	1317	1281	1244	1225	1189	1133	1093	1032	992	931
	Tap (1)	1225	1184	1143	1122	1081	1019	976	911	867	802

4. INSTALLATION INSTRUCTIONS "ATT**KEH"

Electric Heater Kits For use in Air Handlers

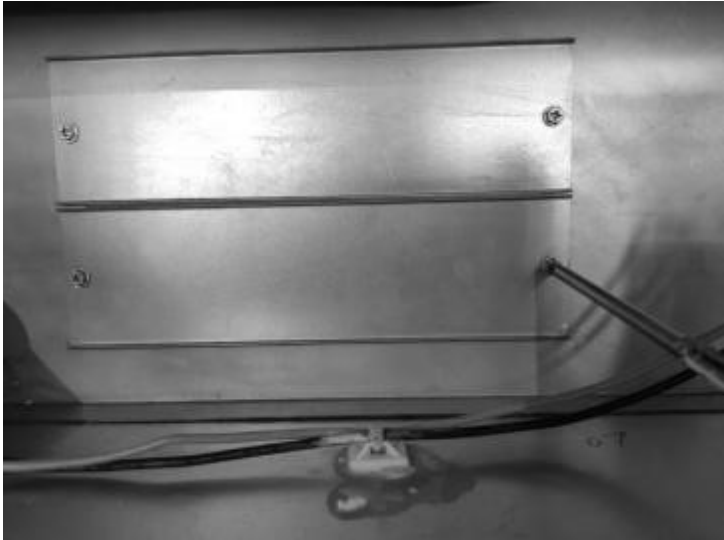
ATTENTION INSTALLING PERSONNEL

Prior to installation, thoroughly familiarize yourself with this installation manual. Observe all safety warnings. During installation or repair, caution is to be observed. It is your responsibility to install the product safely and to educate the customer on its safe use.

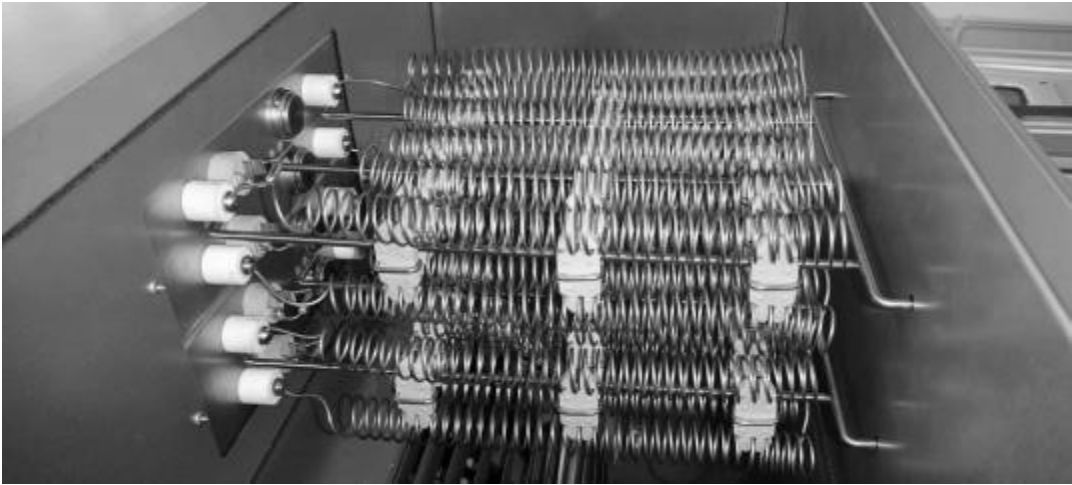
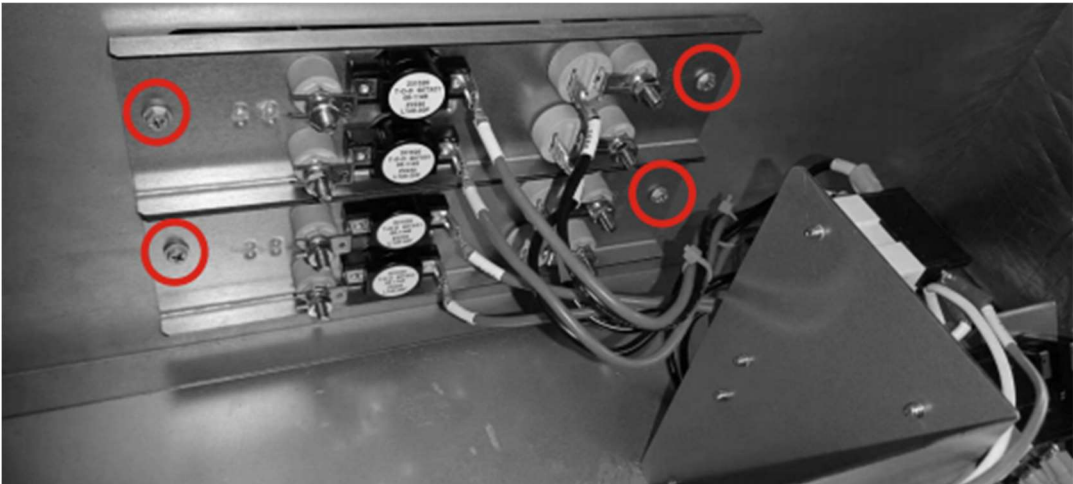
STEP 1. Unfasten 4 screws to take away the blower access panel of the air handler.



STEP 2.Remove the cover plate from the air handler.

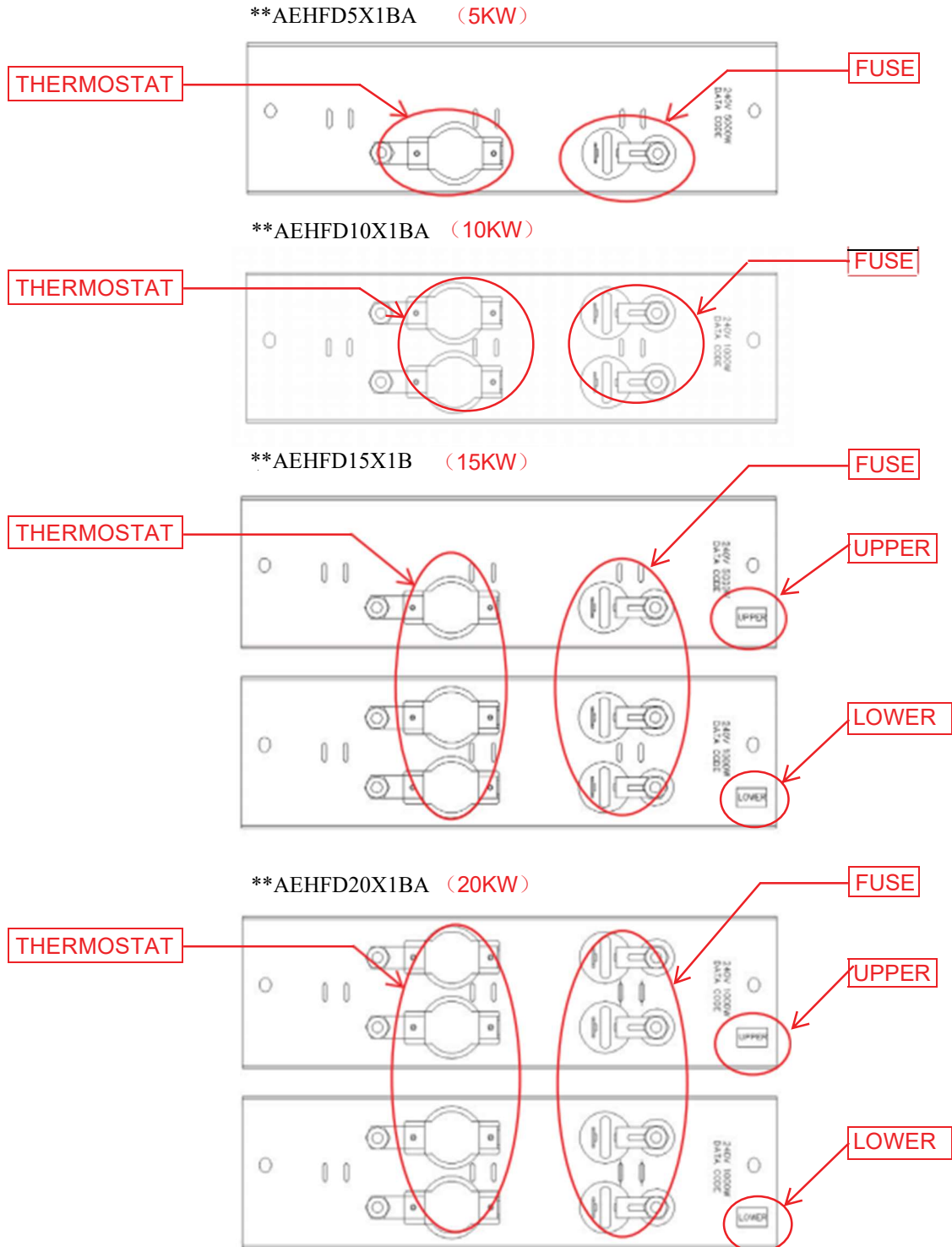


STEP 3.Slide the heater kit into the slot and secure element plate with previously removed screws .

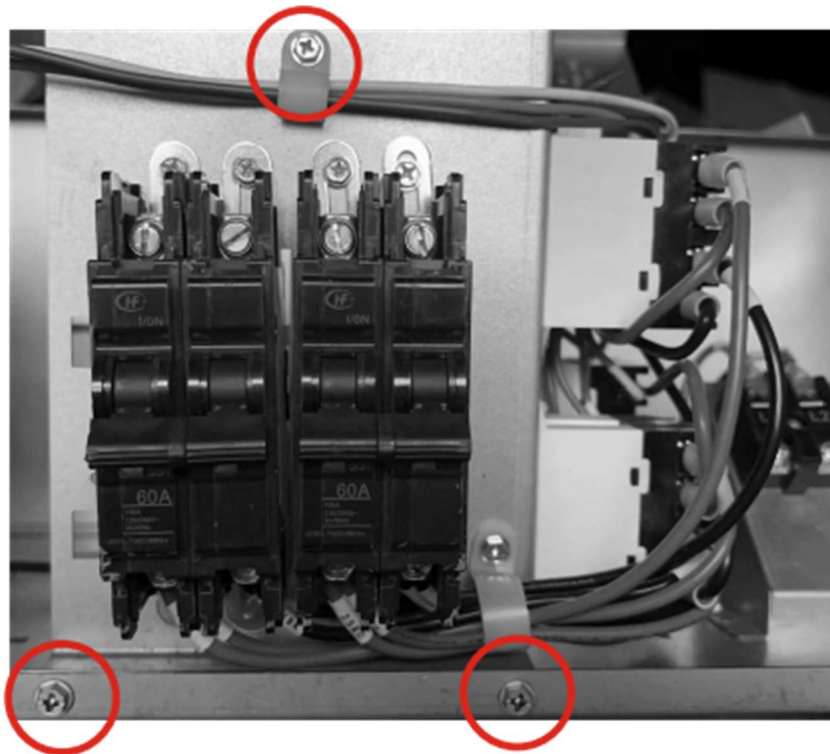


When sliding the heater kit into the slot ensure that it is installed in the correct orientation described below. Thermostat will be on the left hand side and the fuse will be on the right hand side.

When two elements are being used ensure that "UPPER" and "LOWER" elements are installed in the correct slots and orientations.



STEP 4. Align the attachment clip and the hole and fasten the loose wires by using wire tie.

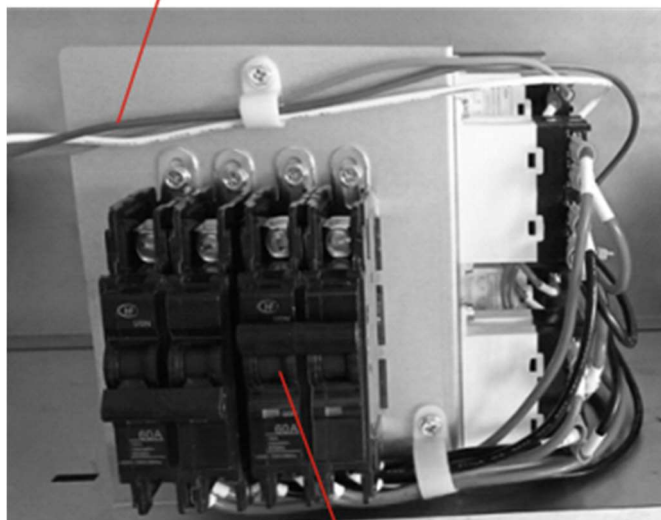


STEP 5. Install the circuit breaker into the mounting rail, break out appropriate area of the plastic circuit breaker cover on the access panel of the air handler.

CONNECT TO 3PINS



CHECK SCREWS



CHECK SCREWS

STEP 6. The labels for the circuit diagram of the electric heater are to be pasted in this area.



WARNING

FIRE, ELECTRICAL SHOCK, HAZARD

After connecting all wires, check all screws of breaker and make sure all screws are properly tight.

Failure to do so will result in breaker malfunction, fire, death, personal injury and property damage.

NOTE :

- When indoor control board receives W1/W2 signal, electric heater will be energized and indoor blower will be turned on.
- When W1/W2 signal is off, indoor blower will be turned off.
- Blower motor runs when "c" is energized, and off when "c" is de-energized.

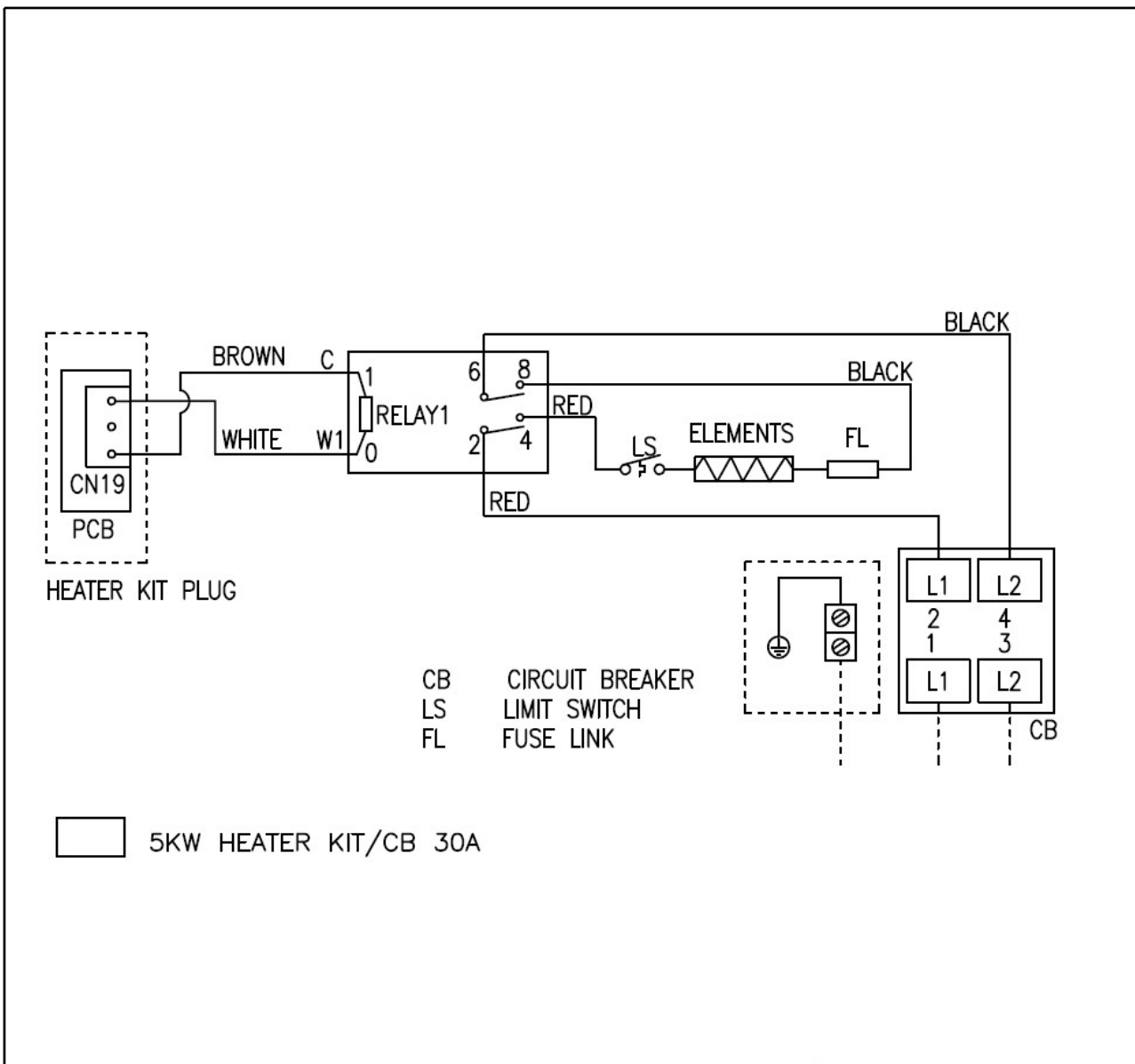


Figure 7-1 Wiring diagram for 5KW electric heat

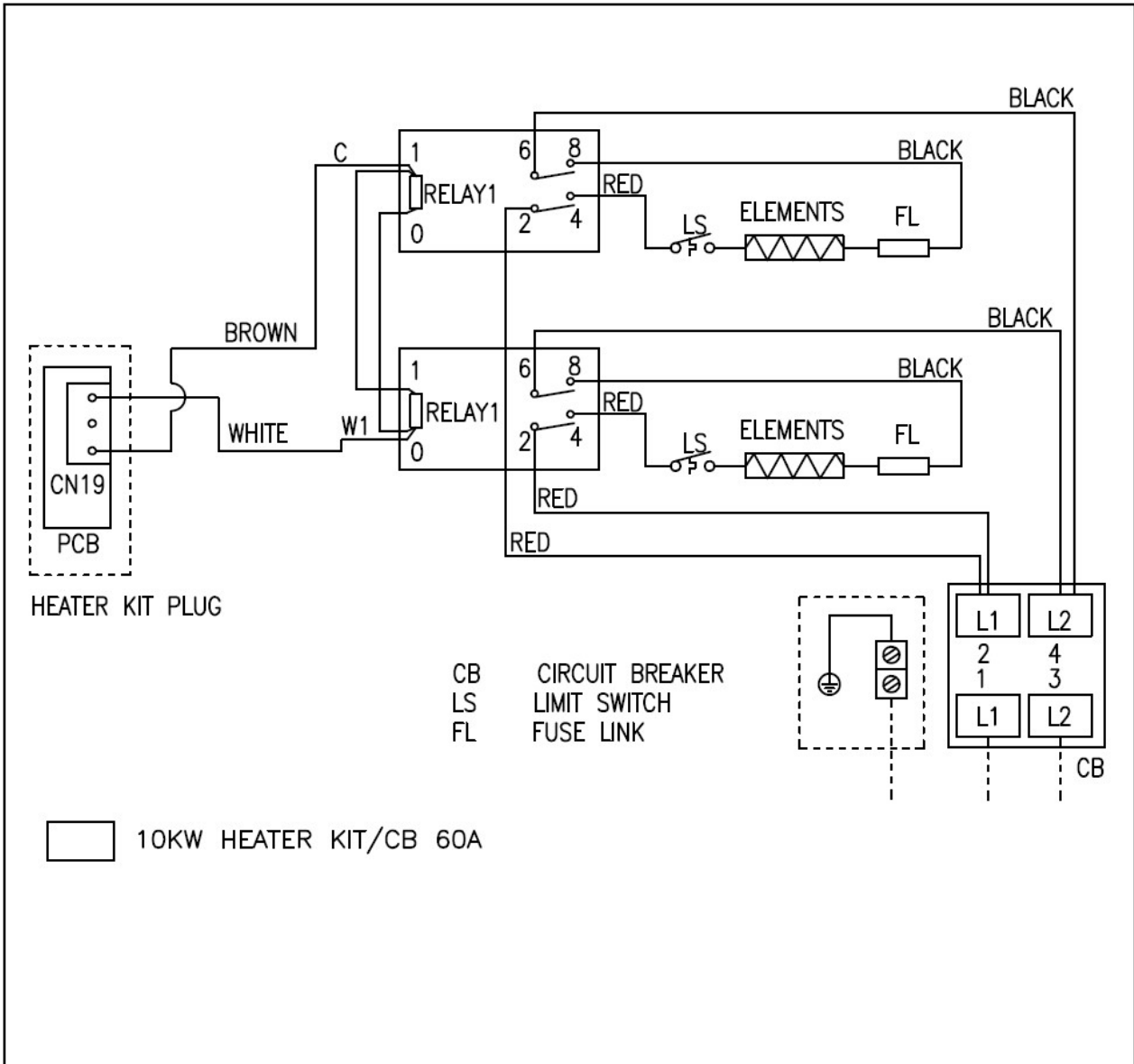


Figure 7-2 Wiring diagram for 10KW electric heat

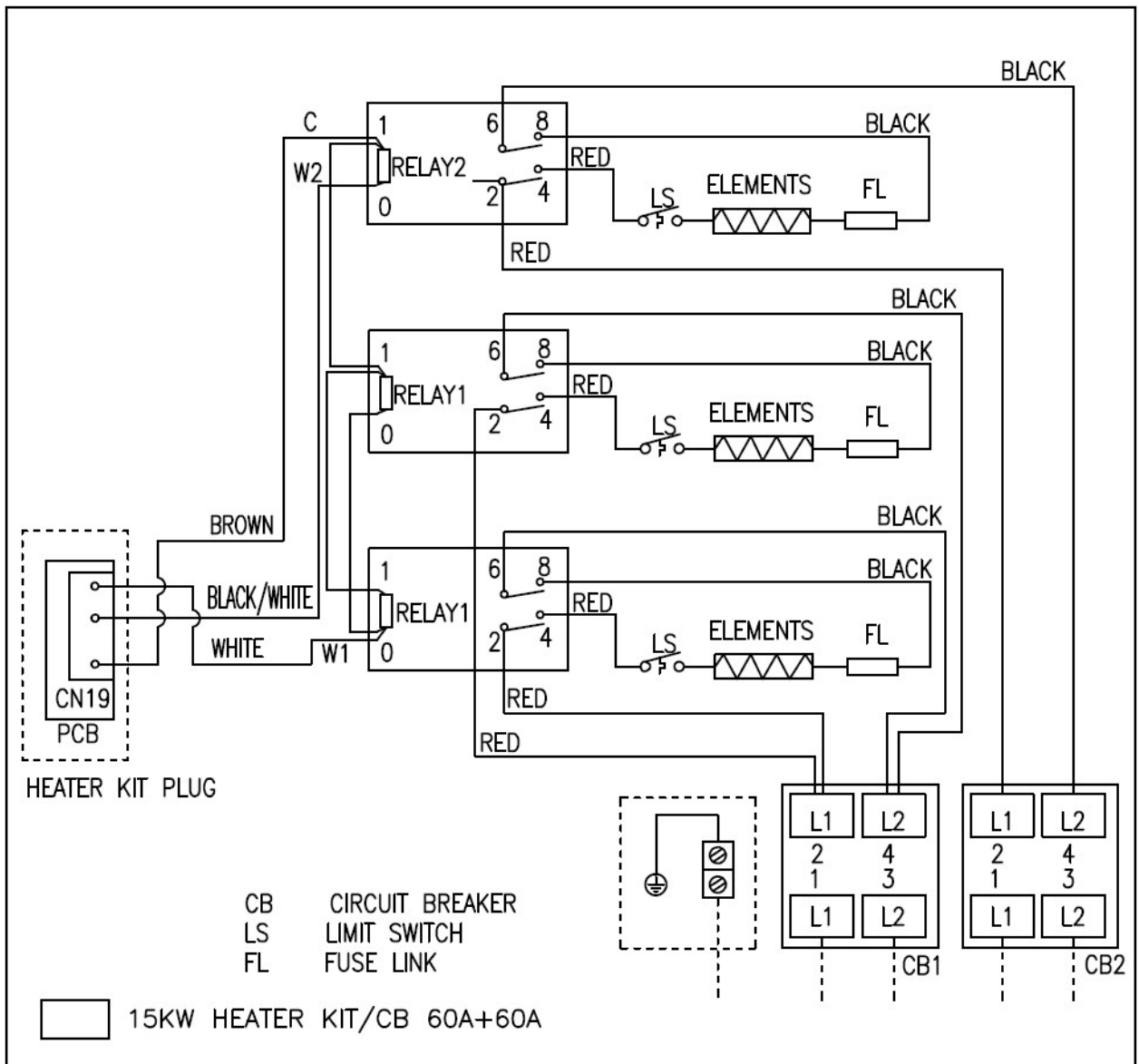


Figure 7-3 Wiring diagram for 15KW electric heat

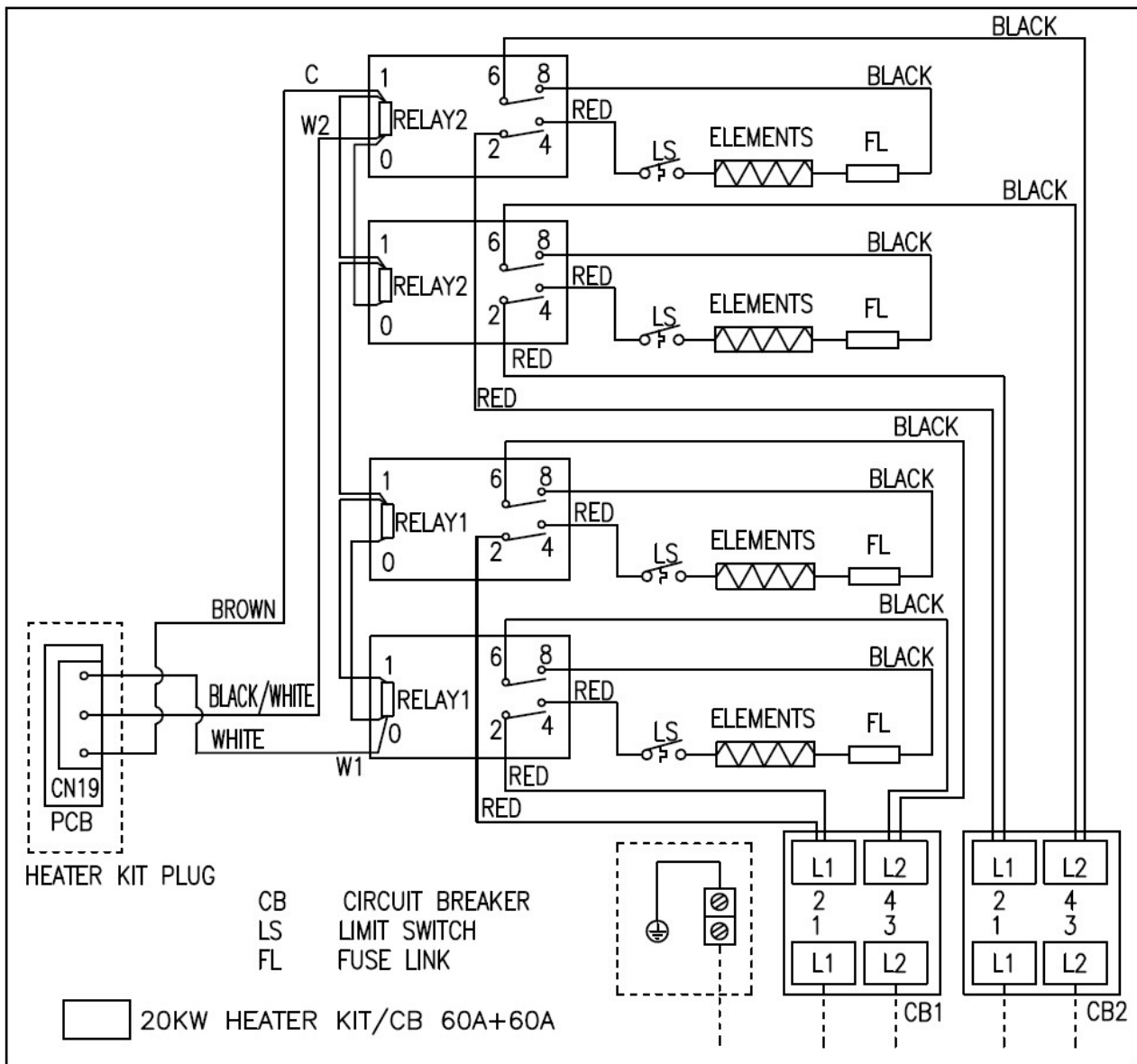


Figure 7-4Wiring diagram for 20KW electric heat

The manufacturer has a policy of continuous data improvement and it reserves the right to change design and specifications without notice. We are committed to using environmentally conscious print practices.