

# MRCOOL® Signature Series TruInverter™ Heat Kit

INSTALLATION & OWNER'S MANUAL

**MODELS:**

MCAEHFD\*X1BA

Read this manual carefully before installation and keep it where the operator can easily find it for future reference.

Due to updates and constantly improving performance, the information and instructions within this manual are subject to change without notice.

Version Date: February 5, 2026

Please visit [www.mrcool.com/documentation](http://www.mrcool.com/documentation) to ensure you have the latest version of this manual.



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## Safety Precautions

### Read Before Using

Incorrect usage may cause serious damage or injury.

The symbols below are used throughout this manual to indicate instructions that should be followed closely or actions that should be avoided to prevent death, injury, and/or property damage.



Indicates the possibility of personal injury or loss of life.



Indicates the possibility of property damage or serious consequences.

### **WARNING HAZARDOUS VOLTAGE**

Disconnect all power, including remote disconnects, before servicing. Ensure that all capacitors have been discharged.

Failure to do the above could result in death or serious injury.

### **WARNING FIBERGLASS**

Reference this manual for proper installation, operating, and maintenance instructions.

During installation of electric heating accessories, be careful not to damage the glass lead wool of the air handler.

Disturbing the insulation in the air handler 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 can also cause respiratory, skin, or eye irritation.

### **WARNING FIRE HAZARD**

With heat pump installations, some electric heaters are position sensitive. Use only an compatible electric heater and unit combinations, per the system's nameplate, and set the blower airflow speed according to the system's instructions.

Use 208/230V power supply with 120V nominal to ground.

Failure to follow the above instructions can result in death, serious injury, or equipment damage.

## ! ATTENTION

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 educate the customer on its safe use.

### 2.1 Electrical Data

Air Handler Model	Voltage-Phase-Hz	Power Supply Wiring Gauge	Motor HP	Motor Steps	Minimum Circuit Amps	Fuse (A)
MCAEAMPVT24D21BA	208/230/240~1Ph-60Hz	14AWG	1/2	7	5	15
MCAEAMPVT36D21BA			1/2		5	
MCAEAMPVT48F21BA			3/4		7	
MCAEAMPVT60F21BA			3/4		7	

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

### 2.2 Electric Heat Data

Kit Model	Air Handler Model	Electric Heat (kW)	Min. Circuit Ampacity (A)			Max. Fuse or Breaker (HACR) Ampacity (A)		
			208V	230V	240V	208V	230V	240V
MCAEHFD5X1BA	MCAEAMPVT24D21BA	5	22.6	24.95	26	25	30	30
MCAEHFD10X1BA		10	45.2	49.9	52	50	60	60
MCAEHFD5X1BA	MCAEAMPVT36D21BA	5	22.6	24.95	26	25	30	30
MCAEHFD10X1BA		10	45.2	49.9	52	50	60	60
MCAEHFD15X1BA		10+5	45.5+22.6	49.9+24.95	52+26	25+50	30+60	30+60
MCAEHFD5X1BA	MCAEAMPVT48F21BA	5	22.6	24.95	26	25	30	30
MCAEHFD10X1BA		10	45.2	49.9	52	50	60	60
MCAEHFD15X1BA		10+5	45.5+22.6	49.9+24.95	52+26	25+50	30+60	30+60
MCAEHFD20X1BA		10+10	45.2+45.2	49.9+49.9	52+52	50+50	60+60	60+60
MCAEHFD5X1BA	MCAEAMPVT60F21BA	5	22.6	24.95	26	25	30	30
MCAEHFD10X1BA		10	45.2	49.9	52	50	60	60
MCAEHFD15X1BA		10+5	45.5+22.6	49.9+24.95	52+26	25+50	30+60	30+60
MCAEHFD20X1BA		10+10	45.2+45.2	49.9+49.9	52+52	50+50	60+60	60+60

Note: MCA and Max. Fuse Ampacity contains the motor amps.

## 2 OVERVIEW

Electric heat kits are suitable for multi-position air handler installations.

• Means available

x Means unavailable

MCAEHFD\*\*X1BA series is designed and approved to be installed in the IV18 or top air handler series.

• Check the MCAEHFD\*\*X1BA label to confirm the size of the MCAEHFD\*\*X1BA size based on the room load under the lowest ambient temperature.

• Inspect all heating elements and wires. Contact MRCOOL® immediately if there is any damage has occurred.

### WARNING

All electrical work must be performed by qualified personnel.

Disconnect all external power before installing or servicing. Turn off the accessory heater power switch, if applicable. Failure to do so can cause serious injury.

MCAEHFD\*\*X1BA must be properly grounded and use copper supply wires. Make sure to follow national electrical code and local regulations.

When installing the heater kit in an enclosed area such as a garage, the heater elements should have a minimum clearance of 18in. (45.72cm.) from the floor to ensure proper ventilation.

### 2.3 Fan Speeds

When the unit is installed with an electric auxiliary heater, the fan speed selection must meet the following static pressure requirements. The highlighted red boxes are not allowed to use electric auxiliary heating.

Model	Motor Speed/ CFM	Total Equivalent Length ft (m)									
		External Static Pressure-Inches W.C. (PSI)									
		0 (0)	.1 (.003)	.16 (.005)	.2 (.007)	.3 (.010)	.4 (.014)	.5 (.018)	.6 (.021)	.7 (.025)	.8 (.028)
MCAESHV8T2421BA	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	802	623	571	492
	Tap (1)	970	919	868	842	791	714	661	580	527	446
MCAESHV9T3621BA	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	852	703	629
	Tap (1)	1038	989	940	916	868	795	743	666	615	538

Model	Motor Speed/ CFM	Total Equivalent Length ft (m)									
		External Static Pressure-Inches W.C. (PSI)									
		0	.1	.16	.2	.3	.4	.5	.6	.7	.8
		(0)	(.003)	(.005)	(.007)	(.010)	(.014)	(.018)	(.021)	(.025)	(.028)
MCAESHV8T4821BA	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
MCAESHV7T6021BA	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

## 2.4 Installation

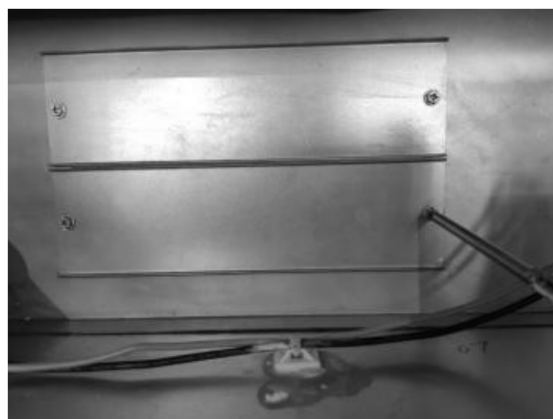
### ATTENTION

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

**Step 1:** Unfasten the 4 screws to take off the blower access panel of the air handler.

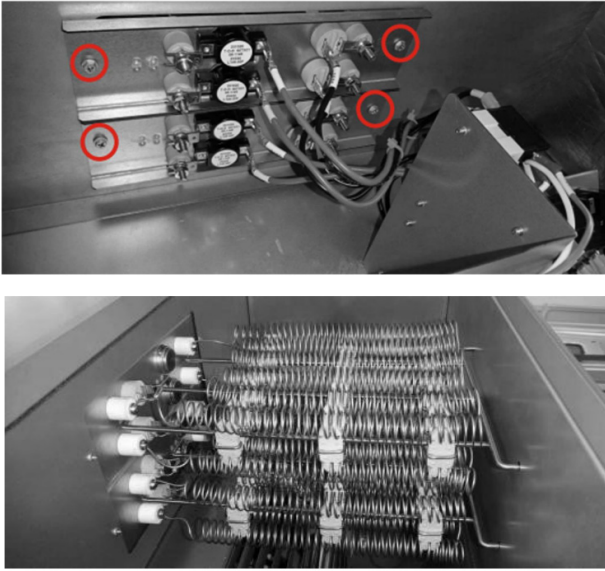


**Step 2:** Remove the cover plate from the air handler.



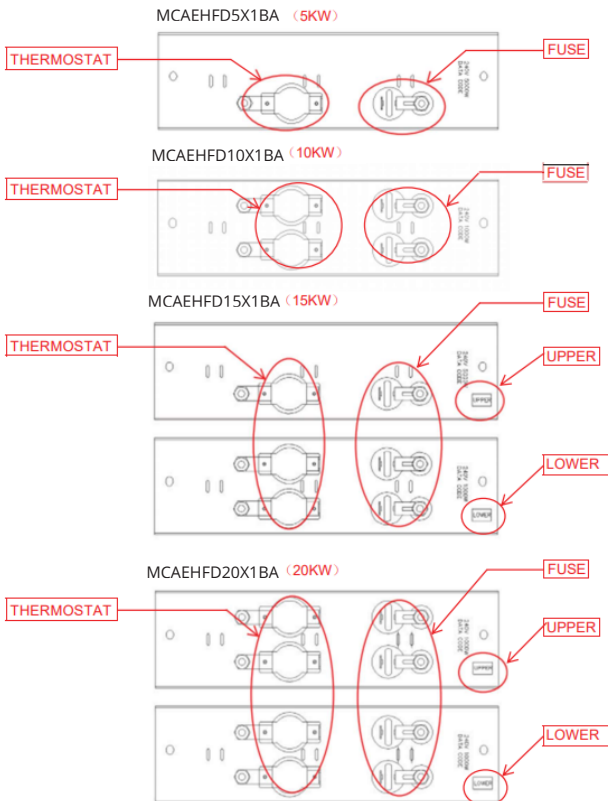
# 2 OVERVIEW

**Step 3:** Slide the heater kit into the slot and secure the element plate with the removed screws.

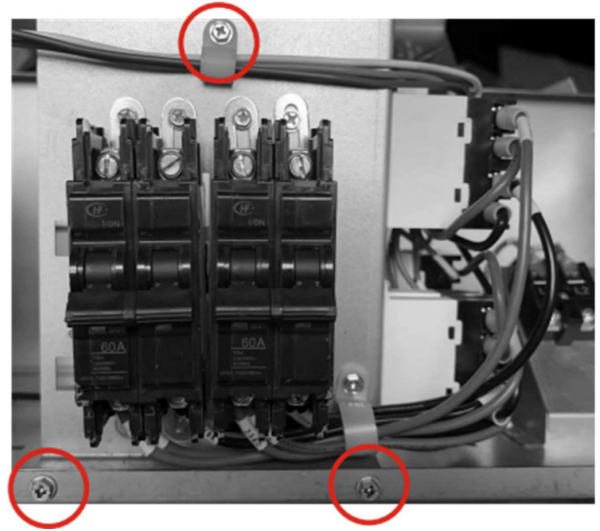


When sliding the heater kit into the slot, ensure it is installed in the correct orientation as described below. The thermostat will be on the left-hand side and the fuse will be on the right hand side.

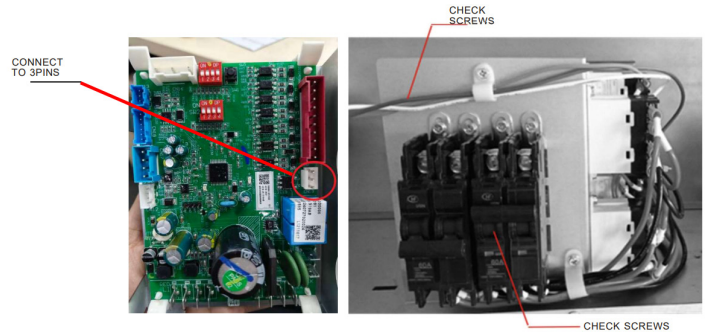
When two elements are being used, ensure the "Upper" and "Lower" elements are installed in the correct slots and orientations.



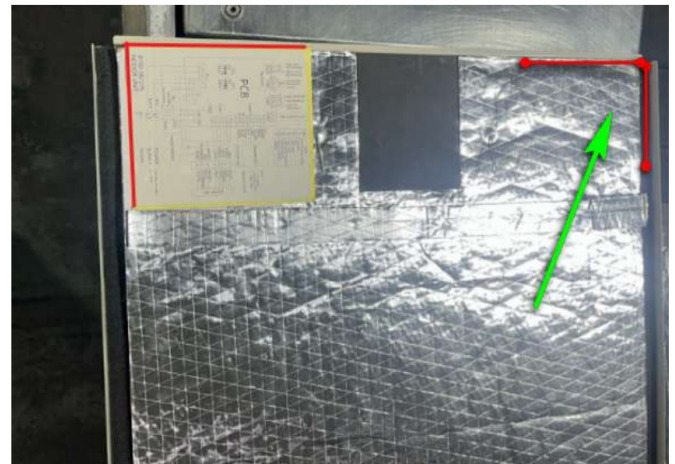
**Step 4:** Align the attachment clip and the hole and fasten the loose wires by using a wire tie.



**Step 5:** Install the circuit breaker into the mounting rail, and break out the appropriate area of the plastic circuit breaker cover on the air handler's access pane.



**Step 6:** The labels for the circuit diagram of the electric heater should be pasted in this area.



## ! WARNING

### Fire, Electrical Shock Hazard

After connecting all wires, check all screws of the breaker and make sure they are tight. Failure to do so will result in breaker malfunction, fire, death, personal injury, and property damage.

Note:

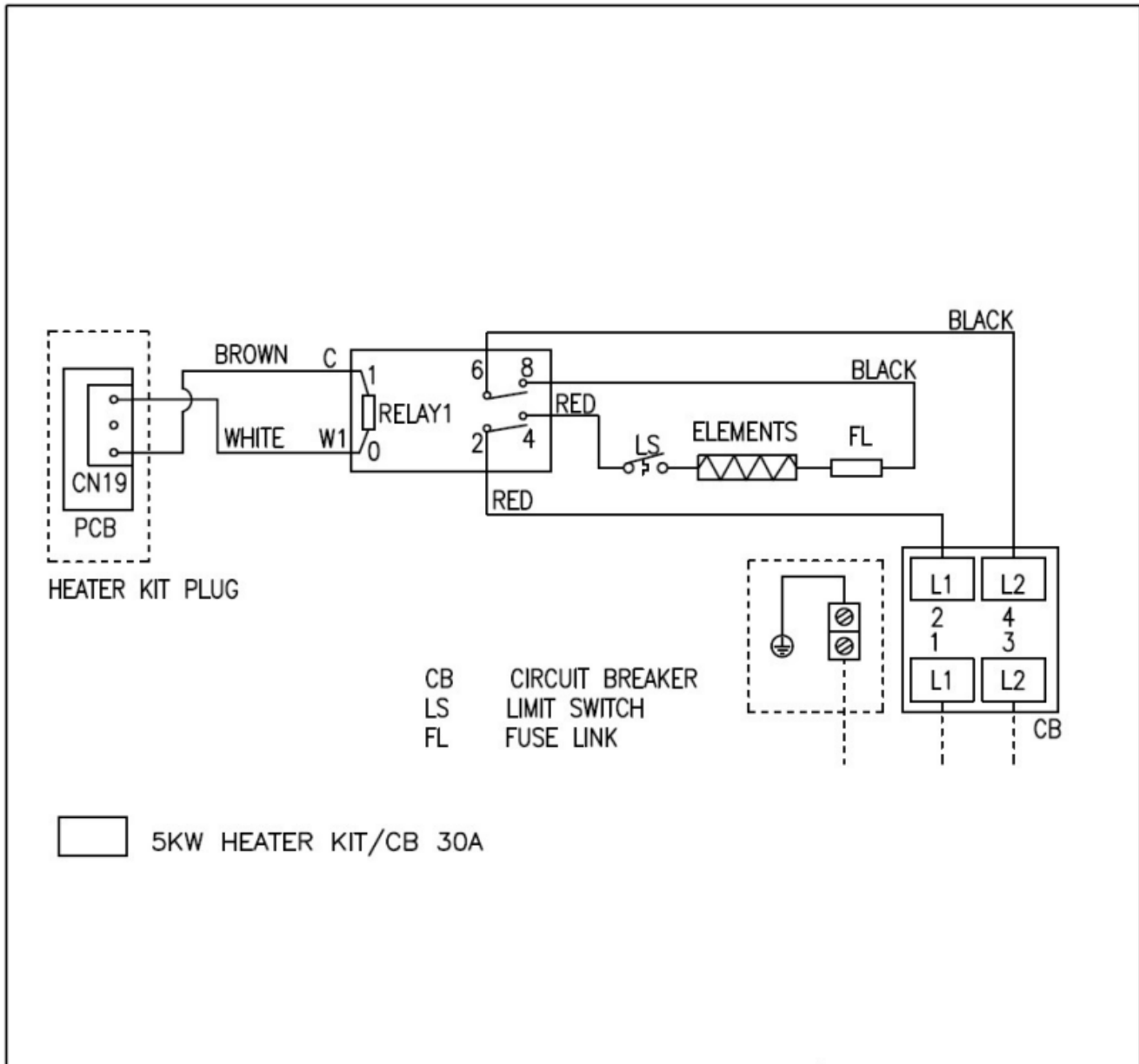
When the indoor control board receives a W1/W2 signal, the electric heater will be energized and the indoor blower will turn on.

When the W1/W2 signal is off, the indoor blower will be turned off.

The blower motor runs when "W" is energized and off when "W" is de-energized.

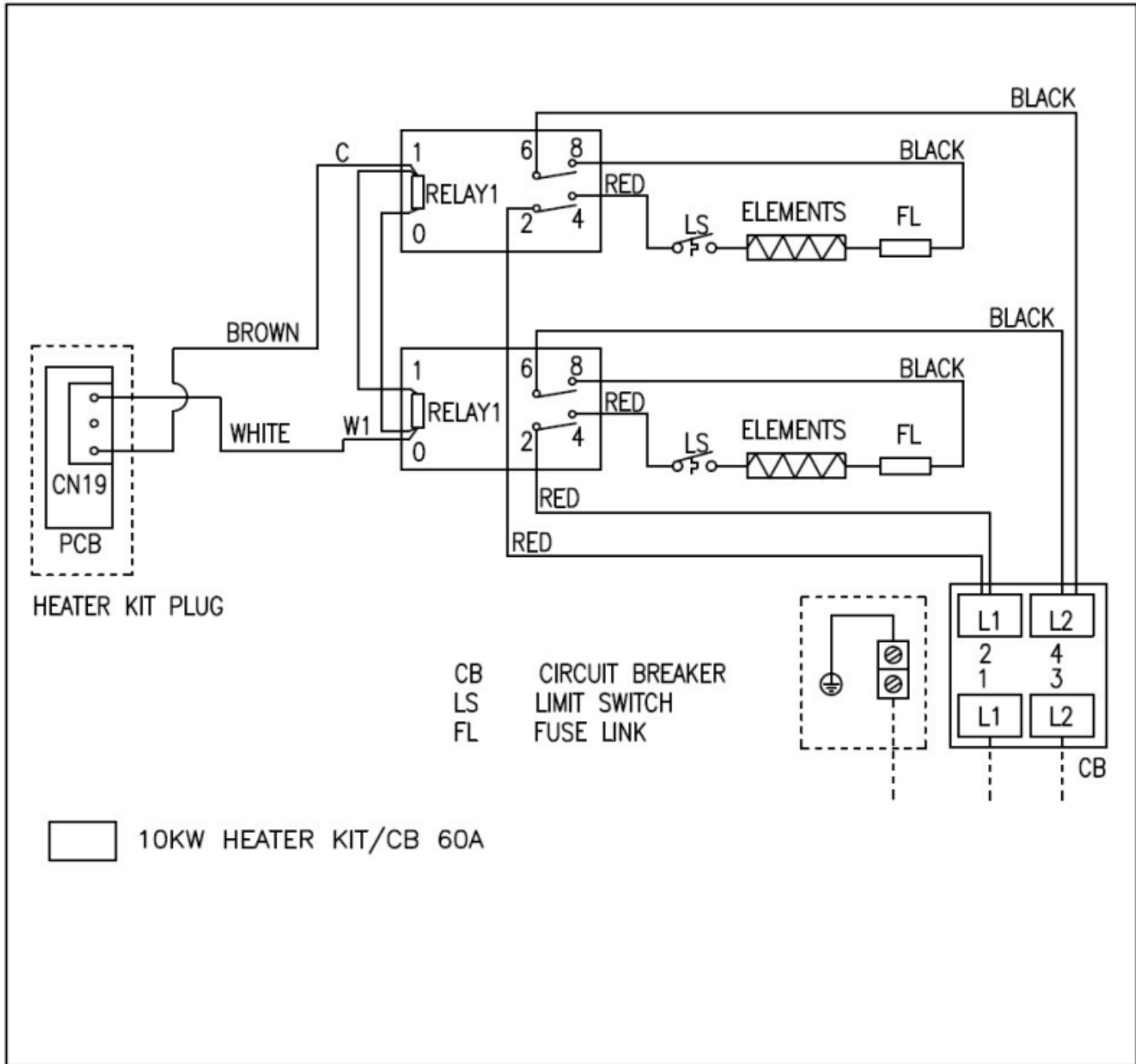
### - Wiring Diagrams

### Wiring Diagram for 5kW Heat Kit

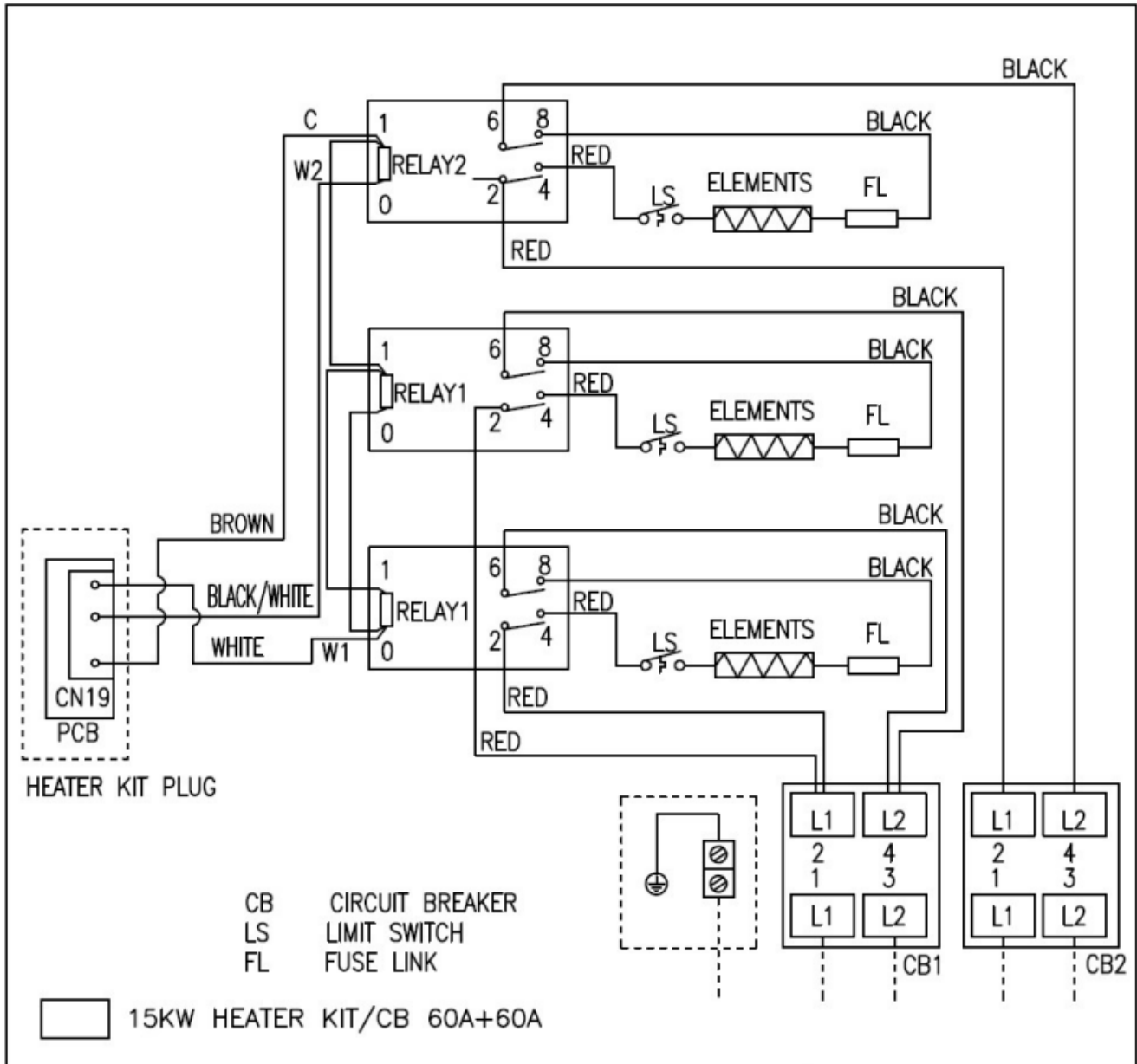


# 3 WIRING DIAGRAMS

## Wiring Diagram for 10kW Heat Kit

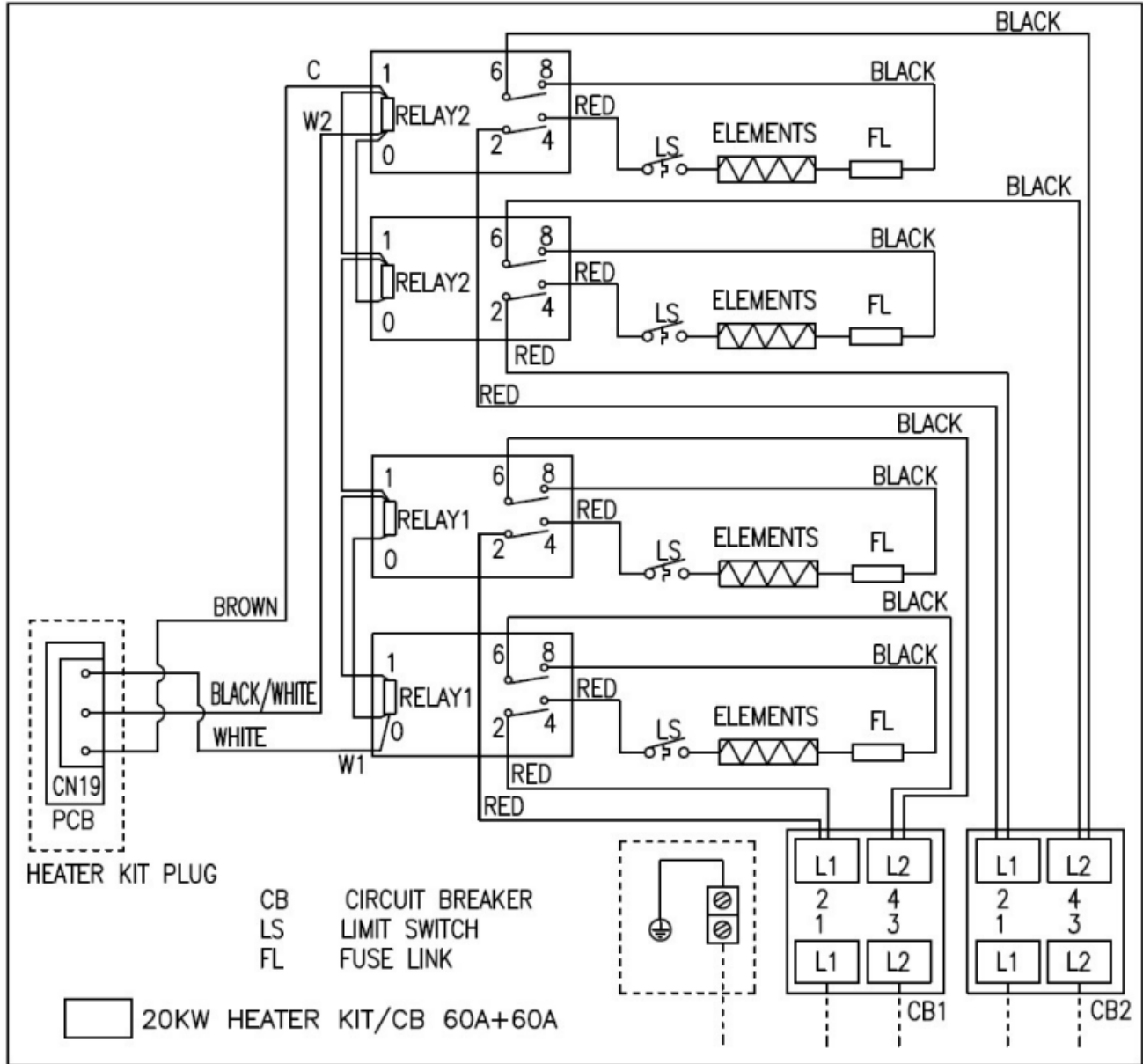


## Wiring Diagram for 15kW Heat Kit



# 3 WIRING DIAGRAMS

Wiring Diagram for 20kW Heat Kit





**MRCOOL®**  
COMFORT MADE SIMPLE

**MRCOOL®**  
**Signature Series**  
**TruInverter™**  
**Heat Kit**

The design and specifications of this product and/or manual are subject to change without prior notice.  
Consult with the sales agency or manufacturer for details.