

# Electric Heat Accessory

AMFK05AHA1 AMFK05BHA1 AMFK05AHB1 AMFK07AHA1  
AMFK07BHA1 AMFK07AHB1 AMFK10AHA1 AMFK10BHA1  
AMFK10AHB1 AMFK14AHB1 AMFK15AHB1 AMFK20AHB1  
AMFK25AHB1 AMFK30AHB1

Single Phase

For Use With

Blower & Fan Coil Units and Electric Furnaces

## WARNING

**Electrical shock hazard.**

Installation or repairs made by unqualified persons can result in hazards to you and others. Installation must conform with local building codes or, in the absence of local codes, with National Electrical Code ANSI/NFPA 70-1996 or current edition.

The information contained in this manual is intended for use by a qualified service technician familiar with safety procedures and equipped with the proper tools and test instruments.

Shut OFF electric power at unit disconnect and/or service panel before beginning the following procedures.

Failure to carefully read and follow all instructions in this manual can result in malfunction, property damage, personal injury, and/or death.

**NOTE:** Supply voltage, amperage, fuse and disconnect switch sizes **MUST** conform with all technical specifications in this manual and on the unit rating plate.

Adapter and filler plates are shipped with the indoor units to be used with electric heat as needed depending on unit size and heater size.

1. Shut **OFF** electric power at unit disconnect switch or service panel.
2. Remove the front panel from unit and locate adapter and filler plates, with screws inside package.
3. Attach adapter plate and filler plate to heater if required to match cabinet. Refer to Figure 1 and table to determine if needed.

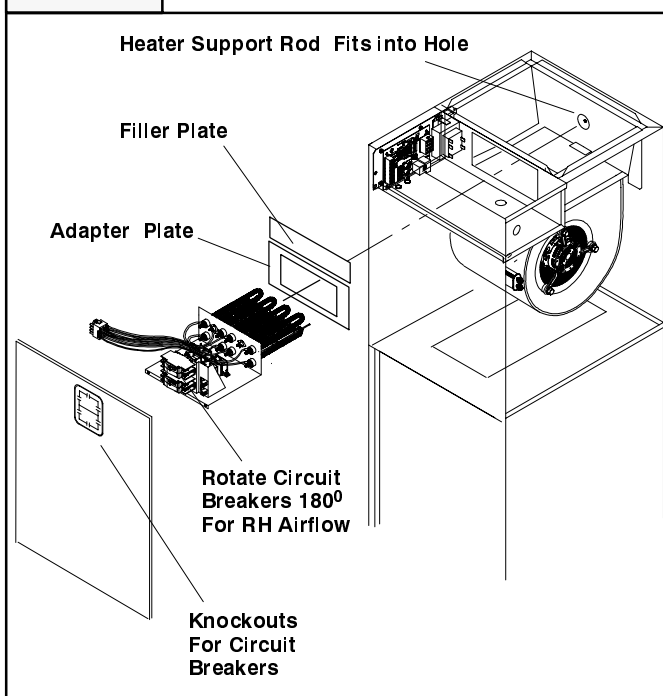
Heater Model AMFK	FCP24,30 FCX24 EF08	FCP36,42 FCX36 EF12	FCP48,60 FCX48,60 EF16,20
05, 07, 10	None	Adapter	Adapter & Filler Plate
14, 15, 20	N/A	None	Adapter
25, 30	N/A	N/A	None

4. **Right Hand Airflow Application Only/Heaters with CB.**  
If indoor section is going to be used for right hand airflow, the circuit breakers will have to be removed and rotated 180°, so the OFF position will be **DOWN** when the cabinet is positioned on the right side. This is an NEC requirement. **DO ONE SET OF BREAKERS AT A TIME to make sure wires are reconnected properly.** Loosen terminal screws on the wires and gently pull wires back from breaker. Re-

move screws securing breaker and rotate 180°, then re-connect wires to breaker. Proper torque for terminal screws is 35 inch pounds.

5. Insert the heater into the cabinet opening as shown in **Figure 1**, so the heater support rod goes into the hole in back of the cabinet. **Exercise caution to prevent tearing of insulation or damage to heater element.**
6. Secure the electric heat accessory with four screws.
7. Connect the plug on the heater wiring into the receptacle on the control board on the side of the cabinet.
8. Install front door panel. **NOTE:** If the heater has circuit breakers, remove the appropriate knockout(s) in the door panel to match circuit breaker location.
9. Mark an "X" in the appropriate box for the heater on the indoor unit rating plate.

**Figure 1 Installing The Electric Heat Accessory**



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## Wiring

All line voltage connections and ground connections **MUST** be made with copper wire.

The power supply wiring **MUST** have overcurrent protection. This can be either fuses or circuit breakers. The maximum size for the overcurrent protection is shown in the column labeled "Max. Fuse or NEC HACR Breaker (Amps)" in the Electrical Data Table or on the unit rating plate.

Connect supply voltage wires to the Circuit Breakers on the heater or to the pigtails on the heater. Power for the blower motor is supplied through the connector from the heater to the control board.

## Grounding

Permanently ground the electric heat accessory in accordance with local codes and ordinances and in the United States with National Electrical Code ANSI/NFPA70-1996 or current edition. Use a copper conductor of the appropriate size from the electric heat accessory ground lug, to a grounding lug on the circuit breaker panel. On models with more than one circuit, a separate copper ground wire **MUST** be connected for *each* circuit.

## Adjusting Thermostat Anticipator

Set the heat anticipator of the thermostat to the proper value. See instructions provided with the thermostat before making this adjustment.

Heater Model	Anticipator Setting
05	.24
07, 10	.32
14, 15	.40
20	.46
25	.53
30	.57

## Staging

The heater elements are turned on in increments. Refer to Staging Table. In addition on heaters larger than 5KW, the heat can be staged (1st & 2nd) either through an indoor thermostat or by using an outdoor thermostat. This satisfies staging requirements imposed by some electric utilities on heaters larger than 6 kilowatts.

A control signal (24V) from W1 on the Indoor T'stat to W1 on the control board energizes the 1st stage of heat. A control signal (24V) to W2 on the control board energizes the second stage of electric heat. To turn ON both stages at the same time, using one control signal, W1 and W2 are jumpered together.

If the indoor thermostat does not have staging capabilities, accessory electronic outdoor thermostats are available that will control two stages of electric heat.

## Temperature Rise Check

Temperature rise is the difference between the supply and return air temperatures.

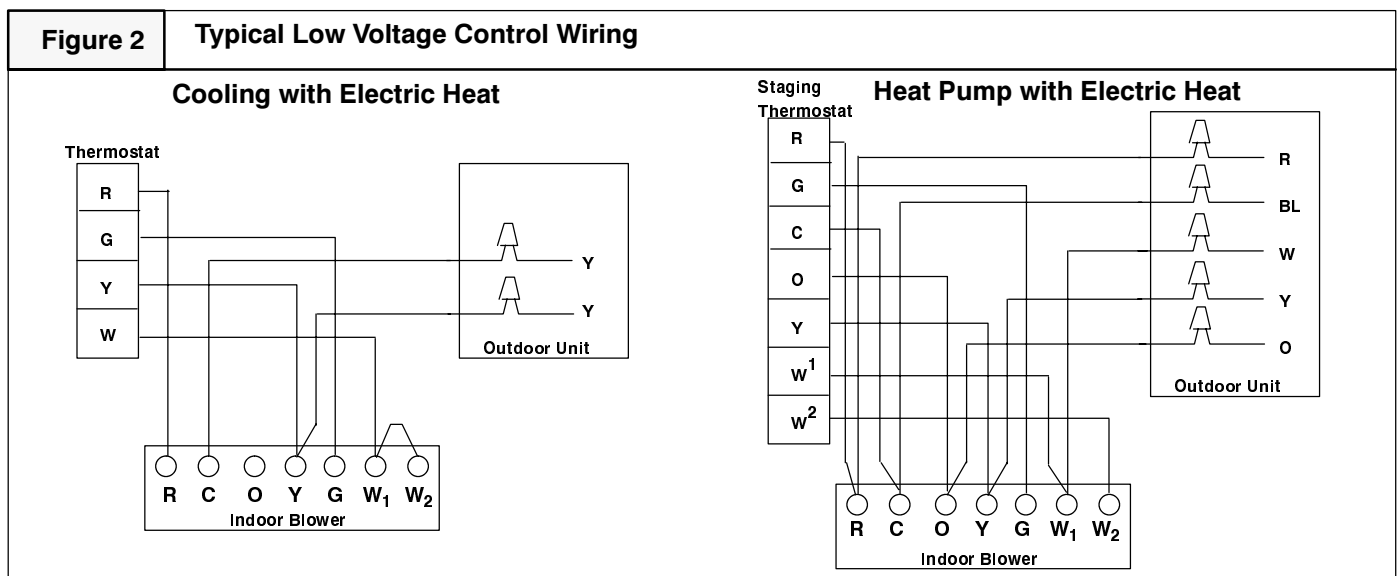
**NOTE:** The temperature rise can be adjusted by changing the heating speed tap at the unit's blower terminal block. Refer to the unit's *Installation Instructions* for airflow information.

**A temperature rise greater than 60°F (33.3°C) is not recommended.**

1. To check the temperature rise through the unit, place thermometers in the supply and return air ducts as close to the unit as possible.
2. Open **ALL** registers and duct dampers.
3. Set thermostat Heat-Cool selector to **HEAT**.
4. Set the thermostat temperature setting as high as it will go.
5. Turn electric power **ON**.
6. Operate unit **AT LEAST** 5 minutes, then check temperature rise.

**NOTE:** The maximum outlet air temperature for all models is 200°F (93.3°C).

7. Set thermostat to normal temperature setting.
8. Turn electric power **OFF**.
9. Be sure to seal all holes in ducts if any were created during this process.



# Technical Data

Heater Model	Supply Voltage	Nomi-Heating BTUH	Heat-KW	KW Per Element	Supply Circuit No.	Heater KW Per Circuit	Heater AMPS.	Maxi-Motor AMPS.	Total AMP	Branch Circuit Ampacity	Maximum Overcurrent Protective Device (AMPS.)	Recommended				
												Supply Wire 75 °C. Copper			Ground Wire	
												No.	Size	Max. Length (F)	No.	Size
AMFK05AH/BH	240	16,832	4.8	4.8	Single	4.8	20.0	6.0	26.0	32.5	35	2	10	61	1	10
	208	12,287	3.6	3.6	Single	3.6	17.3	6.0	23.3	29.2	30	2	10	59	1	10
AMFK07AH/BH	240	24573	7.2	3.6	Single	7.2	30.0	6.0	36.0	45.0	45	2	8	70	1	10
	208	18430	5.4	2.7	Single	5.4	26.0	6.0	32.0	40.0	40	2	8	68	1	10
AMFK10AH/BH	240	32,765	9.6	4.8	Single	9.6	40.0	6.0	46.0	57.5	60	2	6	85	1	10
	208	24,574	7.2	3.6	Single	7.2	34.7	6.0	40.7	50.8	60	2	6	83	1	10
AMFK14AH AMFK15AH	240	49,147	14.4	4.8	Single	14.4	60.0	6.0	66.0	82.5	90	2	4	94	1	8
					Mult. 1	9.6	40.0	6.0	46.0	57.5	60	2	6	50	1	10
					Mult. 2	4.8	20.0	0.0	20.0	25.0	25	2	12		1	10
	208	36,860	10.8	3.6	Single	10.8	52.0	6.0	58.0	72.5	80	2	4	93	1	8
					Mult. 1	7.2	34.7	6.0	40.7	50.8	60	2	6	50	1	10
					Mult. 2	3.6	17.3	0.0	17.3	21.7	25	2	12		1	10
AMFK20AH	240	65,530	19.2	4.8	Single	19.2	80.0	6.0	86.0	107.5	110	2	2	115	1	6
					Mult. 1	9.6	40.0	6.0	46.0	57.5	60	2	6	63	1	10
					Mult. 2	9.6	40.0	0.0	40.0	50.0	50	2	8		1	10
	208	49,147	14.4	3.6	Single	14.4	69.3	6.0	75.3	94.2	100	2	3	90	1	8
					Mult. 1	7.2	34.7	6.0	40.7	50.8	60	2	6	63	1	10
					Mult. 2	7.2	34.7	0.0	34.7	43.3	45	2	8		1	10
AMFK25AH	240	81912	24.0	4.8	Single	24.0	100.0	6.0	106.0	132.5	150	2	1 / 0	148	1	6
					Mult. 1	9.6	40.0	6.0	46.0	57.5	60	2	6	50	1	10
					Mult. 2	9.6	40.0	0.0	40.0	50.0	50	2	8		1	10
	208	61,434	18.0	3.6	Mult. 3	4.8	20.0	0.0	20.0	25.0	25	2	12		1	10
					Single	18.0	75.1	6.0	81.1	101.4	110	2	2	106	1	6
					Mult. 1	7.2	34.7	6.0	40.7	50.8	60	2	6	50	1	10
AMFK30AH	240	98,294	28.8	4.8	Mult. 2	7.2	34.7	0.0	40.0	50.0	50	2	8		1	10
					Mult. 3	9.6	40.0	0.0	40.0	50.0	50	2	8		1	10
					Single	28.8	120.0	6.0	126.0	157.5	175	2	2 / 0	158	1	6
	208	73,721	21.6	3.6	Mult. 1	7.2	34.7	6.0	40.7	50.8	60	2	6	63	1	10
					Mult. 2	7.2	34.7	0.0	34.7	43.3	45	2	8		1	10
					Mult. 3	7.2	34.7	0.0	34.7	43.3	45	2	8		1	10

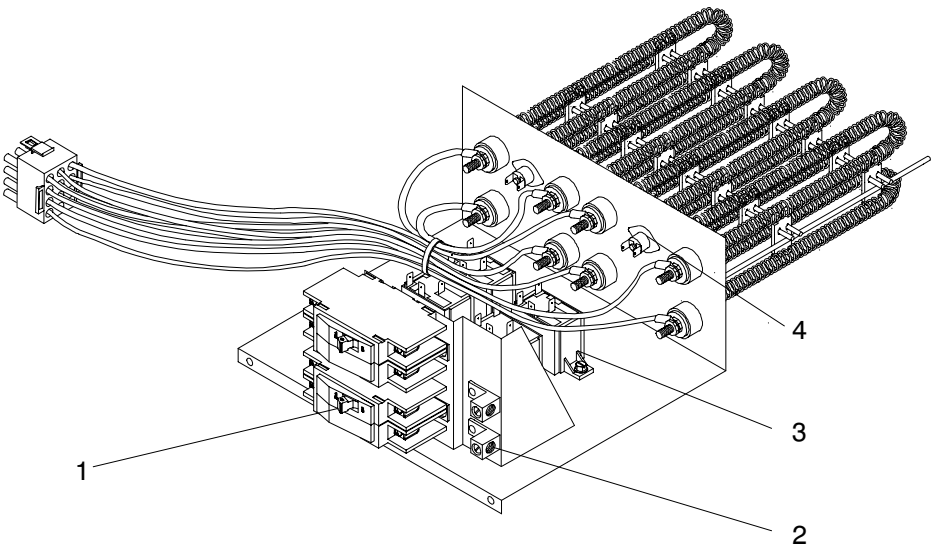
## HEATER STAGING

ELECTRIC HEATER	VOLTAGE	TOTAL HEAT		1st STAGE (W1)		2nd STAGE (W2)	
		208V	240V	208V	240V	208V	240V
AMFK05AH/BH	208-240/1/60	3.6	4.8	3.6	4.8	-	-
AMFK07AH/BH	208-240/1/60	5.4	7.2	2.7	3.6	2.7	3.6
AMFK10AH/BH	208-240/1/60	7.2	9.6	3.6	4.8	3.6	4.8
AMFK14AH, AMFK15AH	208-240/1/60	10.8	14.4	7.2	9.6	3.6	4.8
AMFK20AH	208-240/1/60	14.4	19.2	7.2	9.6	7.2	9.6
AMFK25AH	208-240/1/60	18.0	24.0	7.2	9.6	10.8	14.4
AMFK30AH	208-240/1/60	21.6	28.8	7.2	9.6	14.4	19.2

## ELECTRIC HEATER STATIC PRESSURE DROP - IN. WG.

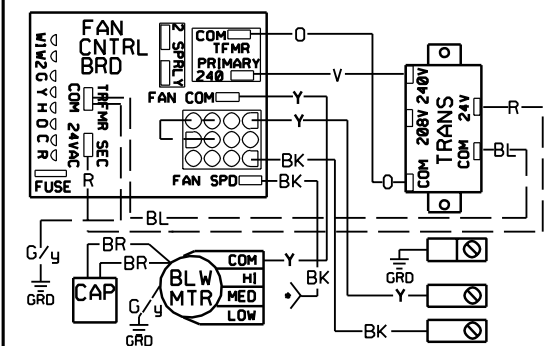
CFM	AMFK05AH/BH	AMFK07AH/BH	AMFK10AH/BH	AMFK14AH AMFK15AH	AMFK20AH	AMFK25AH	AMFK30AH
600	0.01	0.01	0.01	--	--	--	--
700	0.01	0.01	0.01	--	--	--	--
800	0.01	0.01	0.01	0.01	--	--	--
900	0.01	0.01	0.01	0.01	--	--	--
1000	0.01	0.01	0.01	0.01	0.02	--	--
1100	0.01	0.01	0.01	0.02	0.02	--	--
1200	0.01	0.01	0.01	0.02	0.02	--	--
1300	0.01	0.02	0.02	0.02	0.02	--	--
1400	0.01	0.02	0.02	0.02	0.03	0.03	--
1500	0.01	0.02	0.02	0.02	0.03	0.04	--
1600	0.01	0.02	0.02	0.03	0.03	0.04	0.04
1700	0.01	0.02	0.02	0.03	0.03	0.04	0.05
1800	0.01	0.02	0.02	0.03	0.04	0.04	0.05
1900	0.01	0.02	0.02	0.03	0.04	0.05	0.06
2000	0.01	0.02	0.02	0.03	0.04	0.05	0.06

# Replacement Parts

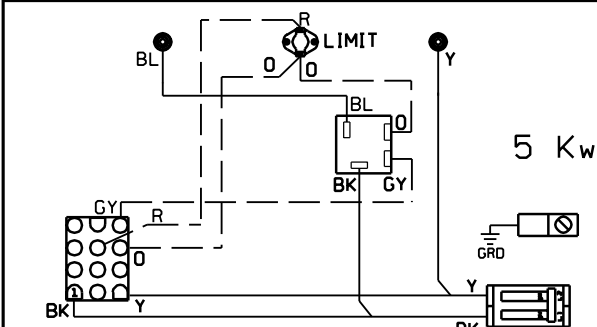


KEY NO.	DESCRIPTION	PART NUMBER	AMFK											
			05 AH/ BHA1	05 AHB1	07 AH/ BHA1	07 AHB1	10 AH/ BHA1	10 AHB1	14 AHB1	15 AHB1	20 AHB1	25 AHB1	30 AHB1	
1	Circuit Breaker,	25 Amp	1082008	-	-	-	-	-	-	1	1	-	1	-
		35 Amp	1082010	-	1	-	-	-	-	-	-	-	-	-
		45 Amp	1082012	-	-	-	1	-	-	-	-	-	-	-
		50 Amp	1082013	-	-	-	-	-	-	-	-	1	1	2
		60 Amp	1082014	-	-	-	-	-	1	1	1	1	1	1
2	Ground Lug	91590	-	1	-	1	-	1	2	2	2	3	3	
3		Relay	1084529	1	1	2	2	2	3	3	4	5	6	
4	Limit Switch	1084734	1	1	1	1	1	1	-	-	-	-	-	
		1084735	-	-	-	-	-	-	-	2	2	-	-	
		1084749	-	-	-	-	-	-	-	-	-	2	2	
		1085049	-	-	-	-	-	-	1	-	-	-	-	

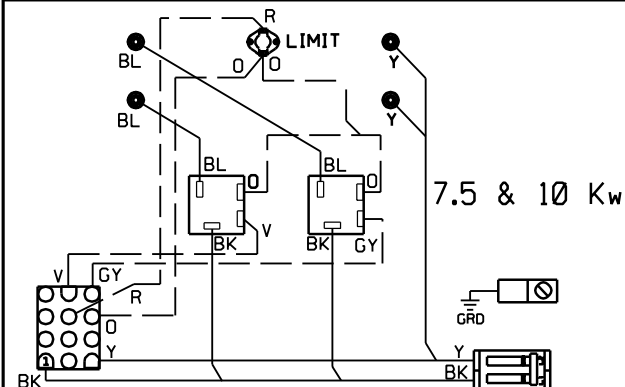
POWER SUPPLY: 208/230-1-60 USE COPPER CONDUCTORS ONLY.  
KEY: ——— HIGH VOLT; - - - - - LOW VOLT.



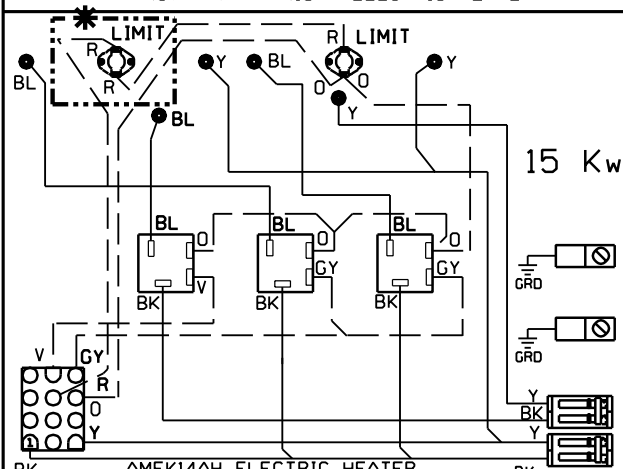
BASE UNIT WITH NO-HEAT KIT AMF001NH INSTALLED  
•SEE INSTALLATION MANUAL FOR PROPER HEATING AND COOLING  
FACTORY PRE-SET SPEED CONNECTIONS FOR YOUR UNIT.



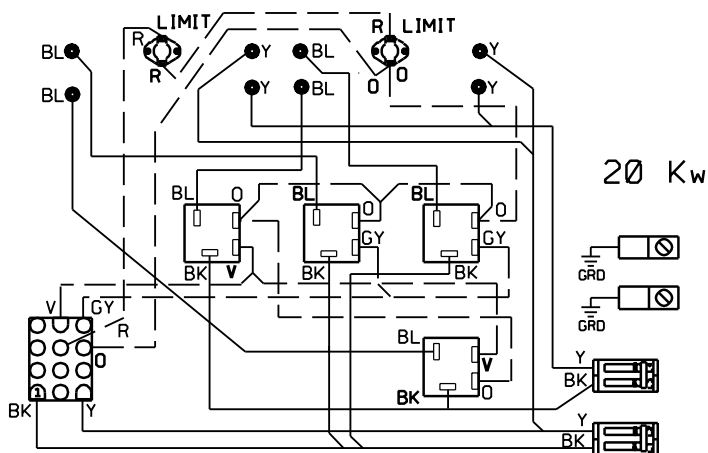
AMFK05AH ELECTRIC HEATER



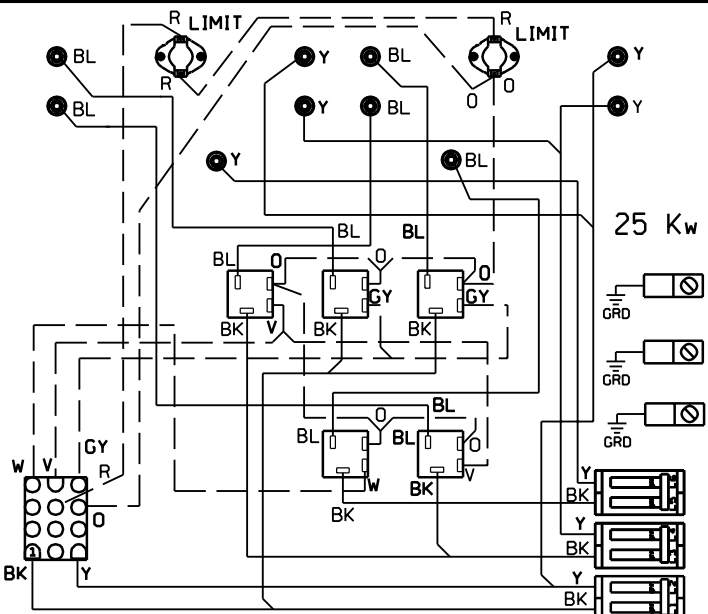
AMFK07AH / AMFK10AH ELECTRIC HEATER



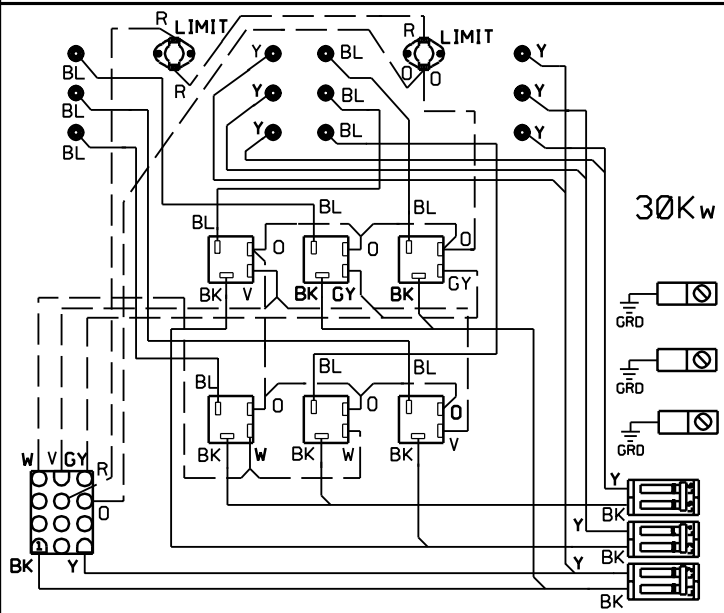
AMFK14AH ELECTRIC HEATER  
•AMFK15AH ELECTRIC HEATER (2 LIMITS)



AMFK20AH ELECTRIC HEATER



AMFK25AH ELECTRIC HEATER



AMFK30AH ELECTRIC HEATER

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