



ACCESSORY HEAT PACKAGE INSTALLATION INSTRUCTIONS

AH 36, 42, 48

GENERAL

The electric heater is designed to be used with models 803-036-G thru 803-060-G and models 805-036-G thru 805-060-G Friedrich Heat Pumps. Each heat pump model is approved for use with specific electric heaters.

Friedrich Heat Pumps are equipped with multi-speed motors to provide 3 speed operation. The motor speed that provides rated airflow should be used for electric heat.

INSTALLATION

To insure proper operation of the heater, installation instructions must be carefully followed. Failure to do so will result in an unsafe condition and nuisance tripping of automatic resets.

Installation is the same for Model 803-036, 803-042 and 805-036, 805-042 left and right hand returns and for Models 803-048, 803-060 and 805-048, 805-060 left hand returns only. (See Figure 1) Models 803-048 and 803-060 and 805-048 and 805-060 right hand returns have a special installation method. (See Figure 2)

1. Place heater over unit air discharge. The heater control box should be on same side as Control Access panel of heat pump (See Figures 1 and 2).
2. Fasten heater to heat pump through mounting holes in heater flange.
3. Feed main supply wire from fused disconnect switch into heater, see chart and heater labeling for proper size of wiring.
4. From line terminal of heater feed 2-#10 Ga. 75°C wire for 803-036, 803-042, 803-048 and 805-036, 805-042, 805-048 or 2-#8 Ga. 75°C wire for 803-060, 805-060 into heat pump high voltage access thru either cable or conduit outside of heat pump.

From thermostat feed thermostat wires into heater terminal block and from heater terminal block to heat pump terminal block (See Figure 3).

Connect ground lead to ground lug.

Wiring must be done to NEC code and meet all local codes.

SPECIFICATION ON HEATERS FOR FRIEDRICH UNITS – ELECTRICAL RATINGS

1. KILOWATTS

<u>MODEL</u>	<u>KW</u>
AH3610	9.8
AH3615	14.7
AH4210	9.8
AH4215	14.7
AH4217	17.25
AH4220	19.6
AH4810	9.8
AH4815	14.7
AH4817	17.25
AH4820	19.6
AH4825	24.5

Heaters are suitable for 208V/240V operation. Values for heater output and power consumption at 208 volts are 75% of their value at 240 volts.

2. AMPERAGE

<u>KW</u>	<u>*SUPPLY WIRE SIZE</u>	<u>TOTAL AMPS</u>	<u>CIRCUIT 1</u>	<u>CIRCUIT 2</u>	<u>CIRCUIT 3</u>
9.8	8 GA.	40.8	40.8	—	—
14.7	6 GA.	61.2	40.8	20.4	—
17.25	4 GA.	72.0	48.0	24.0	—
19.6	4 GA.	81.6	40.8	40.8	—
24.5	2 GA.	102.0	40.8	40.8	20.4

*Based on 75°C Wire – 240 Volts

When used at 208 volts, current will be 87% of 240 volt current.

3. OVER CURRENT PROTECTION

<u>KW</u>	<u>CIRCUIT 1</u>	<u>CIRCUIT 2</u>	<u>CIRCUIT 3</u>
9.8	none	—	—
14.7	50 amps	25 amps	—
17.25	60 amps	30 amps	—
19.6	50 amps	50 amps	—
24.5	50 amps	50 amps	25 amps

FUSETRON CLAS K5 FUSE FRN

4. INTERNAL WIRING

A. CONTROL CIRCUIT

#18 GA. 105°C AWM

B. FAN INTERLOCK CIRCUIT

#16 GA. 105°C THHN

#10 GA. 105°C THHN

PARTS BREAK DOWN ON AH3610 THRU AH4825

1. CONTACTORS — TEXAS INSTRUMENTS (All Models)

KW

9.8	Two	—	60000EO-137		
14.7	Two	—	60000EO-137,	One	— 60000AO-174
17.25	Two	—	60000EO-137,	One	— 60000AO-174
19.6	Two	—	60000EO-137,	One	— 60000AO-8
24.5	Two	—	60000EO-137,	One	— 60000AO-8, One — 60000AO-174

2. LIMIT CONTROL

Texas Instruments L150 20604L9

3. FUSE BLOCKS

KW

UNDERWRITERS SAFETY DEVICE

14.7	13195-404L
17.25	13195-404L
19.6	13195-402L
24.5	13195-602L

4. ELEMENTS — 240 Volt

KW

MODEL NUMBER

9.8	1-0039-29
14.7	1-0039-29
17.25	1-0039-46
19.6	1-0039-29
24.5	1-0039-29

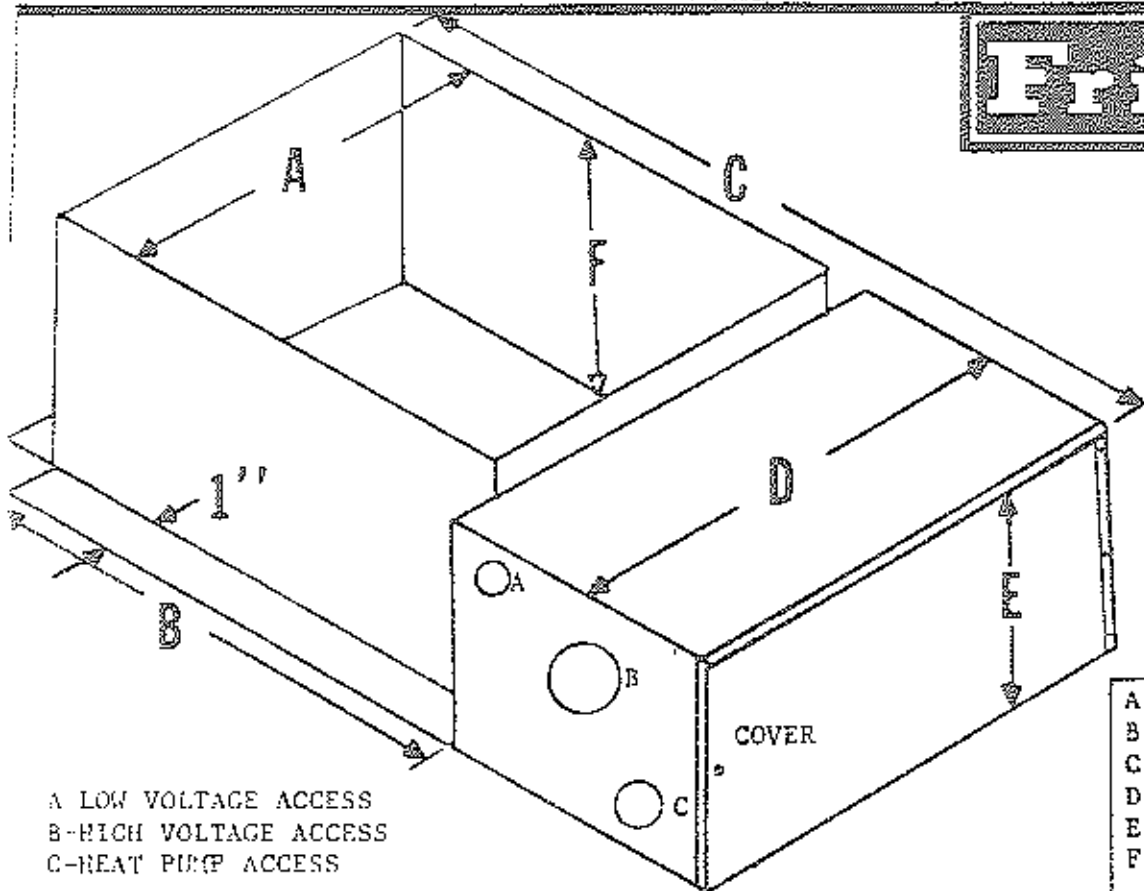
5. ELEMENTS AND FRAME ASSEMBLY

MODEL

KW

PART NUMBER

AH3610	9.8	1-0246-327
AH3615	14.7	1-0246-327 and 1-0246-328
AH4210	9.8	1-0246-325
AH4215	14.7	1-0246-325 and 1-0246-326
AH4217	17.25	1-0246-325 and 1-0246-326
AH4220	19.6	1-0246-325
AH4810	9.8	1-0246-325
AH4815	14.7	1-0246-335
AH4817	17.25	1-0246-335
AH4820	19.6	1-0246-335
AH4825	24.5	1-0246-335



A LOW VOLTAGE ACCESS
 B-HIGH VOLTAGE ACCESS
 C-HEAT PUMP ACCESS

	AH36	AH42	AH48
A	12-7/8	13-11/16	14-7/8
B	11-3/4	12-7/8	15-3/4
C	15-3/4	16-3/4	19-3/4
D	15	16	18-1/4
E	10	11	12
F	11	12	13

803/805-036/042 LEFT AND RIGHT HAND
 RETURN 803/805-048/060 LEFT HAND
 RETURN ONLY

803/805-048/060
 RIGHT HAND RETURN
 ONLY

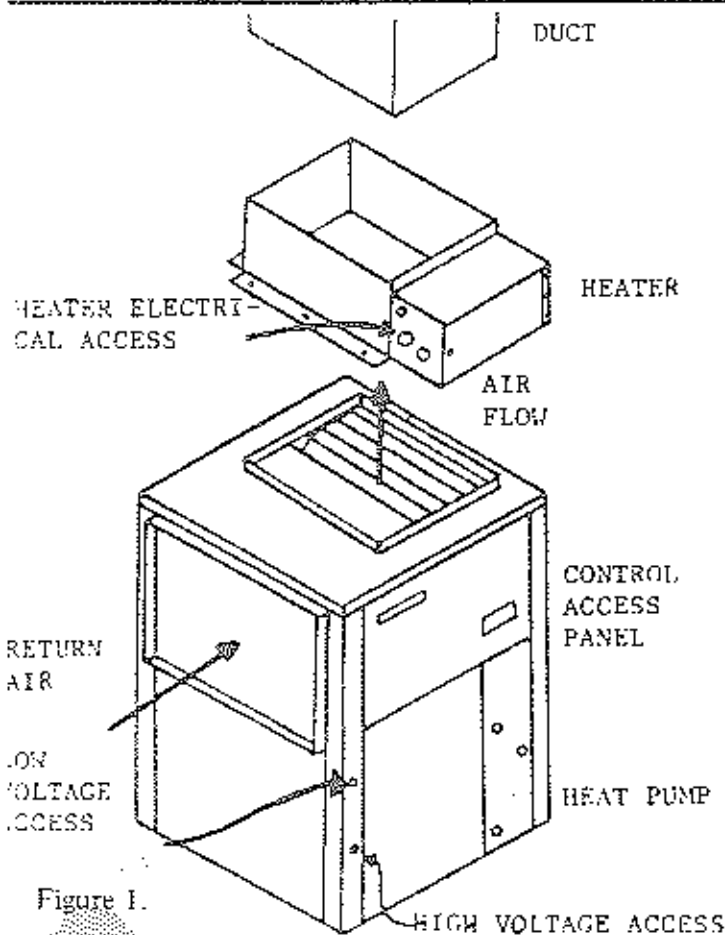


Figure 1.

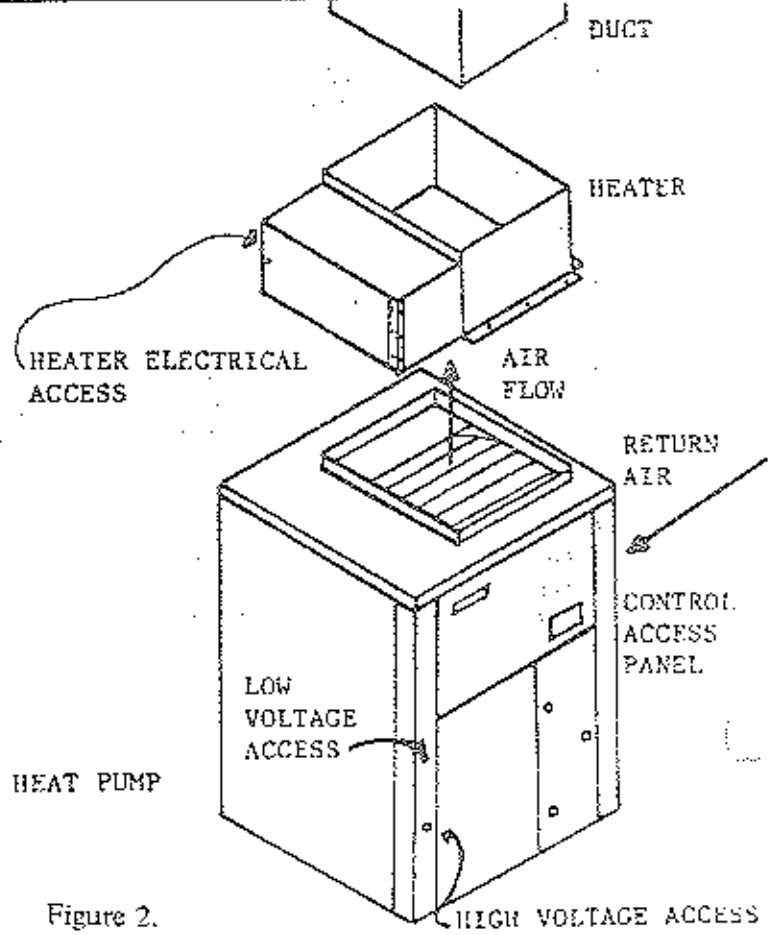


Figure 2.

FUSES MUST BE NO LESS THAN
125% AND NO MORE THAN 150%
AMP DRAW

208/240
60CY FIELD
POWER
SUPPLY

FUSED DISCONNECT

HEATER

ROOM THERMOSTAT
AT 3823

NEC CLASS 1
FIELD WIRING
CONTROL VOLT
LEADS FROM
HEATER TERM.
BLOCK TO HEAT
PUMP TERM.
BLOCK

803 UNIT
RUN COMMON FROM TRANSFORMER
TO NO. 5.
(SPlice BLUE WIRE)

ALL WIRING TO UNIT
MUST COMPLY WITH
NEC AND LOCAL CODES

C-CONTACTOR
BRC-BLOWER RELAY COIL
BR-BLOWER RELAY
BM-BLOWER MOTOR
TR-TRANSFORMER
G-GROUND

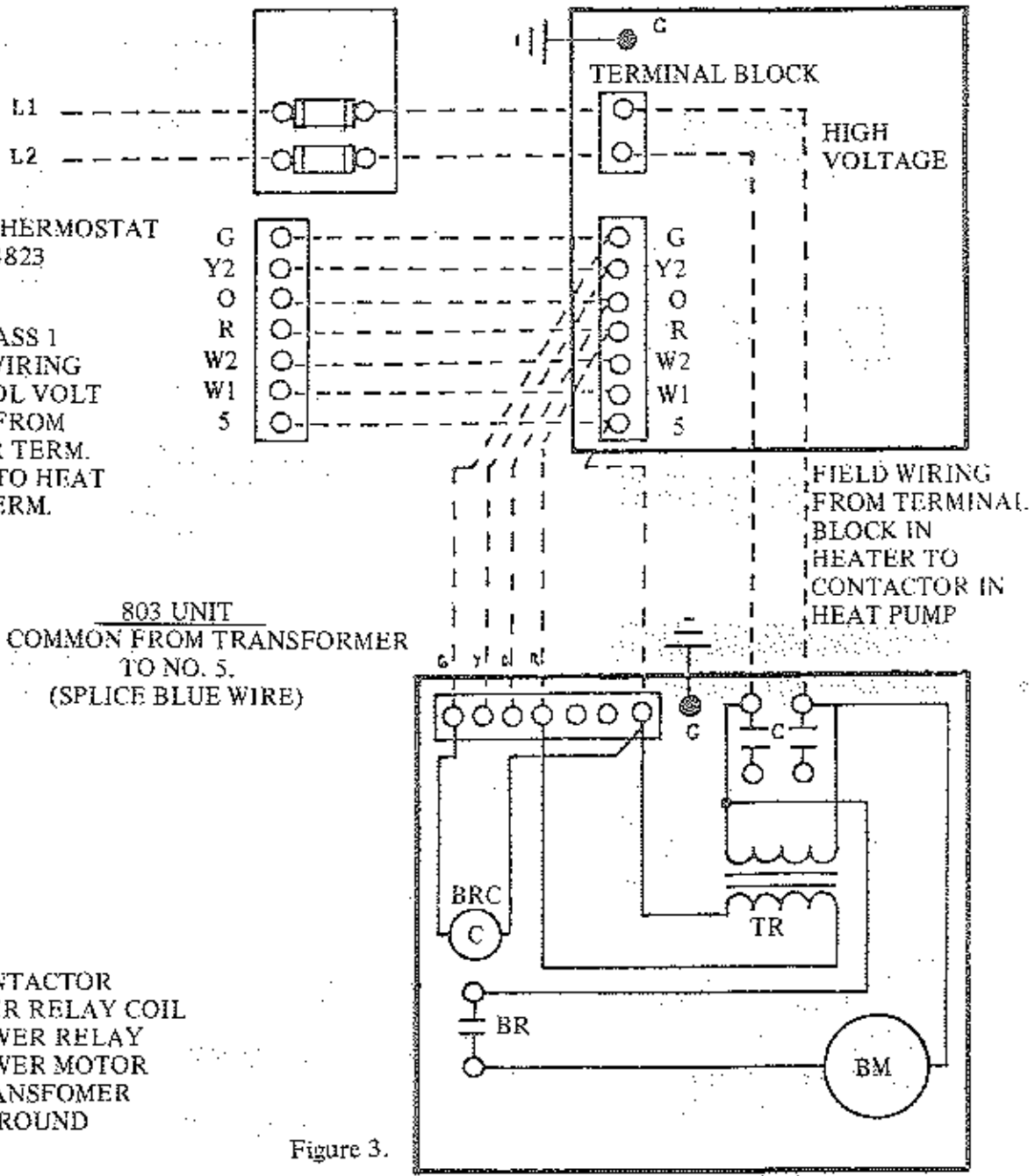
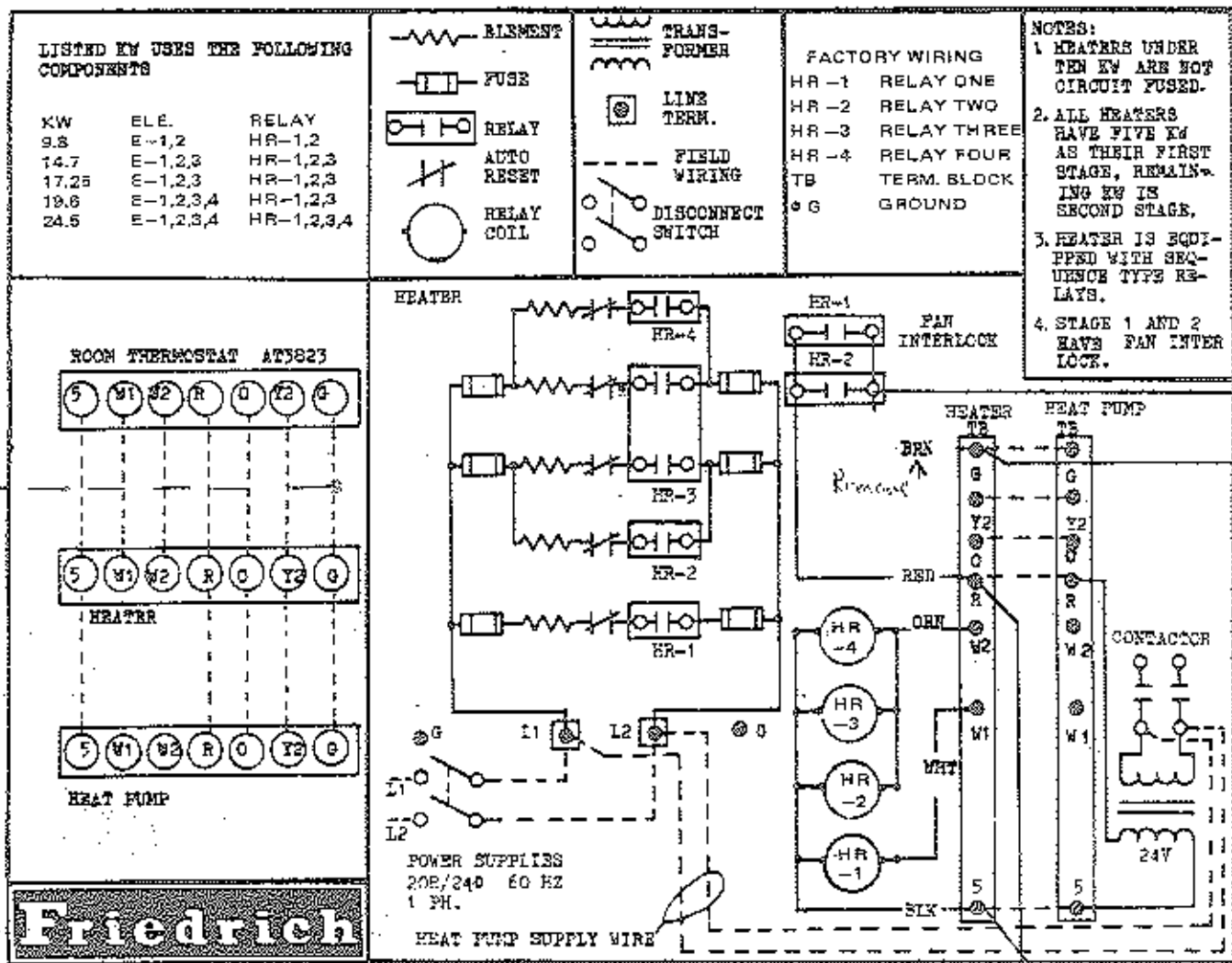


Figure 3.

HEAT PUMP

805-036-G THRU 805-060-G
803-036-G THRU 803-060-G





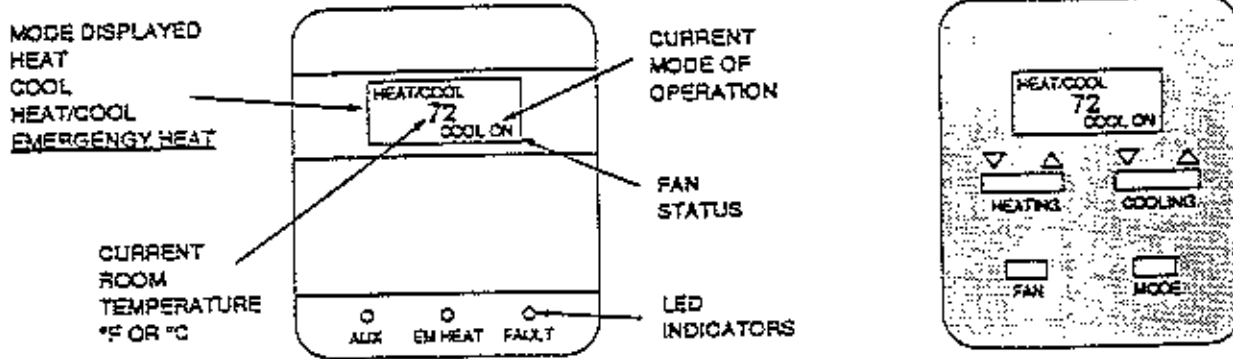
1. MOUNT RELAY R8222N1003.
2. DISCONNECT THERMOSTAT G WIRE FROM STRIP HEAT TERMINAL BLOCK AND ATTACH TO RELAY TERMINAL No. 4.
3. DISCONNECT BROWN WIRE FROM HEATER TERMINAL BLOCK "G" TERMINAL AND ATTACH TO RELAY COIL.
4. ADD WIRE FROM OTHER RELAY COIL CONNECTION TO HEATER TERMINAL BLOCK "5" TERMINAL.
5. ADD WIRE FROM HEATER TERMINAL BLOCK "G" TERMINAL TO RELAY CONTACT TERMINALS No. 3 AND 5.
6. ADD WIRE FROM HEATER TERMINAL BLOCK "R" TERMINAL TO RELAY CONTACT TERMINAL No. 1.

AT0908

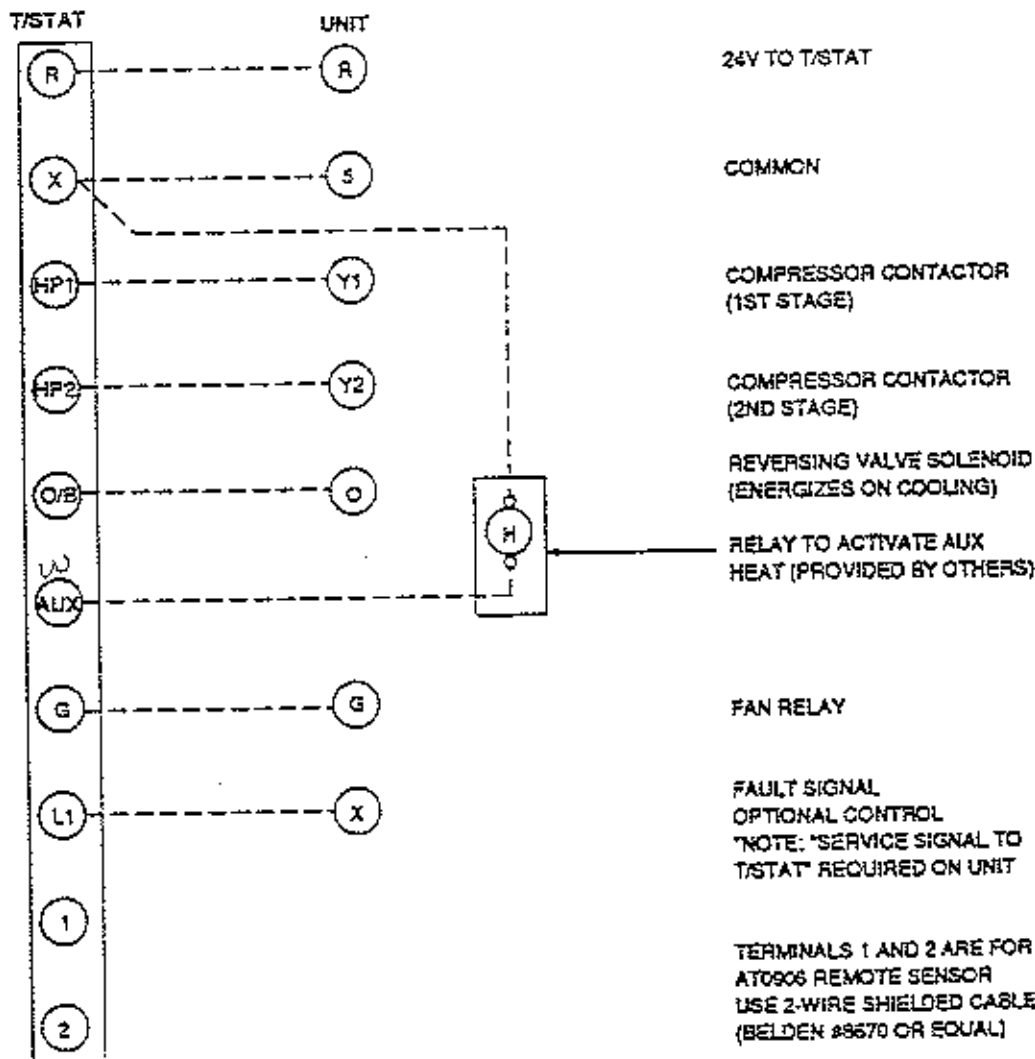
2 Stage Electronic Manual/Automatic Changeover

Submittal Data

ClimateMaster



Typical Field Wiring Diagram for 2 Stage MCO Heat Pump



WAL
ST

YOU MUST FACTORY ORDER MCO CONTROL OPTION ON HEAT PUMP. WHEN APPLYING THIS THERMOSTAT TO A TWO STAGE HEAT PUMP WITH ACC CONTROLS IN THE FIELD, DISCONNECT THE FOLLOWING TWO WIRES FROM THE ACC RELAY WITHIN THE HEAT PUMP, YELLOW ON PIN 3, ORANGE ON PIN 6. ALSO, CHANGE DIP SWITCH SETTING FOR O/B ON AT0908 FOR ENERGIZE ON HEATING (B) AND CONNECT TO "W1" TERMINAL ON HEAT PUMP.

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2. The second part of the document outlines the various methods used to collect and analyze data. It describes the use of statistical techniques to identify trends and anomalies in the data, and the importance of using reliable sources of information.

3. The third part of the document discusses the role of the auditor in the process. It explains that the auditor's primary responsibility is to provide an independent and objective assessment of the financial statements, and to ensure that they are prepared in accordance with the applicable accounting standards.

4. The fourth part of the document discusses the importance of communication in the auditing process. It explains that the auditor must maintain open and effective communication with the client, and must be able to clearly and concisely communicate the results of the audit.

5. The fifth part of the document discusses the importance of ethics in the auditing profession. It explains that auditors must adhere to a strict code of ethics, and must be able to resist pressure from the client to engage in unethical behavior.

6. The sixth part of the document discusses the importance of continuing education in the auditing profession. It explains that auditors must stay up-to-date on the latest developments in the field, and must be able to apply this knowledge in their work.

7. The seventh part of the document discusses the importance of teamwork in the auditing process. It explains that auditors must work closely together, and must be able to communicate effectively with each other, in order to complete the audit successfully.

8. The eighth part of the document discusses the importance of documentation in the auditing process. It explains that auditors must maintain detailed and accurate records of all work performed, and must be able to provide evidence to support their conclusions.

9. The ninth part of the document discusses the importance of risk assessment in the auditing process. It explains that auditors must identify and assess the risks of material misstatement, and must design audit procedures that are tailored to the specific risks of the client.

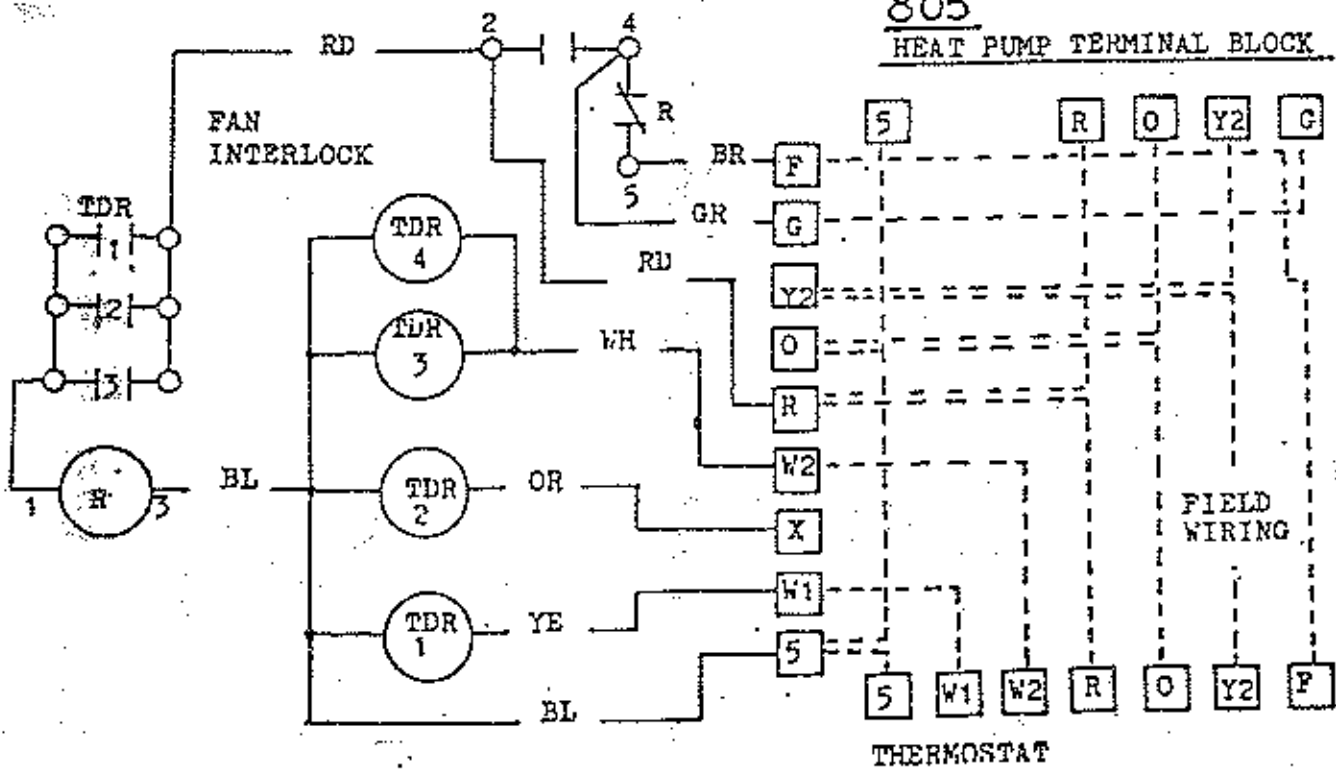
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805

HEATER CONTROL CIRCUIT

805

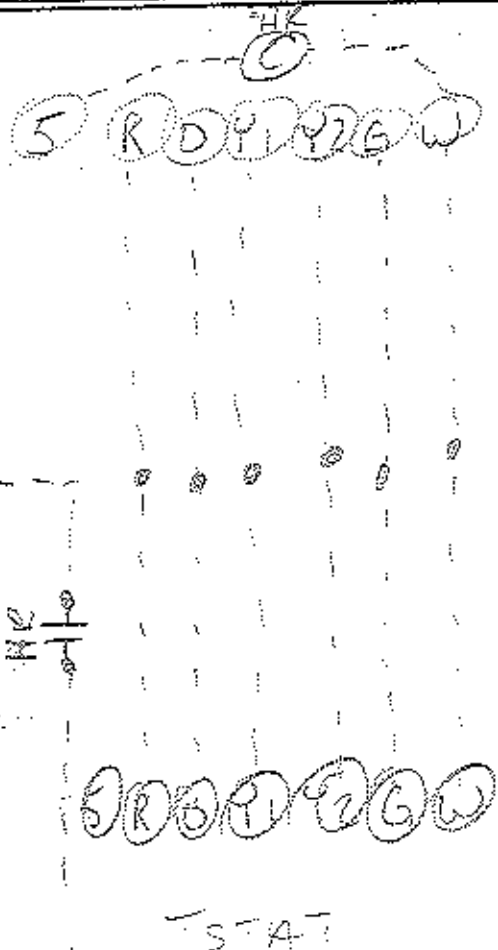
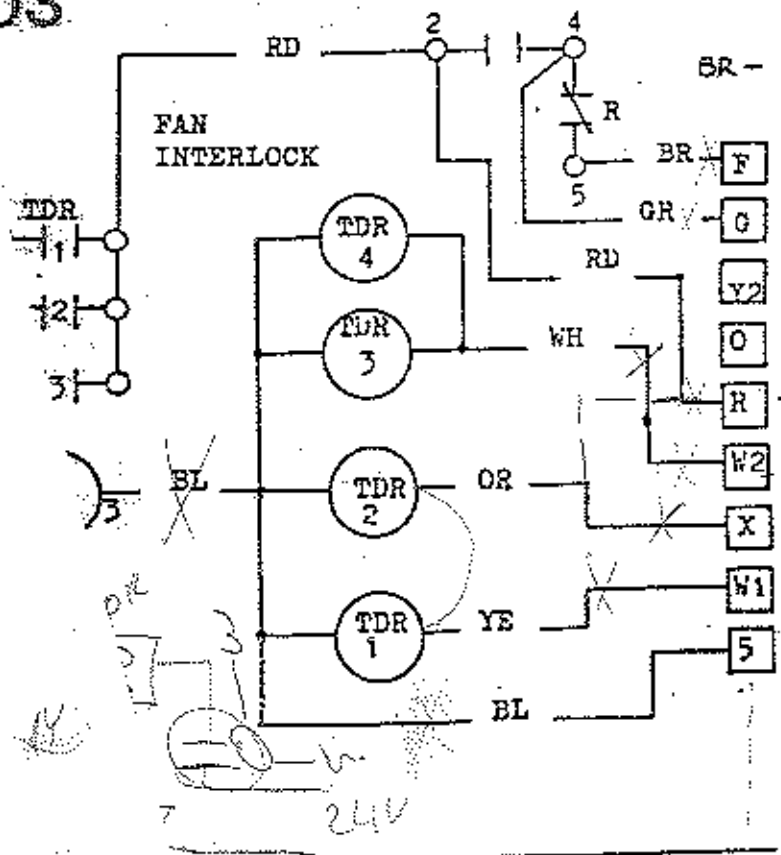
HEAT PUMP TERMINAL BLOCK



803

HEATER CONTROL CIRCUIT

GREY -



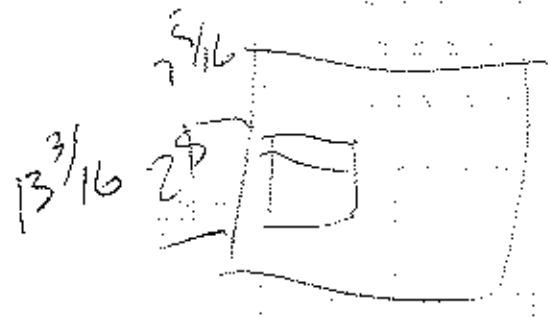
24V

GAS LINE PLUG

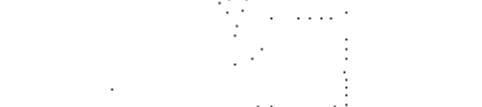
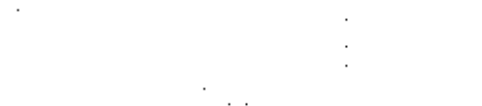
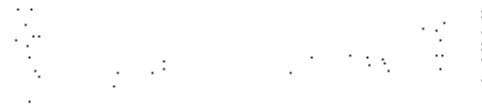
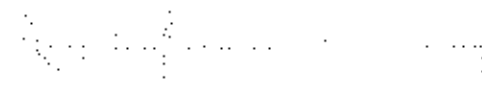
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WIRE GAUGE SIZE

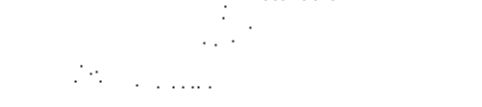
WIRE GAUGE SIZE



WIRE GAUGE SIZE



WIRE GAUGE SIZE



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