

COOL ONLY

BLACK TERMINAL BLOCK (EXTERNAL):

"R" Red wire. Comes from TRANSFORMER

"G" Green Wire. Goes to FAN RELAY terminal #3

"W" -empty-

"B" Black wire. Goes to CONTACTOR terminal F

COMPRESSOR CAPACITOR:

1) One black wire from the hard start on each side

2) A red wire on one side from PLUG 1B

3) Two white wires on the other side

A) White wire from the PLUG 2A

B) White wire from CONTACTOR terminal D

CONTACTOR (see picture below):

110 Volt Power-In Side

Terminal A:1) Black wire from TRANSFORMER (Orange wire instead if 220 volt)

2) Black from FUSE

3) Black from PUMP RELAY terminal 2

Terminal B:1) White wire from WHITE TERMINAL BLOCK - WHITE POWER LEAD

2) Pink wire from PLUG 3B

3) White wire from TRANSFORMER

110 Volt Power-In Side

Terminal A:1) Black wire from PLUG 1C

Terminal B:1) White wire from COMPRESSOR CAPACITOR - white side

2) White to WHITE TERMINAL BLOCK - WHITE PUMP LEAD

24 Volt Side A:1) Green wire from TRANSFORMER

2) Yellow wire from TIME DELAY

3) Yellow wire from PUMP RELAY terminal 1

24 Volt Side B:1) Black wire from BLACK TERMINAL BLOCK "B"

2) Black wire from FAN RELAY terminal 3

FAN RELAY (this is the little relay NOT mounted on the side of the box):

Terminal 1) (24v) Yellow wire from CONTACTOR terminal E

Terminal 2) (110v) Black wire from CONTACTOR terminal A

Terminal 3) (24v) Green wire from BLACK TERMINAL BLOCK "G"

Terminal 4) (110v) Purple wire from PLUG 3C

FUSE HOUSING:

1) Black wire to WHITE TERMINAL BLOCK - BLACK POWER LEAD

2) Black wire to CONTACTOR terminal A

PUMP RELAY (this is the little relay that IS mounted on the side of the box):

Terminal 1) (24v) Yellow wire from TIME DELAY

Terminal 2) (110v) Piggyback red wires

2A) Red wire from PLUG 3A

2B) Red wire from WHITE TERMINAL BLOCK - BLACK PUMP LEAD

Terminal 3) (24v) Black wire from CONTACTOR terminal F

Terminal 4) (110v) Black from PLUG 4B

PLUG (looking at the plug from inside the box):

1st Row #1 = Unused yellow wire (used on units with heat)

#2 = Red wire to COMPRESSOR CAPACITOR (the set of terminals with no white wires)

#3 = Black wire to CONTACTOR terminal C

2nd Row #1 = White wire to COMPRESSOR CAPACITOR

#2 = Unused blue wire (used on units with heat)

#3 = Green wire to ground

3rd Row #1 = Red wire to PUMP RELAY terminal 2

#2 = Pink wire to CONTACTOR terminal B

#3 = Purple wire to FAN RELAY terminal 4

4th Row #1 = -Empty-

#2 = Black wire to PUMP RELAY terminal 4

#3 = -Empty-

TIME DELAY:

- 1) Yellow wire from CONTACTOR terminal E
- 2) Yellow wire from PUMP RELAY 1

TRANSFORMER:

- 1) (24v) Red wire goes to BLACK TERMINAL BLOCK "R"
- 2) (24v) Green to CONTACTOR terminal E
- 3) (110v) White to CONTACTOR terminal B
- 4) IF unit is 110v: Black to CONTACTOR terminal A (Orange and Red wires are capped off)
IF unit is 220v: Orange to CONTACTOR terminal A (Black and Red wires are capped off)

WHITE TERMINAL BLOCK (EXTERNAL):

BLACK POWER LEAD. Black wire goes to FUSE

WHITE POWER LEAD. White wire goes to CONTACTOR terminal B

BLACK PUMP LEAD. Red wire goes to piggyback PUMP RELAY terminal 2

WHITE PUMP LEAD. White wire goes to CONTACTOR terminal D

NOTE:

EBM blowers have a capacitor in the control box.

- 1) One wire piggybacks to the purple wire on FAN RELAY terminal 4
- 2) The other wire goes to PLUG 4A

ELECTRIC HEAT

BLACK TERMINAL BLOCK (EXTERNAL):

"R" Red wire. Comes from TRANSFORMER

"G" Green Wire. Goes to FAN RELAY terminal #3

"W" White wire. Goes to HEAT CONTACTOR terminal E

"B" Black wire. Goes to CONTACTOR terminal F

COMPRESSOR CAPACITOR:

1) One black wire from the hard start on each side

2) A red wire on one side from PLUG 1B

3) Two white wires on the other side

A) White wire from the PLUG 2A

B) White wire from CONTACTOR terminal D

CONTACTOR (See picture below):

110 Volt Power-In Side

Terminal A:1) Black wire from TRANSFORMER (Orange wire instead if 220 volt)

2) Black from FUSE

3) Black from PUMP RELAY terminal 2

4) Black from HEAT CONTACTOR terminal D

Terminal B:1) White wire from WHITE TERMINAL BLOCK - WHITE POWER LEAD

2) Pink wire from PLUG 3B

3) White wire from TRANSFORMER

4) White from HEAT CONTACTOR terminal C

110 Volt Power-In Side

Terminal A:1) Black wire from PLUG 1C

Terminal B:1) White wire from COMPRESSOR CAPACITOR - white side

2) White to WHITE TERMINAL BLOCK - WHITE PUMP LEAD

24 Volt Side A:1) Green wire from TRANSFORMER

2) Yellow wire from TIME DELAY

3) Yellow wire from PUMP RELAY terminal 1

4) Yellow wire from HEAT CONTACTOR terminal F

24 Volt Side B:1) Black wire from BLACK TERMINAL BLOCK "B"

2) Black wire from FAN RELAY terminal 3

FAN RELAY (this is the little relay NOT mounted on the side of the box):

Terminal 1) (24v) Yellow wire from CONTACTOR terminal E

Terminal 2) (110v) Black wire from CONTACTOR terminal A

Terminal 3) (24v) Green wire from BLACK TERMINAL BLOCK "G"

Terminal 4) (110v) Purple wire from PLUG 3C

CONTACTOR (See picture below):

[NOTE this is the contactor between the transformer and the fan relay]

110 Volt Power-In Side

Terminal A) Blue wire from Plug 2B

Terminal B) Yellow wire from PLUG 1A

110 Volt Power-In Side

Terminal A) White wire from CONTACTOR terminal B

Terminal B) Black wire from CONTACTOR terminal A

24 Volt Side A) White wire from BLACK TERMINAL BLOCK "W"

24 Volt Side B) Yellow wire from CONTACTOR terminal E

FUSE HOUSING:

1) Black wire to WHITE TERMINAL BLOCK - BLACK POWER LEAD

2) Black wire to CONTACTOR terminal A

PLUG (looking at the plug from inside the box):

Row 1 #1 = Yellow wire to HEAT CONTACTOR terminal B

#2 = Red wire to COMPRESSOR CAPACITOR (the set of terminals with no white wires)

#3 = Black wire to CONTACTOR terminal C

Row 2 #1 = White wire to COMPRESSOR CAPACITOR

#2 = Blue wire HEAT CONTACTOR terminal A

#3 = Green wire to ground

Row 3 #1 = Red wire to PUMP RELAY terminal 2

#2 = Pink wire to CONTACTOR terminal B

#3 = Purple wire to FAN RELAY terminal 4

Row 4 #1 = -Empty-

#2 = Black wire to PUMP RELAY terminal 4

#3 = -Empty-

PUMP RELAY (this is the little relay that IS mounted on the side of the box):

Terminal 1) (24v) Yellow wire from TIME DELAY

Terminal 2) (110v) Piggyback red wires

2A) Red wire from PLUG 3A

2B) Red wire from WHITE TERMINAL BLOCK - BLACK PUMP LEAD

Terminal 3) (24v) Black wire from CONTACTOR terminal F

Terminal 4) (110v) Black from PLUG 4B

TIME DELAY:

1) Yellow wire from CONTACTOR terminal E

2) Yellow wire from PUMP RELAY terminal 1

TRANSFORMER:

1) (24v) Red wire goes to BLACK TERMINAL BLOCK "R"

2) (24v) Green to CONTACTOR terminal E

3) (110v) White to CONTACTOR terminal B

4) IF unit is 110v: Black to CONTACTOR terminal A (Orange and Red wires are capped off)

IF unit is 220v: Orange to CONTACTOR terminal A (Black and Red wires are capped off)

WHITE TERMINAL BLOCK (EXTERNAL):

BLACK POWER LEAD. Black wire goes to FUSE

WHITE POWER LEAD. White wire goes to CONTACTOR terminal B

BLACK PUMP LEAD. Red wire goes to piggyback PUMP RELAY terminal 2

WHITE PUMP LEAD. White wire goes to CONTACTOR terminal D

NOTE:

EBM blowers have a capacitor in the control box.

- 1) One wire piggybacks to the purple wire on FAN RELAY terminal 4
- 2) The other wire goes to PLUG 4A

REVERSE CYCLE

BLACK TERMINAL BLOCK (EXTERNAL):

"R" Red wire. Comes from piggybacked terminal on REVERSING RELAY 6

"G" Green Wire. Goes to FAN RELAY terminal #3

"W" White wire. Goes to REVERSING RELAY terminal below 6

"B" Black wire. Goes to CONTACTOR terminal F

COMPRESSOR CAPACITOR:

1) One black wire from the hard start on each side

2) A red wire on one side from PLUG 1B

3) Two white wires on the other side

A) White wire from the PLUG 2A

B) White wire from CONTACTOR terminal D

CONTACTOR (See picture below):

110 Volt Power-In Side

Terminal A:1) Black wire from TRANSFORMER (Orange wire instead if 220 volt)

2) Black from FUSE

3) Black from PUMP RELAY terminal 2

Terminal B:1) White wire from WHITE TERMINAL BLOCK - WHITE POWER LEAD

2) Pink wire from PLUG 3B

3) White wire from TRANSFORMER

110 Volt Power-In Side

Terminal A:1) Black wire from PLUG 1C

2) Yellow wire from PLUG 1A

Terminal B:1) White wire from COMPRESSOR CAPACITOR - white side

2) White wire to REVERSING RELAY terminal 3

3) White to WHITE TERMINAL BLOCK - WHITE PUMP LEAD

24 Volt Side A:1) Green wire from TRANSFORMER

2) Yellow wire from TIME DELAY

3) Yellow wire from PUMP RELAY terminal 1

4) Yellow wire from REVERSING RELAY terminal below 4

24 Volt Side B:1) Black wire from BLACK TERMINAL BLOCK "B"

2) Black wire from FAN RELAY terminal 3

FAN RELAY (this is the little relay NOT mounted on the side of the box):

Terminal 1) (24v) Yellow wire from CONTACTOR terminal E

Terminal 2) (110v) Black wire from CONTACTOR terminal A

Terminal 3) (24v) Green wire from BLACK TERMINAL BLOCK "G"

Terminal 4) (110v) Purple wire from PLUG 3C

FUSE HOUSING:

1) Black wire to WHITE TERMINAL BLOCK - BLACK POWER LEAD

2) Black wire to CONTACTOR terminal A

PUMP RELAY (this is the little relay that IS mounted on the side of the box):

Terminal 1) (24v) Yellow wire from TIME DELAY

Terminal 2) (110v) Piggyback red wires

2A) Red wire from PLUG 3A

2B) Red wire from WHITE TERMINAL BLOCK - BLACK PUMP LEAD

Terminal 3) (24v) Black wire from CONTACTOR terminal F

Terminal 4) (110v) Black from PLUG 4B

PLUG (looking at the plug from inside the box):

Row 2 #1 = Yellow wire to CONTACTOR terminal C

#2 = Red wire to COMPRESSOR CAPACITOR (the set of terminals with no white wires)

#3 = Black wire to CONTACTOR terminal C

Row 2 #1 = White wire to COMPRESSOR CAPACITOR

#2 = Blue wire to REVERSING RELAY terminal 1

#3 = Green wire to ground

Row 3 #1 = Red wire to PUMP RELAY terminal 2

#2 = Pink wire to CONTACTOR terminal B

#3 = Purple wire to FAN RELAY terminal 4

Row 4 #1 = -Empty-

#2 = Black wire to PUMP RELAY terminal 4

#3 = -Empty-

REVERSING RELAY:

Terminal 1) (110v) Blue wire from PLUG 2B

Terminal 2) -empty-

Terminal 3) (110v) White wire from CONTACTOR D

Terminal 4) (24v) Black wire from CONTACTOR F

Terminal 5) -empty-

Terminal 6) (24v) Piggyback

6A) Red wire from TRANSFORMER

6B) Red wire from BLACK TERMINAL BLOCK "R"

Below 4) (24v) Yellow wire from CONTACTOR E

Below 6) (24v) White from BLACK TERMINAL BLOCK "W"

TIME DELAY:

1) Yellow wire from CONTACTOR terminal E

2) Yellow wire from PUMP RELAY terminal 1

TRANSFORMER:

1) (24v) Red wire goes to REVERSING RELAY terminal 6 (piggyback)

2) (24v) Green to CONTACTOR terminal E

3) (110v) White to CONTACTOR terminal B

4) IF unit is 110v: Black to CONTACTOR terminal A (Orange and Red wires are capped off)

IF unit is 220v: Orange to CONTACTOR terminal A (Black and Red wires are capped off)

WHITE TERMINAL BLOCK (EXTERNAL):

BLACK POWER LEAD. Black wire goes to FUSE

WHITE POWER LEAD. White wire goes to CONTACTOR terminal B

BLACK PUMP LEAD. Red wire goes to piggyback PUMP RELAY terminal 2

WHITE PUMP LEAD. White wire goes to CONTACTOR terminal D

NOTE:

EBM blowers have a capacitor in the control box.

- 1) One wire piggybacks to the purple wire on FAN RELAY terminal 4
- 2) The other wire goes to PLUG 4A

FX-1 WIRING

CIRCUIT BOARD:

COM L1 Black from PLUG 4B

RUN L2 White from COMPRESSOR CAPACITOR

PUMP L-1 Black from WHITE TERMINAL BLOCK Black Pump Wire

PUMP L-2 Blue from PLUG 2B -AND- White from WHITE TERMINAL
BLOCK White Pump Wire

VALVE L-1 Yellow from PLUG 1A

AC L-1 Black from FUSE

AC L-2 WHITE TERMINAL BLOCK White Power Wire

FAN L-2 Purple from PLUG 3C

FAN L-1 Pink from PLUG 3B

COMPRESSOR CAPACITOR:

- 1) One black wire from the hard start on each side
- 2) A red wire on one side from PLUG 1B
- 3) Two white wires on the other side
 - A) White wire from the PLUG 2A
 - B) White wire from CIRCUIT BOARD RUN L2

FUSE HOUSING:

- 1) Black wire to WHITE TERMINAL BLOCK - BLACK POWER LEAD
- 2) Black wire to CIRCUIT BOARD AC L-1

HP SWITCH PLUG:

Upper wire to Red PLUG wire 3A

Middle wire to Black PLUG wire 1C

Lower capped off

PLUG (looking at the plug from inside the box):

1A = Yellow wire to CIRCUIT BOARD VALVE L-1

ABC 1B = Red wire to COMPRESSOR CAPACITOR (the set
_____ of terminals with no white wires)

1- |000| 1C = Black wire to Middle HP Switch Wire

2- |000| 2A = White wire to COMPRESSOR CAPACITOR

3- |000| 2B = Blue wire CIRCUIT BOARD PUMP L-2

4- |000| 2C = Green wire to ground

--- 3A = Red wire to Upper HP Switch Wire

3B = Pink wire to CIRCUIT BOARD FAN L-1

3C = Purple wire to CIRCUIT BOARD FAN L-2

4A = -Empty-

4B = Black wire to CIRCUIT BOARD COM L1

4C = -Empty-

WHITE TERMINAL BLOCK (EXTERNAL):

BLACK POWER LEAD. Black wire goes to FUSE

WHITE POWER LEAD. White wire goes to CIRCUIT BOARD AC L-2

BLACK PUMP LEAD. Black wire goes to CIRCUIT BOARD PUMP L-1

WHITE PUMP LEAD. White wire goes to CIRCUIT BOARD PUMP L-2

NOTE:

EBM blowers have a capacitor in the control box.

1) One wire piggybacks to the purple wire on CIRCUIT BOARD FAN L-2

2) The other wire goes to PLUG 4A

WIRING HARNESS HOOK-UP

BLACK WIRE These 2 wires go to the high pressure switch. They are interchangeable.

RED WIRE

YELLOW WIRE These 2 wire go to the heat system (reverse cycle valve or electric heat strip) - IF-

BLUE WIRE the unit has heat. Wires are capped off if Cool Only. They are interchangeable.

BLACK WIRE These wires go to the compressor. Black goes to "C" (common), Red goes to "S" (start)

RED WIRE and the white wire goes to "R" (run).

WHITE WIRE

PURPLE WIRE These wires go to the blower. Purple is hot (typically attaches to the black blower

PINK WIRE wire), Pink is common (typically attaches to the white blower wire). Brown is

BROWN WIRE only used on EBM blowers with a brown wire. If no brown wire is present this

wire is capped off.

CONTACTOR DIAGRAM

