

TITLE: H/V 006-012 208V-230V/60/1 265/60/1 DXM2 ECM MPC CV

PCN 20-0286

DATE: 7/22/20

DRAWING NO. 96B0467N03

REV C

LEGEND

Factory Low voltage Wiring

Factory Line Voltage Wiring

Field Low voltage Wiring

Field Line voltage Wiring

Printed Circuit Trace

Optional Wiring

Optional Block Capacitor

Circuit Breaker

Condensate Pan

Control Board Jumper

FUSE

Ground

High Pressure Switch

LED

Low Pressure Switch

Mate-N-Lock

Multi Splice Connector

Optional

Overload

Relay contacts - N.C.

Relay contacts - N.O.

Relay / Contactor Coil

Solenoid Coil

Splice Cap

Temperature Switch

Thermistor

Wire Nut

ACO Automatic Change Over

AL Alarm Relay Contacts

ATS Air Temperature Sensor

BM Blower Motor

BMC Blower Motor Capacitor

BR Blower Relay / Blower Contactor

CAP Capacitor

CB Circuit Breaker

CC Compressor Contactor

CDT Compressor Discharge Temperature

CO Condensate Overflow Sensor

CR Compressor Relay

CRC Compressor Run Capacitor

CS Current Sensor

DHW Domestic Hot Water

DM Damper Motor

DTS Discharge Temperature Switch

EEV Electronic Expansion Valve

EHC Electronic Heat Contactor

ES End Switch

ETC Electronic Temperature Control

EWT Entering Water Temp Sensor

FSR Fan Speed Relay

FSS Fan Speed Switch

HP High Pressure Switch

HPWS High Pressure Water Switch

HR Heating Relay

JW Jumper Wire

LAT Leaving Air Temperature

LOR Lock Out Relay

LP Low Pressure Switch

LT1 Sensor, low temp protection, water coil

LT2 Sensor, low temp protection, air coil

LWT Leaving Water Temp Sensor

MCO Manual Change Over

MOD Modulating Water Valve

MS Manual Starter

MSC Multi Splice Connector

MWV Motorized Water Valve

NLL Night Low Limit Switch

PDB Power Distribution Block

POT Potentiometer

P1 Field Wiring Terminal Block

PR Pump Relay

RAS Return Air Sensor

RVS Reversing Valve Solenoid

SAC Start Assist Capacitor

SAS Supply Air Sensor

TB Terminal Block

TRANS Transformer

UMT Unit Mounted Thermostat

VFD Variable Frequency Drive

VSP Variable Speed Pump

WSTAT Water Stat

NOTES:

1. Compressor and Blower Motor thermally protected internally.

2. All wiring to the unit must comply with NEC and local codes
low voltage wiring shall be Class 2 or equivalent.

3. Transformer wiring is voltage sensitive. Use layout corresponding to the unit voltage.

4. LT1 provides low temperature protection for WATER. When using ANTI-FREEZE solutions, cut JW3 jumper.

5. Typical heat pump thermostat wiring shown. Refer to thermostat IOM for wiring to the unit. T-Stat wiring must be "Class 1" and voltage rating equal to or greater than unit supply voltage.

6. 24V Alarm signal shown. For Dry Alarm contact between AL1 & AL2, cut JW1 for CXM/DXM Gen2 or JW4 DXM.

7. Transformer Secondary Ground via control board standoffs and/or Common to Control Box.

ECM1. For ECM Blower Motor air flow adjustment and diagnostic information refer to I.O.M.

MPC2. Refer to MPC Installation application, and Operation Manual For Control Wiring to the unit.

MPC3. ASW sensors are not required on Water-Water application. ASW06-ASW08 (Water-Air Only) move jumper to LSTAT, ASW09-ASW11 move jumper to Rnet.

MPC8. Factory cut JW1 jumper. Dry Contact will be available between AL1 and AL2

The diagram illustrates the electrical control system for a ClimateMaster MPC unit. Key components and their connections include:

- ClimateMaster MPC:** Features a terminal block with inputs for power (+12V, GND), communication (NET+, NET-, SHIELD), and various sensors (AL1, AL2, EH2, LAT/LWTL, LWT/LWTS, THERM, SLIDE/OVR, LED). It also has a 24V VAC output for the alarm.
- DXM2 Microprocessor Control Logic:** The central control unit with multiple terminal blocks (P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11) for connecting relays, sensors, and control signals. It includes a test button and status indicators.
- Power and Transformer:** A 208V/230V transformer provides 24V power to the system. Connections for L1, L2, and ground are shown. A 24V DC section is also present.
- Compressor and Blower Motor:** The compressor is controlled by a contactor (CC) and a relay (R). The blower motor (BM) is connected to a multi-splice connector (MSC2) and a ground lug.
- Sensors and Switches:** Various sensors (ASW06-ASW15) and switches (HP, LP, LT1, LT2, RV, RVS) are connected to the control logic. A high-pressure switch (HPS) is also shown.
- Wiring Details:** The diagram specifies wire colors (RED, BLK, YEL, BLU, GRY, BRN, VIO, GND) and terminal block locations (MSC2(1) through MSC2(5)). It also shows the placement of fuses and capacitors.

CONTROL BOX LAYOUT