


TITLE: H/V006-012 208-230/60/1, 265/60/1 w/LON ECM CT COMMERCIAL

PCN 19-0476

DATE: 9/12/19



DRAWING NO. 96B0506N02

REV B

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

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

AL Alarm Relay Contacts

BM Blower Motor

BMC Blower Motor Capacitor

BR Blower Relay

CAP Capacitor

CB Circuit Breaker

CC Compressor Contractor

CO Condensate Overflow Sensor

CR Compressor Relay

CTB Common Terminal Block

CS Current Sensor

DHW Domestic Hot Water

DISC Disconnect

DM Damper Motor

DTS Discharge Temperature Switch

ES End Switch

EWTS Entering Water Temp Sensor

FP1 Sensor, low temp protection, water coil

FP2 Sensor, low temp protection, air coil

FSS Fan Speed Switch

HP High Pressure Switch

HPWS High Pressure Water Switch

HR Heating Relay

IAP Ionization Air Purifier

JW Jumper Wire

LAT Leaving Air Temperature

LP Low Pressure Switch

LOR Lock Out Relay

LT1 Sensor, low temp protection, water coil

LT2 Sensor, low temp protection, air coil

LWTS Leaving Water Temp Sensor

MOD Modulating Water Valve

MS Manual Starter

MSC Multi Splice Connector

MWV Motorized Water Valve

PB Power Terminal Block

PDB Power Distribution Block

POT Potentiometer

P1 Field Wiring Terminal Block

RAS Return Air Sensor

RVS Reversing Valve Solenoid

SAC Start Assist Capacitor

TB Terminal Block

TRANS Transformer

TS Terminal Strip

UMT Unit Mounted Thermostat

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 CXM/DXM board standoffs and screws to Control Box.

BM10. Higher numbered taps take priority.

LON1. Refer to LON, OR TSTAT Installation, Application, and Operation Manual for control wiring to the unit.

LON2. Optional LON wires. Only connect if LON connection is desired at the wall sensor.

The diagram illustrates the electrical wiring for a commercial HVAC unit. Key components include the LON Controller, CXM Microprocessor Control Logic, and various sensors and actuators. The wiring is organized into several sections:

- Power Supply:** A 24V transformer (NOTE 3) provides power to the unit. The primary is connected to a 230V/208V/265V supply. The secondary is connected to the CXM board and the LON controller.
- Control Logic:** The CXM board contains a microprocessor and control logic. It is connected to the LON controller and various sensors and actuators.
- Sensors and Actuators:** The diagram shows connections for various sensors (e.g., FP1, FP2, LT1, LT2, LWTS) and actuators (e.g., HP, LP, RV, CO, P2, P3).
- Wiring Details:** The diagram includes detailed wiring for the LON controller terminal block, the CXM board, and the various sensors and actuators. It also shows the connection of the LONWORKS and PROTOCOL lines.

**Component Location TR 006-012**

**\* Optional for MV only**

**UNIT POWER SUPPLY REFER TO DATA PLATE USE COPPER CONDUCTORS ONLY SEE NOTE 2**