

**TITLE:** TRC REV.B I20/60/I, 208-240/60/I, 277/60/I, UNIT-MOUNTED ACO

**PCN:** 22-0237      **DATE:** 5/20/22

DRAWING NO. **96B04I4N2I**      REV -

**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  
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:**

- Compressor and Blower Motor thermally protected internally.
- All wiring to the unit must comply with NEC and local codes low voltage wiring shall be Class 2 or equivalent.
- Field Use Only: Transformer wiring is voltage sensitive. Use layout corresponding to the unit voltage.
- LT1 provides low temperature protection for WATER. When using ANTI-FREEZE solutions, cut JW3 jumper.
- 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.
- 24V Alarm signal shown. For Dry Alarm contact between AL1 & AL2, cut JW1 for CXM/DXM Gen2 or JW4 DXM.
- Transformer Secondary Ground via control board standoffs and/or Common to Control Box.

**BM11.** Blower motor is factory wired for high & low speeds. For any other combination of speeds, at the motor attach the black wire to the higher of the two desired speed taps, and the red wire to the lower of the two desired speed taps.

The main schematic illustrates the electrical connections for the unit. It starts with a 265 V SYSTEM (NEUTRAL ON) entering a PDB (Power Distribution Block). The PDB has terminals L1, L2, T1, and T2. Wires connect these to a 208/240V TRANSFORMER (SEE NOTE 3), which outputs 240V, 208V BLK, and 0V. The 240V line goes to a circuit breaker (CB) and then to the compressor's common terminal (COM). The 208V BLK line goes to the blower motor's common terminal (COM). The 0V line goes to ground. Other components include a multi-splice connector (MSC), end switch (ES), capacitor (CAP), relay (RELAY), and various sensors (e.g., HP, LP, LT1, LT2, RV, CO).

This diagram shows the blower capacitor connection. It features a 277V and 120V transformer. The primary winding is connected to R-YEL and C-BLU. The secondary winding is connected to 0V and COM BLK. The transformer is labeled SEE NOTE 3.

\* CORD CONNECTION OPTION  
208V: (RIBBED-WHT) (GRN) (PLAIN-BLK) PB  
115V: (RIBBED-WHT) (GRN) (PLAIN-BLK) PB

\* PUMP OPTION  
Terminal block configuration: 2 L1, 6 L2, 4 CR, 8 T1, 8 T2. Includes a PUMP symbol.

Heat Pump TSTAT w/RAS.  
Connections: Y, O, G, G2, RH, RC, SI, S2.

**Control Box Layout**  
Components shown: COMPRESSOR CAPACITOR, START ASSIST CAPACITOR, CXM, BLOWER RELAY 2 (HIGH), POWER DISTRIBUTION BLOCK, GROUND, TRANSFORMER, COMPRESSOR RELAY, BLOWER RELAY 1 (LOW).

\* OPTIONAL FOR MWV ONLY  
Connections: HP<sup>1</sup>, HP<sup>2</sup>, RED, HP, HPWS, WTR IN.