



Installation Instructions

NOTE: Read the entire instruction manual before starting the installation


TABLE OF CONTENTS

SAFETY CONSIDERATIONS	2	Convenience Outlets	14
Rated Indoor Airflow (cfm)	3	Factory-Option Thru-Base Connections	16
INSTALLATION	6	Units without Thru-Base Connections	16
Jobsite Survey	6	Field Control Wiring	16
Step 1 - Plan for Unit Location	6	Thermostat	16
Roof Mount	6	Unit without Thru-Base Connection Kit	17
Step 2 - Plan for Sequence of Unit Installation	7	Heat Anticipator Settings	17
Curb-Mount Installation	7	Electric Heaters	17
Pad-Mount Installation	7	Single Point Boxes & Supplementary Fuses	18
Frame-Mount Installation	7	Single Point Boxes without Fuses	18
Step 3 - Inspect Unit	7	Low-Voltage Control Connections	18
Step 4 - Provide Unit Support	7	EconoMi\$er X (Factory-Installed Option)	18
Roof Curb Mount	7	Perfect Humidity™ Control Connections	19
Slab Mount (Horizontal Units Only)	7	Perfect Humidity - Space RH Controller	19
Alternate Unit Support		RTU Open Control System	21
(In Lieu of Curb or Slab Mount)	7	Supply Air Temperature (SAT) Sensor	24
Step 5 - Field Fabricate Ductwork	9	Outdoor Air Temperature (OAT) Sensor	24
For Units with Accessory Electric Heaters	9	EconoMi\$er2	25
Step 6 - Rig and Place Unit	9	Field Connections	25
Positioning on Curb	10	Space Temperature (SPT) Sensors	25
Step 7 - Convert to Horizontal and Connect		Indoor Air Quality (CO ₂) Sensor	26
Ductwork	10	Outdoor Air Quality Sensor	26
Step 8 - Install Outside Air Hood	11	Smoke Detector/Fire Shutdown (FSD)	27
Economizer and Two Position Damper Hood		Space Relative Humidity Sensor or Humidistat ...	27
Package Removal and Setup — Factory Option ..	11	Connecting Discrete Inputs	28
Economizer Hood and Two-Position Hood	11	Communication Wiring - Protocols	29
Step 9 - Install External Condensate Trap and Line ...	12	General	29
Step 10 - Make Electrical Connections	12	Local Access	30
Field Power Supply	12	RTU Open Troubleshooting	30
Units with Factory-Installed		Outdoor Air Enthalpy Control	31
Non-Fused Disconnect	13	Differential Enthalpy Control	31
Units without Factory-Installed		Return Air Enthalpy Sensor	31
Non-Fused Disconnect	14	Smoke Detectors	32
All Units	14	Step 11 - Adjust Factory-Installed Options	42
		Step 12 - Install Accessories	42
		START-UP CHECKLIST	43

SAFETY CONSIDERATIONS

Improper installation, adjustment, alteration, service, maintenance, or use can cause explosion, fire, electrical shock or other conditions which may cause personal injury or property damage. Consult a qualified installer, service agency, or your distributor or branch for information or assistance. The qualified installer or agency must use factory-authorized kits or accessories when modifying this product. Refer to the individual instructions packaged with the kits or accessories when installing.

Follow all safety codes. Wear safety glasses and work gloves. Use quenching cloths for brazing operations and have a fire extinguisher available. Read these instructions thoroughly and follow all warnings or cautions attached to the unit. Consult local building codes and appropriate national electrical codes (in USA, ANSI/NFPA 70, National Electrical Code (NEC); in Canada, CSA C22.1) for special requirements.

It is important to recognize safety information. This is the safety-alert symbol . When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury.

Understand the signal words DANGER, WARNING, CAUTION, and NOTE. These words are used with the safety-alert symbol. DANGER identifies the most serious hazards which **will** result in severe personal injury or death. WARNING signifies hazards which **could** result in personal injury or death. CAUTION is used to identify unsafe practices, which **may** result in minor personal injury or product and property damage. NOTE is used to highlight suggestions which **will** result in enhanced installation, reliability, or operation.

WARNING

ELECTRICAL SHOCK HAZARD

Failure to follow this warning could cause personal injury or death.

Before performing service or maintenance operations on unit, turn off main power switch to unit and install lock(s) and lockout tag(s). Ensure electrical service to rooftop unit agrees with voltage and amperage listed on the unit rating plate. Unit may have more than one power switch.

WARNING

UNIT OPERATION AND SAFETY HAZARD

Failure to follow this warning could cause personal injury, death and/or equipment damage.

Puron® (R-410A) refrigerant systems operate at higher pressures than standard R-22 systems. Do not use R-22 service equipment or components on Puron refrigerant equipment.

WARNING

PERSONAL INJURY AND ENVIRONMENTAL HAZARD

Failure to follow this warning could cause personal injury or death.

Relieve pressure and recover all refrigerant before system repair or final unit disposal.

Wear safety glasses and gloves when handling refrigerants. Keep torches and other ignition sources away from refrigerants and oils.

CAUTION

CUT HAZARD

Failure to follow this caution may result in personal injury.

Sheet metal parts may have sharp edges or burrs. Use care and wear appropriate protective clothing, safety glasses and gloves when handling parts and servicing air conditioning equipment.

Rated Indoor Airflow (cfm)

The table to the right lists the rated indoor airflow used for the AHRI efficiency rating for the units covered in this document.

Model Number	Full Load Airflow (cfm)
558J*04A	1275
558J*05A	1400
558J*06A	1800
558J*07A/G	2200

Position:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Example:	5	5	8	J	E	0	6	A	0	0	0	A	1	A	0	A	A

Unit Type

558 - Cooling RTU with optional Electric Heat - Legacy Series

Model

J - Puron® (R-410A) Refrigerant

Voltage

E = 460-3-60
J = 208/230-1-60
P = 208/230-3-60
T = 575-3-60

Cooling Tons

04 - 3 tons
05 - 4 tons
06 - 5 tons
07 - 6 tons

Refrigerant System Options

A = Standard One Stage cooling models
G = One Stage cooling models with Perfect Humidity™ (07 models only)

Heat Level

(Field installed electric heaters available)
000 = No Heat

Coil Options For Round Tube/Plate Fin Condenser Coil Models Only (Outdoor - Indoor - Hail Guard)

A = Al/Cu - Al/Cu
B = Precoat Al/Cu - Al/Cu
C = E-coat Al/Cu - Al/Cu
D = E-coat Al/Cu - E-coat Al/Cu
E = Cu/Cu - Al/Cu
F = Cu/Cu - Cu/Cu
M = Al/Cu - Al/Cu — Louvered Hail Guard
N = Precoat Al/Cu - Al/Cu — Louvered Hail Guard
P = E-coat Al/Cu - Al/Cu — Louvered Hail Guard
Q = E-coat Al/Cu - E-coat Al/Cu — Louvered Hail Guard
R = Cu/Cu - Al/Cu — Louvered Hail Guard
S = Cu/Cu - Cu/Cu — Louvered Hail Guard

Coil Options For All Aluminum - Novation Condenser Coil Models Only (Outdoor - Indoor - Hail Guard)

G = Al/Al - Al/Cu
H = Al/Al - Cu/Cu
J = Al/Al - E-coat Al/Cu
K = E-coat Al/Al - Al/Cu
L = E-coat Al/Al - E-coat Al/Cu
T = Al/Al - Al/Cu — Louvered Hail Guard
U = Al/Al - Cu/Cu — Louvered Hail Guard
V = Al/Al - E-coat Al/Cu — Louvered Hail Guard
W = E-coat Al/Al - Al/Cu — Louvered Hail Guard
X = E-coat Al/Al - E-coat Al/Cu — Louvered Hail Guard

Packaging & 2-Speed Indoor Fan Motor

A = Standard Packaging, electro mech. controls that require W7212 EconoMi\$er IV
B = LTL Packaging, electro mech. controls that require W7212 EconoMi\$er IV
C = Standard Packaging, electro mech. controls that require W7220 EconoMi\$er X
F = LTL Packaging, electro mech. controls that require W7220 EconoMi\$er X

Factory Installed Options

0A = None

NOTE: See the 558J 3 to 15 ton Price Pages for a complete list of factory installed options.

Outdoor Air Options

A = None
B = Temperature Economizer, Barometric Relief, Standard Leak (W7212 or W7220)
E = Temperature Economizer, Barometric Relief, Standard Leak w/CO₂, (W7212 or W7220)
H = Enthalpy Economizer, Barometric Relief, Standard Leak, (W7212 or W7220)
L = Enthalpy Economizer, Barometric Relief, Standard Leak w/CO₂, (W7212 or W7220)
Q = Motorized 2 Position Damper
U = Temperature Economizer, Barometric Relief, Ultra Low Leak, (W7220)
W = Enthalpy Economizer, Barometric Relief, Ultra Low Leak, (W7220)

Indoor Fan Options

0 = Direct Drive, Standard Static Option (04/05/06 models only)
1 = Belt Drive, Standard Static Option
2 = Belt Drive, Medium Static Option
3 = Belt Drive, High Static Option

Note: On single phase (-J voltage code) models, the following are not available as a factory installed option:

- Coated Coils or Cu Fin Coils
- Louvered Hail Guards
- Economizer or 2 Position Damper
- Powered 115 Volt Convenience Outlet

558J

Fig. 1 - 558J 04-07 Model Number Nomenclature (Example)

C150146

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CONNECTION SIZES	SUBMISSION OF THESE DRAWINGS OR DOCUMENTS WILL BE DEEMED TO BE ACCEPTANCE OF CONTRACT.
A 1 3/8" [35] DIA FIELD POWER SUPPLY HOLE	
B 2" [51] DIA POWER SUPPLY KNOCKOUT	
C 1 3/4" [44] DIA GAUGE ACCESS PLUG	
D 7/8" [22] DIA FIELD CONTROL WIRING HOLE	
E 3/4" -14 NPT CONDENSATE DRAIN	
G 2 1/2" [64] DIA POWER SUPPLY KNOCK-OUT	

THRU-THE-BASE CHART THESE HOLES REQUIRED FOR USE	WIRE USE	REQ'D HOLE SIZES (MAX.)
W	1/2" ACC.	7/8" [22.2]
X	1/2" POWER	7/8" [22.2]
Y	3/4" [001]	POWER 1 1/8" [28.4]

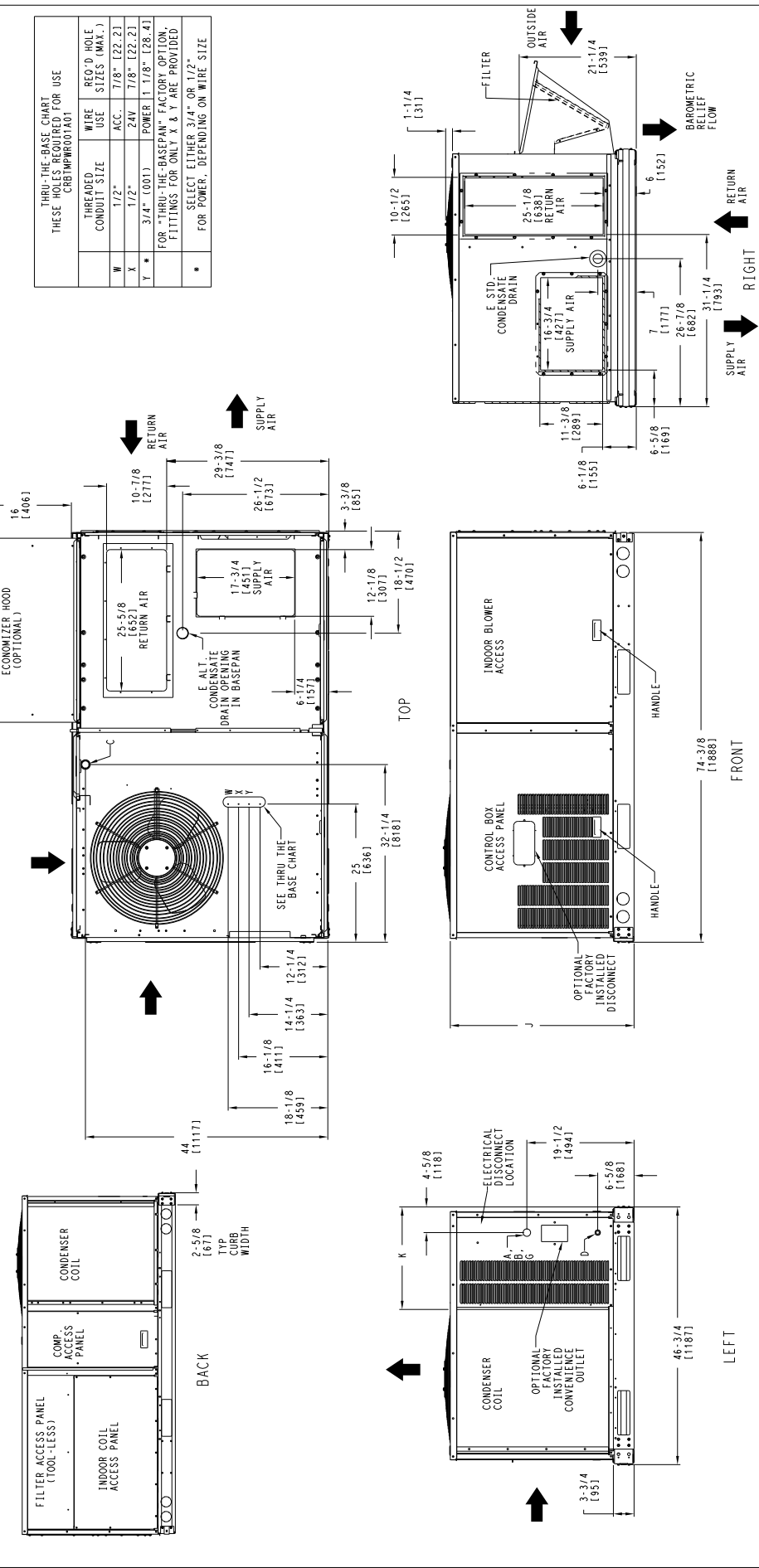
FOR "THRU-THE-BASEPAN" FACTORY OPTION, FITTINGS FOR ONLY X & Y ARE PROVIDED

* SELECT EITHER 3/4" OR 1/2" FOR POWER, DEPENDING ON WIRE SIZE

UNIT	J	K
558J-04A	33-3/8 [847]	18-5/8 [472]
558J-05A	33-3/8 [847]	14-7/8 [377]
558J-06A	41-3/8 [1051]	14-7/8 [377]

NOTES:

1. DIMENSIONS ARE IN INCHES, DIMENSIONS IN [] ARE IN MILLIMETERS.
2. CENTER OF GRAVITY
3. DIRECTION OF AIR FLOW



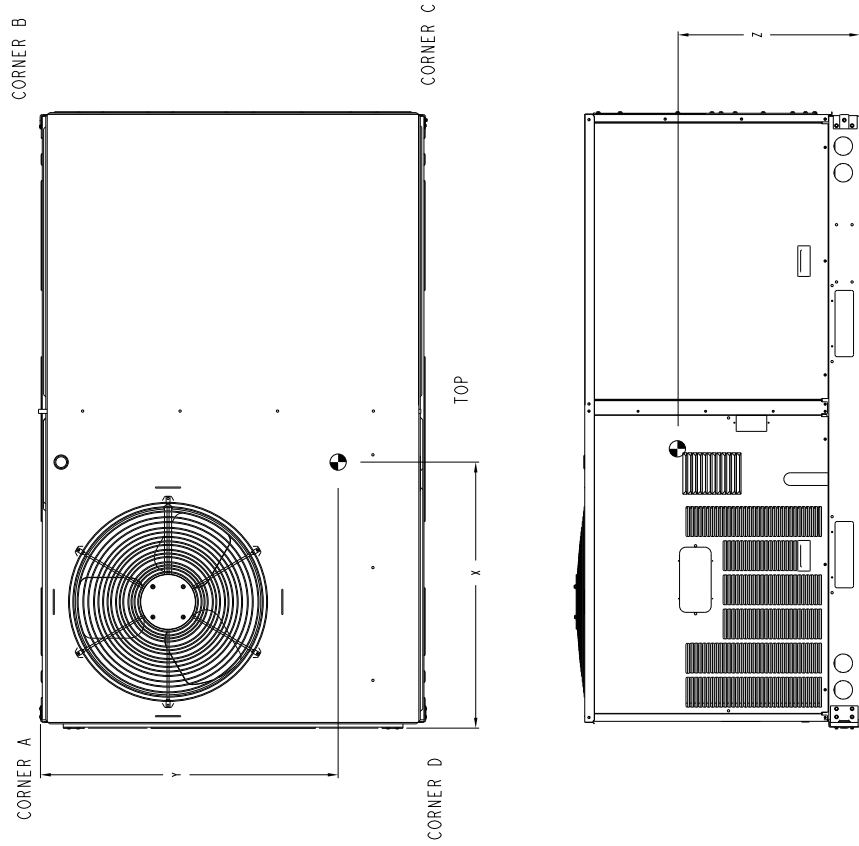
SHEET 1 OF 2	DATE 03-02-15	SUPERCEDES 11-24-08	558J 04-07 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	REV F.6
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Fig. 2 - Dimensional Drawing

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UNIT	STD. UNIT WEIGHT*		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.			HEIGHT	
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z	17 1/4 [438]	17 3/4 [445]
558J-04A	435	197	93	42	106	48	126	57	111	50	39 [991]	25 [635]	17 1/4 [438]		
558J-05A	485	220	117	53	115	52	126	57	128	58	37 [940]	24 [610]	17 1/2 [445]		
558J-06A	515	234	116	53	125	57	143	65	132	60	38 [955]	24 [610]	17 3/4 [451]		
558J-07A	607	275	150	68	160	73	153	69	144	65	38 [965]	22 [559]	20 3/4 [527]		

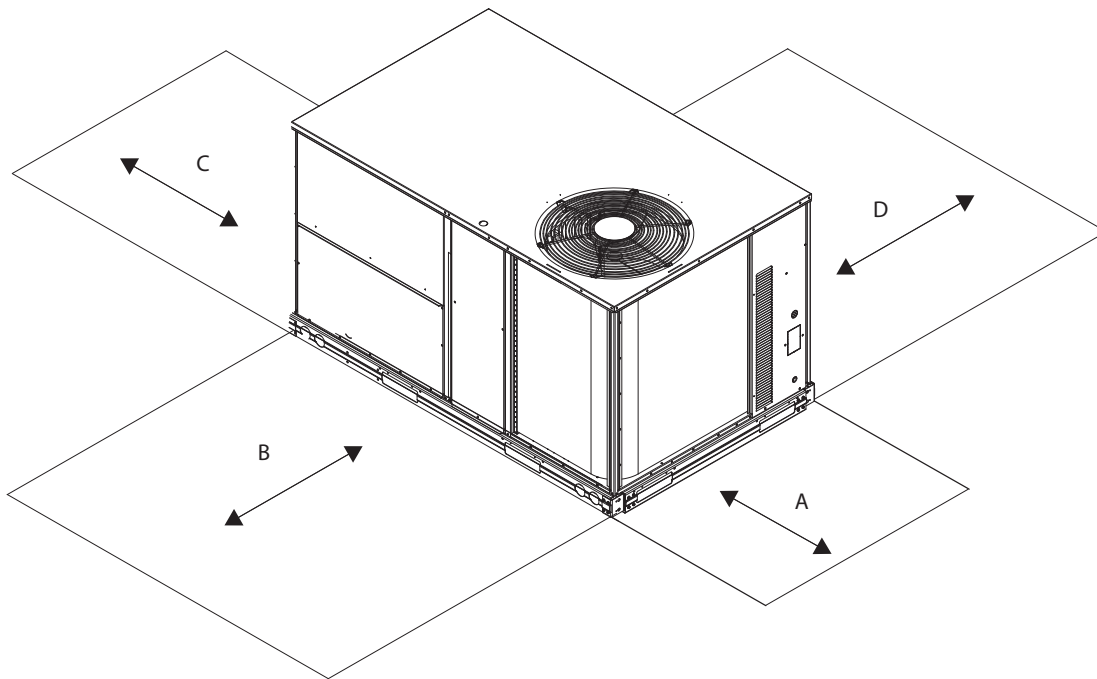
* STANDARD UNIT WEIGHT IS WITHOUT ELECTRIC HEAT AND WITHOUT PACKAGING. FOR OTHER OPTIONS AND ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.



SHEET 2 OF 2	DATE 03-02-15	SUPERSEDES 11-24-08	558J 04-07 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	48TMS01030	REV F.6
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Fig. 2 - Unit Dimensional Drawing (cont.)

558J



C08337

LOCATION	DIMENSION	CONDITION
A	48-in (1219 mm) 18-in (457 mm) 18-in (457 mm) 12-in (305 mm)	Unit disconnect is mounted on panel No disconnect, convenience outlet option Recommended service clearance Minimum clearance
B	42-in (1067 mm) 36-in (914 mm) Special	Surface behind servicer is grounded (e.g., metal, masonry wall) Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass) Check sources of flue products within 10-ft of unit fresh air intake hood
C	36-in (914 mm) 18-in (457 mm)	Side condensate drain is used Minimum clearance
D	42-in (1067 mm) 36-in (914 mm)	Surface behind servicer is grounded (e.g., metal, masonry wall, another unit) Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass)

NOTE: Unit not designed to have overhead obstruction. Contact Application Engineering for guidance on any application planning overhead obstruction or for vertical clearances.

Fig. 3 - Service Clearance Dimensional Drawing

INSTALLATION

Jobsite Survey

Complete the following checks before installation.

1. Consult local building codes and the NEC (National Electrical Code) (ANSI/NFPA 70) for special installation requirements.
2. Determine unit location (from project plans) or select unit location.
3. Check for possible overhead obstructions which may interfere with unit lifting or rigging.

Step 1 — Plan for Unit Location

Select a location for the unit and its support system (curb or other) that provides for minimum clearances required for safety (including clearance to combustible surfaces), unit performance and service access below, around and above unit as specified in unit drawings. See Fig. 3.

NOTE: Consider also the effect of adjacent units.

Unit may be installed directly on wood flooring or on Class A, B, or C roof-covering material when roof curb is used.

Do not install unit in an indoor location. Do not locate air inlets near exhaust vents or other sources of contaminated air.

Although unit is weatherproof, avoid locations that permit water from higher level runoff and overhangs to fall onto unit.

Select a unit mounting system that provides adequate height to allow installation of condensate trap per requirements. Refer to Step 9 — Install External Condensate Trap and Line — for required trap dimensions.

Roof Mount —

Check building codes for weight distribution requirements. Unit operating weight is shown in Table 1.

Table 1 – Operating Weights

558J*	UNITS LB (KG)			
	04	05	06	07
Base Unit	438 (199)	494 (224)	524 (238)	607 (275)
Economizer				
Vertical	50 (23)	50 (23)	50 (23)	50 (23)
Horizontal	80 (36)	80 (36)	80 (36)	80 (36)
Perfect Humidity™ System	N/A	N/A	N/A	41 (15)
Cu Fins	25 (11)	43 (20)	56 (25)	73 (33)
Powered Outlet	32 (15)	32 (15)	32 (15)	32 (15)
Curb				
14-in/356 mm	110 (50)	110 (50)	110 (50)	110 (50)
24-in/610 mm	145 (66)	145 (66)	145 (66)	145 (66)

Step 2 — Plan for Sequence of Unit Installation

The support method used for this unit will dictate different sequences for the steps of unit installation. For example, on curb-mounted units, some accessories must be installed on the unit before the unit is placed on the curb. Review the following for recommended sequences for installation steps.

Curb-mounted Installation —

- Install curb
- Install field-fabricated ductwork inside curb
- Install accessory thru-base service connection package (affects curb and unit) (refer to accessory installation instructions for details)
- Prepare bottom condensate drain connection to suit planned condensate line routing (refer to Step 9 for details)
- Rig and place unit
- Install outdoor air hood
- Install condensate line trap and piping
- Make electrical connections
- Install other accessories

Pad-mounted Installation —

- Prepare pad and unit supports
- Check and tighten the bottom condensate drain connection plug
- Rig and place unit
- Convert unit to side duct connection arrangement
- Install field-fabricated ductwork at unit duct openings
- Install outdoor air hood
- Install condensate line trap and piping
- Make electrical connections
- Install other accessories

Frame-mounted installation —

Frame-mounted applications generally follow the sequence for a curb installation. Adapt as required to suit specific installation plan.

Step 3 — Inspect unit

Inspect unit for transportation damage. File any claim with transportation agency.

Confirm before installation of unit that voltage, amperage and circuit protection requirements listed on unit data plate agree with power supply provided.

Step 4 — Provide Unit Support

Roof Curb Mount —

Accessory roof curb details and dimensions are shown in Fig. 4. Assemble and install accessory roof curb in accordance with instructions shipped with the curb.

Curb should be level. This is necessary for unit drain to function properly. Unit leveling tolerances are shown in Fig. 5. Refer to Accessory Roof Curb Installation Instructions for additional information as required.

Install insulation, cant strips, roofing felt, and counter flashing as shown. *Ductwork must be attached to curb and not to the unit. The accessory thru-the-base power and gas connection package must be installed before the unit is set on the roof curb.*

If electric and control wiring is to be routed through the basepan, attach the accessory thru-the-base service connections to the basepan in accordance with the accessory installation instructions.

NOTE: The gasketing of the unit to the roof curb is critical for a watertight seal. Install gasket supplied with the roof curb as shown in Fig. 4. Improperly applied gasket can also result in air leaks and poor unit performance.

Slab Mount (Horizontal Units Only) —

Provide a level concrete slab that extends a minimum of 6 in. (150 mm) beyond unit cabinet. Install a gravel apron in front of condenser coil air inlet to prevent grass and foliage from obstructing airflow.

NOTE: Horizontal units may be installed on a roof curb if required.

Alternate Unit Support (In Lieu of Curb or Slab Mount) —

A non-combustible sleeper rail can be used in the unit curb support area. If sleeper rails cannot be used, support the long sides of the unit with a minimum of 3 equally spaced 4-in. x 4-in. (102 mm x 102 mm) pads on each side.

558J

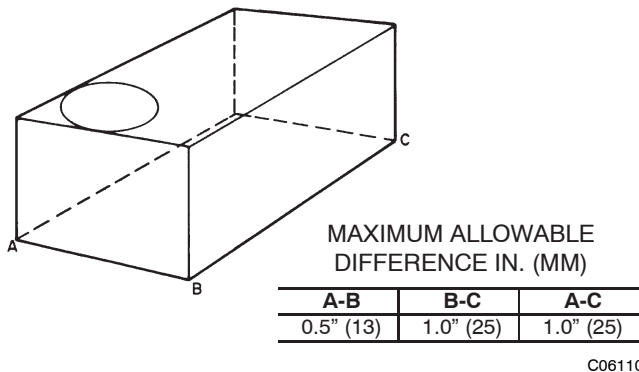


Fig. 5 - Unit Leveling Tolerances

Step 5 — Field Fabricate Ductwork

Cabinet return-air static pressure (a negative condition) shall not exceed 0.35 in. wg (87 Pa) with economizer or 0.45 in. wg (112 Pa) without economizer.

For vertical ducted applications, secure all ducts to roof curb and building structure. *Do not connect ductwork to unit.*

Fabricate supply ductwork so that the cross sectional dimensions are equal to or greater than the unit supply duct opening dimensions for the first 18 in. (458 mm) of duct length from the unit basepan.

Insulate and weatherproof all external ductwork, joints, and roof openings with counter flashing and mastic in accordance with applicable codes.

Ducts passing through unconditioned spaces must be insulated and covered with a vapor barrier.

If a plenum return is used on a vertical unit, the return should be ducted through the roof deck to comply with applicable fire codes.

⚠ CAUTION

PROPERTY DAMAGE HAZARD

Failure to follow this caution may result in damage to roofing materials.

Membrane roofs can be cut by sharp sheet metal edges. Be careful when placing any sheet metal parts on such roof.

For Units with Accessory Electric Heaters —

All installations require a minimum clearance to combustible surfaces of 1-in (25 mm) from duct for first 12-in (305 mm) away from unit.

Outlet grilles must not lie directly below unit discharge.

NOTE: A 90-degree elbow must be provided in the ductwork to comply with UL (Underwriters Laboratories) code for use with electric heat.

⚠ WARNING

PERSONAL INJURY HAZARD

Failure to follow this warning could cause personal injury.

For vertical supply and return units, tools or parts could drop into ductwork and cause an injury. Install a 90-degree turn in the return ductwork between the unit and the conditioned space. If a 90-degree elbow cannot be installed, then a grille of sufficient strength and density should be installed to prevent objects from falling into the conditioned space. Due to electric heater, supply duct will require 90-degree elbow.

558J

Step 6 — Rig and Place Unit

Keep unit upright and do not drop. Spreader bars are not required if top crating is left on unit. Rollers may be used to move unit across a roof. Level by using unit frame as a reference. See Table 1 and Fig. 6 for additional information.

Lifting holes are provided in base rails as shown in Fig. 6. Refer to rigging instructions on unit.

Rigging materials under unit (cardboard to prevent base pan damage) must be removed PRIOR to placing the unit on the roof curb.

When using the standard side drain connection, ensure the red plug in the alternate bottom connection is tight. Do this before setting the unit in place. The red drain pan plug can be tightened with a 1/2-in. square socket drive extension. For further details see “Step 9 - Install External Condensate Trap and Line on page 12.

Before setting the unit onto the curb, recheck gasketing on curb.

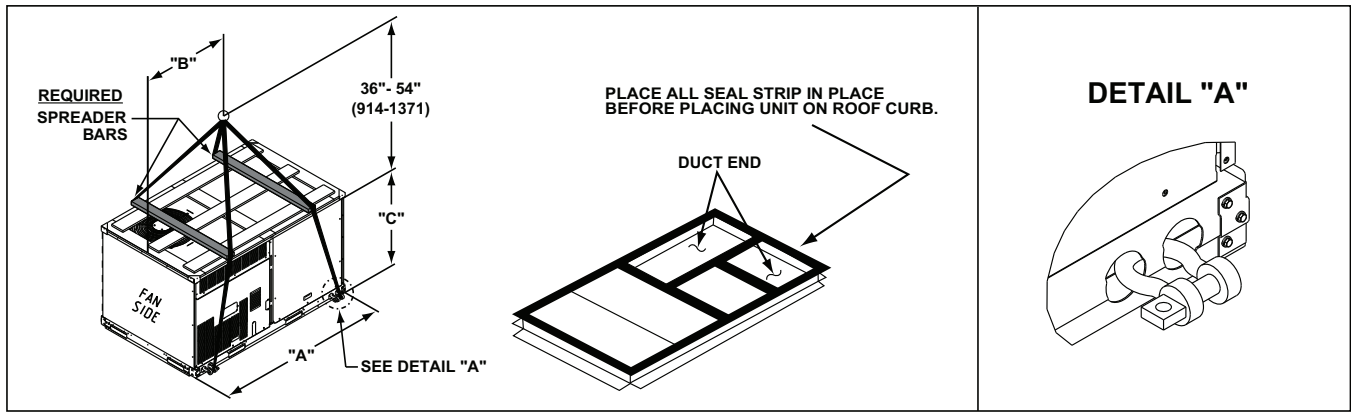
⚠ CAUTION

UNIT DAMAGE HAZARD

Failure to follow this caution may result in equipment damage.

All panels must be in place when rigging. Unit is not designed for handling by fork truck.

If using top crate as spreader bar, once unit is set, carefully lower wooden crate off building roof top to ground. Ensure that no people or obstructions are below prior to lowering the crate.



C11292

UNIT	MAX WEIGHT		DIMENSION					
			A		B		C	
	LB	KG	IN	MM	IN	MM	IN	MM
558J*04	740	336	74.5	1890	38	965	33.5	850
558J*05	795	361	74.5	1890	38	965	33.5	850
558J*06	865	393	74.5	1890	38	965	33.5	850
558J*07	1040	473	74.5	1890	38	965	41.5	1055

NOTES:

1. SPREADER BARS REQUIRED — Top damage will occur if spreader bars are not used.
2. Dimensions in () are in millimeters.
3. Hook rigging shackles through holes in base rail, as shown in detail "A." Holes in base rails are centered around the unit center of gravity. Use wooden top to prevent rigging straps from damaging unit.

Fig. 6 - Rigging Details

Positioning on Curb —

Position unit on roof curb so that the following clearances are maintained: 1/4 in. (6.4 mm) clearance between the roof curb and the base rail inside the front and rear, 0.0 in. clearance between the roof curb and the base rail inside on the duct end of the unit. This will result in the distance between the roof curb and the base rail inside on the condenser end of the unit being approximately 1/4 in. (6.4 mm).

Although unit is weatherproof, guard against water from higher level runoff and overhangs.

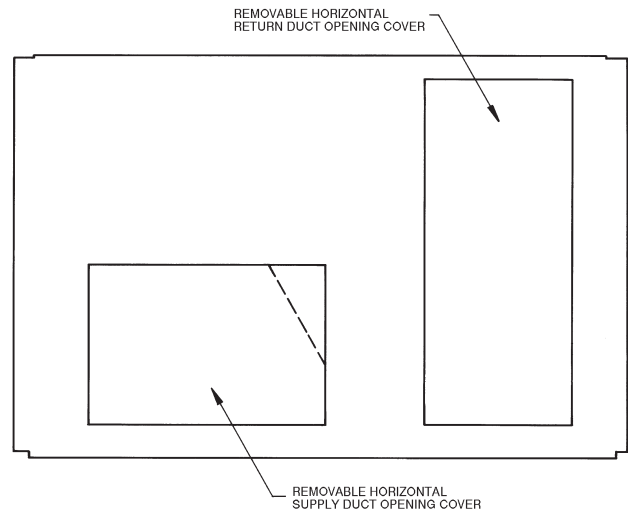
⚠ CAUTION

UNIT DAMAGE HAZARD

Failure to follow this caution may result in equipment damage.

All panels must be in place when rigging. Unit is not designed for handling by fork truck.

remove screws from side duct opening covers and remove covers. Using the same screws, install covers on vertical duct openings with the insulation-side down. Seals around duct openings must be tight. See Fig. 7.



C06108

Fig. 7 - Horizontal Conversion Panels

After unit is in position, remove rigging skids and shipping materials.

Step 7 — Convert to Horizontal and Connect Ductwork (when required)

Unit is shipped in the vertical duct configuration. Unit without factory-installed economizer or return air smoke detector option may be field-converted to horizontal ducted configuration. To convert to horizontal configuration,

Field-supplied flanges should be attached to horizontal duct openings and all ductwork should be secured to the flanges. Insulate and weatherproof all external ductwork, joints, and roof or building openings with counter flashing and mastic in accordance with applicable codes.

Do not cover or obscure visibility to the unit's informative data plate when insulating horizontal ductwork.

Step 8 — Install Outside Air Hood

Economizer and Two Position Damper Hood Package Removal and Setup - Factory Option

NOTE: Economizer and two position damper are not available as factory installed options for single phase (-J voltage code) models.

1. The hood is shipped in knock-down form and must be field assembled. The indoor coil access panel is used as the hood top while the hood sides, divider and filter are packaged together, attached to a metal support tray using plastic stretch wrap, and shipped in the return air compartment behind the indoor coil access panel. The hood assembly's metal tray is attached to the basepan and also attached to the damper using two plastic tie-wraps.
2. To gain access to the hood, remove the filter access panel. (See Fig. 8.)

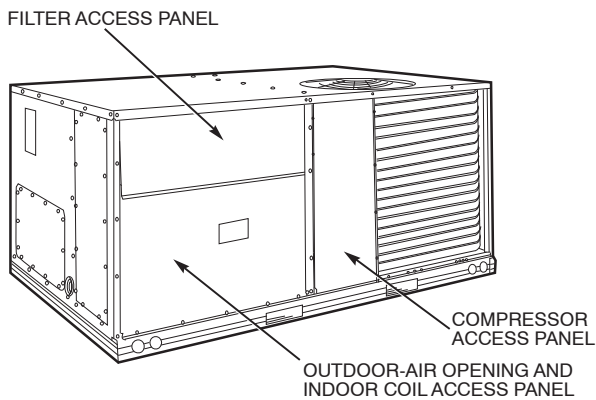


Fig. 8 - Typical Access Panel Locations

C06023

3. Locate the (2) screws holding the metal tray to the basepan and remove. Locate and cut the (2) plastic tie-wraps securing the assembly to the damper. (See Fig. 9) Be careful to not damage any wiring or cut tie-wraps securing any wiring.

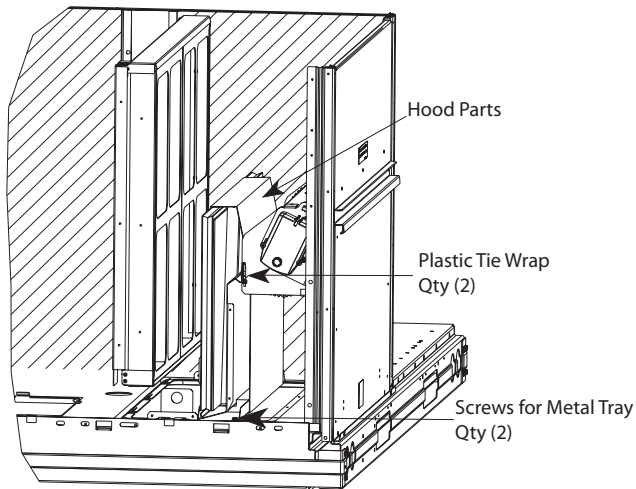


Fig. 9 - Economizer and Two-Position Damper Hood Parts Location

C08639

4. Carefully lift the hood assembly (with metal tray) through the filter access opening and assemble per the

steps outlined in *Economizer Hood and Two-Position Hood*, below.

Economizer Hood and Two-Position Hood —

NOTE: If the power exhaust accessory is to be installed on the unit, the hood shipped with the unit will not be used and must be discarded. Save the aluminum filter for use in the power exhaust hood assembly.

1. The indoor coil access panel will be used as the top of the hood. Remove the screws along the sides and bottom of the indoor coil access panel. See Fig. 10.

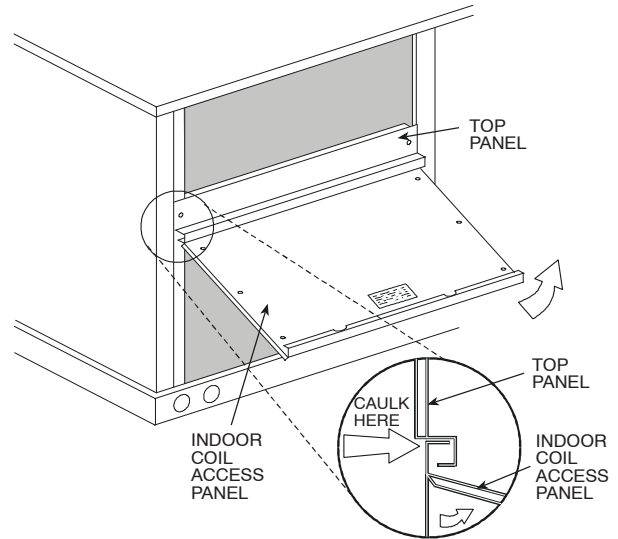


Fig. 10 - Indoor Coil Access Panel Relocation

C06025

2. Swing out indoor coil access panel and insert the hood sides under the panel (hood top). Use the screws provided to attach the hood sides to the hood top. Use screws provided to attach the hood sides to the unit. See Fig. 11.

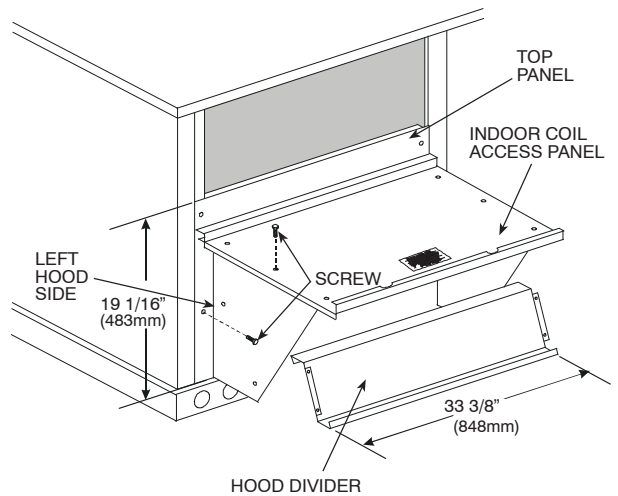


Fig. 11 - Economizer Hood Construction

C06026

3. Remove the shipping tape holding the economizer barometric relief damper in place (economizer only).
4. Insert the hood divider between the hood sides. See Fig. 11 and 12. Secure hood divider with 2 screws on each hood side. The hood divider is also used as the bottom filter rack for the aluminum filter.

5. Open the filter clips which are located underneath the hood top. Insert the aluminum filter into the bottom filter rack (hood divider). Push the filter into position past the open filter clips. Close the filter clips to lock the filter into place. See Fig. 12.
6. Caulk the ends of the joint between the unit top panel and the hood top.
7. Replace the filter access panel.

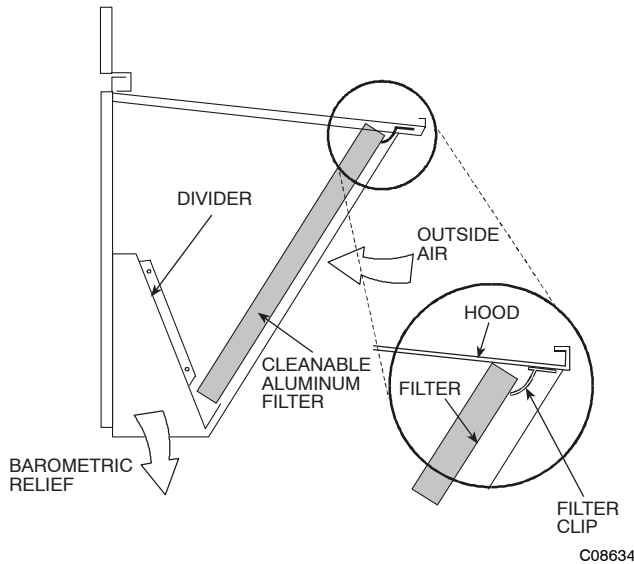


Fig. 12 - Economizer Filter Installation

C08634

Step 9 — Install External Condensate Trap and Line

The unit has one $\frac{3}{4}$ -in. condensate drain connection on the end of the condensate pan and an alternate connection on the bottom. See Fig. 13. Unit airflow configuration does not determine which drain connection to use. Either drain connection can be used with vertical or horizontal applications.

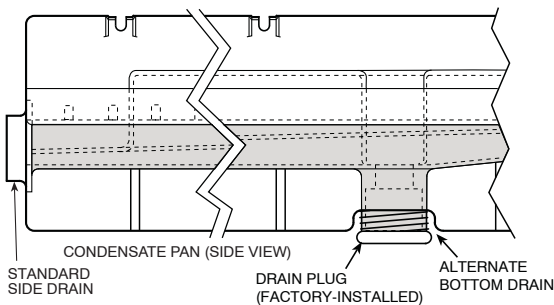


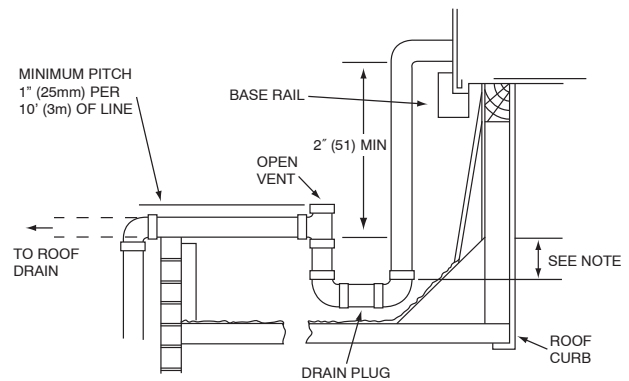
Fig. 13 - Condensate Drain Pan (Side View)

C08021

To use the alternate bottom drain connection, remove the red drain plug from the bottom connection (use a $\frac{1}{2}$ -in. square socket drive extension) and install it in the side drain connection.

The piping for the condensate drain and external trap can be completed after the unit is in place. See Fig. 14.

NOTE: If the alternate bottom drain is not used check the drain plug for tightness prior to setting the unit on the roof curb.



NOTE: Trap should be deep enough to offset maximum unit static difference. A 4" (102) trap is recommended

C08022

Fig. 14 - Condensate Drain Piping Details

All units must have an external trap for condensate drainage. Install a trap at least 4-in. (102 mm) deep and protect against freeze-up. If drain line is installed downstream from the external trap, pitch the line away from the unit at 1-in. per 10 ft (25 mm in 3 m) of run. Do not use a pipe size smaller than the unit connection ($\frac{3}{4}$ -in.).

Step 10 — Make Electrical Connections

⚠ WARNING

ELECTRICAL SHOCK HAZARD

Failure to follow this warning could result in personal injury or death.

Unit cabinet must have an uninterrupted, unbroken electrical ground to minimize the possibility of personal injury if an electrical fault should occur. This ground may consist of electrical wire connected to unit ground lug in control compartment, or conduit approved for electrical ground when installed in accordance with NEC; ANSI/NFPA 70, latest edition (in Canada, Canadian Electrical Code CSA [Canadian Standards Association] C22.1), and local electrical codes.

NOTE: Check all factory and field electrical connections for tightness. Field-supplied wiring shall conform with the limitations of minimum 63°F (33°C) rise.

Field Power Supply —

If equipped with optional Powered Convenience Outlet: The power source leads to the convenience outlet's transformer primary are not factory connected. Installer must connect these leads according to required operation of the convenience outlet. If an always-energized convenience outlet operation is desired, connect the source leads to the line side of the unit-mounted disconnect. (Check with local codes to ensure this method is acceptable in your area.) If a de-energize via unit disconnect switch operation of the convenience outlet is desired, connect the source leads to the load side of the unit disconnect. On a unit without a unit-mounted disconnect, connect the source leads to compressor

contactor C and indoor fan contactor IFC pressure lugs with unit field power leads.

Refer to Fig. 22 for power transformer connections and the discussion on connecting the convenience outlet on page 15.

Field power wires are connected to the unit at line-side pressure lugs on compressor contactor C and indoor fan contactor IFC (see wiring diagram label for control box component arrangement) or at factory-installed option non-fused disconnect switch. Max wire size is #2 AWG (copper only). (See Fig. 15.)

NOTE: TEST LEADS - Unit may be equipped with short leads (pigtailed) on the field line connection points on contactor C or optional disconnect switch. These leads are for factory run-test purposes only; remove and discard before connecting field power wires to unit connection points. Make field power connections directly to line connection pressure lugs only.

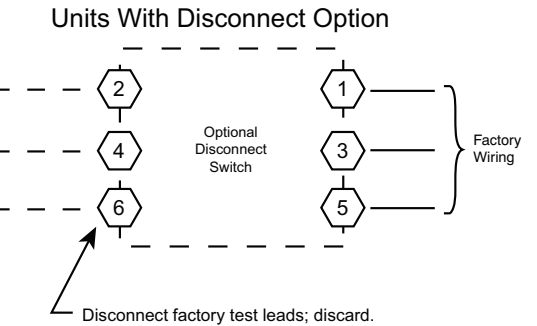
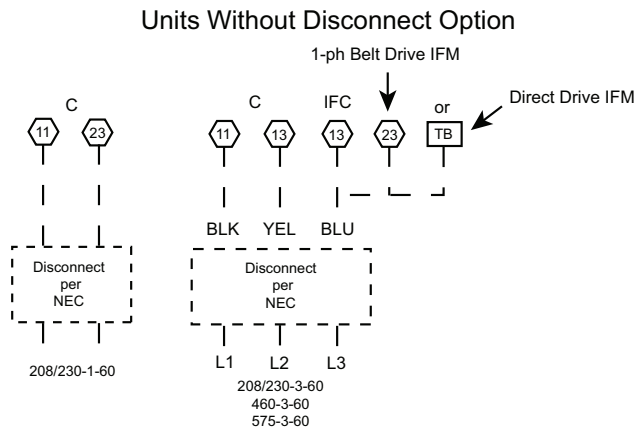


Fig. 15 - Power Wiring Connections

⚠ WARNING

FIRE HAZARD

Failure to follow this warning could result in intermittent operation or performance satisfaction.

Do not connect aluminum wire between disconnect switch and 558J unit. Use only copper wire. (See Fig. 16.)

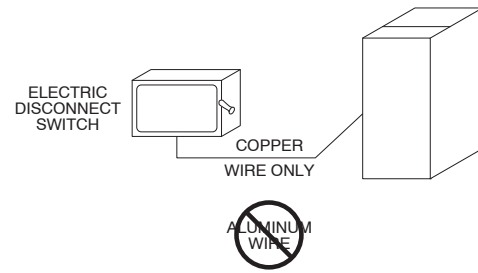


Fig. 16 - Disconnect Switch and Unit

Units With Factory-Installed Non-Fused Disconnect —

The factory-installed option non-fused disconnect (NFD) switch is located in a weatherproof enclosure located under the main control box. The manual switch handle and shaft are shipped in the disconnect enclosure. Assemble the shaft and handle to the switch at this point. Discard the factory test leads (see Fig. 15).

Connect field power supply conductors to LINE side terminals when the switch enclosure cover is removed to attach the handle.

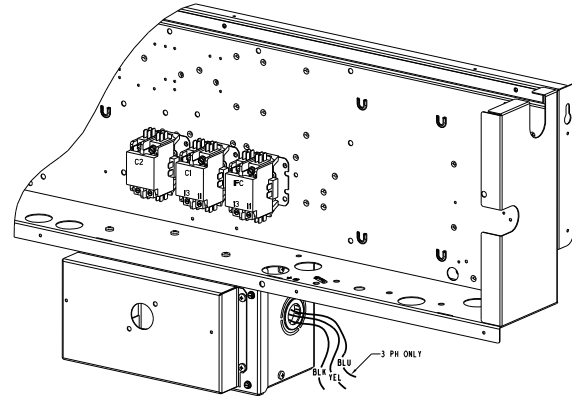


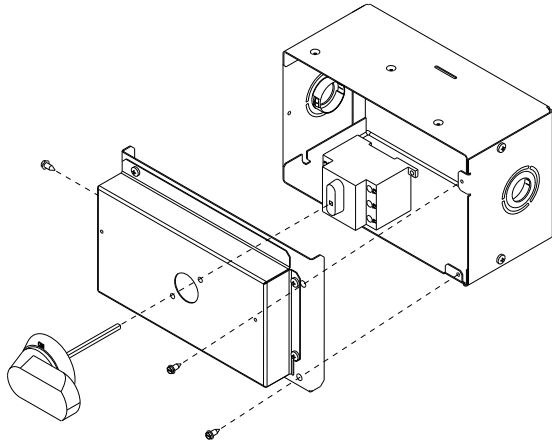
Fig. 17 - Location of Non-Fused Disconnect Enclosure

To field install the NFD shaft and handle:

1. Remove the unit front pane (see Fig. 2).
2. Remove (3) hex screws on the NFD enclosure - (2) on the face of the cover and (1) on the left side cover.
3. Remove the front cover of the NFD enclosure.
4. Make sure the NFD shipped from the factory is at OFF position (the arrow on the black handle knob is at OFF).
5. Insert the shaft with the cross pin on the top of the shaft in the horizontal position.
6. Measure from the tip of the shaft to the top surface of the black pointer; the measurement should be 3.75 - 3.88 in. (95 - 99 mm).
7. Tighten the locking screw to secure the shaft to the NFD.
8. Turn the handle to the OFF position with red arrow pointing at OFF.
9. Install the handle on to the painted cover horizontally with the red arrow pointing to the left.
10. Secure the handle to the painted cover with (2) screws and lock washers supplied.

558J

11. Engaging the shaft into the handle socket, re-install (3) hex screws on the NFD enclosure.
12. Re-install the unit front panel.



C12279

Fig. 18 - Handle and Shaft Assembly for NFD

Units Without Factory-Installed Non-Fused Disconnect —

When installing units, provide a disconnect switch per NEC (National Electrical Code) of adequate size. Disconnect sizing data is provided on the unit informative plate. Locate on unit cabinet or within sight of the unit per national or local codes. Do not cover unit informative plate if mounting the disconnect on the unit cabinet.

All Units —

All field wiring must comply with NEC and all local codes. Size wire based on MCA (Minimum Circuit Amps) on the unit informative plate. See Fig. 15 and the unit label diagram for power wiring connections to the unit power terminal blocks and equipment ground. Maximum wire size is #2 ga AWG per pole.

Provide a ground-fault and short-circuit over-current protection device (fuse or breaker) per NEC Article 440 (or local codes). Refer to unit informative data plate for MOCP (Maximum Over-current Protection) device size.

All field wiring must comply with the NEC and local requirements.

All units except 208/230-v units are factory wired for the voltage shown on the nameplate. *If the 208/230-v unit is to be connected to a 208-v power supply, the control transformer must be rewired by moving the black wire with the 1/4-in. female spade connector from the 230-v connection and moving it to the 200-v 1/4-in. male terminal on the primary side of the transformer.* Refer to unit label diagram for additional information. Field power wires will be connected line-side pressure lugs on the power terminal block or at factory-installed option non-fused disconnect.

NOTE: Check all factory and field electrical connections for tightness.

Convenience Outlets —

⚠ WARNING

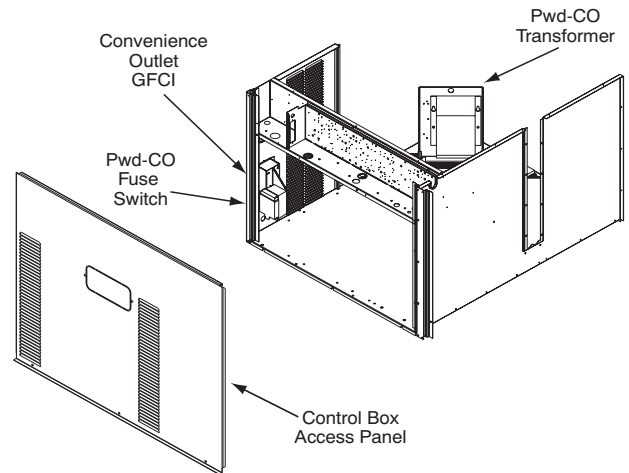
ELECTRICAL OPERATION HAZARD

Failure to follow this warning could result in personal injury or death.

Units with convenience outlet circuits may use multiple disconnects. Check convenience outlet for power status before opening unit for service. Locate its disconnect switch, if appropriate, and open it. Lock-out and tag-out this switch, if necessary.

Two types of convenience outlets are offered on 558J models: Non-powered and unit-powered. Both types provide a 125-volt GFCI (ground-fault circuit-interrupter) duplex receptacle rated at 15-A behind a hinged waterproof access cover, located on the end panel of the unit. See Fig. 19.

NOTE: Unit powered convenience outlets are not available as factory installed options for single phase (-J voltage code) models.



C08128

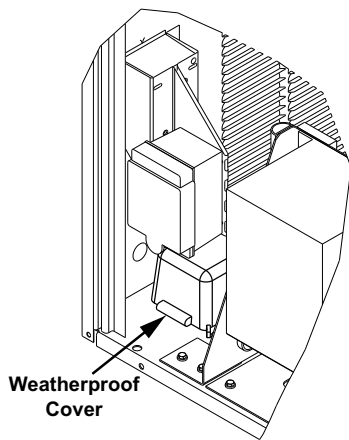
Fig. 19 - Convenience Outlet Location

Installing Weatherproof Cover: A weatherproof while-in-use cover for the factory-installed convenience outlets is now required by UL standards. This cover cannot be factory-mounted due its depth; it must be installed at unit installation. For shipment, the convenience outlet is covered with a blank cover plate.

On units with electro-mechanical controls the weatherproof cover kit is shipped in the unit's control box. The kit includes the hinged cover, a backing plate and gasket.

On units with the factory installed RTU Open option the weatherproof cover kit is secured to the basepan underneath the control box. See Fig. 20.

DISCONNECT ALL POWER TO UNIT AND CONVENIENCE OUTLET. LOCK-OUT AND TAG-OUT ALL POWER.



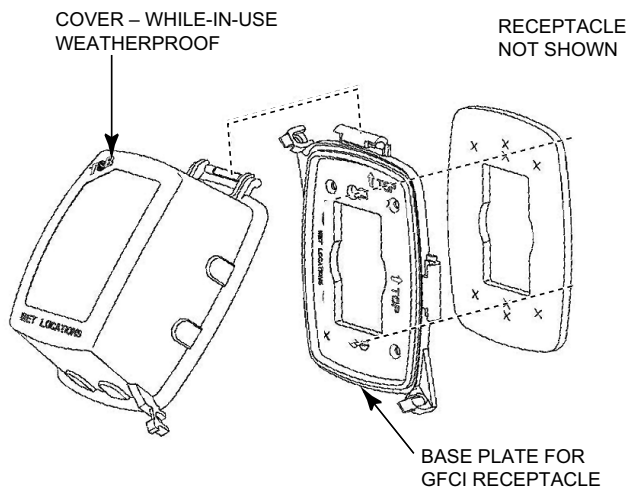
C150149

Fig. 20 - Weatherproof Cover - Shipping Location on Units with Factory Installed RTU Open

Remove the blank cover plate at the convenience outlet; discard the blank cover.

Loosen the two screws at the GFCI duplex outlet, until approximately 1/2-in (13 mm) under screw heads are exposed. Press the gasket over the screw heads. Slip the backing plate over the screw heads at the keyhole slots and align with the gasket; tighten the two screws until snug (do not over-tighten).

Mount the weatherproof cover to the backing plate as shown in Fig. 21. Remove two slot fillers in the bottom of the cover to permit service tool cords to exit the cover. Check for full closing and latching.



C09022

Fig. 21 - Weatherproof Cover Installation

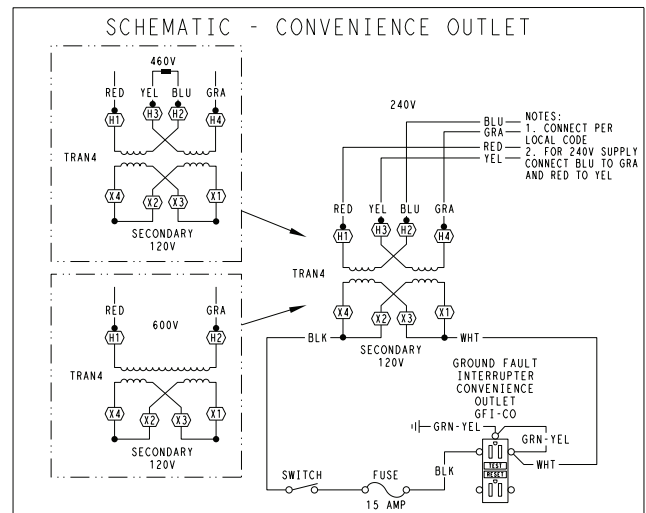
Non-powered type: This type requires the field installation of a general-purpose 125-volt 15-A circuit powered from a source elsewhere in the building. Observe national and local codes when selecting wire size, fuse or breaker requirements and disconnect switch size and location. Route 125-v power supply conductors into the bottom of the utility box containing the duplex receptacle.

Unit-powered type: A unit-mounted transformer is factory-installed to stepdown the main power supply voltage to the unit to 115-v at the duplex receptacle. This

option also includes a manual switch with fuse, located in a utility box and mounted on a bracket behind the convenience outlet; access is through the unit's control box access panel. See Fig. 19.

The primary leads to the convenience outlet transformer are not factory-connected. Selection of primary power source is a customer-option. If local codes permit, the transformer primary leads can be connected at the line-side terminals on the unit-mounted non-fused disconnect or HACR breaker switch; this will provide service power to the unit when the unit disconnect switch or HACR switch is open. Other connection methods will result in the convenience outlet circuit being de-energized when the unit disconnect or HACR switch is open. See Fig. 22.

Using unit-mounted convenience outlets: Units with unit-mounted convenience outlet circuits will often require that two disconnects be opened to de-energize all power to the unit. Treat all units as electrically energized until the convenience outlet power is also checked and de-energization is confirmed. Observe National Electrical Code Article 210, Branch Circuits, for use of convenience outlets.



C08283

UNIT VOLTAGE	CONNECT AS	PRIMARY CONNECTIONS	TRANSFORMER TERMINALS
208, 230	240	L1: RED + YEL L2: BLU + GRA	H1 + H3 H2 + H4
460	480	L1: RED Splice BLU + YEL L2: GRA	H1 H2 + H3 H4
575	600	L1: RED L2: GRA	H1 H2

Fig. 22 - Powered Convenience Outlet Wiring

Test the GFCI receptacle by pressing the TEST button on the face of the receptacle to trip and open the receptacle. Check for proper grounding wires and power line phasing if the GFCI receptacle does not trip as required. Press the RESET button to clear the tripped condition.

Fuse on power type: The factory fuse is a Bussman "Fusetron" T-15, non-renewable screw-in (Edison base) type plug fuse.

NOTICE

Convenience Outlet Utilization

Maximum Continuous use : 8 Amps 24/7

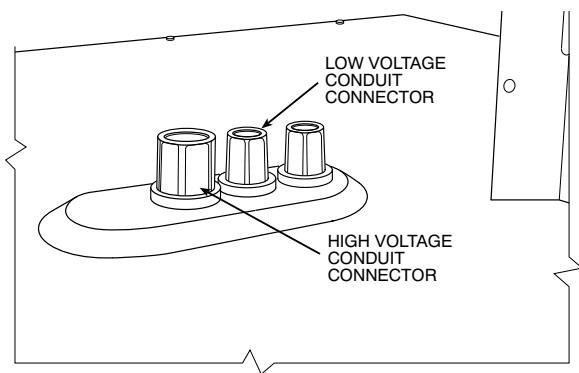
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C13415

Fig. 23 - Convenience Outlet Utilization Notice Label

Factory-Option Thru-Base Connections —

This service connection kit consists of a 1/2-in electrical bulkhead connector and a 3/4-in electrical bulkhead connector, all factory-installed in the embossed (raised) section of the unit basepan in the condenser section. The 3/4-in bulkhead connector enables the low-voltage control wires to pass through the basepan. The 1/2-in electrical bulkhead connector allows the high-voltage power wires to pass through the basepan. See Fig. 24.



C13412

Fig. 24 - Thru-Base Connection Fittings

Check tightness of connector lock nuts before connecting electrical conduits.

Field-supplied and field-installed liquid tight conduit connectors and conduit may be attached to the connectors on the basepan. Pull correctly rated high voltage and low voltage through appropriate conduits. Connect the power conduit to the internal disconnect (if unit is so equipped) or to the external disconnect (through unit side panel). A hole must be field cut in the main control box bottom on the left side so the 24-v control connections can be made. Connect the control power conduit to the unit control box at this hole.

Units without Thru-Base Connections —

1. Install power wiring conduit through side panel openings. Install conduit between disconnect and control box.
2. Install power lines to terminal connections as shown in Fig. 15.

Voltage to compressor terminals during operation must be within voltage range indicated on unit nameplate. See Table 5. On 3-phase units, voltages between phases must be balanced within 2% and the current within 10%. Use the formula shown in the legend for Table 5, Note 2 to determine the percent of voltage imbalance. Operation on improper line voltage or excessive phase imbalance constitutes abuse and may cause damage to electrical components. Such operation would invalidate any applicable Bryant warranty.

Field Control Wiring —

The 558J unit requires an external temperature control device. This device can be a thermostat emulation device provided as part of a third-party Building Management System.

Thermostat —

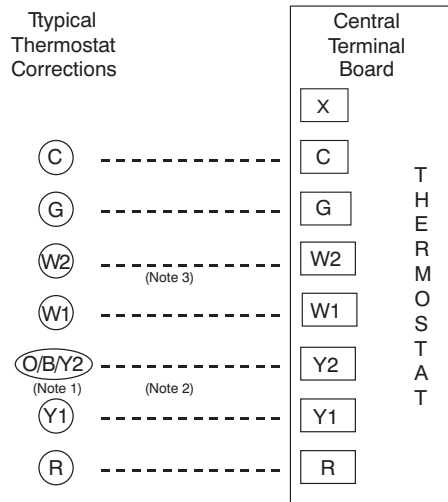
Select a Bryant-approved accessory thermostat. When electric heat is installed in the 558J unit, the thermostat must be capable of energizing the G terminal (to energize the Indoor Fan Contactor) whenever there is a space call for heat (energizing the W1 terminal). The accessory thermostats listed on the unit price pages can provide this signal but they are not configured to enable this signal as shipped.

Install the accessory thermostat according to installation instructions included with the accessory.

Locate the thermostat accessory on a solid wall in the conditioned space to sense average temperature in accordance with the thermostat installation instructions.

If the thermostat contains a logic circuit requiring 24-v power, use a thermostat cable or equivalent single leads of different colors with minimum of seven leads. If the thermostat does not require a 24-v source (no "C" connection required), use a thermostat cable or equivalent with minimum of six leads. Check the thermostat installation instructions for additional features which might require additional conductors in the cable.

For wire runs up to 50 ft. (15 m), use no. 18 AWG (American Wire Gage) insulated wire [35°C (95°F) minimum]. For 50 to 75 ft. (15 to 23 m), use no. 16 AWG insulated wire [35°C (95°F) minimum]. For over 75 ft. (23 m), use no. 14 AWG insulated wire [35°C (95°F) minimum]. All wire sizes larger than no. 18 AWG cannot be directly connected to the thermostat and will require a junction box and splice at the thermostat.



Note 1: Typical multi-function marking. Follow manufacturer's configuration instructions to select Y2.

Note 2: Y2 to Y2 connection required on single-stage cooling units when integrated economizer function is desired

Note 3: W2 connection not required on units with single-stage heating.

--- Field Wiring

C08575

Fig. 25 - Low-Voltage Connections

Unit without Thru-Base Connection Kit —

Pass the thermostat control wires through the hole provided in the corner post; then feed the wires through the raceway built into the corner post to the control box. Pull the wires over to the terminal strip on the upper-left corner of the Controls Connection Board. See Fig. 26.

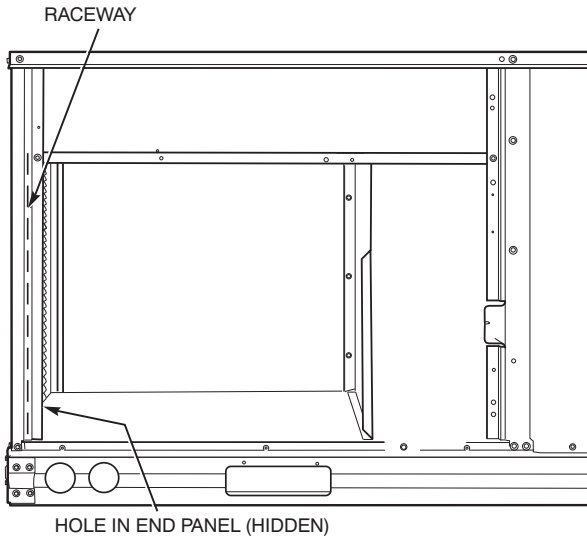


Fig. 26 - Field Control Wiring Raceway

C08027

NOTE: If thru-the-bottom connections accessory is used, refer to the accessory installation instructions for information on routing power and control wiring.

Heat Anticipator Settings —

Set heat anticipator settings at 0.14 amp for the first stage and 0.14 amp for second-stage heating, when available.

Electric Heaters

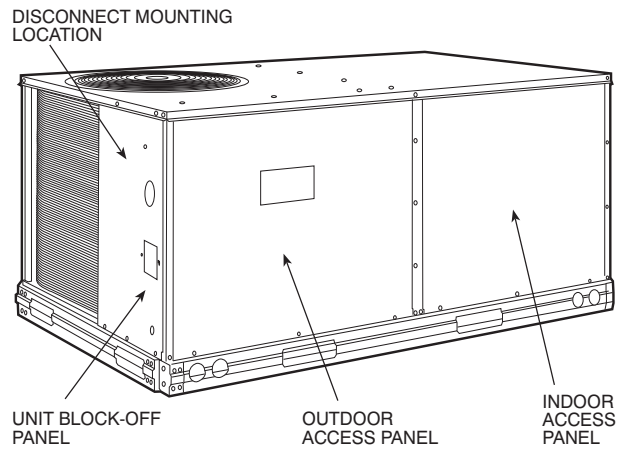
558J units may be equipped with field-installed accessory electric heaters. The heaters are modular in design, with heater frames holding open coil resistance wires strung through ceramic insulators, line-break limit switches and a control contactor. One or two heater modules may be used in a unit.

Heater modules are installed in the compartment below the indoor (supply) fan outlet. Access is through the indoor access panel. Heater modules slide into the compartment on tracks along the bottom of the heater opening. See Fig. 27, Fig. 28 and Fig. 29.

Not all available heater modules may be used in every unit. Use only those heater modules that are UL listed for use in a specific size unit. Refer to the label on the unit cabinet for the list of approved heaters.

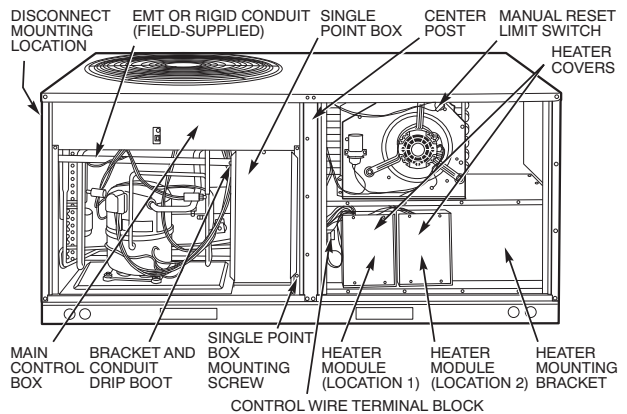
Unit heaters are marked with Heater Model Numbers. But heaters are ordered as and shipped in cartons marked with a corresponding heater Sales Package part number. See Table 2 for correlation between heater Model Number and Sales Package part number.

NOTE: The value in position 9 of the part number differs between the sales package part number (value is 1) and a bare heater model number (value is 0).



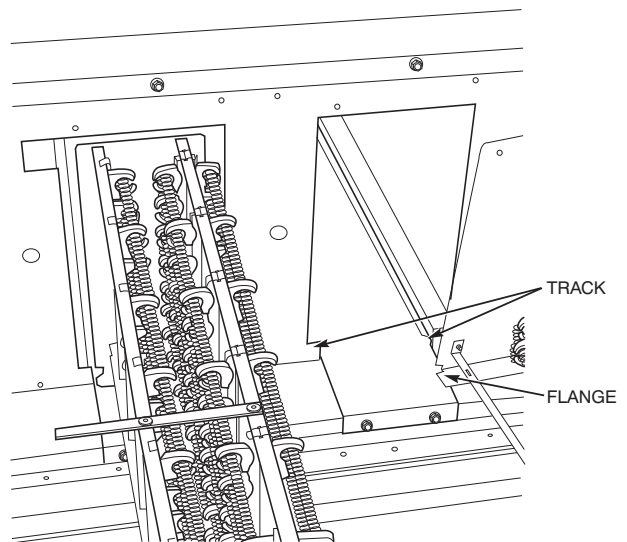
C08133

Fig. 27 - Typical Access Panel Location (3-6 Ton)



C08134

Fig. 28 - Typical Component Location



C08135

Fig. 29 - Typical Module Installation

558J

Table 2 – Heater Model Number

Bare Heater Model Number	C	R	H	E	A	T	E	R	0	0	1	A	0	0
Heater Sales Package PNO Includes: Bare Heater Carton and packing materials Installation sheet	C	R	H	E	A	T	E	R	1	0	1	A	0	0

Single Point Boxes and Supplementary Fuses —

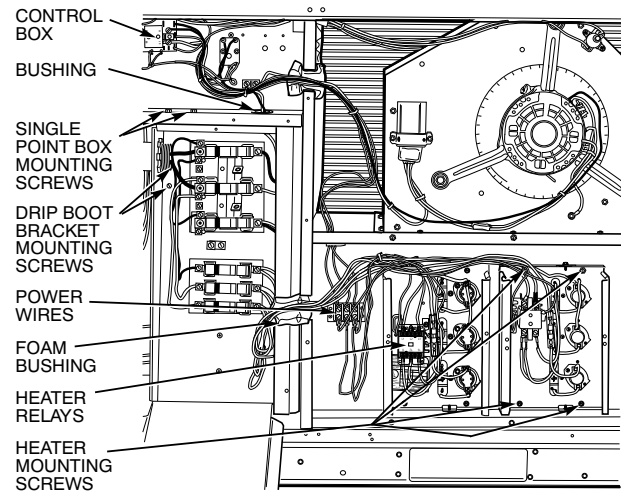
When the unit MOCF device value exceeds 60-A, unit-mounted supplementary fuses are required for each heater circuit. These fuses are included in accessory Single Point Boxes, with power distribution and fuse blocks. The single point box will be installed directly under the unit control box, just to the left of the partition separating the indoor section (with electric heaters) from the outdoor section. The Single Point Box has a hinged access cover. See Fig. 30. The Single Point Box also includes a set of power taps and pigtails to complete the wiring between the Single Point Box and the unit’s main control box terminals. Refer to the accessory heater and Single Point Box installation instructions for details on tap connections.

All fuses on 558J units are 60-A. (Note that all heaters are qualified for use with a 60-A fuse, regardless of actual heater ampacity, so only 60-A fuses are necessary.)

Single Point Boxes without Fuses —

Unit heater applications not requiring supplemental fuses require a special Single Point Box without any fuses. The accessory Single Point Boxes contain a set of power taps and pigtails to complete the wiring between the Single Point Box and the unit’s main control box terminals. Refer to accessory heater and Single Point Box installation instructions for details on tap connections.

558J

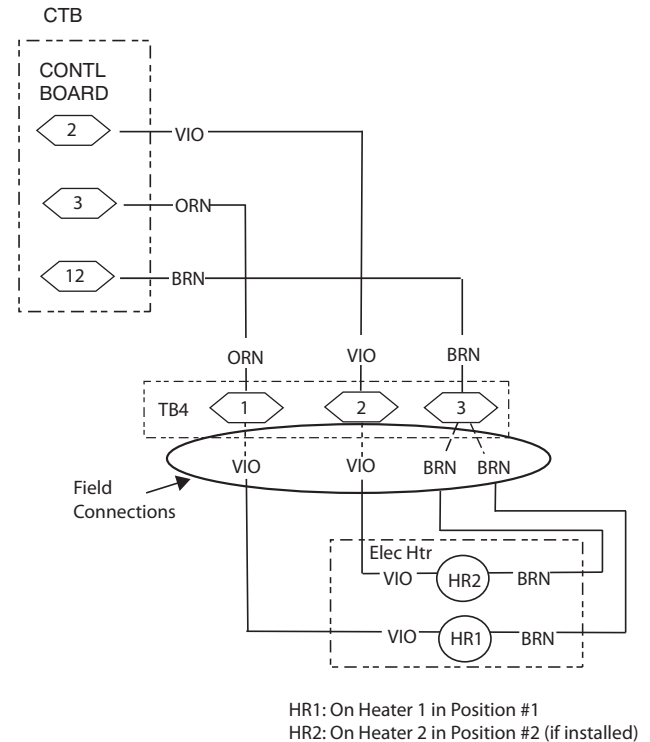


C14253

Fig. 30 - Typical Single Point Installation

Low-Voltage Control Connections —

Pull the low-voltage control leads from the heater module(s) - VIO and BRN (two of each if two modules are installed; identify for Module #1) - to the 4-pole terminal board TB4 located on the heater bulkhead to the left of Heater #1. Connect the VIO lead from Heater #1 to terminal TB4-1. For 2 stage heating, connect the VIO lead from Heater #2 to terminal TB4-2. For 1 stage heating with 2 heater modules connect the VIO lead from both Heater #1 and #2 to terminal TB4-1. Connect both BRN leads to terminal TB4-3. See Fig. 31.



C08331

Fig. 31 - Accessory Electric Heater Control Connections

EconoMi\$er X (Factory-Installed Option) —

For details on operating 558J units equipped with the factory-installed EconoMi\$er X option, refer to *Factory-Installed Economizers for 580J/558J/581J/551J/549J/582J/559J/547J Rooftop Units, 3 to 27.5 Nominal Tons. Economizer Supplement Related to California Title 24* (Catalog No. II-SUP-TI24-02, or later).

Perfect Humidity™ Control Connections

Perfect Humidity – Space RH Controller —

NOTE: Perfect Humidity is a factory installed option which is available for 07 models only.

The Perfect Humidity dehumidification system requires a field-supplied and -installed space relative humidity control device. This device may be a separate humidistat control (contact closes on rise in space RH above control setpoint) or a combination thermostat-humidistat control device such as Bryant's EDGE® Pro Thermidistat with isolated contact set for dehumidification control.

To connect a field-supplied humidistat:

1. Route the humidistat 2-conductor cable (field-supplied) through the hole provided in the unit corner post.
2. Feed wires through the raceway built into the corner post (see Fig. 26) to the 24-v barrier located on the left side of the control box. The raceway provides the UL-required clearance between high-voltage and low-voltage wiring.
3. Use wire nuts to connect humidistat cable to two PINK leads in the low-voltage wiring as shown in Fig. 33.

To connect the Edge Programmable Thermidistat (T6-PRH01-A):

1. Route the Edge Programmable Thermostat multi-conductor cable (field-supplied) through the hole provided in the unit corner post.
2. Feed wires through the raceway built into the corner post (see Fig. 26) to the 24-v barrier located on the

left side of the control box. The raceway provides the UL-required clearance between high-voltage and low-voltage wiring.

3. The Edge Programmable Thermostat has dry contacts at terminals D1 and D2 for dehumidification operation (see Fig. 34). The dry contacts must be wired between CTB terminal R and the PINK lead to the LTLO switch with field-supplied wire nuts. Refer to the installation instructions included with the Bryant Edge Programmable Thermidistat device for more information.



C09502

Fig. 32 - EDGE Pro Thermidistat

558J

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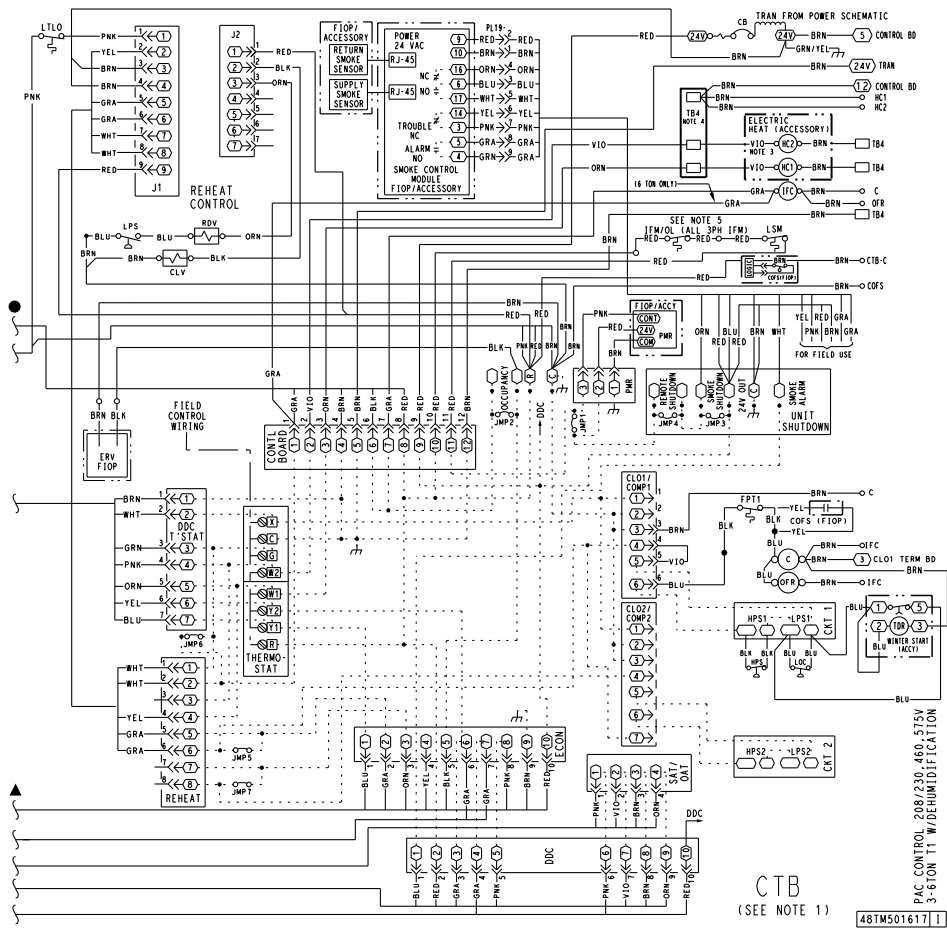


Fig. 33 - 558J*07G (unit with Perfect Humidity™ Dehumidification System) Humidistat Wiring

C150155

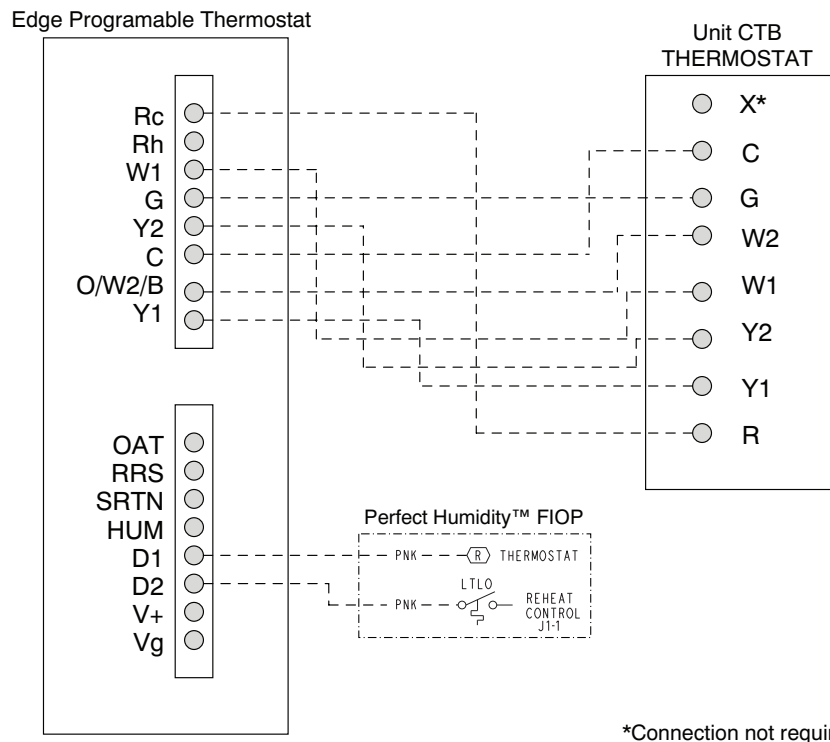


Fig. 34 - 558J*07G (unit with Perfect Humidity Dehumidification System) with Edge Programmable Thermostat

C09501

RTU Open Control System

The RTU Open control is factory-mounted in the 558J unit's main control box, to the left of the CTB. See Fig. 36. Factory wiring is completed through harnesses connected to the CTB. Field connections for RTU Open sensors will be made at the Phoenix connectors on the RTU Open board. The factory-installed RTU Open control includes the supply-air temperature (SAT) sensor. The outdoor air temperature (OAT) sensor is included in the FIOP/accessory EconoMi\$er2 package.

The RTU Open controller is an integrated component of the Bryant rooftop unit. Its internal application programming provides optimum performance and energy efficiency. RTU Open enables the unit to run in 100% stand-alone control mode or a Third Party Building Automation System (BAS). On-board DIP switches allow you to select your protocol (and baud rate) of choice among the four most popular protocols in use today: BACnet, Modbus, Johnson N2 and LonWorks. (See Fig. 35.)

Refer to Table 3, RTU Open Controller Inputs and Outputs for locations of all connections to the RTU Open board.

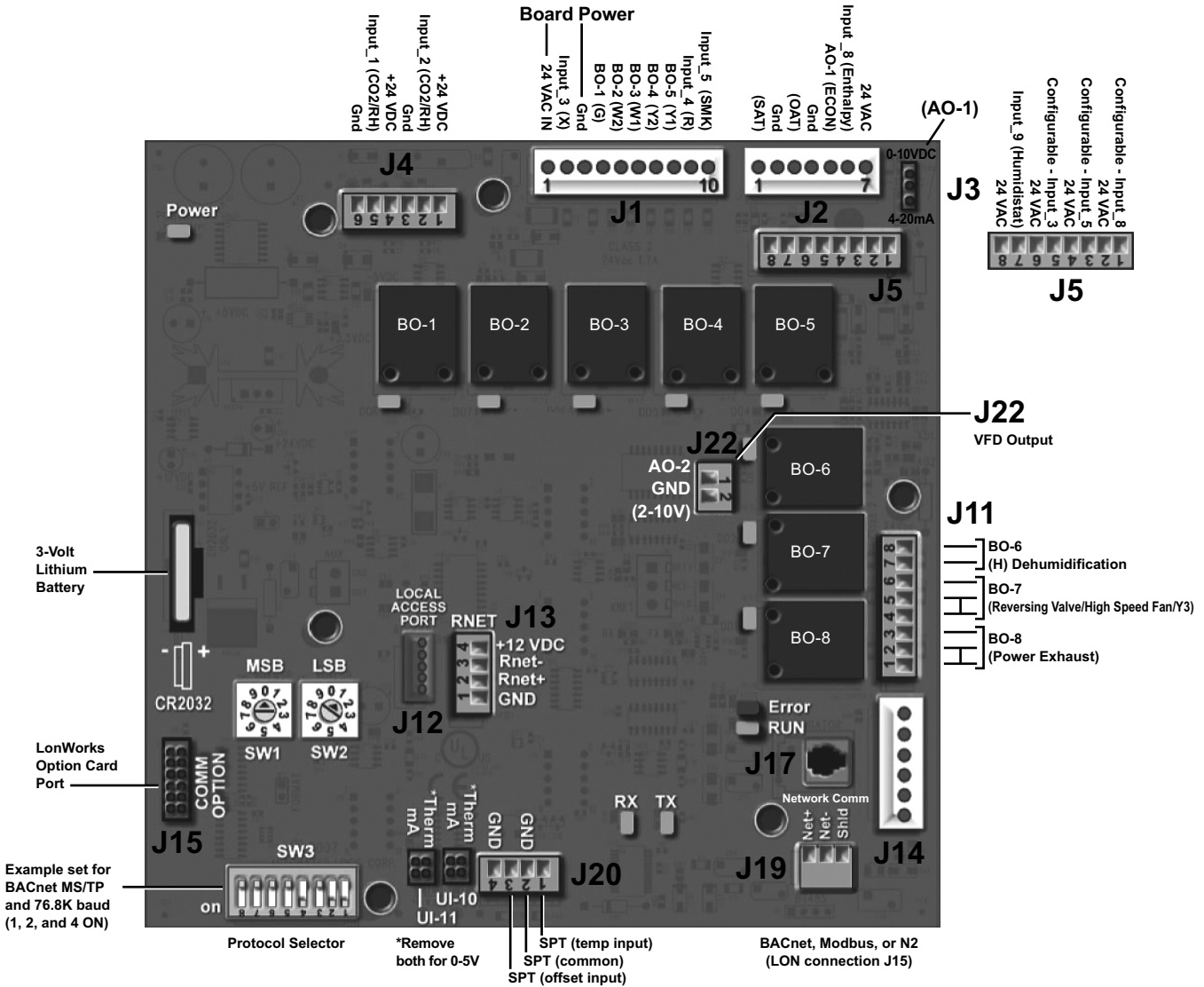


Fig. 35 - RTU Open Multi-Protocol Control Board

C14162

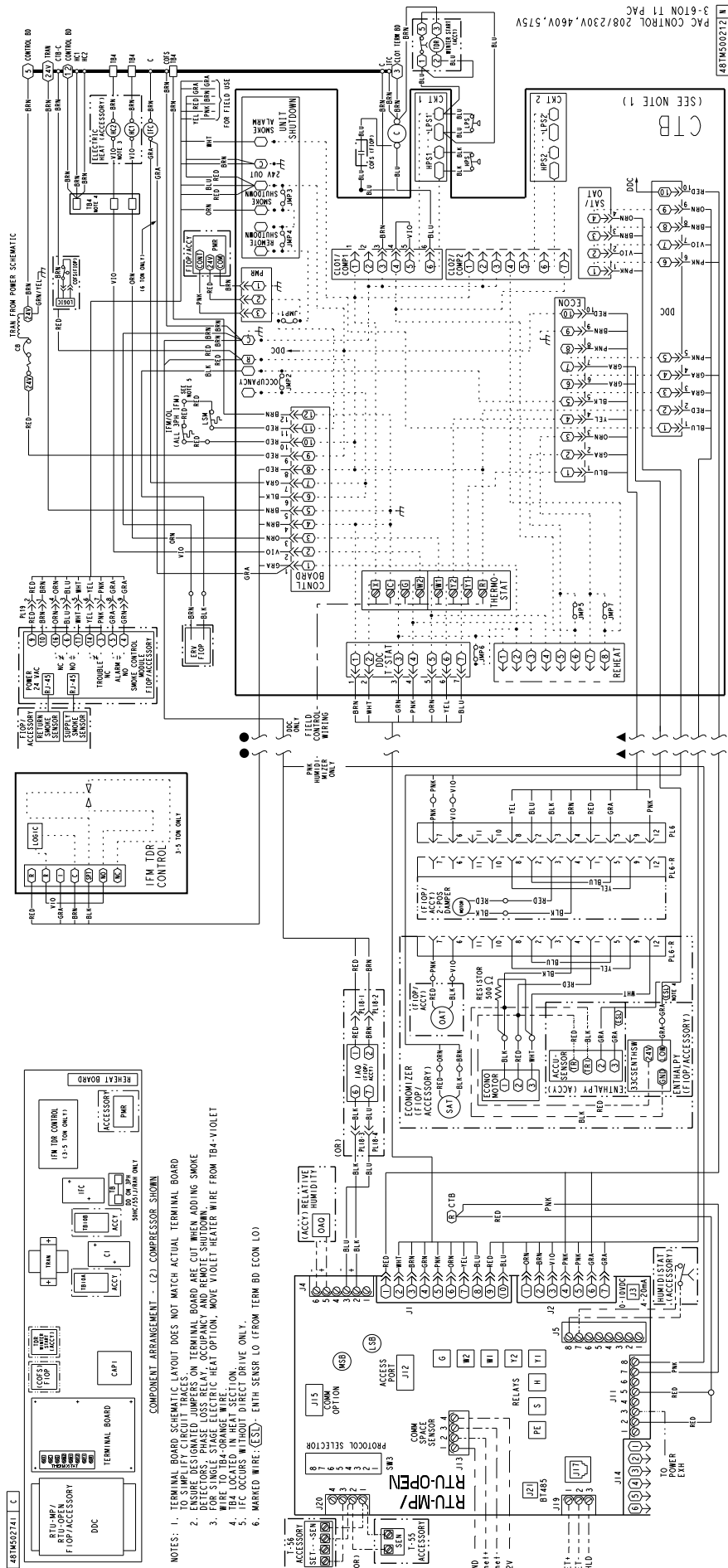


Fig. 36 - RTU Open System Control Wiring Diagram

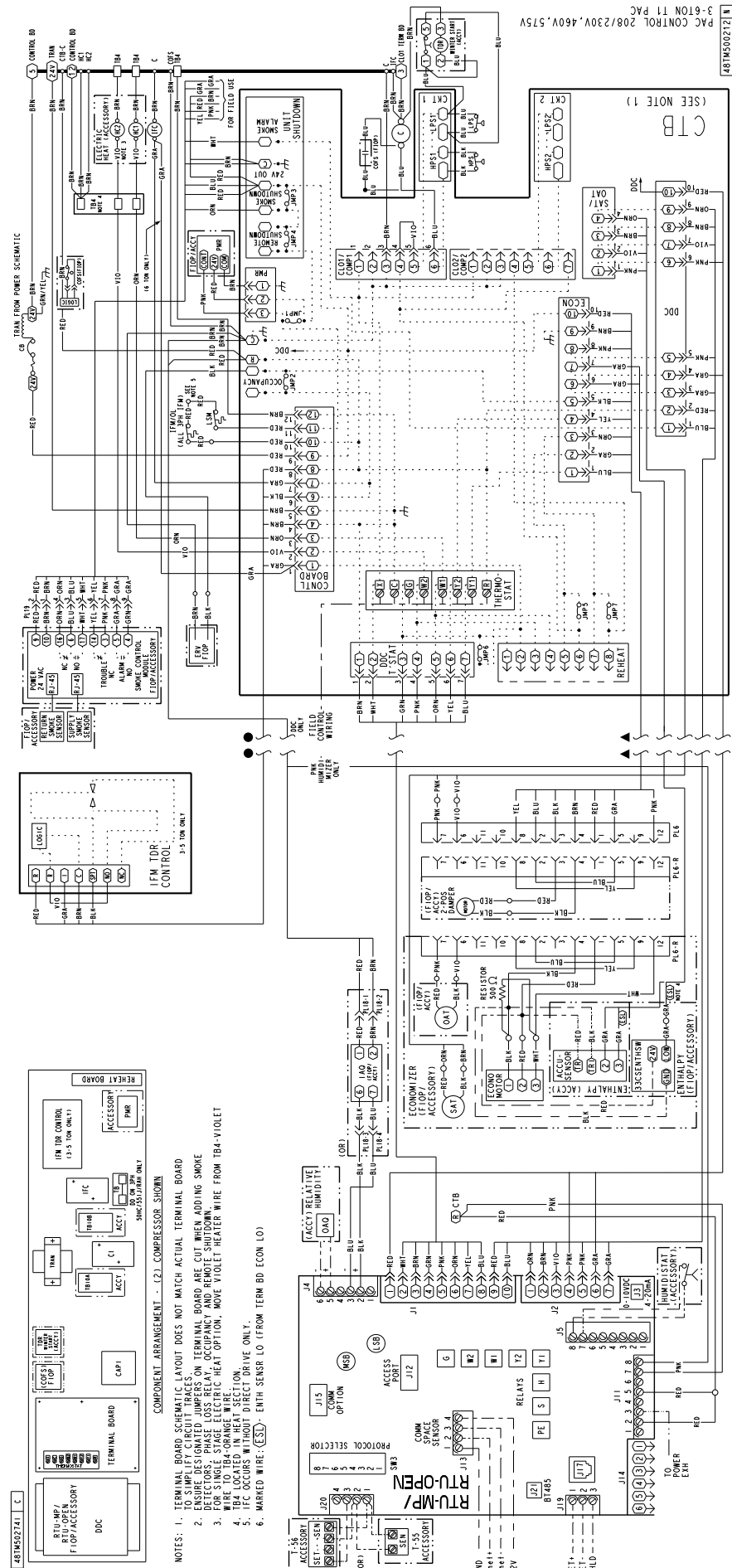
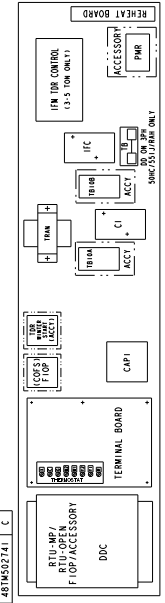


Fig. 37 - RTU Open System Control Wiring Diagram with Perfect Humidity

- NOTES:
1. TERMINAL BOARD SCHEMATIC LAYOUT DOES NOT MATCH ACTUAL TERMINAL BOARD
 2. ENGINE DESIGNATED JUMPS ON TERMINAL BOARD ARE CUT WHEN ADDING SMOKE DETECTORS, PHASE LOSS RELAY, OCCUPANCY AND REMOTE SHUTDOWN.
 3. FOR SINGLE STAGE ELECTRIC HEAT OPTION, MOVE VIOLET HEATER WIRE FROM TBA-VIOLET TO TBA.
 4. TBA LOCATED IN HEAT SECTION.
 5. IFC LOCATED IN HEAT SECTION.
 6. MARKED WIRE: (ES) - ENTH SENSER LO (FROM TERM BD ECON LO)



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Table 3 – RTU Open Controller Inputs and Outputs

POINT NAME	BACnet OBJECT NAME	TYPE OF I/O	CONNECTION PIN NUMBER(S)	CHANNEL DESIGNATION
DEDICATED INPUTS				
Space Temp / Zone Temp	zone_temp	AI (10K Thermistor)	J20-1 & 2	Analog Input 10
Supply Air Temperature	sa_temp	AI (10K Thermistor)	J2-1 & 2	Analog Input 6
Outside Air Temperature	oa_temp	AI (10K Thermistor)	J2-3 & 4	Analog Input 7
Space Temperature Offset Pot	stpt_adj_offset	AI (100K Potentiometer)	J20-3 & 4	Analog Input 11
Safety Chain Feedback	safety_status	BI (24 VAC)	J1-9	Binary Input 4
Compressor Safety Status ⁽¹⁾	comp_status	BI (24 VAC)	J1-2	Binary Input 3
Fire Shutdown Status	firedown_status	BI (24 VAC)	J1-10	Binary Input 5
Enthalpy Status	enthalpy_status	BI (24 VAC)	J2-6 & 7	Binary Input 8
Humidistat Input Status	humstat_status	BI (24 VAC)	J5-7 & 8	Binary Input 9
Zone Temperature	n/a	n/a	J13-1-4	Rnet
CONFIGURABLE INPUTS ⁽⁴⁾				
Indoor Air CO2	iaq	AI (4-20 mA)	J4-2 & 3 or J4-5 & 6	Analog Input 2
Outdoor Air CO2	oaq	AI (4-20 mA)		Analog Input 1
Space Relative Humidity	space_rh	AI (4-20 mA)	J5-1 & 2 or J5-3 & 4, J5-5 & 6 or J5-7 & 8 ⁽³⁾	Analog Input 10
Supply Fan Status ⁽²⁾	sfan_status	BI (24 VAC)		Binary Input 3, 5, 8, or 9, except where intrinsic input is used
Filter Status ⁽²⁾	filter_status	BI (24 VAC)		Binary Input 3, 5, 8, or 9, except where intrinsic input is used
Door Contact ⁽²⁾	door_contact_status	BI (24 VAC)		Binary Input 3, 5, 8, or 9, except where intrinsic input is used
Remote Occupancy input ⁽²⁾	occ_contact_status	BI (24 VAC)		Binary Input 3, 5, 8, or 9, except where intrinsic input is used
IGC input ⁽²⁾	igcovr_status	BI (24 VAC)		Binary Input 9. Mandatory input on gas heat units.
OUTPUTS				
Economizer Output	econ_output	AO (4-20mA)	J2-5	Analog Output 1
Supply Fan VFD	vfd_output	AO (2-10Vdc)	J22-1 & 2	Analog Output 2
Supply Fan Relay	sfan	BO Relay (24VAC, 1A)	J1-4	Binary Output 1 (G)
Cool 1 Relay State	comp_1	BO Relay (24VAC, 1A)	J1-8	Binary Output 5 (Y1)
Cool 2 Relay State	comp_2	BO Relay (24VAC, 1A)	J1-7	Binary Output 4 (Y2)
Cool 3 Relay State	comp_3	BO Relay (24VAC, 1A)	J11-5 & 6	Binary Output 7 (Y3)
Heat 1 Relay State	heat_1	BO Relay (24VAC, 1A)	J1-6	Binary Output 3 (W1)
Heat 2 Relay State	heat_2	BO Relay (24VAC, 1A)	J1-5	Binary Output 2 (W2)
Power Exhaust Relay State	pexh	BO Relay (24VAC, 1A)	J11-2 & 3 (N.O.)	Binary Output 8 (PE)
Dehumidification Relay	dehum	BO Relay (24VAC, 1A)	J11-7 & 8 (N.O.)	Binary Output 6

LEGEND

- AI** – Analog Input
- AO** – Analog Output
- DI** – Discrete Input
- DO** – Discrete Output

* These inputs (if installed) take the place of the default input on the specific channel according to schematic.
 Parallel pins J5-1 = J2-6, J5-3 = J1-10, J5-5 = J1-2 are used for field-installation.

The RTU Open controller requires the use of a Bryant space sensor. A standard thermostat cannot be used with the RTU Open system.

Supply Air Temperature (SAT) Sensor —

On FIOP-equipped 558J unit, the unit is supplied with a supply-air temperature (SAT) sensor (33ZCSENSAT). This sensor is a tubular probe type, approx 6-inches (152 mm) in length. It is a nominal 10-k ohm thermistor.

The SAT is factory-wired. The SAT probe is wire-tied to the supply-air opening (on the horizontal opening end) in its shipping position. Remove the sensor for installation. Re-position the sensor in the flange of the supply-air opening or in the supply air duct (as required by local codes). Drill or punch a 1/2-in. hole in the flange or duct. Use two field-supplied, self-drilling screws to secure the sensor probe in a horizontal orientation. See Fig. 38.

Outdoor Air Temperature (OAT) Sensor —

The OAT is factory-mounted in the EconoMiser2 (FIOP or accessory). It is a nominal 10k ohm thermistor attached to an eyelet mounting ring.

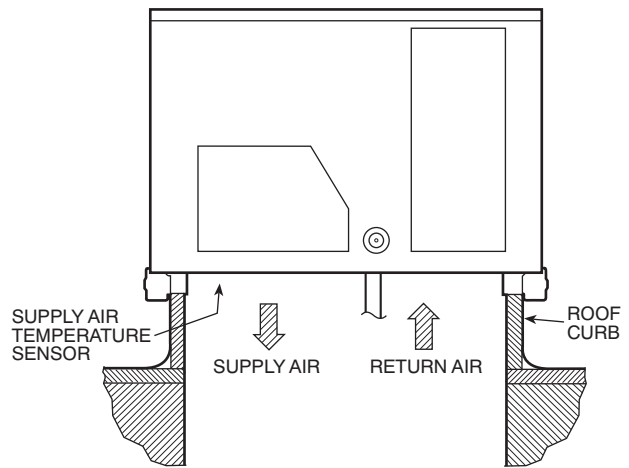


Fig. 38 - Typical Mounting Location for Supply Air Temperature (SAT) Sensor on Small Rooftop Units

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EconoMi\$er2 —

The RTU Open control is used with EconoMi\$er2 (option or accessory) for outdoor air management. The damper position is controlled directly by the RTU Open control; EconoMi\$er2 has no internal logic device.

Outdoor air management functions can be enhanced with field-installation of these accessory control devices:

- Enthalpy control (outdoor air or differential sensors)
- Space CO₂ sensor
- Outdoor air CO₂ sensor

Field Connections

Field connections for accessory sensors and input devices are made the RTU Open, at plugs J1, J2, J4, J5, J11 and J20. All field control wiring that connects to the RTU Open must be routed through the raceway built into the corner post as shown in Fig. 26. The raceway provides the UL required clearance between high- and low-voltage wiring. Pass the control wires through the hole provided in the corner post, then feed the wires thorough the raceway to the RTU Open. Connect to the wires to the removable Phoenix connectors and then reconnect the connectors to the board.

Space Temperature (SPT) Sensors —

SPT sensors available from Bryant are resistive input non-communicating (T55, T56, and T59) sensors. These sensors have a variety of options consisting of: timed override button, set point adjustment, and a LCD screen. Space temperature can be also be written to from a building network or zoning system. However, it is still recommended that return air duct sensor be installed to allow stand-alone operation for back-up. Refer to the configuration section for details on controller configurations associated with space sensors.

- 33ZCT55SPT, space temperature sensor with override button
- 33ZCT56SPT, space temperature sensor with override button and setpoint adjustment
- 33ZCT59SPT, space temperature sensor with LCD (liquid crystal display) screen, override button, and setpoint adjustment

Use 20 gauge wire to connect the sensor to the controller. The wire is suitable for distances of up to 500 ft. Use a three-conductor shielded cable for the sensor and setpoint adjustment connections. If the setpoint adjustment (slidebar) is not required, then an unshielded, 18 or 20 gauge, two-conductor, twisted pair cable may be used.

Connect T-55: See Fig. 39 for typical T-55 internal connections. Connect the T-55 SEN terminals to RTU Open J20-1 and J20-2. See Fig. 40.

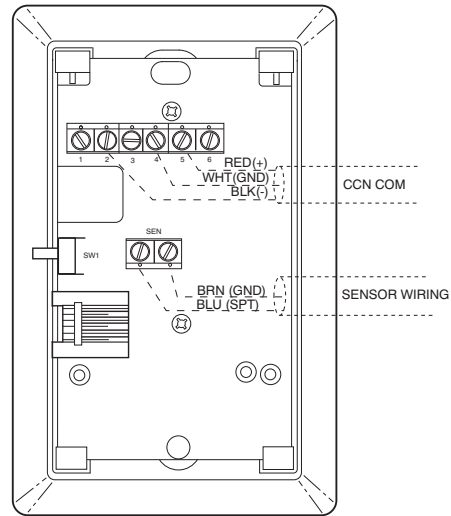


Fig. 39 - T-55 Space Temperature Sensor Wiring

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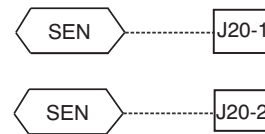


Fig. 40 - RTU Open T-55 Sensor Connections

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Connect T-56: See Fig. 41 for T-56 internal connections. Install a jumper between SEN and SET terminals as illustrated. Connect T-56 terminals to RTU Open J20-1, J20-2 and J20-3 per Fig. 42.

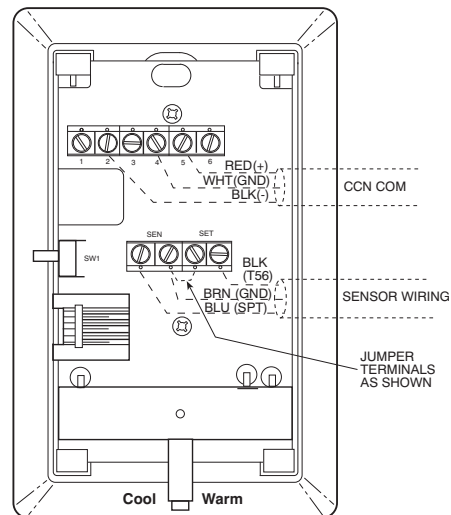


Fig. 41 - T-56 Internal Connections

C08202

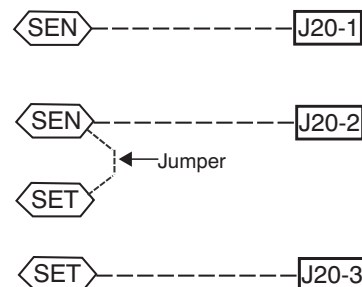
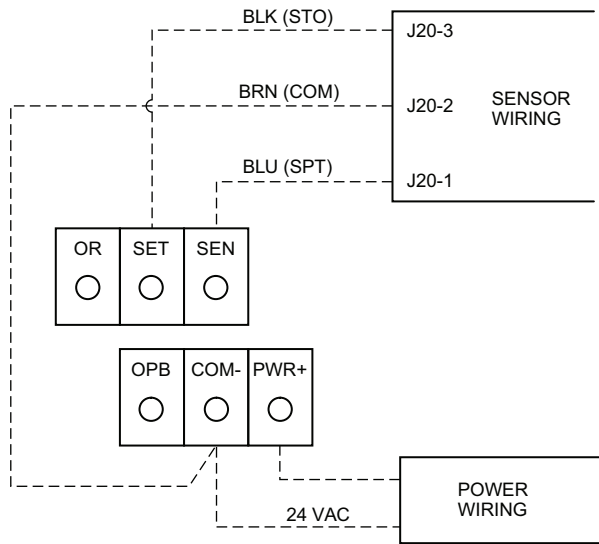


Fig. 42 - RTU Open T-56 Sensor Connections

C08461

Connect T-59: The T-59 space sensor requires a separate, isolated power supply of 24 VAC. See Fig. 43 for internal connections at the T-59. Connect the SEN terminal (BLU) to RTU Open J20-1. Connect the COM terminal (BRN) to J20-2. Connect the SET terminal (STO or BLK) to J20-3.



NOTE: Must use a separate isolated transformer.
Fig. 43 - Space Temperature Sensor Typical Wiring (33ZCT59SPT)

Indoor Air Quality (CO₂) Sensor —

The indoor air quality sensor accessory monitors space carbon dioxide (CO₂) levels. This information is used to monitor IAQ levels. Several types of sensors are available, for wall mounting in the space or in return duct, with and without LCD display, and in combination with space temperature sensors. Sensors use infrared technology to measure the levels of CO₂ present in the space air.

The CO₂ sensors are all factory set for a range of 0 to 2000 ppm and a linear mA output of 4 to 20. Refer to the instructions supplied with the CO₂ sensor for electrical requirements and terminal locations. See Fig. 44 for typical CO₂ sensor wiring schematic.

To accurately monitor the quality of the air in the conditioned air space, locate the sensor near a return-air grille (if present) so it senses the concentration of CO₂ leaving the space. The sensor should be mounted in a location to avoid direct breath contact.

Do not mount the IAQ sensor in drafty areas such as near supply ducts, open windows, fans, or over heat sources. Allow at least 3 ft (0.9 m) between the sensor and any corner. Avoid mounting the sensor where it is influenced by the supply air; the sensor gives inaccurate readings if the supply air is blown directly onto the sensor or if the supply air does not have a chance to mix with the room air before it is drawn into the return airstream.

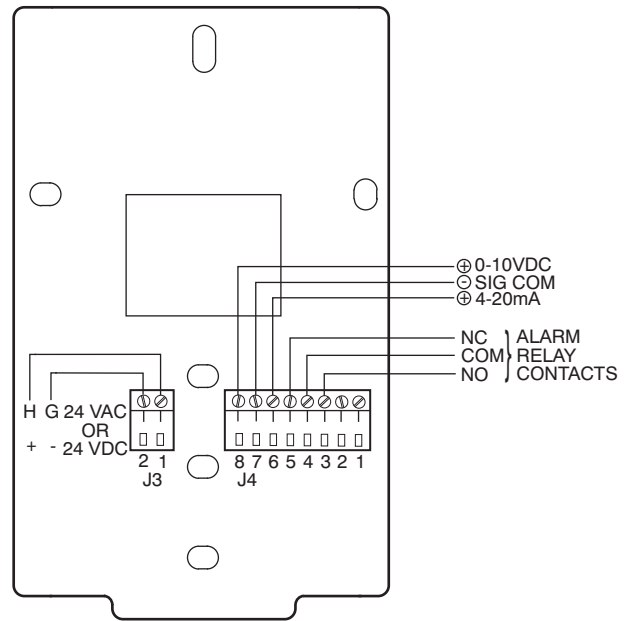


Fig. 44 - Indoor/Outdoor Air Quality (CO₂) Sensor (33ZCSENC02) - Typical Wiring Diagram

Wiring the Indoor Air Quality Sensor: For each sensor, use two 2-conductor 18 AWG (American Wire Gage) twisted-pair cables (unshielded) to connect the separate isolated 24 vac power source to the sensor and to connect the sensor to the control board terminals.

To connect the sensor to the control, identify the positive (4 to 20 mA) and ground (SIG COM) terminals on the sensor. See Fig. 44. Connect the 4-20 mA terminal to RTU Open J4-2 and connect the SIG COM terminal to RTU Open J4-3. See Fig. 45.

IAQ Sensor

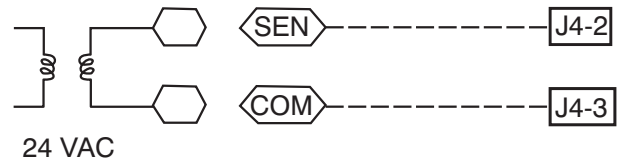


Fig. 45 - RTU Open / Indoor CO₂ Sensor (33ZCSENC02) Connections

Outdoor Air Quality Sensor (PNO 33ZCSENC02 plus weatherproof enclosure) —

The outdoor air CO₂ sensor is designed to monitor carbon dioxide (CO₂) levels in the outside ventilation air and interface with the ventilation damper in an HVAC system. The OAQ sensor is packaged with an outdoor cover. See Fig. 46. The outdoor air CO₂ sensor must be located in the economizer outside air hood.

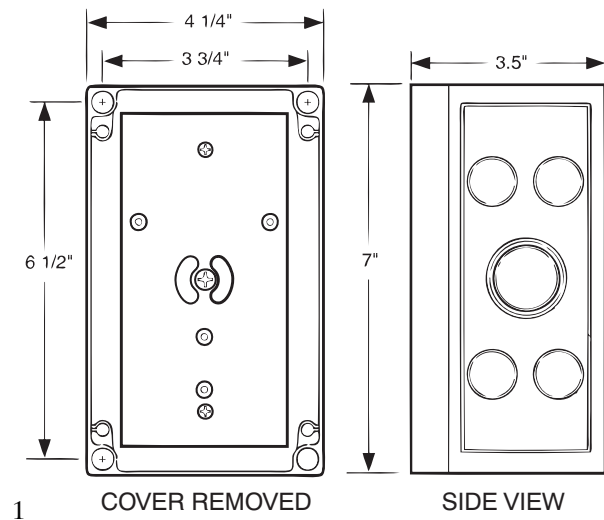


Fig. 46 - Outdoor Air Quality Sensor Cover

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Wiring the Outdoor Air CO₂ Sensor: A dedicated power supply is required for this sensor. A two-wire cable is required to wire the dedicated power supply for the sensor. The two wires should be connected to the power supply and terminals 1 and 2.

To connect the sensor to the control, identify the positive (4 to 20 mA) and ground (SIG COM) terminals on the OAQ sensor. See Fig. 44. Connect the 4 to 20 mA terminal to RTU Open J4-5. Connect the SIG COM terminal to RTU Open J4-6.

OAQ Sensor/RH Sensor

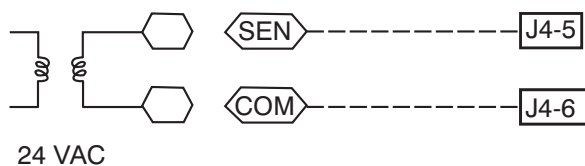


Fig. 47 - RTU Open / Outdoor CO₂ Sensor (33ZCSENCO2) Connections

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Smoke Detector/Fire Shutdown (FSD) —

On 558J units equipped with factory-installed Smoke Detector(s), the smoke detector controller implements the unit shutdown through its NC contact set connected to the unit's CTB input. The FSD function is initiated via the smoke detector's Alarm NO contact set. The RTU Open controller communicates the smoke detector's tripped status to the BAS building control. See Fig. 36 or Fig. 37 (RTU Open System Control wiring schematics).

The Fire Shutdown Switch configuration, **MENU → Config → Inputs → input 5**, identifies the normally open status of this input when there is no fire alarm.

Space Relative Humidity Sensor or Humidistat —

NOTE: The accessory space relative humidity sensor and humidistat are not available for single phase (-J voltage code) models.

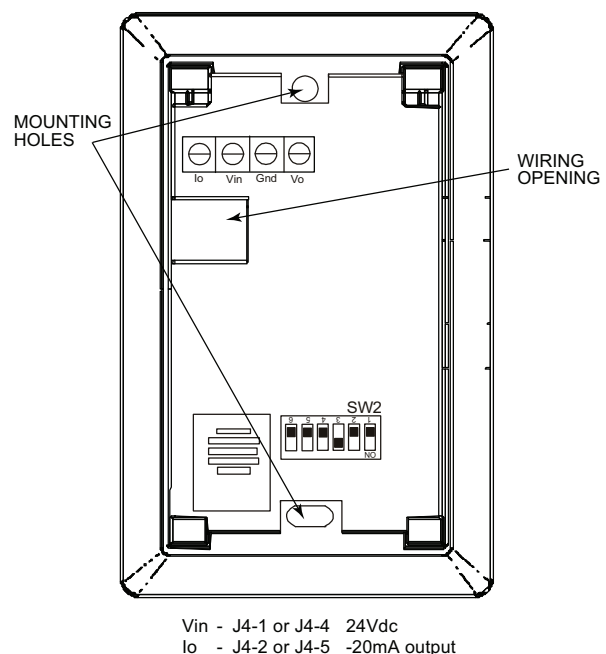
Perfect Humidity™ Control Wiring: In units equipped with the Perfect Humidity option there are two pink (PNK) wires loose in the control box used to control the dehumidification function of the unit. These pink wires are meant to be tied to a space humidistat or thermidistat on an electromechanical unit. On RTU Open equipped units these pink wires must be connected to J11-7 & 8 to allow the Open board to operate the dehumidification function for the unit. Disconnect the J11 Phoenix style connector from the board and use the plug screws to secure the pink wires in pins 7 and 8, reconnect the plug to the board at J11.

NOTE: Perfect Humidity is a factory installed option which is available for 07 models only.

Relative Humidity Sensors (Space or Duct Mounted): The accessory space humidity sensor (33ZCSENSRH-01) or duct humidity sensor (33ZCSENDRH-01) is used to measure the relative humidity of air within the space or return air duct. The RH reading is used to control the Perfect Humidity™ option of the rooftop unit. For wiring distances up to 500 ft (152 m), use a 3-conductor, 18 or 20 AWG shielded cable. The shield must be removed from the sensor end of the cable and grounded at the unit end. The current loop power for sensor is provided by the RTU Open controller as 24vdc. Refer to the instructions supplied with the RH sensor for the electrical requirements and terminal locations. RTU Open configurations must be changed after adding an RH sensor. See Fig. 48 and 49 for typical RH sensor wiring.

- J4-1 or J4-4 = 24vdc loop power
- J4-2 or J4-5 = 4-20mA signal input

NOTE: The factory default for dehumidification control is normally open humidistat.



Vin - J4-1 or J4-4 24Vdc
Io - J4-2 or J4-5 -20mA output

Fig. 48 - Space Relative humidity Sensor Typical Wiring

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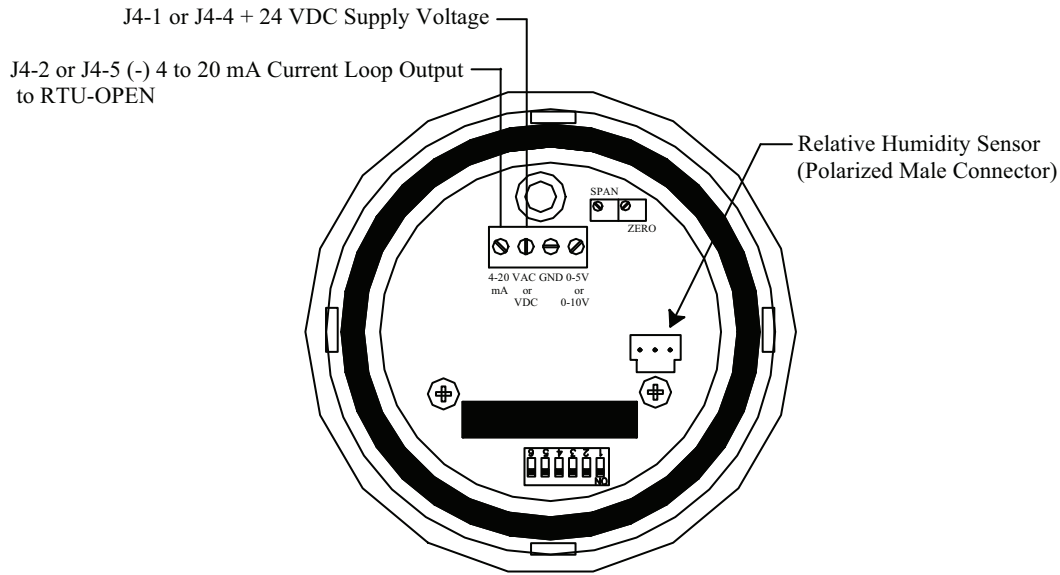


Fig. 49 - Duct Relative Humidity Sensor Typical Wiring

C10839

Humidistat: Use of a field-supplied humidistat provides the RTU Open insight to the relative humidity in the space. The humidistat reads the RH level in the space and compares it to its setpoint to operate a dry contact. The humidistat is a dedicated input on the configurable input 9 and tells the RTU Open when the RH level is HIGH or LOW. The normal condition for humidity is LOW. A normally open humidistat is the factory default control for the Perfect Humidity™ option.

To wire in the field:

- J5-8 = 24 VAC source for dry contact
- J5-7 = Signal input

Connecting Discrete Inputs —

Filter Status: The filter status accessory is a field-installed accessory. This accessory detects plugged filters. When installing this accessory, the unit must be configured for filter status by setting *MENU* → *Config* → *Inputs* → *input 3, 5, 8, or 9* to Filter Status and normally open (N/O) or normally closed (N/C). Input 8 or 9 is recommended for easy of installation. Refer to Fig. 35 and Fig. 36 or Fig. 37 for wire terminations at J5.

Fan Status: The fan status accessory is a field-installed accessory. This accessory detects when the indoor fan is blowing air. When installing this accessory, the unit must be configured for fan status by setting *MENU* → *Config* → *Inputs* → *input 3, 5, 8, or 9* to Fan Status and normally open (N/O) or normally closed (N/C). Input 8 or 9 is recommended for easy of installation. Refer to Fig. 35 and Fig. 36 or Fig. 37 for wire terminations at J5.

Remote Occupancy: The remote occupancy accessory is a field-installed accessory. This accessory overrides the unoccupied mode and puts the unit in occupied mode. When installing this accessory, the unit must be configured for remote occupancy by setting *MENU* → *Config* → *Inputs* → *input 3, 5, 8, or 9* to Remote Occupancy and normally open (N/O) or normally closed (N/C).

Also set *MENU* → *Schedules* → *occupancy source* to DI on/off. Input 8 or 9 is recommended for easy of installation. Refer to Fig. 35 and Table 3 for wire terminations at J5.

Power Exhaust (output): The relay used by the RTU Open board to control power exhaust is a dry contact which means it does not have 24vac. This 24vac must be connected to the relay to allow it to operate the power exhaust relay in the PE accessory. A 24vac source must be provided to J11-2 on the RTU Open control board. This can be provided by the unit's transformer from various sources. The "R" terminal on the unit's low voltage terminal board (LVTB) is a logical source. Refer to Fig. 35 and Fig. 36 or Fig. 37 for wire terminations at J11.

Communication Wiring - Protocols

General —

Protocols are the communication languages spoken by control devices. The main purpose of a protocol is to communicate information in the most efficient method possible. Different protocols exist to provide different kinds of information for different applications. In the BAS application, many different protocols are used, depending on manufacturer. Protocols do not change the function of a controller; just make the front end user different.

The RTU Open can be set to communicate on four different protocols: BACnet, Modbus, N2, and LonWorks.

Switch 3 (SW3) on the board is used to set protocol and baud rate. Switches 1 and 2 (SW1 and SW2) are used to set the board's network address. See Fig. 50 and 51 for protocol switch settings and address switches. The 3rd party connection to the RTU Open is through plug J19. See Fig. 52 for wiring.

NOTE: Power must be cycled after changing the SW1-3 switch settings.

Contact your Bryant applications engineer for more detailed information on protocols, 3rd party wiring, and networking.

SW3 Protocol Selection

PROTOCOL	DS8	DS7	DS6	DS5	DS4	DS3	DS2	DS1
BACnet MS/TP (Master)	Unused	OFF	OFF	OFF	ON	OFF	Select Baud	Select Baud
Modbus (Slave)	Unused	OFF	OFF	ON	ON	OFF	Select Baud	Select Baud
N2 (Slave)	Unused	OFF	OFF	OFF	ON	ON	OFF	OFF
LonWorks	Unused	ON	ON	OFF	ON	OFF	OFF	ON

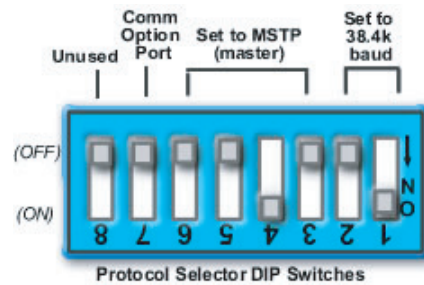
NOTE:

DS = Dip Switch

BACnet MS/TP SW3 example shown

Baud Rate Selections

BAUD RATE	DS2	DS1
9600	OFF	OFF
19,200	ON	OFF
38,400	OFF	ON
76,800	ON	ON



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Fig. 50 - RTU Open SW3 Dip Switch Settings



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Fig. 51 - RTU Open Address Switches

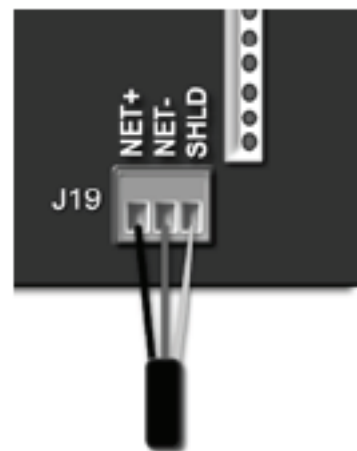


Fig. 52 - Network Wiring

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Local Access

Wall Mounted Equipment Touch

The Equipment Touch is a wall mounted interface used to connect to the RTU Open to access the control information, read sensor values, and maintenance. This is an accessory interface that does not come with the RTU Open controller. You wire the Equipment Touch to the RTU Open's J13 local access port. There are 2 password protected levels in the display (User and Admin). See the Equipment Touch Installation and Setup Guide for more information. See Appendix A for navigation and screen content.

Field Assistant

Field Assistant is a computer program included with the purchase of the Tech Tool Kit (USB-TKIT). This is a field Tech Tool to set-up, service, or download application software to the RTU Open controller and includes a USB Link Cable. The link cable connects a USB port to the J12 local access port. See Fig. 53.

RTU Open Troubleshooting —

Communication LEDs: The LEDs indicate if the controller is speaking to the devices on the network. The LEDs should reflect communication traffic based on the baud rate set. The higher the baud rate the more solid the LEDs will appear. See Table 4.

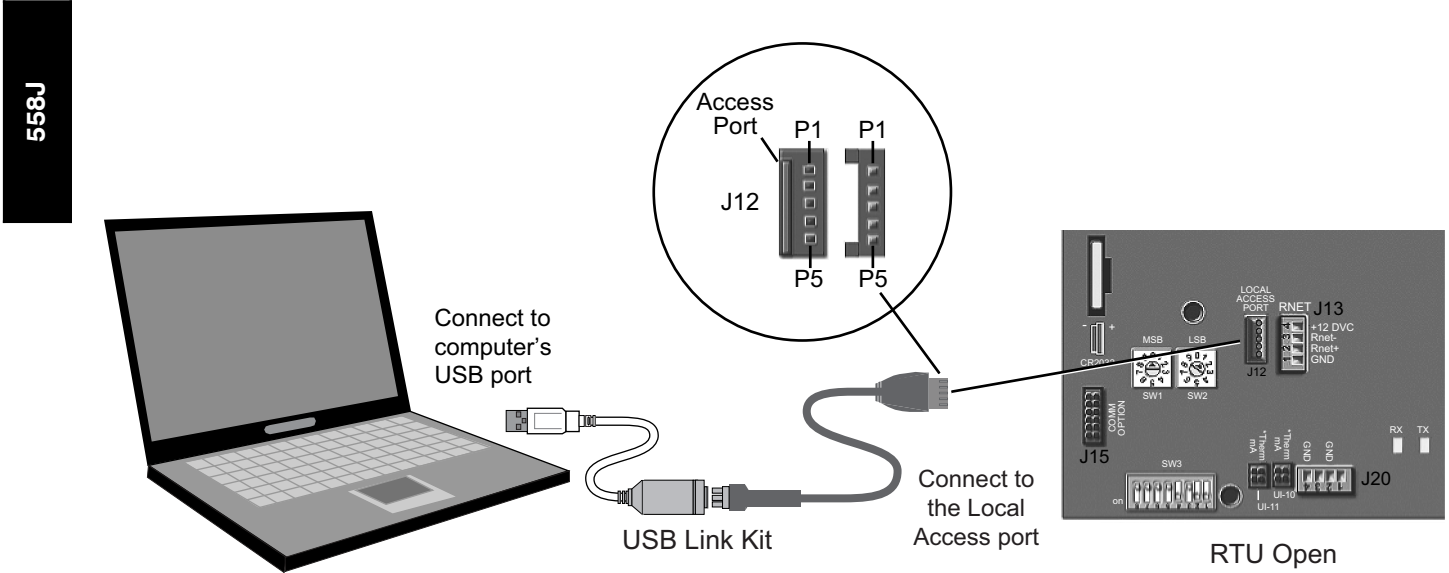


Fig. 53 - PC Running Field Assistant

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Table 4 – LEDs

The LEDs on the RTU Open show the status of certain functions

If this LED is on...	Status is...
Power	The RTU Open has power
Rx	The RTU Open is receiving data from the network segment
Tx	The RTU Open is transmitting data over the network segment
BO#	The binary output is active

The **Run** and **Error** LEDs indicate control module and network status

If Run LED shows...	And Error LED shows...	Status is...
2 flashes per second	Off	Normal
2 flashes per second	2 flashes, alternating with Run LED	Five minute auto–restart delay after system error
2 flashes per second	3 flashes, then off	Control module has just been formatted
2 flashes per second	4 flashes, then pause	Two or more devices on this network have the same MSTP network address
2 flashes per second	On	Exec halted after frequent system errors or control programs halted
5 flashes per second	On	Exec start–up aborted, Boot is running
5 flashes per second	Off	Firmware transfer in progress, Boot is running
7 flashes per second	7 flashes per second, alternating with Run LED	Ten second recovery period after brownout
14 flashes per second	14 flashes per second, alternating with Run LED	Brownout
On	On	Failure. Try the following solutions: <ul style="list-style-type: none"> • Turn the RTU Open off, then on. • Format the RTU Open. • Download memory to the RTU Open. • Replace the RTU Open.

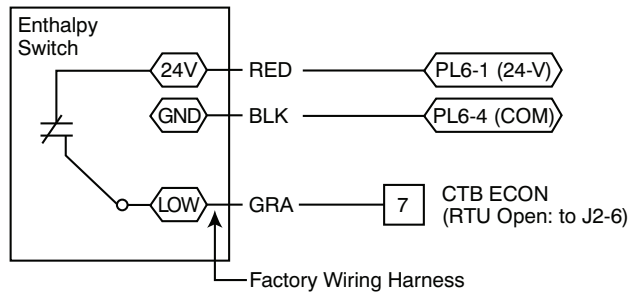
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NOTE: Refer to the *RTU Open Multi-Protocol Controller Controls, Start-Up, Operation and Troubleshooting* manual. Contact your Bryant applications engineer for details on configuration and troubleshooting of connected networks.

Outdoor Air Enthalpy Control (PNO 33CSENTHSW)

The enthalpy control (33CSENTHSW) is available as a field-installed accessory to be used with the EconoMi\$er2 damper system. The outdoor air enthalpy sensor is part of the enthalpy control. (The separate field-installed accessory return air enthalpy sensor (33CSENSEN) is required for differential enthalpy control. See Fig. 54.)

Locate the enthalpy control in the economizer next to the Actuator Motor. Locate two GRA leads in the factory harness and connect the gray lead labeled “ESL” to the terminal labeled “LOW”. See Fig. 54. Connect the enthalpy control power input terminals to economizer actuator power leads RED (connect to 24V) and BLK (connect to GND).



C11169

Fig. 54 - Enthalpy Switch (33CSENTHSW) Connections

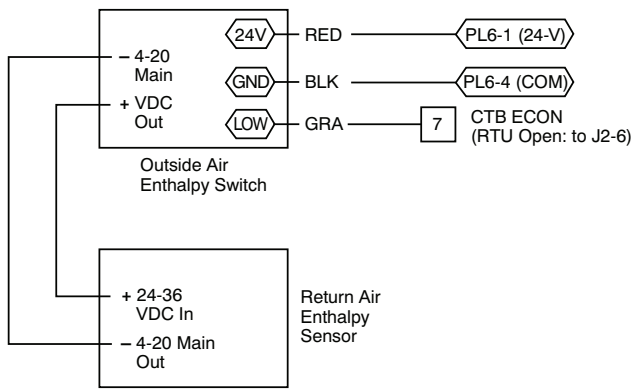
The outdoor enthalpy changeover setpoint is set at the enthalpy controller.

Differential Enthalpy Control —

Differential enthalpy control is provided by sensing and comparing the outside air and return air enthalpy conditions. Install the outdoor air enthalpy control as described above. Add and install a return air enthalpy sensor.

Return Air Enthalpy Sensor —

Mount the return-air enthalpy sensor (33CSENSEN) in the return-air section of the economizer. The return air sensor is wired to the enthalpy controller (33CSENTHSW). See Fig. 55.



C11170

Fig. 55 - Outside and Return Air Enthalpy Sensor Wiring

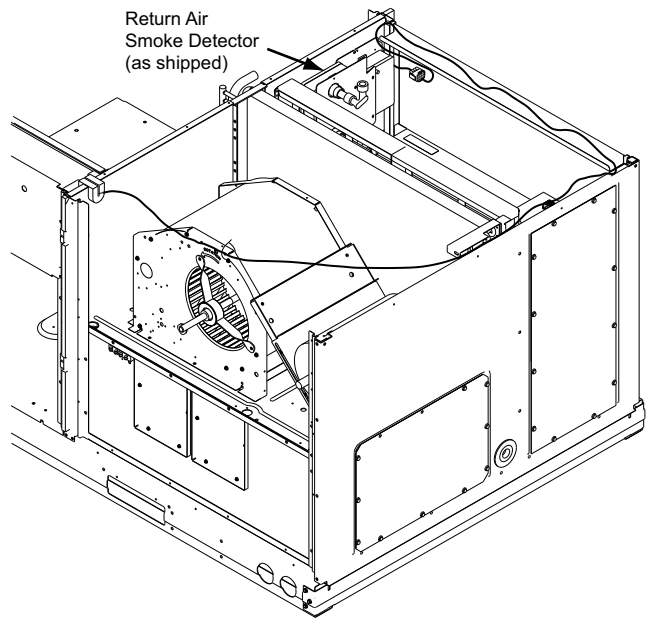
To wire the return air enthalpy sensor, perform the following:

1. Use a 2-conductor, 18 or 20 AWG, twisted pair cable to connect the return air enthalpy sensor to the enthalpy controller.
2. Connect the field-supplied RED wire to (+) spade connector on the return air enthalpy sensor and the (+) terminal on the enthalpy controller. Connect the BLK wire to (-) spade connector on the return air enthalpy sensor and the (-) terminal on the enthalpy controller.

Smoke Detectors

Smoke detectors are available as factory-installed options on 558J models. Smoke detectors may be specified for Supply Air only or for Return Air without or with economizer or in combination of Supply Air and Return Air. All components necessary for operation are factory-provided and mounted. The unit is factory-configured for immediate smoke detector shutdown operation; additional wiring or modifications to unit terminal board may be necessary to complete the unit and smoke detector configuration to meet project requirements.

Units equipped with factory-optional Return Air smoke detectors require a relocation of the sensor module at unit installation. See Fig. 56 for the as shipped location.



C12282

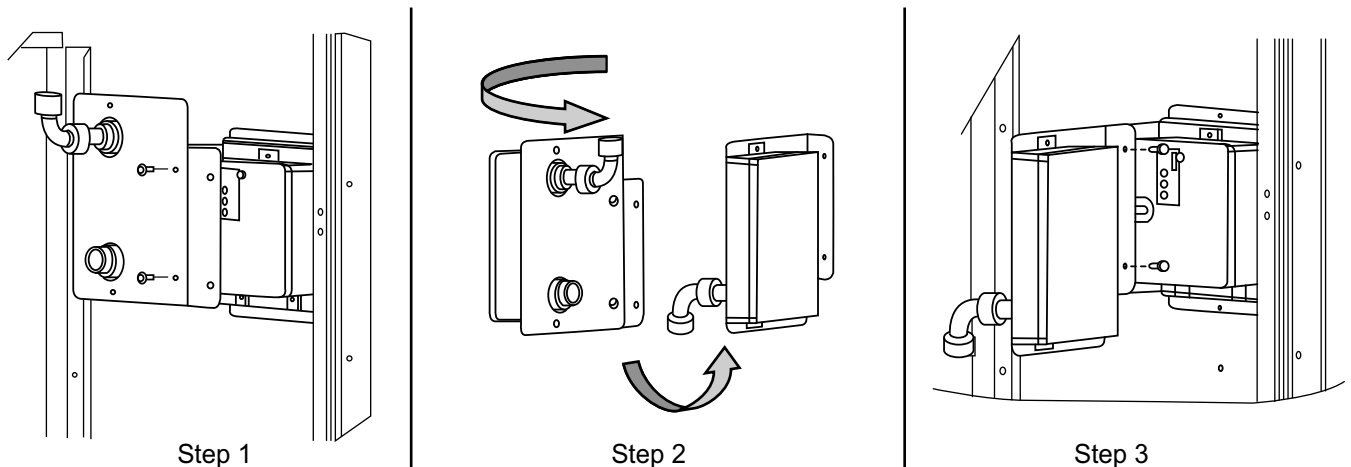
Fig. 56 - Return Air Smoke Detector, Shipping Position

Completing Installation of Return Air Smoke Sensor:

1. Unscrew the two screws holding the Return Air Smoke Detector assembly. See Fig. 57, Step 1. Save the screws.
2. Turn the assembly 90 and then rotate end to end. Make sure that the elbow fitting is pointing down. See Fig. 57, Step 2.
3. Screw the sensor and detector plate into its operating position using screws from Step 1. See Fig. 57, Step 3.
4. Connect the flexible tube on the sampling inlet to the sampling tube on the basepan.

Additional Application Data —

Refer to Catalog No. HKRNKA-1XA for discussions on additional control features of these smoke detectors including multiple unit coordination.



C12283

Fig. 57 - Completing Installation of Return Air Smoke Sensor

Table 5 – Unit Wire/Fuse or HACR Breaker Sizing Data

UNIT	NO M. V-PH-HZ	ELEC. HTR				NO C.O. or UNPWR C.O.																								
		CRHEATER***A00	Nom (kW)	FLA	NO PE.				w/ P.E. (pwrdr fr/unit)				NO PE.				w/ PWR C.O.													
					MCA	MAX FUSE or HACR BRKR	FLA	DISC. SIZE	LRA	MCA	MAX FUSE or HACR BRKR	FLA	DISC. SIZE	LRA	MCA	MAX FUSE or HACR BRKR	FLA	DISC. SIZE	LRA	MCA	MAX FUSE or HACR BRKR	FLA	DISC. SIZE	LRA						
STD	208/230-1-60	NONE	-	-	28	40	26	95	30	45	29	97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		101A	3.3/4.4	15.9/18.3	28/29	40/40	26/27	95/95	30/32	45/45	29/29	97/97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		102A	4.9/6.5	23.5/27.1	36/40	40/45	33/37	95/95	38/43	45/45	35/39	97/97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		103B	6.5/8.7	31.4/36.3	46/52	50/60	42/47	95/95	48/54	50/60	44/50	97/97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		104B	7.9/10.5	37.9/43.8	54/61	60/70	49/56	95/95	56/64	60/70	51/58	97/97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		102A+102A	9.8/13.0	46.9/54.2	65/74	70/80	60/68	95/95	68/77	70/80	62/70	97/97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MED	208/230-1-60	NONE	-	-	28	40	26	95	30	45	29	97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		101A	3.3/4.4	15.9/18.3	28/29	40/40	26/27	95/95	30/32	45/45	29/29	97/97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		102A	4.9/6.5	23.5/27.1	36/40	40/45	33/37	95/95	38/43	45/45	35/39	97/97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		103B	6.5/8.7	31.4/36.3	46/52	50/60	42/47	95/95	48/54	50/60	44/50	97/97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		104B	7.9/10.5	37.9/43.8	54/61	60/70	49/56	95/95	56/64	60/70	51/58	97/97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		102A+102A	9.8/13.0	46.9/54.2	65/74	70/80	60/68	95/95	68/77	70/80	62/70	97/97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DD-STD	208/230-3-60	NONE	-	-	21	30	21	83	23	30	23	85	26	88	28	30	26	88	28	30	26	88	28	30	26	88	28	30	26	
		101A	3.3/4.4	9.2/10.6	21/21	30/30	21/21	83/83	23/24	30/30	23/23	85/85	26/26	88/88	28/28	30/30	26/26	88/88	28/28	30/30	26/26	88/88	28/28	30/30	26/26	88/88	28/28	30/30	26/26	88/88
		102A	4.9/6.5	13.6/15.6	25/27	30/30	23/25	83/83	27/30	30/30	25/27	85/85	28/30	88/88	31/33	35/35	28/30	88/88	33/36	35/40	28/30	88/88	33/36	35/40	28/30	88/88	33/36	35/40	28/30	88/88
		103B	6.5/8.7	18.1/20.9	31/34	35/35	28/31	83/83	33/36	35/40	30/33	85/85	33/36	88/88	37/40	40/40	33/36	88/88	39/42	40/45	33/36	88/88	39/42	40/45	33/36	88/88	39/42	40/45	33/36	88/88
		104B	7.9/10.5	21.9/25.3	35/40	35/40	32/36	83/83	38/42	40/45	34/38	85/85	34/38	88/88	41/46	45/50	38/42	88/88	44/48	45/50	38/42	88/88	44/48	45/50	38/42	88/88	44/48	45/50	38/42	88/88
		105A	12.0/16.0	33.4/38.5	50/56	50/60	45/51	83/83	52/58	60/60	47/53	85/85	47/53	88/88	56/62	60/70	51/57	88/88	58/64	60/70	51/57	88/88	58/64	60/70	51/57	88/88	58/64	60/70	51/57	88/88
STD	208/230-3-60	NONE	-	-	20	30	20	96	22	30	22	98	22	101	27	30	25	101	27	30	25	101	27	30	25	101	27	30	25	
		101A	3.3/4.4	9.2/10.6	20/20	30/30	20/20	96/96	22/23	30/30	22/22	98/98	22/22	101/101	27/27	30/30	25/25	101/101	27/29	30/30	25/25	101/101	27/29	30/30	25/25	101/101	27/27	30/30	25/25	101/101
		102A	4.9/6.5	13.6/15.6	24/26	30/30	22/24	96/96	26/29	30/30	24/26	98/98	24/26	101/101	29/32	35/35	27/29	101/101	32/35	35/35	27/29	101/101	32/35	35/35	27/29	101/101	29/32	35/35	27/29	101/101
		103B	6.5/8.7	18.1/20.9	30/33	30/35	27/30	96/96	32/35	35/40	29/32	98/98	29/32	101/101	36/39	40/40	32/36	101/101	38/41	40/45	32/36	101/101	38/41	40/45	32/36	101/101	36/39	40/40	32/36	101/101
		104B	7.9/10.5	21.9/25.3	34/39	35/40	31/35	96/96	37/41	40/45	33/37	98/98	33/37	101/101	40/45	40/45	37/41	101/101	43/47	45/50	37/41	101/101	43/47	45/50	37/41	101/101	39/43	40/44	37/41	101/101
		105A	12.0/16.0	33.4/38.5	49/55	50/60	44/50	96/96	51/57	60/60	47/52	98/98	47/52	101/101	55/61	60/70	50/56	101/101	57/63	60/70	50/56	101/101	57/63	60/70	50/56	101/101	52/58	53/59	50/56	101/101
MED	208/230-3-60	NONE	-	-	20	30	20	96	22	30	22	98	22	101	27	30	25	101	27	30	25	101	27	30	25	101	27	30	25	
		101A	3.3/4.4	9.2/10.6	20/20	30/30	20/20	96/96	22/23	30/30	22/22	98/98	22/22	101/101	27/27	30/30	25/25	101/101	27/29	30/30	25/25	101/101	27/29	30/30	25/25	101/101	27/27	30/30	25/25	101/101
		102A	4.9/6.5	13.6/15.6	24/26	30/30	22/24	96/96	26/29	30/30	24/26	98/98	24/26	101/101	29/32	35/35	27/29	101/101	32/35	35/35	27/29	101/101	32/35	35/35	27/29	101/101	29/32	35/35	27/29	101/101
		103B	6.5/8.7	18.1/20.9	30/33	30/35	27/30	96/96	32/35	35/40	29/32	98/98	29/32	101/101	36/39	40/40	32/36	101/101	38/41	40/45	32/36	101/101	38/41	40/45	32/36	101/101	36/39	40/40	32/36	101/101
		104B	7.9/10.5	21.9/25.3	34/39	35/40	31/35	96/96	37/41	40/45	33/37	98/98	33/37	101/101	40/45	40/45	37/41	101/101	43/47	45/50	37/41	101/101	43/47	45/50	37/41	101/101	39/43	40/44	37/41	101/101
		105A	12.0/16.0	33.4/38.5	49/55	50/60	44/50	96/96	51/57	60/60	47/52	98/98	47/52	101/101	55/61	60/70	50/56	101/101	57/63	60/70	50/56	101/101	57/63	60/70	50/56	101/101	52/58	53/59	50/56	101/101
HIGH	208/230-3-60	NONE	-	-	22/22	30/30	22/21	134	24/24	30/30	24/24	136	24/24	139	27/26	30/30	27/27	139	29/28	35/35	27/27	139	29/28	35/35	27/27	139	29/29	35/35	27/27	
		101A	3.3/4.4	9.2/10.6	22/22	30/30	22/21	134/134	24/24	30/30	24/24	136/136	24/24	139/139	27/26	30/30	27/27	139/139	29/28	35/35	27/27	139/139	29/28	35/35	27/27	139/139	29/29	35/35	27/27	139/139
		102A	4.9/6.5	13.6/15.6	26/28	30/30	24/26	134/134	28/31	30/35	26/28	136/136	26/28	139/139	32/34	35/35	29/31	139/139	34/37	35/40	29/31	139/139	34/37	35/40	29/31	139/139	31/33	34/37	29/31	139/139
		103B	6.5/8.7	18.1/20.9	32/35	35/35	29/32	134/134	34/37	35/40	31/34	136/136	31/34	139/139	38/41	40/45	34/37	139/139	40/43	40/45	34/37	139/139	40/43	40/45	34/37	139/139	36/39	36/39	34/37	139/139
		104B	7.9/10.5	21.9/25.3	36/40	40/40	33/37	134/134	39/43	40/45	35/39	136/136	35/39	139/139	42/46	45/50	39/42	139/139	45/49	45/50	39/42	139/139	45/49	45/50	39/42	139/139	41/45	41/45	39/42	139/139
		105A	12.0/16.0	33.4/38.5	51/57	60/60	46/52	134/134	53/59	60/60	49/54	136/136	49/54	139/139	57/63	60/70	52/58	139/139	59/65	60/70	52/58	139/139	59/65	60/70	52/58	139/139	54/60	54/60	52/58	139/139

See "Legend and Notes for Table 5 on page 41.



Table 5 - Unit Wire/Fuse or HACR Breaker Sizing Data (cont)

UNIT	NO M, V-Ph-HZ	IFM TYPE	ELEC. HTR		NO C.O. or UNPWR C.O.										w/ PWRD C.O.														
			CRHEATER***A00	Norm (kW)	FLA	NO PE.			w/ P.E. (pwrd fr/unit)			NO PE.			w/ P.E. (pwrd fr/unit)			NO PE.			w/ P.E. (pwrd fr/unit)								
					MCA	MAX FUSE or HACR BRKR	FLA	DISC. SIZE	MCA	MAX FUSE or HACR BRKR	FLA	DISC. SIZE	LRA	MCA	MAX FUSE or HACR BRKR	FLA	DISC. SIZE	LRA	MCA	MAX FUSE or HACR BRKR	FLA	DISC. SIZE	LRA	MCA	MAX FUSE or HACR BRKR	FLA	DISC. SIZE	LRA	
558J*04	460-3-60	STD	NONE	-	-	11	15	11	49	12	15	12	50	13	13	15	13	51	14	14	15	13	51	14	14	20	14	52	52
			106A	6.0	7.2	13	15	11	49	14	15	12	50	14	14	15	15	14	51	17	17	20	14	51	17	20	15	52	52
			107A	8.8	10.6	17	20	15	49	18	20	16	50	18	18	20	20	18	51	21	21	25	18	51	21	25	19	52	52
			108A	11.5	13.8	21	25	19	49	22	25	20	50	24	24	25	24	21	51	25	25	25	21	51	25	25	23	52	52
			109A	14.0	16.8	25	25	22	49	26	30	23	50	27	27	30	27	25	51	29	29	30	25	51	29	29	30	26	52
	575-3-60	HIGH	NONE	-	-	12	15	12	68	13	15	13	69	14	14	20	14	70	15	15	15	14	70	15	15	20	15	71	71
			106A	6.0	7.2	14	15	12	68	15	15	13	69	16	16	20	15	70	18	18	20	15	70	18	20	15	71	71	
			107A	8.8	10.6	18	20	16	68	19	20	17	69	21	21	25	19	70	22	22	25	19	70	22	25	20	71	71	
			108A	11.5	13.8	22	25	20	68	23	25	21	69	25	25	25	21	70	26	26	30	21	70	26	30	23	71	71	
			109A	14.0	16.8	26	30	23	68	27	30	24	69	28	28	30	24	70	30	30	30	24	70	30	30	27	71	71	

See "Legend and Notes for Table 5 on page 41.

Table 5 - Unit Wire/Fuse or HACR Breaker Sizing Data (cont)

UNIT	NO M, V-Ph-HZ	ELEC. HTR			NO C.O. or UNPWR C.O.					w/ PWRD C.O.										
		CRHEATER***A00	Nom (kW)	FLA	NO PE.		w/ P.E. (pwrd fr/unit)			NO PE.		w/ P.E. (pwrd fr/unit)								
IFM TYPE					MAX FUSE or BRKR	DISC. SIZE		MCA	MAX FUSE or BRKR	DISC. SIZE		MCA	MAX FUSE or BRKR	DISC. SIZE		MCA	MAX FUSE or BRKR	DISC. SIZE		
						FLA	LRA			FLA	LRA			FLA	LRA			FLA	LRA	
STD	208/230-1-60	NONE	-	-	34	50	32	133	36	50	35	135	-	-	-	-	-	-	-	-
		101A	3.3/4.4	15.9/18.3	34/34	50/50	32/32	133/133	36/36	50/50	35/35	135/135	-	-	-	-	-	-	-	-
		103B	6.5/8.7	31.4/36.3	46/52	50/60	42/47	133/133	48/54	50/60	44/50	135/135	-	-	-	-	-	-	-	-
		102A+102A	9.8/13.0	46.9/54.2	65/74	70/80	60/68	133/133	68/77	70/80	62/70	135/135	-	-	-	-	-	-	-	-
		103B+103B	13.1/17.4	62.8/72.5	85/97	90/100	78/89	133/133	87/100	90/100	80/91	135/135	-	-	-	-	-	-	-	-
		104B+104B	15.8/21.0	75.8/87.5	101/116	110/125	93/106	133/133	104/118	110/125	95/108	135/135	-	-	-	-	-	-	-	-
		NONE	-	-	34	50	32	133	36	50	35	135	-	-	-	-	-	-	-	-
		101A	3.3/4.4	15.9/18.3	34/34	50/50	32/32	133/133	36/36	50/50	35/35	135/135	-	-	-	-	-	-	-	-
MED		103B	6.5/8.7	31.4/36.3	46/52	50/60	42/47	133/133	48/54	50/60	44/50	135/135	-	-	-	-	-	-	-	
		102A+102A	9.8/13.0	46.9/54.2	65/74	70/80	60/68	133/133	68/77	70/80	62/70	135/135	-	-	-	-	-	-	-	
		103B+103B	13.1/17.4	62.8/72.5	85/97	90/100	78/89	133/133	87/100	90/100	80/91	135/135	-	-	-	-	-	-	-	
		104B+104B	15.8/21.0	75.8/87.5	101/116	110/125	93/106	133/133	104/118	110/125	95/108	135/135	-	-	-	-	-	-	-	
DD-STD	208/230-3-60	NONE	-	-	25	30	24	93	27	30	27	95	30	40	30	98	32	45	32	100
		102A	4.9/6.5	13.6/15.6	24/26	30/30	24/25	93/93	27/30	30/30	27/27	95/95	30/30	40/40	30/30	98/98	33/36	45/45	32/33	100/100
		103B	6.5/8.7	18.1/20.9	30/33	35/35	28/31	93/93	33/36	40/40	30/33	95/95	37/40	40/40	33/36	98/98	39/42	45/45	35/39	100/100
		105A	12.0/16.0	33.4/38.5	50/56	60/60	45/51	93/93	52/58	60/60	47/53	95/95	56/62	60/70	51/57	98/98	58/64	60/70	53/59	100/100
		104B+104B	15.8/21.0	43.8/50.5	63/71	70/80	57/65	93/93	65/73	70/80	59/67	95/95	69/77	70/80	63/70	98/98	71/79	80/80	65/73	100/100
		NONE	-	-	24	30	23	106	26	30	26	108	29	40	29	111	31	40	31	113
		102A	4.9/6.5	13.6/15.6	24/26	30/30	23/24	106/106	26/29	30/30	26/26	108/108	30/32	40/40	29/29	111/111	32/35	40/40	31/32	113/113
		103B	6.5/8.7	18.1/20.9	30/33	35/35	27/30	106/106	32/35	35/40	29/32	108/108	36/39	40/40	32/36	111/111	38/41	40/45	35/38	113/113
STD		105A	12.0/16.0	33.4/38.5	49/55	50/60	44/50	106/106	51/57	60/60	47/52	108/108	55/61	60/70	50/56	111/111	57/63	60/70	52/58	113/113
		104B+104B	15.8/21.0	43.8/50.5	62/70	70/70	56/64	106/106	64/72	70/80	59/66	108/108	68/76	70/80	62/70	111/111	70/78	70/80	64/72	113/113
		NONE	-	-	24	30	23	106	26	30	26	108	29	40	29	111	31	40	31	113
		102A	4.9/6.5	13.6/15.6	24/26	30/30	23/24	106/106	26/29	30/30	26/26	108/108	30/32	40/40	29/29	111/111	32/35	40/40	31/32	113/113
MED	208/230-3-60	103B	6.5/8.7	18.1/20.9	30/33	30/35	27/30	106/106	32/35	35/40	29/32	108/108	36/39	40/40	32/36	111/111	38/41	40/45	35/38	113/113
		105A	12.0/16.0	33.4/38.5	49/55	50/60	44/50	106/106	51/57	60/60	47/52	108/108	55/61	60/70	50/56	111/111	57/63	60/70	52/58	113/113
		104B+104B	15.8/21.0	43.8/50.5	62/70	70/70	56/64	106/106	64/72	70/80	59/66	108/108	68/76	70/80	62/70	111/111	70/78	70/80	64/72	113/113
		NONE	-	-	24	30	23	106	26	30	26	108	29	40	29	111	31	40	31	113
HIGH		102A	4.9/6.5	13.6/15.6	26/28	30/30	25/25	144	28/28	40/40	28/27	146	31/31	40/40	31/31	149	33/32	45/45	33/33	151
		103B	6.5/8.7	18.1/20.9	32/35	35/35	29/32	144/144	34/37	40/40	31/34	146/146	38/41	40/45	34/37	149/149	40/43	45/45	36/39	151/151
		105A	12.0/16.0	33.4/38.5	51/57	60/60	46/52	144/144	53/59	60/60	49/54	146/146	57/63	60/70	52/58	149/149	59/65	60/70	54/60	151/151
		104B+104B	15.8/21.0	43.8/50.5	64/72	70/80	58/66	144/144	66/74	70/80	60/68	146/146	70/78	80/80	64/71	149/149	72/80	80/80	66/73	151/151

See Legend and Notes for Table 5 on page 41.



Table 5 - Unit Wire/Fuse or HACR Breaker Sizing Data (cont)

UNIT	NO M, V-PH-HZ	ELEC. HTR			NO C.O. or UNPWR C.O.																					
		IFM TYPE	CRHEATER**A00	Nom (kW)	FLA	NO RE.				w/ RE. (pwrd fr/unit)				NO P.E.				w/ PWRD C.O.								
						MCA	MAX FUSE or HACR BRKR	FLA	DISC. SIZE	MCA	MAX FUSE or HACR BRKR	FLA	DISC. SIZE	MCA	MAX FUSE or HACR BRKR	FLA	DISC. SIZE	MCA	MAX FUSE or HACR BRKR	FLA	DISC. SIZE					
558J*05	STD	NONE	-	-	-	12	15	11	52	13	15	12	53	14	15	14	54	15	20	15	55	15	20	15	55	
		106A	6.0	7.2	13	15	11	52	14	15	12	53	15	54	14	15	54	17	20	15	55	17	20	15	55	
		108A	11.5	13.8	21	25	19	52	22	25	20	53	24	54	21	25	54	25	25	23	55	25	30	26	55	
		109A	14.0	16.8	25	25	22	52	26	30	23	53	27	53	25	30	25	54	29	30	26	55	29	30	26	55
	MED	108A+108A	23.0	27.7	38	40	35	52	40	40	36	53	41	53	41	45	54	42	45	39	55	42	45	39	55	
		NONE	-	-	12	15	11	52	13	15	12	53	14	54	14	15	54	15	20	15	55	15	20	15	55	
		106A	6.0	7.2	13	15	11	52	14	15	12	53	15	54	14	15	54	17	20	15	55	17	20	15	55	
		108A	11.5	13.8	21	25	19	52	22	25	20	53	24	54	21	25	54	25	25	23	55	25	30	26	55	
	HIGH	109A	14.0	16.8	25	25	22	52	27	30	23	53	27	53	25	30	25	54	29	30	26	55	29	30	26	55
		108A+108A	23.0	27.7	38	40	35	52	40	40	36	53	41	53	41	45	54	42	45	39	55	42	45	39	55	
		NONE	-	-	12	15	12	71	13	15	13	72	15	72	15	20	73	16	20	16	74	16	20	16	74	
		106A	6.0	7.2	14	15	12	71	15	15	13	72	16	73	18	20	73	18	20	16	74	18	20	16	74	
575-3-60	STD	108A	11.5	13.8	22	25	20	71	23	25	21	72	25	25	22	73	26	30	23	74	26	30	23	74		
		109A	14.0	16.8	26	30	23	71	27	30	24	72	28	30	26	73	30	30	27	74	30	30	27	74		
		108A+108A	23.0	27.7	39	40	36	71	41	45	37	72	42	45	38	73	43	45	39	74	43	45	39	74		
		NONE	-	-	9	15	9	42	11	15	11	44	11	15	11	44	13	15	13	46	13	15	13	46		
575-3-60	MED	NONE	-	-	9	15	9	42	11	15	11	44	11	15	11	44	13	15	13	46	13	15	13	46		
		NONE	-	-	9	15	9	46	11	15	11	48	11	15	10	48	13	15	13	46	13	15	13	46		

See "Legend and Notes for Table 5 on page 41.

Table 5 - Unit Wire/Fuse or HACR Breaker Sizing Data (cont)

UNIT	NO. M. V-PH-HZ	IFM TYPE	ELEC. HTR				NO P.E.						NO P.E.						w/ PWRD C.O.								
			ORHEATER***A00	Nom (kW)	FLA	DISC. SIZE		MAX FUSE or HACR BRKR	MCA	DISC. SIZE	MAX FUSE or HACR BRKR	MCA	DISC. SIZE		MAX FUSE or HACR BRKR	MCA	DISC. SIZE		MAX FUSE or HACR BRKR	MCA	DISC. SIZE		MAX FUSE or HACR BRKR	MCA			
						FLA	LRA						FLA	LRA			FLA	LRA			FLA	LRA			FLA	LRA	
558J*06	208/230-1-60	STD	NONE	-	-	37	150	42	60	40	152	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
			102A	4.9/6.5	23.5/27.1	40/40	37/37	150/150	42/43	60/60	40/40	152/152	40/40	42/42	34/34	36/36	34/34	34/34	36/36	34/34	36/36	34/34	36/36	34/34	36/36	34/34	
			103B	6.5/8.7	31.4/36.3	46/52	42/47	150/150	48/54	60/60	44/50	152/152	46/52	46/52	36/40	43/48	39/43	39/43	46/50	43/48	45/50	46/50	39/43	46/50	43/48	45/50	
			102A+102A	9.8/13.0	46.9/54.2	65/74	60/68	150/150	68/77	70/80	62/70	152/152	70/80	64/73	49/55	58/64	60/70	53/59	60/70	60/70	60/70	60/70	53/59	60/70	60/70	53/59	60/70
			103B+103B	13.1/17.4	62.8/72.5	85/97	78/89	150/150	87/100	90/100	80/91	152/152	80/91	82/94	61/69	71/79	80/80	65/72	73/81	80/80	80/80	80/80	65/72	73/81	80/80	80/80	65/72
			104B+104B	15.8/21.0	75.8/87.5	101/116	93/106	150/150	104/118	110/125	95/108	152/152	95/108	97/111	74/84	85/96	90/100	78/88	87/98	90/100	90/100	78/88	87/98	90/100	90/100	78/88	
			NONE	-	-	40	40	175	44	60	42	177	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			102A	4.9/6.5	23.5/27.1	42/43	40/40	175/175	44/45	60/60	42/42	177/177	42/42	42/42	31/31	34/35	34/34	34/34	34/34	45/45	34/35	36/38	34/34	45/45	36/38	34/34	45/45
			104B	7.9/10.5	21.9/25.3	37/42	34/38	122/122	40/44	40/45	36/40	124/124	36/40	36/40	49/55	58/64	60/70	53/59	60/70	60/70	60/70	53/59	60/70	60/70	53/59	60/70	60/70
			105A	12.0/16.0	33.4/38.5	52/58	47/53	122/122	54/60	60/60	47/52	135/135	51/57	51/57	61/69	71/79	80/80	65/72	73/81	80/80	80/80	65/72	73/81	80/80	80/80	65/72	73/81
104B+104B	15.8/21.0	43.8/50.5	62/70	56/64	133/133	64/72	70/80	59/66	135/135	64/72	68/76	70/80	80/80	80/80	72/82	82/93	90/100	82/93	84/95	82/93	90/100	84/95	82/93	90/100			
104B+105A	19.9/26.5	55.2/63.8	76/87	69/79	133/133	78/89	80/90	69/79	135/135	78/89	80/90	74/84	85/96	90/100	78/88	87/98	90/100	87/98	84/95	87/98	90/100	84/95	87/98	90/100			
208/230-3-60	208/230-3-60	STD	NONE	-	-	26	133	29	40	135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
			102A	4.9/6.5	13.6/15.6	27/27	26/26	133/133	29/29	40/40	28/28	135/135	27/27	27/27	31/32	31/32	31/31	33/35	31/32	33/35	31/32	33/35	31/32	33/35	31/32	33/35	
			104B	7.9/10.5	21.9/25.3	34/39	31/35	133/133	37/41	40/45	33/37	135/135	34/39	37/41	40/45	40/45	37/41	37/41	43/47	40/45	45/45	43/47	37/41	43/47	40/45	45/45	
			105A	12.0/16.0	33.4/38.5	49/55	44/50	133/133	51/57	60/60	47/52	135/135	51/57	51/57	60/70	55/61	50/56	50/56	57/63	55/61	60/70	57/63	50/56	60/70	57/63	50/56	60/70
			104B+104B	15.8/21.0	43.8/50.5	62/70	56/64	133/133	64/72	70/80	59/66	135/135	64/72	68/76	70/80	80/80	62/70	70/78	70/80	70/80	62/70	70/78	70/80	70/80	62/70	70/80	64/72
			104B+105A	19.9/26.5	55.2/63.8	76/87	69/79	133/133	78/89	80/90	69/79	135/135	78/89	80/90	74/84	85/96	90/100	75/85	84/95	90/100	84/95	84/95	90/100	84/95	84/95	90/100	77/87
			NONE	-	-	27	26	171	30/30	40/40	28/27	173	30/30	33/33	45/45	45/45	33/33	33/33	33/33	45/45	33/33	35/35	33/33	45/45	35/35	35/35	45/45
			102A	4.9/6.5	13.6/15.6	28/28	28/27	171/171	30/31	40/40	28/27	173/173	30/31	33/34	45/45	45/45	33/33	33/34	33/33	45/45	33/33	35/37	33/33	45/45	35/37	35/37	45/45
			104B	7.9/10.5	21.9/25.3	36/40	33/37	171/171	39/43	40/40	33/37	173/173	39/43	41/45	45/45	45/45	39/42	42/46	42/46	45/45	39/42	45/49	42/46	45/45	45/49	45/49	41/45
			105A	12.0/16.0	33.4/38.5	51/57	46/52	171/171	53/59	60/60	49/54	173/173	53/59	57/63	60/70	60/70	52/58	57/63	57/63	60/70	52/58	59/65	57/63	60/70	59/65	60/70	54/59
104B+104B	15.8/21.0	43.8/50.5	64/72	58/66	171/171	66/74	70/80	60/68	173/173	66/74	70/78	70/80	80/80	64/71	72/80	72/80	80/80	64/71	72/80	72/80	80/80	72/80	80/80	66/73			
104B+105A	19.9/26.5	55.2/63.8	78/89	71/81	171/171	80/91	90/100	74/83	173/173	80/91	84/95	90/100	90/100	77/87	86/97	86/97	90/100	77/87	86/97	86/97	90/100	86/97	90/100	79/88			
HIGH	208/230-3-60	STD	NONE	-	-	29/29	186	32/32	45/45	188	32/32	32/32	45/45	45/45	35/35	37/37	37/37	45/45	35/35	37/37	37/37	45/45	37/37	37/37	45/45		
			102A	4.9/6.5	13.6/15.6	30/30	29/29	186/186	32/33	45/40	188/188	32/33	32/33	45/45	45/45	35/35	37/37	37/37	45/45	35/35	37/37	37/37	45/45	37/37	37/37	45/45	
			104B	7.9/10.5	21.9/25.3	38/42	35/39	186/186	41/45	45/45	37/41	188/188	41/45	44/48	45/45	40/44	40/44	40/44	47/51	40/44	47/51	40/44	47/51	40/44	47/51	40/44	
			105A	12.0/16.0	33.4/38.5	53/59	48/54	186/186	55/61	60/60	50/56	188/188	55/61	59/65	60/70	54/59	54/59	54/59	61/67	54/59	61/67	54/59	61/67	54/59	61/67	54/59	
			104B+104B	15.8/21.0	43.8/50.5	66/74	60/68	186/186	68/76	70/80	62/70	188/188	68/76	72/80	80/80	66/73	66/73	66/73	74/82	66/73	74/82	66/73	74/82	66/73	74/82	66/73	
			104B+105A	19.9/26.5	55.2/63.8	80/91	73/83	186/186	82/93	90/100	75/85	188/188	82/93	86/97	90/100	86/97	86/97	86/97	88/99	86/97	88/99	86/97	88/99	86/97	88/99	86/97	

See "Legend and Notes for Table 5 on page 41.



558J

Table 5 - Unit Wire/Fuse or HACR Breaker Sizing Data (cont)

UNIT	NO M, V-Ph-HZ	IFM TYPE	ELEC. HTR		NO C.O. or UNPWR C.O.						w/ PWRD C.O.							
			CRHEATER***A00	Nom (kW)	FLA	NO PE.			w/ P.E. (pwrd fr/unit)			NO PE.			w/ P.E. (pwrd fr/unit)			
						MCA	MAX FUSE or HACR BRKR	FLA	DISC. SIZE	LRA	MCA	MAX FUSE or HACR BRKR	FLA	DISC. SIZE	LRA	MCA	MAX FUSE or HACR BRKR	FLA
558J*06	460-3-60	STD	NONE	-	-	13	20	14	64	16	20	15	65	17	20	16	66	
			106A	6.0	7.2	13	20	14	64	16	20	15	65	17	20	16	66	
			108A	11.5	13.8	19	25	20	64	24	25	21	65	25	25	23	66	
			109A	14.0	16.8	22	30	23	64	27	30	25	65	29	30	26	66	
			108A+108A	23.0	27.7	35	40	36	64	41	45	37	65	42	45	39	66	
			108A+108A	25.5	30.7	38	45	39	64	45	45	41	65	46	50	42	66	
			NONE	-	-	14	20	15	83	16	20	16	84	17	85	18	20	85
			106A	6.0	7.2	14	20	15	83	16	20	16	84	17	85	18	20	85
			108A	11.5	13.8	20	25	21	83	25	25	22	84	26	23	30	23	85
			109A	14.0	16.8	23	30	24	83	28	30	26	84	30	27	30	27	85
575-3-60	460-3-60	HIGH	108A+108A	23.0	27.7	36	40	37	83	42	45	38	84	43	45	39	85	
			108A+108A	25.5	30.7	39	45	40	83	46	45	42	84	47	50	43	85	
			NONE	-	-	15	20	16	91	17	20	17	92	18	25	18	93	
			106A	6.0	7.2	15	20	16	91	17	20	17	92	19	25	18	93	
			108A	11.5	13.8	21	25	22	91	26	30	23	92	27	30	24	93	
			109A	14.0	16.8	24	30	25	91	29	30	27	92	31	35	28	93	
			108A+108A	23.0	27.7	37	40	38	91	43	45	39	92	44	45	40	93	
			108A+108A	25.5	30.7	40	45	41	91	47	50	43	92	48	50	44	93	
			STD	-	-	10	15	12	50	12	15	12	50	14	20	14	52	
			MED	-	-	10	15	12	54	12	15	12	54	14	15	14	56	
HIGH	-	-	11	15	13	65	13	15	13	65	15	20	15	67				

See "Legend and Notes for Table 5 on page 41.

Table 5 - Unit Wire/Fuse or HACR Breaker Sizing Data (cont)

UNIT	NO M, V-Ph-HZ	ELEC. HTR				NO C.O. or UNPWR C.O.																			
		IFM TYPE	Nom (kW)	FLA	NO PE.						w/ P.E. (pwrd fr/unit)														
					MCA	MAX FUSE or HACR BRKR	FLA	DISC. SIZE	MCA	MAX FUSE or HACR BRKR	FLA	DISC. SIZE	MCA	MAX FUSE or HACR BRKR	FLA	DISC. SIZE									
558J*7 - Units produced on or after 02/09/2015	460-3-60	STD	NONE	-	-	33/33	50/50	32/32	197	35/35	50/50	34/34	199	38/38	50/50	38/37	202	40/40	50/50	40/40	204				
						33/33	50/50	32/32	197/197	35/35	50/50	34/34	199/199	38/38	50/50	38/37	202/202	40/40	50/50	40/40	50/50	40/40	204/204		
						36/40	50/50	33/37	197/197	39/43	50/50	35/39	199/199	42/46	50/50	39/42	202/202	45/49	50/50	41/45	50/50	41/45	204/204		
						51/57	60/60	46/52	197/197	53/59	60/60	49/54	199/199	57/63	60/70	52/58	202/202	59/65	60/70	54/60	54/60	60/70	54/60	204/204	
						64/72	70/80	58/66	197/197	66/74	70/80	60/68	199/199	70/78	70/80	64/71	202/202	72/80	80/80	64/71	202/202	72/80	80/80	66/73	204/204
						78/89	80/90	71/81	197/197	80/91	90/100	74/83	199/199	84/95	90/100	77/87	202/202	86/97	90/100	77/87	202/202	86/97	90/100	79/89	204/204
						35/35	50/50	34/34	212	37/37	50/50	36/36	214	40/40	50/50	39/39	217	42/41	60/60	42/41	217	42/42	60/60	42/42	219
						35/35	50/50	34/34	212/212	37/37	50/50	36/36	214/214	40/40	50/50	39/39	217/217	42/41	60/60	42/41	217/217	42/42	60/60	42/42	219/219
						38/42	50/50	35/39	212/212	41/45	50/50	37/41	214/214	44/48	50/50	40/44	217/217	47/51	60/60	43/46	217/217	47/51	60/60	43/46	219/219
						53/59	60/60	48/54	212/212	55/61	60/70	50/56	214/214	59/65	60/70	54/59	217/217	61/67	70/70	56/62	217/217	61/67	70/70	56/62	219/219
						66/74	70/80	60/68	212/212	68/76	70/80	62/70	214/214	72/80	80/80	66/73	217/217	74/82	80/80	68/75	217/217	74/82	80/80	68/75	219/219
						80/91	80/100	73/83	212/212	82/93	90/100	75/85	214/214	86/97	90/100	79/88	217/217	88/99	90/100	81/91	217/217	88/99	90/100	81/91	219/219
558J*7 - Units produced on or after 02/09/2015	460-3-60	HIGH	NONE	-	-	37	50	36	226	39	50	39	228	42	60	42	231	44	60	44	233				
						37/37	50/50	36/36	226/226	39/39	50/50	37/39	228/228	42/42	60/60	42/42	231/231	44/44	60/60	44/44	60/60	44/44	233/233		
						41/45	50/50	37/41	226/226	43/48	50/50	40/43	228/228	47/51	60/60	43/47	231/231	49/54	60/60	45/49	60/60	45/49	233/233		
						55/62	60/70	51/56	226/226	58/64	60/70	53/59	228/228	61/68	70/70	56/62	231/231	64/70	70/70	58/64	64/70	70/70	58/64	233/233	
						68/77	70/80	63/70	226/226	71/79	80/80	65/72	228/228	74/83	80/90	68/76	231/231	77/85	80/90	70/78	77/85	80/90	70/78	233/233	
						83/93	90/100	76/86	226/226	85/96	90/100	78/88	228/228	89/99	90/100	81/91	231/231	91/102	100/110	83/93	91/102	100/110	83/93	233/233	
						15	20	14	96	16	20	15	97	17	20	17	98	18	25	18	98	18	25	18	99
						15	20	14	96	16	20	15	97	17	20	17	98	18	25	18	98	18	25	18	99
						22	25	20	96	23	25	21	97	25	25	22	98	26	30	23	98	26	30	23	99
						26	30	23	96	27	30	24	97	28	30	26	98	30	30	27	98	30	30	27	99
						39	40	36	96	41	45	37	97	42	45	38	98	43	45	38	98	43	45	38	99
						43	45	39	96	44	45	40	97	46	50	42	98	47	50	42	98	47	50	43	99
558J*7 - Units produced on or after 02/09/2015	460-3-60	MED	NONE	-	-	16	20	15	104	17	20	16	105	18	25	18	106	19	25	19	107				
						16	20	15	104	17	20	16	105	18	25	18	106	19	25	19	25	19	107		
						23	25	21	104	24	25	22	105	26	30	23	106	27	30	24	106	27	30	24	107
						27	30	24	104	28	30	25	105	29	30	27	106	31	35	28	106	31	35	28	107
						40	40	37	104	42	45	38	105	43	45	39	106	44	45	40	106	44	45	40	107
						44	45	40	104	45	45	41	105	47	50	43	106	48	50	44	106	48	50	44	107
						17	20	16	111	18	25	18	112	19	25	19	113	20	25	20	113	20	25	20	114
						17	20	16	111	18	25	18	112	19	25	19	113	20	25	20	113	20	25	20	114
						24	25	22	111	26	30	23	112	27	30	24	113	28	30	26	113	28	30	26	114
						28	30	25	111	29	30	27	112	31	35	28	113	32	35	29	113	32	35	29	114
						42	45	38	111	43	45	39	112	44	45	40	113	46	50	42	113	46	50	42	114
						44	50	41	111	47	50	43	112	48	50	44	113	49	50	45	113	49	50	45	114
558J*7 - Units produced on or after 02/09/2015	575-3-60	STD	NONE	-	-	11	15	11	68	13	15	13	70	13	15	13	70	15	20	15	72				
						11	15	11	68	13	15	11	68	13	15	11	68	13	15	11	68	13	15	72	
						12	15	12	79	14	20	14	81	14	15	13	81	16	20	16	16	20	16	83	
558J*7 - Units produced on or after 02/09/2015	575-3-60	HIGH	NONE	-	-	12	15	12	79	14	20	14	81	14	15	13	81	16	20	16	83				
						12	15	12	79	14	20	14	81	14	15	13	81	16	20	16	20	16	83		
						12	15	12	79	14	20	14	81	14	15	13	81	16	20	16	20	16	20	16	83

See "Legend and Notes for Table 5 on page 41.



558J

Table 5 - Unit Wire/Fuse or HACR Breaker Sizing Data (cont)

UNIT	NO M, V-Ph-HZ	ELEC. HTR			NO C.O. or UNPWR C.O.										w/ PWRD C.O.												
		CRHEATER**A00	Nom (kW)	FLA	NO PE.					w/ P.E. (pwrd fr/unit)					NO PE.					w/ P.E. (pwrd fr/unit)							
					MCA	MAX FUSE or BRKR	FLA	DISC. SIZE	MCA	MAX FUSE or BRKR	FLA	DISC. SIZE	MCA	MAX FUSE or BRKR	FLA	DISC. SIZE	MCA	MAX FUSE or BRKR	FLA	DISC. SIZE	MCA	MAX FUSE or BRKR	FLA	DISC. SIZE			
558J*07 - Units produced on or prior to 02/08/2015	NO M, V-Ph-HZ	NONE	-	-	33/32	50/50	32/31	184	35/34	50/50	34/33	186	37/37	50/50	37/37	189	39/39	50/50	39/39	50/50	39/39	50/50	39/39	191			
					102A	4.9/6.5	13.6/15.6	33/32	50/50	32/31	184/184	35/34	50/50	34/33	186/186	37/37	50/50	37/37	189/189	39/39	50/50	39/39	50/50	39/39	191/191		
					104B	7.9/10.5	21.9/25.3	36/40	50/50	33/37	184/184	39/43	50/50	35/39	186/186	42/46	50/50	39/42	189/189	45/49	50/50	41/45	50/50	41/45	191/191		
					105A	12.0/16.0	33.4/38.5	51/57	60/60	46/52	184/184	53/59	60/60	49/54	186/186	57/63	60/70	52/58	189/189	59/65	60/70	54/60	60/70	54/60	60/70	191/191	
					104B+104B	15.8/21.0	43.8/50.5	64/72	70/80	58/66	184/184	66/74	70/80	60/68	186/186	70/78	70/80	64/71	189/189	72/80	80/80	66/73	80/80	66/73	80/80	191/191	
					104B+105A	19.9/26.5	55.2/63.8	78/89	80/90	71/81	184/184	80/91	90/100	74/83	186/186	84/95	90/100	77/87	189/189	86/97	90/100	79/89	90/100	79/89	90/100	191/191	
					NONE	-	-	34/34	50/50	33/33	199	36/36	50/50	35/35	201	39/39	50/50	39/39	204	41/41	50/50	41/41	50/50	41/41	50/50	41/41	206
					102A	4.9/6.5	13.6/15.6	34/34	50/50	33/33	199/199	36/36	50/50	35/35	201/201	39/39	50/50	39/39	204/204	41/41	50/50	41/41	50/50	41/41	50/50	41/41	206/206
					104B	7.9/10.5	21.9/25.3	38/42	50/50	35/39	199/199	41/45	44/48	50/50	40/44	204/204	47/51	50/60	204/204	47/51	50/60	43/46	50/60	43/46	50/60	43/46	206/206
					105A	12.0/16.0	33.4/38.5	53/59	60/60	48/54	199/199	55/61	60/70	50/56	201/201	59/65	60/70	54/59	204/204	61/67	70/70	56/62	70/70	56/62	70/70	56/62	206/206
104B+104B	15.8/21.0	43.8/50.5	66/74	70/80	60/68	199/199	68/76	70/80	62/70	201/201	72/80	80/90	66/73	204/204	74/82	80/90	68/75	80/90	68/75	80/90	68/75	206/206					
104B+105A	19.9/26.5	55.2/63.8	80/91	80/100	73/83	199/199	82/93	90/100	75/85	201/201	86/97	90/100	79/88	204/204	88/99	90/100	81/91	90/100	81/91	90/100	81/91	206/206					
460-3-60	NO M, V-Ph-HZ	NONE	-	-	17	25	16	92	18	25	17	93	19	25	19	25	19	25	19	25	19	25	95				
					106A	6.0	7.2	17	25	16	92	18	25	17	93	19	25	19	25	19	25	19	25	19	95		
					108A	11.5	13.8	22	25	20	92	23	25	21	93	25	25	22	94	26	30	23	30	23	95		
					109A	14.0	16.8	26	30	23	92	27	30	24	93	28	30	26	94	30	30	27	30	27	95		
					108A+108A	23.0	27.7	39	40	36	92	41	45	37	93	42	45	38	94	43	45	38	43	43	45	95	
					108A+109A	25.5	30.7	43	45	39	92	44	45	40	93	46	50	42	94	47	50	42	47	47	50	95	
					NONE	-	-	18	25	17	100	19	25	18	101	20	25	19	102	21	30	21	30	21	30	103	
					106A	6.0	7.2	18	25	17	100	19	25	18	101	20	25	19	102	21	30	21	30	21	30	103	
					108A	11.5	13.8	23	25	21	100	24	25	22	101	26	30	23	102	27	30	24	27	27	30	103	
					109A	14.0	16.8	27	30	24	100	28	30	25	101	29	30	25	102	31	35	28	31	28	35	103	
108A+108A	23.0	27.7	40	40	37	100	42	45	38	101	43	45	39	102	44	45	40	44	40	45	103						
108A+109A	25.5	30.7	44	45	40	100	45	45	41	101	47	50	42	102	48	50	44	48	44	50	103						
575-3-80	NO M, V-Ph-HZ	NONE	-	-	19	25	18	107	19	25	19	108	21	30	21	30	22	30	22	30	22	30	110				
					106A	6.0	7.2	19	25	18	107	20	25	19	108	21	30	21	30	22	30	22	30	22	110		
					108A	11.5	13.8	24	25	22	107	26	30	23	108	27	30	24	109	28	30	26	26	30	110		
					109A	14.0	16.8	28	30	25	107	29	30	27	108	31	35	28	109	32	35	29	29	35	110		
					108A+108A	23.0	27.7	42	45	38	107	43	45	39	108	44	45	40	109	46	50	42	42	50	110		
					108A+109A	25.5	30.7	45	50	41	107	47	50	43	108	48	50	44	109	49	50	45	45	50	110		
					NONE	-	-	12	15	12	63	14	20	14	65	14	20	13	65	16	20	16	16	16	20	67	
					106A	6.0	7.2	12	15	12	63	14	20	14	65	14	20	13	65	16	20	16	16	16	20	67	
					108A	11.5	13.8	13	20	12	74	15	20	15	76	15	20	14	76	17	20	17	17	17	20	78	
					109A	14.0	16.8	13	20	12	74	15	20	15	76	15	20	14	76	17	20	17	17	17	20	78	
108A+108A	23.0	27.7	13	20	12	74	15	20	15	76	15	20	14	76	17	20	17	17	17	20	78						
108A+109A	25.5	30.7	13	20	12	74	15	20	15	76	15	20	14	76	17	20	17	17	17	20	78						

See "Legend and Notes for Table 5 on page 41.

Legend and Notes for Table 5

LEGEND:

CO	- Convenient outlet
DISC	- Disconnect
FLA	- Full load amps
IFM	- Indoor fan motor
LRA	- Locked rotor amps
MCA	- Minimum circuit amps
MOCP	- Maximum over current protection
PE	- Power exhaust
UNPWR CO	- Unpowered convenient outlet



NOTES:

- In compliance with NEC requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be fuse or HACR breaker. Canadian units may be fuse or circuit breaker.

2. Unbalanced 3-Phase Supply Voltage

Never operate a motor where a phase imbalance in supply voltage is greater than 2%. Use the following formula to determine the percentage of voltage imbalance.

$$\% \text{ Voltage Imbalance} = 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}$$

Example: Supply voltage is 230-3-60



AB = 224 v
BC = 231 v
AC = 226 v

$$\begin{aligned} \text{Average Voltage} &= \frac{(224 + 231 + 226)}{3} = \frac{681}{3} \\ &= 227 \end{aligned}$$

Determine maximum deviation from average voltage.

$$(AB) 227 - 224 = 3 \text{ v}$$

$$(BC) 231 - 227 = 4 \text{ v}$$

$$(AC) 227 - 226 = 1 \text{ v}$$

Maximum deviation is 4 v.

Determine percent of voltage imbalance.

$$\begin{aligned} \% \text{ Voltage Imbalance} &= 100 \times \frac{4}{227} \\ &= 1.76\% \end{aligned}$$

This amount of phase imbalance is satisfactory as it is below the maximum allowable 2%.

IMPORTANT: If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.

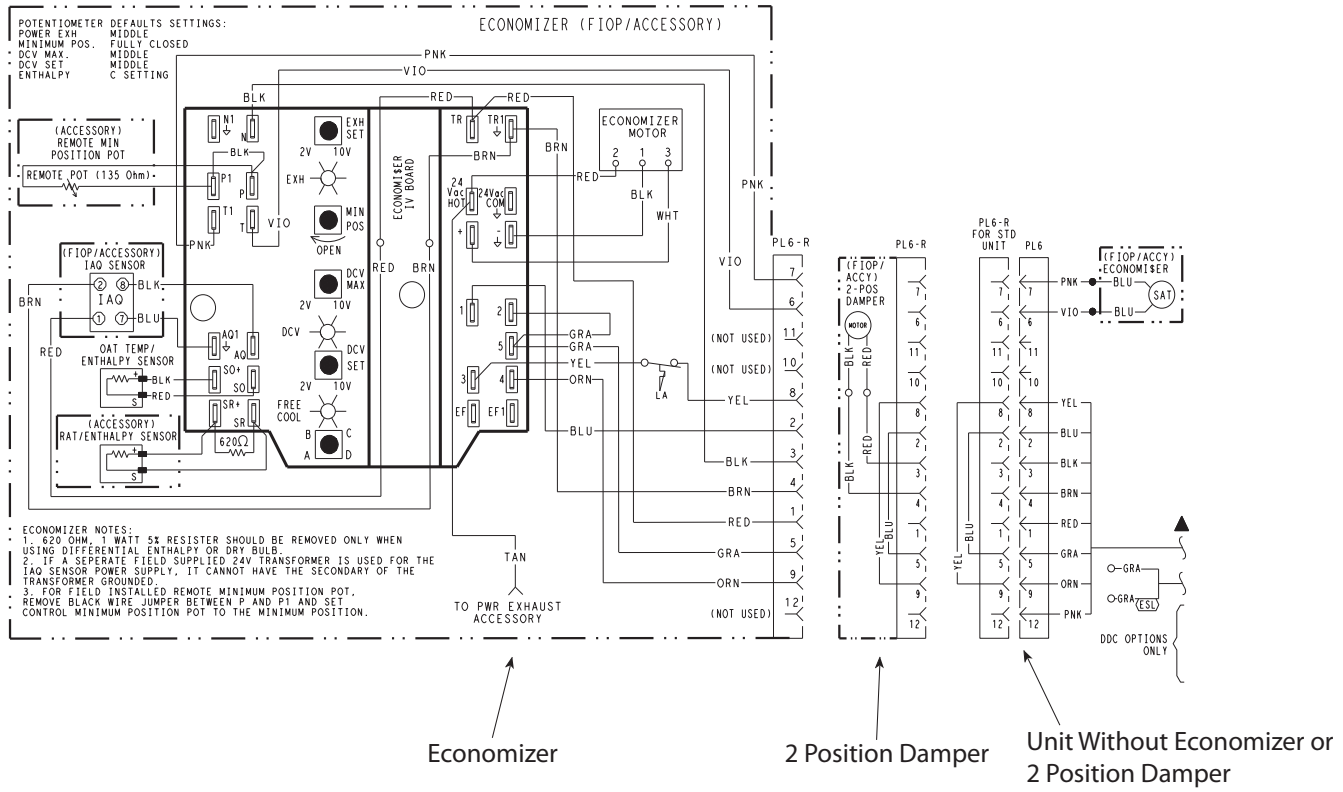


Fig. 58 - EconoMiSer™ IV Wiring

C08631

Step 11 — Adjust Factory-Installed Options

Smoke Detectors —

Smoke detector(s) will be connected at the Controls Connections Board, at terminals marked “Smoke Shutdown”. Remove jumper JMP 3 when ready to energize unit.

EconoMiSer IV Occupancy Switch —

Refer to Fig. 58 for general EconoMiSer IV wiring. External occupancy control is managed through a connection on the Central Terminal Board.

If external occupancy control is desired, connect a time clock or remotely controlled switch (closed for Occupied, open for Unoccupied sequence) at terminals marked OCCUPANCY on CTB. Remove or cut jumper JMP 2 to complete the installation.

Step 12 — Install Accessories

Available accessories include:

- Roof Curb
- Thru-base connection kit (must be installed before unit is set on curb)

- Manual outside air damper
- Two-Position motorized outside air damper
- EconoMiSer IV (with control and integrated barometric relief)
- EconoMiSer2 (without control/for external signal and integrated barometric relief)
- Power Exhaust
- Differential dry-bulb sensor (EconoMiSer IV)
- Outdoor enthalpy sensor
- Differential enthalpy sensor
- Electric Heaters
- Single Point kits
- Thermostat / Sensors
- CO₂ sensor
- Louvered hail guard
- Phase monitor control

Refer to separate installation instructions for information on installing these accessories.

Pre-Start and Start-Up

This completes the mechanical installation of the unit. Refer to the unit’s Service Manual for detailed Pre-Start and Start-up instructions.

UNIT START-UP CHECKLIST

(Remove and Store in Job File)

MODEL NO.: _____

SERIAL NO.: _____

I. PRE-START-UP

- VERIFY THAT ALL PACKAGING MATERIALS HAVE BEEN REMOVED FROM UNIT
- VERIFY INSTALLATION OF OUTDOOR AIR HOOD
- VERIFY INSTALLATION OF FLUE EXHAUST AND INLET HOOD
- VERIFY THAT CONDENSATE CONNECTION IS INSTALLED PER INSTRUCTIONS
- VERIFY THAT ALL ELECTRICAL CONNECTIONS AND TERMINALS ARE TIGHT
- CHECK THAT INDOOR-AIR FILTERS ARE CLEAN AND IN PLACE
- CHECK THAT OUTDOOR AIR INLET SCREENS ARE IN PLACE
- VERIFY THAT UNIT IS LEVEL
- CHECK FAN WHEELS AND PROPELLER FOR LOCATION IN HOUSING/ORIFICE AND VERIFY SETSCREW IS TIGHT
- VERIFY THAT FAN SHEAVES ARE ALIGNED AND BELTS ARE PROPERLY TENSIONED
- VERIFY THAT SCROLL COMPRESSORS ARE ROTATING IN THE CORRECT DIRECTION
- VERIFY INSTALLATION OF THERMOSTAT

II. START-UP

ELECTRICAL

SUPPLY VOLTAGE	L1-L2 _____	L2-L3 _____	L3-L1 _____
COMPRESSOR AMPS 1	L1 _____	L2 _____	L3 _____
COMPRESSOR AMPS 2	L1 _____	L2 _____	L3 _____
SUPPLY FAN AMPS	L1 _____	L2 _____	L3 _____

TEMPERATURES

OUTDOOR-AIR TEMPERATURE _____ °F DB (DRY BULB)

RETURN-AIR TEMPERATURE _____ °F DB _____ °F WB (WET BULB)

COOLING SUPPLY AIR TEMPERATURE _____ °F

PRESSURES

REFRIGERANT SUCTION	CIRCUIT A _____	PSIG
	CIRCUIT B _____	PSIG
REFRIGERANT DISCHARGE	CIRCUIT A _____	PSIG
	CIRCUIT B _____	PSIG

- VERIFY REFRIGERANT CHARGE USING CHARGING CHARTS

GENERAL

- ECONOMIZER MINIMUM VENT AND CHANGE OVER SETTINGS TO JOB REQUIREMENTS (IF EQUIPPED)
- VERIFY SMOKE DETECTOR UNIT SHUTDOWN BY UTILIZING MAGNET TEST

558J

III. PERFECT HUMIDITY™ START-UP (558J*07G ONLY)

STEPS

- 1. CHECK CTB FOR JUMPER 5, 6, 7
JUMPER 5, 6, 7 MUST BE CUT AND OPEN
- 2. OPEN HUMIDISTAT CONTACTS
- 3. START UNIT IN COOLING (CLOSE Y1)

OBSERVE AND RECORD

- A. SUCTION PRESSURE _____ PSIG
 - B. DISCHARGE PRESSURE _____ PSIG
 - C. ENTERING AIR TEMPERATURE _____ °F
 - D. LIQUID LINE TEMPERATURE
AT OUTLET OR REHEAT COIL _____ °F
 - E. CONFIRM CORRECT ROTATION FOR COMPRESSOR
 - F. CHECK FOR CORRECT RAMP-UP OF OUTDOOR FAN MOTOR AS CONDENSER COIL WARMS
- 4. CHECK UNIT CHARGE PER CHARGING CHART
 - 5. SWITCH UNIT TO HIGH-LATENT MODE (SUBCOOLER) BY CLOSING HUMIDISTAT WITH Y1 CLOSED

OBSERVE

- A. REDUCTION IN SUCTION PRESSURE (5 TO 7 PSI EXPECTED)
 - B. DISCHARGE PRESSURE UNCHANGED
 - C. LIQUID TEMPERATURE DROPS TO 50 TO 55°F RANGE
 - D. LSV SOLENOID ENERGIZED (VALVE CLOSSES)
- 6. SWITCH UNIT TO DEHUMID (REHEAT) BY OPENING Y1

OBSERVE

- A. SUCTION PRESSURE INCREASES TO NORMAL COOLING LEVEL
 - B. DISCHARGE PRESSURE DECREASES (35 TO 50 PSI)
 - C. LIQUID TEMPERATURE RETURNS TO NORMAL COOLING LEVEL
 - D. LSV SOLENOID ENERGIZED (VALVE CLOSSES)
 - E. DSV SOLENOID ENERGIZED, VALVE OPENS
- 7. WITH UNIT IN DEHUMID MODE CLOSE W1
COMPRESSOR AND OUTDOOR FAN STOP; LSV AND DSV SOLENOIDS DE-ENERGIZED
 - 8. OPEN W1 RESTORE UNIT TO DEHUMID MODE
 - 9. OPEN HUMIDISTAT INPUT
COMPRESSOR AND OUTDOOR FAN STOP; LSV AND DSV SOLENOIDS DE-ENERGIZED
 - 10. RESTORE SETPOINTS FOR THERMOSTAT AND HUMIDISTAT