Installation Instructions

RCDA - Tracer® AdaptiView™ Display Upgrade Kit

RTAC Rotary Chiller

Model Number: RTAC

This document applies to service offering applications only.

⚠ SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

October 2023 **SO-SVN031A-EN**

Introduction

Read this manual thoroughly before operating or servicing this unit.

Warnings, Cautions, and Notices

Safety advisories appear throughout this manual as required. Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

The three types of advisories are defined as follows:

⚠WARNING	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
⚠CAUTION	Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.
NOTICE	Indicates a situation that could result in equipment or property-damage only accidents.

Important Environmental Concerns

Scientific research has shown that certain man-made chemicals can affect the earths naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same potential impact to the environment. Trane advocates the responsible handling of all refrigerants.

Important Responsible Refrigerant Practices

Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified according to local rules. For the USA, the Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

⚠WARNING

Proper Field Wiring and Grounding Required!

Failure to follow code could result in death or serious injury. All field wiring MUST be performed by qualified personnel. Improperly installed and grounded field wiring poses FIRE and ELECTROCUTION hazards. To avoid these hazards, you MUST follow requirements for field wiring installation and grounding as described in NEC and your local/state electrical codes.

⚠WARNING

Personal Protective Equipment (PPE) Required!

Failure to wear proper PPE for the job being undertaken could result in death or serious injury. Technicians, in order to protect themselves from potential electrical, mechanical, and chemical hazards, MUST follow precautions in this manual and on the tags, stickers, and labels, as well as the instructions below:

- **Before installing/servicing this unit, technicians MUST put on all PPE required for the work being undertaken (Examples; cut resistant gloves/sleeves, butyl gloves, safety glasses, hard hat/bump cap, fall protection, electrical PPE and arc flash clothing). ALWAYS refer to appropriate Safety Data Sheets (SDS) and OSHA guidelines for proper PPE.**
- **When working with or around hazardous chemicals, ALWAYS refer to the appropriate SDS and OSHA/GHS (Global Harmonized System of Classification and Labeling of Chemicals) guidelines for information on allowable personal exposure levels, proper respiratory protection and handling instructions.**
- **If there is a risk of energized electrical contact, arc, or flash, technicians MUST put on all PPE in accordance with OSHA, NFPA 70E, or other country-specific requirements for arc flash protection, PRIOR to servicing the unit. NEVER PERFORM ANY SWITCHING, DISCONNECTING, OR VOLTAGE TESTING WITHOUT PROPER ELECTRICAL PPE AND ARC FLASH CLOTHING. ENSURE ELECTRICAL METERS AND EQUIPMENT ARE PROPERLY RATED FOR INTENDED VOLTAGE.**

⚠ WARNING

Follow EHS Policies!

Failure to follow instructions below could result in death or serious injury.

- **All Trane personnel must follow the company's Environmental, Health and Safety (EHS) policies when performing work such as hot work, electrical, fall protection, lockout/tagout, refrigerant handling, etc. Where local regulations are more stringent than these policies, those regulations supersede these policies.**
- **Non-Trane personnel should always follow local regulations.**

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Trademarks

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Revision History

Document updated to reflect Service Offering number.

Table of Contents

Model Number Descriptions

Digit 1, 2, 3

RCD= Rotary Chiller Display Upgrade

Digit 4 — Development Sequence

A = Development Sequence

Digit 5 — Chiller Type

C = RTAC

Digit 6 — Display Mounting Option

0 = Display Mounted on External Arm
1 = Display Mounted on Door Panel

Digit 7, 8 — Not Used

00 = Placeholder

Digit 9 — Unit Voltage

0 = Note Required
A = 200/60/3
C = 230/60/3
D = 400/50/3
J = 380/60/3
4 = 460/60/3
5 = 575/60/3

Digit 10, 11 — Design Sequence

AA = Original Design

Digit 12 — BAS Interface

0 = None
5 = LonTalk®, LCI-C
6 = Modbus® (Standard Hardware)
7 = BACnet® (Standard Hardware)
8 = Generic BAS Controls

Digit 13 — Tracer® SC

0 = Without Tracer® SC
2 = With Tracer® SC

Digit 14 — Flow Switches

0 = Reuse Existing Switches
2 = Thermal Dispersion Upgrade

Digit 15 — Global Connector Kit Use

0 = Without Global Connector Kit
A = With Global Connector Kit

Digits 16-18 — Unit Nominal Capacity

000 = Not Required
120 = 120 Ton Nominal Capacity RTAC unit
130 = 130 Ton Nominal Capacity RTAC unit
140 = 140 Ton Nominal Capacity RTAC unit
155 = 155 Ton Nominal Capacity RTAC unit
170 = 170 Ton Nominal Capacity RTAC unit
185 = 185 Ton Nominal Capacity RTAC unit
200 = 200 Ton Nominal Capacity RTAC unit
225 = 225 Ton Nominal Capacity RTAC unit
250 = 250 Ton Nominal Capacity RTAC unit
275 = 275 Ton Nominal Capacity RTAC unit
300 = 300 Ton Nominal Capacity RTAC unit
350 = 350 Ton Nominal Capacity RTAC unit
375 = 375 Ton Nominal Capacity RTAC unit
400 = 400 Ton Nominal Capacity RTAC unit
450 = 450 Ton Nominal Capacity RTAC unit
500 = 500 Ton Nominal Capacity RTAC unit

Digit 19 — Unit Basic Configuration

0 = Not Required
N = Standard Efficiency/Performance RTAC Unit
H = High Efficiency/Performance RTAC Unit
A = Extra Efficiency/Performance RTAC Unit

General Information

About This Manual

The step-by-step instructions outlined in this manual describe the procedures required to successfully upgrade an older Tracer® CH530 DynaView™ equipped RTAC Series R® air-cooled chiller to a Tracer AdaptiView™ display system.

Other Required Manuals

This manual must be used with the following publications:

- *Series R® Air-Cooled Helical Rotary Liquid Chillers - Installation, Operation, and Maintenance* (RTAC-SVX01*-EN)
- *Series R® Air-Cooled Helical Rotary Liquid Chillers - Wiring Manual* (RTAC-SVE01*-EN)
- *Tracer AdaptiView™ Display Upgrade for Series R™ Air-cooled Chillers - Operations Guide* (SRV-SVU004*-EN).
- *Tracer® AdaptiView™ Display Upgrade for Series R™ Chillers Model RTAC - Programming Guide* (BAS-SVP031*-EN)
- *BACnet® and Modbus® RTU Communication Interfaces for Trane® Rotary Chiller, Model RTAC - Integration Guide* (RTAC-SVP001*-EN)
- *Tracer® CH530/CH531 Pluggable Connector System Product Code: 0064 (PART) - General Service Bulletin* (PART-SVB16*-EN)
- *LonTalk™ Communication Interface for Trane™ Chillers with Tracer AdaptiView™ Control - Hardware and Software Installation Guide* (ACC-SVN100*-EN)

Required Tools

Normal service tools are required to perform the majority of the work. A service technician with a well-stocked tool chest should have the right tools to perform the job. In addition to the normal service tools and hardware, the following is a partial list of specific field supplied hardware/software components and special tools that are also required to perform the display retrofit:

- An RS-232 Male DB9 to female DB9 pin to pin serial cable to connect the Dynaview to a PC or laptop computer.
  - ***Notes***:
    - *The cable must not be a null-modem cable.*
    - *The cable must be less than 50 feet in length.*
- Type A to Type B USB cable to connect the Tracer UC800 controller to a PC or laptop computer.
- A PC or laptop computer equipped with the following:
  - KestrelView™ service software, version 14.0 Service Pack 9 or newer.
  - Tracer™ TU service software, version 9.4.94 or newer.
- South pole magnet screwdriver (TOL01343).
- Drill
- 7/8-inch hole saw or knockout punch
- 1-1/8-inch hole saw or knockout punch
- 1-3/8-inch knockout punch (needed for enclosure option only)
- 1-1/4-inch hole saw or knockout punch (needed for Arm mount option only)
- #2 (.221) drill bit (needed for enclosure option only)
- Q drill bit - 0.332 (needed for Arm mount option only)
- 17/64-inch drill bit
- 7/16-inch wrenches/sockets
- 5/16-inch wrenches/sockets
- Standard wire crimpers
- 1/2-inch wrenches/sockets

Field-Provided Material

Some field provided material will be required to perform the display retrofit. A list of material is provided here to help the technician to plan ahead and to avoid material shortages at the job site.

Nameplates

A Tracer® AdaptiView™ nameplate is included in the kit to be installed near the original nameplate on the control panel. Always provide the model number and serial number information from the nameplate when making inquiries, ordering parts, or literature for the Tracer AdaptiView display system.

Figure 1. Nameplate example

RTAC AdaptiView™ Display Upgrade Kit Contents

UC800/TD7 Upgrade Kit

Kit Components — Standard

Table 1. TD7 kit contents — 018800330100

Part Number	Mnemonic	Description	Quantity
X13651571010	MOD01924	Module; TD7 Display[(a)]	1
X19070632020	CAB01206	Sealed Ethernet Cable, 3700mm (12 ft)	1
X19051625030	CAB01534	PWR Cable from TD7 to UC800 (Connector to Prepped End), 78.74-inch	1

(a) Includes screws, 7 ft ethernet cable, nameplate, Phoenix connectors, 3.25 ft. global harness

Table 2. USB port kit contents — 018800420100

Part Number	Mnemonic	Description	Quantity
X19140818010	CAB01260	Cable; USB B-Port, 0.5 m Length	1
X19201118010	CAP01053	Cap; USB B-Port, Waterproof	1

Table 3. Miscellaneous kit contents — 018800340100

Part Number	Mnemonic	Description	Quantity
507119190001		Bolt, SS, 1/4-20 x 1.25-inch	4
507118150001		Locknut, SS, 1/4-20,	4
507119200001		Sealing Washer, SS, 1/4,	4
X19210039	MNT00715	Cable Tie Mount Adhesive Backed - for securing cables	11
X19210028010	TIE00122	Cable Ties 0.1 x ~3.87-inch long	15
507118170001		Cord Grip, 3/4 NPT, Split Grommet,	1
507119210001		Cord Grip, 1/2 NPT, Split Grommet	1
507119220001		Cord Grip Nut, 3/4 NPT	1
507119230001		Cord Grip Nut, 1/2 NPT	1
507117820001		Bushing, Split, 1.25-inch	1
X19010309460		Single conductor cable - 14awg UL 1230 blk WIRE	8 ft
X19180041070	TER00315	Insulated Terminal, Fasten Receptacle, 0.25in, 16-14AWG	4
X19180041050	TER01160	Insulated Terminal, Fasten Receptacle, 0.25in, 22-18AWG	3
507119240001		Hole plug, 11/16-inch	1
507119250001		Hole plug, 1/8-inch	4
X25330033030	SCR01401	Screw; Phillips Panhead 0.5-inch, thread rolling, zinc plate 4-40	1

Table 4. Literature kit contents — 018800410100

Part Number	Mnemonic	Description	Quantity
SO-SVN031*-EN		RCDA - Tracer® AdaptiView™ Display Upgrade Kit RTAC Rotary Chiller Installation Instructions	1
SRV-SVU004*-EN		RTAC Controls Operation Guide	1
RTAC-SVP001*-EN		RTAC Integration Guide	1
BAS-SVP031*-EN		Programming Guide	1
X39003841010		ServiceFirst Label	1
507119170001		Schematic, RTAC Controls Upgrade, UC800	1

Table 5. Nameplate — 018503790100

Part Number	Mnemonic	Description	Quantity
X39001352010		Serialized Nameplate	1

Table 6. Back plate assembly kit — 018800350100

Part Number	Mnemonic	Description	Quantity
507118350001		**RTAC UC800 Back Plate Assembly**	1
Back Plate Assembly Kit Components:			
X25330033200	SCR00891	Screw; Phillips Panhead, 0.375 in, thread rolling, zinc plate 8-32	4
507118340001		Back Plate, RTAC	1
X13110674010	FUS01498	Fuse, Class CC FNQ-R 1A 600V	1
X13110790010	HLD00314	Fuse Holder, Class CC fuses, DIN Rail Mnt	1
X13491363010	BLK01486	DIN Rail end Stop	3
X13500224040	RAL01169	DIN Rail, 5 in	1
X13550222010	TRR00401	Transformer, Class 2, 50VA	1
X13651144010	MOD01628	Module, UC800	1
X19010309460		Wire, 14 awg, UL1230 (See ES3401001)	6.5 in
X19180041070	TER00315	Insulated Terminal, Fasten Receptacle	1
X19210028100	TIE00104	Wire Tie, Push Mount	3

Kit Components — Display Mounting Option

Table 7. Unit mount option kit — 018800360100

Part Number	Mnemonic	Description	Quantity
507118320001		Display Enclosure Assembly	1
507119260001		Flange Head Screw, SS, 10-32 x 0.5	4
507119270001		Lock Nut, SS, 10-32	8
507119060001		Display Back Plate	1

Table 8. Arm mount option kit — 018800370100

Part Number	Mnemonic	Description	Quantity
X45091462010	ARM00848	Arm; Gas Spring LCD Wall Mount	1
507119120001		5/16-18 x 5/8-inch long Stainless Sealing Cap Screw	4
507119110001		5/16-18 Stainless Nylon Locknut	4
X19051623010	CAB01149	Wire Harness Extension, 1000mm	1

Optional Add-On Kits

Table 9. LonTalk kit — 018800430100

Part Number	Mnemonic	Description	Quantity
X13650845040	MOD02418	Module, COM5 Interface	1

Table 10. Generic BAS LLIDs kit — 018800050100

Part Number	Mnemonic	Description	Quantity
X13650728070	BRD04873	Dual Low Voltage Input (ICE Making Control)	1
X13650731070	BRD04875	Analog Input/Output, External Current Limit & External Chilled Water Set Point	1
X13650733070	BRD04878	Dual Relay, Ice Making Status (Active or Complete)	1
X13650806050	BRD04879	Quad Relay, Unit Operating Status	1

Table 11. Efector flow switch kit — 018800070100

Part Number	Mnemonic	Description	Quantity
X13651586010	**KIT12480**	**Efector Flow Switch Kit**	**1**
Efector Flow Switch Kit Components:			
X13651583010	MOD02115	Module; Control for Flow Sensors	1
X13790922010	SEN0318	Sensor, Flow	1
X17311072010	ADP01332	Adapter; 1/2 NPT	1
X19052272010	CAB01408	Wire Harness; 5-in Micro DC Cable, 10m long	1

Global Connection Harness Upgrade Kits

Table 12. Global connector kit, 2 compressor units, base lengths 15, 18 or 21 ft — 018800380100

Part Number	Mnemonic	Description	Quantity
X13790348080	TDR00354	Pressure Transducer	6
X13650726100	SEN01959	Temperature Sensor	5
X13540076010	RSN00002	Resin; Heat Conductive Compound, 4 oz.	1
KIT13723	KIT13723	4-wire Ribbon to Global Connector Adapter	15
X19051622010	CAB01146	2Y - Short Wire Harness; 1-2 Branching 500 MM +/-10MM 600V 18AWG	5
X19051622020	CAB01147	2Y - Long Wire Harness; 1-2 Branching 1000 MM +/-20MM 600V 18AWG	5
X19051622030	CAB01148	3Y Wire Harness; 1-3 Branching 500 MM +/-10MM 600V 18AWG	5
X19051623010	CAB01149	EXT-Short Wire Harness; Extension 1000 MM +/-20MM 600V 18AWG	8
X19051623020	CAB01150	EXT - Long Wire Harness; Extension 2000 MM +/-30MM 600V 18AWG	1
X19051625020	CAB01155	F to M Wire Harness; Extension 1000 MM +/-20MM 600V 20AWG	1
X19210028180	TIE00053	Tie; Wire/Cable, .06-4.0 DIA	100

Table 13. Global connector kit, 3 compressor units, base lengths 30, 36 or 39 ft — 018800390100

Part Number	Mnemonic	Description	Quantity
X13790348080	TDR00354	Pressure Transducer	8
X13650726100	SEN01959	Temperature Sensor	6
X13540076010	RSN00002	Resin; Heat Conductive Compound, 4 oz.	1
KIT13723	KIT13723	4-wire Ribbon to Global Connector Adapter	18
X19051622010	CAB01146	Wire Harness; 1-2 Branching 500 MM +/-10MM 600V 18AWG	4
X19051622020	CAB01147	Wire Harness; 1-2 Branching 1000 MM +/-20MM 600V 18AWG	6
X19051622030	CAB01148	Wire Harness; 1-3 Branching 500 MM +/-10MM 600V 18AWG	3
X19051623010	CAB01149	Wire Harness; Extension 1000 MM +/-20MM 600V 18AWG	10
X19051623020	CAB01150	Wire Harness; Extension 2000 MM +/-30MM 600V 18AWG	9
X19051625020	CAB01155	Wire Harness; Extension 1000 MM +/-20MM 600V 20AWG	2
X19210028180	TIE00053	Tie; Wire/Cable, .06-4.0 DIA	125

Table 14. Global connector kit, 4-compressor units, base lengths 39 or 45 ft — 018800400100

Part Number	Mnemonic	Description	Quantity
X13790348080	TDR00354	Pressure Transducer	10
X13650726100	SEN01959	Temperature Sensor	7
X13540076010	RSN00002	Resin; Heat Conductive Compound, 4 oz.	1
KIT13723	KIT13723	4-wire Ribbon to Global Connector Adapter	21
X19051622010	CAB01146	Wire Harness; 1-2 Branching 500 MM +/-10MM 600V 18AWG	8
X19051622020	CAB01147	Wire Harness; 1-2 Branching 1000 MM +/-20MM 600V 18AWG	11
X19051622030	CAB01148	Wire Harness; 1-3 Branching 500 MM +/-10MM 600V 18AWG	1
X19051623010	CAB01149	Wire Harness; Extension 1000 MM +/-20MM 600V 18AWG	11
X19051623020	CAB01150	Wire Harness; Extension 2000 MM +/-30MM 600V 18AWG	2
X19051625020	CAB01155	Wire Harness; Extension 1000 MM +/-20MM 600V 20AWG	2
X19210028180	TIE00053	Tie; Wire/Cable, .06-4.0 DIA	125

Installation

Check the Configuration and Setpoints in the DynaView™ Display/Controller

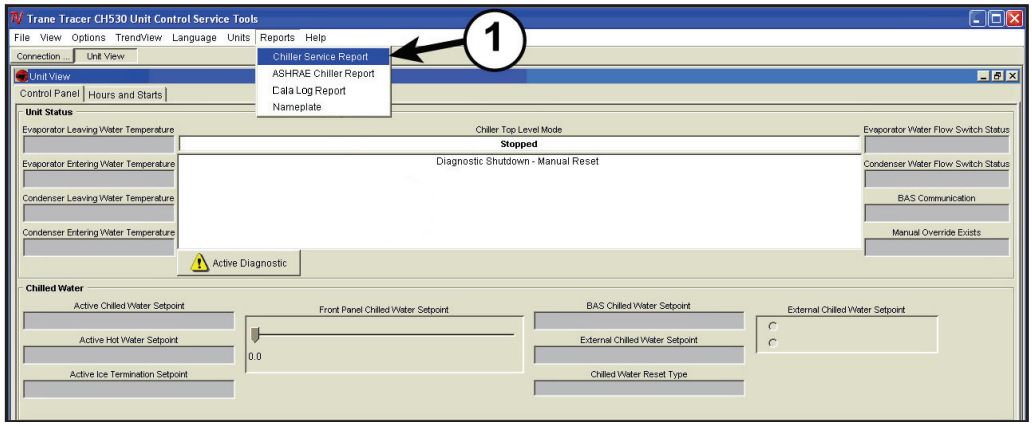
1. Check the current configuration of the DynaView™ and confirm that all settings are correct. Make any necessary changes.
2. Check the current chiller set-points programmed into the DynaView and confirm that they are all correct for the unit. Make any necessary changes.

Export the DynaView™ Configuration and Setpoints

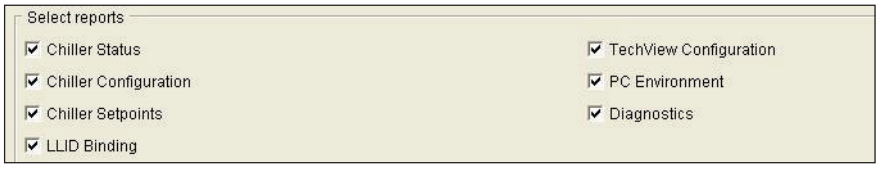
Configuration and setpoint values are required to be saved from the DynaView™ control in order to successfully configure the upgraded UC800 controller. Using KestrelView™ on a PC or laptop computer:

1. Generate a Chiller Service report from the DynaView with Level 4 active. To do this, click on **Reports Menu** and select **Chiller Service Report**.

Figure 2. KestrelView screenshot—accessing Chiller Service report



2. Select all reports to ensure that you get a complete report and convert the report to PDF. The PDF file will be required to manually copy configuration and setpoint values with Tracer® TU once the Tracer® AdaptiView™ display and UC800 are installed.



3. Verify that the PDF report was printed. The PDF report will be used when configuring the upgraded UC800 controller within Tracer TU.

Shutdown Power

⚠WARNING

Hazardous Voltage w/Capacitors!

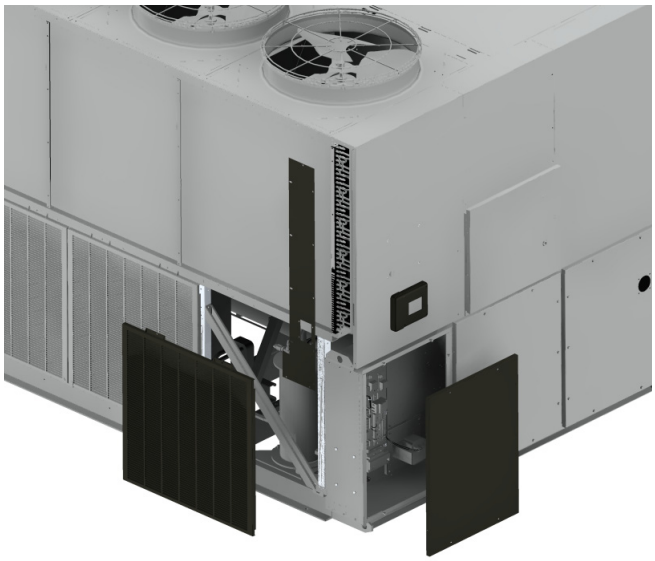
Failure to disconnect power and discharge capacitors before servicing could result in death or serious injury. Disconnect all electric power, including remote disconnects and discharge all motor start/run capacitors before servicing. Follow proper lockout/tagout procedures to ensure the power cannot be inadvertently energized. For variable frequency drives or other energy storing components provided by Trane or others, refer to the appropriate manufacturer's literature for allowable waiting periods for discharge of capacitors. Verify with a CAT III or IV voltmeter rated per NFPA 70E that all capacitors have discharged.

1. Using lockout/tagout safety procedures, shutdown the chillers main power.
2. Open all starter and control panel disconnect switches and secure them in the open position.
3. Confirm that the power is off to the control panel of the chiller.

Remove the DynaView™ Display

1. Remove the louver, side, and control enclosure panels. See Figure 3.
2. Remove the 4 fasteners holding the DynaView display to the Unit.
3. Unplug the 4-wire Phoenix connector from the DynaView display and remove the DynaView display from the unit.

Figure 3. Louver panel removal



Prepare Unit for Installation

⚠WARNING

Risk of Electrocution!

Failure to follow instructions could result in death or serious injury. Before and during drilling operations ensure that all electrical cables and wires are not in the path of the drill bit.

1. Cover unit control cover back plate with plastic to prevent metal chips intrusion.

NOTICE

Equipment Damage!

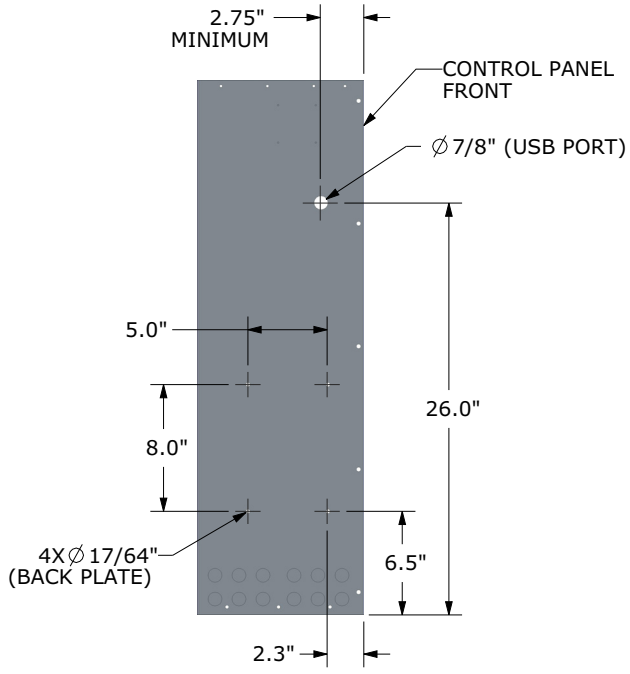
Failure to prevent metal chips from lodging against or inside of the electrical components can cause them to fail when they are energized.

2. Using the template provided, mark the location of the four mounting holes required for the UC800 back plate assembly. The template should be positioned so the lower holes are approximately 6.5-inch from the bottom of the cabinet. See Figure 4, p. 11.

   Note: *Actual size back plate template is found in Figure 56, p. 48.*

3. Use a 17/64-inch drill bit to drill the four holes. See Figure 4.

Figure 4. UC800 back plate assembly mounting hole locations[(a)]

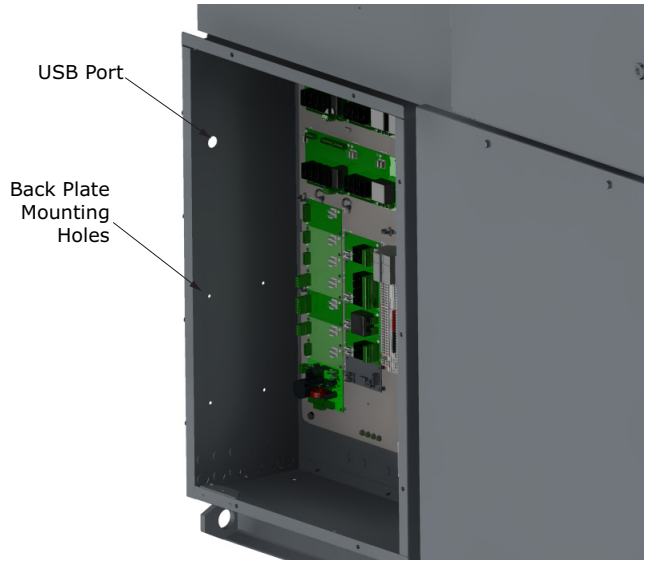


(a) Actual size back plate template is found in Figure 56, p. 48.

4. On either the side or front control panel, drill one 7/8-inch hole for the USB Service Port.

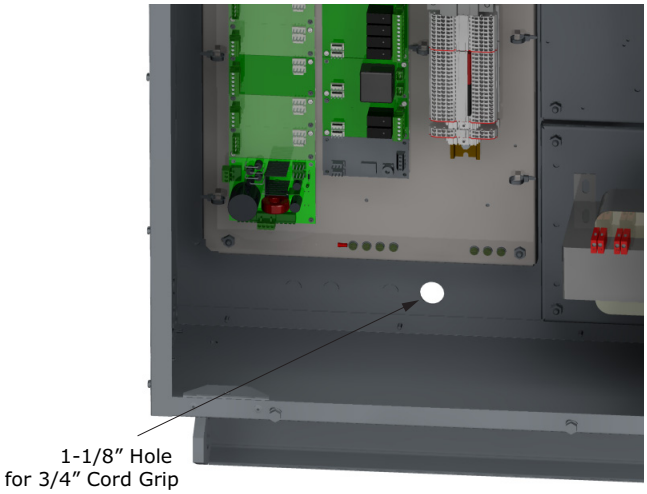
   Note: *Length from the USB port location to the back plate should be 18-inch or less.*

Figure 5. Back plate assembly mount hole locations



5. Drill a 1-1/8-inch hole in the back of the control panel, just below the control back plate. The ¾-inch cord grip will be installed at this location. See Figure 6, p. 12.

Figure 6. Hole for 3/4-inch cord grip

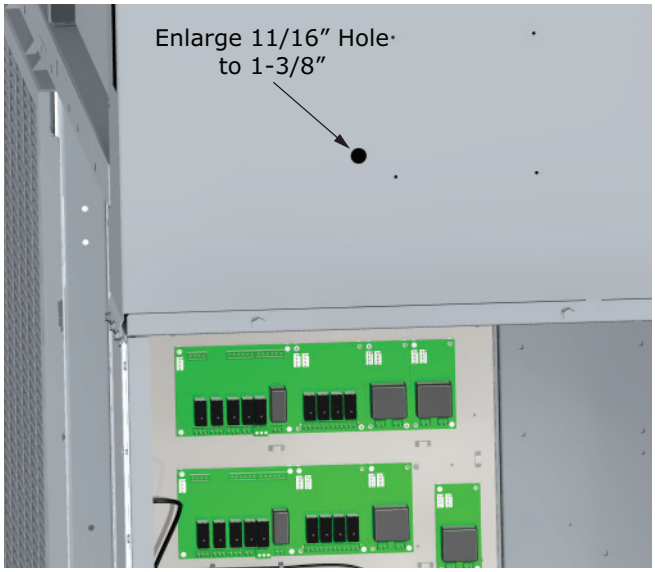


6. After all holes are drilled, use a vacuum to remove any dirt, debris, or metal filings that may have accumulated inside of the control enclosure.

TD7 Enclosure Option

1. Use a 1-3/8-inch knockout punch to enlarge the 11/16-inch diameter hole used to route the Dynaview™ cable.

Figure 7. Panel hole enlargement



2. Remove the lid from the TD7 enclosure, and temporarily install the 1-1/4-inch split grommet. Aligning the split grommet with the 1-3/8-inch hole created in the previous step, place the enclosure on the panel. Level and mark the 4 holes used to mount the enclosure.

   Note: *If the TD7 enclosure will not be mounted in the same location as the DynaView, it must be within 1 foot of the DynaViews original location. Plugs are provided in the kit to cover the original DynaView mounting holes.*

Figure 8. Enclosure

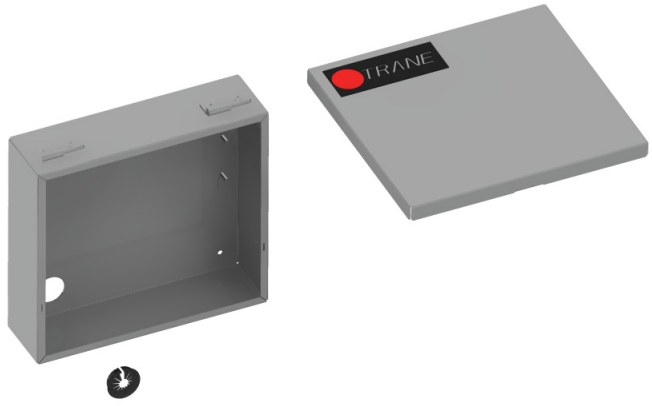


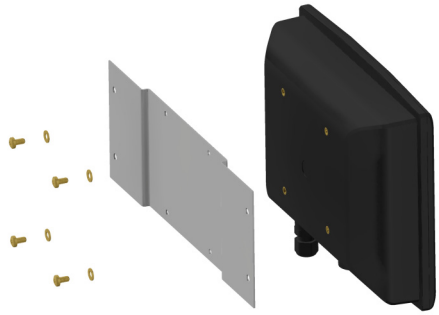
Figure 9. Leveling enclosure and hole marking

3. Remove the front panel or place a piece of wood in between the panel and condenser tubes before drilling any holes.
4. With a #2 (.221-inch) drill bit, drill the 4 holes marked in the previous step.
5. Install the TD7 Panel to the unit with the 10-32 screws and lock nuts.

Figure 10. Enclosure to unit

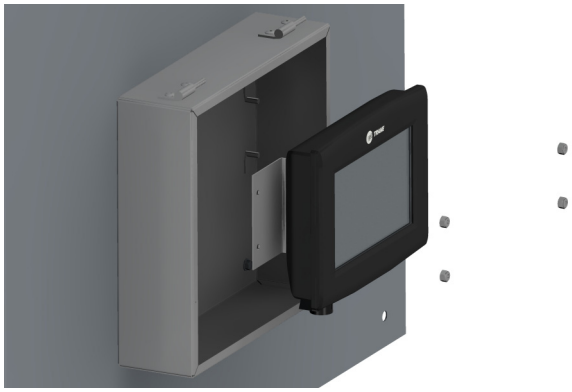
6. Assemble the TD7 to the enclosure backplate using the four brass M4 screws and washer provided in the kit.

Figure 11. TD7 to enclosure backplate



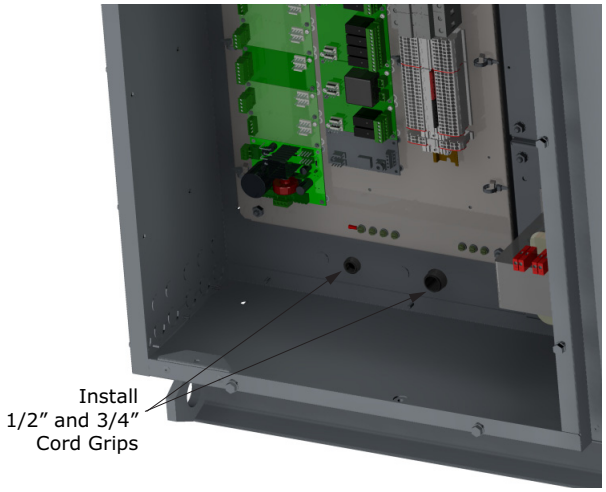
7. Assemble the TD7 to the enclosure with #10-32 lock nuts. See Figure 12.

Figure 12. Assemble the TD7 to the enclosure



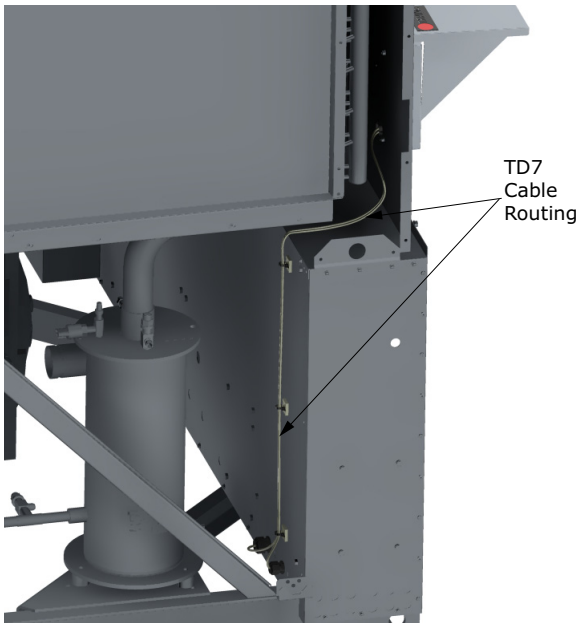
8. Connect wire extension X19051625030 and Ethernet cable X19070632020; route cables through the large hole and install the provided grommet.
9. Route TD7 cables along the back side of the panel, through the ½-inch and ¾-inch cord grips.
10. Install the cord grip split grommets and tighten nuts to seal the cords. See Figure 13, p. 13.

Figure 13. Cord grip



11. Secure cable with the adhesive mounted zip ties provided in the kit. See Figure 14, p. 14.

Figure 14. TD7 cable routing



Arm Mount Option

⚠CAUTION

Display Arm Under Tension!

Failure to follow instructions below could result in minor to moderate personal injury. The display arm is spring-loaded! Do not unfasten the Tracer AdaptiView display from the display arm for any reason without first decreasing the arm tension to its lowest setting! Failure to relieve the tension from the spring-loaded arm before unfastening the display could result in the arm forcefully snapping upwards unexpectedly, the moment the weight of the display is removed from it!

1. On the side of the control panel carefully position the arm mount hole template (Figure 55, p. 47) and mark the 4 required holes.

   Note: *Make sure arm mount location will not interfere with control panel door.*

2. Using a Q (0.332-inch) bit, drill the holes.
3. Using a 1-1/4-inch hole saw or knockout punch, create a hole in the upper side panel for wire routing. See Figure 15.

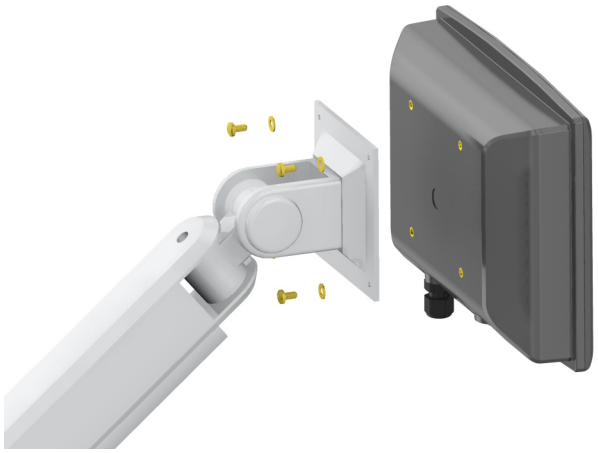
Figure 15. Wire routing hole creation

4. Secure the arm to the control panel enclosure using the 5/16 - 18 sealed hex cap screws and lock nuts. See Figure 16.

Figure 16. Arm installation

5. Securely fasten the Tracer® AdaptiView™ display to the mounting plate on the end of the display arm with the hardware provided. See Figure 17, p. 15

Figure 17. TD7 installation



6. Set the arm tension so the display does not spring up or sag.

Adjusting the Tracer® AdaptiView™ Display Arm

There are three joints on the display arm that allow the Tracer® AdaptiView™ display to be positioned at a variety of heights and angles (see Figure 18, p. 15, items labeled 1, 2, and 3).

Figure 18. Joint locations on the display arm

1. At each joint in the display arm there is either a hex bolt (1 and 2) or hex screw (3). Turn the hex bolt or screw in the proper direction to increase or decrease tension.

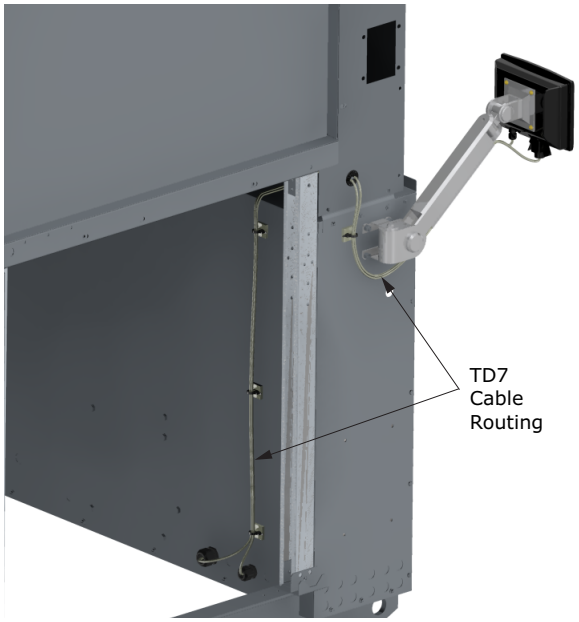
   Note: *Each hex bolt or screw is labeled with loosen, tighten or +/- indicators.*

2. Joint 3 has a 6 mm hex screw controlling the tension on a gas spring, which allows the Tracer AdaptiView display to tilt up and down.
3. Joints 1 and 2 are covered by a plastic cap. Remove the plastic cap to access the hex bolt. Adjust using a 13 mm wrench as necessary.
4. To adjust the swivel of the Tracer AdaptiView display (the spin right and left similar to the steering wheel on a car), adjust the hex bolt located inside the display arm back plate. This adjustment needs to be done BEFORE attaching the display. Use a 9/16 in. or 14 mm wrench.
5. Use a 13 mm wrench to adjust the bolt (item labeled 4 in Figure 18) that allows the entire display arm to swivel to the left and right.

Routing Cables

1. Install the side panel.
2. Route the TD7 cables through the hole in the side panel and install the split grommet. Run the cables along the back side of the panel, and through the 1/2-inch and 3/4-inch cord grips.
3. Install the cord grip split grommets and tighten nuts to seal the cords.
4. Secure cable with the adhesive mounted zip ties provided in the kit. See Figure 19, p. 15.

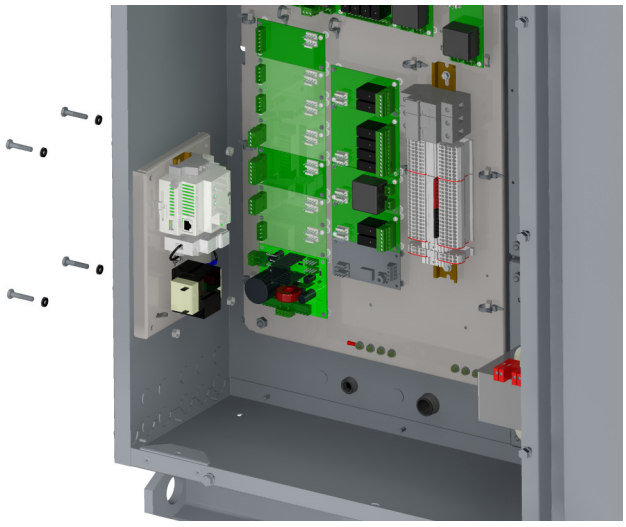
Figure 19. TD7 cable routing



Back Plate Assembly

1. Using the 1/4-20 bolts, nuts and sealing washers secure the back plate assembly to the side panel. See Figure 20, p. 16.

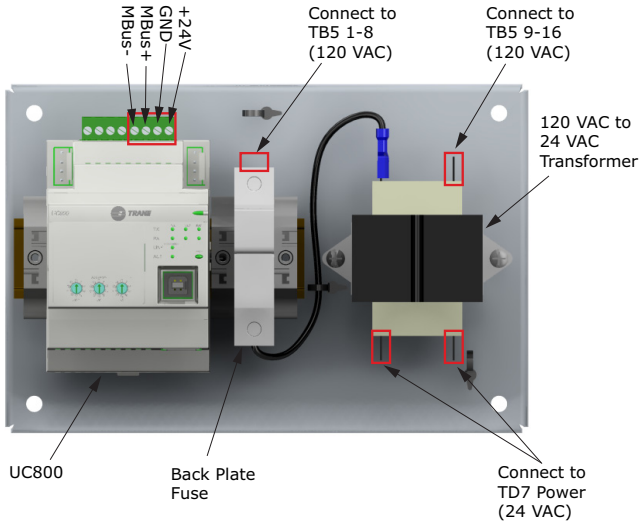
Figure 20. Back plate installation



Note: *See schematic 50711917, shown in Figure 40, p. 32, for the following steps.*

2. Ensure one terminal on the line side of the transformer is connected to the fuse on the backplate assembly by a 14 AWG wire. See Figure 21.

Figure 21. Back plate connections



For the following steps, see Figure 21 and Figure 40, p. 32.

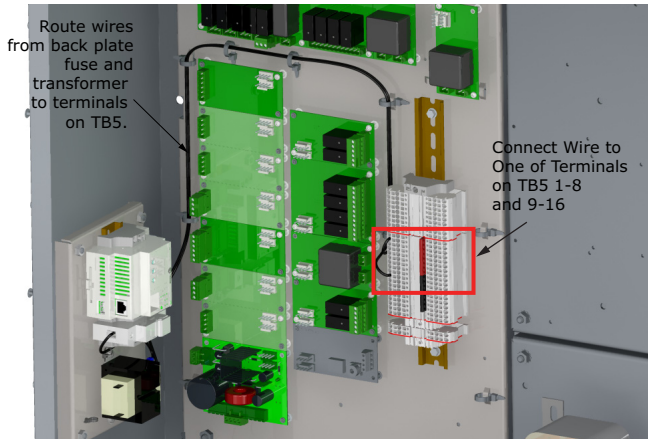
NOTICE

Transformer Damage!

Failure to follow instructions below could result in transformer damage. Be sure to connect fuse on back plate to correct terminal on the unit.

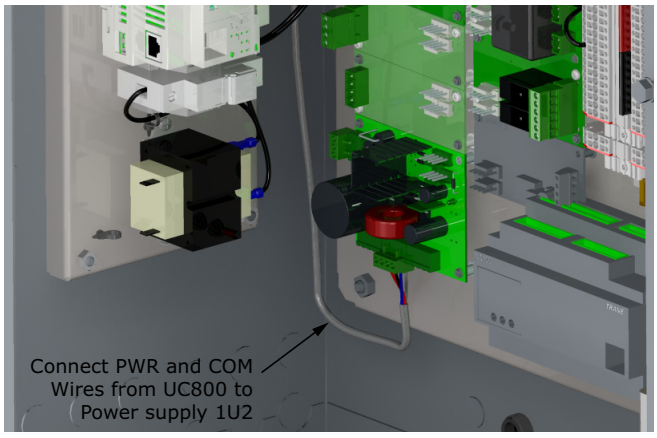
3. Using the 14 gauge wire provided in the kit connect the fuse on the backplate assembly to one of the terminals (1-8) on TB5.
4. Using the 14 gauge wire and terminal provided in the kit connect the Line side of the 24volt transformer on the backplate to one of the terminals (9-16) on TB5.

Figure 22. Back plate wire routing



5. Cut the connector off of cable X19051625020 and use cable to connect the UC800 to the power supply. See schematic 50711917 (Figure 40, p. 32), Figure 21, p. 16, and Figure 23, p. 16.

Figure 23. Back plate UC800 to power supply

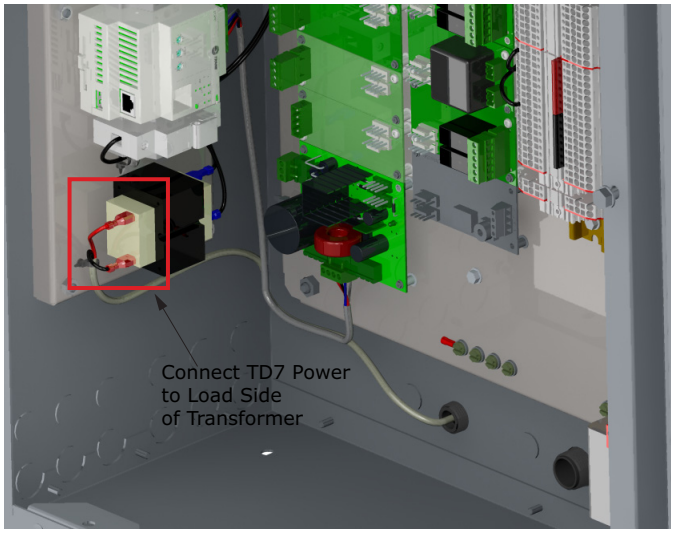


Notes:

- *R — Red wire for 24VDC*
- *BK— Black wire for ground*
- *BL — Blue wire for MBUS+ connection*
- *GR — Gray wire for MBUS- connection*

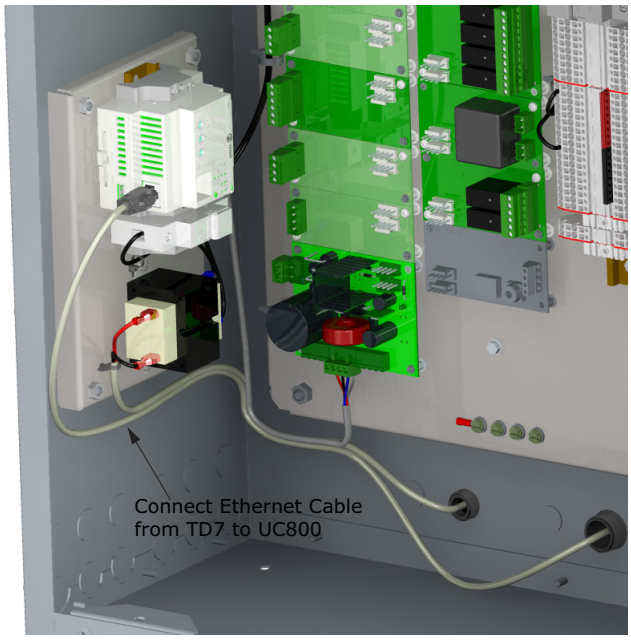
6. Crimp two terminals (X19180041070) to extension X19051625030 from the TD7 and connect to the Load Side of the transformer. See Figure 24, p. 17.

Figure 24. TD7 power connection



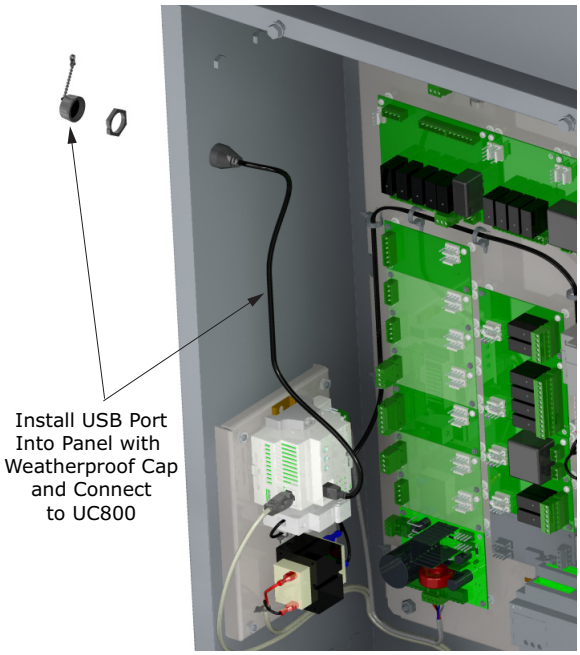
7. Connect the Ethernet cable from the TD7 to the UC800. See Figure 25, p. 17.

Figure 25. TD7 communication connection



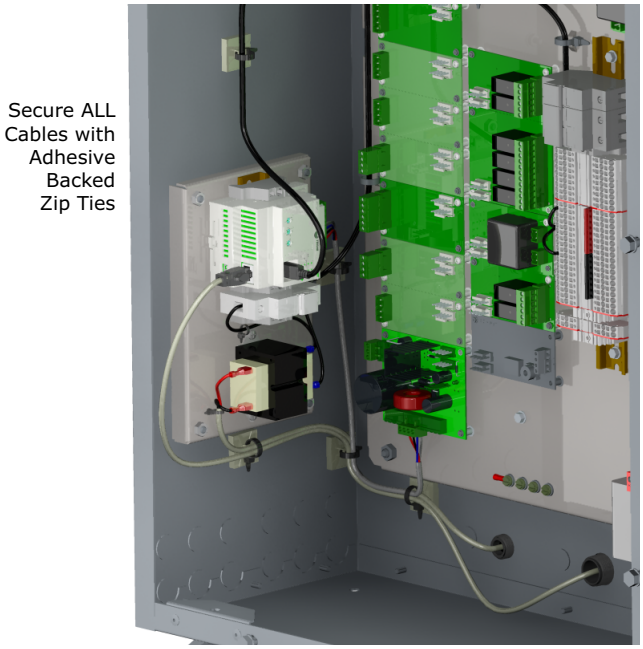
8. Install the USB Service port in the panel and connect to the UC800. Install the USB weatherproof cap. See Figure 26, p. 17.

Figure 26. USB port installation



9. Secure all cables with the adhesive backed zip ties provided in the kit. See Figure 27, p. 17.

Figure 27. Secure all cables

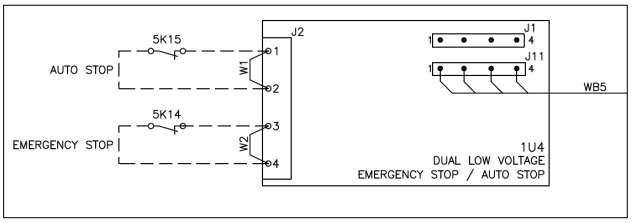


Restore System Power

To prevent an unexpected chiller start up when system power is first restored, implement the appropriate preventative measure from the following list:

1. If the chiller is equipped with an external Auto Stop button, disconnect the wire from terminal J2-1 on the 1U4 LLID.
2. If the chiller is not equipped with an external Auto Stop button, disconnect the factory installed jumper wire end from terminal J2-1 on the 1U4 LLID. See Figure 28, p. 18.

Figure 28. Prevent unexpected chiller start-up before restoring power



3. Perform a final inspection of the control panel enclosure before restoring system power
   a. Remove any tools and use a shop vacuum to remove any dirt or debris that may have been created during the installation process.
   b. Confirm that all upgrade kit wiring has been correctly routed and that all terminal connections have been properly made.
   c. Inspect the rest of the electrical wiring and components within the enclosure to ensure that no wiring connections were accidently loosened or disconnected during the kit installation process.
   d. Reinstall all panels.
4. Remove all lockout/tagout devices used at the power supply panels for the chiller equipment.
5. Warn all personnel in the area that system power is about to be restored.
6. Energize the system according to all applicable standard safety procedures

Programming the Tracer® AdaptiView™

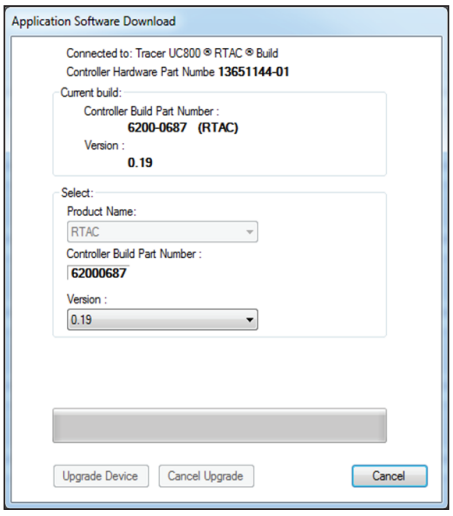
1. Configure the UC800 using Tracer® TU. Refer to the KestrelView report and write all the programming entries in the order listed.

   Note: *For more information regarding the use of the Tracer TU service tool, installation, operation and programming of the Tracer UC800 controller, operation of the control system, and a guide to the diagnostics and troubleshooting of the control system, please refer to the following manuals:*

   - *Tracer® TU Service Tool - Getting Started Guide (TTU-SVN01*-EN)*
   - *Series R® Air-Cooled Helical Rotary Liquid Chillers - Installation, Operation, and Maintenance (RTAC-SVX01*-EN)*
2. Obtain a working AC power adapter with which to power the technicians laptop.
3. Connect the computer with the Tracer TU service tool software to the service port of the Tracer UC800 controller with a USB type A/B cable.
4. Open Tracer TU.

   Note: *The UC800 ships with no software loaded. When first connecting to Tracer TU, a pop-up will direct you toward the software download page.*
5. Select the appropriate product type (**RTAC**), and select the latest version listed.
6. Click the **Upgrade Device** button when complete. See Figure 29.

Figure 29. Application software download



7. Use the Chiller Report PDF to manually copy the configuration parameters in Tracer® TU. See Table 15 for correct mappings. After the configuration is saved, Tracer TU will automatically proceed to LLID Binding view. Check

to see if any of the listed devices need to be bound, indicated by a red box. See Figure 30, p. 21.

Table 15. Mapping table

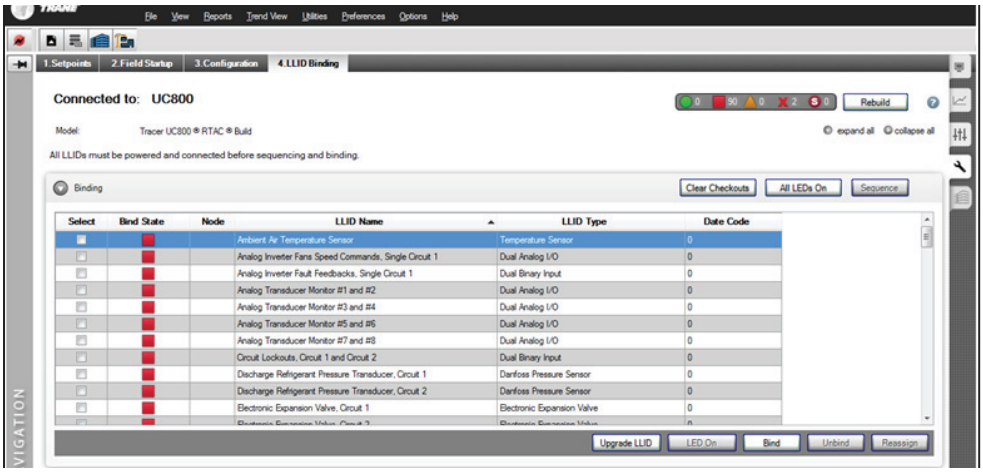
Compressor Frame Size[a]	Manufacturing Location[b]	Unit Type (Model Number Digit 12)[c]	Unit Voltage[d]	Compressor RLA[e]	CT Meter Scale[f]
K1	Charmes	N = Standard, A = Extra Efficiency	400	51	75
K1	Charmes	H = High Efficiency	400	51	75
K2	Charmes	N = Standard, A = Extra Efficiency	400	61	75
K2	Charmes	H = High Efficiency	400	61	75
L1	Charmes	N = Standard, A = Extra Efficiency	400	75	100
L1	Charmes	H = High Efficiency	400	75	100
L2	Charmes	N = Standard, A = Extra Efficiency	400	92	100
L2	Charmes	H = High Efficiency	400	92	100
M1,M3	Curitiba, Pueblo, Taicang	H = High Efficiency	575	90	100
M1,M3	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	575	94	100
M1,M3	Curitiba, Pueblo, Taicang	H = High Efficiency	460	113	150
M1,M3	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	460	118	150
M1,M3	Curitiba, Pueblo, Taicang	H = High Efficiency	380	136	150
M1,M3	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	380	142	150
M1,M3	Curitiba, Pueblo, Taicang	H = High Efficiency	230	225	275
M1,M3	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	230	235	275
M1,M3	Curitiba, Pueblo, Taicang	H = High Efficiency	200	259	275
M1,M3	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	200	270	275
M1,M3	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	220	0	0
M1,M3	Curitiba, Pueblo, Taicang	H = High Efficiency	220	0	0
M1,M3	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	400	118	150
M1,M3	Curitiba, Pueblo, Taicang	H = High Efficiency	400	113	150
M1,M3	Charmes	N = Standard, A = Extra Efficiency	400	110.5	150
M1,M3	Charmes	H = High Efficiency	400	110.5	150
M1,M3	Charmes	H = High Efficiency	380	138	150
M1,M3	Charmes	N = Standard, A = Extra Efficiency	380	138	150
M1,M3	Charmes	H = High Efficiency	460	114	150
M1,M3	Charmes	N = Standard, A = Extra Efficiency	460	114	150
M2,M4	Curitiba, Pueblo, Taicang	H = High Efficiency	575	106	150
M2,M4	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	575	111	150
M2,M4	Curitiba, Pueblo, Taicang	H = High Efficiency	400	133	150
M2,M4	Curitiba, Pueblo, Taicang	H = High Efficiency	460	133	150
M2,M4	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	400	139	150
M2,M4	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	460	139	150
M2,M4	Curitiba, Pueblo, Taicang	H = High Efficiency	380	161	200
M2,M4	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	380	168	200
M2,M4	Curitiba, Pueblo, Taicang	H = High Efficiency	220	240	275
M2,M4	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	220	251	275
M2,M4	Curitiba, Pueblo, Taicang	H = High Efficiency	230	265	275
M2,M4	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	230	278	400
M2,M4	Curitiba, Pueblo, Taicang	H = High Efficiency	200	305	400
M2,M4	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	200	320	400
M2,M4	Charmes	N = Standard, A = Extra Efficiency	400	136	150
M2,M4	Charmes	H = High Efficiency	400	136	150
M2,M4	Charmes	H = High Efficiency	380	163	200

Table 15. Mapping table (continued)

Compressor Frame Size[a]	Manufacturing Location[b]	Unit Type (Model Number Digit 12)[c]	Unit Voltage[d]	Compressor RLA[e]	CT Meter Scale[f]
M2,M4	Charmes	N = Standard, A = Extra Efficiency	380	163	200
M2,M4	Charmes	H = High Efficiency	460	134	150
M2,M4	Charmes	N = Standard, A = Extra Efficiency	460	134	150
N1,N3	Curitiba, Pueblo, Taicang	H = High Efficiency	575	130	150
N1,N3	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	575	134	150
N1,N3	Curitiba, Pueblo, Taicang	H = High Efficiency	400	162	200
N1,N3	Curitiba, Pueblo, Taicang	H = High Efficiency	460	162	200
N1,N3	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	460	168	200
N1,N3	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	400	168	200
N1,N3	Curitiba, Pueblo, Taicang	H = High Efficiency	380	196	275
N1,N3	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	380	203	275
N1,N3	Curitiba, Pueblo, Taicang	H = High Efficiency	220	291	400
N1,N3	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	220	306	400
N1,N3	Curitiba, Pueblo, Taicang	H = High Efficiency	230	324	400
N1,N3	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	230	336	400
N1,N3	Curitiba, Pueblo, Taicang	H = High Efficiency	200	373	400
N1,N3	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	200	386	400
N1,N3	Charmes	N = Standard, A = Extra Efficiency	400	162	200
N1,N3	Charmes	H = High Efficiency	400	162	200
N1,N3	Charmes	H = High Efficiency	380	202	275
N1,N3	Charmes	N = Standard, A = Extra Efficiency	380	202	275
N1,N3	Charmes	H = High Efficiency	460	166	200
N1,N3	Charmes	N = Standard, A = Extra Efficiency	460	166	200
N2,N4	Curitiba, Pueblo, Taicang	H = High Efficiency	575	155	200
N2,N4	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	575	160	200
N2,N4	Curitiba, Pueblo, Taicang	H = High Efficiency	400	194	275
N2,N4	Curitiba, Pueblo, Taicang	H = High Efficiency	460	194	275
N2,N4	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	400	200	275
N2,N4	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	460	200	275
N2,N4	Curitiba, Pueblo, Taicang	H = High Efficiency	380	235	275
N2,N4	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	380	242	275
N2,N4	Curitiba, Pueblo, Taicang	H = High Efficiency	220	344	400
N2,N4	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	220	359	400
N2,N4	Curitiba, Pueblo, Taicang	H = High Efficiency	230	388	400
N2,N4	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	230	399	400
N2,N4	Curitiba, Pueblo, Taicang	H = High Efficiency	200	447	500
N2,N4	Curitiba, Pueblo, Taicang	N = Standard, A = Extra Efficiency	200	459	500
N2,N4	Charmes	N = Standard, A = Extra Efficiency	400	196.5	200
N2,N4	Charmes	H = High Efficiency	400	196.5	200
N2,N4	Charmes	H = High Efficiency	380	240	275
N2,N4	Charmes	N = Standard, A = Extra Efficiency	380	240	275
N2,N4	Charmes	H = High Efficiency	460	198	200
N2,N4	Charmes	N = Standard, A = Extra Efficiency	460	198	200

(a) For compressor frame size, see compressor nameplate or ship history.
(b) Located in Design group in Tracer TU configuration.
(c) See unit nameplate for model number.
(d) Located in Tracer TU UC800 group or on compressor nameplate.
(e) Located in Tracer TU Starter group or on compressor nameplate.
(f) Located in Tracer TU Starter group.

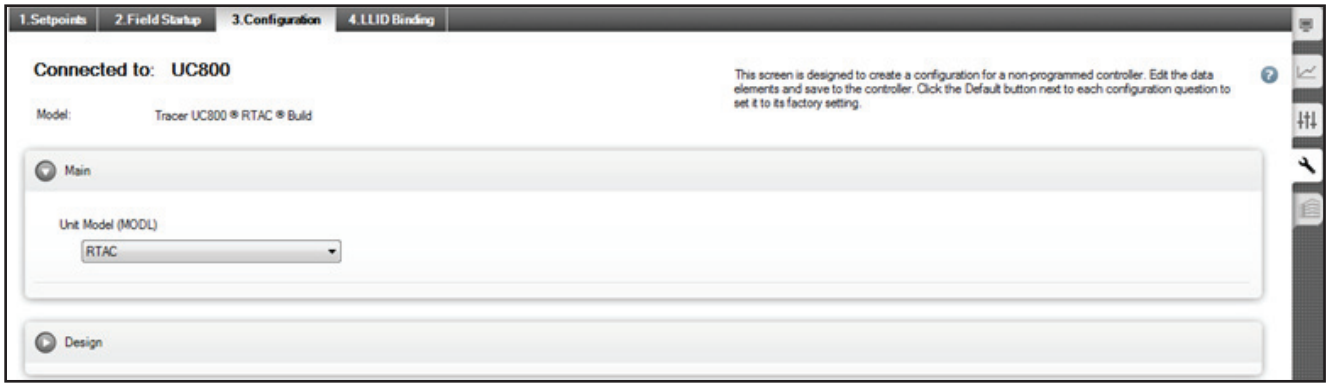
Figure 30. Binding view for all LLIDs



8. Validate configuration and setpoint values from the Chiller Report PDF file that was created from KestrelView. Within the Chiller Report PDF file, use the search function to view the different sections.
9. In the case you changed any configuration or setpoint values, click the Save button. This updates the values on the UC800 controller and takes you to the LLID Binding screen.

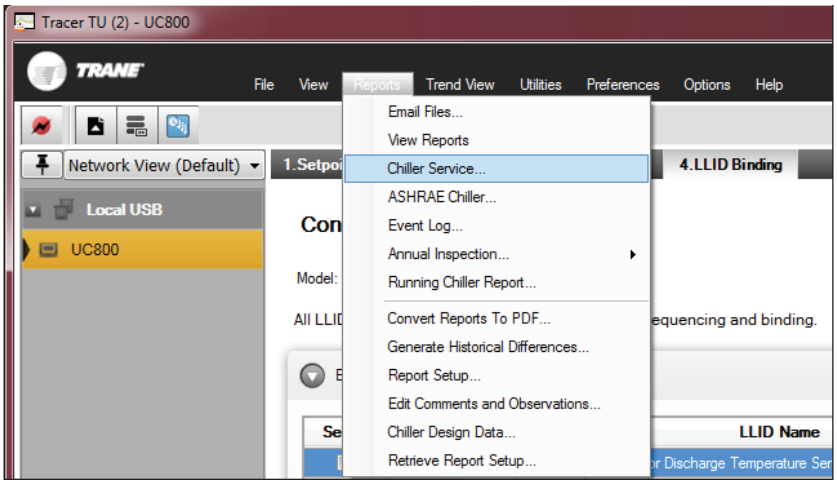
Figure 31. Navigating within the equipment utility configuration tab in Tracer TU

Figure 32. Location of the equipment utility tab in Tracer TU



10. In Tracer TU, save a copy of the Chiller Service Report. From the Reports drop-down menu, select and open Chiller Service Report. See Figure 33, p. 22.

Figure 33. Chiller service report (Tracer TU)



11. Save a copy of the Chiller Service Report. This report can be compared to the report that was saved from KestrelView to ensure that all settings are correct.

    Note: *This step produces backup configuration data in the case the UC800 configuration becomes corrupt.*

    a. Access the Equipment Utilities section of Tracer TU by clicking the wrench symbol on the right hand side of the screen.

    b. Click the Configuration tab.

    c. At the bottom of the screen, click the Save File button.

    d. In the Browse for Folder window, click Make New Folder.

    e. A folder will be created with the name New Folder; this can be renamed later. The path to the folder will be: C:\Programs\Trane\TracerTU\Program\Plugins\UCDataBaseDAL\New Folder

    f. Select the New Folder file.

    g. Click the OK button.

    h. The chiller configuration file will now be saved in the New Folder.

    i. Compare the KestrelView report with the Tracer TU report to validate configuration settings and setpoints.

Options

Generic BAS Interface

For the following option installations, see Figure 39, p. 30, unit schematic and upgrade schematic.

When ordered, controls are provided for hard-wired chiller control. Functions included are as follows:

- External Baseload Command
- Ice Building Control
- External Baseload Set-point
- RLA OUT
- Chilled Water Set-point IN
- Customer Current Limit IN
- Ice Making Status
- Customer Programmable Relays

Tracer® Interface Control

The Tracer® AdaptiView™ controls can interface with several BAS protocols. The UC800 control is able to directly communicate with Modbus® and BACnet® systems. Additional control boards are available to communicate with LonTalk® (COMM5) systems.

Generic BAS Integration

See Table 16, Figure 39, p. 30 component location and appropriate unit schematic for Generic BAS integration.

Table 16. Generic BAS LLID description and connections

Component Designation	Mnemonic	Part Number	Description	LLID Connector	Terminal(s)	Description/ Function	Mating Connection
1U6	BRD04875	X13650731070	Dual Analog In/Out Module - External Current Limit and External Chilled Water Setpoint	J11	1-4	Communication (UC800)	IPC BUS (WB..)
				J2	1	LLID Output (+), 10V for 2-10v, or +20Vdc for 4-20mA	Customer connection Current Limit Setpoint
					2	LLID Input(+), 2-10v, 4-20mA	
					3	LLID GND, for input & output	
					4	LLID Output (+), 10V for 2-10v, or +20Vdc for 4-20mA	Customer connection - Chilled Water Setpoint
					5	LLID Input(+), 2-10v, 4-20mA	
					6	LLID GND, for input & output	
1U7	BRD04873	X13650728070	Dual Low Voltage Input Module - Ice Making Control	J11	1-4	Communication (UC800)	IPC BUS (WB..)
				J2	1, 2	External Input to enable ice making	N.O. contact of 5K18 relay
1U12	BRD04879	X13650806050	Quad Relay Output Module - Unit Operating Status	J1	1-4	Communication (UC800)	IPC BUS (WB..)
				J2	3, 6, 9, 12	Input, 115V (60hz), 220V (50hz)	Customer supplied voltage
					1,2,4,5,7	Output, 115V (60hz), 220V (50hz)	Unit Status Relays
1U13	BRD04878	X13650733070	Dual Relay Output Module - Ice Making Status (Active or Complete)	J1	1-4	Communication (UC800)	IPC BUS (WB..)
				J2	4	Ice Making Status Output, 115V (60hz), 220V (50hz)	Ice Making Status Relay
					6	Input, 115V (60hz), 220V (50hz)	Customer supplied voltage

BACnet/Modbus Integration

Note: *If the current unit is already equipped with BACnet®, the BACnet® LLID (1U24) will need to be removed and BACnet® will need to utilize the UC800 connection.*

Reference Manuals

- *BACnet® and Modbus® RTU Communication Interfaces for Trane® Rotary Chiller, Model RTAC - Integration Guide* (RTAC-SVP001*-EN)
- *Series R® Air-Cooled Helical Rotary Liquid Chillers - Wiring Diagrams* (RTAC-SVE01*-EN)
- Tracer® AdaptiView™ Display Upgrade for Series R™ Chillers Model RTAC - Programming Guide (BAS-SVP031*-EN)

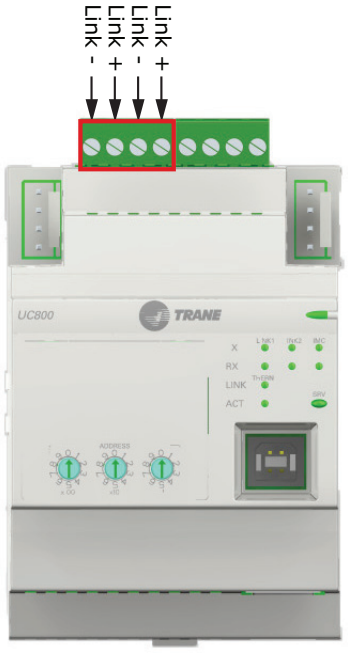
Refer Table 17 and Figure 34 for BACnet® and Modbus™ integration.

Table 17. BACnet/Modbus connections

Mnemonic	Part Number	Description	UC800 Connector	Terminal(s)	Description/ Function	Mating Connection
MOD01628	X13651144010	Tracer UC 800	J3	5	Link +	To Building Automation System or other Trane Remote Device (Shielded Twisted Pair)
				6	Link -	
				7	Link +	To Next Unit (Shielded Twisted Pair)
				8	Link -	

Note: If customer already has BACnet®, BACnet® LLID 1U24 must be disconnected, and UC800 connections used.

Figure 34. UC800 BACnet and Modbus connections



LonTalk Integration

Reference manual *LonTalk® Communication Interface for Trane™ Chillers with Tracer AdaptiView™ Control - Hardware and Software Installation Guide* (ACC-SVN100*-EN), Table 18, Figure 39, p. 30 and appropriate unit schematic for LonTalk® integration.

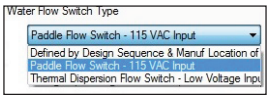
Table 18. LonTalk LLID description and connections

Designation	Mnemonic	Part number	Description	LLID Connector	Terminal(s)	Description/Function	Mating Connection
1U8	MOD02418	X13650845040	Comm 5 Interface (LonTalk®)	J11	1-4	Communication (UC800)	IPC BUS (WB..)
				J2	1-2	Interface Port A and B	To Tracer or other Trane Device (Shielded, Twisted Pair)
					3-4	Interface Port A and B	To Next Unit (Shielded, Twisted Pair)

ifm efector Flow Switch

Note: *This kit is designed to replace paddle style flow switch utilizing a dual high voltage input LLID. This kit is not a drop-in replacement for the current production, low voltage input, thermal dispersion flow switch. The Water Flow Switch Type must be configured for Paddle Flow Switch - 115VAC Input.*

Figure 35. Flow switch configuration



The ifm efector flow switch kit includes:

- flow monitoring module (mounted inside control panel)
- flow sensor
- 10 meter sensor cable
- ½-inch NPT sensor adapter
- din rail and mounting screws.

Note: *To connect the flow monitoring module to the Dual High Voltage Input LLID (1U11), field supplied 16 AWG wire meeting UL 1230 is required.*

Using the provided din rail and 6mm screws, find a suitable location in the control panel to mount the flow module. Complete the installation in accordance with the instructions provided in the efector flow kit and schematic shown in Figure 40, p. 32 and Figure 41, p. 33.

Thermal Dispersion Flow Switch Upgrade

The thermal dispersion flow switch upgrade is a set of solid-state components with no moving parts or paddles to stick or break. The kit includes an extended-length flow probe, cabinet mounted control monitor, 1/2-inch NPT adapter and 30-foot cable. The probe cable operates on low voltage and is not required to be installed in conduit. The probe system is designed for pipe diameters 4-inch and larger. See wiring diagram 50711917(Figure 40, p. 32) and the installation manual included in the upgrade kit for specific instructions for mounting, wiring, and adjusting the switch settings.

Global Connector Kit

The global connector kits allow a unit that has flat ribbon cabling to be modified to the global connection cabling.

See "Global Harness Routing," p. 34 for wiring diagrams.

See Table 12, p. 9 through Table 14, p. 9 for the parts in each kit.

Transducers and Sensors

The existing transducers and sensors are required to be replaced. For the EXV and liquid level sensors install the wire harness adapter male global connector to four-wire ribbon cable (KIT13723). Refer to *Series R® Air-Cooled Helical Rotary Liquid Chillers - Installation, Operation, and Maintenance* (RTAC-SVX01*-EN), *Tracer® CH530/CH531 Pluggable Connector System Product Code: 0064 (PART) - General Service Bulletin* (PART-SVB16*-EN) as well as the diagrams provided in the kit.

Start-Up

1. When the programming is completed and saved, shut down power to the control panel and disconnect the USB cable from the door of the control panel.
2. Restore power to the control panel. The chiller is now ready for normal startup and checkout procedures. See to *Series R® Air-Cooled Helical Rotary Liquid Chillers - Installation, Operation, and Maintenance* (RTAC-SVX01*-EN) for proper startup and checkout procedures.

If you have further questions, contact Trane Global Parts Technical Services. To contact them, send a message to ATechnicalService@trane.com.

Component Locations

Table 19. Global connection component index

Device	Part Number	Description
3LL1	VARIABLE	EVAPORATOR REFRIGERANT LIQUID LEVEL SENSOR, CIRCUIT 1
3PT1	X13790348080	SUCTION REFRIGERANT PRESSURE TRANSDUCER, CIRCUIT 1, COMPRESSOR 1A
3PT2	X13790348080	CONDENSER REFRIGERAND PRESSURE TRANSDUCER, CIRCUIT 1
3PT3	X13790348080	OIL PRESSURE TRANSDUCER, COMPRESSOR 1B
3PT4	X13790348080	OIL PRESSURE TRANSDUCER, COMPRESSOR 1A
3PT5	X13790348080	SUCTION REFRIGERANT PRESSURE TRANSDUCER, CIRCUIT 1, COMPRESSOR 1B
3RT1	X13650726100	OIL TEMPERATURE SENSOR, CIRCUIT 1, COMPRESSOR 1A
3RT2	X13650726100	OIL TEMPERATURE SENSOR, CIRCUIT 1, COMPRESSOR 1B
3V1	Varies[(a)]	ELECTRONIC EXPANSION VALVE, CIRCUIT 1
4LL1	Varies[(a)]	EVAPORATOR REFRIGERANT LIQUID LEVEL SENSOR, CIRCUIT 2
4PT1	X13790348080	SUCTION REFRIGERANT PRESSURE TRANSDUCER, CIRCUIT 2, COMPRESSOR 2A
4PT2	X13790348080	CONDENSER REFRIGERAND PRESSURE TRANSDUCER, CIRCUIT 2
4PT3	X13790348080	OIL PRESSURE TRANSDUCER, COMPRESSOR 2B
4PT4	X13790348080	OIL PRESSURE TRANSDUCER, COMPRESSOR 2A
4PT5	X13790348080	SUCTION REFRIGERANT PRESSURE TRANSDUCER, CIRCUIT 2, COMPRESSOR 2B
4RT1	X13650726100	OIL TEMPERATURE SENSOR, CIRCUIT 2, COMPRESSOR 2A
4RT2	X13650726100	OIL TEMPERATURE SENSOR, CIRCUIT 2, COMPRESSOR 2B
4V1	Varies[(a)]	ELECTRONIC EXPANSION VALVE, CIRCUIT 2
6RT1	X13650726100	EVAPORATOR ENTERING WATER TEMPERATURE SENSOR
6RT2	X13650726100	EVAPORATOR LEAVING WATER TEMPERATURE SENSOR
6RT3	X13650726100	AMBIENT AIR TEMPERATURE SENSOR
1622-01	X19051622010	HARNESS 2Y SHORT (500mm)
1622-02	X19051622020	HARNESS 2Y LONG (1000mm)
1622-03	X19051622030	HARNESS 3Y (500mm)
1623-01	X19051623010	HARNESS EXTENSION, SHORT (1000mm)
1623-02	X19051623010	HARNESS EXTENSION, LONG (2000mm)
1625-02	X19051622010	HARNESS FEMALE TO WIRE LEADS (1000mm)

(a) Part number varies depending on unit configuration.

Figure 36. Component location, 2 compressor units

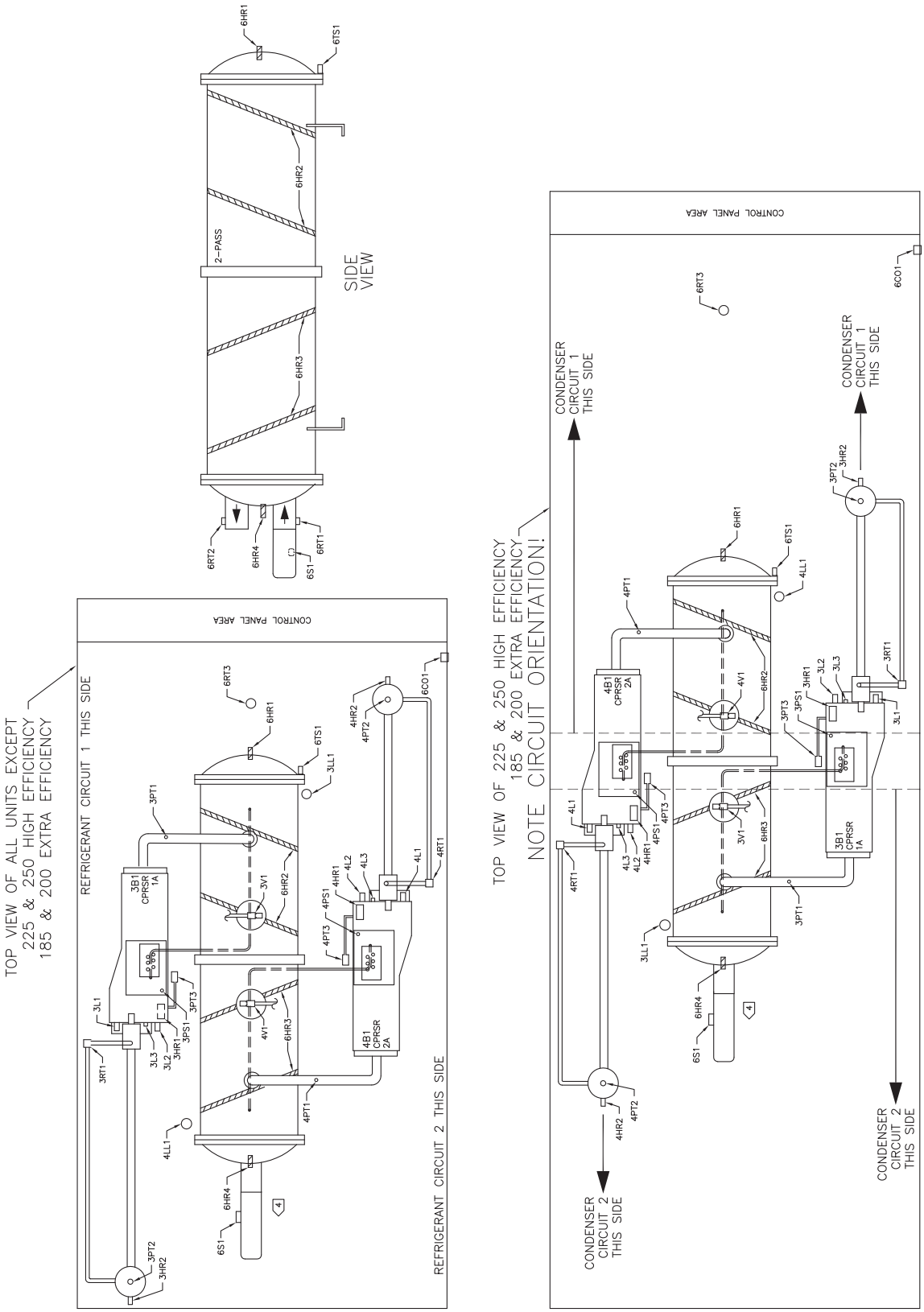


Figure 37. Component location, 3 compressor units

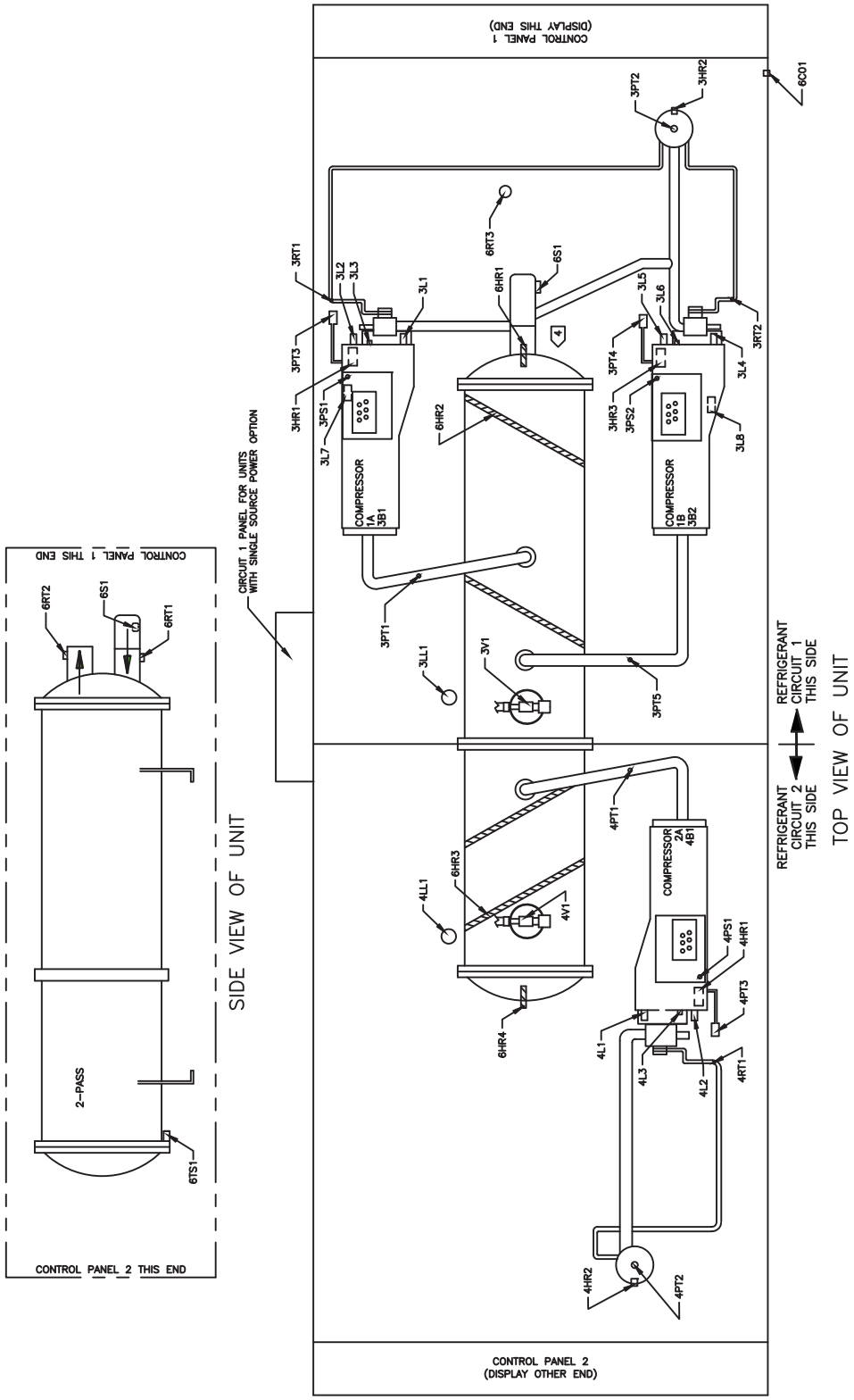


Figure 38. Component location, 4 compressor units

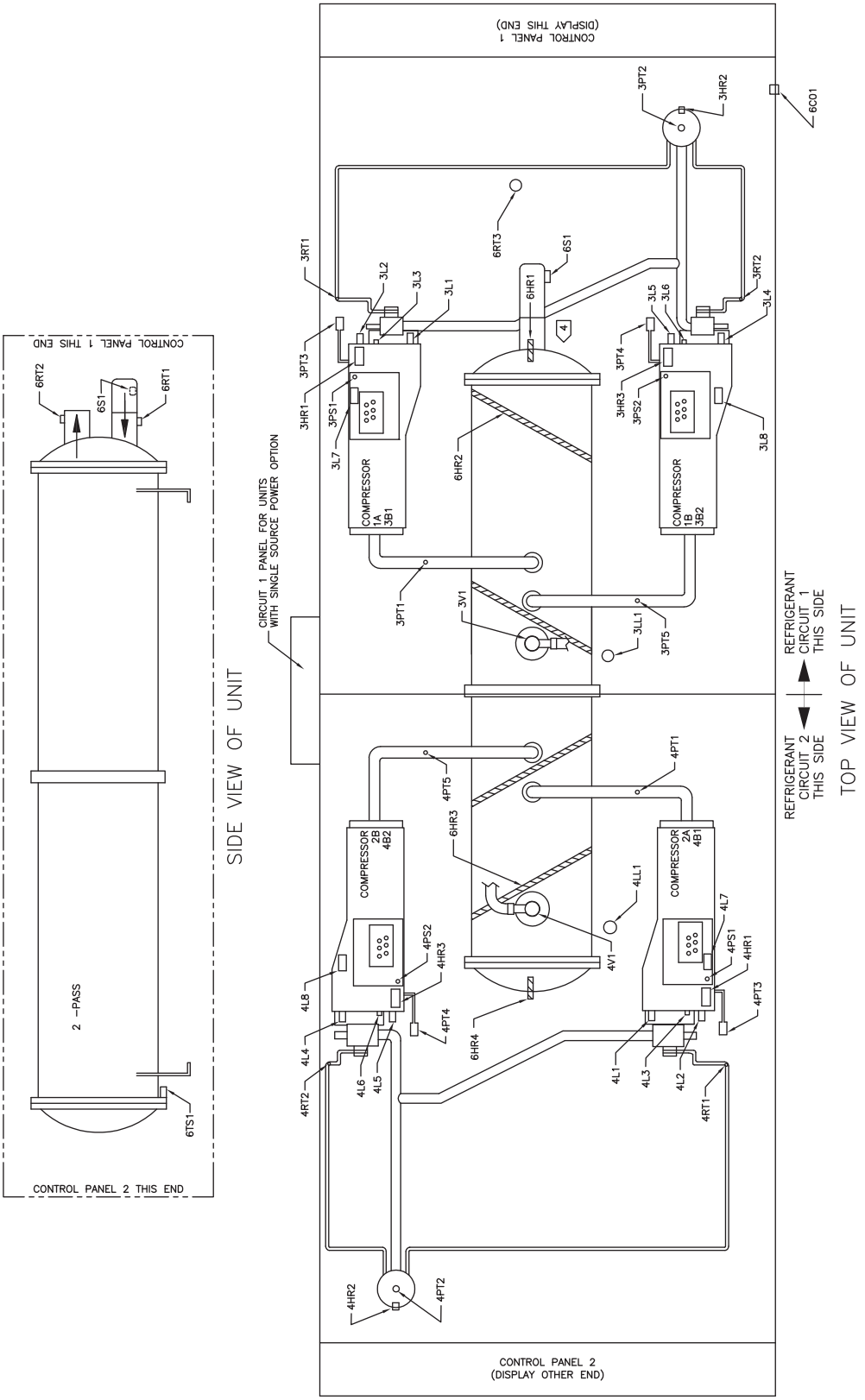
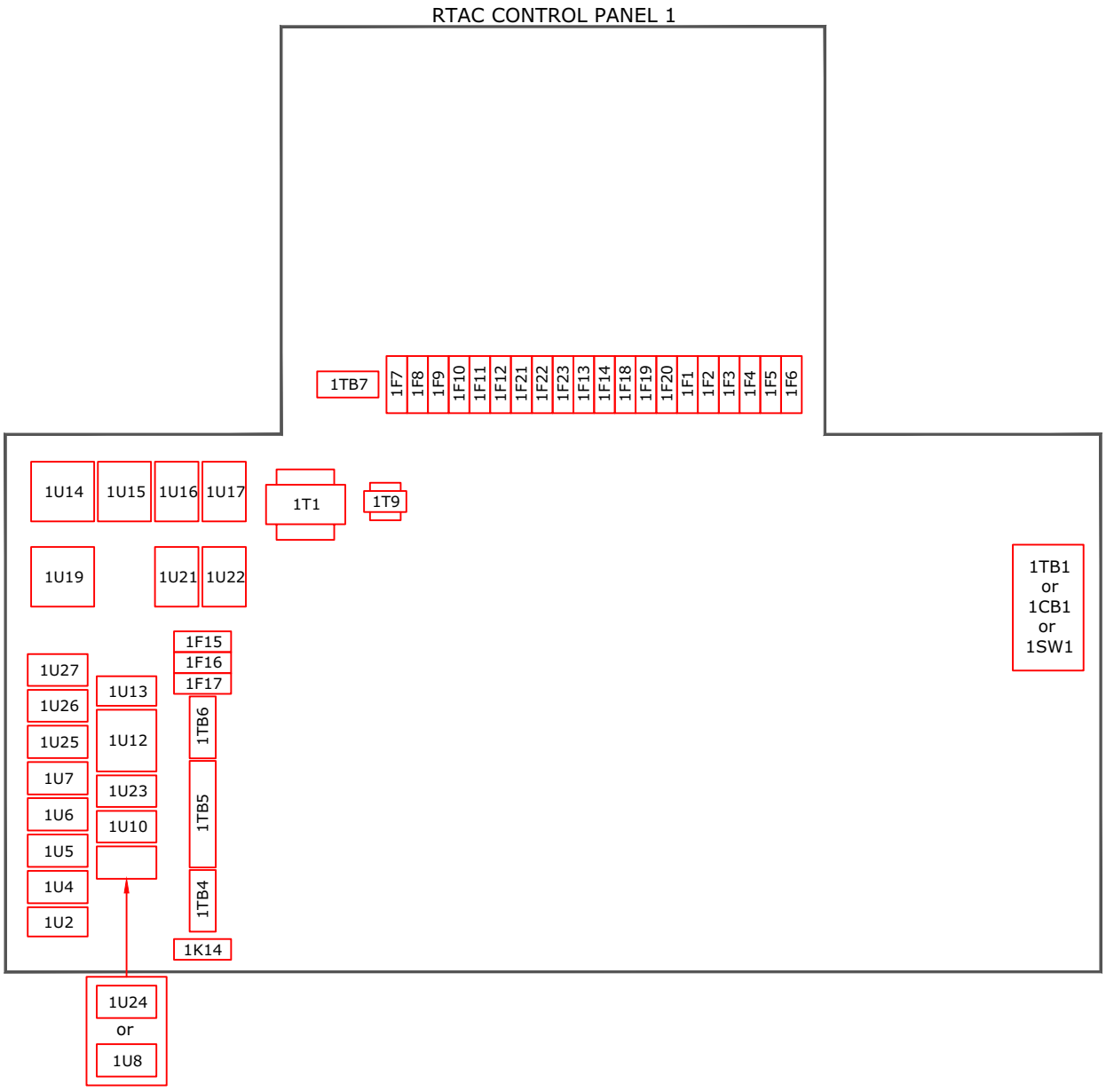


Figure 39. Component location, RTAC control panel



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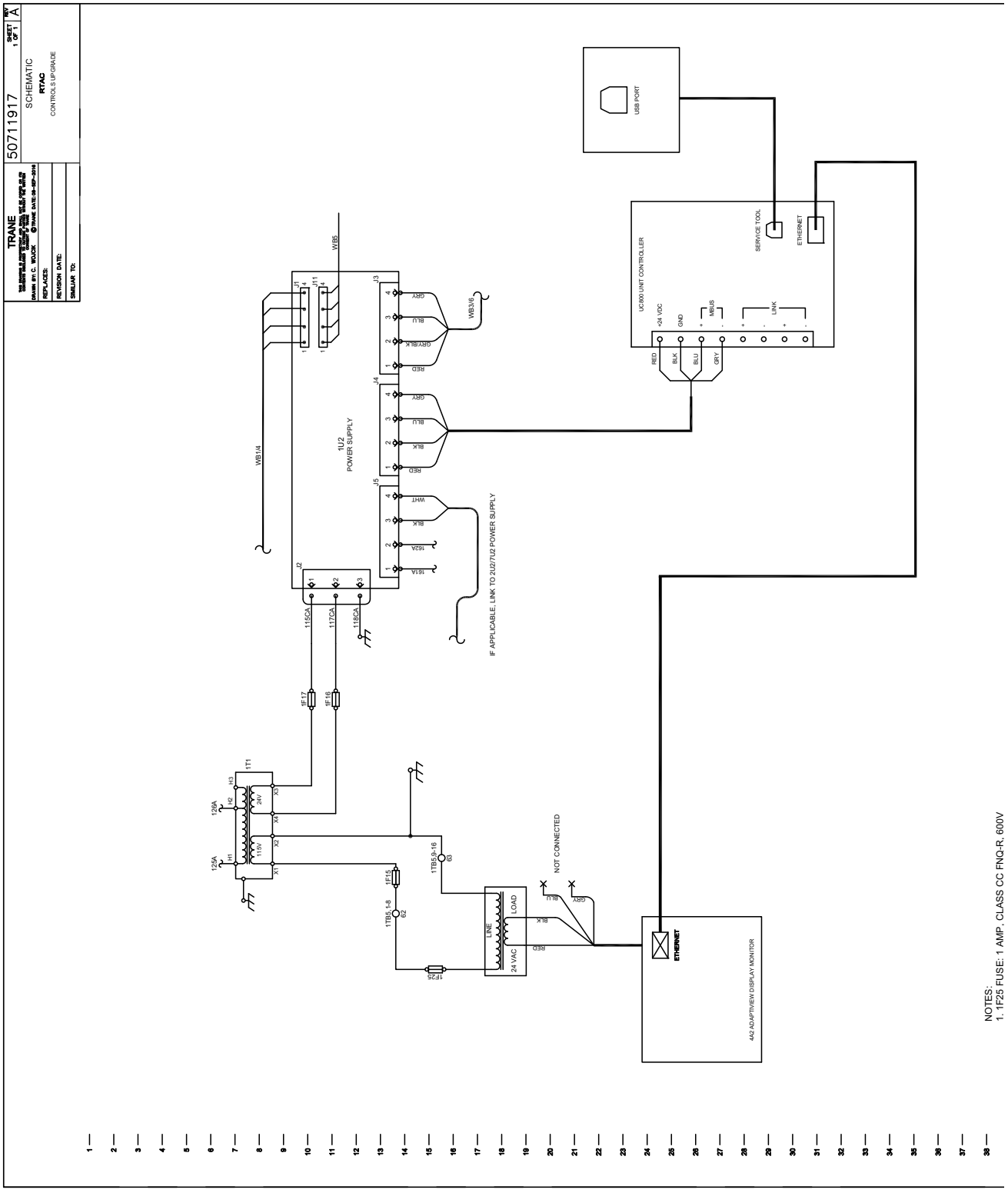
Wiring

Kit Schematic

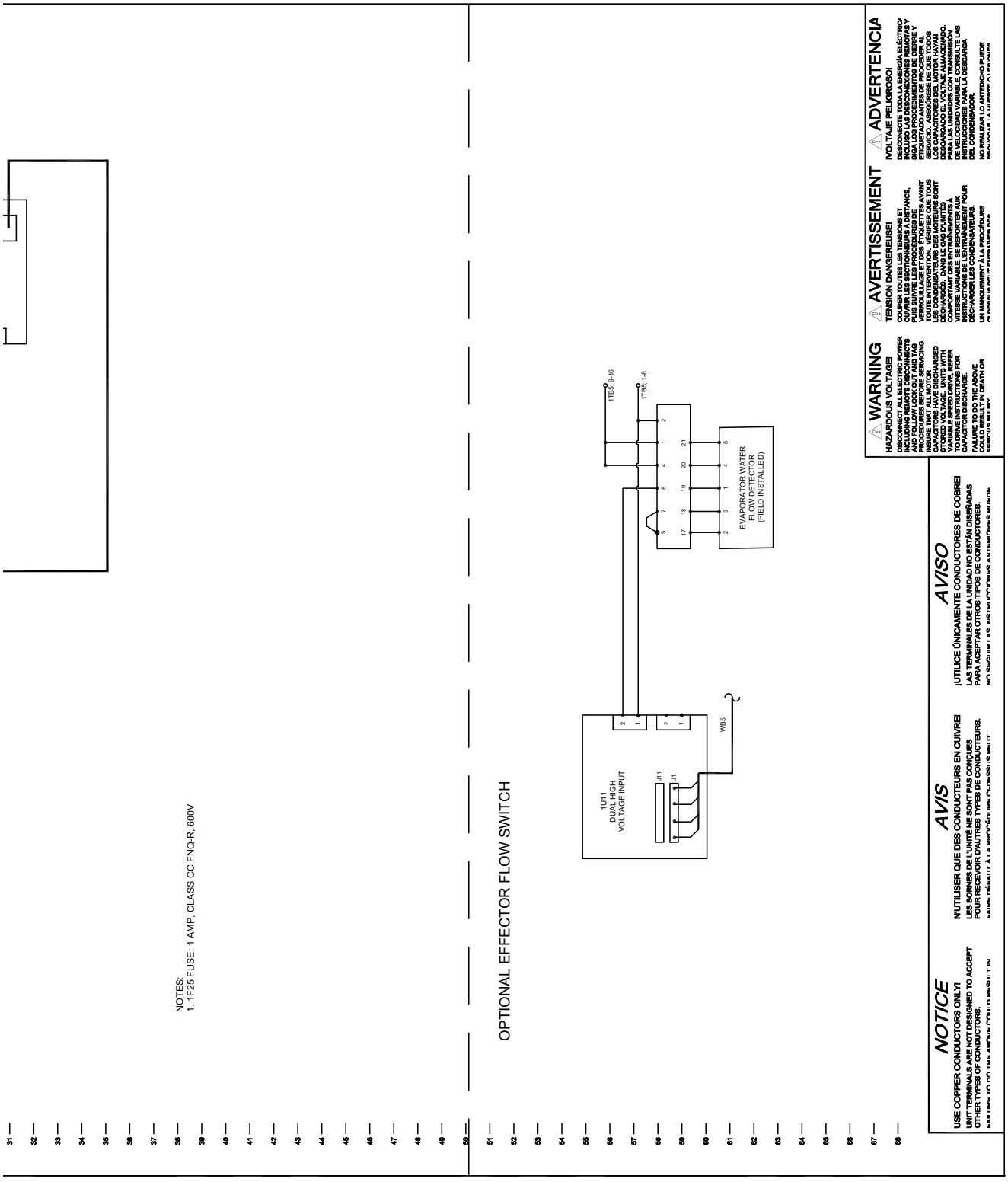
Important: *Optional efector flow switch connection at 1TB5 is 115V.*

Figure 40. RTAC UC800/Tracer AdaptiView upgrade schematic



Important: *Optional efector flow switch connection at 1TB5 is 115V.*

Figure 41. RTAC UC800/Tracer AdaptiView upgrade schematic (continued)



Global Harness Routing

Figure 42. Global harness wiring diagram — 2 compressor unit, 15 foot base

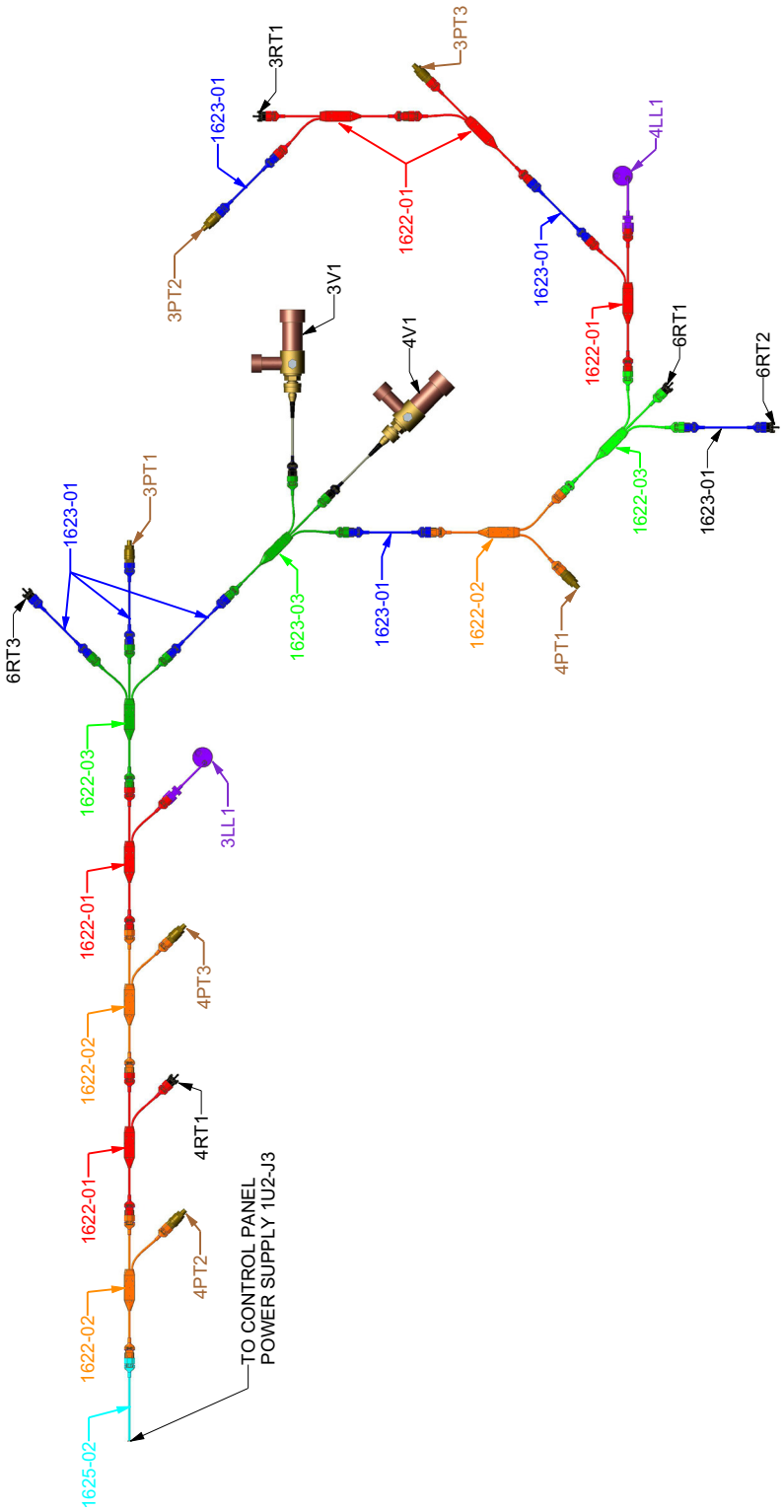


Figure 43. Global harness wiring diagram — 2 compressor unit, 18 foot base

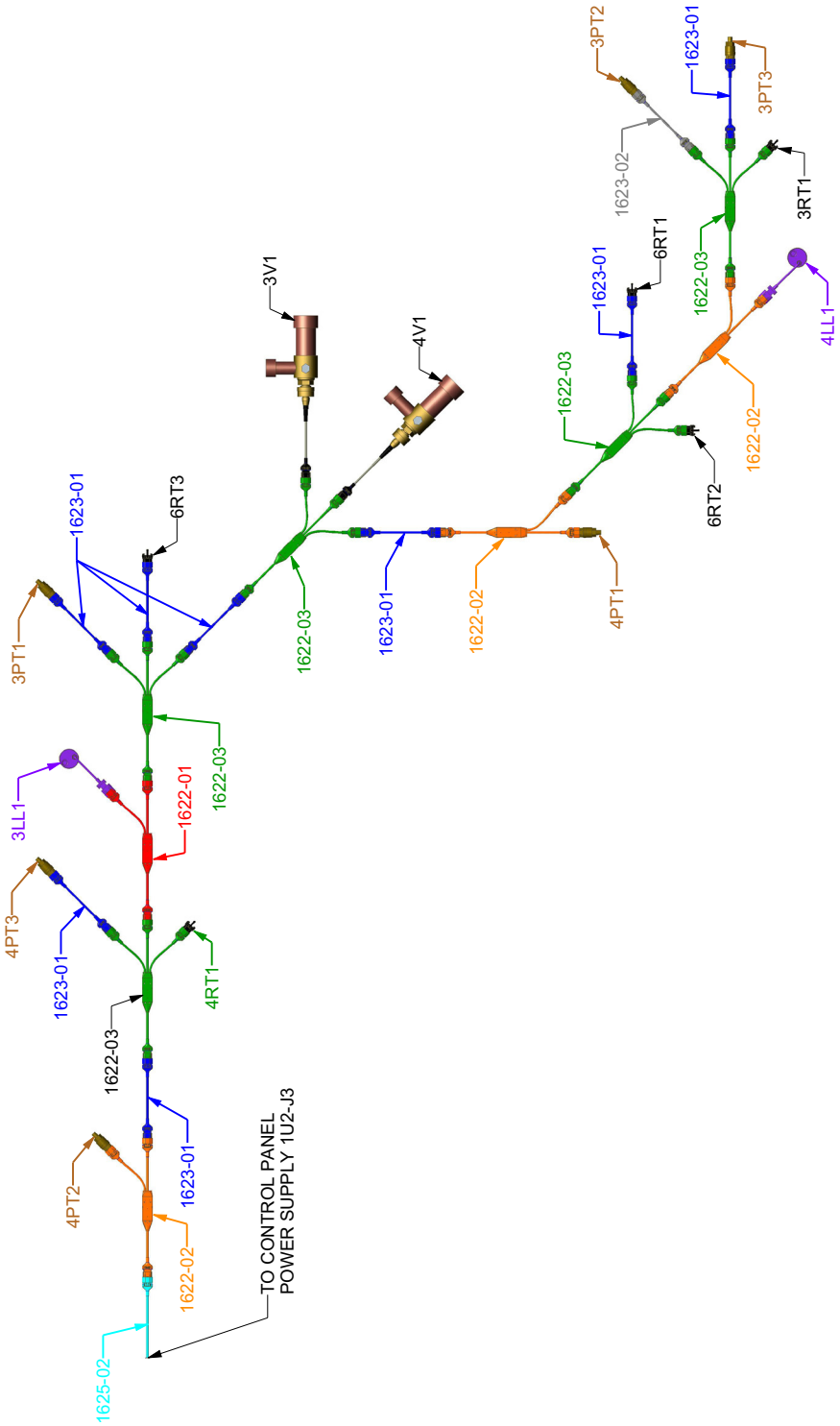


Figure 44. Global harness wiring diagram — 2 compressor unit, 21 foot base

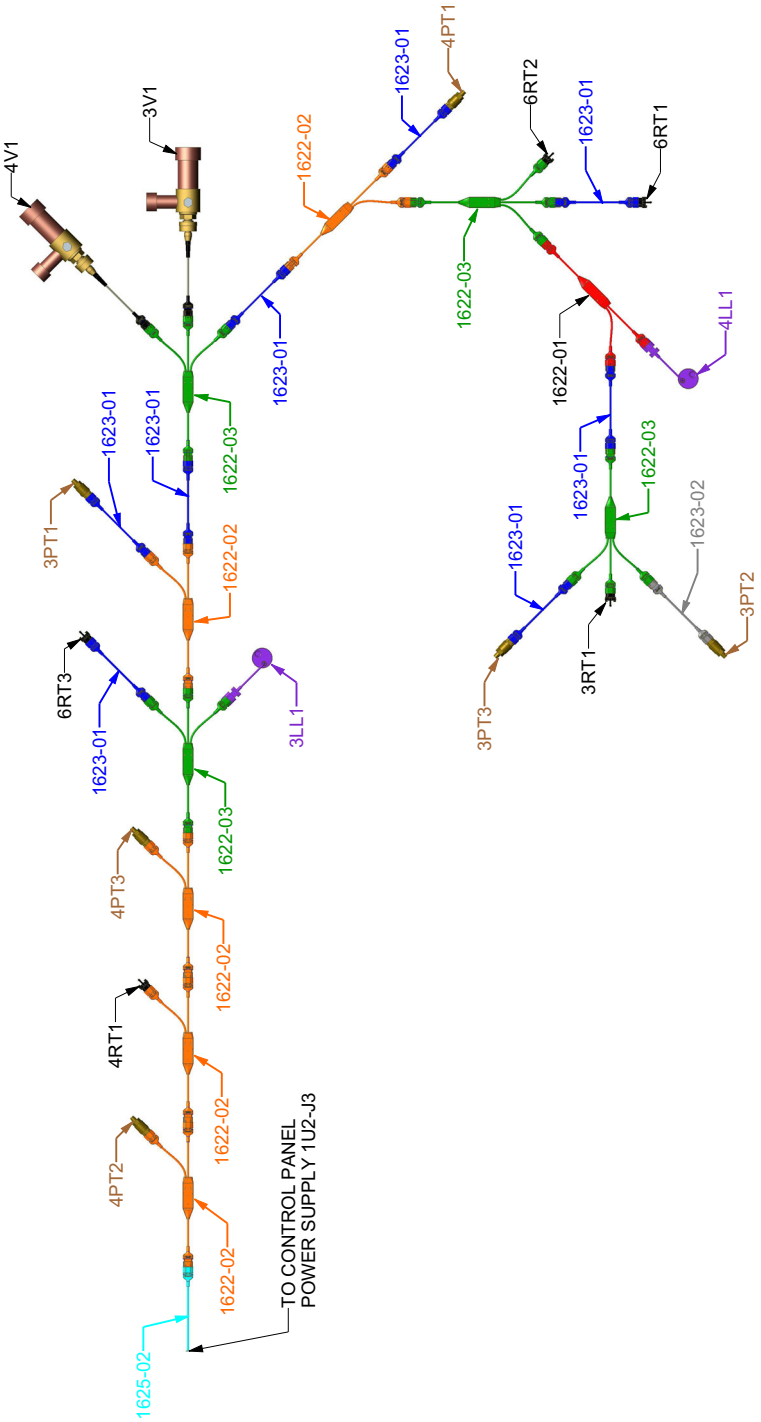


Figure 45. Global harness wiring diagram — 3 compressor unit, 2-pass, 30 foot base

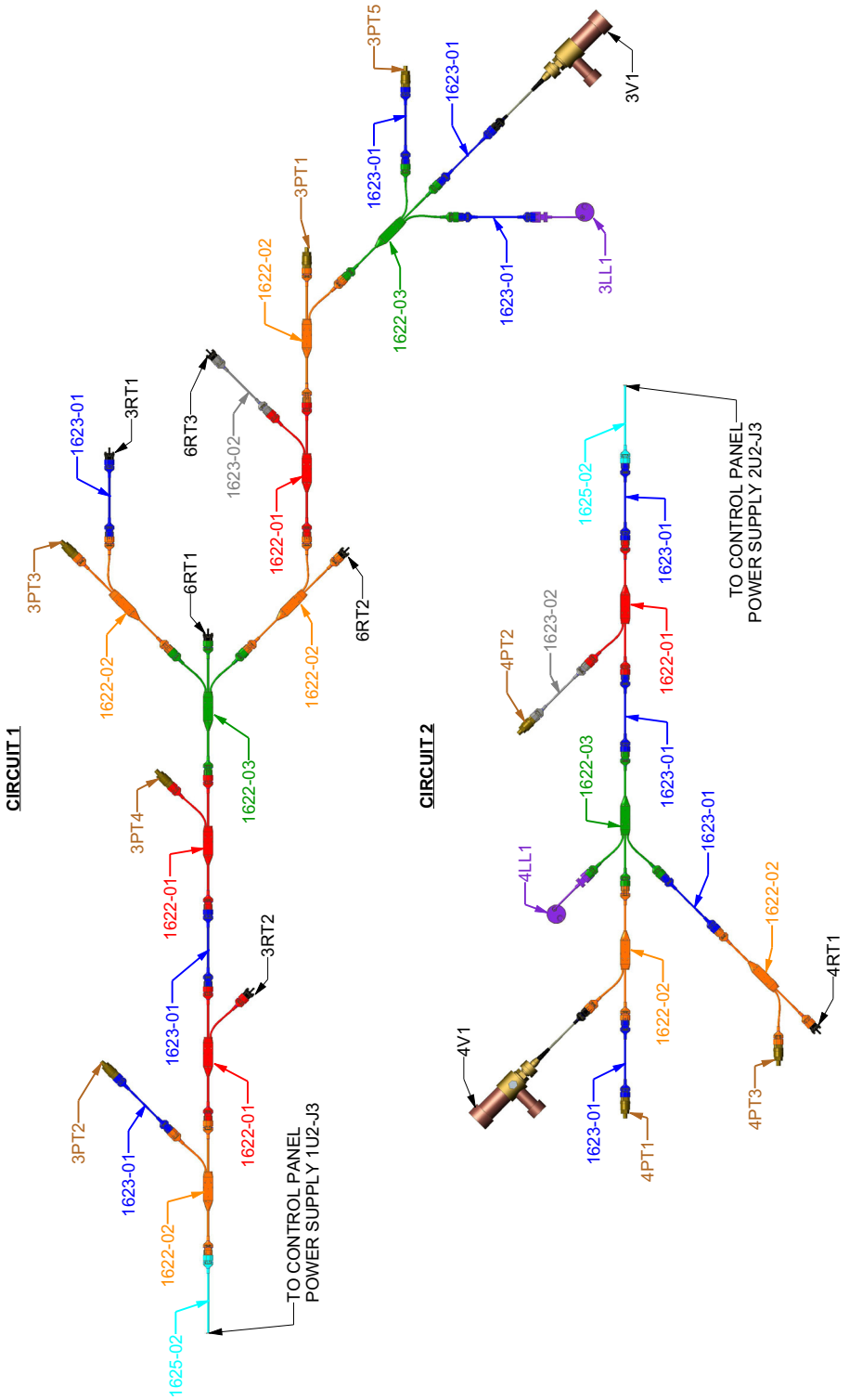


Figure 46. Global harness wiring diagram — 3 compressor unit, 3-pass, 30 foot base

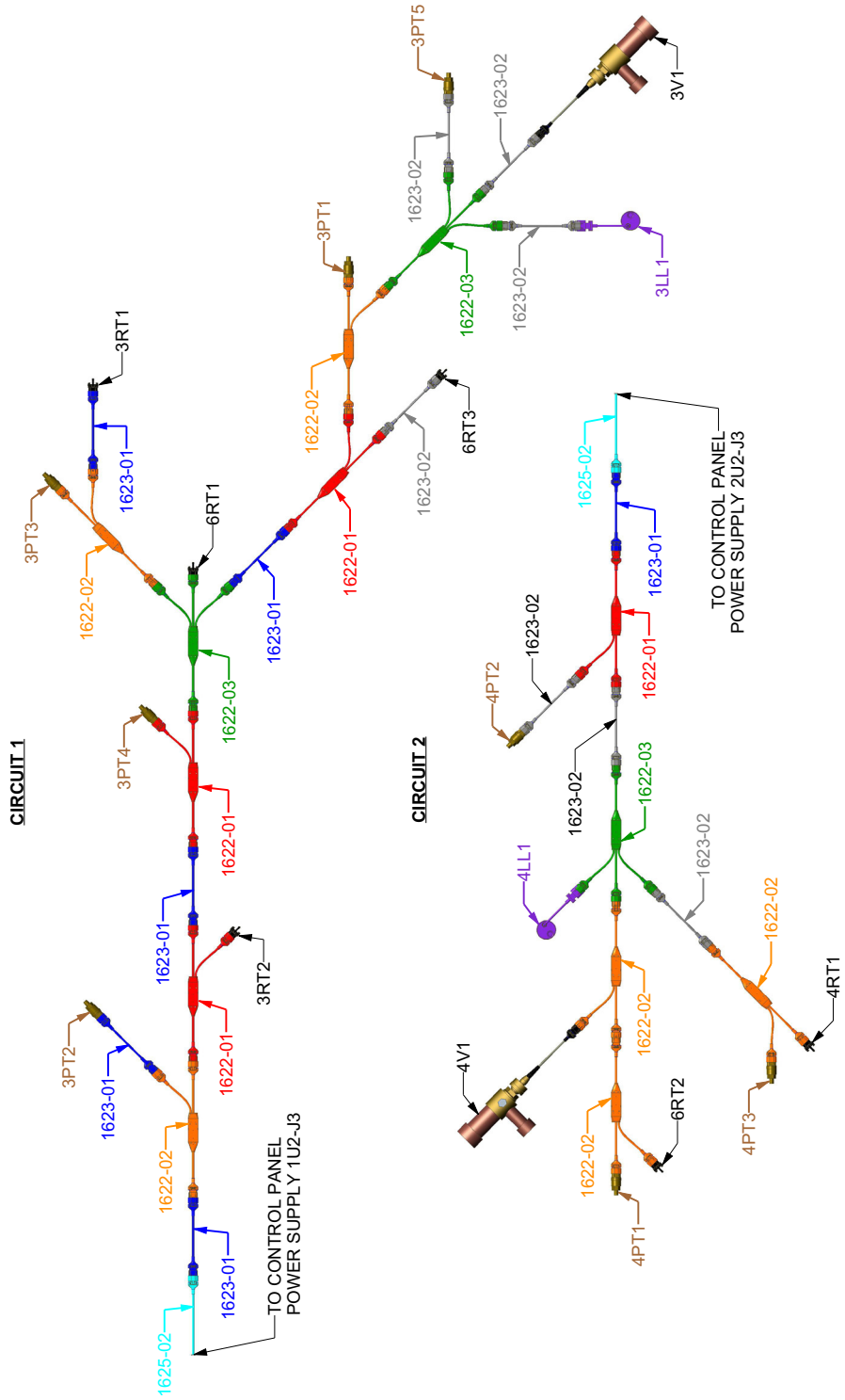


Figure 47. Global harness wiring diagram — 3 compressor unit, 2-pass, 36 foot base

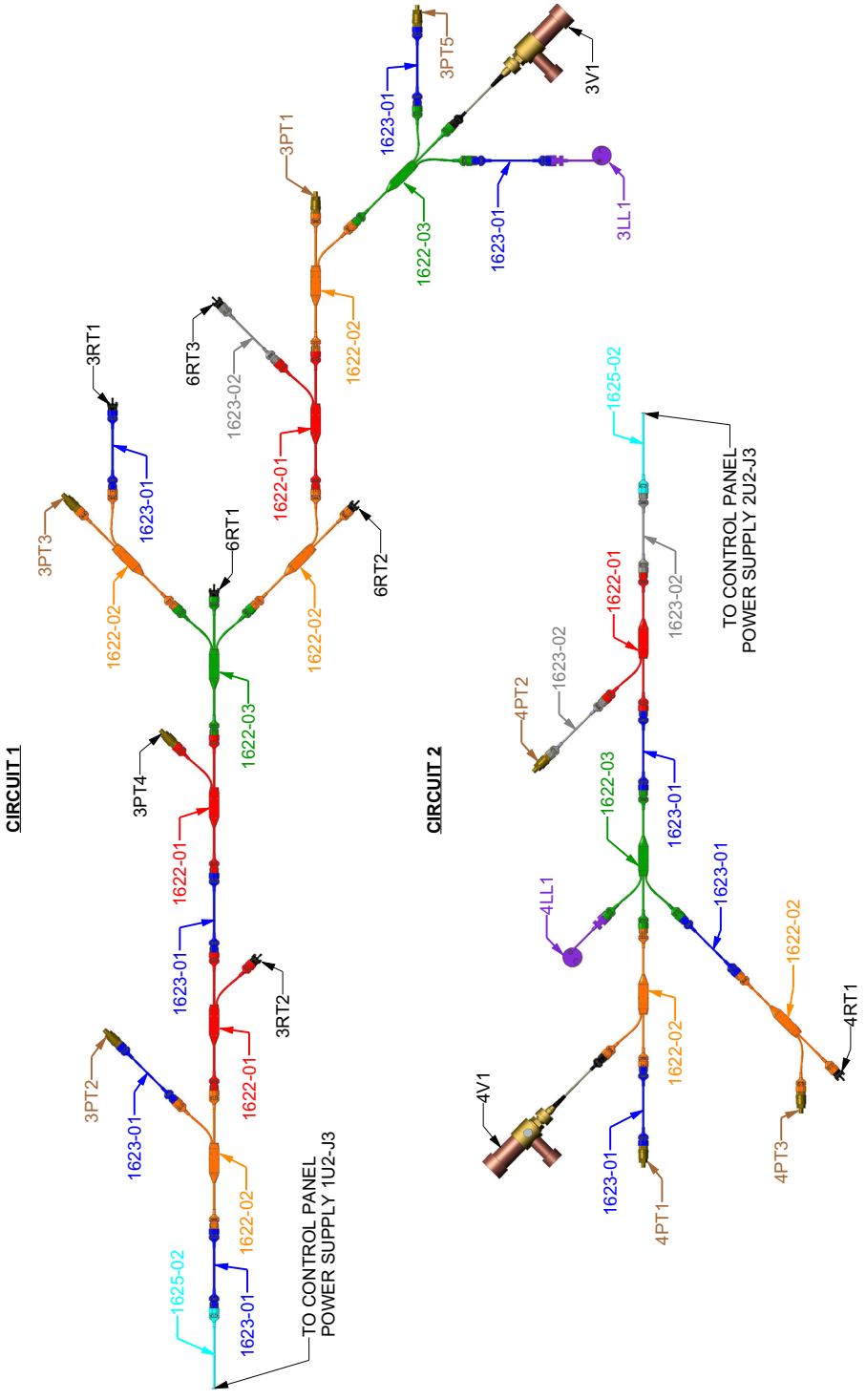


Figure 48. Global harness wiring diagram — 3 compressor unit, 3-pass, 36 foot base

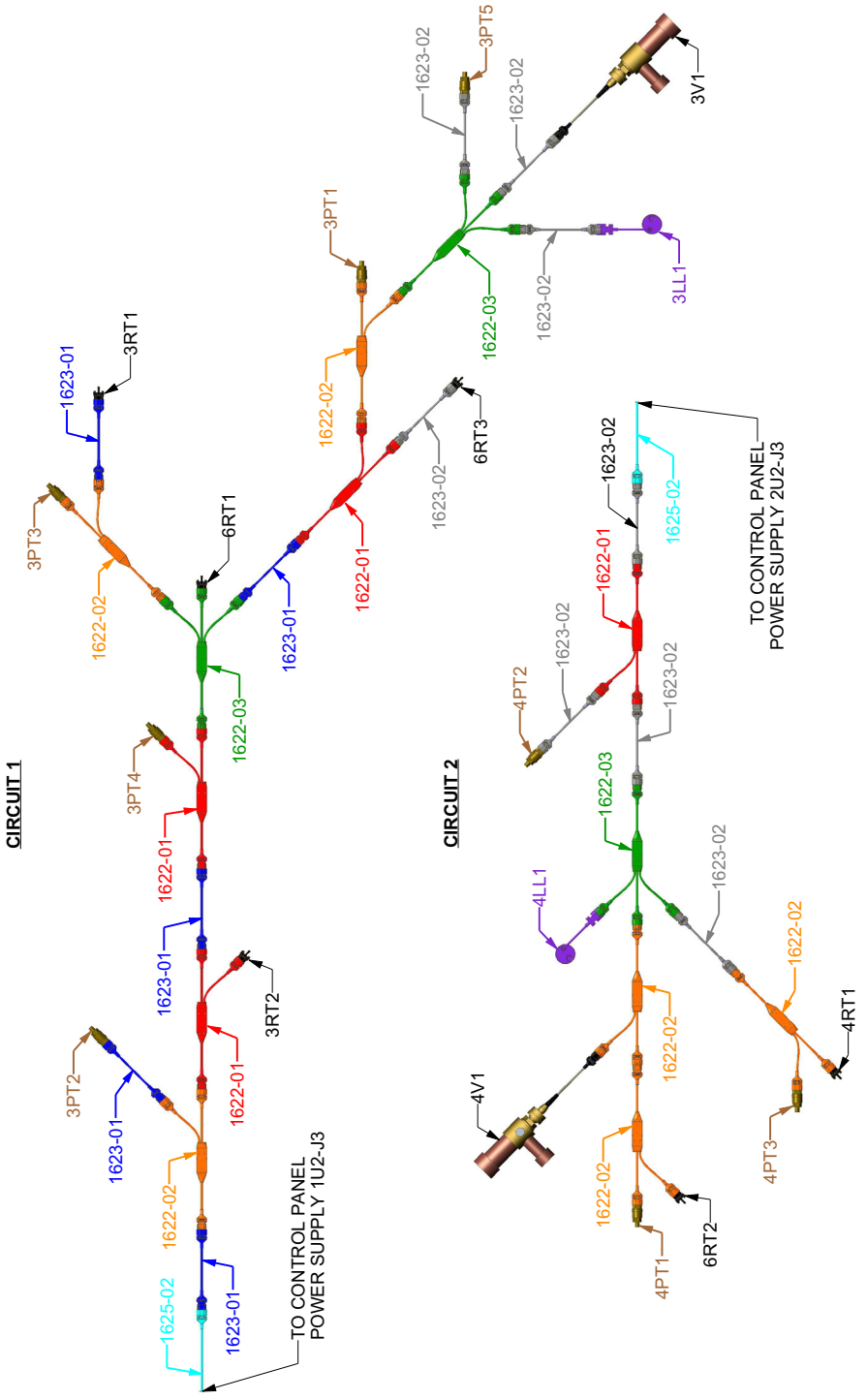


Figure 49. Global harness wiring diagram — 3 compressor unit, 2-pass, 39 foot base

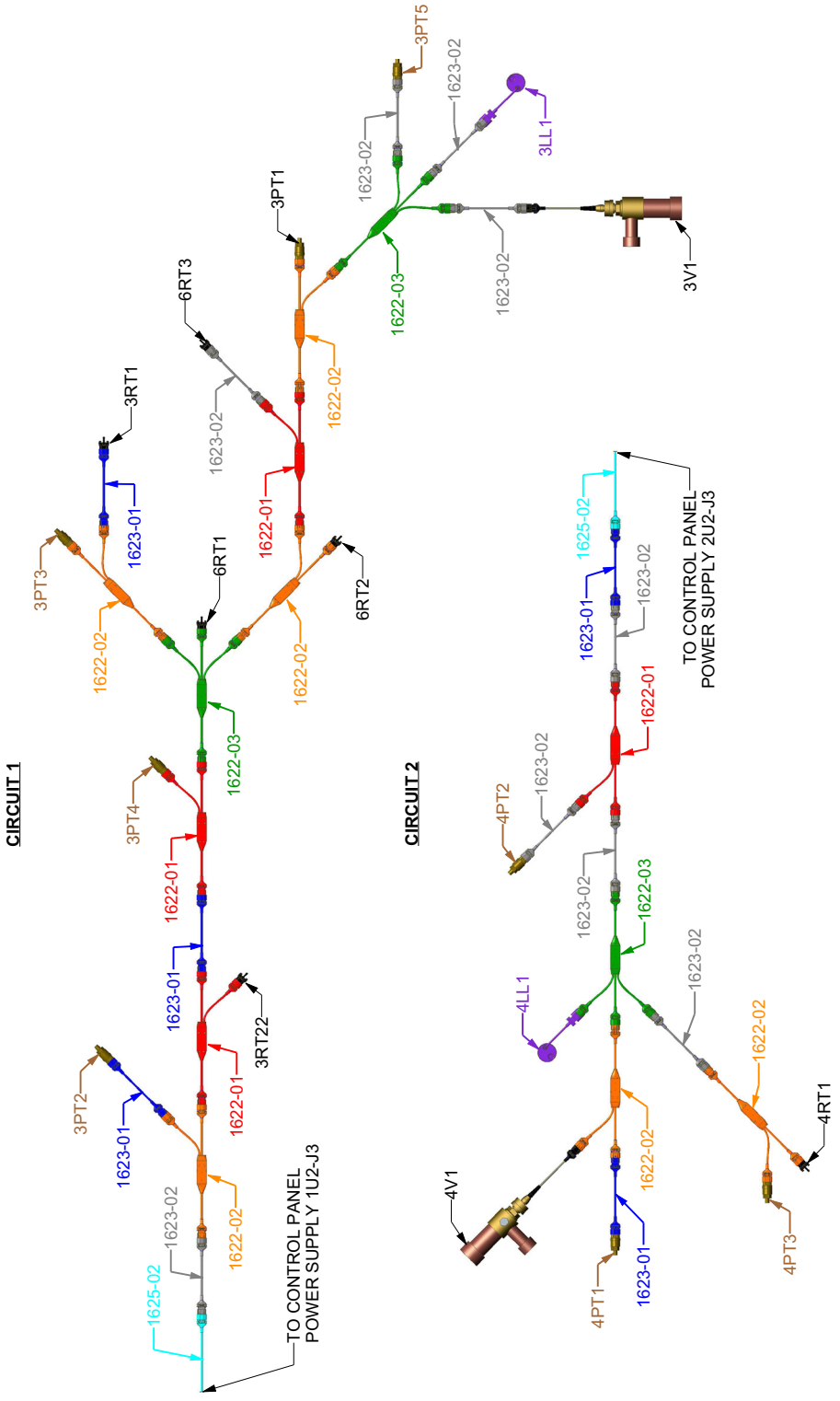


Figure 50. Global harness wiring diagram — 3 compressor unit, 3-pass, 39 foot base

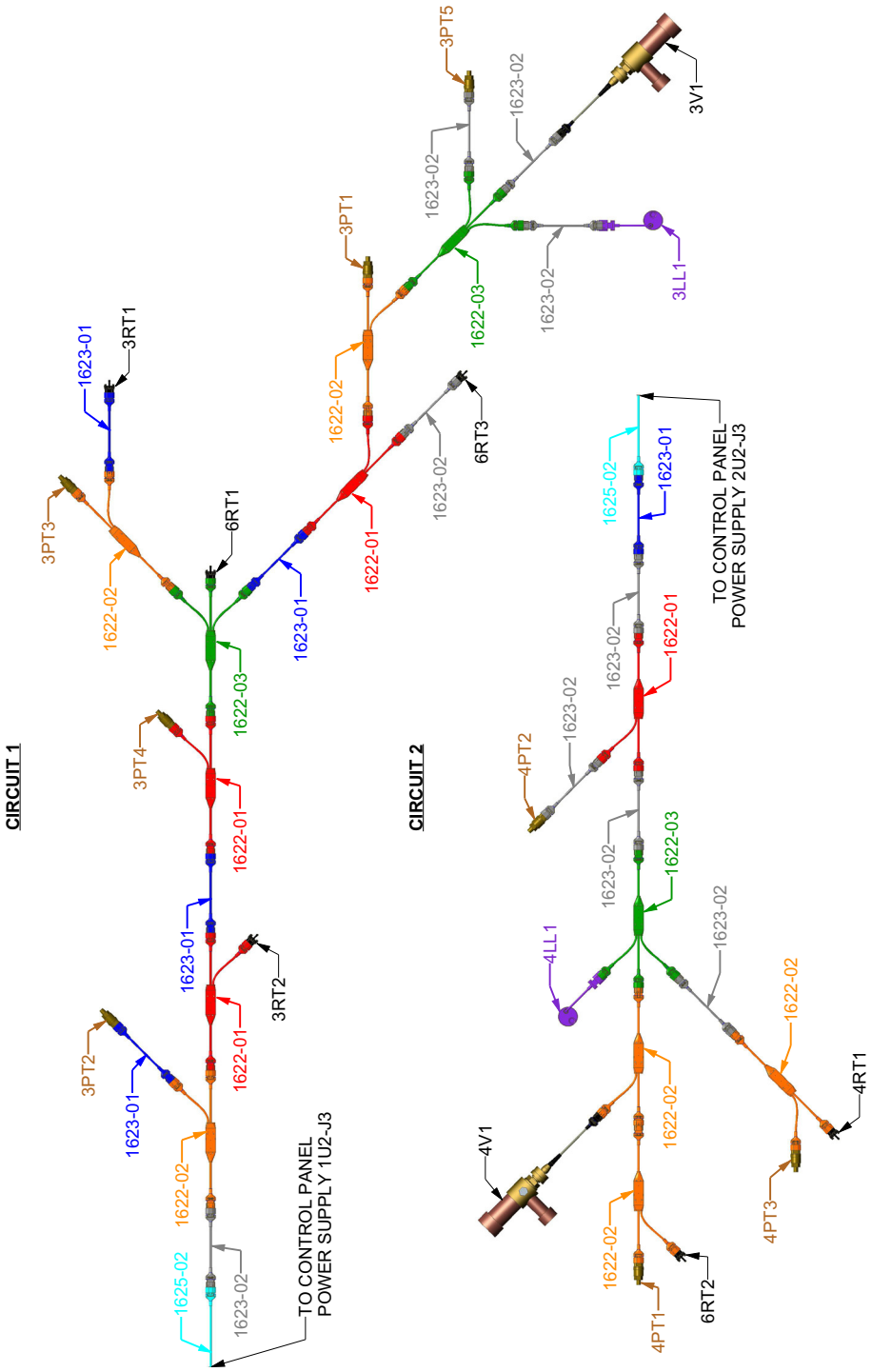


Figure 51. Global harness wiring diagram — 4 compressor unit, 2-pass, 39 foot base

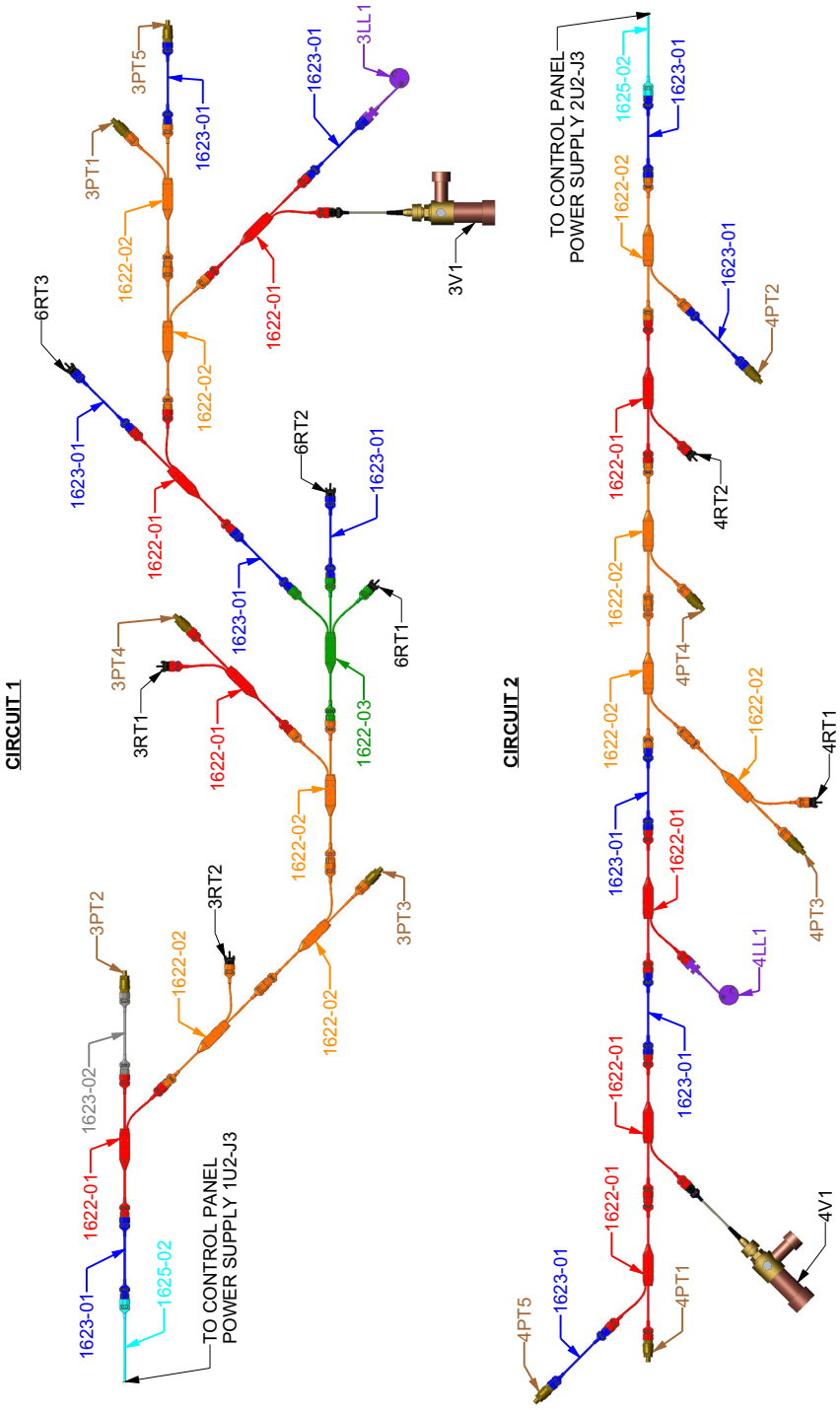


Figure 52. Global harness wiring diagram — 4 compressor unit, 3-pass, 39 foot base

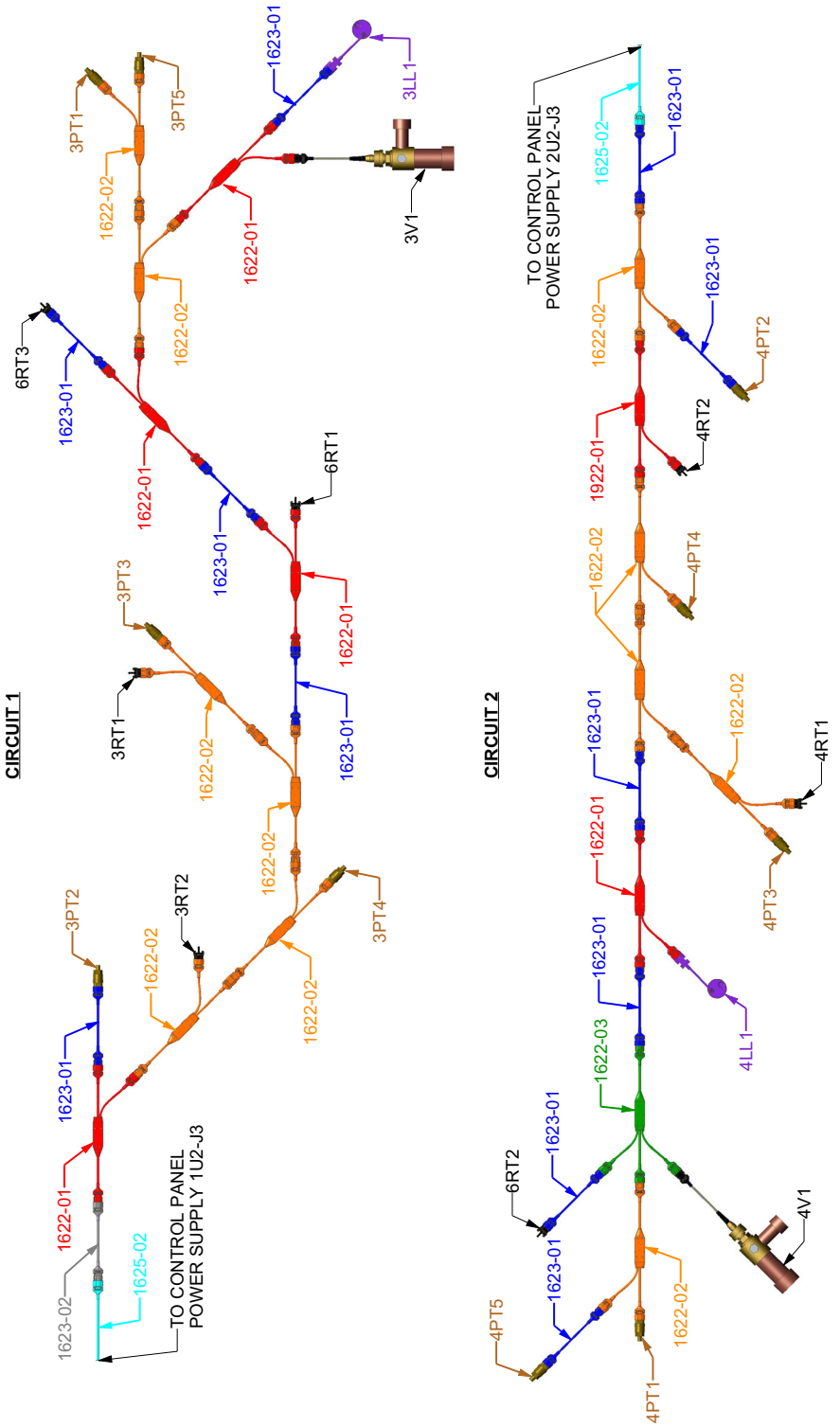


Figure 53. Global harness wiring diagram — 4 compressor unit, 2-pass, 45 foot base

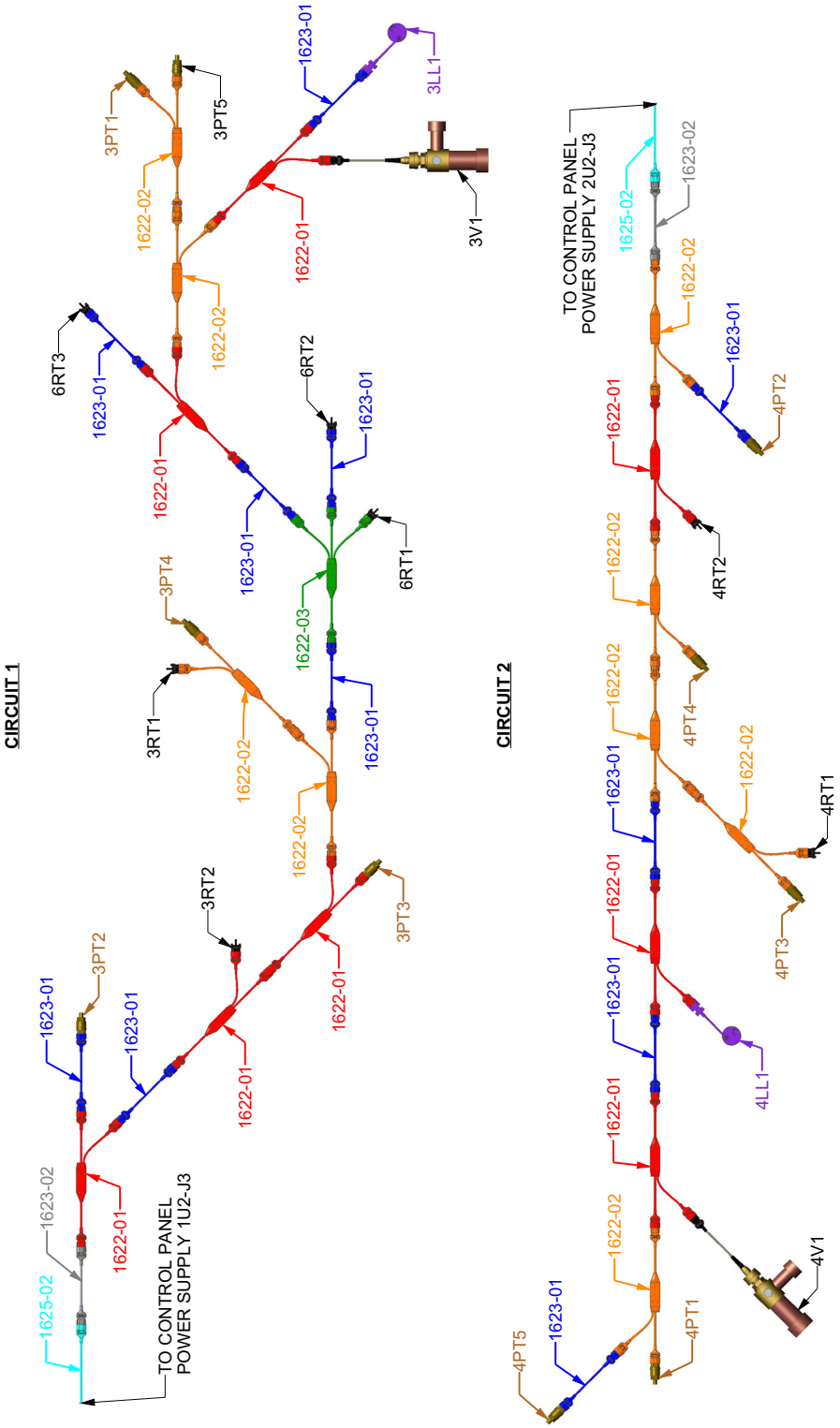
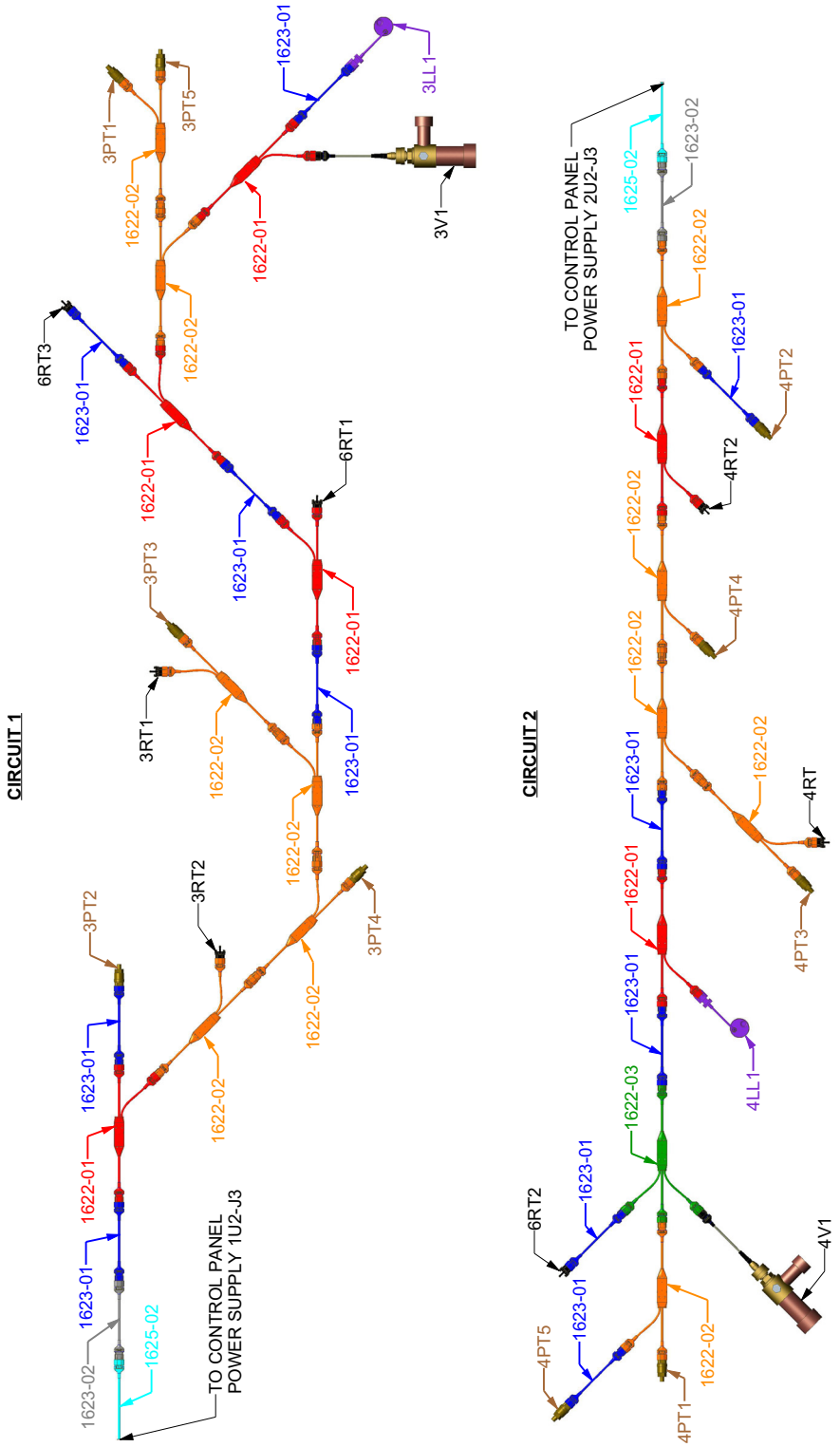


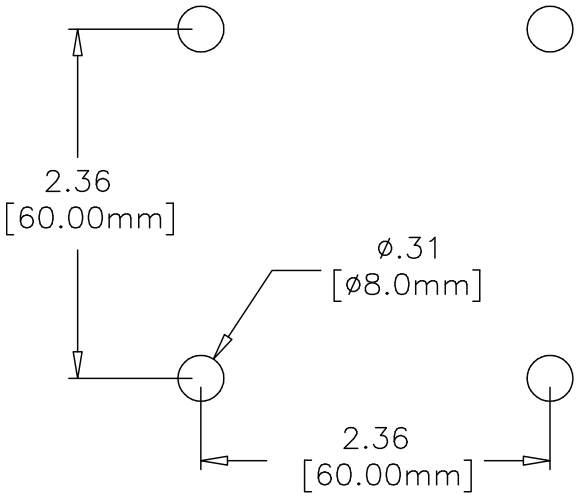
Figure 54. Global harness wiring diagram — 4 compressor unit, 3-pass, 45 foot base



Templates

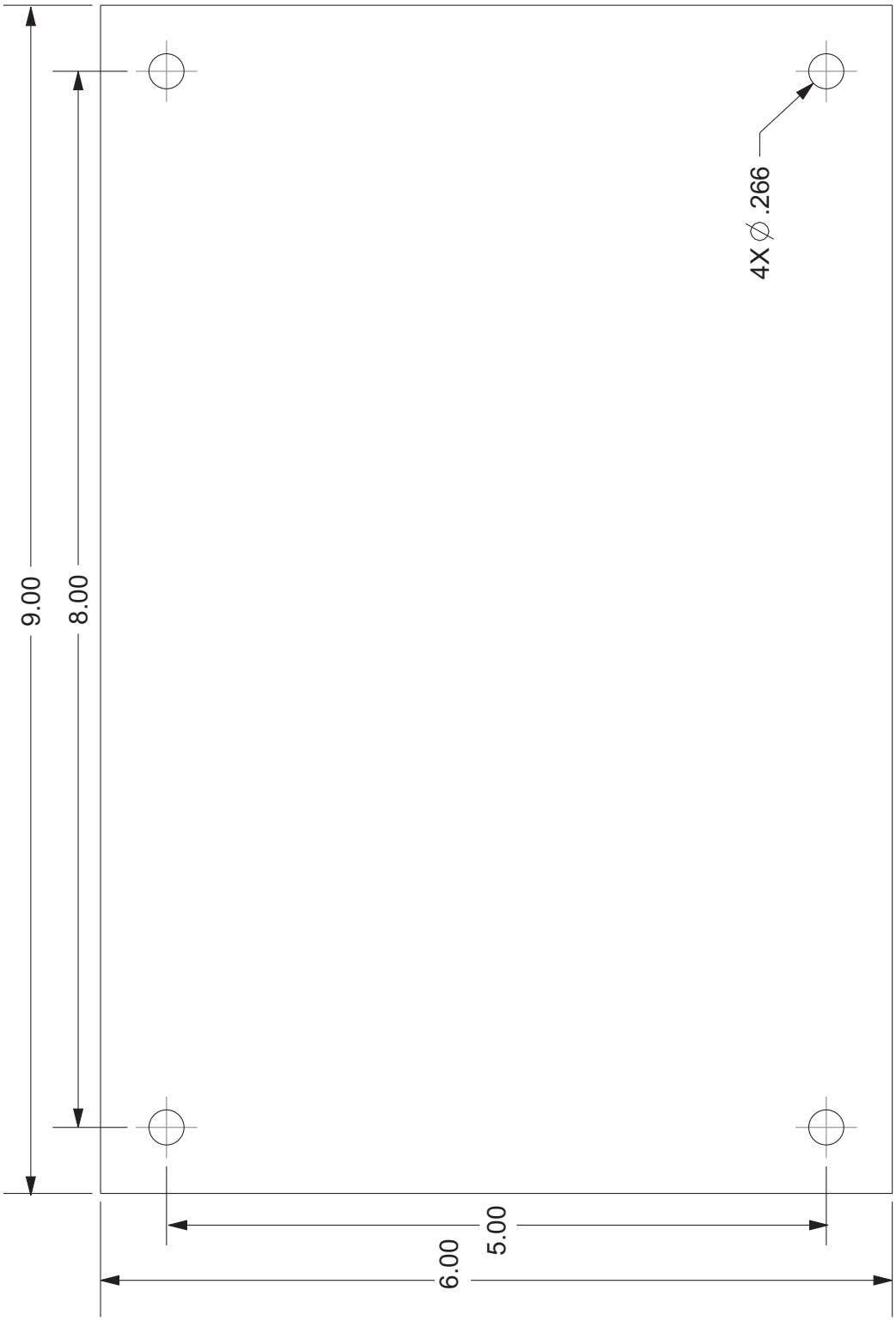
- See Figure 55, p. 47 for arm mount hole template.
- See Figure 56, p. 48 for back plate template.
- See document *RCDA - Template Enclosure Hole Display Upgrade Kit - Installation Instructions* (SO-SVN052*-EN) for enclosure hole template.

Figure 55. Arm mounting holes template, mm (in.)



Note: *Template is shown ACTUAL SIZE.*

Figure 56. Back plate template (in) — actual size



Notes

Trane - by Trane Technologies (NYSE: TT), a global climate innovator - creates comfortable, energy efficient indoor environments for commercial and residential applications. For more information, please visit trane.com or tranetechnologies.com.

SO-SVN031A-EN 13 Oct 2023
Supersedes RCDA-SVN002C-EN (Apr 2020)