

Installation Instructions

GENERAL

The accessory refrigerant pressure transducer and suction superheat package is intended for use with the 48NP/50NB,NP units only. When installed using these installation instructions, this accessory package will improve head pressure control, as well as provide increased diagnostic capability by monitoring compressor discharge and suction pressures and suction superheat. See Package Contents table and Fig. 1 for package contents.

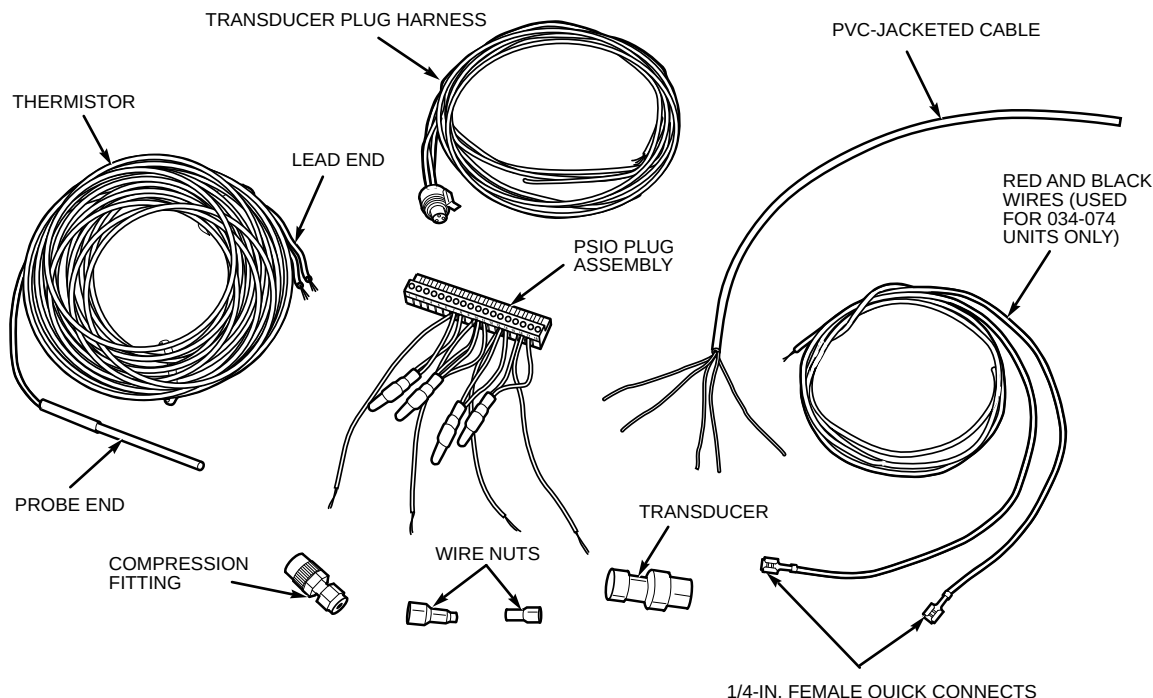
Installation of the discharge pressure transducers in this kit will replace the function of the saturated condensing temperature thermistors (T3 and T4), and installation of the suction pressure transducers will replace the function of the low-pressure switches. The control will no longer require inputs from these thermistors and switches once this installation is complete.

IMPORTANT: The PSIO2 accessory package number 50DJ902431 must also be installed in order to provide suction superheat monitoring.

PACKAGE CONTENTS

ITEM	QUANTITY*
Thermistor	2
Transducer	4
Compression Fitting	2
Wire Nuts (2 types)	13
PSIO1 Plug Assembly	1
Transducer Plug Harness	4
Connection Box	2
Connection Box Cover	2
Connection Box Connector	4
Connection Box Bracket	1
PVC-Jacketed Cable	28 ft
Red and Black Wire Assembly	2
Varnish Cloth	4
Wire Tie	2
Screw	2

*Not all items will be used in each installation. Refer to the Installation section for the items and quantities required for each individual installation. Extra parts not needed may be discarded.



NOTE: Screws, varnish cloth, connectors, connection boxes and covers, and connection box mounting bracket not shown.

Fig. 1 — Package Contents

INSTALLATION

Control Box — Make the control box wiring connections as follows:

024-030 UNITS — Locate the 6-wire harness that enters the upper left hand side of the unit control box. See Fig. 2. Locate the one red wire and one black wire in the harness. Each of these wires will have a ¼-in. quick-connect terminal attached to the free end. Connect the red wire to TB2 (terminal block), terminal 4. Connect the black wire to TB2, terminal 3. See Fig. 4.

NOTE: For your reference, there will already be a violet wire attached to TB2, terminal 4, and an orange wire attached to TB2, terminal 3.

034,044 UNITS — Locate the red and black wires provided. See Fig. 1. Each wire has a ¼-in. female quick-connect terminal on one end. Connect the red wire to TB3 (terminal block), terminal 10. Connect the black wire to TB3, terminal 9. See Fig. 3.

NOTE: For your reference, there will already be a violet wire attached to TB3, terminal 10, and an orange wire attached to TB3, terminal 9.

054-074 UNITS — Locate the red and black wires provided. See Fig. 1. Each wire has a ¼-in. female quick-

connect terminal on one end. Connect the red wire to TB2 (terminal block), terminal 4. Connect the black wire to TB2, terminal 3. See Fig. 4.

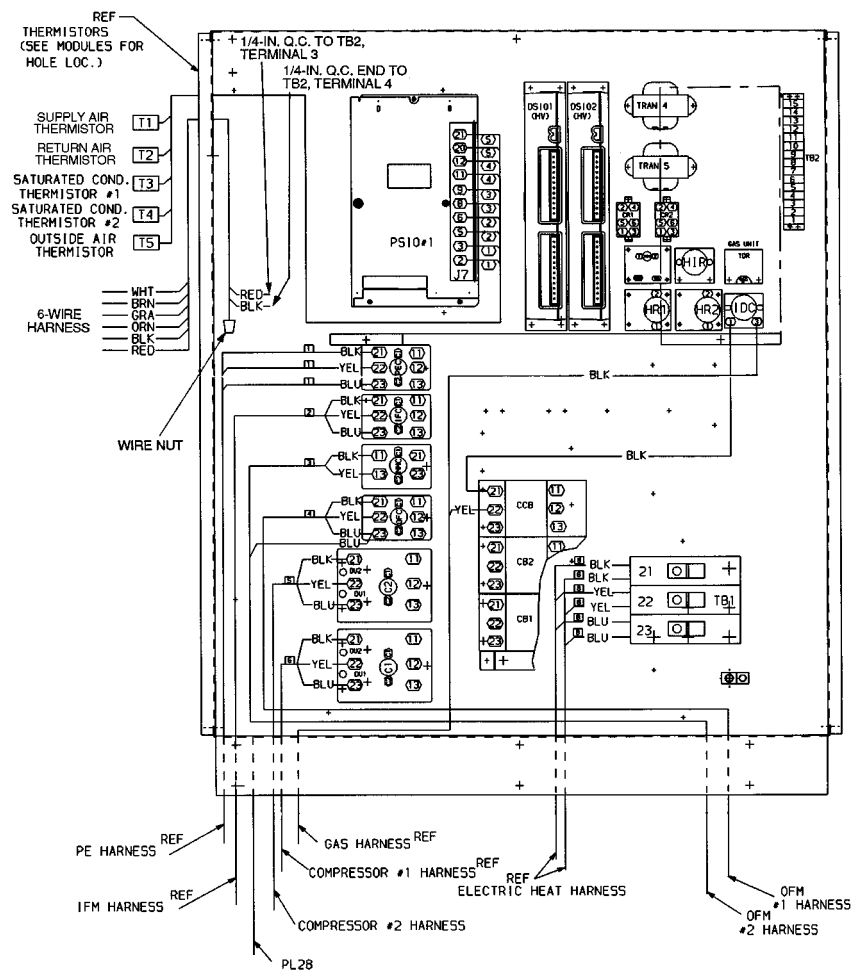
NOTE: For your reference, there will already be a violet wire attached to TB2, terminal 4, and an orange wire attached to TB2, terminal 3.

ALL UNITS — Locate the PSIO1 plug assembly in the accessory kit (see Fig. 1). This will replace plug J7-TOP (pins 1-18) currently in the PSIO1 module. Then:

1. Locate and carefully disconnect the existing J7-TOP plug from the module. The supply-air thermistor (SAT) and return-air thermistor (RAT) must be removed from the J7-TOP and attached to the new plug assembly.

NOTE: The number 1 should be marked on the jacket of the SAT, and the number 2 should be marked on the jacket of the RAT for your reference.

2. Connect the red and black leads from the SAT to terminals 2 and 3 of the new plug, respectively.
3. Connect the red and black leads from the RAT to terminals 5 and 6 of the new plug, respectively.
4. Leave the 2 remaining thermistors and wires connected to the old plug and push it aside (it is no longer used). Carefully connect the new plug to the PSIO1 module.



LEGEND

C	— Contactor
CB	— Circuit Breaker
CR	— Control Relay
DSIO	— High-Voltage Relay Module
DU	— Dummy Terminal
HIR	— Heat Interlock Relay
HR	— Heater Relay
IFC	— Indoor (Evaporator) Fan Contactor
IFM	— Indoor (Evaporator) Fan Motor
OFM	— Outdoor (Condenser) Fan Motor
PE	— Power Exhaust
PEC	— Power Exhaust Contactor
PSIO	— Processor Module
QC	— Quick Connect
TB	— Terminal Block
TDR	— Time-Delay Relay
TRAN	— Transformer

Fig. 2 — Control Box, 024-030

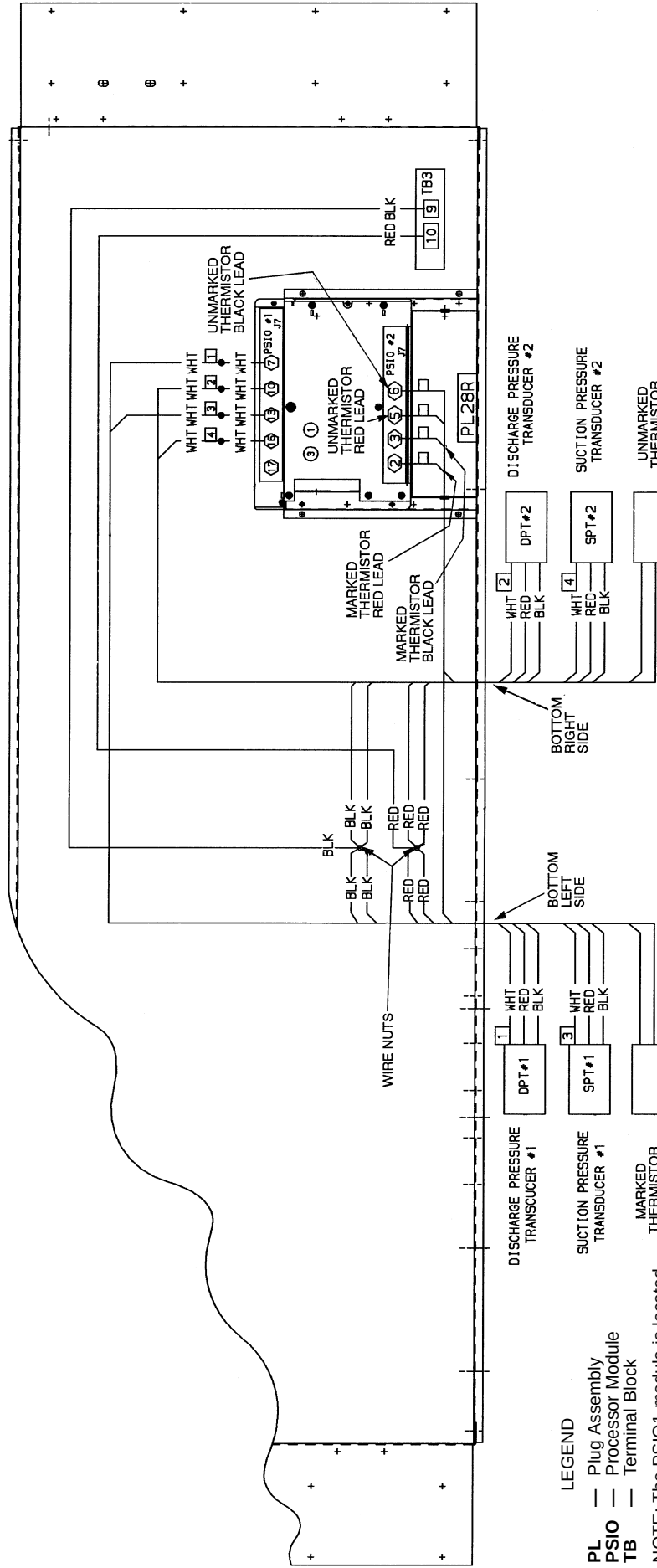
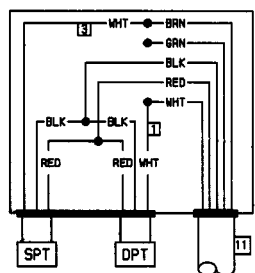
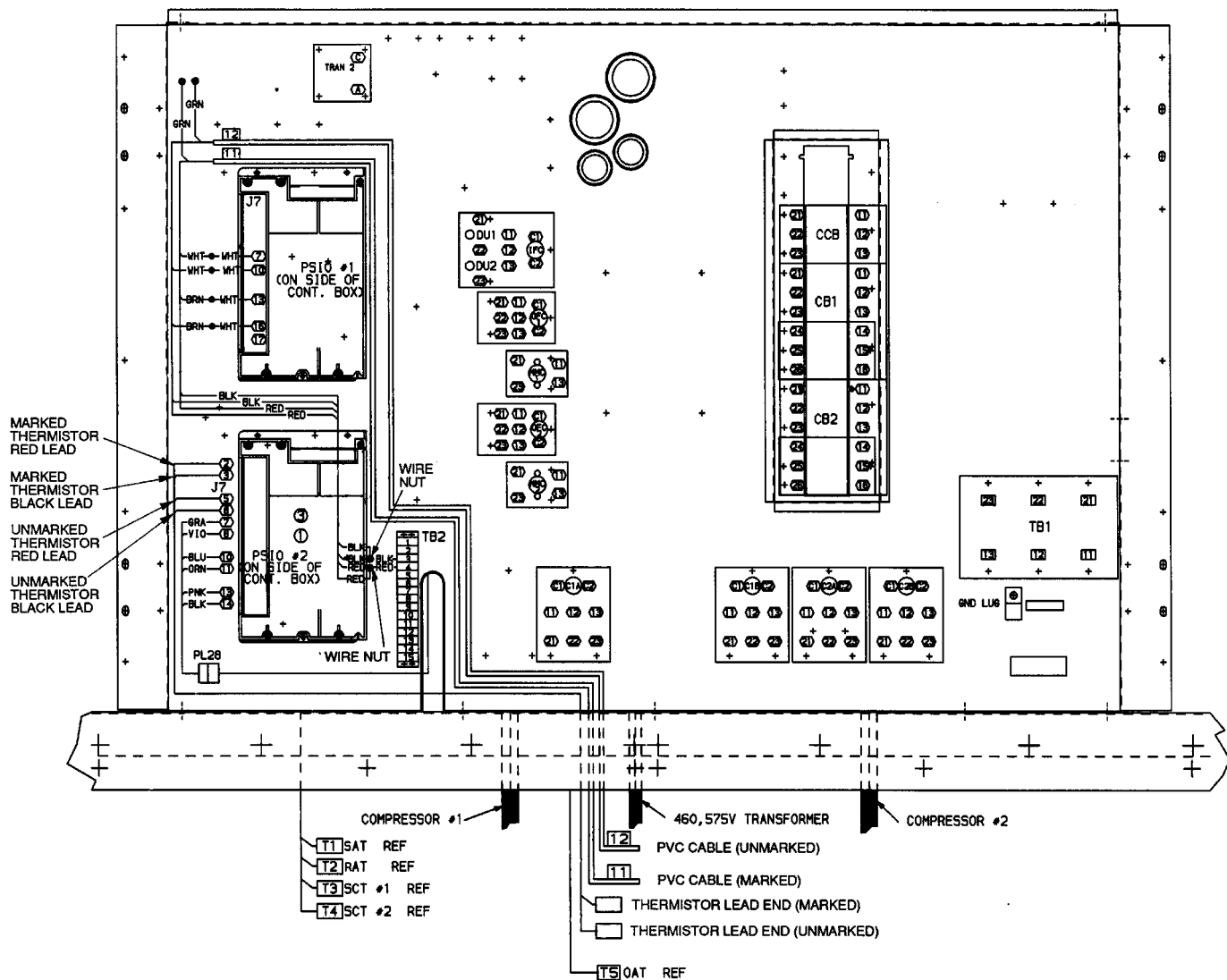
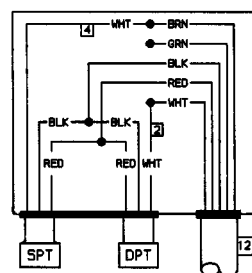


Fig. 3 — Control Box, 034,044



COMPRESSOR #1 CONNECTION BOX WIRING (MARKED CABLE)



COMPRESSOR #2 CONNECTION BOX WIRING (UNMARKED CABLE)

LEGEND

C	— Contactor	OAT	— Outdoor-Air Thermostat
CB	— Circuit Breaker	OFC	— Outdoor (Condenser) Fan Contactor
CCB	— Control Circuit Breaker	PSIO	— Processor Module
CONT	— Control	RAT	— Return Air Thermistor
DPT	— Discharge Pressure Transducer	SAT	— Supply Air Thermistor
DU	— Dummy Terminal	SCT	— Saturated Condensing Thermistor
GND	— Ground	SPT	— Suction Pressure Transducer
IFC	— Indoor (Evaporator) Fan Contactor	TB	— Terminal Block
MMC	— Head Pressure Control Device	TRAN	— Transformer

Fig. 4 — Control Box and Connection Boxes, 054-074

Thermistor and PSIO Module Wiring

024-030 UNITS — Connect the thermistors and transducer harness wires as follows:

1. Locate the 2 thermistors provided (See Fig. 1).
2. Mark both ends of one of the thermistors.
3. Run the lead end of both thermistors into the control box through the field wiring opening on the right-hand side of the control box and over to the accessory PSIO2 (See Fig. 5).
4. Connect the red and black leads from the marked thermistor to PSIO2, plug J7-TOP, pins 2 and 3, respectively. See Fig. 5.
5. Connect the red and black leads from the unmarked thermistor to PSIO2, plug J7-TOP, pins 5 and 6, respectively. See Fig. 5.
6. Locate the harness with the 6 wires in the control box (the same harness used previously. Four of the wires (brown, orange, white, and gray) are connected together with a wire nut (See Fig. 2). Remove this wire nut from the 4 wires, and strip each one back ½ inch.
7. Connect the brown wire to the white wire from PSIO1, plug J7-TOP, pin 7, using the wire nut provided.
8. Connect the orange wire to the white wire from pin 10 of the same plug used in Step 7 using the wire nut provided.
9. Connect the white wire to the white wire from pin 13 of the same plug used in Step 7 using the wire nut provided.
10. Connect the gray wire to the white wire from pin 16 of the same plug used in Step 7 using the wire nut provided.

11. Run the other ends of the 2 thermistors (probe ends) underneath the baffle in the condenser section over to the compressors with the marked thermistor going to compressor no. 1. See Fig. 6 and 7.

034,044 UNITS — Connect the thermistors and transducer harness wires as follows:

1. Locate the 2 thermistors and 4 transducer plug harnesses provided (see Fig. 1).
2. Mark both ends of one of the thermistors.
3. Mark each of the transducer plug harness white wires with different marks so that they can be easily distinguished.
4. Run 2 of the transducer harnesses and the marked thermistor lead ends up through the bottom left side of the control box and over to the PSIO modules (See Fig. 3).
5. Run the other 2 transducer harnesses and the unmarked thermistor lead ends up through the bottom right side of the control box and over to the PSIO modules.
6. Connect the red and black leads from the marked thermistor to PSIO2, plug J7-TOP, pins 2 and 3.
7. Connect the red and black leads from the unmarked thermistor to PSIO2, plug J7-TOP, pins 5 and 6.
8. Connect all 4 red wires from the transducer harnesses (with a wire nut provided) to the other end of the red wire that was connected to TB3 earlier. See Fig. 3.

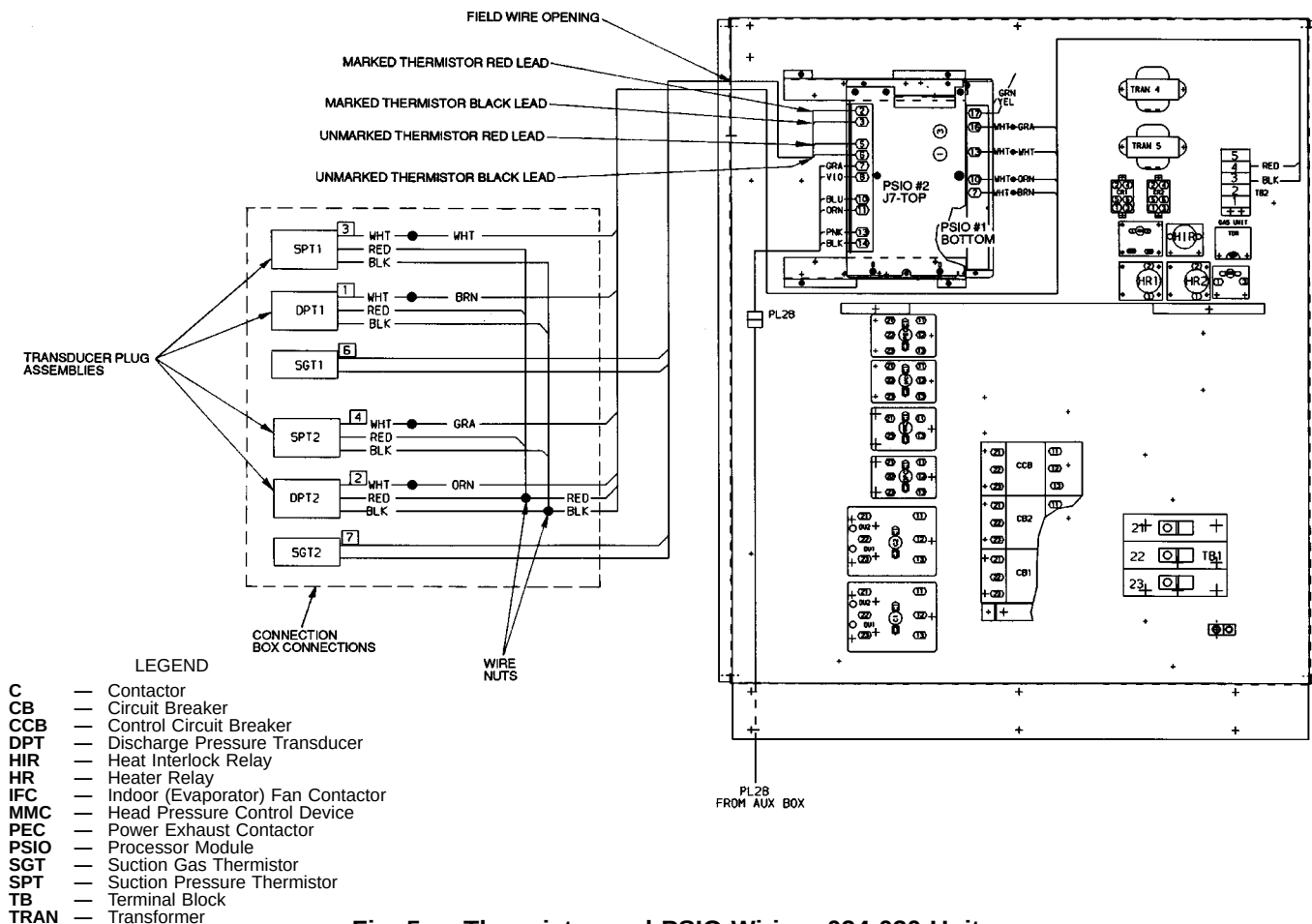


Fig. 5 — Thermistor and PSIO Wiring, 024-030 Units

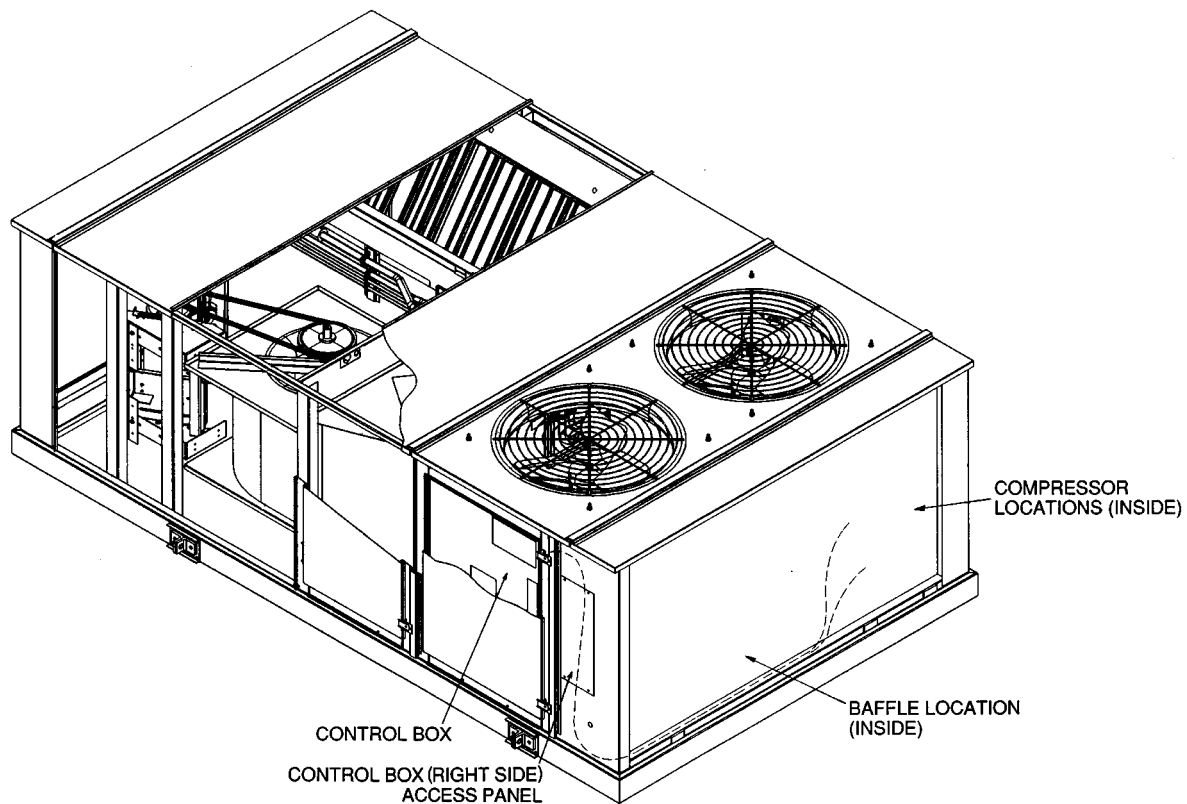


Fig. 6 — Control Box Location and Thermistor Routing, 024-030

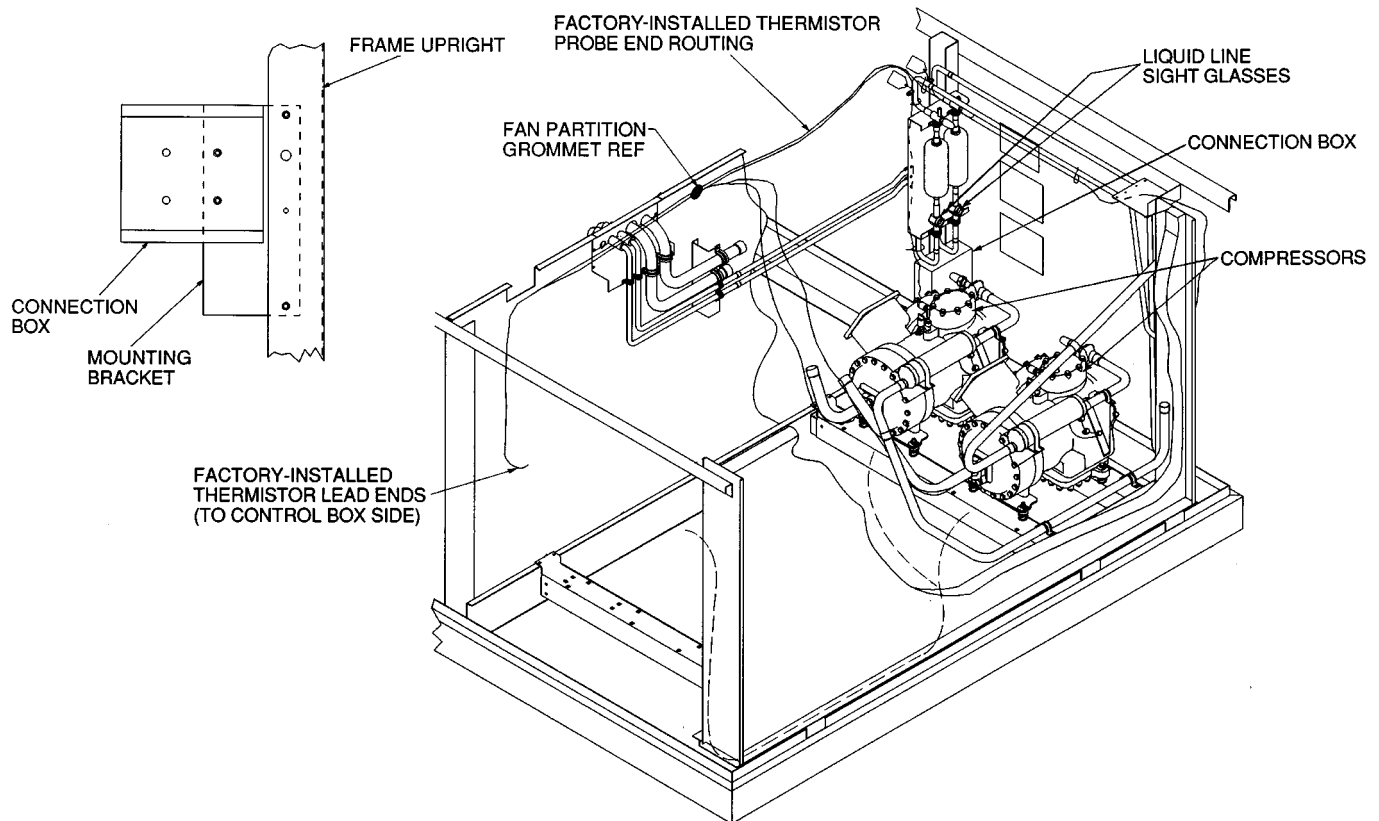


Fig. 7 — Thermistor Probe End Routing, 024-030 Units

9. Connect all four black wires from the transducer harnesses (with a wire nut provided) to the other end of the black wire that was connected to TB3 earlier. See Fig. 3.
10. Connect the white wires from the transducer harnesses to the white wires from the PSIO1 plug assembly as follows (See Fig. 3):
 - a. Connect the 2 white wires from the harnesses that were brought in through the left side of the control box in Step 4 to PSIO1, J7-TOP. Connect one to the white wire from terminal 7 and the other to the white wire from terminal 13.
 - b. Connect the two white wires from the harnesses that were brought in through the right side of the control box in Step 5 to the white wires coming from PSIO1, J7-TOP. Connect one to the white wire from terminal 10, and the other to the white wire from terminal 16.
 - c. Run the probe ends of the 2 thermistors and the plug ends of the wires on the 4 harnesses to the compressors for installation.

054-074 UNITS — Connect the thermistors and transducer harness wires as follows:

1. Locate the 2 thermistors and the 28-ft long coil of PVC-jacketed cable.
2. Mark both ends of one of the thermistors.
3. Cut the coiled cable into 2 equal lengths and mark both ends of one of the lengths.
4. Run one end of each of the cable pieces and the lead end of each of the thermistors through the field wiring opening and into the control box (See Fig. 4).
5. Connect the red and black leads from the marked thermistor to PSIO2, plug J7-TOP, pins 2 and 3.
6. Connect the red and black leads from the unmarked thermistor to PSIO2, plug J7-TOP, pins 5 and 6.
7. Strip back the first 6 inches of the jacket on both PVC cables from Step 3. There should be 5 wires: one each of red, black, green, white, and brown. In the event that the colors do not match, substitute the alternate color(s) into these instructions so that this accessory will be properly wired.

NOTE: See Fig. 4 for Steps 8-14, below.

8. Strip back the red wire from each cable and connect it with a wire nut (provided) to the red wire from TB2.
9. Strip back the black wire from each cable and connect it with a wire nut (provided) to the black wire from TB2.

NOTE: The green wire from each cable WILL NOT be used. Cut the green wire so that it is flush with the PVC cable.

10. Using the wire nut provided, connect the white wire from the marked cable to the white wire from PSIO1, plug J7-TOP, pin 7.
11. Using the wire nut provided, connect the brown wire from the marked cable to the white wire from PSIO1, plug J7-TOP, pin 13.
12. Using the wire nut provided, connect the white wire from the unmarked cable to the white wire from PSIO1, plug J7-TOP, pin 10.
13. Using the wire nut provided, connect the brown wire from the unmarked cable to the white wire from PSIO1, plug J7-TOP, pin 16.
14. Run the other ends of the 2 cables and 2 thermistors out to the compressor section with the marked cable and thermistor going to compressor no. 1.

Compressor Section Wiring — This section will detail the accessory kit wiring in the compressor section. When instructed to plug each transducer into its respective harness, do so and leave the transducer open to atmosphere and near where it will need to be installed (either the discharge service valve or the low-pressure switch location). Each transducer will have to be calibrated BEFORE actual installation onto the compressor.

024-034 UNITS — To wire the compressor section:

1. Locate the sheet metal mounting bracket, the connection boxes (only one is needed for this installation), the connection box covers, the connectors, the varnish cloth, and the screws in the accessory package.
2. Mount the sheet metal bracket to the frame (upright) below the liquid line sight glasses (see Fig. 7), using the screws provided.
3. Mount one of the connection boxes onto the bracket using the screws provided.
4. Use 2 of the knockouts on the connection box and install 2 wiring connectors.
5. Run the other end of the 6-wire harness through one of the connectors and into the connection box using a piece of varnish cloth.

NOTE: Harness can be found wire-tied to one of the liquid lines.

6. Locate the 4 transducer plug harnesses and the 4 transducers in the accessory kit.
7. Plug one into each transducer, and mark both ends of each white wire differently so they can be differentiated. Run the other ends of the harnesses into the other connector and into the connection box using a piece of varnish cloth.
8. Using a wire nut (provided), connect the 4 red wires from the transducer harnesses to the red wire from the unit 6-wire harness. See Fig. 5.
9. Using a wire nut (provided), connect the 4 black transducer harness wires to the black wire from the unit 6-wire harness. See Fig. 5.
10. Connect the white wire from compressor no. 1 discharge transducer harness to the brown wire from the unit harness (See Fig. 5).
11. Connect the white wire from compressor no. 1 suction transducer harness to the white wire from the unit harness (See Fig. 5).
12. Connect the white wire from compressor no. 2 discharge transducer harness to the orange wire from the unit harness (See Fig. 5).
13. Connect the white wire from compressor no. 2 suction transducer harness to the gray wire from the unit harness (See Fig. 5).
14. Install the cover on the connection box.

034,044 UNITS — To wire the compressor section:

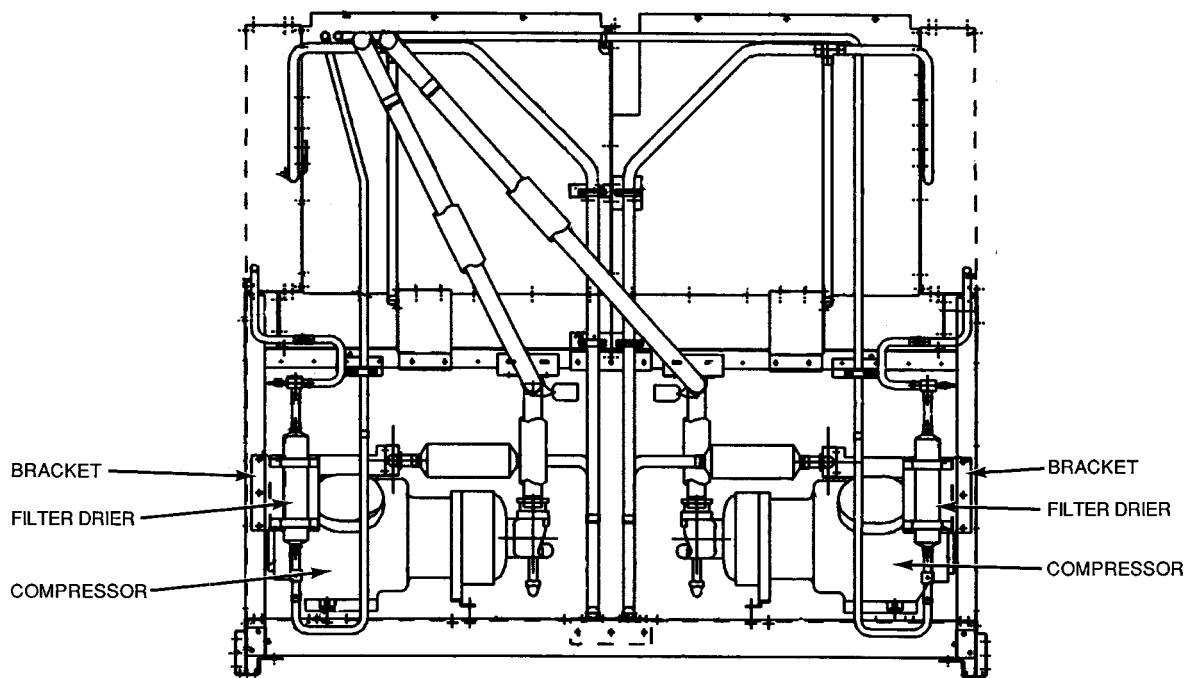
1. Locate the transducer plugs that were run up through the bottom left-hand side of the control box (See Fig. 3).
2. Connect the transducer plug harness (the one where the white wire on the other end is connected to PSIO1, J7-TOP, pin 7) to the discharge pressure transducer for compressor no. 1.
3. Connect the other plug harness (the one where the white wire on the other end is connected to PSIO1, J7-TOP, pin 13) to the suction pressure transducer for compressor no. 1.
4. Locate the transducer plugs that were run up through the bottom right-hand side of the control box (See Fig. 3).

5. Connect the transducer plug harness (the one where the white wire on the other end is connected to PSIO1, J7-TOP, pin 10) to the discharge pressure transducer for compressor no. 2.
6. Connect the other plug harness (the one where the white wire on the other end is connected to PSIO1, J7-TOP, pin 16) to the suction pressure transducer for compressor no. 2.

054-074 UNITS — To wire the compressor section:

1. Locate the 2 connection boxes, 2 covers, 4 connectors, the varnish cloth, and the screws in the accessory package.
2. Mount one of the connection boxes on the compressor side of each of the filter drier brackets (See Fig. 8).
3. Using 2 of the knockouts on each box, install 2 connectors for wiring in each box.
4. Run the marked wire cable through one connector of the box for compressor no. 1 (located on the left when viewing mounted boxes from the control box end) using varnish cloth.
5. Run the unmarked wire cable through one connector of the box for compressor no. 2 (located on the right when viewing mounted boxes from the control box end) using varnish cloth.

6. Locate the 4 transducer plug harness assemblies in the accessory package.
7. Plug one of these into the discharge and suction transducers for each compressor. Mark the white wire in the discharge transducer harness for each compressor.
8. Run two transducer harnesses into the connection box closest to each compressor. (One marked and one unmarked harness will go into each box.)
9. In each connection box, connect the red wire from the 2 transducer harnesses to the red wire from the cable, and the black wire from the harnesses to the black wire from the cable using the wire nuts provided. See Fig. 4.
10. In each connection box, connect the white wire from each transducer harness connected to the discharge pressure transducer (marked) to the white wire from the cable using the wire nuts provided. See Fig. 4.
11. In each connection box, connect the white wire from each transducer harness connected to the suction pressure transducer (unmarked) to the brown wire from the cable using the wire nuts provided. See Fig. 4.
12. Install a cover on each of the connection boxes.



NOTE: The connection box is mounted on the back side of the bracket between the filter drier and compressor.

Fig. 8 — Connection Box Location, 054-074 Units

Controls Configuration and Calibration — Before installing the transducers into the compressors, the controls must be reconfigured and the transducers calibrated. Proceed as follows:

1. Reconnect power to the rooftop unit.
2. Turn on the unit control circuit breaker (CCB).
3. Turn the ON/OFF switch located on the fuse/circuit breaker bracket to the ON position.
4. Use the accessory HSIO keypad and display module (see Fig. 9) to perform the following:

HSIO ENTRY	KEYPAD DISPLAY	ACTION BEING TAKEN
1 [SRVC]	LOG ON	Enter login function
1 1 1 1 [ENTR]	LOGGEDON	Logging in
3 [SRVC]	FACT CFG	Enter factory configuration function
↓	TYPE X	None at this time
↓	AWTP 0	None at this time
↓	SIZE X	None at this time
↓	ULOP X	None at this time
↓	HPSP 113	None at this time
↓	HEAT X	None at this time
↓	HTSG 2	None at this time
↓	TRNS NO	None at this time
1 [ENTR]	TRNS YES	Configure unit
6 [SRVC]	USER CFG	Enter user configuration function
↓	HUSN X	None at this time
↓	SUSN NO	None at this time
1 [ENTR]	SUSN YES	Configure unit
3 [SRVC]	FACT CFG	Enter factory configuration function
↑	SPB CALB	None at this time
↑	SPA CALB	None at this time
↑	DPB CALB	None at this time
↑	DPA CALB	None at this time
↑	DTRS NO	None at this time
1 [ENTR]	DTRS YES	Reset processor

LEGEND

AWTP — Air/Water Type	HTSG — Number of Heat Stages
DP — Discharge Pressure Sensor	SIZE — Unit Size
DTRS — Data Reset	SP — Suction Pressure Sensor
HEAT — Heat Type	SUSN — Suction Sensors
HPSP — Head Pressure Set Point	TRNS — Transducers
HUSN — Humidity Sensors	ULOP — Number of Unloaders

After approximately 20 seconds, the HSIO keypad and display module will resume its normal rotating display indicating that the reconfiguration is complete. After the HSIO resumes its normal rotating display, perform the following:

HSIO ENTRY	KEYPAD DISPLAY	ACTION BEING TAKEN
1 [SRVC]	LOG ON	Enter login function
1 1 1 1 [ENTR]	LOGGEDON	Logging in
3 [SRVC]	FACT CFG	Enter factory configuration function
↑	SPB CALB	
1 [ENTR]	SPB CALB	Calibrate SPB transducer
↑	SPA CALB	
1 [ENTR]	SPA CALB	Calibrate SPA transducer
↑	DPB CALB	
1 [ENTR]	DPB CALB	Calibrate DPB transducer
↑	DPA CALB	
1 [ENTR]	DPA CALB	Calibrate DPA transducer

DP — Discharge Pressure
SP — Suction Pressure

At this point, the unit configuration and transducer calibration is complete. To ensure that the calibration was performed properly and that the suction thermistors are reading correctly, proceed to the following system temperature check:

HSIO ENTRY	KEYPAD DISPLAY	READING NAME (EXPECTED DISPLAY)
6 [STAT]	TEMPS	System temperatures
↓	SCTA X	Saturated condensing temperature, circuit A (–41 F)
↓	STA X	Suction temperature, circuit A (–41 F)
↓	SSTA X	Saturated suction temperature, circuit A (–41 F)
↓	SHA X	Superheat, circuit A (STA-SSTA)
↓	SCTB X	Saturated condensing temperature, circuit B (–41 F)
↓	STB X	Suction temperature, circuit B (–41 F)
↓	SSTB X	Saturated suction temperature, circuit B (–41 F)
↓	SHB X	Superheat, circuit B (STB-SSTB)

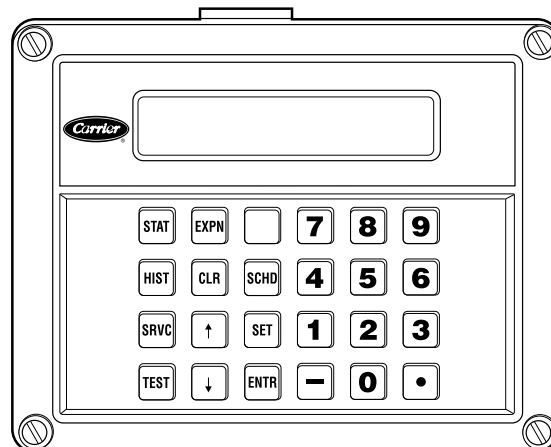


Fig. 9 — HSIO Display Module

Suction temperature readings of -40.0 or 245.0 indicate an open or shorted circuit (respectively). Verify that the wiring connections to PSIO2 have been made correctly. If the readings above are satisfactory, then proceed with the following system pressure check:

HSIO ENTRY	KEYPAD DISPLAY	READING NAME (EXPECTED DISPLAY)
7 STAT	PRESSURE	System pressures
↓	DPA X	Discharge pressure, circuit A (0.0 psig)
↓	SPA X	Suction pressure, circuit A (0.0 psig)
↓	DPB X	Discharge pressure, circuit B (0.0 psig)
↓	SPB X	Suction pressure, circuit B (0.0 psig)

Pressure readings other than 0.0 psig at this point indicate that the calibration for that transducer was unsuccessful. Repeat the calibration procedure above for any transducer value that is ± 1.0 psig. After the Transducer Installation section below is completed, this system pressure check will be repeated.

Transducer Installation

DISCHARGE PRESSURE TRANSDUCER (ALL UNITS — SEE FIG. 10-12)

- 1. Remove the discharge valve stem cap and fully backseat the valve.

- 2. Remove the flare cap from the fitting threaded into the discharge valve body.
- 3. Unplug the harness from the proper transducer.
- 4. Thread the transducer onto the flare fitting and tighten. See Fig. 13-16.
- 5. Reconnect the transducer harness plug.
- 6. Turn the valve stem 1 to 1½ full turns clockwise.
- 7. Replace valve stem cap.
- 8. Repeat Steps 1-7 for the other compressor.

SUCTION PRESSURE TRANSDUCER (ALL UNITS)

- 1. Locate and remove the low-pressure switch on the compressor (See Fig. 10-12).
- 2. Unplug the harness from the proper transducer.
- 3. Thread the transducer onto the flare fitting and tighten. See Fig. 13-16.
- 4. Reconnect the transducer harness plug.
- 5. Open the compressor electrical junction box, and follow the low-pressure switch leads to the box.
- 6. Cut the 2 low-pressure-switch leads just outside of the box, and pull the leads through the connector and into the box.
- 7. Strip each lead back ½-in., twist leads together, and connect them with a wire nut (provided).
- 8. Replace the cover on the compressor electrical junction box. The low-pressure switch will no longer be used.
- 9. Repeat Steps 1-8 for the other compressor.

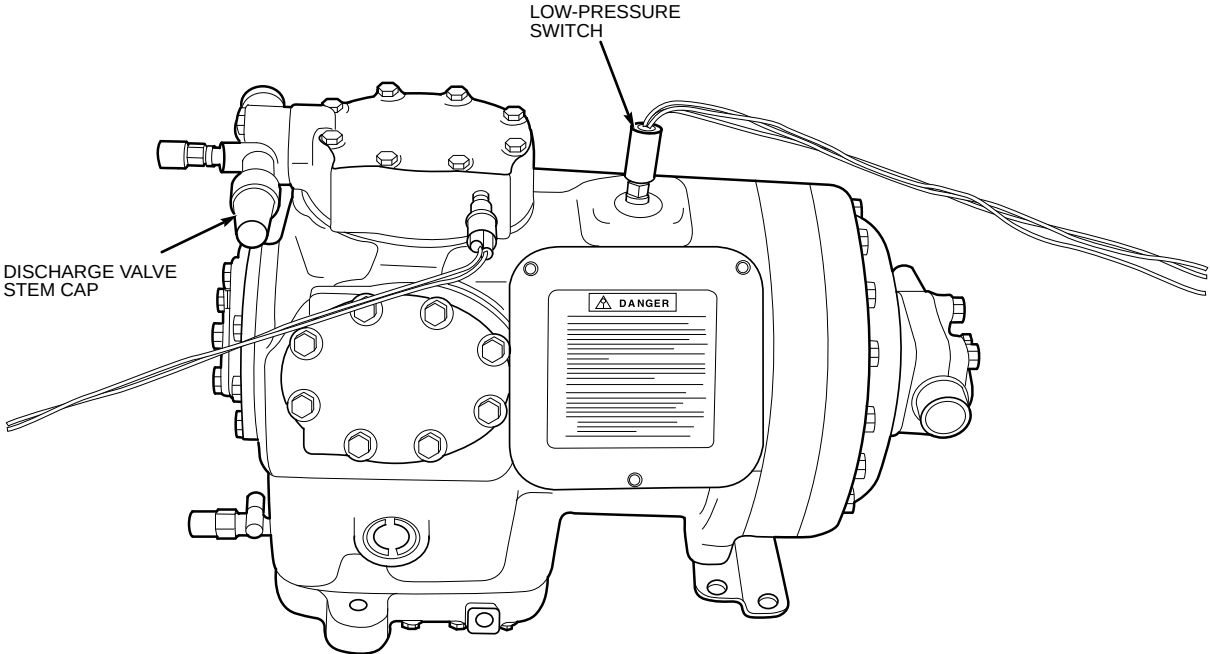


Fig. 10 — Low-Pressure Switch and Discharge Valve Stem Cap Locations (024-034 Units)

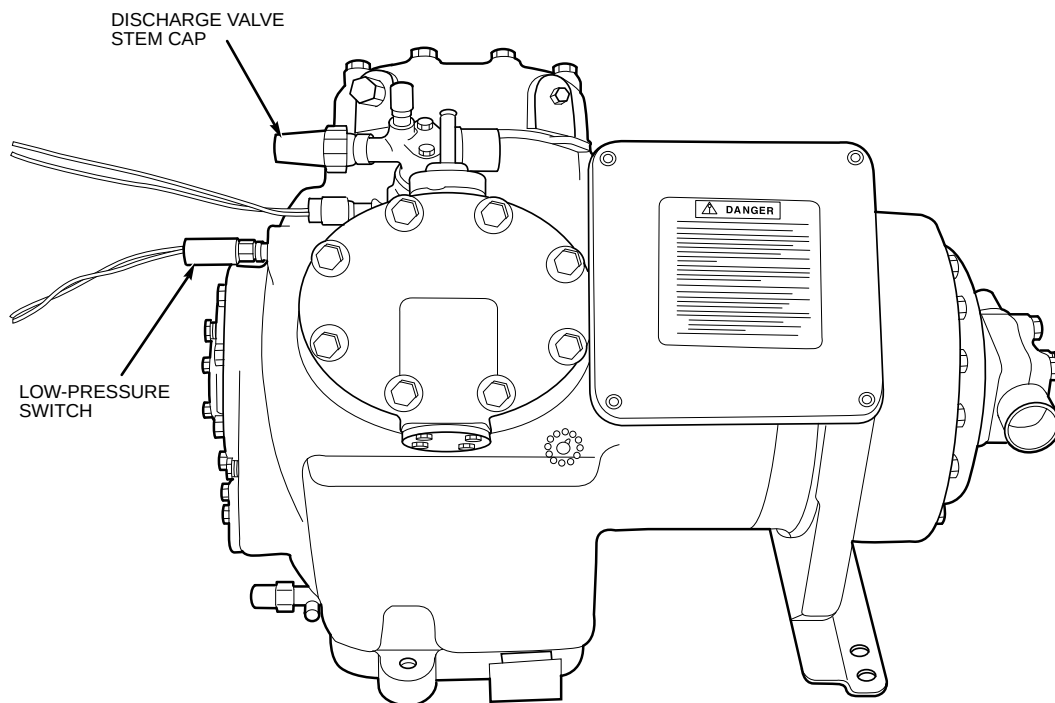


**Fig. 11 — Low-Pressure Switch and Discharge Valve Stem Cap Locations
(044 Units, Compressors 1 and 2; 054 Units, Compressor 2)**

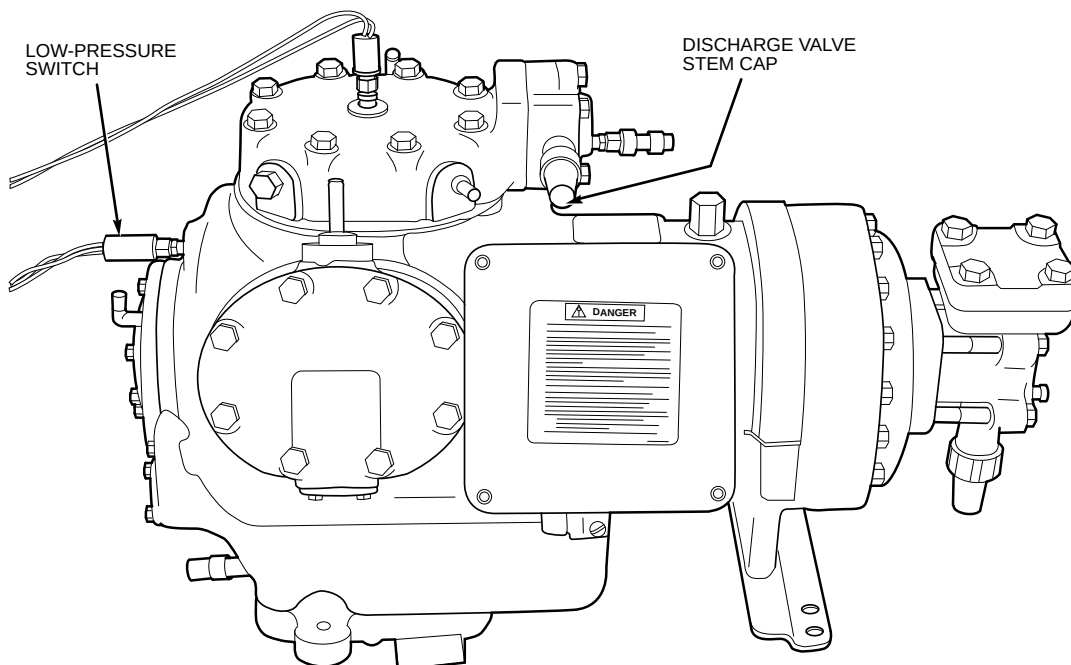


**Fig. 12 — Low-Pressure Switch and Discharge Valve Stem Cap Locations
(054 Units, Compressor 1; 064,074 Units, Compressors 1 and 2)**

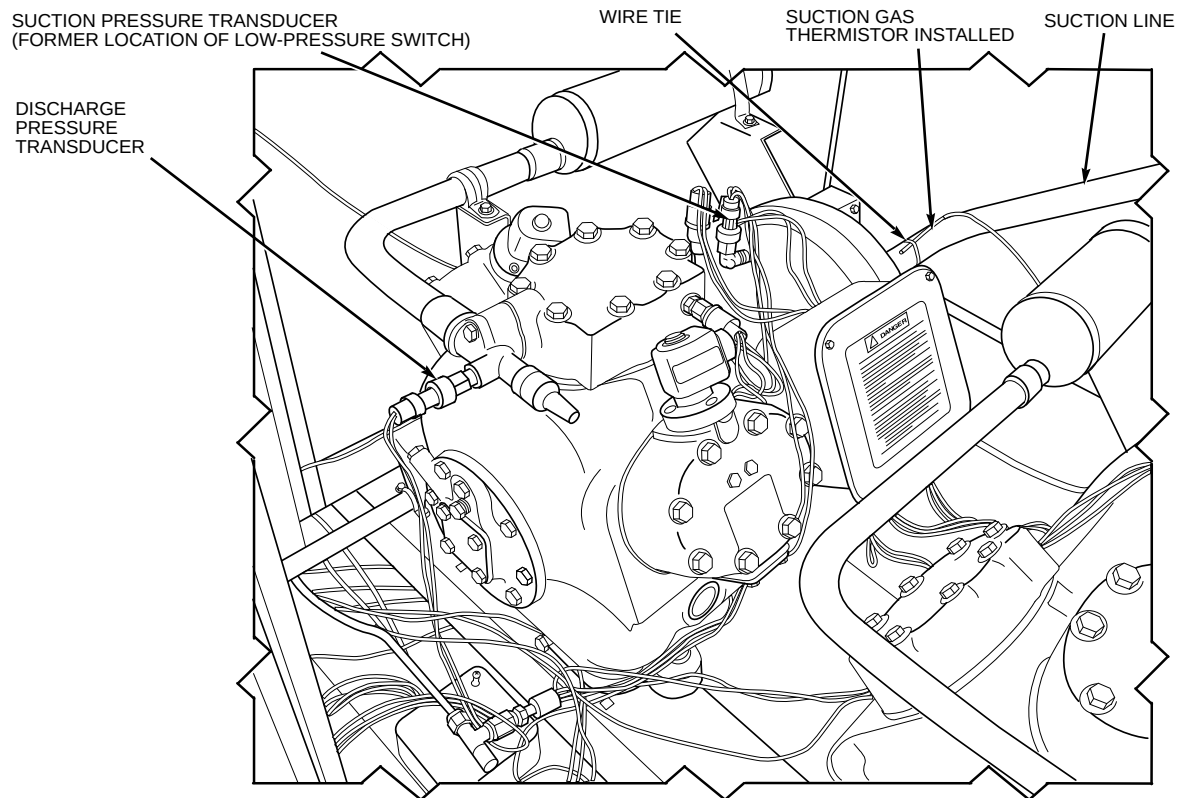


Fig. 13 — Transducers and Thermistor Installed (024-030 Units)

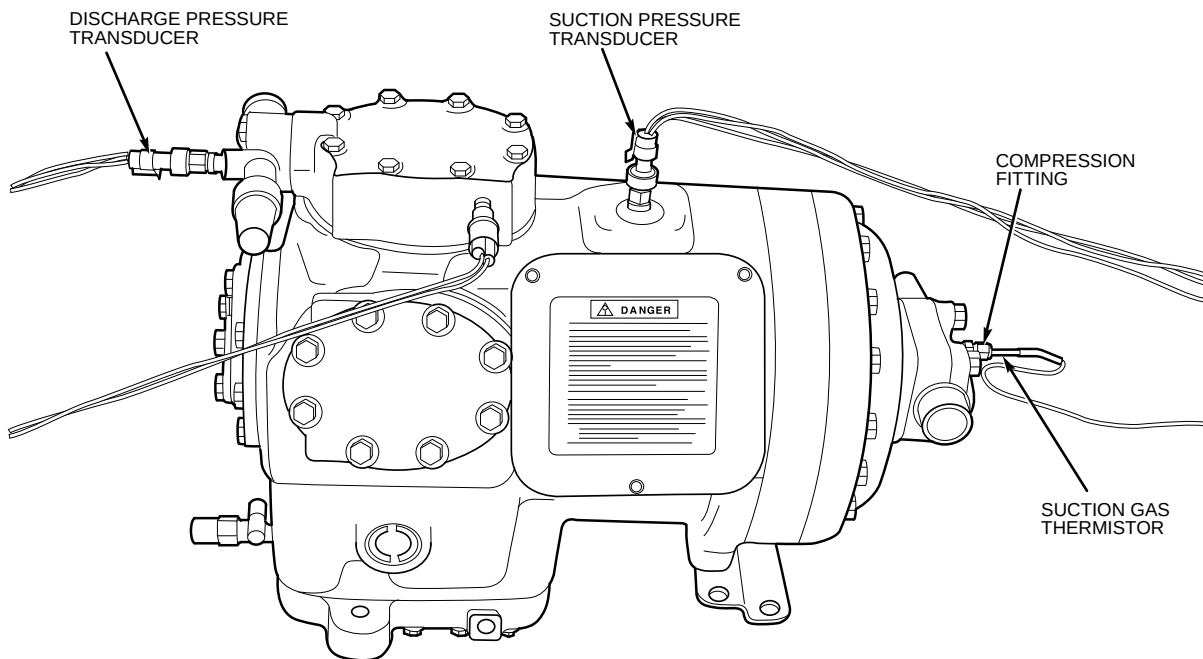


Fig. 14 — Transducers and Thermistor Installed (034 Units)

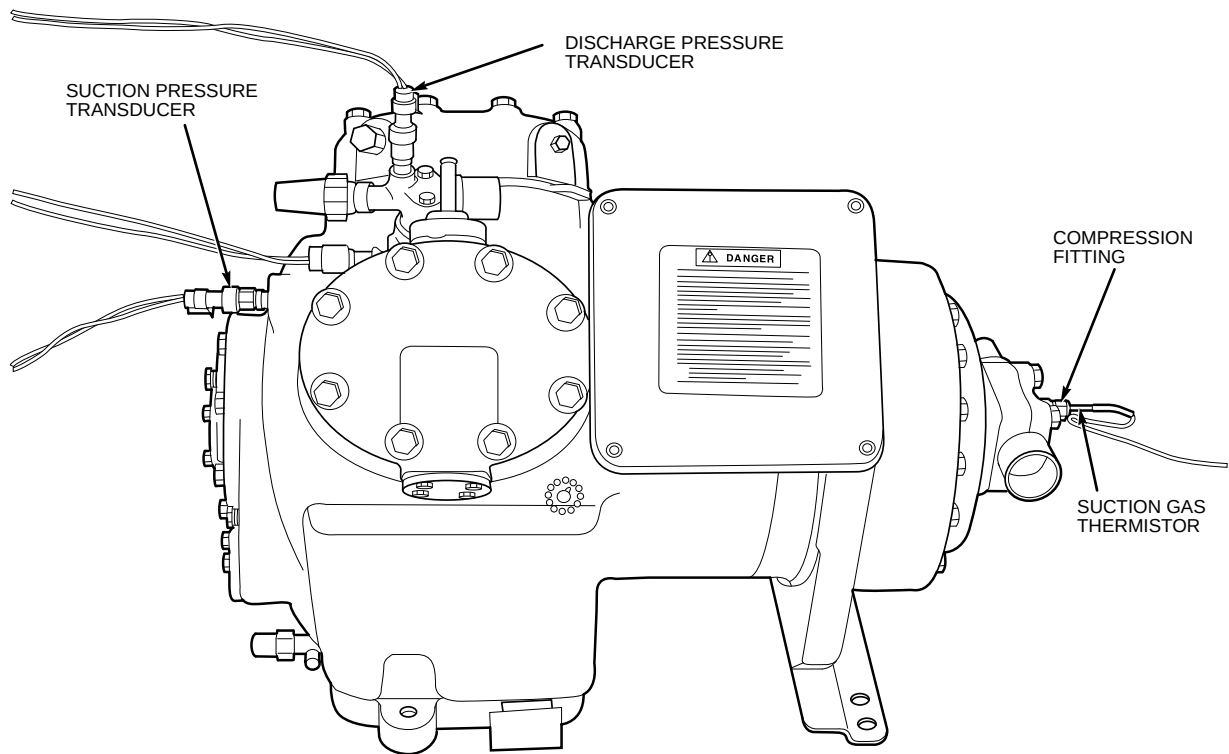


**Fig. 15 — Transducers and Thermistor Installed (044 Units, Compressors 1 and 2;
054 Units, Compressor 2)**

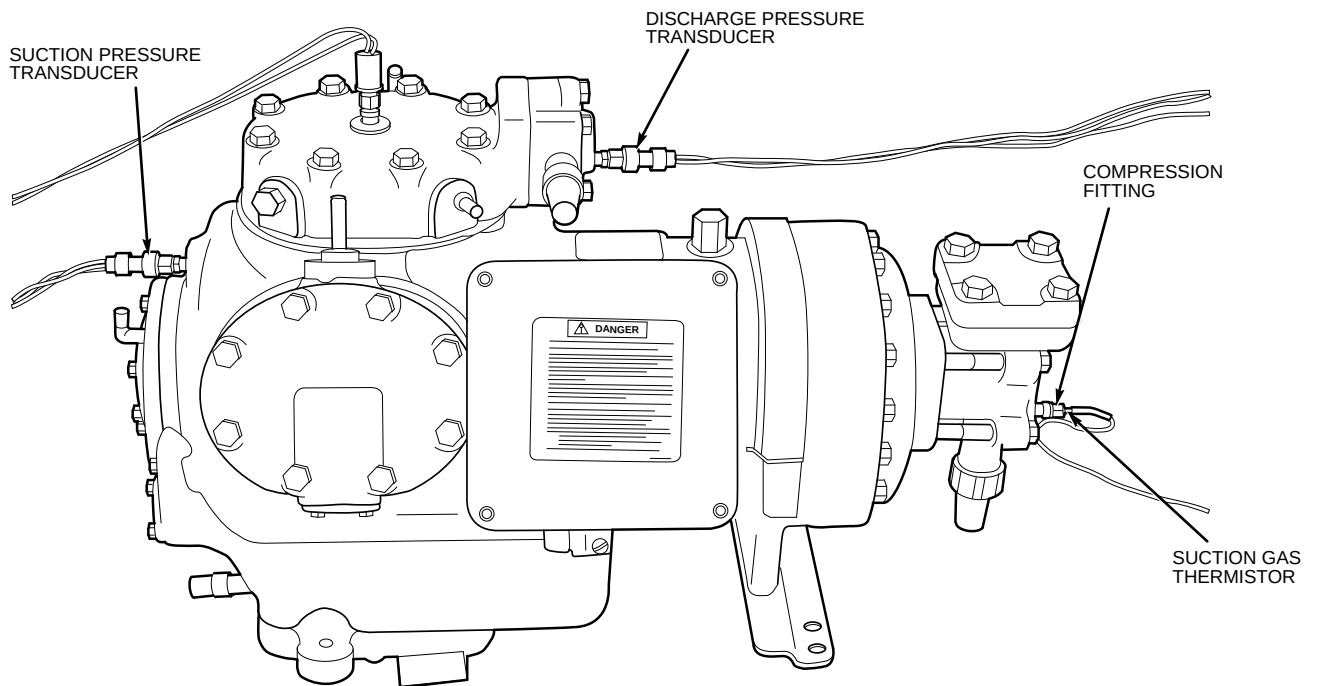


**Fig. 16 — Transducers and Thermistor Installed (054 Units, Compressor 1;
064,074 Units, Compressors 1 and 2)**

SUCTION GAS THERMISTOR — The thermistors that were wired into the control box must now be installed on each compressor.

024-030 Units — Install the marked thermistor onto compressor no. 1 (the compressor on the left when viewing both compressors from the compressor section door). To do so:

1. Lay the thermistor flat and in parallel with the suction line between the compressor suction flange and the first bend in the line (See Fig. 13).
2. Use a wire tie to secure the thermistor to the suction line.
3. Use an insulating compound (such as Press-Tite or similar) to completely surround the stainless steel probe. This will improve the accuracy of the suction superheat reading.
4. Follow the procedures in Steps 1-3 above to install the unmarked thermistor onto the suction line of compressor no. 2 (the compressor on the right when viewing both compressors from the compressor section door).

034-074 Units — Compressor no. 1 is located on the left (when viewing the compressors from the control box end of the unit).

1. Remove the suction valve stem cap and fully backseat the valve.
2. Remove the plug fitting threaded into the valve body.
3. Using a suitable thread sealant, install a compression fitting (provided) into the valve body of compressor no. 1 and tighten (See Fig. 14-16).
4. Loosen the compression nut from the fitting and slide the marked thermistor probe into the compression fitting body (through the nut).
5. Push the thermistor probe into the compression fitting body until it touches the valve stem.
6. Back the thermistor out slightly, snug compressor nut by hand, and tighten $\frac{3}{4}$ to 1 full turn with a wrench to ensure a tight seal. **DO NOT OVERTIGHTEN.**
7. Turn the valve stem 1 to $1\frac{1}{2}$ full turns clockwise. Check compression fitting seal for leaks, and tighten nut if necessary.
8. Replace the valve stem cap.
9. Follow the procedures in Steps 1-8 above to install the unmarked thermistor into the suction line valve of compressor no. 2 (the compressor on the right when viewing the compressors from the control box end of the unit).

Compressor System Pressure Check — Use the accessory HSIO keypad and display module (see Fig. 9) to perform the following:

HSIO ENTRY	KEYPAD DISPLAY	READING NAME (EXPECTED DISPLAY)
 	TEMPS	System temperatures
	SCTA X	Saturated condensing temperature, circuit A (Near outdoor ambient)
	STA X	Suction temperature, circuit A (Near outdoor ambient)
	SSTA X	Saturated suction temperature, circuit A (Near outdoor ambient)
	SHA X	Superheat, circuit A (STA-SSTA)
	SCTB X	Saturated condensing temperature, circuit B (Near outdoor ambient)
	STB X	Suction temperature, circuit B (Near outdoor ambient)
	SSTB X	Saturated suction temperature, circuit B (Near outdoor ambient)
	SHB X	Superheat, circuit B (STB-SSTB)

HSIO ENTRY	KEYPAD DISPLAY	READING NAME (EXPECTED DISPLAY)
 	PRESSURE	System pressures
	DPA X	Discharge pressure, circuit A (100 to 170 psig*)
	SPA X	Suction pressure, circuit A (100 to 170 psig*)
	DPB X	Discharge pressure, circuit B (100 to 170 psig*)
	SPB X	Suction pressure, circuit B (100 to 170 psig*)

*Actual pressure readings will vary with outdoor ambient temperatures. Refer to an R-22 Temperature/Pressure Chart for approximate gage pressure at current outdoor ambient temperature.

If the pressure displayed varies outside of the acceptable table listed above, refer to Pressure Troubleshooting table on page 15 for possible causes.

PRESSURE TROUBLESHOOTING

PRESSURE READING	POSSIBLE CAUSES	POSSIBLE SOLUTIONS
-6.7 psig	No output signal received from transducer by the PSIO1 Module	1. Transducer plug is not plugged in. 2. Pull-down resistor shorted.* 3. Wiring error 4. Power not supplied to transducer 5. Transducer failure
0.0 psig	Transducer is not sensing any pressure	1. Service valve is not opened. 2. Valve core is not being depressed.
205 psig	Open circuit at PSIO1	PSIO1, J7 plug is not properly connected.
>400 psig	PSIO1 is receiving a high-voltage signal	1. Wiring error 2. Transducer failure

*See Fig. 17 for terminal locations. The replacement part number is 30GT511210.

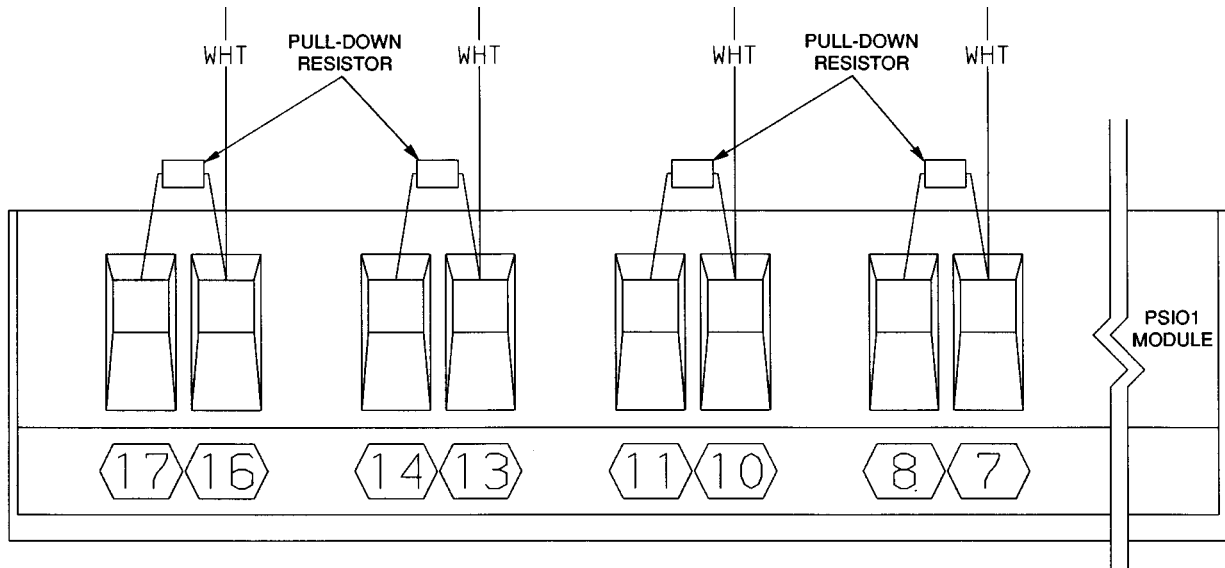


Fig. 17 — Pull-Down Resistor Terminal Locations

