

Small Rooftop Units
Accessory Condensate Overflow Switch
3 to 15 Tons
50/60 Hz

Installation Instructions

Part No. CRCNDOVR003A00

SAFETY CONSIDERATIONS

Installation, start-up, and servicing of air-conditioning equipment can be hazardous due to system pressures and electrical components, and equipment location (roofs, elevated structures, etc.). Only trained and qualified service personnel should install, repair, or service air-conditioning equipment.

Untrained personnel can perform the basic maintenance functions. All other operations should be performed by trained service personnel. When working on air-conditioning equipment, observe precautions in the literature and on tags, stickers, and labels attached to the unit, and other safety precautions that may apply.

- Follow all safety codes.
- Wear safety glasses and work gloves.
- Utilize Lockout/Tagout procedures.
- Use care in handling and installing this accessory.

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

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

WARNING

ELECTRICAL SHOCK HAZARD

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

Before beginning any modification, be certain that the main-line electrical disconnect switch is in the OFF position. Close the main gas supply shutoff valve. Tag disconnect switch and gas valve with suitable warning labels.

INTRODUCTION

The condensate overflow switch accessory kit includes an electronic controller and sensor for use in 3-15 ton light commercial rooftop units. The sensor can be used in downflow or side discharge units. The control module is wired to turn off the compressor(s) after 10 seconds of constant water contact if the drain trap becomes plugged. It requires 5 minutes to reset after the water has cleared. See Table 1 for control logic.

PRE-INSTALLATION

Remove accessory packaging and inspect shipment for damage. See Table 2 for kit contents. File claim with shipping company if accessory is damaged. Verify unit is level and adjust if necessary. See Table 3 for model usage.

With all Carrier direct digital controls (DDC) such as RTU Open, PremierLink™, ComfortLink, and SystemVu™ controls, no alarms or alerts will be initiated based on this condensate overflow switch. In the event of a condensate overflow situation, compressors will shut down, any supply fans will continue operation, and no alarms will be communicated via the unit controller to any connected networks.

Table 1 — Control Logic

POWER	SENSOR	RELAYS	LIGHT
OFF	DRY	OPEN	OFF
OFF	WET	OPEN	OFF
ON	DRY	CLOSED	OFF
ON	WET	OPEN	ON
ON	DRY TO WET	OPEN AT 10 SEC.	ON AT 10 SEC.
ON	WET TO DRY	CLOSED AT 5 MIN.	OFF AT 5 MIN.
ON	DISCONNECTED	OPEN	BLINKS

Table 2 — Accessory Kit Contents

ITEM	DESCRIPTION	QTY	PART NUMBER
1	INSTRUCTIONS	1	I1K-CRCNDOVR-01
2	CONTROLLER, CONDENSATE	1	HL39ZZ008
3	SCREWS, #6 x 3/8"	2	AC41AB080
4	SENSOR, 90" CONDENSATE	1	HL39ZZ009
5	BRACKET	1	48TM503400
6	SCREWS, BRACKET, #10 x 5/8"	2	AL48AM217
7	TIES, WIRE	10	Field Supplied

Table 3 — Model Usage

ACCESSORY PART NUMBER USAGE	MODEL	SIZE
CRCNDOVR003A00	48/50HC	04-14
	48/50KC	04-06
	48/50TC	04-16
	48/50LC	04-12
	50HCQ	04-12
	50KCQ	04-06
	50TCQ	04-14
	580J/558J	04-16
	581J/551J	04-14
	582J/559J	04-06
	547J	04-06
	548J	04-14
	549J	04-12
	RGH/RAH	036-150
	RGS/RAS	036-180
	RGX/RAX	036-060
	RHH	036-120
	RHS	036-150
	RHX	036-060

WARNING

To avoid the possibility of electrical shock, open all disconnects before installing or servicing this accessory.

INSTALLATION

Step 1 — Install Condensate Overflow Switch

1. Remove panel that covers the control box.
2. Use 2 Item 3 supplied screws to fasten condensate controller to box as shown in Fig. 1.
3. Connect RED and BRN power wires from controller to circuit board terminals as shown in Fig. 2.

Step 2 — For SINGLE Compressor Units

1. Remove wire from C1 coil and connect to BLU “Cond 1 In” wire from controller. Connect BLU “Cond 1 Out” wire from controller to open terminal on C1 coil. See Fig. 3.

Out” wire from controller to open terminal on C1 coil. See Fig. 3.

2. The (2) extra ORN wires should be tied back.

Step 3 — For DUAL Compressor Units

1. Remove wire from C1 coil and connect to BLU “Cond 1 In” wire from controller. Connect BLU “Cond 1 Out” wire from controller to open terminal on C1 coil. See Fig. 4.
2. Remove wire from C2 coil and connect to ORN “Cond 2 In” wire from controller. Connect ORN “Cond 2 Out” wire from controller to open terminal on C2 coil. See Fig. 4.

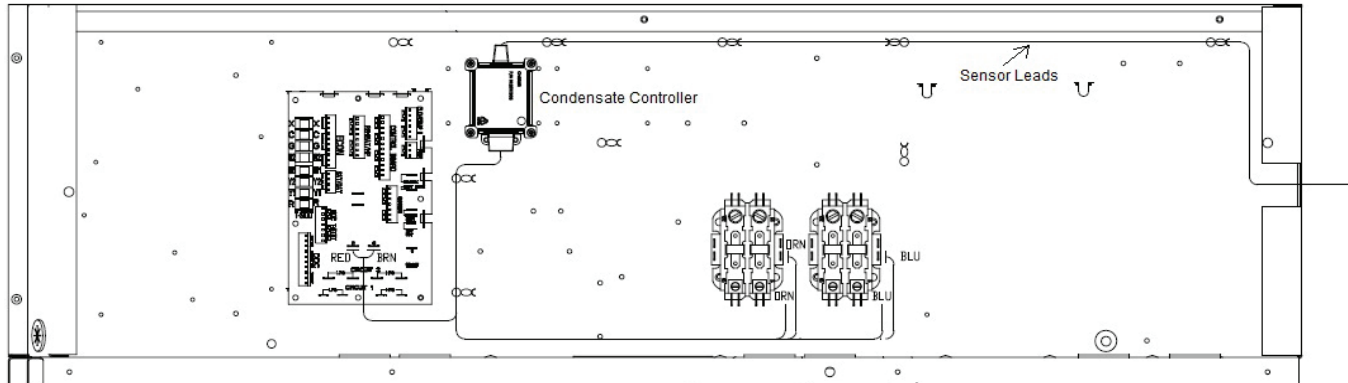


Fig. 1 — Control Box

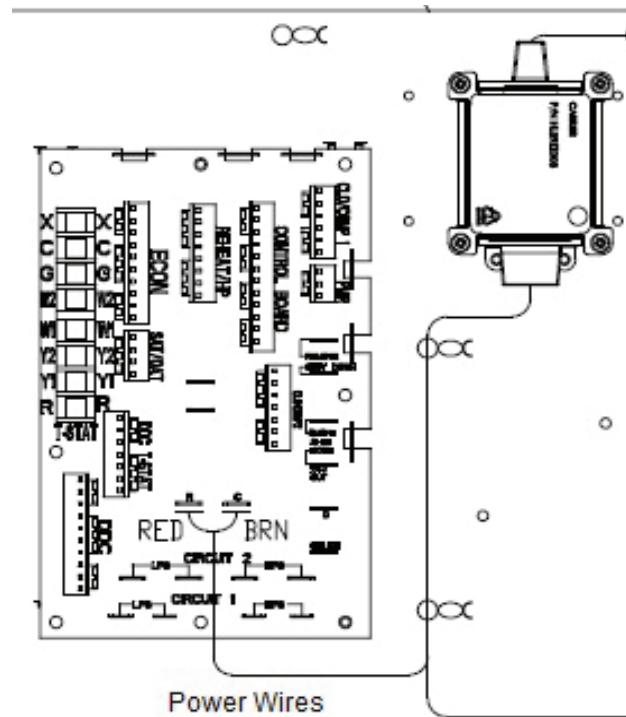


Fig. 2 — Main Circuit Board

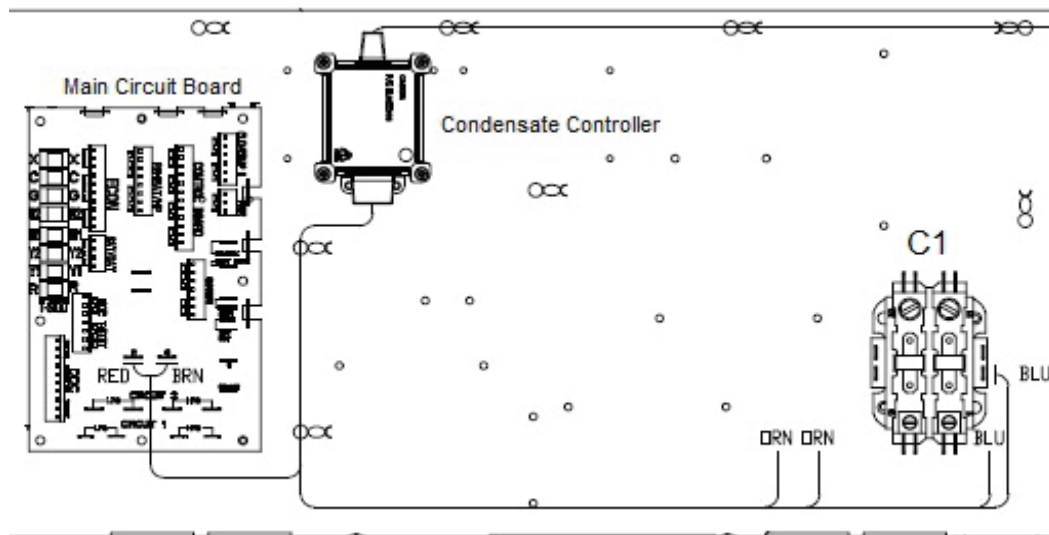


Fig. 3 — Single Compressor

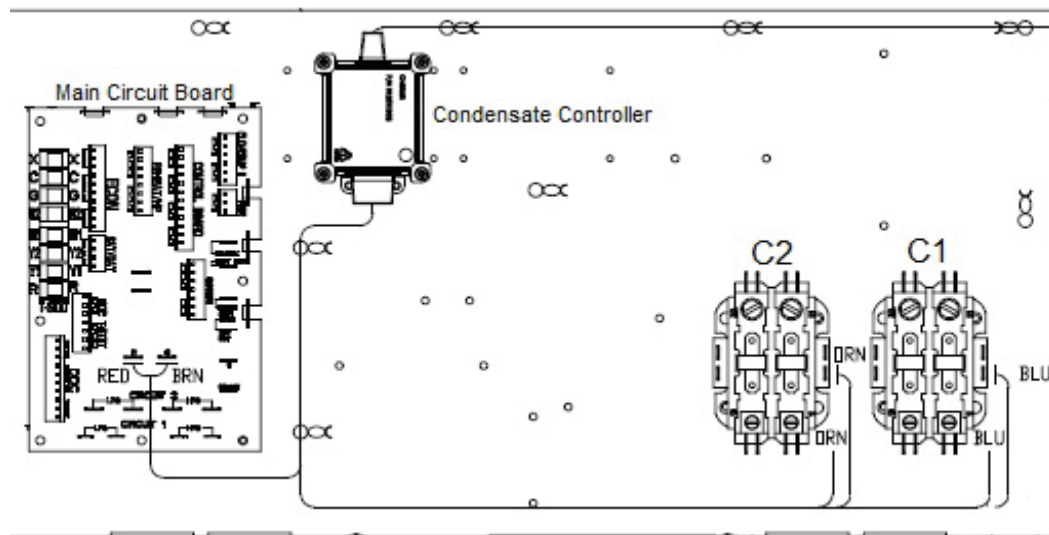


Fig. 4 — Dual Compressor

Step 4 — Run Sensor Lead

1. Remove blower compartment panel and run sensor lead across top of box and pass through grommet on right side for connection to sensor. See Fig. 1 and Fig. 5.

Step 5 — Install Sensor

1. If an economizer is installed on unit it must be removed to access filter rack and condensate pan.
2. Remove air filters and filter rack. See Fig. 6.
3. Remove indoor coil bracket on left side. See Fig. 7.
4. Install sensor (Item 4) on bracket (Item 5) and tighten thumb screw into hole in bracket. Fasten to indoor coil bracket using (2) Item 6 screws. See Fig. 8 and 9.

5. Remove wire ties holding economizer wire harness. Place indoor coil bracket back into slot in condensate pan as shown in Fig. 9 and pass sensor wire into blower compartment. Leave excess wire in blower compartment for later connection.
6. Run wire harness through U-slot while placing indoor coil bracket back into position. See Fig. 10. Refasten with previously removed screws and replace wire ties.
7. Reinstall filter rack and filters. See Fig. 6.

Step 6 — Connect Wire

1. Connect wire lead from controller to sensor lead and wire tie excess wire to wire harness. See Fig. 5.
2. Reassemble unit.

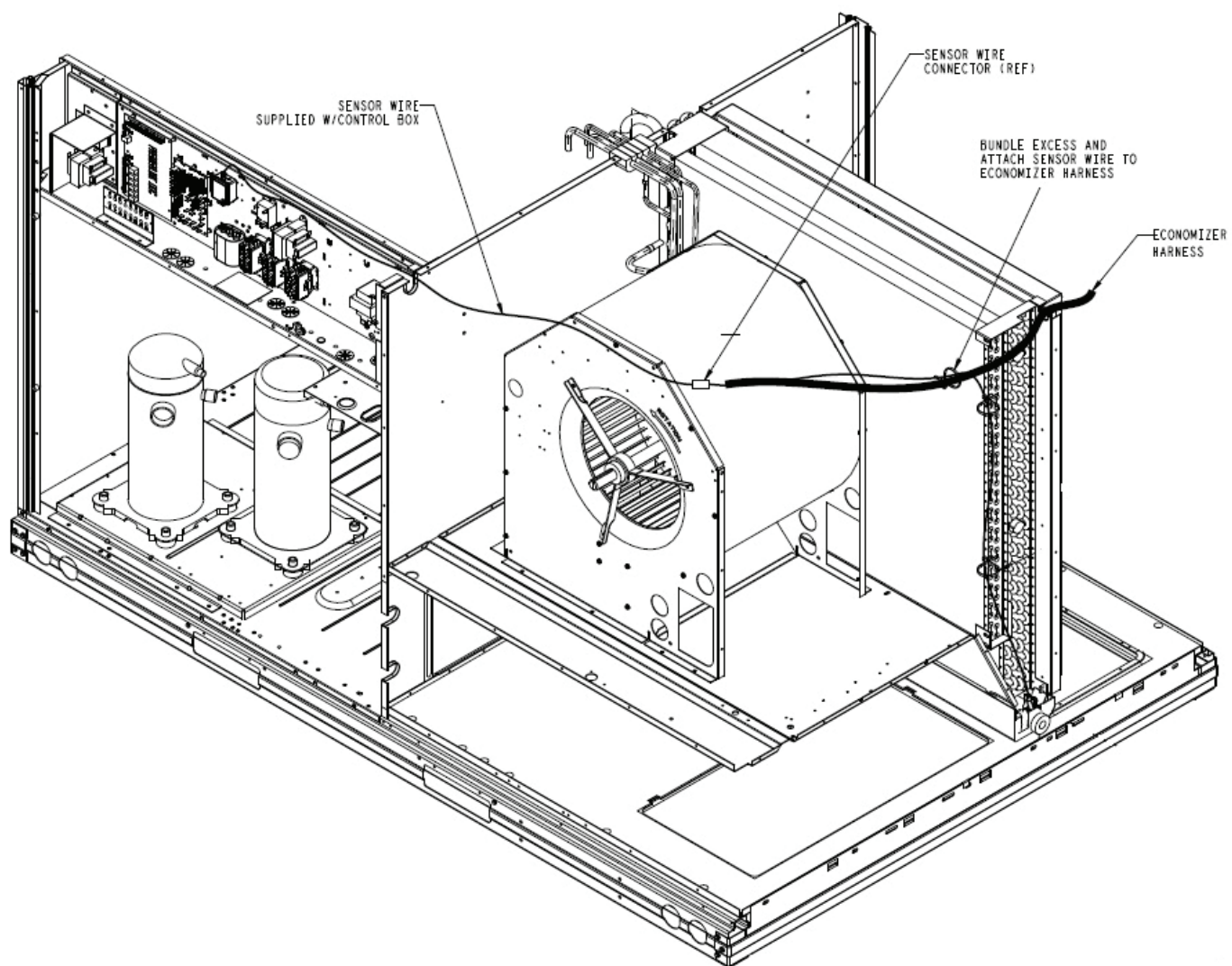


Fig. 5 — Sensor Wire Connection

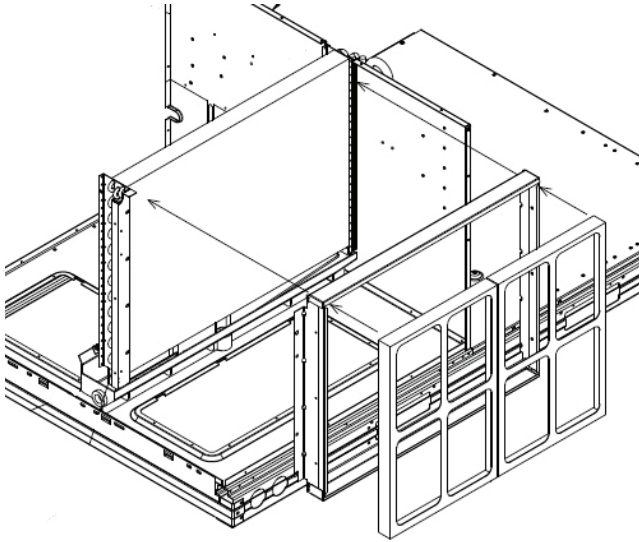


Fig. 6 — Filters and Filter Rack

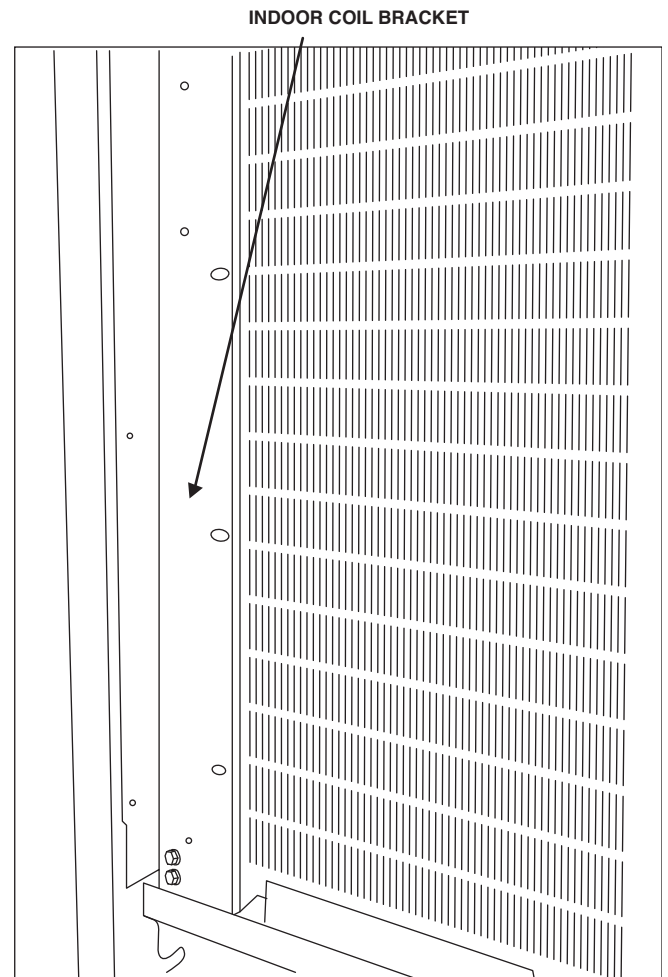


Fig. 7 — Indoor Coil Bracket

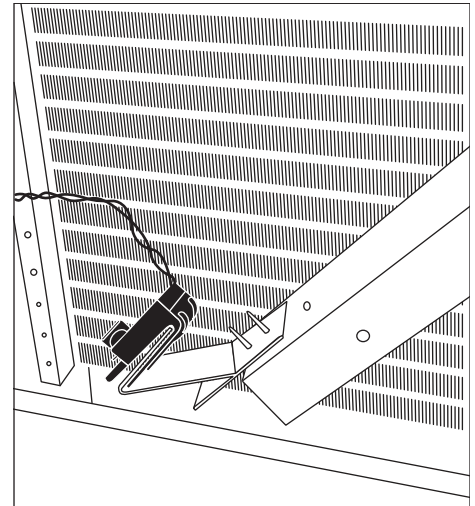
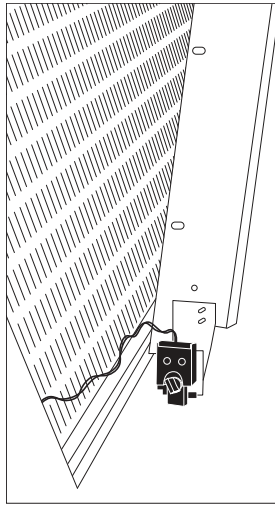
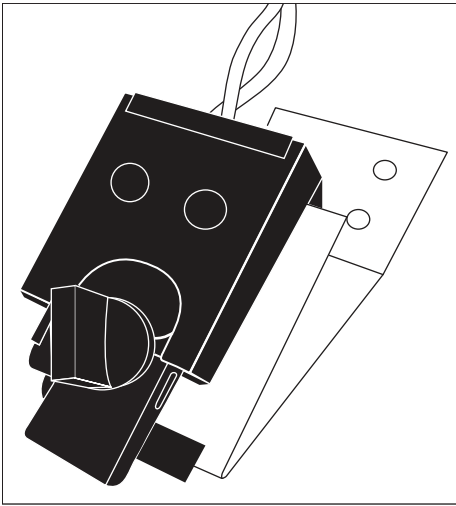
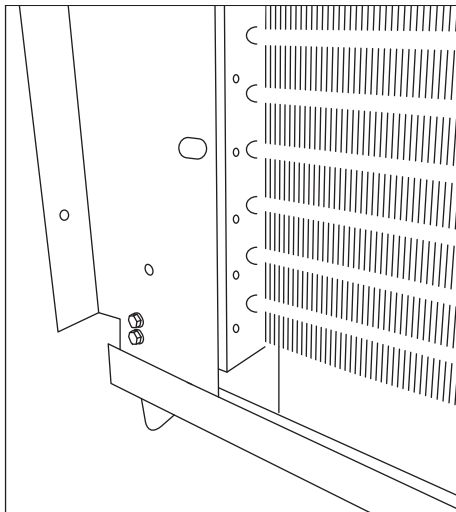
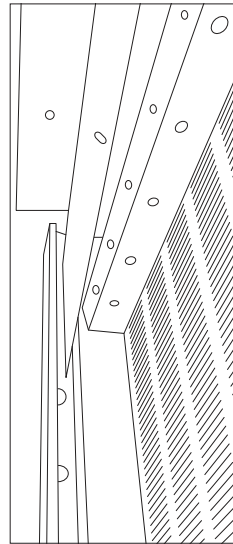


Fig. 8 — Sensor and Bracket

CORRECT INSTALLATION



CORRECT INSTALLATION



INCORRECT INSTALLATION

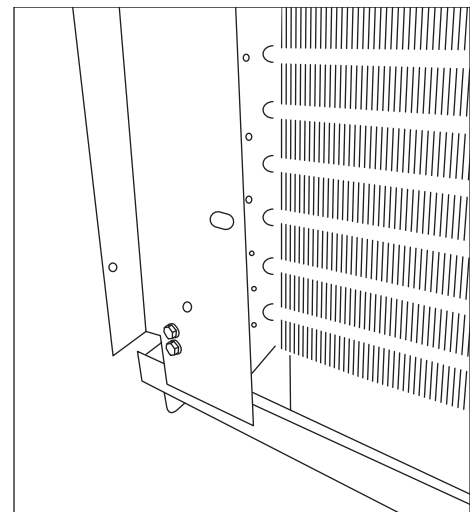
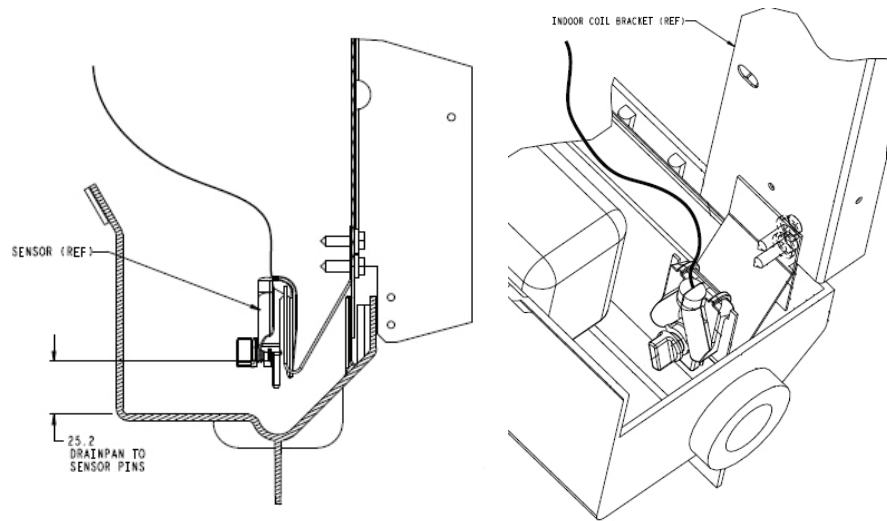
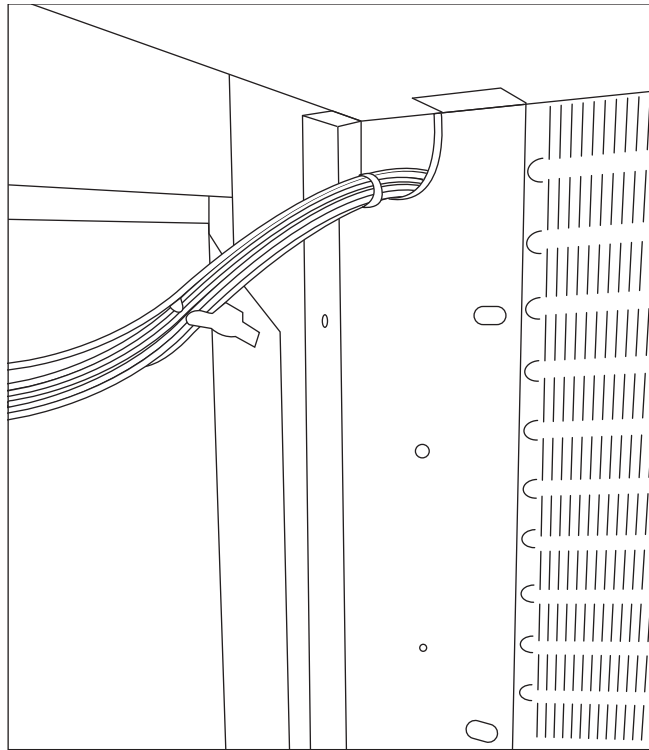


Fig. 9 — Bracket Installation



REFERENCE VIEWS

Fig. 10 — Wire Harness

