Installation Instructions

Winter Start Accessory (CRWINSTR001A00 or DNWINSTR001A00)

Relay-Transformer Accessory (CATRANRY001A00)

For Rooftop Units with R-410A Refrigerant (3-10 Tons)

Split System Condensing Units (7-1/2 to 20 Tons)

Electric Cooling/Gas Heating Rooftop Units (12-25 Tons)

Electric Cooling/Electric Heating Rooftop Units (12-25 Tons)

Winter Start and Relay---Transformer Accessories 50/60 Hz

TABLE OF CONTENTS

IMPORTANT: Read these instructions completely before attempting to install the accessory enthalpy sensor.

PACKAGE CONTENTS - WINTER START ACCESSORY CRWINSTR001A00 or DNWINSTR001A00

QTY	CONTENTS
1	Time–Delay Relay HN67XZ210

RELAY--TRANSFORMER ACCESSORY CATRANRY001A00

QTY	CONTENTS
1	Relay Box Assembly
3	Connector Wires
1	Bushing and Locknut
2	Quick–Connect Terminals
2	Ring Terminals
4	No. 10 Screws
1	Wire Assembly

PACKAGE USAGE

UNIT	ACCESSORY PART NUMBER
10 to 20 Ton Split System Condensing Units with Semi–Hermetic Compressors with R–22 Refrigerant	CRWINSTR001A00 or DNWINSTR001A00 CATRANRY001A00
6 to 10 Ton Split System Condensing Units with Hermetic Compressors with R–22 Refrigerant	CRWINSTR001A00 or DNWINSTR001A00
71/2 to 10 Ton Split System Condensing Units with Semi–Hermetic Compressors with R–22 Refrigerant	
12 to 20 Ton Standard Efficiency Medium Rooftop Units with R–22 Refrigerant	
12 to 25 Ton Standard Efficiency Medium Rooftop Units with R–22 Refrigerant	
3 to 10 Ton Rooftop Units with R–410A Refrigerant	CRWINSTR001A00 or DNWINSTR001A00

SAFETY CONSIDERATIONS

Installation and servicing of air-conditioning equipment can be hazardous due to system pressure and electrical components. 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, tags and labels attached to the unit, and other safety precautions that may apply.

Follow all safety codes. Wear safety glasses and work gloves. Use quenching cloth for unbrazing operations. Have fire extinguishers available for all brazing operations.

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.

Disconnect power supply and install lockout tag before attempting to install accessory.

GENERAL

Winter Start Accessory CRWINSTR001A00 or DNWINSTR001A00 provides a 3-minute time delay for the low-pressure switch to prevent nuisance trips due to low ambient temperature.

Relay-Transformer Accessory CATRANRY001A00 enables installation of multiple liquid line solenoids and other larger 24-v loads.

Two winter start relays are required for all large rooftop units.

INSTALLATION

Relay-Transformer Package — 10 to 20 Ton Split System Condensing Units and Semi-Hermetic Compressors with R-22 Refrigerant

Refer to unit label diagram and install Relay-Transformer Package CATRANRY001A00 in condensing unit as follows:

1. Install component below Terminal Block 2 (TB2) in unit control box. A knockout is provided in the bottom of the control box for running wires from the accessory to TB2.
2. Using the bushing nut (coupler) provided, route the 6 wires through the knockout and tighten the bushing nut.
3. Secure side of accessory to condensing unit using 2 screws provided. (See Fig. 1.)
4. Connect wires to unit controls as shown in Fig. 2.

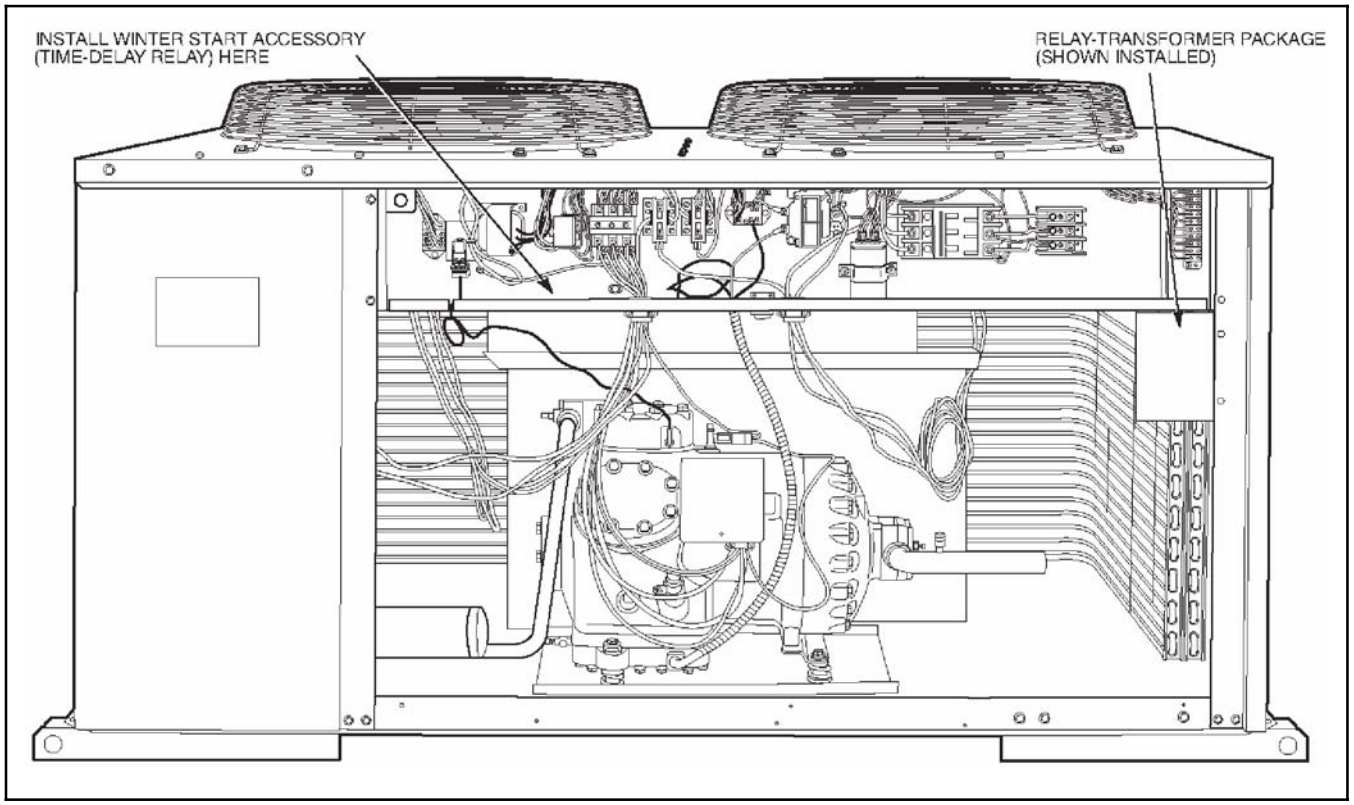

Fig. 1 - Recommended Locations for Accessory Components in 10 to 20 Ton Split System Condensing Units with Semi-Hermetic Compressors with R-22 Refrigerant

Winter Start Accessory — 6 to 10 Ton Split System Condensing Units with Hermetic Compressors and 71/2 to 20 Ton Split System Condensing Units with Semi-Hermetic Compressors with R-22 Refrigerant

Refer to unit label diagram and install Time-Delay Relay (TDR), in condensing unit as follows:

For 10 to 20 ton split system condensing units with semi-hermetic compressors:

1. See Fig. 1 for location of Time-Delay Relay (TDR).
2. Use field-supplied screws and be certain mounting holes are positioned upwards (Fig. 4), as device is position-sensitive.

3. Run field-supplied wires from quick-connect terminals in device to unit controls as shown in Fig. 5. All wires must be 18 AWG (American Wire Gauge).

For 6 to 10 ton split system condensing units with hermetic compressors or 71/2 to 10 ton split system condensing units with semi-hermetic compressors:

1. See Fig. 3 for location of TDR.
2. Use field-supplied screws and be certain mounting holes are positioned upwards (Fig. 4), as device is position-sensitive.
3. Run field-supplied wires from quick-connect terminals in device to unit controls as shown in Fig. 6. All wires must be 18 AWG (American Wire Gauge).

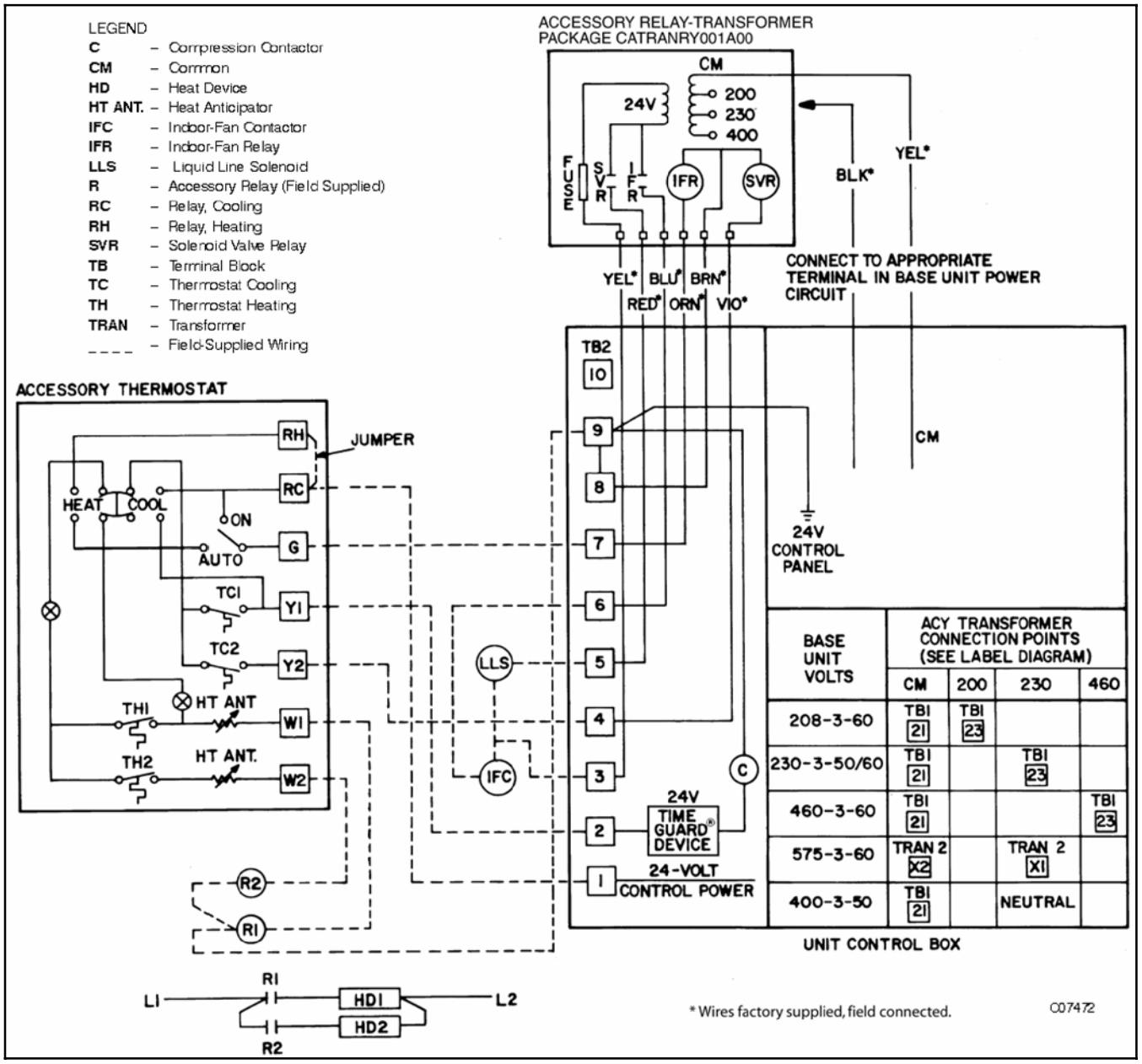

Fig. 2 - Relay-Transformer Accessory Wiring

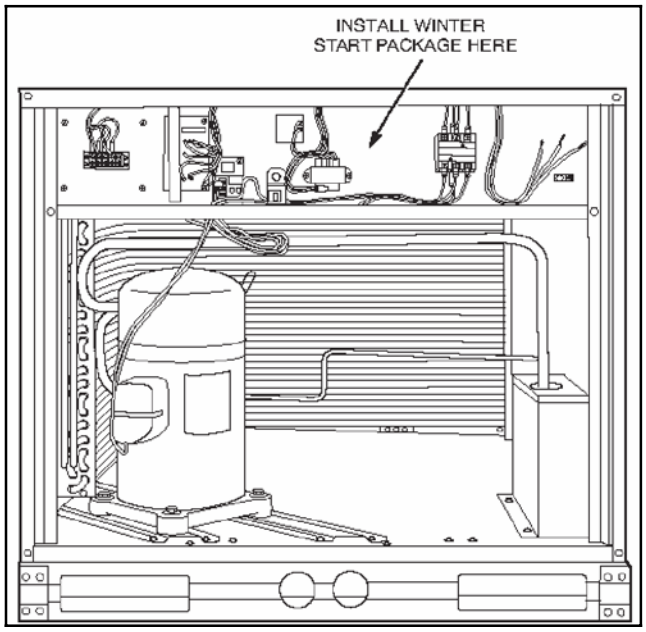

Fig. 3 – Recommended Location for Winter Start Accessory (Time–Delay Relay) in 6 to 10 Ton Split System Condensing Units with Hermetic Compressors and 71/2 to 10 Ton Split System Condensing Units with Semi–Hermetic Compressors with R –22 Refrigerant

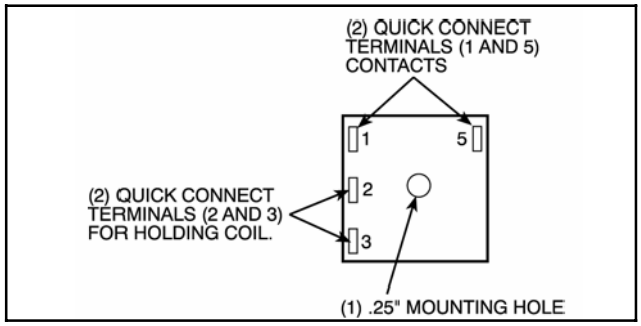

Fig. 4 – Top View, Winter Start Accessory (Time--Delay Relay)

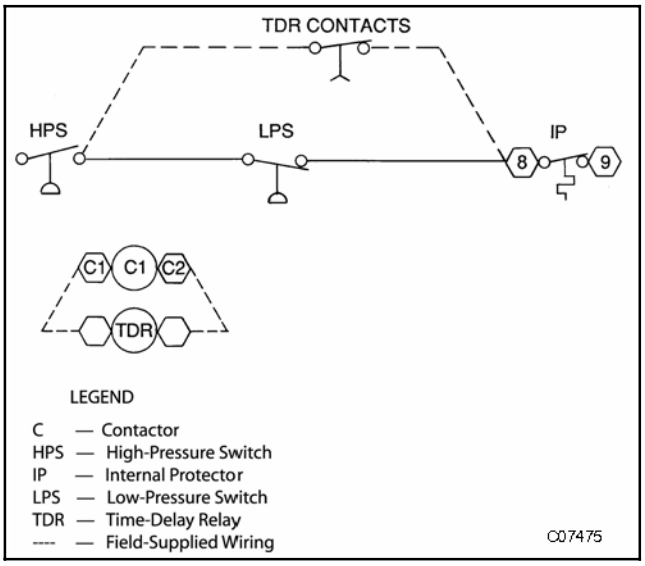

Fig. 5 – Connection Points, Time–Delay Relay, Winter Start Accessory; 10 to 20 Ton Split System Condensing Units with Semi–Hermetic Compressors with R–22 Refrigerant

Winter Start Accessory — 12 to 20 Ton High–Efficiency Medium Rooftop Units with R–22 Refrigerant

Refer to unit label diagram and install Time–Delay Relay (TDR) in unit as follows:

1. Install the Time–Delay Relay in the area shown in the control box using field–supplied screws. (See Fig. 7.)
2. Ensure the top terminals are up, as device is position–sensitive. (See Fig. 4.)
3. Run field–supplied 18 AWG (American Wire Gauge) wires from quick–connect terminals in the device to the unit as shown in Fig. 8.
4. Repeat Steps 1 and 2 for all units. A second relay is required. (See Fig. 8.)

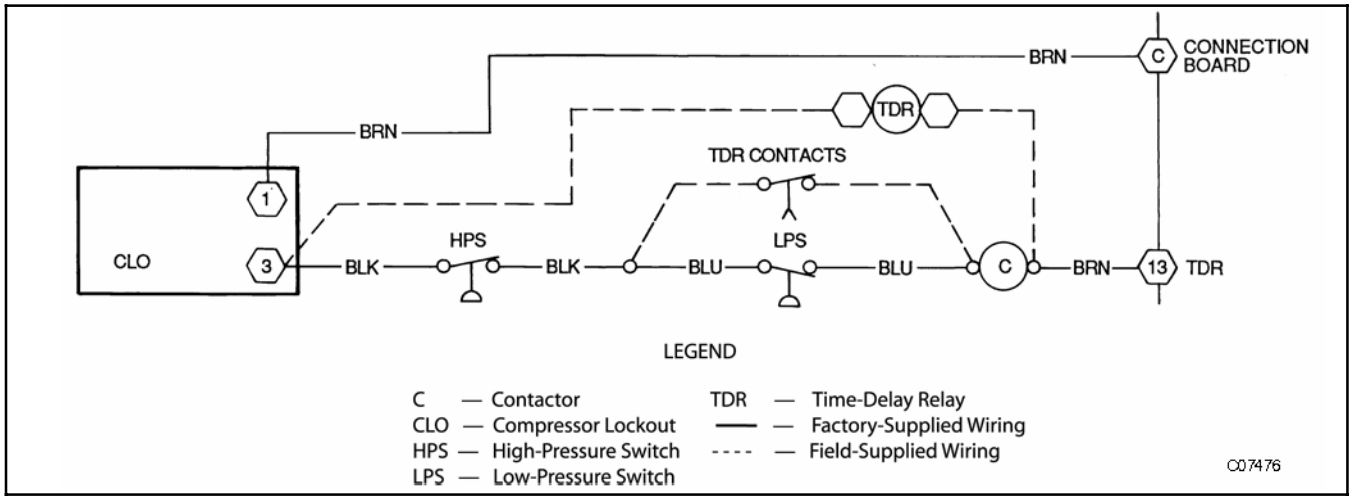

Fig. 6 – Connection Points, Time–Delay Relay, Winter Start Accessory 6 to 10 Ton Split System Condensing Units with Hermetic Compressors and 71/2 to 10 Ton Split System Condensing Units with Semi–Hermetic Compressors with R –22 Refrigerant

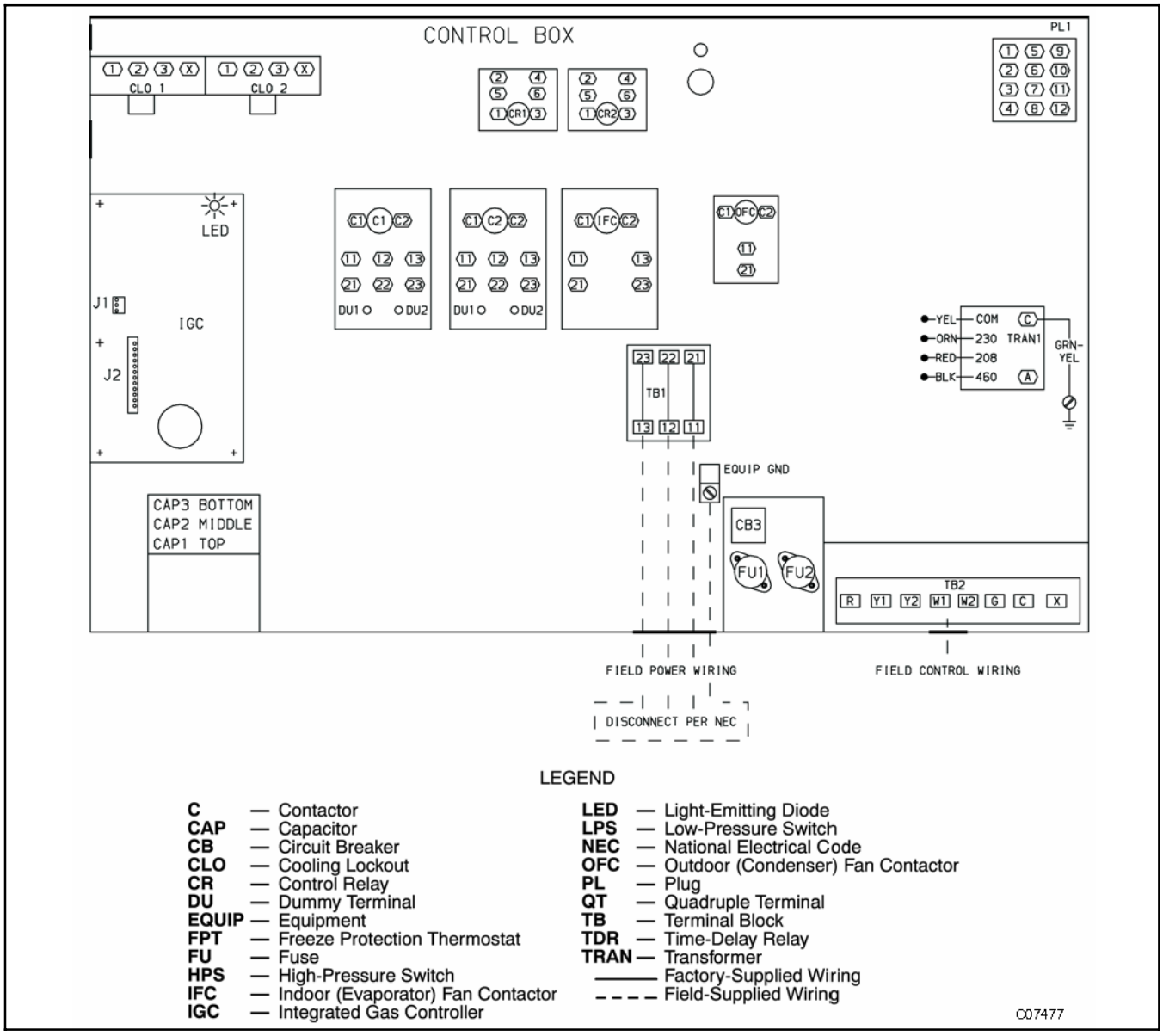

Fig. 7 - Typical Control Box for 12 to 20 Ton High-Efficiency Medium Rooftop Units with R-22 Refrigerant

Winter Start Accessory — 12 to 25 Ton Standard Efficiency Medium Rooftop Units with R-22 Refrigerant

Refer to unit label diagram and install time-delay relay(s) (TDR) in unit as follows. Note that 2 TDRs are required for all units.

1. Install the Time-Delay Relay(s) in the area shown in the control box, using field-supplied screws. (See Fig. 9.)
2. Ensure the top terminals are up, as device is position-sensitive. (See Fig. 4.)
3. Run field-supplied 18 AWG (American Wire Gauge) wires from quick-terminals in the device(s) to the unit as shown in Fig. 10.
4. Repeat Steps 1 and 2 for the second circuit. (See Fig. 10.)

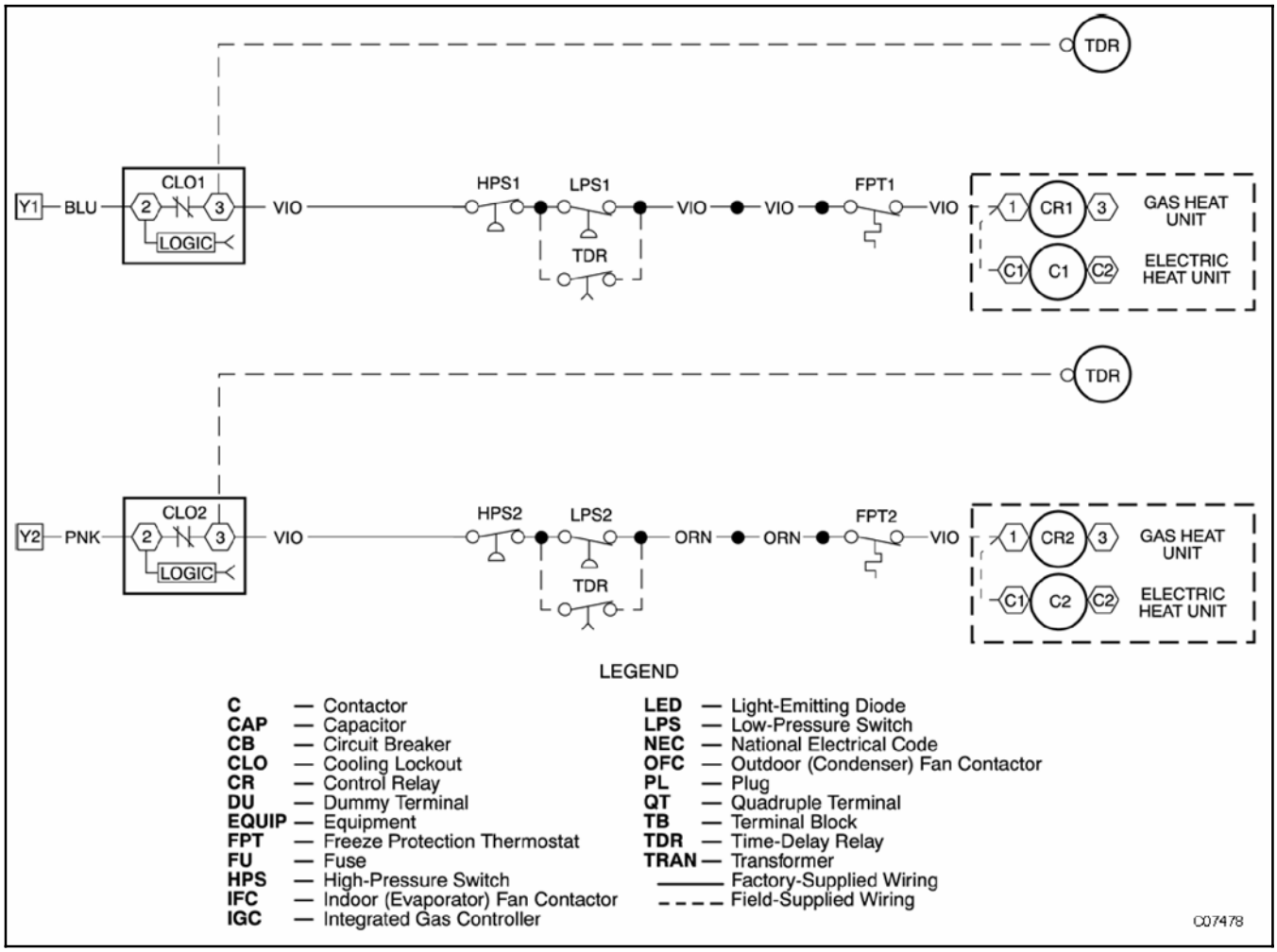

Fig. 8 - Connection Points, Time--Delay Relay, Winter Start Accessory; 12 to 20 Ton High--Efficiency Medium Rooftop Units with R--22 Refrigerant

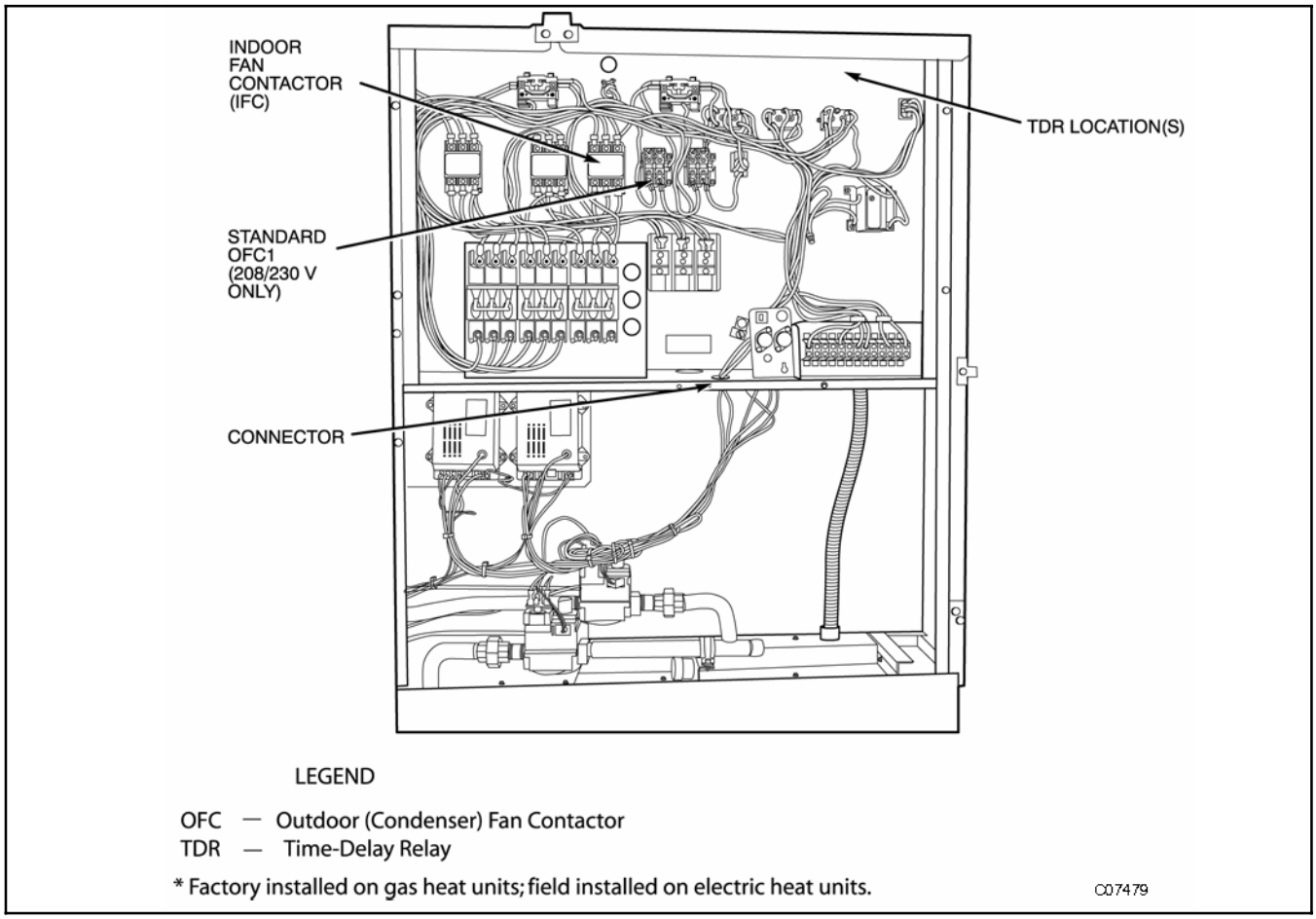

Fig. 9 – Typical Control Box for 12 to 25 Ton Standard Efficiency Medium Rooftop Units with R-22 Refrigerant (208/230 V Gas Heat Unit Shown)

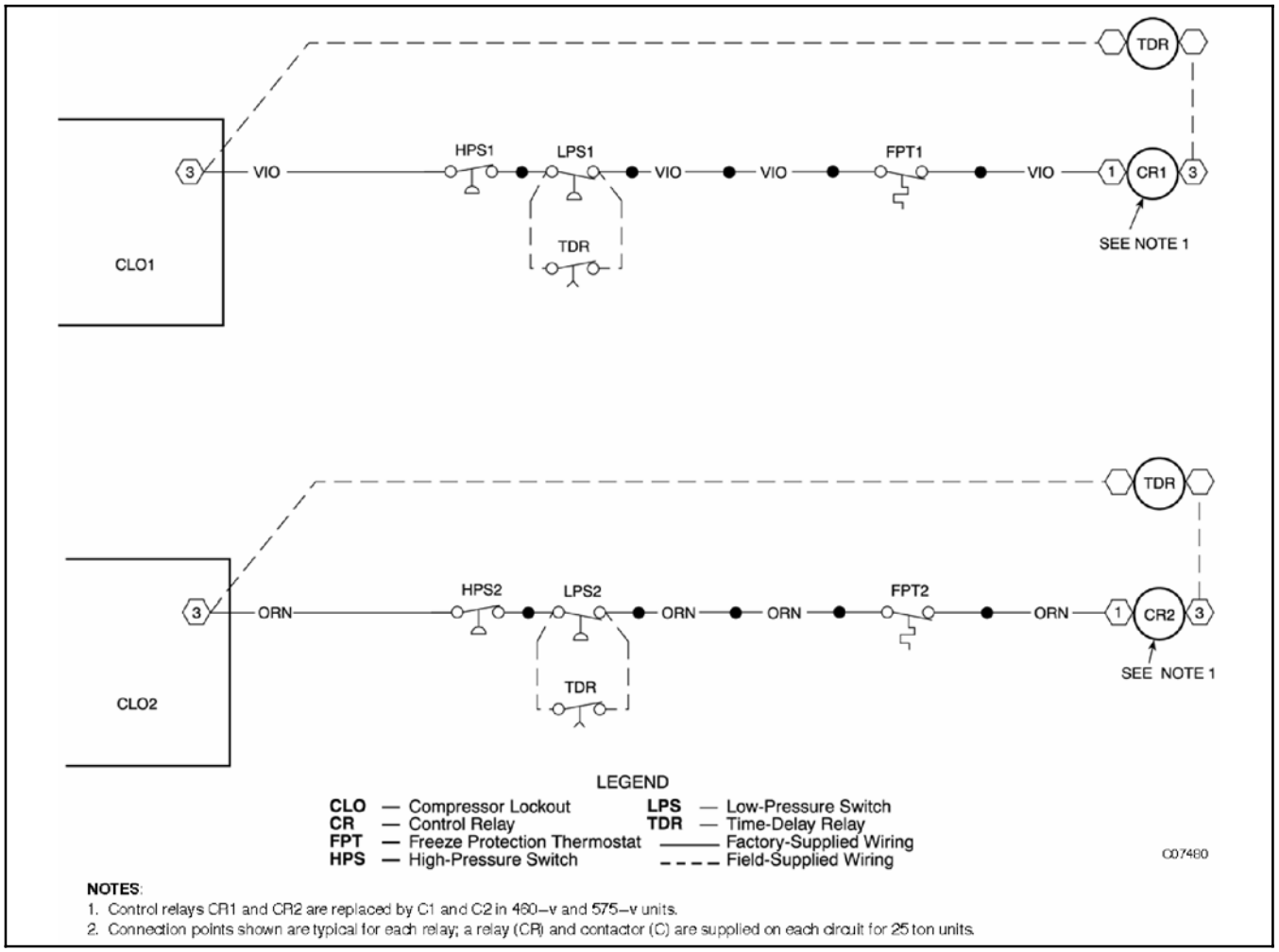

Fig. 10 – Connection Points, Time--Delay Relay, Winter Start Accessory; 12 to 20 Ton High--Efficiency Medium Rooftop Units with R-22 Refrigerant

Winter Start Accessory — 3 to 10 Ton Rooftop Units with R-410A Refrigerant

Refer to unit label diagram and install Time-Delay Relay(s) (TDR) in unit as follows.

1. Install the Time-Delay Relay(s) in the area shown in the control box, using field-supplied screws. (See Fig. 11.)
2. Ensure the top terminals are up, as device is position-sensitive. (See Fig. 4.)
3. Run field-supplied 18 AWG (American Wire Gauge) wires from quick-connect terminals in the device(s) to the unit as shown in Fig. 12.
4. Repeat Steps 1 and 2 for any models with second circuit of cooling.

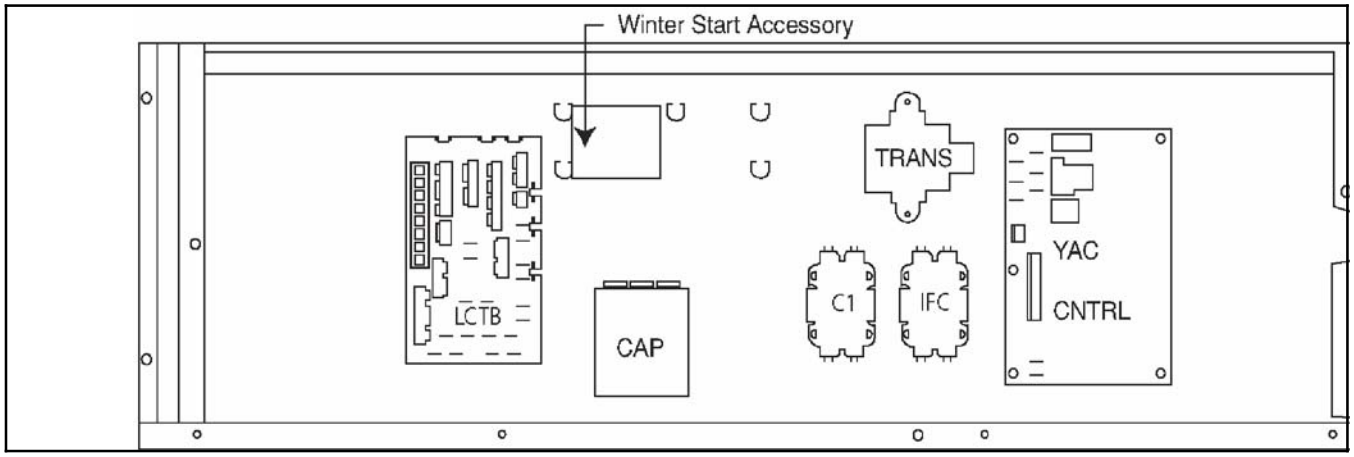

Fig. 11 – Winter Start Accessory Location for 3-10 Ton Rooftop Units with R-410A Refrigerant and Single Circuit

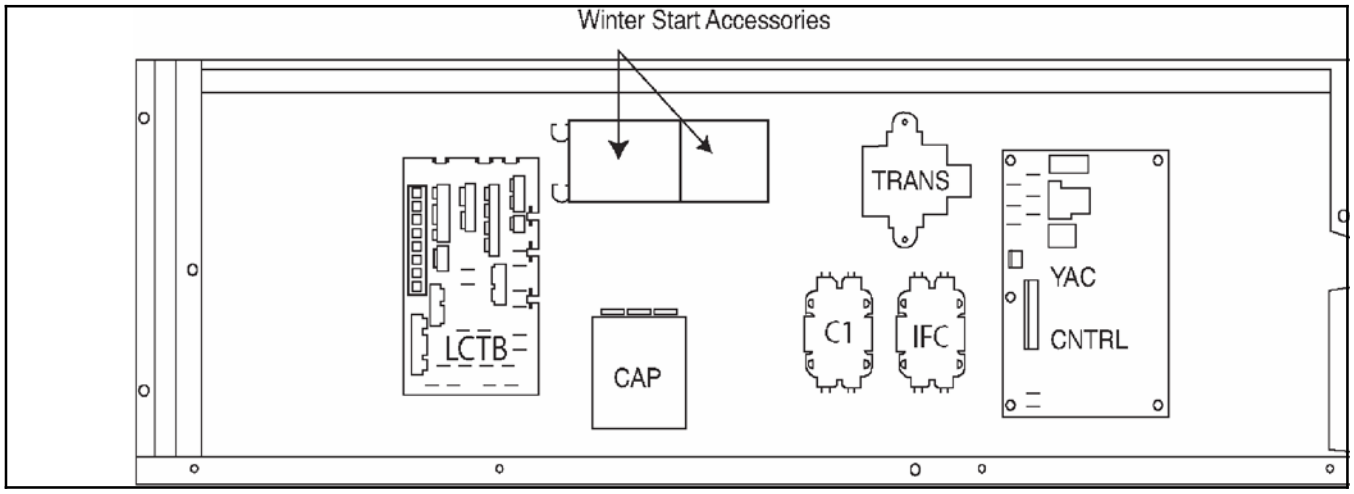

Fig. 12 – Winter Start Accessory Location for 7.5-10 Ton Rooftop Units with R-410A Refrigerant, Two Circuits and No Cycle Loc Control

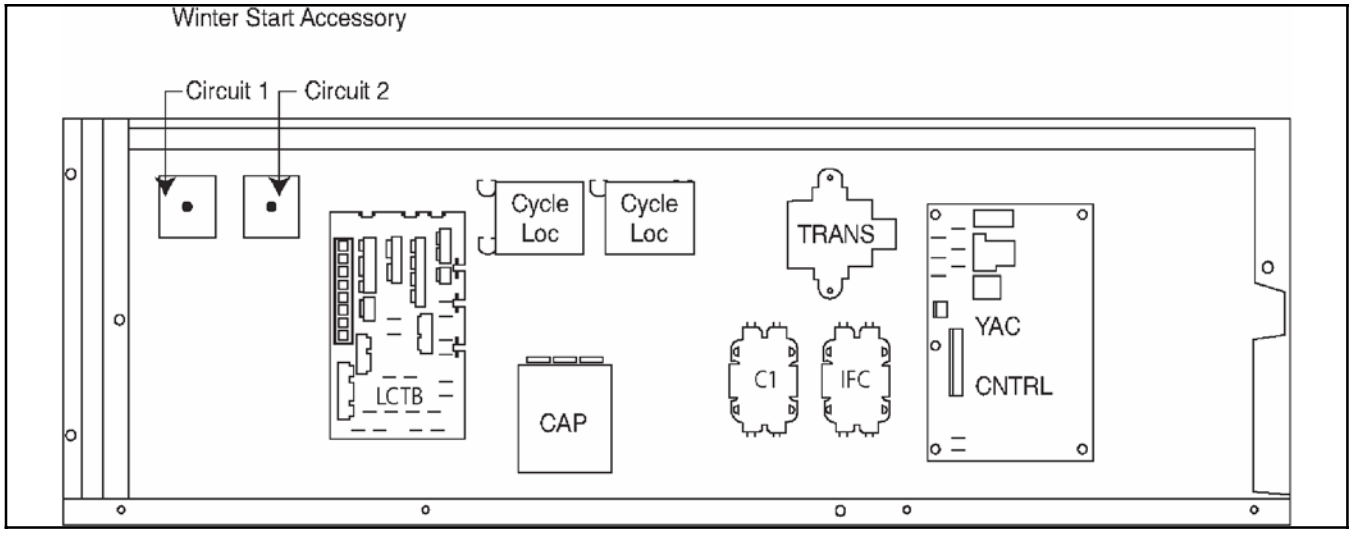

Fig. 13 – Winter Start Accessory Location for 7.5-10 Ton Rooftop Units with R-410A Refrigerant, Two Circuits and Cycle Loc Control

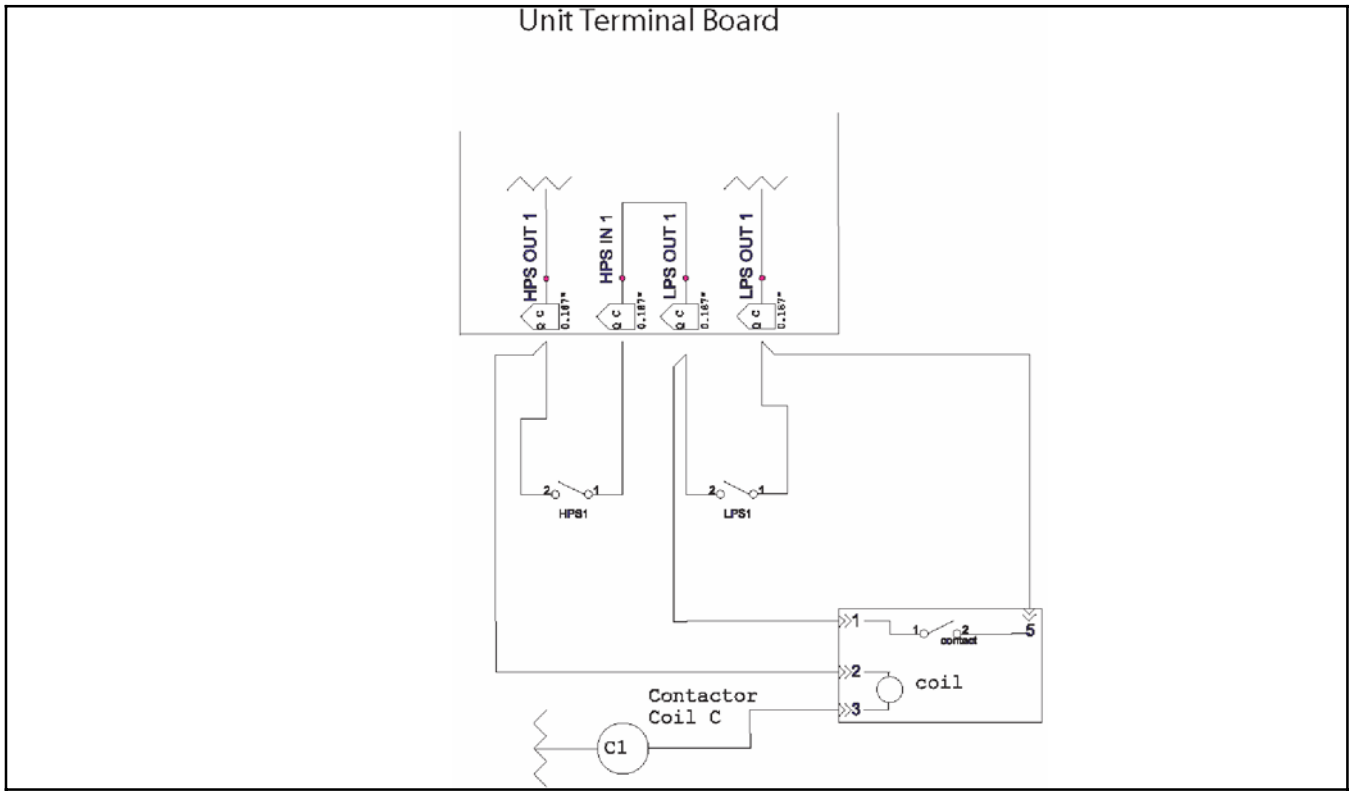

Fig. 14 – Single Circuit

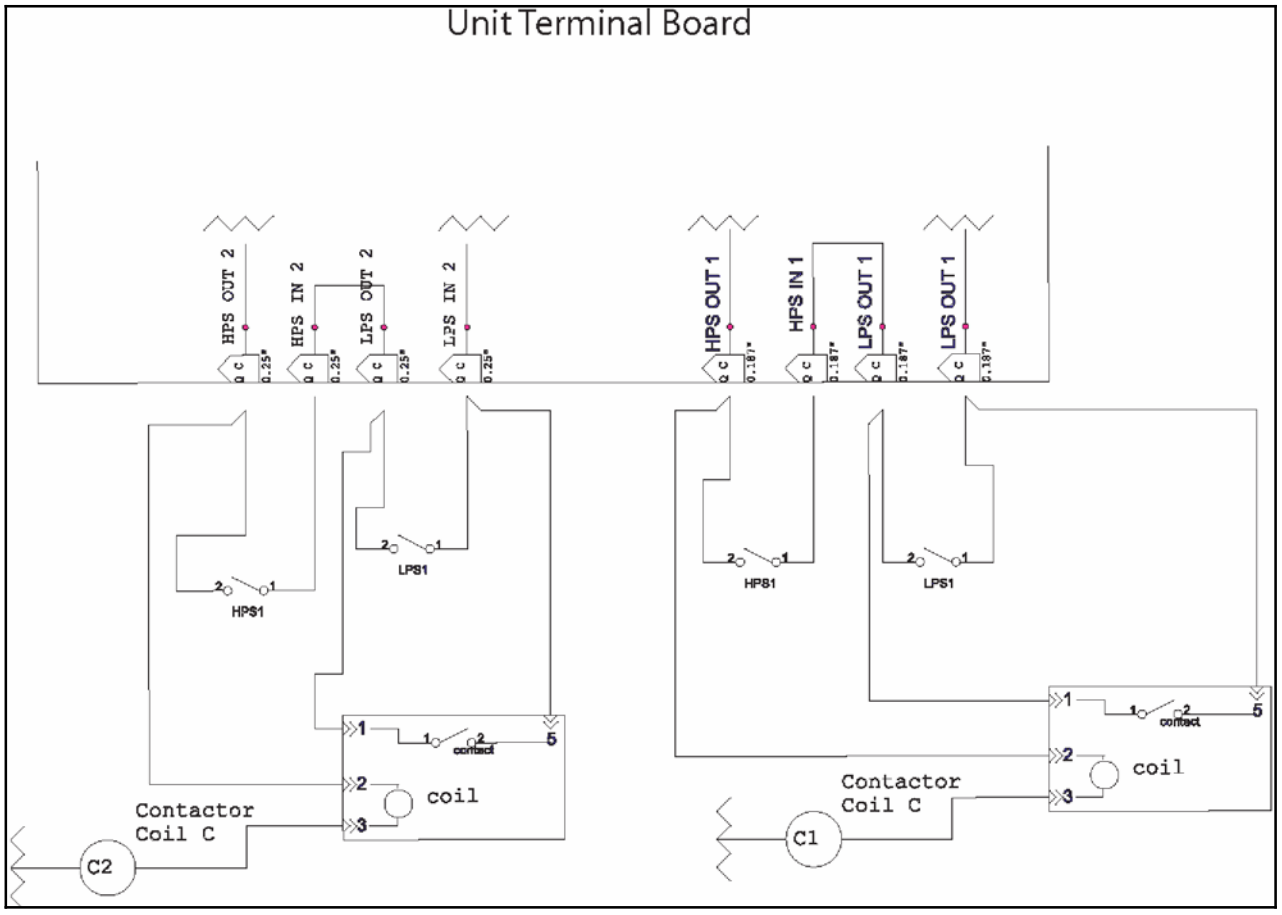

Fig. 15 – Two Circuit