

**READ AND FOLLOW ALL SAFETY INSTRUCTIONS!  
SAVE THESE INSTRUCTIONS AND DELIVER TO OWNER AFTER INSTALLATION**

## IMPORTANT SAFETY INSTRUCTIONS

**⚠ WARNING**

**To reduce the risk of death, injury or property damage from fire, electric shock, cuts, abrasions, falling parts, and other hazards:**

- Service of the equipment must be performed by qualified service personnel.
- Installation and maintenance must be performed by a person familiar with the construction and operation of this product and any hazards involved. All applicable codes and ordinances must be followed.
- Read this document before installing, servicing, or maintaining this equipment. These instructions do not cover all installation, service, and maintenance situations. If your situation is not covered, or if you do not understand these instructions or additional information is required, contact *Synergy Lighting Controls*.

**⚠ WARNING**

**Before installing, servicing, or maintaining this equipment, follow these general precautions.**

**To reduce the risk of electrocution:**

- Make sure the equipment is properly grounded.
- Always de-energize any equipment before connecting to, disconnecting from, or servicing the equipment.

**To reduce the risk of fire:**

- Use supply conductors with a minimum installation temperature rating as specified.

**To reduce the risk of personal injury from cuts, abrasions:**

- Wear gloves to prevent cuts or abrasions from sharp edges when removing from carton, handling and maintaining this equipment.
- Do not install a damaged equipment.

*Synergy Lighting Controls*, a division of *Acuity Brands Inc.*, assumes no responsibility for claims arising out of improper or careless installation or handling of this product.

**SAVE THESE INSTRUCTIONS**

The SPAK 4S2D conversion kit contains (2) double pole relays and components necessary to convert a standard SPAK 8S (contains 8 single pole relays) into a SPAK 4S2D (contains 4 single pole and 2 double pole) relays. The double pole relays and the electronic assembly in the kit replace one SPAK 4S relay board assembly.

### Before You Start

1. Always disconnect all power.
2. Install in accordance with the National Electrical Code and any other codes which may apply.
3. Use only as intended and at the listed voltage.
4. All installation and service must be performed by qualified personnel or service technicians.
5. These components are designed for use with SYNERGY SPAK products ONLY.
6. Do not discard these instructions, this document is a reference for installation, programming, operation, and maintenance of the system.
7. All installation and wiring information contained herein is based on industry-accepted standards and practices. This information is not meant to conflict with or overrule any applicable codes or ordinances. If any conflicts exist, please contact Synergy Lighting Controls before proceeding with the installation.
8. Document all wiring, device terminations and locations. This information will be necessary to correctly configure the system and perform the system start up .
9. **USE EXTREME CAUTION WHEN PERFORMING MAINTENANCE ON THIS EQUIPMENT. HIGH VOLTAGE IS PRESENT INSIDE THE ENCLOSURE!** Failure to follow any or all warnings and proper safety procedures can cause severe injury or death, and/or damage to the equipment.

### Double Pole Relay Operation

The eight SPAK 8S single pole relays correspond to Relays 1-8 on the SPAK keypad and in SPAK programming. The SPAK 2D double pole relay card assembly replaces the lower 4S (single pole) relay card. (This causes Relay 7 and 8 on the SPAK keypad to no longer control any relays (they have been removed). To operate the newly installed 2D double pole relays, use Relay 5 and 6 on the SPAK keypad and in all SPAK programming.

### 2D Relay Assembly Installation

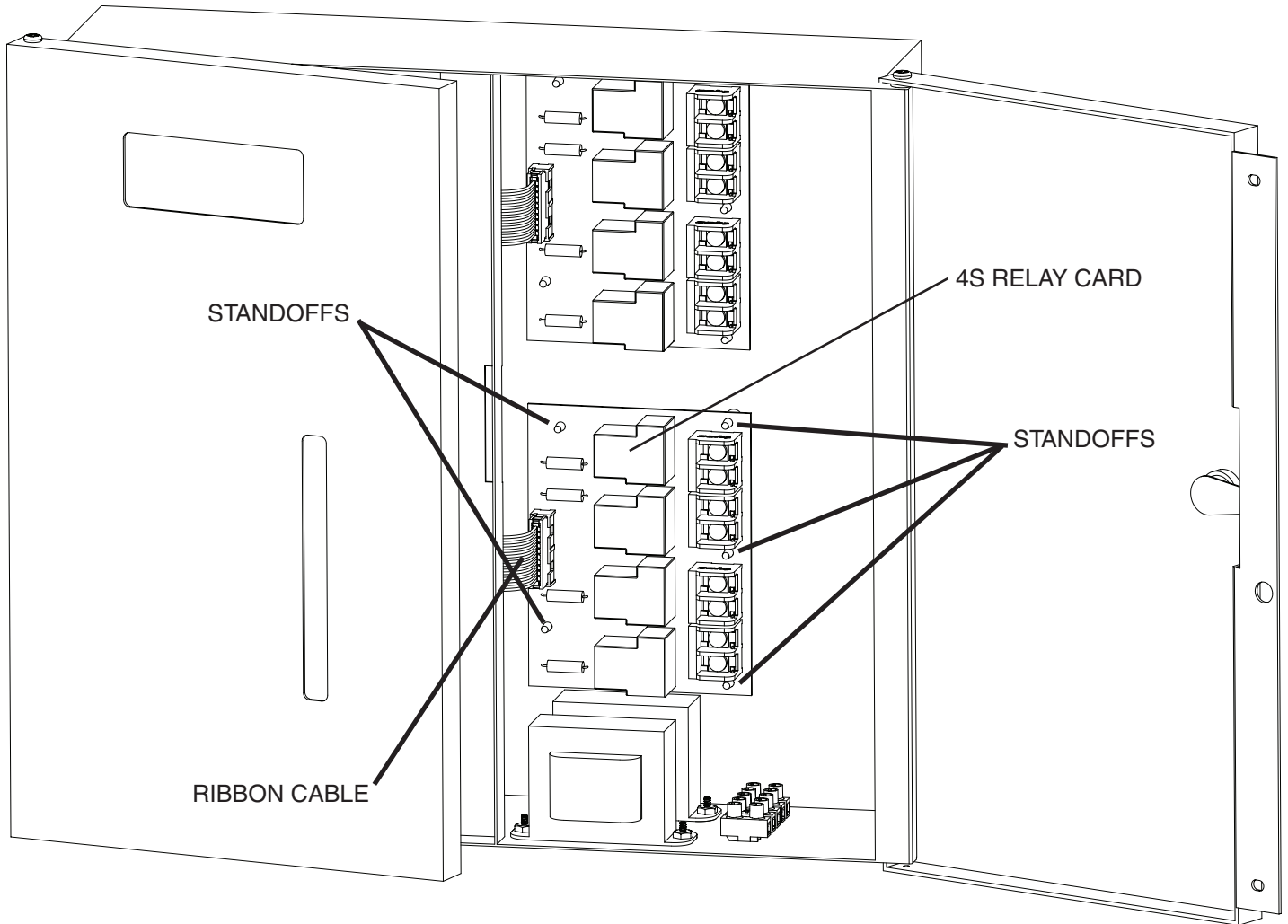
1. Disconnect power from SPAK.
2. Open enclosure to gain access to line voltage compartment of SPAK.
3. Disconnect load wires from relay terminals of the 4S relay board to be removed (if installed)
4. Disconnect ribbon cable from header on relay board. (See Figure 1)
5. Remove the relay board. Use pliers to squeeze the tab in the top of each standoff, and gently wiggle the board to loosen it. Once all 5 standoffs have been released, remove the board. (See Figure 1)
6. Install the 2D relay card assembly in the SPAK (See Figure 3).
7. Connect the black and white input wires from the controller board to the power input terminal block. (See Figure 4)
8. Connect the ribbon cable to the header on the relay board. (See Figure 4)
9. Connect loads to relays. (See Figure 5)

#### **WARNING:**

Test branch circuits for short circuits **prior** to energizing the SwitchPak.

DO NOT apply power to the SPAK and load circuits until after testing for short circuits. **Warranty void** if power is applied to shorted loads.

**SPAK 8S DETAILS**



*Figure 1 - Remove 4S Relay Card*

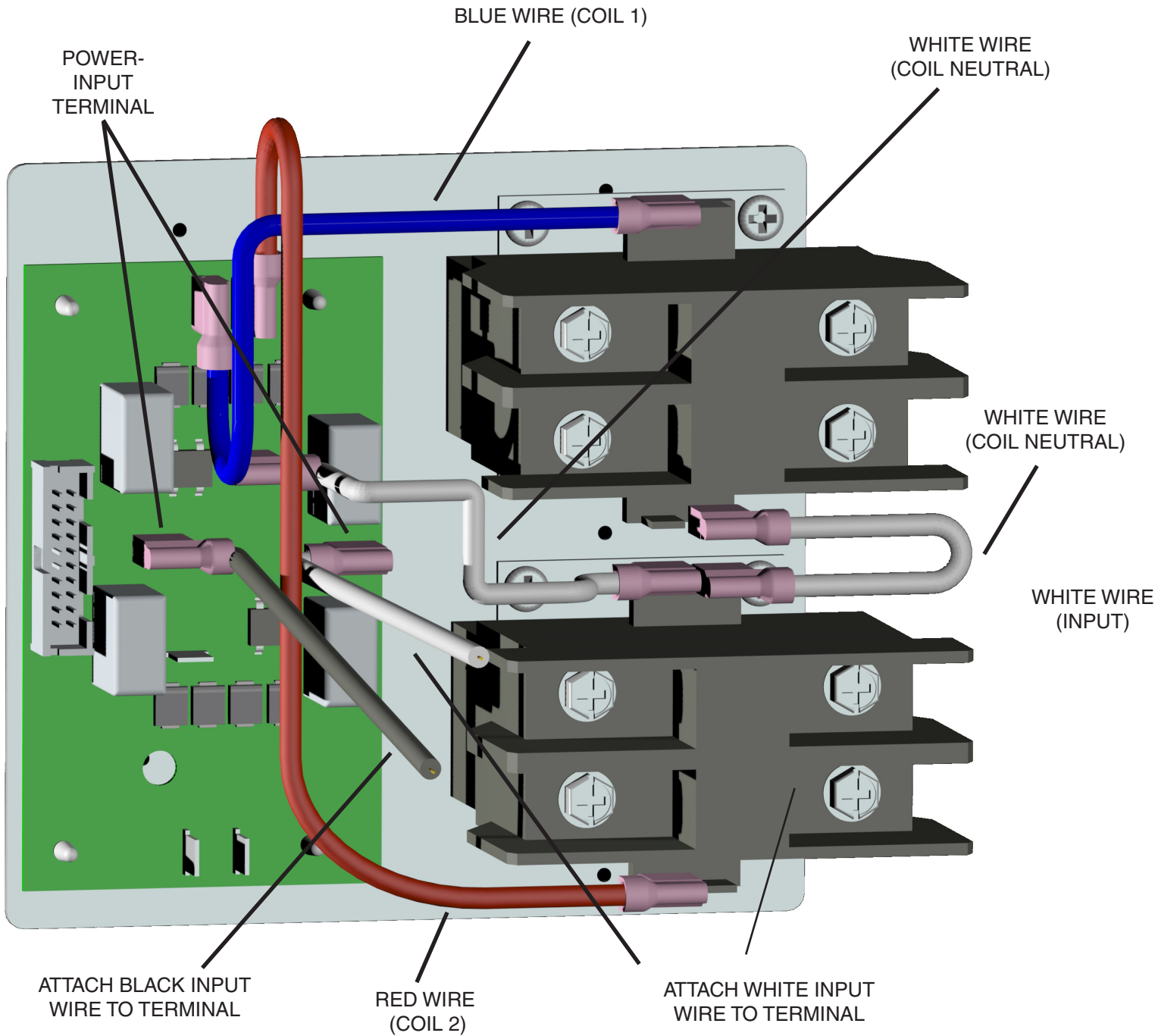
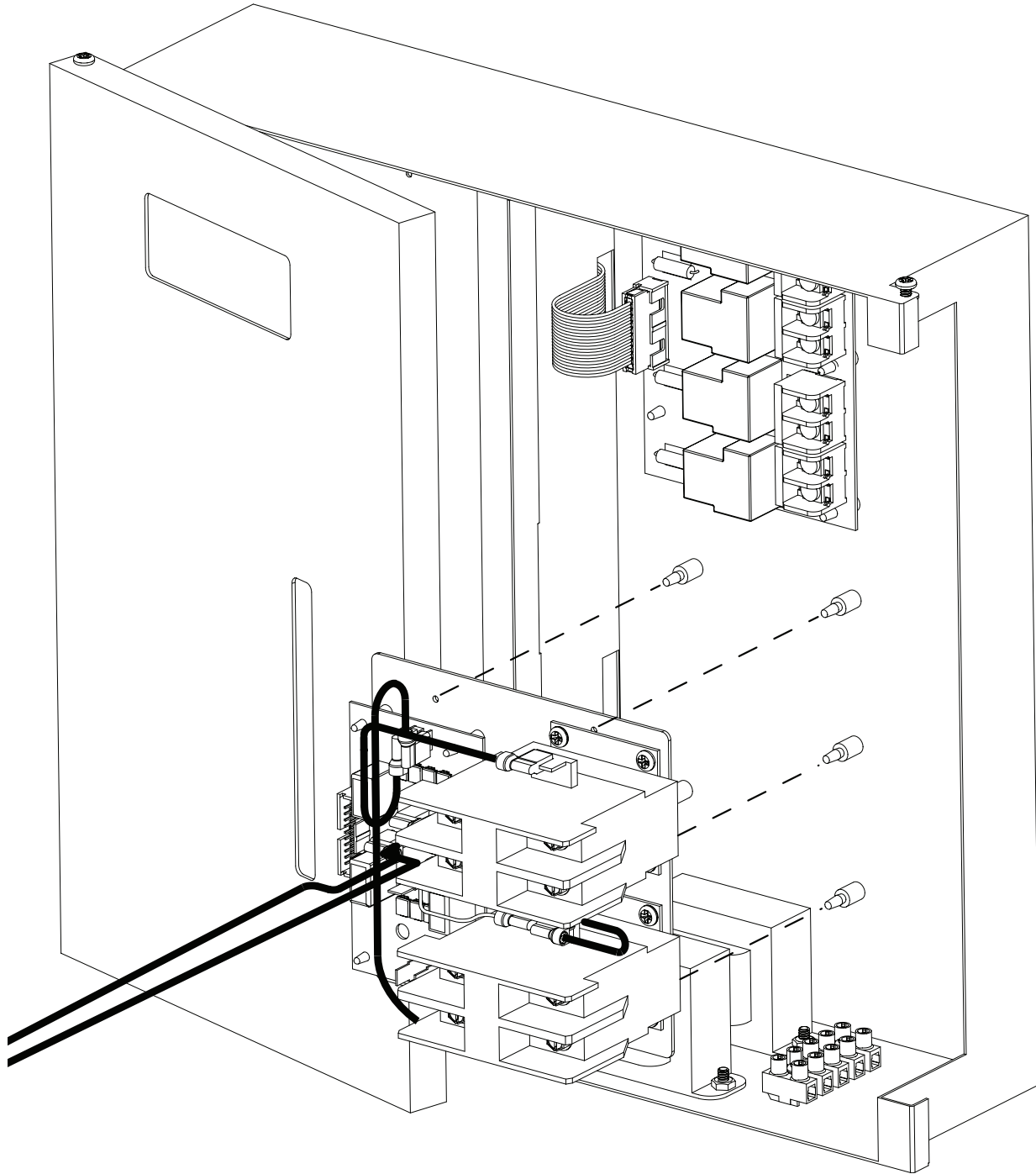
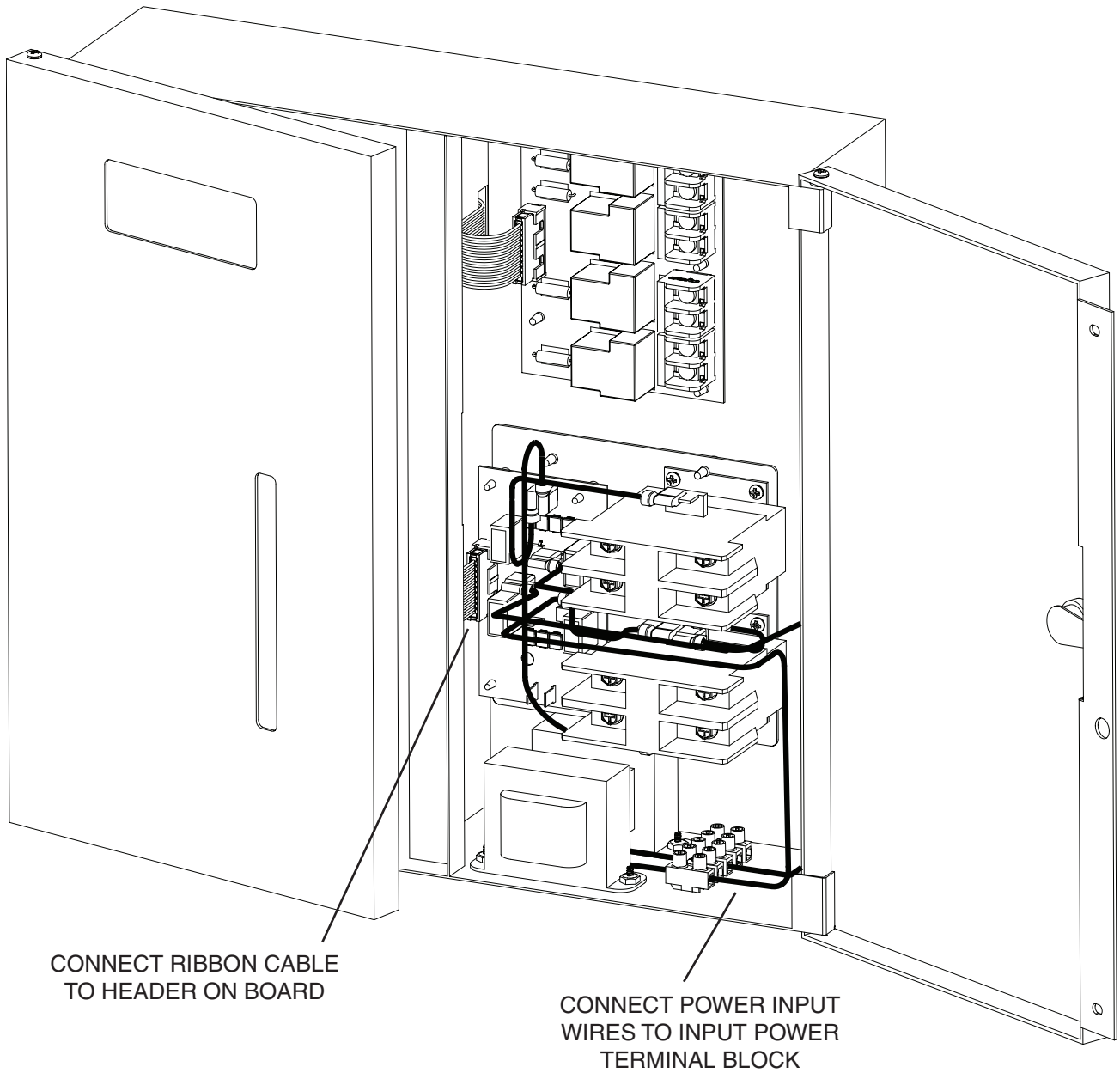


Figure 2 - Wiring Details



*Figure 3 - Install Card/Relay Assembly in Cabinet*



*Figure 4 - Connect Power Input Wires*

### Connect Loads - 4 Single Pole, 2 Double Pole

#### Single Pole Relays:

1. Connect a 120 or 277 volt, 20 amp maximum, branch circuit breaker to the output terminal block position labeled LINE.
2. Connect a single pole load to the output terminal block position labeled LOAD. See *Figure 5* for details.

#### Double Pole Relays:

1. Connect the 2 pole relay card CONTROL POWER INPUT to a 120 or 277 volt circuit, typically the same circuit connected to the cabinet power supply.
2. Connect a 120 or 277 volt, 30 amp maximum, 2 pole branch circuit breaker to the 2 pole relay terminal positions labeled LINE.

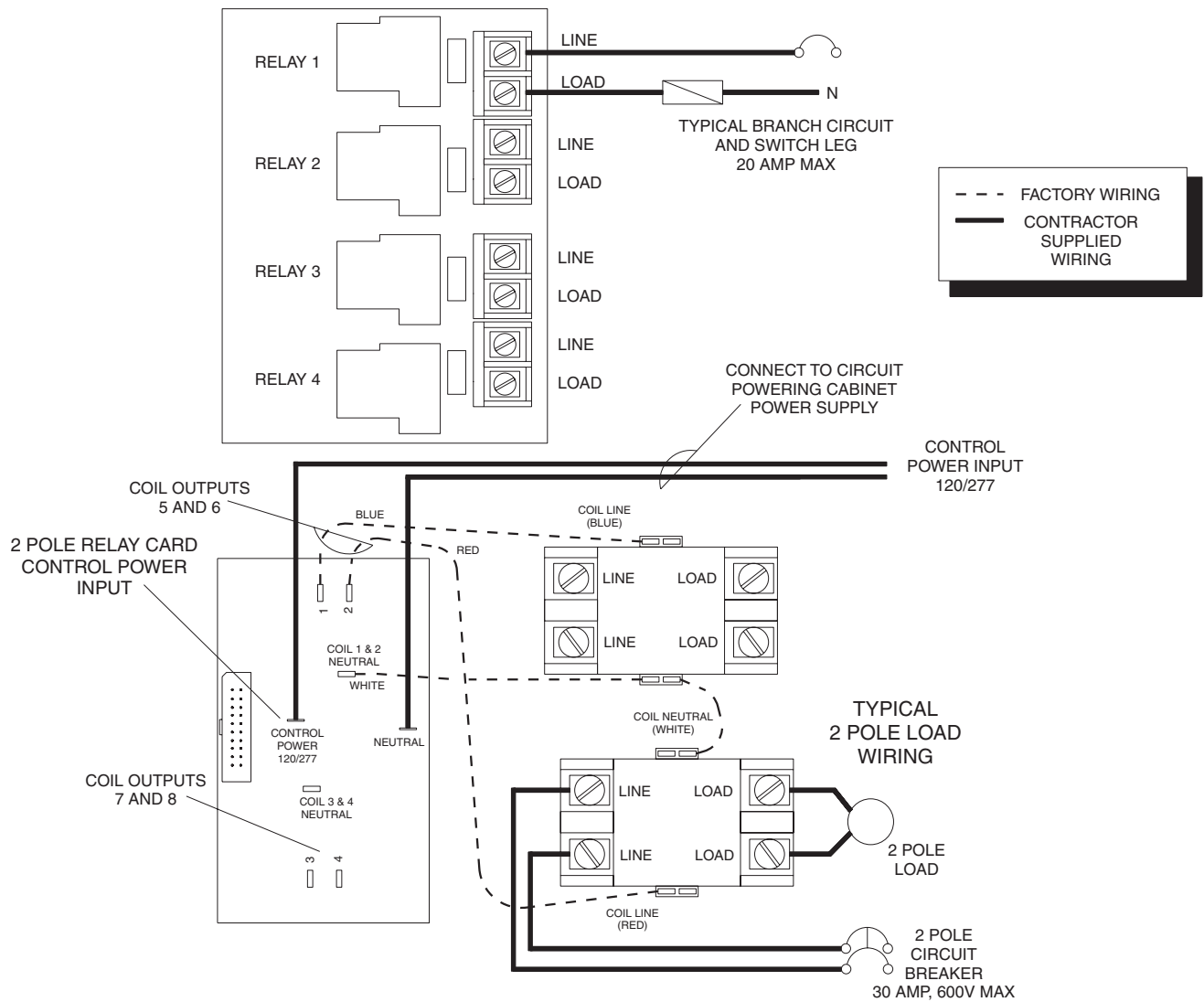


Figure 5 - Load Connections 4S 2D (4 Single Pole, 2 Double Pole)