

### Supervision

- ✓ Form “C” AC fail relay output < 32VDC, < 240VAC @ 3A, resistive load only
- ✓ Form “C” battery trouble relay output < 32VDC, < 240VAC @ 3A, resistive load only
- ✓ Internal battery cut-off relay to protect batteries from deep discharge 9VDC & 18VDC

### Environmental

- ✓ For indoor use only
- ✓ Operating temperature -0°C to 49°C - (32°F to 120°F)

## Maintenance Procedure

The power supply & standby batteries should be tested at least once a year as follows:

- Check LEDs for normal state: AC ON Green, DC ON Green
- Check output voltage with normal load:
  - (assures proper voltage to float charge batteries)
  - For a 12V setting, voltage should read between 13.6 VDC and 13.8 VDC
  - For a 24V setting, voltage should read between 27.1 VDC and 27.6 VDC
- Disconnect AC input:
  - AC LED should be off, and all other LEDs should remain normal with battery back-up
- Check DC output (checks for operational standby batteries)
  - to be above 12.0 VDC for 12V setting and 24.0 VDC for 24V setting
- Apply AC and verify AC LED ON

## Troubleshooting Guide

Problem	Solution
No DC output from terminals.	<ul style="list-style-type: none"> <li>- Check AC and DC LED's on power supply board. Both should be on for proper operation AC ON –GREEN, DC ON - GREEN.</li> <li>- If LED's are not on, check AC power.</li> </ul>
Output voltage is not correct for the connected equipment.	<ul style="list-style-type: none"> <li>- Disconnect AC power, battery(s) and all connected equipment IMMEDIATELY.</li> <li>- Change voltage selection jumper to desired voltage.</li> <li>- Reconnect equipment &amp; reapply AC power.</li> </ul>
Trouble output relay is de-energized. (Relay terminals are labeled shown in the Normal, energized, “no trouble” condition. Relays are energized when no trouble is detected.	<ul style="list-style-type: none"> <li>- Check battery voltage.</li> </ul>

### For Technical Support:

1-800-265-6630 or 519-621-7651 [www.dormakaba.us](http://www.dormakaba.us)

# RCI 10-4

**Class 2 Power Limited  
Power Supply Board c/w Charging**

**Installation and Specifications Manual**

## Base Features

- Universal AC input from 120-240 VAC providing exceptional brownout protection
- Field selectable 12VDC or 24VDC output via jumpers
- Surge protected input and output voltage
- AC and DC visual indication
- Precise battery regulation for lead acid batteries
- Online batteries for no drop switch over on AC failure
- Form C relays to monitor AC failure and low battery condition

See specifications below for more details

## Installation Instructions

1. Mount the supply board in an enclosure suitable for a power supply and battery, as requirements dictate.
2. Make sure a conductive standoff is used with a star washer on the mounting hole nearest the AC input. A good ground is required.

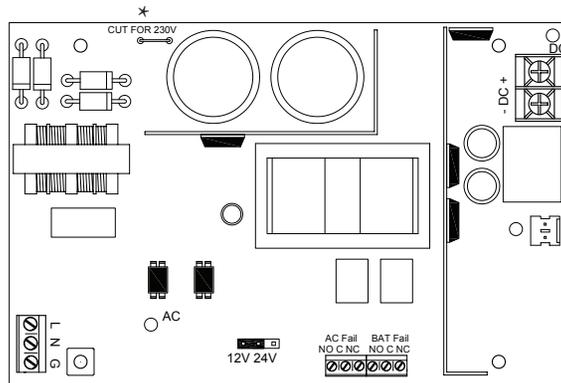
**Note: 10-4 Supply board is for use in a controlled environment.**

3. Run appropriate AC input wiring \* to HIGH VOLTAGE terminals as marked (See Fig. 1).
4. Run wiring for devices to be powered as required and connect to DC output terminals.

**Note: Ensure all wiring is of appropriate gauge for device being powered. All Power Limited circuits must be routed a minimum of .25" from Non-power Limited circuits.**

5. Set DC output voltage jumper to desired voltage PRIOR TO CONNECTING BATTERY AND ENERGIZING AC INPUT VOLTAGE (See Fig. 2).
6. Apply power to AC input terminals and test DC outputs for proper operation.
7. Connect backup battery(s) to battery leads if required using the supplied cables that are suitable to the installation.

**Notes: Do not exceed maximum output of Power Supply 4A @ 12VDC, 4A @ 24VDC.**



**Fig. 1**  
**10-4 Power Supply**  
**Circuit Board**

\* Note: There is a removable link on the top of the power supply board. This link is cut and removed to convert to 240 VAC. Once cut, there is no conversion back to 120 VAC.

Lead acid batteries are typically used for stand by power in security applications, as they float charge well and have no usage memory. When float charged, they typically last 4-5 years. A precision power supply/charger will provide the proper voltage for any given temperature regardless of load. This is what provides long battery life from the 10-4 supply board.

**Fig. 2 – Power Supply Wiring Note: Maintain a minimum clearance of .25" between power limited and non-power limited circuits.**

## Specifications

**Note:** For UL Listed Power Supply UL294 Access Control Performance levels:

- Line Security - I
- Endurance - I
- Destructive Attack - I
- Battery Standby - IV \*

### Input

- ✓ AC input 120VAC/60Hz or 240VAC/50Hz \* Selectable
- ✓ Current Draw 216 Watts
- ✓ AC visual indicator

### Output

- ✓ Typical Output Voltage
  - ✓ 12 VDC Nominal, 12.5 VDC, 4A
  - UL recorded range for compatibility on battery for 12V configuration 9.7 - 13.2 VDC
  - ✓ 24 VDC Nominal, 25.0 VDC, 4A
  - UL recorded range for compatibility on battery for 24V configuration 19.5 - 26.4 VDC

**Note: Typical current measured without load.**

- ✓ 4 Amps supply current at 12VDC
- ✓ 4 Amps supply current at 24VDC
- ✓ Class II Power limited thermally protected DC output
- ✓ Visual indication

### Battery Backup

- ✓ Fully integrated charging circuit
- ✓ Automatic resetting battery over current protection
- ✓ Reverse hookup protection 2A PTC
- ✓ Average recharge current 125mA
- ✓ LED visual indicator

Sealed lead-acid type battery, 12V | 24V, 4Ah-72Ah

For ULC-S318 compliance, the power supply battery fail line must be connected to and monitored by a control panel trouble zone

\* An 18AH battery was used for the UL evaluation.

