



*In or Out... we make it Easy!®*

# **10 Series**

**10-1 and 10-1FPD**

**10-3 and 10-3FPD**

**Power Supply c/w Standby Power Option**

**Installation and Specifications Manual**

## **Base Features**

- Standard 115VAC/60Hz input
- Field selectable 12VDC or 24VDC output via slide switch
- Surge protected input
- Fused output (10-1 only)
- AC and DC visual indication
- Precise battery regulation for lead acid batteries
- Instantaneous switching on AC failure
- Form C relay SPDT to monitor AC failure

## **Installation Instructions**

1. Mount the power supply in an accessible location using the mounting keyholes in the back of the box.

**Note: The RCI 10-1, 10-3, 10-1FPD and 10-3FPD Power Supplies are for use in a controlled indoor environment. All devices connected to or powered from the power supplies shall be installed within the same continuous building structure. Installation must be in accordance with the National, Local Building and Fire Codes. Check with the Authority Having Jurisdiction (AHJ) for details prior to installation.**

2. Route AC power through appropriate knockout and connect to the AC input terminals as marked (See Fig. 1). Use ground feature with 8-32 ground screw provided.
3. Run wiring for devices to be powered through panel knockouts as required and connect to DC output terminals (See Fig. 1). Minimum 22 AWG and maximum distance of 6170ft for field wiring. Use listed conduit or bushings for all knock-outs. Accessory boards mounted in the enclosure require 13mm high non-conductive stand offs.
4. Set DC output voltage selector switch to desired voltage prior to connecting battery and energizing AC input voltage (See Fig. 1). **Do not adjust voltage with power or battery connected.**
5. Apply power to AC input terminals and test DC outputs for proper operation.
6. Connect backup battery(s) to battery leads if required using the supplied cables that are suitable to the installation. Ensure correct polarity (See Fig. 1).

### **Power Supply Wiring**

See wiring diagram on inside of Power Supply cover.

For 10-1 models, maintain a minimum clearance of .25" between power limited and non-power limited circuits. For model 10-1FPD and 10-3FPD use appropriate wiring from PDD-FT install guide. For 10-1 FPD only, use shielded cable as noted.

Lead acid gel cell 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 RCI 10 Series power supply.

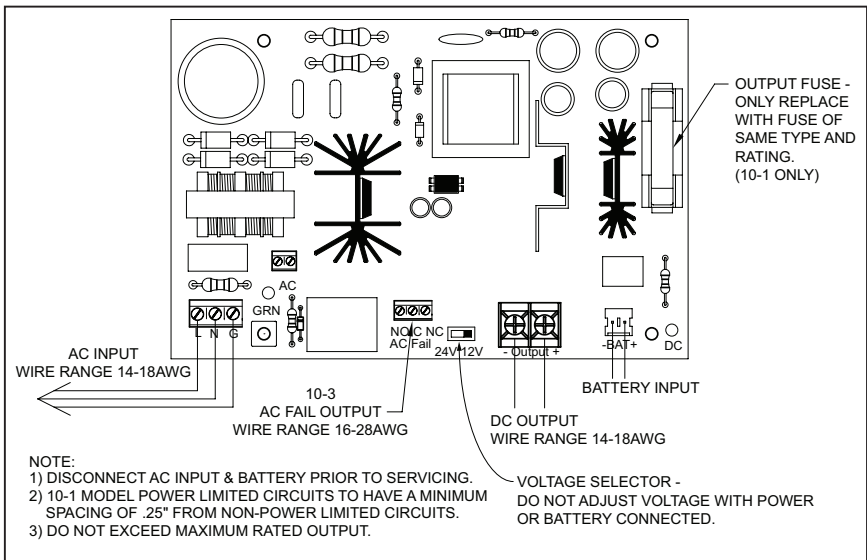


Fig. 1 - Power Supply Circuit Board

## Specifications

### • UL 294 and ULC S319 Class I Access Control System Units.

#### Input

- AC visual indicator

10-1	10-3
115VAC 60 Hz	
0.8 Amps	1.0 Amps

#### Battery Backup

- Tested for use with UL 1034 listed locking devices
- Fully integrated charging circuit
- Battery over current protection
- Average recharge current 75mA

#### Output

- Nominal Output Voltage 12VDC or 24VDC (Measured Voltage: 12VDC - 13VDC or 24VDC - 27VDC)
- Maximum torque of 7 in\*lb for black output terminals
- DC visual indicator
- 10-1 models have power limited output
- 10-3 models have non-power limited output
- Thermally protected DC output

Output	10-1	10-3
@ 12VDC	1.5 Amps	3.0 Amps
@ 24VDC	1.0 Amps	1.5 Amps

Note: Load rating using AC input.  
 Loads rated with 0.6 power factor.

	10-1	10-3
<b>0.5 Hour Standby Time</b>		
12VDC Output	1 x 12V, 4.5 Ahr	1 x 12V, 4.5 Ahr or 1 x 12V, 7 Ahr
24VDC Output	2 x 12V, 4.5 Ahr*	2 x 12V, 4.5 Ahr* or 2 x 12V, 7 Ahr*
<b>1 Hour Standby Time</b>		
12VDC Output	1 x 12V, 7 Ahr	N/A
24VDC Output	2 x 12V, 7 Ahr*	N/A

\*Batteries wired in series

### **Supervision**

- Form “C” AC fail relay output 2A @ 120VAC
- For 10-1, installations that use AC Fail relay are not UL Listed and may result in nuisance AC Fail signals in the event of a substantial transient

### **Environmental**

- Use in a controlled indoor environment.
- Operating temperature 0°C to 49°C (32°F to 120°F)

**Warning: Improper wiring connections may result in damage to these products.**

## **Maintenance**

- Under normal conditions the power supply should be checked for proper operation on an annual basis
- Check output voltage
- It is also recommended that the current draw is checked to ensure that the current is within specifications. Check battery voltage under load. Under normal conditions the battery will last approximately 4-5 years. If battery backup is critical it is recommended to change the battery every 4 years or less.

## **Troubleshooting Guide**

<b>Problem</b>	<b>Solution</b>
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 – RED, DC ON - RED.</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 switch to desired voltage.</li><li>- Reconnect equipment and reapply AC power.</li></ul>

## **For Technical Support:**

**1-800-265-6630 or 519-621-7651 | [www.rutherfordcontrols.com](http://www.rutherfordcontrols.com)**