RUTHERFORD CONTROLS
A DORMA Group Company

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

ISPS10
PCN15024
R07/15GR-1

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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.

Remarque : Les alimentations électriques RCI 10-1, 10-3, 10-1FPD et 10-3FPD sont conçues pour être utilisées dans un environnement intérieur contrôle. Tous les appareils branchés sur ces alimentations électriques et alimentés à partir de celles-ci doivent être installés à l'intérieur de la même structure continue d'édifice. L'installation doit être conforme aux codes national et local du bâtiment et de prévention des incendies. Vérifier les impératifs détaillés liés à l'installation auprès de l'autorité compétente.

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 10-1FPD 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.

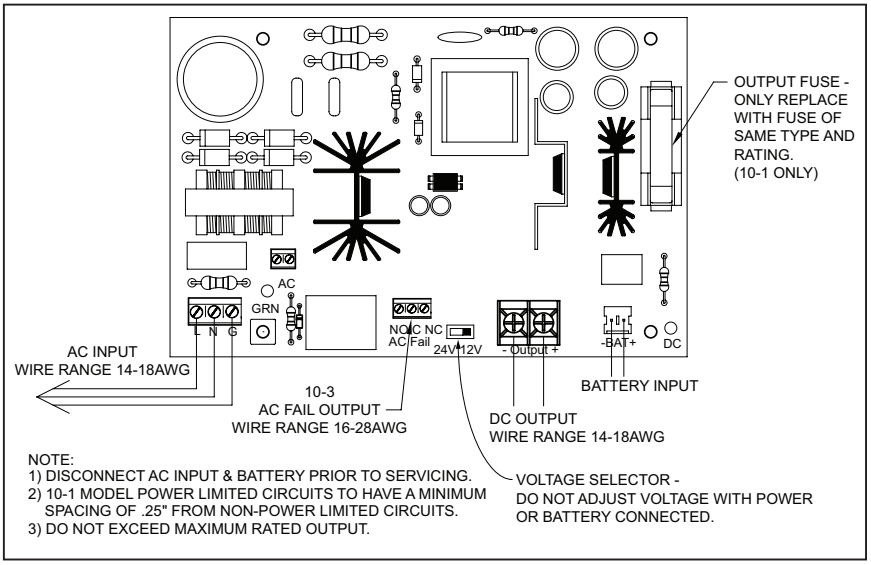

Fig. 1 - Power Supply Circuit Board

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

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.

Battery Backup

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

Battery Capacity	10-1	10-3
0.5 Hour Standby Time		
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*
1 Hour Standby Time		
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.

Avertissement: des branchements de câblage incorrects peuvent provoquer des dommages sur ces produits.

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

Problem	Solution
No DC output from terminals.	- Check AC and DC LED’s on power supply board. Both should be on for proper operation AC ON – RED, DC ON - RED. - If LED’s are not on, check AC power.
Output voltage is not correct for the connected equipment.	- Disconnect AC power, battery(s) and all connected equipment IMMEDIATELY. - Change voltage selection switch to desired voltage. - Reconnect equipment and reapply AC power.

For Technical Support:

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