

# RESERV

## *Video Surveillance UPS*

### *Installation Guide*

#### **Models Include:**

#### **ReServ1**

- Twelve (12) true sine wave regulated 24VAC outputs and Four (4) regulated 12VDC outputs.
- 4 amp total supply current @ 24VAC and 2 amp total supply current @ 12VDC.
- PTC protected power-limited outputs.

#### **ReServ2**

- Sixteen (16) true sine wave regulated 24VAC outputs.
- 4 amp total supply current.
- PTC protected power-limited outputs.

#### **ReServ3**

- Sixteen (16) regulated 12VDC outputs.
- 8 amp total supply current.
- PTC protected power-limited outputs.



Rev. 082510






More than just power.™

## Overview:

ReServ Video Surveillance UPS units are designed to provide power for 24VAC and/or 12VDC cameras during normal or power outage conditions. True sine wave regulated AC outputs and/or regulated DC outputs.

### ReServ Series Video Surveillance UPS Configuration Reference Chart:

Altronix Model Number	Output/Supply Current (Amp)	Ambient Temperature	Input Rating	PTC Protected Power-Limited Outputs	24VAC Outputs	12VDC Outputs	Agency Listings	UL Listings and File Numbers
ReServ1	24VAC @ 4 amp (100VA) & 12VDC @ 2 amp	-33° - 30° C	115VAC 60Hz, 3.5 amp	16	12	4	  	UL File # E329542 UL 60950-1 UL/CUL Listed for Information Technology Equipment.
	24VAC @ 3.5 amp (85VA) & 12VDC @ 2 amp	-33° - 42° C						
ReServ2	24VAC @ 4 amp (100VA)	-33° - 30° C	115VAC 60Hz, 3.5 amp	16	16	—		
	24VAC @ 3.5 amp (85VA)	-33° - 42° C						
ReServ3	12VDC @ 8 amp	-33° - 42° C	115VAC 60Hz, 3.5 amp	16	—	16		

### Specifications:

#### Output:

- PTC protected power-limited outputs are rated @ 1 amp.

#### Battery Backup:

- Built-in charger for sealed lead acid or gel type batteries.
- Automatic switchover to stand-by battery when AC fails.

#### Supervision:

- AC fail supervision (form “C” contacts).
- Low battery supervision (form “C” contacts).

#### Visual & Audio Indicators:

- AC/DC power LED indicators.
- Individual power output LED indicators.
- Low voltage input and Shutdown LED indicators.
- Audio AC Fail and Battery Fail indicator.

#### Additional Features:

- True sine wave regulated AC outputs (ReServ1 & ReServ2). Regulated DC outputs (ReServ1 & ReServ3).
- Unit maintains camera synchronization.
- Ease of installation saves time and eliminates costly labor.

#### Enclosure Dimensions (H x W x D approximate):

- 13.5” x 13” x 3.25” (342.9mm x 330.2mm x 82.55mm)
- Enclosure accommodates up to two (2) 12VDC/7AH batteries.

### Stand-by Specifications:

#### ReServ1

Stand-by Batteries	4 amp (100VA) load at 24VAC and 2 amp load at 12VDC max.
Two (2) 12VDC/7AH	45 minutes
Two (2) 12VDC/12AH*	90 minutes

#### ReServ2

Stand-by Batteries	4 amp (100VA) max. load at 24VAC
Two (2) 12VDC/7AH	45 minutes
Two (2) 12VDC/12AH*	90 minutes

#### ReServ3

Stand-by Batteries	8 amp (100VA) max. load at 12VDC
Two (2) 12VDC/7AH	45 minutes
Two (2) 12VDC/12AH*	90 minutes

\*When using 12AH batteries or larger a separate UL Listed battery enclosure must be installed. Optional UL Listed battery enclosure must be mounted adjacent to the power supply via Class 1 wiring methods.

## **Installation Instructions:**

This installation should be made by qualified service personnel and should conform to all local codes and in accordance with the National Electrical Code. Product is intended for indoor use only. This product contains no serviceable parts.

1. Mount unit in the desired location. Mark and predrill holes in the wall to line up with the top two keyholes in the enclosure. Install two upper fasteners and screws in the wall with the screw heads protruding. Place the enclosure's upper keyholes over the two upper screws, level and secure.  
Mark the position of the lower two holes. Remove the enclosure. Drill the lower holes and install the two fasteners. Place the enclosure's upper keyholes over the two upper screws. Install the two lower screws and make sure to tighten all screws (*Enclosure Dimensions, pg. 8*). Secure enclosure to earth ground.  
**Note:** This product needs to be secured to the building before operation.
2. Connect AC power mains to the terminals marked [L & N] (*Figs. 1-3, pg. 5-7*).  
Use 18 AWG or larger for all power connections (Battery, output) (*Figs. 1-3, pg. 5-7*).  
Use 18 AWG to 22 AWG for power-limited circuits (AC Fail/Low Battery reporting) (*Figs. 1-3, pg. 5-7*).  
**Note:** A readily accessible disconnect device shall be incorporated in the building installation wiring.
3. The LEDs on the power supply board will illuminate when AC power is present.
4. Measure output voltage before connecting cameras/devices to the outputs. This helps avoiding potential damage.
5. ReServ3 only - Adjust voltage for every two (2) outputs using the corresponding trimpot(s) on the board prior to connecting devices.
6. Connecting cameras/devices:  
**ReServ1** - Connect 12VDC cameras/devices to the terminals marked [P 1-4, N 1-4] (*Fig. 1, pg. 5*).  
Connect 24VAC cameras/devices to the terminals marked [5-16] (*Fig. 1, pg. 5*).  
**ReServ2** - Connect 24VAC cameras/devices to the terminals marked [1-16] (*Fig. 2, pg. 6*).  
**ReServ3** - Connect 12VDC cameras/devices to the terminals marked [P 1-16, N 1-16] (*Fig. 3, pg. 7*).
7. Connect batteries to the terminals marked [- BAT + ] (*Figs. 1-3, pg. 5-7*). Use two (2) 12VDC batteries connected in series for 24VDC operation (battery leads included).  
Use batteries - Casil CA1270 (12V/7AH), Genesis NP7-12 (12V/7AH), Ultratech UT1270 (12V/7AH).
8. Connect appropriate signaling notification devices to AC FAIL & BAT FAIL (*Figs. 1-3, pg. 5-7*) supervisory relay outputs.
9. The power LEDs on the unit for Outputs 1-16 will illuminate when AC power is present (*Figs. 1-3, pg. 5-7*).  
**Note:** If any of the power LEDs are not illuminated, the cause may be due to the following:
  - a. AC mains and battery fail.
  - b. One (1) or more power output PTCs are tripped due to a short circuit or overload condition.
  - c. Unit damaged/defective.  
To reset the PTC:
    1. Disconnect corresponding camera/device connected to terminals marked [1-16] (*Figs. 1-3, pg. 5-7*).
    2. Eliminate the trouble condition (short circuit or overload).
    3. Allow 1 minute for PTC to cool off (reset).
    4. Connect corresponding cameras/devices to terminals marked [1-16] (*Figs. 1-3, pg. 5-7*).
    5. Power LEDs will illuminate indicating power has been restored to outputs (*Figs. 1-3, pg. 5-7*).

**WARNING: To reduce the risk of fire or electric shock, do not expose the unit to rain or moisture. This installation should be made by qualified service personnel and should conform to all local codes and in accordance with the National Electrical Code.**

## **LED Diagnostics:**

### **Power Supply Board**

<b>Red (DC)</b>	<b>Green (AC1)</b>	<b>Power Supply Status</b>
ON	ON	Normal operating condition.
ON	OFF	Loss of AC. Stand-by battery supplying power.
OFF	ON	No DC output.
OFF	OFF	Loss of AC. Discharged or no stand-by battery. No DC output.

## **LED Diagnostics (cont'd):**

### **ReServ Board**

LED	LED State		Unit Status
Output LEDs	ON	—	Normal operating condition.
	—	OFF	Loss of 24VAC and/or 12VDC output power.
Low Battery	ON	—	Stand-by batteries are low.
	—	OFF	Normal operating condition.
Shutdown	ON	—	Loss of 24VAC and/or 12VDC output power. Discharged stand-by battery.
	—	OFF	Normal operating condition.

## **Audio Signal Diagnostics:**

### **ReServ Unit**

Audio Signal	Unit Status
Single Periodic Beep	AC Fail.
Double Periodic Beep	Low Battery or No Battery.

## **Terminal Identification:**

### **Power Supply Board**

Terminal Legend	Function/Description
L, G, N	Connect 115VAC 60Hz to these terminals: L to hot, N to neutral.
- DC +	24VDC non power-limited output.
AC FAIL NO, C, NC	Form "C" dry contacts used to instantaneously signal the loss AC to local annunciation devices, with AC present terminals marked NO and C are open, NC and C are closed. When loss of AC occurs terminals marked NO and C are closed, NC and C are open.
BAT FAIL NO, C, NC	Form "C" dry contacts used to signal low battery voltage or loss of battery voltage. Under normal conditions terminals marked NO and C are open, NC and C are closed. During a trouble condition terminals marked NO and C are closed, and NC and C are open.
- BAT +	Stand-by battery connections. Maximum charge current 0.7 amp.

### **ReServ Board**

Terminal Legend	Function/Description
Input - 24VDC +	24VDC input from power supply board.
N, P 1-16	24VAC and/or 12VDC outputs.



The lightning flash with arrow head symbol within an equilateral triangle is intended to alert the user to the presence of an insulated DANGEROUS VOLTAGE within the product's enclosure that may be of sufficient magnitude to constitute an electric shock.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



**CAUTION**  
RISK OF ELECTRIC SHOCK  
DO NOT OPEN



**CAUTION:** To reduce the risk of electric shock do not open enclosure. There are no user serviceable parts inside. Refer servicing to qualified service personnel.

Fig. 1 - ReServ1

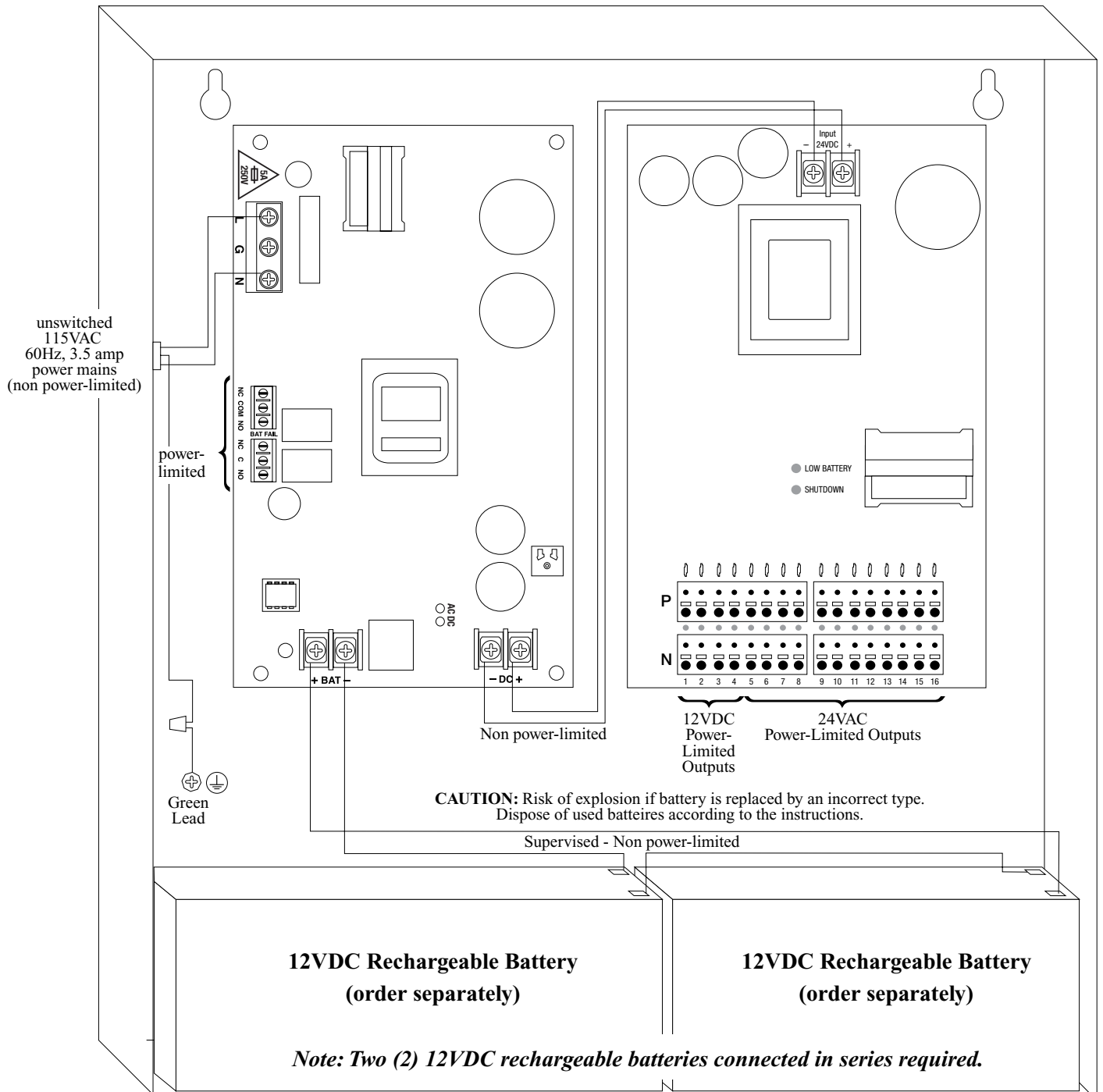


Fig. 2 - ReServ2

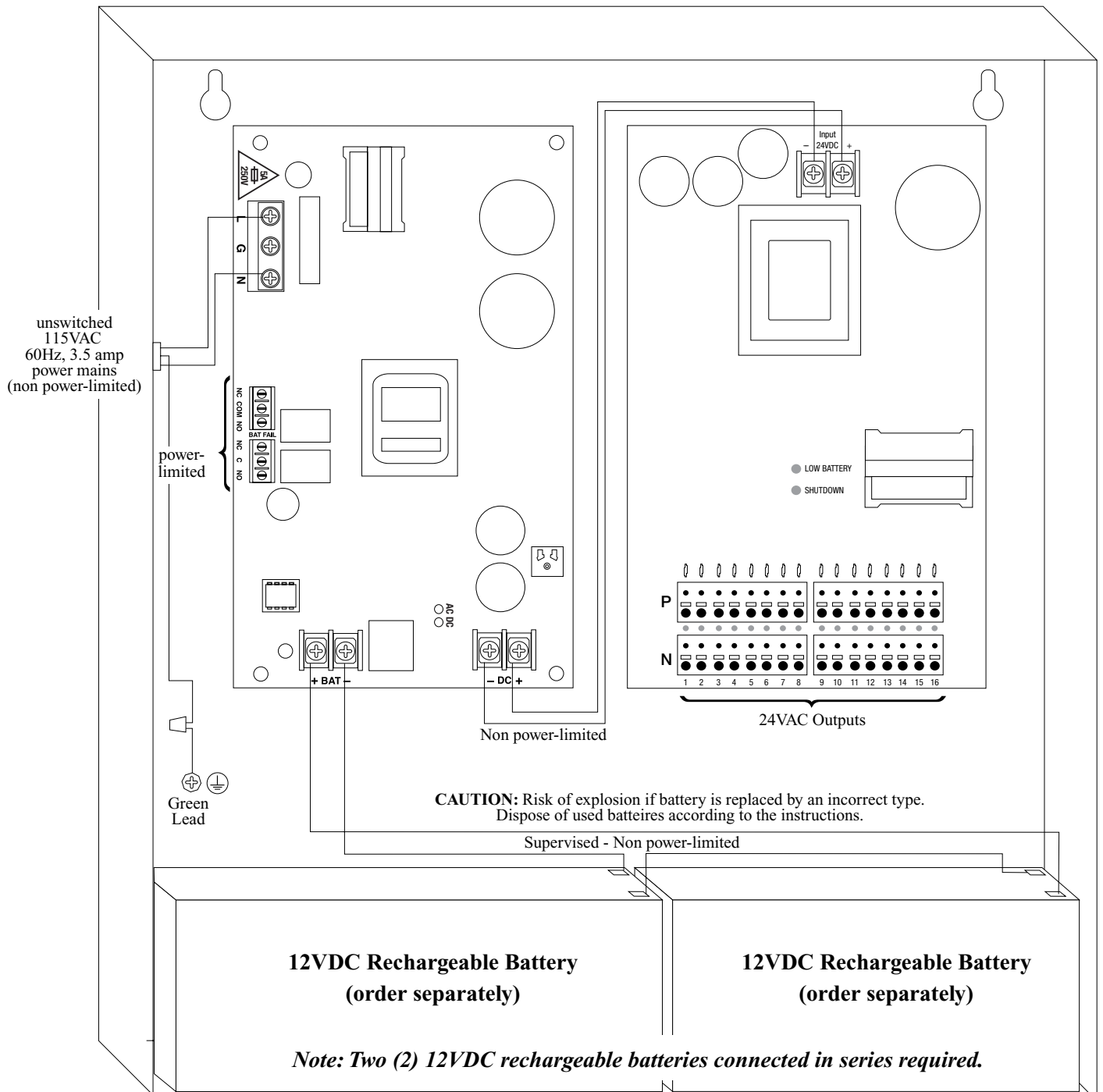
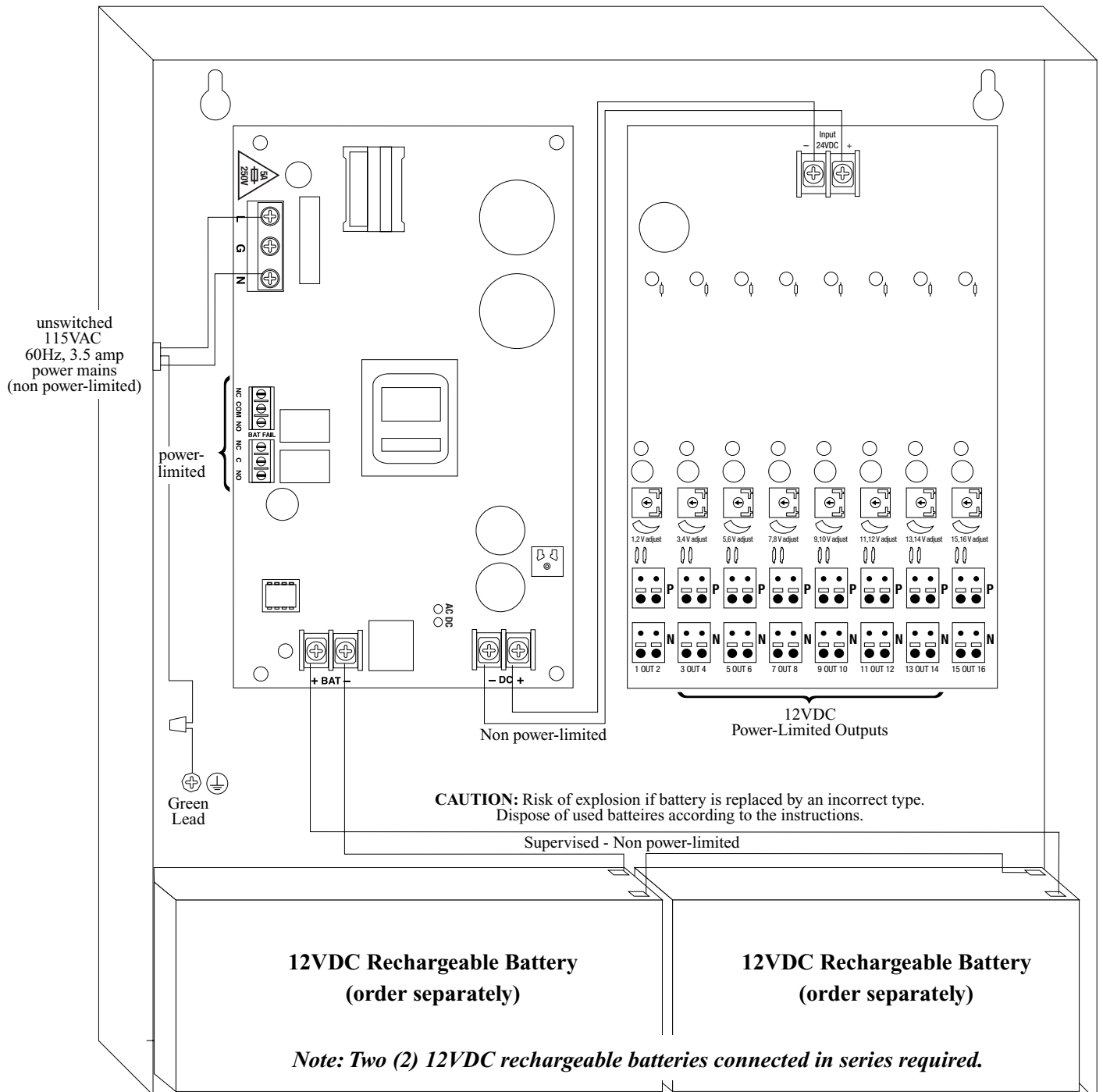
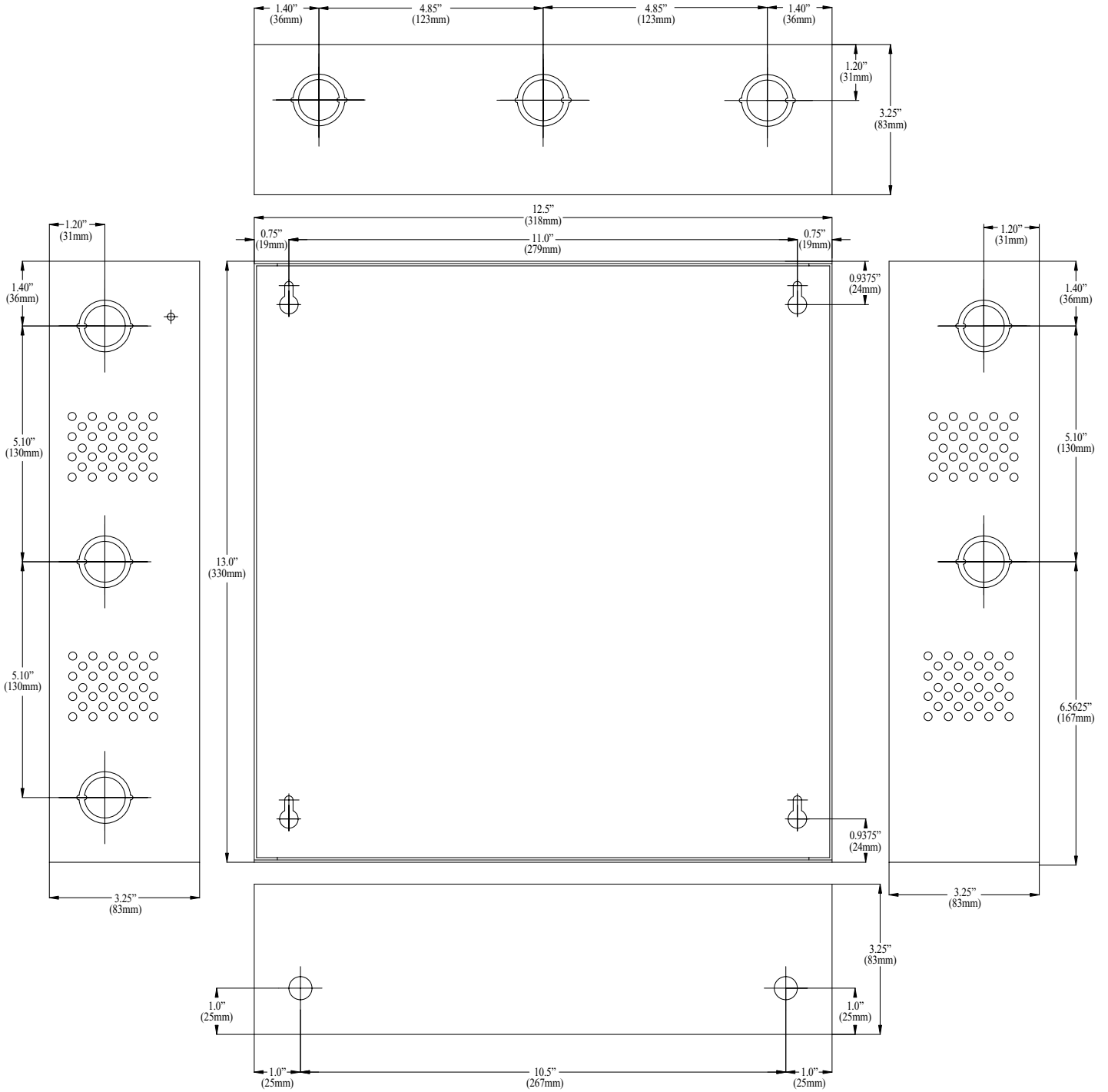


Fig. 3 - ReServ3



**Enclosure Dimensions (H x W x D approximate):**  
 13.5" x 13" x 3.25" (342.9mm x 330.2mm x 82.55mm)



Altronix is not responsible for any typographical errors. Product specifications are subject to change without notice.

140 58th Street, Brooklyn, New York 11220 USA, 718-567-8181, fax: 718-567-9056  
 website: [www.altronix.com](http://www.altronix.com), e-mail: [info@altronix.com](mailto:info@altronix.com), Made in U.S.A.

IIReServ

115N

- 8 -

