

# RESERV

## *Outdoor Video Surveillance UPS*

### *Installation Guide*

#### **Models Include:**

#### **ReServ1WPV**

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

#### **ReServ2WPV**

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

#### **ReServ3WPV**

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



## Overview:

ReServWPV Outdoor 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.

## ReServWPV Series Outdoor Video Surveillance UPS Configuration Reference Chart:

Altronix Model Number	Output/Supply Current (A)	Ambient Temperature	Input Rating	PTC Protected Power-Limited Auto-Resettable Outputs	24VAC Outputs	12VDC Outputs
ReServ1WPV	24VAC @ 4A (100VA) and 12VDC @ 2A	- 33° to 30°C	220VAC, 50Hz, 2A	16	12	4
	24VAC @ 3.5A (85VA) and 12VDC @ 2A	- 33° to 42°C				
ReServ2WPV	24VAC @ 4A (100VA)	- 33° to 30°C				
	24VAC @ 3.5A (85VA)	- 33° to 42°C				
ReServ3WPV	12VDC @ 8A	- 33° to 42°C			-	16

## Specifications:

### Output:

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

### 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 and 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 (ReServ1WPV and ReServ2WPV).
- Regulated DC outputs (ReServ1WPV and ReServ3WPV).
- Unit maintains camera synchronization.
- Ease of installation saves time and eliminates costly labor.

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

- 17.53” x 15.3” x 6.67” (445.3mm x 388.6mm x 169.4mm).
- NEMA4 / IP66 Rated enclosure.
- Accommodates batteries:
  - up to two (2) 12VDC/7AH batteries or
  - up to two (2) 12VDC/12AH batteries.

## Stand-by Specifications:

Stand-by Batteries	ReServ1WPV - 4A (100VA) load at 24VAC and 2A load at 12VDC max. ReServ2WPV - 4A (100VA) max. load at 24VAC ReServ3WPV - 8A (100VA) max. load at 12VDC
Two (2) 12VDC/7AH	45 minutes
Two (2) 12VDC/12AH	90 minutes

## 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. This product contains no serviceable parts.

1. Remove back plate inside the enclosure by removing four (4) mounting screws and ground lug.  
Do not discard hardware.
2. Mark and drill desired knockouts on the enclosure to facilitate wiring.  
**Note:** It is required to use UL Listed outdoor rated conduit hubs with a minimum outdoor rating of 4X.
3. Secure back plate and ground lug inside the enclosure with four (4) mounting screws (*Figs. 1-2, pg. 5-6*).
4. Mount unit in the desired location with the appropriate fasteners utilizing the holes provided on the enclosure's flanges (*Pgs. 7 and 8*). Secure enclosure to earth ground.  
**Note:** This product needs to be secured to the building/pole before operation.
5. Connect AC power mains to the terminals marked [L] and [N] (*Figs. 1-2, pg. 5-6*).  
Use 18 AWG or larger for all power connections (Battery, output) (*Figs. 1-2, pg. 5-6*).  
Use 18 AWG to 22 AWG for power-limited circuits (AC Fail/Low Battery reporting) (*Figs. 1-2, pg. 5-6*).  
**Note:** A readily accessible disconnect device shall be incorporated in the building installation wiring.  
**Keep power-limited wiring separate from non power-limited wiring (220VAC, 50Hz Input, Battery Wires). Minimum 0.25" spacing must be provided.**  
**CAUTION: Do not touch exposed metal parts. Shut branch circuit power before installing or servicing equipment. There are no user serviceable parts inside.**  
**Refer installation and servicing to qualified service personnel.**
6. The LEDs on the power supply board will illuminate when AC power is present.
7. Measure output voltage before connecting cameras/devices to outputs. This helps avoiding potential damage.
8. ReServ3WPV only - Adjust voltage for every two (2) outputs using the corresponding trimpot(s) on the board prior to connecting devices.
9. Connecting cameras/devices:  
**ReServ1WPV:** 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*).  
**ReServ2WPV:** Connect 24VAC cameras/devices to the terminals marked [1-16] (*Fig. 1, pg. 5*).  
**ReServ3WPV:** Connect 12VDC cameras/devices to the terminals marked [P 1-16], [N 1-16] (*Fig. 2, pg. 6*).
10. Connect batteries to the terminals marked [+ BAT -] (*Figs. 1-2, pg. 5-6*).  
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) or NP7-12 (12V/12AH), Ultratech UT1270 (12V/7AH) or Ultratech UT12120 (12V/12AH).
11. Connect appropriate signaling notification devices to AC FAIL and BAT FAIL (*Figs. 1-2, pg. 5-6*) supervisory relay outputs.
12. The power LEDs on the unit for Outputs 1-16 will illuminate when AC power is present (*Figs. 1-2, pg. 5-6*).  
**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. 1-2, pg. 5-6*).
    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. 1-2, pg. 5-6*).
    5. Power LEDs will illuminate indicating power has been restored to outputs (*Figs. 1-2, pg. 5-6*).

**WARNING: This installation should be made by qualified service personnel and should conform to the National Electrical Code and all local codes.**



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.

## **LED Diagnostics:**

### **Power Supply Board**

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

### **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:**

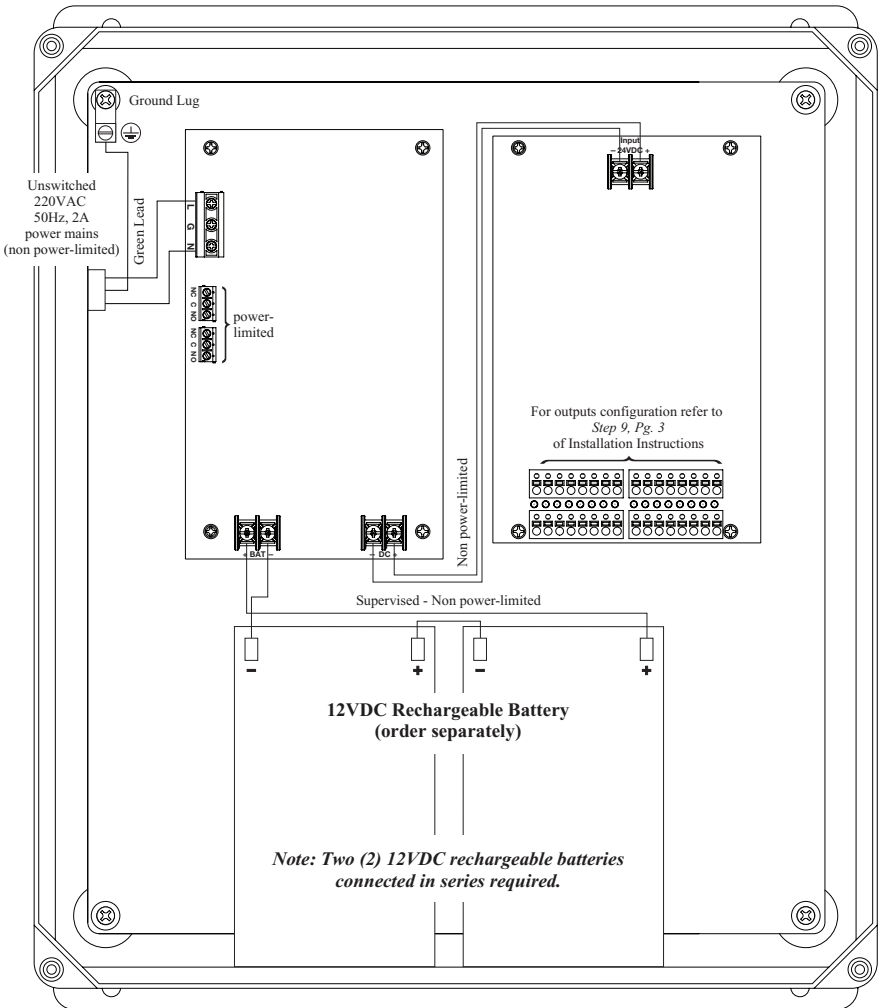
### **Power Supply Board**

Terminal Legend	Function/Description
L, G, N	Connect 220VAC, 50Hz 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 0.7A.

### **ReServ Board**

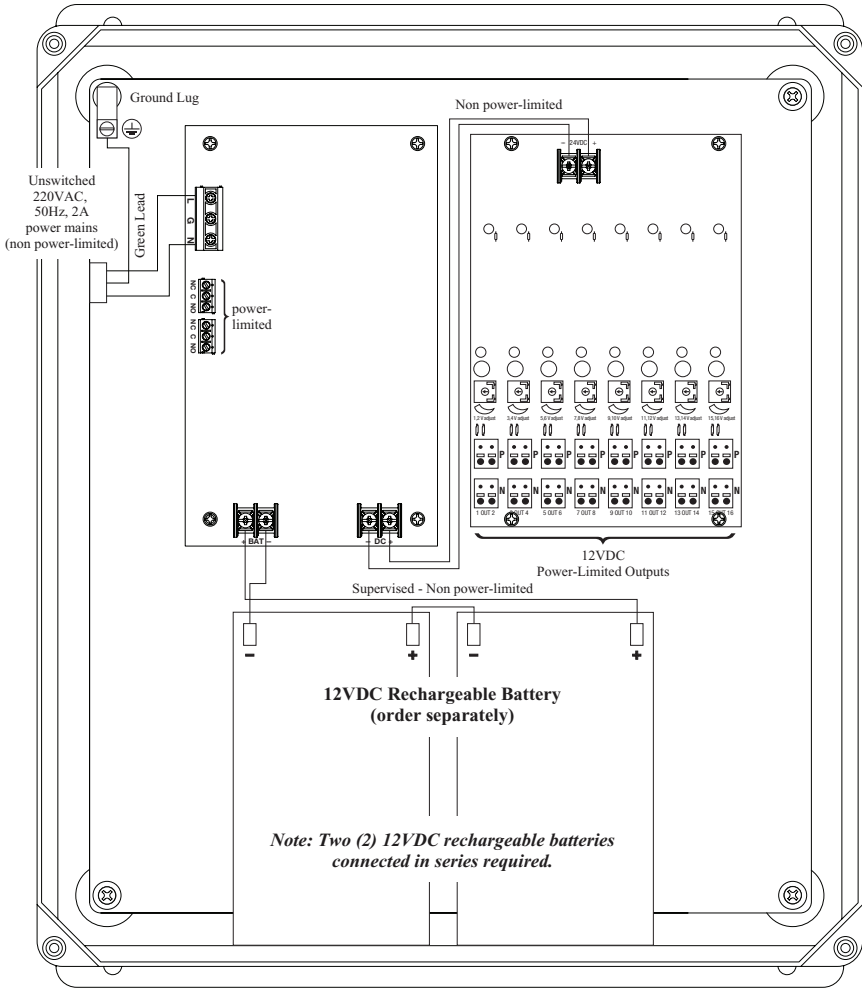
Terminal Legend	Function/Description
Input – 24VDC +	24VDC input from power supply board.
N, P 1-16	24VAC and/or 12VDC outputs.

Fig. 1 - ReServ1WPV and ReServ2WPV



**CAUTION:** Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

Fig. 2 - ReServ3WPV

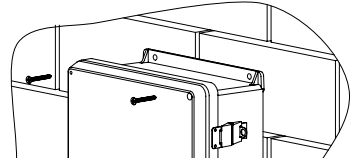


**CAUTION:** Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

## Wall Mount Installation

- 1- Place unit at desired location and secure with mounting screws (not included) (Fig. 3, pg. 7).

Fig. 3



## Pole Mounting Using Optional Pole Mount Kit PMK2 (not included):

This installation should be made by qualified service personnel. This product contains no serviceable parts. PMK2 is intended for use with Altronix outdoor rated power supplies or accessories housed in WP2 enclosures. Brackets are designed for use with the Wormgear Quick Release Straps (two included).

1. Thread one (1) wormgear quick release strap through the slots on the back of a mounting bracket (Fig. 4, pg. 7).
2. Once the desired height of the top Pole Mount bracket is achieved, tighten the straps down by sliding open end of the strap through the locking mechanism on the strap, then tighten the screw with flat head screwdriver or 5/16" hex socket driver (Fig. 5, pg. 7 and Fig. 7, pg. 7).

Fig. 4

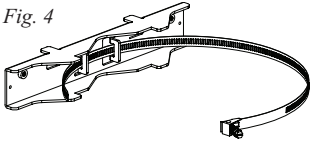


Fig. 5

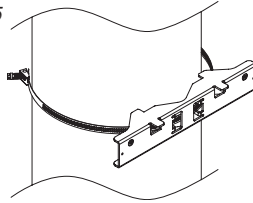
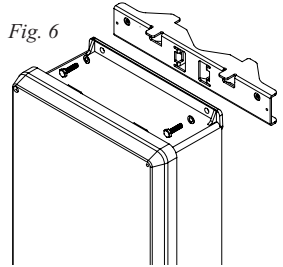


Fig. 6



3. Attach the bottom bracket to the enclosure by inserting bolts through the flange of the enclosure and into the bracket, tightening bolts with a 7/16" hex socket (Fig. 6, pg. 7).
4. Thread the second wormgear quick release strap through the slots on the back of the bottom mounting bracket (Fig. 4, pg. 7).
5. Mount enclosure onto the top bracket by inserting bolts through flange of the enclosure and into the bracket, tightening bolts with a 7/16" hex socket (Fig. 6, pg. 7).
6. Tighten the straps of the bottom bracket down by sliding the open end of the strap through the locking mechanism on the strap, then tighten screw with flat head screwdriver or 5/16" hex socket driver (Fig. 4, pg. 7).
7. Clip excess straps.

Fig. 7

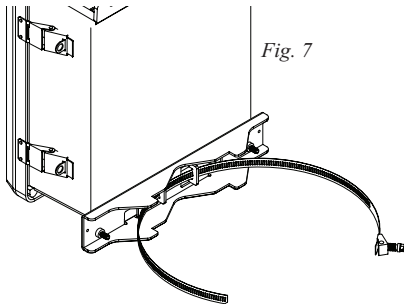


Fig. 8  
2" to 8" (50.8mm to 203.2mm)  
diameter round pole

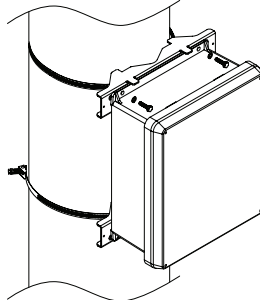
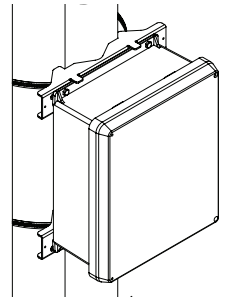


Fig. 8a  
5" (127mm) square pole

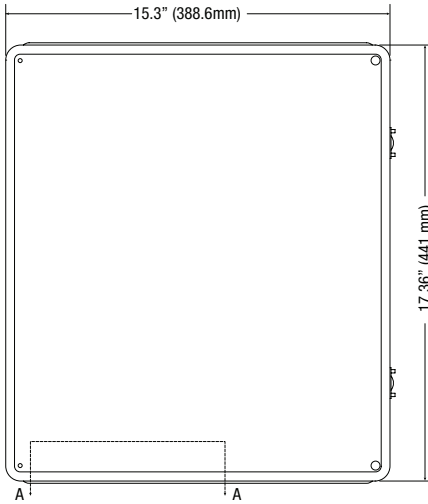


NEMA4/IP66 rated enclosure.

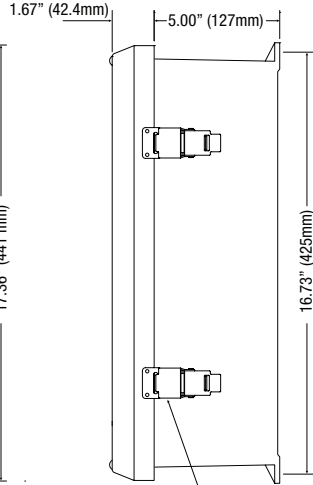
**Enclosure Dimensions (H x W x D approximate):**

17.53" x 15.3" x 6.67" (445.3mm x 388.6mm x 169.4mm)

**FRONT VIEW**

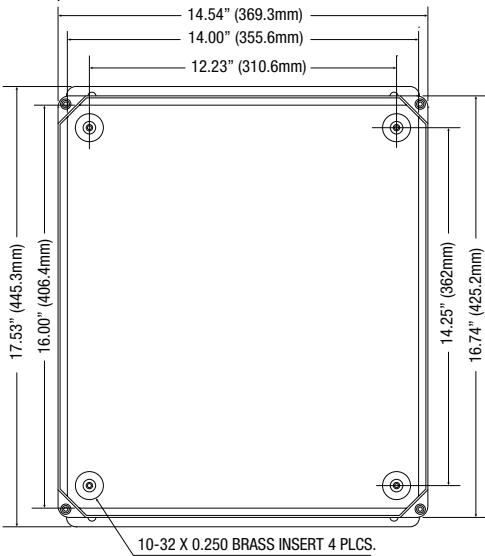


**RIGHT SIDE VIEW**

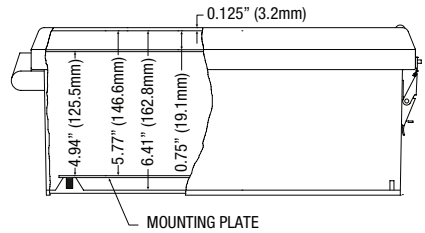


316 STAINLESS STEEL PADLOCK LATCH  
ATTACHED WITH RIVETS. Ø 0.375 PADLOCK EYE

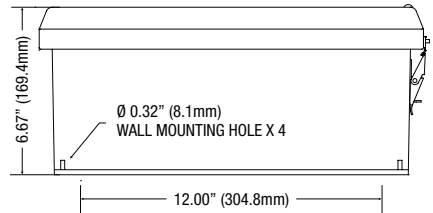
**FRONT VIEW COVER REMOVED**



**SECTION A-A**



**END VIEW**



Altronix is not responsible for any typographical errors.

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IIReServWPV C14R

