



Encompass BPXL Battery Packs

User's Manual

Para Systems, Inc.
1455 Lemay Dr.
Carrollton, TX 75007
Phone: 1-972-446-7363
Fax: 1-972-446-9011
Internet: minutemanups.com
UPS Sizing: sizemyups.com

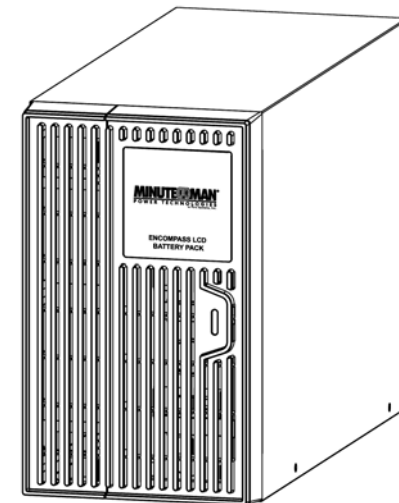


Table Of Contents

1.	Introduction	2
2.	Rear Panel	6
3.	Installation	7
4.	Obtaining Service	11
5.	Replacing the Battery	12
6.	Specifications	16
7.	Limited Product Warranty	17
A1.	Declaration of Conformity	18

Chapter 1: Introduction

Thank you for purchasing this power protection product. It has been designed and manufactured to provide many years of trouble free service. Please read this manual before installing your Encomapss BPXL Battery Pack series, models BP24XL, BP48XL, BP72XL as it provides important information that should be followed during the installation and the maintenance of the Battery Pack allowing you to correctly set up your system for the maximum safety and performance. Included is information on customer support and factory service, if it is required. If you experience a problem with the Battery Pack please refer to the Obtaining Service in this manual to correct the problem or collect enough information so that the Technical Support Department can assist you.

SAVE THESE INSTRUCTIONS - This manual contains important instructions that should be followed during the installation and the maintenance of the Battery Pack and the batteries.

**IMPORTANT SAFETY INSTRUCTIONS
SAVE THESE INSTRUCTIONS !
CONSIGNES DE SÉCURITÉ IMPORTANTES
SAUVEGARDEZ CES CONSIGNES!**

Veuillez lire ce manuel avant l'installation de l'onduleur modèles BP24XL, BP48XL, BP72XL. Il contient de l'information importante qui doit être respectée au cours de l'installation et de l'entretien de l'onduleur et des batteries. Cette information vous permettra de correctement installer le système pour atteindre son rendement maximum en toute sécurité.

CAUTION! The maximum ambient operating temperature for this Battery Pack series is 40°C ("0 ~ 40°C" for Ambient Operation).

- The external vents and openings on the Battery Pack are provided for ventilation. To ensure reliable operation of the Battery Pack and to protect the Battery Pack from overheating, these vents and openings must not be blocked or covered. Do not insert any object into any of the vents or opening that may hinder the ventilation.
- Install the Battery Pack in a well ventilated area, away from excess moisture, heat, dust, flammable gas or explosives.
- Leave adequate space (at least 20cm) in the front and at the rear of the Battery Pack for proper ventilation.
- Do not install the Battery Pack with its front or rear panel facing down at any angle.
- Do not install the Battery Pack laying on its side panels.
- Before usage, you must allow the Battery Pack to adjust to room temperature (20°C~25°C or 68°F~77°F) for at least one hour to avoid moisture condensing inside the Battery Pack.

CAUTION! This Battery Pack series is **ONLY** intended to be installed in an indoor temperature controlled environment that is free of conductive contaminants. This Battery Pack series is not intended for use in a computer room as defined in the Standard for the Protection of Electronic Computer/Data Processing Equipment ANSI/NFPA 75.

WARNING: These Battery Packs contains potentially hazardous voltages. Do not attempt to disassemble the Battery Pack beyond the battery replacement procedure. These Battery Packs contains no user serviceable parts. Repairs and battery replacement must be performed by **QUALIFIED SERVICE PERSONNEL ONLY**.

WARNING: Risk of Electrical Shock. Hazardous live parts inside these Battery Packs are energized from the battery.

CAUTION! DO NOT install these Battery Packs with its front or rear panel facing down at any angle or laying on its side panels.

WARNING: Qualified Service Personnel ONLY must perform the Installation and Servicing of these Battery Packs. MINUTEMAN accepts no liabilities and is not limited to: injury to the User or Service Personnel, or damages to; the Battery Pack, or the connected equipment caused by the incorrect installation or servicing of the Battery Pack and/or UPS system. These Battery Packs **MUST** be operated with their respective UPS models, see the table below:

BP	BP24XL	BP48XL	BP72XL
UPS	EC1000LCD	EC1500LCD EC2000LCD	EC3000LCD

- CAUTION!** To de-energize the Battery Pack:
1. If the UPS is On press and release the Off button.
 2. Disconnect the UPS from the wall outlet.
 3. Turn off the DC breaker on the rear panel of the Battery Pack.
 4. Disconnect the battery cable from the rear panel of the UPS.
 5. To de-energize the Battery Pack completely, disconnect the batteries.

NOTICE: This equipment has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules and the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference of the Canadian Department of Communications. These limits are designed to provide reasonable protection against such interference in a residential installation. This equipment generates and uses radio frequency and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, this equipment may cause interference to radio and television reception. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient the receiving antenna.
- Relocate the computer with respect to the receiver.
- Move the computer away from the receiver.
- Plug the computer into a different outlet so that the computer and receiver are on different branch circuits.
- Shielded communications interface cables must be used with this product.

WARNING: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Receiving Inspection

After removing your Battery Pack from its carton, it should be inspected for damage that may have occurred in shipping. Immediately notify the carrier and place of purchase if any damage is found. Warranty claims for damage caused by the carrier will not be honored. The packing materials that your Battery Pack was shipped in are carefully designed to minimize any shipping damage. In the unlikely case that the Battery Pack needs to be returned to the manufacturer, please use the original packing material. Since the manufacturer is not responsible for shipping damage incurred when the system is returned, the original packing material is inexpensive insurance. **PLEASE SAVE THE PACKING MATERIALS!**



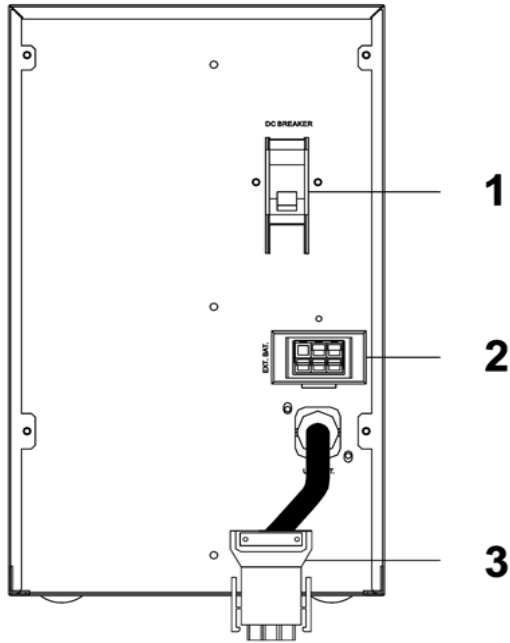
Life Support Policy

As a general policy, we do not recommend the use of any of our products in life support applications where failure or malfunction of the product can be reasonably expected to cause failure of the life support device or to significantly affect its safety or effectiveness. We do not recommend the use of any of our products in direct patient care. We will not knowingly sell our products for use in such applications unless it receives in writing assurances satisfactory to us that (a) the risks of injury or damage have been minimized, (b) the customer assumes all such risks, and (c) our liability is adequately protected under the circumstances.

© COPYRIGHT 2018 BY PARA SYSTEMS, INC.

All Rights Reserved. All rights of this User's Manual ("Manual"), including but not limited to the content, information, and figures are solely owned and reserved by Para Systems, Inc. ("Para Systems"). The Manual can only be applied to the operation or the use of this product. Any disposition, duplication, dissemination, reproduction, modification, translation, extraction, or usage of this Manual in whole or in part is prohibited without the prior written permission of Para Systems. Given that Para Systems will continuously improve and develop the product, changes may be made to the information in this Manual at any time without obligation to notify any person of such revision or changes. Para Systems will make all possible efforts to secure the accuracy and the integrity of this Manual. Para Systems disclaims any kinds or forms of warranty, guarantee, or undertaking, either expressly or implicitly, including but not limited to the completeness, faultlessness, accuracy, non-infringement, merchantability or fitness for a particular purpose of the Manual.

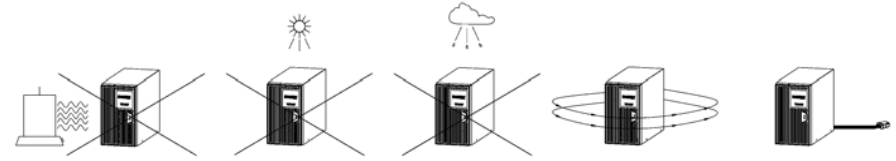
Chapter 2: Rear Panel



1. The DC Breaker connects and disconnects the DC bus voltage from the Battery Pack to the UPS. The DC Breaker will trip in the event of a DC overcurrent condition.
2. The External Battery connector is for Daisy Chaining additional Battery Packs.
3. The External Battery cable is for connecting the Battery Pack to the UPS or Daisy Chaining additional Battery Packs.

Chapter 3: Installation

INSTALLATION PLACEMENT



This Battery Pack series is **ONLY** intended to be installed in an indoor temperature controlled environment that is free of conductive contaminants. DO NOT operate the Battery Pack in: extremely dusty and/or unclean areas, locations near heating devices, water or excessive humidity, or where the Battery Pack is exposed to direct sunlight. Select a location, which will provide good air circulation for the Battery Pack at all times. Route the battery cables so they cannot be walked on or damaged. This Battery Pack series is not for use in a computer room as defined in the Standard for the Protection of Electronic Computer/Data Processing Equipment ANSI/NFPA 75. Typical battery life is 3 to 5 years. Environmental factors do affect battery life. High temperatures, poor utility power, and frequent, short duration discharges have a negative impact on battery life.

Operating Temperature (Maximum): 0 to 40°C (+32 to +104°F)
 Operating Elevation: 0 to 3,000m (0 to +10,000 ft)
 Operating and Storage Relative Humidity: 10% to 90%, non-condensing
 Storage Temperature: -15 to +45°C (+5 to +113°F)
 Storage Elevation: 0 to 15,000m (0 to +50,000 ft)

INSTALLATION

Be sure to read the installation placement and all the cautions before installing the Battery Pack. Place the Battery Pack in the final desired location and complete the rest of the installation procedure.

WARNING! These Battery Packs are extremely heavy. Anytime the Battery Pack has to be handled be sure to use, enough personnel, strong supports and equipment to safely handle the Battery Pack.

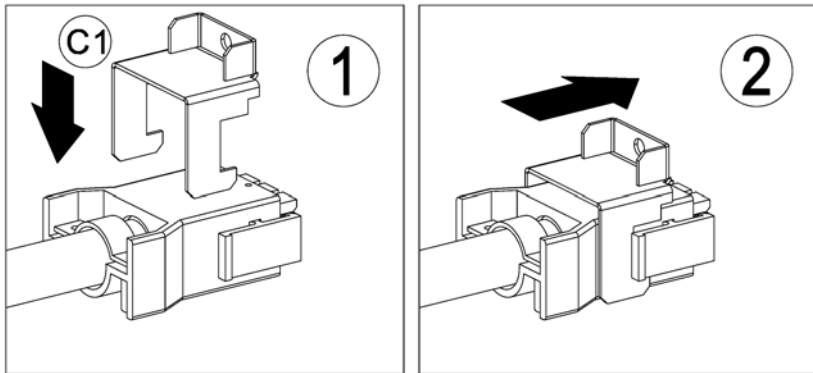
CAUTION! DO NOT install these Battery Packs with its front or rear panel facing down at any angle or laying on its side panels.

NOTE: When using these Battery Packs, the UPS must be configured so that the UPS will report the correct estimated runtime on the LCD screen and in the Power Monitoring software and/or the SNMP card. See the Power Monitoring software or the SNMP card's User's Manual to configure the UPS.

CONNECTING THE BATTERY PACK

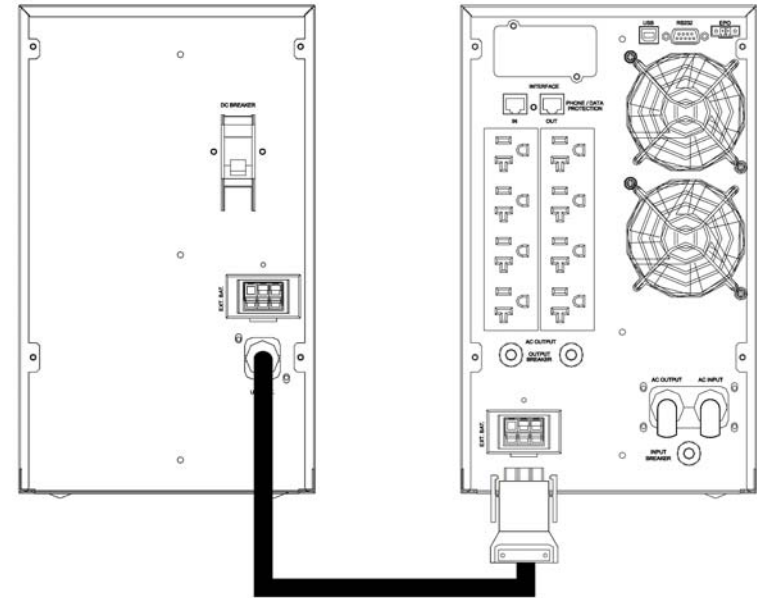
NOTE: When using these Battery Packs, the UPS must be configured so that the UPS will report the correct estimated runtime on the LCD screen and in the Power Monitoring software and/or the SNMP card. See the Power Monitoring software or the SNMP card's User's Manual to configure the UPS.

1. Be sure to read the installation placement procedure, all of the cautions and the safety precautions before connecting the Battery Pack.
2. Make sure that the DC breaker on the rear panel of the Battery Pack is in the off position. **CAUTION:** If the Battery Pack's DC breaker is in the on position, the battery voltage will be present at the open end of the Battery Pack's external battery cable and the external battery connector.
3. If the UPS is on, turn the UPS off and disconnect the UPS's input power cord from the AC wall outlet.
4. Remove the screw from the external battery connector's cover plate on the rear panel of the UPS and the rear panel of the Battery Pack.
5. Install the battery cable strain relief (C1) onto the external battery cable. Step 1: Push the strain relief onto the external battery cable connector. Step 2: Push the strain relief forward.



6. Verify, before connecting the Battery Pack's external battery cable into the UPS's external battery connector, that the battery connectors mate red to red and black to black. **NOTE:** The red connector is the battery positive (+) and the black connector is the battery negative (-).
7. Connect the external battery cable from the Battery Pack to the external battery connector on the UPS and secure the strain relief with the retaining screw. **NOTE:** If connecting more than one Battery Pack see Daisy Chaining.
8. Turn the DC breaker on the rear panel of the Battery Pack to the on position.

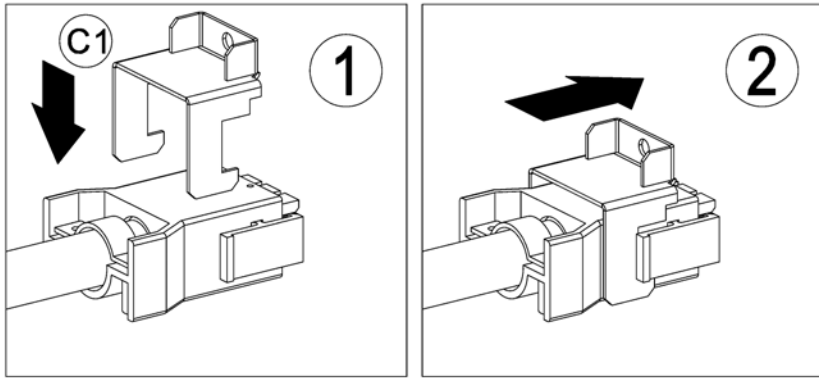
9. The Battery Pack is ready for normal operation, see the UPS User's Manual for the normal startup of the UPS.



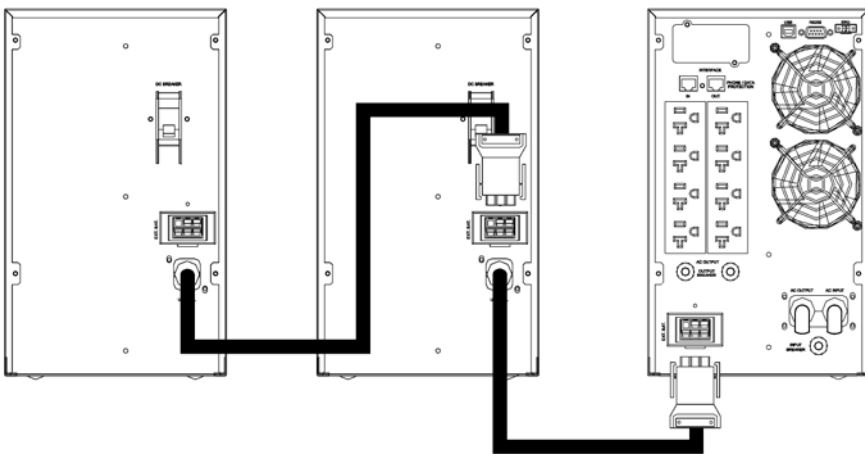
DAISY CHAINING

"Daisy Chaining" means connecting one Battery Pack to another Battery Pack to another Battery Pack, this chain could go on indefinitely. Follow the steps below to Daisy Chain the Battery Packs:

1. Be sure to read the installation placement procedure, all of the cautions and the safety precautions before connecting the Battery Packs.
2. Make sure that the DC breakers on the rear panels of the Battery Packs are in the off position. **CAUTION:** If the Battery Pack's DC breaker is in the on position, the battery voltage will be present at the open end of the Battery Pack's external battery cable and the external battery connector.
3. If the UPS is on, turn the UPS off and disconnect the UPS's input power cord from the AC wall outlet.
4. Remove the screw from the external battery connector's cover plate on the rear panel of the UPS and the rear panel of all of the Battery Packs.
5. Install the battery cable strain reliefs (C1) onto all of the the external battery cables. Step 1: Push the strain relief onto the external battery cable connector. Step 2: Push the strain relief forward.



6. Verify, before plugging the external battery cable into the UPS's external battery connector and the Battery Pack's external battery connector that they mate red to red and black to black. **NOTE:** The red connector is the battery positive (+) and the black connector is the battery negative (-).
7. Connect the external battery cable from the first Battery Pack to the external battery connector on the UPS and secure the strain relief with the retaining screw.
8. Connect the external battery cable from the second Battery Pack to the external battery connector on the first Battery Pack and secure the strain relief with the retaining screw.
9. Turn all of the DC breakers on the rear panels of all of the Battery Packs to the on position.
10. The Battery Packs are ready for normal operation, see the UPS User's Manual for the normal startup of the UPS.



Chapter 4: Obtaining Service

IF THE BATTERY PACK REQUIRES SERVICE

1. Use the following to eliminate obvious causes.
2. Verify there are no tripped circuit breakers and that the batteries are good. A tripped circuit breaker and defective batteries are the most common issues.
3. Call your dealer for assistance. If you cannot reach your dealer, or if they cannot resolve the issue call or fax the Technical Support department at the following numbers; Voice phone (972) 446-7363, FAX line (972) 446-9011 or visit our Web site at www.minutemanups.com the "Discussion Board". Before calling the Technical Support Department have the following information available:
 - a) Contact name and address.
 - b) Where and when the unit was purchased.
 - c) All of the model information about your unit.
 - d) The serial number of your unit.
 - e) Any information on the failure, including LEDs that may be illuminated or error codes displayed.
 - f) A description of the protected equipment including model numbers, if possible.
 - g) A technician will ask you for the above information and if possible, help solve the issue over the phone. In the event that the unit requires factory service, the Technical Support Representative will issue you a Return Material Authorization Number (RMA #). **NOTE: We must have the model number and the serial number of the product to issue an RMA #.**
 - h) If the unit is under warranty, the repairs will be done at no charge. If the unit is not under warranty there will be a charge for the repair.
4. Pack the unit in its original packaging. If the original packaging is no longer available, ask the Technical Support Representative about obtaining a new set. It is important to pack the unit properly in order to avoid damage in transit. Never use Styrofoam beads for a packing material.
 - a) Include a letter with your name, address, day time phone number, RMA number, a copy of your original sales receipt, and a brief description of the problem.
5. Mark the RMA # on the outside of all packages. The factory cannot accept any package without the RMA # marked on the outside.
6. Return the unit by insured, prepaid carrier to:

Para Systems Inc.
MINUTEMAN UPS
1809 W. Frankford Road, Suite 150
Carrollton, TX 75007
ATTN: RMA # _____

Chapter 5: Replacing the Battery

QUALIFIED SERVICE PERSONNEL ONLY

Please read all of the **WARNINGS** and **CAUTIONS** before attempting to service the batteries. Typical battery life is 3 to 5 years. Environmental factors do affect battery life. High temperatures, poor utility power, and frequent, short duration discharges have a negative impact on battery life.

WARNING! This Battery Pack contains potentially hazardous voltages. Do not attempt to disassemble the Battery Pack beyond the battery replacement procedure. This Battery Pack contains no user serviceable parts.

CAUTION: Do not open or mutilate batteries. Released electrolyte is harmful to the skin and eyes and may be toxic.

CAUTION: Do not dispose of batteries in a fire. The batteries may explode. The batteries in this Battery Pack are recyclable. Dispose of the batteries properly. The batteries contain lead and pose a hazard to the environment and human health if not disposed of properly. Refer to local codes for proper disposal requirements or return the battery to the supplier.

CAUTION: The battery system can present a risk of electrical shock. These batteries produce sufficient current to burn wire or tools very rapidly, producing molten metal. Observe these precautions when replacing the batteries:

1. Remove watches, rings, or other metal objects.
2. Use hand tools with insulated handles.
3. Wear protective eye gear (goggles), rubber gloves and boots.
4. Do not lay tools or other metal parts on top of batteries.
5. Disconnect the charging source prior to connecting or disconnecting the battery terminals.
6. Determine if the battery is inadvertently grounded. If the battery is, remove the source of the grounding. Contact with any part of a grounded battery can result in an electrical shock. The likelihood of such shock will be reduced, if such grounds are removed during installation and maintenance.

CAUTION: Replace batteries with the same number and type as originally installed in the Battery Pack. These batteries have pressure operated vents. These Battery Packs contain sealed non-spillable maintenance-free lead acid batteries.

Model #	BP24XL	BP48XL	BP72XL
Internal Battery Module Part #	BM0079	BM0080	BM0081

BATTERY REPLACEMENT PROCEDURE

QUALIFIED SERVICE PERSONNEL ONLY

PLEASE READ THE CAUTIONS AND WARNINGS BEFORE ATTEMPTING TO REPLACE THE BATTERY MODULES

The battery modules in the Battery Packs can be replaced without powering down the whole UPS system.

1. Turn off all of the DC breakers on the rear panel of all of the Battery Packs.
2. Remove the retaining screw from the battery cable strain relief on the rear panel of the UPS and the Battery Packs.
3. Disconnect all of the external battery cables.
4. Remove the Battery Pack's cover screws.
5. Remove the cover and set it aside.
6. Press down to unlock the battery connector holders on the right hand side of the Battery Pack and on the left hand side of the Battery Pack. (FIG. 1)
7. Disconnect the battery connectors (red and black) from each of the battery modules one on the right hand side of the Battery Pack and one on the left hand side of the Battery Pack. (FIG. 1)
8. Remove the fasteners from the battery retaining brackets on the right hand side of the Battery Pack and on the left hand side of the Battery Pack. (FIG. 2)
9. Remove the battery retaining brackets.
10. Grasp one of the battery module and gently pull it out of the Battery Pack and set it aside.
11. Grasp the other battery module and gently pull it of the Battery Pack and set it aside.

NOTE: Use Caution, the battery modules are heavy.

12. Slide the new battery modules into the Battery Pack.
13. Re-install all of the battery retaining brackets.
14. Re-install all of the fasteners for the battery retaining brackets.
15. Verify proper polarity. Reconnect all of the battery connectors (red and black) together.

NOTE: Some sparking may occur this is normal.

16. Relock all of the battery connector holders.
17. Re-install the cover.
18. Re-install the cover screws.
19. Reconnect all of the external battery cables.
20. Re-install the retaining screws for all of the battery cable strain reliefs.
21. Turn on all of the DC breakers on the rear panel of all of the Battery Packs.
22. Properly dispose of the old batteries at an appropriate recycling facility or return them to the supplier in the packing material for the new batteries.
23. The Battery Pack is ready for normal operation.

NOTE: If the UPS has a Weak/Bad Battery Alarm after replacing the battery modules, the user must initiate a self test to clear the Weak/Bad Battery Alarm. To initiate a self test see section 4 "**USER INVOKED BATTERY TEST**" in the UPS's User's Manual.

FIG. 1

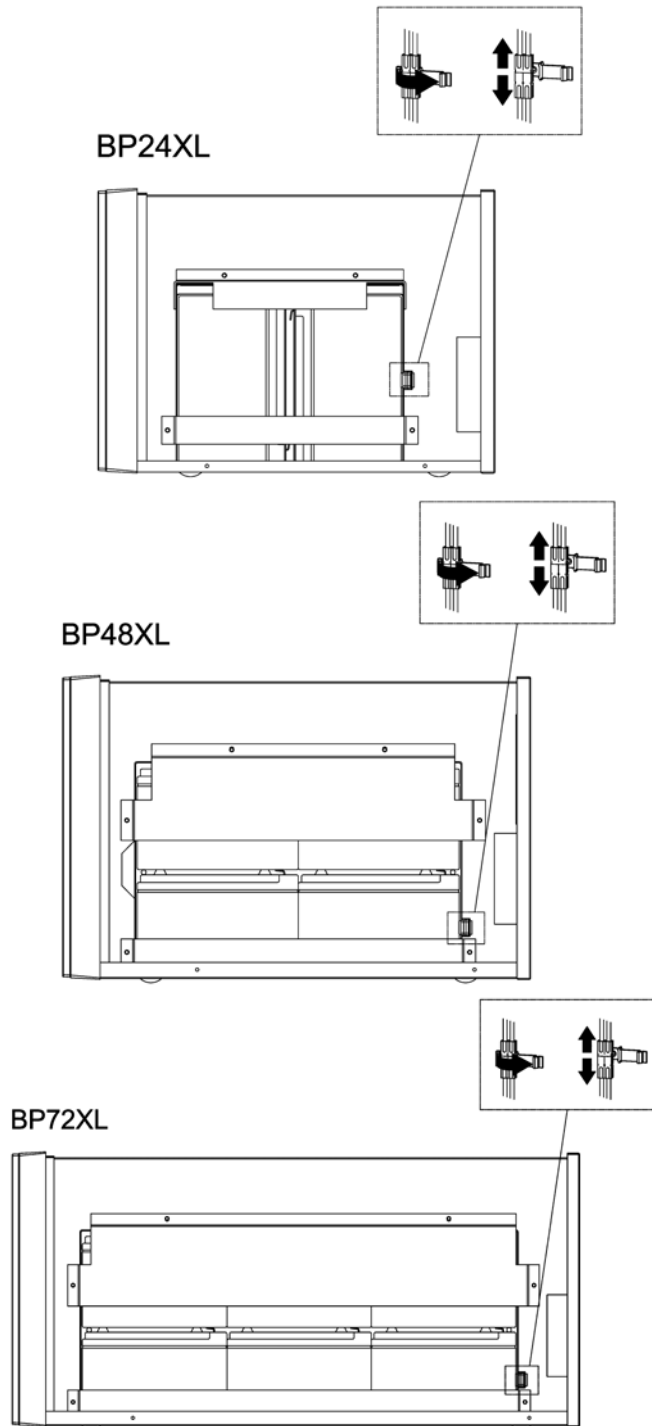
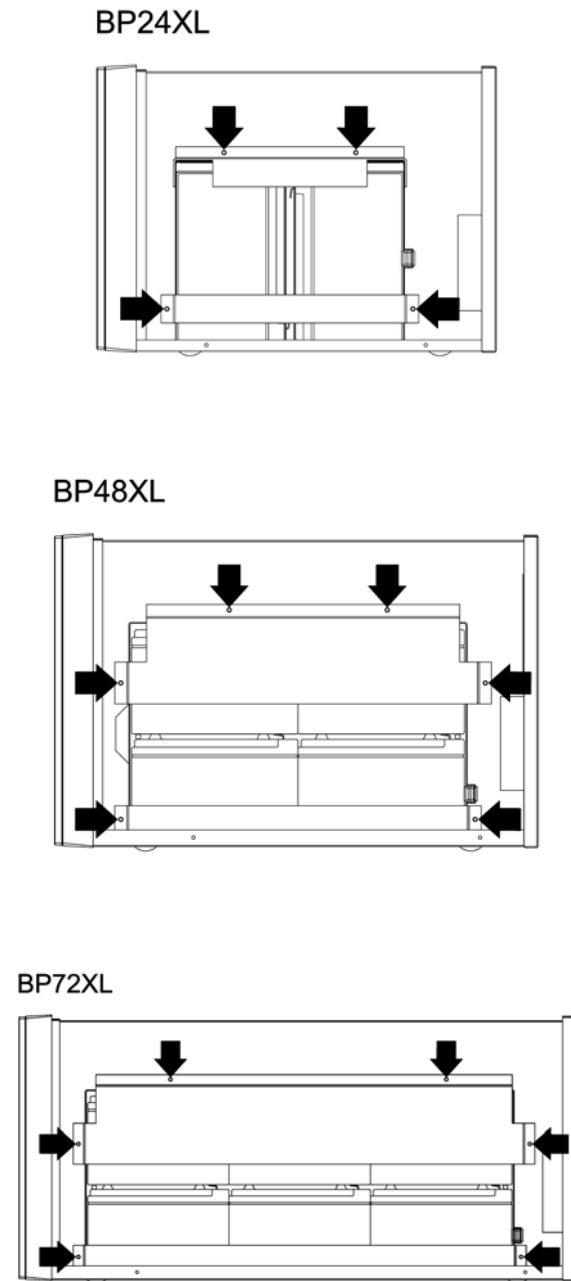


FIG. 2



Chapter 6: Specifications

SYSTEM SPECIFICATIONS			
Model Number	BP24XL	BP48XL	BP72XL
Format	Tower		
BATTERY SYSTEM			
Battery Type	Sealed, Non-Spillable, Maintenance Free, Valve Regulated, Lead Acid		
Typical Recharge Time	24-hours from total discharge		
Typical Battery Life	3-5 years, depending on discharge cycles and ambient temp		
System Voltage	24VDC	48VDC	72VDC
Output Current	40 Amps (MAX)		
Charge Current	2.4 Amps (MAX)		
Battery Module	BM0079	BM0080	BM0081
ENVIRONMENTAL			
Operating Temperature	0 to 40°C (+32 to +104°F)		
Storage Temperature	-15 to +45°C (+5 to +113°F)		
Operating/Storage Humidity	10- 90% Non-Condensing		
Operating Elevation	0 to 3,000m (0 to +10,000 ft)		
Storage Elevation	0 to 15,000m (0 to +50,000 ft)		
PHYSICAL			
Size - Net L X W X H (rackmount bracket installed)	14.1 x 6.1 x 10.2" 356.2x154x258.2mm	17.4 x 6.8 x 11.4" 440x171x288mm	23.4 x 6.8 x 11.4" 594.2x171x288mm
Weight - Net	32.6 lbs 14.8 Kgs	60.6 lbs 27.5 Kgs	89.3 lbs 40.5 Kgs
Size - Shipping L X W X H	17.8 x 10.3 x 15.1" 450.2x260x383mm	21.9 x 10.5 x 15.9" 555x266x403mm	27.9 x 11.2 x 16.3" 708.5x284x412.5mm
Weight - Shipping	35.3 lbs 16.0 Kgs	63.1 lbs 28.6 Kgs	92.4 lbs 41.9 Kgs
REGULATORY COMPLIANCE			
Safety and Approvals	cULus (UL1778 5th Edition & CSA 22.2 no. 107.3-14 / R: 2014), FCC Class A, CE certified, RoHS2 (EU Directive 2011/65/EU & 2015/863/EU)		

Chapter 7: Limited Product Warranty

Para Systems, Inc. (Para Systems) warrants this equipment, when properly applied and operated within specified conditions, against faulty materials or workmanship for a period of three years from the date of purchase. For equipment sites within the United States and Canada, this warranty covers depot repair or replacement of defective equipment at the discretion of Para Systems. Depot repair will be from the nearest authorized service center. The customer pays for shipping the product to Para Systems. Para Systems pays ground freight to ship the product back to the customer. Replacement parts and warranty labor will be borne by Para Systems. For equipment located outside of the United States and Canada, Para Systems only covers faulty parts. Para Systems products that are depot repaired or replaced pursuant to this warranty shall only be warranted for the unexpired portion of the warranty applying to the original product. This warranty applies only to the original purchaser who must have properly registered the product within 10 days of purchase.

The warranty shall be void if (a) the equipment is damaged by the customer, is improperly used, is subjected to an adverse operating environment, or is operated outside the limits of its electrical specifications; (b) the equipment is repaired or modified by anyone other than Para Systems or Para Systems approved personnel; or (c) has been used in a manner contrary to the product's User's Manual or other written instructions.

Any technical advice furnished before or after delivery in regard to use or application of Para Systems' equipment is furnished without charge and on the basis that it represents Para Systems' best judgment under the circumstances, but it is used at the recipient's sole risk.

EXCEPT AS PROVIDED HEREIN, PARA SYSTEMS MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Some states do not permit limitation of implied warranties; therefore, the aforesaid limitation(s) may not apply to the purchaser.

EXCEPT AS PROVIDED ABOVE, IN NO EVENT WILL PARA SYSTEMS BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF THIS PRODUCT, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. Specifically, Para Systems is not liable for any costs, such as; labor for on-site installation, on-site maintenance or on-site service, lost profits or revenue, loss of equipment, loss of use of equipment, loss of software, loss of data, cost of substitutes, claims by third parties, or otherwise. The sole and exclusive remedy for breach of any warranty, expressed or implied, concerning Para Systems' products and the only obligation of Para Systems hereunder, shall be depot repair or replacement of defective equipment, components, or parts; or, at Para Systems' option, refund of the purchase price or substitution with an equivalent replacement product. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

No employee, salesman, or agent of Para Systems is authorized to add to or vary the terms of this warranty.

Please go to our web site at www.minutemanups.com/support to fill out the Warranty Registration.

A1. DECLARATION OF CONFORMITY

Notes:

Application of Council Directive(s): 2014/35/EU

Standard(s) to which Conformity is declared: EN62040-2, IEC61000-2-2, IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5, IEC61000-4-6, IEC61000-4-8, UL1778, CSA 22.2 no. 107.3-14, FCC Class A

Manufacturer's Name: Para Systems, Inc. (MINUTEMAN UPS)

Manufacturer's Address: 1455 LeMay Drive
Carrollton, Texas 75007 USA

Type of Equipment: Uninterruptible Power Supplies (UPS)

Model No: BP24XL, BP48XL, BP72XL

Year of Manufacture: Beginning September 2018

I hereby declare that the equipment specified above conforms to the above Directive(s).

Robert Calhoun
(Name)

Manager Engineering
(Position)

Place: Carrollton, Texas, USA

Date: September 3, 2018