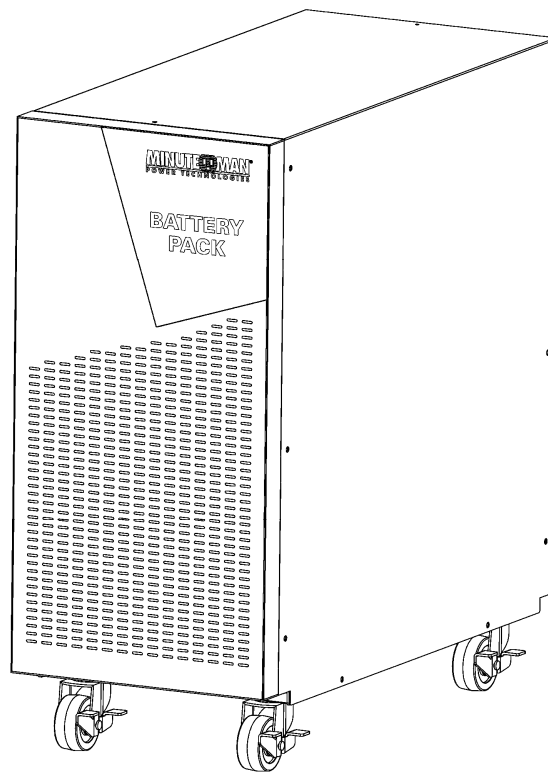


MINUTE MAN[®]

POWER TECHNOLOGIES
by Para Systems, Inc.

BP240TWR Battery Pack

User's Manual



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 Endeavor series Battery Pack, model BP240TWR as it provides important information that should be followed during the installation and the maintenance of the UPS system allowing you to correctly set up your system for the maximum safety and performance. If you experience a problem with the UPS system, please refer to the Troubleshooting guide in this manual to correct the problem or collect enough information so that the Technical Support Department can assist you.

IMPORTANT SAFETY INSTRUCTIONS SAVE THESE INSTRUCTIONS!

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1. Important Safety Warnings

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

CAUTION! The maximum ambient operating temperature for this Battery Pack series is 40°C.

CAUTION! 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 openings.

CAUTION! Install the Battery Pack in a well-ventilated area, away from excess moisture, heat, dust, flammable gas, or explosives.

CAUTION! Leave adequate space (at least 20cm) in the front and at the rear of the Battery Pack for proper ventilation.

CAUTION! Do not mount the Battery Pack with its front or rear panel facing down at any angle.

CAUTION! 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: 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. Repairs and Battery replacement must be performed by **QUALIFIED SERVICE PERSONNEL ONLY**.

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 Service Personnel, or damages to; the Battery Pack and the UPS, or the connected equipment caused by the incorrect installation or servicing of the Battery Pack.

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

CAUTION! To de-energize the Battery Pack:

1. If the UPS is On press and release the On/Off/Test button.
2. Disconnect the UPS and the Battery Pack from the AC 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.

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 Service Personnel, or damages to; the Battery Pack, the UPS, or the connected equipment caused by the incorrect installation or servicing of the Battery Packs. This Battery Pack **MUST** be operated with its respective UPS models, see the table below:

Battery Pack	BP240TWR
UPS	ED6KTF ED10KTF

RECEIVING INSPECTION

Once you receive the product it should be visually 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 by the manufacturer. The packing materials that the product was shipped in were carefully designed to minimize any shipping damage. In the unlikely case that the product needs to be returned to the manufacturer, use the original packing material. Since the manufacturer is not responsible for shipping damage incurred when the product is returned, the original packing material is inexpensive insurance. **PLEASE SAVE THE PACKING MATERIALS!**



2. Installation and Operation

This Battery pack 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 always provide good air circulation for the Battery Pack. Route power cords so they cannot be walked on or damaged. 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. 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 1,000m (0 to +3,280 ft)

Operating and Storage Relative Humidity: 5% to 95%, non-condensing

Storage Temperature: -25 to +45°C (-13 to +113°F)

Storage Elevation: 0 to 15,000m (0 to +50,000 ft)

Storage

Before storing, charge the Battery Pack for at least 24-hours. Store the Battery Pack covered and upright in a dry, cool location. If the Battery Pack is going to be out of service or stored for a prolonged period, the batteries must be recharged for at least 24-hours every 90 days.

2-1 Unpacking and Inspection

WARNING! This Battery Pack is extremely heavy. Any time the Battery Pack must be handled be sure to use, enough personnel, strong supports, and equipment to safely handle the Battery Pack.

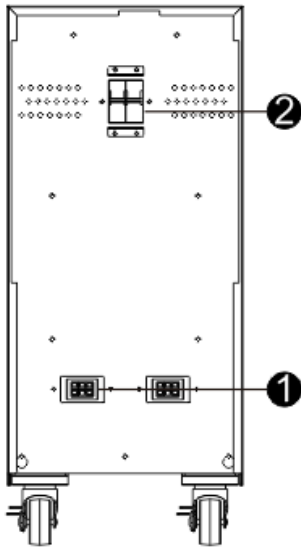
After removing your Battery Pack from its carton, it should be inspected for damage that may have occurred in shipping. Immediately notify the carrier and place of purchase if any damage is found. Warranty claims for damage caused by the carrier will not be honored. The packing materials that your Battery 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!

2-2 Installation

Be sure to read the installation 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.

2-3 Rear Panel



1. External battery connector: connects to either UPS or 2nd Battery Pack
2. DC breaker: Battery disconnect / over-current protection device

2-4 Connecting the Battery Pack to the UPS

1. The UPS must be in the OFF position.
2. The DC breaker(s) on the Battery Pack(s) must be in the OFF position.
3. Connect the battery cable to the External battery connector.
4. Turn the DC breaker to the ON position.
5. See the UPS User's Manual for the Normal Startup of the UPS.

NOTE: If using one than one Battery Pack see Figure 1 below for the connections.

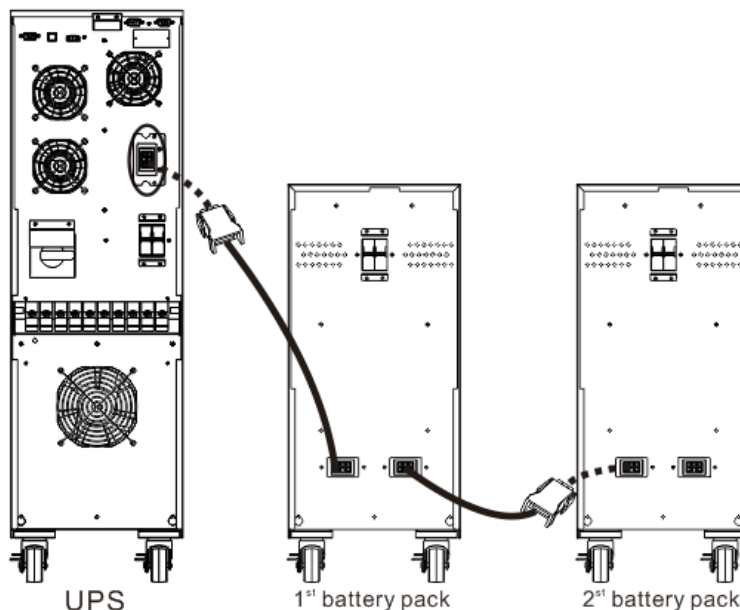


Figure 1, connecting the Battery Pack to the UPS

NOTE: When using this Battery Pack, 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 UPS User's Manual to configure the UPS.

3. Replacing the Battery

QUALIFIED SERVICE PERSONNEL ONLY

Please read all 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 UPS contains potentially hazardous voltages. Do not attempt to disassemble the UPS beyond the battery replacement procedure. This UPS contains no user serviceable parts. Repairs and battery replacement must be performed by **QUALIFIED SERVICE PERSONNEL ONLY**.

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 UPS 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 UPS. These batteries have pressure operated vents. These UPSs contain sealed non-spillable maintenance-free lead acid batteries.

Model	BP240TWR
Battery Quantity / Type	40 – 12V9Ah
Battery Part Number	CSB - HR1234W F2 BB – HR9-12

BATTERY REPLACEMENT PROCEDURE

(QUALIFIED SERVICE PERSONNEL ONLY)

PLEASE READ THE CAUTIONS AND WARNINGS BEFORE ATTEMPTING TO REPLACE THE BATTERIES

Hot-swappable batteries mean that the batteries can be replaced without powering down the whole UPS system.

NOTE: If there is a power interruption while replacing the hot-swappable batteries, with the UPS on, the load will not be backed up. To hot swap the Battery Pack's batteries skip steps 1, 2, 3, and start with step number 4.

1. Turn off the equipment that is connected to the UPS.
2. Press and release the Off button on the front panel of the UPS to transfer to the Bypass mode.
3. Turn off the input breaker on the rear panel of the UPS to completely turn Off the UPS.
- 4. Turn Off all the DC circuit breakers on the rear panel of all the Battery Packs.**
5. Disconnect all the external battery cables.
6. Remove the cover screws.
7. Remove the cover and set aside.
8. Disconnect the two-battery positive (Red) wires, one on the right-hand side and one on the left-hand side. See the battery wiring diagram in Figure 1 below.
9. Disconnect the two-battery negative (Black) wires, one on the right-hand side and one on the left-hand side. See the battery wiring diagram in Figure 1 below.
10. Remove the battery bracket retaining screws on the right-hand side.
11. Remove the battery brackets on the right-hand side and set aside.
12. Disconnect all the battery jumper wires on the right-hand side and set aside.
13. Remove the twenty defective batteries on the right-hand side and set aside.
14. Install the new twenty batteries on the right-hand side.
15. Reconnect all the battery jumper wires on the right-hand side
16. Re-install the battery brackets on the right-hand side.
17. Re-install the battery bracket retaining screws on the right-hand side.
18. Remove the battery bracket retaining screws on the left-hand side.
19. Remove the battery brackets on the left-hand side and set aside.
20. Disconnect all the battery jumper wires on the left-hand side and set aside.
21. Remove the twenty defective batteries on the left-hand side and set aside.
22. Install the new twenty batteries on the left-hand side.
23. Reconnect all the battery jumper wires on the left-hand side
24. Re-install the battery brackets on the left-hand side.
25. Re-install the battery bracket retaining screws on the left-hand side.
26. Verify proper polarity. Reconnect the two-battery negative (Black) wires, one on the right-hand side and one on the left-hand side. See the battery wiring diagram in Figure 1 below.
27. Verify proper polarity. Reconnect the two-battery positive (Red) wires, one on the right-hand side and one on the left-hand side. See the battery wiring diagram in Figure 1 below.

28. Re-install the cover.
29. Re-install the cover screws.
30. Reconnect all the external battery cables.
31. Turn on all the DC circuit breakers on the rear panel of all the Battery Packs.
32. Turn on the input breaker on the rear panel of the UPS to start the UPS in the Bypass mode.
33. Press and release the On button on the front panel of the UPS to turn the UPS on.
34. Turn on the equipment that is connected to the UPS.
35. This completes the Battery Replacement. See the UPS User's Manual for more information.

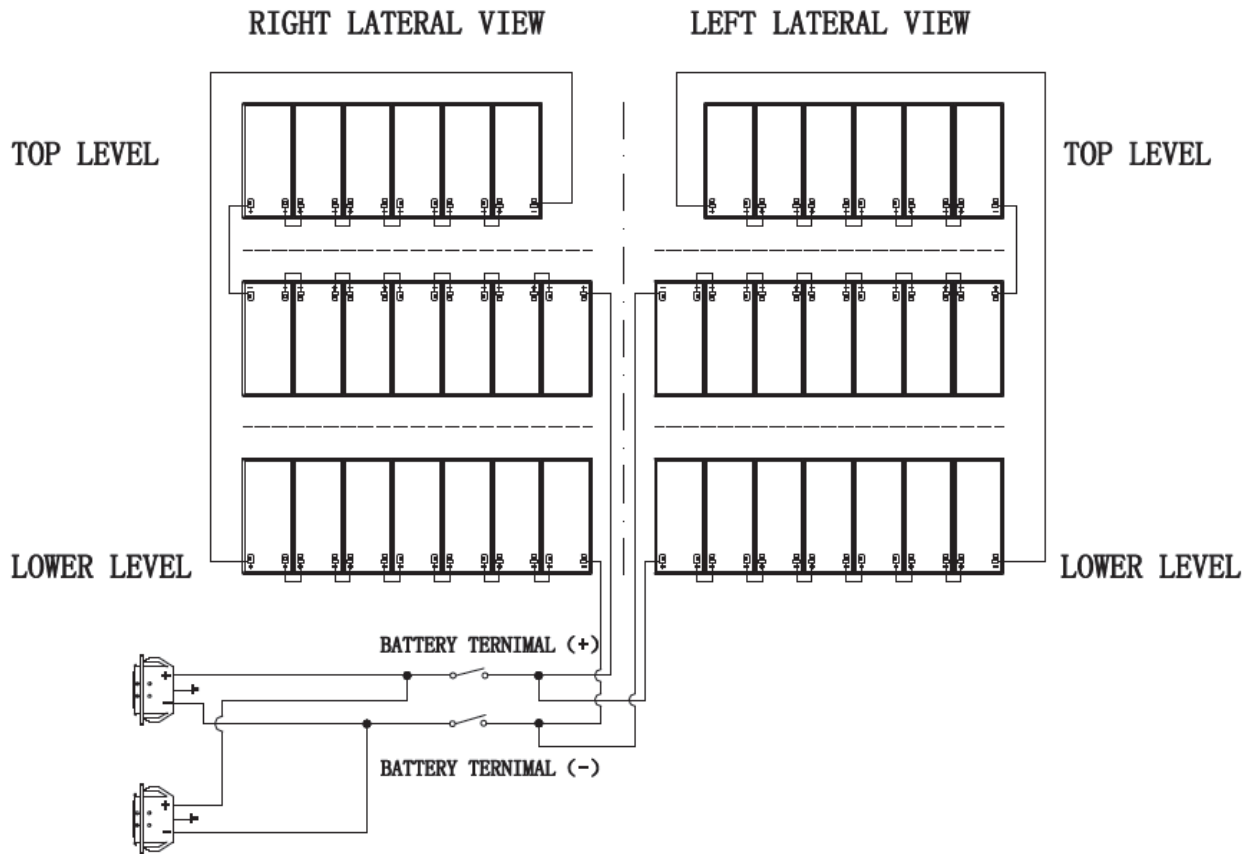


Figure 1 Battery Wiring Diagram

7. Specifications

MODEL	BP240TWR
OUTPUT	
Output	240VDC / 50Amps
BATTERY	
Type	Sealed, Non-Spillable, Maintenance Free, Value Regulated Lead Acid
Typical Recharge Time	9-hours to 90% after a full load discharge
Quantity / Rating	40 - 12V/9Ah
Charging Current	1 Amp \pm 10% (max.)
Charging Voltage	273 VDC \pm 1%
PHYSICAL	
Size Net (L x W x H)	22.09 x 9.84 x 22.60" 561 x 250 x 576 mm
Weight Net	266.76 Lbs. 121.0 Kgs.
Size Shipping (L x W x H)	27.17 x 14.57 x 27.17" 690 x 370 x 690 mm
Weight Shipping	288.81 Lbs. 131.0 Kgs.
ENVIRONMENT	
Operation Temperature	0 ~ 40°C (+32 to +104°F)
Operation Humidity	5% to 95% non-condensing
Operation Altitude	<3280 ft (<1000 m)
Regulatory Compliance	
Safety and Approvals	cTUVus (UL1778 5th Edition & CSA 22.2 no. 107.3-14 / R: 2014), CE certified, RoHS2 (EU Directive 2011/65/EU & 2015/863/EU)

Product specifications are subject to change without prior notice.

8. 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 one (1) year 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 ten (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

Application of Council Directive(s): 2004/108/EC

Standard(s) to which Conformity is declared:

IEC/EN 61000-2-2, IEC/EN 61000-4-2: level 4, IEC/EN 61000-4-3: level 3, IEC/EN 61000-4-4: level 4, IEC/EN 61000-4-5: level 4, IEC/EN 61000-4-6: level 3, IEC/EN 61000-4-8: level 4, IEC/EN 62040-1-1, IEC/EN 62040-2, FCC PART15 CLASS A

IEEE C62.41 Category A1

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: BP240TWR

Year of Manufacture: Beginning March 1, 2019

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: March 1, 2019



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