



**PSCEBB40 and PSCEBB60CH User Manual**

## **PowerShield Centurion Battery Bank**



DESIGNED BY AUSTRALIANS FOR AUSTRALIAN CONDITIONS



POWER PROTECTION SOLUTIONS

[www.powershield.com.au](http://www.powershield.com.au)

## Important Safety Warnings

Please comply with all warnings and operating instructions in this manual strictly. Save this manual properly and read carefully the following instructions before installing the unit. Do not operate this unit before reading through all safety information and operating instructions carefully.

- The battery bank which is supplied with a factory input plug can be safely connected to the wall receptacle by the user.
- This battery bank is connected to an UPS. There will be voltage at the output terminals if the UPS is turned on even if the input AC Mains is not available.
- Make sure that the AC Utility outlet is correctly grounded.
- Do not try to repair the unit yourself, contact your local supplier or your warranty will be void.
- Use a certified input power cable with the correct plugs and sockets for the appropriate voltage system.
- To eliminate any overheating of the battery bank, keep all ventilation openings free from obstruction and do not place any foreign objects on top of the battery bank. Keep the battery bank 20 cm away from the wall.
- Make sure the battery bank is installed within the proper environment as specified. (0-40°C and 30-90% non-condensing humidity)
- Do not install the battery bank under direct sunlight. Your warranty will be void if the batteries fail due to overheating.
- This battery bank is designed for indoor use only.
- This battery bank is not designed for use in dusty, corrosive and salty environment.
- The warranty for this battery bank will be void if water or other liquid is spilt or poured directly onto the battery bank. Similarly we do not warrant any damage to the battery bank if foreign objects are deliberately or accidentally inserted into the battery bank enclosure.
- The battery will discharge naturally if the system is unused for a period of time.
- It should be recharged every 2-3 months if unused. If this is not done, then the warranty will be null and void. During normal operation, the batteries will be automatically remained in charged condition.
- Servicing of Batteries Should be Performed or Supervised by Trained Personnel with Knowledge of Batteries and the Required Precautions
- When replacing batteries, replace with the same quantity, type & capacity.
- CAUTION – Do not dispose of battery or batteries in an open fire. The battery may explode.
- CAUTION – Do not open or mutilate the batteries. The electrolyte from the batteries is toxic and harmful to the skin and eyes.
- CAUTION – Risk of Electric Shock – Battery circuit is not isolated from AC, hazardous Voltage may exist between battery terminals and ground. Test before touching with bare hands.

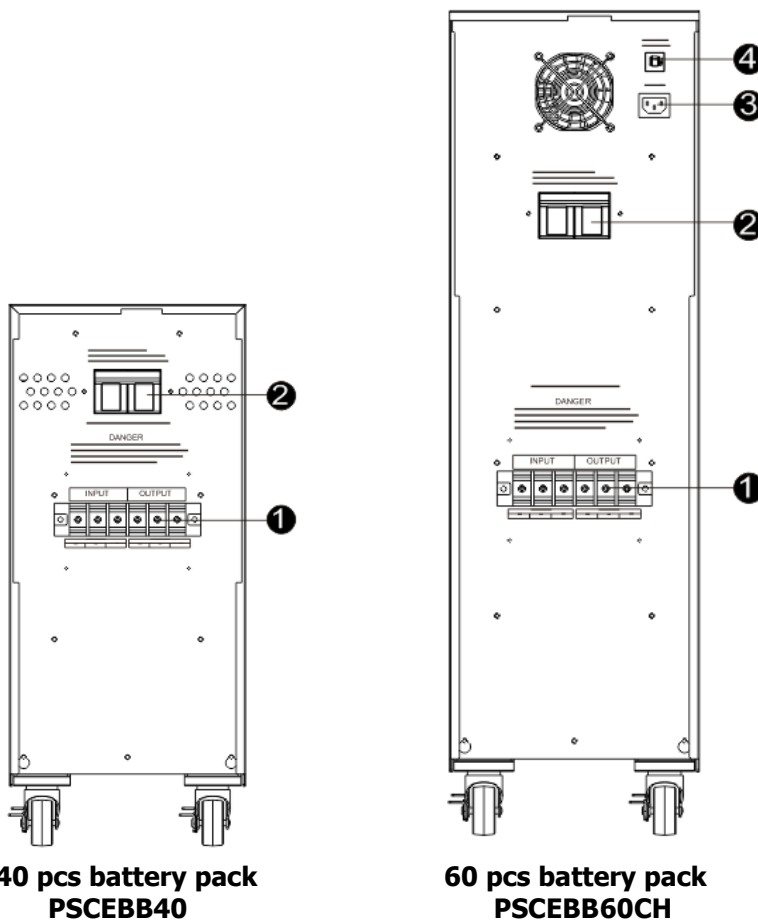
- CAUTION – A Battery can present a risk of electrical shock and high short circuit current.  
The following precaution should be observed when working on batteries:
  1. Remove watches, rings, or other metal objects.
  2. Use tools with insulated handles.
  3. Wear rubber gloves and boots.
  4. Do not lay tools or metal parts on top of batteries.
  5. Disconnect charging source prior to connecting or disconnecting battery terminals.
- Do not plug or unplug the battery connector if UPS works in DC (discharging) mode.

# 1. Installation and Setup

**NOTE:** Before installation, please inspect the unit. Please ensure that nothing inside the package is damaged. Please keep the original package in a safe place for future use.

**WARNING: High DC Voltage: Ensure ALL FUSES are in the Open position AND UPS DC Circuit Breaker is OFF before making any connection between the UPS DC connectors and the battery banks with the battery cables or any battery connectors.**

## 2-1 Rear Panel View



1. DC connector : connects to either UPS or 2<sup>nd</sup> battery pack
2. DC FUSE HOLDER:
  - Battery over-current protection by DC fuses.
  - Easy swap battery: When switching battery, put the position of the DC fuse holder in "O" position. In case there is a 2<sup>nd</sup>(or more) battery pack connected with the battery bank, the DC voltage from the UPS Bat.+/- will flow through without any interruption to the 2<sup>nd</sup> Battery Bank.
3. AC input: directly connects to utility for quick charging
4. AC breaker

## 2-2 Installation and Setup with UPS

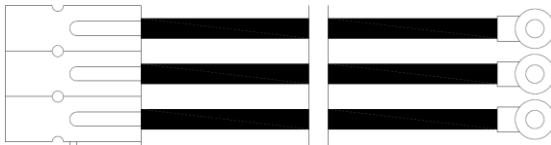
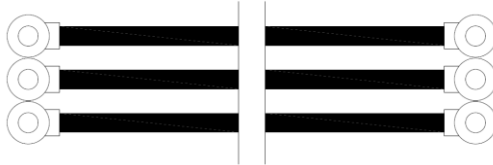
### Unpacking & Inspection

1. Remove the battery pack from the packing.

**Note:** The battery pack is very heavy, be cautious when unpacking and lifting the unit to avoid injury.

2. Check the inside package

- Battery pack unit
- User manual
- DC fuse 100A\*2PCS (20kVA UPS); DC fuse 50A\*2PCS (6kVA or 10kVA UPS)
- Battery connection cable x 2



### Selecting Installation Position

It is necessary to select a proper environment to install the unit, in order to minimize the possibility of damage to the battery bank and extend the life of the batteries. Please follow the instructions below:

1. Keep at least 20cm (8 inches) clearance from the rear panel of the unit from the wall or other obstructions.
2. Do not block the air-flow to the ventilation openings of the unit.
3. Please ensure the installation site environmental conditions are in accordance with the unit's working specifications to avoid overheat and excessive moisture.
4. Do not place the unit in a dusty or corrosive environment or near any flammable objects.
5. This unit is not designed for outdoor use.

### Fuse selection:

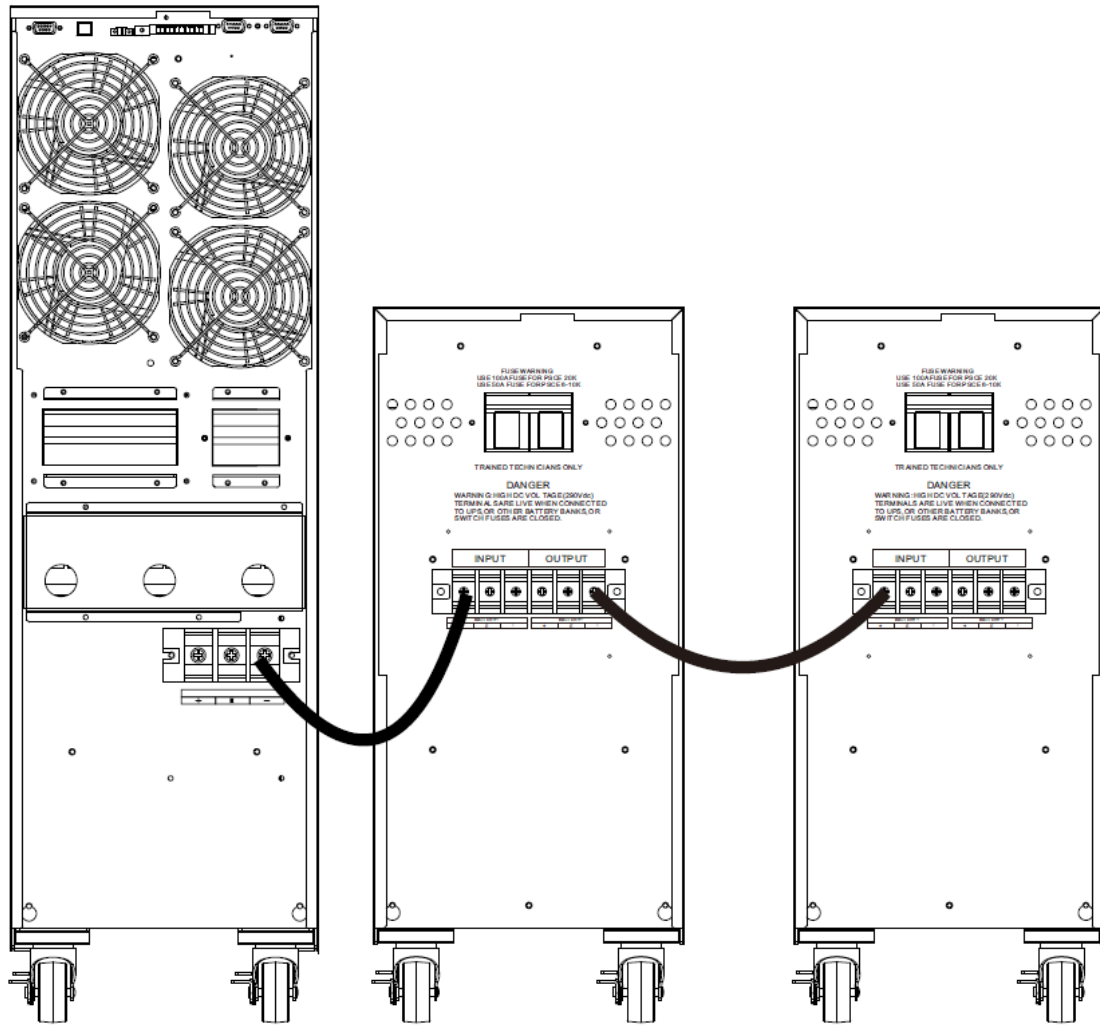
**For 6kVA and 10kVA UPS use 50Amp Fuses**

**For 20kVA UPS use 100Amp Fuses**

### Connecting with UPS and Other Battery Pack

Follow the installation drawings below to connect the UPS and the battery packs with the included cable.

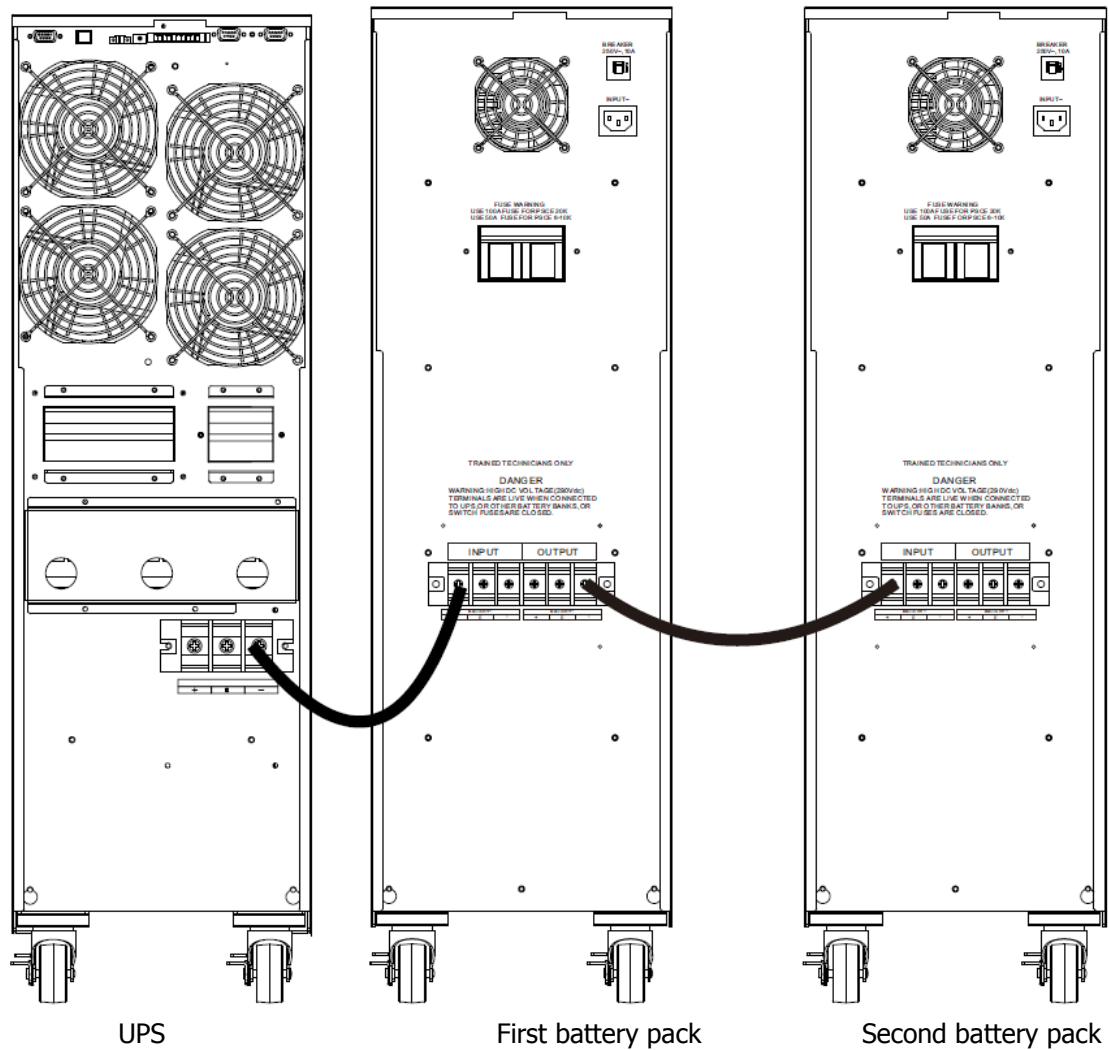
**WARNING: High DC Voltage: Ensure ALL FUSES are in the Open position and the UPS DC Circuit Breaker is OFF before making any connection between the UPS DC connectors and the battery banks with the battery cables or any battery connectors.**



UPS


First battery pack

Second battery pack



### 3. Storage & Maintenance

The unit contains no user-serviceable parts. If the battery service life (3~5 years at 25°C ambient temperature) has been exceeded, the batteries must be replaced. In this case, please contact your dealer.



Be sure to deliver the spent battery to a recycling facility or ship it to your dealer in the replacement battery packing material.

#### Storage

Before storing, charge the unit 4 hours. Store the unit covered and upright in a cool, dry location. During storage, recharge the battery in accordance with the following table:

Storage Temperature	Recharge Frequency	Charging Duration
-25°C - 40°C	Every 3 months	1-2 hours
40°C - 45°C	Every 2 months	1-2 hours