



Provolt Compact Lithium Battery

120AH/120HD/220AH/300AH

Introduction

Congratulations on purchasing a premium quality Provolt Lithium Battery. With proper care your battery will provide many years of reliable service. Please take the time to read this manual, it contains very important information for the safe use of your battery. While very safe if handled correctly, mistreatment or negligence can cause serious injury or death, as well as the risk of property damage.

Important Safety Information

- Risk of fire or injury if misused
- Avoid mechanical shock
- Do not expose to fire
- Do not pierce battery
- Do not disassemble
- Do not drill into enclosure
- Do not allow water to enter
- Do not charge below 0°C
- Do not store below -20°C or above 60°C
- Adequately fuse all connections
- Use LiFePo4 chargers only
- Do not connect directly to vehicle battery
- Do not reverse polarity
- Do not short circuit
- Mount securely

Mounting your Provolt Compact Battery

It is very important that you take the time to correctly and safely mount your battery to suit your individual circumstances. This battery has considerable weight and stores a large amount of energy.

The same considerations that apply to conventional batteries also apply to mounting this Lithium battery. Provolt do not recommend mounting this or any Lithium Battery under the bonnet of a vehicle or in any other areas of extreme heat.

When designing a mounting system, the type and severity of the vehicles usage must be taken into account. If you are not confident in your ability to safely mount your battery, seeking professional advice is strongly recommended.

Connecting your Provolt Compact Battery

Always wear appropriate PPE when connecting or disconnecting battery

DO NOT short circuit or reverse the polarity! Red terminal is Positive (+), Black terminal is Negative (-).

This battery is designed to simultaneously charge and discharge through any available port or terminal. Maximum charge and discharge rates are shown in the specification table. Do not exceed the rated capacity of any terminal or connection, or total capacity of the battery.

All connections made to the battery must be appropriately fused. The fuse must be correctly sized to protect the connected device, battery and wiring from overload and short circuit. The rated capacity of the fuse must not exceed the capacity of the connected port.

Ensure all devices are connected with appropriately sized wiring to reduce voltage drop.

The battery is fitted with a premium BMS (Battery Management System). The BMS is designed to protect the battery from over discharge / charging, and excess discharge/charging currents.

The BMS will turn the battery off when any preset parameter is exceeded. Once the condition has normalised the BMS will switch the battery back on automatically.

Parallel connecting

Parallel connecting Provolt batteries is allowable under certain conditions.
Batteries must be of same age and cycle life
Batteries must be at same state of charge at time of connection.

Series connecting

Provolt do not recommend series connecting any BMS protected Lithium batteries. If higher voltage outputs are required we suggest the purchase of prebuilt 24v or 48v batteries.

Charging

Your Provolt battery can be charged through any available port or terminal.
Only charge with a LiFePo4 compatible charger.

In vehicle charging must be performed through a LiFePo4 compatible DC/DC charger. Direct connection to a vehicle's charging system is not permitted. A VSR (Voltage Sensing Relay) is not an acceptable substitute for a DC/DC Charger.

Solar panels must only be connected through a LiFePo4 compatible controller/regulator.

Do not charge at a rate higher than either the maximum allowable charge rate of the battery, or the connected port.

All charger connections must be appropriately fused.

Troubleshooting

Problem: Very low or no voltage at battery outlets.

Possible Cause	Suggested Solution
Battery has discharged and the BMS has switched the battery off.	Connect charger and allow the battery to charge
Discharge or charging rate has been exceeded.	Disconnect or switch off all loads/chargers. BMS will reset automatically if no other fault is present.
Battery has 'gone to sleep'	Connect a compatible charger or briefly connect an external 12v battery to the terminals. All quality LiFePo4 chargers will wake the battery up.

Problem: Low battery capacity

Possible Cause	Suggested Solution
Incorrect charging procedure or device	Use LiFePo4 compatible charging devices only. Use DC/DC chargers for in vehicle use.
Insufficient recharge capacity not allowing battery to reach full charge	Increase solar capacity, charger size, increase charging times.

Problem: Battery keeps switching off/on.

Possible Cause	Suggested Solution
Discharge/charge rates exceeded.	Disconnect all loadschargers. Assess and reduce current draw.
Short in external wiring.	Disconnect all devices and assess all wiring and connections.
Undersized wiring connected to battery causing voltage drop and increased current draw.	Upgrade wiring, reduce load.

Specifications

Model	Compact-120	Compact-120HD	Compact-220	Compact-300
Rated Voltage	12.8			
Usable Capacity	105ah	105ah	210ah	280ah
Max Continuous Discharge	120amp	180 amp	180 amp	300amp
Peak discharge rate <3s	360amp	500amp	500 amp	900amp
Max Charge Rate	60amp	90amp	90 amp	150amp

Warranty

Provolt Lithium Solutions offers a total of 5 years (2+3yr)* warranty on all batteries from the date of purchase, unless otherwise stated. Provolt warrants its batteries against defects in materials and/or workmanship. This is further to your rights under the Australian Consumer Law. The warranty period for commercial use is 2 Years.

Naturally the warranty cover does not extend to damage caused by normal wear and tear, accidents, misuse, lack of maintenance, neglect, natural disaster, or other external causes; to damage caused by operating the equipment in a manner outside that described in the instructions. The warranty is considered void if the item has been modified, altered or tampered with by a person (or persons) not authorised by us to provide service.

All products must be returned to place of purchase for inspection. If purchased online, a warranty claim form must be filled in and emailed to us before the product is returned. We will contact you with the return procedure. We reserve the right to repair or replace the battery as required.

***5 year (2+3year) Warranty**

Years 1 & 2—Full replacement or no cost repair

Year 3—80% pro-rata replacement and repair

Year 4—60% pro-rata replacement and repair

Year 5—40% pro-rata replacement and repair