



WALMER ENERGY

Dual parallel connection of cylindrical lithium batteries





Overview

What is a parallel battery connection?

In a parallel connection, the batteries are linked side-by-side. This configuration keeps the voltage the same but increases the capacity. For instance, connecting two 3.7V 100mAh lithium cells in parallel will result in a total capacity of 200mAh while maintaining the voltage at 3.7V.

Should you connect lithium batteries in parallel?

Before proceeding with the parallel connection of lithium batteries, it is crucial to keep the following precautions and considerations in mind: **Battery Compatibility:** Ensure that all the batteries you plan to connect in parallel have the same voltage and capacity ratings. Mismatched batteries can lead to imbalances and potential damage.

Why are parallel lithium-ion battery modules important?

Parallel lithium-ion battery modules are crucial for boosting the energy and power of battery systems. However, the presence of faulty electrical contact points (FECPs) between the cells often leads to severe performance degradation, including reduced capacity, accelerated aging, and the potential risk of thermal runaway.

How to wire multiple batteries in parallel?

To wire multiple batteries in parallel, connect the negative terminal (-) of one battery to the negative terminal (-) of another, and do the same to the positive terminals (+). For example, you can connect four Renogy 12V 200Ah Core Series LiFePO4 Batteries in parallel. In this system, the system voltage and current are calculated as follows:



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