

SolarTech Power Solutions

Can lithium battery storage batteries be connected in series



Overview

Lithium batteries can be connected in series or parallel configurations to meet specific voltage and capacity needs, significantly impacting performance and application suitability. Can a lithium battery be connected in a series?

At Valen, we don't recommend series connecting Lithium batteries. However, Lithium batteries can be placed in parallel if required and done correctly. To explain why it is best to first understand how Lithium battery technology works.

Are series and parallel connection of lithium batteries safe?

The series and parallel connection of lithium batteries is a key technology to increase voltage and capacity, but it also contains safety risks. This article will analyze in detail the principles, methods and precautions of series and parallel connection of lithium batteries to help you avoid potential risks and build a battery system correctly.

Can lithium-ion batteries be connected in parallel or in series?

Connecting lithium-ion batteries in parallel or in series is not as straightforward as a simple series-parallel connection of circuits. To ensure the safety of both the batteries and the individual handling them, several important factors should be taken into consideration.

What is a series battery connection?

A series connection involves linking batteries end-to-end to increase the total voltage while keeping the same capacity (measured in milliampere-hours, or mAh). For example, connecting two 3.7V 100mAh lithium cells in series will yield a total voltage of 7.4V, but the capacity remains 100mAh.

What happens if a battery is used in a series connection?

Uniformity: Just like parallel connections, it is necessary to use cells or batteries with the same specifications, including capacity and age, in a series

connection. A mismatch of cells can cause an imbalance in voltage distribution, leading to overcharging or undercharging of individual cells or batteries.

How to charge parallel lithium battery packs?

Specific principles must be followed when charging parallel lithium battery packs: Use a matching charger: The voltage must be suitable for the nominal voltage of the individual batteries. The current setting is reasonable: usually 0.2-0.5C of the total capacity after parallel connection.

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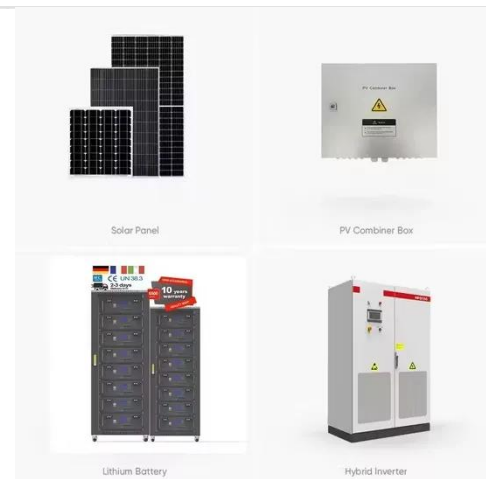


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