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Note on connecting lithium battery packs in parallel

Overview

When wiring lithium batteries in parallel, the capacity (amp hours) and the current carrying capability (amps) are added, while the voltage remains the same.Can you connect lithium batteries in parallel?

Good news! There are ways to connect lithium batteries in parallel to double capacity while keeping the voltage the same. This means two 12V 120Ah batteries wired in parallel will give you only 12V. But increases capacity to 240Ah. Connecting your lithium batteries in parallel requires some preparation to ensure you don't do any expensive damage.

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.

Should lithium ion batteries be wired in series or parallel?

When wiring lithium-ion batteries in series, the voltage is changed which can damage equipment if not performed with caution and great understanding. In contrast, wiring lithium batteries in parallel keeps the voltage the same while simply giving the batteries the ability to supply that same voltage level for longer.

Are parallel lithium batteries safe?

Safety considerations for parallel lithium batteries Although connecting batteries in parallel may seem simple, there are potential risks: Voltage differences lead to mutual charging: higher voltage batteries will charge lower voltage batteries with high current, which may cause overheating.

How many lithium batteries can enerdrive run in parallel?

Most lithium batteries on the market will have an inbuilt battery management

system which will prevent over discharge. Enerdrive supports running its B-TEC batteries lithium batteries in parallel. It recommends a maximum battery bank size of four lithium batteries of equal voltage and amperage.

Why do I need to add batteries in parallel?

If your load requires more current than a single battery can provide, but the voltage of the battery is what the load needs, then you need to add batteries in parallel to increase amperage. Wiring batteries in parallel is an extremely easy way to double, triple, or otherwise increase the capacity of a lithium battery.

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