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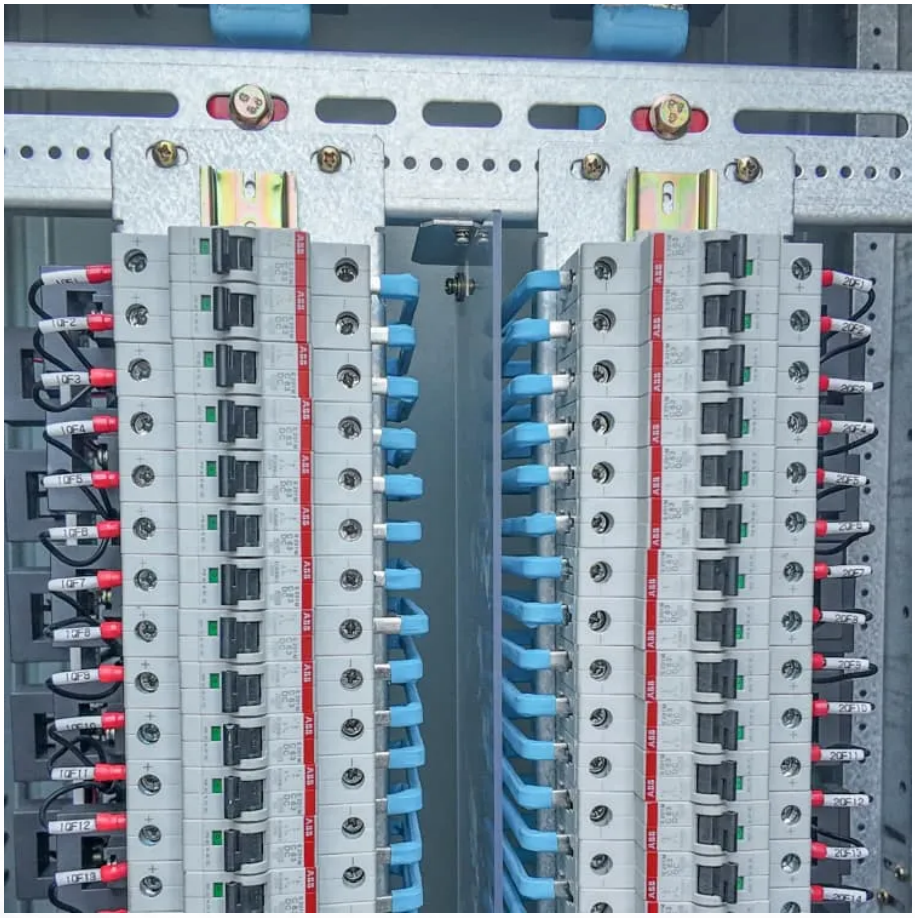
Lithium batteries must be equipped with BMS



Overview

Why should you use a BMS for a lithium-ion battery?

A properly designed BMS for lithium-ion batteries is not optional—it's essential for safe, reliable, and efficient operation. The technology protects valuable battery assets, ensures user safety, and maximizes performance throughout the battery's operational life.

What is lithium battery management system (BMS)?

To ensure the safe, stable, and efficient operation of battery packs, the Battery Management System (BMS) was developed, becoming an indispensable core component in lithium battery systems. This article will explore the functions, working principles, application areas, future development trends, and challenges of lithium battery BMS in depth.

What happens if you run a lithium battery without a BMS?

Operating a lithium battery without a BMS can expose it to risks that might compromise safety and efficiency: Overcharging and Deep Discharging: Without a BMS, cells in a battery can exceed their voltage thresholds during charging or can be depleted beyond safe levels, both of which can lead to battery damage or failure.

What is a BMS for a 12V lithium-ion battery?

A BMS for a 12V lithium-ion battery typically includes several essential features designed to protect and optimize the battery’s performance: Voltage Regulation: This ensures each cell within the battery pack maintains the correct voltage, preventing overcharging and undercharging, which are common causes of battery failure.

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