SolarInnovate Energy Solutions

Power battery pack structure design

Overview

The power battery pack is mainly composed of a shell, battery module components, electrical components, battery management system (BMS), battery system distribution box (BDU), lifting lug, inner frame and connecting plate.What is a power battery pack design scheme?

Through weight reduction and structural optimization, an innovative power battery pack design scheme is proposed, aiming to achieve a more efficient and lighter electric vehicle power system.

What is a battery pack box structure?

The power battery is the only source of power for battery electric vehicles, and the safety of the battery pack box structure provides an important guarantee for the safe driving of battery electric vehicles. The battery pack box structure shall be of good shock resistance, impact resistance, and durability.

What is a battery pack structure model?

A battery pack structure model is imported into ANSYS for structural optimization under sharp acceleration, sharp turn and sharp deceleration turn conditions on the bumpy road. Based on the simulation, the battery pack structure is improved, and suitable materials are determined.

How a battery pack is designed?

With reference to the existing models on the market, the battery pack structure of the model is designed according to the main parameters of the model, and a simplified electric vehicle battery pack model is established by Creo and the material information is determined.

What are the components of an electric vehicle power pack?

The main components of an electric vehicle power pack referenced in this paper include the battery cell, battery module, battery management system

(BMS), cooling equipment, electrical system, and various structural components: the upper cover, lower box, bracket, etc. [10, 11, 12].

What are the components of a power battery pack?

The power battery pack is mainly composed of a shell, battery module components, electrical components, battery management system (BMS), battery system distribution box (BDU), lifting lug, inner frame and connecting plate. The battery modules are arranged horizontally in layers.

Power battery pack structure design

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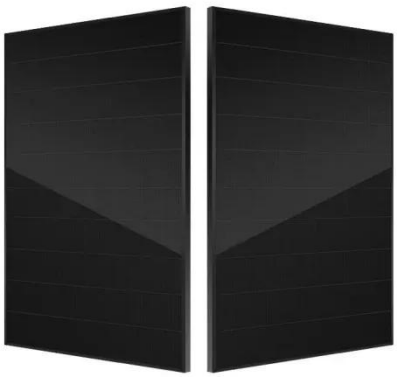

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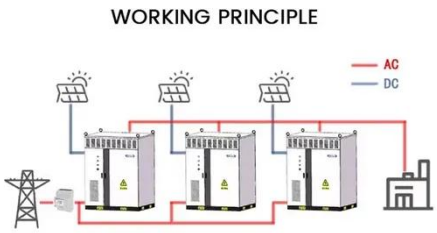

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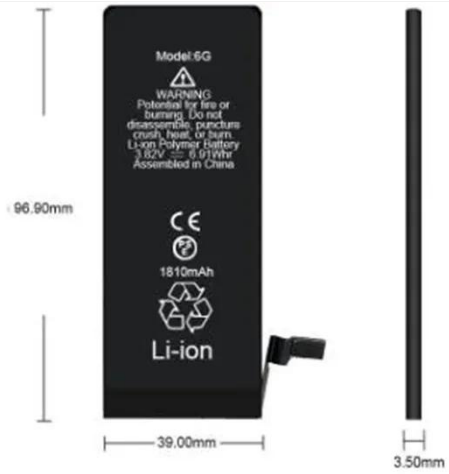

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