

# **Power module function and inverter**





## Overview

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How a power module converts input energy into output energy?

During the power conversion process of the power module, switching power devices (such as MOSFETs, BJTs, IGBTs, etc.) play a crucial role. When the switching device is conducting, the power module can convert input energy into output energy.

What is a power module?

Here the power modules, which are responsible for power conversion, play a crucial role. Requirements for power modules not only depend on the type of vehicle – from motorcycles for daily use to high-performance racing cars and even trucks or trending eVTOLs – but also on their system integration.

What is the working principle of a power module?

The working principle of a power module is based on power electronics technology and control circuitry. Its core consists of switching power devices and control circuits. The following are detailed operational steps of power module operation: 1. Input Voltage Conversion.

What is an IGBT-inverter?

An IGBT-inverter is an inverter build with IGBT power modules to ensure high voltage/power switching functions. The IGBT power module is considered the 'heart' of the electrified drive train. Similar to a human heart distributing energy throughout our bodies, the power module functions as a human heart in the electric drive train for EV/HEVs.



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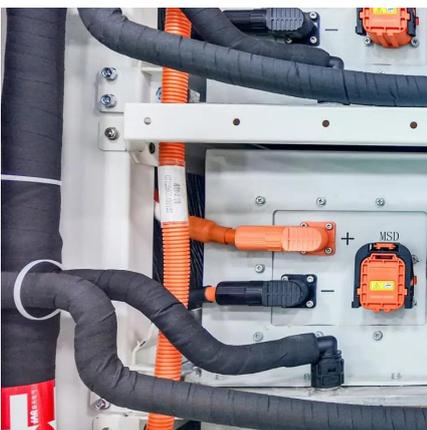
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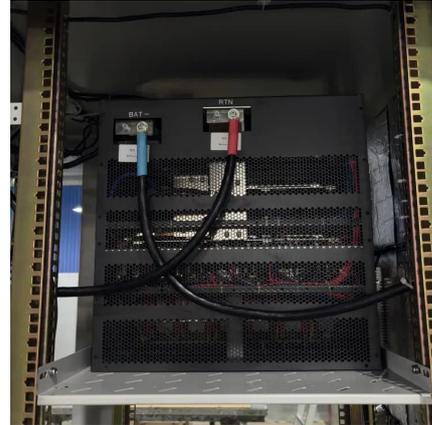


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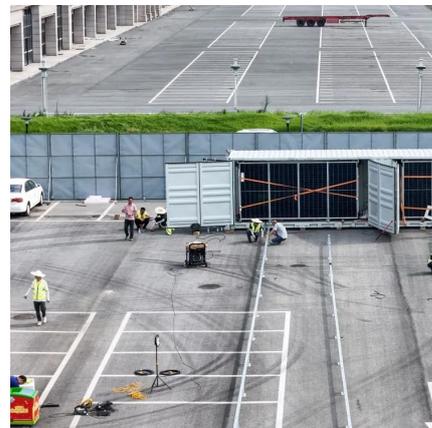
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