

Inverter High Voltage Type





Overview

What is the main circuit of an inverter?

The main circuit of an inverter includes an inverter DC power supply, IGBT bridge inverter, protection circuits, high frequency high voltage transformers, and high frequency high voltage silicon stack (Rectifier).

How does a high-voltage full bridge inverter work?

A high-voltage full bridge inverter works by converting the DC voltage V_1 to a high-frequency square wave AC voltage. This AC voltage is then supplied to a 20kHz frequency high-voltage transformer T1, which, after the boost rectifier, provides power to the load. The inverter high-voltage full bridge drives the routing components and the IGBT power modules.

What are the advantages and disadvantages of inverters?

The first advantage is a series connection of several switches that reduces voltage drop on each switch and allows the reduction of inverter switching losses. Moreover, this allows inverters' implementation in high-voltage and high-power systems. A second advantage is a high number of levels that reduce the output voltage and current THD.

What are high voltage converters used for?

Typically, they are used in high power and high voltage applications such as converters for ships, electric trains, and vehicles, reactive power compensators, wind turbine converters, PV inverters, active filters, UPS, and High Voltage DC (HVDC) systems (Abu-Rub et al., 2010, Rodríguez et al., 2007).



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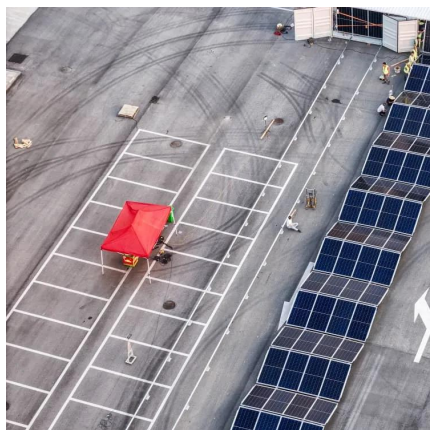


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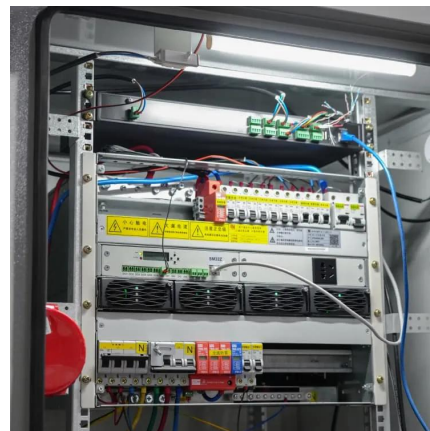


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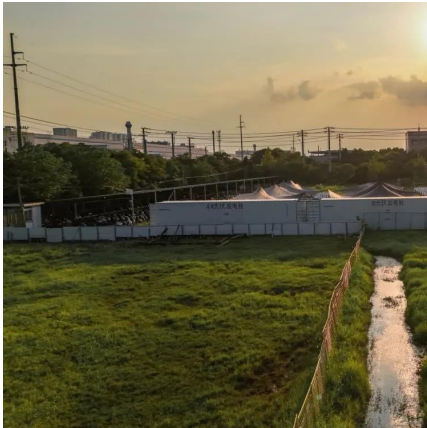
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