

SolarTech Power Solutions

Production of high power inverter



Overview

What is a high-power MV inverter?

In large-scale applications such as PV power plants, "high-power" in medium voltage (MV) inverters is characterized by the use of multilevel inverters to enhance efficiency and scalability. These high-power MV systems generally function within a power range of 0.4 MW–40 MW, and in certain applications, can reach up to 100 MW.

What are the applications of control systems in high-power inverters?

One of the application of control systems in high-power inverters is to increase the speed and accuracy in achieving MPPT. Control algorithms continuously examine the input of the inverter and adjust its operational parameters to extract the maximum available power. Another essential factor is computational complexity.

How to achieve high output power levels in ChB-based inverters?

In order to attain elevated output power levels, obviate the necessity for low-frequency transformers, generate multilevel output voltage, and implement distributed MPPT, a novel three-phase topology has been introduced in Ref. tailored for CHB-based inverters.

What is a high-power string inverter?

High-power string inverters, rather than simply making centralized inverters smaller or string inverters larger, take into account the low cost of centralized inverters and the flexibility of small-power string inverters. It is a market-oriented product that has evolved in response to industry changes.

What are PWM techniques in LS-PV-PP high-power inverters?

In reviewing various PWM techniques in LS-PV-PP high-power inverters, we find that these techniques focus on optimizing the conversion of DC power from solar panels to AC power to inject an appropriate output power into the main

grid.

Are high-power ChB inverters able to control output power?

One of the inherent issues in high-power CHB inverters is the imbalance in the output power, leading to instability and reduced current in grid-connected systems. Therefore, an adaptive control technique has been proposed to regulate the output power in these converters.

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