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High frequency inverter front stage production





Overview

What is a high frequency inverter?

In many applications, it is important for an inverter to be lightweight and of a relatively small size. This can be achieved by using a High-Frequency Inverter that involves an isolated DC-DC stage (Voltage Fed Push-Pull/Full Bridge) and the DC-AC section, which provides the AC output.

What are the characteristics of a fundamental frequency switching inverter?

Fundamental frequency switching and lack of interim DC-link give the proposed inverter the following unique characteristics: Low total blocking voltage (TBV) of converter, signifying minimal semiconductor loss; Fundamental-frequency switching eliminates switching losses; Supports resistive, inductive as well as non-linear loads;.

Can conventional voltage source inverters operate as a single-stage high-gain inverter?

This article proposes a novel fundamental frequency switching operation for the conventional voltage source inverters (VSI) to operate as a single-stage high-gain inverter. As the novel operational strategy changes the behavior of conventional VSI from buck inverter to a boost inverter, it is hereafter termed as a novel inverter.

Which power supply topologies are suitable for a high frequency inverter?

The power supply topologies suitable for the High-Frequency Inverter includes push-pull, half-bridge and the full-bridge converter as the core operation occurs in both the quadrants, thereby, increasing the power handling capability to twice of that of the converters operating in single quadrant (forward and flyback converter).



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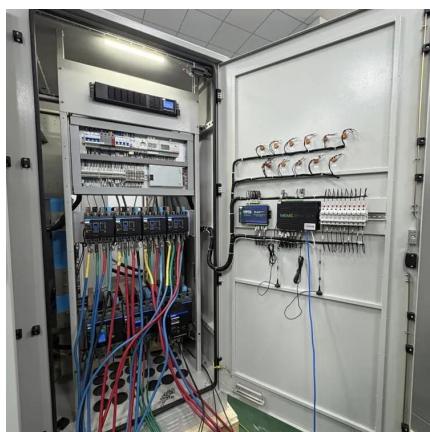


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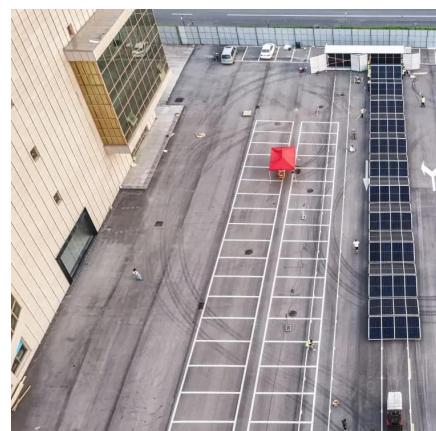


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