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ContainerPower Energy Solutions

Danish high-frequency inverter

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.

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).

Is a new inverter architecture suitable for varying load impedances?

Abstract: This paper presents a new inverter architecture suitable for driving widely varying load impedances at high frequency (HF, 3-30 MHz) and above. We present the underlying theory and design considerations for the proposed architecture along with a physical prototype and efficiency optimizing controller.

Why should you choose an intelligent frequency inverter?

Intelligent frequency inverters with future-oriented features that create opportunities for integrated systems and comprehensive solutions. Increase reliability, optimise performance and extend the lifespan of your motors. Preventive maintenance, vibration measurement, load monitoring, motor current signature analysis and much more.

Why do we need hfvli inverters?

This allows for the use of highly efficient zero-voltage switching inverters that would otherwise be precluded or limited in applications presenting wide

impedance ranges, such as wireless power transfer and RF plasma generation. The prototype HFVLI system demonstrates the benefits of the proposed approach.

What is a bridge type inverter?

The simplest form of an inverter is the bridge-type, where a power bridge is controlled according to the sinusoidal pulse-width modulation (SPWM) principle and the resulting SPWM wave is filtered to produce the alternating output voltage. In many applications, it is important for an inverter to be lightweight and of a relatively small size.

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