



BUHLE POWER

# Inverter High Voltage Inverter





## Overview

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What is a high efficiency power inverter?

High efficiency power inverters which use a modified sine wave to power 230V mains equipment from a 24V battery • Designed to work with most modern day lorries or marine power systems that run of a 24V alternator • Over 85% efficiency • Soft start minimise.

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 V1 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 is high inverter AC/DC conversion section?

The high inverter AC/DC conversion section uses high-frequency design to improve the inverter input power factor (0.98 or more) and an input voltage range. This section also reduces the output filter inductor volumetric power density.



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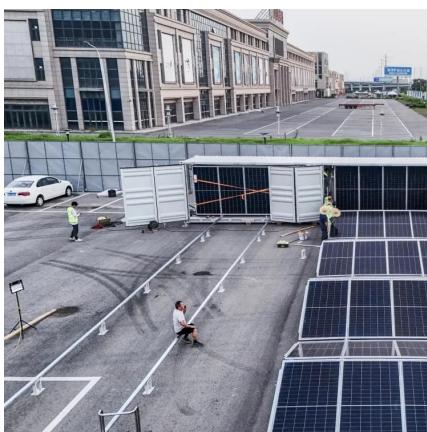
### High Voltage Inverter Design

VF high-voltage sense input voltage is fed back to the control system. Figure 4/High voltage inverter main circuit SCM control system Figure 5 shows the complete block diagram of the ...



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