

Introduction to high voltage inverter





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.

Who develops high voltage inverter systems for electric vehicles?

The vehicle manufactures and automotive tier 1 suppliers develop inverter systems for electric vehicles. Discussions were held with their design and research teams during direct meetings to understand future developments. Through these discussions, along with our own research, there are some clear high voltage inverter trends in the EV market. 3.

What should a high efficiency inverter be?

An inverter should have high efficiency above 90%. It also should be efficient under any circumstances. The inverter should produce accurate AC voltage. In general 120 V or 240 V should be generated by any inverter. It should produce output that will have least harmonic distortion.



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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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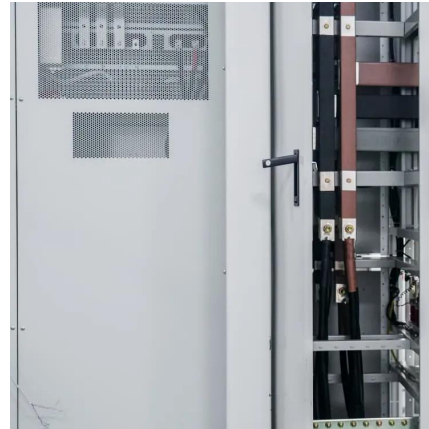
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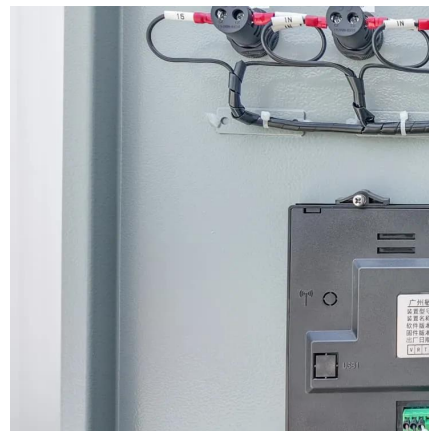


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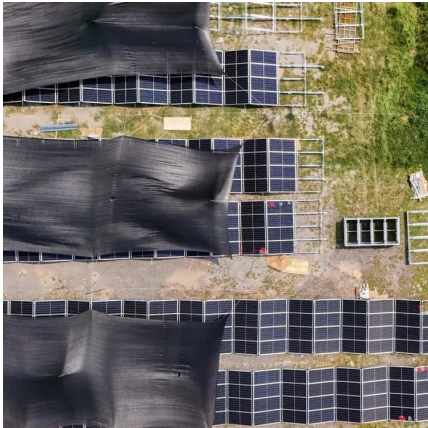
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