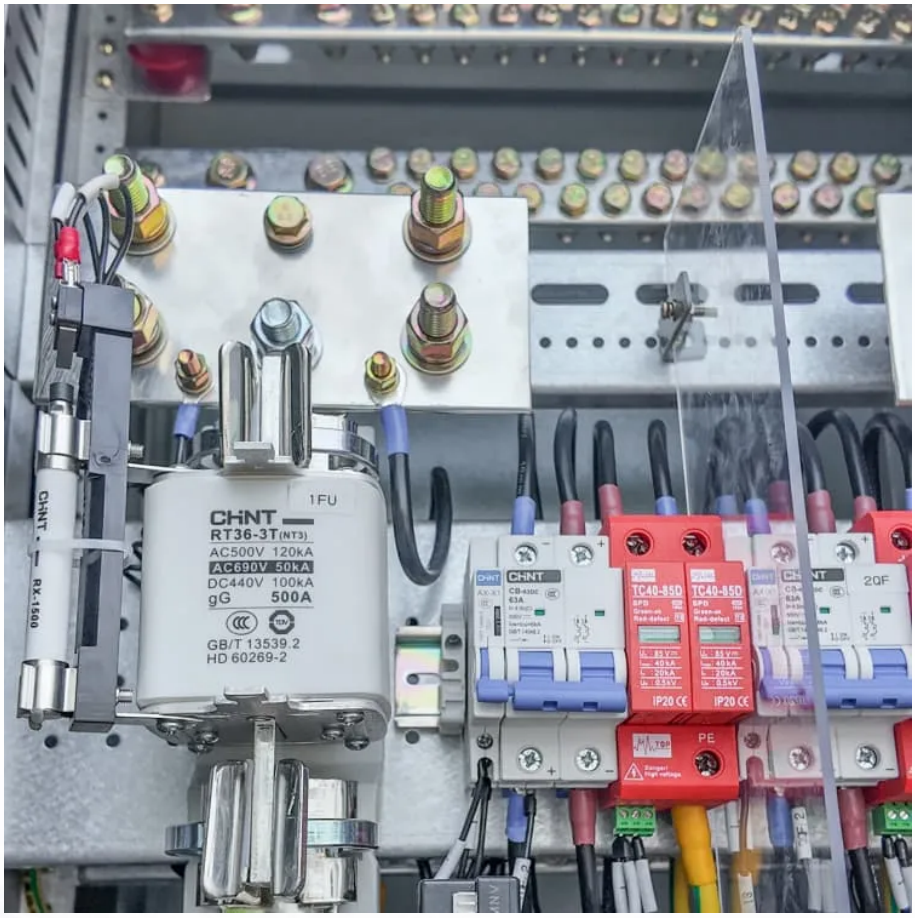
Kongres Container

Production of 48V industrial frequency inverter



Overview

What is a 48 volt battery powered inverter power stage?

48-VDCBattery Powered Inverter Power Stage Reference Design for 5-kW Forklift AC Traction Motor The share of ACIM drives over their DC counterparts for forklift traction is steadily increasing. Using an AC motor requires an inverter power stage to convert DC voltage from the battery to a variable frequency voltage.

What is a 48VDC battery powered inverter?

48-VDCBattery Powered Inverter Power Stage Reference Design for 5-kW Forklift AC Traction Motor All trademarks are the property of their respective owners. Description This TI Design provides a reference solution for a three-phase MOSFET-based inverter to drive an AC induction motor for traction in forklifts.

Which inverter is best for a 48v battery?

In the 48V case, transistors and drivers that can handle at least 100V on the power nodes are a good choice. In a mild hybrid application, realizing the most efficient use of battery power is one of the keys to meeting miles-per-gallon (mpg) and CO2 emission targets. An efficient inverter starts with transistor selection.

What is a 48VDC power stage?

48-VDCBattery Powered Inverter Power Stage Reference Design for 5-kW Forklift AC Traction Motor The turnon and turnoff times of the MOSFETs are independently controlled. A slow turnon is used to minimize overshoot and ringing on the phase output due to unavoidable circuit layout parasitics.

What is a 3 phase MOSFET based inverter?

This TI Design provides a reference solution for a three-phase MOSFET-based inverter to drive an AC induction motor for traction in forklifts. The inverter is

powered from a 48-VDClead acid battery. It is designed to deliver 5 kW of output power from the motor and can handle continuous motor currents of up to 130 ARMSwith a suitable cooling setup.

How does a MOSFET affect power inverter efficiency?

Beyond the power-handling capabilities, other key specifications for the MOSFET include gate charge (QG), parasitic capacitance (CISS, CRSS, COSS) and body-diode characteristics. All of these have an impact on power inverter efficiency.

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