

Dsp development of three-phase inverter





Overview

Aim at the development and realization of SVPWM three-phase inverter control by DSP, the concrete of method and technology by DSP of SVPWM control is given, the complete hardware circuit and DSP control program is designed, the core of source program and setting method of DSP register are given. What is a three-phase inverter reference design?

Three-phase inverter reference design for 200-480VAC drives (Rev. A) This reference design realizes a reinforced isolated three-phase inverter subsystem using isolated IGBT gate drivers and isolated current/voltage sensors.

What is the output current rating of tida-010025 inverter?

Figure 4. Three-Phase Inverter The TIDA-010025 inverter designed using the IGBT module has a nominal output current rating of 14 Arms. Note that in this design provision has been given for three-phase mains voltage rectification but is not tested. 200 to 480 VAC mains input is given to connectors J1 and J3.

How many isolated gate drivers does a tida-010025 inverter need?

The TIDA-010025 inverter requires 7 isolated gate drivers for IGBT switch control. Six drivers are used for controlling the IGBT inverter switches and the seventh driver is used for controlling the brake chopper IGBT. The isolated gate driver used in this design is the UCC23513.

What is a tida-010025 voltage drop?

The voltage drop measured across the NTC is proportional to IGBT module temperature. The TIDA-010025 design is designed to operate from a DC bus voltage of up to 800-Vdc maximum which covers most of the low-voltage drives with grid voltage input up to 480 VAC. A 2- μ F, 1.1-kV film capacitor is placed close to the IGBT module DC bus inputs.



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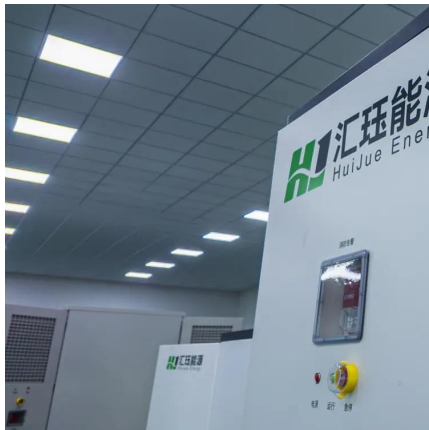
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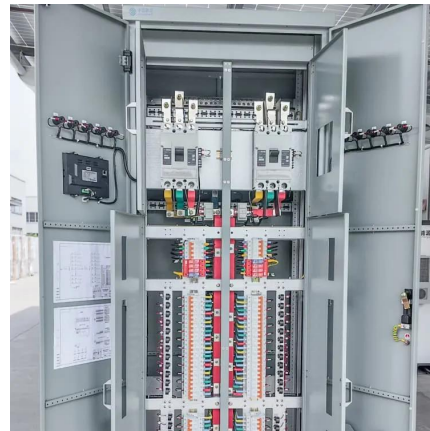


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