Kongres Container

Inverter overvoltage and overcurrent protection

Overview

How can a Class-D inverter protect its output current?

The class-D inverter’s output current can be automatically protected to a safe value by the proposed over-current protection circuits. Compared to active protection, the current detection circuit and related control circuit are not required in the proposed method, which reduces the control complexity and is easy to implement.

Are passive over-current protection circuits suitable for WPT systems with Class-D inverter?

Two passive over-current protection circuits for WPT systems with class-D inverter are proposed in this paper. The class-D inverter’s output current can be automatically protected to a safe value by the proposed over-current protection circuits.

Why is the protection level at the inverter increased?

In addition, the protection level at the inverter is increased if the overvoltage occurs at one of the other strings. When excessive voltage is applied, voltage falls via the cable inductance. If the arrangement is not ideal, the protection level at the inverter is increased (see Fig. 6).

What is a fast overvoltage protection mechanism?

Inverters, whether used for photovoltaic (PV) systems or energy storage facilities, typically include internal fast overvoltage protection mechanisms designed primarily to protect the inverter itself from damaging transients.

What is overvoltage protection?

Overvoltage protection serves to prevent damage to electrical and electronic devices as a result of excessive voltages. Overvoltage protection devices (surge protection devices, or SPD for short) generate equipotential bonding between the connected conductors when excessive voltage is applied.

Can overvoltage protection devices be retrofitted?

The overvoltage protection devices can be retrofitted by plugging them into the base which is standard on all devices. In the Sunny Tripower, the medium protection can be retrofitted quickly and cost-effectively thanks to the SPD type II which can be integrated.

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