SolarInnovate Energy Solutions

Photovoltaic inverter voltage protection

Overview

The overvoltage protection function of the photovoltaic inverter means that when the AC voltage of the inverter network port exceeds the upper limit of the grid voltage set by the inverter, the inverter can automatically cut off the relay of the grid port or reduce the output power to avoid damage to the electrical load in the line because of overvoltage.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.

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).

Do photovoltaic systems need security?

antee your photovoltaic (PV) system security Photovoltaic systems are the future of renewable energies, but they need a certain degree of protection ccording to the system installation differences.The production of electricity with solar panels is one of the most impo.

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.

Can lightning protection be combined with SMA inverters?

Also, special features of combining overvoltage protection devices with SMA inverters are described. The document covers lightning protection in as far as it influences overvoltage protection. Lightning protection systems are intended to prevent damage to buildings from lightning strikes.

How to protect an SMA inverter from overvoltage?

If you wish to protect an SMA inverter against impacting overvoltages, an SPD type II is sufficient. If lightning partial currents are expected, an SPD type I with connected SPD type II should be used. For inverters with one MPP tracker, the strings are combined before the inverter and connected to the SPD(s) at the point of interconnection.

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