SolarTech Power Solutions

High voltage on the grid side of the inverter

Overview

If the mains voltage above 253V comes, the inverter switches itself off to prevent damage. This is common in areas with many solar panels. Causes: Many solar panels nearby → The grid gets overloaded.Why do on grid inverters show overvoltage?

When the voltage range of on grid inverter exceeds the prescribed on grid voltage range, the inverters will show the overvoltage of the grid. In addition, the long, thin, winding or irregular material of the cable used to connect the inverters to the grid will lead to the increase of voltage difference at the AC end of the on grid inverters.

What causes a solar inverter to fail?

The AC voltage overrange is the most common failure of the solar inverter connected with the PV grid system. This is because the grid voltage is not constant and it will change with the changing of the load and current. At the same time, the output voltage of the inverter will be affected by the grid voltage.

What happens if grid voltage is too high?

If grid voltage is already too high your inverter is no longer able to overcome it and instead shuts itself off. For example, if your solars are producing lots of power constantly for 10 minutes, then the grid will go over 255volts, causing an overvoltage reaction.

What happens if a solar inverter goes over 255 volts?

For example, if your solars are producing lots of power constantly for 10 minutes, then the grid will go over 255volts, causing an overvoltage reaction. Newer inverters ramp down power going to the grid before they reach the 258 volt limit.

What are the requirements for photovoltaic power generation on grid inverter?

According to relevant regulations, photovoltaic power generation on grid inverter must work within the specified grid voltage range, which can be monitored in real time and synchronized with the grid voltage.

What happens if multiple inverters are connected to the same phase?

The usual situation is that multiple single-phase inverters are connected to the same phase, which can easily lead to unbalanced grid voltage, and grid voltage rise. There is no doubt that it will lead to on grid overvoltage. This situation is relatively easy to solve.

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