

SolarTech Power Solutions

The DC component of the inverter exceeds the standard



Overview

Grid Overvoltage: The rectifier stage of the inverter converts AC line voltage to DC. If the input AC voltage is higher than nominal, the resulting DC bus voltage will also be higher. For a three-phase inverter, DC bus voltage $\approx \sqrt{2} \times$ AC line-to-line RMS voltage (e.g., 400 V AC yields.

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A DC bus voltage higher than expected on an inverter typically indicates one or more of the following technical issues: Regenerative Braking or Overhauling Load: If the load is decelerating or being driven by external forces (e.g., a motor acting as a generator), energy is fed back into the DC bus.

The DC component in the AC current exceeds the upper threshold. The device detects its external working conditions in real time. After the fault is rectified, the device automatically recovers. If the alarm occurs frequently, contact your dealer or technical support.

After about 2 weeks in service the inverter stops working with ERROR 14 "inverter dc component exceeds the allowable range". It remains hanging until a complete powercycle. On it's dc input 1 there are 21x 280W panels connected (=654V Vmpp / 8,99A Impp, 815Voc / 9.67A Isc). According to my realtime.

Where it exceeds 1000V, the system must be installed per 690.31 (G). Manufacturer's Instructions. The PV system dc source circuit voltage equals the sum of the series-connected dc modules open-circuit voltage (Voc) in a PV string circuit as corrected for the lowest expected ambient temperature.

The maximum DC voltage commonly is a safety relevant limit for sizing a PV system. All components (modules, inverters, cables, connections, fuses, surge arrestors, .) have a certain maximum voltage they can withstand or handle safely. If this voltage gets exceeded, damage or even worse harm can.

PV inverters are designed so that the generated module output power does not exceed the rated maximum inverter AC power. Oversizing implies having more DC power than AC power. This increases power output in low light conditions. You can install a smaller inverter for a given DC array size, or you.

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