SOLAR ELECTRIC

Manufacturer‘s declaration MPP current

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Valid for the inverter series:

PIKO MP plus 1.5–5.0, PIKO 12-20, PIKO IQ 3.0-10, PIKO CI 30-60, PIKO CI 100 PLENTICORE plus 3.0-10, PLENTICORE plus 3.0-10 G2

With the current KOSTAL inverters, you always get an inverter that can process at least 13 A per MPP tracker

Currently, there are a few modules on the market whose MPP current IMPP is just over 13 A. This is the value that the solar module reaches when measured under standard test conditions STC (1000 W/m² irradiation, 25°C cell temperature, 1.5 AM).

In practice, the module’s MPP current is usually below the theoretical data sheet values. KOSTAL inverters are able to determine the point of maximum power („Maximum Power Point“ - MPP) with an accuracy of 99.9% and operate the PV generator at this point. This depends on many factors such as irradiance, light spectrum and temperature.

If the MPP current IMPP of the PV generator becomes too high, it is automatically limited to the max. possible MPP current (= IDCmax per MPPT) of the inverter.

When planning the PV system, the specifications for the short-circuit current ISC_PV and the max. MPP current must be observed:

1. The short-circuit current of the PV generator must not exceed the short-circuit current of the inverter ISC_PV at any time in order not to endanger electrical safety and the validity of the warranty!
2. The MPP current IMPP of the PV generator may be greater than the max. MPP current (= IDCmax per MPPT) of the inverter. The IDCmax of the inverter is not a safety-relevant variable and indicates how much current the inverter can absorb. As soon as the current of the PV generator becomes greater than the permitted MPP current of the inverter, the inverter automatically limits to the maximum possible value.

Exceeding the maximum input current of the inverter by the MPP current of the PV generator does not affect the warranty of the above-mentioned inverters.

All components of our inverters are structurally and thermally designed for the currents specified in the respective device data sheet.

For details on the system design and possible effects on the yield, please refer to our KOSTAL Solar Plan design software, which can be downloaded free of charge from www.kostal-solar-electric.com.

The valid data sheets of our inverters can also be viewed in the download area.

KOSTAL Solar Electric GmbH – Freiburg, 27.02.2024

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