

## SolarTech Power Solutions

# Boost inverter 10kw

## 12.8V 200Ah



## Overview

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What is a 5kw boost converter?

With a nominal voltage rating of 350V and 14A input current, the converters are 5kW rated, with an ability to provide a total input power of 10kW. In this application, the duty-cycle of the boost converter is variable and depends on the input string voltage since the DC-link voltage is kept constant.

How does a 10kW solar inverter charger work?

It supports CAN, USB, and RS485 communication for enhanced connectivity, ensuring reliable and efficient power conversion for a wide range of applications. The 10KW solar inverter charger allows for the simultaneous connection of up to six units, providing a total power output of up to 60,000W.

How much power does a DC-link inverter have?

In boost mode, since this converter supplies the inverter through the DC-link, the discharge power is limited to 4.6kW, the limitation being the maximum power rating of the inverter stage. Depending on the battery voltage, this value can go up to 30A.

What is a boost converter?

By boost converter nature, the output voltage during operation needs to be higher than the input voltage. Considering a string input with up to 10 panels has a voltage range up to 500V, a DC-link voltage of 400V can be chosen with a maximum of 520V. The key parameters can be seen in Table 3-1. Table 3-1. Boost Converter Specifications.

How efficient is a DC/DC boost converter at 400V DC-link output?

Figure 4-6 and Table 4-1 show the efficiency of input DC/DC Boost converter at 400V DC-link output. The input string voltages considered are 50V, 150V, 200V, 250V and 350V. For 200V input, the peak efficiency achieved is 98.9%,

where the boost converter demonstrates the worst-case ripple conditions for a duty cycle of 50%.

Which inverter is best for a large-scale solar system?

Its dependable design and effortless expandability make it a perfect choice for large-scale solar systems. Our 10.2kW pure sine wave hybrid inverter, boasting up to 94% efficiency, seamlessly converts 48V DC to 230V AC power and vice versa. Whether connected to the grid, solar panels, or generators, it offers versatile power options.

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## Contact Us

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