



BUHLE POWER

# The static inverter can generate voltage





## Overview

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How does a static inverter work?

The inverter converts low DC voltage to higher AC voltage. Static inverters are used to generate alternating current from direct current. In this case, the DC power comes from the battery. AC is generated by chopping DC into an approximately sinusoidal curve using power semiconductors.

What are the applications of static inverters?

One of the most critical applications of static inverters is in Uninterruptible Power Supply (UPS) systems. These systems are crucial in industries where even a brief power interruption can result in significant losses, including: Certain critical loads cannot tolerate power interruptions, even for a fraction of a second.

What makes a static inverter more durable and reliable?

This makes static inverter more durable and reliable. Static inverter use high-frequency oscillators to generate alternating high-frequency signals, which are then converted into the required AC voltage through the inverter's transformer. Rectifiers and filters smooth the output AC waveform.

What are the components of a static inverter?

The core components of a static inverter include the rectifier, inverter bridge, control circuits, and filters. Each part has a specific function: Rectifier: Converts AC input into DC output when reverse conversion is required. Inverter Bridge: Transforms DC into AC using semiconductor switches such as IGBTs or MOSFETs.



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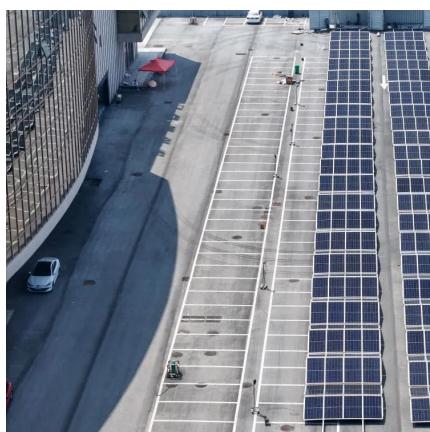
### STATIC POWER INVERTERS

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