

INVERTER

A power inverter, or inverter, is an electronic device or circuitry that changes direct current (DC) to alternating current (AC). The input voltage, output voltage and frequency, and overall power handling depend on the design of the specific device or circuitry. The inverter does not produce any power; the power is provided by the DC source. A power inverter can be entirely electronic or may be a combination of mechanical effects (such as a rotary apparatus) and electronic circuitry. Static inverters do not use moving parts in the conversion process.

Application of inverters

An **inverter** is a device which converts a DC (direct current) voltage source into an AC (alternating current) voltage source. It is useful when you want to run an appliance designed to be operated from AC mains (120 or 240Vac, 50 or 60Hz) from a battery (often 12 or 24Vdc).

Typical applications may be when you are off grid with solar panels and storage battery, when you want to operate mains appliances like TV, hifi, desktop computer and refrigerator. They are also useful for backup power for critical loads when mains power fails.

Inverters may be **rotary**, with an AC generator driven by a DC motor. More commonly, though, they are **static**, using electronic power switches to synthesize an AC waveform from the DC input.