

Base station power conversion to direct current





Overview

What is a converter in a power station?

Converter The heart of the station is the converter unit housed in the hall. This is where the current is converted from AC to DC or vice versa. A converter is made up of transistors, diodes, capacitors and reactors. In order to convert the current, the transistors are switched on and off alternately in line with precisely calculated patterns.

How is electricity converted from alternating current to direct current?

Electricity is converted from alternating current (AC) to direct current (DC) and vice versa in a converter station. This is done by means of high-power, high-voltage electronic semiconductor valves. A semiconductor valve is a device that can carry current in one direction only, and which prevents current from flowing in the opposite direction.

How does a power converter work?

The converter is connected to the AC terminal by means of a transformer that matches the grid voltage to the input voltage required by the converter. 4. DC terminal The DC terminal connects the converter station to the DC power line (overhead line or cable) that runs to the other converter station in the system.

What is the structure of a converter station?

The structure of a converter station is similar to that of a substation – with portals, conductor connectors, pipe connections and transformers. A total of four functional blocks go to make up a converter station: 1. AC terminal The AC terminal connects the entire converter station to a substation to which the overhead AC line is connected. 2.



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High-Voltage Direct Current Technology

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Abstract. The continuous increasing progress in high power and high voltage semiconductor devices leads to have a substantial impact on optimization and effective management of ...

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