

## ContainerPower Energy Solutions

# The role of wind power rectifier modules in communication base stations



## Overview

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In telecommunications infrastructure, rectifier modules provide the necessary DC voltage for powering communication equipment, ensuring reliable connectivity and network uptime. When is a rectifier used in telecommunication infrastructure?

In telecommunication infrastructure, rectifiers are employed wherever AC voltages need to be converted to DC voltages to power telecom cells. AC power is used when IT equipment needs to be powered. When DC telecom devices, such as macrocells or small cells, need to be powered, the AC power is converted to DC with a rectifier.

How does a telecom rectifier work?

Telecom rectifiers convert AC to DC power at the base of macro towers so that DC power can be sent to the DC devices that need it at the top. Traditional telecommunications equipment generally requires 48V DC input power.

Why do telecom small cells need a rectifier?

Not only do rectifiers enable DC devices (such as telecom small cells) to get the DC power they need, they also provide the type of power necessary to charge backup batteries because batteries store DC power. Charging backup batteries enables telecom infrastructure to provide continuous network coverage, even in the case of a power failure.

What is a Class 4 Telecom rectifier?

Class 4 Telecom Rectifiers Rectifiers, including traditional telecom rectifiers, are essentially AC to DC power converters. AC (alternating current) power needs to be converted into DC (direct current) power when powering DC devices (such as 5G antennas for both macrocells and small cells).

What is the role of a rectifier in 5G?

With the advent of 5G networks and their heavier power demands, the role of

rectifiers has become increasingly significant. In telecommunication infrastructure, rectifiers are employed wherever AC voltages need to be converted to DC voltages to power telecom cells. AC power is used when IT equipment needs to be powered.

What is the efficiency rating of a telecom rectifier?

The efficiency rating for telecom rectifiers can usually be pretty high. Unipower and Huawei, for example, provide equipment with an efficiency of up to 96%. This equipment only loses about 4% power that passes through the rectifier as it converts AC to DC power.

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