

The load current of the communication base station is too high





Overview

Is there a direct relationship between base station traffic load and power consumption?

The real data in terms of the power consumption and traffic load have been obtained from continuous measurements performed on a fully operated base station site. Measurements show the existence of a direct relationship between base station traffic load and power consumption.

How do base stations affect mobile cellular network power consumption?

Base stations represent the main contributor to the energy consumption of a mobile cellular network. Since traffic load in mobile networks significantly varies during a working or weekend day, it is important to quantify the influence of these variations on the base station power consumption.

What is a BLVD threshold for a communication base station?

Assume the rated voltage of a communication base station's battery is 48V, with the BLVD threshold set to 42V. When the mains power fails and the battery starts supplying power, the power system continuously monitors the battery voltage through the voltage detection circuit.

Why are base stations important?

In modern communication networks, base stations, as core infrastructure, are crucial for stable operation.

What is a base station power cabinet?

The base station power cabinet is a key equipment ensuring continuous power supply to base station devices, with LLVD (Load Low Voltage Disconnect) and BLVD (Battery Low Voltage Disconnect) being two important protection mechanisms in the power cabinet.

What is the largest energy consumer in a base station?



The largest energy consumer in the BS is the power amplifier, which has a share of around 65% of the total energy consumption . Of the other base station elements, significant energy consumers are: air conditioning (17.5%), digital signal processing (10%) and AC/DC conversion elements (7.5%) .



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Why does the communication base station use -48V power supply?

If it's lower than 48V, the same power of the load on its lines will carry too much current. So we have to choose a thicker power line, which cost a lot and cause line voltage ...

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As two important protection mechanisms in base station power cabinets, LLVD and BLVD play a crucial role in ensuring the stable operation of base station equipment, extending battery life, ...

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Communication Base Station Load Management , Huijue Group ...

As global mobile data traffic surges 35% annually, communication base station load management has become the invisible bottleneck throttling network efficiency.

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Research on Power Load Characteristics and Cluster Analysis of ...

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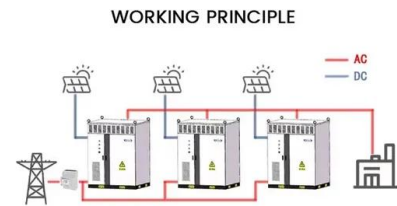
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