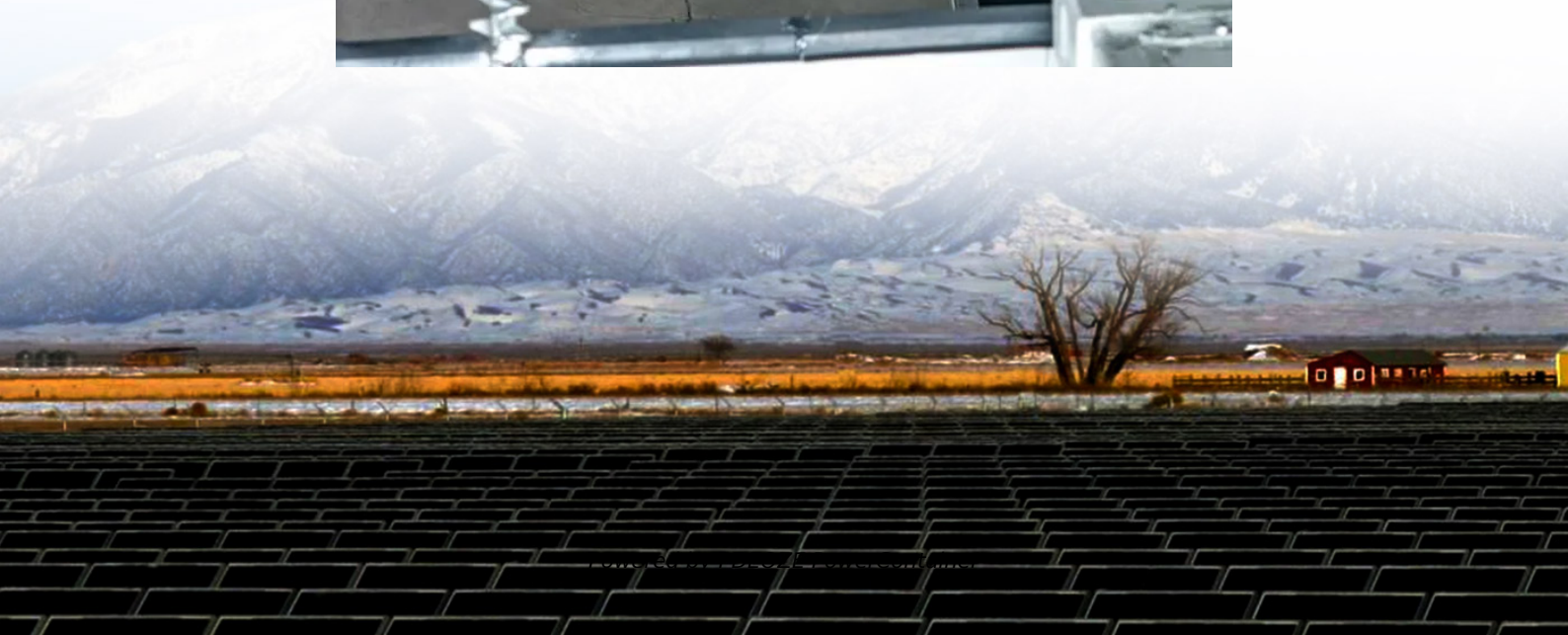


PDEOZE PowerContainer

Safe voltage range of communication base stations



Overview

What is the output voltage of a communication base station?

Assume the output voltage of a communication base station's power system is 48V, with the LLVD threshold set to 40V. When the mains power fails and the battery starts supplying power, the power system continuously monitors the output voltage through the voltage detection circuit.

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.

What is the maximum rated power output for a base station?

Wide area base station (note 1) Medium range base station ≤ 38 dBm (note 2)
Local area base station ≤ 24 dBm (note 2) Note 1: no upper limit for the rated power output, $P_{rated,c,AC}$, for wide area base station. Note 2: the limits may be relaxed according to Table 41.

Do mobile phones need a base station?

Mobile phones and other mobile devices require a network of base stations in order to function. The base station antennas transmit and receive RF (radio frequency) signals, or radio waves, to and from mobile phones near the base station. Without these radio waves, mobile communications would not be possible.

How much exposure can a radio base station have?

On the ground, in houses, and other places where people reside, the exposure levels from radio base stations are normally below 1 percent of the limits. Only in the close vicinity of the antennas can the exposure limits sometimes be exceeded.

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.

Safe voltage range of communication base stations

Assume the output voltage of a communication base station's power system is 48V, with the LLVD threshold set to 40V. When the mains power fails and the battery starts supplying power, the power system continuously monitors the output voltage through the voltage detection circuit.

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.

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Sep 2, 2018 · Engineering Recommendation G78 Issue 4 2018 Recommendations for low voltage supplies to mobile phone base stations with antennae on high voltage structures

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Base Stations Enable Mobile Communications
Antennas Are Placed in Various Locations
More Mobile Devices Means More Base Stations
Base Station Output Power Is Low
Exposure Limits Are Set by Independent Organizations
Exposure Levels Are Much Lower Than The Limits
Public Access Is Restricted Where Needed
No Adverse Health Effects According to The Who
Independent expert organizations have established exposure limits for radio waves based on many years of research. These limits include large safety margins. The World Health Organization (WHO), among others, recommends exposure limits which are adopted by national authorities. See more on ericsson GSMA[PDF]

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