

# **Base station negative 48 power supply voltage division**





## Overview

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Why do communication base stations use -48V power supply?

Communication base stations use -48V power supply for most historical reasons. Historically, the communications industry equipment has been using -48V DC power supply. -48V is also known as positive ground.

What is a -48V power supply system?

Products basically use -48V power supply system, and the actual measured voltage is generally -53.5V. This is because for reliability reasons, communication equipment is equipped with a backup battery (-48V). In order to ensure reliable charging of the battery, the supply voltage needs to be slightly higher than the battery voltage.

What is -48V DC power supply voltage?

The current communication power supply voltage level is divided into DC-48V (+24V), AC 220/380V. Communication industry equipment generally use -48V DC power supply, positive grounding, why?

In this article, I will analyze it for you. Why does -48V DC power supply become the power supply voltage of communication base station?

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What is a communication base station power supply?

Communication base station power supply in the tower room power supply system is an essential and important part of the mobile communication network. The current communication power supply voltage level is divided into DC-48V (+24V), AC 220/380V. Communication industry equipment generally use -48V DC power supply, positive grounding, why?



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### [Why is -48 VDC the Unsung Hero of Telecom Infrastructure?](#)

Sep 3, 2025 · Since most telecommunications equipment at the site requires a DC voltage supply, the AC power from either the electric grid or the diesel generator is converted to -48 VDC by ...

### ["Negative" 48 Volt Power: What, Why and How](#)

Configuration Defined Telecom and wireless networks typically operate on 48 volt DC power. But unlike traditional 12 and 24 volt systems which have the minus (-) side of the battery ...



### [How come negative power supply has negative voltage only](#)

Sep 21, 2023 · A voltage source is negative or positive according to how it is measured. It has no inherent polarity of its own. Only the terminals can have a polarity relative to another ...



### [The Ultimate Guide to Negative 48V DC Power Supplies: ...](#)

Understanding Negative Power Supplies A negative DC power supply generates a negative output voltage relative to a common ground. In the case of the negative 48V DC power supply, ...



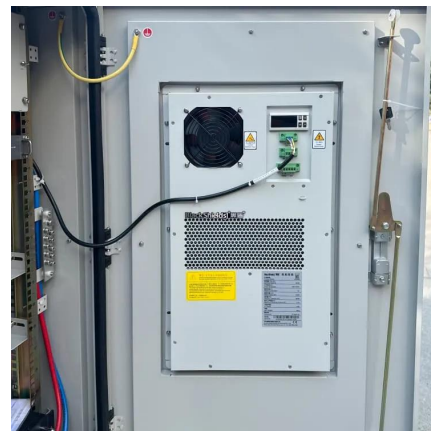
### [48-V Telecom Current, Voltage, and Power Sense With ...](#)

Oct 12, 2017 · Description This verified design can accurately measure current, voltage, and power on a bus that carries -48 V and is able to provide this data using an I2C-compatible ...



### [The Power Behind Connectivity: Telecom and Negative 48 ...](#)

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### [Why does the communication base station use -48V power supply?](#)

Dec 3, 2021 · Why does -48V DC power supply become the power supply voltage of communication base station? Communication base station power supply in the tower room ...





## Positive & Negative Ground Sites

Apr 29, 2020 · For 48-volt sites, these typically operate with a positive-ground configuration, or occasionally with a negative-ground configuration. Positive-ground systems supply -48 volts ...



## Why Telecom Networks Rely on 48V DC Power

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