A-Core Container

The function of 48V power supply for communication base station

Overview

The use of -48V power supply enables the relays to have relatively small current variations when they are engaged and disengosed, thus improving the reliability and stability of the equipment.Why is 48V a good power supply?

In short, 48Vdc is used as it is the highest safe voltage that can easily be obtained using batteries. Ground bonding is used to ensure all interconnected systems are referenced to the same potential. The positive end is bonded to protect against corrosion. What uses 48V power supply?

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What is a -48V back-up battery converter?

The -48V back-up battery converter is similar in construction and complexity to the single-output, high-power VoIP converter previously discussed. The power factor corrected (PFC) AC/DC produces the supply voltage for the 3G Base station's RF Power amplifier (typ. +27V) and the bus voltage for point-of-load converters.

What voltage does a DSL power system supply?

The DSL power system may supply both higher voltage analog line drivers and amplifiers (typ. +/-12V) and several low voltage supplies required by the digital ASIC (+5V, +3.3V, +1.8V, +1.5V).

What types of power systems are used in communications infrastructure equipment?

Communications infrastructure equipment employs a variety of power system components. Power factor corrected (PFC) AC/DC power supplies with load sharing and redundancy (N+1) at the front-end feed dense, high efficiency DC/DC modules and point-of-load converters on the back-end.

What is a preferred power supply architecture for DSL applications?

A preferred power supply architecture for DSL applications is illustrated in Fig. 2. A push-pull converter is used to convert the 48V input voltage to +/-12V and to provide electrical isolation. Synchronous buck converters powered off of the +12V rail generate various low-voltage outputs.

What is a multi-output power supply design?

Multiple output designs may also employ a complex regulation scheme which senses multiple outputs to control the feedback loop. Voice-over-Internet-Protocol (VoIP), Digital Subscriber Line (DSL), and Third-generation (3G) base stations all necessitate varying degrees of complexity in power supply design.

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