

SolarTech Power Solutions

Low-altitude 5G communication base station flow battery



Overview

How many 5G base stations are there?

In this region, it is assumed that there are 10 5G communication base stations, including 4 in residential areas and 6 in commercial areas. Each communication base station uses a set of 200Ah·48V batteries. The initial capacity residual coefficient of the standby battery is 0.7, and the discharge depth is 0.3.

How many batteries does a communication base station use?

Each communication base station uses a set of 200Ah·48V batteries. The initial capacity residual coefficient of the standby battery is 0.7, and the discharge depth is 0.3. When the mains power input is interrupted, the backup battery is used to ensure the uninterrupted operation of communication devices.

How does the power load of a 5G base station affect communication load?

Therefore, the variation of the power load of the 5G base station is closely related to the communication load. It is divided into two kinds of structure, the one that doesn't change is the first structure, such as lighting and air conditioning load; due to the communication load. The second structure of the power load is proportional to the flow.

When does a base station need a backup battery?

When the power supply of the grid is good or the base station load is in a state of low energy consumption, the backup battery of the base station is usually idle. Reasonable evaluation of the reserve energy required by the base station is the premise of its response to the grid dispatching.

Do cellular networks need a low-altitude base station planning model?

However, existing cellular networks suffer from inadequate aerial coverage and the complexity of urban terrestrial channels. To address these challenges,

we propose a novel low-altitude network base station planning model based on the Proximal Policy Optimization (PPO) algorithm.

Can cellular networks support low-altitude unmanned aerial vehicles?

Abstract: The rapid development of low-altitude unmanned aerial vehicles (UAVs) has led to significant communication demands. Leveraging cellular networks to support low-altitude UAV communication offers cost advantages. However, existing cellular networks suffer from inadequate aerial coverage and the complexity of urban terrestrial channels.

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