Solar Storage Container Solutions

Battery charging power calculation for communication base stations

Overview

Why do cellular communication base stations need a battery alloc?

Current cellular communication base stations are facing serious problems due to the mismatch between the power outage situations and the backup battery supporting abili-ties. In this paper, we proposed BatAlloc, a battery alloca-tion framework to address this issue.

How does a battery group work in a base station?

The equipment in base stations is usually supported by the utility grid, where the battery group is installed as the backup power. In case that the utility grid interrupts, the battery discharges to support the communication switching equipment during the period of the power outage.

How is the schedulable capacity of a standby battery determined?

In this article, the schedulable capacity of the battery at each time is determined according to the dynamic communication flow, and the scheduling strategy of the standby power considering the dynamic change of communication flow is proposed. In addition, the model of a base station standby battery responding grid scheduling is established.

How many battery groups does a base station have?

The original battery allocation result is largely skewed that over 65 percent base stations are equipped with only one battery group. Our framework considers both the base station situations and battery fea-tures, allocating 2 battery groups to most base stations and 3 or 4 battery groups to those with long-time power outages.

How many volts does a cellular base station need?

According to the industry standard, the battery used in cellular communication base station is designed to provide power supply for about 10 to 12 hours and we thus set to 10. The second low voltage disconnect of base stations is

usually set as 1.8 v, and we set the end voltage vE as 1.85 v to avoid extreme deep level discharge.

How long does a battery last in a cellular communication base station?

for a new battery cell. According to the industry standard, the battery used in cellular communication base station is designed to provide power supply for about 10 to 12 hours and we thus set to 10. The second low voltage disconnect

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and cascaded LFP batteries applied in communication base stations using a life cycle ...

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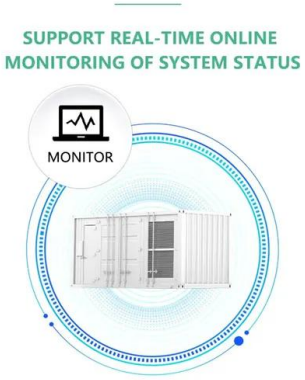

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