

Low-voltage photovoltaic energy storage container for field research





Overview

What is the optimal energy storage power of photovoltaic energy storage?

The optimal energy storage power of photovoltaic energy storage power station is obtained based on the real-time data such as the charge state of the storage system. This paper constructs an optimal voltage control model through ADP algorithm and obtains the optimal coordinated control strategy.

What is a photovoltaic energy storage power station?

Photovoltaic energy storage power station is a combined operation system including distributed photovoltaic system and energy storage system. The overall structure of a photovoltaic storage power station is shown in Figure 1. Figure 1. Photovoltaic energy storage power station.

What is the mathematical model of a photovoltaic energy storage power station?

The mathematical model expression of the photovoltaic system in the photovoltaic energy storage power station is as follows: In formula (1), N_P and N_S represent the number of series capacitors and parallel capacitors in a photovoltaic system respectively. U_{pv} and I_{pv} represent the total voltage and current, respectively.

Which algorithm is used to solve a photovoltaic energy storage system?

The ADP algorithm is used to solve formula (9), and the power constraint conditions of the photovoltaic energy storage system are fully considered. k is used to express the iteration times of ADP algorithm, and the expression of optimal voltage coordination control strategy for photovoltaic energy storage system is as follows:



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