GOODS CONTAINERS

Ky-b fully intelligent solar energy engineering control system

Overview

Renewable energy systems, such as photovoltaic (PV) systems, have become increasingly significant in response to the pressing concerns of climate change and the imperative to mitigate carbon emissions.

What is a hybrid solar energy system?

The proposed hybrid solar energy system uses AI blends machine-learning-driven solar tracking, material upgrade with intelligence, adaptive photovoltaics, and energy management using blockchain into a common and intelligent platform for energy optimization.

What is the energy management system for a stand-alone hybrid system?

In 11 the energy management system was implemented for a stand-alone hybrid system with two sustainable energy sources: wind, solar, and battery storage. To monitor maximum energy points efficiently, the P&O algorithm was used to control photovoltaic and wind power systems. The battery storage system is organized via PI controller.

What is AI-hybrid solar energy?

The AI-hybrid solar energy system presented here optimizes solar energy conversion, storage, and grid integration by integrating CNN-LSTM forecasting, reinforcement learning dual-axis tracking, and Edge AI real-time control. Unlike conventional systems, it can automatically adapt to climatic variations to optimize irradiance capture.

What is a solar energy management system?

These include applications such as remote monitoring and control, predictive maintenance, energy optimization, and other functionalities designed to maximize solar energy generation, enhance system reliability, and ensure efficient energy management.

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Aug 25, 2022 · Keywords: experimental validation, fuzzy logic control, intelligent control, stand-alone solar energy system, DSPACE

platform Citation: Yahiaoui F, Chabour F, Guenounou O, ...

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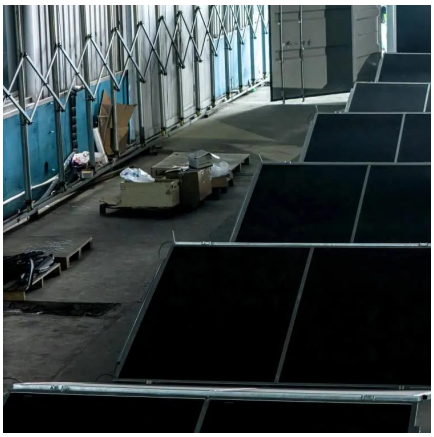

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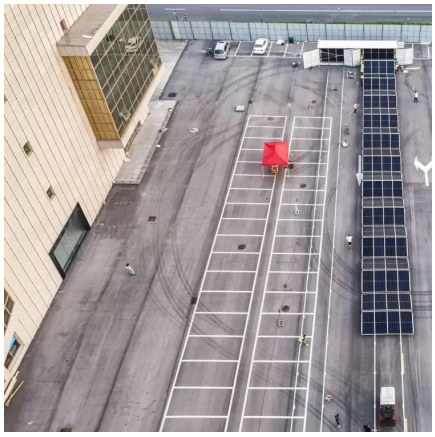

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