

Asynchronous generator power station





Overview

What is an asynchronous generator?

Asynchronous generators, also known as induction generators, are becoming increasingly popular in various renewable energy applications, particularly in small-scale hydroelectric and wind power installations.

What is induction generator & asynchronous generator?

It only occurs when the rotor is driven by a prime mover. In such case, the induction machine will deliver power to the electrical load thus operating as an induction generator. It is also called an asynchronous generator because it runs at a speed other than the synchronous speed.

Do asynchronous generators need a separate excitation system?

Unlike synchronous generators, asynchronous generators do not require a separate excitation system; they draw the necessary reactive magnetizing current from the grid or from a capacitor bank in standalone applications. The rotor, typically a squirrel-cage design.

How do you design an asynchronous generator?

Designing an asynchronous generator connected to the grid involves a comprehensive understanding of both electrical and mechanical principles. Key considerations include managing core saturation, minimizing losses, and ensuring high pull-out torque for stability under varying loads.



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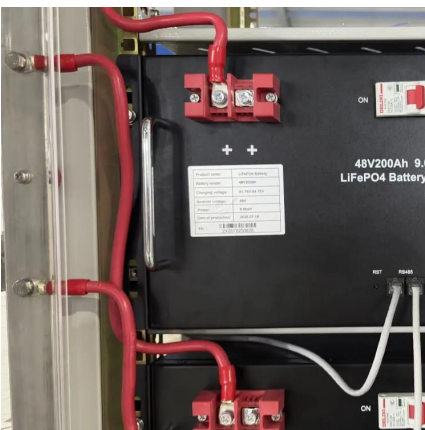
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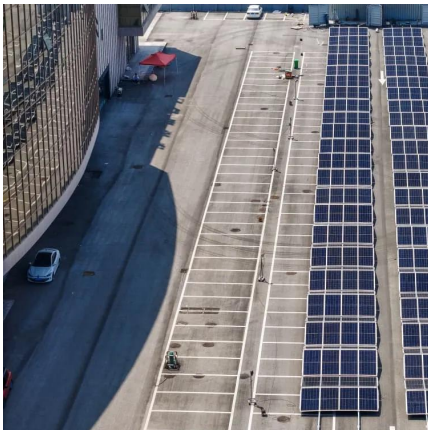
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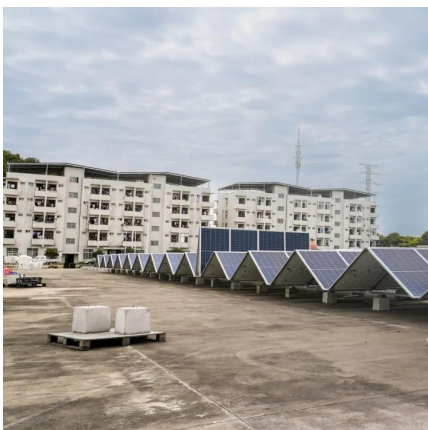
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