

# **Bidirectional charging of photovoltaic folding containers for power grid distribution stations**





## Overview

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Can a bi-directional battery charging and discharging converter interact with the grid?

This paper presents the design and simulation of a bi-directional battery charging and discharging converter capable of interacting with the grid.

How can bidirectional charging/discharging a battery achieve maximum PV power utilization?

In addition, with the proposed strategies, the bidirectional charging/discharging capability of the battery is able to achieve the maximum PV power utilization. All the proposed strategies can be realized by the digital signal processor without adding any additional circuit, component, and communication mechanism.

What is bidirectional power flow control?

Therefore, bidirectional power flow control strategies are proposed to achieve the maximum PV power utilization as well as to realize the hybrid charging methods. In addition, with the proposed strategies, the bidirectional charging/discharging capability of the battery is able to achieve the maximum PV power utilization.

Can a bidirectional DC fast charging station solve the voltage fluctuation crisis?

Therefore, a bidirectional DC fast charging station equipped with a new controller is proposed to solve the voltage fluctuation crisis, in which the switching of the existing power converter is controlled by the new constant current/reduced constant current method.



## Bidirectional charging of photovoltaic folding containers for power

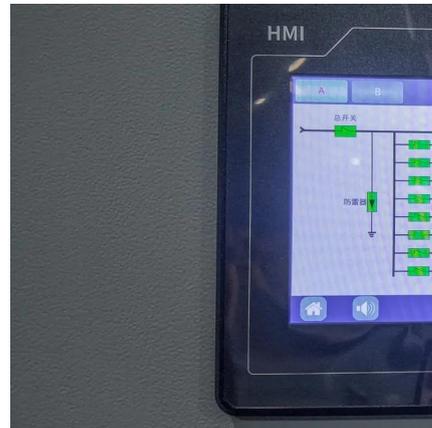


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