

## **SolarInnovate Energy Solutions**

# **The function of DC mobile power box**



## Overview

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What is a mobile DC power system?

Mobile DC Power Systems are typically engineered and equipped with battery chargers, batteries, AC/DC meters and controls including ancillary safety equipment in accordance with applicable IEEE Design and Installation Practices for Stationary Batteries and DC Systems as described in IEEE Std. 946 and IEEE Std. 446.

What is a mobile power system?

Engineering mobile power system components with mechanical and electrical isolation capability allows the user to suspend system operation for safety and maintenance purposes. Depending on DC load requirements, provisions are made to offer systems in single or multiple DC output voltage configurations.

How does a mobile power system work?

Mobile power systems equipped with load bank and monitoring equipment allow operators to test the existing battery and assist in identifying potential performance and/or capacity issues. There are several methods for making physical AC and DC power connections from the mobile power system to the substation.

What is a 48VDC & 120VDC mobile power system?

For example, nominal 48VDC and 120VDC mobile power systems offer versatility to service substations operating on one or both dc voltages. The 48VDC supply may be accomplished via a dedicated 48V battery and charger or by means of a 120V to 48V DC to DC Converter. Please refer to Figure 1 depicting a typical mobile DC power system.

What is a utility substation primary mobile DC power system?

Utility Substation Primary Mobile DC Power System Component Description and Function Batteries: Acting as the heart of the entire system, batteries play

a critical role as a back-up power source for lost or interrupted station power.

What is a high voltage box?

The High Voltage Power Box combines the functionality of an Onboard Charger (OBC), a DC/DC converter and a PDU (Power Distribution Unit). The OBC is the interface between the car and the public grid.

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