

Western European Integrated Bidirectional Power Supply



Overview

Designed for smart grid (V2G, V2H, V2L) applications, BMPU-R2 is a modular grid-tied power supply capable of bidirectional conversion between AC (grid) and DC (EV battery). Its innovative 4-phases design enables operation in three-phase 16A (with or without). The EA-PSB Series bidirectional DC programmable power supply has an integrated, regenerative electronic load and therefore can sink (absorb) current and recover up to 96% of current, returning it to the local power grid. Regenerative PSBs reduce heat, noise and HVAC costs, making them cost-effective. This joint report documents the results of the first year of work, starting from November 2023, of the Coalition of the Willing on Bidirectional Charging (CoW), European Working Groups (EWG) EWG 1: “Car Charging and Aggregators” and EWG 2: “Energy and Grid Topics”. In the BDL Next project, we investigated this question by applying a life cycle assessment (LCA) approach on the endogenous differences in. A European consortium led by Fraunhofer IZM is developing a 22-kilowatt on-board charger with a volume of 4 liters—a third of the 12-liter market average for comparable systems today—using monolithically integrated, bidirectional gallium nitride (GaN) semiconductors from Infineon. The work is part. Bidirectional charging: Technically developed - politically established for the first time Hardly any other topic attracted as much attention in 2025 as bidirectional charging. Technologically, both AC and DC-based systems are available, and numerous pilot projects are already delivering convincing.

Article Content

Bidirectional Charging: 2025 as Turning Point for Smart Energy

The decisive incentive in Germany was recently provided by lawmakers: with the amendment of the Energy Industry Act (EnWG), clear legal foundations were created for the first time

Bidirectional Power Supply

High Performance DC Supplies that Source & Sink Power The EA-PSB Series bidirectional DC programmable power supply has an integrated, regenerative electronic load and therefor can sink

Bidirectional Power Supplies

Bidirectional Power Supplies - Basics A bidirectional Power Supply combines the functions of a standard, unidirectional power supply with an E

Europe Bidirectional Power Supply Market Size 2026

The Europe Bidirectional Power Supply market is undergoing rapid transformation, driven by technological advancements, regulatory shifts, and evolving consumer demands.

Unveiling the Power of Bidirectional Power Supplies: Revolutionizing ...

Renewable Energy Integration: In renewable energy systems like solar and wind power, bidirectional power supplies play a crucial role in managing fluctuations in energy generation.

Bidirectional Power Supply

The EA-PSB Series bidirectional DC programmable power supply has an integrated, regenerative electronic load and therefor can sink (absorb) current and recover up to 96% of current, returning it to

SSZTD12 Technical article | TI

Technical Article For efficiencies" sake – how to integrate bidirectional power flow into your UPS design (part 1) With a growing emphasis on more compact,

For efficiencies sake how to integrate bidirectional power flow into ...

For efficiencies" sake – how to integrate bidirectional power flow into your UPS design (part 1) With a growing emphasis on more compact, smaller and more efficient power systems, there is increasing

EA Elektro-Automatik Introduces Bidirectional

This article highlights Infineon Technologies AG power supply PSB 10000 of EA Elektro-Automatik offers a bidirectional solution for this application.

Application of Bidirectional Power Supply in Home

Figure 2. Sensorless Motor startup voltage Integrate Bidirectional Power Supply to The Control System The bidirectional power supply is essential

Charged EVs | EU consortium aims to fit a 22 kW bidirectional on

A European consortium led by Fraunhofer IZM is developing a 22-kilowatt on-board charger with a volume of 4 liters—a third of the 12-liter market average for comparable systems

How to Simplify System Integration with a TPS DC DC Bidirectional Power ...

Simplify system integration with our modular DC DC bidirectional power supply for regenerative battery testing applications.

BIC-2200 Series: 2200W Bidirectional Power Supply

In this regard, MEAN WELL announces its new BIC-2200 series. This is the first bidirectional power supply with an energy recycle function that aims to replace

Design and Implementation of Bidirectional Power ...

Implementation Challenges and Advances Implementing bidirectional power supplies involves overcoming several challenges, including thermal management, electromagnetic

Believe in the Benefits of Bidirectional Power Supplies

As an example of power testing versatility with high efficiency, EA-PSB 10000 30 kW programmable bidirectional DC power supplies from Elektro-Automatik save the weight and size of a

AC/DC Bidirectional Power Supply - Benefits

An AC/DC bidirectional power supply module not only delivers energy but also recovers unused power, significantly improving the efficiency of modern

Welcome to ITECH

IT6000C series is a bi-directional programmable DC power supply which adopts the third generation SiC-base technology. It integrates the source and sink function

Bidirectional power modules

Designed for smart grid (V2G, V2H, V2L) applications, BMPU-R2 is a modular grid-tied power supply capable of bidirectional conversion between AC (grid) and DC

Should You Consider a Bidirectional Power Supply

Should You Consider a Bidirectional Power Supply The advancements in power supply technologies represent a big step forward for sustainability and flexibility. In this landscape,

Demonstration of bidirectional charging using

The Watt& Well bidirectional EVSE is shown in Figure 1 and it can achieve a full-range test using 400 and 800 V architectures using CHAdeMO and CCS2 connectors. The EVSE has two bidirectional

Western European Bidirectional Energy Storage Inverters Powering

System integration: GRES energy storage system, with a battery capacity of 75kWh and a PCS of 50kW, seamlessly connects with the 23kWp solar system to form an integrated power supply

The Benefits of Bi-Directional Power Design

This article features the advantages and benefits of implementing bi-directional power design allowing full reversible power flow.

BMWK -BiDi Joint Paper

As the Coalition of the Willing, we set out to identify the key barriers impeding bidirectional charging and develop a concrete roadmap from industry perspective in order to have first interoperable products

Europe Bidirectional Power Supply Market Size 2026

Europe Bidirectional Power Supply Market size was valued at USD 1.1 Billion in 2022 and is projected to reach USD 2.

Bidirectional EV Charging: The Spark Europe's Grid

Parked at midday, these vehicles hum quietly as they channel stored energy back into the local grid, stabilising power supply during peak

Western European Bidirectional Energy Storage Inverters Powering

This aim of this research is to analyze unidirectional and bidirectional charging systems integrated with renewable energy, from both economic and environmental perspectives.

Bidirectional AC-DC Power Modules for Microgrids,

Learn how bidirectional AC-DC/DC-AC power modules enable two-way energy flow, fast mode switching, high PF/low THDi, and scalable parallel

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