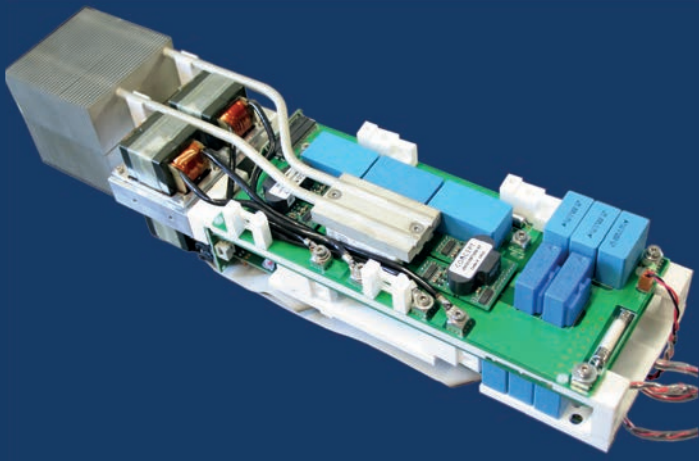


DC-Grid Manager for DC Microgrids in Buildings





DC-Grid Manager for DC Microgrids in Buildings

Description

With the presented **DC-Grid Manager** a complete plug and play solution for local DC micro grids in buildings is available. The **DC-Grid Manager** combines the entire power electronics to generate, store and use renewable energy from independent PV-strings with a very high efficiency in only 2HU of 19" system, which can be easily installed within the rack of a high voltage battery.

The **DC-Grid Manager** has **eight flexibly configurable** channels connected to the common DC-Bus. Each channel can interface to a different device (e.g. PV string, battery system or fuel cell). **The function of each channel can be configured with software.** For example, when connected to a PV string, the channel can operate as maximum power point tracker (MPPT). For applications requiring higher power, the channels can be connected in parallel.

Voltage regulation in the **DC-Grid Manager** is performed by a **voltage droop control**.

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Technical Data

Number of individual DC ports	8
Number of common DC ports	1
Maximum Current of individual DC ports	20 A
Maximum Power @ 380 V (per DC port)	8 kW
Efficiency of individual DC ports	up to 99%
MPPT voltage range	50-430 V
Battery storage voltage range	50-430 V
Dimension	19" (2 height units)

Features

- 8x 8 kW *bidirectional DC/DC converters*
- *Flexible channel configuration for the connection of PV strings, battery storage and other renewable energy sources*
- *Temperature monitoring*
- *Overcurrent protection*
- *Integrated mechanical switches for each channel*
- *Additional fuses for each port*
- *Air cooled*
- *Low cost design approach (no SiC, minimum ceramic capacitors)*

Typical DC Grid Architecture

