DC Microgrid dspace

This paper introduces DC microgrids, their implementation in industrial applications, and several Texas Instruments (TI) reference designs that help enable efficient implementations.

This article presents a dSPACE-control-platform-based implementation of a fixed-switching-frequency modulated model predictive control (M 2 PC) strategy, as an inner controller of a ...

In this paper, an energy management technique was proposed along with detailed modeling for the experimental setup of the DC microgrid (DCMG). A dSPACE 1103 controller was ...

In the first aspect, the present invention proposes a microgrid simulation experiment system based on RTDS and dSPACE, including: RTDS microgrid real-time simulation subsystem, dSPACE...

This chapter covers the overall microgrid construction, beginning with its physical layout in the LEES lab space, and finishing with the interconnection and switching system implemented as part of this thesis.

The DC microgrid is built in RSCAD software of RTDS and the controller is built in dSPACE. The input/output (I/O) cards of RTDS and dSPACE are used to exchange control and DC ...

With the dSPACE solution for software-in-the loop (SIL) testing, you can significantly accelerate your software development process by testing and validating virtually. dSPACE offers you a complete, ...

In this paper, the HiL simulation of an AC-DC microgrid topology with two DC voltage levels was performed. The AC-DC microgrid topology is simulated in real time through the Plecs RT ...

Next, this thesis details the design of one of the main generating sources for the microgrid, the inverter for a hardware-simulated solar panel. Solar panels with DC output are virtually always connected ...

In the MicroGrid context, direct current (DC) MicroGrids are seen as a ma-jor advantage, since renewables (PV, Wind, fuel cells), electronic loads, electric vehicles, and storage (batteries, ...

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