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## 一种自均流多模组大功率电源并联技术(PDF) 分享到:

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Title: Research of Automatic Current-Sharing and Parallel Technology In High-Power Switching Mode Power

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摘要: 针对大功率直流电源模块并联运行时的均流问题,阐述了一种应用于大功率直流电源模块并联系统的数字化控制均流技术,给出了并联系统的结构.通过分析并联系统的环流、功率调节特性等,提出了一种每一个子模块都独立采用双闭环反馈控制的技术.通过仿真与实验,该自均流并联系统可构成恒压电源及恒流电源,输出电压、电流误差分别小于0.83%和0.53%,模块之间电流不均衡度小于3.78%,稳定性好、瞬态响应快.

Abstract: In order to improve the current sharing of parallel high power supplies,a digital current sharing control technique for module-larized power parallel operation is investigated in detail,and the structure of parallel system is presented.Based on the analysis of circumfluence of paralleled system,characteristics of the power regulation,the double closed-loop control technique apply to each sub-module.Through the simulation and experiments,satisfactory dynamic and static performance of the power supply was obtained,the fluctuation of the voltage and current is less than 0.83% and 0.53%,the difference between the sub modules is less than 3.78%.

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