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Three Phase Parallel AC/DC Converter



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TECHNOLOGY READINESS LEVEL (TRL)

TRL 3

PATENT/ GRANTED NUMBER

MY-170392-A

TECHNOLOGY OVERVIEW

The present invention provides a power converter using parallel configuration of two three-phase buck AC-to-DC rectifiers to achieve near-unity power factor, a DC-to-DC converter such as boost-SEPIC and a means to eliminate circulating current, implemented by field-programmable gate array (FPGA). A proportional-integral (PI) controller is added to equalize error from rectifier. The present invention successfully overcomes the problems of low power output and low power factor by utilizing parallel configuration of converters, low efficiency by utilizing a boost-SEPIC and circulating current by implementing a PI controller

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