

## **SINGLE PHASE POWER FACTOR CORRECTION**

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### **Abstract**

Majority of the applications involving electronic circuitry require a regulated DC supply. Since AC supplies are more commonly available, a suitable AC-DC converter becomes mandatory for such applications. These AC-DC converters involve a number of non-linear devices which reduce the system power factor and introduce harmonics in the power system leading to adverse effects. Hence it is essential to use a suitable power factor correction technique to condition the supply current. The objective of the paper has been in the direction of better understanding of AC/DC converter. Emphasis of this paper has the design of 100W AC/DC converter with high input power factor and tight output voltage regulation. Simulation studies have been carried out using MATLAB/SIMULINK by using Average current mode control topology.

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**Keyword :** PFC, Boost converter, Average current mode control, PI controller.

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