



# Generalized Design, Analysis and Control of Grid side converters with integrated UPS or Islanding functionality

By Srinivas Ponnaluri

Shaker Verlag Jul 2006, 2006. Taschenbuch. Book Condition: Neu. 210x149x10 mm. Neuware - Today there is a growing need to use similar power and control hardware and even similar control methods for various applications in utility connected converters operating in grid and island modes. It can be shown that even an AC motor drive control has many similarities to the grid side converter control. Only the application layer of the control is different in each case. The main focus of this thesis is to find the various needs of these applications and how to meet them, address the design and analysis methods, study of topologies, control methods etc. The theory is supported with analysis, simulation and practical results wherever possible. Though there has been a substantial literature available on the topic of concern, there is no generalized systematic approach made available for the converter system design for a given set of basic specifications. The utilization of the converter is completely dependent on the application. For example, consider an IGBT based full bridge line side converter. When the converter is used for unity power factor applications, most of the time diodes conduct when the dc link draws power as compared to...



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