

1. Record Nr.	UNINA9910557338603321
Autore	Monopoli Vito Giuseppe
Titolo	Analysis of the Harmonic Performance of Power Converters and Electrical Drives
Pubbl/distr/stampa	Basel, Switzerland, : MDPI - Multidisciplinary Digital Publishing Institute, 2021
Descrizione fisica	1 electronic resource (97 p.)
Soggetti	Technology: general issues Energy industries & utilities
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	<p>Power converters have progressively become the most efficient and attractive solution in recent decades in many industrial sectors, ranging from electric mobility, aerospace applications to attain better electric aircraft concepts, vast renewable energy resource integration in the transmission and distribution grid, the design of smart and efficient energy management systems, the usage of energy storage systems, and the achievement of smart grid paradigm development, among others. In order to achieve efficient solutions in this wide energy scenario, over the past few decades, considerable attention has been paid by the academia and industry in order to develop new methods to achieve power systems with maximum harmonic performance aiming for two main targets. On the one hand, the high-performance harmonic performance of power systems would lead to improvements in their power density, size and weight. This becomes critical in applications such as aerospace or electric mobility, where the power converters are on-board systems. On the other hand, current standards are becoming more and more strict in order to reduce the EMI and EMC noise, as well as meeting minimum power quality requirements (i.e., grid code standards for grid-tied power systems).</p>