1. Record Nr. UNINA9910484112103321

| | |
|---|---|
| Autore | Xiao Huafeng |
| Titolo | Transformerless photovoltaic grid-connected inverters / / Huafeng Xiao, Xiaobiao Wang |
| Pubbl/distr/stampa | Gateway East, Singapore : , : Springer, , [2021]<br>Â©2021 |
| ISBN | 981-15-8525-3 |
| Edizione | [1st ed. 2021.] |
| Descrizione fisica | 1 online resource (VIII, 248 p. 302 illus., 44 illus. in color.) |
| Collana | CPSS power electronics series |
| Disciplina | 621.3126 |
| Soggetti | Electric inverters |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di bibliografia | Includes bibliographical references. |
| Nota di contenuto | Introduction -- Transformerless Potovoltaic Grid-Connected Inverters and Leakage Current Issue -- Full-Bridge Type Transformerless Inverters -- Half-Bridge Type Transformerless Inverters -- Combined Transformerless Inverters -- Transformerless Grid-Connected Inverters with Non-Unit Power Factor -- DC Injection Eliminations for Transformerless Inverters -- Conclusion. |
| Sommario/riassunto | This book focuses on a safety issue in terms of leakage current, builds a common-mode voltage analysis model for TLIs at switching frequency scale and develops a new modulation theory referred as “Constant Common-Mode Voltage Modulation” to eliminate the leakage current of TLIs. Transformerless Grid-Connected Inverter (TLI) is a circuit interface between photovoltaic arrays and the utility, which features high conversion efficiency, low cost, low volume and weight. The detailed theoretical analysis with design examples and experimental validations are presented from full-bridge type, half-bridge type and combined topologies. This book is essential and valuable reference for graduate students and academics majored in power electronics; engineers engaged in developing distributed grid-connected inverters; senior undergraduate students majored in electrical engineering and automation engineering. |