

1. Record Nr.	UNINA9910463464003321
Autore	Das J. C. <1934, >
Titolo	Power system analysis : short-circuit load flow and harmonics / / J.C. Das
Pubbl/distr/stampa	Boca Raton, Fla. : , : CRC Press, , 2012
ISBN	1-315-21794-5 1-4398-2080-5
Edizione	[Second edition.]
Descrizione fisica	1 online resource (1062 p.)
Collana	Power Engineering ; ; 33
Disciplina	621.310151
Soggetti	Electric power systems - Mathematical models Electric power system stability System analysis Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Front Cover; Contents; Series Introduction; Preface to the Second Edition; Preface to the First Edition; Author; Chapter 1. Short-Circuit Currents and Symmetrical Components; Chapter 2. Unsymmetrical Fault Calculations; Chapter 3. Matrix Methods for Network Solutions; Chapter 4. Current Interruption in AC Networks; Chapter 5. Application and Ratings of Circuit Breakers and Fuses according to ANSI Standards; Chapter 6. Short Circuit of Synchronous and Induction Machines; Chapter 7. Short-Circuit Calculations according to ANSI Standards Chapter 8. Short-Circuit Calculations according to IEC Standards Chapter 9. Calculations of Short-Circuit Currents in DC Systems; Chapter 10. Load Flow over Power Transmission Lines; Chapter 11. Load Flow Methods: Part I; Chapter 12. Load Flow Methods: Part II; Chapter 13. Reactive Power Flow and Control; Chapter 14. Three-Phase and Distribution System Load Flow; Chapter 15. Optimization Techniques; Chapter 16. Optimal Power Flow; Chapter 17. Harmonics Generation; Chapter 18. Effects of Harmonics; Chapter 19. Harmonic Analysis; Chapter 20. Harmonic Mitigation and Filters Chapter 21. Arc Flash Hazard Analysis Chapter 22. Wind Power; Appendix A: Matrix Methods; Appendix B: Calculation of Line and Cable

Constants; Appendix C: Transformers and Reactors; Appendix D: Sparsity and Optimal Ordering; Appendix E: Fourier Analysis; Appendix F: Limitation of Harmonics; Appendix G: Estimating Line Harmonics; Back Cover

Sommario/riassunto

Fundamental to the planning, design, and operating stages of any electrical engineering endeavor, power system analysis continues to be shaped by dramatic advances and improvements that reflect today's changing energy needs. Highlighting the latest directions in the field, *Power System Analysis: Short-Circuit Load Flow and Harmonics, Second Edition* includes investigations into arc flash hazard analysis and its migration in electrical systems, as well as wind power generation and its integration into utility systems. Designed to illustrate the practical application of power system analysis to r
