1. Record Nr. UNINA9910484984403321

Autore	Gupta Om Hari
Titolo	Protection Challenges in Meeting Increasing Electric Power Demand / / by Om Hari Gupta, Manoj Tripathy, Vijay K. Sood
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2021
ISBN	3-030-60500-0
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (XXVII, 130 p. 117 illus., 63 illus. in color.)
Disciplina	621.319
Soggetti	Electric power production Renewable energy sources Electrical Power Engineering Renewable Energy Mechanical Power Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Changes in Conventional Power Systems -- Existing Protection and Challenges -- Solutions to the Protection Challenges -- Conclusions and Future Scope.
Sommario/riassunto	This reference book provides a detailed discussion on the protection challenges that arise due to technological improvements in transmission and distribution systems to supply increasing power demand. The primary focus of this book is transmission line protection with FACTS devices connected to the line and islanding detection in an active distribution system i.e., microgrids. First, a literature review on the protection of transmission lines in the presence of switching devices is presented. The following chapters then present commonly proposed modifications required in the power system to meet increasing power demands, commonly used existing protection schemes and their limitations in the presence of switching devices, and solutions to these limitations in protection schemes. Results from fault simulations using PSCAD/EMTDC and MATLAB are also included. This book will be valuable to graduate students and practicing engineers alike for dealing with protection issues in transmission and distribution

systems incorporating FACTS devices. Provides thorough knowledge of trends in transmission networks for the enhancement of power flow, control and protection Presents an analysis of requirements of microgrids in the future Highlights challenges in the protection of active distribution systems or microgrids against islanding in the presence of distributed generation.