

1. Record Nr.	UNINA9910453336603321
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Titolo	Power system relaying // Stanley H. Horowitz, Arun G. Phadke
Pubbl/distr/stampa	Chichester, West Sussex : , : John Wiley and Sons, , 2014 ©2014
ISBN	1-5231-1101-1 1-118-70151-8 1-118-70319-7
Edizione	[4th ed.]
Descrizione fisica	1 online resource (399 p.)
Classificazione	TEC031000
Altri autori (Persone)	PhadkeArun G
Disciplina	621.31/7
Soggetti	Protective relays Electric power systems - Protection Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Fourth edition.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Cover; Title Page; Copyright; Contents; Preface to the Fourth Edition; Preface to the Third Edition; Preface to the Second Edition; Preface to the First Edition; Chapter 1 Introduction to Protective Relaying; 1.1 What is Relaying?; 1.2 Power System Structural Considerations; 1.2.1 Multilayered Structure of Power Systems; 1.2.2 Neutral Grounding of Power Systems; 1.3 Power System Bus Configurations; 1.4 The Nature of Relaying; 1.4.1 Reliability, Dependability, and Security; 1.4.2 Selectivity of Relays and Zones of Protection; 1.4.3 Relay Speed; 1.4.4 Primary and Backup Protection 1.4.5 Single-and Three-Phase Tripping and Reclosing 1.5 Elements of a Protection System; 1.5.1 Battery and DC Supply; 1.5.2 Circuit Breakers; 1.6 International Practices; 1.7 Summary; Problems; References; Chapter 2 Relay Operating Principles; 2.1 Introduction; 2.2 Detection of Faults; 2.2.1 Level Detection; 2.2.2 Magnitude Comparison; 2.2.3 Differential Comparison; 2.2.4 Phase Angle Comparison; 2.2.5 Distance Measurement; 2.2.6 Pilot Relaying; 2.2.7 Harmonic Content; 2.2.8 Frequency Sensing; 2.3 Relay Designs; 2.3.1 Fuses; 2.4 Electromechanical Relays; 2.4.1 Plunger-Type Relays

2.4.2 Induction-Type Relays; 2.5 Solid-State Relays; 2.5.1 Solid-State Instantaneous Overcurrent Relays; 2.5.2 Solid-State Distance (mho) Relays; 2.6 Computer Relays; 2.7 Other Relay Design Considerations; 2.7.1 Contact Definition; 2.7.2 Targets; 2.7.3 Seal-In Circuit; 2.7.4 Operating Time; 2.7.5 Ratio of Pickup to Reset; 2.8 Control Circuits: A Beginning; 2.9 Summary; Problems; References; Chapter 3 Current and Voltage Transformers; 3.1 Introduction; 3.2 Steady-State Performance of Current Transformers; 3.2.1 Standard Class Designation; 3.2.2 Polarity Markings on CT Windings; 3.3 Transient Performance of Current Transformers; 3.4 Special Connections of Current Transformers; 3.4.1 Auxiliary Current Transformers; 3.4.2 Wye and Delta Connections; 3.4.3 Zero-Sequence Current Shunts; 3.4.4 Flux-Summing CT; 3.5 Linear Couplers and Electronic Current Transformers; 3.6 Voltage Transformers; 3.7 Coupling Capacitor Voltage Transformers; 3.8 Transient Performance of CCVTs; 3.9 Electronic Voltage Transformers; 3.10 Summary; Problems; References; Chapter 4 Nonpilot Overcurrent Protection of Transmission Lines; 4.1 Introduction; 4.2 Fuses, Sectionalizers, and Reclosers; 4.3 Inverse, Time-Delay Overcurrent Relays; 4.3.1 Application; 4.3.2 Setting Rules; 4.4 Instantaneous Overcurrent Relays; 4.4.1 Application; 4.4.2 Setting Rules; 4.5 Directional Overcurrent Relays; 4.5.1 Application; 4.6 Polarizing; 4.6.1 Power Directional Relays; 4.6.2 Fault Directional Relays; 4.7 Summary; Problems; References; Chapter 5 Nonpilot Distance Protection of Transmission Lines; 5.1 Introduction; 5.2 Stepped Distance Protection; 5.3 R-X Diagram; 5.4 Three-Phase Distance Relays; 5.4.1 Phase-to-Phase Faults; 5.4.2 Ground Faults; 5.4.3 Relays in Unfaulted Phases; 5.4.4 Fault Resistance; 5.5 Distance Relay Types

Sommario/riassunto

"The previous three editions of Power System Relaying offer comprehensive and accessible coverage of the theory and fundamentals of relaying and have been widely adopted on university and industry courses worldwide. With the third edition, the authors have added new and detailed descriptions of power system phenomena such as stability, system-wide protection concepts and discussion of historic outages. Power System Relaying, 4th Edition continues its role as an outstanding textbook on power system protection for senior and graduate students in the field of electric power engineering and a reference book for practising relay engineers. Provides the student with an understanding of power system protection principles and an insight into the phenomena involved. Discusses in detail the emerging technologies of adaptive relaying, hidden failures, wide area measurement, global positioning satellites and the specific application of digital devices. Includes relay designs such as electromechanical, solid-state and digital relays to illustrate the advantages and disadvantages of each. Re-examines traditional equipment protection practices to include new concepts such as transmission line differential protection, load encroachment on distance relay characteristics, distributed generation systems, and techniques to improve protection system response to power system events. Analyzes system performance through oscillographs and alarms schemes. Features problems to be worked through at the end of each chapter. "--
