Cyber and Electromagnetic Threats in Modern Relay Protection

Vladimir Gurevich

Israel Electric Corporation, Haifa

This book provides a detailed overview of the vulnerabilities of digital protection relays to natural and intentional destructive impacts. From lightning strikes, electromagnetic fields generated by operating equipment, and issues with control cable shielding to modern technical tools that realize intentional destructive impacts remotely, this first-of-its-kind text covers the latest cyber and electromagnetic threats to digital protection relays. It discusses passive means of protection, such as screened cabinets, filters, cables, special materials, and covers, as well as advanced solutions based on hardware methods.



KEY FEATURES

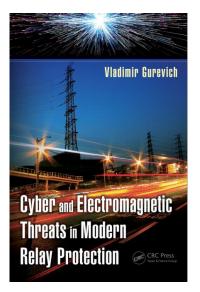
- Provides a detailed overview of the vulnerabilities of digital protection relays to natural and intentional destructive impacts
- Addresses lightning strikes, electromagnetic fields generated by operating equipment, and issues with control cable shielding
- Examines modern technical tools that realize intentional destructive impacts remotely
- Describes passive and active methods for protection of digital protective relays from intentional impacts
- Emphasizes the importance of relay protection to the infrastructure of a country

SELECTED CONTENTS

Technological Advance in Relay Protection: Dangerous Tendencies. Natural Electromagnetic Effects on Digital Protective Relays. Intentional Destructive Electromagnetic Impacts. Vulnerability of Modern Relay Protection to Cyber Attacks. Reducing the Vulnerability of Digital Protective Relays to Intentional Remote Destructive Impacts. Unification: An Important Way for Quick Restoration of Relay Protection after Intentional Destructive Impacts.

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