Contents

Chapter 1 Fundamentals

Chapter 2 Fault Protection

Section 2.1 Stator Phase Fault Protection

Section 2.2 Stator Ground Fault Protection

Section 2.3 Field Fault Protection

Section 2.4 System Backup Protection

Section 2.5 Generator Breaker Failure

Chapter 3 Abnormal Operating Condition Protection

Section 3.1 Abnormal Frequency Protection

Section 3.2 Overexcitation and Overvoltage Protection

Section 3.3 Underexcitation/Loss-of-Excitation Protection

Section 3.4 Current Unbalance (Negative-Sequence) Protection

Section 3.5 Loss of Prime Mover (Antimotoring) Protection

Section 3.6 Out-of-Step Protection

Section 3.7 Voltage Transformer Signal Loss

Chapter 4 Offline and Special Operating Mode Protection

Section 4.1 Inadvertent Energization Protection

Section 4.2 Other Protective Considerations

Chapter 5 System Design

Section 5.1 Tripping Modes

Section 5.2 Multifunction Generator Protection Systems