



# Principles of Electrical Safety

Peter E. Sutherland

2018

416 pp

Paperback

ISBN: 9788126574261

Price: 1,395.00

## About the Book

Principles of Electrical Safety discusses current issues in electrical safety, which are accompanied by series' of practical applications that can be used by practicing professionals, graduate students, and researchers. .

- Provides extensive introductions to important topics in electrical safety
- Comprehensive overview of inductance, resistance, and capacitance as applied to the human body
- Serves as a preparatory guide for today's practicing engineers

## Table of Contents

CHAPTER 1 MATHEMATICS USED IN ELECTROMAGNETISM

CHAPTER 2 ELECTRICAL SAFETY ASPECTS OF THE RESISTANCE PROPERTY OF MATERIALS

CHAPTER 3 CAPACITANCE PHENOMENA

CHAPTER 4 INDUCTANCE PHENOMENA

CHAPTER 5 CIRCUIT MODEL OF THE HUMAN BODY

CHAPTER 6 EFFECT OF CURRENT ON THE HUMAN BODY

CHAPTER 7 FUNDAMENTALS OF GROUND GRID DESIGN

CHAPTER 8 SAFETY ASPECTS OF GROUND GRID OPERATION AND MAINTENANCE

CHAPTER 9 GROUNDING OF DISTRIBUTION SYSTEMS

CHAPTER 10 ARC FLASH HAZARD ANALYSIS

CHAPTER 11 EFFECT OF HIGH FAULT CURRENTS ON PROTECTION AND METERING

CHAPTER 12 EFFECTS OF HIGH FAULT CURRENTS ON CIRCUIT BREAKERS

CHAPTER 13 MECHANICAL FORCES AND THERMAL EFFECTS IN SUBSTATION EQUIPMENT DUE TO HIGH FAULT CURRENTS

CHAPTER 14 EFFECT OF HIGH FAULT CURRENTS ON TRANSMISSION LINES

CHAPTER 15 LIGHTNING AND SURGE PROTECTION

## About the Author

**Peter E. Sutherland** :- serves as lead consultant at GE Energy Services, in Schenectady, New York. He has a PhD in Electric Power Engineering from Rensselaer Polytechnic Institute. He is a well-respected industry expert who has taught several courses on the topic. He is a fellow of IEEE.