Electrical Systems Design, 2/e
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About the Book

This second edition of the well-accepted book continues in its tradition of giving a comprehensive treatment of electrical system design. It covers on one hand the guiding principles of electrical system design, lighting design, designing for household electricity installation, industrial electrical system installation, exterior lighting, cable sizing, earthing and so on, on the other hand it also discusses the challenges that an electrical system designer faces to improve power quality, power factor, and energy efficiency. Keeping in view the current advances and environmental consciousness, the book also covers Solar PV installation and emergency/standby generation installation. The book also carries an introductory chapter on the relevant laws and compliance codes that an electrical system designer should be aware of, namely, Electricity Act of 2003 and National Electrical Code (NEC) 2011.

Only a basic knowledge of electrical engineering is required to understand the concepts. Even though the current practice is to use software tools for every design process, this book provides the background information to help the users to understand how to use electricity efficiently, safely and economically. Although safety is the primary objective of a good electrical system design, the information given in this book is not intended to be a substitute for the national or manufacturer's safety guidelines.

With its coverage and approach, the book will be useful to the engineering students as well as practicing engineers.

Salient Features

▸ Provides design assistance to electrical systems commonly found in residential, recreational, and industrial premises, and also exterior lighting.
▸ Includes the design aspects for improving power factor and reducing impact of harmonics.
▸ Covers the regulatory and compliance framework, and takes into account the Electricity Act 2003 and National Electrical code-2011.
▸ Has a chapter on energy economics in system design comprising financial and tax aspects.
▸ Separate chapters on solar PV installation and emergency/standby generation installation.
▸ Abundant use of diagrams, bulleted tips and solved problems to enhance learning.
▸ Carries end-of-chapter Exercises for practice.

Table of Contents

1. Role of Statutes in Electrical Systems Design
2. Design Aspects of Electrical Systems
3. Principles of Lighting Design
4. Electrical Installations in Domestic Buildings
5. Industrial Installations
6. Cable Sizing and Voltage Drop Calculations
7. Exterior Lighting
8. Power Factor Improvement
9. Power Quality Issues and Resonance Problems in System Design
10. Energy Economics in System Design
11. Power System Earthing
12. Solar PV Systems For Household Applications
13. Emergency and Standby Generation Appendix Bibliography.

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