River Publishers

Grounding Electrical Distribution Systems, Second Edition

Author: Gregory P.Bierals, President, Electrical Design Institute, LLC, USA

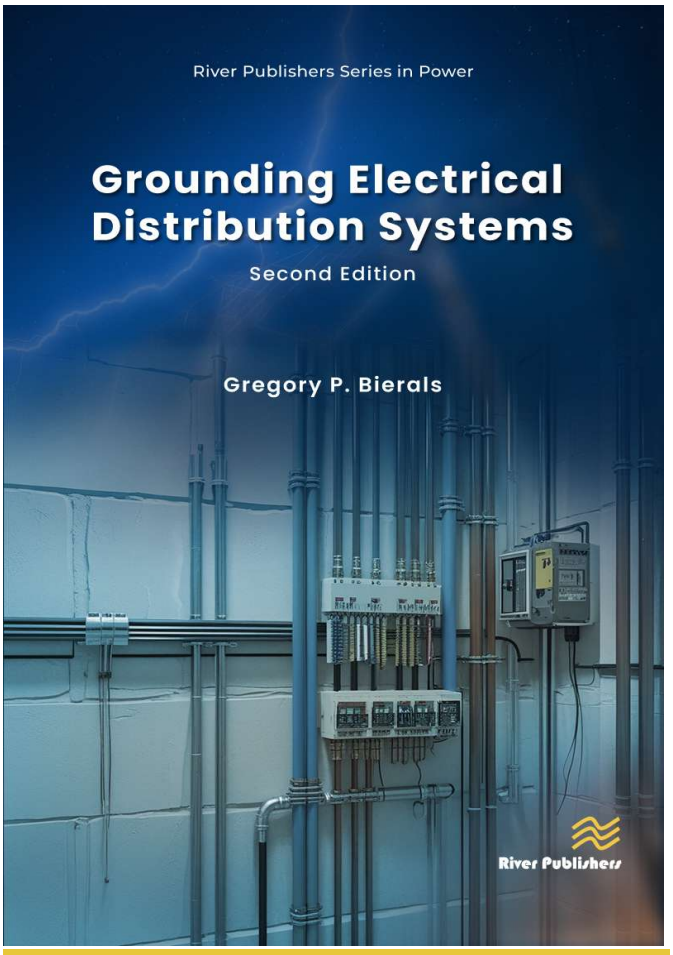
Grounding and bonding are among the most critical—yet widely misunderstood—concepts in the electrical industry. Misinterpretations not only lead to confusion but can also compromise safety and system reliability. This book cuts through the complexity to provide clear, practical guidance on proper methods, grounded in the intent of the National Electrical Code (NEC).

Beginning with definitions from Article 100 of the NEC, the text explains which AC systems are required—or not permitted—to be grounded, and explores the unique advantages of impedance grounding. Each concept is reinforced with references to the NEC, as well as other essential standards including NFPA 780, NFPA 70E, and NFPA 70B.

Drawing on decades of professional experience, the author demystifies technical details such as conductor sizing, grounding electrodes, and lightning protection requirements. Real-world examples illuminate best practices, while emphasizing the dual priorities of safeguarding people and property and ensuring reliable equipment operation.

To strengthen comprehension, the book concludes with an 80-question exam and answer key—an invaluable tool for both learners and seasoned professionals seeking to test and refine their understanding.

Whether you are an apprentice, engineer, inspector, or contractor, this book provides the clarity and confidence you need to design and install electrical systems that are both safe and dependable.
TABLE OF CONTENTS



River Publishers Series in Power

ISBN: 9788743809630
e-ISBN: 9788743809623
Available From: May 2026
Price:

KEYWORDS:
Bond, bonding; bonding connections; bonding jumper; equipment; bonding jumper, main; bonding jumper, supply-side; bonding jumper, system; exothermic weld; fault current; available fault current; fusing current; overcurrent devices; NFPA 780; main conductor; down conductor; permanently installed generators; portable generators; voltage-drop; dc system grounding; dc system bonding; substation grounding and bonding; ground-resistance testing; information technology equipment; signal-reference grid; equipotential bonding; ground; ground fault; ground-fault circuit interrupter; ground-fault current path; ground-fault current path (effective); ground-fault detector â€“ interrupter; ground-fault protection(GFP); grounded; grounding electrode (system); grounding electrode conductor; grounded, functionally grounded; grounded, solidly grounded; grounded conductor: basics of lightning protection; calculating insulatior s; point-to-point fault current calcula fusing currents of conductors

www.riverpublishers.com
marketing@riverpublishers.com