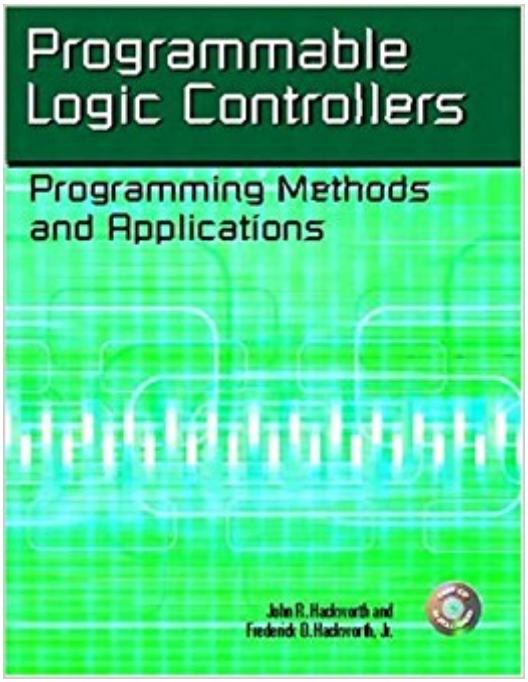
Programmable Logic Controllers: Programming Methods And Applications



Synopsis

This book is designed to help readers develop a good general working knowledge of programmable controllers with concentration on relay ladder logic techniques and how PLC is connected to external components in an operating control system. The book uses real world programming problems that readers can solve on any available programmable controller or PLC simulator. Later chapters relate to more advanced subjects in machine controls making this a welcome addition to a personal technical reference library. KEY TOPCIS: The authors examine ladder diagram fundamentals, the programmable logic controller, fundamental PLC programming, advanced programming techniques, mnemonic programming code, wiring techniques, analog I/O, discrete position sensors, encoders, transducers, and advanced sensors, closed loop and PID control, motor controls, and system integrity and safety. For those involved in Electrical, Automation, Control, and Process Engineering.

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Customer Reviews

Programmable Logic Controllers provides the student with a general working knowledge of the various PLC brands and models. Programming concepts applicable to virtually all controllers are discussed, and practical programming problems are presented throughout the text. A basic understanding of AC/DC circuits, electronic devices (including thyristors), basic logic gates, flip-flops, Boolean algebra, and college algebra and trigonometry is a prerequisite. The PLC simulation CD that accompanies the text provides hands-on programming experience.

Most textbooks related to programmable logic controllers (PLCs) start with the basics of ladder logic, Boolean algebra, contacts, coils, and all the other aspects of learning to program PLCs. However, once they get more deeply into the subject, these books generally narrow the field of view to one particular manufacturer's unit (usually one of the more popular brands and models) and concentrate on programming that device with its capabilities and peculiarities. This is worthwhile if the desire is simply to learn to program that particular unit. However, after finishing the PLC course, most students will likely be employed designing, programming, and maintaining systems using PLCs of another brand or model or various machines with different PLC brands and models. We believe that it is more advantageous to approach the study of PLCs using a general language that provides a thorough knowledge of programming concepts which can be adapted to all controllers. This language would be based on a collection of different manufacturer types with generally the same programming technique and capability. Although it would be impossible to teach one programming language and technique that would be applicable to each and every programmable controller on the market, students can be given a thorough insight into programming methods with this general approach that will allow them to easily adapt to any PLC situation encountered. The goal of this text is to help the reader develop a good general working knowledge of programmable controllers while concentrating on relay ladder logic techniques and how the PLC is connected to external components in an operating control system. The text presents real-world programming problems that can be solved on any available programmable controller or PLC simulator. Later chapters relate to more advanced subjects that are more suitable for an advanced course in machine controls. Readers should have a thorough understanding of fundamental ac and do circuits, electronic devices (including thyristors) and a knowledge of basic logic gates, flip flops, Boolean algebra, and college algebra and trigonometry. Although a knowledge of calculus will enhance the understanding of closedloop controls, it is not required. We also hope that this text will serve as a technical reference for students and professionals.

This book provides basic introduction to Programmable Logic Controllers (PLC) programming and applications. Each chapter provides another piece to using PLCs and is very good if your wanting to learn simple PLCs and introduces more complex operations. If you follow it all the way through it is the same as completing a college course for which this book was written.

Exceeded the condition expressed.

This book is very helpful in the study of plc.It is a wonderful reference.

Same as Power Generation Technologies (Purchased on 10/13/2006) ,dont buy this

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