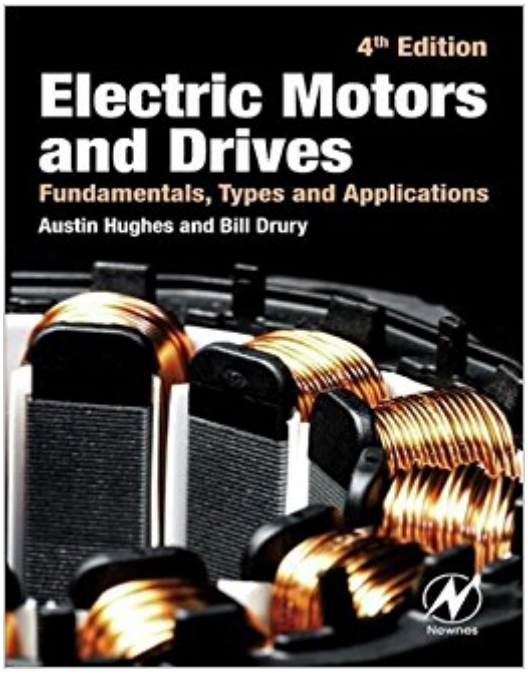
Electric Motors And Drives: Fundamentals, Types And Applications



Synopsis

Electric Motors and Drives is intended for non-specialist users of electric motors and drives, filling the gap between maths- and theory-based academic textbooks and the more prosaic 'handbooks', which provide useful detail but little opportunity for the development of real insight and understanding. The book explores all of the widely-used modern types of motor and drive, including conventional and brushless D.C., induction motors and servo drives, providing readers with the knowledge to select the right technology for a given job.The third edition includes additional diagrams and worked examples throughout. New topics include digital interfacing and control of drives, direct torque control of induction motors and current-fed operation in DC drives. The material on brushless servomotors has also been expanded.Austin Hughes' approach, using a minimum of maths, has established Electric Motors and Drives as a leading guide for electrical engineers and mechanical engineers, and the key to a complex subject for a wider readership, including technicians, managers and students.Acquire knowledge of and understanding of the capabilities and limitations of motors and drives without struggling through unnecessary maths and theoryUpdated material on the latest and most widely-used modern motors and drives, including brushless servomotorsNew edition includes additional diagrams and worked examples throughout

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Customer Reviews

This is a very good technical book on electric machines and drives, probably one of the best I've ever read. It's truly written in a manner that's not heavily mathematical, but without losing any technical soundness or being anecdotal. Instead, the author expertly explains the consequence equations have on the practical design of electric machines and drives, the reasons for the design techniques of today's electric machines and drives, and how to analyze and make assessments for the selection of electric machines and drives. This new update includes a new chapter for field-oriented control used in VFD's. I think it's a worthwhile update to the 3rd edition, but the author sacrifices end of chapter problems for the addition of that chapter. Now, this book has no problems that one can practice, a very unfortunate thing! I don't know why he did it, if but he felt that the publishing costs would be too high with having to print too many extra pages or if he didn't want to develop new problems for the new VFD chapter. I would encourage him at least to bring back the problems for the other chapters in a reprint of this edition! However, the overall book is still excellent and the additional chapter is definitely a must for anyone wanting to understand fully how VFD's work. Overall, I highly recommend this book for an engineer, technician, or student.

I'm a mechanical engineer without a lot of knowledge of electric motor design, although I have used them on various projects.That said, this book, with the aid of clear diagrams and text, is doing an excellent job of showing me the basics of electric motors from the root of the theory. Although I haven't finished this book yet, I have thumbed through the remainder and the content does not drop off.One of the highlights was a basic explanation of a thyristor, which I know now to be a relatively simple circuit element, but wasn't explained well enough in my past to realize what it did and why it was used. This was covered in the chapter that introduces basic control circuits.Readers will need to have some basis circuit and physical understanding to enable a less challenging read. I wish I had discovered this book earlier as it would have made certain tasks a lot simpler in my professional past. I hadn't found another book that so clearly explained electric motors.

A classic book for understanding motors and drive circuitry. An easy read and extremely well written. Gets the points across without getting too bogged down in the equations. The math presented is necessary to get the points across to the reader (its just basic algebra). This is a must

read for motor and drive related design activities and for application. Well done.

As an electric vehicle enthusiast I turned to this book to learn about motors in an intuitive way that also includes some maths and physics to back up the intuition.This book was exactly what i was looking for! Highly recommended because it talks about motors from a historical, cost, electromagnetic and mathematical perspective, the book itself is extremely well engineered.

This is a lovely introductory book for the basic theory and applications of electrical motors. I'd say it's targeted at engineers and others with an undergraduate physics education. But very little theoretical background is required.

This book is useful for a refresher on electric motors and drives. I use it to help with troubleshooting in the plant.

I had the great pleasure to have been one of Dr. Hughes' students many moons ago. His latest book is a joy to read, and clarifies many complex topics in motor theory, whilst not being too mathematical.Highly recommended. A classic text book on motor theory

Easy to read and follow. Well organized. Great book.

Types And You (Revised & Expanded) Eat Right for Your Type Live Right for Your Type (4 blood types, 4 diets 4 blood types, 4 programs) Electric Motor Drives: Modeling, Analysis, and Control Electric Machines and Drives Advanced Electric Drives: Analysis, Control, and Modeling Using MATLAB / Simulink Experiments in Electronics Fundamentals and Electric Circuits Fundamentals