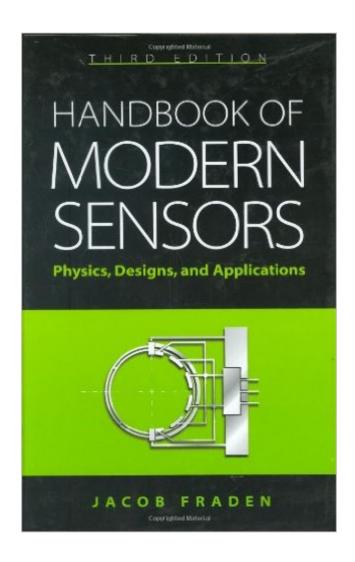# Handbook Of Modern Sensors: Physics, Designs, And Applications

Synopsis

The Handbook's coverage of sensors is extensive, ranging from simple photodiodes to complex devices containing components in combination. It offers hard-to-find reference data on the properties of numerous materials and sensing elements and emphasizes devices that are less well-known, whose technology is still being refined, and whose use permits the measurement of variables that were previously inaccessible.

Book Information

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Customer Reviews

I have my doubts about whether Fraden had a copy-editor review this book before printing. It's full of egregious typos and downright bizarre terminology (OPAM = op amp).I don't mean to be to harsh, I think English isn't Fraden's first language and he must come from a non-EE background. This book contains useful, but poorly-presented information. You're probably better off figuring out what you want to sense and reading some appnotes instead.

I think this book is great. It has a good portion dedicated to introduction to instrumentation and a lot of what I thought was fairly obscure knowledge about different sensors. It wasn't as in-depth as I would have liked when it came to how individual sensors might be designed, but that would make it into a pretty heavy book in retrospect.

Jacob Fraden is a Russian-American inventor and sensor specialist. He invented the popular ear thermometers and has excellent insights, decades of experience and an incredible knowledge. In this book, he attempts to describe all modern sensors with their peculiarities, strengths and weaknesses. Given the subject, this is an almost impossible undertaking but the author handles it quite well.The author is very clear in his discussions of physical parameters such as heat, light, pressure and movement which define the chapters of the book. According to these physical parameters, the technical means to measure them can be discussed. This means the general structure of the book will not be outdated for some time, whereas market comparisons of actual products can never be perfectly up-to-date. Note that this book is about measurement of physical parameters by hardware. It is not a book about software or algorithms, except for the second chapter that discusses measurement methods.As a non-native English speaker, Fraden writes simple and logical sentences that I as a foreign reader appreciate very much. In addition, Fraden uses the metric system and not descriptions like "ounce per square foot" which are useless for me in Europe. I have read several books about sensor technologies, but none of these has a comparable wide scope. The book is useful both as a reference and for reading from the beginning to the end, if you really want to know.This is IMHO the best book on this subject if you are a designer and you want to get a thorough knowledge of available sensors and their working principles.

This book is a good reference book to many different sensors that I was looking for. As an engineer looking to use these types of sensors, it gave me a nice overview to quickly move into the design and application thought process. Thanks

I recommend for anyone that is using sensors or would like to understand a little more than basics of sensoring.

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