

electrical engineering library for mathcad®

Add live, interactive electrical engineering resources to Mathcad for immediate reference at any time

PRODUCT OVERVIEW

The Electrical Engineering Library delivers more than 130 sections of key areas in electrical engineering, which take complete advantage of Mathcad's calculation and browsing capabilities.

The Electrical Engineering Library provides hundreds of standard calculation procedures, formulae and reference tables used by electrical engineers. These are delivered electronically for use directly within Mathcad. Explanatory text and examples give you detailed background and guidance when you want it. Each title comes with search, a hyperlinked table of contents and hyperlinked indexing. Best of all, all calculations are live, so you can put in your own numbers and adapt them for use in your own work.

THE ELECTRICAL ENGINEERING LIBRARY FOR MATHCAD INCLUDES:

Electrical & Electronic Engineering from Hicks - Adapted from the Standard Handbook of Engineering Calculations (edited by Tyler G. Hicks), this title delivers electrical and

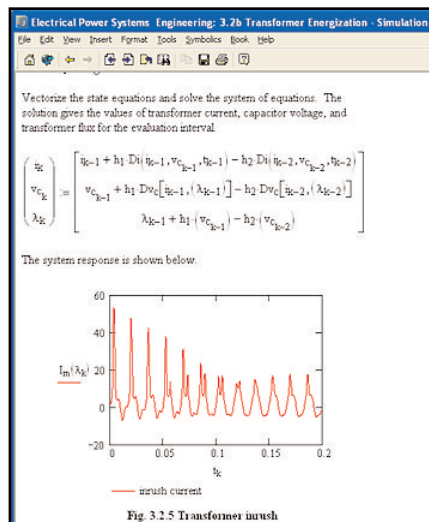


Figure 1. The Electrical Engineering Library offers information on fundamental concepts for modeling electrical power distribution systems.

electronics engineering formulae and procedures, supported with explanatory text, tables and figures.

Sample Topics - Direct-Current Circuit Analysis; Power System Short-Circuit Current; Transformer Characteristics and Performance; Electrical Measurement Analysis of Permanent-Magnet Motors; Solid-State Device Evaluation; Reliability Analysis of Electronic Circuits; Equipment to Network Synthesis by Using an Operational Amplifier; Microwave Transmitter Analysis; Analysis of Images Produced by Concave or Plane Mirrors; Compound Thin-Lens Analysis

Electrical Power Systems Engineering - This title explores fundamental concepts for modeling electrical power distribution systems, providing analysis techniques necessary to design a functioning system, and locating possible difficulties in a proposed design. Immediately apply hundreds of calculation procedures to find solutions in the design and implementation of power distribution and power conversion systems.

Sample Topics - Voltage Drop Calculations; Load Flow Calculations; Least-Cost Power Transformer Sizing; Power System Harmonic Analysis; Power Line Parameters; Impedance of Lines; Characteristics of Aluminum Cable; Power System Faults; Mid-Line Fault Calculations; Out-of-Step Protection; Induction Motor Start-up Protection; DC Motor Protection; System Transients; Transformer Energization; Typical Transformer Impedances; Application of Surge Arresters

Topics in Mathcad: Electrical Engineering - Useful Mathcad problem-solving techniques in the context of common design calculations from several different branches of electrical engineering, such as circuit analysis or digital filter design. These applications use Mathcad's complex arithmetic, matrix operators, equation solving power, and plotting capabilities to provide a reference source of Mathcad methods and formulas.

WHAT ARE MATHCAD E-BOOKS?

Mathcad E-books give you interactive “live” access to what would otherwise be hard copy reference books. Because the books are electronic, you get all the features you would expect from an electronic reference tool, such as hyperlinks, browsing and full word search. In addition, these books deliver unique benefits because you read them in Mathcad, with full access to all of Mathcad’s calculation and graphing features. As you change parameters and definitions, Mathcad recalculates. Modify the algorithms to build your own models, explore the content by working directly in the book or drag content into your own Mathcad worksheets.

SPECIFICATIONS

System Requirements

- Mathcad 12 or higher
- Windows® XP, 2000 or higher
- 20 MB of free hard disk space (if installing to hard drive)
- CD-ROM (The library may be run from the CD.)

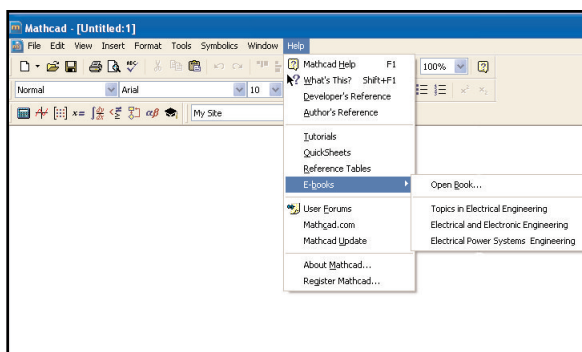


Figure 2. Mathcad E-books provide “live” access to hard copy reference books, and offer features such as hyperlinks, browsing and full word search.



With 20 years of experience, Mathsoft Engineering & Education, Inc. provides comprehensive solutions that streamline the engineering process in a way that can be documented, verified and reused, enabling engineering and product innovation.

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