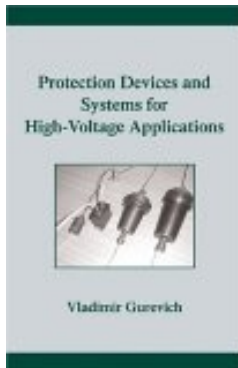


## Protection Devices and Systems for High-Voltage Applications

**Series:** Power Engineering **Volume:** 20



**Author:** Dr. Vladimir Gurevich, Israel Electric Corp.

**Publisher:** CRC PRESS (Taylor & Francis Group)

**List Price:** \$159.95

**Cat. #:** DK2791

**ISBN 13:** 978-0824740566

**ISBN 10:** 0824740564

**Publication Date:** 2/4/2003

**Number of Pages:** 304

**Availability:** In Stock

The book presents description of unique novel technology for protection of high voltage equipment (power supplies, lasers, radar, RF generators, etc.) against internal breakdowns and overloads and also for upgrading of automation systems in power network 10 - 36 kV.

The book contains technical details essential to manufacturers of high-voltage equipment for commercial production of novel protection devices and to power companies for self-supporting building the novel devices in their laboratories.

Designed as the review of achievements in the field of protection of the high-voltage installations, **Protection Devices and systems for High Voltage Applications**

- \* discussed general problems related to the generation of current overload protection systems;
- \* describes different designs of new type high voltage interfaces, which have not been published before;
- \* describes the high and low voltage semiconductor and reed switch based hybrid switching devices;
- \* includes descriptions of different automation devices developed by author, designated for use in power network 10 - 36 kilovolt;
- \* describes automatic overload protection systems, based on new elements, for powerful radar, lasers, RF-generators, etc.;
- \* presents different technological high voltage devices;
- \* contains vast ready reference information, which is intended to facilitate designers reproducing the described devices making the monograph unique in some way.
- \* and more!

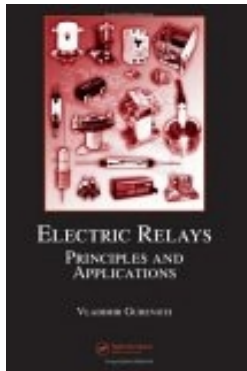
The book suited to electrical, radio, power, electro-physical, industrial engineers; research and development managers; and upper-level undergraduate, graduate, and continuing-education students in these disciplines.



[www.crcpress.com](http://www.crcpress.com)

## Electric Relays: Principles and Applications

*Series: Electrical and Computer Engineering* **Volume: 130**



**Author:** Dr. Vladimir Gurevich, Israel Electric Corp.

**Publisher:** CRC PRESS (Taylor & Francis Group)

**List Price:** \$159.95

**Cat. #:** DK884X

**ISBN 13:** 978-0849341885

**ISBN 10:** 0849341884

**Publication Date:** 12/15/2005

**Number of Pages:** 704

**Availability:** In Stock

This book is a unique edition in which extensive data on electric relays of all kinds is presented together for the first time: electromechanical, solid-state, reed, electronic, thermal, high-voltage, microprocessor, etc., and also many kinds of protective relays for power systems.

Actually, it is an encyclopedia of electric relays, including a history of the creation of the relay, detailed descriptions of designs, principles of action and applications of all types of relays, trends of development and the latest developments in this field, not well known even to the engineering public.

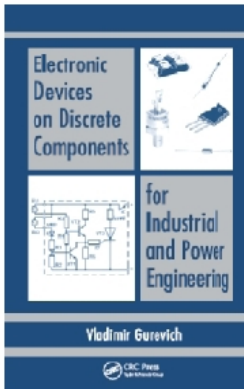
The book is intended not only for specialists in the field of electric relays, but also for all engineers and technicians who use or maintain relays, and for students and teachers in schools, colleges and universities, and can also be of use to marketing personnel as an excellent present or souvenir for their customers.



[www.crcpress.com](http://www.crcpress.com)

# Electronic Devices on Discrete Components for Industrial and Power Engineering

**Series:** *Electrical and Computer Engineering*



**Author:** Dr. Vladimir Gurevich, Israel Electric Corp.

**Publisher:** CRC PRESS (Taylor & Francis Group)

**List Price:** \$139.95

**Cat. #:** 69829

**ISBN 13:** 978-1420069822

**ISBN 10:** 1420069829

**Publication Date:** 1/22/2008

**Number of Pages:** 424

**Availability:** In Stock

Is it possible today to design and make automatic devices for industrial and power engineering uses without microcircuits and microprocessors, without complex power supplies for them? "Yes!" asserts the author of the book, Dr. Vladimir Gurevich, and as proof of this assertion provides descriptions of tens of original automatic devices based on modern discrete components: high-voltage transistors and thyristors, miniature vacuum and high power gas filed reed switches, and combinations of them. Such devices turn out to be much more simple and, in many cases, more reliable than the traditional devices made today. To make the material more accessible to a broad spectrum of readers, the author begins the book with an explanation of the working principles of semi-conductor devices of various types and, further, through the description of elementary functional modules, passes on to complete automatic devices. The book finishes with extensive reference material on modern high-voltage bipolar, FET and IGBT transistors, thyristors and triacs, reed switches, especially selected by the author.

The book can be used as:

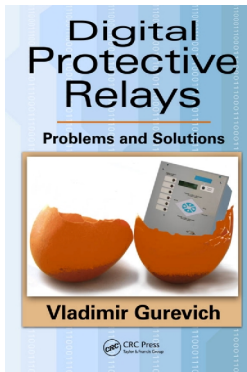
- \* Textbook for studying principles and construction of automatic devices on discrete components;
- \* Source of ideas and solutions for the development or modernization of electronic switches, generators, timers, logic elements, regulators and voltage stabilizers, relay protection against overloads or emergency modes;
- \* A complete set of descriptions of the original devices ready-for-use;
- \* Handbook of modern discrete elements of automatics



[www.crcpress.com](http://www.crcpress.com)

## Digital Protective Relays: Problems and Solutions

*Series: Electrical and Computer Engineering*



**Author:** Dr. Vladimir Gurevich, Israel Electric Corp.

**Publisher:** CRC PRESS (Taylor & Francis Group)

**List Price:** \$129.95

**Cat. #:** K11721

**ISBN 13:** 978-1439837856

**ISBN 10:** 1439837856

**Publication Date:** 11/05/2010

**Number of Pages:** 390

**Availability:** In Stock

Digital (microprocessor-based) protection relays (DPR) are dominating the global market today, essentially pushing all other types of relays out of the picture. These devices play a vital role in power operations for fields ranging from manufacturing, transportation, and communication to banking and healthcare.

**Digital Protective Relays: Problems and Solutions** offers a unique focus on the problems and disadvantages associated with their use, a crucial aspect that goes largely unexamined. While there is already a massive amount of literature documenting the benefits of using digital relays, devices as sophisticated as DPR obviously have faults and drawbacks that need to be understood. This book covers these, delving into the less familiar inner workings of DPR to fill a critical literary void and help decision makers and specialists in the field of protection relays find their way out of the informational vacuum. The book provides vital information to assist them in evaluating relay producers' claims and then choose the right product.

Tearing away the informational "curtain" that exists today, this book:

- Describes construction of functional modules of existing relays
- Analyzes drawbacks and problems of digital relays
- Details specific technical problems and their solutions
- Assesses dangers of intentional destructive electromagnetic intrusions
- Discusses alternative (non-microprocessor-based) protection relays, and problems related to international standards

Focusing on practical solutions, this book explains how to correctly choose digital relays and ensure their proper use while avoiding the many problems they can present. The author avoids mathematics and theory in favor of more practical, tangible information not easily found elsewhere. Setting itself apart from other books on the subject, this volume shines a light into the long hidden "black box" of information on DPRs, giving users a valuable tool to help them anticipate possible problems, something sorely lacking in the literature.



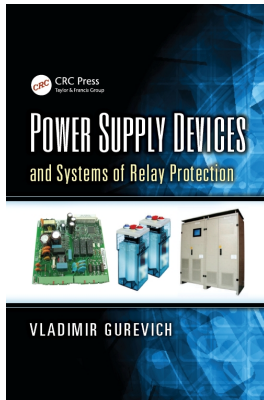
Taylor & Francis  
CRC Press

Essential Information for the Scientific,  
Technical, and Medical Communities

[www.crcpress.com](http://www.crcpress.com)

# Power Supply Devices and Systems of Relay Protection

**Series:** *Electrical and Computer Engineering*



**Author:** Dr. Vladimir Gurevich, Israel Electric Corp.

**Publisher:** CRC PRESS (Taylor & Francis Group)

**List Price:** £82.00

**Cat. #:** K19006

**ISBN 13:** 978-1466583795

**ISBN 10:** 1466583797

**Publication Date:** 06/17/2013

**Number of Pages:** 260

**Availability:** In Stock

**Power Supply Devices and Systems of Relay Protection** brings relay protection and electrical power engineers a single, concentrated source of information on auxiliary power supply systems and devices. The book also tackles specific problems and solutions of relay protection power supply systems and devices, which are often not dealt with in the literature. The author, an experienced engineer with more than 100 patents, draws on his own experience to offer practical, tested advice to readers.

## ***A Guide to Relay Protection Power Supply for Engineers and Technicians***

The first chapter reviews the electronics and primary elements of the system, including transistors, thyristors, optocouplers, logic elements, and relays, and their principles of operation. This background gives staff who service relay protection power supply systems the necessary electronics knowledge to help them work more effectively with the equipment. The next chapters of the book then cover built-in:

- digital protection relay power supplies,
- battery chargers,
- accumulator batteries,
- uninterruptible power supply,
- characteristic features of auxiliary DC systems at substations and power plants.
- the final chapters discuss questions and problems that engineers and technicians may face. These include insulation problems, issues in auxiliary DC power supply such as voltage dips, and electromagnetic disturbances such as blackouts, spikes, and surges. The author also explains how to address them.

Suitable for beginners and experienced engineers alike, the book is written for those who work with relay protection systems and with AC and DC auxiliary power systems in power plants and substations. It combines theory and practical recommendations to provide a valuable reference on power supply devices and systems.



[www.crcpress.com](http://www.crcpress.com)