1. Record Nr. UNINA9910449812603321

Autore	Rosenberg Paul
Titolo	Audel practical electricity [[electronic resource] /] / Paul Rosenberg, Robert Middleton
Pubbl/distr/stampa	Indianapolis, IN, : Wiley Pub., c2004
ISBN	1-280-35041-5 9786610350414 0-7645-7407-8
Edizione	[5th ed.]
Descrizione fisica	1 online resource (480 p.)
Collana	Audel Technical Trades Series ; ; v.19
Altri autori (Persone)	MiddletonRobert
Disciplina	621.319/24
Soggetti	Electrical engineering Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	At head of title: Audel. "All new 5th ed." Rev. ed. of: Practical electricity / by Robert G. Middleton. c1988. Includes index.
Nota di contenuto	Introduction; Chapter 1:Magnetism and Electricity; Magnetic Poles; Experiments with Magnets; Formation of Permanent Magnets; Aiding and Opposing Magnetic Fields; Electromagnetism; Volts, Amperes, and Ohms; Electric and Magnetic Circuits; Understanding Electric Circuits; Kirchhoff's Voltage Law; Electrical Power; Quick-Check Instruments for Troubleshooting; Summary; Test Questions; Chapter 2: Conductors and Insulators; Classes of Conductors; Conducting Wire; Circular Mil-Foot; American Wire Gauge; Stranded Wires; Aluminum Wire; Line Drop; Temperature Coefficient of Resistance Earth (Ground) Conduction Conduction of Electricity by Air; Conduction of Electricity by Liquids; Insulators for Support of Wires; Classes of Insulation; Insulation Resistance; Plastic-Insulated Sheathed Cables; Summary; Test Questions; Chapter 3: Electric Circuits; Picture Diagrams and Schematic Diagrams; Voltage Polarities in Series Circuits; Voltage Measurements with Respect to Ground; Resistance of a Battery; Efficiency and Load Power; Circuit Voltages in Opposition; Principles of Parallel Circuits; Shortcuts for Parallel Circuits; Conductance Values

Kirchhoff's Current Law for Parallel Circuits Practical Problems in Parallel Circuits; Line Drop in Parallel Circuits; Parallel Connection of Cells; Summary; Test Questions; Chapter 4: Series-Parallel Circuits; Current Flow in a Series-Parallel Circuit; Kirchhoff's Current Law; Series-Parallel Connection of Cells; Line Drop in Series-Parallel Circuits; Use of a Wattmeter; Circuit Reduction; Power in a Series-Parallel Circuit; Horsepower; Three-Wire Distribution Circuit; Summary; Test Questions; Chapter 5: Electromagnetic Induction; Principle of Electromagnetic Induction
Laws of Electromagnetic Induction Self-Induction of a Coil; Transformers; Advantage of an Iron Core; Choke Coils; Reversal of Induced Secondary Voltage; Switching Surges; The Generator Principle; Summary; Test Questions; Chapter 6: Principles of Alternating Currents; Frequency; Instantaneous and Effective Voltages; Ohm's Law in AC Circuits; Power Laws in Resistive AC Circuits; Combining AC Voltages; Transformer Action in AC Circuits; Core Loss and Core Lamination; DC versus AC Resistance; Summary; Test Questions; Chapter 7: Inductive and Capacitive AC Circuits; Inductive Circuit Action
Power in an Inductive Circuit Resistance in an AC Circuit; Impedance in AC Circuits; Power in an Impedance; Capacitive Reactance; Capacitive Reactance and Resistance in Series; Inductance, Capacitance, and Resistance in Series; Inductance and Resistance in Parallel; Capacitance and Resistance in Parallel; Inductance, Capacitance, and Resistance in Parallel; Summary; Test Questions; Chapter 8: Electric Lighting; Sources of Light; Measurement of Amount of Illumination; Tungsten Filaments; Starting Surge of Current; Aging Characteristics; Lamp Bases and Bulbs; Vapor-Discharge Lamps
Metal Halide Lamps

Sommario/riassunto

Everything begins with the basics To succeed in any of today's electrical specialties, you must first understand the fundamentals. This concise guidebook, fully updated and revised to comply with the National Electrical Code,? provides that solid foundation in electrical theory, circuitry, and common applications. Whether you're pursuing an electrical career, need a refresher course, or simply want to understand the wiring in your home, you'll learn the basics from this book.* Examine the fundamentals of magnetism and electric-ity, conductors, insulators, and circuits* Study com