

1. Record Nr.	UNINA9910825484603321
Autore	Brittian L. W
Titolo	Audel electrical trades pocket manual / / L.W. Brittian
Pubbl/distr/stampa	Hoboken, New Jersey, : John Wiley & Sons, Inc., [2012]
ISBN	1-280-59241-9 9786613622242 1-118-27775-9 1-118-27780-5 1-118-27778-3
Edizione	[1st ed.]
Descrizione fisica	1 online resource (386 p.)
Classificazione	TEC005030
Disciplina	621.3
Soggetti	Electric industries - Vocational guidance Electrical engineering - Vocational guidance
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Audel Electrical Trades Pocket Manual; Contents; Introduction; Disclaimer; Chapter 1 THE LAWS THAT CONTROL AND EXPLAIN ELECTRICITY; POWER FACTOR; THREE-PHASE POWER; CIRCUIT PROTECTIVE DEVICES; Chapter 2 POWER GENERATION AND DISTRIBUTION WITHIN COMMERCIAL AND INDUSTRIAL FACILITIES; ELECTRICAL POWER GENERATORS; TOTAL LOADS SERVED; TYPES OF ONSITE POWER GENERATION; Chapter 3 POWER, CONTROL, AND LIGHTING TRANSFORMER; ELECTRICAL POWER; INSULATION MATERIAL TEMPERATURE RISE; GROUNDING; TERMINAL CONNECTION MARKINGS; THREE-PHASE, OIL-COOLED POWER TRANSFORMERS; THREE-PHASE DRY-TYPE TRANSFORMERS DRY-TYPE SINGLE-PHASE CONTROL CIRCUIT TRANSFORMERS Chapter 4 ELECTRICAL SWITCH GEAR; MOTOR CONTROL CENTER; PRIMARY FUNCTIONS OF SWITCH GEAR; LOW-VOLTAGE POWER DISTRIBUTION; BUS BAR AND CIRCUIT BREAKER ARRANGEMENTS; OPTIONAL PROTECTIVE DEVICES; METAL-CLAD SWITCH GEAR; CONTINUOUS CURRENT RATINGS; ARC-RESISTANT SWITCH GEAR; Chapter 5 ELECTRICAL CIRCUIT PROTECTIVE DEVICES; MOLDED CASE CIRCUIT BREAKERS; MINIATURE CIRCUIT BREAKERS; VACUUM CIRCUIT BREAKERS;

INSULATED CASE CIRCUIT BREAKERS; LOW-VOLTAGE POWER CIRCUIT BREAKERS; SUPPLEMENTAL PROTECTORS; MOTOR CIRCUIT PROTECTORS; OIL CIRCUIT BREAKERS
GAS INSULATED CIRCUIT BREAKERS FUSES; CIRCUIT BREAKER MAINTENANCE; COORDINATION BETWEEN PROTECTIVE DEVICES; Chapter 6 PERSONNEL PROTECTIVE DEVICES; INTRODUCTION; GROUND FAULT PROTECTION OF EQUIPMENT; HISTORY AND NOMENCLATURE OF GFCIS IN THE UNITED STATES; TROUBLESHOOTING GFCIs; TIME AND CURRENT LEVELS PROTECTED BY CIRCUIT BREAKERS; ARC FAULT CIRCUIT INTERRUPTERS; Chapter 7 THREE-PHASE MOTORS; ELECTRIC MOTOR PRINCIPLES OF OPERATION; RATED FULL LOAD SPEED; SERVICE FACTOR; RATED AMBIENT TEMPERATURE; STAT OR WINDING INSULATION CLASSES; TYPES OF TORQUE PRODUCED BY A MOTOR Chapter 8 CONTROLLING AND PROTECTING THREE-PHASE MOTORS COMPONENTS OF A MOTOR STARTER; MOTOR STARTER SIZES; METHODS OF STARTING THREE-PHASE INDUCTION MOTORS; FULL VOLTAGE, ACROSS THE LINE MOTOR STARTERS; HOW A MOTOR STARTER OPERATES; THREE-WIRE CONTROL CIRCUIT CONTROLLING A THREE-PHASE MOTOR STARTER; SIZING OF OVERLOAD HEATER ELEMENTS; Chapter 9 VARIABLE FREQUENCY DRIVES; FOUR-QUADRANT OPERATION; TORQUE; PARTS OF A DRIVE; PULSE WIDTH MODULATION; SIX-STEP METHOD OF DRIVE CONTROL; PROGRAMMING DRIVES; Chapter 10 PROGRAMMABLE LOGIC CONTROLLERS; BLACK BOX CONCEPT; PLC SIZES; PLC CONSTRUCTION TYPES OF INPUTS AND OUTPUTS TIMERS; COUNTERS; BENEFITS OF USING PLCs; I/Os AND MEMORY ADDRESSES; Chapter 11 ELECTRICAL SERVICES; METERING EQUIPMENT; GROUNDING OF ELECTRICAL SYSTEMS; BONDING VERSUS GROUNDING; FAULT CURRENT PATH, CONDUITS, AND LOCKNUTS; LOW AND HIGH IMPEDANCE GROUNDED SYSTEMS; UNGROUNDED ELECTRICAL SYSTEMS; SECOND GROUND FAULT; SEPARATION OF THE GROUNDED SYSTEM CONDUCTOR (NEUTRAL) AND THE EQUIPMENT GROUNDING CONDUCTOR; WHAT CONDUCTORS MUST BE GROUNDED; SEPARATELY DERIVED SYSTEMS; STANDARD VOLTAGES; Chapter 12 ELECTRICAL LIGHT FIXTURES; APPLICATIONS FOR LIGHT FIXTURES
DESIGN OF LIGHTING SYSTEMS

Sommario/riassunto

Answers at your fingertips This hands-on guide will help you troubleshoot and solve electrical problems in industrial and commercial settings. You'll find plain-English explanations for a wide range of electrical equipment and systems, from transformers and switch gears to alarm and wiring systems. Use this book to quickly access reliable information and improve your on-the-job skills. Get useful rules of thumb and quick tricks Discover formulas, charts, and tables essential for plant electrical work Locate technical data quickly and get up to speed on