

Basics of Electricity

OEM: Rockwell Automation • Duration: 1 Day (8 hrs) • Code: MFG-244

COURSE MODULES & TOPICS

Objectives

- Learn and understand fundamental electrical concepts and terms
- Learn and understand about sources of electricity; how its produced and distributed
- Learn and understand variations of wiring devices
- Learn and understand input devices, sensors and switches; identifying normally open and normally closed states
- Learn and understand output devices
- Learn and understand multi-meter use
- Learn and understand safety fundamentals around electricity

Student Materials

- Student Manual includes the key concepts, definitions, examples, and activities presented in this course

Course Agenda

- Atoms, Charge, Valence Electrons
- What is Electrical Current
- Voltage, Resistance/Impedance
- Ohm's & Kirchoff's laws
- Conductors, Insulators
- Semi-Conductors
- DC & AC Electricity
- AC Power Generations & Distribution
- Electrical Power Consumption Costs
- Transformers & Power Supplies
- Switches
- Terminal Strips
- Connectors
- Circuit Breakers
- Fuses
- GFCIs
- Sensors

- Switches
- Mechanical Operators
- Electronic Operators
- Lamps, Pilot Lights
- Solenoids
- Electromechanical Relays
- Electric Motors
- Disconnect Devices

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