Content Community Connection

United States
The Electricity Forum Inc.
742 Pre Emption Road
Geneva, NY 14456
Tel 289-387-1025

Canada
The Electricity Forum
1885 Clements Rd, Unit 218
Pickering, ON L1W3V4
Tel 905-686-1040
Fax 905-686-1078
Toll Free 855-824-6131

How to Read Electrical Schematics

Course details: https://electricityforum.com/electrical-training/how-to-read-electrical-schematics

COURSE DATES AND TIMES

Our 6-Hour Live Online *How to Read Electrical Schematics* course provides comprehensive training on understanding and interpreting essential documentation such as electrical drawings, blueprints and schematics used in industrial, commercial, and institutional settings. This course covers three critical types of documents: drawings, which offer general visual representations of power systems; electrical blueprints, which focus on the physical layout and installation of components in facilities; and electrical schematics, which use symbols to depict the functional operation of circuits.

Participants will learn how to navigate and interpret each type of document, from architectural electrical blueprints to complex schematics and single-line diagrams. The course will also cover troubleshooting techniques, the use of symbols, and understanding common components. Attendees will leave equipped to make revisions and markups, ensuring accuracy and efficiency in both the design and implementation phases of power systems.

DRAWINGS, BLUEPRINTS, AND SCHEMATICS

- *Electrical Drawings*: A broad term that refers to any diagram or visual representation of a system. It can include blueprints, schematics, and other types of diagrams that represent the physical layout, function, or wiring of a system.
- *Electrical Blueprints*: Focus on the physical layout of components within a building or facility, showing the locations of outlets, switches, and wiring. These are primarily used in the construction and installation phases.
- *Electrical Schematics*: Provide a functional representation of an electrical circuit, using symbols to depict components and connection points. Schematics show how a system operates but do not focus on physical layout or scale.

WHO SHOULD ATTEND

This course is ideal for:

- Apprentices
- Plant managers
- Maintenance supervisors
- Engineers
- Facility managers
- Building contractors

and anyone involved in installing, maintaining, or troubleshooting power systems in industrial, commercial, or institutional environments.

STUDENTS RECEIVE

- Certificate of Course Completion
- FREE 100-Page Digital Arc Flash Safety Handbook (Value $20)
- $50 Coupon Toward any Future Electricity Forum Event (Restrictions Apply)
- .6 Continuing Education Unit (CEU) Credits (6 Professional Development Hours)
- FREE Magazine Subscription (Value $25.00)
- Course Materials in PDF Format

COURSE OUTLINE

Course Outline: How to Read Electrical Schematics, Drawings and Blueprints

1. INTRODUCTION TO ELECTRICAL DRAWINGS, BLUEPRINTS, AND SCHEMATICS

- Overview of the different types of documentation and their purposes.
- *Electrical Drawings*: A general term covering all types of diagrams used in work.
- *Electrical Blueprints*: Focus on the physical layout and installation of systems in buildings and facilities.
- *Electrical Schematics*: Functional diagrams showing the operation and connections of circuits using symbols.

2. READING AND INTERPRETING PRINTS

- Understanding the layout and organization of different prints.
- How to identify the type of document you are working with (drawing, blueprint, or schematic).

3. ELECTRICAL SYMBOLS

- Common symbols used in drawings, blueprints, and schematics.
- Understanding NEMA, IEC, and ANSI device numbers and their significance across different document types.

4. ARCHITECTURAL BLUEPRINTS (CONSTRUCTION DRAWINGS)

- Introduction to blueprints specific to many installations.
- Understanding plan views, floor plans, elevations, sections, and pictorial views.
- Using detail drawings and schedules for installation purposes.

5. SINGLE-LINE DIAGRAMS AND POWER DISTRIBUTION SCHEMATICS

- How to interpret single-line (one-line) diagrams used for power distribution.
- Understanding block diagrams, power risers, and one line represents power distribution schematics for system operation.

6. COMMON COMPONENTS

- Identifying common components across blueprints, drawings, and schematics.
- Understanding component applications and operations.

7. TROUBLESHOOTING USING ELECTRICAL SCHEMATICS

- Using schematics to perform voltage, resistance, and continuity checks.
- Understanding manual and automatic circuits.
- Diagnosing typical problems using schematics as a guide.

8. ELEMENTARY ELECTRICAL DIAGRAMS (SCHEMATICS)

- Ladder diagrams: Depicting sequential control of systems.
- Wiring diagrams: Showing the physical connections between components.
- Three-line diagrams: Detailed representation of three-phase systems.
- Block diagrams: Simplified representations of system components and their interactions.

9. REVISING AND MARKING UP ELECTRICAL DRAWINGS, BLUEPRINTS, AND SCHEMATICS

- Making changes to field copies during the installation process.
- Maintaining archival copies for future reference.

COURSE SCHEDULE:

Start: 10 a.m. Eastern Time
Finish: 4:30 p.m. Eastern Time

Contact us Today for a FREE quotation to deliver this course at your company's location.

https://electricityforum.com/onsite-requestforquote