Craft Skills

Electrical Print Reading

Course Number

FND-030

Course Purpose

This course provides the participant with the basic understanding of electrical prints and components associated with electrical print reading; it also provides the participant with the ability to interpret simple ladder logic diagrams.

Upon completion of this course, you should be able to:

- Describe the organization of an electrical print
- Identify common electrical schematic symbols
- Interpret an electrical block diagram and a one-line diagram
- Interpret an electrical three-line diagram
- Interpret a piping and instrumentation diagram (P&ID)
- Analyze a basic logic circuit
- Interpret basic ladder logic

COURSE AGENDA

DAY 1

- Distinguishing Electrical PrintTypes and Uses
- Recognizing Print Organization and Layout
- Interpreting Print Symbology and Conventions
- Interpreting Block Diagrams
- Outlining One-Line Diagrams

DAY TWO

- Analyzing Circuits
- Reading P&ID Drawings
- Interpreting Loop Diagrams
- Recognizing Logic Symbols
- Analyzing Logic Circuits
- Diagramming Ladder Logic Symbols
- Interpreting Ladder Logic Layout
- Review
- Written Exam

WHO SHOULD ATTEND

This course is designed for electrical maintenance technicians, but is also used for cross-training of mechanical maintenance technicians.

PREREQUISITES

To successfully complete this course, the following prerequisites are required:

- None

FACILITY REQUIREMENTS

Electrical prints of facility for each student to include: One-line diagram, wiring diagram, three-line drawing, P&ID, PLC programming diagrams.

STUDENT MATERIALS

To enhance and facilitate the students' learning experiences, the following materials are provided as part of the course package:

- Student Manual, which contains the key concepts, definitions, and examples presented in the course
- Lab Guide which includes the hands-on exercises

HANDS-ON PRACTICE

Throughout this course, you will have the opportunity to practice the skills you have learned through a variety of hands-on exercises. These exercises focus on the skills introduced in each lesson.

You will also have the opportunity to combine and practice groups of key skills by completing multiple integrated practices during the course.

NEXT LEARNING LEVEL

Once you have mastered the skills covered in this course, you may want to attend specific training, such as:

- Test Equipment

COURSE LENGTH

This is a two-day course.

TO REGISTER

To register for this or any other Rockwell Automation training course, contact your local authorized Allen-Bradley® Distributor or your local Sales/Support office for a complete listing of courses, descriptions, prices, and schedules.

You can also access course information via the Web at **http://www.rockwellautomation.com/training**

To be respectful of the environment, Rockwell Automation is transitioning some of its training courses to a paperless format. Students are asked to complete downloads and bring personal devices to these classes. A full list of digital/paperless courses is currently available through your local distributor.

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Publication GMST-PP742B-EN-P - January 2020 | Supersedes Publication GMST-PP742A-EN-P - November 2017