THE AUTOMATION GHANA ACADEMY

RS LOGIX 5000 TRAINING

TRAINING COURSE OUTLINE

COURSE SUMMARY

This 3-module course begins with an introduction to RS Logix 5000, covering fundamental system components, controller communication, project organization, and tag creation. The second module introduces participants to ladder diagram programming, focusing on essential instructions, Add-on Instructions (AOIs), procedures, and effective documentation practices. The course finishes with a module on maintenance and troubleshooting strategies, addressing controller, digital and analog I/O issues, power supplies, noise problems, and system monitoring using trend charts.

By the end of this course, participants will have gained practical skills and knowledge to effectively program, maintain, and troubleshoot RS Logix 5000 systems in industrial environments.

MODULE 1

COURSE OBJECTIVES

- Understand Logix5000 Systems and Software Components.
- Connect and Communicate with a Logix5000 Controller.
- Understand Logix5000 Project Organization and Execution.
- Understand, create and monitor Tags.
- Understand the Logix5000 Programming Languages.
- Document, Search and Print Components

COURSE OUTLINE

- Identifying System Components
- Identifying Software Components
- Connecting a Computer to a Communications Network
- Communicating with a Logix 5000 Controller
- Interpreting RSLogix / Studio 5000 Project Organization and Execution.
- Tags
- Identifying Local I/O Tags
- Creating Tags and Monitoring Data
- Introduction to Ladder Logic

- Drafting Basic Ladder Logic
- Selecting Basic Ladder Logic Instructions
- Editing Ladder Logic Online
- Introduction to Structured Text, Function Block Diagrams and Sequential Function Charts.
- Documenting and Printing Components
- Searching for Project Components
- Case Study

MODULE 2

COURSE OBJECTIVES

- Start a Ladder Diagram
- Test a Ladder Diagram
- Program Timer Instructions
- Program Counter Instructions
- Program Compare instructions
- Program Move instructions
- Program Math instructions
- Handle Expressions
- Program Add-on Instructions
- Program a Procedure
- Separate the Procedure from Equipment Control
- Document and Search Ladder Logic

COURSE OUTLINE

- Introduction
- Starting a Ladder Diagram
- Testing a Ladder Diagram
- Programming Timer Instructions
- Program Counter Instructions
- Program Compare instructions
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- Program the Move instruction
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MODULE 3

COURSE OBJECTIVES

- Apply Preventative Maintenance and
- Troubleshooting Strategies
- Troubleshoot Controller Problems
- Monitor GSV/SSV Instructions
- Force I/O and Toggling Bits
- Troubleshoot Digital I/O Problems
- Troubleshoot Analog I/O Problems
- Troubleshoot Remote I/O
- Troubleshoot Power Supplies
- Troubleshoot Noise Problems
- Troubleshoot and Monitoring a
- System Using a Trend Chart
- Manage Project Files
- Troubleshoot Basic Projects
- Integrated Practice
- Identify Industrial Networks

COURSE OUTLINE

- Applying Preventative Maintenance and Troubleshooting Strategies
- Troubleshooting Controller Problems
- Monitoring GSV/SSV Instructions
- Troubleshooting Digital I/O Problems
- Troubleshooting Analog I/O Problems
- Troubleshooting Remote I/O
- Troubleshooting Power Supplies
- Forcing I/O and Toggling Bits
- Troubleshooting Noise Problems
- Troubleshooting and Monitoring a System Using a Trend Chart
- Managing Project Files
- Integrated Practice-Troubleshooting Basic Projects
- Identifying Industrial Networks Hands- on
- RSLinx communications
- Configure IP addresses for PLC
- On-line communications of networks