Intertech
Applying Practical Skills in a Technological World

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Allen-Bradley PLC-5
Intermediate II Programming & Troubleshooting
Module: 203

Ladder Logic programs often contain a combination of contracts, coils timers, and counters with additional instructions manipulating data in the program at the word level. The Intermediate II course further explores the file manipulation, block transfer, and message instructions. Programs using these instructions include data gathering, calculations, date and time stamping, shift reports, data concentration, totaling, averaging, etc.

The Intermediate II course continues the development of the skills necessary to trace the flow of word information into, through, and out of logic programs using the word and file manipulation instructions. This additional programming knowledge provides the ability to comprehend and troubleshoot detailed control circuits. In addition, the system status and diagnostic data is reviewed and used to help diagnose and solve in-plant control problems quickly. *This course is conducted using Rockwell RSLogix-5, 6200, or Advanced Interface (AI) software, depending on student preference.*

Objectives

- Refresh knowledge of the major functional components of the Allen-Bradley PLC-5 programmable control system.
- Refresh knowledge of all communication options present on the PLC-5 platforms and the uses and applications for these communication options.
- Review the memory organization present in the PLC-5 controller.
- Reexamine how to take advantage of program files as subroutines and in the Enhanced controller as active program files.
- Refresh knowledge of all communication options present on the PLC-5 platforms and the uses and applications for these communication options.
- Review the memory organization present in the PLC-5 controller.
- Reexamine how to take advantage of program files as subroutines and in the Enhanced controller as active program files.
- Refresh knowledge of the relay, compare, math, and data conversion instructions.
- Review and apply the message and block transfer instructions to real-world application.
- Finish exploration and application of file manipulation instructions.
- Apply all studied instructions to create and test your own programs in extensive hands-on lab sessions designed to stimulate and develop a logical approach to problem solving.
- Explore the fault, processor input interrupt (PII), and selectable timed interrupt (STI) subroutines.
- Create methods to test programs, develop traps, and to follow the flow of information through a series of instructions including relay, word, and file level instructions.
- Introduce concepts related to and used with the bit manipulation instructions.
- Develop advanced troubleshooting skills, learn to gather clues to help eliminate non-problem spots, and draw attention to possible problem areas.