ControlLogix Advanced Programming Course

Course Description

This training course provides the necessary resources and hands-on practice to efficiently Program ControlLogix® or other Logix5000™ systems (i.e., CompactLogix™, FlexLogix™, DriveLogix™, and SoftLogix™). It builds upon your knowledge of common controller terms and operation, your ability to identify and create advanced RSLogix5000 project components, and your experience interpreting basic ladder logic and function block. This course adds to the trainee skill set by introducing new tasks such as create Add-on instruction in ladder diagram, Programming a PID and event and periodic task. After practicing such skills, you will be presented with a systematic strategy for function block programming

Target Audience:

Individuals who need to professionally program a ControlLogix or other Logix5000 systems should attend this course.

Pre-requisites:

- Basic computer skills with Windows.
- Good AB-PLC products experience or knowledge.
- Program and troubleshoot RSLogix5000 application.

Duration:

5 days, 7hours/day (from 9:00am to 4:00 pm including Coffee/Lunch Breaks).

Course Outline:

- Creating a periodic Task
- Creating an event task
- Starting a Ladder Diagram
- Testing a Ladder Diagram
- Selecting Basic Ladder Logic Instructions
- Programming Timer Instructions
- User defined data type
- Analog signal modules & module
- Add on instruction in ladder diagram
- Creating a Function Block Diagram
- Programming Logical Function Block Instructions
- Programming Analog Function Block Instructions
- Programming Bit Instructions (XIC, XIO, OTE, OTL, OTU, ONS, OSR, OSF)
- Programming Compare Instructions (CMP, EQU, GEQ, GRT, LES, LIM, MEQ, NEQ)
- Programming Move/Logical Instructions (MOV, MVM, BTD,CLR, AND, OR)
- Programming Compute/Math Ins., (CPT, ADD, SUB, MUL, SQR, SQRT, NEG, ABS)
- Programming Input/output Instructions (MSG, GSV, SSV)
- Programming Timer and Counter Instructions (TON, TOF, RTO, CTU, CTD, CTUD, RES)
- Programming Program Control Instructions (JMP, LBL, JSR, RET, SBR, TND, MCR, AFI)
- Programming a PID Loop Using ladder diagram

Course Agenda

Day 1:

- Creating a periodic Task
- Creating an event task
- Starting a Ladder Diagram
- Testing a Ladder Diagram
- Selecting Basic Ladder Logic Instructions
- Programming Timer Instructions

Day 2:

- User defined data type
- Analog signal modules & module
- Add on instruction in ladder diagram
- Creating a Function Block Diagram
- Programming Logical Function Block Instructions
- Programming Analog Function Block Instructions

Day 3:

- Programming Bit Instructions (XIC, XIO, OTE, OTL, OTU, ONS, OSR, OSF)
- Programming Compare Instructions (CMP, EQU, GEQ, GRT, LES, LIM, MEQ, NEQ)
- Programming Move/Logical Instructions (MOV, MVM, BTD, CLR)

Day 4:

- Programming Compute/Math Instructions (CPT, ADD, SUB, MUL, DIV, MOD,SQR, SQRT, NEG, ABS)
- Programming Input/output Instructions (MSG, GSV, SSV)
- Programming Timer and Counter Instructions (TON, TOF, RTO, CTU, CTD, CTUD)

Day 5:

- Programming Program Control Instructions (JMP, LBL, JSR, RET, SBR,TND, MCR, AFI)
- Programming a PID Loop Using ladder diagram