FTSolution for APT®
Programming Training Course

Prerequisite knowledge

- Participants should have a basic knowledge of industrial automation and low voltage electrical circuitry in industrial environment.
- Participants should have basic Windows® 7,8,10 knowledge and be able to execute basic operations on a PC.

Goals

- Participants will be able to troubleshoot problems on an Industrial Automation Unit based on CTI series 2500 / TI555 PLC's programmed with FTSolution for APT®.
- Participants will be able to write programs to handle typical PLC application problem: designing the Solution and selecting the best available tool to program each part of the application and debugging the result to test each part of the Solution.

Method

- Various demonstrations
- Exercises

Number of participants

- Maximum 6

Duration

- Programming training : 5 days

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Contents

1. Principles

- Programming with FTSolution for APT®: an object oriented approach
- Design approach with FTSolution for APT®
- Process Control Solutions: Modular Approach / FTSolution for APT® Philosophy
- Solution structure and the Physical Process

2. Basics

- Creating a Solution or importing an old APT® program
- Objects in FTSolution for APT®
- Programming Languages in FTSolution for APT®
- Program Levels in FTSolution for APT®
- Configuring the Compile Configuration File
- Configuring the Communications Setup File

3. Tables

- Configuring I/O Modules, Module types
- Configuring I/O's, I/O types
- Declaring Variables, variable types
- Declaring Devices, device types, properties
- Recipes, recipe templates

4. Subroutines

- Creating a subroutine, parameter declaration
- MATH in a user defined Subroutine

5. CFC's & CFB's

- Using the CFC Editor
- Creating and changing CFC's
- Using CFB's; linking & connecting CFB's
- Math CFB's
- Interlock CFB
- Analog Alarm CFB
- PID CFB

6. SFC's

- Overview
- Using the SFC Editor
- Steps & Transitions
- Using the SFC Sub-Editor
- Testing an SFC
- Creating a Safe State SFC

7. Validating, Compiling and downloading a Solution

- The Compile Configuration File
- Compilation Options; understanding different compile types
- Compilation Errors and compile Report
- Downloading the Program to the PLC
- Running the program, PLC Run modes