

Attention: The following topics *not* addressed during this class:

- I/O and hardware troubleshooting
- Motion Control
- TwinSAFE

Prerequisite:

Previous experience with PLC and industrial automation control.

Topics Covered

Documentation – Catalog and Information System

eXtended Automation Architecture

TwinCAT PLC Control

Connecting PLC Variables to Hardware

- Linking the PLC Variables to Hardware
- Simple PLC Program – Connecting

Variables

- Variable Types
- Declarations
- Variable Scope
- Initial Values
- Constants

Languages of the PLC

- IL – Instruction List
- LD – Ladder Diagram
- FBD – Function Block Diagram
- SFC – Sequential Function Chart
- UML – Unified Machine Language (State Chart)
- CFC – Continuous Function Chart
- ST – Structured Text

Loading and Running the PLC

- Online Changes

Pragmas

Structures

Enumerations

Arrays

Functions

- Standard
- User Created

Function Blocks

- Standard
- User Created

Code Sequencing and POU Calls

Introduction to OOP

Libraries

- Adding Beckhoff Libraries
- Versions
- User created

Troubleshooting PLC Code

- Break Points
- Flow Control
- Global Search
- Cross Reference

Boot Project

TwinCAT Measurement

Downloading from the Web

Licensing

Project Compare