

# CTI 2500 Serie® Maintenance

## *Prerequisite knowledge*

This course is intended for students that have experience with Automation and Control Systems including control devices and PLCs.

The student should also have some basic knowledge of RLL or control programming and be competent using a PC with Windows® 7.

## *Goals*

The student will receive hands-on experience with a live training system. Each Training System will provide a 2500 Series® Base, power supply, processor, digital input module, digital output module, and an analog input/ output module connected to a PC Application Development Station.

Upon Completion, the student will be able to:

- Assemble a CTI 2500 Series® System
- Understand the System Operation and Architecture
- Write and edit a discrete RLL program
- Monitor the operation of an RLL Program
- Troubleshoot a 2500 Series® System

## *Method*

- Various demonstrations
- Exercises

## *Number of participants*

- Maximum 6

## *Duration*

- Advanced training : 3 days

### **CTI's 2500 Serie® Trainings**

**NAPA INTERNATIONAL FRANCE - Marina 7 – 1545 RN 7 -06 270 VILLENEUVE-LOUBET – France**  
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## Contents

### *PLC Fundamentals*

- Hardware Description
- Address and Memory Structure , data Formatting
- I/O concepts
- Configuration

### *PLC Configuration*

- Switches and jumpers
- Memory configuration
- I/O configuration
- I/O status indicators
- PLC Scan time setup

### *PLC programming fundamentals*

- Discrete Programming
- Timer and Compare Discrete Programming

### *505 WorkShop® Utilities*

- Communications Setup
- Loading and Saving Programs
- Data Window
- Cross Reference
- Documentation Window
- Using FT® Logger & FT® Trend
- 505 Simulator®
- FTVersionTrak®

### *Word Programming*

- Number formats and conversion
- Analog Inputs
- Analog Outputs Ladder Math

### *Profibus-DP Configuration (optionally; depending on customers application)*

- Profibus network setup
- Profibus operation
- Profibus status indicators

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## *Analog Alarms*

- Definition
- Alarm operation within PLC
- Alarm configuration parameters

## *Analog Control (PID) Loops*

- Definitions and theory of control Loops
- PID loop operation within PLC
- Loop configuration parameters
- Loop SF variables

## *Special Function Programs and Subroutines (continued on day 3)*

- SF program types and methods of execution
- SF instruction set and operators
- Passing parameters to SF subroutines
- Memory access within SF programs
- SFP/SFS configuration
- SF error reporting (SFEC)
- On-Line editing of SF programs