

# **BASIC HANDS-ON PLC fundamentals & troubleshooting II**

## **Basic Hands-On PLC Fundamentals & Troubleshooting II**

**1-DAY  
TRAINING**

### **Training Description:**

Building on the skills obtained in Basic Hands-On PLC Fundamentals & Troubleshooting I, you will learn to connect and troubleshoot NPN, PNP, sourcing and sinking input devices, along with understanding the important process of troubleshooting these devices. You will learn how counters, timers, and other programming functions work, and how to troubleshoot the input and output circuits associated with PLCs. By the end of this second day you will have wired and learned to troubleshoot a real PLC with operating sensors, switches, relays, and contactors found in most real world machines.

Attending Basic Hands-On PLC Fundamentals & Troubleshooting I is not a prerequisite for this seminar, but it is highly recommended.

### **Training Topics:**

#### **PROGRAMMABLE LOGIC CONTROLLER I/O HARDWARE**

- **Operation and Troubleshooting AC I/O**
- **Operation and Troubleshooting DC I/O**
  - **Sinking**
  - **Sourcing**
- **Working with Proximity Switches**
- **Troubleshooting Using Multimeters**

#### **PLC ADDRESSING**

- **Purpose**
- **Manufacturers Examples**

#### **PLC PROGRAMMING**

- **Instructions**
  - **Conditional**
  - **Output**
  - **Internal Bits**
  - **Timers**
  - **Counters**
- **Scan Cycle**
- **Program Execution**

#### **TROUBLESHOOTING EXAMPLES**

- **With Documentation**
- **Working with an Unknown System**

#### **CLASS DISCUSSION AND REVIEW**



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