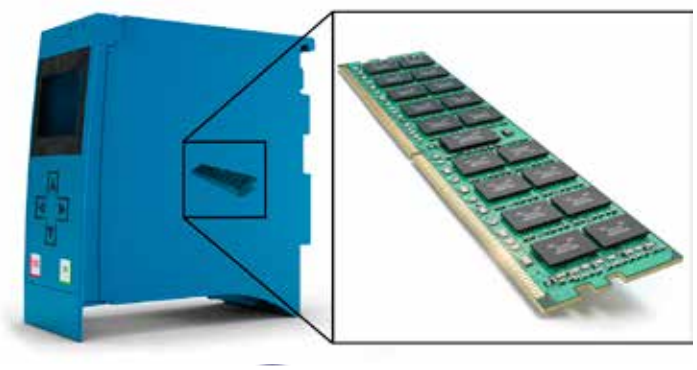
PROGRAMMABLE LOGIC CONTROLLER (PLC) BASICS

eLearning courses designed to increase productivity and profits



Learning Made Simple, Visual, and Interactive

The THORS Programmable Logic Controller (PLC) Basics course introduces the learner to PLC components, such as the power supply module, Input or Output (I/O) module, field devices, programming device, and data processor. The course also covers PLC architecture that includes the different types of PLC arrangements and the operation of PLC, which is explained using examples involving industrial automation. Presented in THORS' highly visual and interactive learning format, this course will equip the learner with a foundational knowledge of a PLC and its related automation processes.

Credit Hours **2.0**

Learning Objectives

- Define the components of a PLC.
- Identify the different input and output modules.
- Explain the various field devices used for PLC automation.
- Explain the functionality of a programming device.
- Understand the process of a data processor.
- Recall the different types of PLC arrangements.

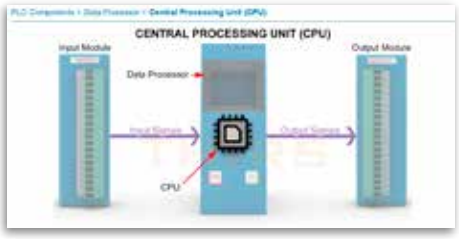
Table of Contents

I. PLC Components

- **Power Supply Module**
- **Input or Output (I/O) Modules**
  - Discrete I/O Modules
  - Analog I/O Modules
- **Field Devices**
  - Input Devices
    - Discrete Input Devices
    - Analog Input Devices
  - Output Devices
    - Discrete Output Devices
    - Analog Output Devices
- **Programming Device**
- **Data Processor**
  - Central Processing Unit (CPU)
  - Memory
    - Volatile Memory
    - Nonolatile Memory
  - Communication Module

II. PLC Architecture

- **Arrangement**
  - Modular PLC
  - Compact PLC
- **Operation**
  - I/O Module Operation
    - Operating Modes
    - Operating Characteristics
  - Data Processor Operation
  - Process Control
    - Interlocking Process Control
    - Sequential Process Control
    - Random Process Control



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