

## CONTROL SYSTEMS PLC

**CONCEPT** PLC stands for Programmable Logic Controller, which is a type of digital computer used in industrial control systems. They are commonly used to control machinery on factory assembly lines by performing specific tasks, monitoring sensors and collecting data.

## **EXAMPLES**

**PLC HARDWARE:** this includes the physical components of the PLC such as the CPU, input/output modules, power supply, communication modules and other peripherals.

**PLC SOFTWARE:** this includes the programming software used to write and test PLC programs, as well as software for monitoring and troubleshooting the system.

**LADDER LOGIC:** this is the graphical programming language used to create PLC programs, which uses a series of interconnected rungs to control the system.

**SENSORS AND ACTUATORS:** these are devices that provide input and output signals to the PLC, allowing it to control and monitor the system.

**COMMUNICATION PROTOCOLS:** these standards are used for communication between the PLC and other devices in the system, such as HMIs, SCADA systems and other PLCs.

**HUMAN-MACHINE INTERFACE (HMI):** this device allows operators to interact with the PLC and monitor the system's status.

**DOCUMENTATION:** this includes manuals, schematics and other documents that provide information about the system design, operation and maintenance.

## **PLC SYSTEM Power Supply** Central Processing Unit (CPU) Memory Sensing Program Data Devices Devices Optical Optical Isolation Isolation **Programming Device**





