

Microcontrollers and PLC control

Modern manufacturing uses microprocessor systems to control the many robots and automated processes found in factory assembly lines. Two types of processors are used:

- The programmable logic controller (PLC)
- The microcontroller

The **Programmable Logic Controller** (PLC) is a digital computer used for automation of industrial processes. One of these PLC computers can control machinery on the factory assembly line. Unlike general-purpose computers, the PLC is designed for many inputs and outputs. PLCs are resistant to electrical noise, vibration and impact.



PLC within a Nuclear Plant

The **Microcontroller** is a computer system on a single chip. Microcontrollers include CPU, memory and input and output connections. The majority of microcontrollers are inside other machinery, such as automobiles, telephones, appliances, and peripherals for computer systems. These are called embedded systems. Typical input and output devices include switches, relays, solenoids, LEDs, LCD displays, and sensors for data such as temperature, humidity, light level etc.

Tip:

The PLC was invented in response to the needs of the American car industry in 1968

