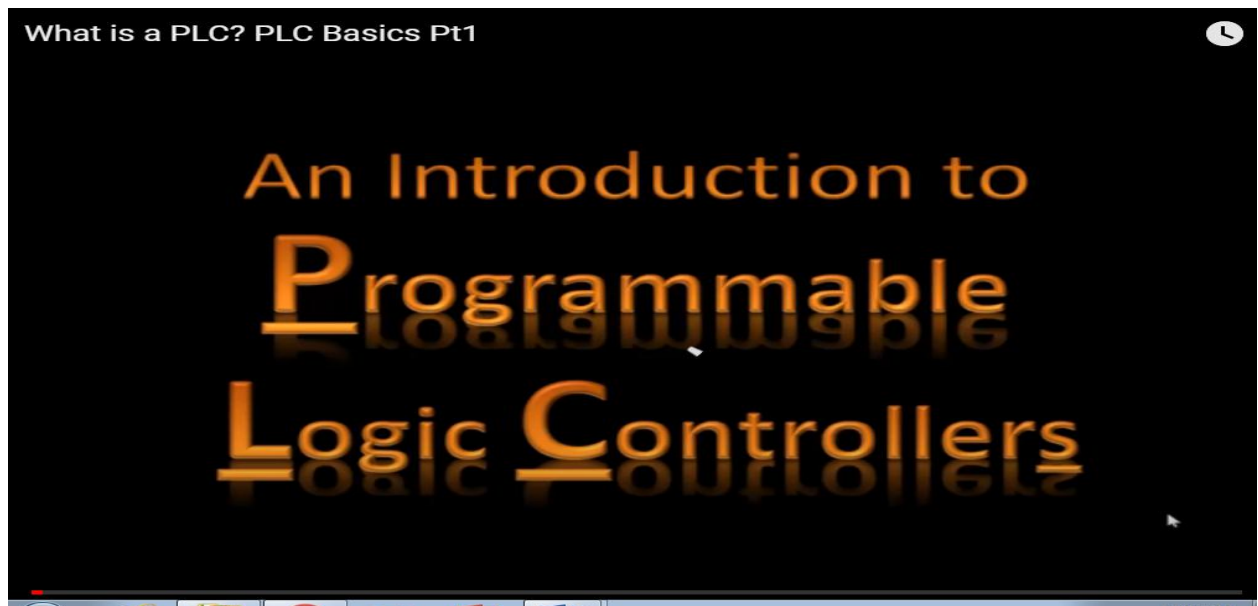
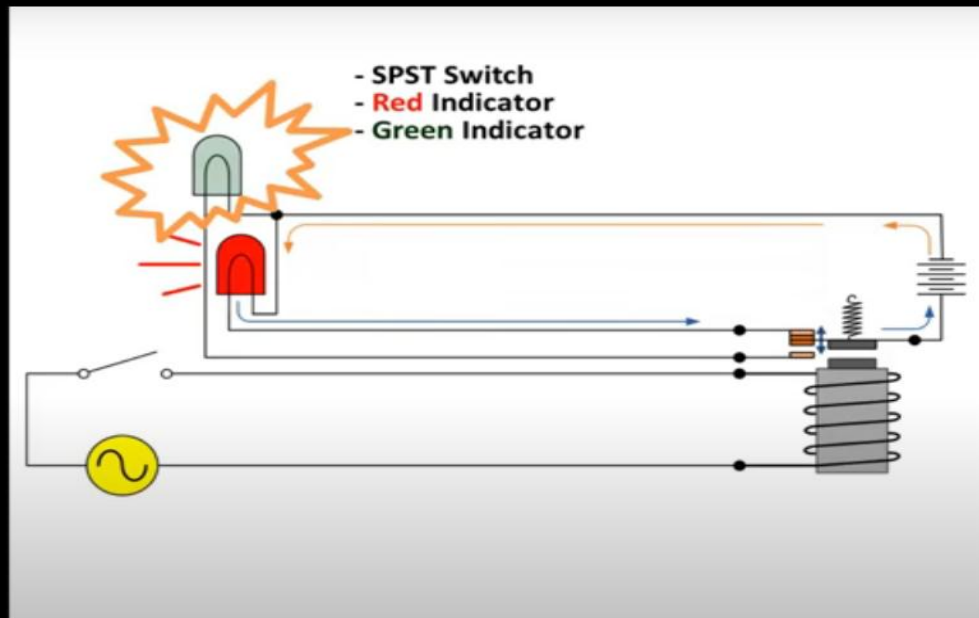


Date:	30/5/2020	Name:	SAFIYA BANU
Course:	LOGIC DESIGN	USN:	4AL16EC061
Topic:	Applications of Programmable logic controllers	Semester & Section:	8 th , B
Github Repository:	Safiya-Courses		

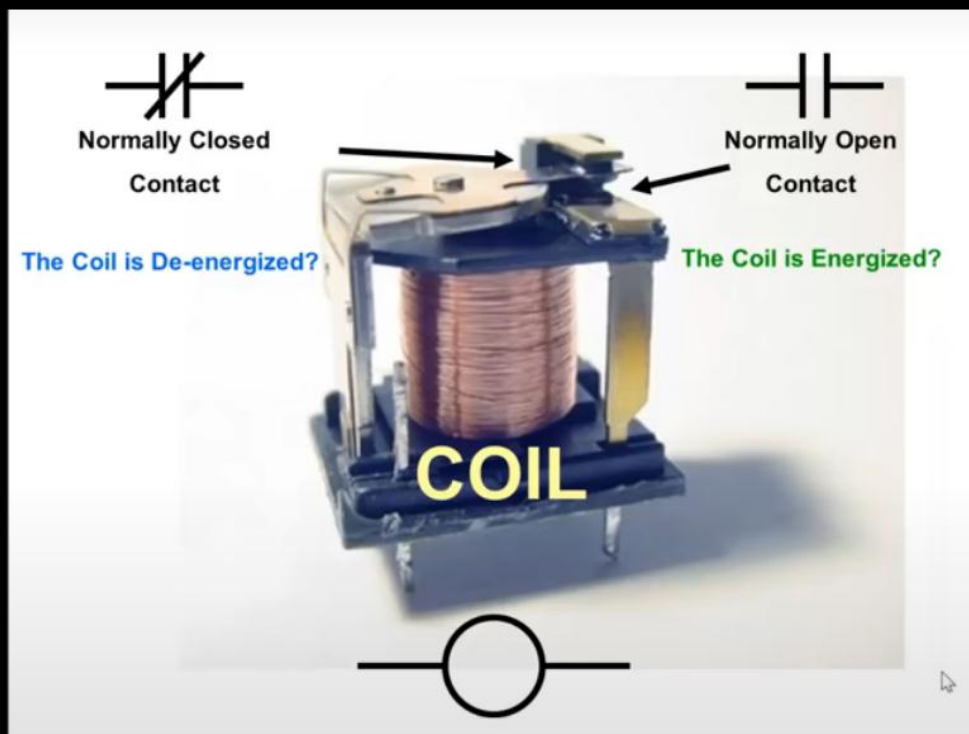
REPORT



What is a PLC? PLC Basics Pt1



What is a PLC? PLC Basics Pt1



All PLCs are digital devices at heart. Thus, in order to interface with an analog sensor or control device, some “translation” is necessary between the analog and digital worlds. Inside every analog input module is an ADC, or Analog-to-Digital Converter, circuit designed to convert an analog electrical signal into a multi-bit binary word.

Conversely, every analog output module contains a DAC, or Digital-to-Analog Converter, circuit to convert the PLC’s digital command words into analog electrical quantities.

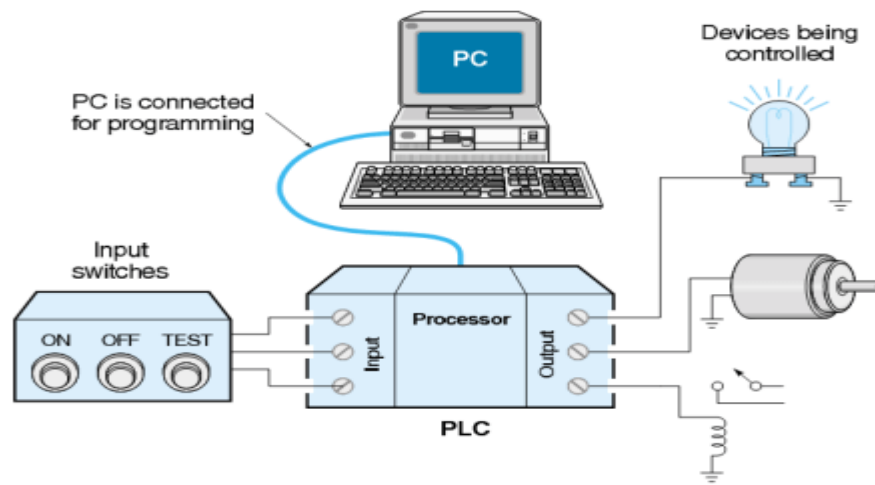
Analog I/O is commonly available for modular PLCs for many different analog signal types, including:

- Voltage (0 to 10 volt, 0 to 5 volt)
- Current (0 to 20 mA, 4 to 20 mA)
- Thermocouple (millivoltage)
- RTD
- Strain gauge

A **Programmable Logic Controller**, also called a **PLC** or programmable controller, is a computer-type device used to control equipment in an industrial facility.

The kinds of equipment that PLCs can control are as varied as industrial facilities themselves. Utility Plants, Batch Control Application, Chemical Processing, Conveyor systems, food processing machinery, auto assembly lines etc...you name it and there’s probably a PLC out there controlling it.

Programmable Logic Controller (PLC)



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In a traditional industrial control system, all control devices are wired directly to each other according to how the system is supposed to operate. In a PLC system, however, the PLC replaces the wiring between the devices.

Thus, instead of being wired directly to each other, all equipment is wired to the PLC. Then, the control program inside the PLC provides the “wiring” connection between the devices.

The control program is the computer program stored in the PLC’s memory that tells the PLC what’s supposed to be going on in the system. The use of a PLC to provide the wiring connections between system devices is called softwiring.
