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PLC & VFD Training

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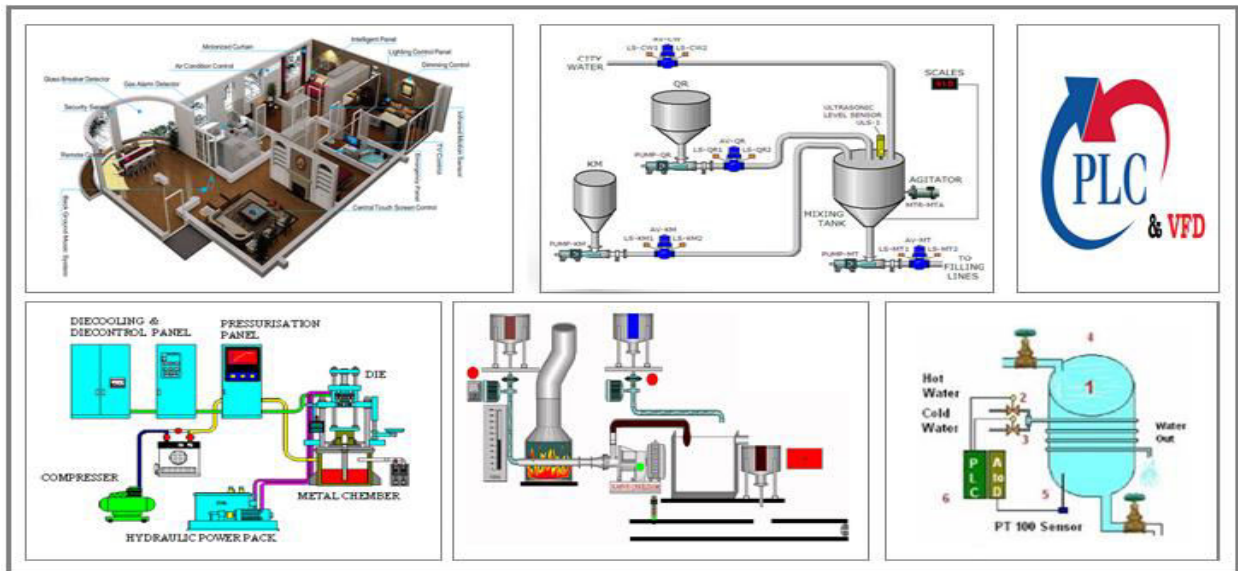
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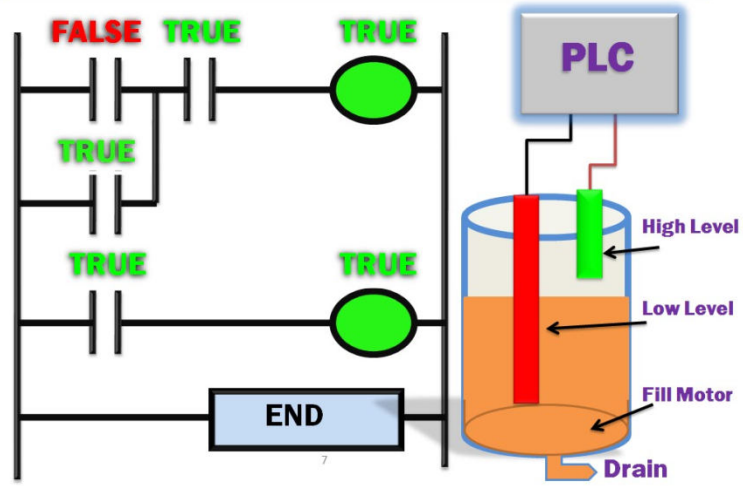
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How Does A PLC Work?





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Theory of PLC

- Introduction to PLC
- Types of PLC
- PLC VS Microcontroller
- PLC Advantages & PLC Applications
- Introduction to PLC Hardware
- How to select the PLC for Projects
- Introduction to I/O Devices (Digital only)
- Introduction to Logic Gates
- Introduction to Ladder programming, Ladder Symbols, function Blocks.
 - Syntax & its error
 - Scanning of I/O in ladder
- Benefits of ladder programming
 - Designing Single Rung & network
 - Designing Multiple & branching Rungs & networks
 - Learning algorithms for Practical applications.
 - Introduction to PLC Trainer 100A
- What is Automation Control & Project management
- Writing of Alarms in PLC And Interface,Ack in HMI/SCADA



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- Analog Input/Output Programming
 - Analog Input Reading, Averaging, Scaling etc
 - Analog Output writing, Scaling for field Devices
 - Programming for 4-20mA, 0-10v Analog Input Signals
- High Speed Counter
 - Use of high speed counter in Ladder Programming,
 - Application of High speed Counter

Theory of VFD

To study Functions of VFD Switches & Symbols.

- To operate motor using VFD Console switches.
- To change parameter settings.
- Selection of VFD for Application.
- To change Ramp Down time [deceleration time].
- To change Ramp up time [acceleration time].
- To set output frequency limit [Maximum].
- To set output frequency limit [Minimum].
- Introduction of Modbus Communication of VFD with PLC .
- Troubleshooting of VFD.



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Practicals on PLC & VFD

- Wiring of Input devices Push buttons Limit switch to the PLC.
- Wiring of output devices from PLC to Relay Contactor and Solenoid Valves.
- Wiring of Level Sensors Pressure sensor to the PLC
- Wiring of Analog output from PLC to different devices.
- Programming Of Analog Input and Output in PLC
- Configuration of PLC - CPU Hardware with the Software
- PLC Ethernet / Profibus / RS 232 Comport Configuration with work station.
- Creating new Project for Conveyor Control/ Fan Control/ Pump Control with different industry based Application.
- Creating Interval control systems for Process Applications with TIMER COUNTER and commands
- Configuration of High Speed Counters with PLC and Its Programming.
- Plant Graphic Control Interfacing Program with Monitoring systems.
- Motor Starter
 - Start/Stop Push button with Motor overload & High temp i/p
 - Motor Directions control For-Rev direction with delay & interlock Protections.



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- Conveyor Systems
 - Material conveyer with Counter
- Traffic Light control
 - Traffic Light controller 4 lane
- Water Level controller
 - Water level controller with pump