



Telephone: 01536 409666

Email: info@plctraining.co.uk

Website: <https://www.plc-training.co.uk>

Allen Bradley PLC-5 Basics

Software: RSLogix 5

PLC Type: Allen Bradley PLC5 PLC

Duration: 5 Days

Pre-requisites: None

Maximum Delegates: 6

Brief Description

- Be able to recognise PLC-5 hardware and be able to replace modules when a fault occurs.
- Be able to operate the Allen Bradley software to make it perform certain tasks.
- Understand basic instruction set and be able to make minor modifications to software.
- Be able to backup and restore a PLC program when required.
- Be able to perform basic system diagnostics when a problem occurs.

Course Content

To fault find a system you need to know EXACTLY how it works

HOW EXACTLY DOES A PLC WORK?

- Am I getting the input to the PLC?
- The Led on the output card means i am getting voltage out right? does it?
- What exactly happens in between? theres more than just a program in the CPU
- How exactly does it scan the program?
- What is this Watchdog Timer? Is it that important?
- Can I use the same output twice? That's bad programming isn't it?
- A PLC is a logic controller, so use a logical approach to fault find it.
- What are the 8 simple test points to check?
- The PLC is in RUN, that means theres a program right? does it?
- FORCING a bit and toggling a bit is pretty much the same yeah? depends on which PLC

Then you need to know the specifics

HOW DO I DO THE FOLLOWING? (some straight forward some not so)

- Check power is ON and PLC is in right mode (RUN or Program)
- Check LEDs for fault definition
- Check and Change Modules if required (with spares and without spares)
- System connection

- Establish link to PLC (RSLinx, a major problem area these days)
- Create a blank project and take a backup (just in case I mess up)
- Open the correct project Off Line and link to PLC
- Interrogate errors in Status table
- Identify if it is a hardware or software fault?
- Identify if it is a PLC or Comms fault
- Change the battery
- Check all settings against a template, Node Address etc.
- Check Hardware Configuration
- Clear Memory and Download program
- Check software against latest copy (Compare function)
- Monitor program
- Searching for specific operands and instructions
- Changing timer, counter values On Line
- Making minor mods Off Line and On line
- Check or create a Custom Monitor table to establish parameter status
- Create a Histogram to monitor address transitions
- Create a Trend to trend address status or values
- Force a parameter if required
- Call up documentation to assist with software diagnostics
- Printing Cross Reference / Program Listings etc.

Background information also covered

Understanding of the following:

- Number formats, bits, words
- Binary, floating point, integer
- Program blocks and Data Tables, B3, T4, N7 etc
- How to monitor various blocks
- Understand basic Ladder programs
- Basic Instructions, contacts, Set, reset etc.
- Timers, Counters
- Comparators, Maths
- Altering values in a data table
- Back tracking through a program to establish where power flow stops
- Overall reset procedure
- Fault finding tips

Course Equipment (per delegate)

- PLC5 PLC
- PC or Laptop
- Simulator