JTEKT

Koyo | **TOYODA**

TOYOPUC BASIC TRAINING

Module 1. Toyopuc Hardware
- a. PLC Platforms
  - i. PC3JG
  - ii. PC10
- b. CPU Front Panel Understanding and Operation
  - i. PC3JG
    1. Monitor Operation State
    2. Error Monitor
    3. IO Monitor
    4. Link Communication Monitor
    5. Link Error Codes
    6. SFC/FB Monitor
    7. IO Force Monitor
  - ii. PC10G
    1. CPU Status
    2. Error Information
    3. Link Communication Monitor
- c. Rack Addressing
  - i. Selector Modules
  - ii. CPU Base vs. Selector Bases
  - iii. Rotary Switch Settings
  - iv. Rack Addressing Examples
  - v. Rack Addressing with PCwin
- d. Lab 1 – Set up PLC rack addressing.

Module 2. PLC Operation and Memory
- a. Program Scanning
- b. Toyota Standard of Programs
- c. Different Parts of a Program
  - i. Start
  - ii. End
  - iii. Pend
- d. Program Execution/Non-Execution – CPU Modes
- e. Memory Allocation
  - i. Separate mode vs. Single area mode
  - ii. 3 Modes of operation – Toyota standards
  - iii. I/O Table Capacities

Module 3. Numbering Systems and Addressing
   a. Decimal
   b. Binary
   c. Octal
   d. Hexadecimal
   e. BCD

Module 4. PCwin Software
   a. Structure of PCwin and PLC programs
   b. Different functionalities of the menu bar in PCwin
   c. How to read and write to PLC
   d. Monitor
      i. Ladder logic
      ii. Register and I/O monitor
   e. Search and Contact Table
   f. Force IO

Module 5. PCwin Parameters
   a. Setup and Design a New Project in PCwin
   b. Demonstrate the use of IO module configuration manually and automatically
   c. Troubleshoot any errors of the parameter configuration

Module 6. PCwin Editing and Ladder Instructions
   a. Open ladder programs
   b. Insert rungs of logic
   c. Create logic using contacts/coils, set and reset coils, one shots, timers, counters and functions.
   d. Write a program for basic motor control, utilizing all programs, and all types of instructions.

Module 7. Error Codes and Troubleshooting
   a. Describe the different error ranks and the effect on the PLC
   b. Use the PLC front panel to retrieve errors codes
   c. Use troubleshooting flowchart to assist in problem solving.
   d. Use PCwin's error monitor to retrieve error codes and details.
   e. Use special relays to retrieve error codes and details
   f. Use special registers to retrieve error codes and details.