



Modicon Programmable Controller Modbus Plus Local Area Network Module 108

This course provides you with a working knowledge of Modicon's Modbus Plus Local Area Network (LAN). Modbus Plus is a proprietary communication network designed to permit high-speed, peer-to-peer communication between a variety of control and/or monitoring devices (called network nodes). Nodes may include Modicon Programmable Controllers, Host Computers equipped with appropriate hardware and software interface, PC based Programming Software, PC based Network Manager/File Servers Software, and other Modbus, Modbus Plus, RS-232, RS-485 devices. This course will provide a hands-on opportunity for you to layout, configure, implement, test and troubleshoot all four (4) levels of Modbus Plus communication. This is a four (4) day course. Prerequisite: Modicon Quantum/984 Maintenance & Troubleshooting or instructor approval.

Course Objectives

- Define a Modbus Plus Local Area Network, how it works, and why it is used.
- Determine system hardware and software capabilities.
- Define communications terms, node, peer-to-peer, global, peer cop specific, peer cop global etc.
- Develop a system block diagram for a typical Modbus Plus System.
- Be able to predict communications, deterministic communications, on Modbus Plus with an understanding of the channels for data transfer.
- Learn how much information can be exchanged between nodes during a token rotation.
- Understand the functionality of the major system components; RR85 Repeater, BP85 Bridge Plus, and BM85 Bridge Multiplexer, SA85 personal computer interface card, and your Quantum and 984 controllers with Modbus Plus ports.
- Install Modbus Plus Network software, understand how the software works, and what the software does for your system (hints on avoiding pitfalls).
- Understand proper cable lengths and connector installation techniques, and learn about potential routing and environmental problems.
- Work with all four (4) levels of communication, peer to peer, global, peer cop peer to peer and peer cop global.
- Read and write information between nodes, network option modules, other protocol based devices and between networks.
- Learn how to communicate between Modbus Plus protocol and other communications protocols.
- Develop strategies for documenting network hardware and data communications.
- Determine system throughput, predicting token rotation, and response time, by grouping nodes to improve throughput, prioritizing data transmission, etc.
- Ideas on optimizing system communications on the network, i.e. throughput.