

AUTOMATION ACADEMY

A u t o m a t i o n S y s t e m s T r a i n i n g S p e c i a l i s t s

Course Title: Modicon 984 Controllers Maintenance Course

The Modicon 984 Maintenance Course has been designed to familiarise Electricians, Technicians and Maintenance Engineers with little or no experience of Modicon systems to the different aspects associated with the operation and maintenance of Modicon controllers and the programming software. This course is intended to give students the background knowledge and practical experience in working on a Modicon system so that they have a good understanding of the system and have the ability to make small edits and make changes to program parameters.

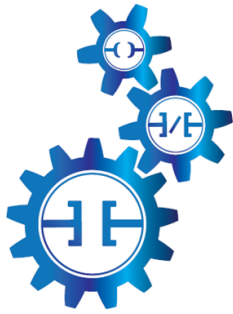
Where possible, application specific exercises, actual drawings and plant programs will be used to allow the students to gain the greatest possible benefit from the course.

Course Objectives:

- ☒ To introduce students to the concepts, terminology and operation of Modicon Controllers.
- ☒ To recognise and understand the hardware associated with Modicon 984 controllers.
- ☒ To recognise and understand what the system LED's indicate.
- ☒ To be able to open and understand the program structure of the Modicon program and to have the confidence to implement minor changes to the ladder program and register values.
- ☒ Understanding the use and operation of Modicon ladder instructions set.
- ☒ To be able to use the programming software to connect online to monitor and be able to use the search facilities to chase through the program to determine problems on plant.
- ☒ To understand the operation and terminology of Modbus and Modbus Plus communication links.
- ☒ To be able to locate and replace faulty modules by understanding and using the cpu diagnostics within the controller when an error is present.
- ☒ To be able to create a backup copy of the Modicon controllers program. To be able to restore a program back into the controller from a backup copy.

Course Content:

The hardware architecture and operation of Modicon controllers.
Understanding Modicon I/O modules, their plant wiring and LED indicators.
Addresses used in the Modicon range of controllers.



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First steps using the programming software.
Creating a training program to demonstrate plant programming examples.
Getting an online connection to the Modicon controller, serial and/or Ethernet.
Downloading the user program to the Modicon controller.
Online monitoring and the Modicon search facility.
Creating and using tables to monitor the Modicon PLC status.
An overview of the Modicon ladder programming techniques used on plant programs.
A demonstration of simple program editing and modifying plant programs.
Reading the Modicon controllers instruction set.
Programming examples including relay, timers, logic, maths.
Understanding and configuring higher level ladder instructions in the program.
Binary, Decimal and Hex numbering systems and their use in a Modicon program.
Using and creating program documentation.
Using program documentation for fault finding purposes.
Analogue modules and the maths involved in analogue signal processing
The configuration and operation of Modbus and Modbus Plus communications
Modicon controller fault information and their meanings.

Customised training included in the course cost.

As part of this training course we will include custom application exercises for your own plant and processes, this value added option creates immediate payback for students on plant. It will have the benefit of the students becoming familiar with key areas of your PLC project(s) during the training course. This option does require the supply of your plant drawing and program listings at least 2 weeks prior to the course start date.

Course Duration: 4 Days

Documentation: Modicon 984 Controller Training Manual.

Equipment per student: Modicon 984 controller

Programming laptop

Plant simulator

Web link: [Modicon 984 Controllers Maintenance Course](#)