

## SIEMENS S7 LEVEL 1 MAINTENANCE

### Siemens S7 300/400 Maintenance Course

The course has been designed to familiarise Electricians, Technicians and Maintenance Engineers with little or no experience of S7 to the many different aspects associated with the operation and maintenance of Siemens S7 controllers.

Where possible, application specific exercises, actual drawings and programs listings are used to allow the students to gain the greatest possible benefit from the course. The practical experience on the course will provide knowledge on Program structure, editing, Hardware Configuration and Profibus networks enabling the student to perform maintenance faulting finding in the Siemens S7 software, on Siemens S7 hardware and on plant devices connected to Siemens S7 PLC.

### Objectives

To introduce students to the concepts and operation of S7 programmable controllers, including the following areas:

- ✓ Locate and replace faulty modules.
- ✓ Reload programs.
- ✓ I/O Fault finding.
- ✓ Introduction to communications.
- ✓ Implement changes to the program.
- ✓ Using the Simatic S7 programmer to connect online and monitor programs to determine plant problems.

### COURSE CONTENT

- ✓ The hardware architecture of the S7 range of controllers.
- ✓ I/O Modules and wiring.
- ✓ Addresses used in the S7 range of controllers.
- ✓ Data Formats.
- ✓ Data blocks.
- ✓ Program structure, introduction to blocks; OB's, FC's FB's , SFC's, SFB's and DB's.
- ✓ Introduction to LAD, FDB and STL programming formats.
- ✓ Introduction to Project Structure.
- ✓ First steps with the programmer.
- ✓ Hardware Configuration.
- ✓ Downloading projects to the PLC.
- ✓ Creating an online connection.
- ✓ Online monitoring, searching and using the cross-reference XRF.
- ✓ Programming using LAD, FDB and STL.
- ✓ Editing and modifying programs.
- ✓ Instruction set. Relay, maths, move, compare and logic functions.
- ✓ Using and creating program documentation.
- ✓ Introduction to function blocks and their uses.
- ✓ Using the symbols list.
- ✓ Analogue modules and analogue scaling.
- ✓ Introduction to Load, transfer, maths and compares.
- ✓ Diagnostic information and module information used for fault finding.
- ✓ Data monitoring and modifying variables.
- ✓ Forcing facilities.
- ✓ Archiving and retrieving projects.
- ✓ Application exercises on your plant programs.

#### Course Reference S7MNTL1

#### Course Duration 5 Days

#### Documentation Siemens S7 Programming and Maintenance Training Manual.

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