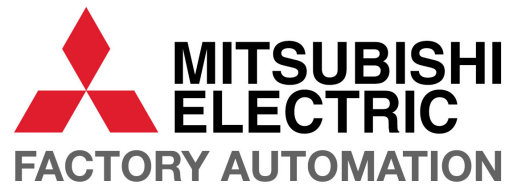**iS** **Industrial**Solutions

IS Training

2009 Prospectus

FX Series-Introduction

Main Objectives

Based around the GX Developer software, the course explains the PLC functions, architecture and use of the internal devices as well as the main instruction set. Students are given practical exercises to solve.

MITSUBISHI ELECTRIC
FACTORY AUTOMATION

Requirements

Students need no previous experience with Mitsubishi PLCs. Some knowledge of other manufacturers' products would be useful. An appreciation of a PC (QWERTY) keyboard and an understanding of basic electrical principles and number bases would be an advantage.

Products Used

This course uses dedicated FX simulator system hardware together with GX Developer programming software.

Subjects

- A comparison of PLC and relay systems
- GX IEC Developer software
- Producing a ladder diagram
- Programme testing
- Serial transfer
- Simple application programmes
- Simulation and monitoring special devises

Suggested Other Courses

FX Series - Advanced

Duration

2 Days

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FX Series-Advanced

Main Objectives

Based around the GX Developer or GX IEC software, the course will run through the advanced features of the FX PLC. Concentrating on the applied instruction set, delegates will be able to use the mathematical functions, displaying results and interfacing with analogue units. Students are given many practical exercises to solve.

MITSUBISHI ELECTRIC
FACTORY AUTOMATION

Requirements

Students need previous experience with either Mitsubishi or other manufacturers' PLC products. An understanding of basic electrical principles and number bases is required.

Products Used

This course uses dedicated FX simulator system hardware together with GX Developer or GX IEC programming software

Duration

2 Days

Subjects

- Special M Coils
- Step Ladder programming
- Data Registers
- Shift Registers
- Master Control
- Advanced Programming Techniques
- Index Registers
- Sub-Routines
- Floating Point Maths

Suggested Other Courses

IEC programming

Q Series

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Q Series PLC-Introduction

Main Objectives

Using GX or GX IEC Developer software, the course will detail PLC systems and architecture. The use of the internal devices as well as the main instruction set will be covered. Students are given many practical exercises to solve.
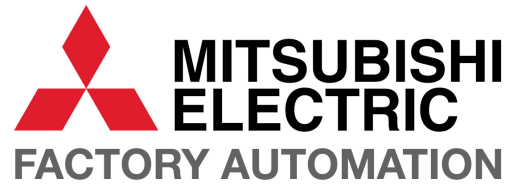
MITSUBISHI ELECTRIC
FACTORY AUTOMATION

Requirements

Students need no previous experience with Mitsubishi PLCs. Some knowledge of other manufacturers' products would be useful. An appreciation of a PC (QWERTY) keyboard and an understanding of basic electrical principles and number bases would be an advantage.

Products Used

This course uses dedicated Q series simulator system hardware together with GX or GX IEC Developer programming software.

Duration

2 Days

Subjects

- A brief history of PLC systems
- A description of their internal operation
- A comparison of PLC relay systems
- GX Developer software
- Producing a ladder diagram
- Modifications
- Programme testing
- Transfer simple application programmes
- PLC sequence controller
- Safety
- Documentation
- Files
- Printouts
- Fault finding & diagnostics
- Simulation and monitoring
- Special devices

Suggested further courses:

Q Series - Advanced

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Q Series PLC-Advanced

Main Objectives

Based around the GX or GXIEC Developer software, the course will demonstrate the advanced features of the PLC, concentrating on the applied instruction set. Delegates will be able to use the mathematical functions, displaying results and interfacing with analogue units. Students are given practical exercises to solve.

MITSUBISHI ELECTRIC
FACTORY AUTOMATION
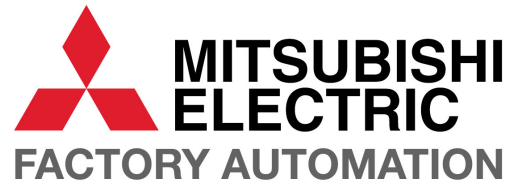
Requirements

Students need previous experience with either Mitsubishi or other manufacturers' PLC products. An understanding of basic electrical principles and number bases is required.

Products Used

This course uses dedicated Q series simulator system hardware together with GX or GX IEC Developer programming software.

Subjects

- Advanced programming techniques
- Using 16/32 bit memory areas
- Counting in binary and BCD
- Simple frequency circuit
- Delay programmes
- Automatic centring
- Shift registers
- Master control
- Index registers
- Sub – routines
- Analogue control
- Analogue - digital conversion
- Digital - analogue conversion

Duration

2 Days

Suggested further courses:

IEC programming

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IEC 61131.3 Programming

Main Objectives

Based on the GX IEC Developer software, the course will run through the functions and programme editors of the software. Concentrating on the basic features, students will be able to create programmes and become confident using this package.
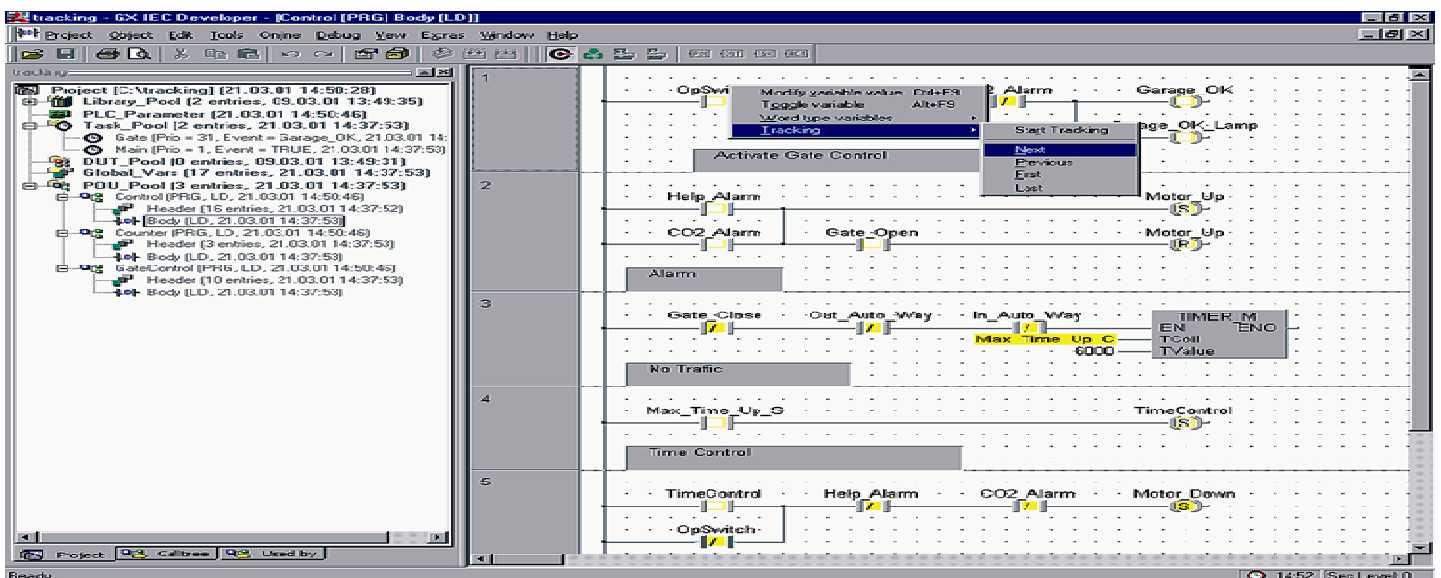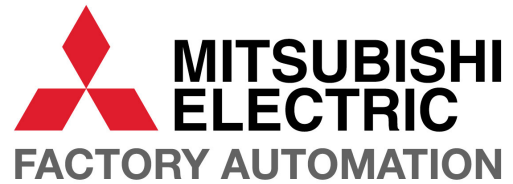
MITSUBISHI ELECTRIC
FACTORY AUTOMATION

Requirements

Students need previous experience with either Mitsubishi or other manufacturers' PLC products. Knowledge of Microsoft Windows™ is essential. It would be advantageous to have some knowledge of IEC 61131.3

Products Used

GX IEC Developer Version 7

Duration

2 Days

Subjects

- Introduction to IEC61131
- PLC Open
- POU
- Global variables/headers
- Programming languages
- Compiling
- Functions
- Function blocks
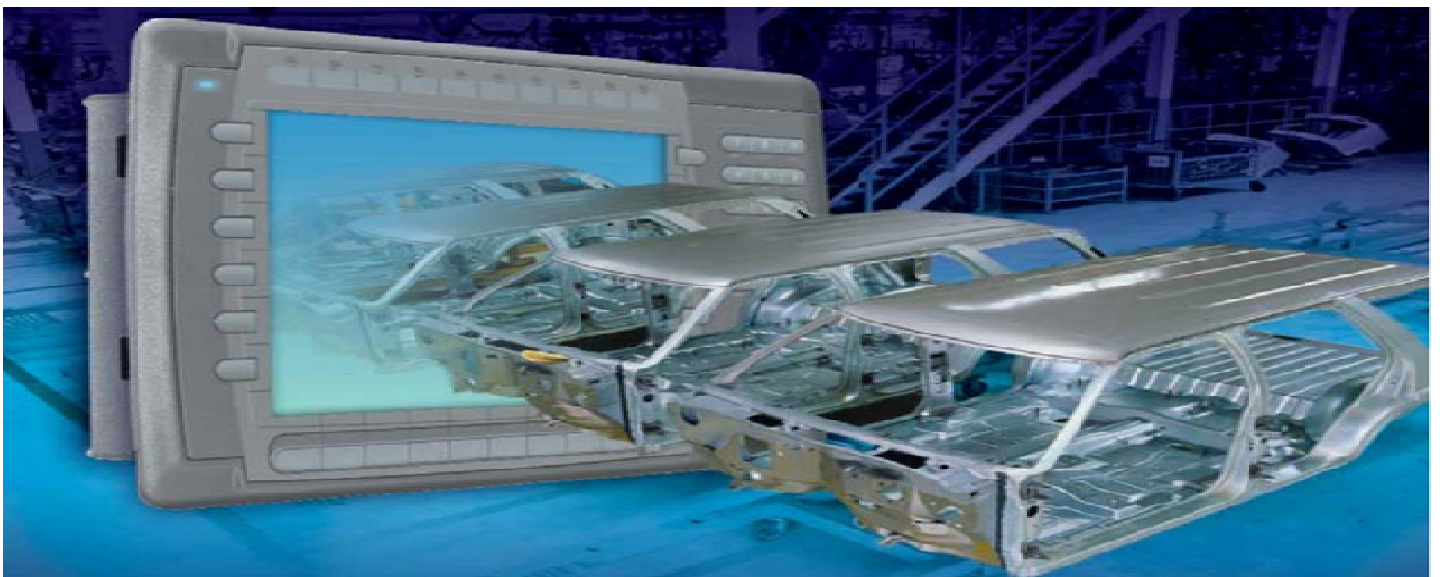- Sequence flow chart
- Monitoring
- Printing

Suggested further courses:

Q Series Advanced

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E-Series HMI Displays

Main Objectives

The course explains the set-up and basic communication that the HMI uses in conjunction with the PLC. It will also cover E-Designer, going over basic dynamic and test objects useful in most projects.

Requirements

Students do not need previous experience with either Mitsubishi or other manufacturers' HMI products. An understanding of basic electrical principles would be an advantage. Basic PLC

Products Used

This course uses the FX or Modular PLC simulator system with an E1000 HMI

Subjects

- Introduction to HMIs
- Basic programming of the terminal from the PC software
- Basic set up of the terminal
- Application examples and test
- Question and answers

Suggested further courses:

Duration

2 Days

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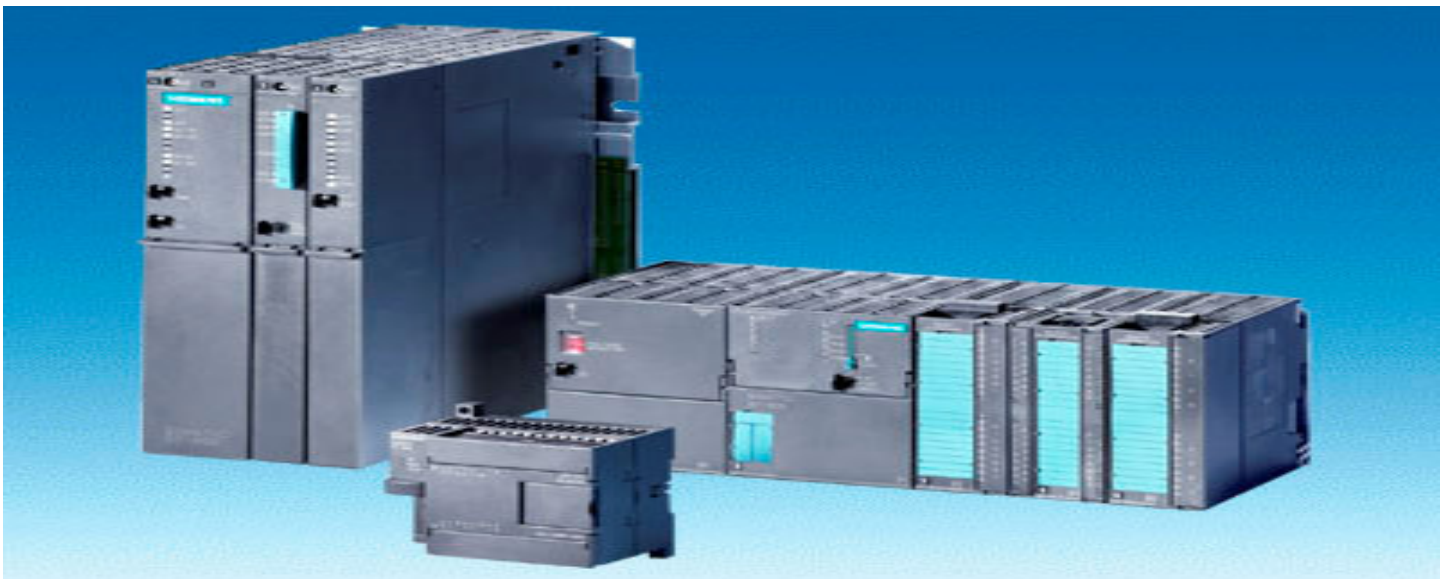
S7 PLC-Introduction

Main Objectives

Based around the Step 7 software, the course explains the PLC functions, architecture and use of the internal devices as well as the main instruction set. Students are given practical exercises to solve.

SIEMENS

Requirements

Students need no previous experience with Siemens PLCs. Some knowledge of other manufacturers' products would be useful. An appreciation of a PC (QWERTY) keyboard and an understanding of basic electrical principles and number bases would be an advantage.

Products Used

This course uses dedicated S7 series PLC hardware together with Step 7 programming software.

Duration

2 Days

Subjects

- Introduction to PLC Hardware
- Format of Ladder Diagrams, CSF and Statement Lists
- Introduction to IEC 1131
- Use of Timers & Counters, Special Functions & Blocks
- Connection of field devices, Addressing and Device Number Systems
- Program uploading and downloading.
- Commonly used instructions
- Diagnosing faults using forced addressing
- Configuration, Addressing & Performance Criteria of CPU's
- Practical Exercises on Plant Simulation Systems

Suggested further courses:

S7 Series Advanced

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S7 PLC-Advanced

Main Objectives

Based around the Step 7 software, the course will demonstrate the advanced features of the PLC, concentrating on the applied instruction set. Delegates will be able to use the mathematical functions, displaying results and interfacing with analogue units. Students are given practical exercises to solve.
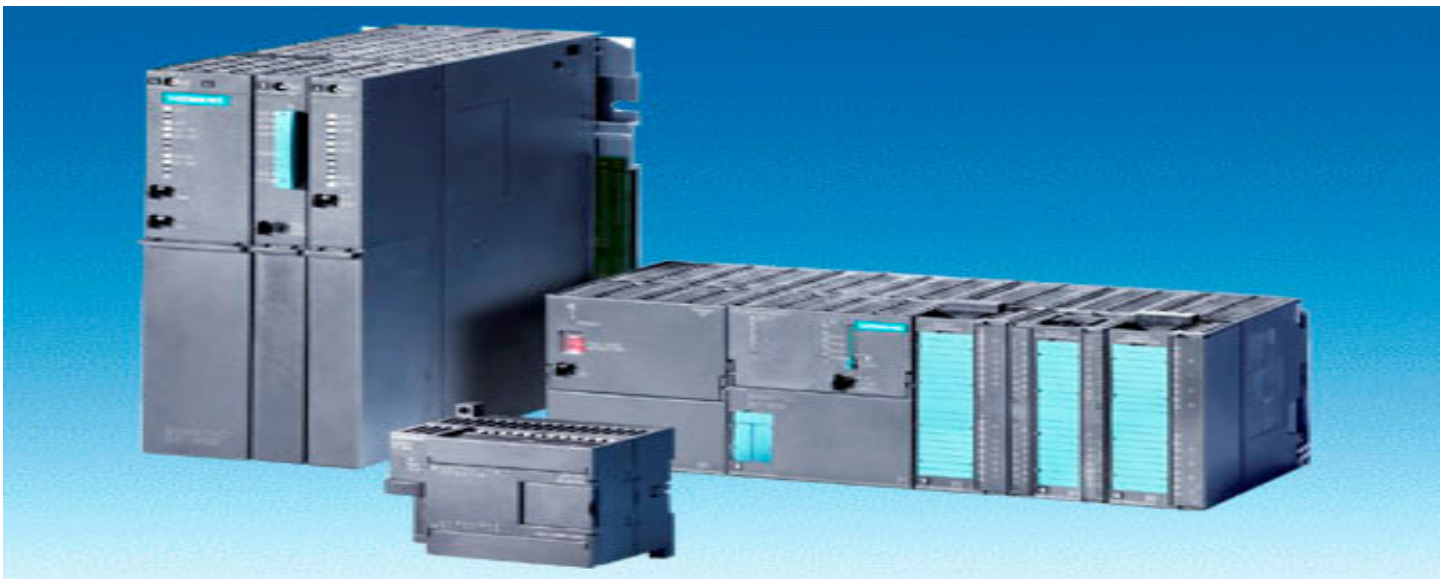
SIEMENS

Requirements

Students need previous experience with either Siemens S7 or other Manufactures PLC products. An understanding of basic electrical principles and number bases is required

Products Used

This course uses dedicated S7 series PLC hardware together with Step 7 programming software.

Subjects

- Networking protocols and configuration
- Programming Techniques
- Advanced Diagnostic Applications
- Analogue I/O
- High Level Instructions
- Special Modules i.e. High speed counters, etc
- Control Registers
- Practical Exercises on Plant Simulation Systems

Suggested further courses:

Duration

2 Days

iS Industrial Solutions

iFix Fundamentals

Main Objectives

The iFIX Fundamentals course is designed to provide a good working knowledge of iFIX. Valuable hands on lab exercises are provided to guide students through building a SCADA application.

The course is designed for process, automation engineers who will be developing, configuring and using iFIX applications.
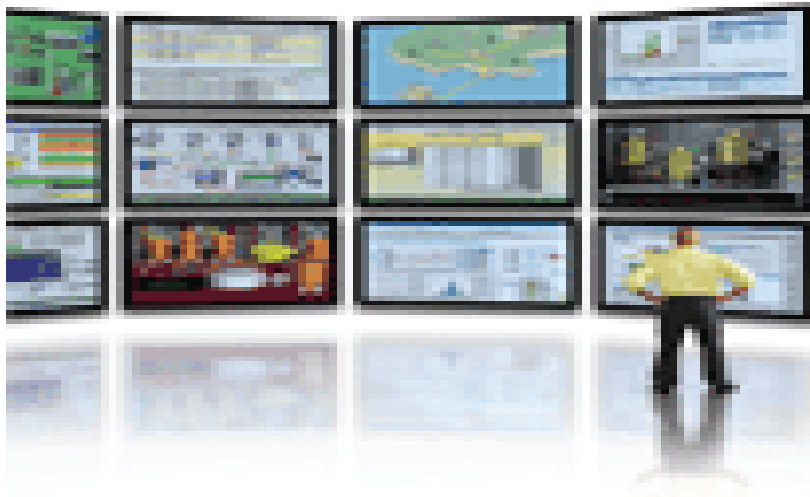
Requirements

Participants should have a good working knowledge of windows operating systems.

Products Used

iFix Version 5.0

Duration

4 Days

Subjects

- Familiarisation with the Workspace
- Understand iFIX SCADA servers and client nodes
- Use and understand the drawing tools
- Develop plant Mimics and graphics
- Use object Animation
- PLC Driver and System configuration
- Tag/Database Configuration
- Setup Real Time and Historical Trending
- Configure Alarms and generate Alarm screens
- Setup system wide security Strategy
- Create basic scripts using the VBA wizards
- Backup and Restore applications

iS **Industrial**Solutions

Training Details

Contact Details

Craig O'Rorke
Industrial Solutions
Unit 5 Teal Court
Strathclyde Business Park
Bellshill
ML4 3NN
01698 845550
cororke@industrialsolutions.uk.com

Training Venues

Courses Can be held at our Premises in Bellshill, or if a more flexible approach is required they can be held on-site, or at a location near your facility.

Materials

All course material will be provided, including PC, Hardware and applicable software

Training Cost

All courses will be charged at £325.00 per person per day, with a Minimum Charge of £650.00 per day.

All cost excluded VAT

Duration

Courses start at 9.30 and finish at approximately 4.30pm

Group Size

Up to 6 Delegates with minimum of 2 Delegates, smaller class sizes can be accommodated, but the minimum charge will apply .

Bespoke Courses

Bespoke course can be arranged and based on your specific requirements , please make contact to discuss your requirements.

iS Industrial Solutions