

# T568 Freelance System Engineering

## Course goal

The goal of this course is to engineer a Freelance system and to become familiar with configuration and commissioning tasks.

## Learning objectives

Upon completion of this course the participants will be able to:

- Describe the network structure in the Freelance architecture
- Describe the functionality of the major system components
- Describe the structure of application programs i.e. variables, programs, tasks
- Configure and maintain objects in Control Builder F
- Configure the AC 700F controller with local I/O's
- Configure the AC 800F controller and establish fieldbus connectivity to corresponding Remote I/O's
- Create and maintain standard and user specific function blocks
- Load the controller and work in online mode
- Create and modify standard displays
- Manage and configure alarm and events
- Setup trends and configure historical data collection

## Participant profile

This training is targeted to Freelance users and system integrators who need to get a comprehensive overview about the Freelance system capabilities.

## Prerequisites

Students shall know the fundamentals of working with Distributed Control Systems and have basic knowledge of IEC 61131-3 programming and of working with Microsoft Windows XP.



## Topics

- Freelance system architecture
- Control Builder F
- Application structures
- AC 700F and AC 800F Hardware
- OPC communication
- Applications with Function Block Diagram (FBD) and Structured Text (ST)
- User function blocks
- Standard displays
- Trends
- Alarm and events
- Logs and reports
- Free graphics
- Sequential Function Charts
- Import / export
- Bulk data handling
- System documentation

## Course type and methods

This is an instructor led course with interactive classroom discussions and associated lab exercises. Approximately 50% of the course is hands-on lab activities.

## Course duration

The duration is 5 days.

## Course outline

### Day 1

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- Course overview
  - Freelance system architecture
  - Control Builder F
  - Application structures
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### Day 2

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- Advanced configuration and commissioning
  - Applications with Function Block Diagram (FBD) and Structured Text (ST)
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### Day 3

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- Standard displays
  - Trends
  - Alarm and events
  - Logs and reports
  - Free graphics
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### Day 4

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- Sequential Function Charts (SFC)
  - User function blocks
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### Day 5

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- System connectivity
- Bulk Data Manager
- Import / export
- System documentation