

## Course description

# T560

## Freelance

# System and Engineering Basic Course

### Course goal

Participants will gain a good basic knowledge of the components and functionality of the hybrid process control system Freelance. After the course they will be able to configure and commission simple functions using Control Builder F and operate functions on the human system interface DigiVis.

### Learning objectives

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

- Describe the system 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 800F controller and establish fieldbus connectivity to corresponding Remote I/O's.
- Configure the AC 700F controller.
- Load the controller and work in online mode.
- Create and modify standard displays, like Group display and Trend display.
- Manage and configure alarm and events.
- Modify Free Graphic displays.

### Participant profile

Control personnel from all areas of automation.

### Prerequisites

Basic knowledge of loop-control technology and data processing, knowledge of the Windows® operating systems is of advantage.



### Topics

- System overview, system structure
- Hardware components AC 800F and AC 700F
- Safety and redundancy concept.
- System Functions (software)
- Operation using DigiVis
- Project planning hints
- Configuration and commissioning with Control Builder F
- Project Tree, Hardware Structure, Tag- and Variable list
- Functional modules: Monitoring, open- and closed-loop control
- Standardized and Free Graphic displays
- Message management, logging and reporting
- OPC based PLC connect

### 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.

### Duration

The duration is 5 days.

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### Course outline

Day 1	Day 2	Day 3	Day 4	Day 5
<ul style="list-style-type: none"><li>■ Welcome and introduction of the participants</li><li>■ Course Overview</li><li>■ Freelance System Architecture</li><li>■ Training Equipment Overview</li><li>■ Human System Interface DigiVis</li></ul>	<ul style="list-style-type: none"><li>■ AC 800F and AC 700F Hardware</li><li>■ Redundancy</li><li>■ Project tree</li><li>■ CBF Base Engineering</li></ul>	<ul style="list-style-type: none"><li>■ Variable list</li><li>■ Tag list</li><li>■ Hardware structure</li><li>■ CBF Base Commissioning</li><li>■ Open loop control</li><li>■ Monitoring</li></ul>	<ul style="list-style-type: none"><li>■ Closed loop control</li><li>■ Standard displays</li><li>■ Trendserver</li><li>■ Alarms and Events</li><li>■ CBF Viewer</li><li>■ Profibus DP with remote I/O</li><li>■ OPC based PLC connect</li></ul>	<ul style="list-style-type: none"><li>■ Logs and reports</li><li>■ Free graphics</li><li>■ Project Export and Import</li><li>■ Backup functionality</li></ul>

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