F851
Automation Products AC500
Advanced Programming

Course Duration

The duration is 3 days.

Course Type

This is an instructor led course. Approximately 50% of the time is used for hands-on labs and practical exercises.

Course Goal and Learning Objectives

The goal of this course is to learn the engineering of the AC500.
Upon completion of this course the participants will expand their programming skills and learn how to efficiently program and test AC500 and how to connect it to different control and monitoring devices.

Student Profile

This training is targeted at application engineers, programmers and system integrators.

Prerequisites and Recommendations

Students should have attended the F850 AC500 Basic course or have knowledge and experience associated with the content of this course.

Main Topics of the Training

Project structure and programming

- Definition of HW configuration for "Carwash" project
- Mapping of variables (import from templates)
- Program structure and programming
    - Task configuration
    - Dealing with POUs, actions and several global variable lists
    - Step chain programming, SFC editor
    - Editors: ST and FBD
    - Defined data types: arrays and structures
    - Creation of an own FB
    - Creation of an own library
    - Alarm and Event handling
    - Recipes
    - Project security; user groups and levels
- Creation of new project from the existing one (best practice by adaption)

Integrated Visualization

- Import and creation of visualization objects (dealing with several screens and master screen, switching between screens)
    - Mapping the variables for existing visualization
    - Creation of additional screens
    - Creation of a visualization template

Program test, test functions, trouble shooting

- Watch lists and further test functions
- Trends and traces
- Customization of programming environment depending on the programmer and application requirements

Programming of parallel control and monitoring devices
- Control out from different devices:
    - Integrated visualization
    - Web server
    - OPC client (e.g. Matrikon)
    - CP600 via CODESYS TCP/IP protocol (the CP600 project is prepared)

- Data backup and data handling
- Project and source code backup on the SD card
- Data handling by use of CAA library

Power and productivity
for a better world™

ABB

Course outline

Day 1	Day 2	Day 3
▪ Definition of HW configuration for "Carwash" project ▪ Mapping of variables (import from templates) ▪ Test of the hardware configuration ▪ Creating of program structure for "Carwash " ▪ Step chain programming ▪ Adapting of visualization template ▪ Commissioning of the project ▪ Program test, test functions and trouble-shooting ▪ Project backup	▪ Programming of control from different places ▪ Creation of additional vizualization objects ▪ Alarm handling with visualization ▪ Creation of own Function Block with integrated vizualization template ▪ Creation of own library ▪ Recipes with visualization ▪ Sampling traces with visualization	▪ Dealing with defined data types ▪ Data logging ▪ Test of control from different places: 　o Integrated visualization 　o Web server 　o OPC client (e.g. Matrikon) 　o CP600 via CODESYS TCP/IP protocol (the CP600 project is prepared) ▪ Project security, user groups and levels ▪ Data backup and data handling

Please note that a notebook with Automation Builder is provided by the training facility. If you wish to use your notebook, please install the current version of Automation Builder by yourself prior to the training.

Course Bookings

http://www100.abb.com/TPOnline/NET/Public%20Courses.aspx

Contact

ims-plc.training@fr.abb.com

Team Leader

Francois Bureau
Phone: +33 437 40 40 00
Fax: +33 437 40 40 01
francois.bureau@fr.abb.com

Dora Höfer
Phone: +49 62 21 / 701-1444
Fax: +49 62 21 / 701-1382
dora.hoefer@de.abb.com

Further AC500 Information
www.abb.com/PLC