

ABB UNIVERSITY & ONLINE ACADEMY FOR EXCITATION AND SYNCHRONIZATION

# J340 - UNITROL® P Service and Commissioning training

8 days, in-person training

#### **Course goals**

The course goal is to learn how to use the function programming language FUPLA 2 for reprogramming of the UNITROL® P processing unit (PSR2) and to implement the modifications. Attendees will learn to use the documentation, install and use FUPLA to program and troubleshoot UNITROL® P automatic voltage regulators and excitation systems.

#### Main learning objectives

Upon completion of this course, attendees will:

- Know the design aspects of UNITROL® P
- Know the principle mode of operation of the devices
- Know the UNITROL® P user software and can read the FUPLA
- Be able to modify parameters and the logic control software
- Be able to put a UNITROL® P system into service

# Participant profile(s) Prerequisites - Project design engineers - Commissioning engineers - Testing and maintenance personnel Prerequisites - Basic knowledge in electronics and digital technique - Basic personal computer knowledge Delivery and learning methods Duration

## Delivery and learning methods - Lectures - 8 days

- Practical exercises with FUPLA using a PC and the table module
- Practical exercises using the UNITROL® P demo unit

#### 8 days, Max. 8 participants

#### Registration

For registration or enquiries please visit: ABB University & Online Academy for Excitation - Enquiries

#### **Notes**

### **Topics**

#### **PSR2 Processing Unit**

- Operation principles
- Settings
- Memory organization, data formats
- Program control
- I/O device knowledge
- ARCnet coupler

#### **Operating Program Language FUPLA2**

- Installation
- PTS Shell (Programming tools)
  - Editor (Fup and state chart)
  - · Configuration manager and code generator
  - Documenting
  - Debugger
- Program structure
  - · Function blocks, function block library
  - Project design

#### **UNITROL® P**

- Channel configuration, design aspects
- Hardware, interfaces, ARCnet devices, converter electronics

#### AVR software of UNITROL® P

- Voltage regulator, limiters, PSS, superimposed regulators
- Channel and follow-up control
- Monitoring and protection
- Troubleshooting and commissioning aspect

