ABB

J670 – UNIREC Service and Commissioning

5 days, in person training

Course goals

The course goal is to learn how to start-up, adjust, operate, maintain, and troubleshoot the UNIREC system.

Main learning objectives

Upon completion of this course, attendees will:

– Remember the synchronous machine and its operating conditions

– Know the design aspects of UNIREC and its possible configuration

– Be familiar with the principle mode of operation of the electronic devices

– Can read and interpret the hardware drawing

– Be able to operate the voltage regulator using the excitation control builder tool

– Change parameters and display signals

– Use the trending and data logger

– Read the fault logger

– Identify and interpret alarm indication

– Be able to explain the most important software functions

– Be able to localize and replace defective components

– Be familiar with the test and commissioning procedure for UNIREC

Participant profile(s)	**Prerequisites**
– Application, Test, Service and Commissioning Engineers	– Basic knowledge of electronics and power generation – Personal computer knowledge is required – English Level: B1

| **Delivery and learning methods**	**Duration**
– Lectures and demonstrations – Practical exercises with training equipment	– 5 days classroom training, Max. 8 participants

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Registration

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

ABB MyLearning page (requires log in): J670 - UNIREC Service and Commissioning

Notes

Topics

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– Basic of excitation system and operating condition of the synchronous machine

– Configurations of UNIREC for various applications

– Setting, Indication and principle of operation of the hardware devices

  • Main Controller AC 800PEC
  • Excitation Controller CCM6080
  • Measuring and I/O interfaces (CIO)
  • Converter Interface (CCI)
  • Service Control Panel SCP
  • Converter types

– Principle of operation of the software, difference to UN6080

– Ethernet addressing and communication to upper control systems

– How to use the tools for UNITROL 6080 utilized for commissioning

  • PEC Tool for SW download and upload
  • PEC Tool for trending and data logger
  • Control Builder for Parameter modifications

– How to use the Service Control Panel SCP

  • How to change parameters, how to record signals using the data logger and trending features
  • Software downloads

– Discussion of the most important parameters

– Hands-on Training using UN6080 training equipment
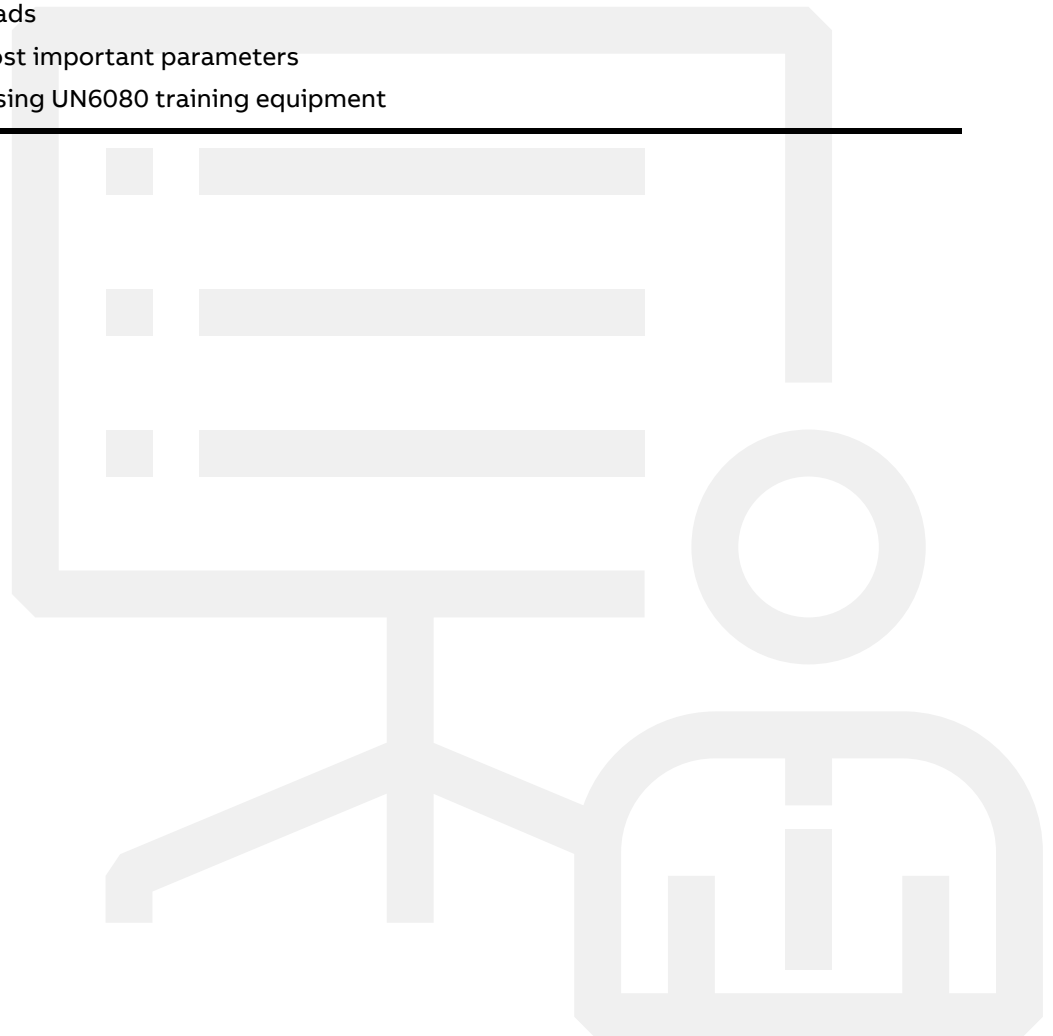
Virtual Course map

Typical course layout (time or sequence may change)

DAY 1 | 8:30 AM – 4:30 PM

– Course overview
– Basics of excitation system
– Thyristor Converter
– Overview of UNIREC System
  • System Topology
  • Application Range
  • Converter Types
  • Control Panels

– How to use Excitation Control Terminal
  • Operation
  • Trending
  • Data Logger
  • Events
– User's manual operation

DAY 2 | 8:30 AM – 4:30 PM

– Principe of operation of UNIREC
  • Interface
  • How to operate
  • Use of Control Builder interaction windows

– Operation with the Service Control Panel (SCP)
– Factory/Site visit

DAY 3 | 8:30 AM – 4:30 PM

– Hardware Concept
– Hardware Components
– Function of the Hardware Components
– How to read the Hardware Schema
– Hardware Schema Exercise

– Software Concept
– Software Function
– Software Tools
– Software Handling

DAY 4 | 8:30 AM – 4:30 PM

– Overview of the PECTool
– Display Events
– Action for Alarm and Faults
– Trending
– Transient Recorder

– Change IP Address Setting of controllers
– Backup / Download the software
– Control Builder Project Backup/Restore
– Download the CIT software to the controller

DAY 5 | 8:30 AM – 4:30 PM

– Commissioning Procedure Overview
– Specific Tests
– How to perform preventive maintenance work
  • Schedule
  • Procedures
  • Spare parts

– How to perform corrective maintenance work
  • Alarm handling
  • Troubleshooting procedure
  • Replacement of defective components
– Evaluation
– Conclusion & Feedback

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Contact us

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