Training Brochure
Grid Automation System

ABB India Limited
Grid Automation System

Power and productivity
for a better world™

General

The Training center of ABB IN / PGGA offers courses of Products and System courses for different target groups within the modular of the training program.
The objective of the Training Program is to provide education and training to make application of Protection and Substation Automation leading to more and secure power. We have developed a training program to help you to meet the technical challenges and complexities of integrating modern Protection and Substation Automation into your expanding power system infrastructure. The Training Program offers a structured program, designed to improve the technical competency of your engineers and optimize the value of your power system investment.

Training center location

ABB India Limited
Grid Automation
Plot No. 5 & 6, 2nd Phase
Peenya Industrial Area, P.B. No. 5806
Bangalore - 560 058 India

Time

The training timings is as per the schedule. The first day of the training program starts by 09:30 AM

Registration

To guarantee maximum benefit of the courses for the attendees, the number of participants for the course is limited. You are advised to apply well in advance. Training confirmation will be sent to you as soon as the program is finalized with the complete details

Customized training courses

If you are interested in special customized curses to be conducted in our learning center or on your place, please contact us

Hotel reservations

The list of hotels in Bangalore is also attached with the enrollment form.
Please make reservation by yourself as soon as possible.

Cancellation & Payment terms

The details are attached in the enrollment form.

For Inquiries

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(a)Training Room 01: Remote Terminal Unit

(b) Training Room 06: GAS

(C) The Training Centre Building

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Training Course schedule

Following are the course modules available for the training. The details of the modules are given in the subsequent sections.

Course INPGGA-01: Transmission Line Protection
Course INPGGA-02: Station Protection
Course INPGGA-03: Generator System Protection
Course INPGGA-04: Substation Automation with IEC61850
Course INPGGA-05: Gateway and Remote HMI Engineering
Course INPGGA-06: Substation Protection course.
Course INPGGA-07: Substation Automation course.
Course INPGGA-08: Substation Protection and Automation course.
Course INPGGA-09: Remote Terminal Unit - RTU500 Basic course.
Course INPGGA-10: Remote Terminal Unit - RTU500 PLC and HMI.
Course INPGGA-11: Remote Terminal Unit - RTU500 Advanced.
Course INPGGA-12: Remote Terminal Unit - RTU500 with IEC61850 Client & Server.
Course INPGGA-13: Remote Terminal Unit - RTU500 & MicroSCADA Remote HMI.
Course INPGGA-14: Remote Terminal Unit - Din Rail Mounting Basic Course.
Course INPGGA-15: 800xA & Power Management System.

Course description

INPGGA– 01
Transmission Line Protection

Course goal

- To impart knowledge on the basics of power system fundamentals and various protection functions and products normally used in Transmission Lines. The product training covers information on basics and product overview, operation & maintenance of these aspects.

Learning objectives

Upon completion of this course, students will be able to:

- Gain fundamentals of power system protection, and application
- Gain knowledge on transmission Line protection products like REL670/650 and RED670/RED650
- Learn PCM600 tool functions

Participant profile

- Personnel from Power Utilities, Power Generation companies & industries and Consultants responsible for engineering, relay setting, testing, commissioning, operation, and maintenance of substations.

Prerequisites

- Degree or diploma in engineering, basic knowledge of Protection & Substation Automation and PC operations

Course duration

- The duration of the course is 5 days.

Topics

- The Electrical Power System – Fundamentals
- Protection for Electrical Power Systems – Fundamentals
- Protection for Transmission Line
- Relion670/650 IED hardware
- Relion670/650 Protection and Control device with PCM600 Toolbox -Operation & Maintenance
- REL670/REL650 for Line Distance Protection -IED Functionality
- RED670/RED650 for Line Differential Protection -IED Functionality
- Engineering of Protection System
- Case Studies, Q & A, Open Discussion

Course type and methods

This is an instructor led seminar with practical exercises on PCM600.
The language of the course is English.

ABB India Limited
Grid Automation System

Course description

INPGGA–02
Station Protection

Course goal

- To impart knowledge on the basics of power system fundamentals and various protection functions and products normally used in Transformers and Busbars.The product training covers information on basics and product overview, operation & maintenance of these aspects.

Learning objectives

Upon completion of this course, students will be able to:

- Gain fundamentals of power system protection, and application
- Gain knowledge on Transformer , Busbar protection products like RET670/650 and REB670/650
- Learn PCM600 tool functions

Participant profile

- Personnel from Power Utilities, Power Generation companies & industries and Consultants responsible for engineering, relay setting, testing, commissioning, operation, and maintenance of substations.

Prerequisites

- Degree or diploma in engineering, basic knowledge of Protection & Substation Automation and PC operations

Course duration

- The duration of the course is 5 days.

Topics

- The Electrical Power System – Fundamentals
- Protection for Electrical Power Systems – Fundamentals
- Protection for Transformer , Busbar
- Relion670/650 IED hardware
- Relion670/650 Protection and Control device with PCM600 Toolbox -Operation & Maintenance
- RET670/RET650 for Transformer Differential Protection -IED Functionality
- REB670/REB650for Busbar Differential Protection -IED Functionality
- Engineering of Protection System
- Case Studies, Q & A, Open Discussion

Course type and methods

This is an instructor led seminar with practical exercises on PCM600.
The language of the course is English.

ABB India Limited
Grid Automation System

Course description

INPGGA–03
Generator Protection

Course goal

- To impart knowledge on the basics of power system fundamentals and various protection functions and products normally used in Generator. The product training covers information on basics and product overview, operation & maintenance of these aspects.

Learning objectives

Upon completion of this course, students will be able to:

- Gain fundamentals of power system protection, and application
- Gain knowledge on Generator protection products like REG670/650
- Learn PCM600 tool functions

Participant profile

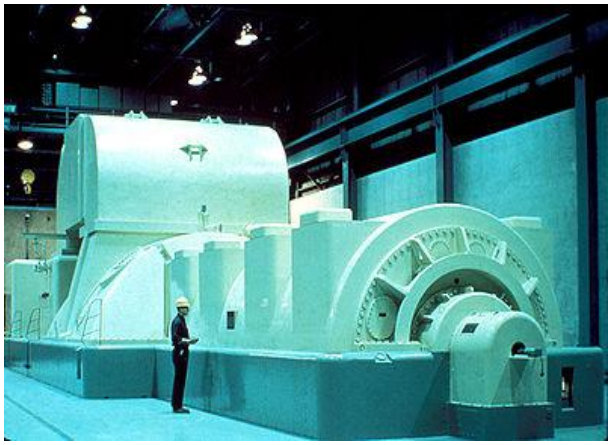
- Personnel from Power Utilities, Power Generation companies & industries and Consultants responsible for engineering, relay setting, testing, commissioning, operation, and maintenance of substations.

Prerequisites

- Degree or diploma in engineering, basic knowledge of Protection & Substation Automation and PC operations

Course duration

- The duration of the course is 5 days.



Topics

- The Electrical Power System – Fundamentals
- Protection for Electrical Power Systems – Fundamentals
- Protection for Generator
- Relion670/650 IED hardware
- Relion670/650 Protection and Control device with PCM600 Toolbox -Operation & Maintenance
- REG670/REG650for Generator Differential Protection -IED Functionality
- Engineering of Protection System
- Case Studies, Q & A, Open Discussion

Course type and methods

This is an instructor led seminar with practical exercises on PCM600.
The language of the course is English.

ABB India Limited
Grid Automation System

Course description

INPGGA–04
Substation Automation with IEC61850

Course goal

- To impart knowledge on the basics of IEC 61850-communication standard and station automation and to provide knowledge of the systems normally used in these applications. The product training covers information on basics and product operation & maintenance and Configuration of HMI aspects

Learning objectives

Upon completion of this course, students will be able to:

- Gain basics of Substation Automation system
- Gain basic knowledge on IEC 61850
- Gain knowledge on BCU
- Gain knowledge on SCADA HMI Tool.
- Learn PCM600 tool functions

Participant profile

- Personnel from Power Utilities, Power Generation companies & industries and Consultants responsible for engineering, relay setting, testing, commissioning, operation, and maintenance of substations.

Prerequisites

- Degree or diploma in engineering, basic knowledge of Protection & Substation Automation and PC operations

Course duration

- The duration of the course is 5 days.

Topics

- Substation Automation in Transmission and Distribution Networks Fundamentals
- Data Communication for Power Utilities - Fundamentals
- Functions of Substation Automation Systems - Application & Design
- Communication Protocols for Power Utilities - Application & Design
- IEC 61850 for Substation Automation - Application & Design
- System Architecture Design for Substation Automation – System Overview
- IED670 Protection and Control device with PCM600 Toolbox – Operation & Maintenance
- REC670 for Control Solutions- Configurations Overview
- MicroSCADA Pro for Substation Automation – HMI Engineering
- Operation and Maintenance for Substation Automation Systems
- Configuration for Substation Automation System - System Integration

Course type and methods

This is an instructor led seminar with practical exercises on PCM600, MicroSCADA pro. The language of the course is English.

ABB India Limited
Grid Automation System

Course description

INPGGA–05
Gateway Engineering and Remote HMI configuration

Course goal

- To impart knowledge on the basics of IEC 61850-communication standard and station automation and to provide knowledge of the systems normally used in these applications. The product training covers information on basics and product operation & maintenance and Configuration of HMI aspects

Learning objectives

Upon completion of this course, students will be able to:

- Gain basics of Substation Automation system
- Gain basics of Remote Communication
- Gain basic knowledge on IEC60870 –5-101/104
- Gain knowledge on SCADA HMI Tool.
- Learn PCM600 tool functions

Participant profile

- Personnel from Power Utilities, Power Generation companies & industries and Consultants responsible for engineering, relay setting, testing, commissioning, operation, and maintenance of substations.

Prerequisites

- Degree or diploma in engineering, basic knowledge of Protection & Substation Automation and PC operations

Course duration

- The duration of the course is 5 days.

Topics

- Substation Automation in Transmission and Distribution Networks Fundamentals
- Data Communication for Power Utilities - Fundamentals
- Functions of Substation Automation Systems - Application & Design
- Communication Protocols for Power Utilities - Application & Design
- System Architecture Design for Remote communication – System Overview
- MicroSCADA Pro for Substation Automation – Gateway Engineering
- MicroSCADA Pro for Substation Automation – Remote HMI Engineering
- Configuration for Remote Control Center - System Integration
- Operation and Maintenance for Remote Control Center

Course type and methods

This is an instructor led seminar with practical exercises on PCM600, MicroSCADA pro .
The language of the course is English.

ABB India Limited
Grid Automation System

Course description

INPGGA–06
Substation Protection System

Course goal

- To impart knowledge on the basics of power system fundamentals and various protection functions and products normally used in these applications. The product training covers information on basics and product overview, operation & maintenance aspects.

Learning objectives

Upon completion of this course, students will be able to:

- Gain fundamentals of power system protection, and application
- Gain knowledge on transmission products.
- Learn PCM600 tool functions

Participant profile

- Personnel from Power Utilities, Power Generation companies & industries and Consultants responsible for engineering, relay setting, testing, commissioning, operation, and maintenance of substations.

Prerequisites

- Degree or diploma in engineering, basic knowledge of Protection & Substation Automation and PC operations

Course duration

- The duration of the course is 10 days.

Topics

- The Electrical Power System – Fundamentals
- Protection for Electrical Power Systems – Fundamentals
- Protection for Busbar , Circuit breakers, Power Transformers and reactors Application & Design
- Relion670/650 IED hardware
- Relion670/650 Protection and Control device with PCM600 Toolbox -Operation & Maintenance
- REL670/REL650 for Line Distance Protection -IED Functionality
- RED670 for Line Differential Protection -IED Functionality
- RET670/RET650 for Transformer Protection -IED Functionality
- REB670/REB500 for Busbar Protection -IED Functionality
- REG670 for Generator Protection -IED Functionality
- Engineering of Protection System
- Case Studies, Q & A, Open Discussion

Course type and methods

This is an instructor led seminar with practical exercises on PCM600.
The language of the course is English.

ABB India Limited
Grid Automation System

Course description

INPGGA–07
Substation Automation System

Course goal

- To impart knowledge on the basics of IEC 61850-communication standard and station automation and to provide knowledge of the systems normally used in these applications. The product training covers information on basics and product operation & maintenance and Configuration of HMI aspects.

Learning objectives

Upon completion of this course, students will be able to:

- Gain basics of Substation Automation system
- Gain basic knowledge on IEC 61850
- Gain knowledge on BCU
- Gain knowledge on SCADA HMI Tool.
- Learn PCM600 tool functions

Participant profile

- Personnel from Power Utilities, Power Generation companies & industries and Consultants responsible for engineering, relay setting, testing, commissioning, operation, and maintenance of substations.

Prerequisites

- Degree or diploma in engineering, basic knowledge of Protection & Substation Automation and PC operations

Course duration

- The duration of the course is 10 days.

Topics

- Substation Automation in Transmission and Distribution Networks Fundamentals
- Data Communication for Power Utilities - Fundamentals
- Functions of Substation Automation Systems - Application & Design
- Communication Protocols for Power Utilities - Application & Design
- IEC 61850 for Substation Automation - Application & Design
- System Architecture Design for Substation Automation – System Design
- IED670 Protection and Control device with PCM600 Toolbox – Operation & Maintenance
- REC670 for Control Solutions- Configurations and Engineering
- MicroSCADA Pro for Substation Automation – HMI Engineering
- Gateway Application
- Operation and Maintenance for Substation Automation Systems
- Configuration for Substation Automation System - System Integration

Course type and methods

This is an instructor led seminar with practical Exercises on PCM600,Micro SCADA pro .
The language of the course is English.

Course description

INPGGA–08
Substation Protection and Automation System

Course goal

- To impart knowledge on the basics of IEC 61850-communication standard and station automation and to provide knowledge of the systems normally used in these applications. The product training covers information on basics and product operation & maintenance and configuration of HMI aspects.

Learning objectives

Upon completion of this course, students will be able to:

- Gain basics of Substation Automation system
- Gain basic knowledge on IEC 61850
- Gain knowledge on BCU
- Gain knowledge on SCADA HMI Tool .
- Learn PCM600 tool functions

Participant profile

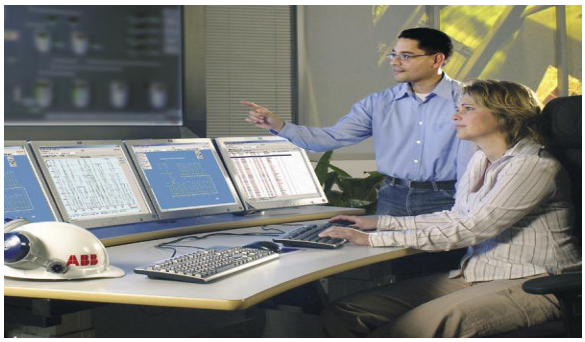
- Personnel from Power Utilities, Power Generation companies & industries and Consultants responsible for engineering, relay setting, testing, commissioning, operation, and maintenance of substations.

Prerequisites

- Degree or diploma in engineering, basic knowledge of Protection & Substation Automation and PC operations

Course duration

- The duration of the course is 10 days.



Topics

- Substation Automation in Transmission and Distribution Networks Fundamentals
- Data Communication for Power Utilities - Fundamentals
- Functions of Substation Automation Systems - Application & Design
- Communication Protocols for Power Utilities - Application & Design
- IEC 61850 for Substation Automation - Application & Design
- System Architecture Design for Substation Automation – System Design
- IED670 Protection and Control device with PCM600 Toolbox – Operation & Maintenance
- REC670 for Control Solutions- Configurations and Engineering
- MicroSCADA Pro for Substation Automation – HMI Engineering
- Gateway Application
- Operation and Maintenance for Substation Automation Systems
- Configuration for Substation Automation System - System Integration

Course type and methods

This is an instructor led seminar with practical exercises on PCM600, MicroSCADA pro .
The language of the course is English.

Course description

INPGGA–09
Remote Terminal Unit – RTU500 Basic course

Course goal

The training course provides a basic introduction into data acquisition and RTU500 family.
Participants will be informed about the actual ABB RTU products, RTU500 family. basics of data acquisition process and the utilities' secondary process He knows how to configure PC for using RTU500 and is familiar with RTU demonstration box which is used in the RTU500 courses.

Learning objectives

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

- Gain basics of Remote Terminal Units
- Gain basic knowledge on Remote IEC Protocol
- Gain knowledge on RTUtill 500 software
- Gain basic knowledge on Protocol Simulator
- Create Configuration of RTU500.

Participant profile

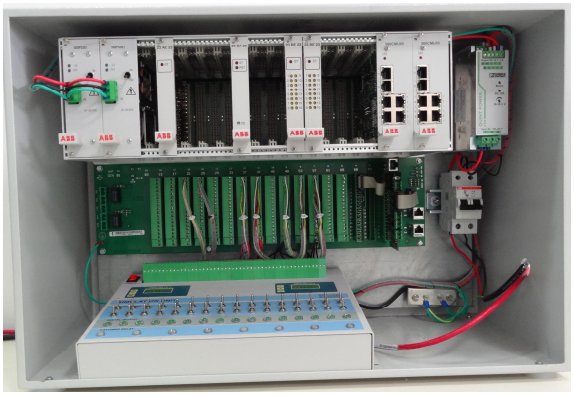
- Personnel from Power Utilities, Power Generation companies & industries and Consultants responsible for engineering, testing, commissioning, operation, and maintenance of substations.

Prerequisites

- Degree or diploma in engineering, basic knowledge in Utility process, PC Handling (Microsoft Windows) And Internet Explorer Experience
  Knowledge of general telecontrol functions, IEC protocols.

Course duration

- The duration of the course is 3 days.



Topics

- Basics of data acquisition and utilities' secondary process.
- Communication protocol basics.
- Communication interfaces, networks.
- Introduction into ABB RTU products and RTU500 family.
- PC applications for RTU500; RTUtil500 installation and Over view of Protocol Simulator.
- The integrated Webserver of the RTU500.
- RTU Demonstration box.
- Properties of the communication units (CMU)
- Diagnosis by the Integrated Webserver

Course type and methods

This is an instructor led seminar with practical exercises on RTUtill 500 and Protocol Simulator with Demo Box.
The language of the course is English.

Course description

INPGGA–10
Remote Terminal Unit – RTU500 PLC & HMI

Course goal

The participant, who has already experience with RTU500, RTUtil500 and Webserver, refreshes his RTU knowledge. He extends his skills especially concerning configuration, extensions and trouble shooting.

Learning objectives

Upon completion of this course, students will be able to:

- He knows the features and possibilities of the 'Integrated Human Machine Interface', and is trained in creating his own station diagram, to control a substation.
- Extension of a project in RTUtil500 by a PLC-program.

Participant profile

- Personnel from Power Utilities, Power Generation companies & industries and Consultants responsible for engineering, testing, commissioning, operation, and maintenance of substations.

Prerequisites

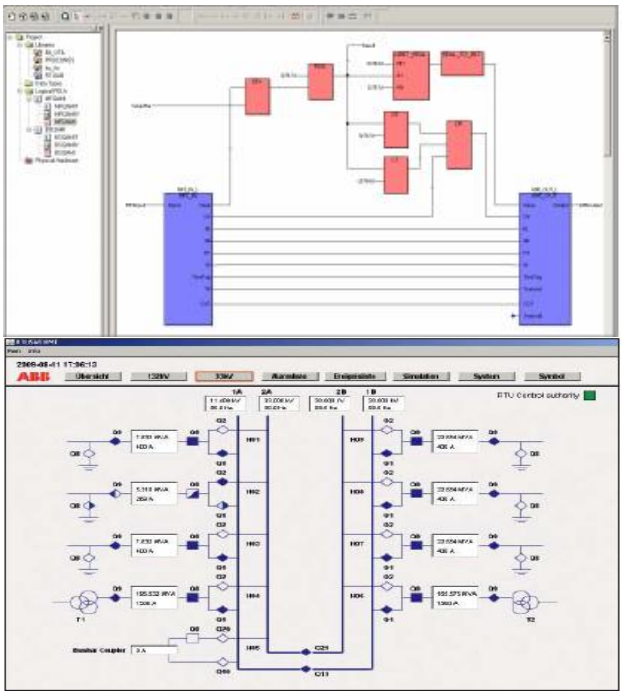
- Degree or diploma in engineering, Attendance On Course INPSNM-SA09
  basic knowledge in PLC programming.

Course duration

- The duration of the course is 2 days.

Course type and methods

This is an instructor led seminar with practical exercises on RTUtill 500, Web HMI, MULTIPROGwt & Protocol Simulator with Demo Box.
The language of the course is English.



Topics

- System integration of subordinated RTUs, Master- and Slave function
- RTU500 Redundancy Concept for power supplies, communication lines and –units.
- Creation of a single line diagram for switchgear by using the 'Integrated HMI'
- MULTIPROGwt – handling of the tool
- Libraries and their modules
- Extension of a project in RTUtil500 by a PLC-program
- Cyclic tasks and system tasks
- Exercise program concerning binary and analog processing and command handling

Course description

INPGGA–11
Remote Terminal Unit – RTU500 Advanced

Course goal

The Training Course provides a Basic Introduction on Integrating RTU with Master Control Center With Telemetry Protocols such as IEC60870-5-101 & IEC60870-5-104 And also Integrating Relays on IEC60870-5-103, Integration of Multi-Function Meters On Modbus protocol.

Learning objectives

Upon completion of this course, students will be able to:

- Gain basics of Integration of RTU with Master.
- Gain basic knowledge IEC Telemetry Protocol.
- Gain knowledge on Modbus Protocol.
- Gain knowledge on RTU Integration with different MFM/Relay's.
- Learn to create Configuration of RTU500.
- The Redundancy Concept of the RTU500.
- Cyber security features are treated during the course.

Participant profile

- Personnel from Power Utilities, Power Generation companies & industries and Consultants responsible for engineering, relay setting, testing, commissioning, operation, and maintenance of substations.

Prerequisites

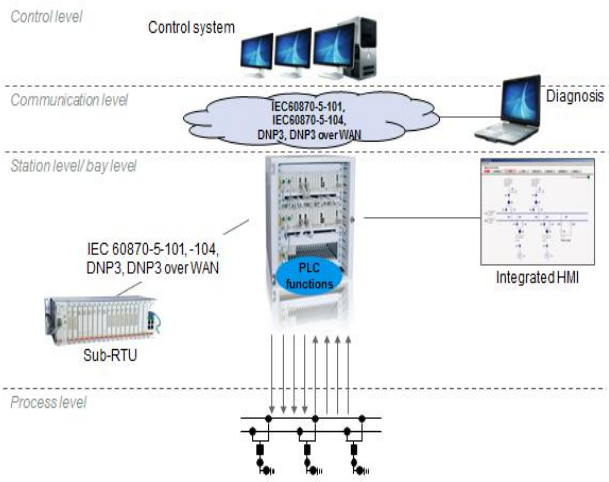
- Degree or diploma in engineering, Attendance On Course INPSNM-SA09.

Course duration

- The duration of the course is 3 days.

Course type and methods

This is an instructor led seminar with practical exercises on RTUtill 500, Protocol Simulator, and Integration with other devices with Demo Box.
The language of the course is English.



Topics

- How to configure an IEC 101 / 104 communication line
- Excel-Import/Export function of RTUtil500
- Process archives for indications, measurements, pulse counter, securtity events
- Tool RTUtil with the menus selection-configuration-filter-transfer-diagnosis-listprotocol-configuration monitor.
- System integration
- Analyzing telecontrol protocols based upon protocol family IEC60870-5-101, IEC60870-5-103, IEC60870-5-104 and other protocols.
- Exercises with subordinated devices
- Cyber security features of the RTU
  Analyzing telecontrol protocols based upon protocol family IEC60870-5-101, IEC60870-5-104 and other protocols.
- The Redundancy Concept of the RTU500 concerning power supplies, communication lines and communication units are discussed and the participant is informed about properties and limits.
- Gateway Functions and network-tree-routing.
- The training can be modified according to the requirements of the participants.

Course description

INPGGA–12
Remote Terminal Unit – RTU500 with IEC61850 Client & Server

Course goal

- After the course the participant will be familiar to configure RTU500 IEC61850 as client (Gateway) and server (IED Proxy). In exercises the engineering is done for common configuration together with REx670 or 615, 630, REF542plus… The participant will have a basic knowledge and practice of necessary tools for configuration and protocol analysis. He is able to commission RTU500 in IEC61850 client, server and GOOSE configuration

Learning objectives

Upon completion of this course, students will be able to:

- Gain basics of Substation Automation system
- Gain basic knowledge on IEC 61850
- Gain knowledge on System Integration
- Gain knowledge on Import/Export of SCD-files.
- Learn PCM600 & IET600 tool functions

Participant profile

- Personnel from Power Utilities, Power Generation companies & industries and Consultants responsible for engineering, relay setting, testing, commissioning, operation, and maintenance of substations.

Prerequisites

- Degree or diploma in engineering, Attendance On Course INPSNM-SA09.

Course duration

- The duration of the course is 2 days

Course type and methods

This is an instructor led seminar with practical exercises on PCM600, RTUtill 500, and IET600. The language of the course is English.

Topics

- Introduction in IEC61850 standard structure - used protocol elements
- RTU500 as IEC61850 server
- RTU500 as IEC61850 client
- RTU Server (IED) configuration
- RTU client (gateway) configuration
- GOOSE configuration
- Data flow: EXCEL import of IEC61850 configuration into RTU500
- Usage of tools (RTUtil500, PCM600, IET600)
- Create SCD files
- Integrated Human Machine Interface
- Configuration of NCC protocols (e.g. IEC60870-5-101)
- Import/Export of SCD-files

Course description

INPGGA–13

Remote Terminal Unit – RTU500 & MicroSCADA Remote HMI

Course goal

- To impart knowledge on the basics of RTU 560 and its configuration with RTUtill 500 and MicroSCADA configuration

.

Learning objectives

Upon completion of this course, students will be able to:

- Gain basics of Substation Automation system
- Gain basic knowledge on RTU500
- Gain knowledge on SCADA HMI Tool.

Participant profile

- Personnel from Power Utilities, Power Generation companies & industries and Consultants responsible for engineering, relay setting, testing, commissioning, operation, and maintenance of substations.

Prerequisites

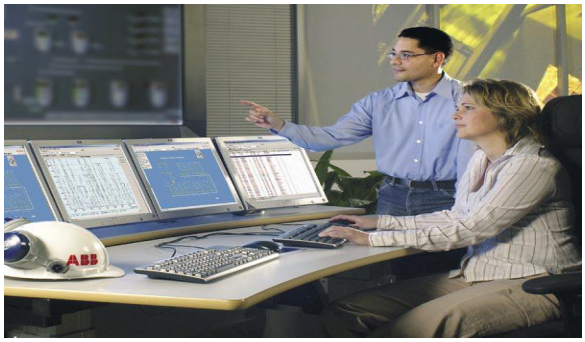
- Degree or diploma in engineering, basic knowledge of RTUs, SCADA systems and PC operations

Course duration

- The duration of the course is 5 days.

Course type and methods

This is an instructor led seminar with practical exercises on MicroSCADA pro.
The language of the course is English.



Topics

- Substation Automation in Transmission and Distribution Networks Fundamentals
- Data Communication for Power Utilities - Fundamentals
- Functions of Substation Automation Systems - Application & Design
- Communication Protocols for Power Utilities - Application & Design
- IEC Telemetry protocol for Substation Automation - Application & Design
- System Architecture Design for Substation Automation – System Design
- MicroSCADA Pro for Substation Automation – HMI Engineering
- Gateway Application
- Operation and Maintenance for Substation Automation Systems
- Configuration for Substation Automation System - System Integration

Course description

INPGGA–14
Remote Terminal Unit – Din Rail Mounting Basic

Course goal

After the course the participant will be familiar with DIN Rail mountable modules of the RTU500 family.
The available DIN Rail mountable modules are introduced, and the system concept for DIN Rail mounting is described (Connections to the bus system, system limitations, license model, ...).
Using RTU WIZARD and the configuration tool RTUtil500 DIN Rail mountable systems are configured in practical exercises.
The technical details of the available Multi Meter (CT / VT interface modules) are discussed, the Configuration and conversion parameter are described.
In a practical exercise the participant is able to configure and test his own Multi Meter (560CVD03).
The features and configuration of the available GSM/GPRS modems is presented in the training..

Learning objectives

Upon completion of this course, students will be able to:

- Gain Knowledge about Din Rail Mounting RTU's.
- Gain basic knowledge on Remote IEC protocol.
- Gain knowledge on GSM / GPRS modem connection.
- Gain knowledge on RTUtill 500.
- Learn to create Configuration of RTU500.

Participant profile

- Personnel from Power Utilities, Power Generation companies & industries and Consultants responsible for engineering, testing, commissioning, operation, and maintenance of substations.

Prerequisites

- Degree or diploma in engineering, basic knowledge Utility process, PC Handling (Microsoft Windows) And Internet Explorer Experience, Knowledge of general telecontrol functions, IEC protocols.

Course duration

- The duration of the course is 2 days.

Topics

- Hardware modules for DIN Rail mounting (basic modules, I/O modules, additional)
- System concept of the DIN Rail mountable RTU and RTU500
- Configuration of DIN Rail mountable Systems by using RTU WIZARD and RTUtil500
- Configuration of additional DIN Rail mountable I/O modules by using RTUtil500
- Technical Details and Properties of the Multi Meter (CT / VT Interface modules)
- Wiring principles for Voltage Transformer (VT) / Current Transformer (CT)
- Configuration of Transducers And MFM.
- GSM / GPRS modem connection (client / server) and PPP connection
- Practice with basic modules, I/O modules, Multi Meter und GSM/GPRS modems

Course type and methods

This is an instructor led seminar with practical exercises on RTUtill 500/Wizard and Protocol Simulator with Demo Box.
The language of the course is English.

Course description

INPGGA–15
800xA and Power Management System

Course goal

- To impart knowledge on the basics of 800xA System and Power Management System using 800xa platform. To provide basic Knowledge of the systems normally used in these applications. The product training covers information on basics of 800xA, AC800M controller and associated hardware, communication modules, Product operation, maintenance and Configuration of HMI aspects.

Learning objectives

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

- Explain the System 800xA architecture & function of different components.
- Navigate in the System 800xA Environment.
- Configure AC800M Hardware and associated Communication interface, I/O's.
- Handle trend displays, alarm/event list and standard monitoring/control functions.
- Understand various communication protocols associated with 800xA.
- Supervision of IED's using IEC61850.
- Understand Basics of PMS functionalities.

Participant profile

- This training is targeted to operators and maintenance Personnel from Industries, Power Utilities & Power Generation companies.

Prerequisites

- Participants shall know the fundamentals of working with control systems/Sub-station automation and having basic knowledge of windows Operating System Environment

Course duration

- The duration of the course is 5 days.

Topics

- 800xA System Architecture and Frame work- Fundamentals
- AC800M Hardware and its associated Input/ Output Modules – Fundamentals
- Configuration of 800xA System – Fundamentals.
- Communication Protocols for Industries and Power Utilities - Application & Design
- IEC 61850 for Substation Automation using 800xA - Application & Design
- Functions of Power Management System integrated with IEC61850 – Application & Design
- Functions of 800xA Integration – Application & Design.
- 800xA System Health Check and Trouble Shooting – Fundamentals.
- 800xA for Substation Automation and Power Management System – HMI Engineering
- 800xA Historian – Fundamentals.

Course type and methods

This is an instructor led seminar with practical exercises on 800xA system.
The language of the course is English.