Course description

INPSNM–SA11
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.

Topics

- How to configure an IEC 101 / 104 communication line
- Excel-Import/Export function of RTUtil500
- Process archives for indications, measurements, pulse counter, security events
- Tool RTUtil with the menus selection-configuration filter-transfer-diagnosis-list-protocol-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 type and methods

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

Course duration

The duration of the course is 3 days