Telepace Studio Product Training

Telemetry & Remote SCADA Solutions

Telepace Studio Programming and SCADAPack Controller Three Day Training Session

Schneider Electric

Training Course Overview

This 3-day course is designed to give each participant a detailed introduction to the SCADAPack controller, as well as configuration of the RealFLO gas flow computer interface. The knowledge gained from this course will enable the participants to successfully use SCADAPack controllers in a wide variety of SCADA, gas flow measurement, process control and telemetry applications.

SCADAPack Controller Hardware

The installation, operation and maintenance of the SCADAPack controller as well as all hardware aspects of the SCADAPack controller will be explained to give the participant a detailed knowledge of the features of the SCADAPack controller.

The SCADAPack controller programming languages, SCADAPack controller memory map and an explanation of using C programs and Ladder Logic Programs concurrently is given.
A detailed explanation of register addressing using the I/O Database is presented. Assigning I/O Database registers to physical I/O using the register assignment dialog.

Series 5000 I/O Modules

Addressing and configuring Series 5000 I/O modules used with the SCADAPack is explained.
The types of modules available and their application in telemetry or SCADA systems are presented.

Telepace Ladder Logic Software

The Telepace Ladder Logic program and database structure. The Ladder Logic program execution is examined from single and multiple input logic elements to ladder rungs and networks. The program sequence of Ladder Logic background tasks such as serial port communication and I/O Database access are explained.

Programming the SCADAPack controller using the Telepace Ladder Editor. Using the Ladder Editor to create and edit sample programs, the participant is guided through the many features of the Ladder Editor. The sample programs created will use most of the Ladder Logic functions and an explanation of use and configuration of each function will be given.

SCADAPack Controller Communication

Programming the SCADAPack controller as a master station in a master/slave or remote I/O configuration. This topic will include an explanation and a practical application of the TeleBUS Communication Protocol. Programming and configuration of the SCADAPack controller for protocol communication using the MSTR function of the Telepace Ladder Editor.

Training Course Schedule

Note that the times below are for reference only. Times may be changed for individual courses.

Day One

09:00 – 10:30 Introductions and distribution of course materials
Outline course schedule and topics to be covered during the course
Hardware/software Overview and Control Microsystems overview
SCADAPack hardware section

10:30 – 10:45 Break

10:45 – 12:00 Continue with SCADAPack hardware & manual & controller tour
Introduction to Relay Ladder Logic (RLL) fundamentals
Telepace Studio Introduction
Introduce NEW User Interface
Firmware Loader

12:00 – 13:00 Lunch Break

13:00 – 15:00 Develop a simple program

15:00 – 15:15 Break

15:15 – 17:00 SCADAPack I/O Database configuration & Modbus protocol
Introduction to the Telepace Ladder Editor including a complete presentation on the features, structures and use of the Telepace Ladder Editor

Day Two

This section of the course will involve using the Telepace Ladder Editor to create, modify and monitor a complete Telepace Studio program. Various ladder logic functions will be explained as they are used in the development of the Telepace Relay Ladder Logic program. For example:

09:00 – 10:30 Telepace Studio Ladder Editor programming examples:
CMPU - Compare Unsigned Integers

10:30 – 10:45 Break

10:45 – 12:00 Continue with Telepace Studio Ladder Editor programming examples:

MULU and DIVU - Multiply and Divide Unsigned Integers
PUTU - Transfer data from one location to another
Timers - Functions to measure elapsed time
UCTR - Upwards counter

Training Course Schedule

Day Three

09:00 – 10:30	Advanced Telepace function blocks used in example programs: CALL and SUBR – Calling and using subroutines FLOW – Flow accumulator from pulse-type devices
10:30-10:45	Break
10:45 – 12:00	Continue with Advanced Telepace function blocks used in example programs: PIDA – PID controller with analog output DLOG – Data logger with introduction to SCADALog software MSTR – Modbus master message communications
12:00 – 13:00	Lunch
13:00 – 15:00	Configuring the SCADAPack for communication as a Master station and as a Slave station in a communication network; communication system diagnostics
15:00 – 16:00	Question and Answer Period - Assistance with customer specific applications
16:00 – 16:15	Break
16:15 – 17:00	Course Review