



SIPROTEC 4/5 Training – 2019

- DIGSI 4 and DIGSI 5 courses now include free software!
- IEEE Certificates Program CEU credits available
- New SICAM A800 training offered

DIGSI 4 Overview Training

April 23 - 24, 2019
October 15-16, 2019

Wendell, North Carolina
Wendell, North Carolina

- Code: DIGSI 001
- Length: 2 Days
- Delivery: Classroom
- Price: \$1,200.00

Prerequisites: Student will need to bring a laptop PC with DIGSI 4 software pre-installed (at least DIGSI 4 Basis required). Please contact us in case you do not have DIGSI 4.

Audience: The training is intended for protective relay engineers, designers and technicians from electric utilities and the industrial section wishing to gain a basic knowledge of the planning, commissioning, maintenance and operating SIPROTEC 4 protection devices.

This course is a combination of lecture, demo and hands-on exercises. The format of this class is *learning by doing* – meaning each student will have a SIPROTEC relay for practical configuration and testing (max 2 students per relay). Basic protection concepts and applications are presented.

Upon completion of this course, the students shall be able to:

- Configure a relay
- Use the input/output matrix
- Program the default and control display
- Program additional logic in CFC
- Analyze fault records with SIGRA
- Use all commissioning support tools in DIGSI

Note: DIGSI 4 Overview Training (DIGSI 001) requires the use of at least DIGSI 4 Basis software. Someone will contact you prior to class date to provide you with a free licensed copy of the DIGSI 4 Basis software. If you have also signed up for DIGSI 002 you will instead be provided with DIGSI Professional or DIGSI Professional + IEC61850.

Energy Automation Training

Siemens Industry, Inc.

SIEMENS

DIGSI 4 CFC Training

April 25, 2019

Wendell, North Carolina

October 17, 2019

Wendell, North Carolina

- Code: DIGSI 002
- Length: 1 Day
- Delivery: Classroom
- Price: \$675.00

Prerequisites: Student will need to bring a laptop PC with DIGSI 4 software pre-installed (at least DIGSI 4 Professional required). Please contact us in case you do not have DIGSI 4.

Completion of DIGSI 4 Overview training or a working knowledge of DIGSI Manager and DIGSI 4 Device Editor Configuration Matrix.

Audience: The training is intended for protective relay engineers, designers, and technicians from electric utilities and the industrial section wishing to expand on a working knowledge of DIGSI Professional to design CFC logic into SIPROTEC relays using DIGSI Professional Device Manager, Device Editor Configuration Matrix, and CFC Editor.

This course is a combination of lecture, demo and hands-on exercises. The training will have a brief overview of DIGSI, followed by programming examples of CFC applications.

Upon completion of this class, the student shall be able to:

- Define a basic CFC chart
- Use the DIGSI Device Editor Configuration Matrix to assign items sources and destinations to/from the CFC charts
- Use the DIGSI CFC Editor to create a CFC chart, insert logical functions, and draw the technological sequence of logic by assigning CFC inputs and outputs
- Compile the CFC chart, save the Device File and download the Device File to the relay

Note: DIGSI 4 CFC Training (DIGSI 002) requires the use of at least DIGSI 4 Professional software. Someone will contact you prior to class to provide you with a free licensed copy of DIGSI 4 Professional software.

DIGSI 5 Overview Training

March 5 - 6, 2019

May 14 - 15, 2019

June 18 - 19, 2019

September 17 - 18, 2019

Wendell, North Carolina

Foster City, California

Minnetonka, Minnesota

Wendell, North Carolina

- Code: DIGSI5 001
- Length: 2 Days
- Delivery: Classroom
- Price: \$1,200.00

Prerequisites: Student will need to bring a laptop PC with DIGSI 5 software pre-installed (DIGSI 5 Standard recommended). Please contact us in case you do not have DIGSI 5.

Audience: Users from electric utilities and the industrial sector seeking to gain a basic knowledge of SIPROTEC 5 devices and the use of DIGSI 5 software.

Students will be introduced to SIPROTEC 5 relays and the DIGSI 5 software. They will learn the basics of SIPROTEC 5 device design and how to perform basic programming operations using the DIGSI 5 software.

Upon completion of this course, the students will be familiar with the following:

- SIPROTEC 5 Hardware – Base Module, Expansion Modules, HMI, IO Boards
- SIPROTEC 5 Protection Devices – Overcurrent, Motor, TF Diff, Line Protection, Bay Controller, Busbar Protection, Digital Fault Recorder, SIPROTEC 5 Order Configurator
- DIGSI 5 Overview – Variant and Licensing, Installing DIGSI 5, SIPROTEC 5 Device Drivers
- DIGSI 5 User Interface – Project Tree, Working Area, Inspector Window, Libraries
- DIGSI 5 – Single-line Configuration, Add a new device, Devices and Networks
- DIGSI 5 – SIPROTEC Device, Device Information, Hardware and protocols, Measuring points, Function Groups, Information Routing, Communication Mapping, Device Settings, CFC Charts, Display Pages
- DIGSI 5 Online and Testing – Network configuration, Online Access, Process Data, Loading configuration to devices, Manage FW and Drivers
- DIGSI 5 CFC
- Hands-on exercises are included throughout the course

Note: DIGSI 5 training requires the use of DIGSI 5 software. DIGSI 5 Standard will be provided free of charge. Someone will contact you prior to class to provide you with an installation DVD. The DIGSI 5 Standard license key will be provided to the student upon arrival at the class.

SIPROTEC 5 / DIGSI 5 Class for Field Service Personnel

March 7- 8, 2019

May 16 - 17, 2019

June 20 - 21, 2019

September 19 - 20, 2019

Wendell, North Carolina

Foster City, California

Minnetonka, Minnesota

Wendell, North Carolina

- Code: DIGSI5 002
- Length: 2 Days
- Delivery: Classroom
- Price: \$1,300.00

Prerequisites: Student will need to bring a laptop PC with DIGSI 5 software pre-installed (DIGSI 5 Standard recommended). Please contact us in case you do not have DIGSI 5.

Completion of DIGSI 5 Basic course or comparable knowledge.

Audience: The purpose of this class is to prepare field service personnel who will be involved in testing and operating with SIPROTEC 5 relays. This is a hands-on class with practical exercises throughout.

The following topics will be covered in this class:

- Necessary basic setup (software, device drivers, cables, manuals, etc)
- Overview of SIPROTEC 5 hardware platform
- Working with DIGSI 5 software:
 - Opening a project
 - Checking relay firmware and configuration versions
 - Performing a firmware upgrade
 - Uploading settings to relay; downloading settings from relay
 - Comparing setting files (offline/online; offline/offline)
 - Saving events and fault records)
- Testing wiring with the help of relay commissioning tools:
 - Checking binary inputs; binary outputs
 - Checking analog inputs (current; voltage)
- Protective function testing of most commonly used functions using digital test set:
 - 50/51; 50N/51N
 - 27 / 59
 - 81
 - 25
- Logic Testing (Custom logic programmed using CFC software):
 - We will create a test a logic using Siemens CFC software
- Communication Protocol Testing:
 - We will program and test a communication protocol using the relay commissioning aid tool and a protocol simulator

Note: DIGSI 5 training requires the use of DIGSI 5 software. DIGSI 5 Standard will be provided free of charge. Someone will contact you prior to class to provide you with an installation DVD. The DIGSI 5 Standard license key will be provided to the student upon arrival at the class.

SICAM A8000 Training

Spring / Summer / Fall / Winter 2019

SICAM A8000 Associate

On Request

Wendell, North Carolina

- Code: SIA8 001
- Length: 1 Day
- Delivery: Classroom
- Price: \$675

Prerequisites: Student will need to bring a laptop PC

Audience: Users from electric utilities and the industrial sector seeking to gain a basic knowledge of SICAM 8000 products. This course is a combination of lecture, demo and hands-on exercises.

Upon completion of this class, the student shall be able to:

- Overview of all A8000 product members and their related applications
- Overview of hardware architecture like CPU's, power supplies and I/O modules as well as available protocols and Cyber Security features
- Understand the Hardware components capabilities and know how to scale them in energy automation architectures

SICAM A8000 Advanced WEB

On Request

Wendell, North Carolina

- Code: SIA8 002
- Length: 3 Day
- Delivery: Classroom
- Price: \$2,025

Prerequisites: Student will need to bring a laptop PC
Attend SICAM A8000 Associate training

Audience: Users from electric utilities and the industrial sector seeking to gain a basic knowledge of SICAM 8000 products. This course is a combination of lecture, demo and hands-on exercises.

Upon completion of this class, the student shall be able to:

- To assemble and initialize the equipments with SICAM WEB
- How to create a signal list and assign them to I/O modules or communication protocols
- Setup system technique and topology information
- Create logics using instruction list
- Extract CPU's diagnoses
- Create or recover backups

SICAM A8000 Advanced TOOLBOX II

On Request

Wendell, North Carolina

- Code: SIA8 003
- Length: 5 Day
- Delivery: Classroom
- Price: \$3,375

Prerequisites: Student will need to bring a laptop PC
Attend SICAM A8000 Associate training

Audience: Users from electric utilities and the industrial sector seeking to gain a basic knowledge of SICAM 8000 products. This course is a combination of lecture, demo and hands-on exercises.

Upon completion of this class, the student shall be able to:

- Install TOOLBOX II
- Create structured projects
- Setup system technique and topology information
- Data modeling with Process Technical Plant, including signal generation and routing information
- How to bulk edit database for time improvement
- Initialize equipment and download parameters using TOOLBOX II
- Create logics using CAExPlus
- Extract CPU's diagnosis
- Create or recover backups

Class addresses:

Wendell Facility

Siemens
7000 Siemens Road
Wendell, NC 27591

Minnetonka Facility

Siemens
10900 Wayzata Boulevard, Suite 400
Minnetonka, MN 55305

California Facility

Siemens
4000 E. Third Ave.
Suite 400, 4th Floor
Foster City, CA 94404

Classes begin at 8:30am and end at 4:30pm daily.

Limited Room, Register Soon.

For more information on training courses, prices, registration and general training questions, please contact:

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