



Columbus Temperature Control Co.

Course #6001 EC-gfxProgram Graphical Programming

Visit Our Web Site @ www.columbustemp.com

Course #6001 EC-gfxProgramming is designed for the participants to gain the level of technical expertise necessary to effectively and efficiently design, engineer, and program Distech Controls using Distech Controls graphical programming language software. A complete course agenda is available by request, or on our web site www.columbustemp.com, select the "training" link.

Course Topics:

- Commissioning, plug-in setup & registration, network variables
- Function block programming: I/O, comparator, logic, and math blocks.
- Device profiles: constants, variables, nvi and nvo blocks, HVAC blocks.
- Scheduler plug-in & wizard
- A complete course #6001 outline is posted under the "training" link at www.columbustemp.com.

Course: Distech Controls #6001 (5 days)

Date: 4/11/11 - 4/15/11

Time: 8:00 a.m. — 5:00 p.m.

Instructor: Sylvain Picard
Distech Technical Trainer

Location: Columbus Temperature Control
1053 East 5th Avenue
Columbus, OH 43201

Phone: (614) 294-6216

Price: \$1,250.00
Breakfast and lunch will be provided

To register, please provide the information below and fax to (614) 294-2940

Student Name(s): _____

Company Name: _____

Company Address: _____

Phone: _____ Fax: _____ Email: _____

Payment Information

Purchase Order # (must have an account in good standing): _____

Check (Make Payable to Columbus Temperature Control Company)

Credit Card (number and expiration date): _____

Type of Credit Card: Visa MasterCard AMEX Credit Card Signature: _____

Registrations will be accepted for all available classes on a "first come, first served" basis. Payment must be received within 20 days of the class date or reservation will be forfeited. Purchase orders require an open account in good standing and a minimum order amount of \$25. Cancellations must be received at least 7 days prior to the date of the class to receive a full refund. Registration confirmations will be faxed shortly after the registration form is received. Reminders will be faxed a few days before the date of the class. All classes include a meal, unless otherwise indicated. Many class sizes are limited, so early registration is recommended. Columbus Temperature Control reserves the right to change any class information at any time.

April 11-15th, 2011 Columbus Temperature Control

Distech Controls Training Seminar

Course # 6001

Distech Controls Applications & Controllers Training

Training Seminar period: 5 Days (8:00 AM to 5:00 PM)

Pre-Requisites: Functional knowledge of Windows

Asset: LONWORKS Network Design (LND), HVAC Intro and BACnet Fundamentals

Audience

- Network integrators
- Operations and maintenance engineers
- Energy management specialist
- Security systems installers and integrators
- Installers, specifiers and estimators

Objectives

- The architecture of the LONWORKS & BACnet controller offering
- Using graphical programming to program control sequences
- Understanding the EC-gfxProgram user interface
- Integration with a LNS environment (Lonwatcher 3)
- Integration with a Niagara^{AX} environment (EC-Net^{AX})

Course Outline

DAY 1 AM

Introduction to Distech Controls line of products

- Open System Platform
- Configurable & Programmable controller overview
- Peripherals overview
- Distech Controls Web Site and SmartInstaller

LNS Network Management tool

- Lonwatcher 3
- Browser plug-in
- Londisplay 3 HMI
- LNS Configuration and Monitoring plug-ins
- LONWORKS terminology & fundamentals

AX Network Management tool

- EC-NET^{AX}
- EC-BOS
- EC-NET Support Pack
- EC-NET Configuration Wizards

DAY 1 PM

Configurable Controllers

- ECC-VAV & ECC-VVT Series
- EC-RTU-L
- EC-STAT
- EC-Display

DAY 2 AM

Introduction to the EC-*gfx*Program tool

- Definition
- Advantages

Using EC-*gfx*Program

- Supported platforms
- Adding devices with Lonwatcher 3
- Adding devices with EC-Net^{AX}
- Launching EC-*gfx*Program

The programming interface

- View customization
- Tool box
- Code library
- Project explorer pane
- Properties pane
- Menu and toolbar
- Build, Synchronize, Debug
- Options
- Special function panes

Programmable Controllers and Applications

- Key features
- VAV applications
- Small enclosure applications
- Large enclosure applications
- Power terminal unit applications
- Smart-Sensors
- Smart-VUE
- Wireless sensors

Installation and Wiring Practices

- Power wiring
- Recommended LON Network Design
- Recommended BACnet Network Design
- Input & Output wiring
- Remote I/O modules wiring
- Smart-Sensors wiring
- Smart-VUE wiring
- Wireless Sensors installation

DAY 2 PM

LON specific functionalities

- Hardware input blocks
- Hardware output blocks
- Constants
- Variables
- Network Variables
- Network Variable connections
- SNVT conversion
- PID

DAY 3 AM

BACnet specific functionalities

- Hardware input blocks
- Hardware output blocks
- Analog Values
- Binary Values
- Multistate Values
- Network Values
- PID
- IsNull

DAY 3 PM

General functionalities

- Comparators
- Logic
- Math
- Tools
- Custom Blocks
- FOR loop
- Generic Blocks
- Custom Toolbox

DAY 4 AM

Time-related functionalities

- Time blocks
- Scheduler configuration tool (LON)
- Real-time clock configuration tool (LON)
- EC-Net^{AX} Scheduling & Time Synchronization

HVAC-related functionalities

- HVAC blocks
- VAV blocks
- Psychrometric blocks

DAY 4 PM

Peripherals

- Wireless
- EC-Smart Sensor
- EC-Smart-VUE

DAY 5 AM

EC-*gfx*Applications

- ECB-VAV Pre-Loaded application
- dclImages
- Code Library

DAY 5 PM

Questions & Review

Final Exam