

AutoCAD Electrical Fundamentals

Students learn how to build intelligent ladder diagrams and panel layouts, and how to leverage this intelligence. The courseware provides an overview of many AutoCAD® Electrical utilities designed to enable users to quickly build and manage electrical-controls drawings. Students learn how to create electrical-controls production drawings. All exercises and datasets through hands-on exercises are based on the JIC (US) standard.

Objectives

The primary objective of this courseware is to teach students the basic commands necessary for creating professional electrical-controls drawings with AutoCAD Electrical software.

- After completing this course, students will be able to:
- Navigate the AutoCAD Electrical user interface.
- Use the fundamental features of AutoCAD Electrical.
- Build intelligent ladder diagrams and panel layouts.
- Create, view, and edit the project settings and properties.
- Extract data from drawings into reports formatted to match users' standards.
- Insert and edit parametric PLC modules, nonparametric PLC modules, and stand-alone PLC I/O points.

Duration

3 days

Who should attend?

New users of AutoCAD Electrical.

Typical Schedule

Unless otherwise noted on your class registration e-mail, this class starts each day at 9:00 am and ends at 4:00 pm.

Prerequisites

Before using this guide, students should have a working knowledge of the following:

- A recent version of AutoCAD.
- Electrical drafting, design, or engineering principles.
- Microsoft® Windows® Vista or Microsoft® Windows® XP.

Outline

Introduction to AutoCAD Electrical

- GUI
- Designs and Methodologies

Project Files

- WDP Project File
- Project Manager Interface

Schematics 1 – Single Wires/ Components

- Wires, Referencing
- Ladders
- Rungs
- Source/ Destination Signal Arrows
- Insert Component
- Parent/ Child Components

Schematics II – Multiple Wire and Circuits

- Dashed Link Lines
- 3-Phase
- Cable Markers
- Fan In/Out
- Insert Saved Circuit
- Save Circuit to Icon Menu
- Move or Copy Circuit

- Circuit Builder

Editing Commands

- Edit Component
- Project Task List
- Delete, Scoot, Move, Align and Copy Component
- Surfer Command
- Copy Catalog Assignment
- Copy Installation. Location Codes
- Attribute Editing Commands

Panel Drawings

- Insert Footprint Icon Menu
- Insert Footprint From Schematic List
- Insert Component From Panel List
- Edit Footprint
- Assign Item Numbers
- Add Balloons

Terminals

- Insert Terminal Symbol
- Multiple Level Terminals
- Multiple Insert Component Command
- Insert Jumpers

- Terminal Strip Editor
 - DIN Rail Command
- PLC Symbols
- Insert PLC (Parametric)
 - Insert PLC (Full Units)
 - Insert Individual PLC I/O Points
 - PLC Based Tagging
 - Spreadsheet to PLC I/O Utility

- Point to Point Wiring Drawings
- Insert Connectors
 - Edit Connectors
 - Insert Splices
 - Bend Wires

- Symbol Creation
- Schematic Symbols
 - Naming Convention
 - Icon Menu Wizard
 - AutoCAD Electrical Databases

- Titleblocks
- Update Titleblocks
 - Titleblock Setup

- Reporting Tools
- Create Report
 - Save an External File

- Put on Drawing
- Configure Report Templates
- Running Automatic Reports
- Electrical Audit

- Settings and Templates
- Project Properties
 - Drawing Properties
 - Panel Drawing Configuration
 - Template Files
 - Sharing Symbol Libraries and Databases

- Drawing Update Tools
- Project-Wide Update/ Retag
 - Project-Wide Utilities
 - Plot Project
 - Export to Spreadsheet
 - Update from Spreadsheet
 - Copy Project
 - Swap/ Update Block
 - Mark Drawings
 - Verify Drawings

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