

AutoCAD® Electrical Complete Guide

AutoCAD® Electrical CAD software, part of the Digital Prototyping solution, is AutoCAD for electrical design. It includes all the functionality of familiar AutoCAD software plus a complete set of electrical CAD features, including comprehensive symbol libraries and effective tools for automating electrical design tasks.

This video tutorial course has been created to assist the creation of professional electrical-control drawings with the help of AutoCAD Electrical. It covers a wide range of features such as schematic drawings, panel drawings, parametric and nonparametric PLC modules, stand-alone PLC I/O points, ladder diagrams, point-to-point wiring diagrams, reports generation and the creation of symbols.

User's prerequisites

You don't need any previous experience with AutoCAD® Electrical to take this course.

Course Outline

Introduction to AutoCAD Electrical

- Introduction to ACAD Electrical
- Invoking Commands
- Project Manager
- Components of Dialog Boxes
- Creating Backup Files
- Dynamic Input Modes
- Creating and Managing Workspaces
- Help and Online Options

Working with Projects and Drawings

- Creating a New Project
- Working with Drawings
- Grouping Drawings within a Project
- Changing the Order of Drawings in a Project
- Removing a Drawing from a Project
- Assigning a Description to a Drawing
- Switching between the Drawings of an Active Project
- Configuring the Drawing List Display
- Copying a Project
- Deleting a Project
- Other Options in the Project Manager

Working with Wires

- Inserting Wires at Angles
- Inserting Multiple Bus Wiring
- Trimming a Wire
- Stretching Wires
- Creating Wire Types

- Changing and Converting Wire Types
- Inserting Wire Numbers
- Copying Wire Numbers
- Positioning Wire Numbers In-line with a Wire
- Deleting Wire Numbers
- Editing Wire Numbers
- Hiding Wire Numbers
- Swapping Wire Numbers
- Finding/Replacing Wire Numbers
- Moving a Wire Number
- Inserting Wires into a Drawing
- Scooting a Wire Number
- Flipping a Wire Number
- Toggling the Wire Number Position
- Repositioning the Wire Number Text with the Attached Leader
- Inserting Wire Color/Gauge Labels in a Drawing
- Inserting the Special Wire Numbering in a Drawing
- Adding Source Signal Arrows
- Adding Destination Signal Arrows
- Showing Source and Destination Markers on Cable Wires
- Checking Line Entities
- Bending Wires at Right Angle
- Checking and Repairing Gap Pointers
- Checking/Tracing a Wire
- Inserting Wire Gaps
- Removing Wire Gaps
- Flipping Wire Gaps/Loops

Creating Ladders

- Inserting a New Ladder
- Renumbering an Existing Ladder
- Changing the Size of a Ladder
- Repositioning a Ladder
- Changing the Rung Spacing
- Adding Rungs
- Converting Line Reference Numbers
- Renumbering the Ladder Line Reference
- Changing the Reference Numbering Style of a Ladder
- Inserting X Grid Labels
- Inserting X-Y Grid Labels
- Schematic Components
- Inserting Schematic Components
- Annotating and Editing the Symbols
- Selecting an Existing Part Number
- Creating a Project Specific Catalog Database
- Creating Parent-Child Relationships
- Inserting Components from the Equipment List
- Inserting Components from the Catalog List
- Adding a New Record in the Schematic Component or Circuit Dialog Box
- Editing an Existing Record in the Schematic Component or Circuit Dialog Box
- Inserting Components from Panel Lists
- Swapping and Updating Blocks

AutoCAD® Electrical Complete Guide is specifically aimed at experienced software users looking for advanced skills instruction and introductions to more specialized software. Our on-screen instructors walk you through the processes step by step, allowing you to follow along hands-on if you wish; quickly and easily picking up the new skills you need.

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AutoCAD® Electrical Complete Guide (cont'd)

Course Outline (cont'd)

Schematic Editing

- Changing the Component Location with Scoot Tool
- Changing Component Locations using the Move Component Tool
- Copying a Component
- Aligning Components
- Deleting Components
- Updating Components from Catalog Database
- Toggling between the Normally Open and Normally Closed Contacts
- Copying the Catalog Assignment
- Copying Installation/Location Code Values
- Auditing Drawings
- Retagging Drawings
- Moving Attributes
- Editing Attributes
- Hiding Attributes
- Unhiding Attributes
- Adding Attributes
- Squeezing an Attribute/Text
- Stretching an Attribute/Text
- Changing the Attribute Size
- Rotating an Attribute
- Changing the Justification of an Attribute
- Changing an Attribute Layer

Connectors, Point-to-Point Wiring Diagrams, and Circuits

- Inserting a Connector from the List
- Inserting Connectors
- Adding Pins to a Connector
- Deleting a Connector Pin
- Moving a Connector Pin
- Swapping Connector Pins
- Reversing a Connector
- Rotating a Connector
- Stretching a Connector
- Splitting a Connector
- Editing Pin Numbers of a Connector
- Using Point-to-point Wiring Diagrams
- Saving Circuits to an Icon Menu
- Inserting Saved Circuits
- Moving Circuits
- Copying Circuits
- Saving Circuits by using WBlock

- Inserting the WBlocked Circuit
- Retagging Wires on a WBlocked Circuit
- Configuring a Circuit
- Adding Multiple Phase Ladders and Wires
- Adding Three-phase Symbols

Panel Layouts

- The WD_PNLM Block File
- Creating Panel Layouts from Schematic List
- Annotating and Editing Footprints
- Inserting Footprints from the Icon Menu
- Inserting Footprints from a Catalog List
- Inserting Footprints from an Equipment List
- Inserting Footprints from Manufacturer Menus
- Copying a Footprint
- Setting the Panel Drawing Configuration
- Making the Xdata Visible
- Renaming Panel Layers
- Adding a Balloon to a Component
- Adding Multiple Balloons
- Resequencing Item Numbers
- Inserting Nameplates
- Inserting DIN Rail
- Editing the Panel Footprint Lookup Database File

Schematic and Panel Reports

- Generating Schematic Reports
- Report Generator Dialog Box
- Changing Report Formats
- Placing Reports in the Drawing
- Schematic and Panel Reports
- Saving the Report to Files
- Editing a Report
- Generating Panel Reports
- Generating the Cumulative Report
- Setting the Format File for Reports

PLC Modules

- Inserting Parametric PLC Modules
- Inserting Nonparametric PLC Modules
- Editing a PLC Module
- Inserting Individual PLC I/O Points
- Creating and Modifying Parametric PLC Modules
- Using the Spreadsheet to PLC I/O Utility Tool

Terminals

- Inserting Terminal Symbols
- Inserting Terminal from the Schematic List
- Inserting Terminals Manually
- Inserting Terminals from the Panel List
- Adding and Modifying Associations
- Terminal Block Properties
- Selecting, Creating, Editing, and Inserting Terminal Strips
- Defining and Generating the Terminal Strip Table
- Editing the Terminal Properties Database Table
- Creating the Terminal Properties Database Table
- Resequencing Terminal Numbers - Pick Method
- Resequencing Terminal Numbers - Project-Wide
- Copying Terminal Block Properties
- Editing Jumpers

Settings, Configurations, Templates, and Plotting

- Setting Project Properties
- Setting Drawing Properties
- Reference Files
- Mapping the Title Block
- Updating Title Blocks
- WD_TB Attribute
- Creating Templates
- Plotting the Project
- Creating Symbols
- Creating Symbols
- Editing Existing Symbols
- Marking and Verifying Drawings
- Exporting the Data to Spreadsheets
- Updating the Data from the Spreadsheet
- Using Project-Wide Utilities

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