

Top 10 Reasons to Move from AutoCAD® to AutoCAD® Electrical

Digital Prototyping

As part of the Autodesk® solution for Digital Prototyping, AutoCAD® Electrical makes it easy to share the electrical intent from the controls design with other Autodesk applications, enabling both electrical and mechanical teams to work collaboratively on digital prototypes.

AutoCAD Electrical includes integrated data management with Autodesk® Vault software, a centralized application for workgroups that securely stores and manages work-in-progress design data and related documents. For additional functionality, such as revision control, file and folder security, and BOM and ECO management, learn more about the complete Vault family of products — Autodesk® Vault Workgroup, Autodesk® Vault Collaboration and Autodesk® Vault Manufacturing. Find out more at www.autodesk.com/vaultfamily.

Discover why so many electrical controls designers are using AutoCAD Electrical.

1. Comprehensive Symbol Libraries

AutoCAD® Electrical software ships with more than 2,000 standards-based schematic symbols. A simple, menu-driven system for inserting electrical, pneumatic, hydraulic, and piping and instrumentation diagram (P&ID) devices enables you to quickly build standards-based controls designs by selecting frequently used devices from a menu. Symbol libraries include support for the AS, GB, IEC, JIC, and JIS standards. The comprehensive symbol library includes devices such as the following:

Electrical Symbols

- Push buttons
- Selector switches
- Pilot lights
- Relays
- Contacts
- Fuses
- Terminals and more

Hydraulic and Pneumatic Symbols

- Valves
- Regulators
- Filters

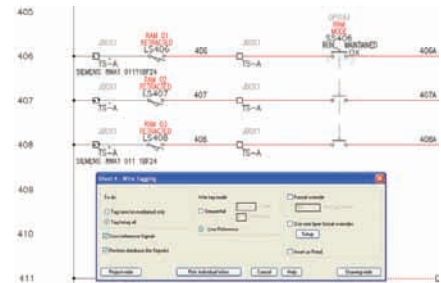
P&ID Symbols

- Tanks and vessels
- Valves
- Pumps
- Nozzles
- Flow arrows



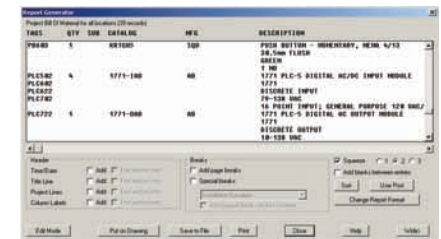
2. Automatic Wire Numbering and Component Tagging

Automatically assign unique wire numbers and component tags in your drawings and reduce the time you spend tracking design changes—resulting in fewer errors. AutoCAD Electrical automatically places sequential or reference-based numbers on all wires and components based on the chosen configuration. AutoCAD Electrical can determine if an inserted wire number will “bump into” anything and automatically searches laterally along the wire for a clear spot to place the wire number. If no clear spot is found, AutoCAD Electrical continues to search for a clear spot away from the wire and, when found, automatically draws a leader back to the wire.



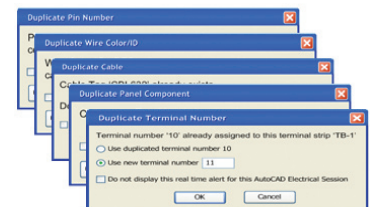
3. Automatic Project Reports

Drastically reduce the time required to manually generate and update reports, while removing associated errors. Report generation in AutoCAD Electrical is simple with a variety of automatic reports, including bills of materials (BOMs), cable lists, terminal reports, from/to wire lists, and many more. The report function gives you the option of generating multiple reports with a single command and includes flexible export options.



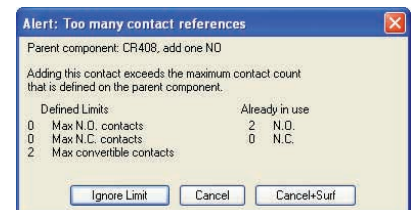
4. Real-Time Error Checking

Avoid costly errors before the build phase begins by catching and removing errors during design. AutoCAD Electrical monitors and alerts users to potential design errors as they occur by constantly comparing the requested changes with the current project.



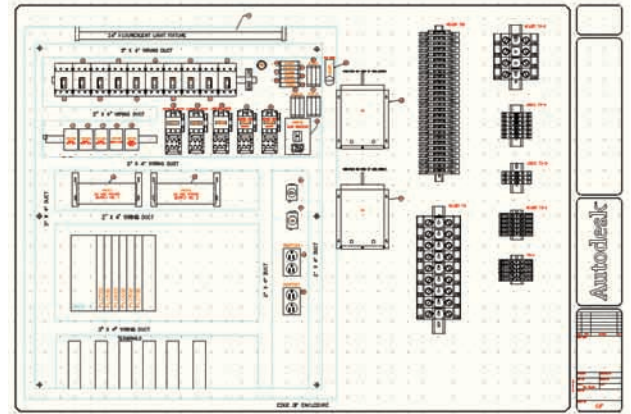
5. Real-Time Coil and Contact Cross-Referencing

Reduce the risk of assigning too many contacts to any relay, and minimize time spent manually tracking assignments. AutoCAD Electrical sets up parent/child relationships between coils and contacts, keeping track of how many contacts are assigned to any coil or multi-contact device, and alerting users when they have exceeded the limit.



6. Create Smart Panel Layout Drawings

Easily create panel layout drawings and help reduce errors with automatic tracking and updating of all part placements. Once the schematic creation phase is complete, AutoCAD Electrical extracts a list of schematic components for placement into panel layout drawings. Users choose the panel location and a physical “footprint” representation of each device to be inserted into the layout, and a link is automatically created between the device and its representation. Any changes to the schematic or panel representation automatically update the other. Non-schematic items, such as wire duct and mounting hardware, can be added to the layout and automatically combined to create a “smart” panel BOM report.

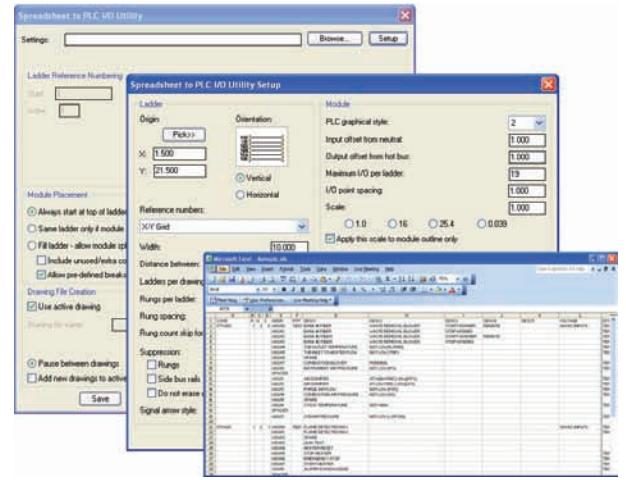


7. Electrical-Specific Drafting Features

Slash design time by using commands purpose-built for electrical controls designers. AutoCAD Electrical includes all the functionality of AutoCAD plus a comprehensive set of functions developed specifically for designing electrical control systems. Specialized features such as trim wire, copy and delete component or circuit, and scoot and align components make it much easier to create drawings quickly. AutoCAD Electrical offers productivity gains of up to 80 percent over AutoCAD.*

8. Automatically Create PLC I/O Drawings from Spreadsheets

Automatically create PLC I/O drawings from the design data stored in a spreadsheet. AutoCAD Electrical gives users the ability to generate a comprehensive set of PLC I/O drawings by simply defining the project's I/O assignments in a spreadsheet. AutoCAD Electrical then automatically creates drawings, complete with ladders per the drawing configuration, I/O modules, addresses and description text, and component and terminal symbols connected to each I/O point. Once the drawings have been created, the I/O address and description report can be exported to the PLC program.



9. Share Drawings with Customers and Suppliers and Track Their Changes

Easily exchange data with customers or suppliers in native DWG format. Edit and view AutoCAD Electrical drawings in any DWG™-compatible program, such as AutoCAD or AutoCAD LT® software. When designs are edited by outside sources, AutoCAD Electrical can create a report of any modifications made to the drawings by others. Also, when you are ready to issue a new revision to your design process, AutoCAD Electrical can create a report of changes made to the drawings since the last revision update.

10. Reuse Existing Drawings

Get a head start on your design projects by reusing drawings from another project. Make a copy of a specific part, or reuse an entire drawing set when starting a new design. Save frequently used circuits for reuse in future designs. AutoCAD Electrical automatically rennumbers the wires and devices to match the configuration of the current drawing or project in which they are placed. You can also reduce design time and errors by retagging all components in a project with a single command.

Now Is the Time

Want to increase your productivity by up to 80 percent? Then now is the time to move to AutoCAD Electrical.

* The AutoCAD Electrical Productivity Study compares the time required to complete 10 tasks in both basic AutoCAD and AutoCAD Electrical. The conclusion: switching to AutoCAD Electrical may help increase your productivity by as much as 80 percent. To learn more, visit www.autodesk.com/autocadelectrical-whitepapers.

For more information about AutoCAD Electrical, visit www.autodesk.com/autocadelectrical.

To locate the reseller nearest you, visit www.autodesk.com/reseller.

Feature	AutoCAD®	AutoCAD® Electrical
Full AutoCAD Functionality	•	•
Familiar AutoCAD Interface	•	•
Powerful Drafting Tools	•	•
DWG™ Compatibility	•	•
Comprehensive Symbol Libraries		•
Electrical-Specific Drafting Features		•
Real-time Error Checking		•
Schematic Design Tools		•
Panel Layout Tools		•
Terminal Management Tools		•
PLC I/O Tools		•
Automatic BOM Generation		•
Autodesk® Inventor® Associativity		•

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