Technical What's New

AutoCAD®

Electrical 2008

Autodesk®

Technical What's New

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AutoCAD® Electrical software is the leading 2D application built specifically to create and modify electrical controls designs. As part of the AutoCAD family of products, it automates the tedious task of creating ladder and point-to-point style drawings. It tracks all wire numbers and component tags, and cross-references coil and contact information for increased drafting productivity. It generates automated reports, such as bills of materials and from-to wire lists, helping to eliminate errors associated with generating reports manually. And, it saves time by passing wire connectivity information to and from AutoCAD Electrical and Autodesk® Inventor™ software applications.

AutoCAD Electrical—the only logical choice for electrical controls design.

Technical What's New

Productivity Tools

AutoCAD Electrical software automates many of the manual tasks associated with creating accurate designs, allowing more time for designing and engineering.

Surfable Reports

When reports are placed into a drawing as a table, you can click on various report cells to quickly find the corresponding devices within the schematic or panel layout drawings in the active project.

Insert Component and Insert Footprint Enhancements

The Insert Component and Insert Footprint dialog boxes are updated to improve ease of use when selecting components to insert into your drawing.
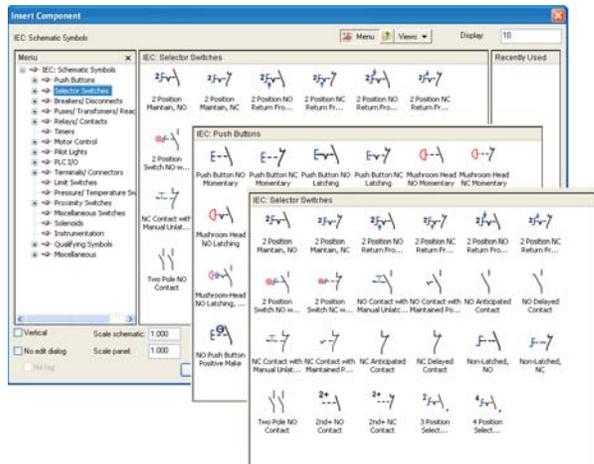
Enhanced dialog box controls include:

- **Menu Tree Structure**
  Displays the main menu and submenus from which you can freely navigate. Clicking the menus displays the corresponding menu icons in the Symbol Preview window. The menu is created by reading the *.dat file defined in the Project Properties dialog box.

- **Symbol Preview Window**
  Displays the symbol icons and submenu icons corresponding to the selected menu. Clicking an icon performs one of the following functions based on the icon properties as defined in the *.dat file: insert a component or circuit, display a submenu, or execute a command.

- **Recently Used**
  Displays the last components inserted during the current editing session. The most recently used icon displays at the top. This list follows the view options setting in the symbol preview window and the total number of icons displayed depends on the value specified in the Display edit box.

- **View**
  Changes the view display for the Symbol Preview window and Recently Used window. The current view option is indicated with a check mark. Options include: Icon with text, Icon only, or List view.

- **Tooltips**
  When you move the cursor over an icon, the icon name and block/circuit/command names display as tooltip information.

Icon Menu Wizard Enhancements

The Icon Menu Wizard allows you to easily customize the icon menus. You can now copy and paste icons from one submenu into another, drag and drop icons to place those that are commonly used at the top of the Symbol Preview window and those that are used less frequently at the bottom of the window, and create new icons to use when inserting components. You can also easily modify the existing icon or menu properties like changing the name, image or block name. Right-click the menu or icon on the Icon Menu Wizard dialog box and select Properties. The existing data is overwritten in the *.dat file with the new changes.
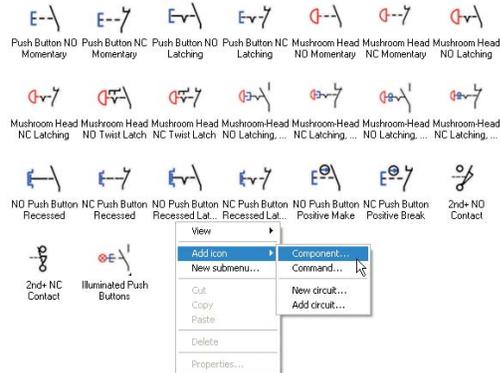
Parametric Twisted Pair Symbol Enhancements

The icon menus are enhanced to include three new parametric twisted pair symbols. To insert a twisted pair symbol, click Components > Insert Component. On the Insert Component icon menu, click Cable Markers.
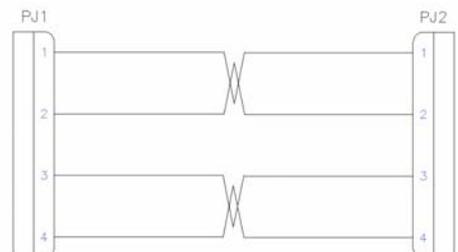
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Terminals

Increase design accuracy and reduce the complexity involved when working with terminals in a design.

Terminal Strip Editor Enhancements

The Terminal Strip Editor provides an easy way to manage and edit terminals used throughout a project. You can now start designs with a terminal strip layout drawing representing the terminal strip. In the modified Terminal Strip Selection dialog box, you can either select a terminal strip for editing, or create a new terminal strip definition in the project and maintain its properties in the graphical terminal strip layout drawing.

The Terminal Strip Editor dialog box now has an enhanced grid control with bolder grid lines that provide better visual definition for the terminal strip.

Other enhancements to the dialog box include:

• The Terminal Pin (TPin) column is now "T."

• The TERM column is now "Number" to indicate the terminal numbering, whether it is a wire number or user-defined number.

• The Function column is now "Installation."

• A new column (on the far left side of the grid) indicates the level definition.

• Tooltip instructions display once you move your cursor over one of the tool buttons in the dialog box.

• There is better context menu support that is based on individual cells.

• The Preview tab is now "Layout Preview."

• The Cable Preview tab is now "Cable Information."
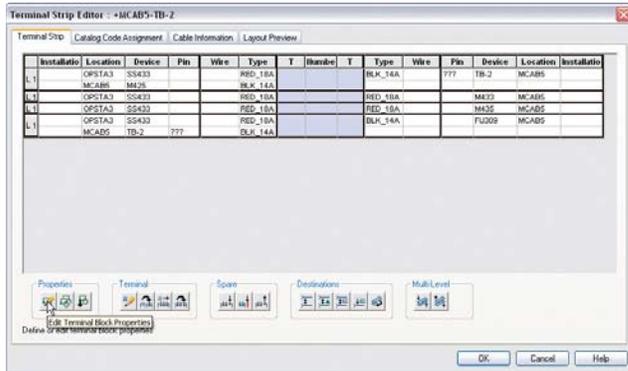
New tools are available on the Terminal Strip Editor dialog box to create associations, separate levels from a multiple level terminal block into separate terminal blocks, reverse the left and right wiring information for a terminal, and edit terminal block properties such as the number of levels and number of wires per connection.

The Layout Preview tab of the Terminal Strip Editor dialog box has been enhanced to allow AutoCAD table objects to be inserted as a terminal strip. This allows for more accurate representations of what is in the Terminal Strip Editor, more flexibility with the style, and provides a means for automatic updating.
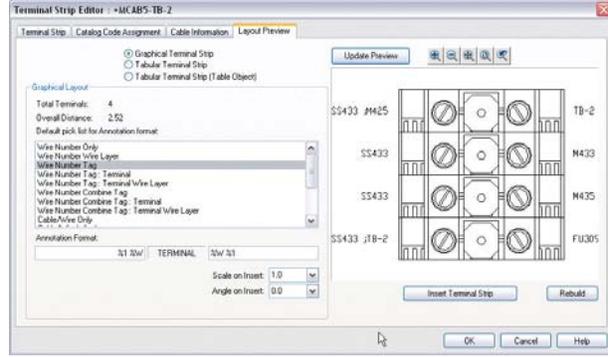
Multi-Level Terminals

Multi-level terminal blocks are quickly becoming an industry standard. Using AutoCAD Electrical, you can define and manage the terminal numbers and levels as well as all connectivity information with no added complexity.

You can now associate schematic terminals to build a multi-level terminal block that is limited to the number of levels defined in the block properties. Use the new Add/Modify Associations tool to search project terminal strips for existing multi-level terminal blocks so that you can define and maintain terminal associations. Terminals must be in the same terminal strip and be in the same project to be associated together. You can also remove a terminal from any multi-level relationship and copy terminal properties from one terminal symbol to another.

Associating schematic terminals combines the terminals into a single terminal block property definition. The number of schematic terminals that can be combined is limited to the number of levels defined for the block property. Terminal associations can also tie together a set of schematic terminal block symbols to one panel representation of a terminal footprint.

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Spare Terminal Tracking

Extra terminal block definitions and accessory information is now maintained and saved on the graphical terminal strip layout. You can insert spare terminals and have them accurately update the Bill of Materials as well as various terminal reports.

Terminal Properties Database Editor

Terminal properties data is now managed based on manufacturer. Use the new Terminal Properties Database Editor tool to select the manufacturer table to edit or create a new one in the catalog database for the active project.
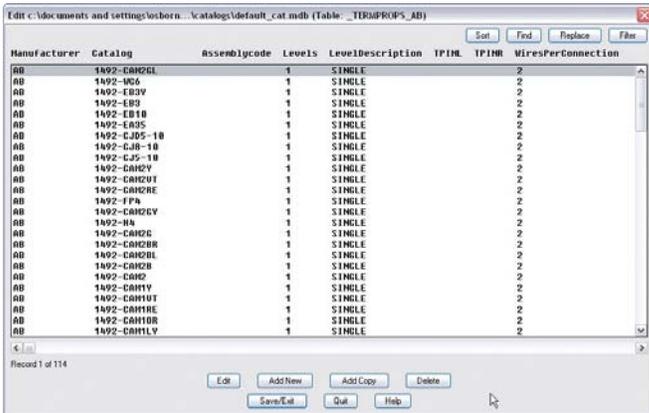
Terminal Jumper Support

Use the new Edit Jumper tool to add, edit, or remove jumpers between terminals that share the same potential in a schematic drawing. You can display temporary line graphics between the primary terminal and secondary terminals within the same drawing.

Jumpers now display on the panel drawing so you have a visual representation of jumpers that appear on tabular terminal strips. Cells of a table row are joined with a graphical jumper that looks like two circles connected by a solid thick line. Three columns of jumpers are supported within a single jumper column in the table.
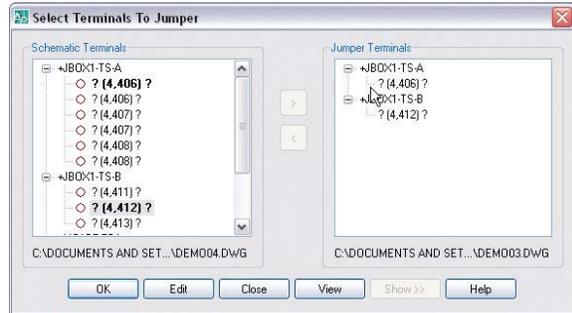
PLC I/O Drawings

Quickly and easily create and communicate PLC I/O drawings.

PLC I/O Import/Export

You can now share your critical design information between AutoCAD Electrical and Schneider Electric's Unity Pro Software. Employing the widely used XML language format, you can transfer design data back and forth while maintaining structure and organization.
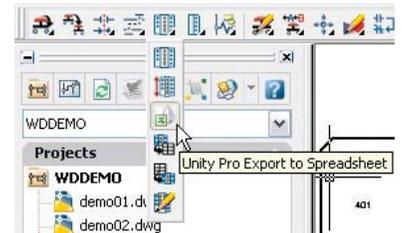
Use the new Unity Pro Export to Spreadsheet tool to import Unity Pro XML export files to aid in the creation of PLC-style ladder drawings and panel layout drawings (in both vertical and horizontal format) in the active project. The Unity Pro export files also contain catalog information. You can reformat it to generate an equipment list to aid in the creation of a rack layout drawing used in panel layouts or separate rack layout drawings.

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Use the new Unity Pro Export tool to create a Unity Pro I/O variable file (*.xsy) in the Unity Pro XML format from your AutoCAD Electrical drawings. The Unity Pro export file is generated from the PLC drawings and their respective PLC symbols.
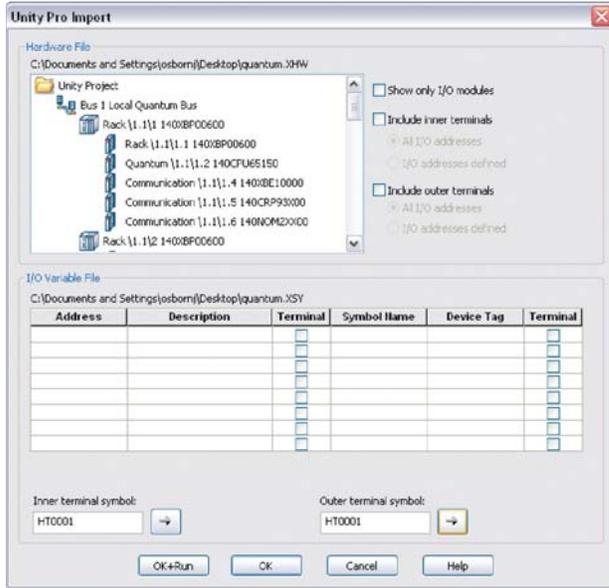
PLC I/O Libraries Enhancements

You can quickly create PLC I/O drawings by selecting from a library of over 3,000 intelligent PLC I/O modules from the industry's most popular manufacturers.
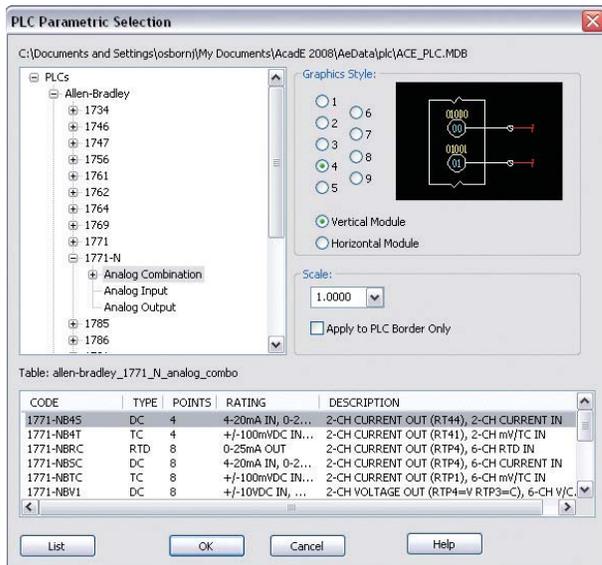
Spreadsheet to PLC I/O Utility Enhancements

You no longer have to create and save the starting drawing for the Spreadsheet to PLC I/O Utility tool. You can now define a starting drawing file name or start with the active drawing. Additional enhancements include:

- Default settings are now read automatically the first time you run the tool.
- You can select a settings file and make it the default.
- You can have the newly created drawings added automatically to the end of the active project.
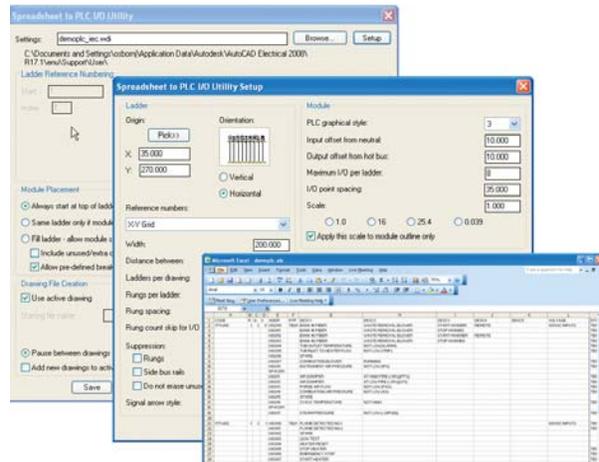
Defining Wire Connections

Deliver more accurate reports by leveraging the flexibility in the level of control available when defining the wire connection sequence.

Direct to Terminal Wire Sequencing

You can now use the Define Wire Sequence tool to define additional direct-to-terminal wire connection sequences in schematic networks. For example, one side of a schematic terminal might be connected to three field devices. A specific wire connection sequence can be defined to force the connection reporting, but it is limited to reporting the terminal as a common connection point for only two of the three field devices. The third has to be reported as jumpered to one of the other two devices. Now, with the support for secondary direct-to-terminal sequences, the third field device can be sequenced directly to the terminal and the Wire From/To report shows all three field devices tied directly to the terminal.

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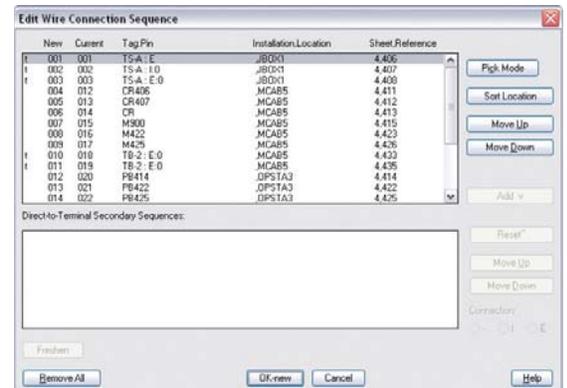
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Visual Wiring Sequence Indicators

Once you define additional wire connection sequences, use the Show Wire Sequence tool to graphically show the new sequencing. When any changes are made to a wire sequence, the updated information is accurately reflected in the From/To Wire list report.
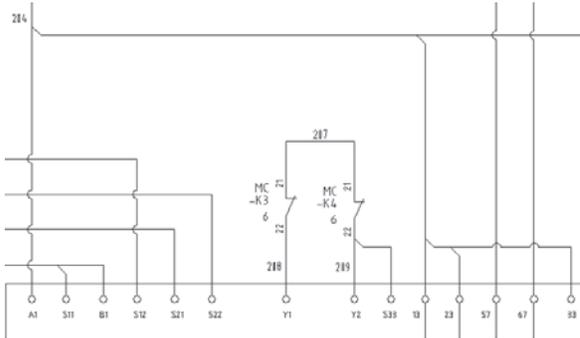
Manufacturer Content Management

AutoCAD Electrical supports international standards and provides a comprehensive library of manufacturer content, enabling users to produce standards-based designs using a consistent set of manufacturer components.

Pin List Data Management

Pin list data is now managed based on manufacturer. Use the Pin List Database Editor tool to select the pin list table to edit or create a new table.

The _PINLIST table in the default_cat.mdb file now uses a single PINLIST column and a single PEER_PINLIST column. The continuation columns have been removed.
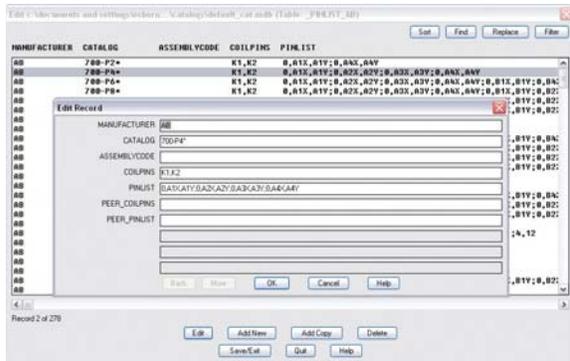
Installer Improvements for Manufacturer Content

You can now selectively install content based on manufacturer, reducing the size of the content databases and data redundancy. If you later decide you want to install content from another manufacturer, open the Add or Remove Programs tool in your Control Panel, select AutoCAD Electrical 2008, and click Change/Remove. Click Add/Remove Features, click Next on the first screen, and then select the manufacturers to install on the Manufacturer Contents Selection screen.

Catalog Content Updates

AutoCAD Electrical ships with a manufacturer's catalog database that contains over 350,000 components from the industry's most popular vendors. These components provide a full spectrum of input and output devices including switches, sensors, lights, and numerous panel devices, such as wireway and panel enclosures.

To address the need for local content in local languages, enhancements have been made to the International Catalog Content including an expanded selection of manufacturers, and manufacturer provided content which included periodic updates for Subscription customers.

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Performance and Ease of Use

Improved performance enhancements enable you to complete designs faster and more efficiently than ever before.

Improved Performance

Significant improvements in running commands that affect other drawings have dramatically improved the performance of AutoCAD Electrical 2008.

Electronic User's Guide

A User's Guide for AutoCAD Electrical is now available in PDF format. This is accessible from the Launchpad and the homepage of the Help System.

Stay Up-to-Date

Autodesk gives you more. Gain access to technical expertise, utilize training and support programs direct from Autodesk, stay up-to-date with the latest product releases and give us your feedback. Not only does Autodesk want to help you use AutoCAD Electrical more effectively but we want to make sure AutoCAD Electrical is working effectively for you.

Subscription

Log into the Subscription Center to receive product updates, log and view support requests, or take eLearning courses. A valuable component of Autodesk® Subscription, eLearning provides a continually expanding curriculum of short training exercises.

Product Updates

If you experience an issue with AutoCAD Electrical 2008 that has already been solved in a service pack or hotfix, a dialog box will appear when you submit the problem to Autodesk, enabling you to immediately install the new service pack or hotfix.

Feedback

AutoCAD Electrical customers can provide feedback to the AutoCAD Electrical development team through several different avenues. For example:

- Provide tips or join newsgroups at **www.autodesk.com/autocadelectrical**

- Keep up-to-date on what's happening in your industry, stay in touch with other industry professionals, and take advantage of a host of online resources at the Manufacturing Community Portal at **mfgcommunity.autodesk.com**

- Talk with your Autodesk Authorized Reseller and support staff

Your input is crucial to our success and we look forward to receiving your suggestions.

Conclusion

We thank you for your continued support of AutoCAD Electrical and hope you feel we are listening to your needs. We developed and added the new and enhanced functionality to AutoCAD Electrical 2008 to make you more productive, your company more competitive, and to return true value to your bottom line.

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