Categories and Features	Electrical Schematics Standard	Electrical Schematics Professional	SolidWorks Electrical 3D
Electrical Component Library Access the extensive integrated library of manufacturer parts and easily customize and adapt parts with easy-to-use import tools and wizards.	✓	✓	✓
Electrical Component Library Real-time Collaboration Synchronize all project design data in real time and bi-directionally in a multi-user collaborative environment. This synchronization unifies key information (such as Bill of Material and design data) between design disciplines and users.			✓
Real-time Multiuser Collaborate in a multi-user collaborative environment between 2D schematics and the 3D model.			✓
Electrical Design in 3D CAD Place or remove electrical components in the 3D CAD model. Easily create the electrical interconnect of the electrical 3D elements with auto-routing that allows for the planning and documentation of route paths and associated data (such as length of wires, cables, and harnesses within the system).			✓
Auto-Routing Simplify the auto-routing process for wire, cables, and harness in the 3D CAD model.			✓
3D Electrical Cabinet Design Utilize existing CAD designs as well as SOLIDWORKS automation tools to create comprehensive electrical 3D cabinet designs and documentation. This cohesive environment is synchronized in real time without the use of external files and can utilize existing CAD designs.			✓
Collaborative Electrical-Mechanical Development Multiple electrical and mechanical engineers can work on the same project simultaneously in real time using SOLIDWORKS Electrical 3D's advanced database technology with its bi-directional, multi-user environment.			✓
Distributed Mode Enhance schematic performance by minimizing network traffic and deferring real-time project updates. This technology provides a performance boost on large projects and remote access, without having to use special techniques.		✓	✓

Feature			
Embedded Electrical System Design Planning Schematically-define embedded electrical systems in a SOLIDWORKS 3D CAD model with an intuitive graphical user interface and the intelligence of traditional multi-line tools.		✓	✓
Link to SOLIDWORKS 3D CAD Link to 3D SOLIDWORKS assemblies to facilitate the verification of proper fit, planning of all wire, cable and harness routes, and calculation of all wire lengths prior to any assembly.		✓	✓
Single-line Schematics Create complex embedded electrical systems utilizing simple pictorial representations of electrical components and interconnectors.	✓	✓	
Multi-Line Schematics Create schematics with an easy-to-use interface optimized for simplification of repetitive tasks.	✓	✓	
Mixed Schematic Combine both single-line and multi-line drawings on the same schematic, while maintaining associativity.	✓	✓	
2D Cabinet Creation Generate 2D panel representations from an electrical schematic, with 2D outlines of electrical components.	✓	✓	
Design and Reuse Speed designs with integrated tools for intelligent cut and paste, an easy-to-access selection of "favorite" components and circuit design elements, and the ability to reuse non-SOLIDWORKS Electrical design elements though easy-to-use import wizards.	✓	✓	
Automated Terminal Drawing Creation Generate terminal drawings automatically based on, and synchronized with, the real-time design.	✓	✓	
Report Generation Generate reports automatically based on real-time design database queries. Develop custom reports using integrated custom report creation tools.	✓	✓	
Automated Contact Cross-Referencing Sync and cross-reference electrical contacts automatically in real time based on the availability and type of contacts from manufacturer-specific components.	✓	✓	
Advanced Formula Manager Take advantage of enhanced formula capabilities from wire naming to project name formulas.	✓	✓	
Electrical Content Portal Access the web-based portal for an extensive library of industry-standard schematic symbols and a database of manufacturer parts.	✓	✓	

Feature			
Enhanced SOLIDWORKS PDM Connector Manage electrical and mechanical data in one system based on proven SOLIDWORKS PDM capabilities and an enhanced PDM interface.	✓	✓	
Electrical Symbol Library Access an extensive library of industry-standard schematic symbols (IEC, ANSI, JIS, GB) to easily customize and adapt parts with easy-to-use import tools.	✓	✓	
Manufacturer Parts Add external links to PDF files and enhanced data fields in addition to cable lengths for pre-defined and custom cables.	✓	✓	
Symbol Editor Edit index and passive symbols with enhanced tools.	✓	✓	
Marks and Wires Management Take advantage of number group options, reuse of unused wire marks, natural ordering support and enhanced DWG import capabilities.	✓	✓	
Dynamic Connector Tools Simplify the creation, design and use of electrical connectors with the powerful, easy-to-use connector wizard.		✓	
Customizable Reports & Documentation Automatically generate reports based on real-time design database queries, with custom reports created via integrated custom report-creation tools.		✓	
Global Project Settings Specify global project settings for drawing style, project attributes and wire-style managers.		✓	
Classifications Create custom part classifications to enhance part management and selection.		✓	
Common ECAD and MCAD Database Share a common ECAD and MCAD database, ensuring consistency and facilitating creation of a single, unified Bill of Materials (BOM).		✓	
SOLIDWORKS PDM Integration Automate publishing of schematic data, drawings and reports for archival purposes and revision control.		✓	
PLC Tools Automate many PLC wiring design tasks and import PLC data and labels with Programmable Logic Controller Management (PLC) management tools.		✓	

Multi-Level Terminals Strip Support Manage 3D terminal strips and renumber/set component terminal properties, as well as add manufacturer parts, circuits and accessory components to terminal strip.		✓	
Electrical Design Planning Use the virtual "design-in-place" development environment to build a schematically-defined electrical harness. Produce detailed assembly drawings using the built-in drawing tools to create ballooned assemblies, pin board or cut list drawings, as well as associated BOM documentation.		✓	