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Harness Engineering

All the power of electrical CAD specialized for electrical wire harness design
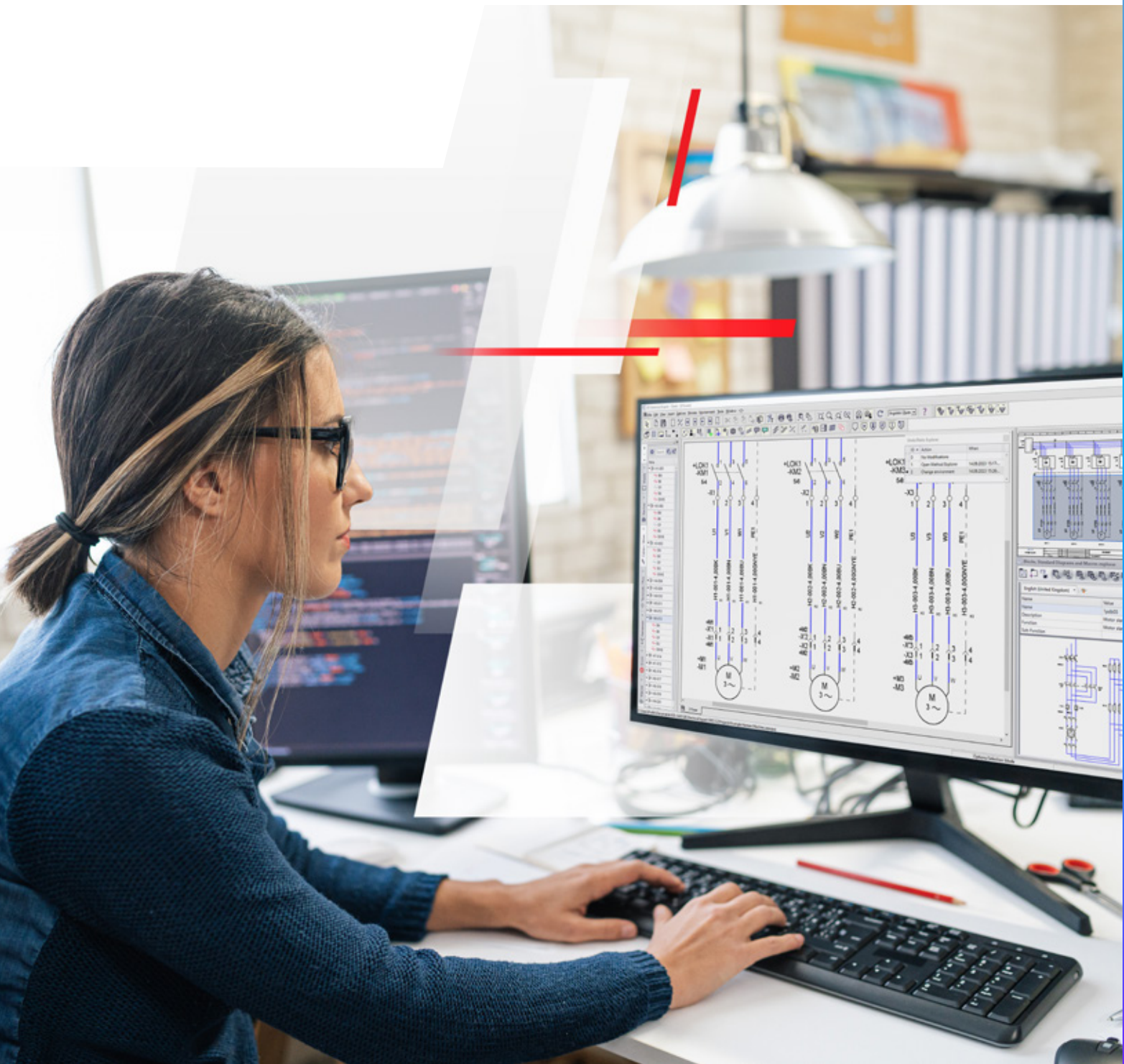
Summary

The leading sustainable enterprise platform for electrical design, simulation, engineering, and operations.

What we do

- We provide a comprehensive range of software, solutions and services to Design, Analyze, Engineer, Operate and Maintain electrical systems.

- Our offer enables a single source of truth for the entire Electrical Network through a multidimensional digital twin platform.

What makes us unique

- ETAP offers the most comprehensive solution for ensuring electrical design and engineering consistency and seamless data flow throughout the project life cycle.

- With our model-driven electrical digital twin technology, we drive innovation to support sustainability, safety, and resilience through continuous intelligence.

- Our wide geographical presence provides lightning-fast responsiveness in global, regional, and local markets.

Our commitments

Safety

ETAP prioritizes safety by allowing engineers to simulate and analyze electrical power systems, helping identify potential risks, and ensuring compliance with safety standards.

Sustainability

ETAP drives digital transformation for sustainability, supporting our customers in their energy transition, empowering them to make decisions for a green and smart future across the lifecycle.

Reliability

Elevate your electrical system's reliability to unprecedented levels with ETAP's advanced software solutions, ensuring optimal performance, proactive mitigation, and maximizing operational efficiency.

Resilience

We empower our clients to withstand adversity and minimize downtime, providing real-time adaptability, risk mitigation, and the assurance of continuous operations in the face of dynamic challenges.

Efficiency

ETAP streamlines the process of designing and analyzing electrical systems, improving efficiency in engineering workflows. It reduces the time and resources required with built-in automation and collaboration tools. It also enables engineers to optimize system performance and make cost-effective decisions.

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Supporting a diverse range of business sectors
across the global energy landscape

Distribution

Renewable

Generation
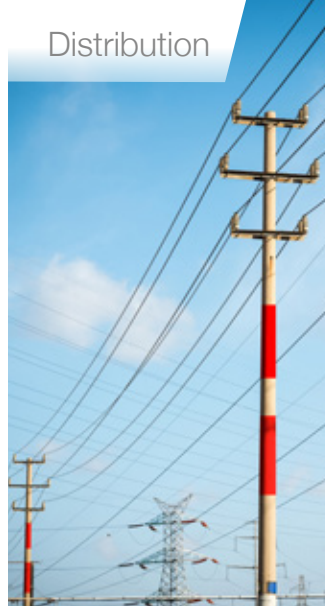
Transportation

Industrial

Commercial

Transmission

Data Centers

SEE Harness Engineering

Design 2D electrical multi-wire harnesses from electrical schematics with an add-on module for SEE Electrical Expert.

Overview of the product

Harness Engineering is an add-on module for machine designers that extends SEE Electrical Expert functionality by allowing designers to design logical diagrams and high-quality harness layouts for electrical wire interconnection systems (EWIS).

Customer challenges

- Lack of documentation available on demand
- Time wasted on repetitive tasks and recreating documentation
- Complexities in code compliance and safety regulation validations
- Difficulty communicating across the project lifecycle and loss of data
- Lack of customization abilities
- Inability to access up-to-date manufacturer catalog content

Benefits

Improved Efficiency:

- Streamline electrical design and harness manufacturing processes, reduce errors, and save time.

Improved Productivity:

- Perform detailed manufacturing tasks, automate harness management and production.

Improved Collaboration:

- Easily generate your completed documentation and seamlessly collaborate with stakeholders.

Harness Engineering Features

The module includes three integrated applications used for harness design and the production of electrical harnesses.

Harness Documentation

Boosts the efficiency of 2D harness design.

- Logical and physical (2D) design tools for electrical harnesses
- Accessory placement
- Route wires and cables within the harness in alignment with the electrical schematic.
- Automatic calculation of wire and cable lengths in the harness, as well as the diameter of different harness branches
- For optimal functionality, select from a wide array of dedicated symbols, electrical codes, and connection methods. Cables and accessories are also included.

Jigboard

Create harness diagrams to scale.

- Full-scale drawing of the harnesses can be used as a mounting plate.
- Branch management: Control branch bend radius and review each branch's bend diameter.
- Apply automatic flattening to harnesses, and adjust the layout of their branches and end terminations.

End Fitting

Define the fitting methods required for wire ends.

- Manage harness wire terminations.
- Define the equipment connection methods for wire end fittings.

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Benefits of moving to the new subscription bundles

Increased flexibility & scalability
Adjust the service to your business, whenever you need and wherever you expand.

Faster Innovation cycles
Incorporate best practices, stay up to date and future-ready with early access to latest improvements and innovation, contribute to product development.

Lower upfront cost & long-term pricing optimization
Predict and best manage your costs, preserve your investment with a lower cost of ownership, benefit from early bird cost advantages.

Best in class technical support & customer success teams
Leverage top-notch technical assistance with remote desktop diagnostics from dedicated specialized teams and customer success support. Access exclusive onboarding material for smooth technology adoption.

Simplified customer experience
Enjoy price stability over the years, payment facility, and online and offline user flexibility.

+ Available Add-Ons For Your Unique Needs

01.

3D Panel Design

Create a virtual model to gain a spatial perspective of all components required within a cabinet design.

Quickly create and optimize the components required for the panel to identify and resolve issues within your design.

02.

3D Panel Manufacturing

Optimize manufacturing by integrating the 3D model of the panel enclosure with wiring.

Create precise documentation for your shop floor workers throughout the entire assembly process.

3D Panel Manufacturing includes all 3D Panel Design features.

03.

Harness Engineering

A dedicated tool for use within the transportation industry to design and manufacture highly complex harness systems designed using SEE Electrical Expert.

Available for Grow and Scale bundles.

04.

Automatic Diagram Generation

Improves the workflow for electrical designers by automatically creating electrical projects from data sets.

Generates schematics automatically based on functional design descriptions, standard templates, and predefined rules.

Available for Scale bundle.

05.

Multi-languages

Rapidly translate and manage SEE Electrical Expert projects in selected multiple languages. Provides options to fine-tune the translated terminology, and includes options for layout customization of the translated content.

06.

SEE Web Catalogue

Utilize a comprehensive online catalog of electrical devices in your projects with over 1 million references provided by over 1800 manufacturers including continually updates.

Includes advanced engineering data, schematic representation, and intelligent 3D parts.

The SEE Harness Engineering add-on is available for SEE Electrical Expert Grow or Scale bundles.

Features included in SEE Electrical Expert bundles

Feature	Launch	Grow	Scale
Project management by location, by function, and by a subset	✓	✓	✓
Create single and multi-line schematics with revisions, layers, hyperlinks, and error-checking	✓	✓	✓
Automatic component tagging, wire numbering, and cross-referencing	✓	✓	✓
Navigation between related components and signals	✓	✓	✓
Powerful search engine and fast editing with copy/paste and modification tools	✓	✓	✓
Cable insertion into schematic diagrams	✓	✓	✓
Intelligent equipment selection from the equipment catalog (contact numbers, voltage, current...)	✓	✓	✓
Automatic generation of bill of material, equipment, list of cables, and wires with export to Excel	✓	✓	✓
Project electrical data explorer	✓	✓	✓
Mass electrical data editing	✓	✓	✓
Customizable professional environment with symbol creation, blocks, macros, and methods	✓	✓	✓
Multiple symbol libraries (including IEC, and NFPA) with graphical overview, grouping, and searching	✓	✓	✓
Connectors and terminal strips management with terminal numbering, bridges, and cable selection	✓	✓	✓
CAD drawing abilities and dimensioning capabilities	✓	✓	✓
Bi-directional compatibility with other CAD systems (DWG, DXF, DXB, DWF, and others)	✓	✓	✓
Image import and export	✓	✓	✓
Intelligent PDF export with search and navigation	✓	✓	✓
Redline functionality	✓	✓	✓
Function and location management	✓	✓	✓
CanecoBT and SE EPD Ecodial Connectors. Single and multiline schematics automatic generation	✓	✓	✓
Export labels to various printer types		✓	✓
PLC configuration management		✓	✓
Network and field bus management		✓	✓
Automatic generation of racks and I/O card sheets		✓	✓
Direct import of PLC configuration from Schneider Electric, Siemens, Allen-Bradley, Microsoft Excel		✓	✓
Separate management of wires and voltages		✓	✓
Advanced cable management		✓	✓
Automatic wire creation and update		✓	✓
Automatic wiring connection according to cabling direction		✓	✓
Wiring diagrams for symbols		✓	✓
2D Panel editor with equipment placement, dimensioning, and drilling layout		✓	✓
Navigation between panel layout and schematics		✓	✓
Synoptic cabling editor with the creation of terminal strips, cables, and connections on the drawings		✓	✓
MS SQL Server equipment database creation			✓
Management of the working environments with merging, synchronization, and differences detection			✓
Update of "Local environment" according to a "Reference environment" stored on the server			✓
Project object control according to the environment and schematics, and data export filtering			✓
Multiple configuration management in a single project			✓
Parts list management with an evaluation of the differences between 2 editions			✓
Import of equipment list to the project, and import from SEE Web Catalogue by using an Excel sheet			✓
Validity tagging for symbol connections and connection points			✓
Hierarchical options and variants management			✓
Generic interface to communicate with PDM / PLM / ERP tools (PTC-Windchill, ARAS, SAP…)			✓
Enhanced interface providing the option to work with Solidworks PDM and Enovia Smarteam			✓
Data import/export for quick and easy editing of project data in Microsoft Excel			✓

How to choose
the right Subscription Bundle

01.
Assess

- Assess your business requirements
- Assess your budget
- Assess your future needs

02.
Compare

- Compare features and functionalities
- Compare prices
- Compare scalability

03.
Select

- Ask for a presentation
- Make the right choice

Also available

SEE Electrical

SEE Electrical is an intuitive electrical CAD software for electrical professionals to easily design and document electrical schematics.

CANECO

CANECO is a comprehensive software solution for electrical professionals to efficiently design, complete calculations, and document electrical installations.

For more details,

Please follow this link

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