

## **SEE Electrical 3D Panel**



SEE Electrical 3D Panel is a program dedicated to designing and manufacturing electrical cabinets, switchboards and panels.

By improving and unifying design and production in the digital twin process, it significantly enhances efficiency and quality.

SEE Electrical 3D Panel can be purchased as an additional module by designers who are already subscribing to SEE Electrical or SEE Electrical Expert. However, a very attractive option is to subscribe to a standalone version. With standalone option a diagram designer can work simultaneously with a cabinet layout designer, and without blocking each other.

SEE Electrical 3D Panel software can be purchased in two levels – Design and Manufacturing. The Manufacturing level includes all of the design features existing in the Design level, and have additional features for manufacturing market.

In today's design and manufacturing environments, hiring skilled staff and implementing automation are critical challenges. SEE Electrical 3D Panel software offers a solution by simplifying processes and reducing design time. With intelligent snapping and collision checks, it ensures efficient component layout and minimizes errors. The software's automation features streamline design creation, wire routing, and document generation, saving time and enhancing accuracy. The software enables the automatic creation of accurate documents for each cabinet assembly step.

With SEE Electrical 3D Panel, engineers can:

- Utilize a comprehensive suite of tools tailored for the design of electrical cabinets to insert equipment and mounting plates in the 3d environment
- Access a vast library of 3D references with accurate scaling within cabinets, by leveraging content from the equipment database
- Manage components, electrical properties, wire channels, rails and busbars
- Route wires, calculate wire lengths, generate a From >> To list and manage End Fitting
- Create a drilling plan and other manufacturing outputs.



## **Product overview**

SEE Electrical 3D Panel streamlines and unifies your cabinet design and manufacturing in a true digital twin process.

Its core functionality is electrical panel design, which enables precise dimensioning and optimized space utilization.

With a professional and intuitive interface, complemented by an extensive library of intelligent 3D parts, SEE Electrical 3D Panel enhances efficiency and productivity by providing timely access to precise documents and digital data for the production of electrical cabinets.

Its features support various stages in panel manufacturing, including device picking, labeling, mechanical processing, pre-assembly of terminal strips, wire prefabrication, panel mounting, and wiring.

## **Key features:**

Cabinet layout design: You can design electrical switchboards, cabinets and automation panels using an extensive library of elements.

- Simplicity by Design: Enjoy an intuitive interface that simplifies the design process, making it easy to create detailed layouts effortlessly with mounting plates, wire ducts, rails, busbars, wires and components
- Efficient Snapping System: Utilize an intelligent snapping system for quick and precise layout, reducing design time while ensuring accuracy
- Automated Error Prevention: Benefit from automated collision and wire channel filling checks, minimizing errors and ensuring easy panel assembly and operation
- Powerful Automation: Experience streamlined design creation, wire routing, and document generation with powerful automation tools, saving time and enhancing accuracy
- Universal Compatibility: Seamlessly import schematic data from others systems, ensuring compatibility
  and facilitating smooth integration into your design process
- · Documentation Engine: Automatically generate assembly instructions for your shop floor associates
- Manufacturing Automation: Fully customizable CNC & Wire Machine export compatible with most vendors
- Digitize your manufacturing process: Leverage the design with 3D Shop Floor Wiring and Mounting Assistant

SEE Electrical 3D Panel facilitates 3D layout creation and manufacturing by optimizing processes in one digital-twin workflow.







## Features list

Design

Manufacturing

| Efficient 3D cabinet layout editor for creating switchboard and panels with full digital management of the switchboard | \text{\tint{\text{\tin}\text{\tin}\\ \text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\texi}\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\texi}\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\texi}\text{\text{\text{\texi}\text{\texi}\text{\text{\text{\texi}\text{\text{\text{\texi}\text{\text{\texi}\text{\text{\texi}\text{\text{\texi}\text{\texi}\text{\texi}\text{\texit{\texit{\texit{\texi}\text{\texi}\text{\texit{\texi}\titt{\texitit}}\\tint{\texitit{\texit{\texitit{\texit{\texi}\tit | Q                   |
|--|--|---------------------|
| Integrated equipment catalogues with components' dimensions and 3D models (or parts) with electrical properties        | $\phi$   | $\phi$              |
| Extensive 3D symbol libraries with easy snapping and positioning on rails and on the mounting plate                    | $\Diamond$   | $\phi$              |
| Smart 3d parts creation with import of 3D models from STEP and others formats  | $\Diamond$   | $\phi$              |
| Wiring of components via selected wire and management of component's points  | $\Diamond$   | $\phi$              |
| Wire channels and rails management   | $\Diamond$   | ø                   |
| design features with busbar type selection, positioning, stretching, and bending                                       | $\phi$   | $\phi$              |
| Collision checking on rails with management of declared safe distances   | $\Diamond$   | $\phi$              |
| Import of the electrical circuit diagram data from SEE Electrical products and other CAE systems                       | $\phi$   | ø                   |
| Navigation between 3D Panel drawing and electrical diagrams with tracked changes (included only with SEE add-on)       | $\phi$   | ø                   |
| Documentation Designer for creating documentation and templates  | ø  | ø                   |
| Electrical and mechanical BOM report management  | $\Diamond$   | ø                   |
| Export 3D projects to the SEE Electrical 3D Shop Floor mounting application  | <b>\rightarrow</b>   | $\phi$              |
| Automatic wire routing with routing optimization and wire length calculations  | 0  | ø                   |
| Creation of a drilling plan for the panel's doors and busbars  | 0  | ø                   |
| Busbar manufacturing drawings with drilling and busbar connections   | 0  | ø                   |
| End fitting management for wires and component connection points   | <b>\rightarrow</b>   | \operatorname{\psi} |
| Generation of a list of wires From >> To with wire lengths and wire types  | <b>\rightarrow</b>   | þ                   |
| Nire machine export with wire cutting list   | 0  | ø                   |
| CNC machine output   | 0  | þ                   |
| Documentation Designer engine with dynamic templates and view creation   | 0  | ø                   |
| Enhanced generation of 2D documentation and reports.   |  | 0                   |

