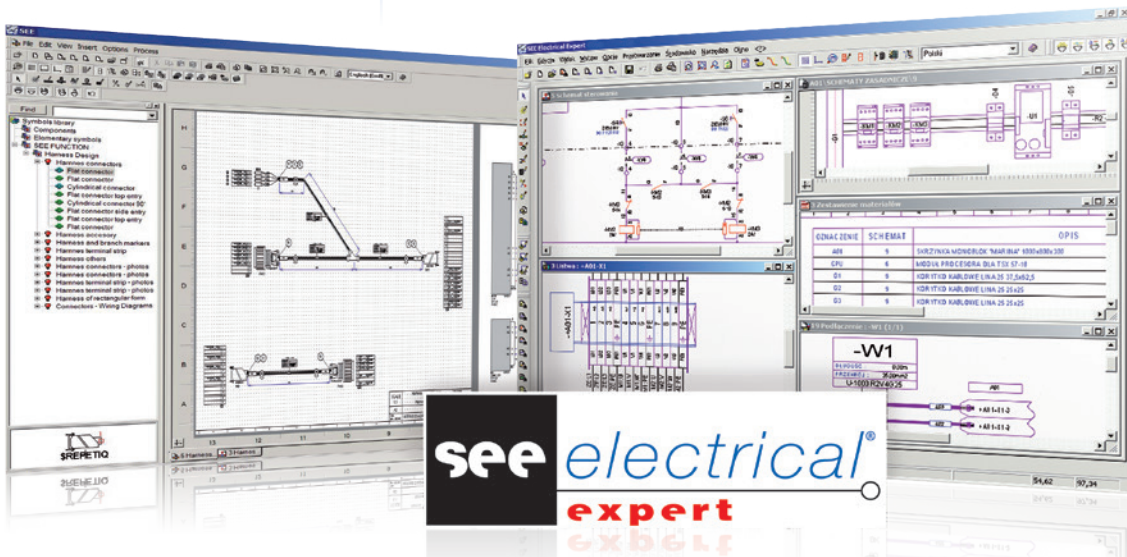


“All the Power of Electrical CAD dedicated to industrial automation and embedded systems”



More than 70,000 people
worldwide use an IGE+XAO
software package

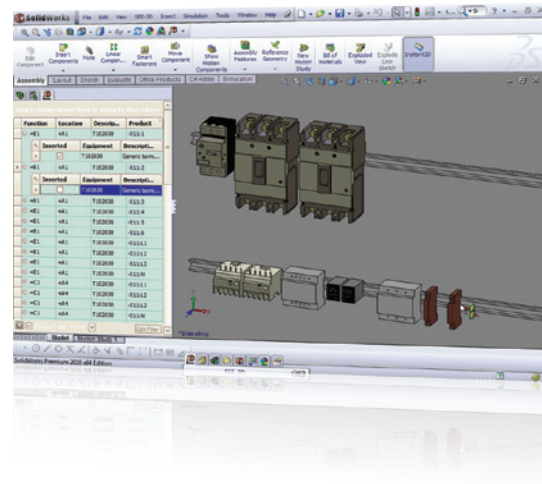
Thanks to IGE+XAO's 27 years of experience, SEE Electrical Expert is one of the reference in the world of electrical design.



Innovation

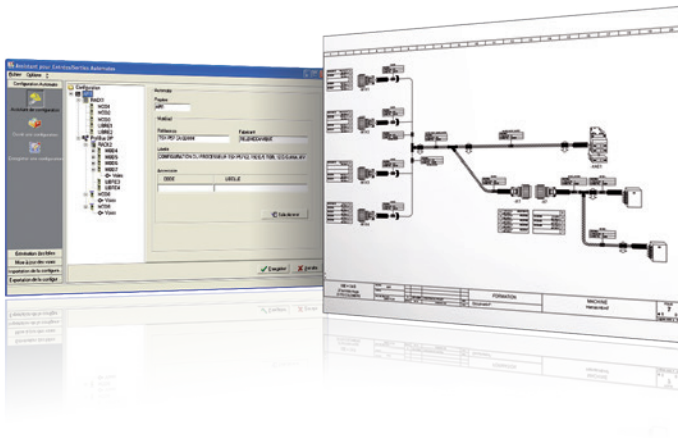
An opening to innovation with the following modules:

- «Concurrent Engineering»: all the power of collaborative work in one single module;
- «3D Panels»: 3D installation design integrated to the IGE+XAO world;
- «Harness Documentation» for designing 2D harnesses and routing the wires and cables in accordance with the schematics with maximum reliability;
- «Synoptic»: automatically generates all the terminal strips and cable diagrams and updates the schematics;
- «Open Data»: changes optimisation;
- Options & Variants: design standardization (project number as well as change time reduction);
- «Automatic Diagram Generation», «SEE Generative View» and «SEE Compodata»: innovative solutions for automatic generation of electrical projects.



Communication

- Several communication gateways with other software packages:
 - mechanical CAD (Catia, SolidWorks, Creo, NX, Inventor AutoCAD, etc.);
 - PDM (SmartTeam, Windchill, TeamCenter, SolidWorks ePDM,...);
 - ERP (SAP,...);
 - professional software (PLC programming, labelling, panel manufacturing, cable cutting, documentation, archiving, cost calculation, etc.);
- 100% unicode environment.



Efficiency

A complete environment for an immediately operational business package:

- more than 1,000 electrical standardized symbols (IEC, IEEE, etc.);
- many design templates built in (motor starters with corresponding control part, drives, PLC cards, etc.);
- updated and online electrical equipment catalogue with more than 700,000 parts (ABB, Legrand, Eaton - Moeller Electric, Phoenix Contact, Rockwell Automation - Allen Bradley, Schneider Electric, Siemens, Socomec, Wago, Weidmüller, etc.);
- hundreds of working methods already available (symbol tagging, wire numbering formats, terminal strip layouts, connectors, cables, management of interconnections, part list templates, terminal and cable lists, XLS and XML export formats...).

SEE Electrical Expert basic packages

SEE Electrical Expert is available in 2 different packages including all the basic functions for the creation and the modification of electrical diagrams.

Control package

Dedicated to industrial installations and automation:

- component, connection, equipotential and wire tagging;
- real-time cross-referencing management;
- component choice according to logical constraints (number of used and available contacts).

Harness Package

("Cabling" and "Parts List" modules included)

Dedicated to embedded systems cabling:

- management of signals, wires, cables, shielding, connectors...
- wire lists, parts lists, cable lists generation.

The additional SEE ELECTRICAL EXPERT modules

Cabling

Level 1 - Terminals:

- terminal strip management;
- automatic terminal and terminal strip tagging;
- management of different types of terminal (disconnect, fuses, diodes, stepped, etc.);
- cable selection assistance (types, wire numbers, colours,...);
- terminal sheet automatic generation;
- cables and interconnection automatic generation;
- navigation between schematic and terminal strip diagrams.



Harness Documentation:

- logical and physical (2D) electrical harnesses design;
- positioning of accessories;
- automatic routing of cables and wires into the harness according to the schematics;
- automatic calculation of harness wire and cable lengths and branch diameters.

Level 2 - Synoptic:

("Terminals" module included)

- installation synoptic design (localisation, cable and terminal strip graphical management; navigation);
- terminal automatic creation and cabling;
- automatic terminal and cable insertion in the schematics;
- multi-connection terminals;
- automatic bridge and neutral management;
- connector management;
- between enclosures cabling list import;
- automatic management of cable lists;
- creation and automatic insertion of symbols on the connections*;
- graphical cabling list*;
- assistance with the cabling of complex installation*.

* included in Harness Package ("Cabling" module)

End Fitting:

- definition of equipment associated to wire end fittings.

PLC Management

PLC:

- management of PLC configurations;
- networks and field buses management (remote input/output);
- automatic generation of racks and input/output cards schematics;
- import/export of input/output lists;
- input/output card updating.

Cabinet Layout

Level 1 - Panels:

- equipment placement and collision control;
- associative dimensioning;
- rail and wireway management;
- enclosure selection assistance;
- navigation between panel layout and schematic diagrams.

3D Panels with SolidWorks:

- 3D equipment placement in SolidWorks;
- equipment and panel layout realistic view;
- collision control.

Level 2 - Panels Manufacturing:

("Panels" module included)

- wire routing in the cabinet;
- wire length calculation;
- wireway filling rate calculation;
- automatic cabling wire list;
- drilling layout generation.

The additional SEE ELECTRICAL EXPERT modules

Data Management

Level 1 - Parts List:

- automatic generation of bill of materials;
- multi-criteria sorting and filtering;
- user defined page layouts (multiple templates available);
- generation of terminal block tags for engraving machines.

Options & Variants:

- multiple configuration management in a unique folder;
- validity tagging for symbol connections or connection points;
- hierarchical options/variants; validity defined as a Boolean expression;
- schematics and data export filtering.

Level 2 - Parts List Manager:

("Parts List" module included)

- MS SQL Server or Oracle equipment database;
- part list management (evolution between 2 revisions);
- equipment list importing (pre-part list);
- automatic equipment code assignment;
- advanced research tools in the equipment catalogue (for SEE Web Catalogue service subscribers).

Exchange and Communication

Concurrent Engineering:

- simultaneous work of several users on the same project;
- conflict management (simultaneous access to data);
- modifications made by other users are instantly seen;
- online discussions (chat) tools.

Translation:

- project translation in different languages;
- multi-lingual project management.

DXF / DWG:

- DXF format (AutoCAD) and DWG Importation/Exportation.

Open Data:

- data export for quick and easy editing of project data with Excel or any other application;
- data imported back with consistency control.

PDM Connect:

- electrical data export for integration in PDM tools (Teamcenter-Siemens, Windchill-PTC, SAP...).

SmarTeam Integration:

- projects and associated documents storing and management into Enovia SmarTeam PDM;
- project management from SEE Electrical Expert and/or Enovia SmarTeam.

SolidWorks ePDM Interface:

- project and attribute storing and synchronization in SolidWorks Enterprise PDM.

Interfaces CATIA, SolidWorks, Creo, NX, Inventor:

- equipment and cabling list export.

Data Extractor:

- XML format customized data export.

Additional services

SEE Web Catalogue:

- online equipment catalogue with more than 700 000 equipment codes, 900 manufacturers and 20 000 specific equipment symbols. Accessible from all the software;
- powerful research tool;
- filtering availability.

SEE Parts Libraries:

- on demand specific equipment creation service.

Additional packages

SEE Viewer and SEE Viewer Premium:

- documents viewing and printing.

SEE Generative View and Automatic Diagram Generation:

- electrical project automatic creation.

SEE Project Manager, SEE Project Manager LT and SEE Project Manager in the Cloud:

- document Management.



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