

# ElectricalDesign



Design of electrical installations made easy



Complies to the standards: IEC 60364, BS 7671, HD 384

# What is the most efficient way to design electrical installations?

This question has been a permanent guideline for the development of our industry leading application: [ElectricalDesign](#).

As the electrical design standards and code compliance regulations have to be applicable to all types of installations and technical solutions worldwide, their content is extensive, complex and not presented in a ready-to-use format.

The design process can therefore be complicated and laboriously repetitive. It requires a large number of calculations, simulations, decisions that need be made early on and, finally, the production of detailed construction drawings and reports.

A lot of engineers rely on separate tools: CAD editors, 3D modelers, spreadsheets and word processors, specialized calculations tools, cable sizing routines, archives of documents containing equipment and material specifications. The communication between these tools and the manual input-output can be tedious, time-consuming and dangerously error-prone.

## All the tools in a single package

ElectricalDesign V15 combines all this functionality and provides out of the box tools for modeling, validation, automated production of schematics and drawings, reporting and 3D visualization. It assists the designer with guidelines, proven design templates, concise documentation, reference information and open-ended libraries of materials, symbols and equipment.

Read the QR code with your QR code reader.



# Modeling the electrical distribution

The installation's electrical distribution is comprised of interconnected switchboards (electrical panels).

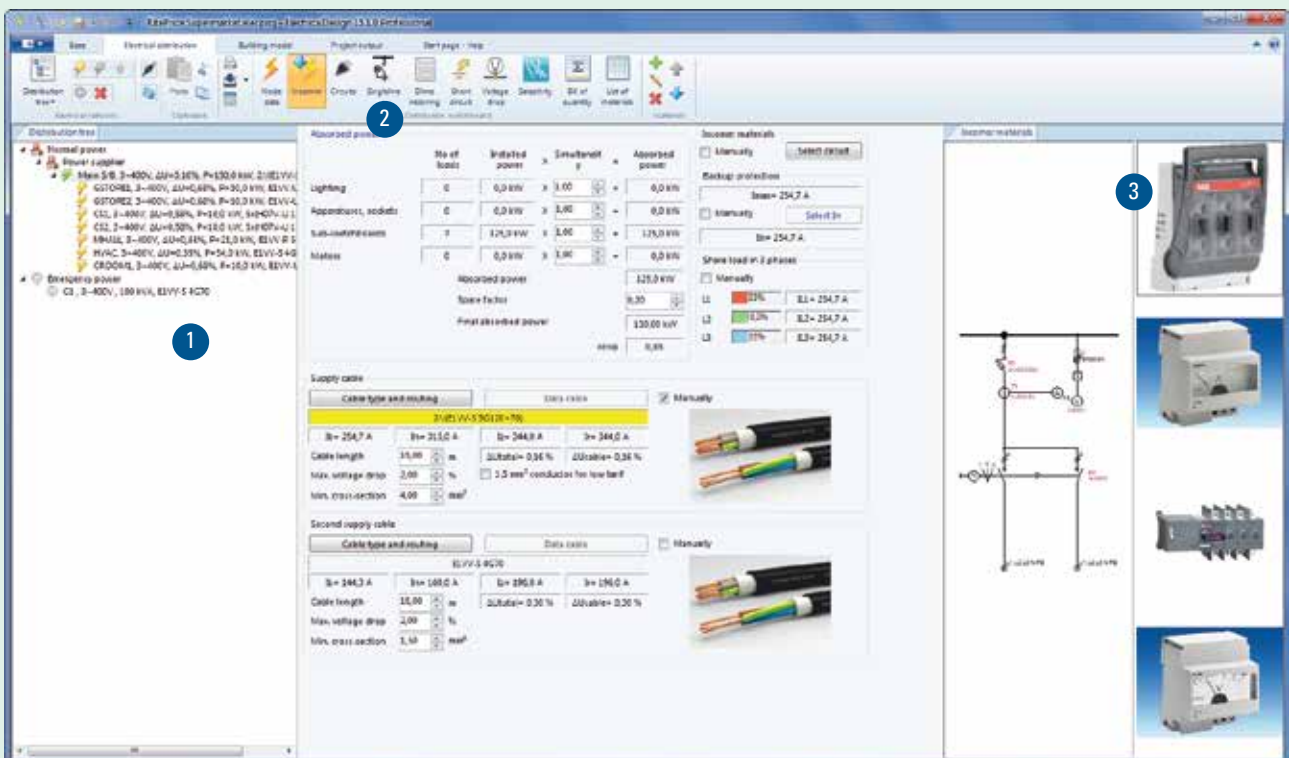
It is modeled in a hierarchical treeview [1] that is easy to navigate and offers a “bird’s eye” overview of the whole installation.

Right click to add LV and MV switchboards and subswitchboards, transformers, generators and UPSs. Each switchboard's properties are split into tabs (groups) [2] for easier navigation.

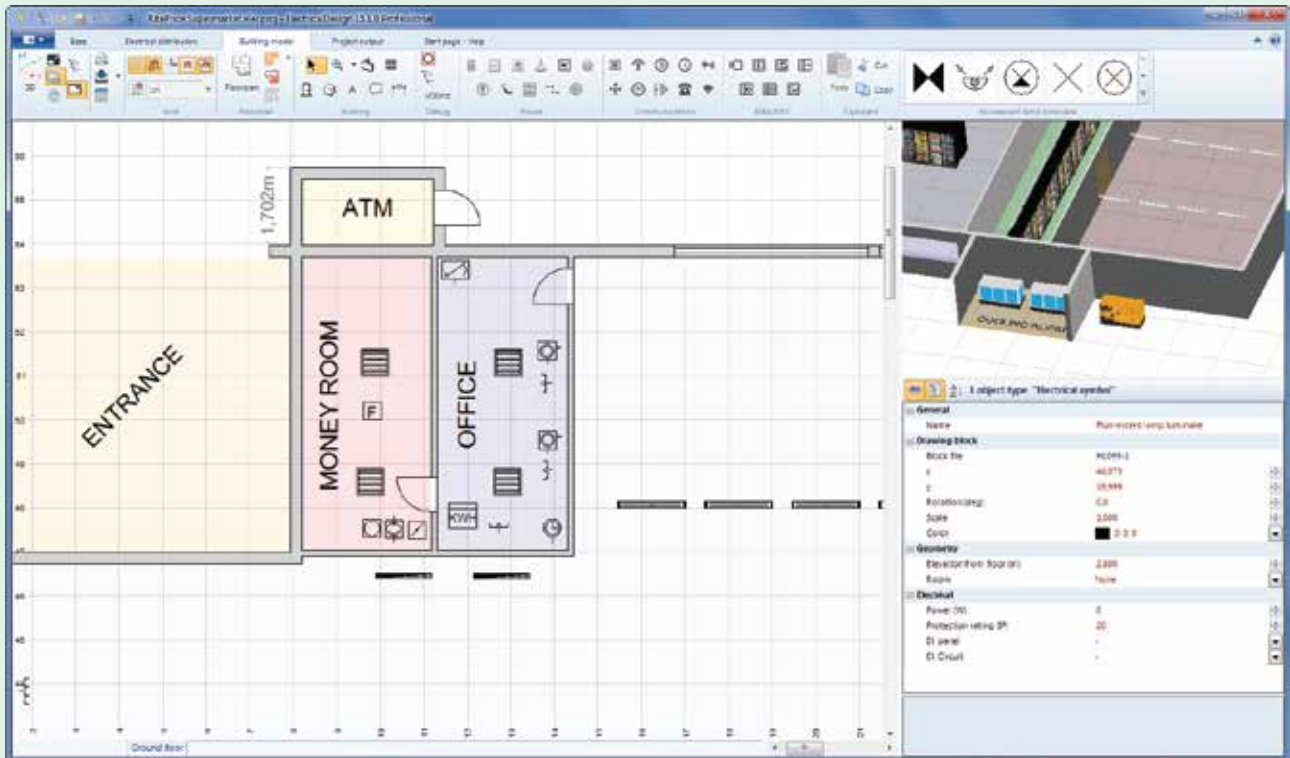
Schematic drawings and pictures are presented for every material and group of materials where possible.

Circuits can be added to switchboards. Select from a library of predefined circuits (sets of materials) or easily add your own.

Cable sizing calculations are done in the background after every change in the project, while the user maintains a fine-grained control over what is selected automatically and what is selected manually.



# Building modeler, 2D drafting, 3D visualization



The integrated building modeler allows you to add architectural and electrical elements in 2D and immediately preview them in 3D.

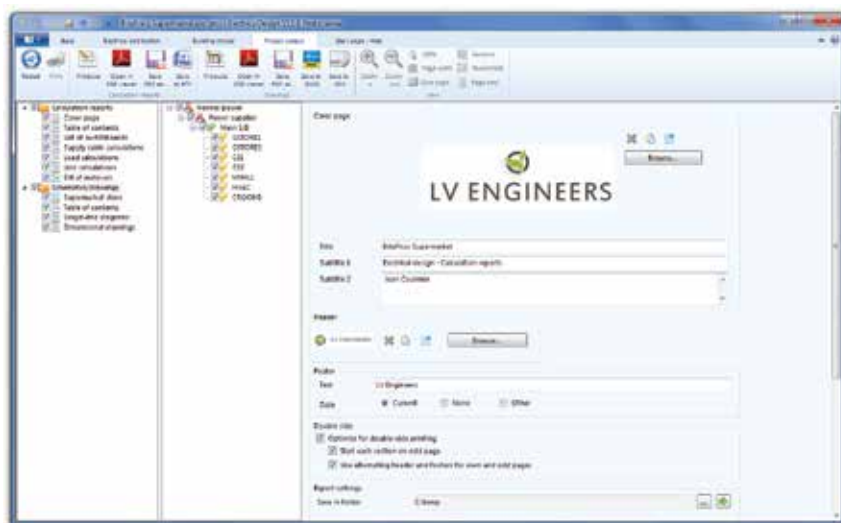
Import an existing architectural floor plan and use as a background on which you can add the electrical symbols. Or create floor plans using the included architectural tools (walls, openings, rooms etc.)

Select from a large library of electrical symbols to add to your floorplan. Optionally designate cable routes with the cableline tool.

Annotate your drawings with notes, dimensions and texts.

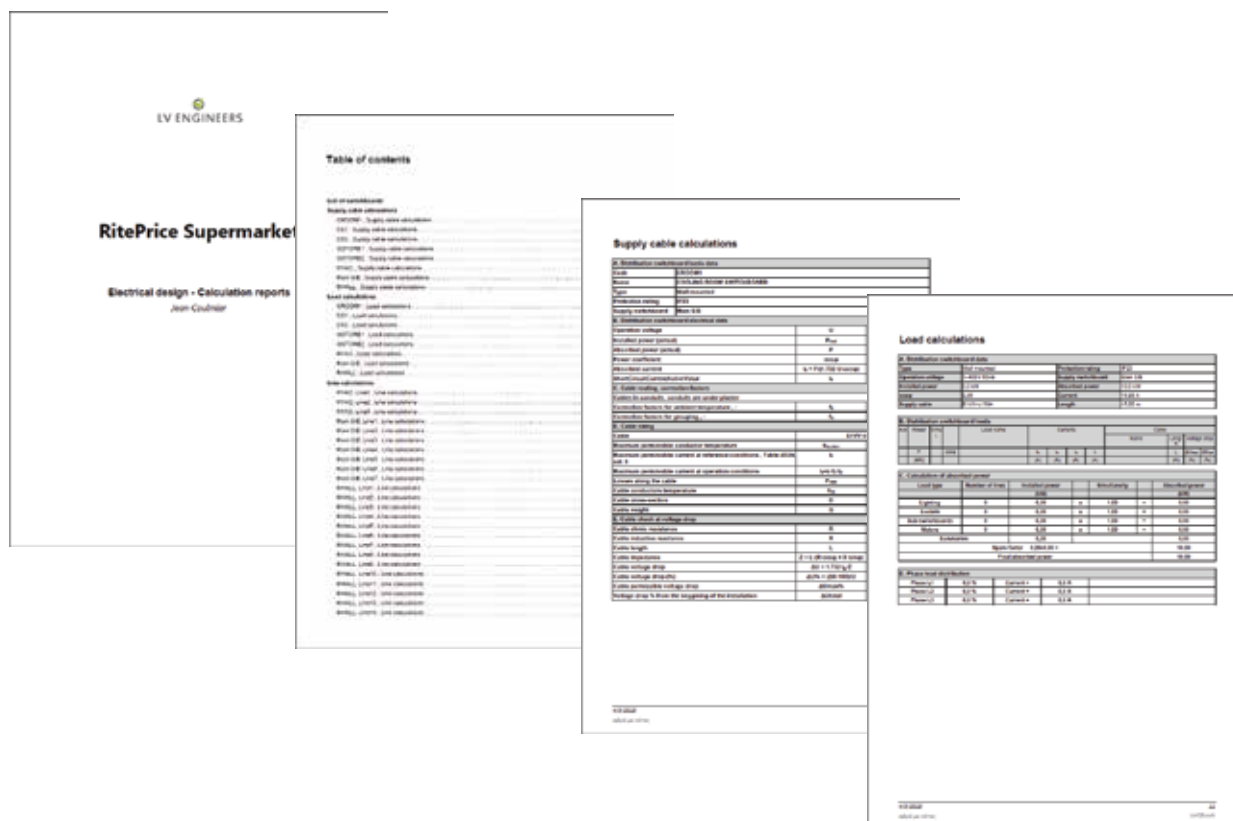
Easily print or export your drawings to a number of vector formats (DWG, DXF, PDF) and produce pictures and videos from the 3D visualization.

## Project output - Reports



Check-select the reports you want and click 'Produce'. The reports are produced in PDF (for printing, sharing and archiving) and RTF format for easy editing. Easily brand the reports with your logo and contact info.

A detailed table of contents is added to the produced file. The reports can be previewed withing ElectricalDesign or saved and opened externally.



3-400V 50Hz

From PFC  
G1  
P = 150.00 kW  
L = 15.00m

From Diesel Generator Set  
G1  
S = 100 kVA  
P = 10.00 kW  
L = 15.00m

To Distribution SwitchBoard  
GSTORE1  
P = 10.00 kW  
L = 15.00m

To Distribution SwitchBoard  
GSTORE2  
P = 10.00 kW  
L = 15.00m

To Distribution SwitchBoard  
CS1  
P = 10.00 kW  
L = 15.00m

To Distribution SwitchBoard  
Main  
P = 10.00 kW  
L = 15.00m

To Distribution SwitchBoard  
Main  
P = 21.00 kW  
L = 15.00m

To Distribution SwitchBoard  
HVAC  
P = 54.00 kW  
L = 15.00m

To Distribution SwitchBoard  
CROCOM1  
P = 10.00 kW  
L = 15.00m

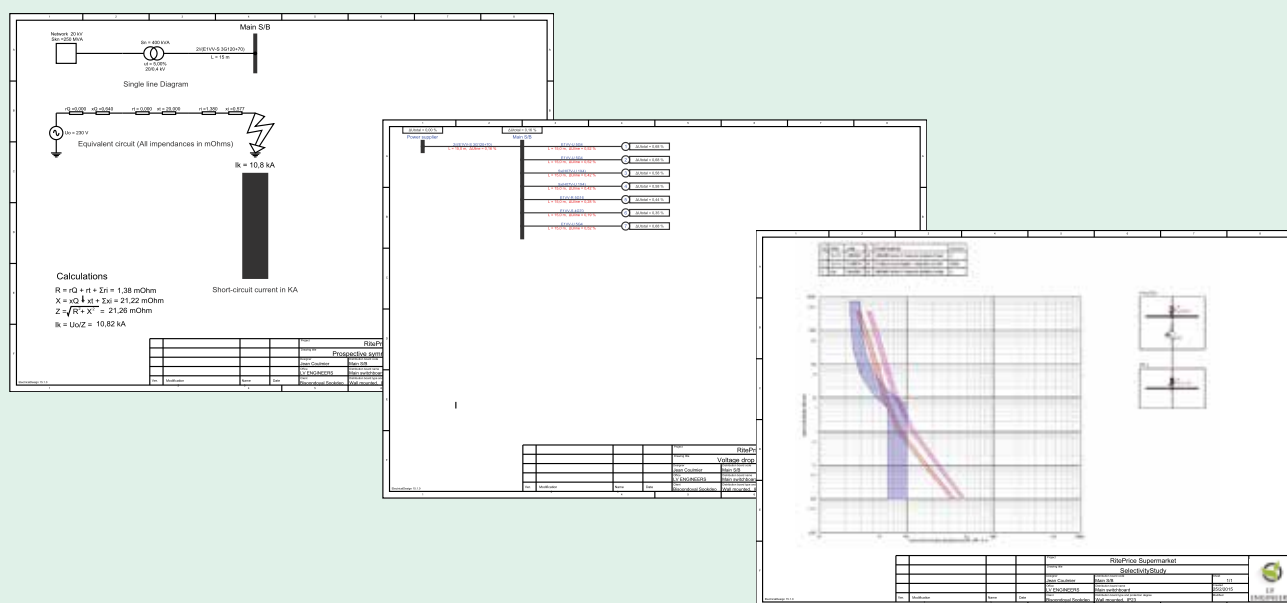
Ver.	Modification	Name	Date
1			
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7			
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Project		RitePrice Supermarket	
Drawing title		Distribution board single-line diagram	
Designer	Jean Coulmier	Distribution board code	Main S/B
Client	LV ENGINEERS	Distribution board name	Main switchboard
Client	Bisoondoyal Sookdeo	Distribution board type and protection degree	Wall mounted, IP23
Sheet	1/1	Created	25/2/2015
Modified		Modified	

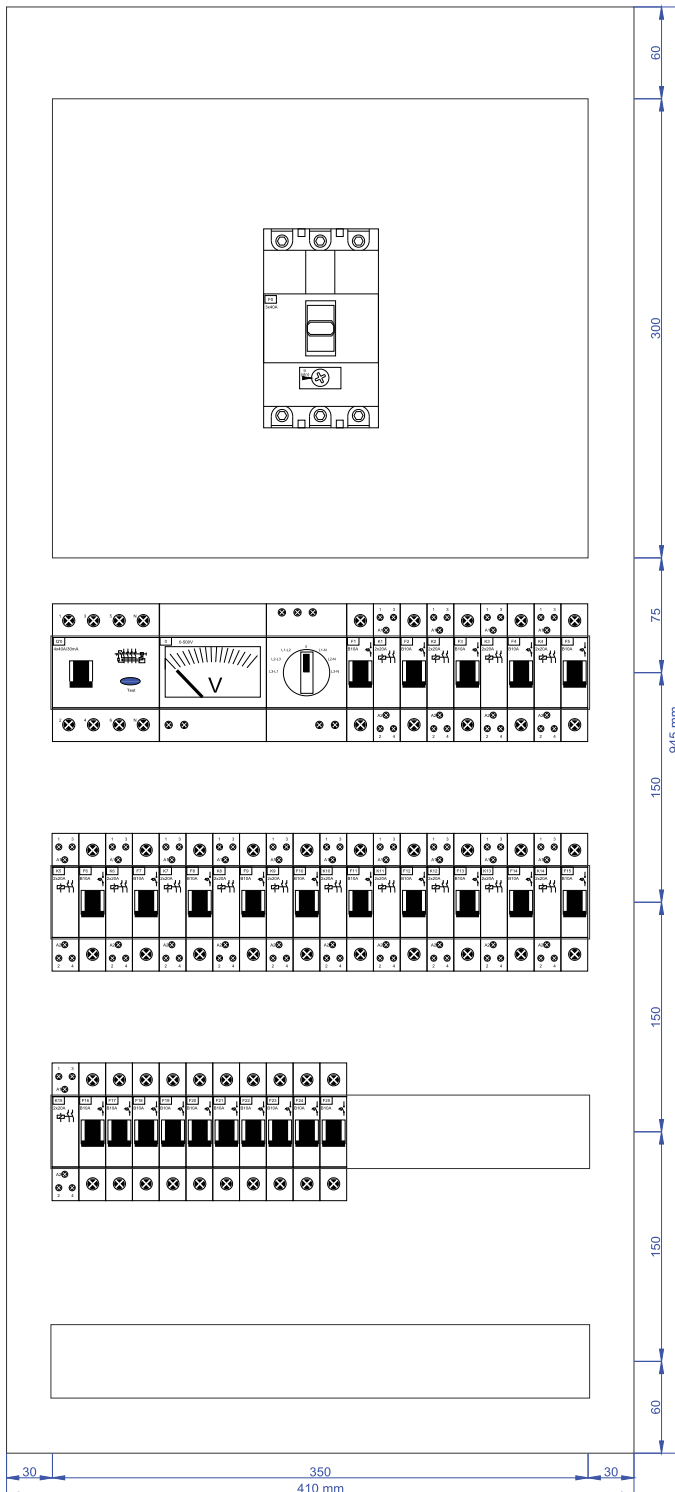
ElectricalDesign 15.1.0

LV ENGINEERS

Every drawing can be saved as PDF, DWG, DXF and many more popular vector formats.



# Cabinet layout drawings



The cabinet layout (dimensioning) drawings are produced automatically based on the switchboard's circuits and the drawing block of each circuit's material.

Fully parameterized layout options (layout direction, number of columns and rows, elements per row, row clearance etc.).

Different types of cabinets:

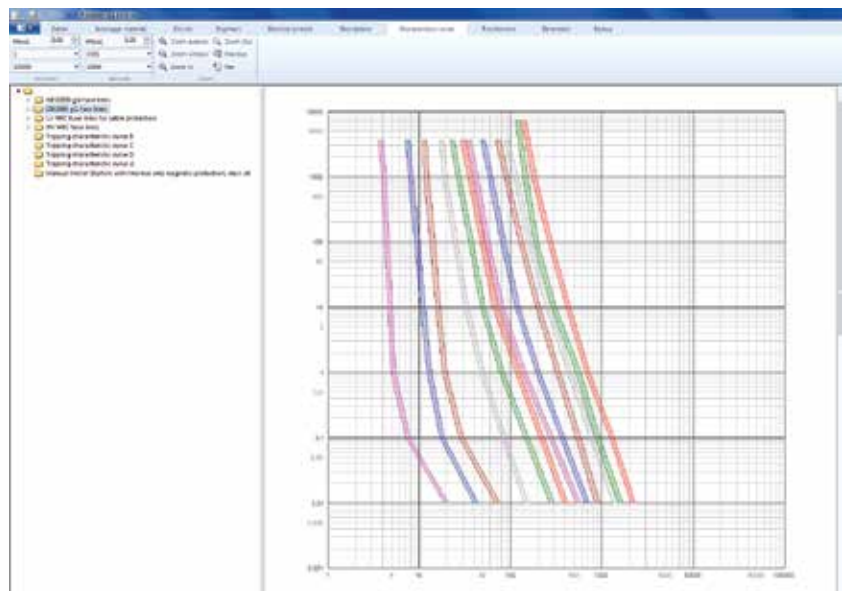
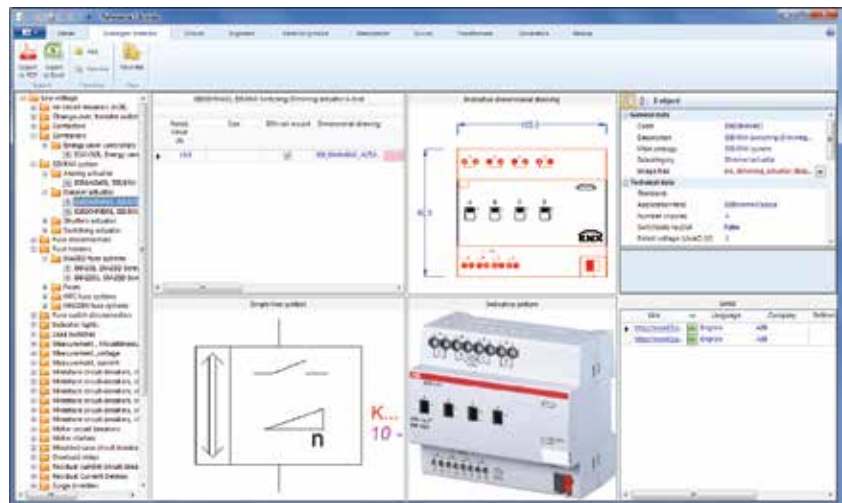
- Wall mounted with DIN-rail materials
- Wall mounted with primary space
- Floor-standing



# Libraries

Designers of electrical installations need to have readily available a large number of specifications of materials and equipment.

ElectricalDesign includes libraries of cables, switchgear materials, symbols, transformers and generators along with their full specifications and reference information. It also includes an open-ended library of circuits (predefined sets of materials). All available for use in your projects.






## Support, documentation & video tutorials

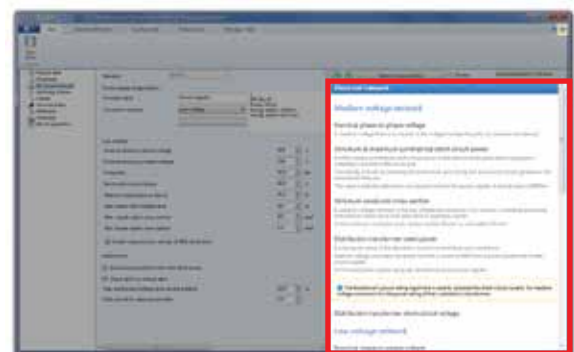
Customer service and satisfaction is our number one priority. We provide a range of services to make using our software as easy and straightforward as possible.

Read the QR code with your QR code reader.

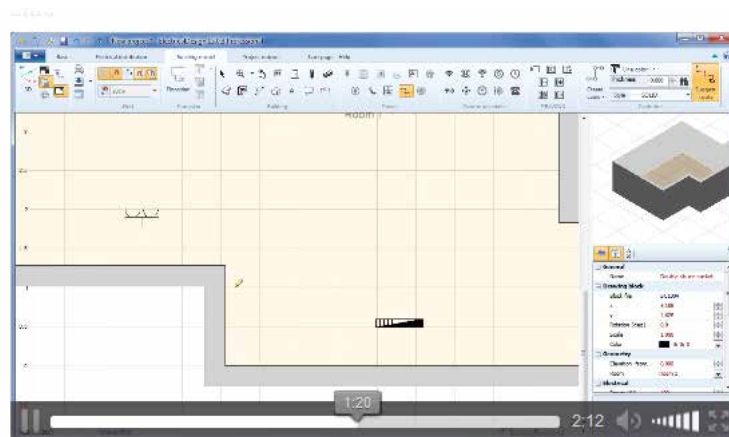


Detailed, searchable documentation explains the use of the application and the underlying calculation methods.

Simply open the help window on the right by clicking  and the help topics will “follow” you as you navigate to different parts of the application displaying the appropriate help topic.



Get started fast by watching the video tutorials!



## Benefits



### TIME SAVINGS

Correct mistakes earlier – spend less time later with more complicated changes, offering improved customer satisfaction.

No time wasted importing/exporting data into/from different tools. Simulation and calculations tools, 2D and 3D visualization, drawings, reports, libraries and documentation within the same application.

Minimize the time spend browsing materials and equipment. The libraries come preloaded with a large number of data (materials and equipment available on the market). New data can be easily added to the libraries.

Every new project has default values (where possible) for its most important parameters. These values have been carefully selected and significantly speed up the modeling of the electrical distribution.

Frequent references to the standards textbooks can be distracting and interrupt your workflow. Important information, formulas and excerpts from the standards are included in the help.



### COST SAVINGS

Ensure that your design satisfies regulations without oversizing equipment.

Prevent numerous changes later once the build is in progress.

Ability to take off material volumes and amounts means less overspend – which in turn leads to less waste on unnecessary materials being ordered and not wanted/used.

# Specifications

## Basic

- ✓ Integrated, stand-alone application. Not an add-on and no add-ons required.
- ✓ Modern, ribbon-based user interface.
- ✓ Unlimited undo/redo steps.
- ✓ Simple installation
- ✓ Simple licensing model. Portable licenses means that you can work on many machines using a single license. Purchase or lease your license.

## Electrical distribution & cable sizing calculations

- ✓ Hierarchical treeview of the switchboards and their relationships (parent-child).
- ✓ Use ready-made groups of materials (circuits).
- ✓ Fine-grained control over what is calculated automatically or selected manually.
- ✓ Checks for mismatches, warnings and color-coded alert messages indicate possible errors.
- ✓ Tables of summaries provide a complete overview of your project.

## 2D & 3D drawings and models

- ✓ Easy modeling of architectural and electrical elements in 2D and full parametrical preview in 3D.
- ✓ Embedded CAD editor for simple and fast editing of DWG/DXF drawings.

## Automated production of drawings and schematics

- ✓ Single-line diagrams produced from the list of circuits.
- ✓ Fully customizable cabinet layout and dimensioning drawings (wall or floor mounted cabinets).
- ✓ Voltage drop schematic diagram.
- ✓ Short-circuit schematic diagram.
- ✓ Selectivity diagram for each circuit.
- ✓ Customize the drawings with your logo or select your own forms.
- ✓ Export to DWG, DXF, PDF, RTF formats.

## Reports

- ✓ Absorbed power calculation
- ✓ Detailed line calculation
- ✓ List of switchboards
- ✓ Bill of quantities
- ✓ Bill of materials
- ✓ Export to PDF or editable, well-formed RTF format
- ✓ Easily brand your reports and drawings with your logo

## Code compliance

- ✓ IEC 60364
- ✓ BS 7671
- ✓ HD 384

# System requirements

Processor	Pentium III or later or compatible
Operating System	Windows 8, 7, Vista, XP
Mouse	Wheel mouse or similar functionality
Graphics Card	Graphics card with OpenGL version 3.3 support and good 3D performance. Preferably NVidia® or AMD®. Intel® cards may have some driver issues. Cards with no 3D acceleration are supported but graphics may be slow.
RAM	At least 4 GB RAM
Hard disk	300 MB of available hard disk space
Screen resolution	Minimum resolution 1024x768, recommended resolution 1920x1080
Other	Up to date video card driver

# Try it!

Ask for a free, working 30-day demo

[www.ti-soft.com/en/demo](http://www.ti-soft.com/en/demo)



Since 1988 TiSoft has developed innovative software solutions serving the building and construction industry.

TiSoft is Greece's leading MEP (Mechanical, Electrical, Plumbing) & HVAC (Heating, Ventilation, Air conditioning) software provider which results from the company's commitment to substantial support and value for money.

The international product line includes Electrical, Heating and Energy design applications. A unique advantage of TiSoft software is the integration between many tools - simulation and calculations tools, 2D and 3D visualization, drawings, reports, libraries and documentation integrated within the same application.

