



SIEMENS

Totally Integrated Power

SIMARIS Planning Tools

Easy, fast, and safe planning of electric power distribution

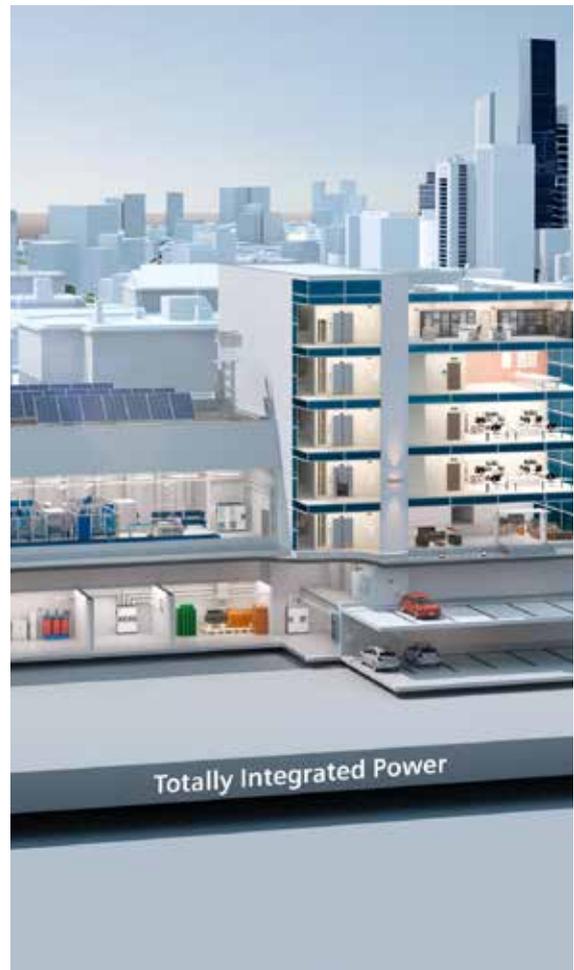
[siemens.com/simaris](https://www.siemens.com/simaris)



Totally Integrated Power (TIP) – we get the power to the point.

Our products, systems, and solutions for low and medium voltage make power distribution efficient, safe, and reliable – in cities, infrastructure, buildings, and industry. They can be interfaced to building or industrial automation and are completed by comprehensive support throughout their entire service life.

With the SIMARIS planning tools, Siemens provides efficient support for working on projects specifically for planning electric power distribution systems.





SIMARIS planning tools provide efficient planning support

Convenient electrical design

The planning of electric power distribution for industrial plants, infrastructure projects and buildings is becoming increasingly complex. So that you as electrical designer are able to work even more efficiently in the existing conditions, our innovative SIMARIS planning tools effectively support your planning process. This helps you save time and expense for the overall planning of a power distribution system. This optimal support helps you focus better on your vital tasks such as concept drafting.

Three efficient SIMARIS planning tools

SIMARIS planning tools set a benchmark in planning efficiency. They provide efficient support in dimensioning an electric power distribution system and determining the equipment and distribution boards for it.

- SIMARIS design for network calculation and dimensioning
- SIMARIS project for determining the space requirements of distribution boards and the budget, and for generating specifications
- SIMARIS curves for visualizing characteristic tripping curves, cut-off current and let-through energy curves

Intuitive and user-friendly

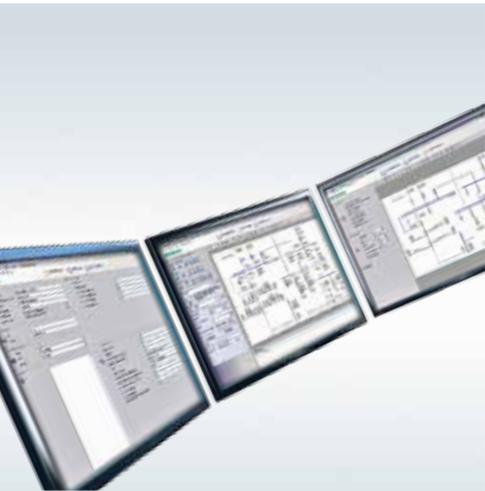
The SIMARIS planning tools are tailor-made to the daily tasks and challenges of your work as electrical designer. They are easy and conveniently to handle thanks to their user interface which is straightforward in design. The complete product portfolio from the medium-voltage switchgear to the distribution board for electrical installations has been mapped, so that you can plan your complete power distribution system from start to finish. For easy and effective handling, you can transfer project data between the SIMARIS planning tools. Of course, you can also use all tools independently. Application does not require any special knowledge of Siemens products and systems, as the equipment is determined by the software on the basis of your project-related specifications.

In short

- Intuitive, easy handling and documentation of planning results
- Integrated planning from the medium voltage down to the consumer level
- Automatic selection of matching components and distribution board systems
- High degree of planning reliability plus flexibility in the planning and implementation process

Read the QR code with your QR code reader.





Power distribution systems for industrial plants infrastructure and buildings – from the medium-voltage level to the socket outlet.



SIMARIS design – efficient dimensioning

Saving potential in planning

SIMARIS design can be used to dimension electric networks based on real products with a minimum of input – from the medium voltage level to the socket outlet. This software helps reduce your overall planning expenses for power distribution systems and thus minimizes selection and dimensioning time for the necessary equipment – and offers a high degree of planning reliability into the bargain.

Dimensioning made to measure

Based on the requirements of the specific power distribution system, SIMARIS design safely and reliably dimensions a system solution from a broad product portfolio that is in compliance with all the relevant standards (VDE, IEC) and reflects the present state of the art in technology. Suitable components are selected automatically. So you can focus on what's important in your planning. Time-consuming research into specific product data in catalogues is a thing of the past. In addition, the software calculates the short-circuit current, load flow, voltage drop and the energy balance. Plus, the personal, short-circuit and overload protection settings are made automatically in line with the calculations made.

Fast, safe, and flexible

Planning an electric power distribution system is always subject to considerable changes and adaptations both in the planning and in the implementation

stage. SIMARIS design integrates each modification into the supply concept and automatically checks it for compliance with the relevant standards and regulations. Consequently, you needn't perform costly and time-consuming checks of standards yourself. In the later planning stages, for example, consumer data now specified in more detail can be adapted easily and quickly. Selectivity verification is often mandatory, for example for installations in safety power supply systems. SIMARIS design professional allows you to create this verification automatically.

Intelligent functions

SIMARIS design furnishes you with a host of intelligent functions for setting up and dimensioning electric networks. For example, it is possible to plan separate protection of parallel cable routes in feed-in circuits. Various types of couplings can be created in the network diagram, even at sub-distribution level. Furthermore, busbars can easily be added and edited in the software, as well as entire motor starter combinations at the consumer level. Regarding busbar systems and cables for power transmission, it is possible to consider the required functional endurance directly in the planning. Even the possibly necessary lightning and/or overvoltage protection can be considered in the planning stage already.



Convenient and straightforward

Thanks to its user-friendly handling and its graphical user interface, you will intuitively find your way around SIMARIS design.

The software provides excellent options for graphical editing of network diagrams. For direct project implementation, there are user-friendly options for documenting the results of the entire network dimensioning process – e.g. a component list of the necessary equipment or the network diagram in your desired format (PDF, DXF, DWG). In addition, you can export project data and continue planning specific installations using SIMARIS project. A list of all settings determined during the dimensioning of protective devices can be exported, too. This way, the settings can be transferred to the equipment during plant installation.

Worldwide use

Are you planning a project abroad? No problem, SIMARIS design is available in about 20 languages. If you make the proper selection, even technical and product-related country typicals are automatically considered. This software can therefore be used for power distribution projects across the globe. Thanks to planning with real product parameters, projects planned with SIMARIS design can be implemented safely. See for yourself, how easy and fast it is to work with SIMARIS design. Should any questions about dimensioning with SIMARIS design arise at any time, our consultants in your

area will be happy to provide on-site support: www.siemens.com/simaris/contact

Additional features

SIMARIS design professional provides additional functions for design experts:

- Parallel network operation: different power sources (e.g. transformers and generators) can be operated in the same network.
- Isolated networks can be configured and mapped within a project.
- Automatic selectivity evaluation: selectivity limits are shown automatically in addition to the current-time characteristic and the corresponding envelope curves.
- Creating active and passive safety power supply systems: integration of normal (= bidirectional) and unidirectional couplings (tie breakers) into the network diagram – also at the sub-distribution board level.
- Option to compare and optimize the power losses of all components determined on the network diagram, thus enabling an increase in energy efficiency.

More information

www.siemens.com/simarisdesign

In short

- Automatic equipment selection and dimensioning
- Calculation of short-circuit current, load flow, voltage drop, and energy balance
- Free definition of network operating modes and switching conditions
- Busbar trunking systems for power transmission and distribution included in network design



Straightforward planning of electric power distribution systems for buildings.



SIMARIS project – determining resources

In short

- Fast overview of space requirements and budget
- User-friendly output options for documentation purposes
- Easy adaptability to a changing use of facilities and system expansions
- Option for saving complete installations in the Favourites library to be available for similar projects

A software tool tailored to the needs of planners

SIMARIS project helps you obtain a quick overview of the space requirements for an electric power distribution system inside the building that covers everything from the medium-voltage switchgear down to the distribution boards. Thus you can establish the budget for your project quickly and have a technical specification created automatically.

Easy, fast, and straightforward

As defined in the project structure and the basic technical data, the following is visualized in SIMARIS project:

- For medium-voltage switchgear, the required system and the panels are selected and a front view including dimensions is output.
- The required protective and switching devices per installation are selected for the low-voltage switchgear and distribution boards. Based on this device list, the required number of distribution boards is determined automatically, equipped with devices, and presented in a front view including dimensions. In addition, you can also plan low-voltage switchgear in a graphics-oriented way.
- After the desired busbar trunking system was selected, length data and the additionally required components must be specified. The resulting components are presented in a component list.
- As regards transformers, the relevant system is selected and then the required

quantity. Selected transformers are represented in a component list.

Simple handling and reliable operation

You need no detailed information on Siemens equipment or their order numbers, as SIMARIS project makes the choice automatically in compliance with the parameters entered. In doing so, the software factors in the wiring, control and measurement etc. for each switchgear component or distribution board.

It is possible to factor in the required functional endurance of busbar systems, this means the Promat plates required to enclose the busbars are automatically added to the component list if an appropriate selection was made.

The option to import data from a network diagram created with SIMARIS design saves reselecting these components in SIMARIS project. Very time-saving: You can save typical variants of a switchgear installation configured in SIMARIS project and integrate them into new projects from the Favourites library again and again. In addition, installations that were created automatically can subsequently be optimized or changed.

The budget sheet enables budgeting. As an alternative, you can request a budget overview of all components required for the power distribution system from your SIMARIS contact by sending him/her the project file.

More information

www.siemens.com/simarisproject



Safe power distribution due to evaluations of characteristic tripping curves, characteristic cut-off current curves and let-through energy curves



SIMARIS curves – visualizing characteristic curves

Easy evaluation of characteristic curves
You wish to evaluate the characteristic tripping curves of Siemens low-voltage protection devices and fuses (IEC) without creating a new project in SIMARIS design? This is precisely what the SIMARIS curves software does for you.

Simulation of device settings
Use SIMARIS curves to select the required devices by directly entering their order numbers or, use the option to specify devices based on technical attributes with the aid of the handy easy-select feature. Then, evaluate the characteristic curves shown in the diagram and perform the necessary settings, which you can immediately check in the diagram again. The easy-select feature also allows you to save individual products with the attributes you have defined as favourites and retrieve them at a later date with a simple mouse click.

Comprehensive visualisation
Besides the depiction of characteristic tripping curves and tolerance bands, and the option to set parameters, cut-off current curves and let-through energy curves are also presented for the devices. A straightforward printout documents the characteristic curves you have selected and their corresponding settings. Or use the app version of SIMARIS curves on your tablet PC or smartphone, this enables you to access the settings to be made on site at any time, for example when systems are installed.

More information
www.siemens.com/simariscurves

- In short**
- Visualizing and evaluating characteristic curves
 - Simple product selection per order number or easy-select feature
 - Saving selected devices as favourites
 - Saving several characteristic curves plus settings as overall project

Siemens AG

Infrastructure & Cities Sector
Low and Medium Voltage
Medium Voltage and Systems
Mozartstr. 31c
91052 Erlangen
Germany

E-mail: technical-assistance@siemens.com

Order no.: IC1000-G320-A145-V1-7600

Printed in Germany

03142.0

Subject to change without prior notice

© 2014 Siemens AG. All rights reserved.

The information in this brochure only includes general descriptions and/or performance characteristics, which do not always apply in the form described in a specific application, or which may change as products are developed. The required performance characteristics are only binding if they are expressly agreed at the point of conclusion of the contract.