



SIEMENS

Totally Integrated Power

Manuals and software tools

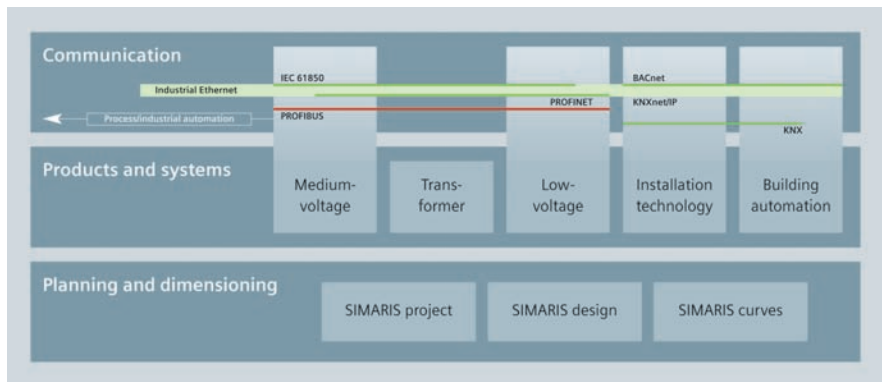
For effective power distribution planning

Answers for infrastructure.

Consistent and reliable power distribution with Totally Integrated Power

The electrical power distribution is the basis, comparable to a vital artery, for the reliable and efficient function of all electrically powered building installations. Therefore, for the electrical power distribution consistent solutions are required.

Our answer: Totally Integrated Power™ (TIP). This includes tools and support for planning and configuration as well as a complete, optimally harmonized product and system portfolio for integrated power distribution, from the medium-voltage switchgear right down to the socket outlet.



More information:
www.siemens.com/tip



Full-range supplier for the electrical power distribution – in industrial applications and in the infrastructure.

Experts in your area

Totally Integrated Power's regional contacts offer personal and professional support. Our experienced and competent local consultants offer individual expert advice on all your power distribution queries. Our support portfolio covers the whole spectrum: from basic calculations and the various planning phases right through to the preparation of customer specifications – irrespective of whether power supply systems are being newly installed, expanded or overhauled, or whether a complete solution is required.

Bundled expertise

Our consultants are on hand offering expert advice covering all aspects of plant planning and develop project-specific solutions with you. This is supplemented with workshops, customer events and conferences on specialist topics from the world of Totally Integrated Power. A qualified team of experts in the central specialist department of Siemens for power distribution provides local support to all regional consultants. Together, they form a unique expert support service – aimed directly at electrical planning engineers.

Manuals and software tools for power distribution planning

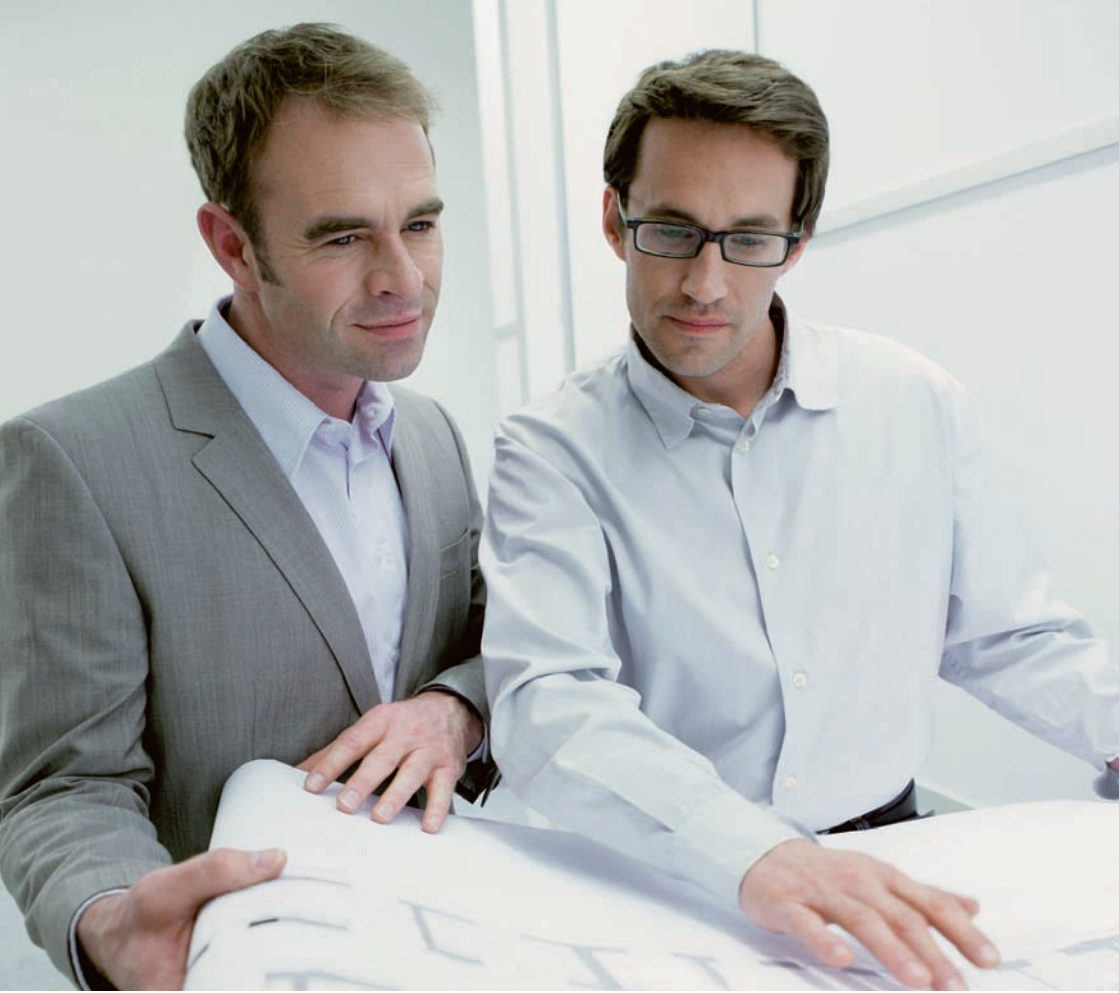
Power distribution planning not only requires experience, but a broad, and above all, up-to-date specialist knowledge. The technical manuals presented in this brochure offer state-of-the-art technical expertise covering all aspects of electrical power distribution. A wide range of software tools provide comprehensive support for the planning and configuration of your power distribution. As a planning engineer you can leverage these tools to improve competitiveness and increase your success.

Fast and reliable support on the Internet

You can download all technical manuals and software tools directly from our Totally Integrated Power website.

More information:

www.siemens.com/tip/planning



The following pages show our offering of manuals and software tools. Our technical manuals, software tools and online tender specification texts support you through every stage of your power distribution planning, thus saving you considerable time, especially on routine tasks, and allowing you to focus more on innovative solutions.

Planning manuals

You can obtain your copy of the following three planning manuals, “Planning principles of power distribution”, “Draft planning” and “Planning of a high-rise building” from your regional TIP consultant. You will find the relevant contact details at

www.siemens.com/tip/contact

You can download the PDF files directly at

www.siemens.com/tip/planning
> Manuals & Brochures

Application manual – Part 1: “Planning principles of power distribution”

The greatest potential for optimizing the planning, construction and operation of a power distribution system is created in the preliminary planning stage. This is when the course is set that will enable the prevention of safety problems and escalating time schedules as well as costs during the erection and subsequent use of the building. The basic concept of this manual is to emphasize the advantages of integrated planning that incorporates all the pertinent standards, regulations and directives. The manual also focuses on the importance of consistency in the dimensioning of the main components and in the management of power distribution.



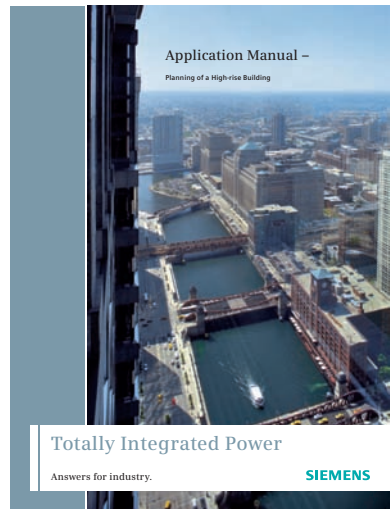
Application manual: “Draft planning”

Based on the planning principles, draft planning for power distribution – in the sense of system and integration planning – represents the finished planning concept and all its defined components. For projects that require official approval, draft planning is the basis for subsequent approval planning. The planning and erection of buildings requires compliance, not only with a range of standards, regulations and directives, but also with the specific provisions of the building and plant operator (e. g. factory regulations) and the relevant power distribution network operator. The detailed appendix gives an overview of all key documents.



Application manual: “Planning of a high-rise building”

We are seeing ever increasing demands placed on modern high-rise buildings. High levels of safety, high flexibility throughout the entire life cycle, a low level of environmental pollution, the integration of renewable energies and low costs are the demands that now already need to be considered in the planning stage. The coordination of individual systems represents a particular challenge. Integrated planning means that you need to optimize the performance of high-rise buildings as part of a combined overall system rather than focusing on the demands placed on them individually. An optimized solution results from the connection of individual requirements.



Planning manuals

You can also obtain your copy of the following three engineering manuals “GEAFOL cast-resin transformers”, “SIVACON 8PS busbar trunking systems – Planning with SIVACON 8PS” and “SIVACON S8 low-voltage power distribution boards” from your regional TIP consultant. You will find the relevant contact details at www.siemens.com/tip/contact

You can download the PDF files directly at www.siemens.com/tip/planning > Manuals & Brochures

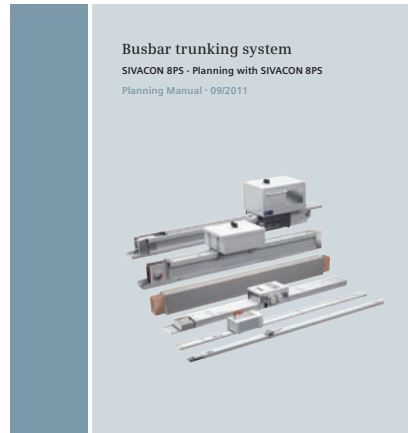
Planning guidelines: “GEAFOL cast-resin transformers”

Wherever high load densities necessitate a power supply in the immediate vicinity of the actual load, GEAFOL® cast-resin transformers are the perfect solution. They give planning engineers the freedom they require: Not only do they allow the cost-efficient implementation of power system concepts, they are also safe and environmentally friendly. The planning guidelines focus on key technical data for planning, installation site requirements and connection technology. The brochure also provides information on how to ventilate transformer rooms and on the electromagnetic compatibility (EMC) of distribution transformers.



Planning manual: “SIVACON 8PS busbar trunking systems”

Compared to cables, busbar trunking systems offer greater safety in buildings due to their high short-circuit strength and minimum fire load. The SIVACON 8PS busbar trunking systems enable reliable and safe operation of all load demands up to 6,300 A – from transformers over main distribution boards, through to small consumers. Our comprehensive planning manual will help.



Low-Voltage Power Distribution and
Electrical Installation Technology **SIEMENS**
Answers for infrastructure.

Planning manual: “SIVACON S8 low-voltage power distribution board”

Developing a power distribution concept and rating the associated systems and system components is very complex. User requirements must be matched with the technical feasibility offered by manufacturers. Our planning manual for SIVACON S8 low-voltage power distribution board helps you choose the right low-voltage power distribution board for your application.



Software tools

The innovative SIMARIS® software family sets a new benchmark in electrical engineering support. It eases the workload when it comes to planning and dimensioning power distribution systems and choosing the right devices and distribution boards, thus effectively relieving you of mundane routine tasks and saving you significant amounts of time. The tools of the SIMARIS family can be used for all aspects of electrical planning, from basic calculations right through to the tender process.

For further information on the three software tools, please contact your regional SIMARIS contact partner (www.siemens.com/simaris/contact) or visit our website at www.siemens.com/simarisdesign www.siemens.com/simarisproject www.siemens.com/simariscurves

SIMARIS design: for dimensioning

Using our versatile product portfolio, the dimensioning software SIMARIS design determines the optimum solution for the power distribution requirements of your specific system in accordance with sound planning practice and the applicable standards (VDE, IEC) – from the medium-voltage infeed right through to the loads. The correct components are automatically selected during this calculation process, thus making costly and laborious catalog research for individual product data a thing of the past.



SIMARIS project: for easy determination of space requirements and budget

The free software tool SIMARIS project enables the quick and easy creation of transparent configuration documents with regard to the space and budget requirements for suitable electrical distribution boards and the respective protection devices and switchgears. You can also use the software to create a complete specification text in GAEB D81 or RTF format (available in German or English). SIMARIS project is available for the countries Germany, Austria, Switzerland and Poland. For application in further countries we are working on extending the included product portfolio for future versions.



SIMARIS curves: for displaying characteristic curves

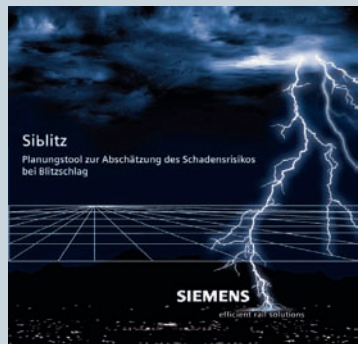
The free SIMARIS curves software displays the tripping characteristics (time/current characteristics) with tolerance ranges for low-voltage protection devices and fuses (IEC), as well as the let-through current and let-through power characteristics of various devices.



You can find Siblitz® on the Internet at www.siemens.com/tip/planning
> Tools for Planning and Configuration

Siblitz calculation tool for lightning protection

Lightning discharges pose a risk to people, buildings, equipment and installations. Electrical and electronic systems are particularly at risk. Protective measures are required to reduce or avoid damage from lightning. Siblitz is a user-friendly software tool that enables a fast and full calculation of the damage risk. Using this software, risk calculations that used to require two to three days can now be performed in a matter of minutes. Whether you are a planning expert, a design engineer or an installation engineer, Siblitz significantly simplifies the process of assessing damage risk. It allows users to focus on the key factors of risk assessment – determination and selection of the relevant parameters.



Software tools

PROFIX configuration tools can be found on the Internet at www.siemens.com/tip/planning

The pressure calculation tool for 8DJH medium-voltage switchgear is a service offered to Siemens customers. Please contact your regional TIP consultant for further information at www.siemens.com/tip/contact

You will find the configurators for our busbar trunking systems on the Internet at www.siemens.com/tip/planning
Tools > Configurators in the Siemens Industry Mall

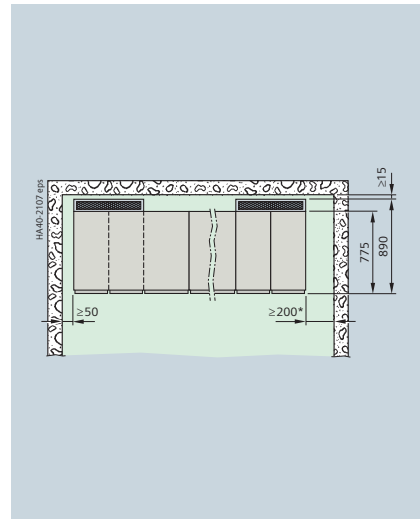
PROFIX configuration tools for medium-voltage switchgear

The PROFIX configuring tools enable fast creation of a block diagram, a front view and the respective design details of the medium-voltage switchgear. The plans can be generated directly in PowerPoint or as a Windows graphic via a graphics generator. With its "Export" function, the graphics generator also provides the option of saving plans in a neutral data format, in EMF (Enhanced Windows Metafile) and DXF (Auto-Cad). These neutral data formats enable further processing of the plans in other DP programs.



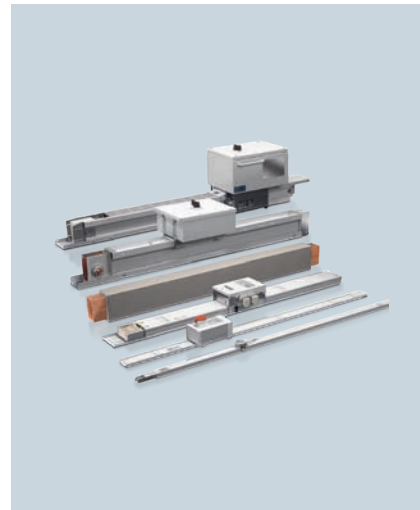
Pressure calculation tool for 8DJH medium-voltage switchgear

This software tool enables a simplified pressure calculation for 8DJ medium-voltage switchgear according to Pigler. The tool provides a good approximation for closed rooms when the pressure increases uniformly throughout the room. However, for all other medium-voltage switchgear, or in case of highly complex geometries or higher short-circuit powers, it is necessary to perform a detailed pressure calculation with 3D finite elements that also takes the dynamic pressure development into account. This requires a more complex software tool that is also used as a basis for the pressure calculation services offered by your regional TIP consultant.



Configurators for SIVACON 8PS busbar trunking systems

Busbar trunking systems in low-voltage environments ensure the safe and reliable transmission and distribution of electrical power from the transformer, via main and subdistribution systems, to the loads. Siemens offers a complete range of six type-tested and high-performance systems. All busbar trunking systems are "type-tested low-voltage switchgear and controlgear assemblies" (TTA) in accordance with IEC/EN 60439-1 and -2. This provides a safety standard that corresponds to the high demands of automated production lines and building control. We offer suitable configurators for all systems.



Configuration software

You will find the ALPHA SELECT software package on the Internet at www.siemens.com/tip/softwaretools
> ALPHA SELECT

Fast and easy configuration of distribution boards with products from the Industry shopping basket with ALPHA SELECT configuration software.

This software enables planning and installation engineers to configure distribution boards quickly and easily. Simple and intuitive functions guide you every step of the way, from configuration to installation. Configuration faults are virtually impossible thanks to collision tests and configuration rules stored in the program. Simple preparation of tender documents thanks to a clear output selection structure for generating printouts or data output of parts lists, layout diagrams, setups and electrical structures.



You will find the planner tool for GAMMA building control on the Internet at www.siemens.de/tip/softwaretools
> **GAMMA Planer-Tool**

Planning tool for GAMMA building control

This software tool is available online free of charge from the DIN construction portal for the creation of building specifications. It is particularly useful and helps save time if a tender is required for public sector customers that needs to comply with specific construction standards. It enables the easy preparation and supplementation of master building specifications for building control based on the GAMMA product range that comply with specific construction standards and will stand up to any inspection by the building authorities. It generates convenient and inspection-proof tender specification texts through the incorporation of product descriptions from the GAMMA catalog.

The screenshot displays the Siemens GAMMA building control software interface. At the top left is the SIEMENS logo, and at the top right is the text 'Gamma Gebäudesystemtechnik'. Below the header, there is a navigation bar with a 'Erste Schritte' link. The main content area is divided into three rows, each featuring a KNX logo and a tool description:

- Siemens.GAMMA Katalog**
 - > Siemens.GAMMA Katalog starten
 - > Erste Schritte mit dem Online-Katalog
- Siemens.GAMMA Planer-Tool**
 - > Siemens.GAMMA Planer-Tool starten
 - > Erste Schritte mit dem Planer-Tool
- Siemens.GAMMA Installateur-Tool**
 - > Siemens.GAMMA Installateur-Tool starten
 - > Erste Schritte mit dem Installateur-Tool

Each row also includes an 'English version' link with a corresponding description: 'Start Siemens.GAMMA Katalog' / 'First Steps with the Online-Catalog' and 'Start Siemens.GAMMA Planer-Tool'. At the bottom right of the interface is the logo for 'DIN bauportal gmbh' with the tagline 'dynamische baudaten'.

Service & Support

You will find tender specification texts on the Internet at

www.siemens.com/specifications

> **Technical Building Equipment**

Tender specifications for technical building equipment

These tender text modules for technical building equipment in commercial, institutional and industrial buildings are free of charge and offer you qualified online support for the compilation of building specifications. The tender texts are regularly updated and are available in Word format (RTF) and GAEB format (D81).



For further technical details of our products and systems for low-voltage power distribution and electrical installation technology, or our Service & Support

offering with useful support tools, please visit us on the Internet at www.siemens.com/lowvoltage/support

Manuals, standards and approvals

We offer all the technical product information you need for our range of products online at our Service & Support portal. The comprehensive technical information we provide on each and every product guides you through every stage of your project, from the engineering and configuration phase right through to operation, around the clock and 365 days a year. You will find:

- product data sheets, manuals/operating instructions
- certificates, characteristic curves, downloads
- FAQs

The screenshot displays the Siemens website interface for 'Low-Voltage Power Distribution and Electrical Installation Technology'. The page features a navigation menu on the left, a search bar at the top right, and a main content area with a list of products. The products are listed with their order numbers and descriptions, including 'SMARIS DESIGN 6 0 PROF UNIV', 'SMARIS DESIGN 6 0 PROF SHOLE', 'SMARIS DESIGN 6 0 PROF MULTI', 'SMARIS PROJECT 1 0', 'SMARIS CURVES 1 0', 'SMARIS TOOLS DVO, INCL. PROF E LICENSE', 'SMARIS TOOLS DVO, INCL. PROF LICENSE', 'SMARIS TOOLS DVO, INCL. BASIC LICENSE', and 'SWITCH DISCONNECTOR W/O HANDLE 63A/3POLE'. The page also includes a 'Filter settings' section and a 'Result page' indicator.

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The information provided in this brochure contains descriptions or characteristics of performance which in case of actual use do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract. All product names may be brand names of Siemens Ltd or another supplier whose use by third-parties for their own purposes may violate the owner's rights.

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