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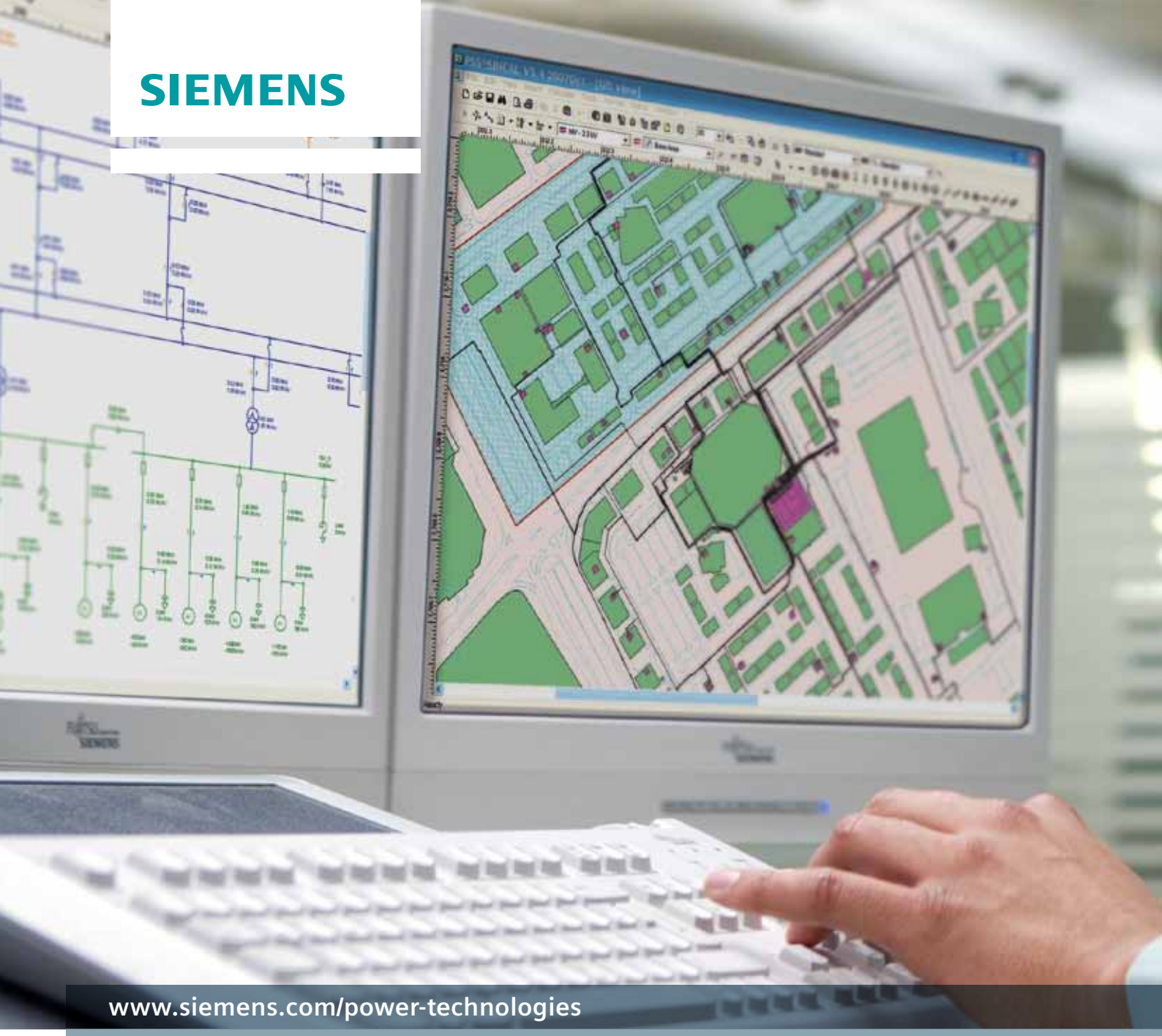


www.siemens.com/power-technologies

PSS®SINCAL – efficient planning software for electricity and pipe networks

Siemens PTI – Software Solutions

Answers for infrastructure & cities.

PSS®SINCAL – efficient planning of utility and industry networks

Comprehensive network planning and analysis are essential for utility companies as well as industrial network operators, generating companies, and engineering consulting firms. This can be a time-consuming process. To facilitate the planning and design of supply networks, Siemens has designed PSS®SINCAL, a high-performance tool for planning electricity, gas, water, and district heating as well as district cooling networks.

Siemens is the world's leading provider of system planning software, and with over 50 years of experience has optimized PSS®SINCAL in close cooperation with its users. PSS®SINCAL is a highly versatile tool with standardized interfaces for easy data import and export, and it offers the potential for maintaining a variety of data in a single system. It is the perfectly suited and highly efficient tool for anyone who has to plan and analyze utility and industrial networks.

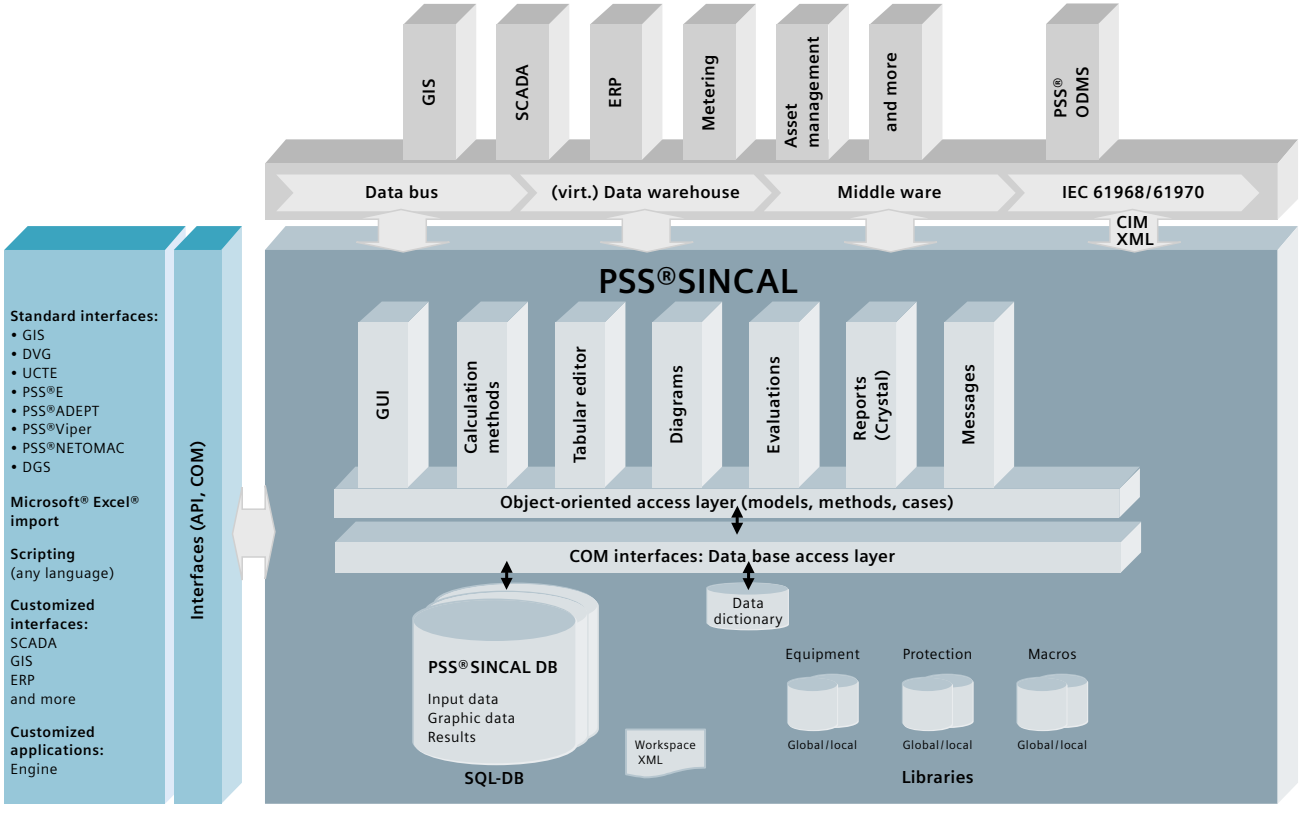
PSS®SINCAL architecture – fast and easy integration into any IT environment

PSS®SINCAL is equipped with numerous interfaces to allow simple integration into your IT environment. The use of open or commercial databases permits direct data exchange with other systems like:

- GIS
- ERP (e.g., SAP)
- Asset management
- Integration of external data sources in simulations
- SCADA
- MDM (e.g., EnergyIP™)
- Engine application

even with standard protocols such as CIM (IEC 61968/61970) including versions 10 to 15 (Entso-E).

The open architecture, based on COM servers, also allows the generation of custom applications using PSS®SINCAL as an engine.



PSS®SINCAL – advantages at a glance




User-friendly software ...

- simple and intuitive handling
- universal user interface for all fields – electricity, gas, water, district heating/cooling
- customizable to specific needs
- fully integrated modular structure and licensing
- Microsoft® Windows® environment
- client-server architecture, Internet capability
- multi-user capability, including user logins
- multi-language user interface: English, German, Spanish, Chinese

... with high-level performance ...

- computation and evaluation of large networks
- efficient data management in commercial databases like Microsoft® Access® or Oracle®
- object-oriented modeling of all equipment
- macro and scripting functionality for efficient automatization
- combined analysis of separately modeled networks

... and a wide range of interfaces ...

- fully documented open database
- numerous and varied interface types
- easy import and export of network models, e.g.:
  – standard interface to Microsoft® Excel®
  – customizable interfaces to GIS and SCADA systems
- interactive data import from external source during simulation
- single data repository eliminates data redundancy across applications

... for accurate and reliable technical results ...

- all technical analyses based on one network model that takes into account network modelling details corresponding to the chosen analysis method
- realistic modeling of power system components, including elements for Smart Grids and microgrids
- interactive visualization of network models in schematic, geographic, and multi-layer plans
- direct viewing and editing of data in masks, tables, diagrams, network plans, reports, etc.
- toolbox for highlighting and enhanced processing of data
- advanced handling and analysis of planning scenarios

... to provide you with measurable benefits!

- time and cost savings in network planning
- tailored training and individual support for specific network planning tasks
- simple integration with existing processes and workflows
- high data and documentation quality
- improvement of network performance and capital expenditure plans

PSS®SINCAL – product platform

PSS®SINCAL provides special applications for protection device management and dynamic network calculation:

- PSS®PDMS is a protection device management system allowing for the storage and management of protection data such as settings, documents, and files. It also enables users to connect protection data from parameterization software (e.g., DIGSI®) and PSS®SINCAL's protection simulations.
- PSS®NETOMAC expert system is an application optimized for dynamic network calculations. It provides real-time capability and interactive diagrams as well as a structured code and model management system – developed for dynamic simulation.

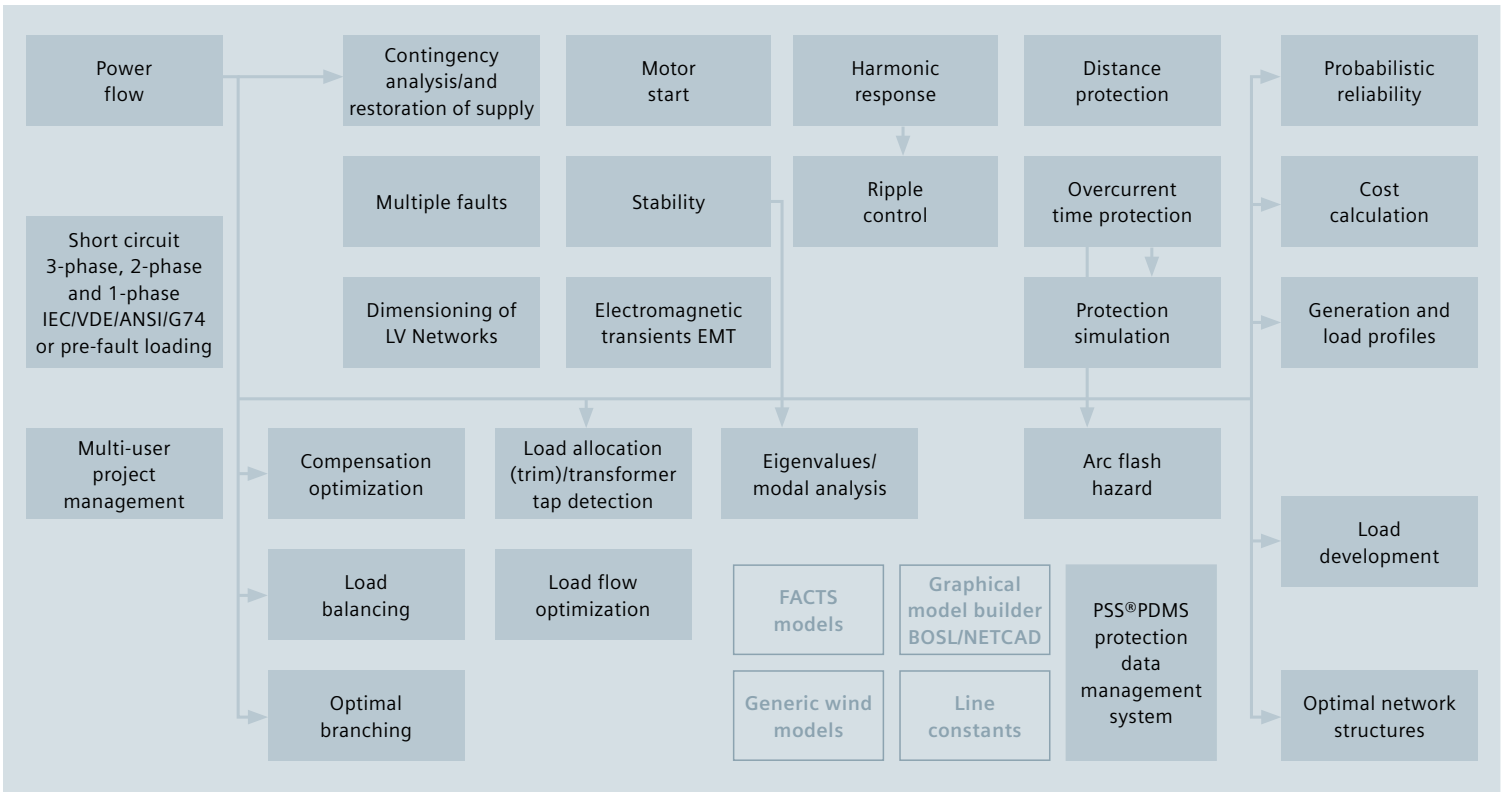
PSS®SINCAL – a customizable solution

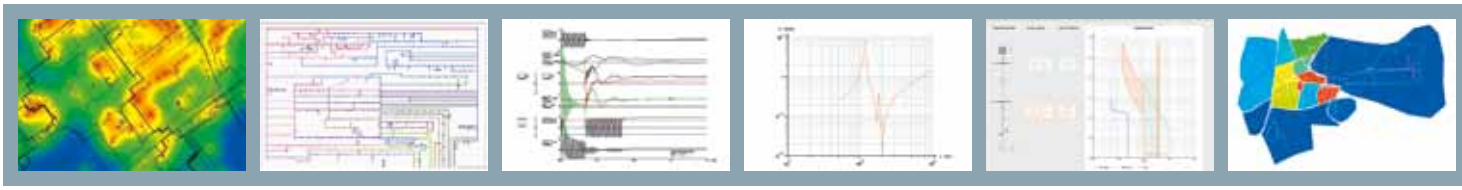
With PSS®SINCAL we offer a state-of-the-art full-range network analysis software solution that will greatly facilitate all your network planning tasks. PSS®SINCAL supports a fully unbalanced network model for high, medium, and low-voltage grids and can handle the planning and analysis for electrical as well as pipe networks, such as water, gas, and district heating/cooling systems. This makes it an optimal solution for both industry and utilities.

The modular and fully integrated structure of PSS®SINCAL allows for a high level of customization according to your individual needs. You can choose from a wide range of different modules and flexible license types.

Network with interactive map from the Internet – dynamic simulation in unbalanced networks

Modules for ELECTRICITY network planning

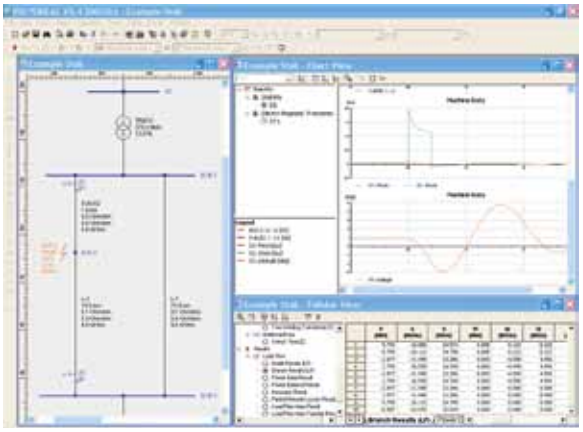




PSS®SINCAL – a certified high-quality product

PSS®SINCAL also provides the capability to solve exceptional tasks with its high-quality algorithms optimized for both accuracy and performance. User-defined applications can be easily developed with its object-oriented data model. Sophisticated case and data management facilitate the handling of complex projects.

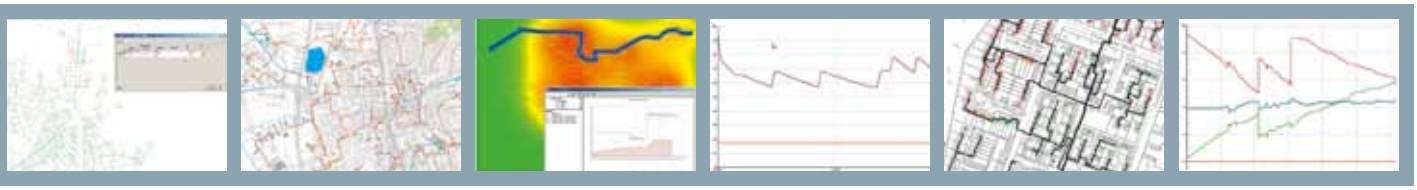
Backed by Siemens' commitment to product excellence and to providing efficient solutions as well as official certification, PSS®SINCAL meets the highest requirements of its international user base.



Stability study with results in diagram and spreadsheet view

Modules for PIPE network planning

General	Gas	Water	District heating	District cooling
	Gas steady state	Water steady state (incl. fire water)	District heating steady state	District cooling steady state
Multi-user project management		Water tower filling		
	Gas dynamic	Water dynamic	District heating dynamic	District cooling dynamic
	Gas contingency analysis	Water contingency analysis	District heating contingency analysis	District cooling contingency analysis



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Siemens AG
Infrastructure & Cities Sector
Wittelsbacherplatz 2
80333 Munich, Germany

Siemens AG
Infrastructure & Cities Sector
Smart Grid Division
Services
Power Technologies International
Freyeslebenstrasse 1
91058 Erlangen, Germany

Siemens Energy, Inc.
Siemens Power Technologies International
400 State Street
P.O. Box 1058
Schenectady, NY 12301-1058, USA
Phone: +1 800 347-66 59

Siemens Transmission and Distribution Ltd
Sir William Siemens House
Princess Road
Manchester, M20 2UR, United Kingdom

For more information, please contact
our Customer Support Center.
Phone: +49 180 524 70 00
Fax: +49 180 524 24 71
(Charges depending on provider)
E-mail: support.ic@siemens.com

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