SIEMENS

Ingenuity for life

Towards a digital future

Solutions for low-voltage power distribution

siemens.com/lowvoltage/digitalization

Higher performance

from planning to operation

Industrial enterprises in almost every sector are implementing digital technologies to make their processes more efficient and flexible, and to boost their productivity. In this context, the electrical infrastructure assumes a double function: As an integral part of digital environments, it ensures safe, reliable, and efficient power supply to plants, machinery, and buildings, supplying important data for the industrial Internet of Things at the same time.

Get in now and exploit the potentials of digitalization!

Planning the electric power distribution for industrial plants, infrastructure, and buildings is becoming more and more complex. Innovative software tools, CAx data, or TIA portal support you – as an electrical planner, a switchboard manufacturer, or a panel builder – effectively in your planning and engineering process.

Moreover, the digital transformation offers the operators of infrastructures, industrial plants, and buildings huge potentials for higher productivity and efficiency.

Already in the short run, operators can reduce their energy costs by up to ten percent if weak points in the consumption can be detected in a targeted way and eliminated with simple means.

By identifying energy guzzlers, avoiding load peaks, and optimizing the energy consumed in production and building operation, even up to 30 percent can be saved.
Furthermore, failures and blackouts can be avoided, and power supply can be ensured.

Cloud-based analysis systems

Condition monitoring

Power monitoring

MindSphere

Predictive maintenance

Power distribution

Data concentrator

SIMARIS control diagnostics station

7KN powercenter3000 IoT data platform

Systems

SIVACON 8PS busbar trunking systems

Data center racks

SIVACON S8 switchboard

SIVACON 8MF1 system cubicle

Machinery with integrated measuring devices / control

Field devices

3WL air circuit breaker

3VA molded case circuit breaker incl. measuring function

SIMOCODE pro motor management system

Frequency converter

7KM PAC measuring device

Sensors

Tools, systems, and products

for planning, installation, operation, and maintenance

**Today, all process steps in electric power distribution can be completely digitally supported – starting with electrotechnical planning.
In operation, the continuous recording of power flows provides the transparency and data basis that is essential for digital enterprises – as a foundation for higher energy efficiency and failure safety, as well as for lower costs and CO_2 emissions.**

Efficient planning

SIMARIS tools
As software-based planning tools and engineering systems, the SIMARIS software tools support you for efficient planning of the electric power distribution and its integration in digitalization, long before the actual construction of switchboards, distribution systems, or control cabinets.

siemens.com/simaris

CAx data
With product data for automation technology and low-voltage switching technology, macros for e-engineering systems, 3D models, and device circuit diagrams, industrial control cabinets are produced based on digital twins – with up to 80 percent lower expenses for planning, configuration, design, documentation, ordering, and commissioning.

siemens.com/lowvoltage/cax

TIA portal
Thanks to the integration of communication-capable protection and measuring devices as well as motor management systems into the Totally Integrated Automation (TIA) portal, the electrification becomes an integral part of industrial automation.
The uniform engineering framework can parameterize all important components, simulate them virtually, test them, and put them into operation in order to optimize the interaction of electrification and automation components. This provides a shorter time-to-market and a higher productivity of the plant, with equal benefits for system integrators, switchboard manufacturers, and plant operators.

siemens.com/TIA-portal

Building Information Modeling (BIM)
With BIM data, a digital twin of the building with all its technical installations is created. On this digital twin, errors can be detected and eliminated virtually before they occur in the real world. Studies have shown that change requests are reduced by up to 40 percent in this way – and that there are also considerable cost savings in operation.

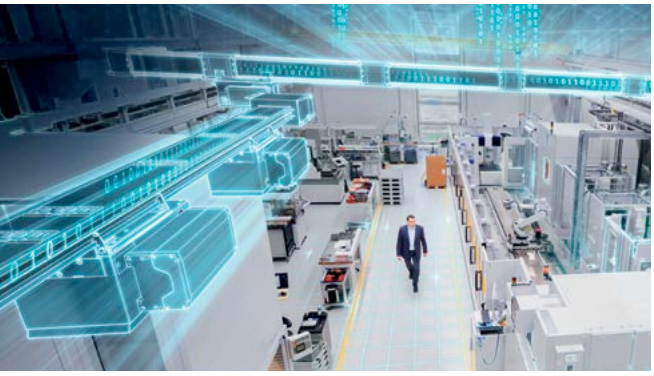
siemens.com/bim-eplanning

Faster installation

BusbarCheck app – better installation
The app, for example, supplies installation instructions to installers. It identifies the connection points and documents them visually, in order to simplify your SIVACON 8PS installation and documentation. At the push of a button, an electronic bolt protocol is generated from this – as a documentation of the high-quality installation for your customer.

Download:
http://sie.ag/busbar-itunes
http://sie.ag/busbar-android

Cost-efficient operation/ maintenance



SIVACON 8PS busbar trunking systems – supply of power and data
Wherever more protection, switching, and measuring devices are used for more energy transparency at field level, the measured values, status, and diagnostics data must also be transmitted. SIVACON 8PS busbar trunking systems with powerline technology (BD2, LD, and LI systems) transmit power and data – plug and play – via flexibly pluggable tap-off units, without additional data cables or wiring – even for retrofitting existing installations.

siemens.com/sivacon-8PS

Diagnostics station SIMARIS control – the digital twin of the switchboard
As a permanent diagnostics station in SIVACON S8, SIMARIS control allows for uniform control of your power distribution, including predictive maintenance for higher switchboard availability. Based on energy-relevant data, SIMARIS control helps you to create a digital image of your power distribution for your local control level or cloud-based analysis systems (IoT).

siemens.com/sivacon-S8

7KN powercenter3000 IoT data platform
The 7KN powercenter3000 IoT data platform transmits energy data to local energy management systems or to open, cloud-based IoT solutions. Depending on the application, it pays off to integrate the data already in the low-voltage main distribution via SIMARIS control, or in industrial automation via SIMATIC S7 (through the engineering in the TIA portal).

siemens.com/powermonitoring

Your customized digital entry

Small and medium-sized companies, in particular, are often confronted with the question of how to deal with the digitalization topic. Or, in concrete terms: What does digitalization mean for your processes? Which products, systems, technologies, and measures do you consider useful to provide the greatest benefit? Our portfolio of field devices and tools offers manifold possibilities.

3WL air circuit breakers
Reliable protection against short circuit, earth fault, or overload faults: The 3WL air circuit breakers make the infeed of electric energy particularly safe.

siemens.com/3wl

3VA molded case circuit breakers
Thanks to integrated measuring functions, the 3VA molded case circuit breaker acquires current, voltage, energy, and consumption data for seamless transfer to higher-level automation and energy management systems.

siemens.com/3va

7KM PAC measuring devices
With the 7KM PAC measuring devices, up to 200 measured values are acquired via standard bus systems – with a clear assignment of the energy consumption to individual cost centers.

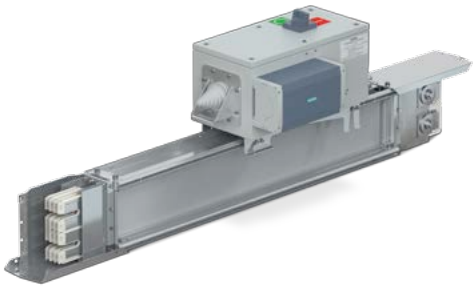
siemens.com/powermonitoring

SIMOCODE pro motor management system
Benefit from extensive protection, monitoring, and control functions, as well as from detailed operational, service, and diagnostics data with SIMOCODE pro – also for fail-safe disconnection of motors. Using OPC UA communication, this data is available for cloud-based solutions such as MindSphere.

siemens.com/simocode

SIVACON 8PS busbar trunking systems
The busbar trunking systems BD2, LD, and LI from the SIVACON 8PS product portfolio not only transmit power, but also energy data directly via the busbar conductors by using powerline technology.
The data is therefore at your disposal via plug and play for higher-level automation and energy management systems or cloud-based systems (IoT).

siemens.com/sivacon-8PS

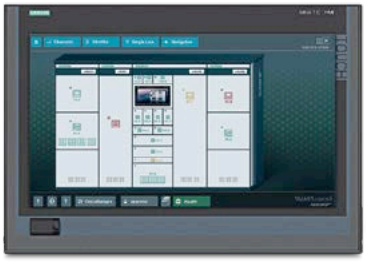


7KN powercenter3000 IoT data platform
The 7KN powercenter3000 IoT data platform collects energy and system data from up to 40 connected measuring and protection devices, and submits it to local energy management systems or cloud-based solutions such as MindSphere. Thus, small and medium-sized companies can get into cloud-based energy management in an economic and flexible way to become more energy-efficient.

siemens.com/powermonitoring

Diagnostics station SIMARIS control
Parameterize, operate, and monitor all communication-capable switching devices – installed in the SIVACON S8^{plus} switchboard – uniformly, and support predictive maintenance with "Health Status" for higher system availability. SIMARIS control is also used for connection to energy management, automation, as well as cloud-based analysis systems (IoT) such as MindSphere.

siemens.com/sivacon-S8



powermanager power monitoring software with direct cloud connection
The powermanager power monitoring software displays important electrical characteristics for individual loads or complete systems in a clear dashboard, and analyzes the energy consumptions. Saving measures can be derived directly, and faults are easy to locate. With the latest version of the software, the data can be directly transmitted to open IoT operating systems such as MindSphere. This way, comprehensive evaluations such as location-independent analyses are possible.

siemens.com/powermonitoring

Published by
Siemens AG

Smart Infrastructure
Distribution System
Mozartstraße 31c
91052 Erlangen, Germany

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.energy@siemens.com

Article No. EMMS-B10120-01-7600
Dispo 30407
TH 260-190151 BR 04191.0