

SIEMENS

Ingenuity for life



SIVACON S8^{plus}

Innovative features and solutions
for SIVACON S8

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Innovations at your command – SIVACON S8^{plus}

Profit from exciting features

SIVACON S8^{plus} is ready for the challenges of digitalisation and the future. It is the SIVACON S8 low-voltage switchboard that provides special features for power-critical applications – providing, for example, increased safety as well as high flexibility thanks to its high quality custom design.

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Your advantages with SIVACON S8^{plus}

- Increased protection against internal arcing for a high level of personnel and switchboard safety
- New small withdrawable units for space saving switchboards
- Higher ratings through energy-efficient cooling for safe and reliable operation
- Powerful Motor Control Unit – the solution for the oil and gas market
- Communication-capable systems and sensors for future-proof and reliable operation
- SIMARIS control – interface and monitoring system for uniform operation and monitoring of intelligent switchboards
- Comprehensive support from planning to maintenance

SIVACON S8^{plus} innovation highlights



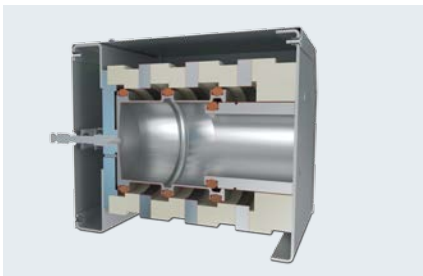
Increased protection against internal arcing for a high level of personnel and switchboard safety



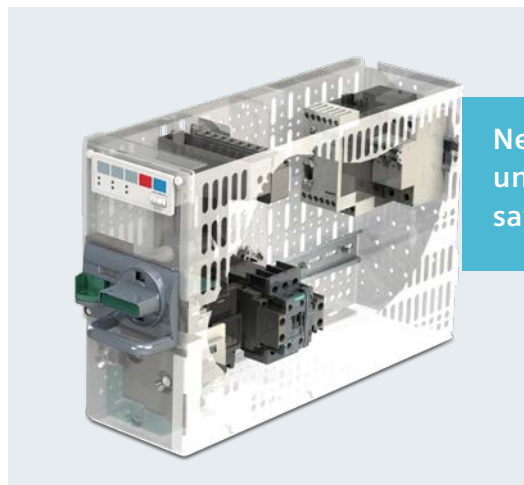
Arc faults can cause personal injury or heavy damage to installations which may lead to high downtime costs. Even in modern low-voltage switchboards, the occurrence of an arc fault is not impossible. Arc faults can be caused by objects, animals, or by incorrect work. Within milliseconds, an internal arc releases a high amount of energy which causes extreme heat, a pressure wave, and toxic gases. The new active protection system against internal arcing available for SIVACON S8^{plus} quenches an arc fault quickly and reliably. The new system limits the arcing time and decreases the pressure wave and the temperature significantly, which reduces the risk of injury during operation and maintenance, as well as the damage to the equipment.

The new system offers the following key features:

- Short-circuit strength of 100 kA up to 690 V
- Continuous self-supervising condition monitoring of the system
- No explosive substances needed; activation via Thomson Coil
- Reusability – two full-load operations at fault conditions with easy reset mechanism
- Testable – up to 1,000 test cycles
- Special Siemens SIVACON S8^{plus} arcing schemes

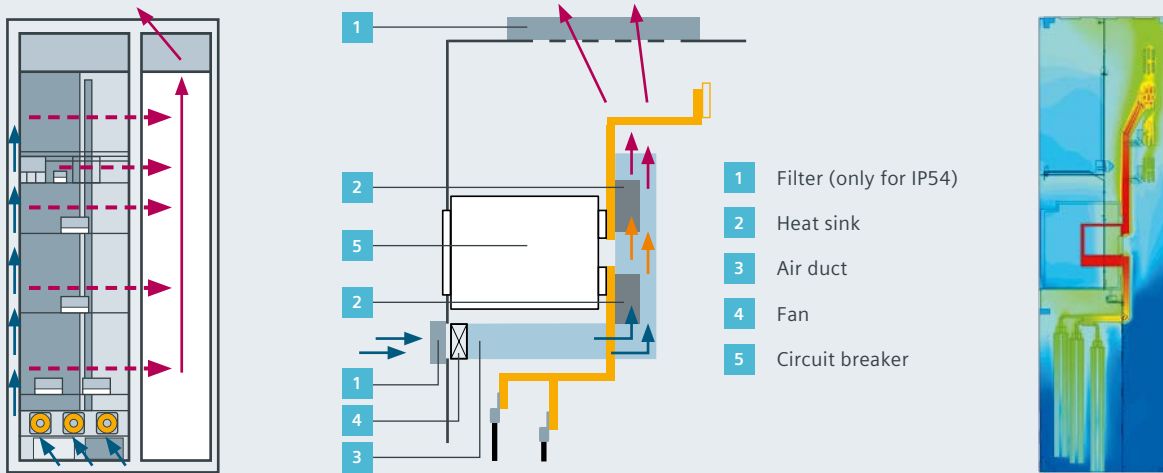


The new design increases the packing density, and thus reduces the switchboard's total investment costs. The new withdrawable unit is 300 mm high and is especially suitable for the new Siemens SIRIUS and SENTRON device ranges. It offers an optimised air-flow design to lower the temperature rise caused by the power loss of the electric devices. Better access to the devices on the mounting plate ensures easy maintenance.



New small withdrawable units for space saving switchboards

Higher ratings through energy-efficient cooling for safe and reliable operation



SIVACON S8^{plus} offers a patented forced cooling technology for cubicles in circuit-breaker design and in universal mounting design (Motor Control Centers, MCC). The system was designed and optimised by Computational Fluid Dynamics (CFD) simulation, and was confirmed by numerous design verifications according to IEC 61439. The system reduces the derating and provides a low tempera-

ture profile inside an MCC to ensure safe and long life operation of sensitive electronic equipment. The control system monitors the temperature at critical spots, ensuring an energy-efficient cooling at any time. For increased safety and operability, all fans are speed monitored, and the system provides full redundancy in the unlikely event of a fan failure.

Forced cooling for circuit-breaker design and withdrawable design

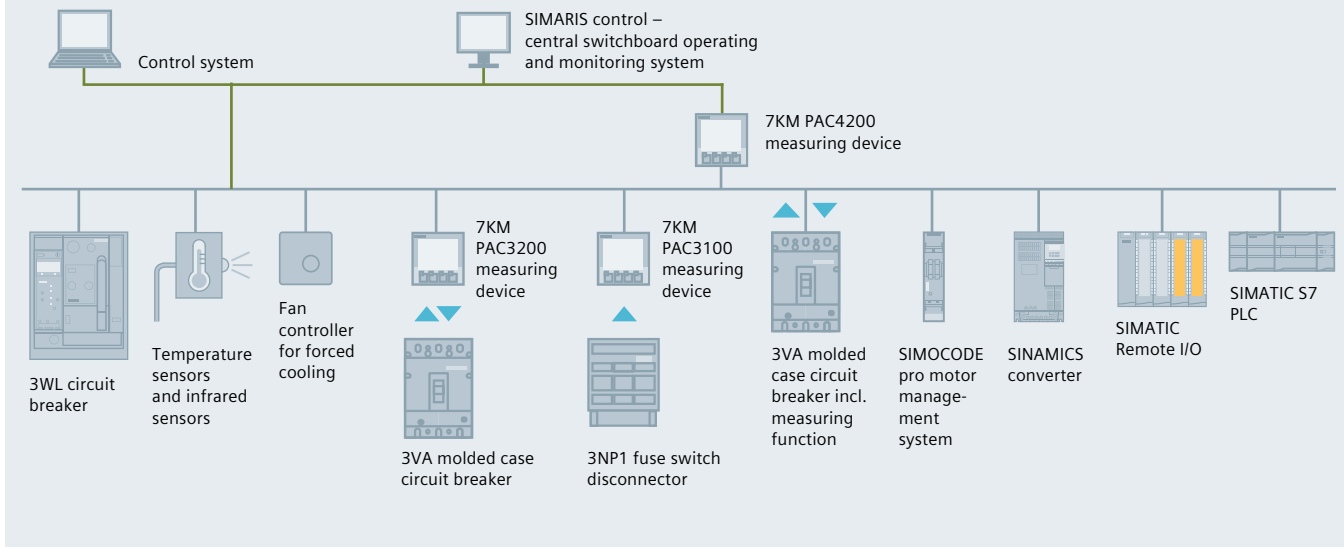
Powerful Motor Control Unit – the solution for the oil and gas market



The new Motor Control Unit (MCU), specially designed for SIVACON S8^{plus} switchboards is one of the most compact, robust and powerful intelligent protection and control device for three-phase low-voltage motors.

It offers fault-tolerant, dual-redundant MODBUS communication for up to 32 devices per loop. To simplify reconfiguration, initialisation modules are also available.

Communication-capable systems and sensors for future-proof and reliable operation



Communication-capable measuring and switching devices and sensors

Modern switchboards feature an increasing number of intelligent switching devices, which often perform various control and monitoring tasks.

The SIVACON S8^{plus} offers following key features:

- Integration of different bus systems in SIMARIS control
- Fully redundant communication system solutions are available
- IEC 61850 gateway solution. The special data concentrator converts all data into one IED (Intelligent Electronic Device) node
- Standardised data model for Motor Control Centers
- Setting of threshold values for monitoring, control and diagnostics, for early signaling
- Withdrawable unit/compartment identification and initialisation
- Communication-capable MCCBs in withdrawable design
- Continuous 24/7 temperature monitoring
- Energy monitoring



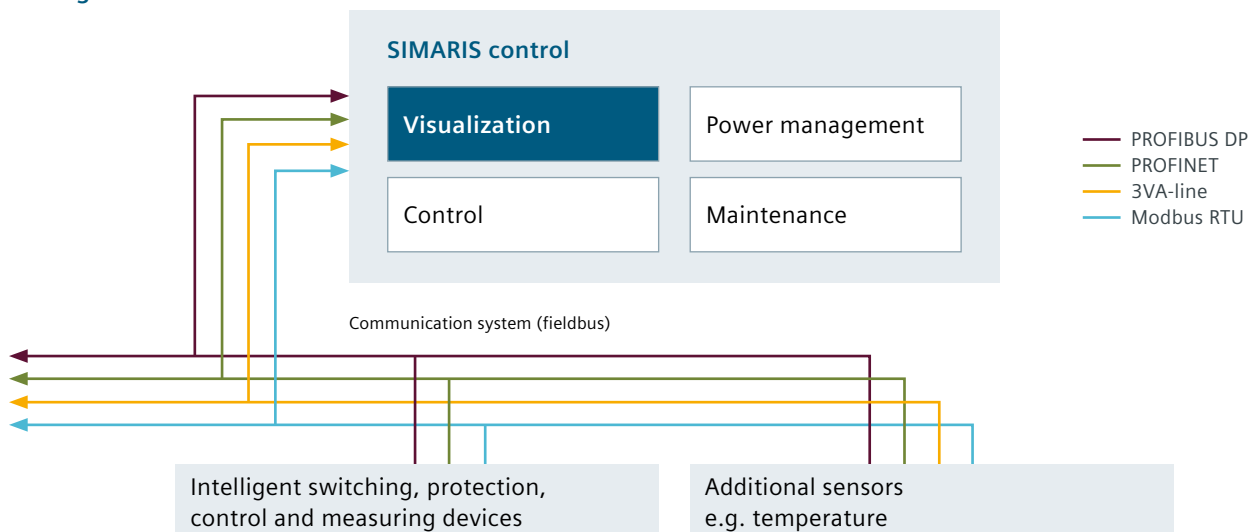
SIMARIS control – interface and monitoring system for uniform operation and monitoring of intelligent switchboards



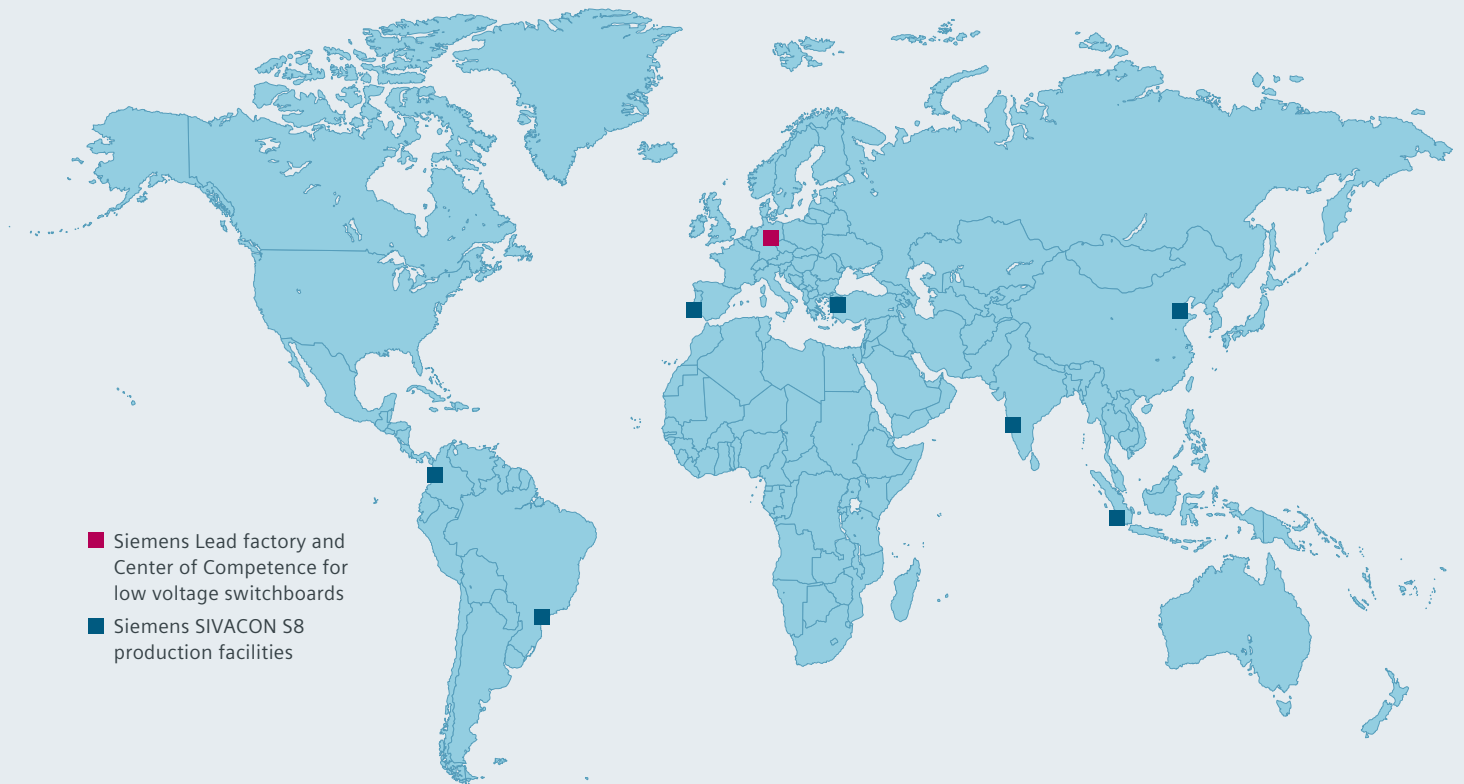
SIMARIS control is the central remote or on-site interface to the SIVACON S8^{plus} switchboard, where all intelligent switching and measuring devices can be operated and monitored.

- Compatible to various communication systems and network topologies
- Flexible and expandable
- Support for preventive maintenance through fast diagnostics
- Switch position indication and operating hour counter
- Uniform parameterisation of various devices via one interface
- SIMARIS control functions are independent of higher automation levels, and use the available switchboard communication system
- Appropriate authorisation levels are defined in individual user groups to avoid operating errors – for extra safety
- Adjustments of the digital twin can be maintained by the customer

Intelligent switchboard



Comprehensive support from planning to maintenance



SIVACON S8 production factories

The SIVACON S8 factory in Leipzig, Germany, is also the global Siemens Center of Competence (CoC) for low voltage switchboards, where sales, product management, research and development, engineering, production, and quality departments work seamlessly toward maximising customer benefits. The CoC is complemented by strategically placed Siemens SIVACON S8 factories around the world, using the same CAD system, software tools, and assembly standards to ensure the high quality of Siemens at every site. Our highly qualified worldwide teams of trained design-to-order experts work hand in hand with SIVACON S8 research and development. The result: a high level of flexibility and optimised solutions for all customer requirements.

Reliable local support

Local Siemens experts assist you around the world, providing ideas and solutions for your power supply, and specific expertise on project management and financial services. Important aspects of safety, logistics, and environmental protection are also considered.

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