

Completely Integrated Solutions  
for the Navy

## SINAVY<sup>CIS</sup> POWER MV

Generators, medium-voltage switch-gear system and power management for naval vessels

Your Success is Our Goal

# SIEMENS

Industrial Solutions and Services

SINAVY<sup>CIS</sup> POWER MV medium-voltage systems with their innovative system design are utilized for the primary generation and distribution of electrical energy onboard of naval vessels. They not only stand out in terms of their high performance, but also through their flexibility and low maintenance requirements. SINAVY<sup>CIS</sup> POWER MV fulfils the special operational, functional and tactical requirements for naval surface vessels and has been qualified for shock and vibration in accordance with German Navy standards.

### SINAVY<sup>CIS</sup> POWER MV – powerful and reliable

In particular, ships with high energy consumption such as destroyers, frigates, or aircraft carriers require medium-voltage systems.

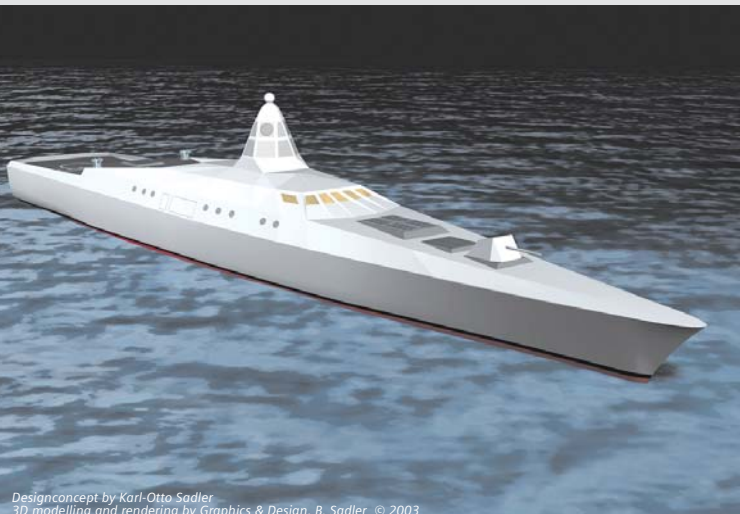
But powerful performance alone is not enough. The operator also expects a high level of availability, safe and simple handling features at minimum investment.

### SINAVY<sup>CIS</sup> POWER MV – our solution in detail

SINAVY<sup>CIS</sup> POWER MV medium voltage switchgear systems conform with current qualification requirements, and are part of the comprehensive Siemens concept for energy production and energy distribution on board ships. The operator can thereby rely on a system with exceptionally high supply and operational reliability.

### Five good reasons for SINAVY<sup>CIS</sup> POWER MV

- Supply reliability through type-tested and environmentally qualified systems
- High level of operational safety through utilization of widespread standardized components
- State of the art technology which fulfils functional, operational and special requirements
- System engineering and system responsibility from a single source
- Environmentally friendly through utilization of modern vacuum switches



## Versatile and adaptable

The compact and modular design of SINAVY<sup>CIS</sup> POWER MV medium-voltage plant with integrated power management system has been adapted to the special environmental conditions and functional requirements on board of naval combat vessels.

## Bulkhead room version

The bulkhead room version of SINAVY<sup>CIS</sup> POWER MV medium-voltage switchgear systems features a housing made of sendzimir zinc-coated tin, with upward pressure relief, a pressure-proof high-voltage door when inner fault arcs are in the control panel and pressure-proof bulkhead walls to the terminal and bus bar room.

## Control panel design and operation

The control panel with its integrated mechanical switching position displays in the mimic diagram enables reading of the switching position of the power switches without opening the high voltage door. In addition, the system offers clear allocation of the activation openings and operating elements for the respective switch position displays.

The system consists of maintenance free vacuum power switches for separation and grounding, a transact-electrical converter for electrical measurements and the capacitive surge acquisition. It additionally consists of safety mechanisms with integrated control, communications, operation and monitoring functions.



## Special safety measures

Special mechanical safety features ensure the highest level of safety possible. In the event of an internal fault (arc fault) in a compartment, the effects of the fault remain confined to the compartment. Safety features include:

- No burn-through of partition walls to adjacent compartments
- No burn-through of separation walls to adjacent feeders
- Pressure-resistance to adjacent compartments and panels
- No re-ignition of arc fault within adjacent compartments or panels
- Hot gases are directed through the special pressure relief duct away from the operator

The air-isolated systems are available for performance ranges up to 24 kV, 50/60 Hz.

Medium voltage generators are the primary source of electric energy onboard.

For the supply of the low voltage network, transformers are used as necessary.

SINAVY<sup>CIS</sup> POWER MV ensures maximum availability, reliability, and maintainability (ARM) in combination with the highest level of human and operational safety.

[www.siemens.com/marine](http://www.siemens.com/marine)

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CIS = Completely Integrated Solutions

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## SINAVY<sup>CIS</sup> – Completely Integrated Solutions for the Navy

As a comprehensive industry-specific solution for naval vessels, our SINAVY<sup>CIS</sup> product family integrates all the products and services you need for sustained maximization of your ship's performance.

For each particular task, a solution has been defined that

- **horizontally** improves all of your ship's operations
- **vertically** integrates the ship's information and security management end-to-end, helping to make better-founded decisions
- and, at the same time, is designed for optimal vessel-specific maintenance and comes with assured further development **over the whole life cycle**

Due to this unique combination of horizontal, vertical and life cycle dimensions, our solutions all carry the genes of an exhaustive and sustained plant productivity in their very core.

**For More Stability. More Availability. More Power.**

**Completely Integrated Solutions from Siemens.**