



**Your competent and reliable Partner for
Power Electronics and Control Systems.**

--- Detailed Portrait of our Company ---

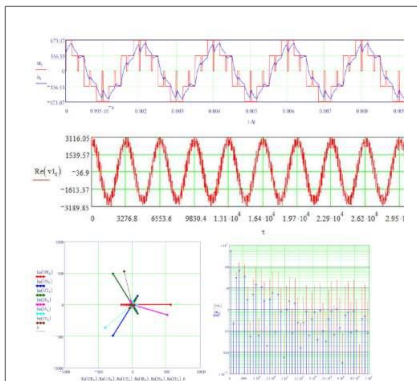


Services of Simatex AG – All from one Hand

Simatex provides qualitative and technologically advanced solutions in the areas of power electronics and control systems directly and exclusively from Switzerland.

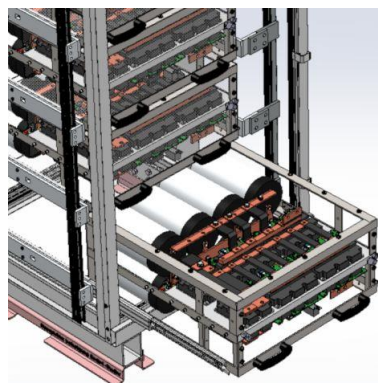
Our goal is to support customers competently and reliably from the first idea to the development, production through to successful commissioning as well as service and support. All from one hand.

We maintain a very transparent, sustainable and uncomplicated business policy and constantly develop innovative and technically complex products.



RESEARCH DEVELOPMENT

- ⊕ Mathcad / Matlab
- ⊕ Simulink Simulations
- ⊕ Prototyping



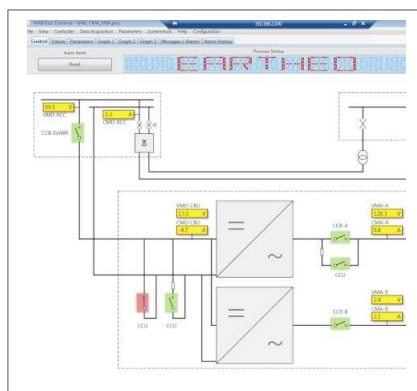
ENGINEERING

- ⊕ SolidWorks 3D
- ⊕ Electro CAD
- ⊕ Project specific



PRODUCTION

- ⊕ 6000 m2 area
- ⊕ Series production
- ⊕ Swiss quality



SOFTWARE

- ⊕ Beckhoff / Siemens
- ⊕ Visualizations
- ⊕ Remote Diagnostics



TEST LABORATORY

- ⊕ Product Testing
- ⊕ Parameterization
- ⊕ FAT Client acceptance



SERVICE

- ⊕ Installation
- ⊕ Commissioning
- ⊕ Maintenance

Quality products of Simatex AG

Simatex offers a wide variety of products for power electronic applications and control technology. The detailed knowledge is based on more than 30 years of experience with complex applications and projects worldwide.

■ Control- und SCADA Systems

(GIS Switchgear, Generator switchgear, Steam- and Gas turbines, Compressor Control, Gas Monitoring, PSD Platform-Screen-Doors, Test-laboratories)

■ Inverters for Traction

(Active rectifiers, ERS Energy Recovery System, Recovery Inverter, ESS Energy Storage System)

■ Inverter and Control of Wind Turbines

(4-Quadrant Inverter with Chopper, Wind turbine control, Safety System, LVRT)

■ VFD Medium Voltage Inverter for Drive Applications

(ASM and SM Motors for Pump, Mixer, Compressor, Extruder.... 1,6MW up to 25MW)

■ Inverter for Petrochemical and Marine

(Drill ships und Drill platforms, Oil rigs, Marine drives)

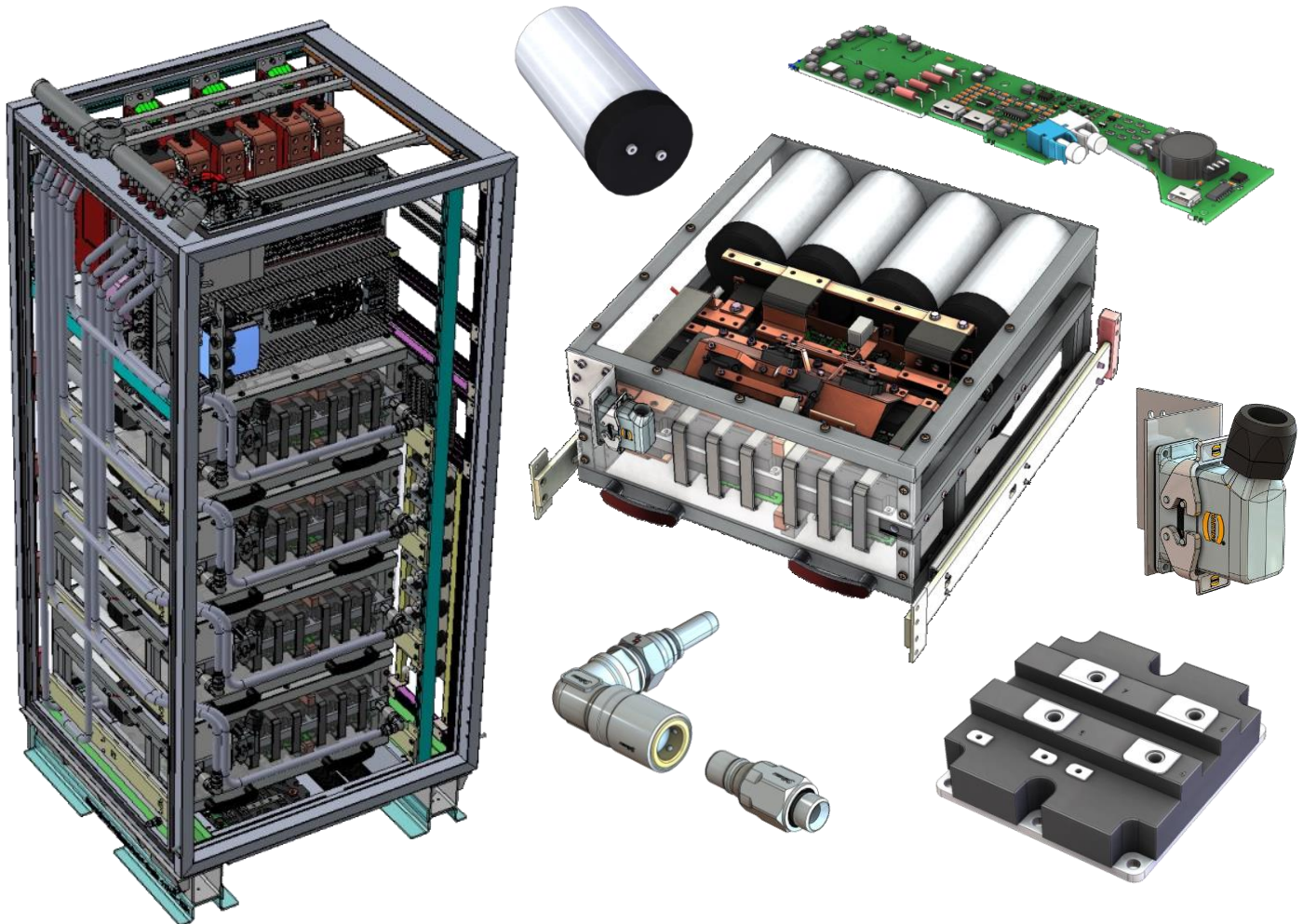
■ Inverter as Current Source and DC Application

(Ship demagnetization system, High Current and high control accuracy, Test Laboratories)



Product example of a 5MW inverter in a modular design

For a Swiss railway company, a unique and compact 5MW special inverter was successfully developed in a very short time. As an upgrade for a train, the Simatex "Active Rectifier and Inverter Unit" can control the 3kV DC link of the drive inverters with power coming from the 25kV AC line via a transformer and at the same time feed the braking energy back.



Standardized modules with as many identical components as possible

This optimizes material prices and long delivery times as a result of supply shortage from manufacturers and suppliers. Further, the modules can be used for various similar applications.

Availability, reliability, service friendliness

The modular " drawer-technology " minimizes downtime as well as the simplicity of service, maintenance and spare parts stocks. The electrical and optical cables are routed through a plug and the cooling water can be separated by a drip-proof coupling. Changing a module is possible without emptying coolant or using any special tools.

Extremely compact

Depending on the situation and the project, there was a great challenge in terms of space, weight and regulations, which Simatex was able to master successfully. The development was done in a very close relationship with the customer.

Key features and principle of Simatex AG

Swiss quality products

All Simatex products are fully developed and manufactured in Switzerland according to high quality standards and valid regulations.

High flexibility

Through an efficient team, customer and project specific solutions and changes can be implemented quickly and easily.

Modular Design

All products are as modularly as possible with identical components. This optimizes delivery times, installation, commissioning and service.

Innovative ideas

Innovative solutions and modular design reduce downtime for service and maintenance to a minimum.

30-Years Experience

Simatex has many years of experience with very demanding, complex projects and applications in various industries worldwide.

Excellent customer service

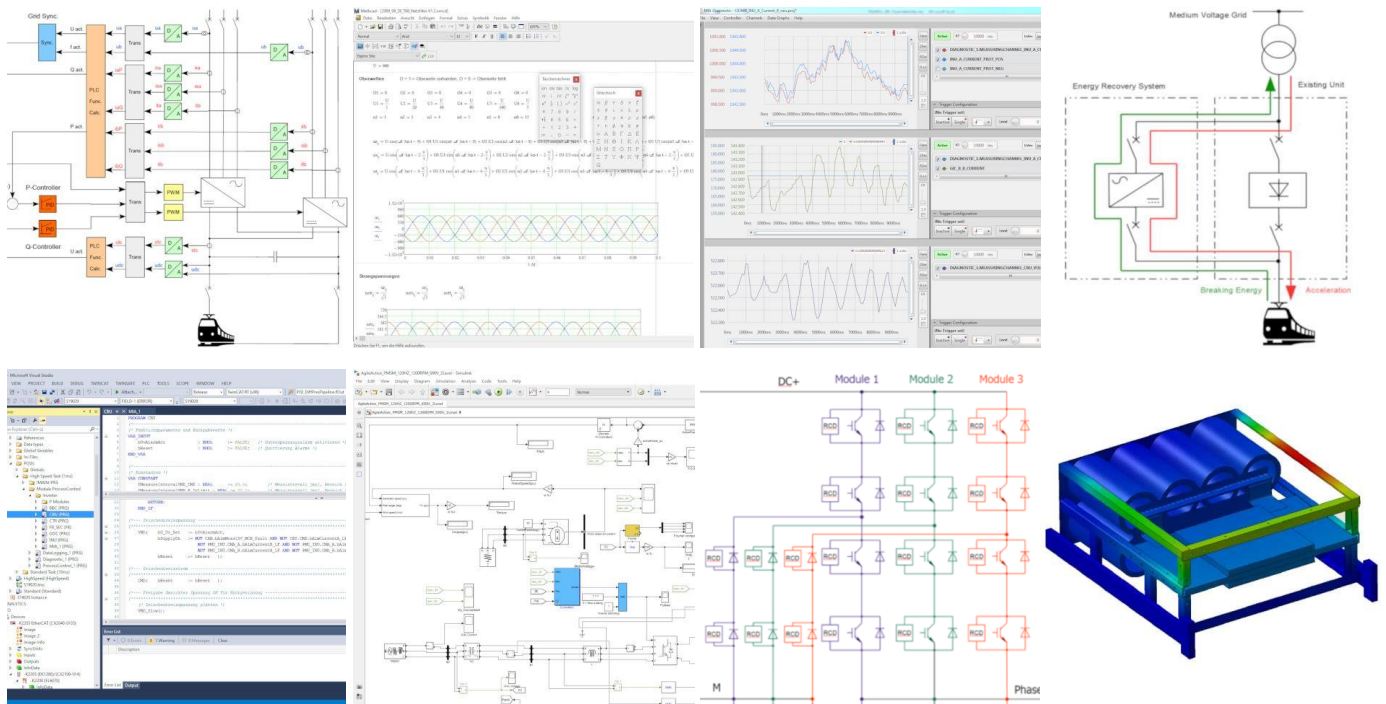
Simatex maintains a corporate policy with broadly based expertise. This guarantees a high quality service for all customer requests.

Transparent and fair

Simatex maintains transparent and sustainable business relationships. Products and services have an optimal price-performance ratio.

Qualitative standard components

Simatex products contain only high quality standard components with good availability on the world market.



Main benefits of a strategic partnership

The goal of Simatex is the development of long-term partnerships based on reliability and trust. Such strategic partnership is with important benefits for everyone involved.

⊕ Efficient communication

The human resources policy of Simatex is designed to build and maintain long-term employees. Each specializes in its areas still expertise and project information is communicated widely. This guarantees a fast and very efficient handling of all requests.

⊕ Resource planning and scheduling

A simple and flexible company structure or organization enables optimal resource planning and scheduling. The internal processes of Simatex are simple, goal-oriented and efficient.

⊕ Transparent and fair prices

Simatex is open to any kind of pricing. Our optimal company size and efficient management keep fixed costs, especially administrative expenses, very low. Therefore customers get high quality products for fair prices.

⊕ Flexibility

The company Simatex is characterized by an exceptionally high flexibility. Every smallest request is done to the complete satisfaction of the customer.

⊕ Stable Company

Simatex AG works without any external financing. So there are no bank loans or current accounts. All product developments are financed from current income. In addition, no development costs were capitalized in the balance sheets.







Experiences and references in the field of power electronics

ERS Energy Recovery System (IGBT-Inverter) for Traction

Example of modular Energy Recovery System with medium voltage IGBT-Inverter. Braking energy from 1500VDC traction vehicles fed back directly into the grid.




Client:	Project:	Scope of Supply:	Technical Data VFD:	Quantity:
	Inverter WAB Wengernalpbahn	Energy Recovery Inverter incl. 12-pulse Oil transformer,	500kW, 300% Overload capacity 1500VDC, 2-Quadrant, 12-pulse	1 pc.
	Inverter BOB Berner Oberland-Bahn	Energy Recovery Inverter incl. 12-pulse Oil transformer,	1000kW, 300% Overload capacity 1500VDC, 2-Quadrant, 12-pulse	1 pc.
	Inverter Alpigen Wengernalpbahn	Energy Recovery Inverter incl. 12-pulse Oil transformer,	500kW, 300% Overload capacity 1500VDC, 2-Quadrant, 12-pulse	1 pc.
	Inverter Bavaria Appenzeller Bahnen	Energy Recovery Inverter incl. DC-Switchgear Protection	500kW, 300% Overload capacity 1500VDC, 2-Quadrant, 12-pulse	1 pc.

ESS Energy Storage System (DC-DC Converter and Energy Storage with Supercapacitor Technology)

Modular Energy Storage System with medium voltage DC-DC Converter and Supercapacitor technology. Regenerative braking energy from 1500 VDC traction vehicles temporary stored and fed into the system again.



Client:	Project:	Scope of Supply:	Technical Data VFD:	Quantity:
	RBS Loeffelhof	Energy Storage System incl. DC-DC Converter	1000kW, 5kWh storage capacity, 1500VDC	1 pc.

VFD Variable Frequency Drive for Petrochemical Application

300'000 tons/year LLDPE/ HDPE Plant



Application:	Scope of Supply:	Technical Data VFD:	Quantity:
3300 kW Compressor	Start-up Inverter (IGBT, 3-Level NPC) incl. 12-pulse Transformer, Bypass, Synchronization, Cooling System	4600MW, 3300V 12-pulse, 2-Quadrant, PLC	2 pcs.
4600 kW Compressor	Start-up Inverter (IGBT, 3-Level NPC) incl. 12-pulse Transformer, Bypass, Synchronization, Cooling System	5.9MW, 3300V 12-pulse, 2-Quadrant, PLC	2 pcs.
1600 kW Cutter	Speed and torque-controlled Inverter (IGBT, 3-Level NPC) incl. 12-pulse Transformer, Transformer-Protection, Cooling System	2.0MW, 3300V 12-pulse, 2-Quadrant, PLC	2 pcs.
12000 kW Extruder	Speed and torque-controlled Inverter (IGBT, 3-Level NPC) incl. 24-pulse Transformer, Motor supervision- and protection, Cooling System	15.6MW, 6000V 24-pulse, 2-Quadrant, PLC	2 pcs.

VFD Variable Frequency Drive for Petrochemical Application

300'000 T/Y LDPE Plant







Application:	Scope of Supply:	Technical Data VFD:	Quantity:
4600 kW Compressor	Speed and torque-controlled Inverter (IGBT, 3-Level NPC) incl. 12-pulse Transformer, Transformer-Protection, Cooling System	5.6MW, 3300V 12-pulse, 2-Quadrant, PLC	1 pc.

Inverter for Wind Power

4-Quadrant Inverter with generator control and grid synchronization. Including Chopper for LVRT.



Client:		Scope of Supply:	Quantity:
	NORDEX	Various Inverter up to 2.5MW	1200 pcs.
	MINYANG Wind Power	Various Inverter up to 1.5MW	70 pcs.
	Mtorres wind energy	Frequency Inverter 1.5MW	20 pcs.
	Agile Wind Power	1000kW Inverter and Wind Turbine Control	1 pc.

Transocean Oil rigs

Drilling Platforms of Transocean for the search and extraction of oil and gas in the sea.



Application:	Scope of Supply:	Quantity:
TOC 1 Transocean, Arctic Marshall Islands, USA	14 pcs. 4Q-IGBT Inverter with 650V/2800A 24 pcs. 4Q-IGBT Inverter with 1800V/1950A	38 pcs.
TOC 2 Sedco 706 Liberia, Africa	12 pcs. 4Q-IGBT Inverter with 650V/2800A 24 pcs. 4Q-IGBT Inverter with 1800V/1950A	38 pcs.
TOC 3 Sedco 714 Republic of Vanuatu	13 pcs. 4Q-IGBT Inverter with 650V/2800A 24 pcs. 4Q-IGBT Inverter with 1800V/1950A	37 pcs.

Transocean drilling ship's

The world's largest enterprise-class drilling ships from Transocean with dynamic positioning.



Application:	Scope of Supply:		Quantity:
NEC 1 NEW Enterprise Discoverer Clear Leader Marshall Islands, USA	14 pcs. 24 pcs.	4Q-IGBT Inverter with 650V/2800A 4Q-IGBT Inverter with 1800V/1950A	38 pcs.
NEC 2 NEW Enterprise Discoverer Deep Seas Marshall Islands, USA	14 pcs. 24 pcs.	4Q-IGBT Inverter with 650V/2800A 4Q-IGBT Inverter with 1800V/1950A	38 pcs.
NEC 3 NEW Enterprise Discoverer Clear Leader Marshall Islands, USA	13 pcs. 24 pcs.	4Q-IGBT Inverter with 650V/2800A 4Q-IGBT Inverter with 1800V/1950A	37 pcs.
NEC 4 Discoverer Enterprise Marshall Islands, USA	14 pcs. 24 pcs.	4Q-IGBT Inverter with 650V/2800A 4Q-IGBT Inverter with 1800V/1950A	38 pcs.
NEC 5 NEW Enterprise Pathfinder Marshall Islands, USA	14 pcs. 18 pcs.	4Q-IGBT Inverter with 650V/2800A 4Q-IGBT Inverter with 1800V/1950A	32 pcs.