

On land, on water, in the air

Realized combinations of functions, voltages and powers

Your partner for power electronics for now 50 years

The SYKO group researches, develops, modifies and produces in the field of power electronics from a few watts up to regulated and cascaded $n \times 10 \text{ kW}$ (>36 kW) output power (DC and / or AC) with input voltages <6 V up to > 5000 V (DC or AC) and currents up to >1200A (input or output) for battery- and frontend-devices.

Our extraordinary strength is the fulfilment of complex and functional power interfaces.

We fulfil the normative standards of the market:

EMC, shock/vibration, temperature according to MIL STD, VG, DEF STAN
 For years we are using full digital processes (control) and information exchange with the customers system by using potential free communication-bus systems.

All our offices, R&D and production lines are located in Mainhausen / Germany.

Functional low power converters from 1 W up to 1 kW are still addressed in the research-, modification-, and standard-program.

Functional power cascading from 1.7 kW up to >6 kW up to $\geq 36 \text{ kW}$ for 1ph/3ph-converters.

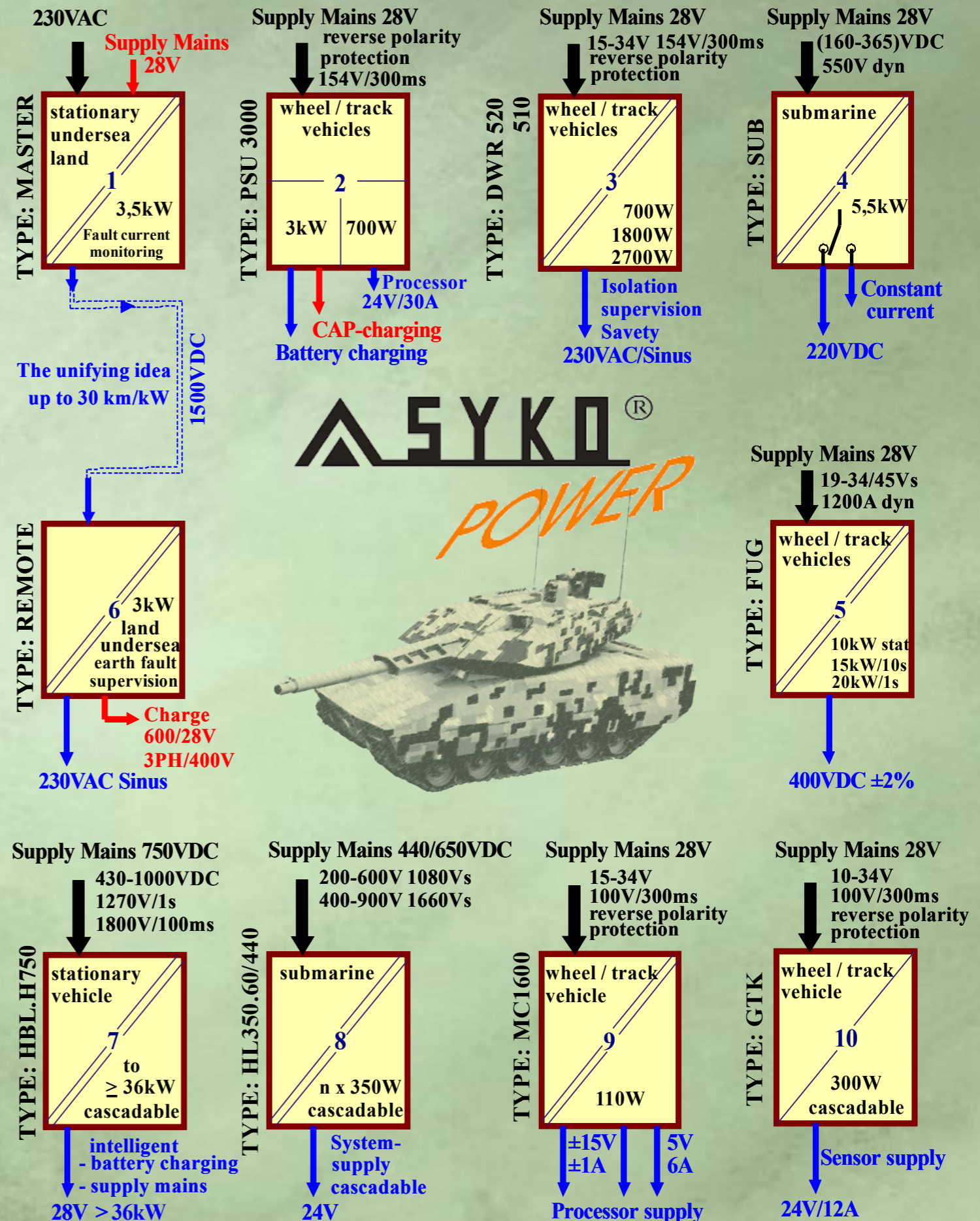
We will fulfil also your requirements.

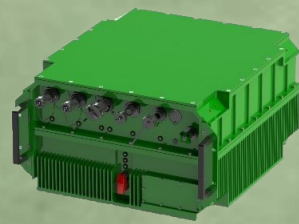
Don't hesitate to contact us:

SYKO Gesellschaft für Leistungselektronik mbH

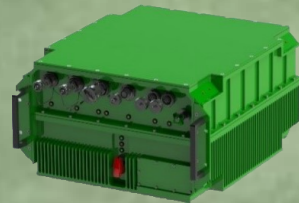
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MASTER 230 VAC → 1500 VDC
28 VDC optional



REMOTE 1500 VDC → 230 VAC
optional 3Ph/400 VAC
optional 28 V Battery-charging

The system separates people from the danger zone. It controls DC power transmission (3,3 kW) over long distances (3.3 Km) with a total efficiency of 94%. Integrated are the safety requirements "fault current" protection at the 1500 VDC primary side and insulation monitoring at the 230 VAC remote side.



PSU.3000 28 VDC → 58 VDC

To move massive mechanics highly dynamically powered by the 28 V board supply net this short circuit proofed Buck/Boost topology regulates the output voltage with $V\text{-Out} = f(T\text{-battery})$ supporting board mains over the static 3 kW power string. A second independent power string with 700 W and 24 V powers a central processor board. Both strings are protected against wrong polarity (-60 V), active load dump (174 V / 350 ms) without current reflexions and they are statically and dynamically short circuit proofed.



DWR 520, DWR 1500, DWR 2500

28 V-Bordnet → 230 VAC

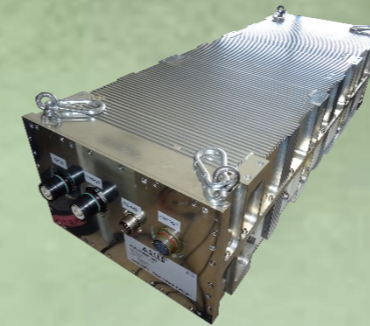
SYKO has defence battery inverters with 550 W / 1500 W / 2500 W output power with MIL certificates which were tested in accredited test houses and tested in the field.

The defence battery inverters produces synthetic sinusoidal alternating voltage. The 230 VAC / 115 VAC output has been specifically approved for safety measures (in ex. insulation monitoring).



SUB

Isolated DC/DC converter for operation on various submarine electrical systems with a very wide static and dynamic voltage range. The cascable power range nx5 kW provides a general 220 VDC output voltage or a regulated variable constant current output.



FUG.KON

The converter supplied by the 28 V- battery board net (20 V-45 V) with parallel supply from a 7.5 kW generator produces a potential-free high-output voltage of 300 VDC optionally 700 VDC with 7 kW static output power, 15 kW / 10 sec. and 20 kW / >1 sec. to supply DC or AC-powertrains to move massive mechanics with high dynamic demands.



HBL.H750 750 VDC → 28V BAT
3Ph/400 VAC optional
optional high voltage Battery

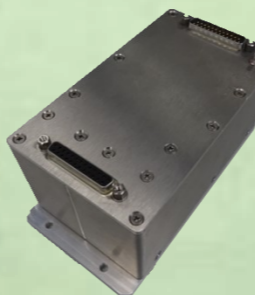
This intelligent cascable nx6 kW Multimaster battery charging system for low and high voltage batteries works with an input voltage from 390 VDC up to 1270 VDC or a rectified 3Ph/400/480 VAC - 50/60 Hz. The parallel operation of board net powering and battery charging with a temperature-dependent charging voltage $V\text{-BAT} = f(T\text{-Bat})$ works in current splitting mode.

Optionally converter meets MIL standards.



HL 350

A potential-separated and cascable DC/DC converter for operation on various submarine on-board networks with a very wide static and dynamic voltage range. The nx350 Watt output supplies various sensor platforms/electrosystems with short-circuit proof 24 V constant voltage.



MC1600 und GTK 05

100 W low output power converter for supplying processor level or sensor platform, potential-separated from the 28 V-board-net with a dynamic input voltage 9 V - 174 V without current reflection, with active reverse polarity protection (-40 V), with independent, potential-separated, over-voltage proofed and short-circuit proofed outputs.



GTK 06

A 300W DC/DC converter working on 28 V board nets with a range from 9 V – 36 V / 100 V-350 ms with built in reverse polarity protection for supplying 24V sensor platforms. The converter works ground related without manipulating the 0 V-ground-structure of the board net by using a 3 wire system.