

# Power Conversion Systems

Custom Solutions for leading  
companies since 1986

DC-DC CONVERTERS |

INVERTERS |

BATTERY CHARGERS |

Leading technology Power  
Converters are strategic devices for  
the electrification of everything

## 4 kW Power Electronic Drivetrain & Control Unit

An air-cooled AC/DC/AC multi-functions power unit providing on-board charging mode and e-motor drive mode plus several additional functions.

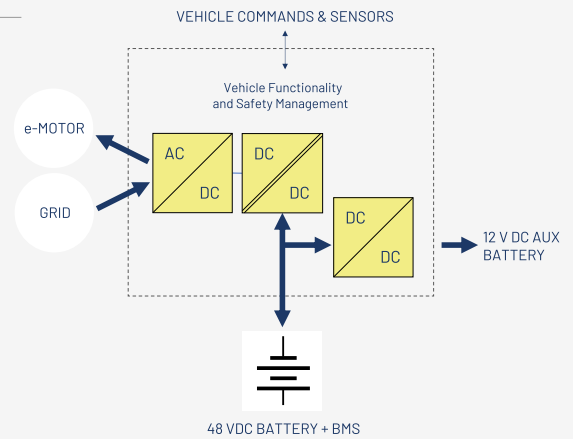


### Applications

5kW class power hybrid and electric vehicles drivers

### Key features & benefits:

- Unrivaled exceptional ratio kW/l rate and integrated functionality
- 4 kW e-motor Drive with KERS function
- 2 kW Integrated, Patented Battery Charger
- 150 W Auxiliary services DC/DC Converter
- Built-in Vehicle Functionality and Safety Management
- Ready for the V2G (vehicle-to-grid) operations
- Hybrid mode ready via 2kW additional inverter module



## 10 kW Galvanically Insulated Bidirectional DC/DC Converter

The fundamental RGM brick for insulated DC/DC conversion. A unique battery converter which provides full management of 50 V batteries, to integrate them on a 750 V.

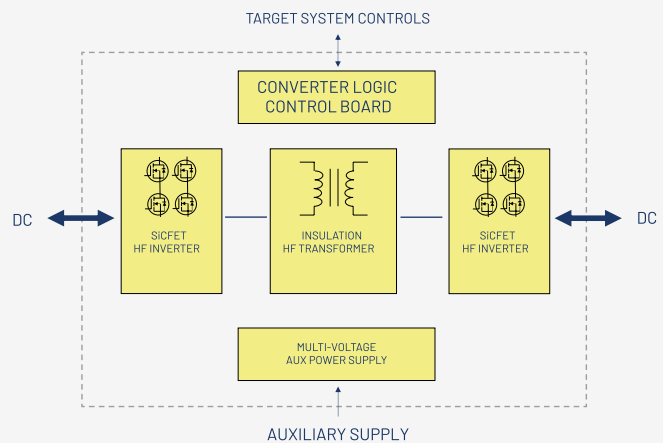


### Applications

Hybrid telecom, MILD hybrids, Electric/ Hybrid Off-Road Vehicles, system integrators, batteries manufacturers, rental operators who aim to offer smart battery solutions

### Key features & benefits

- Up to 160 A current
- 10 litres volume and 10 kg. weight, without heatsink
- Available for several voltage range
- Available air cooled and water cooled
- Fuel Cells compliant



## 20 kW Hybrid Fridge Electronic System (H-FES)

An on-board Electronic power conversion system managing a mobile fridge in hybrid or full-electric mode.

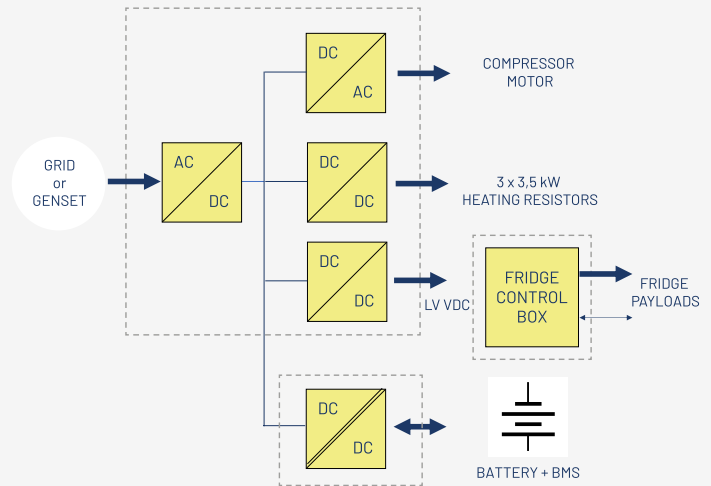


### Applications

- Hybrid refrigeration systems
- Trucks, Containers, Trailers

### Key features & benefits:

- Engine-Generator control (RPM, fuel pump, glow plugs, other)
- Mains / Generator commutation control
- Energy storage control (batteries)
- Mobile modular execution, liquid cooled



## 30 kVA Step Load Converter / Energy Storage System

An AC/DC/AC power converter system that charges Battery Pack from the Grid or a Generator (AC-DC charge mode) and provides AC Voltage (DC-AC export mode).

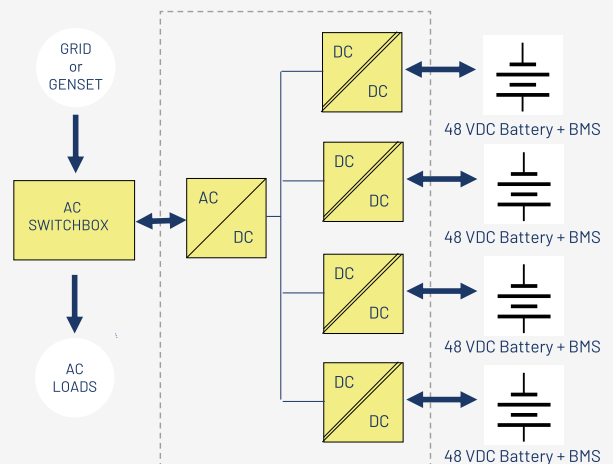


### Applications

- Any industrial/residential storage system
- Genset Manufacturers and/or Rental operators.

### Key features & benefits

- 4 galvanically insulated DC/DC and 1 AC/DC bidirectional converters as an optimised system to use up to 4 50V, Li-based batteries for energy storage and step load converter for genset.
- Parallelable to any output of a generator and/or grid to supply a step load to that (micro)grid.
- Modular and scalable, ready for any industrial/residential storage system or V2G applications.



## 50 kVA Power Class Conversion Combo System

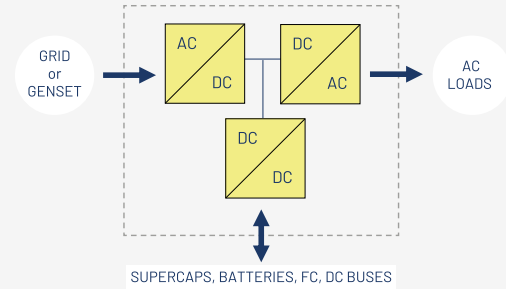
A liquid cooling AC/DC/AC power converter system delivering AC output from an ICE driven PM generator or the grid source, supported by a bidirectional DC energy buffer.

### Applications

- Battery driven Gensets
- Smart grids
- Energy Storage Devices
- Hybrid/electric vehicles
- Fuel Cells driven Gensets

### Key features & benefits:

- Network stabilizer (Frequency and Voltage)
- Independent Energy Source
- Continuity against voltage drops (blackout)
- Elimination of disturbances even of very short duration
- Unlimited continuity of energy with parallelism with a motor generator
- Power scalable, parallelable



## 50 kW Integrated High Voltage DCDC Power Converter

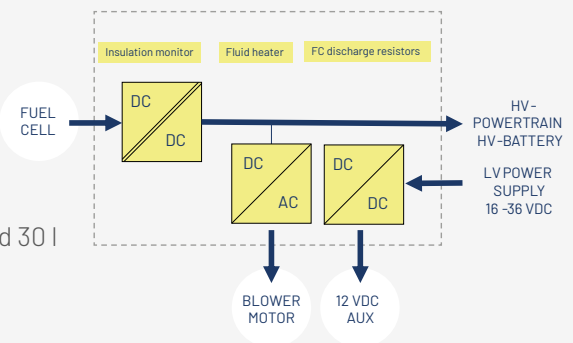
A liquid cooling on-board DC/DC power converter system that converts an unregulated DC voltage from Fuel Cell to regulated DC and AC voltage.

### Applications

- Fuel Cell Modules
- Fuel Cell Electric Vehicles (Heavy duty trucks, buses, utility vehicle, rail)
- Fuel Cell Generator Sets

### Key features & benefits

- Fully Galvanic Isolation
- Highest power density in the market, less than 50 kg and 30 l
- 50kW DC/DC converter
- 3,5 kVA HV 3ph blower motor drive
- 250W 24V-12V DC/DC
- Additional functions integration to limit size and harness of FCM
- Power scalable, parallelable



## 50 kVA class Hybrid Genset / Grid Power System

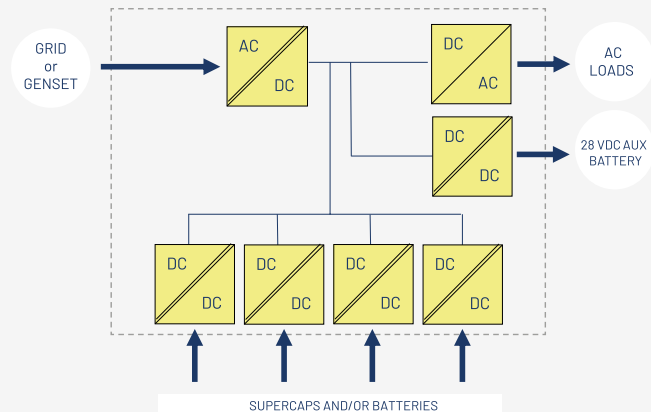
An extremely dense Power System delivering galvanic isolated AC / DC output from an ICE driven PM generator or the grid source and managing a DC energy buffer (supercaps or batteries).

### Applications

All that ones in which is mandatory to galvanically separate the loads from the input

### Key features & benefits:

- Engine and generator full digital control
- AC output: 3ph.+ active N for enhanced unbalancement capability
- 5kW, 28V DC output by a high frequency, galvanically isolated DC/DC converter
- Volume 120 l.



## 65 kW Galvanically insulated and Bidirectional DC/DC Converter

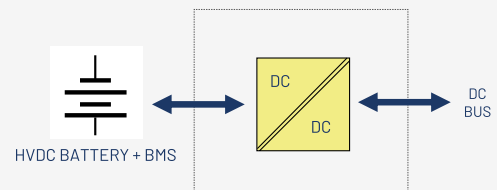
A liquid cooled execution DC/DC converter

### Applications

- Electric / Hybrid Boats
- High Power EV DC chargers
- High Voltage EV DC Chargers
- DC Grids
- Smart grids

### Key features & benefits

- Galvanically insulated and Bidirectional
- Li-based battery management with CAN BUS connection to BMS
- Liquid cooled marine execution
- MODBUS/TCP interface to the boat automation
- Designed to work in parallel with more devices over the DC BUS



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## Why RGM

<b>Heritage</b>	Providing solutions to international leading companies since 1986
<b>Design Support</b>	Turn-key solutions not available on the market with a high level of integration into the customer products: "have it work the way you want"
<b>Value to Customers</b>	Compact, efficient, highly integrated, reliable products, result in customer's lower costs of manufacturing

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## Contacts

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