

# ENERGY STORAGE SOLUTIONS



**POWER OF MSc**



## ENERGY STORAGE SOLUTIONS

### MSc DC/DC CONVERTERS AND GRID INVERTERS

MSc bidirectional DC/DC converters and Grid Inverters have especially been designed for energy storage and smart grid applications. The converters can be used easily as a building blocks in different power generation and energy storage systems.

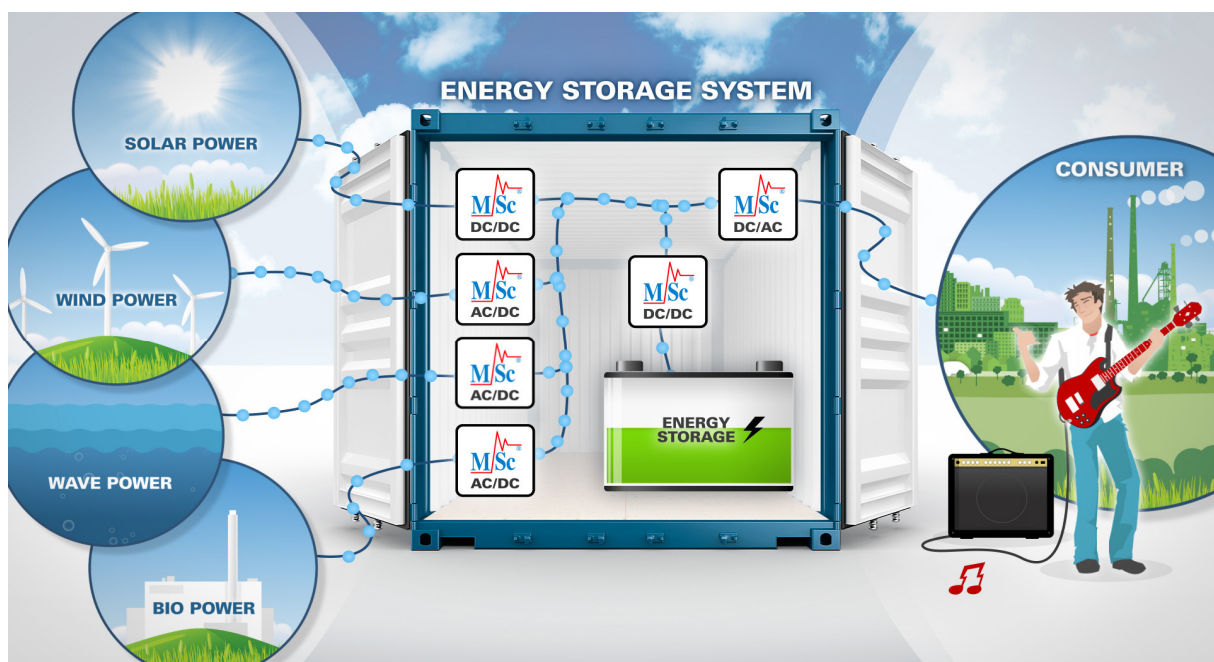
MSc DC/DC converters and Inverters have been tested in a broad variety of applications, from renewable energy generating solutions to hybrid drives for mobile machines and uninterruptible motor drive systems.



### RENEWABLE ENERGY AND SMART GRID SOLUTIONS

MSc DC/DC converters are ideal solution for charging and discharging the batteries in energy generation and smart grid applications.

MSc Grid Inverters makes it possible to connect the power and energy storage system to the grid. Also bidirectional operation enables the power flow to both directions in order to stabilize the grid based on the consumption.



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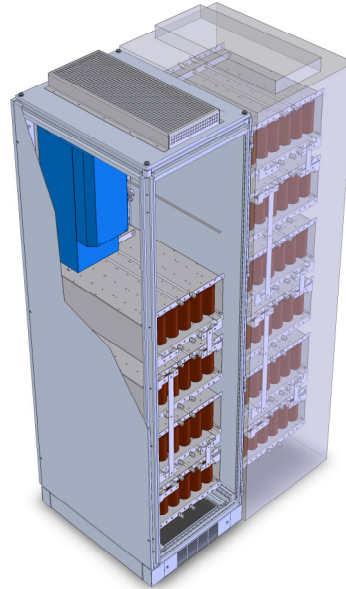
Alasniitynkatu 30, FI-33560 Tampere, Finland  
Tel.: +358 50 532 1469 , info@msc.eu, www.msc.eu

## ENERGY STORAGE SOLUTIONS

### REGENERATIVE POWER SOLUTIONS

MSc Energy Storage System is a complete solution for regenerative power applications and it includes DC/DC converters and super capacitors with all the built-in safety and control functions.

MSc Energy Storage System is modular and it covers the energy storage needs from 30kJ to 1,8MJ and momentary power peak levels from 10 to 280kW.

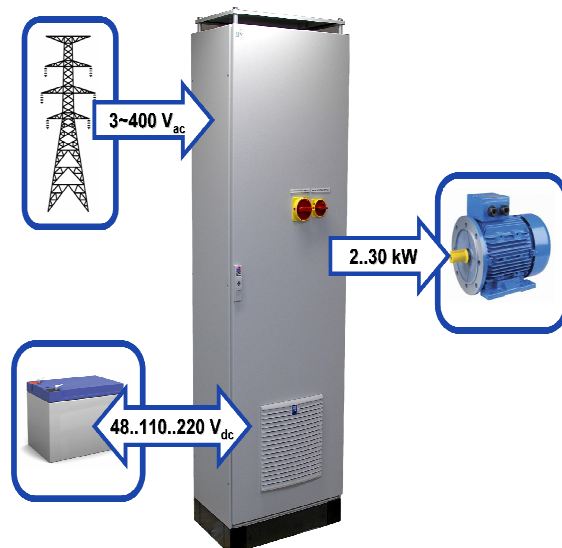


### UNINTERRUPTIBLE MOTOR DRIVE (UMD) SOLUTIONS

MSc Uninterruptible Motor Drive (UMD) is the perfect solution for the critical motor drive applications.

MSc UMD provides a constant electric supply to the 3-phase AC motor drives, ensuring uninterruptible operation during the mains failure.

The standard MSc UMD systems cover motor powers from 2,2 to 30 kW and the complete system includes also the batteries for the different back-up times.



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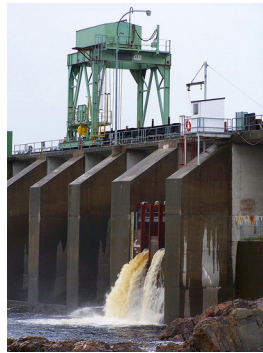
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### MSC REFERENCES

MSc has delivered totally over 14.000 converters to be used in many different industrial and rolling stock applications. The durability of MSc solutions has been tested in several demanding application areas and environments.

The various MSc solutions are currently deployed in many countries as Finland, Sweden, Norway, Russia, Germany, the United Kingdom, Belgium, the Netherlands, Czech Republic, Switzerland, Spain, Saudi-Arabia, Mexico and Australia.



Further information, please contact  
MSc Electronics Oy  
Email: [info@msc.eu](mailto:info@msc.eu)  
Tel: +358 (0) 50 532 1469