



UNSW
SYDNEY



Modular Multilevel Converters

Aiming to extend the use of modular multilevel converters across multiple application areas. The family of modular multilevel converters is the very definition of state-of-the-art when it comes to high-power power-electronics conversion.

Competitive advantage

- World-leading analytical tools and modelling capabilities
- More than 10 years of research experience in developing topologies, hardware and control for modular multilevel converters

Impact

- Modular multilevel converters deliver greater power capacity, voltage levels and conversion efficiency than all previous generations.

Successful outcomes

- Development of tailored solutions for multiple applications including HVDC systems, energy storage and renewable energy systems

Capabilities and facilities

- Reliability focused enhancements such as active redundancies
- Multiphysics capacity including electrical, thermal and electromagnetic
- A fully reconfigurable 2/4 full-bridge (Gen2) MMC setup with integrated high-level control
- Small-scale half-bridge (Gen1) MMC with direct access to component level
- Full AC and DC grid emulation
- Advanced monitoring, metering and data logging capacities

Our partners

- Tecnalia Energy, Spain

More Information

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