



POWER CONVERSION SYSTEMS

ENERGY STORAGE MADE SIMPLE

POWER CONVERSION SYSTEMS
DESIGNED FOR POWER GENERATION

TRUSTED EUROPEAN COMPONENTS | INTEGRATED CONTROLS | SIMPLIFIED BESS ARCHITECTURE

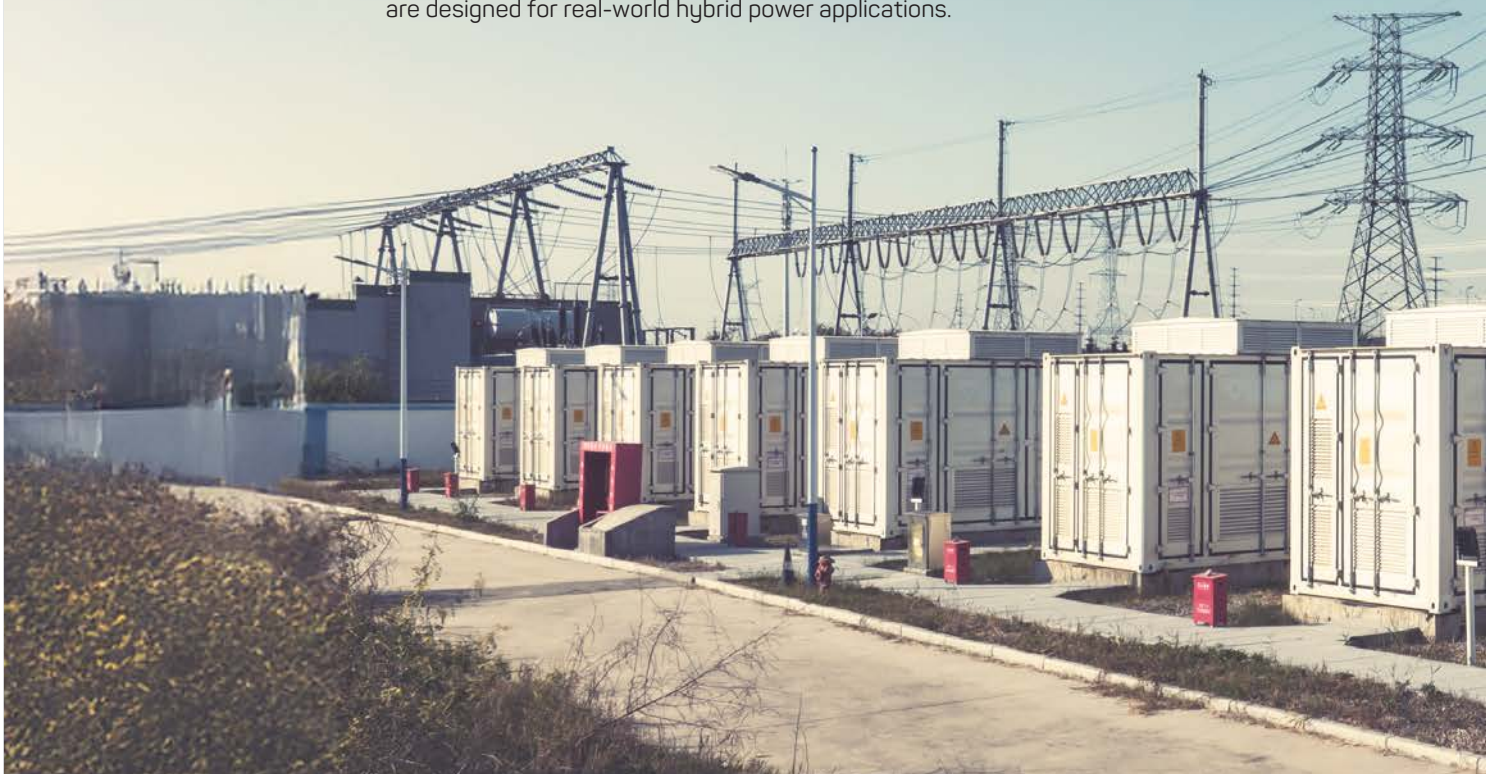


SIMPLIFYING HYBRID POWER INTEGRATION

POWER GENERATION EXPERTISE APPLIED TO MODERN ENERGY STORAGE SYSTEMS.

Mecc Alte Power Conversion Systems help OEMs, system integrators and power specialists simplify development, reduce integration complexity and accelerate the deployment of modern energy storage systems.

Built around trusted EU components and supported globally, our solutions are designed for real-world hybrid power applications.



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WHAT IS A POWER CONVERSION SYSTEM?

THE BRIDGE BETWEEN BATTERIES AND USABLE POWER

A Battery Energy Storage System (BESS) stores energy as DC power within battery modules. To make that energy usable by equipment, generators, buildings and industrial applications, it must be safely converted, controlled and managed. This is the role of the Power Conversion System.

The Power Conversion System is the intelligence and control layer of a BESS, converting stored DC energy into stable AC power while managing energy flow, system protection, performance and integration with other power sources. Without it, batteries are simply stored energy. With it, batteries become a flexible and reliable power solution.

HOW IT WORKS



BATTERY SYSTEM

Stores energy



POWER CONVERSION SYSTEM

Converts and controls energy



USABLE AC POWER

Powers equipment, sites and infrastructure

MORE THAN JUST AN INVERTER

Modern power conversion systems do far more than convert power. They provide the intelligence required to safely control and optimise energy storage applications.

Key functions include:

- DC to AC power conversion
- Energy flow management
- System protection and safety
- Generator integration
- Peak shaving
- Load management
- Microgrid operation
- Grid support functions
- Monitoring and communications
- Battery energy storage control

DESIGNED FOR POWER GENERATION

Unlike many power conversion suppliers that originate from industrial automation or utility sectors, Mecc Alte solutions are developed specifically for power generation applications.

This means greater understanding of:

- Generator integration
- Hybrid power systems
- Rental applications
- Temporary power
- Mobile energy systems
- Island mode operation
- Off-grid environments
- Critical power applications

For customers building Battery Energy Storage Systems, this translates into simplified integration, reduced engineering effort and faster deployment.

ENERGY STORAGE MADE SIMPLE

From individual components to complete integrated systems, Mecc Alte Power Conversion solutions help customers build Battery Energy Storage Systems faster, more simply and with greater confidence.

WHY POWER GENERATION EXPERTISE MATTERS



Energy storage is changing the power landscape. But successful energy storage systems require more than batteries.

They require intelligent power conversion, hybrid control and a deep understanding of how generators, batteries, grids and loads interact in real-world applications.

Unlike many suppliers whose expertise originates in solar, automation or generic power electronics, Mecc Alte's heritage is firmly rooted in power generation.

For decades we have supported generator manufacturers, rental fleets, temporary power providers and critical infrastructure projects worldwide.

Today, that experience helps customers build more capable, reliable, scalable and more flexible energy storage systems.

WE UNDERSTAND:

Generator integration

Hybrid power systems

Rental power applications

Temporary power

Load acceptance and rejection

Synchronisation

Black start

Grid interaction

Microgrids

Critical power applications

Load sharing

Peak shaving

Parallel operation

SIMPLIFYING HYBRID POWER INTEGRATION

Modern energy storage projects involve multiple technologies, suppliers and engineering disciplines. Managing that complexity increases engineering effort, development time and project risk.

Mecc Alte helps simplify the process through proven architectures, integration-ready platforms and dedicated engineering support.

CUSTOMER BENEFITS

Reduced system complexity

Simplified integration

Reduced engineering effort

Faster development

Reduced project risk

Easier commissioning

Faster route to market

Simplified long-term support



HELPING OEMS ACCELERATE ENERGY STORAGE DEVELOPMENT

Whether developing a prototype, a rental fleet solution or a commercial energy storage platform, Mecc Alte helps customers focus on creating value rather than solving integration challenges.

CHOOSE YOUR INTEGRATION PATH

Every customer is different. Some require complete engineering freedom. Others require proven building blocks. Others require integrated solutions ready to accelerate deployment.

Mecc Alte supports all three approaches.

COMPONENTS

MAXIMUM FLEXIBILITY

Individual technologies designed for OEM integration.

Includes:

- MP inverter range
- BESS200 hybrid energy management platform
- Communications and connectivity
- Engineering support

Ideal for customers with strong internal engineering capability and complete control over system architecture.



BESS ONE PCK

PCK - POWER COMPONENTS KIT

A proven package of key power conversion components designed to simplify the development of modern energy storage systems.

Ideal for customers who wish to design and package their own systems while reducing development complexity.

BENEFITS

- Proven component selection
- Simplified integration
- Reduced engineering effort
- Faster development
- Flexible architecture
- OEM design freedom



BESS ONE PCS

PCS - POWER CONVERSION SYSTEM

A fully integrated and pre-engineered power conversion solution designed to minimise complexity and accelerate deployment.

BENEFITS

- Reduced complexity
- Faster deployment
- Simplified commissioning
- Reduced engineering effort
- Reduced project risk
- Faster time to market



HYBRID POWER INTELLIGENCE



BESS200 HYBRID ENERGY MANAGEMENT PLATFORM

Modern energy storage systems require more than power electronics. They require intelligent control.

BESS200 provides the intelligence layer that enables modern hybrid power systems, coordinating batteries, generators, grids and loads within a single energy architecture.

KEY CAPABILITIES

Peak shaving

Load levelling

Demand management

Generator support

Grid forming

Grid following

Synchronisation

Black start

Renewable integration

Spinning reserve

Microgrid operation

The result is intelligent coordination between all energy sources and loads.



TRUSTED EU COMPONENTS. GLOBAL SUPPORT.

ENERGY STORAGE PROJECTS ARE LONG-TERM INVESTMENTS.

Customers increasingly seek technologies that offer confidence, continuity and support throughout the project lifecycle.

Mecc Alte combines trusted European engineering and industrial technologies with a global support network and experienced technical teams.

WHY IT MATTERS

- Trusted EU component architecture
- Global technical support network
- Local commercial representation
- Proven industrial technologies
- Long-term product availability
- Dedicated engineering expertise
- Reliable supply chain support
- Confidence in critical power applications



ONE ECOSYSTEM. GREATER POSSIBILITIES.

Mecc Alte solutions are designed to integrate with a wide range of technologies and energy storage architectures. However, additional functionality can be unlocked when Mecc Alte power conversion systems operate alongside Mecc Alte generator controllers.

Through native controller-to-controller communication, customers can benefit from a more integrated hybrid power architecture.

POTENTIAL ADVANTAGES

Reduced wiring complexity

Reduced commissioning effort

Native load sharing

Enhanced synchronisation

Advanced peak shaving

Improved backup performance

Simplified start/stop logic

Enhanced system awareness

Improved scalability

Reduced engineering effort

OPTIONAL TODAY. POWERFUL TOMORROW.

The Mecc Alte ecosystem creates additional value for customers looking to standardise on a single hybrid power architecture.



SMARTeCH^{II}

THE COMPLETE POWER CONVERSION PLATFORM



EVERYTHING YOU NEED TO DEVELOP THE NEXT GENERATION OF ENERGY STORAGE SYSTEMS.

COMPONENTS

- MP INVERTER RANGE
- BESS200
- COMMUNICATIONS

ENGINEERING SUPPORT

TECHNICAL TRAINING

PCK ONE

POWER COMPONENTS KIT

APPLICATION DEVELOPMENT

PCS ONE

POWER CONVERSION SYSTEM

BUILD YOUR NEXT ENERGY STORAGE SYSTEM WITH CONFIDENCE

DESIGNED FOR POWER GENERATION

Mecc Alte Power Conversion Systems combine decades of power generation expertise with advanced power conversion and hybrid control technologies, helping OEMs and system integrators simplify development, reduce integration complexity and accelerate deployment.

Download technical datasheets, integration guides and application resources or speak directly with a Mecc Alte specialist about your next project.

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