



Description:

Grid Interface & Storage Modules

- Uninterruptable Power Supply
- Grid forming or grid parallel
- Integrated or modular battery storage
- High power density
- Modular
- Expandable

Power Converter Module:

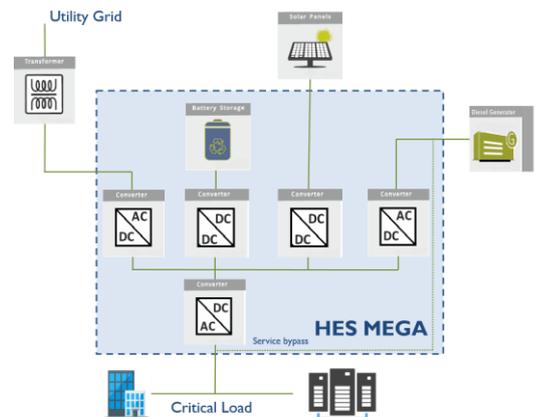
- IGBT-based power converter with ultra-fast switching capability (20ms responses time)
- 2.0 MW continuous power output
- High efficiency conversion system
 - o 10C Battery (2.0 MW / 0.2 MWh)
 - o Grid (2.0 MW AC)
- Output
 - o 400/480/690 V, 3 phase, 50/60 Hz
- Universal grid compatibility: All grid codes (BDEW2008, TC2007, TR8 FGW, DS3.....)
- THC = 1.33% (measured at 3MW converter)
- Lowest electromagnetic interference because of symmetrically grounded DC link
- High reliability: field proven design with more than 15 GW installed converter capacity
- Active harmonic compensation
- Optimised PWM gives high converter efficiency (98%)
- DC connection for lower number of components
- Smart charging strategy for long battery life

Enclosure:

- External dimensions – module container 6096mm(l) x 2438mm(w) x 2896mm(h)
- Integrated FM 200 Fire Suppression system. Fully compliant with EN 15004
- Operating temperature - -20°C to +50°C
- False floor for efficient cable management
- Low power LED internal and external lighting
- All external interfaces at gland box on outside

Applications:

- Micro-grids
- Island grids
- Critical Power

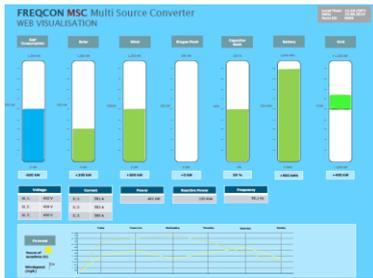


Battery Management System:

- Self-diagnostics
- Cell balancing
- Charge and discharge enable supervision and control
- State of charge, health, current, temperature, cell resistance monitoring
- Multiple strings of cells in parallel and series for battery redundancy (Optional)

Control System:

- High speed data processing and communication
- Touch screen HMI
- Remote monitoring and management
- Optional utility grade energy metering
- Control of DC/DC converter or DC/AC converter with variable voltage and frequency
- Ethernet based communication protocols like Profinet, Profibus, Modbus TCP, OPC.
- Visualisation, alarm handling, SCADA



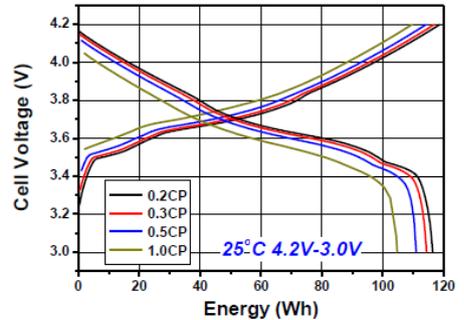
Air Conditioning*:

- 20 kW latent cooling capacity
- Underfloor cooling units
- Efficient airflow management through equipment compartment

*Indicates optional equipment

Battery Module:

- Lithium Ion
- Light weight and compact
- Battery Management System included
- Low maintenance, sealed for life construction
- Multiple battery packs can be connected in parallel to increase capacity.
- 4 times longer cycle life than lead acid
- Very high charge and discharge capability (up to 10C)
- 4.0 MW power can fit in 20ft container module
- 'Hot Swap' capability



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