



ACBOX V5



Up to 1.91 MVA
Up to 4.02 MWh
2 h to 8 h



All-in-One Modularity

Batteries, 4-quadrant AC/DC power conversion and liquid cooling system integrated in a rugged high-cube containerized module.

Distributed power conversion

Each rack comes with its own independent power converter for best granularity and optimized energy yield and system availability. Cutting-edge, SiC-based design delivers top-of-the-class efficiency across the operating range.

State-of-the-art safety

Redundant safety features ensure safe operation and hazard management at all times. The aerosol-based fire suppression system can operate up to 24 h even in the event of total external power outage.

Ready for next-generation grid support

Future-proof grid support functions thanks to proprietary grid forming control with virtual inertia, virtual impedance and millisecond-scale response time. Native cybersecurity features complement the control capabilities.

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|---------------|------------------------------|---|---------------------|
| ENERGY | Cell Chemistry | LFP | |
| | Cell Specifications | 587 Ah 0.5P | 755 Ah 0.25P |
| | Rack Maximum voltage | 1500 V _{DC} | |
| | Rack Minimum voltage | 1164 V _{DC} | |
| | Rack Configuration | 4 x 1P104S | |
| | Rack Nameplate energy | 781.4 kWh | 1005 kWh |
| | Container Configuration | 4 racks (2 columns) | 4 racks (2 columns) |
| | Container Nameplate energy | 3.12 MWh | 4.02 MWh |
| | Container DC maximum power | 1.56 MWh | 1.00 MWh |
| POWER | Rated voltage | 690 V _{AC} ± 10% | |
| | Frequency | 50, 60 Hz | |
| | Power factor | 0 under-excited, 1, 0 over-excited | |
| | THDi | <3% @ P=25% | |
| | Architecture | Distributed SiC-based 4-quadrant power converters | |
| | Independent AC/DC | 4 | 4 |
| | 2 h Apparent power | 1.91 MVA | - |
| | 3 h Apparent power | 1.43 MVA | - |
| | 4 h Apparent power | - | 1.43 MVA |
| | Independent AC/DC | - | 2 |
| | 8 h Apparent power | - | 0.71 MVA |

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|-------------------|---|--|
| GENERAL | Size | C1 |
| | Dimensions | 12 ft HC |
| | Weight | < 24000 kg < 30000 kg |
| | Installation | Stand-alone or Back-to-back |
| | Ingress Protection | Container: IP 55, TMS: IP XXB |
| | Corrosion protection ⁽¹⁾ | Container = C5H, TMS = C4H |
| | Operating temperature ⁽¹⁾⁽²⁾ | -35 °C to 55 °C |
| | Operating altitude ⁽³⁾ | 2000 m |
| | Storage temperature | -40 °C to 60 °C |
| | Sound pressure level | 71 dBA @ 1 m 68 dBA @ 1 m |
| PROTECTION | DC over-current | Fuses on both poles at rack level |
| | DC disconnection | Disconnect load switch at rack level |
| | AC over-current | Circuit breakers at system level |
| | AC disconnection | Circuit breakers at system level |
| | AC surge protection device | Yes |
| | AUX surge protection device | Yes |
| | Insulation monitoring | AC+DC ground fault monitoring |
| | Fire detection | Redundant optical smoke and thermal sensors |
| | Fire extinguishing | Aerosol |
| | Explosion prevention | Redundant gas detectors and air circulation system through motorized inlet and outlet (NFPA 69 compliant) |
| | Explosion management | Pressure-controlled deflagration vents (NFPA 68 compliant) |
| FEATURES | Insulation monitoring | Yes, with virtual inertia and xVRT current injection |
| | Black start | Yes |
| | Communication | Modbus TCP/IP, OPC-UA over Optical Fiber |
| STANDARDS | Declaration of conformity | CE, UKCA |
| | Safety System | IEC 62933-5-2, UL 9540 |
| | Safety PCS | IEC 62477-1, UL 1741 |
| | Safety Batteries | IEC 62619, IEC 63056, UL 1973, UL 9540A |
| | EMC | IEC 61000-6-2, 61000-6-4, IEEE 1547.1 |
| | Power quality | IEC 61727, IEEE 519 |
| | Performance | IEC 61683 |
| | Cyber-security | IEC 62433 |
| | Grid code | EU EN 50549 Finland SJV2024 Germany VDE-AR-N 4110, 4120, 4130, VDE FNN Guidelines for grid forming Italy Terna Allegato A.79, CEI 0-16 Spain NTS v2.1, Capacidades grid forming UK G99 US UL 1741 SB, IEEE 2800 |

(1) Custom configurations available upon request

(2) Detailed specifications available upon enquiry



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