



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.

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 MW	1.00 MW
POWER	Rated voltage	690, 730 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 @ 690 V _{AC}	1.91 MVA	-
	3 h Apparent power @ 690 V _{AC}	1.43 MVA	-
	4 h Apparent power @ 690 V _{AC}	-	1.43 MVA
	Independent AC/DC	-	2
	8 h Apparent power @ 690 V _{AC}	-	0.71 MVA

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	
	Cybersecurity	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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