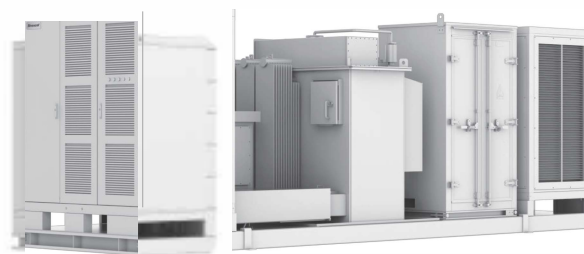


## POWER CESS 4000

### COMMERCIAL AND INDUSTRIAL LARGE-SCALE ENERGY STORAGE SYSTEM



Flexible and Scalable  
for Any Application



Advanced Thermal Design



Environmentally Friendly  
Operation



Intelligent Energy Management  
System (EMS)

#### Reliable Power Supply

- A robust, outdoor 4,073 kWh containerized Energy Storage System (ESS)
- Compatible with a wide range of inverters
- Offers flexible grid integration

#### Versatile Configurations

- Easily meet diverse energy demands by connecting 1 to 10 battery clusters in parallel for seamless expansion
- High energy density maximizes storage capacity while minimizing the system's footprint
- Ensures high-efficiency operation by minimizing auxiliary power consumption

#### Reduced Environmental Impact

- Effectively smooths the output from renewable energy sources
- Simplifies the integration of renewable energy and helps reduce CO<sub>2</sub> emissions from conventional power generation
- Features an advanced, low-noise fan system for quiet operation

#### Proven Safety

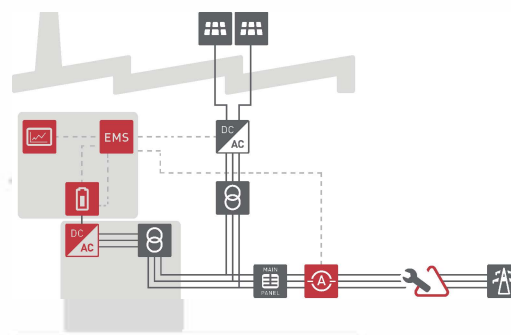
- The fan system is compliant with the NFPA 69 standard
- Fire suppression systems comply with NFPA 855 standards for all country-specific models
- Includes an emergency gas detection port to ensure operator safety

#### Advanced Thermal Design

- A smart, dual-mode cooling system (liquid and air conditioning) maintains stable, 24/7 operation for both the battery compartment and the electrical room

#### Intelligent Energy Management System (EMS)

- Enables unified power plant communication with autonomous container operation
- Features self-sufficient control with a versatile HMI suitable for all users
- An ALL-IN-ONE solution for seamless energy management



\* Two Power Conversion Systems (PCS), one MV transformer and Ring Main Unit (RMU), and one auxiliary cabinet and transformer are all integrated onto a single skid base.

## BATTERY CABINET DATA

Dimensions	W6058×H2896×D2438 mm	Battery Rack Quantity	10
Weight	Approx. 83775 lbs	Battery Pack Quantity per Rack	8
Ingress Protection Class	IP55	Battery Pack Structure	1P52S
Configuration	10Rx8Px52S	Battery Capacity per Pack	50.918 kWh
Cell Capacity	306Ah	Battery Type	LiFePO <sub>4</sub>
Output DC voltage Range	1164-1498 VDC	DC-side Rated Voltage	1331.2 Vdc
Nominal Charge/Discharge Rate	0.1-0.5C	BMS	Integrated
Nominated Energy	4.07MWh	EMS	Integrated
Rated Power DC	2MW	Cooling Method	Water and glycol mix
Auxiliary Load Voltage	480V 60 Hz, 3P4W		
Auxiliary Peak Load	30kW		
Operating Temperature	-22°F to 122°F		
Painting/Coating Class	C4/C5 (optional)		
Noise Level	84 dBA at 1m (50 Hz)    86 dBA at 1m (60 Hz)		
Fire Suppression System	Gas detection, Gas exhaust, Smoke detection, Fire control panel, Horn and Strobe		
Standards & Certification	EN IEC 62619、IEC 63056、IEC 60730 Annex H、UL 1973、CE LVD ESS EN 62477-1、AK Certificate IEC 62040-1、CE EMC ESS EN 61000-6-2/-4, Emission EN 55011, CISPR11、TUV mark ESS IEC 62933-5-2、Test Reports IEC 62933-5-1/-2-1 with EVE Rack、AS/EC 61439-1/-2、UL9540、UL9540A、NFPA69、UN38.3		

## AUX CABINET AND TRANSFORMER DATA

Aux. Transformer	100kVA / 690V / 400V
UPS	Up to 1kVA (0.5h standard) (Consult for more capacity)
Meter	Meters for Aux. Power Consumption and PCS
Communication method	Gateway
Cooling Method	Temperature controlled forced air cooling
Output Power	480V 60Hz for USA
Communication	RS 485, Ethernet, CAN

## MV TRANSFORMER AND RMU DATA

Nominal AC power	2580kVA@113°F		
Transformer Vector	Oil-immersed transformer		
Transformer protection	Protection relay for pressure, temperature (two levels) and gas		
Oil retention tank	Galvanized steel. Integrated with hydrocarbon filter. Optional		
Switchgear configuration	DeV / CV (RMU)		
Switchgear protection	Circuit breaker (V)		
Switchgear short circuit rating	20 kA 1s (Consult for customized)		
Transformer winding type	Dy11y11 (Consult for customized)		
Overload capability	100%		
MV AC voltage	10kV-33kV (Consult for other voltage level)		
LV AC voltage	690V	AC PF	0.99/-1-1
AC frequency	50Hz / 60Hz	Insulation Level	A
Transformer impedance	5.75%-8%	LV-MV connections	Copper bar or cable
Cooling type	KNAN	LV protection	Motorized CB in PCS
THDi	≤3%	MV protection	Microcomputer protection

## PCS DATA

Nominal AC power	1075kVA	Size (W*H*D)	24.9*8.5*7.2 ft
AC connection	Three-phase three-wire (3P3W)	Weight	≤44092 lbs
Overload Capability	1183kVA	Enclosure	IP54
AC voltage	690(-15%-10%) V	Corrosion Prevention	C4
AC frequency	50/60 (-5-5) Hz	Operating temp.	-4°F to 122°F (De-rating over 113°F)
THDi	≤3%	Storage temp.	-58°F to 158°F
AC PF	-1 -1	Cooling	Air cooling
Number of DC branch	1	Humidity	0-95% (No condensing)
Voltage regulation accuracy	±1%	Max elevation	Standard 1000m/3300feet (Consult for other elevation)
Peak efficiency (with auxiliary source)	98.5%		
Size (W*H*D)	7.2*7.1*4.3 ft	Certification	PCS, transformer, RMU certification base on project country
Weight	4235 lbs		
Noise	<75dB		
Protection	IP54		
Operating temp.	-4°F to 122°F (De-rating over 113°F)		
Cooling	Air cooling		
Humidity (storage)	0-95% (No condensing)		
Max altitude	3000m (De-rating over 3000 m)		
Communication	RS 485, Ethernet, CAN		
Protocol	Modbus TCP/RTU. IEC104. IEC61850		

## SKID DATA