

JDENERGY

Galaxy 1

STRING ENERGY STORAGE PREFABRICATED CABIN FEATURING AC-DC INTEGRATION



Intelligent energy block Galaxy-1
5016kWh Energy Storage System

⦿ Economically Efficient

⦿ Ultimate Safety

⦿ Grid Friendly

⦿ Intelligent Operation and Maintenance

■ Economically Efficient

- Dual-circuit Liquid Cooling: Maintains $\leq 3^{\circ}\text{C}$ cell temperature deviation across container.
- String Architecture: 100% Depth of Discharge (DoD) with zero capacity loss.
- Single-container conversion efficiency $\geq 90\%$.
- Intelligent thermal control to boost system cycle efficiency.

■ Grid Friendly

- Advanced Grid Support: Primary/Secondary frequency regulation, AGC/AVC capabilities.
- Flexible Operation Modes: Peak shaving, valley filling, and demand charge management.
- Seamless Transition: $\leq 20\text{ms}$ switching time between charge and discharge.

■ Ultimate Safety

- Cell-level aerogel thermal insulation.
- Three-level Fuse Protection: Multi-tier overcurrent safeguarding from cell to system.
- Integrated BMS+PCS+EMS control and protection architecture.
- 2-hour fire endurance rating with high-temperature resistance.

■ Intelligent Operation and Maintenance

- Versatile Applications: Utility-scale (generation-grid side) and C&I medium voltage projects.
- 20ft pre-integrated design for easy transportation & installation.
- All-in-One Integration: Highly integrated AC/DC architecture minimizing footprint and commissioning time.

SYSTEM DATA

Operating Temperature	$-30^{\circ}\text{C} \sim 55^{\circ}\text{C}$
Operating Humidity	0% ~ 95% RH (non-condensing)
Altitude	$\leq 2000\text{m}$
Thermal Management Methods	Liquid cooling (Battery+PCS)
Fire Suppression System	Thermal Runaway Mitigation System
System Protection Level	IP55 (Battery compartment)
Communication Protocol	IEC 104/IEC 61850/ Modbus Tcp
Certifications & Standards	IEC62477 IEC62619 IEC61000 UL 9540A UL 1973 UL 1741 NFPA69

AC SIDE PARAMETERS

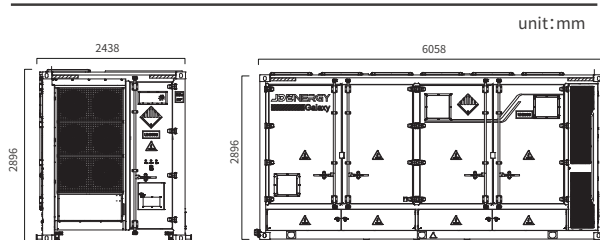
Rated Power	2508kW (2h) / 1254kW (4h)
Rated Grid Voltage	690VAC (-15%~10%)
Grid Frequency	50/60Hz
Current THD	$< 3\%$
Power Factor	> 0.99 (Rated power)
Overload Capability	110% for 10 min, 120% for 1 min
Dimensions (L*W*H)	6058*2438*2896
Total Weight	$\approx 43000\text{kg}$
Installation Mode	Hoisting

DC SIDE PARAMETERS

Cell Type	LFP 3.2V/314Ah
Battery capacity	5016kWh
DC rated voltage	1331.2V
DC voltage range	1164.8V-1497.6V
Configuration	1P416S*12(2h) / 2P416S*6(4h)
Charge-Discharge Rate	0.5P(2h) / 0.25P(4h)
Number of Cycles	≥ 10000 Cycles

PCS DATA

PCS Technology	SiC
PCS Power Rating	215kW*2
DC Input Voltage	1000V-1500V
Grid-Forming Capability	Enabled
Black Start Function	Enabled

MECHANICAL PARAMETER

Tolerance: Length $\pm 2\text{mm}$, width $\pm 2\text{mm}$

*JDEnergy reserves the right of final interpretation for all data contained in this specification.(202608 V1.0)

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