

7000 kWh

BATTERY ENERGY STORAGE SYSTEM (BESS)

Ultra High-Capacity | Grid-Scale | Intelligent Energy Infrastructure



SYSTEM OVERVIEW



- ✓ Integrated Battery Management System (BMS) for cell-level monitoring and protection
- ✓ Advanced Energy Management System (EMS) with real-time analytics and smart control
- ✓ SCADA-ready architecture for seamless plant integration
- ✓ Remote monitoring, diagnostics & predictive maintenance capability
- ✓ Intelligent load balancing and automated demand response
- ✓ Grid-support functions including frequency & voltage regulation

SAFETY FEATURES



- ✓ Multi-layer protection at cell, module & rack level
- ✓ Advanced thermal runaway detection & prevention
- ✓ Automatic aerosol / gas-based fire suppression system
- ✓ Emergency shutdown mechanism (E-Stop)
- ✓ Protection against over-voltage, over-current & short circuit
- ✓ Intelligent thermal management for safe temperature control

**WHAT
SETS OUR
5MWH
BESS
APART**

KEY APPLICATIONS



- ✓ Utility-scale renewable energy integration
- ✓ Solar + Storage hybrid power projects
- ✓ Grid stabilization & frequency control
- ✓ Microgrid and islanding operations
- ✓ Peak shaving & load shifting for industrial facilities
- ✓ Industrial & commercial backup power
- ✓ EV charging infrastructure support

SYSTEM ADVANTAGES



- ✓ High energy density for large-scale operations
- ✓ Modular & scalable architecture
- ✓ Fast deployment with containerized design
- ✓ Optimized lifecycle performance
- ✓ Low maintenance and high reliability
- ✓ Reduced carbon footprint with better energy economics

Energex PowerVault 7000 – Battery Parameters

Battery Parameters	Energex PowerVault 7000
Battery Configuration	408S9P
Battery Nominal Voltage / Capacity	1305.6V / 5283Ah
Battery Energy	6897.485 kWh / 6.897 MWh
Cell Type / C-Rate	Lithium Ferro Phosphate (LFP) Prismatic Type @ 0.5C
Cell Nominal Voltage / Capacity	3.2V / 587Ah
Depth of Discharge (DoD)	95%
DC Operating Voltage Range	1101.6V to 1489.2V
Battery Cycle Life	>10000 Cycles
Maximum Charge / Discharge Current	3440 A
Battery Dimension (L×W×H)	6058 × 2438 × 2896 mm
Thermal Management	Advance Intelligent Liquid Cooling
Operating Temperature Range – Charging	0°C to 50°C (<85% RH) – Above 45°C Derating
Operating Temperature Range – Discharging	-20°C to 60°C (<85% RH) – Above 45°C Derating
Working Altitude	< 4000 mtr
Weight	55.0 Tons
Special Battery Parameters	
Communication Interface	Modbus TCP/IP, CAN, RS485, Ethernet, IoT
Control & Communication	SCADA for Central Control & Monitoring Communication Standard Industrial Protocols
Fire Suppression System	Detectors: Flammable Gas, Smoke, Heat, Temperature, CO Alarms (3 Levels) Ventilation System Sprinkler System Mandatory Aerosol Manual & Automatic Switching
Protection Class (IEC 60529)	IP55
Anti-Corrosion Degree	C4
System Designed Service Life	15 Years (with RTE Degradation)
Certifications	
Battery Cell	IEC62619, UL1973, UL9540A
Battery Pack	IEC60730-1, UN38.3, UL1973, UL9540A
Battery Rack	IEC62619, IEC 60730-1, IEC 63056, IEC62477-1, UL1973, UL9540A, UL 60730-1
System	IEC 62477-1, IEC 60730-1 EN IEC 61000-6-2/4, UN38.3 UN3536, UL9540, UL 60730-1 IEC 62619 UN 38.3 EN 62477-1, IEC 63056 EN IEC 61000-6-2/4