

5000 kWh

BATTERY ENERGY STORAGE SYSTEM (BESS)

High-Capacity | Scalable | Intelligent Energy Solution



SYSTEM OVERVIEW



- ✓ Power & Control Systems
- ✓ Integrated Battery Management System (BMS)
- ✓ Energy Management System (EMS) with real-time analytics
- ✓ SCADA compatibility
- ✓ Remote monitoring & diagnostics
- ✓ Smart load management & demand response ready

SAFETY FEATURES



- ✓ Multi-level cell, module & rack protection
- ✓ Advanced thermal runaway detection
- ✓ Fire suppression system (aerosol / gas-based)
- ✓ Emergency shutdown system (E-Stop)
- ✓ Over-voltage, over-current & short-circuit protection

**WHAT
SETS OUR
5MWH
BESS
APART**

KEY APPLICATIONS



- ✓ Utility-scale renewable integration
- ✓ Solar + Storage Hybrid Projects
- ✓ Microgrid & Islanding Solutions
- ✓ Peak shaving & load shifting
- ✓ Industrial & Commercial backup power
- ✓ EV charging infrastructure support

SYSTEM ADVANTAGES



- ✓ High energy density & compact footprint
- ✓ Modular & scalable architecture
- ✓ Fast deployment & plug-and-play installation
- ✓ Long service life with low maintenance
- ✓ Reduced carbon footprint & operational costs

Energex PowerVault 5000 – Battery Parameters

Battery Parameters	Energex PowerVault 5000
Battery Configuration	416S12P
Battery Nominal Voltage / Capacity	1331.2V / 3768Ah
Battery Energy	5015.962 kWh / 5.016 MWh
Cell Type / C-Rate	Lithium Ferro Phosphate (LFP) Prismatic Type @ 0.5C
Cell Nominal Voltage / Capacity	3.2V / 314Ah
Depth of Discharge (DoD)	95%
DC Operating Voltage Range	1123.2V to 1497.6V
Battery Cycle Life	>10000 Cycles
Maximum Charge / Discharge Current	2500A
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	42.5 Tons
Special Battery Parameters	
Communication Interface	Modbus TCP/IP, CAN, RS485, Ethernet, IoT
Control & Communication	SCADA for central control & monitoring, 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