

CONTAINERIZED DISTRIBUTED ENERGY STORAGE: L2000



Handle multiple energy applications simultaneously for utilities and large enterprises with the L2000 Containerized Distributed Energy Storage System. Johnson Controls combines world-class energy storage technology with intelligent controls and decades of experience in modular data centers and chiller plants to create an efficient, cost-effective solution.

This scalable system can provide hours of high-energy output, offering new opportunities to regulate, store and distribute power with maximum benefits:

- **Seamless integration with building systems**, including *Metasys*® and other building automation systems via BACnet® or Modbus. Our advanced controls blend HVAC, lighting, security, and fire safety to optimize whole-building performance and simplify participation in energy markets.
- **Greatest economic benefits** captured through support of multiple applications. The L2000 handles and optimizes for multiple applications, including peak shaving, load shifting, frequency regulation, demand response, and participation in energy markets and incentive programs to cut costs and generate revenue.
- **Customizable system with scalable modules**, configured from 150 kWh up to 500 kWh. The L2000 is a complete energy storage system, including batteries, controls, HVAC, fire detection and suppression, installed outdoors and connected to your electrical service. Batteries are snapped into racks (no electrician needed) with our controls and embedded software, all housed in 20-foot, 40-foot or 45-foot shipping containers.
- **Local and remote real-time monitoring, diagnostics and control.** The system overview displays energy, power, health, alarm and key performance indicator trends, updated in real time. Detailed views and reports provide additional data.
- **Lowest lifecycle cost** through adaptive algorithms and premium battery composition.

THE L2000 AT A GLANCE

- Outdoor solution for large buildings, campuses, enterprises and utility applications
- Multiple energy applications for utilities and large enterprises
- Remote and local real-time monitoring and control
- Metasys compatible
- Complete solution with batteries, controls, HVAC and fire detection and suppression systems
- Life up to 20 years, based on application

WHY JOHNSON CONTROLS?

We build solutions that meet today's needs and shape better tomorrows. Distributed Energy Storage from Johnson Controls brings together the company's expertise in batteries and buildings to create smarter buildings with more efficient energy use. As a global diversified technology and multi-industrial leader, Johnson Controls is capable of delivering complex energy storage solutions and has a track record of successfully implementing projects across the globe.



L2000 Product Specifications

Characteristic	BU-150E / P	BU-250E / P	BU-500E / P	BU-1000E / P	BU-1500E / P	BU-3000E / P	BU-5000E / P
Nameplate Storage Capacity (kWh)	168 / 184.6	252 / 276.9	504 / 553.8	1008 / 1015.3	1660 / 1569.1	3154 / 3024	5146 / 5040
Usable Storage Capacity (kWh)	151.2 / 166.14	226.8 / 249.21	453.64 / 98.42	907.2 / 913.77	1494 / 1412.19	2838.6 / 2721.6	4631.4 / 4536
Maximum Charging Power (kW)	168 / 369.2	252 / 553.8	504 / 1107.6	1008 / 2030.6	1660 / 3138.2	3154 / 6048	5146 / 10080
Maximum Discharging Power (kW)	168 / 369.2	252 / 553.8	504 / 1107.6	1008 / 2030.6	1660 / 3138.2	3154 / 6048	5146 / 10080
Output Power (kW)	Dependent upon PCS selected; see PCS specifications in L2000 Product Bulletin						
DC Voltage Range (Vdc)	588 – 803 / 588 – 823	588 – 803 / 588 – 823	588 – 803 / 588 – 823	588 – 803 / 588 – 823	714 – 1000 / 588 – 823	714 – 1000	714 – 1000
AC Output Voltage (Vac)	Dependent upon PCS selected; see PCS specifications in L2000 Product Bulletin						
Aux Power Input (Vac)	480/240 Vac, 3P, 60Hz, 10 kVA (max)	480/240 Vac, 3P, 60Hz, 12 kVA (max)	480/240 Vac, 3P, 60Hz, 15 kVA (max)	480/240 Vac, 3P, 60Hz, 30 kVA (max)	480/240 Vac, 3P, 60Hz, 30 kVA (max)	480/240 Vac, 3P, 60Hz, 40 kVA (max)	480/240 Vac, 3P, 60Hz, 40 kVA (max)
Utility Interface (optional)	DNP3						
Building Interface (optional)	Johnson Controls <i>Metasys</i> ® system, ASHRAE BACnet®						
System Monitoring	Local and Remote						
Fire Detection	Tyco FAST2000™/2						
Fire Suppression	Novec™ 1230 Aerosol						
Operating Temperature	0°C to +40°C (System derates if temperature is below +18°C or above +28°C) +32°F to +104°F (System derates if temperature is below +64°F or above +82°F)						
Operating Humidity	5% – 85% relative humidity, non-condensing						
Enclosure (No Augmentation)	E-10	E-10	E-20	E-20	E-20	E-40	E-40
Enclosure (With Augmentation)	E-10	E-10	E-20	E-20	E-40	E-40	E-45
Approximate Weight	1360 kg 3000 lbs	1720 kg 3800 lbs	3220 kg 7100 lbs	5533 kg 12200 lbs	6667 kg 14700 lbs	10704 kg 23600 lbs	16057 / 16400 kg 35400 / 36300 lbs

Storage System Enclosure Dimensions

Characteristic	E-10	E-20	E-40	E-45
External Length	2.99 m 10 ft	6.058 m 20 ft	12.129 m 40 ft	13.716 m 45 ft
External Width	2.438 m 8 ft	2.438 m 8 ft	2.438 m 8 ft	2.438 m 8 ft
External Height	2.591 m 8.5 ft	2.591 m 8.5 ft	2.896 m 9.5 ft	2.896 m 9.5 ft
Empty Weight	1100 kg 2425 lb	2000 kg 4409 lb	3900 kg 8598 lb	4800 kg 10582 lb