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, intelligent controls, and decades of data center and chiller plant experience 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 benefit.

- **Seamless integration.** The L2000 integrates with *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 benefit.** Patented controls use machine learning to deploy the battery for maximum value in a full range of applications, including peak shaving, load shifting, frequency regulation, demand response, and participation in energy markets and incentive programs.
- **Customizable, scalable system.** Modules can be 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 10-foot, 20-foot, 40-foot or 48-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.** Adaptive algorithms ensure value, and premium battery composition extends system life.

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

WHY JOHNSON CONTROLS?

Only our distributed energy storage solution offers expertise in both buildings and intelligent controls. Our holistic approach brings you maximum value, with proven, flexible solutions. And it's all backed by the service, reliability and stability of a global market leader. Learn more at **johnsoncontrols.com/des**.

Johnson Controls

L2000 Product Specifications

Characteristic	BU-150E / P	BU-250E / P	BU-500E / P	BU-1000E / P	BU-1500E / P	BU-3000E / P	BU-5000E
Nameplate Storage Capacity (kWh)	156 / 184.6	313 / 276.9	506 / 560	1013 / 1009	1519 / 1569	3039 / 3024	5065
Usable Storage Capacity (kWh)	149.8 / 177.2	300.5 / 265.8	485.8 / 537.6	972.5 / 968.6	1458.2 / 1506.2	2917.4 / 2903	4862.4
Maximum Charging Power (kW)	62.4 / 369.2	125.2 / 553.8	202.4 / 1120	405.2 / 2018	607.6 / 3138	1215.6 / 6048	2026
Maximum Discharging Power (kW)	62.4 / 369.2	125.2 / 553.8	202.4 / 1120	405.2 / 2018	607.6 / 3138	1215.6 / 6048	2026
Output Power (kW)	Dependent upon PCS selected; see PCS specifications in L2000 Product Bulletin						
DC Voltage Range (Vdc)	588 – 823	588 – 823	714 – 1000 / 712 – 1000	714 – 1000 / 712 – 1000	714 – 1000 / 712 – 1000	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, 50 kVA (max) BU-1500P: 30 kVA (max)	480/240 Vac, 3P, 60Hz, 50 kVA (max)	480/240 Vac, 3P, 60Hz, 75 kVA (max)
Utility Interface (optional)	DNP3						
Building Interface (optional)	Johnson Controls *Metasys*® 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 +19°C or above +27°C) +32°F to +104°F (System derates if temperature is below +66°F or above +81°F)						
Operating Humidity	5% – 85% relative humidity, non-condensing						
Enclosure (No Augmentation)	E-10	E-10	E-10 / E-20	E-20	E-20 / E-40	E-40	E-48
Enclosure (With Augmentation)	E-10	E-10	E-10 / E-20	E-30 / E-40	E-40	E-48 / E-40	E-48
Approximate Weight	3000 kg (6600 lbs) / 1900 kg (4200 lbs)	3800 kg (8400 lbs) / 2700 kg (6000 lbs)	7100 kg (15600 lbs) / 5100 kg (11000 lbs)	12200 kg (26900 lbs) / 10200 kg (22500 lbs)	14700 kg (32400 lbs) / 10800 kg (23800 lbs)	23600 kg (52000 lbs) / 19740 kg (43500 lbs)	36000 kg (79300 lbs)

Storage System Enclosure Dimensions

Characteristic	E-10	E-20	E-40	E-48
External Length	2.99 m (10 ft)	6.058 m (20 ft)	12.129 m (40 ft)	14.63 m (48 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 lbs)	2000 kg (4409 lbs)	3900 kg (8598 lbs)	4800 kg (10582 lbs)