

# 50 KW DISTRIBUTED ENERGY STORAGE: L2000 SU50



Capture the greatest possible value from energy storage with the SU50 Distributed Energy Storage system from Johnson Controls, through applications such as peak shaving or use with a solar photovoltaic (PV) system. Our patented controls technology uses machine learning to learn and predict demand, then deploys the battery for the greatest economic benefit.

- **Everything in one box.** A single package contains the 50 kW inverter, batteries, Emergency Power Off (EPO) switch, application controls and meter.
- **Quick installation.** Place the skid-mounted system on a concrete pad, stone, or the ground, for quick installation by an electrician. Connection requires only a single grid point and an internet connection.
- **Easy commissioning.** Once the SU50 is connected, the system learns the facility operation and starts the application, whether it's demand management and peak shaving or integration with a solar PV system.
- **Seamless compatibility.** Use standard protocols for easy integration with your building management system, making it easy to view energy storage alongside other building systems.
- **Remote monitoring and control.** Stay on top of performance and savings with local and remote real-time monitoring, diagnostics and control – including easy updates for tariff and energy rates.
- **Minimized energy cost.** Embedded machine learning via model predictive control predicts facility load, then optimizes the application for maximum economic benefit. The SU50 system meets California Self Generation Incentive Program (SGIP) and Hawaii Rule 14 requirements.
- **Flexible applications.** Use for peak shaving, solar + storage, and other applications – and as a backup power source to continue operations during a grid outage.

## THE SU50 AT A GLANCE

- Outdoor solution for commercial customers
- Machine learning for optimal economic benefits
- Continuous 50 kW output for 1, 2, 3, or 4 hours
- Remote and local real-time monitoring and control
- *Metasys*® compatible

## 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](https://johnsoncontrols.com/des).

# SU50 Product Specifications

Characteristic	SU50/50P	SU50/100E	SU50/150E	SU50/200E
Continuous Power (kVA / kW)	50			
Frequency (Hz)	57 - 63			
Nominal Utility Grid Voltage (Vac)	480 ± 40, 3P, 4 wire WYE interconnection			
Power Factor Range (±)	0.5 lead or lag			
THD @ Full Power (%)	< 5			
Grid Forming	Optional for backup power			
Inverter Regulatory Listings	UL-1741 SA / UL-1547 / CA 12 / HI 14			
Nameplate Storage Capacity (kWh)	46	104	156	208
Usable Storage Capacity (kWh)	39	84	140	193
Maximum Charging Power (kW)	50.0			
Maximum Discharging Power (kW)	50.0			
Battery Regulatory Listings	UL 1642, UL 1741, UL 1973, UN 38.3, IEEE 1547, NFPA 70E, NEC 2017, CA 21, HI 14, FCC Part 15B, IBC/CBC			
Aux Power Input (Vac)	Consumed from Grid Connection			
Application Support	Model Predictive Control (MPC) Peak Shaving, Solar + Storage, Backup Power			
Building Interface	Johnson Controls <i>Metasys</i> ®, ASHRAE BACnet®			
System Monitoring	Local and Remote (via internet)			
Communications Interface	Hardwired TCP / IP			
Protocols Supported	Modbus IP / BACnet IP / Restful Web Services			
Controls Update Interval	4 seconds			
Power Metering	Real Power (kW), Energy (kWh), Power Factor (%)			
Voltage Metering	Voltage (Vac), Current (Iac)			
Meter Accuracy	0.2% revenue grade			
Update Interval	4 seconds			
Meter Regulatory Approvals	ANSI C.22			
Battery Monitoring	Rack Voltage (Vdc), Min/Max Cell Voltage (Vdc), Cell Temperature (°C), State of Charge (%)			
Nominal RT System Efficiency (%)	86	85	85	85
Max Consumption (VA)	400			
Standby Consumption (W)	125 / 550			
Warranty	System warranty, standard inverter warranty, and standard battery cell degradation warranty all included			
Mounting	Pallet Mounting			
Enclosure	Outdoor Weather Resistant - NEMA 3R			
Operating Temperature	0 - 40°C (System derates if temperature is below 18°C or above 28°C)			
Operating Humidity	5% - 85% Relative Humidity, Non-Condensing			
Dimensions (W x H x D) (in)	92 x 69 x 50			
Weight (lbs)	3100	3500	4100	4700

## SU50 Ordering Information

Nameplate Battery Capacity (SU50-XXXX)	
SU50/50	46 kWh
SU50/100	104 kWh
SU50/150	156 kWh
SU50/200	208 kWh
Remote Monitoring Unit (RMU-XXX)	
RMU-CELL	4G LTE remote monitoring interface
RMU-WIFI	Wireless internet monitoring interface
RMU-ETH	1G Ethernet interface