



POWERING **PROGRESS,**
ENERGIZING **LIVES**



**LITHIUM
SOLUTIONS**



LITHIUM SOLUTIONS

- 01. Pb Replacement**
- 02. Wall Mount**
- 03. Ground Mount**
- 04. Stackable**
- 05. Rack Mount**
- 06. BESS Containerized**

PB REPLACEMENT

Pb Replacement

01

Lithium-Ion: Lead Acid (Pb) Replacement Battery

Lithium Iron Phosphate (LiFePO_4) battery system specifically designed as a replacement for conventional lead-acid batteries in residential & household applications. It offers higher energy efficiency, longer service life, and reduced maintenance requirements compared to traditional battery technologies. Engineered to meet modern household power backup needs, the system delivers reliable performance, excellent thermal stability, and a compact, space-saving design for easy installation.



Key Benefits

Rapid Charging

Charge up to 4× faster than conventional lead-acid batteries. Less downtime, higher efficiency, and reliable performance for solar and backup systems.

Easy Replacement

Designed to match standard lead-acid form factors. Simply replace your old battery with CLN Lithium for a smooth, hassle-free upgrade.

Maintenance-Free

No water top-ups. No corrosion. Just install and operate with complete peace of mind and zero maintenance effort.

Low Self-Discharge

Retains charge for longer durations, even during extended storage periods. Always ready when you need it.

Product Features

-  Inbuilt battery indicator
-  Higher Safety Performance and Longer Cycle Life
-  Multiple Protection with built-in smart BMS
-  Bluetooth Connectivity with Remote Monitoring
-  Low battery alarm
-  Easy installation

Applications



Surveillance cameras or security systems.



Home Backup Power



Router and Internet Backup



Small Office

Technical Specifications

Model	12.8V 100Ah	25.6V 100Ah
Nominal Voltage (V)	12.8	25.6
Capacity (Ah)	100	
Cell Type and Chemistry	Prismatic, LFP	
BMS Type	Smart	
Maximum cut-off voltage (V)	14.4 (± 0.4)	28.8 (± 0.8)
Minimum cut-off voltage (V)	10.0 (± 0.4)	20.0 (± 0.8)
Charging Voltage (V)	14	28
Recommended Charging Current (A)	30	
Maximum Charging Current (A)	50	
Recommended Discharge Current (A)	50	
Maximum Discharging Current (A)	100	
Cycle Life (95% DOD, 25°C, 0.5C/0.5C)	3000	
Cell under voltage protection	Yes	
Cell over voltage Protection	Yes	
Over current protection	Yes	
Short circuit protection	Yes	
Temperature protection	Yes	
Working Temperature (°C)	0 - 60	
Storage Temperature (°C)	0 - 45	
Weight (kg)	17(approx.)	25(approx.)
Size (LxWxH)mm	330x255x180	540x255x180
Communication	As Per Requirement	
Connector	Through Wall Connector	
IP Protection	IP 20	

WALL MOUNT

Wall Mount

02

Lithium-Ion: Wall Mount Battery

This is a wall-mounted LiFePO₄ battery designed for residential energy storage and backup power applications. Equipped with an intelligent BMS, it ensures safe, reliable, and efficient operation. Compatible with both solar PV and grid systems, it stores energy for use during outages and peak demand periods. Its compact, space-saving design, long cycle life, and scalable parallel connection capability make it an ideal solution for modern homes seeking energy independence and uninterrupted power.



Product Features

-  Inbuilt LCD Screen
-  Higher Safety Performance and Longer Cycle Life
-  Multiple Protection with built-in smart BMS
-  Bluetooth Connectivity with Remote Monitoring
-  Low battery alarm
-  Easy installation
-  Up to 16 Units in Parallel

Applications

-  Surveillance cameras or security systems.
-  Home Backup Power
-  Router and Internet Backup
-  Small Office

Technical Specifications

Model	25.6V200Ah	51.2V100Ah
Nominal Energy (kWh)	5.12	5.12
Nominal Voltage (V)	25.6	51.2
Capacity (Ah)	200	100
Cell Type and Chemistry	Prismatic, LFP	
BMS Type	Smart	
Maximum cut-off voltage (V)	28.8 (±0.8)	57.6 (±1.5)
Minimum cut-off voltage (V)	20.0 (±0.8)	44.8 (±1.5)
Charging Voltage (V)	28	56
Recommended Charging Current (A)	30	
Maximum Charging Current (A)	50	
Recommended Discharge Current (A)	50	
Maximum Discharging Current (A)	100	
Cycle Life (95% DOD, 25°C, 0.5C/0.5C)	6000	
Protection	BMS, MCB	
Cell under voltage protection	Yes	
Cell over voltage Protection	Yes	
Over current protection	Yes	
Short circuit protection	Yes	
Temperature protection	Yes	
Working Temperature (°C)	0 – 60	
Storage Temperature (°C)	0 – 45	
Weight (kg)	55(approx.)	57(approx.)
Size (LxWxH)mm	653x400x183	653x400x183
Communication	RS485	
Connector	Through Wall Connector	
IP Protection	IP 20	
Scalability	Up to 16 units in parallel	
Display	LCD Display	
Warranty	5 Years	
Installation Type	Wall Mount	

GROUND MOUNT

Ground Mount

03

Lithium-Ion: Ground Mount Battery

Engineered for high-performance energy storage, the CLN Ground-Mounted Lithium Battery features an integrated wheeled design for easy mobility and convenient installation. Reliable, efficient, and built for dynamic power requirements.



Product Features

-  Inbuilt LCD Screen
-  Higher Safety Performance and Longer Cycle Life
-  Multiple Protection with built-in smart BMS
-  Bluetooth Connectivity with Remote Monitoring
-  Heavy-duty metal casing offers enhanced durability
-  Low battery alarm
-  Easy installation and Up to 16 Units in Parallel

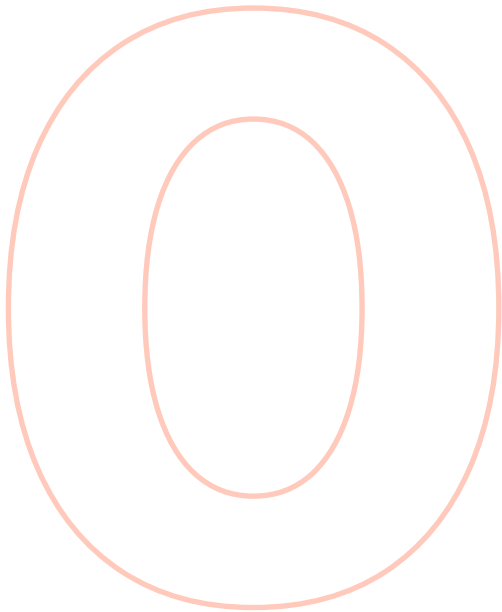
Applications

-  Surveillance cameras or security systems.
-  Home Backup Power
-  Router and Internet Backup
-  Small Office

Technical Specifications

Model	25.6V230Ah	25.6V314Ah	51.2V230Ah	51.2V 314Ah
Nominal Energy (kWh)	5.8	8	11.7	16
Nominal Voltage (V)	25.6		51.2	
Capacity (Ah)	230	314	230	314
Cell Type and Chemistry	Prismatic, LFP			
BMS Type	Smart			
Maximum cut-off voltage (V)	28.8 (± 0.8)		57.6 (± 1.5)	
Minimum cut-off voltage (V)	20.0 (± 0.8)		44.8 (± 1.5)	
Charging Voltage (V)	28		56	
Recommended Charging Current (A)	70	90	70	90
Maximum Charging Current (A)	100	100	100	100
Recommended Discharge Current (A)	100	100	100	100
Maximum Discharging Current (A)	150	150	150	150
Cycle Life (95% DOD, 25°C, 0.5C/0.5C)	6000			
Protection	BMS/MCB			
Cell under voltage protection	Yes			
Cell over voltage Protection	Yes			
Over current protection	Yes			
Short circuit protection	Yes			
Temperature protection	Yes			
Working Temperature (°C)	0 – 60			
Storage Temperature (°C)	0 – 45			
Weight (kg)	53	60	91	121
Size (LxWxH)mm	540x375x261	400x475x269	683x450x258	895x450x235
Communication	RS485			
Connector	Through Wall Connector			
IP Protection	IP20			
Scalability	Up to 16 units in parallel			
Display	LCD Display			
Warranty	5 Years			
Installation Type	Ground Mount			

STACKABLE BATTERY



Stackable Battery

Lithium-Ion: Stackable Battery

Power your home with the CLN Energy Stackable Lithium-Ion battery — a smart and scalable solution designed for modern residential energy needs. With modular capacity expansion of up to 20.48 kWh, the system adapts effortlessly to growing power requirements. Featuring multiple operating modes and remote monitoring through a dedicated mobile app, it delivers enhanced control and convenience. Its compact design, advanced safety features, and maintenance-free operation ensure reliable and efficient energy storage for everyday use.



Product Features

- Modular and Scalable : Stack up to 4 modules – from 5.12 kWh to 20.48 kWh total capacity
- Inbuilt LCD Screen
- Higher Safety Performance and Longer Cycle Life
- Multiple Protection with built-in smart BMS
- Bluetooth Connectivity with Remote Monitoring
- Low battery alarm
- Easy installation

Technical Specifications

Model	48V 100Ah	48V 200Ah	48V 300Ah	48V 400Ah
Battery Capacity(kWh)	4.8	9.6	14.4	19.2
Nominal Voltage (V)	48V			
Capacity (Ah)	100	200	300	400
Cell Type and Chemistry	Prismatic, LFP			
BMS Type	Smart			
Maximum cut-off voltage (V)	54 (±1.5)			
Minimum cut-off voltage (V)	42 (±1.5)			
Charging Voltage (V)	52.5			
Recommended Charging Current (A)	30	60	90	120
Maximum Charging Current (A)	50	100	150	200
Recommended Discharge Current (A)	50	100	150	200
Maximum Discharging Current (A)	100	200	300	400
Cycle Life	6000 (95% DOD, 25°C, 0.5C/0.5C)			
Cell under voltage protection	Yes			
Cell over voltage Protection	Yes			
Over current protection	Yes			
Short circuit protection	Yes			
Temperature protection	Yes			
Working Temperature (°C)	0 - 60			
Storage Temperature (°C)	0 - 45			
Communication Interface/Protocol	RS485			
Connector	Through Wall Connector			
Standards (Compliance)	UN38.3, IEC 62619, IEC 61000, UL 1973			
Protection	Over voltage, under-voltage			
	Over-temperature (charge and discharge)			
	Under-temperature (charge and discharge)			
	Over current (charge and discharge)			
	External short circuit detection			
	IP 20			

RACK MOUNT

Rack Mount

05

Lithium-Ion: Rack Mount ESS

Empower large-scale operations with the CLN Energy Rack Mounted High Voltage Energy Storage System - a powerful, scalable solution built for commercial and industrial performance. Designed in IP20 and IP55 variants for flexible indoor and semi-outdoor installations, this vertically compact system delivers high-capacity storage, dependable backup, and seamless integration with advanced energy management systems. Featuring an intelligent BMS with automatic protection, cell balancing, and master-slave control, it ensures maximum safety, stability, and long-term reliability for mission-critical power needs.



Product Features

-  **Scalable & Modular Design**
Up to 1000V, 50-500 kWh system with modular and scalable
-  **Advanced BMS**
Three-level architecture (BMU+RBMS+GBMS) for enhanced safety and efficiency
-  **Long Lifespan**
10 years life with 6000 cycle life, LFP chemistry for highest safety standards.
-  **Customizable**
Flexible configurations to suit different rack voltage ranges and sizes.
-  **Thermal Management**
Advanced thermal analysis for enhanced battery safety and performance
-  **Smart BMS**
Intelligent control and SOC estimation for optimal performance
-  **Wide Scalability**
Modular daisy-chain architecture with configurable master and slave units.
-  Maintenance-free, non-toxic, and cobalt-free LFP chemistry
-  Compatible with major smart hybrid inverters

100Ah HV Series

Battery Specification	240V 100Ah	384V 100Ah	480V 100Ah	512V 100Ah	720V 100Ah
Battery Configuration	240V 100Ah	384V 100Ah	480V 100Ah	512V 100Ah	720V 100Ah
Battery Capacity (kWh)	24	38	48	51.2	72
Battery Type	LFP	LFP	LFP	LFP	LFP
Chemistry	LiFePO4	LiFePO4	LiFePO4	LiFePO4	LiFePO4
Cell Package Type	Prismatic	Prismatic	Prismatic	Prismatic	Prismatic
Capacity (Ah)	100	100	100	100	100
DoD	>90%	>90%	>90%	>90%	>90%
Nominal Voltage (V)	240	384	480	512	720
Voltage Range (V)	210-270	336-432	420-540	448-576	630-810
Rated Charging Current (Standard)	0.3C				
Peak Charging Current	0.5C				
Rated Discharge Current	1C				
Communication Interface/Protocol	RS485/CAN				
Charging Operating Ambient Temperature (°C)	0 to 55				
Discharging Operating Ambient Temperature (°C)	0 to 60				
Storage Temperature For 6 Months (°C)	0 to 35 (50% SOC)				
Cooling	Natural / Forced / HVA				
Lifecycle at Ambient 25 (°C)	3000				
IP Protection	IP20/IP54				
Electrical Protection	Contactor / Breaker / MBMS				
Protection	Over voltage, under-voltage				
	Over-temperature (charge and discharge)				
	Under-temperature (charge and discharge)				
	Over current (charge and discharge)				
	External short circuit detection				
	Over current (charge and discharge)				
	External short circuit detection				

314Ah HV Series

Battery Specification	240V 314Ah	384V 314Ah	480V 314Ah	720V 314Ah
Battery Configuration	240V 314Ah	384V 314Ah	480V 314Ah	720V 314Ah
Battery Capacity (kWh)	75.36	120.57	150.72	226.08
Battery Type	LFP	LFP	LFP	LFP
Chemistry	LiFePO4	LiFePO4	LiFePO4	LiFePO4
Cell Package Type	Prismatic	Prismatic	Prismatic	Prismatic
Capacity (Ah)	314	314	314	314
DoD	>90%	>90%	>90%	>90%
Nominal Voltage (V)	240	384	480	720
Voltage Range (V)	210-270	336-432	420-540	630-810
Rated Charging Current (Standard)	0.3C	0.3C	0.3C	0.3C
Peak Charging Current	0.5C	0.5C	0.5C	0.5C
Rated Discharge Current	1C	1C	1C	1C
Communication Interface /Protocol	RS485/CAN	RS485/CAN	RS485/CAN	RS485/CAN
Charging Operating Ambient Temperature (°C)	0 to 55	0 to 55	0 to 55	0 to 55
Discharging Operating Ambient Temperature (°C)	0 to 60	0 to 60	0 to 60	0 to 60
Storage Temperature For 6 Months (°C)	0 to 35 (50% SOC)			
Cooling	Natural / Forced / HVA			
Lifecycle @ Ambient 25 (°C)	6000			
IP Protection	IP20/IP54			
Electrical Protection	Contactor / Breaker / MBMS			
Protection	Over voltage, under-voltage			
	Over-temperature (charge and discharge)			
	Under-temperature (charge and discharge)			
	Over current (charge and discharge)			
	External short circuit detection			
	Over current (charge and discharge)			
	External short circuit detection			

BESS CONTAINERIZED

BESS Containerized

06

5.015 MWh Battery Energy Storage System (BESS)

CLN Energy's 5.015 MWh Battery Energy Storage System (BESS) is engineered to deliver reliable, scalable, and high-performance energy storage for utility-scale, commercial, and micro grid applications. Built with advanced Lithium-Ion technology, the system stores energy efficiently and makes it available whenever required, enhancing energy reliability and operational flexibility.

Designed for seamless integration with renewable energy and distributed power systems, the BESS helps maximize energy utilization, improve system resilience, and support sustainable energy infrastructure. Its modular architecture, advanced safety features, and long service life ensure dependable performance in even the most demanding environments.



Product Features

- ⚙️ High energy density and long cycle life
- 🔌 Supports renewable energy integration
- ⚙️ Modular and scalable design
- 🛡️ Enhanced safety and battery protection
- 🔌 Reliable operation in demanding environments
- ✂️ Low maintenance and reduced operating costs

Applications

-  Grid stabilization
-  Mini/Micro-grid Application
-  Peak sharing & load balancing

Technical Specifications

Parameter		BESS-5015-0.5C
Battery module	Cell Capacity (Ah)	314
	Battery Pack	1P52S
	Module Voltage (V)	166.4
	Module Power (kWh)	52.2496
	IP Class	IP67
Battery Rack	Nos. of Modules (pcs)	8
	Cluster Nominal Voltage (V)	1331.2
	Voltage Range (V)	1164.8-1476.8
	Single Battery Rack Power (kWh)	417.997
Battery Container	Nos. of Battery Clusters (pcs)	12
	Battery system energy (kWh)	5015
	Battery Cabin Dimension (WxDxH) mm	6058x2438x2896
	Weight (T)	≤43
	Cooling Method	Liquid cooling
	IP Class	IP54
Compliant with Standards	Battery	IEC62619, UL1973, UL9540A. UN38.3

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