

Home ESS LFP battery-Low Voltage

Overview

DLG provides safe, well-designed and high-performance standard LFP battery pack for customers. The battery pack is compact, easy to install, free of maintenance and is used as the building block of energy storage system by assembling in parallel. It is widely applied in home applications, small C&I ESS as well as Telecom stations.



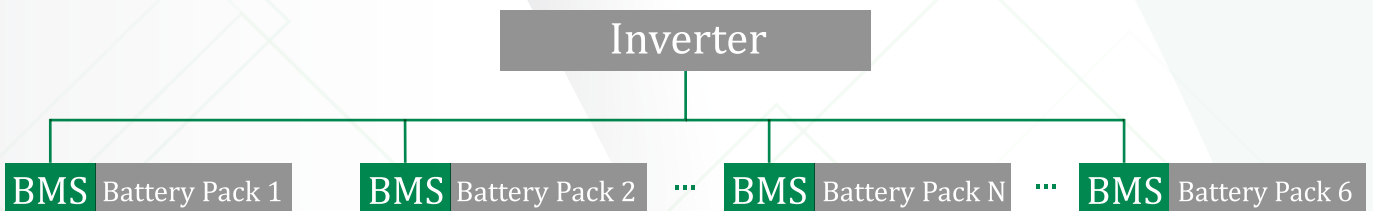
Features

- Scalable to 30kWh
- Long Cycle Life
- Easy Installation, Maintenance free, Easy Replacement
- Light and Compact
- Integrated battery management system
- Able to communicate with mainstream ESS inverters

BMS

The BMS is widely applied in low voltage home ESS in China, Europe and Australia etc. The high performance of BMS is guaranteed by adopting Automotive-level chips and self-developed sophisticated BMS software.

At the same time, it's able to communicate with mainstream ESS inverters.



BMS Function

- Measuring and Collecting of battery data such as Voltage, Current and Temperatures
- SoC and SoH calculation
- Protection and Warning
- Communication
- Balancing
- The BMS will automatically even-out any difference in the State of Charge between cells
- Key Data recording and storage
- Parallel connection

Typical Application



Self-Consumption:

store excess energy generated by solar panels and use it whenever needed



Back-up Power Supply:

provide emergency power supply during grid blackouts.



Electricity Bills Reduction:

charge the battery during off-peak period and discharge the battery during peak period



Smart Energy Management:

Measure, Monitor and Manage the system in real-time. Maximize the system life span by intelligent algorithms

ESS48-2U-L



Technical Specifications

Battery Model	ESS48-2U-L
Chemistry	LFP
Nominal Voltage	48V
Voltage Range	45V-54V
Nominal Capacity	50AH
Nominal Energy	2.4kWh
Unit Dimension	440mm* 410mm * 89mm
Unit Weight	25kg
Standard Charge Current	25A
Maximum Charge Current	50A
Standard Discharge	25A
Maximum Discharge Rate	50A
Peak Current	100A
Round-Trip Efficiency	≥97%
Communication Protocol	RS485, CAN
Cycle Life	≥4000cycles@0.5C/0.5C@90%DOD, ret@80%, 25°C
Calendar Life	≥10years
Operating Temperature	Charge: 0°C~ 45°C, Discharge: -20°C~ 60°C
Certificates	UN38.3/IEC62619
Storage Temperature	Within 1month ----- -20-45°C 1-3months----- -20-35°C 3-12months----- -20-25°C

ESS48-3U-L



Technical Specifications

Battery Model	ESS48-3U-L
Cell	CATL3.2V100Ah
Chemistry	LFP
Nominal Voltage	51.2V
Voltage Range	45V-57.5V
Nominal Capacity	100AH
Nominal Energy	5.12kWh
Unit Dimension	450mm* 500mm * 134mm (3U)
Unit Weight	40kg
Standard Charge Current	50A
Maximum Charge Current	50A
Standard Discharge	50A
Maximum Discharge Rate	100A
Peak Current	100A
Round-Trip Efficiency	≥95%
Communication Protocol	RS485, CAN, Dry Contact
Cycle Life	≥6000cycles@0.5C/0.5C@90%DOD, ret@80%, 25°C
Calendar Life	≥10years
Operating Temperature	Charge: 0°C~ 55°C, Discharge: -20°C~ 55°C
Certificates	IEC62619 / UN38.3
Storage Temperature	Within 1month ----- -20~50°C 1-3months----- 0~35°C 3-12months----- 20~25°C

ESS48-4U-L



Technical Specifications

Battery Model	ESS48-4U-L
Cell	CATL3.2V100Ah
Chemistry	LFP
Nominal Voltage	51.2V
Voltage Range	45V-57.5V
Nominal Capacity	100AH
Nominal Energy	5.12kWh
Unit Dimension	460mm* 500mm * 200mm(4U)
Unit Weight	50kg
Standard Charge Current	50A
Maximum Charge Current	50A
Standard Discharge	50A
Maximum Discharge Rate	100A
Peak Current	100A
Round-Trip Efficiency	≥95%
Communication Protocol	RS485, CAN, Dry Contact
Cycle Life	≥6000cycles@0.5C/0.5C@100%DOD, ret@80%, 25°C
Calendar Life	≥10years
Operating Temperature	Charge: 0°C~ 55°C, Discharge: -20°C~ 55°C
Certificates	IEC62619 / UN38.3
Storage Temperature	Within 1month ----- -20~50°C 1-3months----- 0~35°C 3-12months----- 20~25°C

ESS LFP battery - High Voltage

The DLG battery pack adopts safe lithium ion chemistry and is used as the building block of a larger energy storage system by assembling in series or parallel. It is optimized to guarantee longer cycle life and lighter weight than the lead acid battery. The modular design allows for flexible configurations to match almost any voltage and capacity requirements, at the same time, modules can be delivered faster with high uniformity. The battery pack is applied widely in low/high voltage home ESS, C&I ESS, Telecom stations etc.



Features

- Safe and Reliable
- Long Cycle Life
- Easy Installation, Maintenance free
- Scalable Design to allow for flexible configurations
- Integrated Battery Management System
- Connected in Series

Technical Specifications

Battery Model	ESS2U-48-H
Chemistry	LFP
Nominal Voltage	48V
Voltage Range	45V-54V
Nominal Capacity	50AH
Nominal Energy	2.4kWh
Unit Dimension	440mm* 410mm * 89mm
Unit Weight	25±0.5kg
Standard Charge	25A CC until 54V,CV until 500mA cut-off @23±2°C (0.5C)
Maximum Charge Current	50A
Standard Discharge	10.2A CC until 37.5V cut-off @23±2°C(0.2C)
Maximum Discharge Current	100A
Round-Trip Efficiency	≥96%
Communication Protocol	RS485, CAN
Cycle Life	≥4000cycles@0.5C/0.5C@100%DOD, ret@80%, 25°C
Calendar Life	≥10years
Operating Temperature	Charge: 0°C~ 45°C, Discharge: -20°C~ 60°C
Certificates	Cell: UN38.3/UL1642/IEC62619
Storage Temperature	Within 1month ----- -20-45°C 1-3months----- -20-35°C 3-12months----- -20-25°C

Battery Rack

DLG provides HV battery rack which consists of several battery packs (4-15) in series and one main control box. The HV battery rack is designed mainly for large houses and small scale commercial applications.



Technical Specifications for HV battery rack (Max. 720V50Ah)

Product Model	720V50Ah
Chemistry	LFP
Nominal Battery Rack Capacity	50Ah
Nominal Energy	36kWh
Nominal Voltage	720V
Voltage Range	675-810V
Capacity of Each Battery pack	51Ah
Maximum Charging Voltage	810V
Standard Charging Current	25A
Maximum Charging Current	50A
Standard Discharging Current	25A
Maximum Discharging Current	100A
Communication Protocol	RS485\CAN
Enclosure Protection Rating	IP20
Operating Temperature	0~50°C
Storage Temperature	-20~60°C
Other:	
1) Battery Pack Dimensions(W*D*H)	440mm* 410mm * 89mm
2) MCU Dimensions (W*D*H)	442mm*390mm*100mm