

POWERSYNC Lithium Iron Phosphate (LiFePO4) Energy Storage Systems (ESS) are designed for residential, commercial, or industrial scale projects where long lasting, efficient, and scalable energy solutions are required.

The POWERSYNC ESS's are modular and are available in two different voltage configurations both of which can be stacked in parallel to a maximum of 16 units.

25.6V-100Ah (2.56 kWh) ESS Modules

- System Energy Storage Capacity: 2.56 kWh to 40.96 kWh
- System Power: 1.28kW to 20.48 kW

51.2V-100Ah (5.12 kWh) ESS Modules

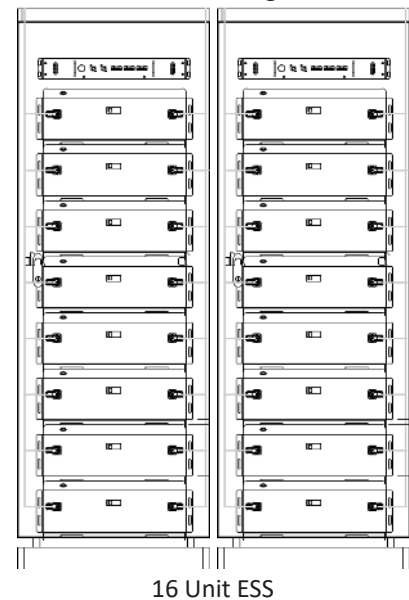
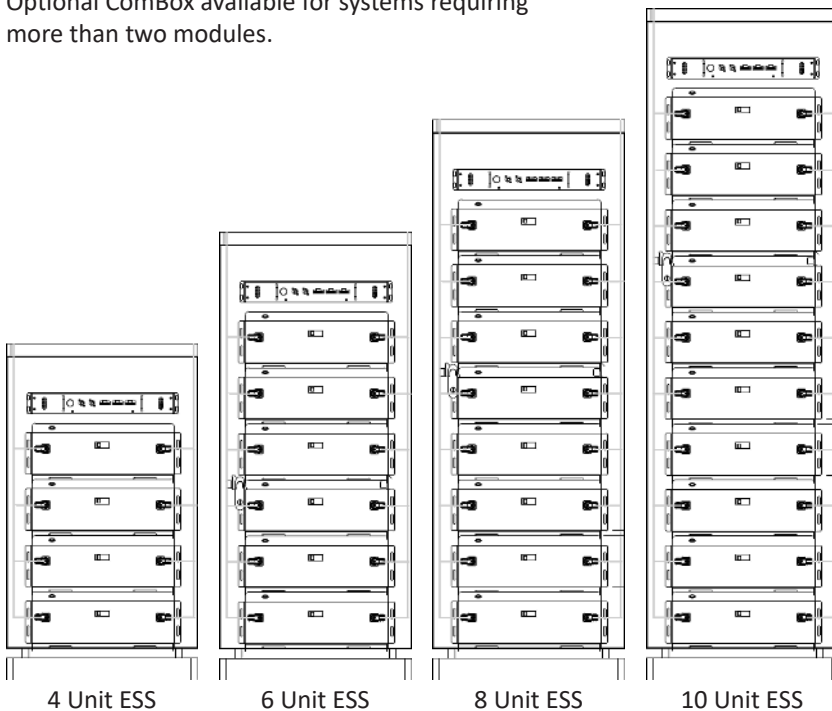
- System Energy Storage Capacity: 5.12kWh to 81.92 kWh
- System Power: 2.56kW to 40.96kW

POWERSYNC ESS's are customizable and can be delivered as a stand alone battery system or as a fully integrated system including inverters, charge controllers, and energy management software.

These ESS modules offer a significant longer cycle life and longer float/calendar life than lead acid batteries while helping to minimize replacement cost and reduce total cost of ownership.

The key benefits of LiFePO4 technology are its inherent strong thermal stability, enhanced safety and tolerance, and a high cycle life compared with other lithium chemistries.

Optional ComBox available for systems requiring more than two modules.



Also available as a one or two unit mount ESS.

25.6V-100Ah ESS	Total Energy	Available Power
Single Module	2.56 kWh	1.28 kW
4 Unit Cabinet	10.24 kWh	5.12 kW
6 Unit Cabinet	15.36 kWh	7.16 kW
8 Unit Cabinet	20.48 kWh	10.24 kW
10 Unit Cabinet	25.60 kWh	12.80 kW
12 Unit Cabinet	30.72 kWh	15.36 kW
16 Unit Cabinet	40.96 kWh	20.48 kW

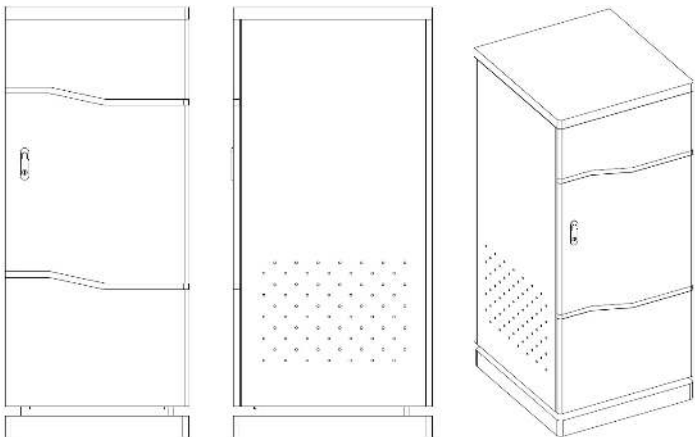
51.2V-100Ah ESS	Total Energy	Available Power
Single Module	5.12 kWh	2.56 kW
4 Unit Cabinet	20.48 kWh	10.24 kW
6 Unit Cabinet	30.72 kWh	15.36 kW
8 Unit Cabinet	40.96 kWh	20.48 kW
10 Unit Cabinet	51.20 kWh	25.60 kW
12 Unit Cabinet	61.44 kWh	30.72 kW
16 Unit Cabinet	81.92 kWh	40.96 kW

For systems requiring more than 10 modules, simply use two of the 6 or 8 unit cabinets.

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For projects requiring more than 81.92 kWh of energy storage, multiple 16 module 51.2V systems can be combined together.

Residential and Light Commercial Energy Storage Systems



25.6V LiFePO4
Energy Storage System

POWERSYNC manufactures Energy Storage Systems (ESS) which are designed for easy installation into residential, commercial, or utility scale projects.

POWERSYNC ESS Lithium Iron Phosphate (LiFePO₄) batteries are available as 25.6V-100Ah (2.56 kWh) modules and are designed to be connected in parallel up to 40.96 kWh of storage as three cabinets.

POWERSYNC ESS can be integrated with industry standard solar charge controllers, inverters, and energy management systems.

Financing solutions are available for any project size.

PERFORMANCE SPECIFICATIONS

Model Number	ESS-LFP25-2560
Nominal Voltage	25.6V
Nominal Capacity	100 Ah (C5,25C)
Energy	2.56 kWh
Internal Resistance	≤40mΩ
Cycle Life	>10,000 @50% DOD >6,000 @80% DOD >2,000 @100% DOD
Retained Capacity	80% at 10,000 Cycles
Self Discharge Rate	<1% per month
Efficiency of Charge	100% @0.5C
Efficiency of Discharge	96~99% @1C

CHARGE SPECIFICATIONS

Charge Voltage	29.2±0.2V
Charge Mode	CC/CV 29.2V / Float 27.6V
Charge Current	≤ 100A = 1C
Charge Cut-off Voltage	31.2V ± 0.2V

DISCHARGE SPECIFICATIONS

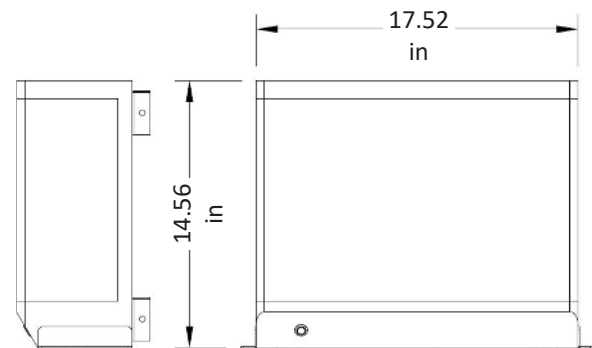
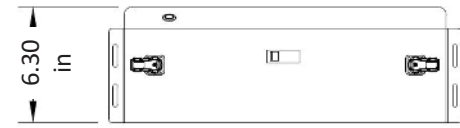
Max Continuous Current	≤ 100A = 1C = 1Hr
System Continuous Current	50A = 0.5C (Per Module)
Reserve Capacity @250W	> 10 Hours
Reserve Capacity @500W	> 5 Hours
Discharge Cut-off Voltage	22.4V

MECHANICAL SPECIFICATIONS

Case	Steel
Dimensions (W x D x H)	17.52 x 14.56 x 6.30 in. (445 x 370 x 160 mm)
Weight (lbs./kg.)	±57 lbs (26 kg)

ENVIRONMENTAL SPECIFICATIONS

Charge Temperature	0C to 45C (32F to 113F) @60±25% Relative Humidity
Discharge Temperature	-20C to 60C (-4F to 140F) @60±25% Relative Humidity
Storage Temperature	0C to 40C (32F to 104F) @60±25% Relative Humidity
Water Dust Resistance	IP20
Certifications	UL1641 UL1973 Pending UL9540 Pending



The **25.6V-100Ah (2.56 kWh) POWERSYNC** Lithium Iron Phosphate (LiFePO4) battery module is specifically designed for residential or light commercial applications needing up to 40.96 kWh of energy storage.

These ESS battery modules can be placed parallel for energy storage systems up to 40.96 kWh of total capacity. These ESS will integrate with any inverter or solar charge controller.

Features

Longer Cycle Life: Offers a significant longer cycle life and longer float/calendar life than lead acid batteries helping to minimize replacement cost and reduce total cost of ownership. LiFePO4 batteries are designed for 10,000 cycles at 50% DOD, and 6,000 cycles at 80% DOD, and 2,000 cycles at 100% DOD.

More Energy: Delivers significantly more energy than lead acid batteries, even at high discharge rate while maintaining high energy capacity.

Advanced BMS Protection: Under/Over voltage and current protection ensuring safe and efficient operation.

Safety: Advanced LiFePO4 cell design includes various safeguards including high temp thermal fuse, and flame retardant additive.

Increased Flexibility: This LiFePO4 battery module is designed to be connected in parallel for applications up to 40.96 kWh. The modules can be fitted into a cabinet or wall mount configuration.

Optional Master Communications Box: Optional communication box with 7" LCD display showing voltage, current, SOC, and temperature for each individual module using RS485 protocol.

FEATURES

- 15 Year Performance Warranty
- 10 Year Product Warranty
- Up to 100%
- Scalable to 40.96 kWh
- 10,000 Cycle Life* (80% Capacity)
- Safe LiFePO4 Chemistry
- Integrates with Standard Inverter / Chargers

Max Cabinet Size: 10 Modules (25.6 kWh)
Max System Size: 16 Modules (40.96 kWh)

SUMMARY

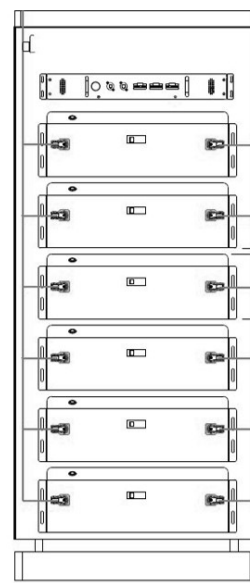
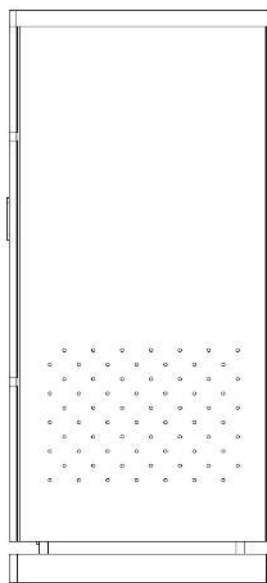
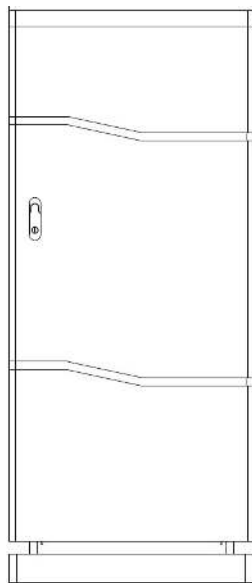
The POWERSYNC ESS has been designed for easy installation into residential, commercial, and industrial applications.

Our High-Performance LiFePO4 energy storage system is easy to install, safe, and consistently reliable. It provides the lowest lifetime energy cost for both new solar customers and retrofit customers.

The essSYNC 25.6V-100Ah (25.6 kWh) LiFePO4 battery modules can be connected in parallel for scalable systems up to 16 modules (40.96 kWh).

Multiple Systems can be operated in parallel allowing for flexible design for a wide range of project sizes.

The essSYNC modules offer the most advanced proprietary battery management system that allows for scalability without the use of additional battery management devices.

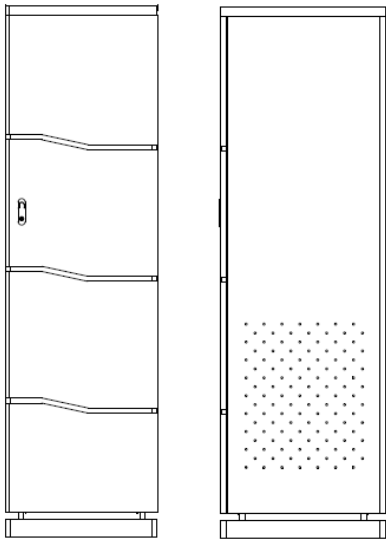


6 Module Cabinet Displayed

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*Cycle Life: All battery cycle life is impacted by numerous factors including temperature, depth of discharge (DOD), charge/discharge rates, charge/discharge current and the frequency of cycling.

Residential, Commercial, or Utility Scale Energy Storage Systems



51.2V LiFePO4
Energy Storage System

POWERSYNC manufactures Energy Storage Systems (ESS) which are designed for easy installation into residential, commercial, or utility scale projects.

POWERSYNC ESS Lithium Iron Phosphate (LiFePO4) batteries are available as 51.2V-100Ah (5.12 kWh) modules and are designed to be connected in parallel up to 81.92 kWh of storage.

POWERSYNC ESS can be integrated with industry standard solar charge controllers, inverters, and energy management systems.

Financing solutions are available for any project size.

PERFORMANCE SPECIFICATIONS

Model Number	ESS-LFP51-5120
Nominal Voltage	51.2V
Nominal Capacity	100 Ah (C5,25C)
Energy	5.12 kWh
Internal Resistance	≤40mΩ
Cycle Life	>10,000 @50% DOD >6,000 @80% DOD >2,000 @100% DOD
Retained Capacity	80% at 10,000 Cycles
Self Discharge Rate	<1% per month
Efficiency of Charge	100% @0.5C
Efficiency of Discharge	96~99% @1C

CHARGE SPECIFICATIONS

Charge Voltage	58.4±0.2V
Charge Mode	CC/CV 58.4V / Float 55.2V
Charge Current	≤ 100A = 1C
Charge Cut-off Voltage	62.4V ± 0.2V

DISCHARGE SPECIFICATIONS

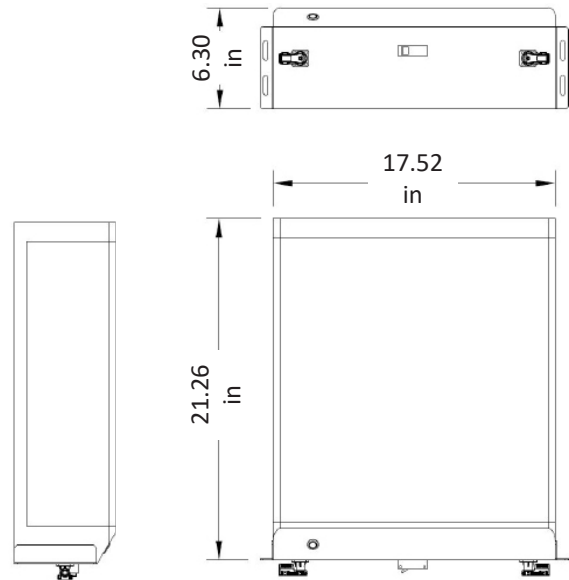
Max Continuous Current	≤ 100A = 1C = 1Hr
System Continuous Current	50A = 0.5C (Per Module)
Reserve Capacity @500W	> 10 Hours
Reserve Capacity @1000W	> 5 Hours
Discharge Cut-off Voltage	44.8V

MECHANICAL SPECIFICATIONS

Case	Steel
Dimensions (W x D x H)	17.52 x 21.26 x 6.30 in. (445 x 540 x 160 mm)
Weight (lbs./Kg.)	±99 lbs (45 kg)

ENVIRONMENTAL SPECIFICATIONS

Charge Temperature	0C to 45C (32F to 113F) @60±25% Relative Humidity
Discharge Temperature	-20C to 60C (-4F to 140F) @60±25% Relative Humidity
Storage Temperature	0C to 40C (32F to 104F) @60±25% Relative Humidity
Water Dust Resistance	IP20
Certifications	UL1641 UL1973 Pending UL9540 Pending



The **51.2V-100Ah (5.12 kWh) POWERSYNC** Lithium Iron Phosphate (LiFePO4) battery module is specifically designed for high capacity and high performance residential, commercial, and utility scale energy storage systems.

These ESS battery modules can be placed parallel for energy storage systems up to 81.92 kWh of total capacity. These ESS will integrate with any inverter or solar charge controller.

Features

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FEATURES

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- 10 Year Product Warranty
- Up to 100%
- Scalable to 81.92 kWh
- 10,000 Cycle Life* (80% Capacity)
- Safe LiFePO4 Chemistry
- Integrates with Standard Inverter / Chargers

Max Cabinet Size: 10 Modules (51.2 kWh)
Max System Size: 16 Modules (81.92 kWh)

SUMMARY

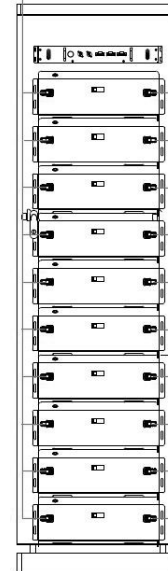
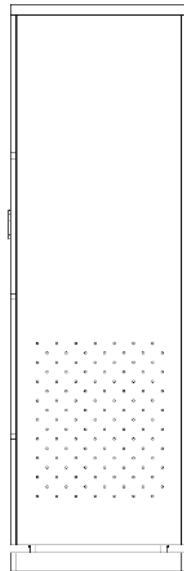
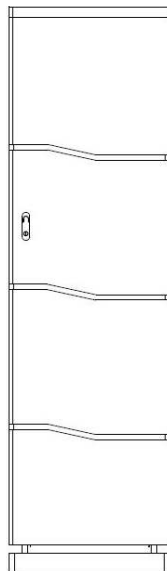
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10 Module Cabinet Displayed

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