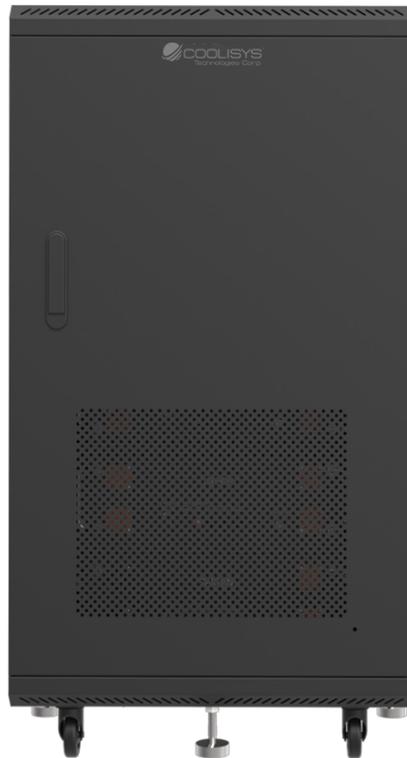


CB12LF

12kWh LFP LITHIUM BATTERY SOLUTION



The Coolisys CB12LF is a 12kWh LFP battery cabinet with wheels. It can be easily moved to the installation site. Two CB12LF batteries can be stacked for 24kWh power. The CB12LF uses LiFePO₄ chemistry, which offers a longer life span and is safer than other lithium chemistries.

CB12LF

KEY FEATURES

- For both residential and commercial use
- Full communication with Coolisys hybrid inverters
- LiFePO₄ chemistry is ideal for high temperatures and high cycle count
- Five battery modules connected in parallel
- 1000-strand 200°C 4AWG power cables with quick disconnects
- Integrated 200A breaker to quickly shutdown power
- LED indicators for state of charge, alarms and run status
- AC Version(CB12LFAC) comes with Silver Case and White Door
- DC Version(CB12LFDC) comes with Black Case and Black Door

If you need more reserved power, the CB12LF can be stacked for 24kWh. Since the CB12LF uses LiFePO₄ chemistry, it has a longer life span and is safer than other lithium chemistries.

STANDARD CONFIGURATION			
Capacity @ 25°C		12kWh	24kWh
Units of CB12LF		1	2
Use with Inverter Models		CI5500DC CI5500AC	CI5500DC CI5500AC
Cont. AC Power to Load	From Battery, PV and Grid	7kW	7kW
	From Battery and PV	5.5kW	5.5kW
	From Battery Only	5.5kW	5.5kW

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CB12LF

ELECTRICAL SPECIFICATION

SPECIFICATIONS	
Capacity@ 25°C	12kWh (250Ah)
Battery Chemistry	LFP
Nominal Voltage	48V
Cont. Charge Power	5kW
Discharge Power	9.6kW
Peak Discharge Power	15kW
Cont. Charge	100A
Discharge Current	200A
Terminal Type / Location	Amphenol HVSP-0R6-MHX / Front
Depth of Discharge (DOD)	100%
Cycle Life [80%DOD, @25°C]	6000 cycles
Communication Interface	RS485 Standard MODBUS protocol
Battery Management System	OVP, UVP, OTP, UTP, OCP, SCP
Scalable	Up to 2 units
Product Weight	220kg (485.0 lbs)
Product Dimensions (WxHxD)	600x1100x600mm (23.6x43.3x23.6in)
Installation Method	Free-Standing
Protection Rating	NEMA 1 / IP20
Operating Temperature	-20 to 60°C (-4 to 140°F)
Min. Cold Charge Temperature	0°C (32°F)
Storage Temperature	-40 to 60°C (-40 to 140°F)
Compliance	EN 61000 [ch 4.2, 4.3, 4.5, 4.6] EN55022, EMC (CE), UL1642, UN38.3
Warranty	5 Years

*All specifications are subject to change without notice.

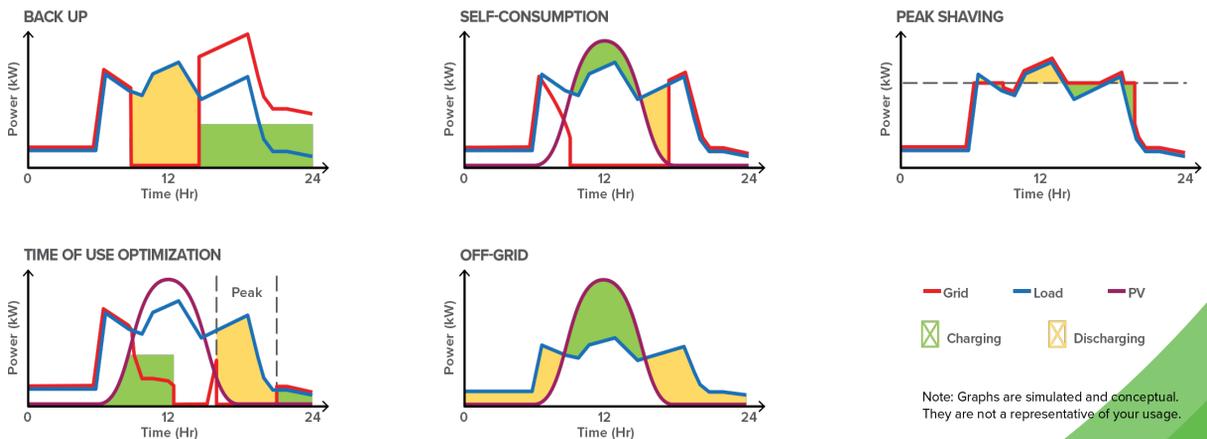
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STORAGE CAPACITY

The storage capacity required will vary from site to site based on the purpose of the energy storage system. Some people will want a backup system in case of power outages, self-consume their excess solar production, peak-shave to reduce their electricity bill, optimize time-of-use rates, or to go off-grid.

- Backing up the entire home is unrealistic due to cost and space constraints. Typically, the refrigerator and other appliances or electronics deemed essential would back up. To figure out the storage capacity, multiply the essential load by the number of hours of backup required.
- If the only goal is to self-consume excess solar production, then usable storage capacity needs to be equal to or greater than the excess solar production. For peak-shaving, the storage capacity should be equal to or greater than the peak usage minus the utility usage threshold. The utility billing history should be referenced when determining peak usage and the threshold for utility usage.
- Time-of-use (TOU) has two functions: 1) Optimize TOU rate usage and 2) Solar arbitrage. In both, the batteries are charged during non-peak hours and discharged during peak. In arbitrage, any excess power is sold to the utility during peak hours. For TOU optimization, the storage capacity should exceed peak load usage. For arbitrage, the storage capacity needs to store all excess PV production, as well as, support the load and feedback to the grid during peak hours.
- For an off-grid system, the battery capacity will need to be large enough to support the load for more than 24 hours.



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CALCULATING BATTERY USAGE TIME

One of the most common questions regarding energy storage is, “How many hours will the batteries last?” It seems like a simple question, but the answer is anything but simple. To calculate usage time, you need to know how the energy storage system will be used, and that varies from person to person.

The section below can be used to estimate usage time. 1) Take the sum of the power rating of all the appliances that will be on the load. 2) Make sure the sum is less than the continuous AC output, otherwise it will overload and shutdown. 3) Take the storage capacity and divide it by the sum of the load. This will give you the approximate usage time for the batteries.

Storage Capacity	12kWh	24kWh
Battery Model	CB12LF	CB12LF
No. of Batteries	1	2
Cont. AC Output with Battery* (SOC @ 20%)	5.5kW	5.5kW
Cont. AC Output with Battery* (SOC @ 100%)	5.5kW	5.5kW
Total AC Load		
Usage Time (Storage Capacity/Total AC Load)		

*Continuous AC output is based on the use of one hybrid inverter. If a larger continuous AC output is required, please contact us.



Cable Box
140W



Lights
100W



Air Purifier
50W



Furnace Fan
295W



AC (Central)
3500W



AC (Window)
660W



Refrigerator
100W



Freezer
660W



Well Pump
800W



Sump Pump
800W



Microwave
1500W



LCD TV
150W

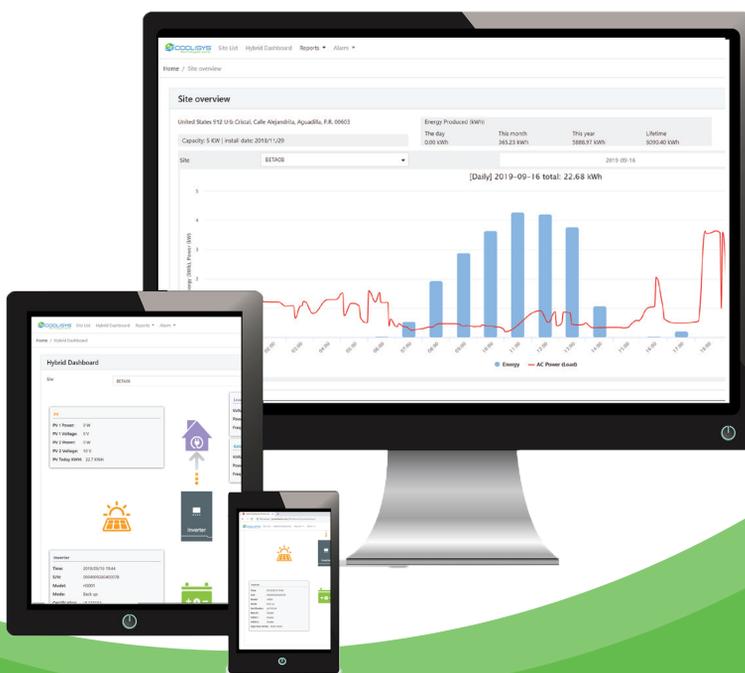
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CB12LF

CLOUD-BASED MONITORING SYSTEM

Monitoring for a PV system is a must, whether you are a homeowner, installer or utility. It is the most efficient and inexpensive way to troubleshoot and maintain a PV system. It only makes sense that our monitoring system should be cloud-based for ease of access from anywhere in the world, through a web portal, an Android or iOS mobile app.

With Coolisys' monitoring system, the inverter's past and current performance is tracked, so it can be used to pinpoint performance issues and provide guidance for maintenance, ensuring the system is at its optimal performance over the lifetime of the installation.



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Coolisys Technologies Corp designs and manufactures full custom, value added and standard comprehensive power solutions for the most demanding applications in the defense, healthcare, telecom, and industrial markets.

