Lefor
Energy Storage

LeforEss

ONE-STOP MANUFACTURER OF ENERGY STORAGE SYSTEM

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INTEGRITY • DEDICATED • PROFESSIONAL • INNOVATIVE
RELIABLE • SUSTAINABLE • CUSTOMER-FOCUSED • EXPERIENCED

Company Development History

Commitment to Sustainability and Future Outlook

Xiamen Lefor is dedicated to leading the global energy storage industry by advancing sustainable and innovative energy solutions, with a strong focus on environmental protection, safety, and customer well-being.

2016

Foundation and Vision

Founded in 2016, Xiamen Lefor Energy Storage Technology focused on pioneering solar batteries, inverters, and residential energy storage systems.

2017-2018

Infrastructure Development

We established our headquarters in Xiamen, with a global sales center and advanced R&D facility, setting the stage for future growth.

2019-2020

Product Expansion and Certifications

Expanded our product range to include various lithium batteries and earned international certifications, entering key markets worldwide.

2021-2022

Strengthening Global Presence

Enhanced our global sales and distribution networks, driving technological advancements and product improvements.

2023

Strategic Collaborations and Market Expansion

Formed strategic partnerships in China and Nigeria to boost manufacturing capabilities and expand market presence, particularly in Africa.

2024

Facilitate better expansion of new energy business

Offer more professional services for overseas partners in the energy storage sector.

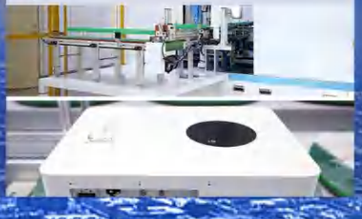
Company Introduction

Established in 2016, Xiamen Lefor Energy Storage Technology Co., Ltd. leads the solar renewable energy industry, specializing in solar batteries, inverters, and residential energy storage systems for global markets.

Our Xiamen headquarters includes a cutting-edge R&D center and global sales hub, supported by two advanced lithium battery manufacturing facilities in Fuzhou and Sanming. Leveraging top-tier technology, management, and R&D capabilities, we deliver high-quality lithium batteries worldwide.

Our products, certified by UN 38.3, UL, CE, CB, and RoHS, are recognized and sold in Europe, America, Africa, and Southeast Asia. We prioritize safe, sustainable practices to protect our environment and stakeholders' well-being.

With rising global demand for new energy solutions, Xiamen Lefor Energy Storage Technology is enhancing R&D and production efforts to solidify our position as a global leader in the energy storage industry.



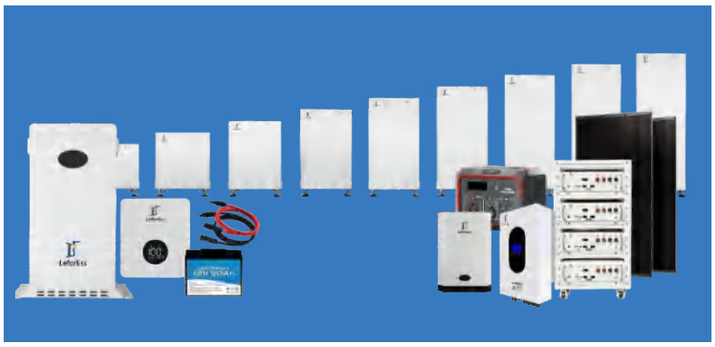
Company Qualifications

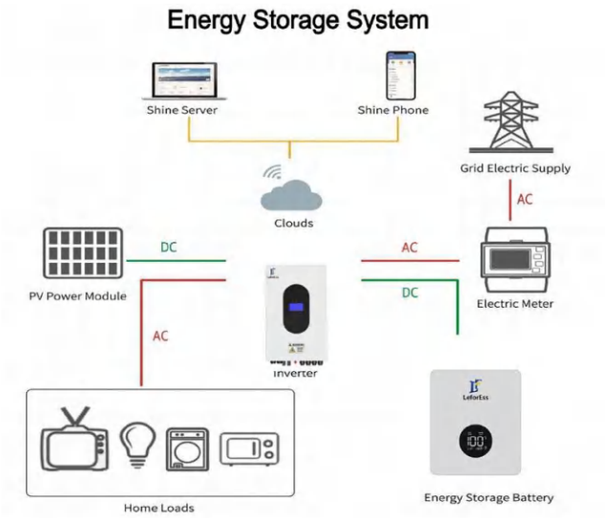
Customers Distribution Map

Global Partners

ATESS, GROWATT, MEGAREVO, SOFAR, SOROTEC, Deye, MUST 美世乐, SRNE, LUXPOWER TEK, Afore 艾优, victron energy, SMA, Voltronic Power, PURSUIT OF PERFECTION, GOODWE 固德威, risen 东方日升

Products Overview





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01 Batteries

Wall-mounted Battery | Thermal Management Battery | All-in-One Unit| Stacked Battery | Portable Battery | Lead to Lithium Battery |Energy Storage System (Cabinets and Containers)

Wall-mounted Battery

LF-LPW-10K-1

LF-LPW-5K-1

1. Built-in BMS board for real-time data monitoring and battery protection
2. Grade-A battery cell
3. >6000 cycles
4. Multiple battery modules can be connected in parallel
5. Design life ≥10 years

Model	LF-LPW-5K-1	LF-LPW-10K-1
Nominal voltage	51.2V	51.2V
Rated capacity	100Ah	200Ah
Size	660*570*160mm	660*570*160mm
Weight	55kg±5kg	88kg±5kg
Maximum operating current	100A	150A
Pack internal resistance	≤100mΩ	
Cycle times	≥6000 cycles @ 80% DOD,25℃, 0.5C	
Design life	≥10 years	
Charging voltage	57.6V±0.5V(16 series)	
Discharge cut-off voltage	44V±0.5V(16 series)	
Charging temperature range	0℃~60℃(working below 0℃ will affect the performance of battery capacity)	
Discharge temperature range	-20℃~60℃(working below 0℃ will affect the performance of battery capacity)	
Storage environment	0℃~45℃ @ 60%±25% RH	
Communication	RS232-PC,RS485(B)-PC RS485(A)-Inverter, Canbus-Inverter	
Certification	UN38.3,MSDS,CE,UL1973(Cell),IEC62619(Cell)	

Feature

1. Service life up to 10 years
2. >6000 cycles
3. Multiple battery modules can be connected in parallel
4. Compatible with multiple inverter brands
5. LCD display
6. Convenience with wall-haning installation

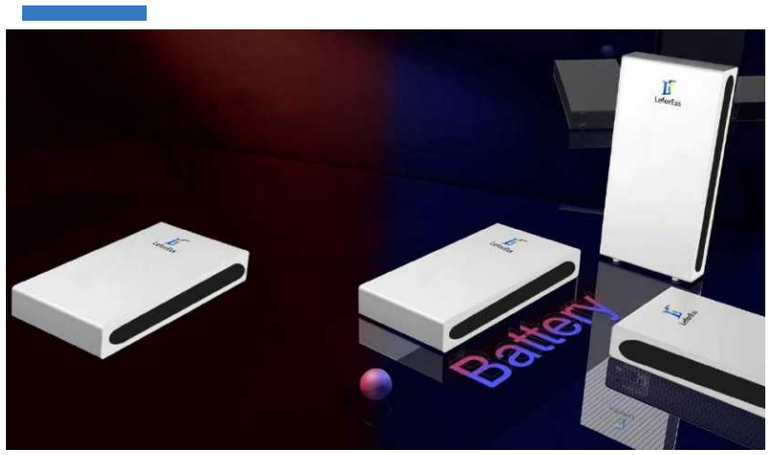
LF-ELECUBE-5k

Cell parameters		Battery module parameters		Battery Pack parameters	
Rated voltage(V)	3.2	Configuration	1P85	Configuration	1P165
Rated capacity(Ah)	100	Rated voltage(V)	25.6	Rated voltage(V)	51.2
Charge Discharge Rate©	0.5	Operating voltage(V)	23.2-29	Operating voltage(V)	46.4-57.9
Cycle Life(25℃,0.5C/0.5 C,@80%DOD)	>6000	Rated capacity(Ah)	100	Rated capacity(Ah)	100
		Rated energy(kWh)	2.56	Rated energy(kWh)	5.12
		Max continuous current(A)	50	Max continuous current(A)	50
Dimensions (L*W*H)(mm)	160.7*51.5*116.5	Operating temperature(℃)	0-55	Operating temperature(℃)	0-55
		Weight(kg)	18	Weight(kg)	58
		Dimensions(L*W*H)(mm)	452.7*163*132	Dimensions(L*W*H)(mm)	674*420*173
Certification: CE, IEC62619(Cell&Pack), MSDS, ROHS, UN38.3					

LF-ELECUBE-10k

Cell parameters		Battery module parameters		Battery Pack parameters	
Rated voltage(V)	3.2	Configuration	1P85	Configuration	1P165
Rated capacity(Ah)	200	Rated voltage(V)	25.6	Rated voltage(V)	51.2
Charge Discharge Rate©	0.5	Operating voltage(V)	23.2-29	Operating voltage(V)	46.4-57.9
Cycle Life(25℃,0.5C/0.5 C,@80%DOD)	>6000	Rated capacity(Ah)	200	Rated capacity(Ah)	200
		Rated energy(kWh)	5.12	Rated energy(kWh)	10.24
		Max continuous current(A)	100	Max continuous current(A)	100
Dimensions (L*W*H)(mm)	174*54*200.5	Operating temperature(℃)	0-55	Operating temperature(℃)	0-55
		Weight(kg)	34	Weight(kg)	90
		Dimensions(L*W*H)(mm)	484*177*217.5	Dimensions(L*W*H)(mm)	635*421.5*258.5
Certification: CE, IEC62619(Cell&Pack), MSDS, ROHS, UN38.3					

Thermal Management Battery



Feature

1. **Outdoor Installation**
   Resistant to extreme winter cold and summer heat
2. **Real-Time Temperature Control**
   Keeps the battery in optimal working condition
3. **High Charging/Discharging Efficiency**
   Supports 1C fast charging and discharging
4. **Safety and Longevity**
   Offers a 15-year no-degradation warranty for extended use

Model	LF-ELS10K-T	LF-ELS14K-T
Battery Type	LiFePO4	
Standard voltage	51.2Vdc	51.2Vdc
Voltage range	46.4-57.6Vdc	46.4-57.6Vdc
Cell capacity	200Ah	280Ah
BAT capacity	10.24kWh	14.33kWh
DOD	Max.100 % DOD (settable)	
Cycle life (25℃,0.5C/0.5C,80%DOD)	>6000	>10000
Rated power	7000W	10000W
Max Charge/Discharge curent	140A	200A
Dimension (H*W*D)	1169.5*640*196mm	1169.5*640*196mm
Weight	114.5kg	137.5kg
BAT Operating ambient temperature	-20~60 ℃	
Cell Continuous Operating Temperature	10~35℃	
Humidity	0-95%RH(Non-condensing)	
Thermal management Type	Liquid Cooling/Heating	
Display	LED+App	
Communication	RS485, CAN	
Installation	Floor mounted & Fixed to wall	
IP Grade	Ip65	
Certifcation	CE, ROHS, MSDS, IEC 62619, UN 38.3, CE-EMC	

Model	LF-ELEBOX-9K-HVT	LF-ELEBOX-11K-HVT
Battery Type	LiFePO4	
Standard voltage	192Vdc	230.4Vdc
Voltage range	174~216Vdc	208.8~259.2Vdc
Cell capacity	50Ah	
BAT capacity	9.6kWh	11.52kWh
DOD	Max.100 % DOD (settable)	
Cycle life (25℃,0.5C/0.5C,80%DOD)	>8000	
Rated power	6500W	8000W
Max Charge/Discharge curent	50A	
Dimension (H*W*D)	1196*640*197mm	1356*640*197mm
Weight	113.5kg	130kg
BAT Operating ambienttemperature	-20~60 ℃	
Cell Continuous Operating Temperature	10~35℃	
Humidity	0-95%RH(Non-condensing)	
Thermal management type	Liquid Cooling/Heating	
Display	LED+App	
Communication	RS485, CAN	
Installation	Floor mounted & Fixed to wall	
IP Grade	Ip65	
Certifcation	CE, ROHS, MSDS, IEC 62619, UN 38. 3, CE-EMC	

Model	LF-ELEBOX-13K-HVT	LF-ELEBOX-14K-HVT
Battery Type	LiFePO4	
Standard voltage	259.2Vdc	288Vdc
Voltage range	234.9~291.6Vdc	261~324Vdc
Cell capacity	50Ah	
BAT capacity	12.96kWh	14.4kWh
DOD	Max.100 % DOD (settable)	
Cycle life (25℃,0.5C/0.5C,80%DOD)	>8000	
Rated power	9000W	10000W
Max Charge/Discharge curent	50A	
Dimension (H*W*D)	1475.5*640*197mm	1595*640*197mm
Weight	145kg	153.2kg
BAT Operating ambienttemperature	-20~60 ℃	
Cell Continuous Operating Temperature	10~35℃	
Humidity	0-95%RH(Non-condensing)	
Thermal management type	Liquid Cooling/Heating	
Display	LED+App	
Communication	Rs485, CAN	
Installation	Floor mounted & Fixed to wall	
IP Grade	Ip65	
Certifcation	CE, ROHS, MSDS, IEC 62619, UN 38.3, CE-EMC	

All -in-One Unit

Feature

1. Integrated with inverter and storage battery
2. Built in MPPT controller
3. >6000 cycles
4. Cloud energy management application for data monitoring via mobile apps

LF-ESSD-OH5-BAT5-X

Mode	LF-ESSD-OH5-BAT5-X
Battery Data	
Battery Type	Lithium
Nominal Battery Voltage(V)	48
Max.Continuous Charging Current(A)	80
Max.Charge Power(W)	4500
Max.Discharge Power(W)	5000
Max.Discharge Power	
Max.Input Power(W)	5500
Max.Input Voltage(V)	500
MPPT Operating Voltage Range(V)	120-430
Start-up Voltage(V)	150
Nominal Input Voltage(V)	300
Number of MPPT Trackers	1
Number of String per MPPT	1
AC Output Data	
Rated Power(W)	5000
Nominal Output Current(A)	21.7
Nominal Output Voltage(V)	220/230/240
Nominal Output Frequency (Hz)	50/60
Output THDv(@Linear Load)	<3%
Coversion Efficiency	
Max.Efficiency	93.6%
MPPT Efficiency	99.9%
Protection	
AC Overcurrent Protection	Integrated
AC Short Circuit Protection	Integrated
AC Overvoltage Protection	Integrated
Remote Shutdown	Integrated
Environmental/Ambient Conditions	
Operating Temperature Range(℃)	0~50℃
Excess Temperature Behaviour	Excess Temperature Behaviour
Relative Humidity	0~95%
Installation Altitude above sea level	Up to 2000m above sea level
Cooling Method	Air Cooling
Mechanical Data	
Product dimensions (W x H x D mm)	\
Protection Level	Ip20
Installation Type	Floor-standing
Communications	
Display	LCD, WLAN+APP
Monitoring Settings	Integrated data logger
Communication with BMS	CAN
Communication with Portal	WiFi
Other Data	
Topology	Transformerless
Reliability	Integrated

Mode	LF-ESSD-OH10-BAT10
Battery Data	
Battery Type	Lithium
Nominal Battery Voltage(V)	48
Max.Continuous Charging Current(A)	160
Max.Charge Power(W)	9000
Max.Discharge Power(W)	10000
Max.Discharge Power	
Max.Input Power(W)	11000
Max.Input Voltage(V)	450
MPPT Operating Voltage Range(V)	120-430
Start-up Voltage(V)	150
Nominal Input Voltage(V)	300
Number of MPPT Trackers	2
Number of String per MPPT	1
AC Output Data	
Rated Power(W)	10000
Nominal Output Current(A)	43
Nominal Output Voltage(V)	220/230/240
Nominal Output Frequency (Hz)	50/60
Output THDv(@Linear Load)	<3%
Coversion Efficiency	
Max.Efficiency	93.6%
MPPT Efficiency	99.9%
Protection	
AC Overcurrent Protection	Integrated
AC Short Circuit Protection	Integrated
AC Overvoltage Protection	Integrated
Remote Shutdown	Integrated
Environmental/Ambient Conditions	
Operating Temperature Range(℃)	0~50℃
Excess Temperature Behaviour	Excess Temperature Behaviour
Relative Humidity	0~95%
Installation Altitude above sea level	Up to 2000m above sea level
Cooling Method	Air Cooling
Mechanical Data	
Product dimensions (W x H x D mm)	\
Protection Level	Ip20
Installation Type	Floor-standing
Communications	
Display	LCD, WLAN+APP
Monitoring Settings	Integrated data logger
Communication with BMS	CAN
Communication with Portal	WiFi
Other Data	
Topology	Transformerless
Reliability	Integrated

Stacked Battery

Feature

1. LiFePO4 composition
2. 6,000cycles/ 5 years' service life
3. Consistent performance over wide temperature range
4. convenient installation due to the stacking capability
5. Integrated state-of-the-art BMS
6. 5 years' warranty

Battery Specifications				
Model	LF-THS5		LF-THS10	LF-THS15
Nominal Parameters				
Voltage	25.6V	51.2V	51.2V	51.2V
Capacity	200Ah	100Ah	200Ah	306Ah
Energy	5.12KWh		10.24KWh	15.66KWh
Dimensions(L*W*H)	580*440*160mm		660*570*160mm	740*500*250mm
Weight	48.5Kg		82Kg	110Kg
Basic Parameters				
Service Life (25℃)	5 years			
Cycle Time (80%DOD,25℃)	6000 cycles			
Storage Time/Temperature	5 months (25℃),3 months(35℃),1 month(45℃)			
Operating Temperature	-20℃ to 60℃@60±25% relative humidity			
Storage Temperature	0℃ to 45℃@60±25% relative humidity			
Case Protection Class	Ip21			
Electronic Parameters				
Nominal Voltage	25.6VDC	51.2VDC	51.2VDC	51.2VDC
Maximum Charging Voltage	28.8VDC	57.6VDC	57.6VDC	57.6VDC
Discharge Cut-off Voltage	21.6VDC	40VDC	43.2VDC	43.2VDC
Maximum Charge And Discharge Current	200A	100A	200A	200A

Portable Battery

Feature

1. Portable design, weighting less than 7.5 kg
2. Cost efficient
3. >10000 cycles
4. LiFePO4 battery cells for superior performance and longevity

Model	LF-HEROEE1
Battery Chemistry	Lithium-iron phosphate(LiFePO4)
Battery Capacity	1005Wh(with built-in Hithium battery cell)
Battery Lifespan	10000 cycles
Battery Level Indicator	Yes,four LEDs
AC Input(Grid)	230 Vac 50Hz,200W
DC Input (Solar)/Connector	12-36 Vdc, 200W max /Xt90
AC Output/Waveform	200W max/Pure sine-wave
AC Outlet	Universal
Protection	Overcharge &over-discharge protection/Over-voltage &under-voltage protection/ Over-current protection/High &low temperature protection/ Overload protection/ Shortcircuit protection/Fault protection
Operating/Storage Temp.	0℃to+45℃/-20℃ to+45℃
Net Weight	8.18 kg
Dimensions	210mm(L)×130mm(W)×285mm(H)
Warranty	Two years
Certification	IEC62368/UN38.3

Lead to Lithium Battery

Feature

1. The safest lithium battery material recognized by the battery industry.
2. Small volume ,light weight ,high energy density and environmentally-friendly.
3. Cycle life is up to more than 2000 times, which is about 10 times that of lead-acid battery.
4. Support high-rate discharge, highly compatible PCM and BMS can be built in, protecting from overcharge, over discharge, over current, short circuit, high temperature and low temperature.
5. Wide operation temperature range, stable performance at high and low temperature
6. A variety of lead-acid plastic shell size substitutions.
7. Multiple battery packs can be used in parallel.

Model	Charge Current	Charge Voltage	Discharge Current	Discharge Cut-off Voltage
6.4V6Ah	1.2A	7.3V	6.0A	5.0V
6.4V7Ah	1.4A	7.3V	7.0A	5.0V
12.8V6Ah	1.2A	14.6V	6.0A	10.0V
12.8V7.5Ah	1.5A	14.6V	7.5A	10.0V
12.8V12Ah	2.4A	14.6V	12A	10.0V
12.8V20Ah	4.0A	14.6V	20A	10.0V
12.8V24Ah	4.8A	14.6V	24A	10.0V
12.8V30Ah	6.0A	14.6V	30A	10.0V
12.8V42Ah	8.4A	14.6V	42A	10.0V
12.8V54Ah	10.8A	14.6V	54A	10.0V
12.8V60Ah	12.0A	14.6V	60A	10.0V
12.8V84Ah	16.8A	14.6V	80A	10.0V
12.8V100Ah	20.0A	14.6V	100A	10.0V
12.8V200Ah	40.0A	14.6V	100A	10.0V
12.8V300Ah	60.0A	14.6V	150A	10.0V

Energy Storage System (Cabinets and Containers)

Feature

1. Multiple working modes can be flexibly set
2. Support battery management system and comprehensive thermal management.
3. Support real-time online monitoring of system status.
4. Support simultaneous access to load, battery, grid, DG, and PV.

Model	LF-ESSA0030B-0055	LF-ESSA0050B-0055	LF-ESSA0050B-0100	LF-ESSA0100B-0215
Rated Power (kW)	30	50	50	100
Rated Voltage(V)	400			
Rated Current (A)	43	72	72	144
Rated Current (A)	320V-460V			
Rated Frequency	50/60Hz			
Frequency Range	45-55/55-65Hz			
THDi(on-grid)	<3%			
THDu(off-grid)	≤1% linear;≤5% non-linear			
Power Factor	1(0.8 leading～0.8 laging can be set)			
Overload Capacity	110% Long term			
AC Output	3W+N+PE			
Isolation Transformer	100/400	200/400	200/400	270/400
On-grid Off-grid Switching	Support			
PV Data				
Max.PV Input Voltage(V)	1000			
Max.PV Power (kW)	60/120	60/120	60/120	120/180/240
MPPT Operating Voltage Range(V)	250~850			
MPPT Full Load Voltage Range (V)	450~850			
Buck-boost Mode	Support			
Battery Data				
Cell Type	3.2V/120Ah/1C,LFP	3.2V/120Ah/1C,LFP	3.2V/280Ah/1C,LFP	3.2V/280Ah/1C,LFP
Nominal Voltage(V)	460.8V,1P144S	460.8V,1P144S	358.4V,1P112S	768V,1P240S
Nominal Energy (kWh)	55.296	55.296	100.352	215.04
Working Voltage range(V)	403.2~511.2	403.2~511.2	319.2~397.6	672~850
Max.Charge and Discharge rate	1C@25℃	1C@25℃	0.5C@25℃	0.5C@25℃
Cycles	≥3,800	≥3,800	≥5,000	≥5,000
System Data				
Dimensions W*D*H(mm)	1,770×1,510×2,270	1,770×1,510×2,270	1,770×1,510×2,270	2,450×1,550×2,400
Net Weight(kg)	2000	2200	2400	3900
Operating Temperature(℃)	0～+45			
Relative Humidity	0~95%(non-condensing)			
Ingress protection	Ip54			
Noise Emission(dB)	<75			
Operating Altitude	3,000m			
Cooling	Intelligent air cooling			
Fire Extinguishing System	Aerosols/NOVEC1230			
Display	Touch LCD display+cloud platform			
EMS Communcation	RS485,TCP/IP			

Model	LF-ESSC0500B-1075	LF-ESSC1000B-2150
Rated Power (kW)	500	1000
Rated Voltage(V)	400	
Rated Current(A)	722A	1.445A
Voltage Range(V)	320V-460V	
Rated Frequency	50/60Hz	
Frequency Range	45-55/55-65Hz	
THDi(on-grid)	<3%	
THDu(off-grid)	≤1% linear;≤5% non-linear	
Power Factor	1(0.8 leading～0.8 laging can be set)	
Overload Capacity	110%Long term	
AC Output	3W+N+PE	
Isolation Transformer	315/400	
On-grid Off-grid Switching	Support	
PV Data		
Max.PV Input Voltage(V)	1000	
Max.PV Power (kW)	600/660/720	1,200/1,320/1,440
MPPT Operating Voltage Range(V)	250~850	
MPPT Full Load Voltage Range (V)	450~850	
Buck-boost Mode	Support	
Battery Data		
Cell Type	3.2V/280Ah/1C,LFP	
Nominal Voltage(V)	768V/1P240S	
Nominal Energy(MWh)	1.0752	2.1504
Working Voltage Range(V)	672~850V	
Max.Charge and Discharge Rate	0.5C@25℃	
Cycles	≥5000	
System Data		
Dimensions W*D*H(mm)	6,058×2,438×2,896	12,192×2,438×2,896
Net Weight (kg)	21000	38000
Operating Temperature(℃)	0~+45	
Relgtive Humidity	0~95%(non-condensing)	
Ingress Protection	Ip54	
Noise Emission(dB)	<75dB	
Operating Altitude	3,000m	
Cooling	Intelligent air cooling	
Fire Extinguishing System	FM200/NOVEC1230	
Display	Touch LCD display+cloud platform	
EMS Communication	RS485,TCP/IP	

02 | Inverters

Off-grid inverters| On-grid/Hybrid Inverters|
Three phase Inverters| Micro Inverters

Off-grid Inverters

Feature

1. Multiple operation modes
2. Built-in UPS, MPPT
3. Compatible with almost all LiFePO4 battery packs
4. Integrated with APP, can be remotely diagnose and update
5. Max 6 pcs can be connected in parallel

Model	LF-O3000TL-24	LF-O5000TL-48
Battery Data		
Battery Type	Lithium/Lead-Acd	Lithium/Lead-Acid
Nominal Battery Voltage (V)	24	48
Max.Continuous Charging Cument (A)	120	80
Max.Charge Power(W)	3200	4500
Max.Discharge Power(W)	3000	5000
PV Strcng Input Data		
Max.Input Power (W)	2000	5500
Max.Input Voltage(V)	150	500
MPPT Operating Voltage Range(V)	30-115	120-430
Start-up Voltage (V)	30	150
Nominal Input Voltage (V)	100	300
Number of MPPT Trackers	1	1
Number of Stings per MPPT	1	1
AC Output Data		
Rated Power (W)	3000	5000
Nominal Output Current (A)	13.6	21.7
Nominal Output Voltage (V)	220/230/240	220/230/240
Nominal Output Frequency (Hz)	50/60	50/60
Output THDv (@Linear Load)	<3%	<3%
Conversion Efficiency		
Max.Efficiency	93.6%	93.6%
MPPT Efficiency	99.9%	99.9%
Protection		
AC Overcurrent Protection	Integrated	Integrated
AC Short Circuit Protection	Integrated	Integrated
AC Overvoltage Protection	Integrated	Integrated
Remote Shutdown	Integrated	Integrated
Environmental/Ambient Conditions		
Operating Temperature Range(℃	0~+50	0~+50
Excess Temperature Behaviour	continuous power reduction (derating)	
Relative Humidity	0 to 95%(climate class 4k6),non-condensing	
Installation Altitude above Sea Level	up to 2000 mabove sea leve	
Installation Location	Inside	Inside
Cooling Method	Air Cooling	Air Cooling
Mechanical Data		
Dimensions （WxHxD mm)	300x485x120	300x485x120
Weight (kg)	9±0.5	9.5±0.5
Protection Level	Ip20	Ip20
Installation Type	Wall Installation with Wall Bracket	
Communications		
Display	LCD,WLAN+APP	LCD,WLAN+APP
Monitoring Setings	Integrated data logger	Integrated data logger
Communication with BMS	CAN	CAN
Communication with Portal	Wifi	Wifi
Other Data		
Topology	Transformerless	Transformerless
Reliability	Integrated	Integrated
Manufacturer's Warranty	2 Years	2 Years

Off-grid Inverters

Solar Storage Inverter

MODEL	HSI 3000S	CAN BE SET
INVERTER		
Rated Output Power	3,000W	
Max.Peak Power	6,000VA	
Rated Output Voltage	230Vac	√
Load Capacity of Motors	2HP	
Rated AC Frequency	50Hz/60Hz	√
Waveform	Pure Sine Wave	
Switch Time	10ms(typical)	
BATTERY		
Battery Type	Lead-acid / Li-ion / User defined	√
Rated Battery Voltage	24V	
Voltage Range	20～33Vdc	√
Max.MPPT Charging Current	60A	√
Max.Mains/Generator Charging Current	80A	√
Max.Hybrid Charging Current	140A	√
PV INPUT		
Num. of MPPT Trackers	1	
Max.PV Array Power	1,600W	
Max.Input Current	40A	
Max.Voltage of Open Circuit	108Vdc	
MPPT Voltage Range	30-90Vdc	
UTILITY/ GENERATOR INPUT		
Input Voltage Range	UPS mode:170～280Vac; APL mode:90～280Vac	√
Frequency Range	50/60Hz	
Bypass Overload Current	30A	
EFFICIENCY		
MPPT Tracking Efficiency	99.9%	
Max. Battery Inverter Efficiency	92%	
GENERAL		
Dimensions	378*280*103mm	
Weight	6.8kg	
Protection Degree	Ip20, Indor Only	
Operating Temperature Range	-10℃~55℃	
Noise	≤60dB	
Cooling Method	Forced air cooling with adjustable air speed	
Warranty	18 Months	
COMMUNICATION		
Embedded Interfaces	Rs485 / USB / Dry contact	√
External Modules(Optional)	Wi-Fi / GPRS	√
CERTIFICATION		
Safety	CE(IEC 62109-1)	
EMC	En61000, C2	
RoHS	Yes	

MODEL	HSI 3500	CAN BE SET
INVERTER		
Rated Output Power	3,500W	
Max.Peak Power	6,000VA	
Rated Output Voltage	230Vac(L/N/PE single phase)	√
Load Capacity of Motors	2HP	
Rated AC Frequency	50Hz/60Hz	√
Waveform	Pure Sine Wave	
Switch Time	10ms(typical)	
BATTERY		
Battery Type	Lead-acid / Li-ion / User defined	√
Rated Battery Voltage	24V	
Voltage Range	20～33Vdc	√
Max.MPPT Charging Current	80A	√
Max.Mains/Generator Charging Current	80A	√
Max.Hybrid Charging Current	80A	√
PV INPUT		
Num. of MPPT Trackers	1	
Max.PV Array Power	4,000W	
Max.Input Current	13A	
Max.Voltage of Open Circuit	500Vdc	
MPPT Voltage Range	120-450Vdc	
UTILITY/ GENERATOR INPUT		
Input Voltage Range	UPS mode:170～280Vac; APL mode:90～280Vac	√
Frequency Range	50/60Hz	
Bypass Overload Current	30A	
EFFICIENCY		
MPPT Tracking Efficiency	99.9%	
Max. Battery Inverter Efficiency	92%	
GENERAL		
Dimensions	378*280*103mm (1.24*0.92*0.34ft)	
Weight	7.4kg (16.31lb)	
Protection Degree	Ip20, Indor Only	
Operating Temperature Range	-10℃~55℃	
Noise	≤60dB	
Cooling Method	Internal Fan	
Warranty	1.5 Years	
COMMUNICATION		
Embedded Interfaces	Rs485 / CAN / USB / Dry contact	√
External Modules(Optional)	Wi-Fi / GPRS	√
CERTIFICATION		
Safety	CE(IEC 62109-1)/FCC/SAA	
EMC	En61000, C2	
RoHS	Yes	

MODEL	HSI 5500	CAN BE SET
INVERTER		
Rated Output Power	5,500W	
Max.Peak Power	11,000VA	
Rated Output Voltage	230Vac(L/N/PE single phase)	√
Load Capacity of Motors	4HP	
Rated AC Frequency	50Hz/60Hz	√
Waveform	Pure Sine Wave	
Switch Time	10ms(typical)	
BATTERY		
Battery Type	Lead-acid / Li-ion / User defined	√
Rated Battery Voltage	48V	
Voltage Range	40～60Vdc	√
Max.MPPT Charging Current	100A	√
Max.Mains/Generator Charging Current	60A	√
Max.Hybrid Charging Current	100A	√
PV INPUT		
Num. of MPPT Trackers	1	
Max.PV Array Power	6,000W	
Max.Input Current	22A	
Max.Voltage of Open Circuit	500Vdc	
MPPT Voltage Range	120-450Vdc	
UTILITY/ GENERATOR INPUT		
Input Voltage Range	UPS mode:170～280Vac; APL mode:90～280Vac	√
Frequency Range	50/60Hz	
Bypass Overload Current	40A	
EFFICIENCY		
MPPT Tracking Efficiency	99.9%	
Max. Battery Inverter Efficiency	92%	
GENERAL		
Dimensions	426*322*126mm (1.40*1.06*0.41ft)	
Weight	10.5kg (23.15lb)	
Protection Degree	Ip20, Indor Only	
Operating Temperature Range	-10℃~55℃	
Noise	≤60dB	
Cooling Method	Internal Fan	
Warranty	1.5 Years	
COMMUNICATION		
Embedded Interfaces	Rs485 / USB / Dry contact	√
External Modules(Optional)	Wi-Fi / GPRS	√
CERTIFICATION		
Safety	CE(IEC 62109-1)/FCC/SAA/CETL(UL1741 C22.2 NO.107.1)	
EMC	En61000	
RoHS	Yes	

On-grid/Hybrid Inverters

Feature

1. Multiple operation modes
2. Built-in UPS, MPPT
3. Compatible with almost all LiFePO4 battery packs
4. Integrated with APP, can be remotely diagnose and update
5. Max 6 pcs can be connected in parallel

Model	LF-H3600TL	LF-H4600TL	LF-H5000TL
Battery Data			
Battery Type	Lithium / Lead-Acid	Lithium / Lead-Acid	Li-Ion / Lead-Acid
Nominal Battery Voltage (V)	51.2	51.2	51.2
Battery Voltage Range (V)	41.6 ~ 58.5	41.6 ~ 58.5	41.6 ~ 58.5
Max. Continuous Charging Current (A)	80	95	95
Max. Continuous Discharging Current (A)	85	100	100
Max. Charge Power (W)	3600	4600	5000
Max. Discharge Power (W)	3600	4600	5000
PV String Input Data			
Max. Input Power (W)	5200	6600	7000
Max. Input Voltage (V)	500	500	500
MPPT Operating Voltage Range (V)	120-430	120-430	120-430
Start-up Voltage (V)	150	150	150
Nominal Input Voltage (V)	360	360	360
Max. Input Current per MPPT (A)	15	15	15
Max. Short Circuit Current per MPPT (A)	18.9	18.9	18.9
Number of MPP Trackers	2	2	2
Number of Strings per MPPT	1	1	1
AC Output Data (On-grid)			
Rated Power Output to Utility Grid (W)	3600	4600	5000
Max. Apparent Power Output to Utility Grid (VA)	3960	4600	5500
Max. Apparent Power from Utility Grid (VA)	3960	4600	5500
Nominal Output Voltage (V)	220 / 230 / 240	220 / 230 / 240	220 / 230 / 240
Nominal AC Grid Frequency (Hz)	50 / 60	50 / 60	50 / 60
Max. AC Current Output to Utility Grid (A)	17.2	50 / 60	50 / 60
Max. AC Current From Utility Grid (A)	17.2	200Ah	200Ah
Max. Total Harmonic Distortion	<3%	<3%	<3%
Power Factor（cosφ）	~0.99 (Adjustable from 0.8 leading to 0.8 lagging)		
Switch Time	<10 ms	<10 ms	<10 ms
AC Output Data (Back-up)			
Back-up Rated Power (W)	3600	4500	4500
Max. Output Apparent Power (VA)	3600	4500	4500
Max. Output Current (A)	15.6	20	20
Nominal Output Voltage (V)	220 / 230 / 240	220 / 230 / 240	220 / 230 / 240
Nominal Output Freqency (Hz)	50 / 60	50 / 60	50 / 60
Output THDv (@Linear Load)	<3%	<3%	<3%
Conversion Efficiency			
Max. Efficiency	97.8%	97.8%	97.8%
EU Efficiency	97%	97%	97%
Max. Battery to AC Efficiency	95%	95%	95%
MPPT Efficiency	99.9%	99.9%	99.9%
Protection			
Residual Current Monitoring	Integrated	Integrated	Integrated
Anti-islanding Protection	Integrated	Integrated	Integrated
Remote Shutdown	Integrated	Integrated	Integrated
Protection Level	Ip65	Ip65	Ip65
Environmental / Ambient Conditions			
Operating Temperature Range (℃)	-25 ~ +60	-25 ~ +60	-25 ~ +60
Relative Humidity		0 to 95%，non-condensing	
Installation Altitude above Sea Level		up to 2000 m above sea level	
Cooling Method	Natural Cooling	Natural Cooling	Natural Cooling
Monitoring Settings		Integrated data logger	
Other Data			
Dimensions (W × H × D mm)	350x580x230	350x580x230	350x580x230
Weight (kg)	25±0.5	25±0.5	25±0.5
Installation Type		Wall Installation with Wall Bracket	
Communication	CAN / RS485 / WiFi	CAN / RS485 / WiFi	CAN / RS485 / WiFi
Manufacturer's Warranty	5 Years	5 Years	5 Years

Three Phase Inverter

Feature

1. Maximum charge/discharge current: 240A.
2. 48V low-voltage battery with integrated transformer for safety isolation.
3. Frequency droop control, supporting parallel operation of up to 10 units.
4. AC-coupled compatibility for retrofitting existing solar systems.
5. 100% three-phase unbalanced output, with each phase capable of delivering up to 50% of rated power.
6. Direct support for diesel generators without the need for external converters.
7. Direct support for diesel generators without the need for external converters.

Parametri Tecnici / Model	LF-G8K-P3LA	LF-G10K-P3LA	LF-G12K-P3LA
PV Input			
Max. DC Input Power (W)	10400	13000	15600
Rated DC Input Power(V)	LF-G8K-P3LA	550 (160-800)	
Start-up Voltage(V)	160		
MPPT Voltage Range(V)	200-650		
MPPT Voltage Range (V)	350-650		
Max. DC Input Current per String (A)	13+13	26+13	26+13
Max. DC Short-circuit Current (A)	17+17	34+17	34+17
Number of MPPTS	2		
Number of Strings per MPPT	1+1	2+1	2+1
Efficiency			
Maximum Efficiency	97.6%		
European Efficiency	97.0%		
MPPT Efficiency	99.0%		
AC Output			
Rated AC Output Power(W)	8000	10000	12000
Max. AC Output Power (W)	8800	11000	13200
Peak Power (Off-grid)	2 times rated power, 10 seconds		
Rated AC Output Current (A)	12.1	16.7	18.2
Max. AC Current(A)	13.4	18.4	20
Maximum Output Short-circuit Current (A)	75		
Maximum Continuous AC Output Current (A)	45		
Power Factor	0.8 (leading) to 0.8 (lagging)		
AC Output Frequency and Voltage	50/60Hz; 220/380Vac, 230/400Vac (three-phase)		
Grid Type	Three-phase four-wire		
Current Harmonics	<3% (of n ominal p ower)		
Grid DC component	<0.5% In		
Battery			
Battery Type	Lead-acid or Lithium Battery		
Battery Voltage Range (V)	40-60		
Maximum Charging Current (A)	160	200	240
Maximum Discharge Current (A)	160	200	240
Charging Curve	Three-stage Charging/Equalization Charging		
External Temperature Sensor	Available		
Battery Management System	Adaptive BMS System		
Protection			
PV Input Lightning Protection	Available		
Island Protection	Available		
Reverse Polarity Protection for DC	Available		
Insulation Impedance Detection	Available		
Leakage Current Monitoring Protection	Available		
Output Overcurrent Protection	Available		
Output Short-circuit Protection	Available		
Output Overvoltage Protection	Available		
Surge Protection	Two-stage lightning protection on DC side, two-stage lightning protection on AC side		
Overvoltage Protection	Two-stage lightning protection on DC side, three-stage lightning protection on AC side		
Certifications and Standards			
Grid Certification	IEC61727/ 62116,EN50549-1		
Safety/EMC Standards	IEC/ EN 61000-6-1/ 2/ 3/ 4, I EC/ EN 62109-1, I EC/ EN 62109-2		
Other			
Operating Temperature Range (℃)	-40-60℃, >45℃ Dera ting		
Cooling Method	Smart Cool ing		
Noise Level (dB)	≤50 dB		
BMS Communication Port	RS485; CAN		
Smart Monitoring	WIFI+APP		
Weight (kg)	37.5		
Dimensions (Height x Width x Thickness mm)	702×422×281 (Excluding Connectors And Brackets)		
Protection Level	Ip65		
Installation Method	Wall-mounted		
Warranty	5 Years (10 Years Optional)		

Micro Inverters

Feature

1. Safe to use: low photovoltaic input voltage, high and low voltage isolated
2. Built-in MPPT, DSP control: DC to AC peak efficiency up to 94.20%.
3. Small and light-weighted, easy to install,.
4. Ip67 class protection
5. WIFI Remote monitoring.
6. Support combined grid connection: up to 6units for model number GT800TL

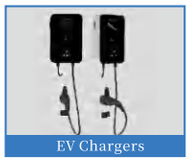
Model	LF-GT400TL	LF-GT600TL	LF-GT800TL
PV Input (DC)			
PV Max Input Power(W)	250x2	350 x2	450 x2
PV Max Input Voltage(V)	60	60	60
Start-up Voltage (V)	30	30	30
MPPT Voltage Range (V)	25-55	25-55	25-55
Full Load MPPT Voltage Range (V)	33-55	33-55	33-55
Operating Voltage Range(V)	16-60	16-60	16-60
Max Input Current(A)	7A x2	12Ax2	14A x2
Maximum Input Short-circuit Current(A)	15A x2	20Ax2	25A x2
Number of MPPT Trackers	2	2	2
AC Output			
Rated Output Power (W)	400	600	800
Nominal Output Current (A)	1.74	2.6	3.48
Maximum Output Power(VA)	400	600	800
Nominal Grid Voltage (V)	230 (single-phase)	230 (single-phase)	230 (single-phase)
Grd Voltage Range (V)	184-264VAC	184-264VAC	194-264VAC
Nominal Grid Frequency (Hz)	50Hz/60Hz	50Hz /60Hz	50Hz /60Hz
Max.Total Harmonic Distortion	>0.99	>0.99	>0.99
Power Factor	8pcs	8pcs	6pcs
Max Parallel	Yes	Yes	Yes
Anti-islanding Protection	Yes	Yes	Yes
AC Short Circuit Protection	Yes	Yes	Yes
System			
Max. Efficiency	94.2%	94.2%	94.2%
Protection Class	CLASS I	CLASS I	CLASS I
Protection Level	Ip67	Ip67	Ip67
Cooling Method	Natural Cooling	Natural Cooling	Natural Cooling
Monitoring	WIFI	WIFI	WIFI
Operating Temperature Range(℃)	-40- +65	-40- +65	-40- +65
Manufacturers Warranty	10 Years	10 Years	10 Years
Mechanical Data			
Dimensions (W × H × Dmm)	225 x225x37	225x225x37	225x225x37
Weight (kg)	3.25	3.25	3.25
Product Certification	IEC 62321-3-1:2013; IEC 62321-4:2013+A1:2017; IEC 62321-5:2013 IEC 62321-6:2015; IEC 62321-7-1:2015; IEC 62321-7-2:2017 IEC 62321-8:2017		
Test standards	ENIEC61000-6-3.2021; ENIEC 61000-6-1:2019; ENIEC 61000-3-2:2019+A1:2021; EN 61000-3-3:2013+A2:2021 EN 62109-12010; EN 62109-2:2011 VDE-AR-N 4105:2018; conjunction with DIN VDE V 0124-100:2020		

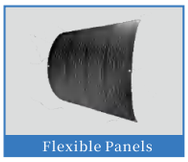
03 Other Related Equipment

Flexible Panels| MC4 Connectors| Transformers| Cables | Switchgear | EV Chargers | Foldable Panels | Solar Streetlight

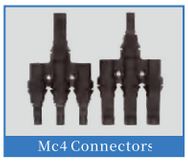
Other Related Equipment

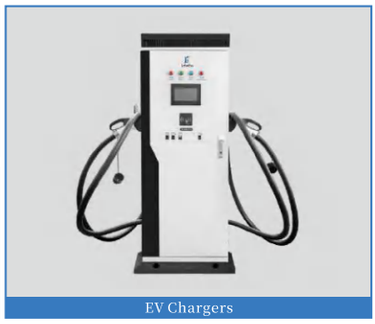
Cables

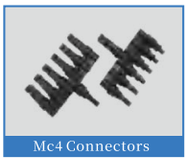

EV Chargers


Flexible Panels

Foldable Panels


Mc4 Connectors


EV Chargers


Mc4 Connectors

Mc4 Connectors

Mc4 Connectors

Mc4 Connectors

Solar Streetlight

Switchgear

Transformers

Feature

Besides batteries and inverters, Lefor also provide other energy storage related products such as panels (which also include flexible panels and foldable panels), MC4 connectors, cables, switchgear, transformers, EV chargers, solar street light, etc.If you are interested in these products too, feel free to contact us as well!

04 Household Usage Small Systems Solutions

Single Phase Off Grid Systems| Single Phase On Grid Systems | Single Phase Hybrid Systems

For private clients looking to purchase storage systems for household use, we have solutions ready to meet your needs. In this catalog, we present three examples each for off-grid, on-grid, and hybrid systems, featuring only three main products. Other accessories, such as cables and connectors, will vary based on different clients' needs. If the power output for your systems is not included in these examples, or if you would like a quote for cables and connectors specific to your case, please contact us directly. We can provide tailored solutions for your needs.

Household Usage Small Systems Solutions

Single Phase Off Grid Systems

Off-grid 1kW system

Item	Product Name	Specification	Picture	Unit
LF--63000TL-24	Off-grid Inverter 220V-240V 50HZ/60HZ	3KW		1
LF-LPW24-5K-1	Low Voltage Wall-mounted (25.6V)	5.12 KWH		1
LF-5KT550M10	Solar panel	550W		2

Off-grid 3kW system

Item	Product Name	Specification	Picture	Unit
LF--OH3000TL-HP	Off-grid Inverter 220V-240V 50HZ/60HZ	3KW		1
LF-LPW24-5K-1	Low Voltage Wall-mounted (25.6V)	5.12 KWH		1
LF-5KT550M10	Solar panel	550W		6

Single Phase On Grid Systems

On-grid 5 kW system

Item	Product Name	Specification	Picture	Unit
LF-H5000TL	Hybrid Inverter 220V-240V 50HZ/60HZ	5KW		1
LF-5KT550M10	Solar panel	550W		10

On-grid 10 kW system

Item	Product Name	Specification	Picture	Unit
LF-H5000TL	Hybrid Inverter 220V-240V 50HZ/60HZ	5KW		2
LF-5KT550M10	Solar panel	550W		19

Single Phase Hybrid Systems

Hybrid 8 kW system

Item	Product Name	Specification	Picture	Unit
LF-SUN-8K-SG01LP1-EU	Hybrid Inverter 220V-240V 50HZ/60HZ	8KW		1
LF-LPW-10K-1	Low Voltage Wall-mounted (51.2V)	10.24 KWH		1
LF-5KT550M10	Solar panel	550W		15

Hybrid 10 kW system

Item	Product Name	Specification	Picture	Unit
LF-SUN-12K-SG02LP1-EU-AM3	Hybrid Inverter 220V-240V 50HZ/60HZ	12KW		1
LF-ELESHELL-14.3K	Low Voltage Wall-mounted (51.2V)	14.3 KWH		1
LF-5KT550M10	Solar panel	550W		22

05 Project Cases

Dominican 16KW

Germany 30KW

Iraq 25KW

Jamaica 20KW

Nigeria 15KW

Nigeria 30.72KW

Oman 110KW

South-Africa 120KW

Germany 100KW

Armenia 14KW

France 15KW

06 After-sale Support
—— dedicated after-sales service department

Flow Chart

Having issues after receiving the products?

↓

Contacting your assigned salesperson

↓

Transferring your case to our after-sales department

↓

After-sales department providing you with solutions

↓

Problems Solved

At Lefor, we understand that quality and affordability attract customers, but exceptional after-sales care earns their loyalty. That's why we have a dedicated after-sales service department to ensure comprehensive technical support and assistance following every purchase.

Upon receiving your products, if any issues arise, simply contact your assigned salesperson. They will promptly transfer your case to our after-sales team. We offer support via email, WhatsApp group chat, or any other preferred communication method.

In essence, our mission is to provide a worry-free shopping experience and robust technical support through swift responses and efficient problem resolution.

07 Customers Feedback and Company Activities

Over the past few years, our company has received numerous positive reviews from customers and warmly welcomed many visits from clients. If you would like to visit us as well, please feel free to contact us, and we will be delighted to host you with our best hospitality.

Additionally, we have participated in many trade shows, showcasing our products and engaging with industry professionals worldwide.

On the other hand, our company also takes great care of our employees' welfare. Each year, we organize team-building activities, fully funded by the company, which include trips, dinners, and other social events.

LeforEss

Appendix

For customers interested in sending us an inquiry, we kindly ask that you review the RFQ questions below. By preparing answers to these questions in advance, we can ensure a more efficient and effective inquiry process:

1. Is your energy storage system intended for personal/home use or a commercial project?
2. Do you need a single-phase system or a three-phase system?
3. What is the total power requirement for your project (in kW or MW)?
4. What is the storage capacity you need (in kWh or MWh)?
5. What voltage level does your project require?
6. Where will the energy storage system be installed? Please provide the specific location (if possible).
7. What is the primary application of your energy storage system? (e.g., backup power, off-grid system, peak shaving, renewable energy integration, etc.)
8. What is your budget range?
9. What is your expected project start and delivery timeline?
10. Do you have any special requirements or specifications we should be aware of? (e.g., brand preferences, certification requirements, specific features, etc.)
11. Please provide your contact information for further communication (e.g., email, phone number, WeChat, etc.).
12. Is there any other information or documents you can provide to help us better understand your needs?
13. Are you aware of any local certifications or requirements needed for importing these energy storage products into your country?
14. Do you need an off-grid, on-grid or hybrid system?