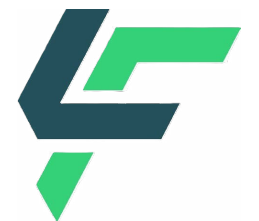


BESS AND INVERTERS

CATALOG 2026





About Lithium Force Factory

The LF factory was Founded in 2008 in Guangdong and brings deep expertise in lithium-ion battery technology and manufacturing for electric vehicles (EVs) and BESS applications. Since 2008, Lithium Force- China has been a pioneer in the field, holding more than 30 patents in lithium-ion battery class R&D and manufacturing capabilities to provide top-class reliability and has been certified by the strictest international certification authority.

LF focuses on green energy innovation and is dedicated in providing people with better quality, more efficient and more economical energy use experience.

Lets's power up the world-together!



SMT Workshop



Assembly Workshop



ATE Testing



Aging Test Workshop



Complete energy solutions

EU-Standard Hybrid Inverter



US-Standard Hybrid Inverter



ALL-IN-ONE Energy Storage System



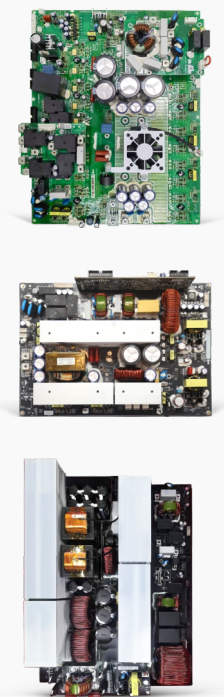
Stacked Home Energy Storage System



Energy Storage Battery



PCBA SKD



EU-Standard 230V

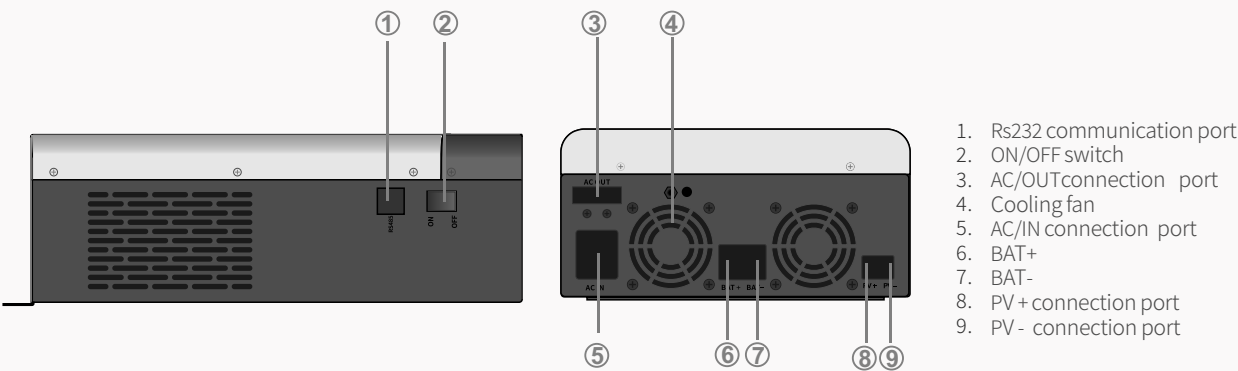


LF-H-1.2K-12V-EU LF-H-2.2K / 4.2K-24V-EU

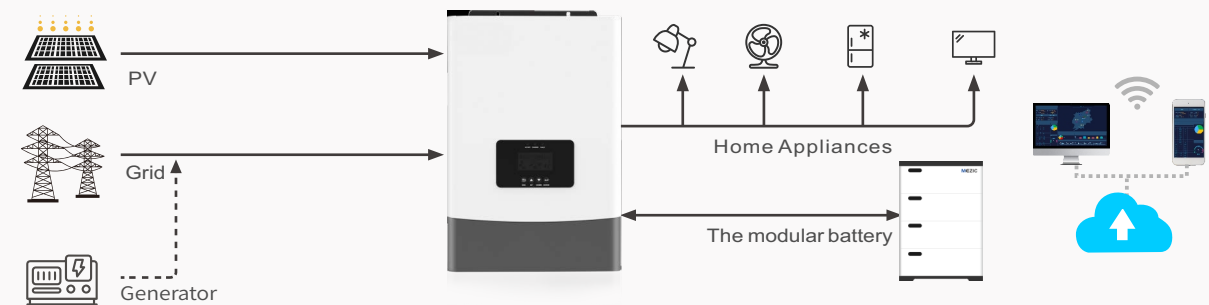
EU-Standard Hybrid Inverter

- Features segmented charging and discharging.
- Supports operation without a battery. Solar energy and mains power can supply power to load devices together.
- Equipped with energy-saving mode, reducing no-load losses.
- Offers four charging modes:: solar only, mains priority, solar priority, and hybrid charging.
- It has two output modes: mains bypass and inverter output, and has uninterrupted power supply function.
- It provides complete protection against short-circuit, over-voltage, under-voltage, overload, and backflow, ensuring 360° safety.
- Adopting fully digital voltage and current dual closed-loop control, advanced SPWM technology, and outputting pure sine waves.
- Enables remote monitoring and management via WiFi or GPRS.

Interface Description



Solar System Connection



Product Specifications

Model	LF-H-1.2K-12V-EU	LF-H-2.2K-24V-EU	LF-H-4.2K-24V-EU
Max. Power (W)	1200VA/1200W	2200VA/2200W	4200VA/4200W
AC Input			
Rated input voltage	230VAC		
Input Voltage	170~280VAC (UPS mode) ; 90~280VAC (family mode)		
Frequency	50Hz/60Hz (Automatic detection)		
Inverter Output			
Output voltage	230VAC±5%		
Peak power	2000VA	4000VA	8400VA
Efficiency	90%~93%		
Conversion time	≥10ms		
Output voltage waveform	Pure sine wave		
Battery DATA			
Battery voltage	12VDC	24VDC	24VDC
Charging Voltage	13.5VDC	27VDC	27VDC
Battery overvoltage protection value	16VDC	31VDC	32VDC
PV & AC charging			
Solar charging type	MPPT		
Max. input voltage of MPPT	102VDC		500VDC
MPPT power	500W	1200W	4000W
MPPT working range	17~80VDC	30~80VDC	120~450VDC
MPPT charging current	40A		80A
Charging current of mains power	20A		60A
Max. charging current	60A		140A
Certification standards			
Certification	CE(IEC62109-1,2), UL1741		
EMC certification level	EN61000-6-1, EN61000-6-3,FCC 15 class B		
Operating temperature range	-15°C to 55°C		
Storage temperature range	-25°C ~55°C		
Humidity range	5% to 95% (Coating protection)		
Noise	≤60dB		
Protection Degree	IP21		
Heat dissipation	Forced air cooling, intelligent variable speed fan		
Communication interface	RS232/RS485		
Dimensions (L * W * H)	338x120x110mm	338x120x110mm	456x300x125mm
Net Weight (kg)	7.8	8	9
Optional function			
Parallel function	☐ YES ☐ NO		
WIFI function	☐ YES ☐ NO		
Grid anti backflow CT	☐ YES ☐ NO		



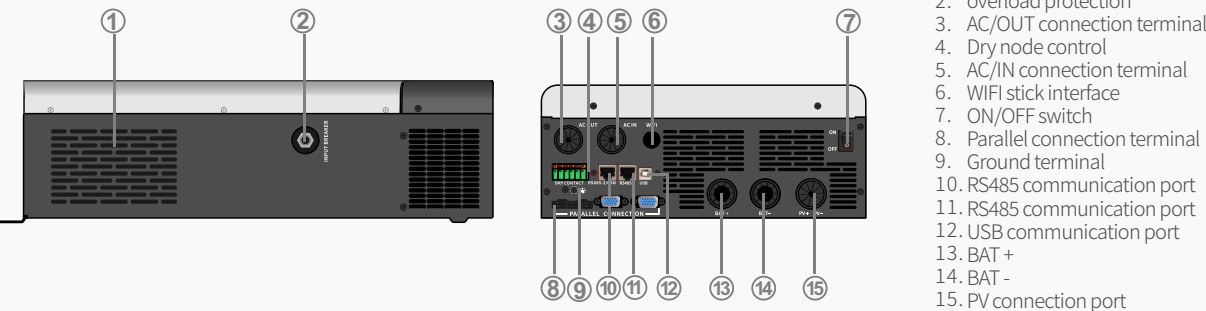
EU-Standard 230V



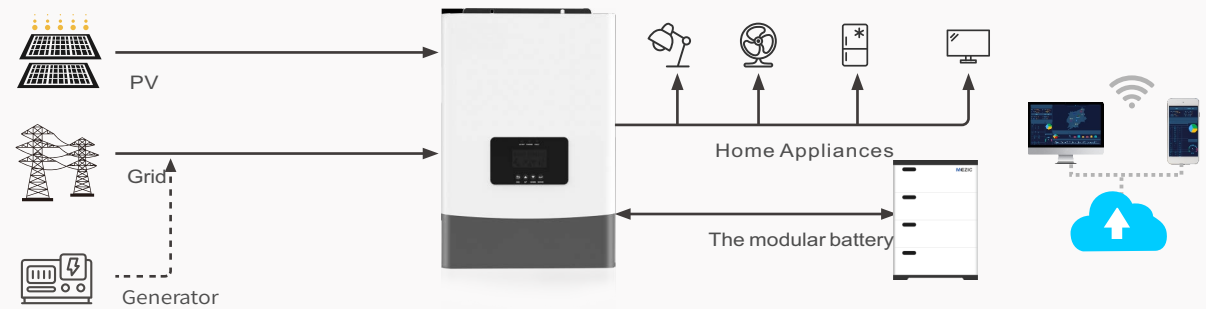
LF-H-6.2K/ 12K-48V-EU
EU-Standard Hybrid Inverter

- Features segmented charging and discharging.
- Anti backflow grid connection function (photovoltaic mixed power supply), can set grid connection mode.
- Supports use without battery. Solar energy and mains power can supply power to load devices together.
- Equipped with energy-saving mode functions, reducing no-load losses.
- There are 4 charging modes to choose from: solar only, mains priority, solar priority, and hybrid charging.
- Equipped with dual activation function of lithium battery, it can be triggered by connecting either mains or photovoltaic power source.
- It has two output modes: mains bypass and inverter output, and has uninterrupted power supply function.
- It provides complete protection against short-circuit, over-voltage, under-voltage, overload, and backflow, ensuring 360° safety.
- Adopting fully digital voltage and current dual closed-loop control, advanced SPWM technology, and outputting pure sine waves.
- Enables remote monitoring and management via WiFi or GPRS.

Interface Description



Solar System Connection



Product Specifications

Model	LF-H-6.2K-48V-EU	LF-H-12K-48V-EU
Parallel mode		
Permitted parallel number	1~6	1~6
AC mode		
Rated input voltage	230Vac ±5%	230Vac ±5%
Input voltage range	170~280VAC (UPS mode) ; 90~280VAC (family mode)	
Frequency	50Hz/60Hz (Auto detection)	
Frequency Range	47±0.3Hz~55±0.3Hz (50Hz); 57±0.3Hz~65±0.3Hz (60Hz);	
Overload/short circuit protection	Circuit breaker	
Efficiency	>95%	
Conversion time	≥10ms	
AC reverse protection	Yes	
Maximum bypass overload current	40A	60A
Inverter mode		
Output voltage waveform	Pure sine wave	
Rated output power (VA/W)	6200VA/6200W	12000VA/12000W
Power factor	1	
Rated output voltage (Vac)	230Vac	
Output voltage error	±5%	
Output frequency range (Hz)	50Hz±0.3Hz/60Hz±0.3Hz	
Maximum Efficiency	>92%	>93%
Overload protection	(102% < load <125%) ±10%: report error and turn off the output after 5 minutes; (125% < load < 150%) ± 10%: report error and turn off the output after 10 seconds; Load >150% ±10%: report error and turn off the output after 5 seconds;	
Peak power	12000VA	24000VA
Loaded motor capability	4HP	8HP
Output short circuit protection	Circuit breaker	
Bypass circuit breaker specification	40A	63A
Rated battery input voltage	48V (Minimum starting voltage 44V)	
Battery voltage range	40.0Vdc~60Vdc±0.6Vdc (Undervoltage alarm/shutdown voltage/overvoltage alarm /overvoltage recovery... setttable on LCD screen)	
Power saving mode self-consumption	Load≤25W	Load≤50W
AC charging		
Battery type	Lead acid or lithium battery	
Maximum charge current(can be set)	80A	150A
Charge current error	±5Adc	
Charge voltage range	40 ~60Vdc	
Short circuit protection	Circuit breaker and blown fuse	
Circuit breaker specifications	40A	63A
PV charging		
MPPT way	1	2
Maximum PV open circuit voltage	500Vdc	
PV operating voltage range	120Vdc~500Vdc	120Vdc~500Vdc
MPPT voltage range	90Vdc~450Vdc	90Vdc~450Vdc
Battery voltage range	40-60Vdc	
Maximum PV input power	6200W	6000WX2
Maximum PV input current	22A	22A+22A
Charging short circuit protection	Blown fuse	
Wiring protection	Reverse polarity protection	
Hybrid Max charing current specifications (AC +PV)		
Max charging current(can be set)	0-100A	0-150A
Certified specifications		
Certification	CE(IEC62109-1,2), UL1741	
EMC certification level	EN61000-6-1, EN61000-6-3,FCC 15 class B	
Operating temperature range	-10°C to 55°C	
Storage temperature range	-25°C ~60°C	
Humidity range	5% to 95% (Conformal coating protection)	
Noise	≤60dB	
Protection Degree	IP21	
Heat dissipation	Forced air cooling, variable speed of fan	
Communication interface	USB/RS485(/WiFi/GPRS)/ Dry node control	
Product Size/Packaging Size (L*W*D)	456x300x125/520x360x190mm	579x353x147mm/620x505x205mm
Net Weight (kg)	10	19.5
Optional function		
Parallel function	☐ YES	☐ NO
WIFI function	☐ YES	☐ NO
Grid anti backflow CT	☐ YES	☐ NO



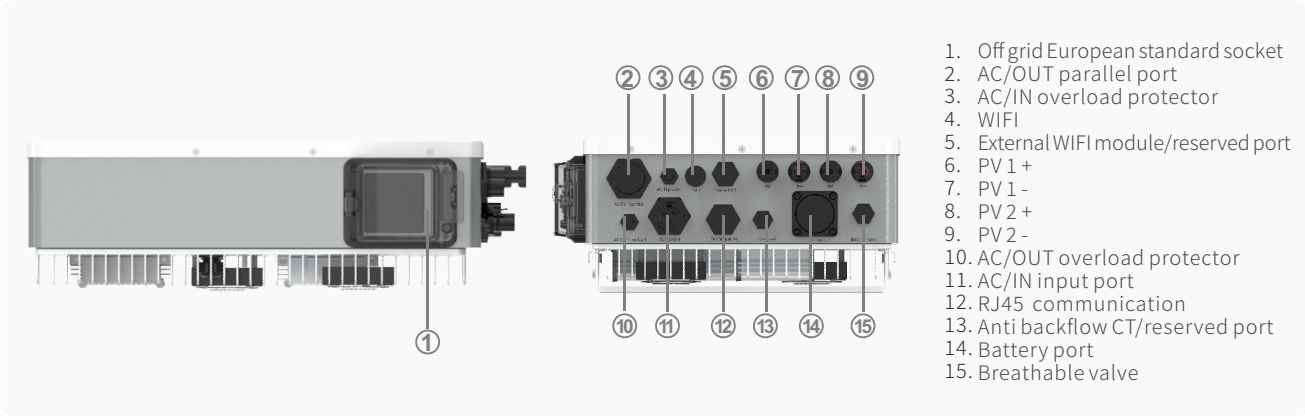
EU-Standard 230V



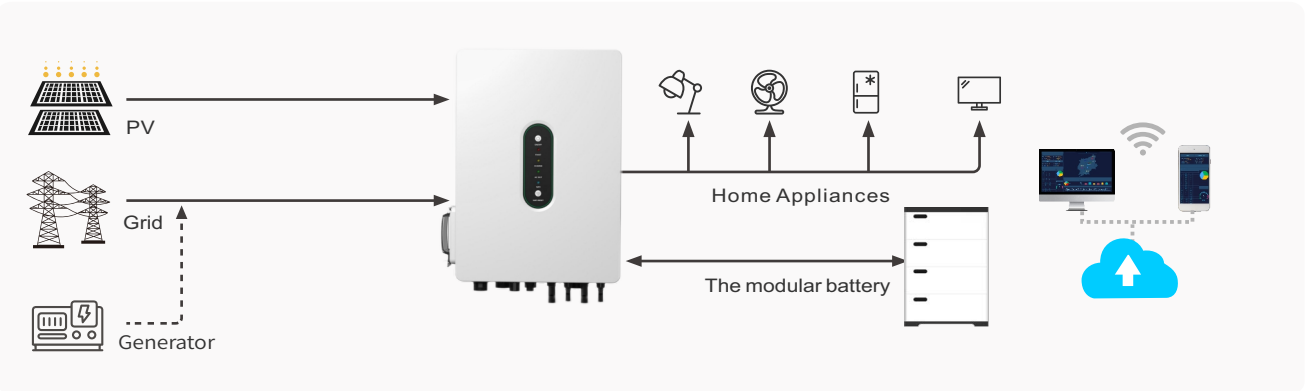
LF-H-1.6K/ 24K-48V-EU IP66 Balcony Storage Hybrid Inverter

- Super fast charging
- Efficient MPPT
- High efficiency of charging and discharging
- Smart Control via Mobile APP
- Charging mode output protection
- Battery undervoltage wake-up (Mains/MPPT wake-up)
- IP66 high protection design
- On-grid/Phase separation
- Excellent load adaptability
- Adopting DSP digital control technology

Interface Description



Solar System Connection



Product Specifications

Model	LF-H-1.6K-48V-EU		LF-H-2.4K-48V-EU	
Parallel mode (function reserved)				
Permitted Parallel number	2-6 Units			
AC mode				
Rated input voltage	220/230Vac			
Input voltage range	(170Vac~280Vac)±2% (90Vac-280Vac)±2%			
Frequency	50Hz/ 60Hz (Auto detection)			
Maximum efficiency	>94%			
Conversion time	≥10ms			
AC reverse protection	Yes			
Maximum bypass overload current	16A			
Grid-connected power	1600		2400	
Inverter mode				
Output voltage waveform	Pure sine wave			
Rated output power (VA)	1600		2400	
Rated output power (W)	1600		2400	
Power factor	1			
Rated output voltage (Vac)	230Vac			
Output voltage error	±1%			
Output frequency range (Hz)	50Hz±0.3Hz/60Hz±0.3Hz			
Maximum Efficiency	>94%			
Peak power	3200VA		4800VA	
Output short circuit protection	Circuit breaker (16A)			
Bypass circuit breaker specification	16A			
Rated battery input voltage	51.2V/48V			
AC charging				
Battery type	Lead-acid or lithium batteries			
Maximum Charge current (can be set)	35A		50A	
Charge current error	±5Adc			
Charge voltage range	44~56.8Vdc			
Short circuit protection	blown fuse			
Circuit breaker specifications	16A			
PV charging				
Maximum PV open circuit voltage	100Vdc			
PV operating voltage range	10-100Vdc			
Battery voltage range	44-56.8Vdc			
Maximum PV input power	800W*2		800W*2	
Maximum PV input current	16A*2			
PV charging current range(can be set)	0-32A			
Charging short circuit protection	blown fuse			
Wiring protection	Reverse polarity protection			
Hybrid Max charging current specifications (PV+AC)				
Max charging current(can be set)	0-35A		0-50A	
Certified specifications				
Certification	CE(IEC62109-1,2)			
EMC certification level	EN61000, C2			
Operating temperature range	-15°C to 55°C			
Storage temperature range	-25°C ~ 60°C			
Humidity range	5% to 95% (Three anti-paint protection)			
Noise	≤35dB		≤45dB	
Protection Degree	IP66			
Heat dissipation	Natural Cooling		Outside the radiator with fan air cooling	
Communication interface	RS485(WiFi/GPRS)			
Size (L*W*H)	380mm*270mm*120mm(With heat sink and case)		480mm*370mm*220mm	
Net Weight (kg)	7.5		8.5	
Optional function				
Parallel function	☐ YES		☐ NO	
WIFI function	☐ YES		☐ NO	
Grid anti backflow CT	☐ YES		☐ NO	

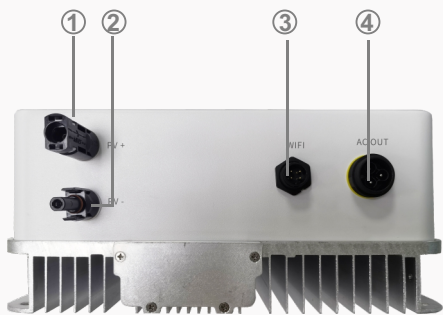


LF-G-3.6K/ 5K-M1-EU

IP66 Single Phase On-Grid Solar Inverter

- 150% DC Input Oversizing
- Wide MPPT voltage range: 50V-550V
- Max. input current per string: 20A, Compatible with high power modules
- Smart I-V Curve Diagnosis Function: locate PV string faults accurately and automatically detect faults
- Intelligent Fault Detection: AC side voltage and current waveforms real-time recorded, fast fault location
- Support RS485/WiFi/4G: remote monitoring and operation via PC or mobile phones
- IP66 Protection Degree: support outdoor installation
- DC & AC Type II SPD: prevent lightning damage
- AFCI Function (Optional): when an arc-fault is detected the inverter immediately stops operation

Interface Description



1. PV connection +
2. PV connection -
3. WIFI stick interface
4. AC OUT connection terminal

Solar System Connection



Product Specifications

Model	LF-G-3.6K-M1-EU	LF-G-5K-M1-EU
Input(DC))		
Max. Input Power	5.52 KW	7.5KW
Max. Input Voltage	600V	
Start Voltage	50V	
Rated Input Voltage	360V	
MPPT Voltage Range	50-550V	
Number of MPPT Trackers / String per MPPT	1/1	
Max. Current per MPPT	20A	
Max. Short Circuit Current per MPPT	26A	
Output(AC)		
Max. Output Current	16A	22.7A
Rated Output Power	3.68KW	5KW
Max. Output Power	3.68KVA	5KVA
Rated Grid Frequency	50/60Hz	
Rated Grid Voltage	220Vac/230Vac/240Vac	
Power Factor	0.8 lead... 0.8 lag	
THDi	<3%(Rated power)	
Efficiency		
Max. Efficiency	97.8%	
European Efficiency	97.3%	
MPPT Efficiency	99.9%	
Protection		
DC Reverse Polarity Protection	Yes	
Anti-islanding Protection	Yes	
AC Short Circuit Protection	Yes	
Residual Current Monitoring Unit	Yes	
Insulation Resistance Monitoring	Yes	
Ground Fault Monitoring	Yes	
Grid Monitoring	Yes	
PV String Monitoring	Yes	
Surge Protection	Type II	
AFCI Protection	Optional	
General Data		
Dimensions(L*W*H)	270x250x145 mm	
Net Weight(kg)	13	
Operating Temperature Range	-15°C to 55°C	
Cooling Method	Natural	
Protection Degree	IP66	
Max. Operating Altitude	4000m	
Relative Humidity	0~100%	
Topology	Transformerless	
Night Power Consumption	<1 w	
Communication	RS485/USB,4G/WIFI (Optional)	
Standard Compliance		
Certification	G98/G99,VDE0126,VDE0124, EN50549-1/2,CEI 0-21/CEI 0-16,AS4777.2,IEC62116	
Optional function		
Parallel function	☐ YES	☐ NO
WIFI function	☐ YES	☐ NO
Grid anti backflow CT	☐ YES	☐ NO

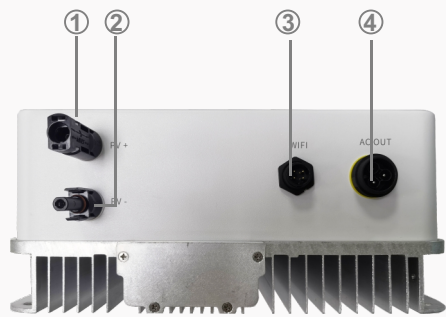
EU-Standard 230V



LF-G-3.6K/ 5K/ 8K/ 10K-M2-EU
IP66 Single Phase On-Grid Solar Inverter

- MPPT Trackers , Max. input current per string:20A
- 150% DC Input Oversizing
- Compatible with high power modules
- Smart I-V Curve Diagnosis Function: locate PV string faults accurately and automatically detect faults
- Intelligent Fault Detection: AC side voltage and current waveforms real-time recorded, fast fault location
- Support RS485/WiFi/4G: remote monitoring and operation via PC or mobile phones
- IP66 Protection Degree: support outdoor installation
- DC & AC Type II SPD: prevent lightning damage
- AFCI Function (Optional): when an arc-fault is detected the inverter immediately stops operation

Interface Description



1. PV connection +
2. PV connection -
3. WIFI stick interface
4. AC OUT connection terminal

Solar System Connection



Product Specifications

Model	LF-G-3.6K-M2-EU	LF-G-5K-M2-EU	LF-G-8K-M2-EU	LF-G-10K-M2-EU
Input(DC)				
Max. Input Power	5.52 KW	7.5KW	12KW	15KW
Max. Input Voltage	600V			
Start Voltage	80V			
Rated Input Voltage	360V			
Full-load MPPT Voltage Range	135-480V	170-480V	250-550V	290-550V
MPPT Voltage Range	80V~560V			
Number of MPPT Trackers	2			
Number of String per MPPT	1/1			
Max. Current per MPPT	20A			
Max. Short Circuit Current per MPPT	26A			
Output(AC)				
Max. Output Current	16A	25A	40A	45.5A
Rated Output Power	3.68KW	5KW	8KW	10KW
Max. Output Power	3.68KVA	5.5KVA	8.8KVA	10KVA
Rated Grid Frequency	50/60Hz			
Rated Grid Voltage	220Vac/230Vac/240Vac			
Power Factor	0.8 lead... 0.8 lag			
THDi	<3%(Rated power)			
Efficiency				
Max. Efficiency	98.1%	98.3%	98.1%	
European Efficiency	97.3%	97.4%	97.3%	
MPPT Efficiency	99.9%	99.9%	99.9%	
Protection				
DC Reverse Polarity Protection	Yes			
Anti-islanding Protection	Yes			
AC short Circuit Protection	Yes			
Residual Current Monitoring Unit	Yes			
Insulation Resistance Monitoring	Yes			
Ground Fault Monitoring	Yes			
Grid Monitoring	Yes			
PV String Monitoring	Yes			
Surge Protection	Type II			
AFCI Protection	Optional			
General Data				
Dimensions (L*W*H)	380x380x160 mm			
Net Weight(kg)	13			
Operating Temperature Range	-15°C to 55°C			
Cooling Method Natural Smart Cooling	Natural			
Protection Degree	IP66			
Max. Operating Altitude	4000M			
Relative Humidity	0~100%			
Topology	Transformerless			
Night Power Consumption	<1 W			
Communication	RS485/USB,4G/WIFI (Optional)			
Standard Compliance				
Certification	IEC/EN 62109-1/2,IEC/EN 61000-6-1/3,EN50549,IEC61727/IEC62116,CEI0-21,C10/C11, G98/G99,RD244,UNE21701,UNE217002,TOR Erzeuger, AS4777, ABNT,NB/T320004			
Optional function				
Parallel function	☐ YES		☐ NO	
WIFI function	☐ YES		☐ NO	
Grid anti backflow CT	☐ YES		☐ NO	

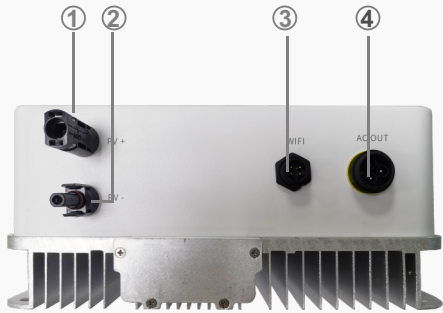
EU-Standard 230V



LF-G-3K/ 5K/ 8K/ 10K/ 12K/ 15K-EU
IP66 Three Phase On-Grid Solar Inverter

- Three Phase On-Grid Solar Inverter
- 2MPPT Trackers,high single circuit tracking accuracy, fast dynamic response
- 160% DC Input Oversizing
- Wide MPPT voltage range:140V-1000V
- Compatible with high power modules
- Smart I-V Curve Diagnosis Function: locate PV string faults accurately and automatically detect faults
- Intelligent Fault Detection: AC side voltage and current waveforms real-time recorded, fast fault location
- Support RS485(WIFI/GPRS/Ethernet optional): remote monitoring and operation via PC or mobile phones
- IP66 Protection degree: support outdoor installation
- DC&AC Type II SPD: prevent lightning damage
- AFCI Function (Optional): when an arc-fault is detected the inverter immediately stops operation

Interface Description



- 1. PV connection +
- 2. PV connection -
- 3. WIFI stick interface
- 4. AC OUT connection terminal

Solar System Connection



Product Specifications

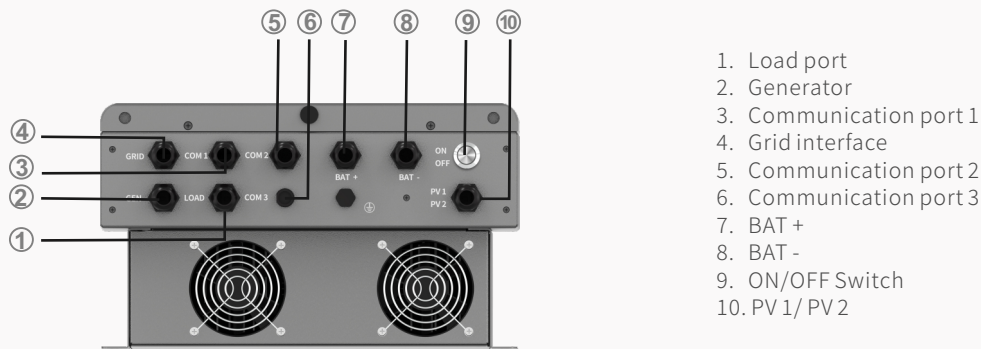
Model	LF-G-3K-EU	LF-G-5K-EU	LF-G-8K-EU	LF-G-10K-EU	LF-G-12K-EU	LF-G-15K-EU
Input(DC)						
Max. Input Power (for module STC)	4.5 KW	7.5KW	12KW	15KW	18KW	22.5KW
Max. DC Voltage	1100V					
Satrt-up Voltage	180V					
Nominal Voltage	600V					
MPPT Voltage Range	140-1000V					
No. of MPPT Trackers	2					
No. of PV Strings per MPPT Tracker	1/1	1/2				
Max. Input Current per MPPT Tracker	16A/16A	16A/32A				
Output(AC)						
Nominal Output Power	3KW	5KW	8KW	10KW	12KW	15KW
Max. AC Appatent Power	3.3KVA	5.5KVA	8.8KVA	11.1KVA	13.2KVA	16.5KVA
Nominal AC Voltage(Range)	230/400V(340-440V)					
AC Grid Frequency(Range)	50/60Hz(45~55/55~65Hz)					
Max. Output Current(PF=0.9)	4.8A	8.0A	12.8A	15.9A	19.1A	23.9A
Adjustable Power Factor	0.8 lead... 0.8 lag					
THDi	<3%					
AC Grid Connection Type	3L/N/PE or 3L/PE					
Efficiency						
Max. Efficiency	98.4%	98.5%				98.6%
European Efficiency	97.5%	98%				98.1%
MPPT Efficiency	99.9%	99.9%				99.9%
Protection						
Anti Reverse Power Function	Optional					
DC Reverse Polarity Protection	Yes					
DC Switch	Yes					
AC/DC Surge Protection	Type II					
Insulation Resistance Monitoring	Yes					
AC Short-circuit Protection	Yes					
Grid Monitoring	Yes					
Anti-islanding Protection	Yes					
Residual-current Monitoring Unit	Yes					
AFCI Protection	Optional					
General Data						
Dimensions(L*W*H)	440X370X140MM					
Net Weight	13KG					
Operating Temperature Range	-15°C to 55°C					
Relative Humidity	0~100%					
Altitude	4000米 (>2000M derating)					
Self-consumption at Night	<1 w					
Topology	Transformerless					
Cooling	Natural cooling					
Protection Degree	IP66					
DC Connection	H4/MC4 (Optional)					
AC Connection	Connector					
Guarantee Period	5,10years (Selectable)					
Communication	RS485/USB,4G/WIFI(Optional)					
Criteria Met						
Grid Connection Standards	G98/G99,VDE0126,VDE0124, EN50549-1/2,CEI 0-21/CEI 0-16,AS4777.2,IEC62116,PEA,MEA					
Safety Standards	IEC62109-1/2,IEC62116,IEC61727,IEC61683,IEC60068(1,2,14,30)					
EMC Standards	EN61000-6-1/2/3/4					
Optional function						
Parallel function	☐ YES ☐ NO					
WIFI function	☐ YES ☐ NO					
Grid anti backflow CT	☐ YES ☐ NO					



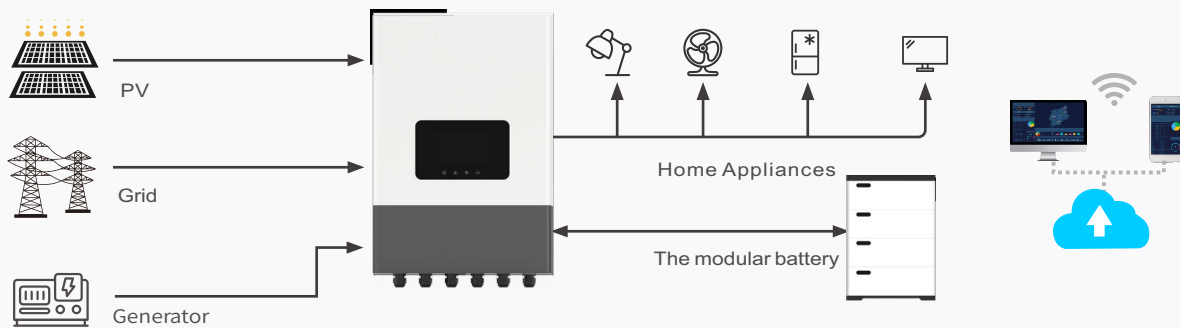
LF-SPH-6K-48V-EU
IP66 Single Phase Hybrid Inverter

- Advanced MPPT with up to 99.9% efficiency
- Up to 16A+16A PV input current
- Comprehensive security from hardware to software
- Multiple safety approvals
- Up to 100A charging current
- Supports Li-ion battery BMS communication
- Outputs high-quality pure sine wave AC power
- With IP66 protection degree
- Easy to install and simple to use
- Exclusive Li-ion battery BMS dual activation
- Time-slot function to save cost with peak-valley

Interface Description



Solar System Connection



Product Specifications

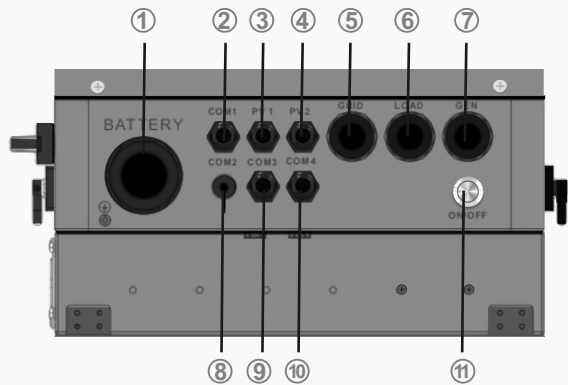
Model	LF-SPH-6K-48V-EU
OFF-GRID OUTPUT	
Rated Output Power	6000W
Max. Peak Power	12,000VA
Rated Output Voltage	230Vac, single phase
Load Capacity of Motors	4HP
Output Frequency Range	50Hz ± 0.3Hz/60Hz ± 0.3Hz
Conversion time	≥10ms
ON-GRID OUTPUT	
Rated Output Power	6000W
Max. Apparent Power	12000VA
Rated. Output Current	26A
Max. Output Current	28.6A
THDI	< 3%
Power Factor	0.8 leading to 0.8 lagging
Rated Voltage	230Vac, single phase
Frequency	50Hz/60Hz
BATTERY	
Battery Type	Lead-acid / Li-ion / User-defined
Rated Battery Voltage	48V (minimum start-up voltage 44V)
Battery Voltage Range	40~60Vdc
Max. PV Charging Current	100A
Max. Utility Charging Current	60A
Max. Generator Charging Current	40A
PV INPUT	
Num. of MPPT	2
Max. Input Power	4500W+4500W
Max. Input Current	16A+16A
Max. Short-circuit Current	27A+27A
Max. Open-circuit Voltage	500Vdc+500Vdc
MPPT Operating Voltage Range	120~450Vdc
UTILITY / GENERATOR INPUT	
Input Voltage Range	90~280Vac
Input Frequency Range	50/60Hz
Bypass Overload Current	40A
EFFICIENCY	
MPPT Tracking Efficiency	99.9%
Max. Efficiency	97.5%
GENERAL	
Num. of Parallel	1~6 units
Dimension	556*345*182mm
Weight	20kg
Protection Degree	IP66
Operating Temperature Range	-25~60°C
Humidity Range	0% ~ 100%
Noise	<60dB
Cooling Method	heatsink & intelligent air cooling
Warranty	5 years
COMMUNICATION	
Internal Interface	Rs485 / CAN / USB / Dry contact
External Module (optional)	Wi-Fi / GPRS
CERTIFICATION	
On-grid Certification	EN50549-1, G99, NRS-097, VDE-ARN-4105, CEI021, UNE217002
Safety	IEC62109-1, IEC62109-2
EMC	EN61000-6-1, EN61000-6-3, FCC15 classB
RoHS	Yes
Optional function	
Parallel function	☐ YES ☐ NO
WIFI function	☐ YES ☐ NO
Grid anti backflow CT	☐ YES ☐ NO



LF-SPH-12K-48V-EU
IP66 Single Phase Hybrid Inverter

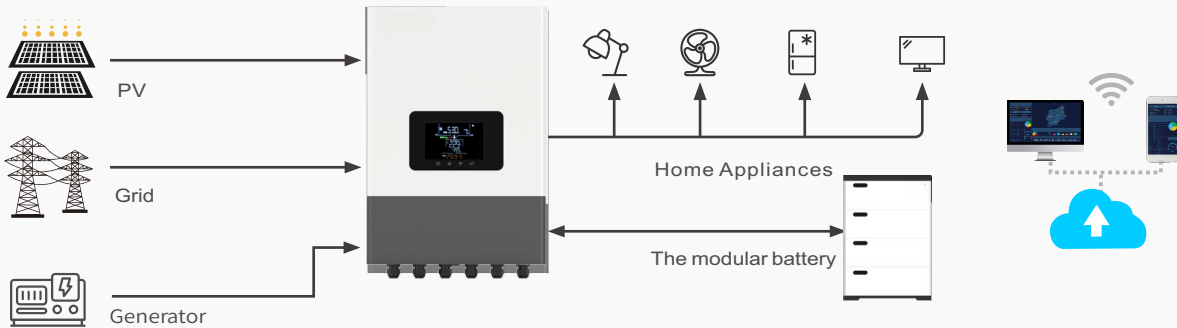
- Advanced MPPT with up to 99.9% efficiency
- Up to 22A X 2 PV input current
- With software and hardware security protection
- Multiple safety approvals
- Up to 200A charging current
- Supports Li-ion battery BMS communication
- Outputs high-quality pure sine wave AC power
- With IP66 protection degree
- Easy to install and simple to use
- Exclusive Li-ion battery BMS dual activation
- Time-slot function to save cost with peak-valley

Interface Description



- 1. Battery
- 2. Communication port 1
- 3. PV 1
- 4. PV 2
- 5. Grid interface
- 6. Load port
- 7. Generator
- 8. Communication port 2
- 9. Communication port 3
- 10. Communication port 4
- 11. ON/OFF Switch

Solar System Connection



Product Specifications

Model	LF-SPH-12K-48V-EU
INVERTER OUTPUT	
Rated Output Power	12000W
Max. Peak Power	24000VA
Rated Output Voltage	230Vac single-phase / three-phase (parallel)
Load Capacity of Motors	6HP
Output Frequency	50/60Hz
Number of Parallel	1~6 units
AC OUTPUT (Grid)	
Rated Output Power	12000W
Max. Apparent Power	12000VA
Max. Output Current	54.6A
Rated Output Voltage	230Vac
THDI	< 3%
Power Factor	0.8 leading to 0.8 lagging
Rated Voltage	230Vac, single phase
Frequency	50Hz/60Hz
BATTERY	
Battery Type	Lead-acid / Li-ion / User-defined
Rated Battery Voltage	48V
Battery Voltage Range	40~60Vdc
Max. PV Charging Current	120A
Max. Utility Charging Current	200A
Max. Generator Charging Current	200A
PV INPUT	
Num. of MPPT	2
Max. Input Power	6600W+6600W
Max. Input Current	22A+22A
Max.Voltage of Open Circuit	500Vdc+500Vdc
MPPT Voltage Range	125-425Vdc
MAINS/GENERATOR INPUT	
Input Voltage Range	90~280Vac
Frequency Range	50/60Hz
Bypass Overload Current	63A
EFFICIENCY	
MPPT Tracking Efficiency	99.9%
Max. Efficiency	97.5%
European Efficiency	97%
GENERAL	
Dimensions	Dimensions 670*440*240mm
Weight	37kg
Protection Degree	IP66
Operating Temperature Range	-25~60°C
Humidity range	0~100%
Cooling Method	Forced air cooling
COMMUNICATION	
Embedded Interfaces	Rs485 / CAN / USB / Dry contact
External Module (optional)	Wi-Fi / GPRS
CERTIFICATION	
Safety	IEC62109-1, IEC62109-2
EMC	EMC EN61000-6-1, EN61000-6-3, FCC 15 class B
RoHS	Yes
Optional function	
Parallel function	☐ YES ☐ NO
WIFI function	☐ YES ☐ NO
Grid anti backflow CT	☐ YES ☐ NO



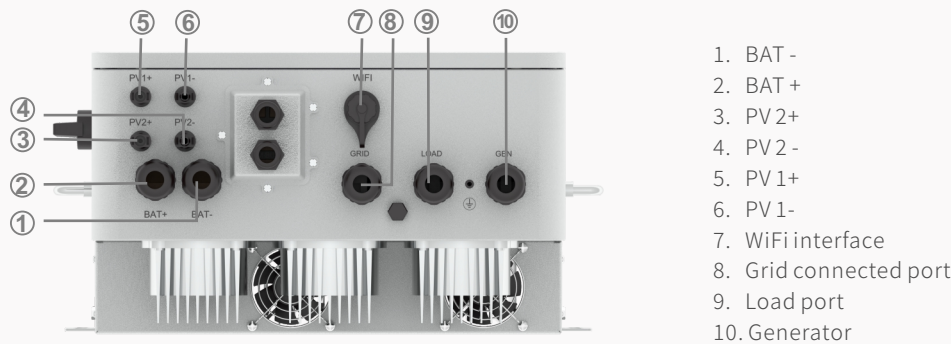
EU-Standard 230V



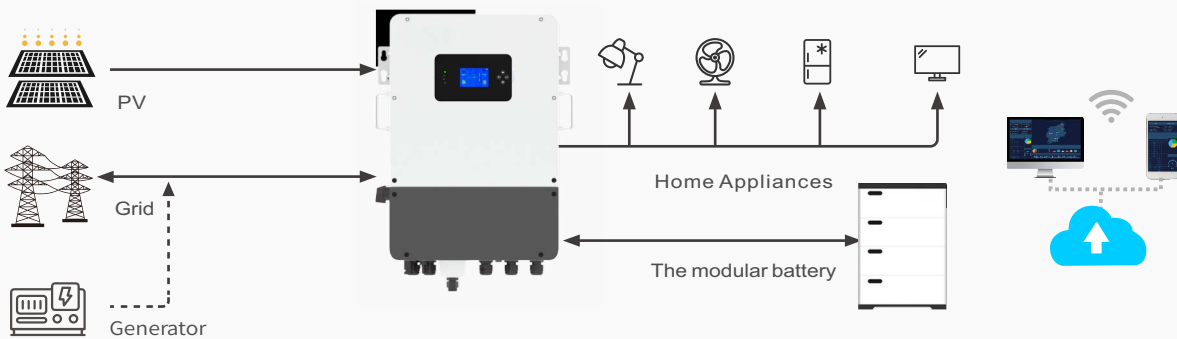
LF-TH-12K-48V-EU
IP66 Three-phase hybrid inverter

- Supports up to 12 units in parallel operation, meeting the demands of small-scale industrial and commercial energy storage applications.
- Grid-to-off-grid switching time is less than 10 ms, ensuring uninterrupted power supply to critical equipment.
- Allows configuration of up to 6 battery charging time periods and cut-off thresholds.
- Supports maximum power charging and discharging modes.
- Compatible with diesel generators for battery charging and load power supply.
- High system efficiency with intelligent air-cooling to prolong overall service life.
- Integrated communication interfaces including RS485, CAN, and WiFi (via App/PC Cloud monitoring).
- Smart load management, CT sensing, ATS support, and optional GPRS module for remote connectivity.

Interface Description



Solar System Connection



Product Specifications

Model	LF-TH-12K-48V-EU
Battery Input Data	
BatteryType	Lead-acid & LiFe PO4
Battery Voltage Range (V)	40~60
Max. Charging Current (A)	240
Max. Discharging Current (A)	240
External Temperature Sensor	3 Stages / Equalization
Charging Curve	YES
Charging Strategy for Li-Iron Batter	Self-adaptation to BMS
PV String Input Data	
Max. DC input Power(W)	15600
Rated PV Input Voltage (V)	550(160-800)
Start-up Voltage (V)	200-650
MPPT Voltage Range (V)	350-650
Full Load DC Voltage Range (V)	160V
PV input Current(A)	26+13
Max. PV Isc (A)	34+17
No. of MPPT Trackers	2
Number of Strings per MPPT Tracker	1+1
AC input/Output Data	
Rated AC Output Active Power (W)	12000
Max AC Output Active Power (W)	13200
AC Input/Output Rated Current (A)	18.2/17.4
Max AC input/Output Current (A)	20/19.1
Max. Three-phase Unbalanced Output Current(A)	27.3/26.1
Max. Output short circuit current(A)	75
Max. Continuous AC Passthrough(A)	45
Peak Power (off grid)	2 times of rated power, 10S
Power Factor	0.8 leading to 0.8 lagging
Output Frequency and Voltage	50/60Hz; 3L/N/PE; 220/380Vac, 230/400Vac
Grid Type	Three Phase
Total Harmonic Distortion (THDi)	<3% (of nominal power)
DC Current Injection	<0.5% In
Efficiency	
Max. Efficiency	97.60%
Euro Efficiency	97.0%
MPPT Efficiency	>99.0%
Protection	
Anti-islanding Protection	Integrated
PV String Input Reverse Polarity Protection	Integrated
Insulation Resistor Detection	Integrated
Residual Current Monitoring Unit	Integrated
Output Over Current Protection	Integrated
Output Shorted Protection	Integrated
Surge Protection	Dc Type II / Ac Type II
Over Voltage Category	Dc Type II / Ac Type III
Certifications and Standards	
Grid Regulation	VDE4105,EC61727/62116,VDE0126,AS4777.2,CE10 21,EN50549-1,G98,G99, C10-11,UNE217002,NBR16149/NBR16150
Safety EMC/Standard	IEC/EN 61000-6-1/2/3/4,IEC/EN 62109-1,IEC/EN 62109-2
General Data	
Operating Temperature Range (°c)	-40~60°C
Cooling	Smart cooling
Noise(dB)	≤50 dB
Communication with BMS	RS485; CAN
Monitor mode	WiFi+APP
Net Weight (kg)	31
Cabinet Size(WxHxD mm)	680x440x255
Protection Degree	IP66
Installation Style	Wall-mounted
Optional function	
Parallel function	☐ YES ☐ NO
WiFi function	☐ YES ☐ NO
Grid anti backflow CT	☐ YES ☐ NO



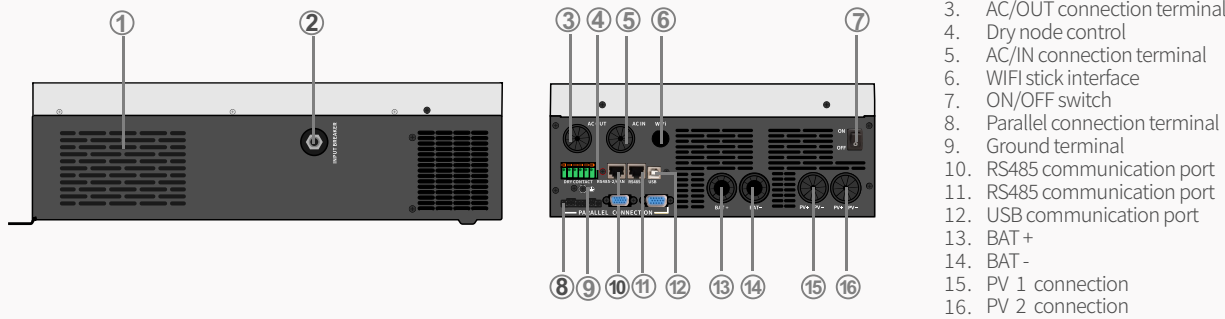
US-Standard 120V



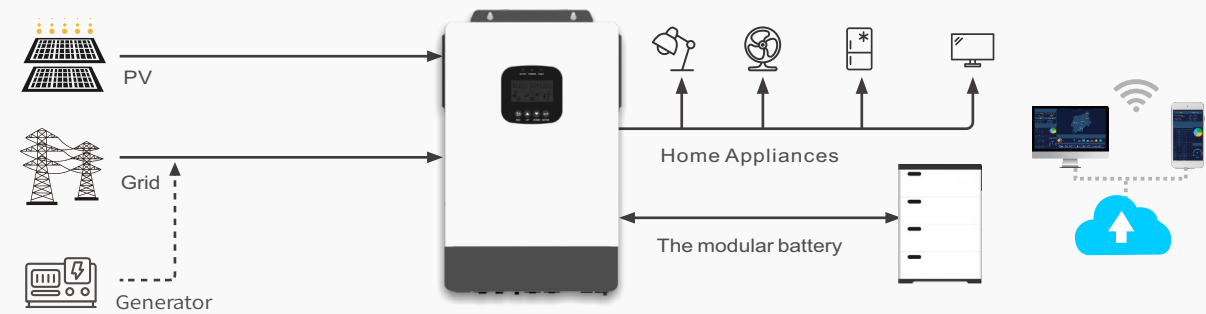
LF-H-3.6K/ 6.5K-48V-US US-Standard Hybrid Inverter

- Features segmented charging and discharging.
- Anti-countercurrent grid-connected function (photovoltaic hybrid power supply), grid-connected mode can be set.
- Supports operation without a battery. Solar and utility grid can power loads at the same time.
- Power saving mode available to reduce no-load loss.
- Offers four charging modes: Only Solar, Mains Priority, Solar Priority and Mains & Solar hybrid charging.
- With dual activation function of lithium battery, it can be triggered by any power supply of the mains/photovoltaic.
- Two output modes: mains bypass and inverter output; uninterrupted power supply.
- Complete protections, including over voltage and under voltage protection, overload protection, reverse protection, etc ,360° all-round protection with a number of protection functions.
- Full digital voltage and current double closed loop control, advanced SPWM technology, output of pure sine wave.
- WiFi or GPRS: can monitor system permissions remotely.

Interface Description



Solar System Connection



Product Specifications

Model	LF-H-3.6K-48V-US	LF-H-6.5K-48V-US
Parallel mode		
Permitted parallel number	1~6	1~6
AC mode		
Rated input voltage	120Vac ±5%	
Input voltage range	(90Vac~140Vac)±2%	
Frequency	50Hz/60Hz (Auto detection)	
Frequency Range	47±0.3Hz~55±0.3Hz (50Hz); 57±0.3Hz~65±0.3Hz (60Hz);	
Overload/short circuit protection	Circuit breaker	
Efficiency	>95%	
Conversion time	≥10ms	
AC reverse protection	Yes	
Maximum bypass overload current	40A	60A
Inverter mode		
Output voltage waveform	Pure sine wave	
Rated output power (VA/W)	3600VA/3600W	6500VA/6500W
Power factor	1	
Rated output voltage (Vac)	120Vac	
Output voltage error	±5%	
Output frequency range (Hz)	50Hz±0.3Hz/60Hz±0.3Hz	
Maximum Efficiency	>91%	
Overload protection	(102% < load <110%) ±10%: report error and turn off the output after 5 minutes; (110% < load < 125%) ± 10%: report error and turn off the output after 10 seconds; Load >125% ±10%: report error and turn off the output after 5 seconds;	
Peak power	7200VA	12000VA
Loaded motor capability	2HP	5HP
Output short circuit protection	Circuit breaker	
Bypass circuit breaker specification	40A	63A
Rated battery input voltage	48V (Minimum starting voltage 44V)	
Battery voltage range	40.0Vdc~60Vdc±0.6Vdc (Undervoltage alarm/shutdown voltage/overvoltage alarm /overvoltage recovery... settable on LCD screen)	
Power saving mode self-consumption	Load≤25W	
AC charging		
Battery type	Lead acid or lithium battery	
Maximum charge current(can be set)	40A	120A
Charge current error	±5Adc	
Charge voltage range	40 ~60Vdc	
Short circuit protection	Circuit breaker and blown fuse	
Circuit breaker specifications	40A	63A
PV charging		
MPPT channels	1	2
Maximum PV open circuit voltage	300Vdc	
PV operating voltage range	120Vdc~300Vdc	
MPPT voltage range	90Vdc~260Vdc	
Battery voltage range	40-60Vdc	
Maximum PV input power	4500W	4500W+4500W
Maximum PV input current	22A	22A+22A
Wiring protection	Reverse polarity protection	
Hybrid Max charging current specifications (AC +PV)		
Max charging current(can be set)	0-80A	0-150A
Certified specifications		
Certification	CE(IEC62109-1,2), UL1741	
EMC certification level	En61000, C2/FCC15 CLASS B	
Operating temperature range	-15°C to 55°C	
Storage temperature range	-25°C ~60°C	
Humidity range	5% to 95% (Conformal coating protection)	
Noise	≤60dB	
Protection Degree	IP21	
Heat dissipation	Forced air cooling, variable speed of fan	
Communication interface	USB/RS485(/WiFi/GPRS)/ Dry node control	
Size (L*W*D)	415x280x100mm	550x365x130mm
Net Weight (kg)	7.8	21
Optional function		
Parallel function	☐ YES	☐ NO
WIFI function	☐ YES	☐ NO
Grid anti backflow CT	☐ YES	☐ NO

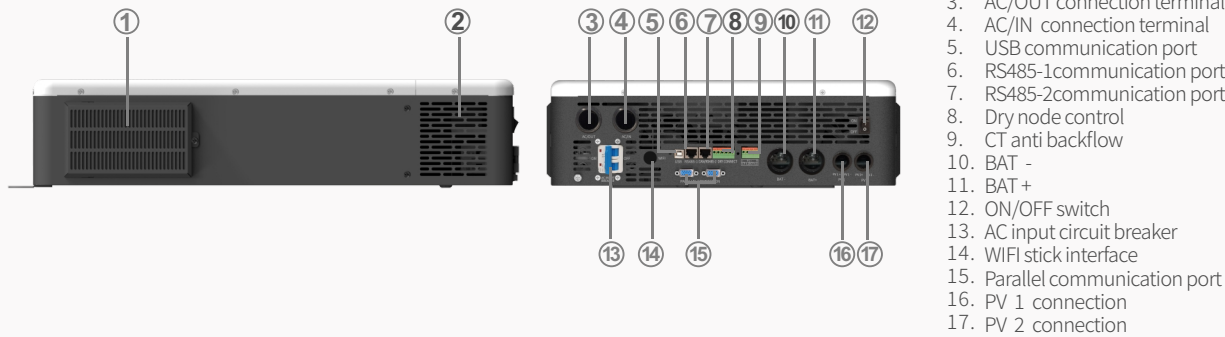
US-Standard 120V



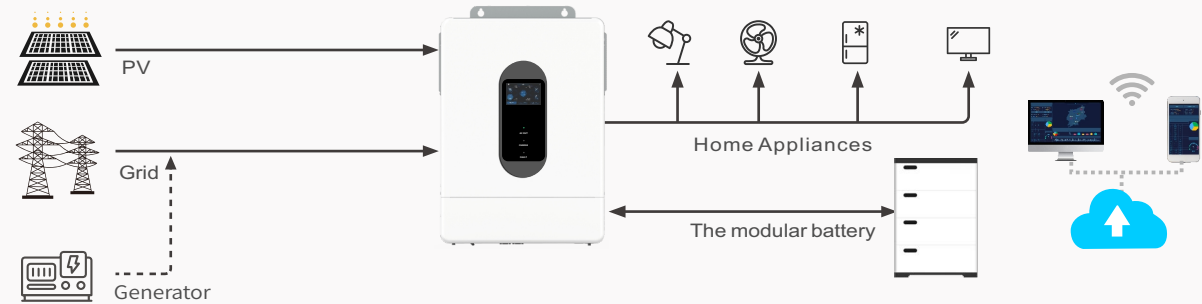
LF-H-7.2K/ 12K-48V-US
US-Standard Hybrid Inverter

- It has the function of sectional charge and discharge (can set the time period for battery charging or discharging).
- Anti feed-in, self-consumption function (can be hybrid power supply from solar, battery and grid).
- With dual activation function of lithium battery. It can be triggered by any power supply of the mains or solar (when the li-ion battery was dormant).
- Power saving mode available to reduce no-load loss.
- Available in four charging modes: Only Solar, Mains Priority, Solar Priority and Mains & Solar hybrid charging.
- Two output modes: mains bypass and inverter output; Uninterrupted power supply.
- Complete protections, including over voltage and under voltage protection, overload protection, reverse protection, etc. 360° all-round protection with a number of protection functions.
- With touch resistance LCD screen dynamic flow diagram design, easy to understand the system data and operation status.
- Full digital voltage and current double closed loop control, advanced SPWM technology, output of pure sine wave; support split-phase and single-phase pure sine wave output.
- Diverse human-computer interaction: support CAN, USB, WiFi and RS485 communication, local and remote power on or off, dry node control.

Interface Description



Solar System Connection



Product Specifications

Model	LF-H-7.2K-48V-US		LF-H-12K-48V-US
Parallel mode			
Permitted parallel number	1~6		1~6
AC mode			
Rated input voltage	120(L1/N, L2/N)/240Vac(L1/L2)		
Input phase voltage range	(85Vac~140Vac)±2%		
Frequency	50Hz/60Hz (Automatic detection)		
Frequency Range	47±0.3Hz~55±0.3Hz (50Hz); 57±0.3Hz~65±0.3Hz (60Hz);		
Overload/short circuit protection	Circuit breaker		
Efficiency	>95%		
Conversion time	≥10ms		
AC reverse protection	Yes		
Maximum bypass phase overload current	2 pole, 63A/63A(L1/L2)		
Inverter mode			
Output voltage waveform	Pure sine wave		
Rated output power (VA)	Split phase: 7200 Single phase: 7600 (limited by the wiring terminals)		Split phase: 12000 Single phase: 7200 (limited by the wiring terminals)
Rated output power (W)	Split phase: 7200 Single phase: 7600		Split phase: 12000 Single phase: 7200 (limited by the wiring terminals)
Power factor	1		
Rated output voltage (Vac)	120Vac (L1/N, L2/N)/240Vac(L1/L2)		
Output voltage error	±5%		
Output frequency range (Hz)	50Hz±0.3Hz/60Hz±0.3Hz		
Maximum Efficiency	>91%		
Overload protection	(102% < load <110%) ±5%: report error and turn off the output after 5 minutes; (110% < load < 125%) ± 5%: report error and turn off the output after 10 seconds; Load >125% ±5%: report error and turn off the output after 5 seconds;		
Peak power	Split phase: 12000VA Single phase: 12000VA		Split phase: 18000VA Single phase: 18000VA
Loaded motor capability	4HP		6HP
Output short circuit protection	Can protect, after continuous short circuit for 1 second		
Bypass circuit breaker phase specification	2 pole, 63A/63A(L1/L2)		
Rated battery input voltage	51.2V (Minimum starting voltage 44V)		
Battery voltage range	40.0Vdc~58.6Vdc±0.6Vdc (Undervoltage alarm/shutdown voltage/overvoltage alarm /overvoltage recovery... settable on LCD screen)		
Power saving mode self-consumption	Load≤25W enter power-saving mode		
AC charging			
Battery type	Lead acid or lithium battery		
Maximum charge current(can be set)	120A		160A
Charge current error	±5Adc		
Charge voltage range	40 ~58.6Vdc		
Short circuit protection	Circuit breaker and blown fuse		
Circuit breaker phase specifications	2 pole, 63A/63A(L1/L2)		
PV charging			
Number of MPPT groups	2		
Maximum PV open circuit voltage	500Vdc		
PV operating voltage range	90Vdc~500Vdc		
MPPT voltage range	90Vdc~450Vdc		
Battery voltage range	40-58.6Vdc		
Maximum PV input power	6000W		6000W+6000W
Maximum PV input current	22A+22A		
Charging short circuit protection	Blown fuse		
Hybrid charging Max charging current specifications (AC charging+PV charging)			
Max charger current(can be set)	0-220A		
Certified specifications			
Certification	UL STD.1741		
EMC certification level	FCC part15, CLASS B		
Operating temperature range	-10°C to 55°C		
Storage temperature range	-25°C ~ 60°C		
Humidity range	5% to 95% (Conformal coating protection)		
Noise	≤60dB		
Heat dissipation	Forced air cooling, variable speed of fan		
Communication interface	USB/RS485(/WiFi/GPRS)/ Dry node control		
Protection Degree	IP21		
Product /Packaging dimensions (L*W*H)	540x350x120mm/640x450x220mm		620x450x132mm/758x564x224mm
Net weight / Gross weight (kg)	20/21.5		23.8/28.6
Optional function			
Parallel function	☐ YES	☐ NO	
WIFI function	☐ YES	☐ NO	
Grid anti backflow CT	☐ YES	☐ NO	



EU-Standard 230V



LF-A-6.2K-5KWH-EU
ALL-IN-ONE Energy Storage System



Less Waste, Max Storage

Harness more of the sun's power—this energy storage system increases the self-consumption rate up to 90%, lowering your electricity bill and your carbon



Safe and Powerful Technology

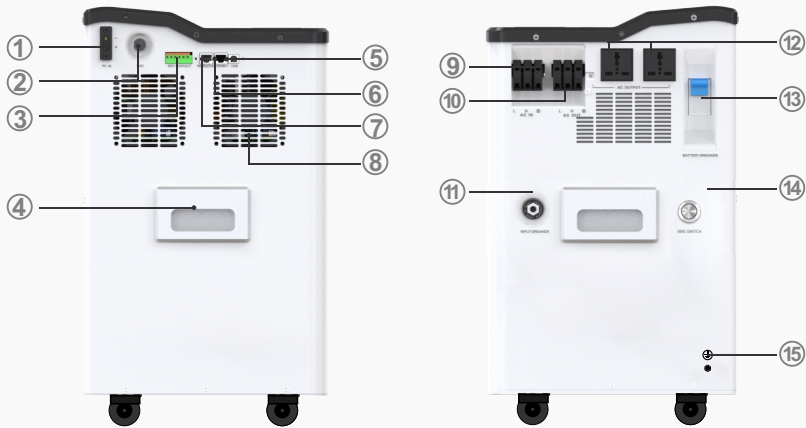
LFP (LiFePO4) batteries are safer, and an electrical isolation design protects against accidental short circuits



Power for Your Home

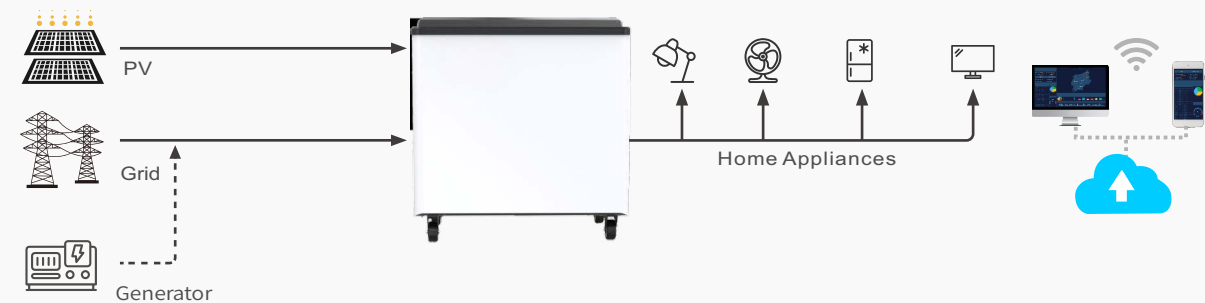
This battery storage system stores energy, detects outages and automatically becomes your home's energy source when the grid fails. Unlike a generator, it keeps your lights on and your phone charged without maintenance, fuel or noise. Pair with solar and charge with sunlight to keep your appliances running for days.

Interface Description



- 1. PV input
- 2. WIFI stick interface
- 3. Dry node control
- 4. Handle
- 5. USB communication port
- 6. RS485-1 communication port
- 7. RS485-2 communication port
- 8. Intelligent cooling fan
- 9. Mains input
- 10. AC output
- 11. Overload protection switch
- 12. AC output
- 13. Battery Switch
- 14. BMS switch
- 15. Ground terminal

Solar System Connection



Product Specifications

Model	LF-A-6.2K-5KWH-EU
Battery data	
Battery type	LiFePO4
Battery nominal voltage (Vdc)	51.2
Battery capacity (WH)	5120
Max. charging current/output current (A)	100
Rated charging power/Rated discharge power (W)	6200
Charging temperature(°C)	0~55
Discharging temperature(°C)	-20~55
Output	
USB-A*4	MAX18W (QC Output: 5V/2.4A or 9V/2A or 12V/1.5A) *2
TYPE-C*2	MAX100W (PD Output: 5V/3A or 9V/3A or 12V/3A or 15V/3A or 20V/5A) *1
5525DC power socket * 2	12V2A*1
AC socket * 4	2000W*2
Total power of AC socket	4000
Input Data (PV)	
Max. input Power (W)	6000
Max. input voltage (Vdc)	500Vdc
MPPT Operating Voltage Range(Vdc)	120-450
Start voltage (Vdc)	120
Single MPPT input current (A)	20
Max. input current of single MPPT (A)	22
Number of MPPTs	1
Number of Strings Per MPPTs	2
AC Output (Grid connected)	
Grid connected output nominal power (VA)	6200
Max. power output/input for grid connection (VA)	6200
Rated output voltage (Vac)	230
Output voltage range (Vac)	180-270
Rated operating frequency (Hz)	50/60(±0.2%)
Max. output/input current for grid connection (A)	26
Conversion time (ms)	10
Power factor	0.8 leading... 0.8 lagging
THD	<3%
AC output (Off grid)	
Off grid output nominal power (VA)	6000
Max. output power of off grid (VA)	6200
Max. off-grid output current (A)	26
Rated output voltage (Vac)	230 (±2%)
Output voltage range (Vac)	180-270
Rated operating frequency (Hz)	50/60(±0.2%)
THD	<3%
Efficiency	
Max. Efficiency	>95%
Max. DC-AC transformation efficiency	>92%
MPPT Efficiency	99.9%
General Data	
Operating Temperature (°C)	-15~55 °C
Relative Humidity	5%-95%
Noise(Normal)(dB)	≤60
Communication	Wi-Fi / GPRS/USB/RS485
Cooling Method	FAN Cooling
Ingress Protection	IP21
Product Size (LxWxH) (MM)	520*320*550
Packing Size (LxWxH) (MM)	592*376*715
Net Weight/Gross Weight (kg)	62/72
Optional function	
WIFI function	☐ YES ☐ NO
Grid anti backflow CT	☐ YES ☐ NO

EU-Standard 230V



LF-A-6.2K-10KWH / 16KWH-EU
ALL-IN-ONE Energy Storage System



Less Waste, Max Storage

Harness more of the sun's power—this energy storage system increases the self-consumption rate up to 90%, lowering your electricity bill and your carbon



Safe and Powerful Technology

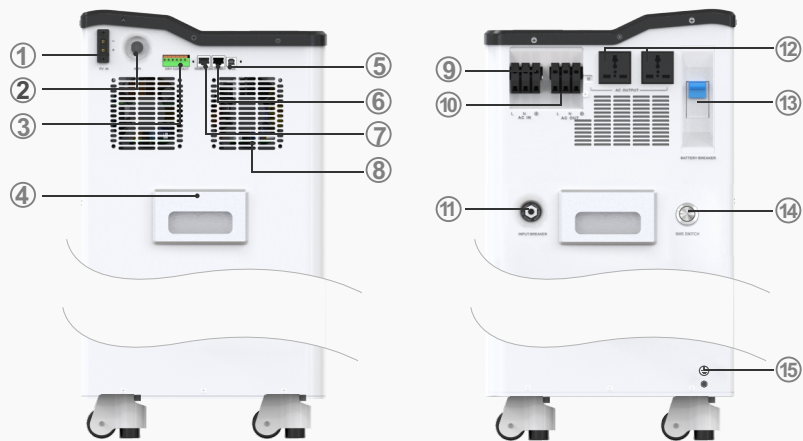
LFP (LiFePO4) batteries are safer, and an electrical isolation design protects against accidental short circuits



Power for Your Home

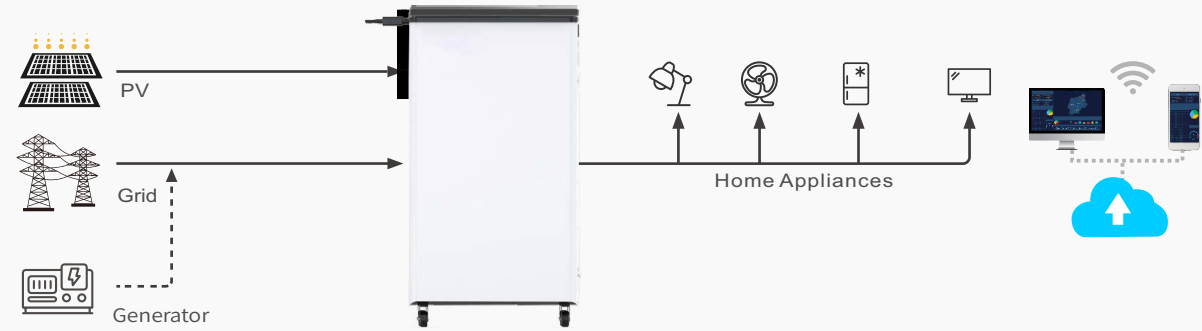
This battery storage system stores energy, detects outages and automatically becomes your home's energy source when the grid fails. Unlike a generator, it keeps your lights on and your phone charged without maintenance, fuel or noise. Pair with solar and charge with sunlight to keep your appliances running for days.

Interface Description



- 1. PV input
- 2. WIFI stick interface
- 3. Dry node control
- 4. Handle
- 5. USB communication port
- 6. RS485-1 communication port
- 7. RS485-2 communication port
- 8. Intelligent cooling fan
- 9. Mains input
- 10. AC output
- 11. Overload protection switch
- 12. AC output
- 13. Battery Switch
- 14. BMS switch
- 15. Ground terminal

Solar System Connection



Product Specifications

Model	LF-A-6.2K-10KWH-EU		LF-A-6.2K-15KWH-EU
Battery data			
Battery type	LiFePO4		
Battery nominal voltage (Vdc)	51.2		
Battery capacity (WH)	10000		16000
Max. charging current/output current (A)	200		
Rated charging power/Rated discharge power (W)	6200		
Charging temperature(°C)	0~55		
Discharging temperature(°C)	-20~55		
Output			
USBA*4	MAX 18W (QC Output: 5V/2.4A or 9V/2A or 12V/1.5A) *2		
TYPE-C*2	MAX 100W (PD Output: 5V/3A or 9V/3A or 12V/3A or 15V/3A or 20V/5A) *1		
5525DC power socket * 2	12V2A*1		
AC socket * 4	2000W*2		
Total power of AC socket	4000		
Input Data (PV)			
Max. input Power (W)	6200		
Max. input voltage (Vdc)	500Vdc		
MPPT Operating Voltage Range(Vdc)	120-450		
Start voltage (Vdc)	120		
Single MPPT input current (A)	20		
Max. input current of single MPPT (A)	22		
Number of MPPTs	1		
AC Output (Grid connected)			
Grid connected output nominal power (VA)	6200		
Max. power output/input for grid connection (VA)	6200		
Rated output voltage (Vac)	230		
Output voltage range (Vac)	180-270		
Rated operating frequency (Hz)	50/60(±0.2%)		
Max. output/input current for grid connection (A)	26		
Conversion time (ms)	10		
Power factor	0.8 leading... 0.8 lagging		
THD	<3%		
AC output (Off grid)			
Off grid output nominal power (VA)	6200		
Max. output power of off grid (VA)	6200		
Max. off-grid output current (A)	26		
Rated output voltage (Vac)	230 (±2%)		
Output voltage range (Vac)	180-270		
Rated operating frequency (Hz)	50/60(±0.2%)		
THD	<3%		
Efficiency			
Max. Efficiency	>95%		
Max. DC-AC transformation efficiency	>92%		
MPPT Efficiency	99.9%		
General Data			
Operating Temperature (°C)	-15~55 °C		
Relative Humidity	5%-95%		
Noise (Normal)(dB)	≤60		
Communication	Wi-Fi / GPRS/USB/RS485		
Cooling Method	fan cooling		
Ingress Protection	IP21		
Product Size (LxWxH) (MM)	520*320*930		
Packing Size (LxWxH) (MM)	595*380*1145		
Net Weight/Gross Weight (kg)	105/120		130/145
Optional function			
WIFI function	☐ YES ☐ NO		
Grid anti backflow CT	☐ YES ☐ NO		

EU-Standard 230V



LF-6.2K-5KWH / 10KWH / 15KWH-EU

Stacked Home Energy Storage System



Less Waste, Max Storage

High energy density and efficient energy utilization



Safe and Powerful Technology

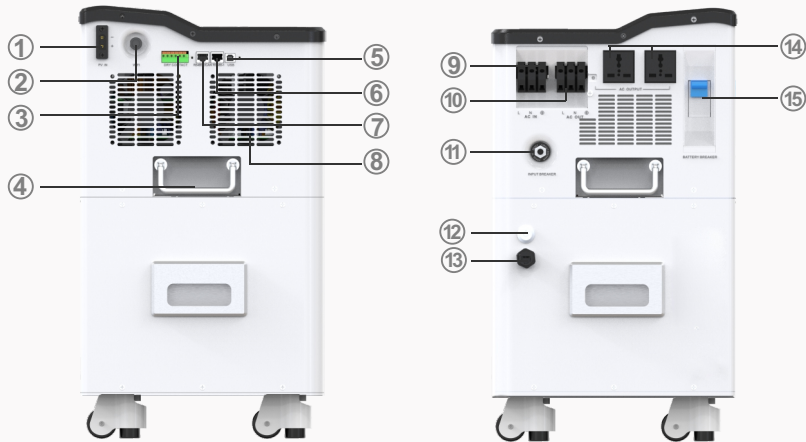
LFP (LiFePO4) battery cell, electrical isolation, external short circuit protection



Power for Your Home

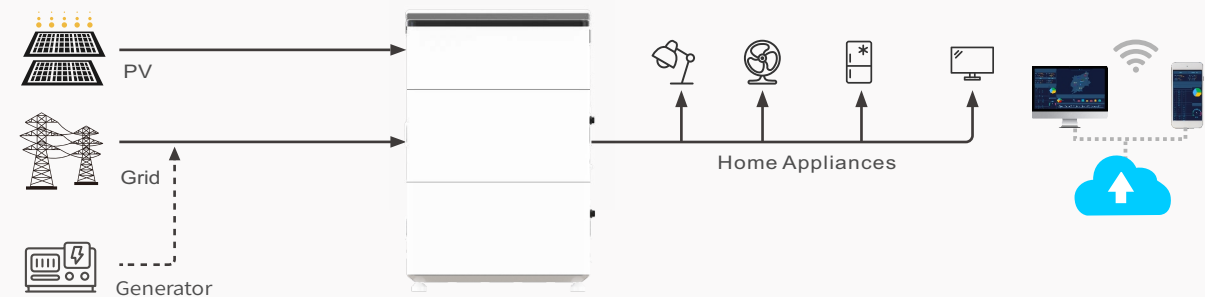
This battery storage system stores energy, detects outages and automatically becomes your home's energy source when the grid fails. Unlike a generator, it keeps your lights on and your phone charged without maintenance, fuel or noise. Pair with solar and charge with sunlight to keep your appliances running for days.

Interface Description



- 1. PV input
- 2. WIFI stick interface
- 3. Dry node control
- 4. Handle
- 5. USB communication port
- 6. RS485-1 communication port
- 7. RS485-2 communication port
- 8. Intelligent cooling fan
- 9. Mains input
- 10. AC output
- 11. Overload protection switch
- 12. BMS switch
- 13. Battery communication
- 14. AC output
- 15. Battery switch

Solar System Connection



Product Specifications

Model	LF-6.2K-5KWH-EU		LF-6.2K-10KWH-EU	LF-6.2K-15KWH-EU
Battery data				
Battery type	LiFePO4			
Battery nominal voltage (Vdc)	51.2			
Battery capacity (WH)	5120	5120X2	5120X3	
Number of Batteries	1	2	3	
Max. charging current/output current (A)	150			
MAX. Rated discharge power (W)	7000			
Charging temperature(°C)	0~55			
Discharging temperature(°C)	-20~55			
Output				
USBA*4	MAX 18W (QC Output: 5V/2.4A or 9V/2A or 12V/1.5A) *2			
TYPE-C*2	MAX 100W (PD Output: 5V/3A or 9V/3A or 12V/3A or 15V/3A or 20V/5A) *1			
5525DC power socket * 2	12V2A*1			
AC socket * 4	2000W*2			
Total power of AC socket	4000			
Input Data (PV)				
Max. input Power (W)	6200			
Max. input voltage (Vdc)	500Vdc			
MPPT Operating Voltage Range(Vdc)	120-450			
Start voltage (Vdc)	120			
Single MPPT input current (A)	20			
Max. input current of single MPPT (A)	22			
Number of MPPTs	1			
AC Output (Grid connected)				
Grid connected output nominal power (VA)	6200			
Max. power output/input for grid connection (VA)	6200			
Rated output voltage (Vac)	230			
Output voltage range (Vac)	180-270			
Rated operating frequency (Hz)	50/60(±0.2%)			
Max. output/input current for grid connection (A)	26			
Conversion time (ms)	10			
Power factor	0.8 leading... 0.8 lagging			
THD	<3%			
AC output (Off grid)				
Off grid output nominal power (VA)	6200			
Max. output power of off grid (VA)	6200			
Max. off-grid output current (A)	26			
Rated output voltage (Vac)	230 (±2%)			
Output voltage range (Vac)	180-270			
Rated operating frequency (Hz)	50/60(±0.2%)			
THD	<3%			
Efficiency				
Max. Efficiency	>95%			
Max. DC-AC transformation efficiency	>92%			
MPPT Efficiency	99.9%			
General Data				
Operating Temperature (°C)	-15~55 °C			
Relative Humidity	5%-95%			
Noise (Normal)(dB)	≤60			
Communication	Wi-Fi / GPRS/USB/RS485			
Cooling Method	fan cooling			
Ingress Protection	IP21			
Inverter+Base Size (LxWxH) (MM)	605*385*350			
Battery pack Size (LxWxH) (MM)	630*380*370			
Optional function				
WIFI function	☐ YES ☐ NO			
Grid anti backflow CT	☐ YES ☐ NO			

EU-Standard 230V



LF-12K-10KWH/20KWH/30KWH-EU
Stacked Home Energy Storage System



Less Waste, Max Storage
High energy density and efficient energy utilization

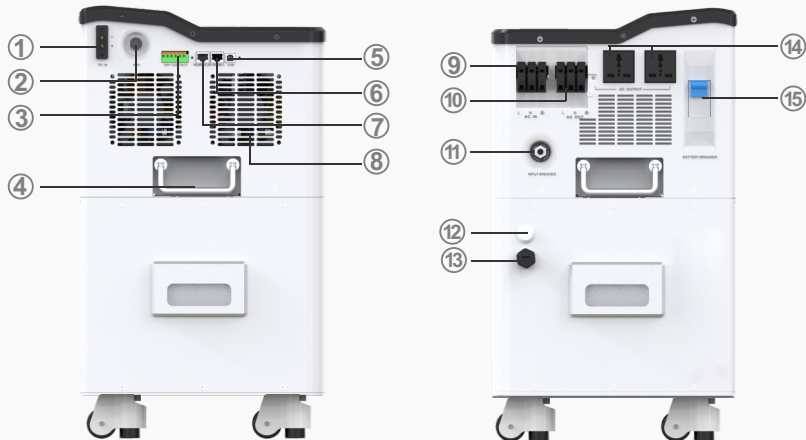


Safe and Powerful Technology
LFP (LiFePO4) battery cell, electrical isolation, external short circuit protection



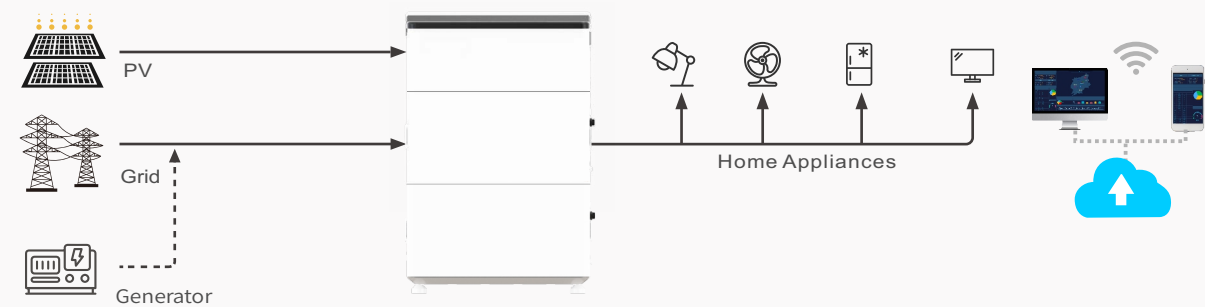
Power for Your Home
This battery storage system stores energy, detects outages and automatically becomes your home's energy source when the grid fails. Unlike a generator, it keeps your lights on and your phone charged without maintenance, fuel or noise. Pair with solar and charge with sunlight to keep your appliances running for days.

Interface Description



- 1. PV input
- 2. WIFI stick interface
- 3. Dry node control
- 4. Handle
- 5. USB communication port
- 6. RS485-1 communication port
- 7. RS485-2 communication port
- 8. Intelligent cooling fan
- 9. Mains input
- 10. AC output
- 11. Overload protection switch
- 12. BMS switch
- 13. Battery communication
- 14. AC output
- 15. Battery switch

Solar System Connection



Product Specifications

Model	LF-12K-10KWH-EU		LF-12K-20KWH-EU	LF-12K-30KWH-EU
Battery data				
Battery type	LiFePO4			
Battery nominal voltage (Vdc)	51.2			
Battery capacity (WH)	10240	10240X2	10240X3	
Number of Batteries	1	2	3	
Max. charging current/output current (A)	100/150			
Rated charging power/Rated discharge power (W)	150A/7500W	150A/12000W		
Charging temperature(°C)	0~55			
Discharging temperature(°C)	-20~55			
Output				
USBA*4	MAX 18W (QC Output: 5V/2.4A or 9V/2A or 12V/1.5A) *2			
TYPE-C*2	MAX 100W (PD Output: 5V/3A or 9V/3A or 12V/3A or 15V/3A or 20V/5A) *1			
5525DC power socket * 2	12V2A*1			
AC socket * 4	2000W*2			
Total power of AC socket	12000W			
Input Data (PV)				
Max. input Power (W)	6000X2			
Max. input voltage (Vdc)	500Vdc			
MPPT Operating Voltage Range(Vdc)	120-450			
Start voltage (Vdc)	120			
Single MPPT input current (A)	22+22			
Number of MPPTs	2			
AC Output (Grid connected)				
Grid connected output nominal power (VA)	12000			
Max. power output/input for grid connection (VA)	12000			
Rated output voltage (Vac)	230			
Output voltage range (Vac)	180-270			
Rated operating frequency (Hz)	50/60(±0.2%)			
Max. output/input current for grid connection (A)	62			
Conversion time (ms)	10			
THD	<3%			
AC output (Off grid)				
Off grid output nominal power (VA)	12000			
Max. output power of off grid (VA)	12000			
Max. off-grid output current (A)	62			
Rated output voltage (Vac)	230 (±2%)			
Output voltage range (Vac)	UPS mains power mode: (170Vac~280Vac) APL generator mode: (90Vac~280Vac)			
Rated operating frequency (Hz)	50/60(±0.2%)			
THD	<3%			
Efficiency				
Max. Efficiency	>95%			
Max. DC-AC transformation efficiency	>92%			
MPPT Efficiency	99.9%			
General Data				
Operating Temperature (°C)	-15~55 °C			
Relative Humidity	5%-95%			
Noise (Normal)(dB)	≤60			
Communication	Wi-Fi / GPRS/USB/RS485			
Cooling Method	fan cooling			
Ingress Protection	IP21			
Inverter+Base Size (LxWxH) (MM)	730*490*400			
Battery pack Size (LxWxH) (MM)	735*495*430			
Optional function				
WIFI function	☐ YES ☐ NO			
Grid anti backflow CT	☐ YES ☐ NO			

US-Standard 120V



LF-12K-10KWH/20KWH/30KWH-US

Stacked Home Energy Storage System
US-Standard



Less Waste, Max Storage

High energy density and efficient energy utilization



Safe and Powerful Technology

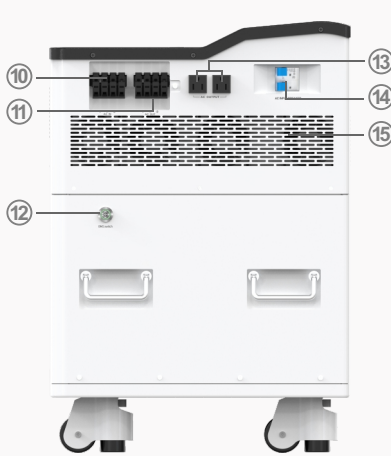
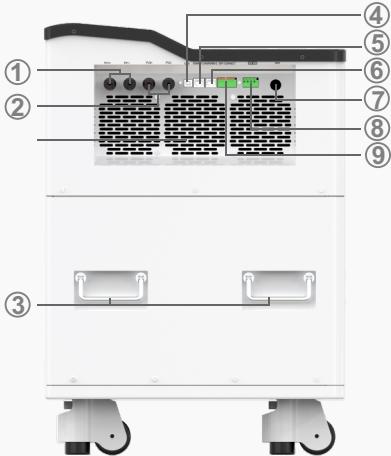
LFP (LiFePO4) battery cell, electrical isolation, external short circuit protection



Power for Your Home

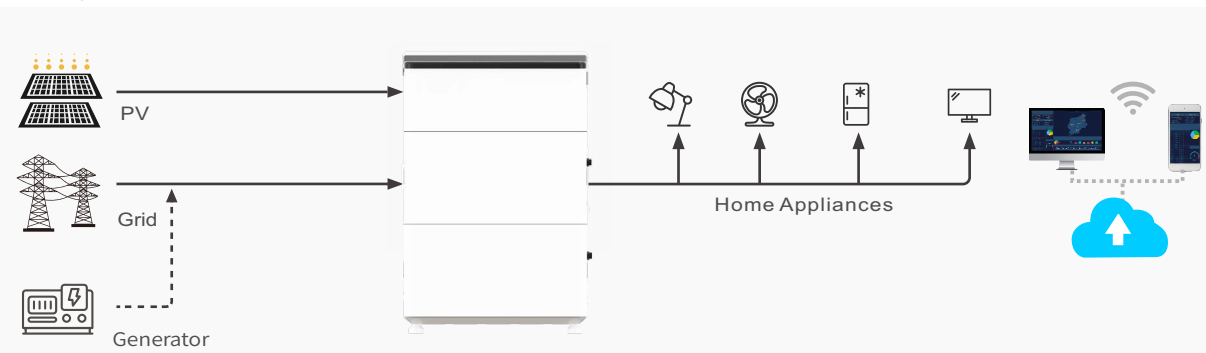
This battery storage system stores energy, detects outages and automatically becomes your home's energy source when the grid fails. Unlike a generator, it keeps your lights on and your phone charged without maintenance, fuel or noise. Pair with solar and charge with sunlight to keep your appliances running for days.

Interface Description



- 1. PV 1 input
- 2. PV 2 input
- 3. Handle
- 4. USB communication port
- 5. RS485-1 communication port
- 6. RS485-2 communication port
- 7. WIFI stick interface
- 8. CT-L1/L2
- 9. Dry node control
- 10. AC in
- 11. AC out
- 12. BMS switch
- 13. AC output
- 14. AC Input breaker
- 15. Intelligent cooling fan

Solar System Connection



Product Specifications

Model	LF-12K-10KWH-US		LF-12K-20KWH-US	LF-12K-30KWH-US
Battery data				
Battery type	LiFePO4			
Battery nominal voltage (Vdc)	51.2			
Battery capacity (WH)	10240	10240X2	10240X3	
Number of Batteries	1	2	3	
Max. charging current/output current (A)	100/150			
Rated charging /discharge power (W)	150A/7500W	150A/12000W		
Charging temperature(°C)	0~55			
Discharging temperature(°C)	-20~55			
Output				
USBA*4	MAX 18W (QC Output: 5V/2.4A or 9V/2A or 12V/1.5A) *2			
TYPE-C*2	MAX 100W (PD Output: 5V/3A or 9V/3A or 12V/3A or 15V/3A or 20V/5A) *1			
5525DC power socket * 2	12V2A*1			
AC socket * 4	1000W*2			
Total power of AC socket	12000W			
Input Data (PV)				
Max. input Power (W)	6000X2			
Max. input voltage (Vdc)	500Vdc			
MPPT Operating Voltage Range(Vdc)	120-450			
Start voltage (Vdc)	120			
Single MPPT input current (A)	22+22			
Number of MPPTs	2			
AC Output (Grid connected)				
Grid connected output nominal power (VA)	12000			
Max. power output/input for grid connection (VA)	12000			
Rated output voltage (Vac)	120 (L1/N,L2/N) /240Vac(L1/L2)			
Output voltage range (Vac)	90-130			
Rated operating frequency (Hz)	50/60(±0.2%)			
Max. output/input current for grid connection (A)	63			
Conversion time (ms)	10			
THD	<3%			
AC output (Off grid)				
Off grid output nominal power (VA)	12000			
Max. output power of off grid (VA)	12000			
Max. off-grid output current (A)	63			
Rated output voltage (Vac)	120 (L1/N,L2/N) /240Vac(L1/L2)			
Output voltage range (Vac)	90~130			
Rated operating frequency (Hz)	50/60(±0.2%)			
THD	<3%			
Efficiency				
Max. Efficiency	>95%			
Max. DC-AC transformation efficiency	>92%			
MPPT Efficiency	99.9%			
General Data				
Operating Temperature (°C)	-15~55 °C			
Relative Humidity	5%-95%			
Noise (Normal)(dB)	≤60			
Communication	Wi-Fi / GPRS/USB/RS485			
Cooling Method	fan cooling			
Ingress Protection	IP21			
Inverter+Base Package Size (LxWxH) (MM)	762*522*522			
Inverter+Base Package Weight (kg)	54			
Battery pack Package Size (LxWxH) (MM)	762*522*462			
Battery pack Package Weight (kg)	110			
Optional function				
WIFI function	☐ YES ☐ NO			
Grid anti backflow CT	☐ YES ☐ NO			



LF-5KWH



-  **More Usable Energy**
90% depth of discharge
-  **High Efficiency**
Full-time 1C discharge
-  **Flexible Installation**
Wall mounted or floor stand
-  **High Expansibility**
Scalable from 5.12kWh to 76.8kwh
-  **Safe&Reliable**
Lithium iron phosphate cell Cobalt free
-  **Perfect Compatibility**
Compatible with mainstream inverter brand

LF-10KWH



-  **More Usable Energy**
90% depth of discharge
-  **Flexible Investment**
Scalable From 15.36 to 967.68kWh
-  **Safe & Reliable**
Lithium Iron Phosphate Cell
-  **Easy Installation**
Floor Stand
-  **Quick Commissioning**
Color Touchscreen
-  **Perfect Compatibility**
Compatible with mainstream inverter brand

Product Specifications

Model	LF-5KWH
Performance	
Nominal Voltage	51.2 Vdc
Nominal Capacity	100 Ah
Battery Energy	5120 Wh
Charge Current	50 A
Charge Power	2560 W
Discharge Current	100 A
Discharge Power	5120 W
Short Circuit Current	350 A
Communication	
Display	Color Touchscreen
Communication	RS232, RS485, CAN
General Specification	
Dimension (WxDxH mm)	440x138x600 mm
Weight (Kg)	47.3 kg
Installation	Floor Stand or Wall Mount
Operating temperature range	-20°C~55°C
Operating/Storage Humidity	≤95%RH
Max Operating Altitude	≤2000m
IP Rating	IP21
Cell Technology	LiFePO4, Lithium Iron Phosphate
Cycle life	6000 Cycles @ 90% DOD/25°C/0.5C
Scalability	Max 15 batteries in parallel
Warranty	5 years
Standard Compliance (More Available Upon Request)	
Certificates	CE, UN38.3
Ordering and Deliverable Part	
Product ordering part	Battery (Cable /Wall Mount Included)

Product Specifications

Model	LF-10KWH
Performance	
Nominal Voltage	51.2 Vdc
Nominal Capacity	200 Ah
Battery Energy	10.24 kWh
Charge Voltage	55.68~56.16 Vdc
Discharge Voltage	45.6~56.16 Vdc
Maximum Charge Current	100 A
Maximum Discharge Current	160 A
Maximum Charge Power	5120 W
Max Discharge Power	8704 W
Short circuit current	540 A
Communication	
Display	LED indicator+ LCD Display
Communication	RS232, RS485, CAN
General Specification	
Dimension (WxDxH mm)	465x186x695 mm
Weight (Kg)	83.5 kg
Installation	Floor Stand or Wall Mount
Operating temperature range	-20°C~55°C
Storage Temperature	≤25°C,12 months; ≤35°C,6 months; ≤45°C,3 months
Operating /Storage /humidity	≤95%RH
Max Operating Altitude	≤2000m
IP Rating	IP21
Cell Technology	LiFePO4, Lithium Iron Phosphate
Cycle life	6000 Cycles @ 90% DOD/25°C/0.5C
Warranty	5 years
Scalability	Max 63 batteries in parallel
Ordering and Deliverable Part	
Product ordering part	Battery (Cable /Wall Mount Included)



LF-16KWH



More Usable Energy

90% depth of discharge



High Energy

Single cell with 314Ah



High Expansibility

Max 63 batteries in parallel. Scalable from 16.07kWh to 1012.83kWh



Easy Installation

Floor stand with wheels



Perfect Compatibility

Compatible with major inverter brand



Smart Display Screen

Touchscreen-control.Real-time battery status display

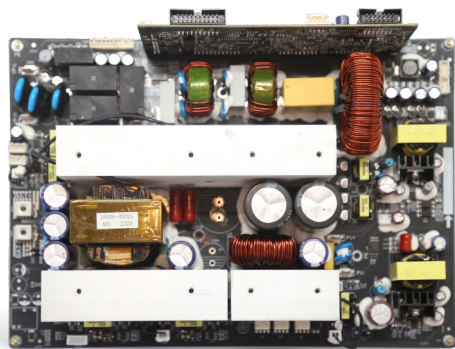
Product Specifications

Model	LF-16KWH
Performance	
Nominal Voltage	51.2 Vdc
Nominal Capacity	314 Ah
Battery Energy	16076.8 Wh
Charge Voltage	56.16 V
Maximum Charge Current	150 A
Maximum Discharge Current	200 A
Charge Voltage	55.68~56.16 Vdc
Discharge Voltage	45.6~56.16 Vdc
Short Circuit Current	540 A
Communication	
Display	LED indicator+ LCD Display
Communication	RS232, RS485, CAN
General Specification	
Dimension (W×D×H mm)	866×450×230 mm
Weight (Kg)	119 kg
Operating temperature range	Charge 0°C~45°C Discharge -20°C~55°C
Storage Temperature	Short Term(within 1 month) -10°C~45°C LongTerm(within 1 year)0°C~35°C
Storage Humidity	≤ 95%RH
Max Operating Altitude	≤2000m
IP Rating	IP21
Cell Type	LiFePO4, Lithium Iron Phosphate
Warranty	5 years
Cycle life	8000 Cycles @ 90% DOD/25°C/0.5C
Ordering and Deliverable Part	
Product ordering part	Battery (Cable included)

PCBA SKD



IP66 6000W



6200W



12000W

Product Specifications

Model	LFMZ-6K-48V-EU
OFF-GRID OUTPUT	
Rated Output Power	6000W
Max. Peak Power	12,000VA
Rated Output Voltage	230Vac, single phase
Load Capacity of Motors	4HP
Output Frequency Range	50Hz ± 0.3Hz/60Hz ± 0.3Hz
Conversion time	≥10ms
ON-GRID OUTPUT	
Rated Output Power	6000W
Max. Apparent Power	12000VA
Rated. Output Current	26A
Max. Output Current	28.6A
THDI	< 3%
Power Factor	0.8 leading to 0.8 lagging
Rated Voltage	230Vac, single phase
Frequency	50Hz/60Hz
BATTERY	
Battery Type	Lead-acid / Li-ion / User-defined
Rated Battery Voltage	48V (minimum start-up voltage 44V)
Battery Voltage Range	40~60Vdc
Max. PV Charging Current	100A
Max. Utility Charging Current	60A
Max. Generator Charging Current	60A
PV INPUT	
Num. of MPPT	2
Max. Input Power	4500W+4500W
Max. Input Current	16A+16A
Max. Short-circuit Current	27A+27A
Max. Open-circuit Voltage	500Vdc+500Vdc
MPPT Operating Voltage Range	120~450Vdc
UTILITY / GENERATOR INPUT	
Input Voltage Range	90~280Vac
Input Frequency Range	50/60Hz
Bypass Overload Current	40A
EFFICIENCY	
MPPT Tracking Efficiency	99.9%
Max. Efficiency	97.5%
GENERAL	
Num. of Parallel	1~6 units
Protection Degree	IP66
Operating temperature range	-25~60°C
Humidity Range	0% ~ 100%
Noise	<60dB
Cooling Method	heatsink & intelligent air cooling
Warranty	5 years
COMMUNICATION	
Internal Interface	RS485 / CAN / USB / Dry contact
External Module (optional)	Wi-Fi / GPRS
CERTIFICATION	
On-grid Certification	EN50549-1, G99, NRS-097, VDE-ARN-4105, CEI021, UNE217002
Safety	IEC62109-1, IEC62109-2
EMC	EN61000-6-1, EN61000-6-3, FCC15 classB
RoHS	Yes

Model	LFSH-6.2K-48V-EU
Parallel mode	
Permitted parallel number	1~6
AC mode	
Rated input voltage	230Vac ± 5%
Input voltage range	(170Vac~280Vac)±2% (90Vac~280Vac)±2%
Frequency	50Hz/60Hz (Auto detection)
Frequency Range	47±0.3Hz~55±0.3Hz (50Hz); 57±0.3Hz~65±0.3Hz (60Hz);
Overload/short circuit protection	Circuit breaker
Efficiency	>95%
Conversion time	≥10ms
AC reverse protection	Yes
Maximum bypass overload current	40A
Inverter mode	
Output voltage waveform	Pure sine wave
Rated output power (VA/W)	6200VA/6200W
Power factor	1
Rated output voltage (Vac)	230Vac
Output voltage error	±5%
Output frequency range (Hz)	50Hz±0.3Hz/60Hz±0.3Hz
Maximum Efficiency	>92%
Overload protection	(100%~120% load) ±10% report error and turn off the output after 5 minutes; (120%~150% load) ±10% report error and turn off the output after 30 seconds; Load >150% ±10% report error and turn off the output after 5 seconds;
Peak power	12000VA
Loaded motor capability	4HP
Output short circuit protection	Circuit breaker
Bypass circuit breaker specification	40A
Rated battery input voltage	48V (Minimum starting voltage 44V)
Battery voltage range	40.0Vdc~60.0Vdc±0.6Vdc (Undervoltage alarm / shutdown voltage/overvoltage alarm / overvoltage recovery... settable on LCD screen)
Power saving mode self-consumption	
AC charging	
Battery type	Lead acid or lithium battery
Maximum charge current(can be set)	80A
Charge current error	±5Adc
Charge voltage range	40 ~60Vdc
Short circuit protection	Circuit breaker and blown fuse
Circuit breaker specifications	40A
PV charging	
MPPT way	1
Maximum PV open circuit voltage	500Vdc
PV operating voltage range	120Vdc~500Vdc
MPPT voltage range	90Vdc~450Vdc
Battery voltage range	40-60Vdc
Maximum PV input power	6000W
Maximum PV input current	22A
Charging short circuit protection	Blown fuse
Wiring protection	Reverse polarity protection
Hybrid Max charging current specifications (AC +PV)	
Max charging current(can be set)	0-100A
Certified specifications	
Certification	CE(IEC62109-1,2),
EMC certification level	EN61000
Operating temperature range	-10°C to 55°C
Storage temperature range	-25°C ~60°C
Humidity range	5% to 95% (Conformal coating protection)
Noise	≤60dB
Heat dissipation	Forced air cooling, variable speed of fan
Communication interface	USB/RS485/WiFi/GPRS/ Dry node control

Model	LFSH-12K-48V-EU
Parallel mode	
Permitted parallel number	1~6
AC mode	
Rated input voltage	230Vac ± 5%
Input voltage range	(170Vac~280Vac)±2% (90Vac~280Vac)±2%
Frequency	50Hz/60Hz (Auto detection)
Frequency Range	47±0.3Hz~55±0.3Hz (50Hz); 57±0.3Hz~65±0.3Hz (60Hz);
Overload/short circuit protection	Circuit breaker
Efficiency	>95%
Conversion time	≥10ms
AC reverse protection	Yes
Maximum bypass overload current	60A
Inverter mode	
Output voltage waveform	Pure sine wave
Rated output power (VA/W)	12000VA/12000W
Power factor	1
Rated output voltage (Vac)	230Vac
Output voltage error	±5%
Output frequency range (Hz)	50Hz±0.3Hz/60Hz±0.3Hz
Maximum Efficiency	>93%
Peak power	24000VA
Loaded motor capability	8HP
Output short circuit protection	Circuit breaker
Bypass circuit breaker specification	63A
Rated battery input voltage	48V (Minimum starting voltage 44V)
Power saving mode self-consumption	Load≤50W
AC charging	
Battery type	Lead acid or lithium battery
Maximum charge current(can be set)	120A
Charge current error	±5Adc
Charge voltage range	40 ~60Vdc
Short circuit protection	Circuit breaker and blown fuse
Circuit breaker specifications	63A
PV charging	
MPPT way	2
Maximum PV open circuit voltage	500Vdc
PV operating voltage range	120Vdc~500Vdc
MPPT voltage range	90Vdc~450Vdc
Battery voltage range	40-60Vdc
Maximum PV input power	6000W+6000W
Maximum PV input current	22A+22A
Charging short circuit protection	Blown fuse
Wiring protection	Reverse polarity protection
Hybrid Max charging current specifications (AC +PV)	
Max charger current(can be set)	0-150A
Certified specifications	
Certification	CE(IEC62109-1,2)
EMC certification level	En61000
Operating temperature range	-15°C to 55°C
Humidity range	5% to 95% (Conformal coating protection)
Noise	≤60dB
Heat dissipation	Forced air cooling, variable speed of fan
Communication interface	USB/RS485/WiFi/GPRS/ Dry node control