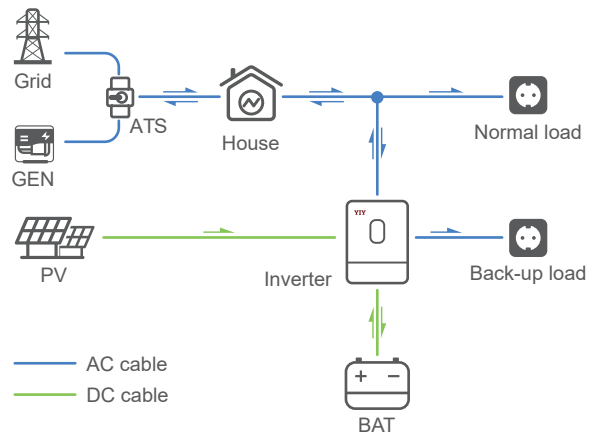
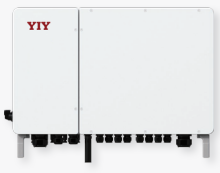
Residential Energy Storage System

In a hybrid system, solar power prioritizes supplying the load, with any excess energy charging the battery. Any further surplus is fed back into the grid. When solar generation is insufficient, the battery and grid power supplement the supply. This enables peak shaving and demand management, alleviates grid congestion in areas with high solar penetration, supports participation in electricity market services such as virtual power plants (VPPs), and provides seamless backup power for scenarios requiring high supply continuity.

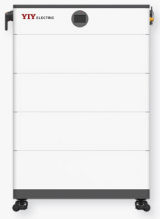
Hybrid System



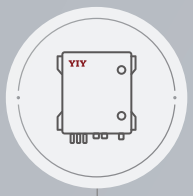
HES 5-20kW HT



HES 22-50kW HT

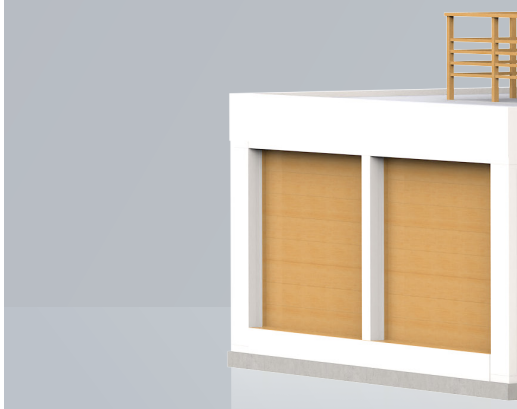


LFP-M-S Series



PV Combiner Box

- Easy installation
- Easy to expand




Cloud+APP
• Monitoring system
Solar Panels
Battery
• Modular Design
• Stacked Type LiFePO4
Battery Pack
Inverter
• Hybrid Inverter

HES 5-20kW HT

YIY

Hybrid Inverter

• Product Features

- Support 100% Three Phase Unbalance
- SiC Technology 98.2% Efficiency
- 2 Independent Battery Ports for Mixture Use of Old & New Battery
- <10ms On/Off-grid Switchover
- 6 Units in Parallel (Off-grid Mode)
- 150-200% PV Input Power
- 200% Grid Input Power, 58A Grid Input Current Supplying to Loads & Charging Battery in Parallel
- Support Altittude 5000m(>3000m Derating)
- Support AC Couple

• Technical Parameter

Model Name	HES(5K)HT	HES(6K)HT	HES(8K)HT	HES(10K)HT	HES(12K)HT	HES(15K)HT	HES(18K)HT	HES(20K)HT
Off-grid Output								
Rated Output Power	5kW	6kW	8kw	10kW	12kW	15kW	18kW	20kW
Peak Power&Duration	10kVA(60s)			11kVA(60s)	13.2kVA(60s)	16.5kVA(60s)	19.8kVA(60s)	22kVA(60s)
Rated Voltage	3L/N/PE,220/380V; 230/400V							
Rated Frequency	50Hz/60Hz							
Rated Output Current	7.5A	9A	12A	15A	18A	22.5A	27A	30A
Output THDu	<3%							
Off-grid Parameter								
Rated Output Power	5kW	6kW	8kW	10kW	12kW	15kW	18kW	20kW
Max. Input Power from Grid	10kW	12kW	16kW	20kW	24kW	30kW	36kW	40kW
Max. Input Current from Grid	15A	18A	24A	29A	35A	44A	52A	58A
Max. Output Current	8A	10A	13A	16A	20A	24A	29A	32A
Rated Grid Voltage	3/N/PE,220/380V, 230/400V,240/415V							
Grid Voltage Range	184-276V/320-480v							
PV Input								
Max. Input Power	10000Wp	12000Wp	16000Wp	20000Wp	24000Wp	30000Wp	30000Wp	30000Wp
Max.Input Voltage	1000V							
Number of MPPT	2							
Max. Input String Per MPPT	2							
MPPT Voltage Range	130-960V							
Rated Input Voltage	600V							
Starting Voltage	200V							
Max. Input Current	25A/25A							
Short-Circuit Current	30A/30A							
Battery Parameter								
Battery Type	Lithium-ion/Lead-Acid/Sodium-ion							
Number of Battery Input Ports	2							
Battery Voltage Range	125-800V							
Full Load Battery Voltage Range	125-800V	125-800V	160-800V	210-800V	250-800V	300-800V	360-800V	400-800V
Battery Charging/Discharging Current	25A*2							
Peak Charging/ Discharging Current-Duration	35A*2-60s							
Efficiency								
Max. Eficiency	98.2%							
European Efficiency/CEC Efficiency	97.70%							
Max. Battery Charging/ Discharging Efficiency	97.80%							
General Data								
Size(W*H*D)	573mm*509mm*219mm							
Weight	35kg							
Noise	<45dB(A)							
Operating Altitude	5000m (>3000m Derating)							
Operating Temperature	-25C~+60C							
Cooling Method	Intelligent Air Cooling							
Ingress Protection Grade	IP65							
Monitoring	LED/WIFI/4G/Bluetooth/RS485							
Communication Port	RS485/CAN/DRED/Dry contact/Parallel port							
Protection	DC Switch; AC Overvoltage Protection; AC Overcurrent Protection;AC Short Circuit Protection;Anti-islanding Protection; Residual Current Monitoring; PV Insulation Resistance Detection,Surge Protection:LEVEL II; Reverse Polarity Protection(PV& Battery;:Lightning Protection							
Certification								
CE-LVD	IEC62109-1,IEC 62109-2, EN 62109-1,EN 62109-2, IEC 62477-1							
CE-EMC	EN 61000-6-1, EN 61000-6-2,EN 61000-6-3, EN 61000-6-4, EN 62920							
Grid	VDE-AR-N 4105,C10-11,G98/G99,CEI 0-21, EN50549, PEA, MEA, IEC 62116, IEC 61727NRS 097-2-1,AS 4777.2, R25,UNE217001,UNE217002, NTS 2.1, NC RfG							

HES 22-50kW HT

YIY

Hybrid Inverter

• Product Features

- SiC Technology, Max. Efficiency 98%
- 2 Independent Battery Ports for Mixture Use of Old & New Battery
- 150%-340% PV Input Power, 4 MPPTs, PV Input Current 40A, Higher Compatibility with PV Panel
- 200%-470% Grid Input Power, 150A Grid Input Current Supplying to Loads & Charging Battery in Parallel
- 150% Overload, AFCI Function(Optional)
- Smaller Size, Easier for Installation and Price-wise in Shipping
- Executive Generator Port, Smart Monitoring Max.Generator Input Current 150A
- Battery Current 160A, High Adapability with Battery
- 6 Units in Parallel (Off-grid Mode)

• Technical Parameter

Model Name	HES(22K)HT	HES(25K)HT	HES(29.9K)HT	HES(30K)HT	HES(40K)HT	HES(42.5K)HT	HES(50K)HT
Off-grid Output							
Rated Output Power	22kW	25kW	29.9kw	30kW	40kW	42.5kW	50kW
Max. Apparent Power	24.2kVA	27.5KVA	29.9KVA	33KVA	44KVA	42.5kVA	55kVA
Rated Voltage	3L/N/PE,220/380V; 230/400V						
Rated Frequency	50Hz/60Hz						
Rated Output Current	31.9A	36.3A	43.5A	43.5A	58A	61.6A	72.5A
Max. Output Current	35.1A	39.9A	43.5A	47.9A	63.8A	61.6A	79.8A
Peak Power &Duration	150%(10s)						
Generator Input Current	150A						
THDU	<3%						
Off-grid Parameter							
Rated Output Power	22kW	25kW	29.9kW	30kW	40kW	42.5kW	50kW
Rated Grid Voltage	3L/N/PE,220/380V; 230/400V						
Rated Grid Frequency	50H2/60HZ						
Rated Output Current	31.9A	36.3A	43.5A	43.5A	58A	61.6A	72.5A
Grid Input Current	150A						
PV Input							
Max. DC Input Power	75000Wp						
Max.Input Voltage	1000V						
Rated Input Voltage	600V						
Starting Voltage	180V						
MPPT Voltage Range	150-850V						
Max.Input String Per MPPT	4/8						
Max. DC Input Current	4*40A						
Short-circuit Current	4*60A						
Battery Parameter							
Battery Type	Lithium-ion/Lead-Acid/Sodium-ion						
Battery Voltage Range	140-800V						
Max. Charing/Discharing Power	22kW	25kW	29.9kW	30kW	40kW	42.5kW	50kW
Max. Charing/Discharing Current	80A*2						
Number of Battery Input Ports	2						
Efficiency							
Max. Eficiency	98.6%						
European Efficiency/CEC Efficiency	97.97%						
Max. Battery Charging/Discharging Efficiency	98%						
General Data							
Size(W*H*D)	850mm*550mm*295mm						
Weight	88kg						
Noise	55dB(A)						
Operating Temperature	-25C~+60C						
Operating Altitude	4000m(>3000m Derating)						
Humidity Range	0-100%						
Ingress Protection Grade	IP66						
Cooling Method	Intelligent Air Cooling						
Monitoring	LED+BlUetOoth+APP, WIFI/LAN/4G						
Communication Port	RS485* 1, Internet/WIF|/4G, DO*2,D)*2,AI*1,AO*1,DRM*3						
DC Power	12VDC 2A						

LFP-M-S

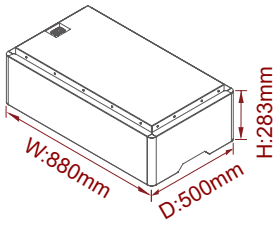
YIY

Stacked Type LiFePO4 Battery Pack

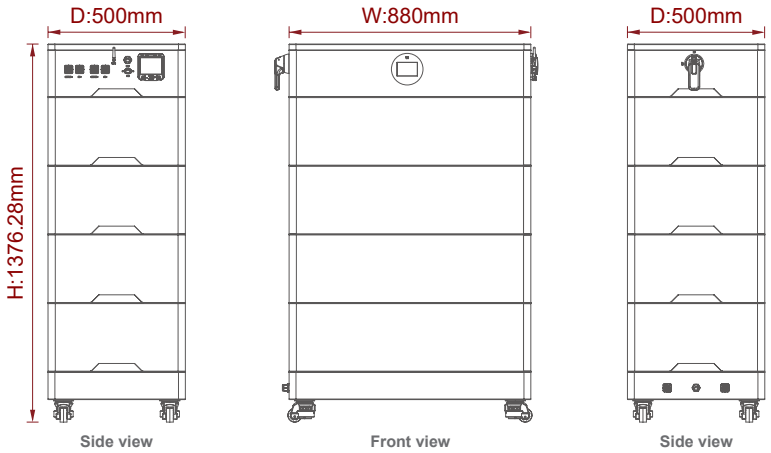
• Features

- **Flexible Expansion**
  Up to 4 clusters in parallel,32.14kWh~128.56kWh capacity
- **Easy Installation**
  Stackable design, Wireless connection.
- **IP54 Protection**
  Indoor&outdoor installations
- **Easy to Install**
  Stackable auto-configuration modules, wireless connection.

• Product Dimensions



LFP-M48314S



Max 4-Layer Rack

• Technical Parameter

LFP-M-S Series Stacked Type LiFePO4 Battery Pack		
Specifications		
Model	LFP-M48314S	
Rated Voltage	51.2V	
Rated Capacity	314Ah	
Rated Energy	16.07KWH	
Cell Configuration	16S1P	
Battery Cell	3.2V 314AH	
Cycles	8000@70%SOH,90%DOD (25℃)	
Standard Charge		
Operation temperature range@charging	0~55℃	
Rated charge voltage	56V±0.4V	
Max charge voltage	57.6V±0.4V	
Allowed MAX charge current	157A	
Peak charge current	170A 2S	
Standard Discharge		
Operation temperature range @discharging	-10~60℃	
Output Voltage Range	46.4~57.6V	
Discharge Cut-off voltage	46.4V	
Allowed MAX discharge current	150A	
Peak discharge current	160A 3S	
Mechanical Characteristics		
Dimension (W*D*H)	880*500*283mm	
Weight (N.W)	130KG	
Communication		
CAN	Inverter PC control and monitor	
Storage and Transportation Requirements		
Storage Temperature	Less than 1 month	-20~35℃
	Less than 6 month	-10~30℃
Storage Humidity	45~75%RH	
SOC	Storage	60~75%SOC
	Transport	45~55%SOC