



### PRODUCT OVERVIEW

The HF series is a new all-in-one hybrid solar charger inverter which integrates solar energy storage and grid power storage with sine wave AC output. Thanks to DSP control and an advanced control algorithm, the HF series has a high response speed, high reliability and meets top industry standards.

### FEATURES

- Full digital voltage and double closed loop current control, SPWM technology and pure sine wave output.
- Two output modes – grid power bypass/inverter output & uninterrupted power supply.
- Available in 4 charging modes: solar only, grid priority, solar priority, grid and solar hybrid charging.
- Advanced MPPT technology with 99.9% efficiency.
- Compatible with various battery types.
- ON/OFF rocker switch for AC output control.
- Power saving mode available to reduce no-load loss.
- Intelligent variable speed fan for efficient thermal management and extended system life.
- Lithium battery activation design, allowing access for lead-acid batter and lithium battery.
- 360° all-around protection including overload, short circuit and over-current.

### APPLICATIONS

- Emergency power supply.
- Home backup storage.
- Data storage/UPS backup systems.
- Off-grid power storage.
- Solar power storage.

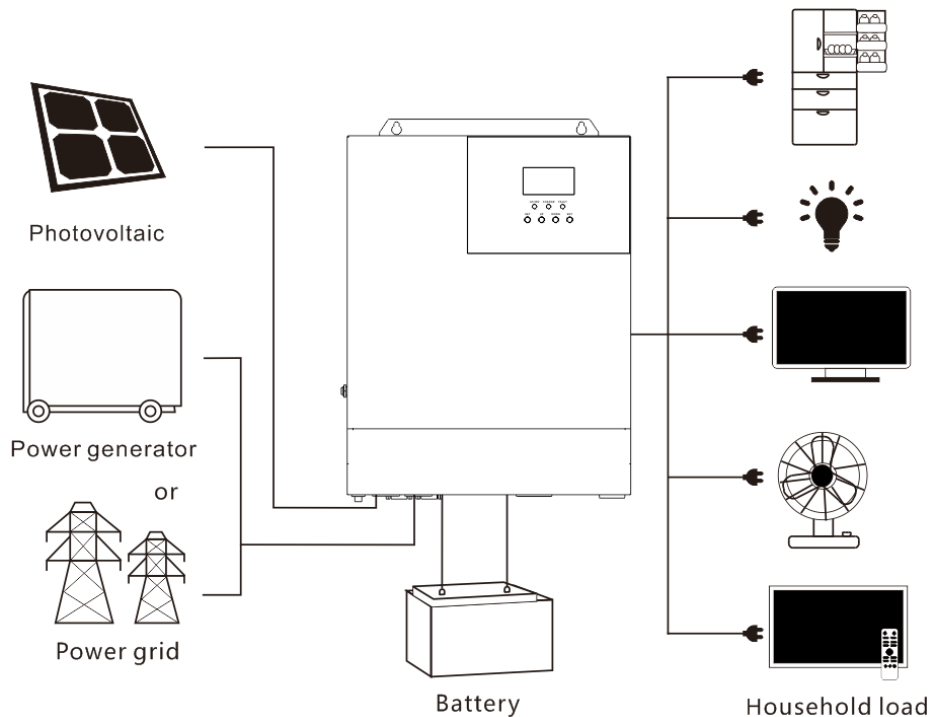
### Product Description

PART#	DESCRIPTION	OUTPUT VOLTAGE	INPUT VOLTAGE	POWER OUTPUT	WEIGHT
EV-HF4830S60	220/230VAC Hybrid Inverter	230VAC	48V	3000W	22.04 LBS
EV-HF4840S60	220/230VAC Hybrid Inverter	230VAC	48V	4000W	22.04 LBS
EV-HF4850S80	220/230VAC Hybrid Inverter	230VAC	48V	5000W	22.04 LBS

## Specifications

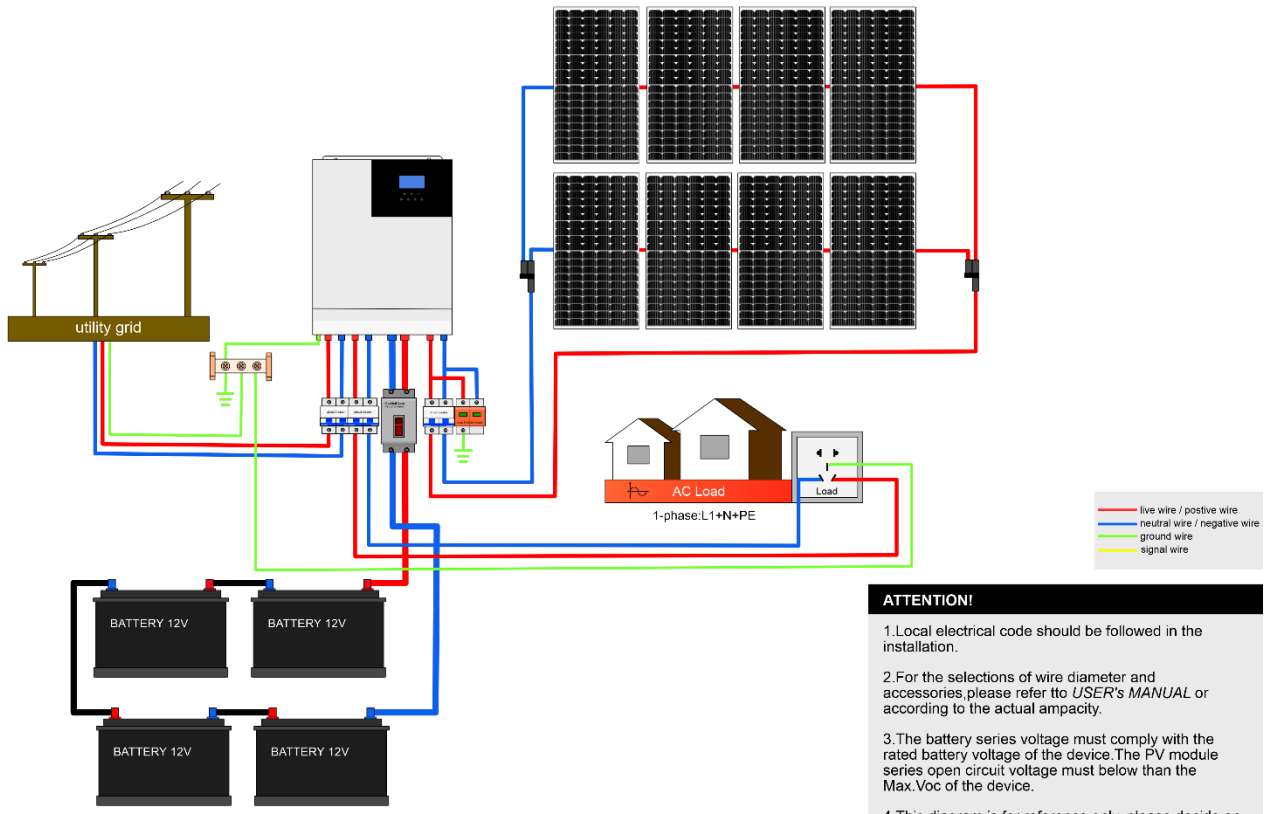
MODEL#	EV-HF4830S60	EV-HF4840S60	EV-HF4850S80
<b>AC MODE</b>			
Rated Input Voltage	220/230VAC		
Input Voltage Range	(170Vac~280Vac) ±2%/(90Vac-280Vac)±2%		
Frequency	50Hz/ 60Hz (Auto detection)		
Frequency Range	47±0.3Hz ~ 55±0.3Hz (50Hz)/57±0.3Hz ~ 65±0.3Hz (60Hz)		
Overload/Short Circuit Protection	Circuit breaker		
Efficiency	>95%		
Conversion Time (Bypass & Inverter)	10ms (Typical)		
AC Reverse Protection	Available		
Maximum Bypass Overload Current	40A		
<b>INVERTER MODE</b>			
Output Voltage Waveform	Pure sine wave		
Rated Output Power (VA)	3000VA	4000VA	5000VA
Rated Output Power (W)	3000W	4000W	5000W
Power Factor	1		
Rated Output Voltage	230VAC		
Output Voltage Error	±5%		
Output Frequency Range (Hz)	50Hz ± 0.3Hz/60Hz ± 0.3Hz		
Efficiency	>90%		
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	6000W	8000W	10000W
Loaded Motor Capability	2HP	3HP	4HP
Output Short Circuit Protection	Circuit breaker		
Bypass Breaker Specifications	40A		
Rated Battery Input Voltage	48V (Minimum starting voltage 44V)		
Battery Voltage Range	(Undervoltage alarm/shutdown voltage/overvoltage alarm/overvoltage recovery... can be set on LCD screen)		
Power Saving Mode	Load ≤25W		
<b>AC CHARGING</b>			
Battery Type	Lead acid or lithium battery		
Maximum Charge Current	60A		
Charge Current Error	± 5ADC		
Charge Voltage Range	40-58VDC		
Short Circuit Protection	Circuit breaker and fuse		
Circuit Breaker Specifications	40A		
Overcharge Protection	Alarm and charging shutoff after 1 minute		

MODEL#	EV-HF4830S60	EV-HF4840S60	EV-HF4850S80
<b>PV CHARGING</b>			
Maximum PV Open Circuit Voltage	145VDC		
PV Operating Voltage Range	60-145VDC		
MPPT Voltage Range	60-115VDC		
Battery Voltage Range	40-60VDC		
Maximum Output Power	3200W		4200W
PV Charging Current Range (Can be set)	0-60A		0-80A
Charging Short Circuit Protection	Fuse		
Wiring Protection	Reverse polarity protection		
<b>CERTIFIED SPECIFICATIONS</b>			
Certification	CE (EN62040-1), ETL		
EMC Certification Level	EN62040-2, C2		
Operating Temperature Range	5°F to 131°F		
Storage Temperature Range	-13°F ~ 140°F		
Humidity Range	5% to 95% (Conformal coating protection)		
Noise	≤ 60dB		
Heat Dissipation	Forced air cooling, variable speed of fan		
Communication Interface	USB/RS485(Bluetooth/WiFi/GPRS)/Dry node control		
Dimensions	16.29" x 13.30" x 4.96"		
Weight	22.04 LBS		



### System Schematic: HF Series 48V -145

**ATTENTION!** Open circuit voltage in serials connection must be below 145V when used -145 suffix productions



**ATTENTION!**

1. Local electrical code should be followed in the installation.
2. For the selections of wire diameter and accessories please refer to *USER'S MANUAL* or according to the actual ampacity.
3. The battery series voltage must comply with the rated battery voltage of the device. The PV module series open circuit voltage must be below than the Max.Voc of the device.
4. This diagram is for reference only, please decide on the connection method according to the actual situation.