

# All-in-one solar charger inverter

HF2420S60-100/HF2430S60-100



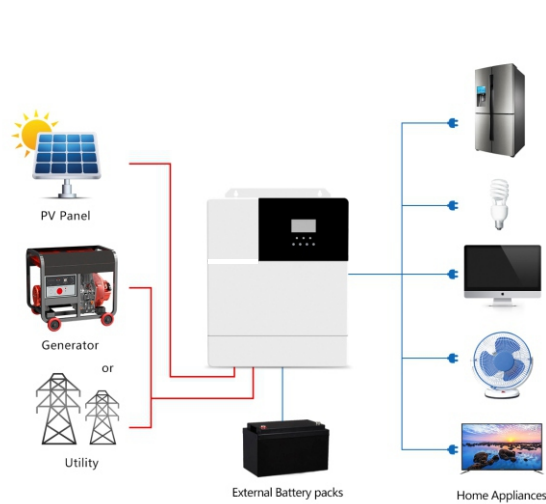
## Product overview

HF series is a new all-in-one hybrid solar charge inverter, which integrates solar energy storage & means charging energy storage and AC sine wave output. Thanks to DSP control and advanced control algorithm, it has high response speed, high reliability and high industrial standard.

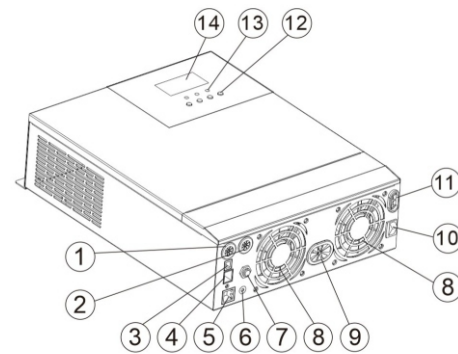
## Performance characteristics

- Full digital voltage and current double closed loop control, advanced SPWM technology, output of pure sine wave.
- Two output modes: mains bypass and inverter output; uninterrupted power supply.
- Available in 4 charging modes: Only Solar, Mains Priority, Solar Priority and Mains & Solar hybrid charging.
- Advanced MPPT technology with an efficiency of 99.9%.
- With the charging requirement (voltage, current, mode) settings, and suitable for various types of energy storage batteries.
- ON/OFF rocker switch for AC output control.
- Power saving mode available to reduce no-load loss.
- Intelligent variable speed fan to efficiently dissipate heat and extend system life.
- Lithium battery activation design, allowing access of lead-acid battery and lithium battery.
- 360° all-round protection with a number of protection functions. Such as overload, short circuit and over current.
- Supply of a variety of user-friendly communication modules, such as RS485(GPRS, WiFi), USB etc., and suitable for computer, mobile phones, Internet monitoring as well as remote operations.
- Lithium battery can be activated by both mains and PV.

## Product connection diagram



## Appearance



|   |                             |   |                      |
|---|-----------------------------|---|----------------------|
| ① | AC input port               | ⑧ | Cooling fan          |
| ② | AC output port              | ⑨ | Battery port         |
| ③ | USB communication port      | ⑩ | ON/OFF rocker switch |
| ④ | RS485 communication port    | ⑪ | PV port              |
| ⑤ | Dry node port               | ⑫ | Touch button         |
| ⑥ | Grounding screw hole        | ⑬ | LED Indicator        |
| ⑦ | AC input Overload protector | ⑭ | LCD screen           |

## Technical parameters >>>

| Models                                 | HF2420S60-100   | HF2430S60-100 |
|--|---|---------------|
| <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 and inverter)  | 10ms (typical)  |               |
| AC reverse protection                  | Available   |               |
| Maximum bypass overload current        | 30A   |               |
| <b>Inverter mode</b>                   |   |               |
| Output voltage waveform                | Pure sine wave  |               |
| Rated output power (VA)                | 2000  | 3000          |
| Rated output power (W)                 | 2000  | 3000          |
| Power factor                           | 1   |               |
| Rated output voltage (Vac)             | 230Vac  |               |
| Output voltage error                   | ±5%   |               |
| Output frequency range (Hz)            | 50Hz ± 0.3Hz/60Hz ± 0.3Hz   |               |
| Efficiency                             | >92%  |               |
| Overload protection                    | (102% < load < 125%) ±10%: report error and turn off the output after 5 minutes;<br>(125% < load < 150%) ± 10%: report error and turn off the output after 10 seconds;<br>Load > 150% ±10%: report error and turn off the output after 5 seconds; |               |
| Peak power                             | 4000  | 6000          |
| Loaded motor capability                | 1HP   | 2HP           |
| Output short circuit protection        | Circuit breaker   |               |
| Bypass breaker specifications          | 30A   |               |
| Rated battery input voltage            | 24V (Minimum starting voltage 22V)  |               |
| Battery voltage range                  | 20.0Vdc~33Vdc ± 0.6Vdc (Undervoltage alarm/shutdown voltage/overvoltage alarm /overvoltage recovery... settable on LCD screen)  |               |
| Power saving mode                      | Load ≤50W   |               |
| <b>AC charging</b>                     |   |               |
| Battery type                           | Lead acid or lithium battery  |               |
| Maximum charge current                 | 60A   | 80A           |
| Charge current error                   | ± 5A dc   |               |
| Charge voltage range                   | 20.0Vdc~33Vdc   |               |
| Short circuit protection               | Circuit breaker and blown fuse  |               |
| Circuit breaker specifications         | 30A   |               |
| Overcharge protection                  | Alarm and turn off charging after 1 minute  |               |
| <b>PV charging</b>                     |   |               |
| Maximum PV open circuit voltage        | 100Vdc  |               |
| PV operating voltage range             | 30-100Vdc   |               |
| MPPT voltage range                     | 30-85Vdc  |               |
| Battery voltage range                  | 18-33Vdc  |               |
| Maximum output power                   | 1400W   |               |
| PV charging current range (can be set) | 0-60A   |               |
| Charging short circuit protection      | Blown fuse  |               |
| Wiring protection                      | Reverse polarity protection   |               |
| <b>Certified specifications</b>        |   |               |
| Certification                          | CE(IEC 62109-1)   |               |
| 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% (Conformal coating protection)  |               |
| Noise                                  | ≤60dB   |               |
| Heat dissipation                       | Forced air cooling, variable speed of fan   |               |
| Communication interface                | USB/RS485(WiFi/GPRS)/Dry node control   |               |
| Size (L*W*D)                           | 378mm*280mm*103mm   |               |
| Weight (kg)                            | 6.2   |               |