# EU STANDARD 220V HYBRID SOLAR INVERTER



## 12KW Features >

- Lithium battery activation function, which can be triggered by PV
- Pure Sine Wave
- PV input 500VDC Max
- MPPT Voltage 60-450VDC
- Detachable dust cover for harsh environment
- Wifi remote monitoring optional
- Current Transformer optional
- Supports parallel operation (Optional)

Pure sine wave | BMS Lithium Battery Activation | WiFi optional | High Efficiency | MPPT | Anti-shock design terminal | Output Multiple Priority | Smart battery charging design

## Bottom view




1. AC Input
2. AC Output 1
3. AC Output 2
4. Battery Input
5. PV Input 1 & PV Input 2
6. WiFi Port optional
7. BMS Port optional

## 12KW Maximum number of parallel units: 6

## TECHNICAL PARAMETER

| Model | HF12KD-48MH | HF12KD-48MH (Parallel version) |
|---|---|---|
| **AC Input** | | |
| Nominal Input Voltage | 220/230/240; L+N+PE | |
| Voltage Range (VAC) | 90~280V (APP MODE)<br>90~280V (GEN MODE)<br>170~284V (UPS MODE) | |
| Frequency | 50~60Hz (Auto Adaptive) | |
| **AC Output** | | |
| Rated Capacity | 12000W | |
| Peak Power | 24000VA | |
| Nominal Output Voltage | 220/230/240VAC; L+N+PE | |
| Voltage Range | 90~280V (Appliance mode)<br>170~284V (UPS mode) | |
| Power Factor | 1 | |
| Frequency | Battery mode: 50 / 60Hz ± 0.1% | |
| Switch Time (Line Mode to Battery Mode) | UPS mode: 10ms (Typical)<br>Appliance mode: 10ms (Typical)<br>GEN mode:20ms | |
| Wave Form | Pure Sine Wave | |
| Overload Capacity (Battery Mode) | 1min@102%~120%Load<br>10s@ > 120%Load | |
| Max Efficiency (Battery Mode) | 94%@48VDC | |
| Parallel Quantity | - | 6 |
| **Charger (PV / AC)** | | |
| Solar Charger Type | Dual MPPTs | |
| MPPT Voltage | 60~450VDC | |
| Max PV Input Current / Input Power | Using One MPPT: 27A/6KW<br>Using Two MPPTs: 22.5A/Per MPPT, 15KW/Total | |
| Max PV Open Circuit Voltage | 500VDC | |
| Max PV Charge Current | 160A | |
| Max AC Charge Current | 160A Settable | |
| Max Charge Current (AC + PV) | 160A | |
| **Battery** | | |
| Nominal Voltage | 48VDC | |
| Maximum Discharge Current | 160A (Default) / 220 (Can set) | |
| Constant Charge Voltage (Settable) | 56.4VDC | |
| Floating Charge Voltage (Settable) | 54VDC | |
| Battery Over Voltage | 61VDC | |
| BMS Protocol (Optional) | VOL,GRO,PYL,IRO,OVT | |
| Battery Type | Lithium / VRLA | |
| **Interface** | | |
| HMI | LCD, 4 buttons + 4 LED lights, can display running/input/output/load mode | |
| Port | RS485/RS232/USB | RS485/RS232/USB/Parallel Interface |
| Expansion Interface | 2*13PIN(Pitch2.0mm)<br>1+12PIN(Pitch2.0mm, USB, RJ45, etc | |
| Parallel Interface | - | Parallel Interface |
| Monitoring | WIFI (Optional) | |
| CT (Current Transformer) | Optional | |
| **General Data** | | |
| Ingress Protection | IP21 | |
| Operating Temperature | -10~45 °C (Reduce output power to 80% above 45 °C) | |
| Environment Humidity | 5%~95% (No condensing) | |
| Storage Temperature | -10~60°C (Battery 0~45°C) | |
| Operating Altitude | Should not exceed 1000m, up to 4000m. Refer to IEC62040-3 | |
| product size / packing size (mm) | 512*435*134mm / 595*505*210mm | |
| Noise | <55db | |
| Net / Gross Weight (kg) | 15kg / - | |