CONSNANT
Constant Electric Power

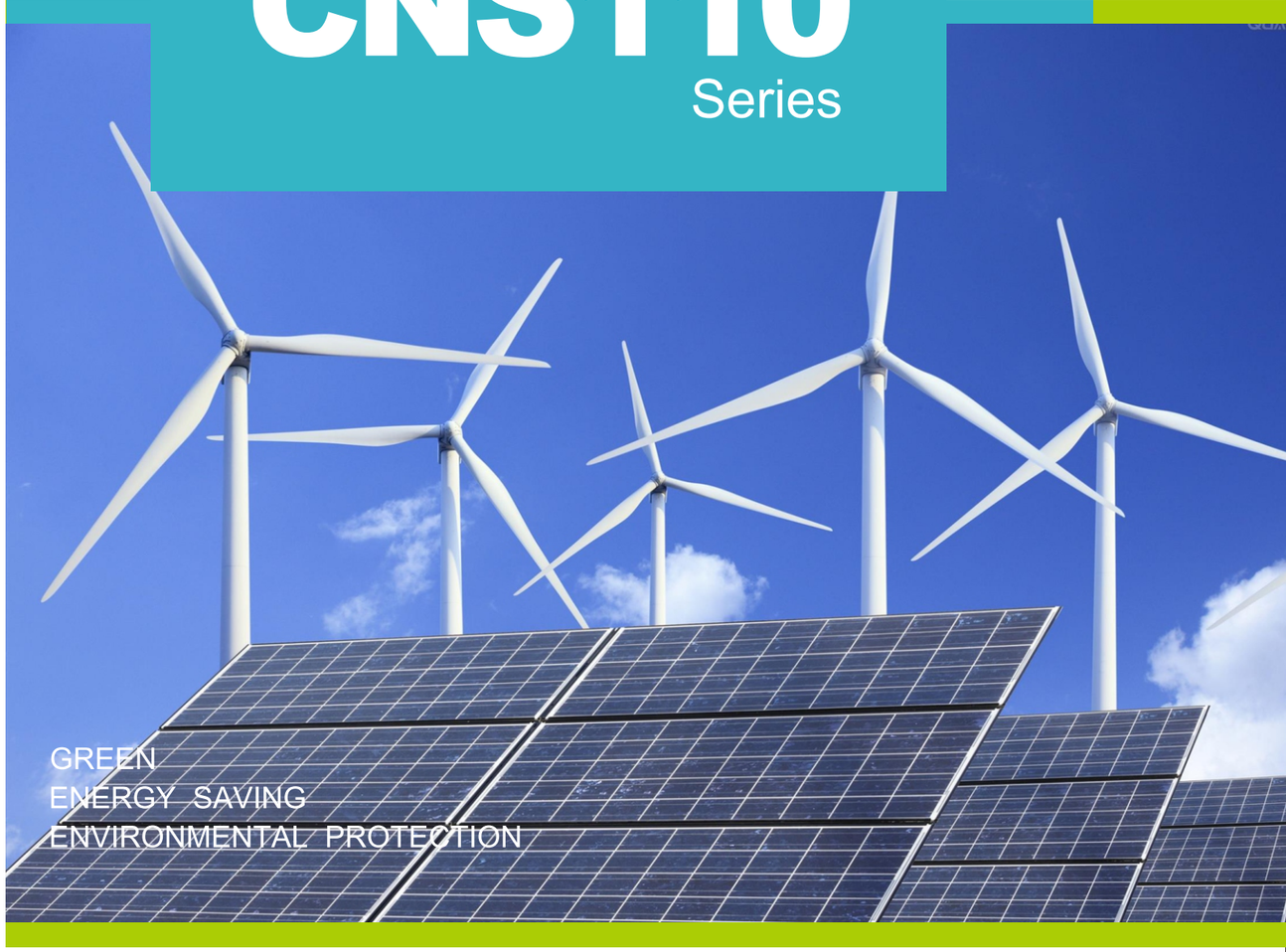
## Technical Specifications

| Battery Inverter Mode Specifications: | | | |
|---|---|---|---|
| output | Output Voltage Waveform | Sine wave | |
| | Rated Output Power (KW) | LV:1/KW/2KW3KW/ | HV:1KW/2KW/3KW/4KW/5KW/6KW/ |
| | | 4KW/5KW/6KW | 7KW/8KW/9KW/10KW/12KW |
| | Power Factor | 0.9~1.0 | |
| | Nominal Output Voltage (V) | LV:120Vac ±10%rms | HV:230Vac ±10%rms |
| | Nominal Output Frequency (Hz) | 60Hz ± 0.3Hz | |
| | | 50Hz ± 0.3Hz | |
| DC Voltage | Nominal DC Input Voltage | 12VDC/24VDC/48VDC | |
| | DC Voltage range | 10-15.5Vdc for 12VDC | |
| | | 20-31.0Vdc for 24VDC | |
| | | 40-62.0Vdc for 48VDC | |
| | Low Battery Alarm | 10.5Vdc ± 0.3Vdc for 12V battery | |
| | | 21.0Vdc ± 0.6Vdc for 24V battery | |
| | | 42.0Vdc ± 1.2Vdc for 48V battery | |
| | Low DC input Shut-down | 10.0Vdc ± 0.3Vdc for 12V battery | |
| | | 20.0vdc± 0.6Vdc for 24V battery | |
| | | 40.0Vdc ± 1.2Vdc for 48V battery | |
| | High DC input Alarm & Fault | 16Vdc ± 0.3Vdc for 12V battery | |
| | | 32Vdc ± 0.6Vdc for 24V battery | |
| | | 64Vdc ± 1.2Vdc for 48V battery | |
| | High DC input Recovery | 15.5Vdc ± 0.3Vdc for 12V battery | |
| | | 31.0Vdc ± 0.6Vdc for 24V battery | |
| | | 62.0Vdc ± 1.2Vdc for 48V battery | |
| AC Charger | Nominal Charge Current | 20A/35A/50A/70A/90A(5 stages adjustable charging current) | |
| | Charge Current Regulation | ± 5Adc | |
| | Over Charge Protection | Bat.V≥15.5VDC for 12V battery | |
| | | Bat.V≥31.0VDC for 24V battery | |
| | | Bat.V≥62.0VDC for 48V battery | |
| | | beeps 0.5s every 1s & fault after 60s | |
| | Algorithm | Three stage: Boost CC (constant current stage) → | |
| | | Boost CV (constant voltage stage) → Float (constant voltage stage) | |
| Solar charger | Rated Charge Current | 40A | 60A |
| | Rated charge battery Voltage type | 12V/24V/48V | 12V/24V |
| | Max.PV open circuit array voltage | 12V for 40Vdc | |
| | | 24V for 55Vdc | |
| | | 48V for 110Vdc | |
| | Charger mode | MPPT | |
| | PV Low Voltage Re-connect | PV≥Bat.V=3V | |
| | PV Low Voltage Disconnect | PV≦Bat.V | |
| Efficiency | Efficiency | ≥97% | |
| | Efficiency (Battery Mode) | ≥85% | |
| | Efficiency (Line Mode) | >98% | |
| Transfer Time | Ac to Dc | 20ms (Max) | |
| | Dc to Ac | 15ms (Max) | |
| System parameter | Over-Load Protection | 110% <load<150%, beeps 0.5s every 1s, and Fault after 60s off the output, | |
| | | Load>150%, beeps 0.5s every 1s, and Fault after 20s. | |
| | Output Short Circuit Protection | Current limit (Fault after 10s) | |
| | Surge rating (10s) | 1:3 (VA) | |
| | Power saver | Load ≦25W (Enabled on “P/S auto” setting of Remote control) | |
| | Protections | Low battery, over charging, over load , over temp. | |
| | Indicators | LED+LCD Display | |
| General Specifications | Operating Temperature Range | 0°C to 40°C | |
| | Storage temperature | -15ºC ～60ºC | |
| | Operation humidity | 5% to 95%(non-condensing) | |
| | Audible Noise | 60dB max | |
| | Cooling | Forced air, variable speed fan | |
| | Dimension(L*W*H) | 1-3KW: 526x423x260mm 4-6KW: 530*396*190mm | |
| | | 7-12KW: 627*416*204mm | |
| | Net weight(Kg) | 1KW 21.5Kg; 1.5KW 23.5kg; 2KW 26Kg; 3KW 30.5kg; 4KW 32kg; 5KW 36.5kg; | |
| | | 6KW 40.5kg; 7KW 43.5kg; 8KW 50kg; 10KW 57.5kg; 12KW 60 kg | |

Product specifications are subject to change without further notice

AC/SOLAR Charging Off Grid Hybrid Inverter

# CNS110 Series

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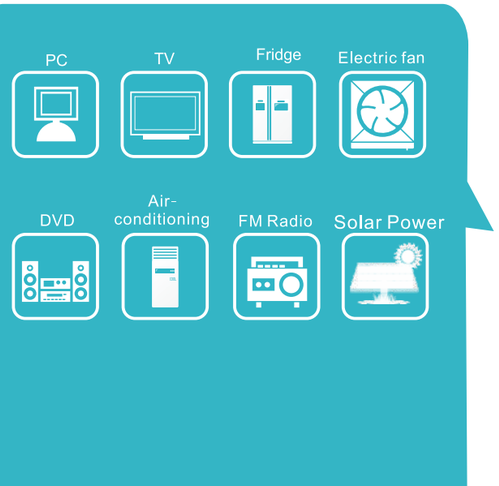
AC/SOLAR Charging off grid hybrid inverter



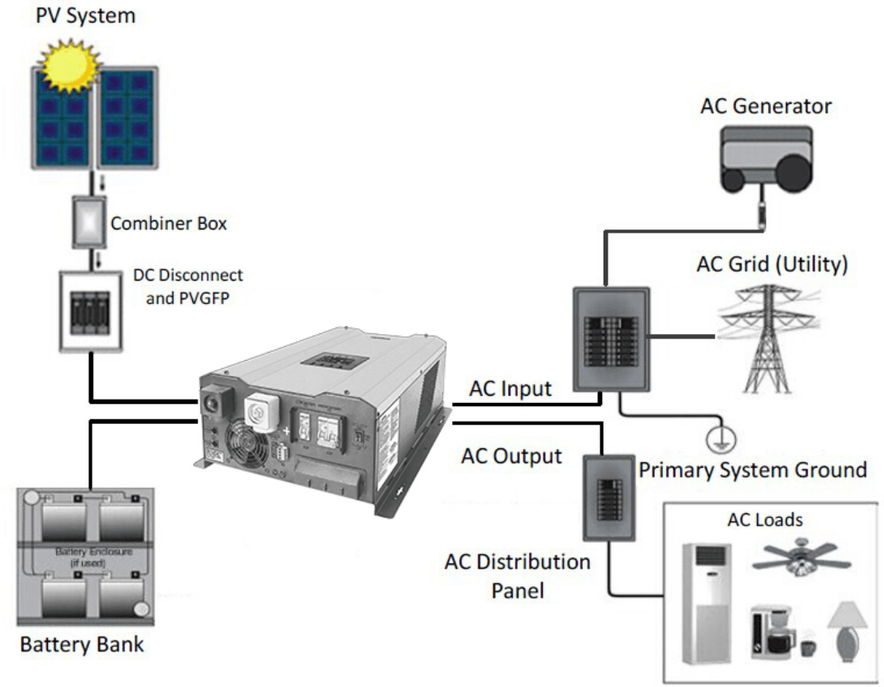

**Product snapshot:**

Model: 1-12KW

Nominal voltage: 120VAC 1-6KW;

220/230/240VAC 1-12KW

Nominal frequency: 50/60Hz




## Key Features:

- AC/Solar charging Off grid Hybrid Inverter.
- LED/LCD display, Enhanced functions setting via LCD, Man-machine intelligent design.
- Built-in 40A/60A optional MPPT solar charger controller.
- LCD shows the solar capacity.
- 5 stages adjustable AC charging current. AC charging also can be closed.
- AC/DC priority modes can be set.
- Generator restart signal. (Dry contact)
- 3 times peak power. Strong loading capacity.
- Overload, output short-circuit protection.

## Technical specifications

| Model | | CNS110-1KW -- CNS110-12KW | |
|---|---|---|---|
| | | LV Model(1-6KW) | HV Model(1-12KW) |
| **Line Mode Specifications:** | | | |
| Input Voltage | Input Voltage Waveform | Sinusoidal (utility or generator) | |
| | Nominal Input Voltage | LV 120Vac | HV 230Vac |
| | Low Line Disconnect | Normal:85Vac±4% | Normal:184Vac±4% |
| | | Wide:80Vac±4% | Wide:135Vac±4% |
| | Low Line Re-connect | Normal:95Vac±4% | Normal:194Vac±4% |
| | | Wide:85Vac±4% | Wide:145Vac±4% |
| | High Line Disconnect | Normal:136Vac±4% | Normal:263Vac±4% |
| | | Wide:140Vac±4% | Wide:263Vac±4% |
| | High Line Re-connect | Normal:131Vac±4% | Normal:253Vac±4% |
| | | Wide:135Vac±4% | Wide:253Vac±4% |
| | Max AC Input Voltage | 150Vrms | 270Vrms |
| Input Frequency | Nominal Input Frequency | 50Hz/ 60Hz (Auto detection) | |
| | Low Line Frequency Re-connect | 51+0.3Hz for 60Hz;<br>41+0.3Hz for 50Hz; | |
| | Low Line Frequency Disconnect | 50+0.3Hz for 60Hz;<br>40+0.3Hz for 50Hz; | |
| | High Line Frequency Re-connect | 64+0.3Hz for 60Hz;<br>54+0.3Hz for 50Hz; | |
| | High Line Frequency Disconnect | 65+0.3Hz for 60Hz;<br>55+0.3Hz for 50Hz; | |
| main functions | Output Voltage Waveform | As same as Input Waveform | |
| | Over-Load Protection (SMPS load) | Air switch | |
| | Output Short Circuit Protection | Air switch | |
| | Max Bypass Overload Current | 40A/50A | |