# NPower Series

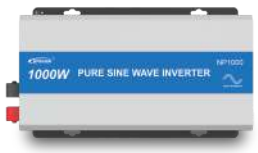
Pure sine wave inverter

## Overview

NPower series is a low-frequency pure sine wave inverter which can convert 12/24/48VDC to 220/230V AC (or 110V/120V AC) and power the AC loads. It has stronger ability to work with impact load. Ranging from 260W to 5000W, Npower is compatible with lithium-ion battery perfectly, and suits for the system which requires high reliability.

## Features

- Adoption of advanced SPWM technology, pure sine wave output
- Adopt voltage and current double closed-loop control to enhance the load capacity
- The input and output adopt completely isolated inverter technology with high reliability
- The input adopts an anti-surge design to meet the special requirements of surge limitation of the lithium battery
- The output adopts excellent EMC design to prevent interference of connected equipment
- Output voltage 220/230VAC (or 110/120VAC )and frequency 50/60Hz optional
- Extensive protections: input reverse polarity, input overvoltage, input low voltage, output overload and short circuit, overheating
- RS485 port can connect the communication module, realize remote start/stop inverter and monitor the running status via the APP or PC software
- Set the inverter's ID via the APP or PC software to monitor several inverters
- The case is designed with the galvanized board, with high strength and strong corrosion resistance

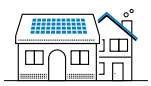




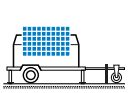





Solar Car


Solar Home


Solar Boat


Solar Power Generator

# Technical Specifications

| Item | NP260-12 | NP260-22 | NP400-12 | NP400-22 | NP600-12 | NP600-22 | NP800-12 | NP1000-22 |
|---|---|---|---|---|---|---|---|---|
| Continuous output power | 260W@25℃<br>260W@45℃ | 260W@25℃<br>260W@45℃ | 400W@25℃<br>350W@45℃ | 400W@25℃<br>350W@45℃ | 600W@25℃<br>500W@45℃ | 600W@25℃<br>500W@45℃ | 800W@25℃<br>800W@45℃ | 1000W@25℃<br>800W@45℃ |
| Surge power | 400W | 400W | 700W | 700W | 1000W | 1000W | 1600W | 2000W |
| Output voltage | 220/230VAC<br>(-8%~+3%) | 220/230VAC<br>(±3%) | 220/230VAC<br>(-8%~+3%) | 220/230VAC<br>(±3%) | 220/230VAC<br>(-8%~+3%) | 220/230VAC<br>(±3%) | 220/230VAC<br>(-8%~+3%) | 220/230VAC<br>(±3%) |
| Output frequency | 50/60Hz±0.2% | | | | | | | |
| Output wave | Pure sine wave | | | | | | | |
| Output distortion THD | THD≤3%(Resistive load) | | | | | | | |
| Load power factor | 0.2-1(Load VA ≤ Continuous output power) | | | | | | | |
| Rated input voltage | 12VDC | 24VDC | 12VDC | 24VDC | 12VDC | 24VDC | 12VDC | 24VDC |
| Input voltage range | 10.8~16VDC | 21.6~32VDC | 10.8~16VDC | 21.6~32VDC | 10.8~16VDC | 21.6~32VDC | 10.8~16VDC | 21.6~32VDC |
| Output efficiency of 80% rated power | 81% | 84% | 81% | 85% | 81% | 85% | 83% | 85% |
| Max. rated efficiency | 79% | 82% | 79% | 84% | 80% | 83% | 81% | 82% |
| Max. output efficiency | 89%(80W) | 90%(100W) | 90%(100W) | 91%(100W) | 89%(200W) | 92%(160W) | 92%(100W) | 92%(200W) |
| No-load current | <0.4A | <0.3A | <0.5A | <0.3A | <0.6A | <0.4A | <0.6A | <0.4A |
| Static Loss | < 0.3W@12V | < 0.4W@24V | < 0.3W@12V | < 0.4W@24V | < 0.3W@12V | < 0.4W@24V | < 0.3W@12V | < 0.4W@24V |
| RS485 com. port | 5VDC/300mA(Non-isolated) | | | | | | | |
| Dimension(LxWxH) | 365×212×97 mm | 365×212×97 mm | 386×215×99 mm | 386×215×99 mm | 428×243×121 mm | 428×243×121 mm | 475×268×139 mm | 475×268×139 mm |
| Mounting dimension | 220×193mm | 220×193mm | 230×196mm | 230×196mm | 260×220mm | 260×220mm | 270×245mm | 270×245mm |
| Net Weight | 6.4kg | 6.3kg | 8.1kg | 7.9kg | 10.4kg | 10.1kg | 13.3kg | 12.7kg |
| Operating temperature range | -20℃~+45℃(Full load) | | | | | | | |
| Relative humidity | < 95%(N.C.) | | | | | | | |
| Enclosure | IP20 | | | | | | | |

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# Technical Specifications

| Item | NP1000-42 | NP1200-12 | NP1200-22 | NP1500-12 | NP1500-22 | NP2000-12 | NP2000-22 | NP2000-42 |
|---|---|---|---|---|---|---|---|---|
| Continuous output power | 1000W@25℃<br>1000W@45℃ | 1200W@25℃,<br>1000W@45℃ | 1200W@25℃<br>1000W@45℃ | 1500W@25℃<br>1300W@45℃ | 1500W@25℃<br>1500W@45℃ | 2000W@25℃<br>2000W@45℃ | 2000W@25℃<br>2000W@45℃ | 2000W@25℃<br>2000W@45℃ |
| Surge power | 2000W | 2000W | 2000W | 3000W | 3000W | 4000W | 4000W | 4000W |
| Output voltage | 220/230VAC<br>(±3%) | 220/230VAC<br>(-8%~+3%) | 220/230VAC<br>(±3%) | 220/230VAC<br>(-5%~+3%) | 220/230VAC<br>(±3%) | 220/230VAC<br>(-5%~+3%) | 220/230VAC<br>(±3%) | 220/230VAC<br>(±3%) |
| Output frequency | 50/60Hz±0.2% | | | | | | | |
| Output wave | Pure sine wave | | | | | | | |
| Output distortion THD | THD≤3%<br>(Resistive load) | THD≤3%<br>(Resistive load) | THD≤3%<br>(Resistive load) | THD≤5%<br>(Resistive load) | THD≤3%<br>(Resistive load) | THD≤5%<br>(Resistive load) | THD≤3%<br>(Resistive load) | THD≤3%<br>(Resistive load) |
| Load power factor | 0.2-1(Load VA ≤ Continuous output power) | | | | | | | |
| Rated input voltage | 48VDC | 12VDC | 24VDC | 12VDC | 24VDC | 12VDC | 24VDC | 48VDC |
| Input voltage range | 43.2~64.0VDC | 10.8~16VDC | 21.6~32VDC | 10.8 ~ 16VDC | 21.6 ~ 32VDC | 10.8~16.0VDC | 21.6~32.0VDC | 43.2~64.0VDC |
| Output efficiency of 80% rated power | 90.80% | 81% | 85% | 84% | 88.50% | 84.50% | 88% | 89% |
| Max. rated efficiency | 89.40% | 78% | 84% | 82% | 87% | 82% | 86% | 87% |
| Max. output efficiency | 94.5%(300W) | 92%(200W) | 93%(300W) | 90%(400W) | 92%(500W) | 90%(600W) | 93%(500W) | 93%(500W) |
| No-load current | < 0.19A | <0.6A | <0.4A | < 2.0A | < 0.5A | < 2.5A | < 0.6A | < 0.3A |
| Static Loss | < 0.7W@48V | < 0.3W@12V | < 0.4W@24V | < 0.6W@12V | < 0.6W@24V | < 0.6W@12V | < 0.6W@24V | < 1.8W@48V |
| RS485 com. port | 5VDC/200mA<br>(Isolation) | 5VDC/300mA<br>(Non-isolated) | 5VDC/300mA<br>(Non-isolated) | 5VDC/300mA(<br>Non-isolated) | 5VDC/300mA<br>(Non-isolated) | 5VDC/300mA<br>(Non-isolated) | 5VDC/300mA<br>(Non-isolated) | 5VDC/200mA<br>(Isolation) |
| Dimension(LxWxH) | 452x268x139<br>mm | 511×268×139<br>mm | 511×268×139<br>mm | 566×313×145<br>mm | 566×313×145<br>mm | 554×393×175<br>mm | 554×393×175<br>mm | 486×313×145<br>mm |
| Mounting dimension | 270x245mm | 300×245mm | 300×245mm | 350×292mm | 350×292mm | 350×372mm | 350×372mm | 350×292mm |
| Net Weight | 13.91kg | 15.7kg | 15.3kg | 20.3kg | 20.2kg | 29.8kg | 27.6kg | 20.7kg |
| Operating temperature range | -20℃~+45℃(Full load) | | | | | | | |
| Relative humidity | < 95%(N.C.) | | | | | | | |
| Enclosure | IP20 | | | | | | | |

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# Technical Specifications

| Item | NP2500-12 | NP2500-22 | NP2500-42 | NP3000-22 | NP3000-42 | NP3500-42 | NP4000-22 | NP4000-42 | NP5000-42 |
|---|---|---|---|---|---|---|---|---|---|
| Continuous output power | 2500W@25℃2<br>500W@45℃ | 2500W@25℃<br>2500W@45℃ | 2500W@25℃<br>2500W@45℃ | 3000W@25℃<br>3000W@45℃ | 3000W@25℃<br>3000W@45℃ | 3500W@25℃<br>3500W@45℃ | 4000W@25℃<br>4000W@45℃ | 4000W@25℃<br>4000W@45℃ | 5000W@25℃<br>5000W@45℃ |
| Surge power | 5000W | 5000W | 5000W | 6000W | 6000W | 7000W | 8000W | 8000W | 10000W |
| Output voltage | 220/230VAC<br>(-8%~+3%) | 220/230VAC<br>(-6%~+3%) | 220/230VAC<br>(±3%) | 220/230VAC<br>(-5%~+3%) | 220/230VAC<br>(±3%) | 220/230VAC<br>(±3%) | 220/230VAC<br>(±3%) | 220/230VAC<br>(±3%) | 220/230VAC<br>(±3%) |
| Output frequency | 50/60Hz±0.2% | | | | | | | | |
| Output wave | Pure sine wave | | | | | | | | |
| Output distortion THD | THD≤5%<br>(Resistive load) | THD≤3%<br>(Resistive load) | THD≤3%<br>(Resistive load) | THD≤3%<br>(Resistive load) | THD≤3%<br>(Resistive load) | THD≤3%<br>(Resistive load) | THD≤3%<br>(Resistive load) | THD≤3%<br>(Resistive load) | THD≤3%<br>(Resistive load) |
| Load power factor | 0.2-1(Load VA ≤ Continuous output power) | | | | | | | | |
| Rated input voltage | 12VDC | 24VDC | 48VDC | 24VDC | 48VDC | 48VDC | 24VDC | 48VDC | 48VDC |
| Input voltage range | 10.8~16VDC | 21.6~32VDC | 43.2~64VDC | 21.6~32VDC | 43.2~64VDC | 43.2~64VDC | 21.6~32VDC | 43.2~64VDC | 43.2~64VDC |
| Output efficiency of 80% rated power | 87% | 89% | 91.50% | 88% | 90% | 90% | 89% | 91.50% | 91.50% |
| Max. rated efficiency | 85% | 87% | 90% | 86% | 89% | 89% | 86% | 90% | 90% |
| Max. output efficiency | 90%(700W) | 93%(500W) | 94%(800W) | 94%(500W) | 94%(900W) | 93%(900W) | 93%(1400W) | 94%(1000W) | 94%(1400W) |
| No-load current | < 3.0A | < 0.8A | < 0.5A | < 0.8A | < 0.5A | < 0.5A | < 2.5A | < 0.5A | < 0.5A |
| Static Loss | < 0.6W@12V | < 0.6W@24V | < 1.8W@48V | < 0.6W@24V | < 1.8W@48V | < 1.8W@48V | < 0.6W@24V | < 1.8W@48V | < 1.8W@48V |
| RS485 com. port | 5VDC/300mA<br>(Non-isolated) | 5VDC/300mA<br>(Non-isolated) | 5VDC/300mA<br>(Non-isolated) | 5VDC/300mA<br>(Non-isolated) | 5VDC/200mA<br>(Isolation) | 5VDC/200mA<br>(Isolation) | 5VDC/300mA<br>(Non-isolated) | 5VDC/200mA<br>(Isolation) | 5VDC/200mA<br>(Isolation) |
| Dimension(LxWxH) | 584×393×175<br>mm | 604×393×175<br>mm | 549×328×175<br>mm | 639×393×175.5<br>mm | 584×328×170<br>mm | 564×353×175<br>mm | 660×435×210<br>mm | 604×393×175<br>mm | 640×435×210<br>mm |
| Mounting dimension | 350×372mm | 350×372mm | 350×307mm | 350×372mm | 350×307mm | 350×332mm | 625×300mm | 350×340mm | 605×300mm |
| Net Weight | 32kg | 32.2kg | 25.5kg | 34.0kg | 28.4kg | 32.2kg | 43.2kg | 37kg | 50kg |
| Operating temperature range | -20℃~+45℃(Full load) | | | | | | | | |
| Relative humidity | < 95%(N.C.) | | | | | | | | |
| Enclosure | IP20 | | | | | | | | |

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