



# PNI SP500W / PNI SP1000W / PNI SP2000W

Power inverter / Invertor de tensiune



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## Main features

- Pure sine wave output
- THD (Total Harmonic Distorsion) <3%
- Protections: undervoltage, overvoltage, overheating, overload, short circuit

## Introduction




SP series PNI inverters convert 12V DC input voltage into 230V AC 50Hz voltage.

We recommend that you read this manual carefully before putting the product into operation.

## Warnings

- Do not store the product in environments with corrosive gases, high humidity and high temperature, dust and electromagnetic interference.
- In the event of a fault, do not open or repair this product by yourself. Call a specialized service center.

## Symbol convention

Symbol	Signification
 DANGER	Potential serious danger that could cause casualties.
 WARNING	Potential medium danger that could cause minor injuries.
 CAUTION	Potential danger that could cause device failure, data loss, device performance impairment, and other unexpected losses.

## Safety precaution

We recommend that you read this chapter carefully before using the product, in order to avoid personal injury and product damage.

### Symbols description

		
Safety sign	Antistatic sign	Danger, electric shock

The inverter generates high temperatures during usage.

Carefully read the installation and operating instructions to avoid personal injury or damage to the equipment.

**Warning:** We do not take responsibility for non-compliance with safety measures.

Batteries of different sizes and from different manufacturers may have different voltage. Make sure that the inverter voltage corresponds to the battery voltage. Contact the seller for more details. Any change in the configuration or structure of the system may affect its proper functioning.

### **Danger High Voltage!**

Touching the inverter in a humid or wet object (or hands) can put you in a dangerous situation.

1. Do not open the product's housing under any circumstances. The input and output of the inverter presents a high voltage danger. Opening the inverter and touching the internal components can put you in a dangerous situation.
2. Before maintenance, you must completely disconnect the power supply of the inverter. It is recommended that you check both the input and output of the inverter with a voltmeter to ensure that it is disconnected properly.
3. Even if the power is completely disconnected, residual energy may remain in the inverter. Leave the inverter disconnected for 10 minutes to ensure that the system is completely discharged.

4. Keep the inverter packaged before installation and use.
5. Do not manipulate the inverter in the presence of electrical conductors: metal watch, bracelets, rings.
6. The inverter must be repaired, installed and maintained only by qualified personnel.

**Inductive load and half-wave rectification load attentions!**

We recommend choosing an inverter with a power 2-3 times higher than the half-wave rectification or inductive load.

**Avoid antistatic danger**

We recommend that you wear antistatic wrist strap to protect sensitive parts from static discharge equipment.

**Do not disconnect the inverter when turned on**

Do not install or disconnect the appliance while it is switched on. Pay maximum attention when connecting the power cords.

**Use only regulated batteries**

Use only regulated batteries. Use of unregulated batteries may result in product malfunction.

**Use the battery according to the manufacturer's rules**

Use the battery according to the connection rules provided by its manufacturer. Improper operation can endanger you.

1. Do not shortcircuit the wires. The connections must be made very tightly.
2. Do not touch both battery terminals or wires connected to them at the same time.
3. Avoid spilling electrolyte. The electrolyte is corrosive for metal and poses a short-circuit hazard.
4. Keep the battery safe, away from fire or a source of sparks.

**Avoid fans harm**

Avoid accidental blocking of the fans. Do not use tools or your fingers to stop them.

**Keep the inverter well ventilated**

Make sure that the ventilation and air exhaust outputs of the inverter are

not blocked in any way. Also, do not mount the passive radiator part of the housing attached to a wall, ceiling or floor, but at a distance that allows air to pass.

## Inverter installation

### Environment conditions

Keep the inverter in a dry and ventilated environment. Keep the inverter away from moisture, dust, heat, sunlight, volatile gas or high salinity.



### Caution

The operating temperature range of the product is  $-26^{\circ}\text{C} \sim +60^{\circ}\text{C}$ . Do not overload the inverter in conditions with temperatures above  $40^{\circ}\text{C}$ . If you use the inverter excessively at temperatures above  $40^{\circ}\text{C}$ , reduce the consumption by 10% for each degree above  $40^{\circ}\text{C}$ .

The optimum operating temperature of the inverter is between  $+20^{\circ}\text{C} \sim +30^{\circ}\text{C}$ .

If used at temperatures above  $30^{\circ}\text{C}$ , the battery life will decrease considerably. Below  $20^{\circ}\text{C}$  the electric storage time will decrease.

### Keep safety distance

The inverter must be mounted at least 60 mm from the surrounding walls, with the cooling radiator unobstructed by other objects.

Do not cover the side panels of the inverter to ensure efficient cooling and to avoid overheating.

### The electric cables connection

Make sure the power button of the inverter is OFF.

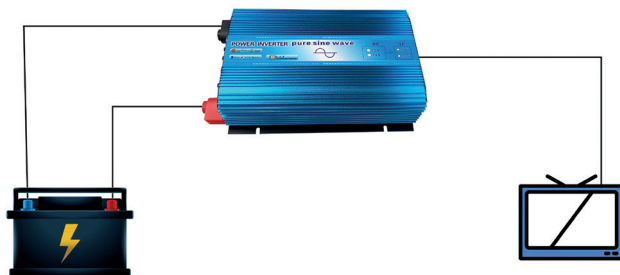
Observe the polarity of the wires and do not connect them in reverse to avoid shorting the inverter.

Follow these steps to connect the inverter cables:

1. Switch off the inverter with the ON / OFF button.
2. Connect the wires to the battery terminals respecting the polarity.
3. Make sure that the 2 cables are connected tightly, to avoid overheating.

4. Connect the load to the Schuko socket.
5. After making sure all connections are made correctly, turn on the inverter. If the green LED indicator lights up, it means that the output voltage is correct and the inverter is working properly.

The correct connection of the inverter is shown in the following diagram.



### Caution

1. Do not use the AC output of the inverter to connect it to the 230V mains, so as not to burn the inverter.
2. Connect the loads one by one and do not exceed the declared maximum power of the inverter.
3. For inductive loads choose an inverter with a maximum power 2-3 times higher.
4. It is recommended to start the car only with the inverter turned off, because this procedure will consume a lot of current and can affect the inverter.
5. The inverter must be mounted in a ventilated place, must not be covered and must be protected from access by people.
6. Do not connect the inverter to discharged, defective or old batteries, as this may cause the inverter to burn out.

## About battery

A storage battery or accumulator is a device that generates energy following a chemical process. Make sure you have chosen a suitable battery for this inverter, to ensure a correct and optimal operation.

### Battery performance index

1. Capacity: Represents the amount of energy at maximum power composed of the discharge current multiplied by the discharge time.  
Capacity = Discharge current (I) x Discharge time (H)
2. Discharge rate: Represents the speed of each discharge current per specific time
3. Discharge current: The discharge current is the output current. It is usually expressed in Amperes or volume multiplied by a coefficient.
4. Final discharge voltage: Represents the voltage when the battery is not discharged. It is usually about 1.75V / cell
5. Nominal capacity: Represents the capacity after 20 hours of unloading.
6. Self-discharge rate: The battery is discharged even if it is not used. The unit is C / unit.

### Choosing the right battery

Because inverters need strong current when operating, the maximum capacity and current of the battery are factors that determine the efficiency at which the inverter operates (50% - 100%).

These factors can also damage the battery.

Battery storage capacity depends on the maximum discharge current:

Maximum discharge current = Rated power / (storage voltage x 0.85)

Battery storage capacity = average discharge current discharge time

Example:

PNI SP1000W has a rated power of 1000W, 12V input voltage:

Average discharge current =  $1000 / (12 \times 0.85) = 98A$

If kept on for 2 hours:

Battery storage capacity =  $98 \times 2 = 196 Ah$



Choose a battery with a capacity greater than 196 Ah.

## Recommended values for the batteries

<b>Invertor</b>	<b>Power (W)</b>	<b>Recommended battery</b>
SP500W	500	12V, $\geq 100\text{Ah}$
SP1000W	1000	12V, $\geq 150\text{Ah}$
SP2000W	2000	12V, $\geq 200\text{Ah}$

# Troubleshooting

<p>The inverter does not turn on and the Power LED does not light up</p>	<ol style="list-style-type: none"> <li>1. The battery is defective</li> <li>2. The battery connection is abnormal</li> <li>3. The fuse is blown</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace the battery</li> <li>2. Connect the battery carefully</li> <li>3. Change the fuse</li> </ol>
<p>The inverter is under protection and the red error LED (Fault) lights up</p>	<p>The inverter is protected and the red Fault LED is on.</p> <ol style="list-style-type: none"> <li>1. The inverter enters protection when the total number of consumers exceeds the rated power of the inverter.</li> <li>2. The starting power of the consumers is higher than the declared peak power for the inverter. The inverter enters protection.</li> <li>3. The battery voltage is too low. The inverter triggers surge protection.</li> <li>4. The battery voltage is too high. The inverter triggers overvoltage protection.</li> <li>5. The inverter temperature is too high.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce the number of connected consumers and restart the inverter.</li> <li>2. Inductive consumers (motors, pumps) have a very high starting consumption. Choose an inverter with a nominal power 4-5 times higher in these cases.</li> <li>3. If the battery voltage rises above the minimum protection level, the inverter restarts automatically. (or change the battery).</li> <li>4. If the battery voltage drops below the maximum protection level, the inverter restarts automatically (or change the battery).</li> <li>5. Close the inverter for 15 minutes, check and clean the fans and side vents and keep ventilation space around the housing.</li> </ol>

The inverter does not work at 100% load	<ol style="list-style-type: none"> <li>1. The wires between the battery and the inverter are too long.</li> <li>2. The connection to the battery / inverter is weak.</li> </ol>	<ol style="list-style-type: none"> <li>1. Shorten the threads or use thicker threads. We recommend using the wires in the package.</li> <li>2. Check and tighten the connectors on the inverter and battery.</li> </ol>
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If the inverter does not work after applying the above solutions, we recommend that you contact the Seller, Importer or Service Representative, consulting the warranty certificate.

Do not unpack the product as you will lose the product warranty.

We recommend a regular maintenance of the product to prolong its life.

1. Avoid using the inverter in humid, dusty environments with too high a temperature.
2. Avoid subjecting the product to mechanical shocks
3. Periodically check cables and connections
4. Periodically clean the inverter fans.

## Technical specifications

	<b>SP500W</b>	<b>SP1000W</b>	<b>SP2000W</b>
Input voltage	12V DC		
Output power	500W	1000W	2000W
Output voltage	230V AC		
Frequency	50Hz/60Hz		
Transfer efficiency	>88%		
Output wave	Pure sine wave		
Total harmonic distortion	THDV $\leq$ 3% (100% linear load)		
Overload capacity	>120%		
Protections	undervoltage, overvoltage, overheating, overload, short circuit		
<b>Recommended battery parameters</b>			
Type	Plumb-acid/Litium		
Voltage	12V		
Maximum current	100A	150A	200A
Under / over voltage protection	10V/15.5V		
Voltage warning level	10.5V		
Cut-off level (interrupt)	9.7V-10.2V		
Recovery level	12.5V		
<b>General parameters</b>			
LED indicators	Green, Red		
Active cooling	Fan		
Working temperature	-26°C ~ +60°C		
Working humidity	$\leq$ 90% (non-condensing)		

## Caracteristici de baza

- Forma de unda de iesire: sinusoida pura
- THD (Total Harmonic Distorsion) <3%
- Protectie la subtensiune, supratensiune, supraincalzire, suprasarcina, scurtcircuit

## Introducere




Invertoarele PNI din seria SP transforma tensiunea de intrare 12V DC in 230V AC 50Hz.

Va recomandam sa cititi cu atentie acest manual inainte de punerea in functiune a produsului.

### Atentionari

- Nu tineti produsul in medii cu gaze corozive, cu umiditate si temperatura mare, cu praf si interferente electromagnetice.
- In caz de defectiune nu desfaceti si nu reparati singur acest produs. Apelati la un centru service specializat.

## Semnificatia simbolurilor

Simbol	Semnificatie
 DANGER	Potential pericol grav care ar putea cauza victime.
 WARNING	Potential pericol mediu ca gravitate care ar putea cauza vatamari usoare.
 CAUTION	Potential pericol care ar putea cauza defectarea dispozitivului, pierderea de date, alterarea performantelor dispozitivului si alte pierderi nepravazute.

## Masuri de siguranta

Va recomandam sa cititi cu atentie acest capitol inainte de utilizarea produsului, pentru a evita accidentarea personala si defectarea produsului

### Descriere simboluri

		
Semn de siguranta	Semn antistatic	Pericol de electrocutare

Invertorul genereaza temperaturi inalte in timpul functionarii.

Cititi cu atentie instructiunile de montaj si utilizare, pentru a evita ranirea personala sau deteriorarea echipamentului.

**Atentie:** Nu ne asumam raspunderea pentru nerespectarea masurilor de siguranta.

Baterii de dimensiuni diferite si de la producatori diferiti pot avea tensiune diferita. Asigurati-va ca tensiunea invertorului corespunde cu tensiunea bateriei. Contactati vanzatorul pentru mai multe detalii. Orice modificare a configuratiei sau structurii sistemului poate afecta functionarea corecta a acestuia.



### **Pericol tensiune mare!**

Atingerea cu un mediu umed a invertorului va poate pune intr-o situatie de pericol.

1. Nu desfaceti produsul in nici o situatie. Intrarea si iesirea de curent de pe invertor prezinta pericol de tensiune inalta. Desfacerea invertorului si atingerea componentelor interne va pot pune intr-o situatie de pericol.
2. Inainte de operatiunile de mentenanta, trebuie sa deconectati complet alimentarea invertorului. Este recomandat sa verificati cu un voltmetru atat intrarea cat si iesirea invertorului pentru a va asigura ca este deconectat.
3. Chiar daca alimentarea este deconectata complet, poate ramane energie reziduala in invertor. Lasati invertorul deconectat timp de 10 minute pentru a

va asigura ca sistemul este descarcat complet.

4. Pastrati invertorul impachetat inainte de instalare si utilizare.

5. Nu manipulati invertorul in prezenta unor conductori electrici: ceas metalic, bratari, inele.

6. Invertorul trebuie fixat, instalat si intretinut doar de personal calificat.

### **Atentie la sarcinile inductive si la rectificari de jumatate de unda**

Va recomandam sa alegeti un inverter cu o putere de 2-3 ori mai mare decat puterea consumatorilor de tip inductiv sau jumatate de unda modificata.

### **Evitare pericol antistatic**

Va recomandam sa purtati bratară antistatică conectată la împământare pentru a proteja partile sensibile ale echipamentului de descărcări statice.

### **Nu deconectati produsul conectat la tensiune si pornit**

Nu instalati sau deconectati aparatul cat timp acesta este pornit. Acordati atentie maxima la conectarea firelor de alimentare.

### **Utilizati doar baterii reglementate**

Utilizati doar baterii reglementate. Utilizarea unor baterii nereglementate poate duce la nefunctionalitatea produsului.

### **Utilizati bateria respectand regulile producatorului**

Utilizati bateria respectand regulile de conectare oferite de producatorul acesteia. Operarea incorecta va poate pune in primejdie.

1. Nu scurtcircuitati firele. Legaturile trebuie sa fie executate foarte strans.

2. Nu atingeti simultan ambele borne ale bateriei sau fire conectate la acestea.

3. Evitati varsarea lichidului electrolitic. Electrolitul este coroziv pentru metal, si reprezinta pericol de scurtcircuit.

4. Pastrati bateria in siguranta, departe de foc sau sursa de scantei.

### **Atentie la ventilatoare**

Evitati blocarea accidentala a ventilatoarelor. Nu utilizati unelte sau degetele pentru oprirea acestora.

### **Montati echipamentul intr-o zona aerisita**

Asigurati-va ca zonele de ventilatie si de evacuare aer ale invertorului nu sunt obturate in nici un fel. De asemenea, nu montati partea de radiator pasiv

a carcasei lipita de un perete, tavan sau podea, ci la o distanta ce permite trecerea aerului.

## Instalarea invertorului

### Conditii mediu de instalare

Pastrati invertorul in mediu uscat si ventilat. Pastrati invertorul departe de umezeala, praf, caldura, lumina soarelui, gaz volatil sau cu salinitate ridicata.



### Precautii

Intervalul de temperatura de functionare a produsului este  $-26^{\circ}\text{C} \sim +60^{\circ}\text{C}$ . Nu solicitati invertorul la maxim, la temperaturi de peste  $40^{\circ}\text{C}$ . Daca utilizati excesiv invertorul la temperaturi de peste  $40^{\circ}\text{C}$ , scadeti consumul cu 10% pentru fiecare grad peste  $40^{\circ}\text{C}$ .

Temperatura optima de functionare a invertorului este intre  $+20^{\circ}\text{C} \sim +30^{\circ}\text{C}$ . Daca se utilizeaza la temperaturi de peste  $30^{\circ}\text{C}$ , autonomia bateriei va scadea considerabil. Sub  $20^{\circ}\text{C}$  va scadea timpul de acumulare electrica.

### Distanta de siguranta

Invertorul trebuie montat la minim 60mm de peretii inconjuratori, cu radiatorul de racire neobturat de alte obiecte.

Nu acoperiti panourile laterale ale invertorului pentru a asigura o racire eficienta si pentru a evita supraincalzirea acestuia.

### Conectarea cablurilor electrice

Asigurati-va ca butonul de power al invertorului este pe OFF (oprit).

Respectati polaritatea firelor si nu le conectati invers, pentru a evita scurtcircuitarea invertorului.

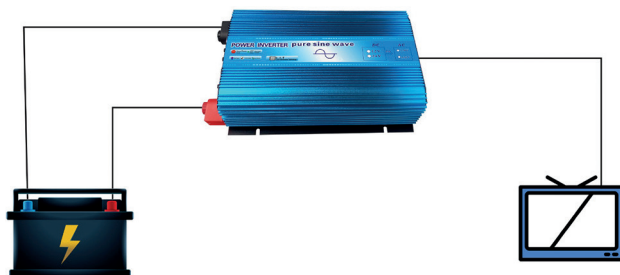
Urmarii urmatoorii pasi pentru conectarea cablurilor invertorului:

1. Opriti invertorul din butonul ON/OFF (Pornit/Oprit).
2. Conectati firele la bornele bateriei respectand polaritatea.
3. Asigurati-va ca cele 2 cabluri sunt conectate strans, pentru a evita supraincalzirea acestora.
4. Conectati consumatorii la priza Schuko.



5. După ce vă asigurați că toate conexiunile sunt făcute corect, porniți invertorul. Dacă indicatorul LED verde se aprinde, înseamnă că tensiunea de ieșire este corectă și invertorul funcționează corect.

Conectarea corectă a invertorului este prezentată în următoarea schemă.



### Atentionari

1. Nu utilizați ieșirea de curent alternativ a invertorului pentru conectarea la rețeaua națională de 230V, ca să nu ardeți invertorul.
2. Conectați consumatorii pe rând și nu depășiți puterea maximă declarată a invertorului.
3. Pentru sarcini inductive alegeți un invertor cu putere maximă de 2-3 ori mai mare.
4. Este recomandat să porniți autoturismul doar cu invertorul oprit, deoarece această procedură va consuma foarte mult curent și poate afecta invertorul.
5. Invertorul trebuie montat într-un loc aerisit, nu trebuie acoperit și trebuie ferit de accesul persoanelor.
6. Nu conectați invertorul la baterii descărcate, defecte sau vechi, deoarece poate determina arderea invertorului.

# Despre baterie

Bateria de stocare sau acumulatorul este un dispozitiv ce genereaza energie in urma unui proces chimic. Asigurati-va ca ati ales un acumulator potrivit pentru acest invertor, pentru a asigura o functionare corecta si optima.

## Index performanta baterie

1. **Capacitate:** Reprezinta cantitatea de energie la putere maxima compusa din curentul de descarcare multiplicat cu timpul de descarcare.  
Capacitate = Curent descarcare (I) x Timp descarcare (H)
2. **Rata de descarcare:** Reprezinta viteza fiecarui curent de descarcare
3. **Curent de descarcare:** Curentul de descarcare este curentul de iesire. Este exprimat de obicei in Amperi sau volum multiplicat cu un coeficient.
4. **Tensiune descarcare finala:** Reprezinta tensiunea cand bateria nu se descarca. In mod usual este aproximativ 1.75V / celula
5. **Capacitate nominala:** Reprezinta capacitatea dupa 20 ore de descarcare.
6. **Rata de autodescercare:** Bateria se descarca chiar daca nu este utilizata. Unitatea este C / unitate.

## Dimensionarea corecta a bateriei

Deoarece invertoarele au nevoie de un curent puternic atunci cand functioneaza, capacitatea si curentul maxim ale bateriei sunt niste factori care determina eficienta la care functioneaza invertorul (50% - 100%).  
Acesti factori pot determina si deteriorarea bateriei.

Capacitatea de stocare a bateriei depinde de curentul maxim de descarcare:  
Curent maxim de descarcare = Putere nominala/(tensiune stocarex0.85)  
Capacitate de stocare baterie = curent mediu de descarcarextimp de descarcare

Exemplu:

PNI SP1000W are o putere nominala de 1000W, tensiune de intrare 12V, deci:

Curent mediu de descarcare =  $1000 / (12 \times 0.85) = 98A$

Daca se mentine 2 ore pornit:

Capacitate de stocare baterie =  $98 \times 2 = 196$  Ah  
Alegeti o baterie cu o capacitate mai mare de 196 Ah.

## Valori recomandate pentru baterie

<b>Invertor</b>	<b>Putere (W)</b>	<b>Baterie recomandata</b>
SP500W	500	12V, $\geq 100$ Ah
SP1000W	1000	12V, $\geq 150$ Ah
SP2000W	2000	12V, $\geq 200$ Ah

## Probleme si solutii

<p>Invertorul nu porneste si LED-ul Power nu se aprinde</p>	<ol style="list-style-type: none"> <li>1. Bateria este defecta</li> <li>2. Conexiunea la baterie este anormala</li> <li>3. Siguranta este arsa</li> </ol>	<ol style="list-style-type: none"> <li>1. Schimbati bateria</li> <li>2. Conectati bateria cu grija</li> <li>3. Schimbati siguranta</li> </ol>
<p>Invertorul este in protectie si LED-ul rosu de eroare (Fault) se aprinde</p>	<p>Invertorul este in protectie si ledul rosu Fault este aprins.</p> <ol style="list-style-type: none"> <li>1. Invertorul intra in protectie cand totalul consumatorilor depaseste puterea nominala a invertorului.</li> <li>2. Puterea de pornire a consumatorilor este mai mare decat puterea de varf declarata pentru invertor. Invertorul intra in protectie.</li> <li>3. Tensiunea bateriei este prea scazuta. Invertorul declanseaza protectie la subtensiune.</li> <li>4. Tensiunea bateriei este prea ridicata. Invertorul declanseaza protectia la supravoltaj.</li> <li>5. Temperatura invertorului este prea ridicata.</li> </ol>	<ol style="list-style-type: none"> <li>1. Micsorati numarul consumatorilor conectati si reporniti invertorul.</li> <li>2. Consumatorii inductivi (motoare, pompe) au un consum de pornire foarte mare. Alegeti un invertor cu o putere nominala de de 4-5 ori mai mare in aceste cazuri.</li> <li>3. Daca tensiunea bateriei creste peste nivelul minim de protectie, invertorul reporneste automat. (sau schimbati bateria).</li> <li>4. Daca tensiunea bateriei scade sub nivelul maxim de protectie, invertorul reporneste automat (sau schimbati bateria).</li> <li>5. Inchideti invertorul pentru 15 min, verificati si curatati ventilatoarele si gurile laterale de aerisire si pastrati spatiu de ventilare in jurul carcasei.</li> </ol>

<p>Invertorul nu functioneaza in sarcina 100%</p>	<ol style="list-style-type: none"> <li>1. Firele intre baterie si invertor sunt prea lungi.</li> <li>2. Conectarea la baterie / invertor este slabita.</li> </ol>	<ol style="list-style-type: none"> <li>1. Scurtati firele sau folositi fire mai groase. Recomandam utilizarea firelor din colet.</li> <li>2. Verificati si strangeti conectorii pe invertor si baterie.</li> </ol>
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Daca invertorul nu functioneaza dupa aplicarea solutiilor de mai sus, va recomandam sa contactati Vanzatorul, Importatorul sau Rezentantatul service, consultand certificatul de garantie.

Nu desfaceti produsul, deoarece pierdeti garantia produsului.

Recomandam o intretinere periodica a produsului pentru prelungirea duratei de viata a acestuia.

1. Evitati utilizarea invertorului in medii umede, cu praf, cu temperatura prea ridicata.
2. Evitati supunerea produsului la socuri mecanice
3. Verificati periodic cablurile si conexiunile
4. Curatati periodic ventilatoarele invertorului.

## Specificatii tehnice

	<b>SP500W</b>	<b>SP1000W</b>	<b>SP2000W</b>
Tensiune de intrare	12V DC		
Putere de iesire	500W	1000W	2000W
Tensiune de iesire	230V AC		
Frecventa	50Hz/60Hz		
Eficienta de transfer	>88%		
Unda de iesire	Sinusoida pura		
Distorsiune armonica totala	THDV $\leq$ 3% (100% linear load)		
Capacitate suprasarcina	>120%		
Protectii	Scurtcircuit, suprasarcina, supraincalzire, supratensiune, subtensiune		
<b>Parametri acumulator recomandat</b>			
Tip	Plumb-acid/Litiu		
Tensiune	12V		
Curent maxim	100A	150A	200A
Protectie sub/supratensiune	10V/15.5V		
Nivel atentionare subtensiune	10.5V		
Nivel cut-off (intrerupere)	9.7V-10.2V		
Nivel recuperare (recovery)	12.5V		
<b>Parametri generali</b>			
Indicatori led	Verde, Rosu		
Racire activa	Ventilator		
Temperatura de lucru	-26°C ~ +60°C		
Umiditate de lucru	$\leq$ 90% (fara condens)		

## EN:

## EU Simplified Declaration of Conformity

SC ONLINESHOP SRL declares that Power inverter PNI SP500W, SP1000W, SP2000W complies with the Directive EMC 2014/30/EU. The full text of the EU declaration of conformity is available at the following Internet address:

<https://www.mypni.eu/products/6848/download/certifications>

<https://www.mypni.eu/products/6849/download/certifications>

<https://www.mypni.eu/products/6850/download/certifications>

## DE:

## Vereinfachte EU- Konformitätserklärung

SC ONLINESHOP SRL erklärt, dass das Wechselrichter PNI SP500W, SP1000W, SP2000W der Richtlinie EMC 2014/30/ EU entspricht. Sie finden den ganzen Text der EU-Konformitätserklärung an der folgenden Internetadresse:

<https://www.mypni.eu/products/6848/download/certifications>

<https://www.mypni.eu/products/6849/download/certifications>

<https://www.mypni.eu/products/6850/download/certifications>

## ES:

## Declaración UE de conformidad simplificada

SC ONLINESHOP SRL declara que el Inversor de energia PNI SP500W, SP1000W, SP2000W cumple con la Directiva EMC 2014/30/EU. El texto completo de la declaración de conformidad de la UE está disponible en la siguiente dirección de Internet:

<https://www.mypni.eu/products/6848/download/certifications>

<https://www.mypni.eu/products/6849/download/certifications>

<https://www.mypni.eu/products/6850/download/certifications>

## FR

## Déclaration de conformité simplifiée de l'UE

SC ONLINESHOP SRL déclare que Convertisseur de energia PNI SP500W, SP1000W, SP2000W est conforme à la directive EMC 2014/30/EU. Le texte complet de la déclaration de conformité UE est disponible à l'adresse Internet suivante:

<https://www.mypni.eu/products/6848/download/certifications>

<https://www.mypni.eu/products/6849/download/certifications>

<https://www.mypni.eu/products/6850/download/certifications>

## HU:

## Egyszerűsített EU Megfelelési Közlemény

SC ONLINESHOP SRL kijelenti azt, hogy a áramváltó PNI SP500W, SP1000W, SP2000W megfelel az EMC 2014/30/EU irányelvnek. Az EU-megfeleléségi nyilatkozat teljes szövege a következő internetes címen érhető el:

<https://www.mypni.eu/products/6848/download/certifications>

<https://www.mypni.eu/products/6849/download/certifications>

<https://www.mypni.eu/products/6850/download/certifications>

## IT:

## Dichiarazione UE di conformità semplificata

SC ONLINESHOP SRL dichiara che il Invertitore PNI SP500W, SP1000W, SP2000W è conforme alla direttiva EMC 2014/30/UE. Il testo completo della dichiarazione di conformità europea è disponibile al seguente indirizzo Internet:

<https://www.mypni.eu/products/6848/download/certifications>

<https://www.mypni.eu/products/6849/download/certifications>

<https://www.mypni.eu/products/6850/download/certifications>

## PL:

## Uproszczona deklaracja zgodności UE

SC ONLINESHOP SRL oświadcza, że Falownik PNI SP500W, SP1000W, SP2000W jest zgodny z dyrektywą EMC 2014/30/EU. Pełny tekst deklaracji zgodności UE dostępny jest pod następującym adresem internetowym:

<https://www.mypni.eu/products/6848/download/certifications>

<https://www.mypni.eu/products/6849/download/certifications>

<https://www.mypni.eu/products/6850/download/certifications>

## RO:

## Declaratie UE de conformitate simplificata

SC ONLINESHOP SRL declara ca Invertor de tensiune PNI SP500W, SP1000W, SP2000W este in conformitate cu Directiva EMC 2014/30/EU. Textul integral al declaratiei UE de conformitate este disponibil la urmatoarea adresa de internet:

<https://www.mypni.eu/products/6848/download/certifications>

<https://www.mypni.eu/products/6849/download/certifications>

<https://www.mypni.eu/products/6850/download/certifications>

